

OPERATOR: **Extraction Oil & Gas**

WELL NAME: **VT LDS C3-16-18**

FIELD NAME: DJ Basin - Wattenberg

DRILLING RIG: Patterson 901

API #: 05-123-44418

LAT/LONG: 40.40129, -104.65689

SURFACE HOLE: SWNW S15-T5N-R65W, 1895' FNL, 554' FWL

BOTTOM HOLE: S18-T5N-R65W, 1512' FNL, 460' FWL



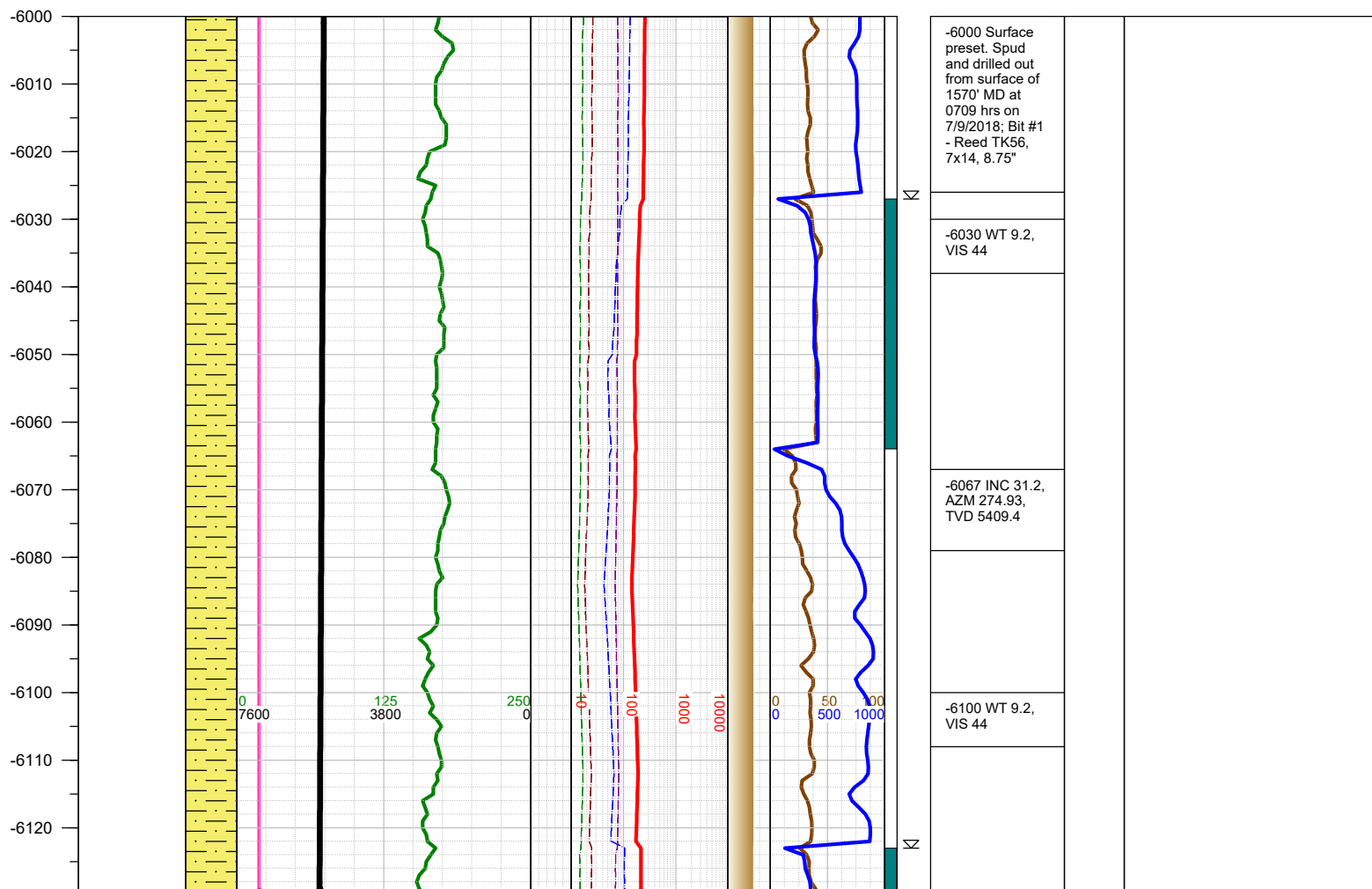
Earth Science Agency, LLC

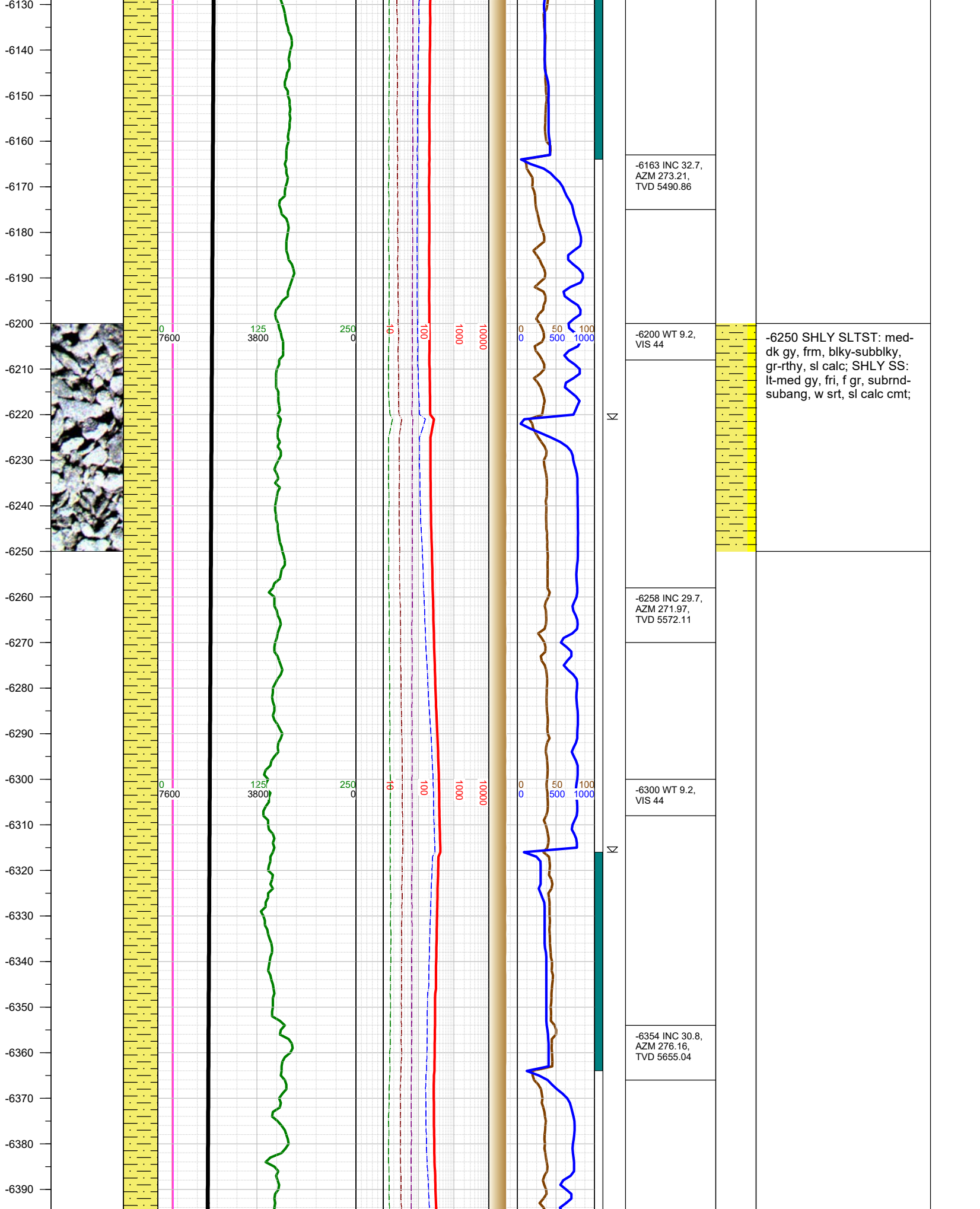
COUNTY: Weld  
STATE: Colorado  
GROUND ELEVATION: 4648'  
KELLY BUSHING: 4677'  
DRILLING FLUID: OBM  
TVD VS. MD: 6947' / 20340'  
SPUD DATE: July 9, 2018  
TD DATE: July 12, 2018  
  
DEPTHS LOGGED: 6000' - 20340'  
DATES LOGGED: July 9, 2018 - July 12, 2018  
GEOLOGISTS: Blake Eatherton, Dan Jacobs  
SCALE: 5" = 100'

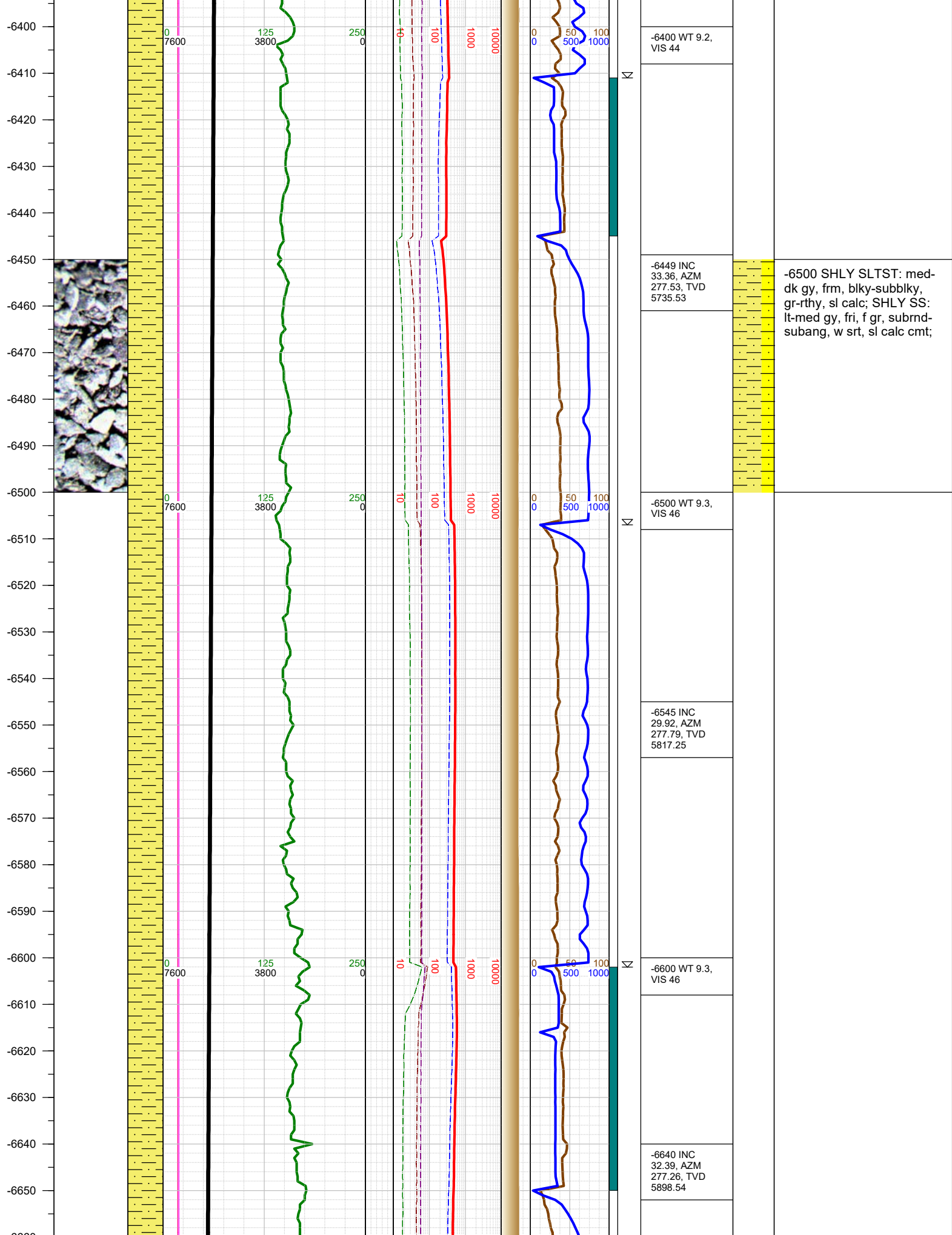
#### LEGEND

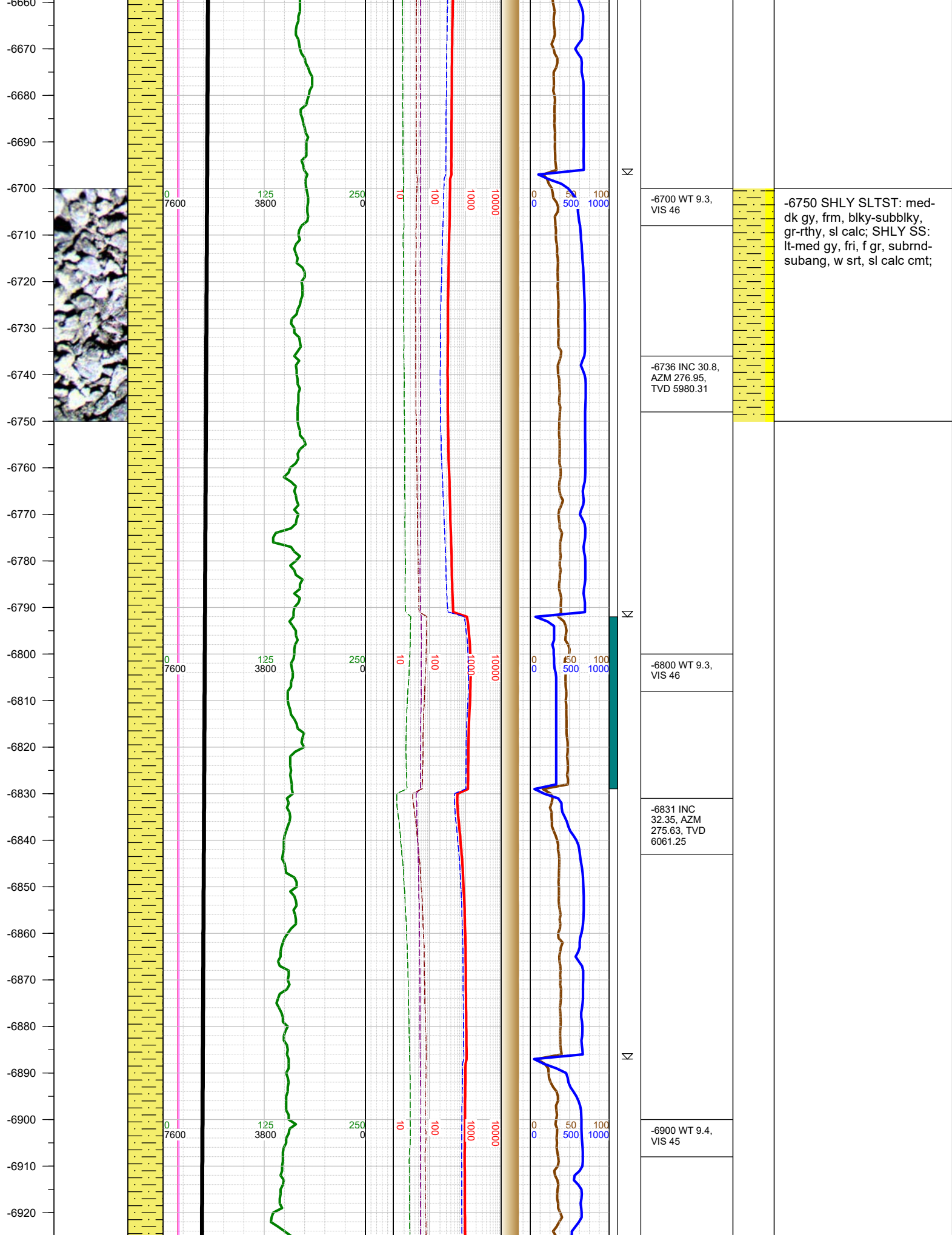


FORMATION  $\approx$  CONNECTION  $\Delta$  MIDNIGHT NEW BIT GAS SHOW FAULT

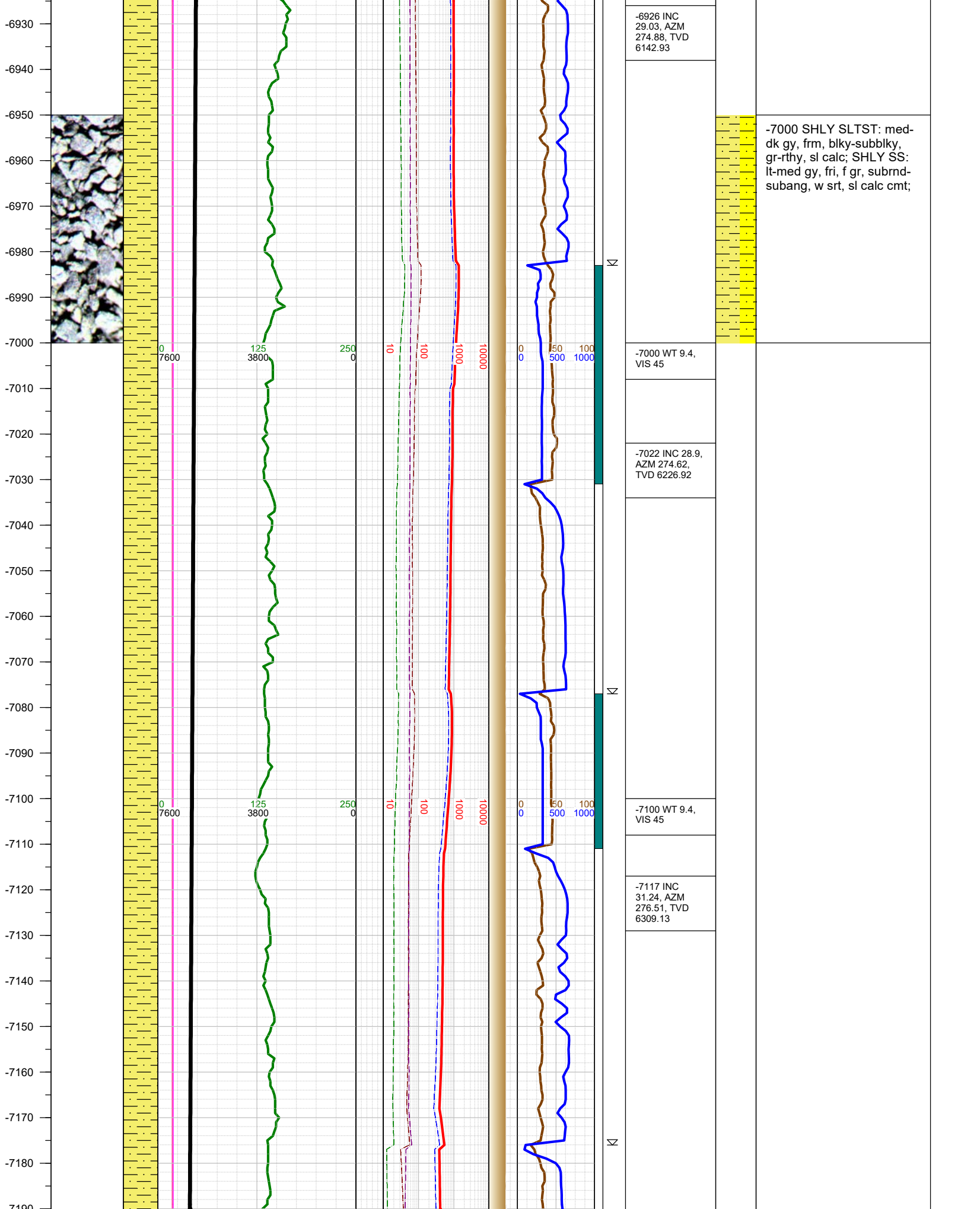


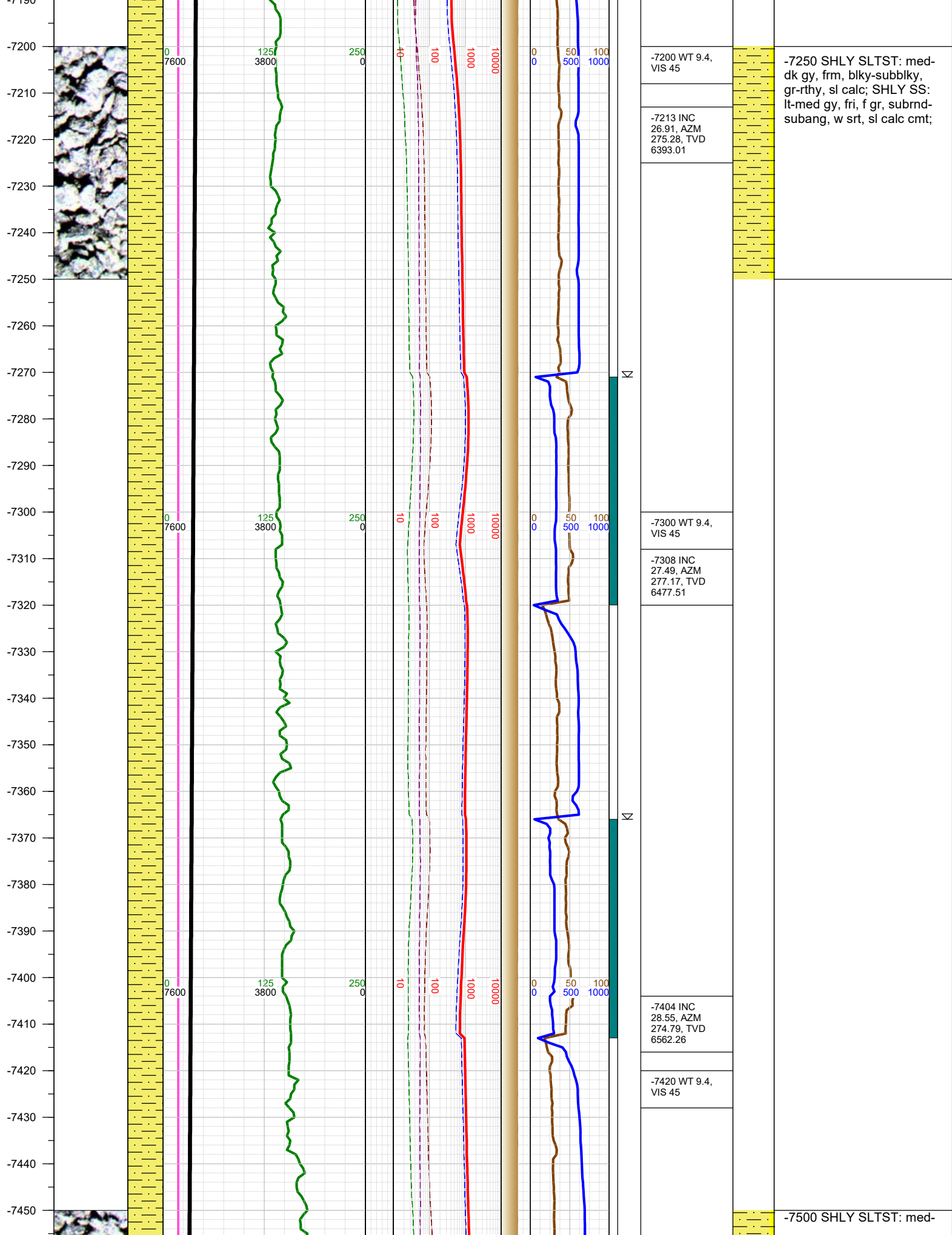


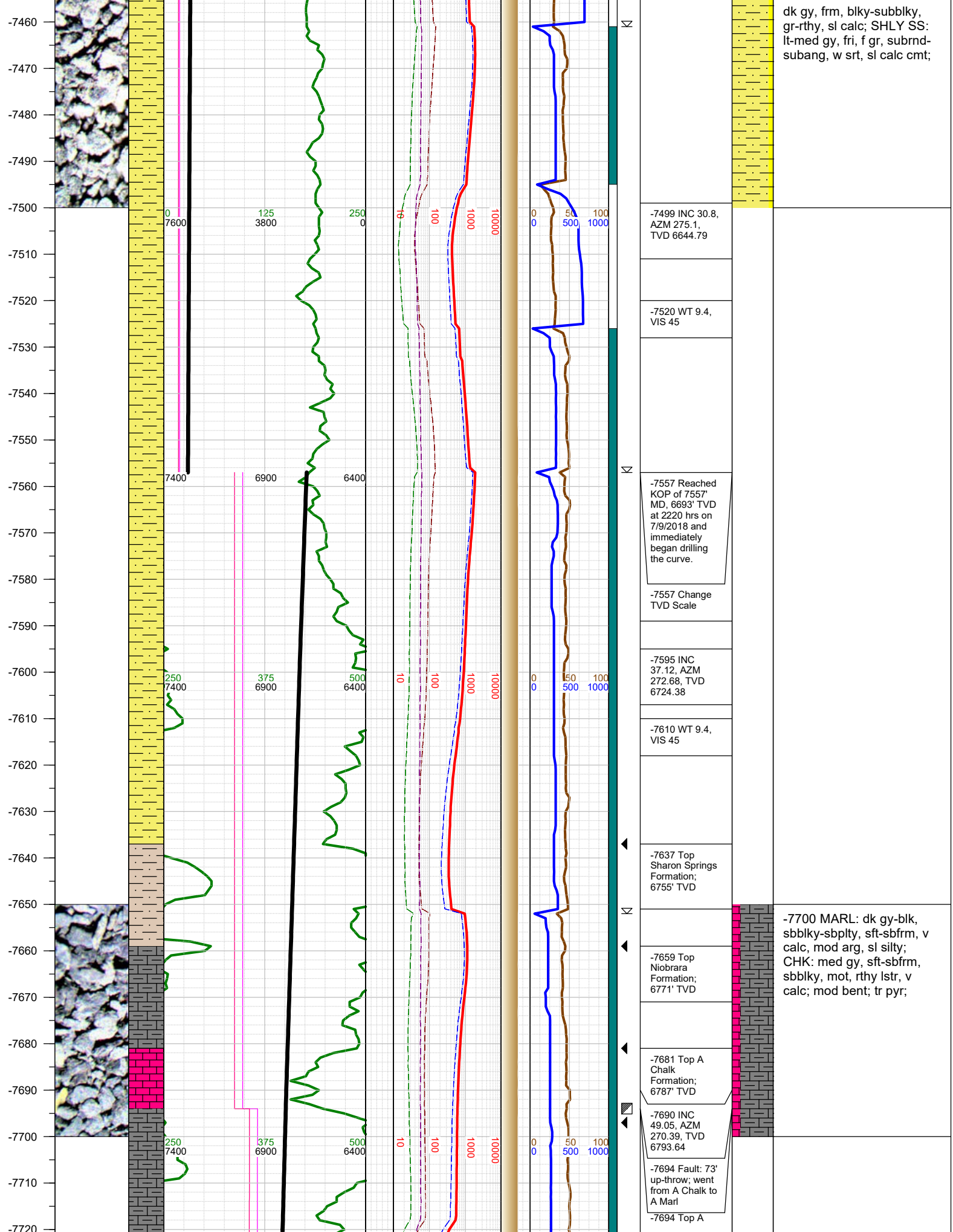




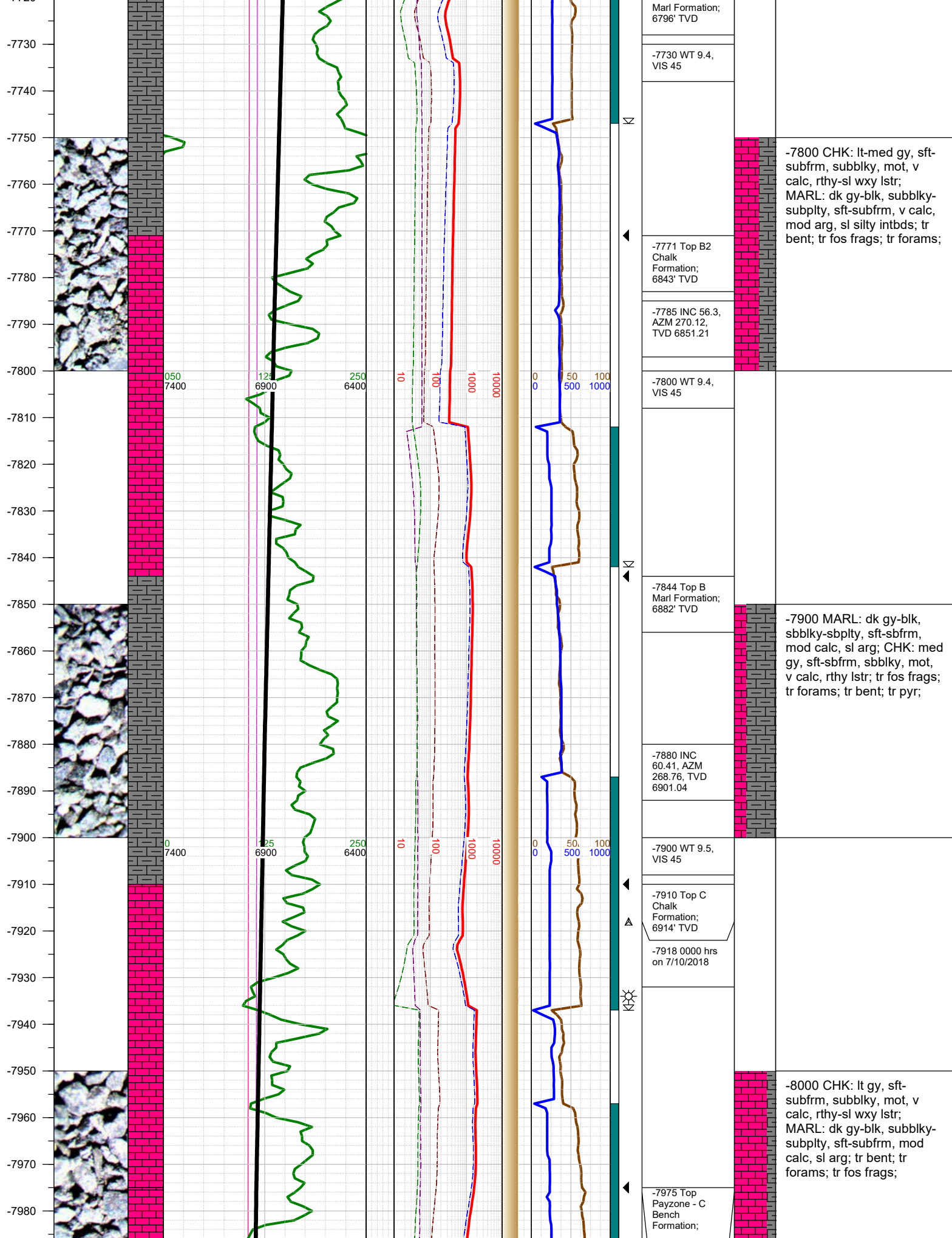




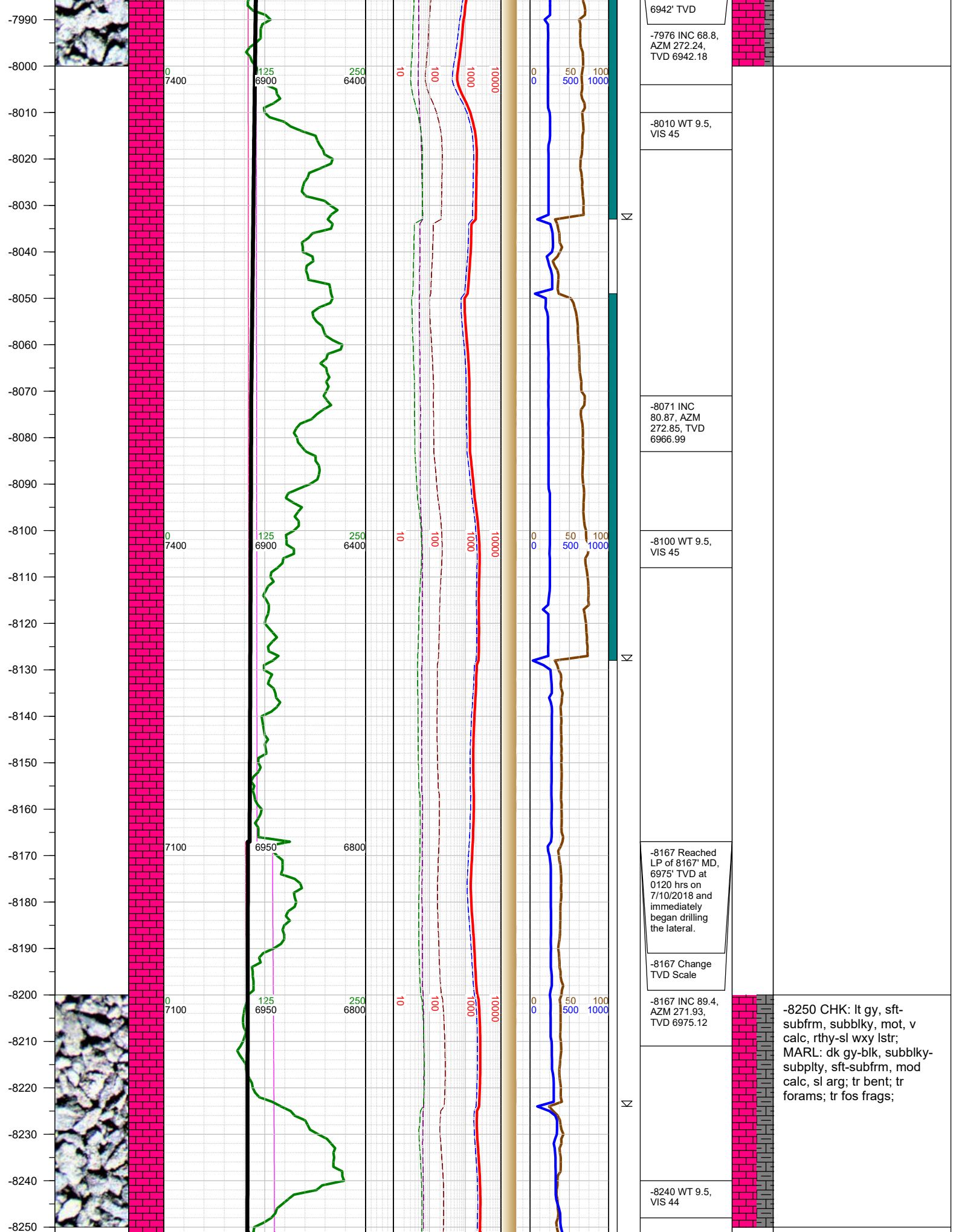


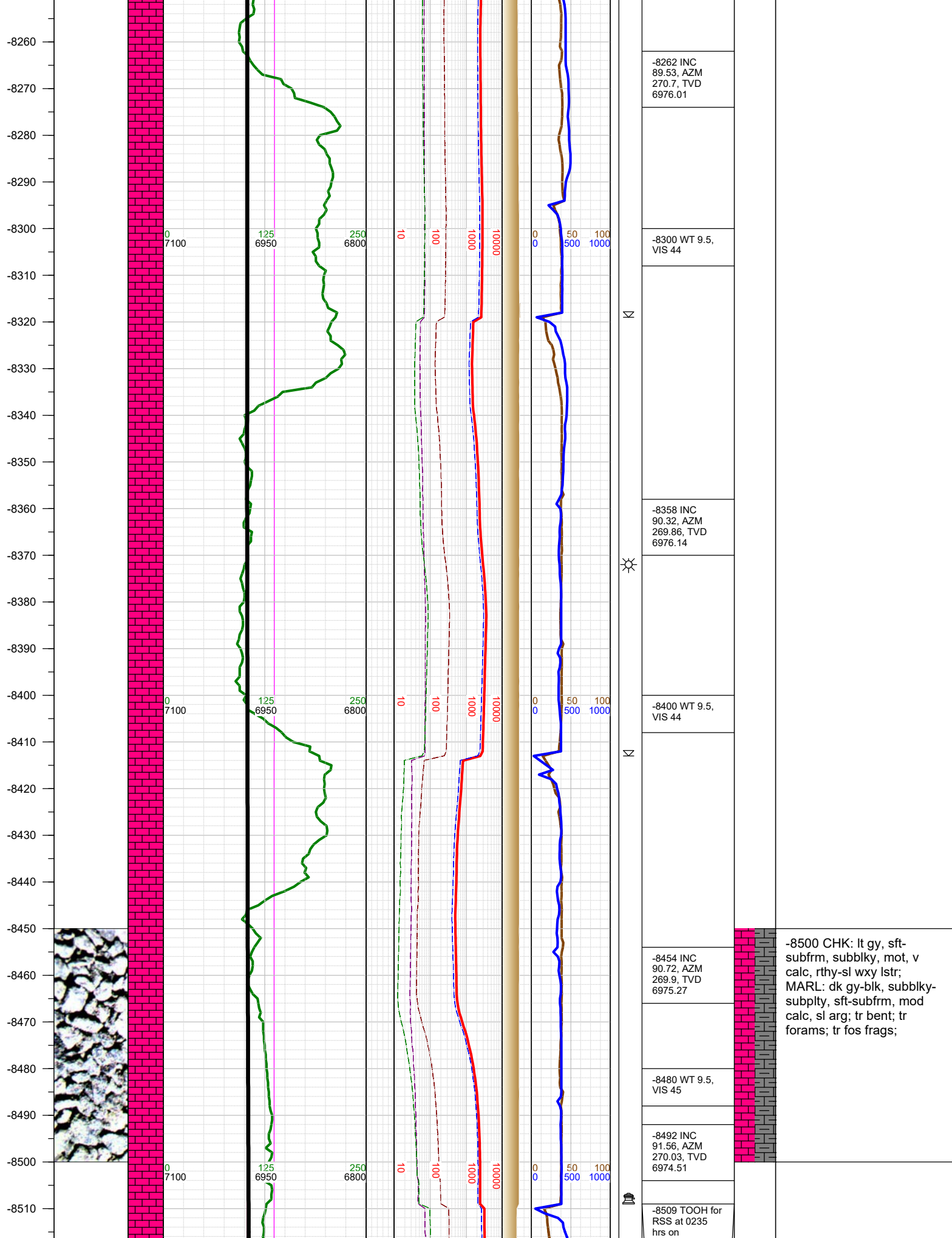




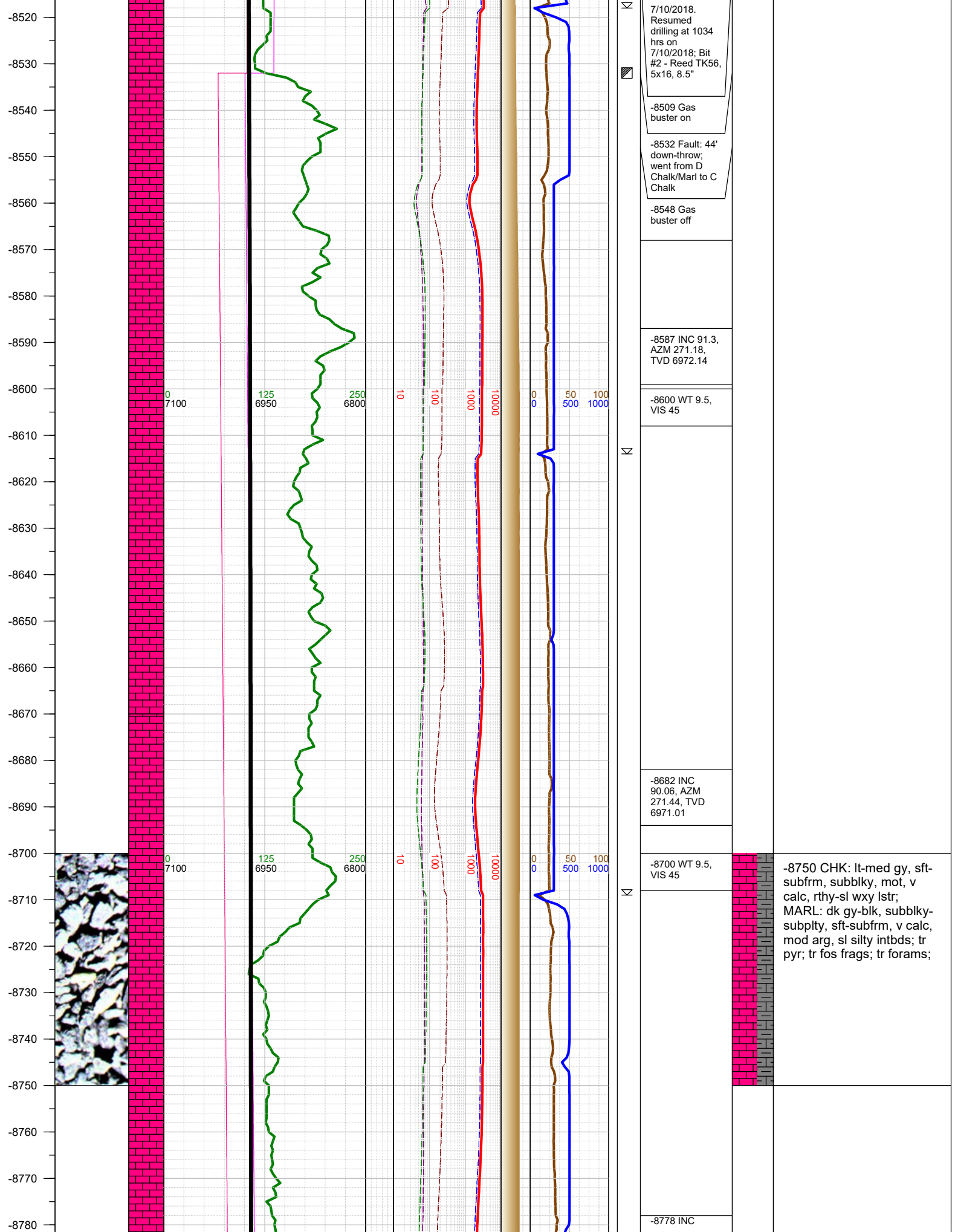




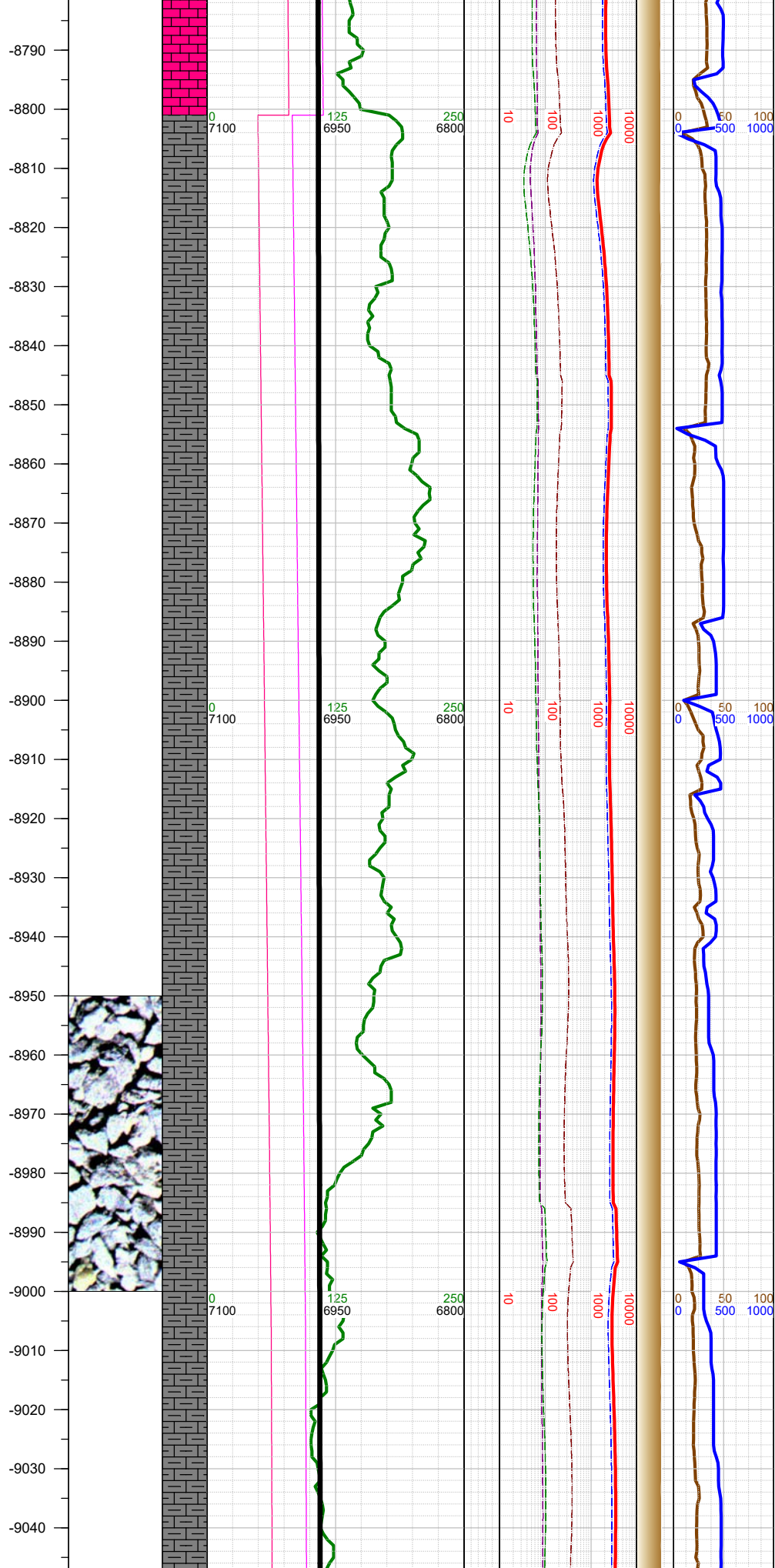








-8500 CHK: lt gy, sft-subfrm, subblky, mot, v calc, rthy-sl wxy lstr; MARL: dk gy-blk, subblky-subply, sft-subfrm, mod calc, sl arg; tr bent; tr forams; tr fos frags;



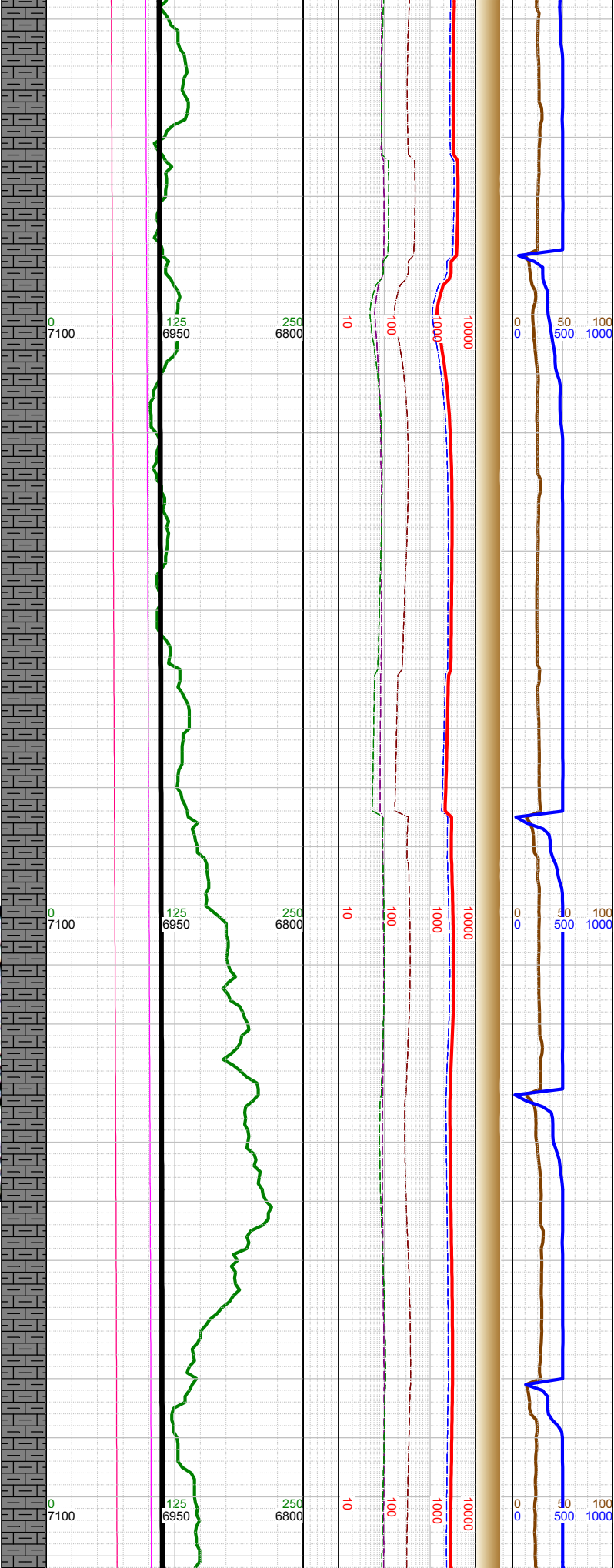
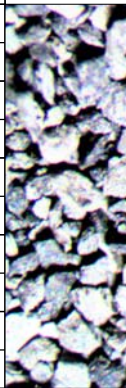




90.54, AZM 272.02, TVD 6970.51		
	-8801 Fault: 36' down-throw; went from C Chalk to B Marl	
	-8820 WT 9.5, VIS 45	
	-8873 INC 90.5, AZM 273.07, TVD 6969.65	
	-8900 WT 9.5, VIS 44	
		-9000 CHK: lt-med gy, sft-subfrm, subblky, mot, v calc, rthy-sl wxy lstr; MARL: dk gy-blk, subblky-subply, sft-subfrm, v calc, mod arg, sl silty intbds; tr pyr; tr fos frags; tr forams;
	-8969 INC 90.32, AZM 272.77, TVD 6968.96	
	-9000 WT 9.5, VIS 44	



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-9064 INC  
90.85, AZM  
273.47, TVD  
6967.99

-9100 WT 9.5,  
VIS 44

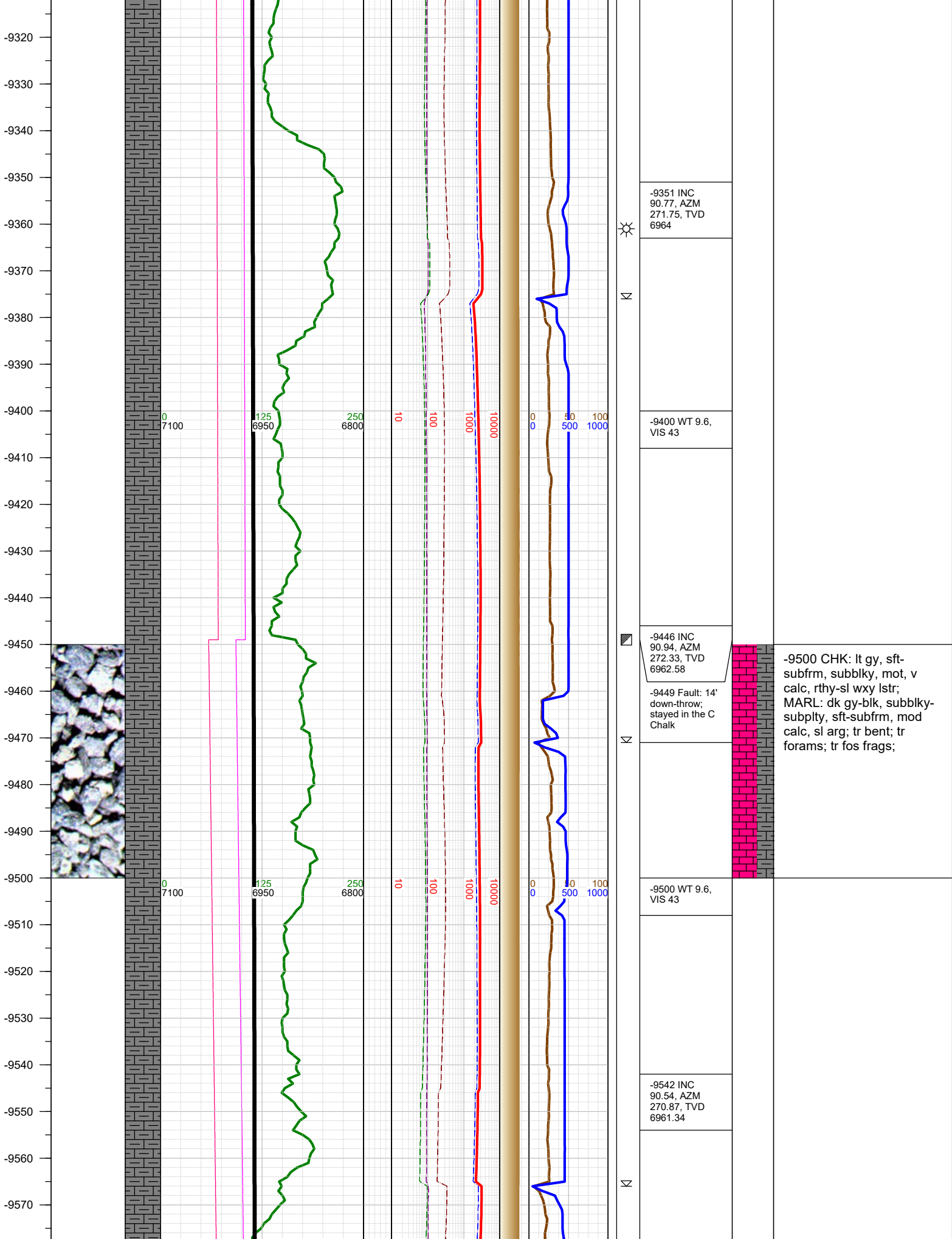
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273.25, TVD  
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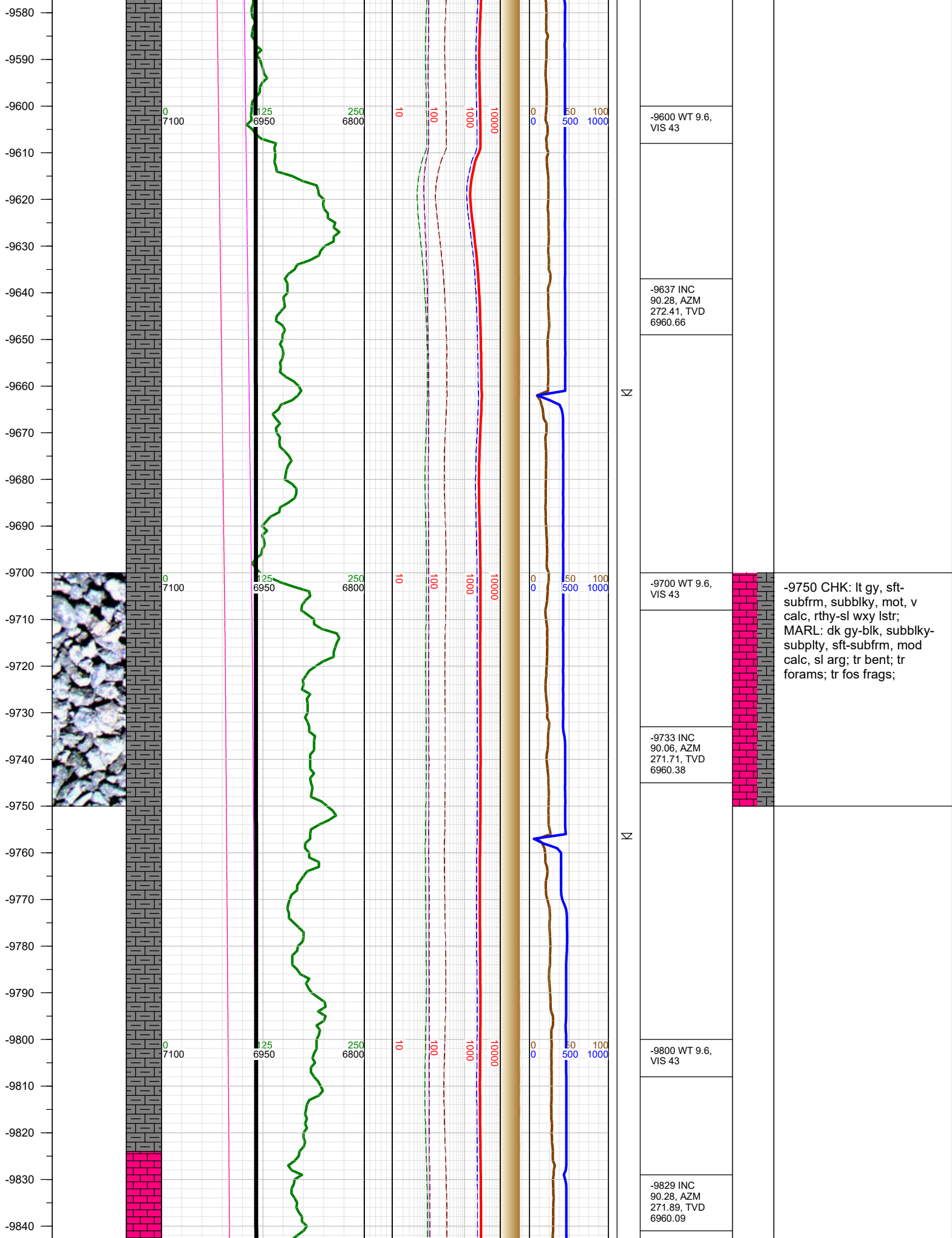
-9200 WT 9.5,  
VIS 44

-9255 INC  
90.81, AZM  
272.33, TVD  
6965.32

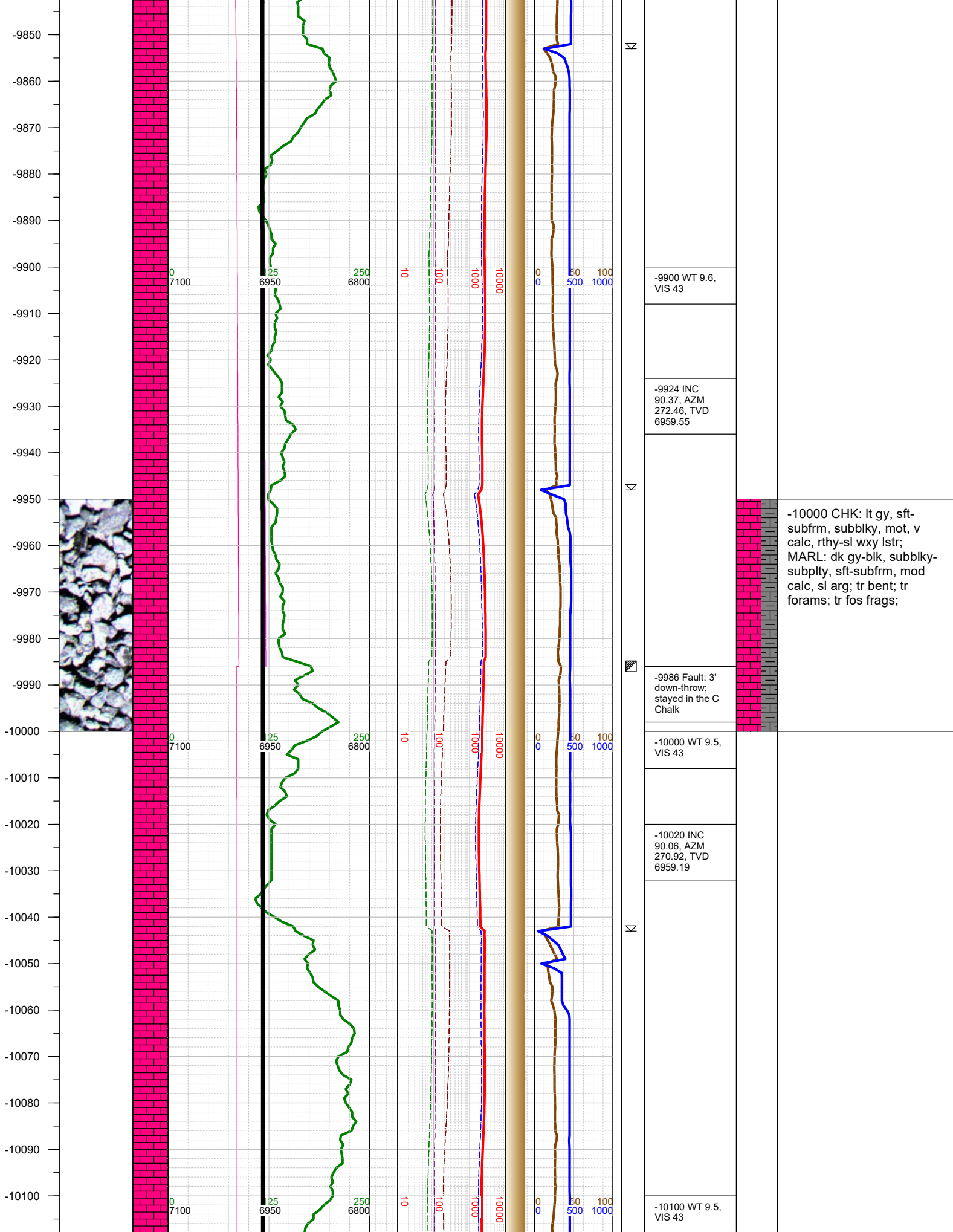
-9300 WT 9.5,  
VIS 44

-9250 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;

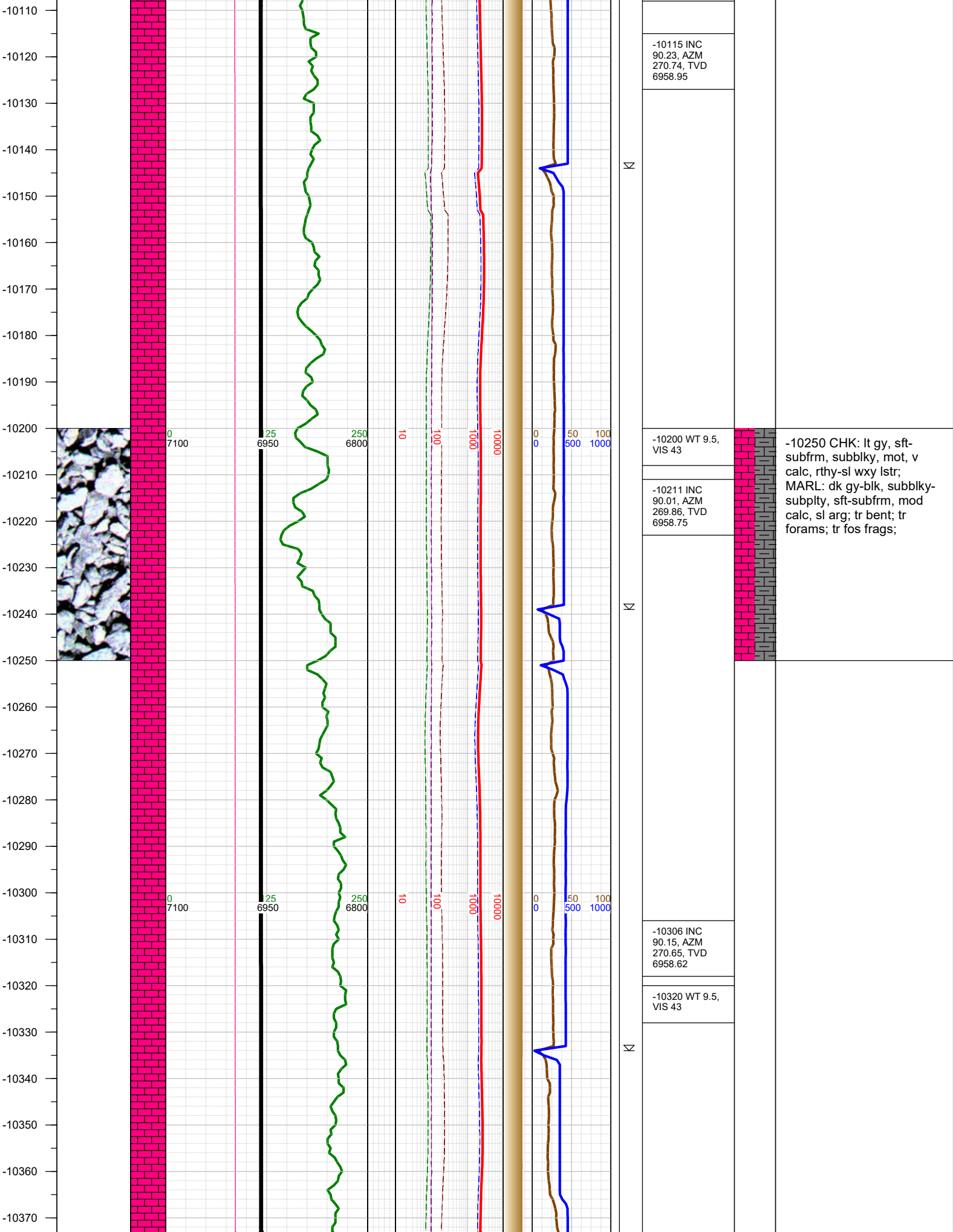


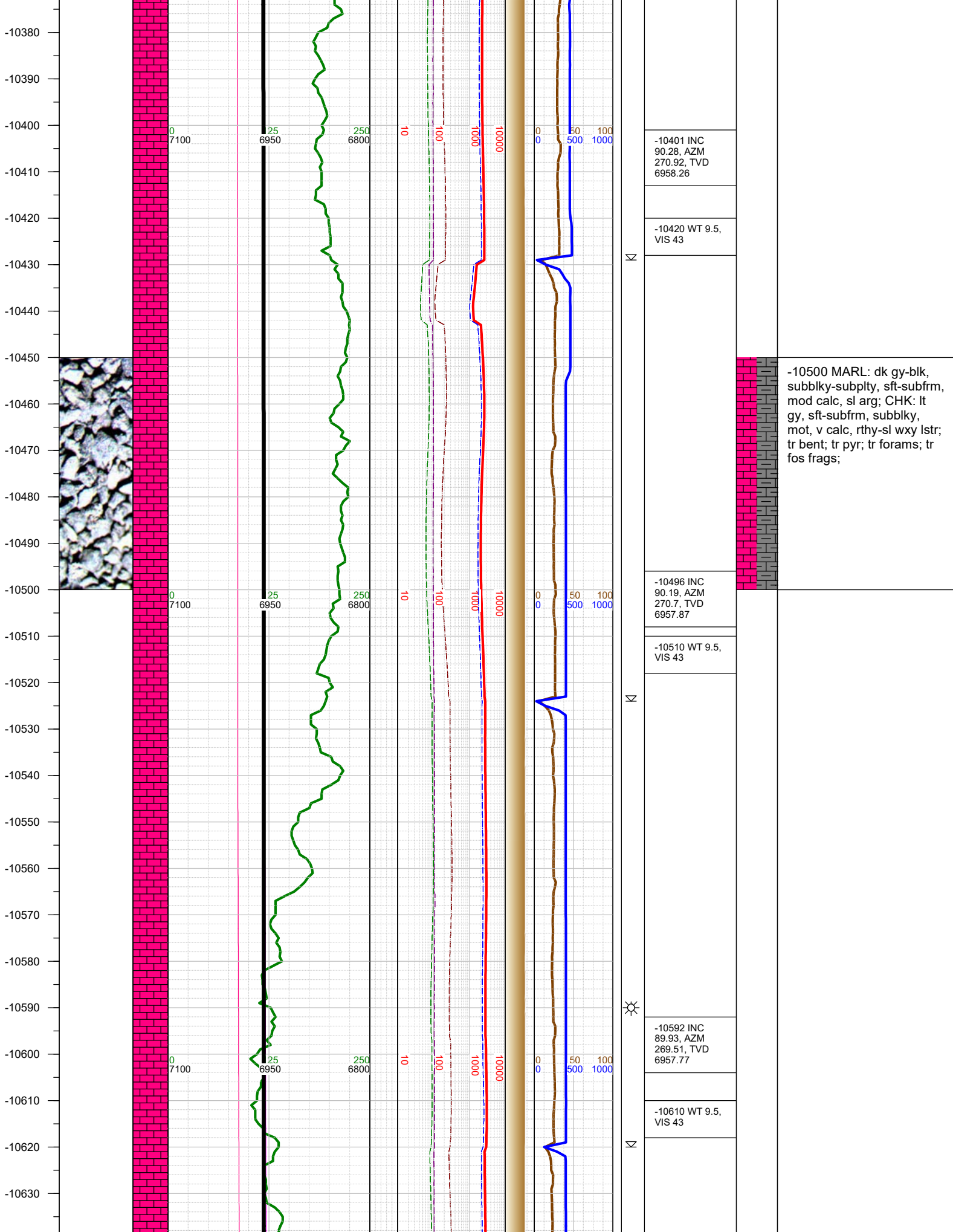


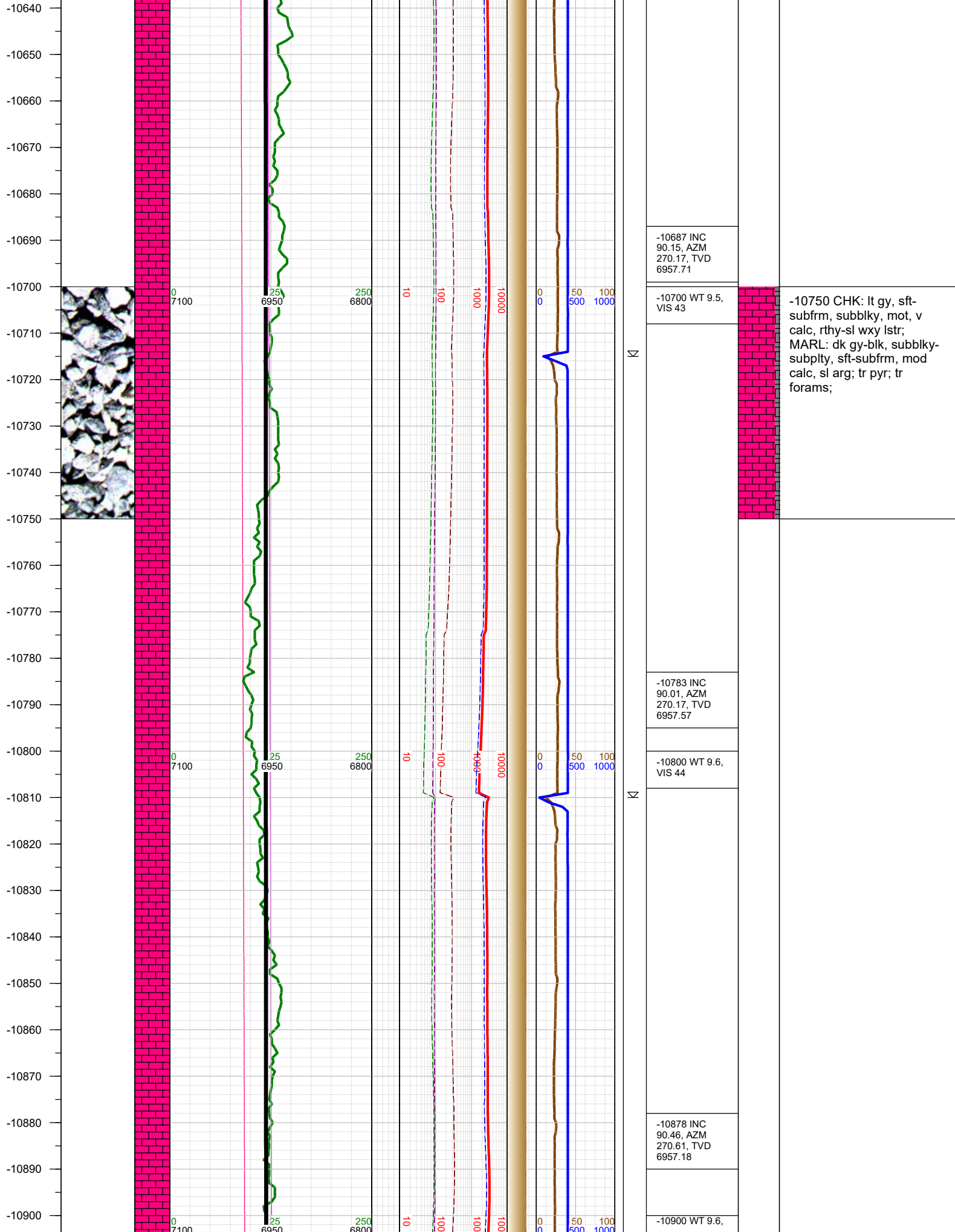






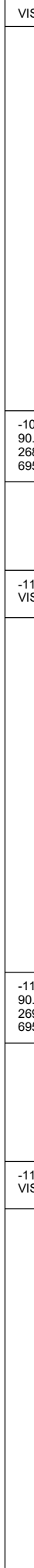
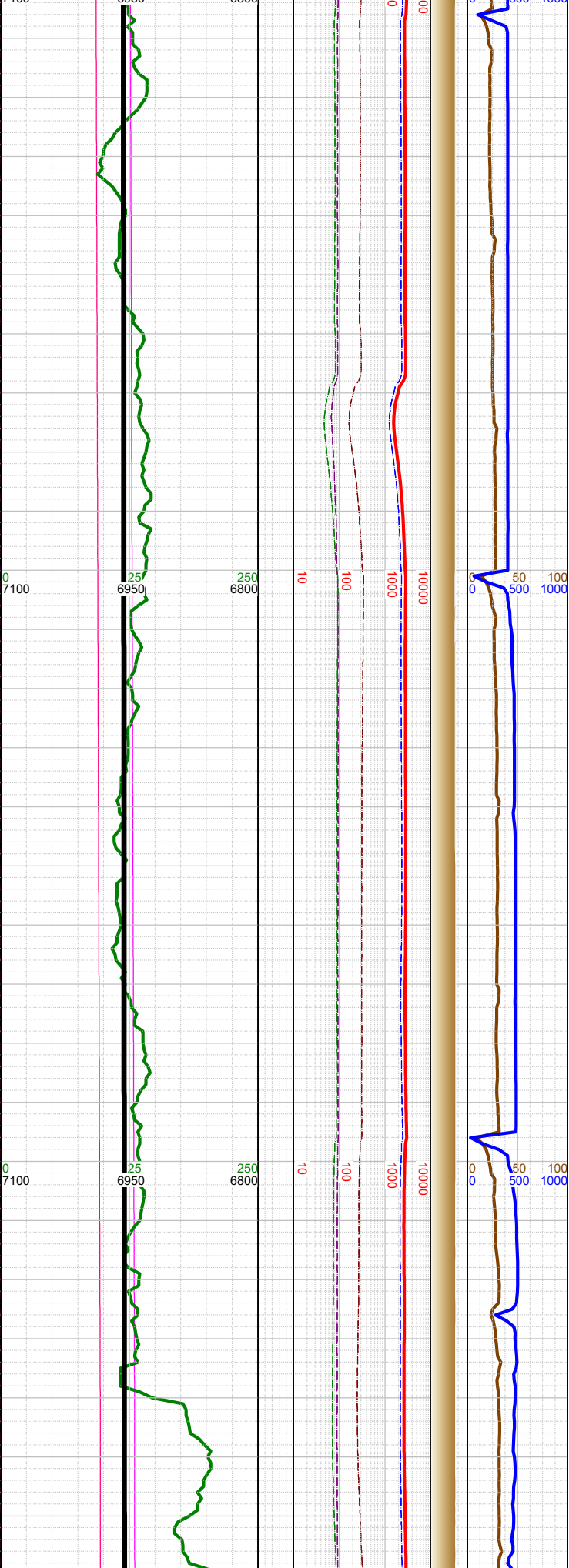
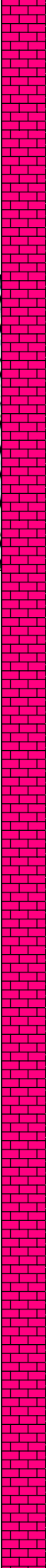
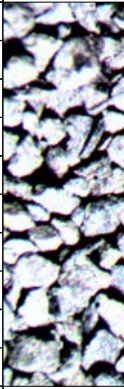








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-11000 CHK: lt gy, sft-subfrm, subblky, mot, v calc, rthy-sl wxy lstr; MARL: dk gy-blk, subblky-subply, sft-subfrm, mod calc, sl arg; tr pyr; tr forams;

VIS 44

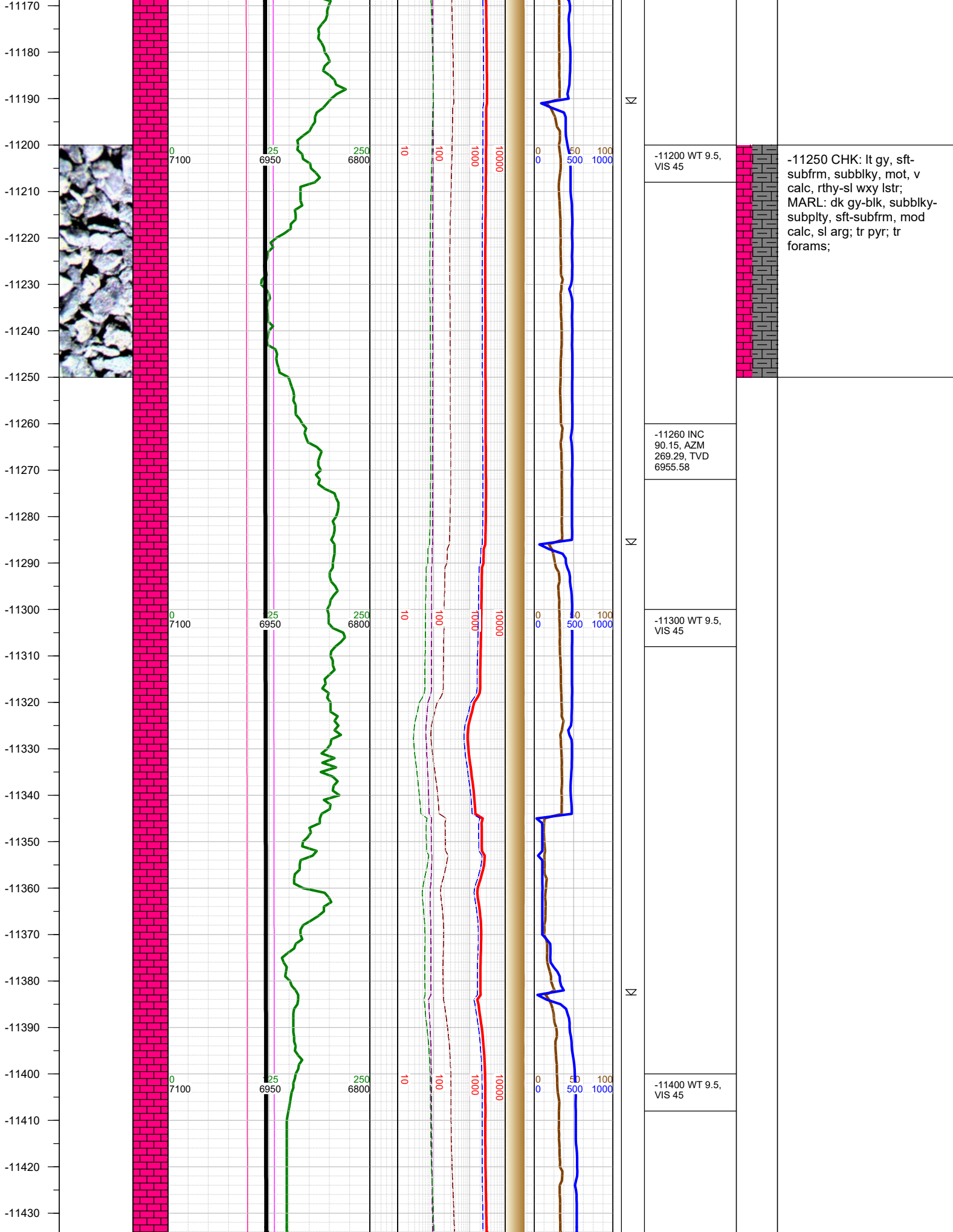
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268.8, TVD  
6956.72

-11000 WT 9.6,  
VIS 44

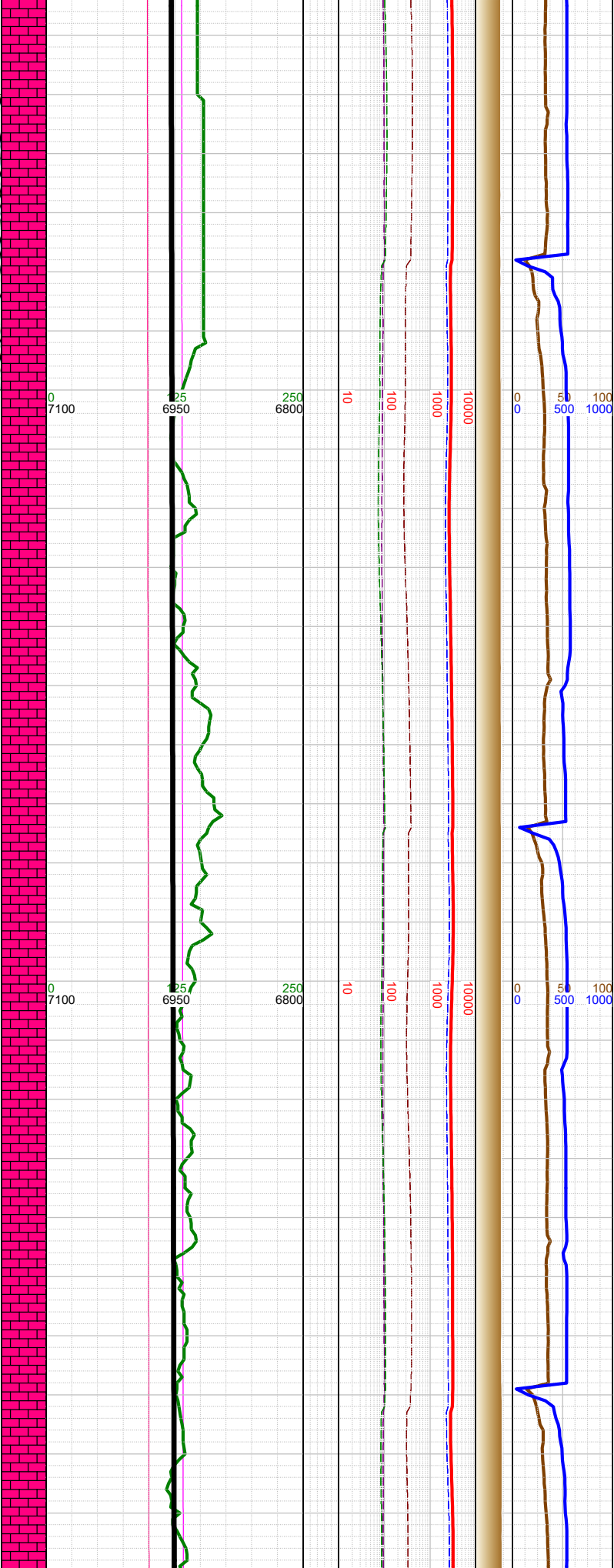
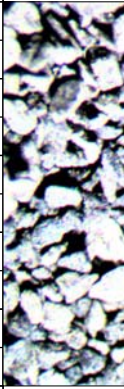
-11068 INC  
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269.42, TVD  
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-11100 WT 9.5,  
VIS 45





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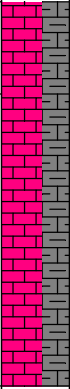
-11450 INC  
90.77, AZM  
269.02, TVD  
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-11500 WT 9.5,  
VIS 45

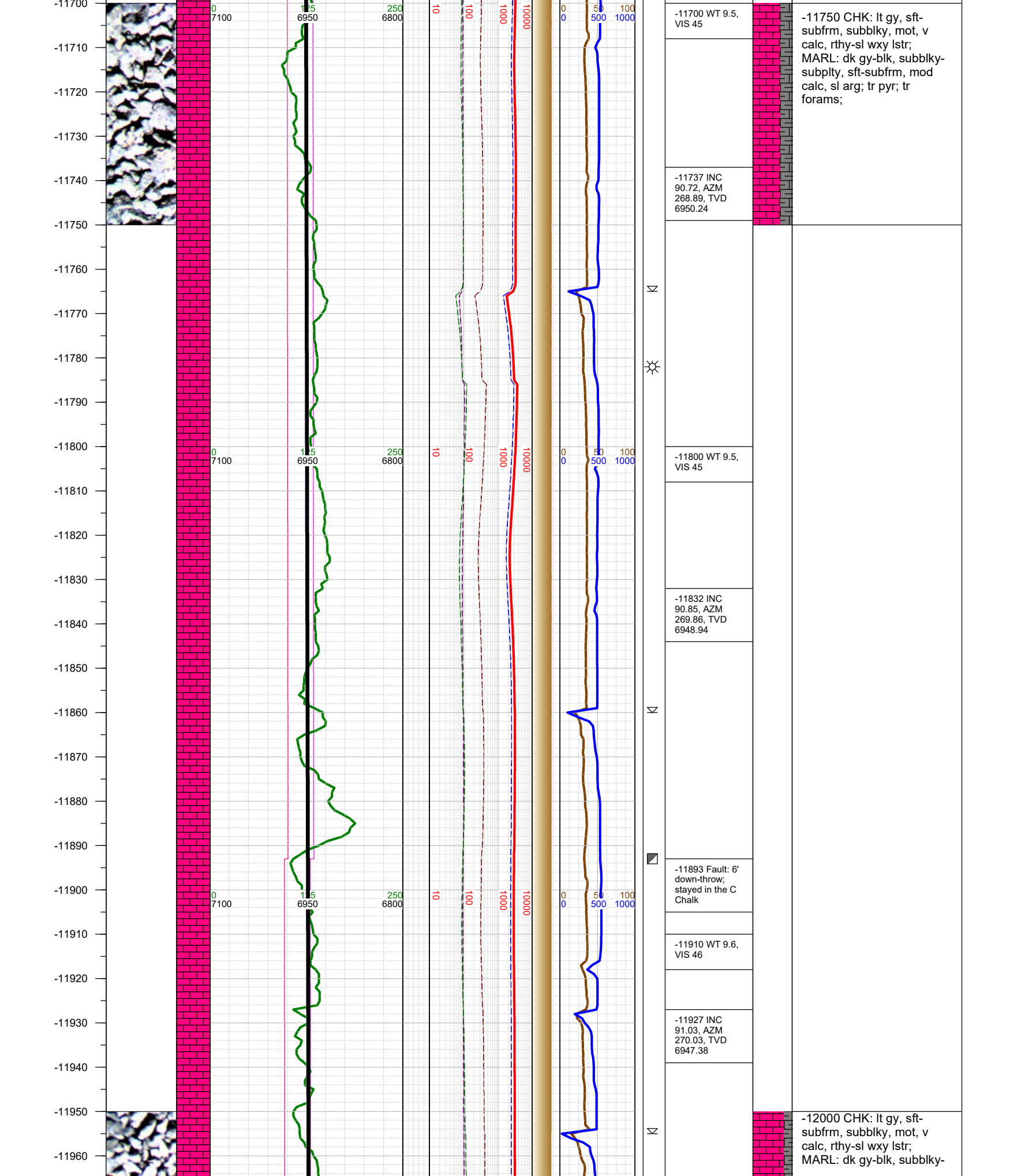
-11546 INC  
90.77, AZM  
268.71, TVD  
6952.77

-11600 WT 9.5,  
VIS 45

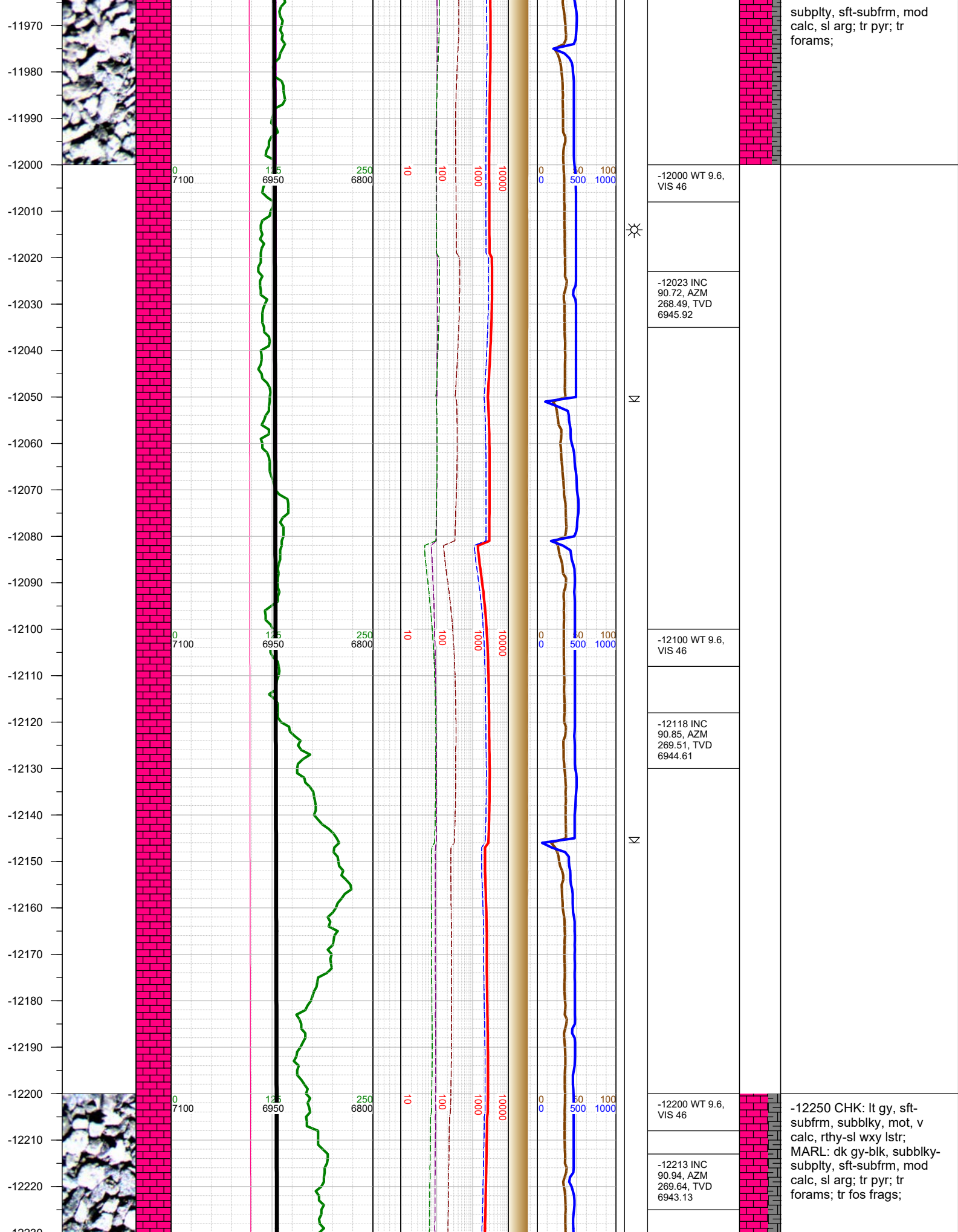
-11641 INC  
90.77, AZM  
268.49, TVD  
6951.49

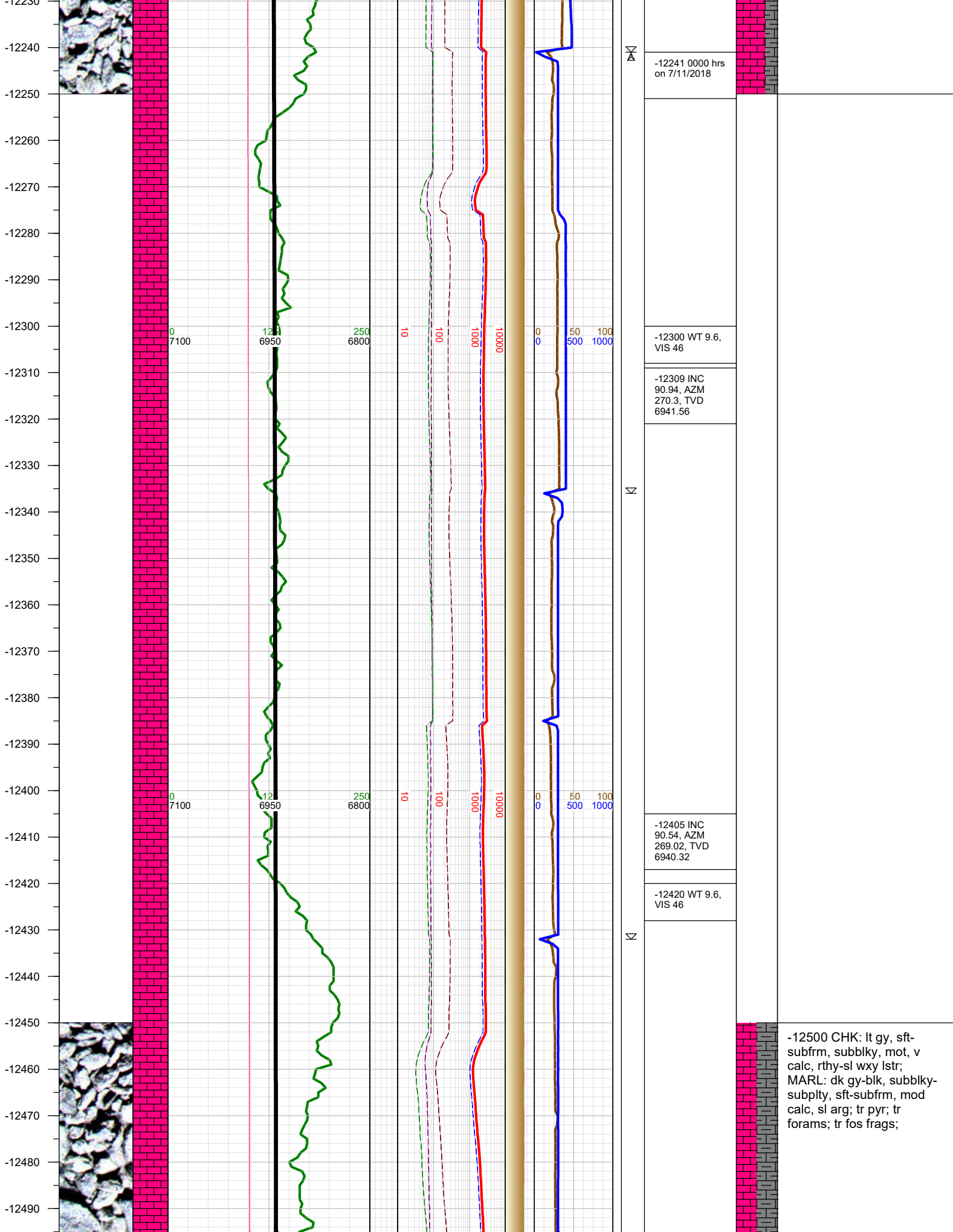


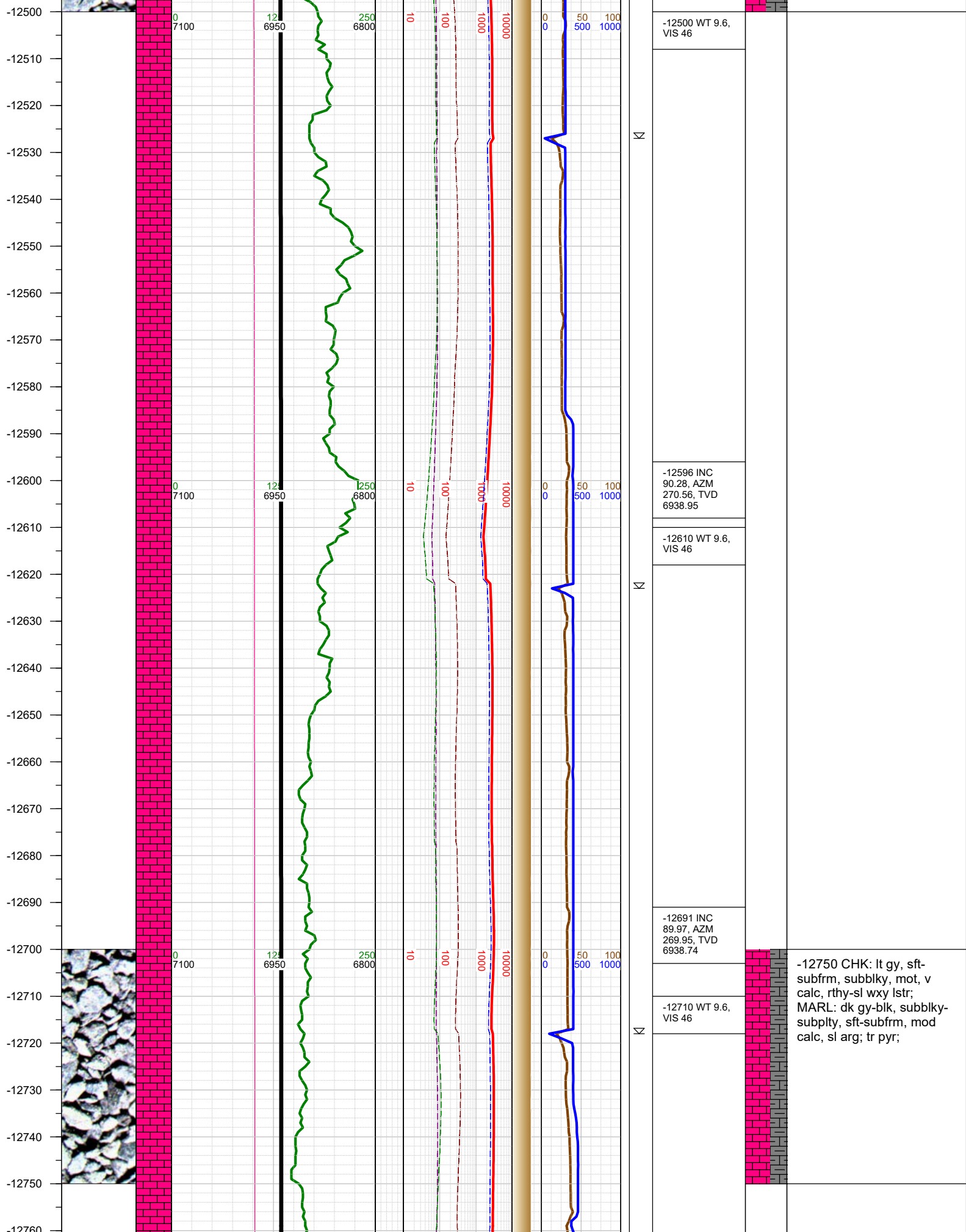
-11500 CHK: lt gy, sft-subfrm, subblky, mot, v calc, rthy-sl wxy lstr; MARL: dk gy-blk, subblky-subplty, sft-subfrm, mod calc, sl arg; tr pyr; mod forams; tr fos frags;



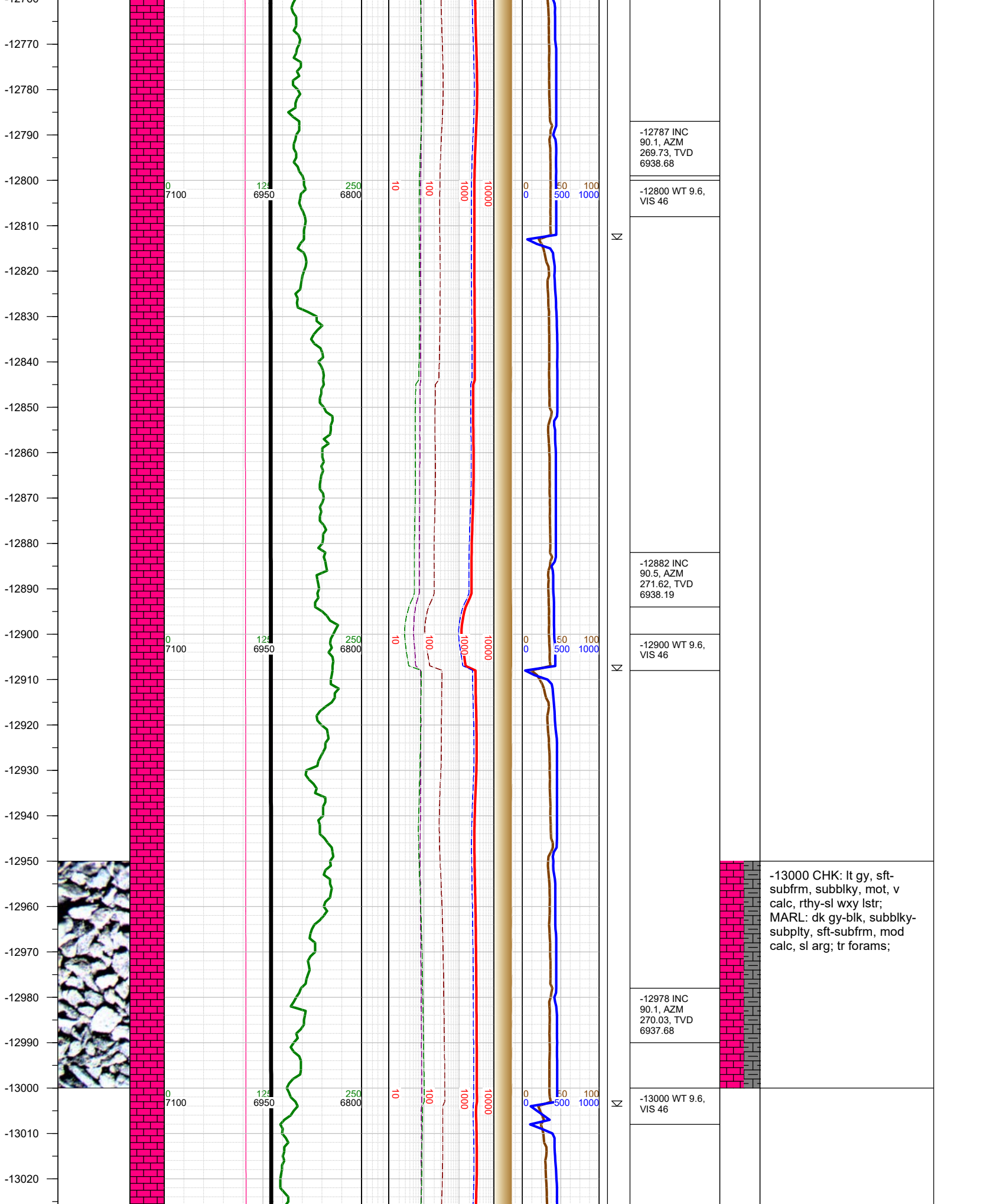




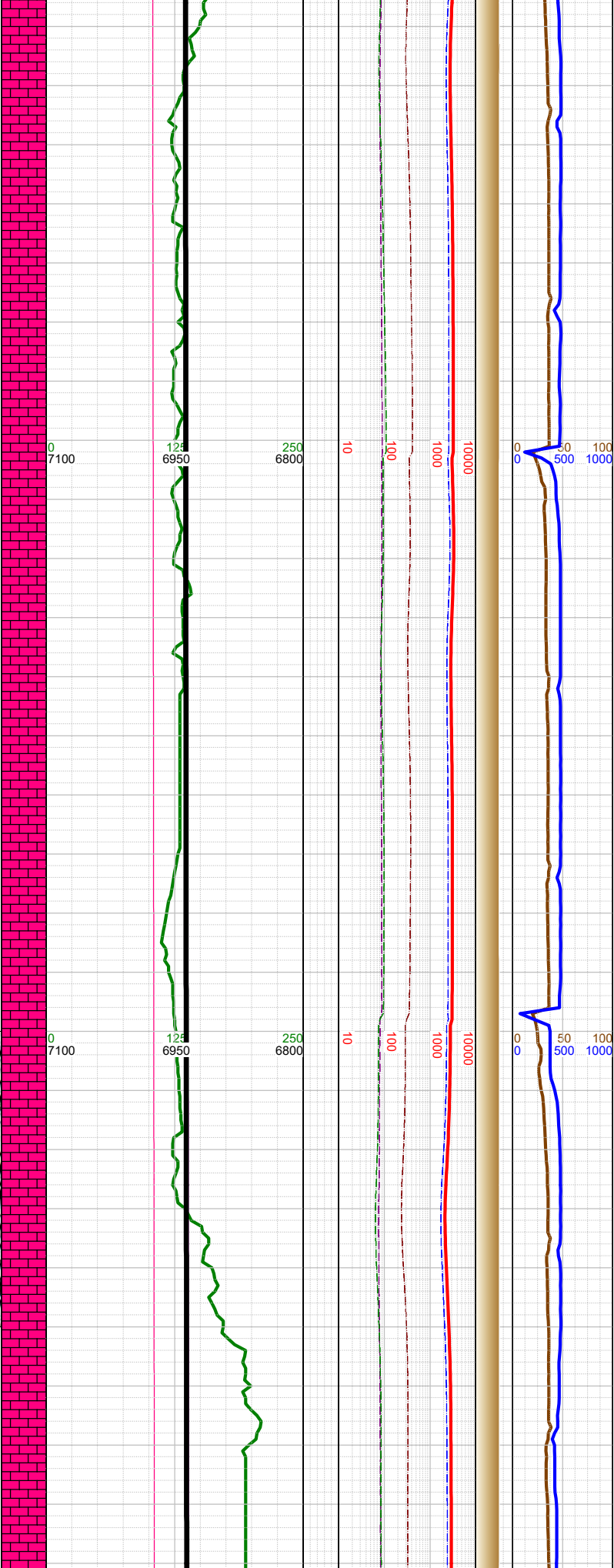








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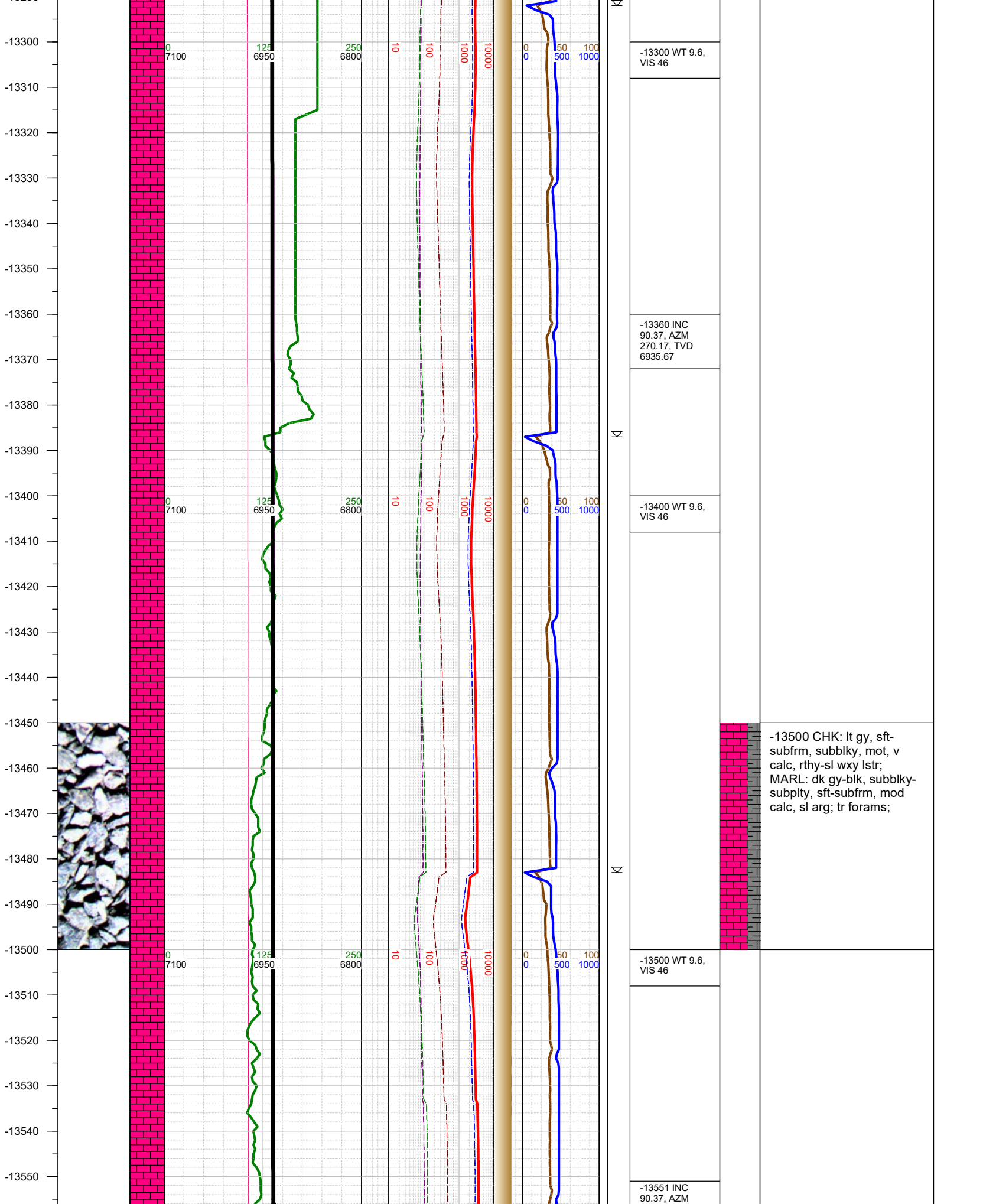
-13100 WT 9.6,  
VIS 46

-13169 INC  
90.37, AZM  
271.31, TVD  
6936.9

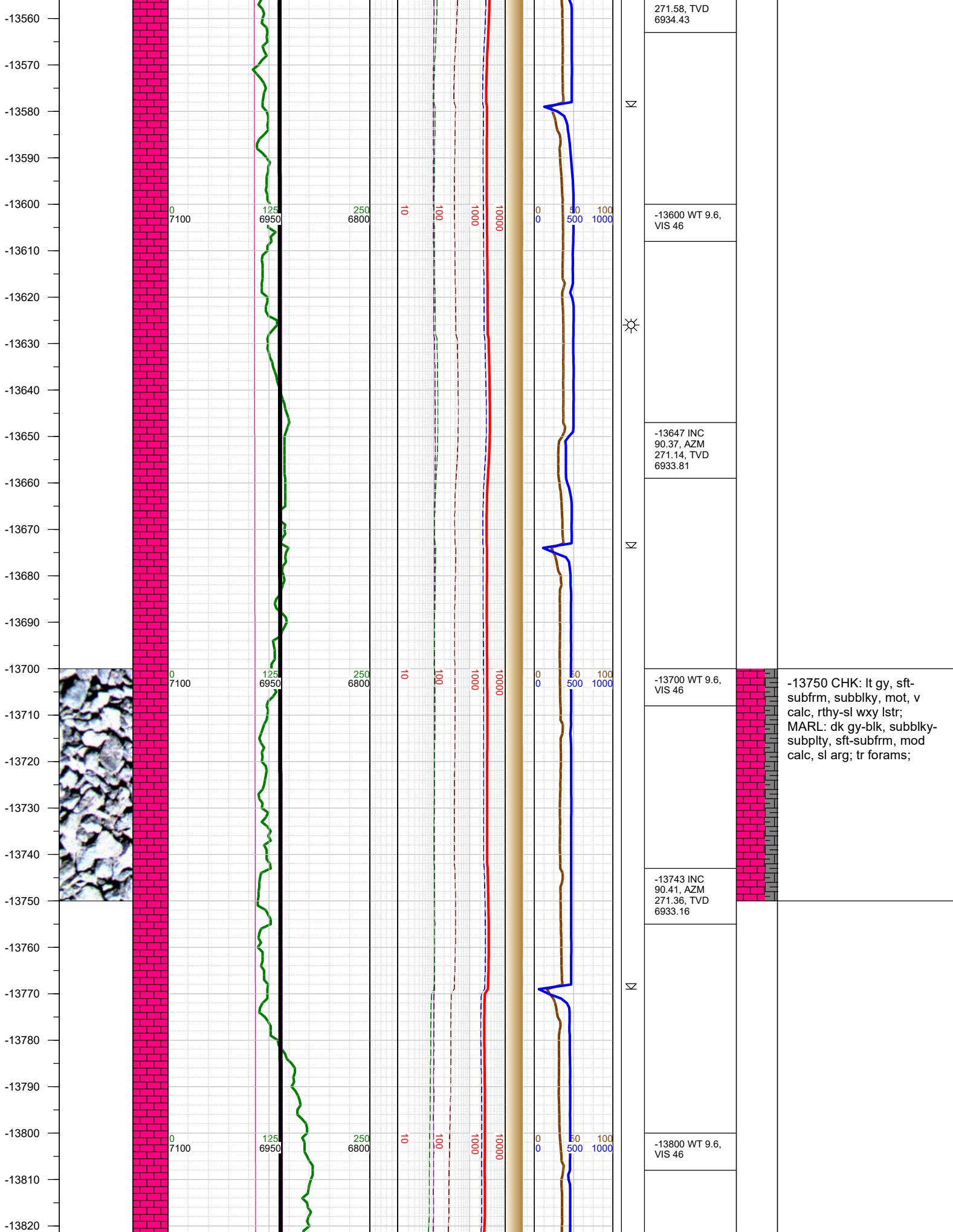
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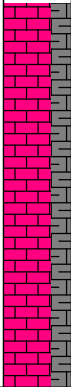
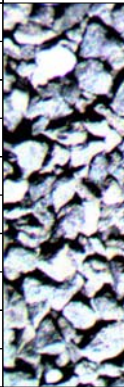
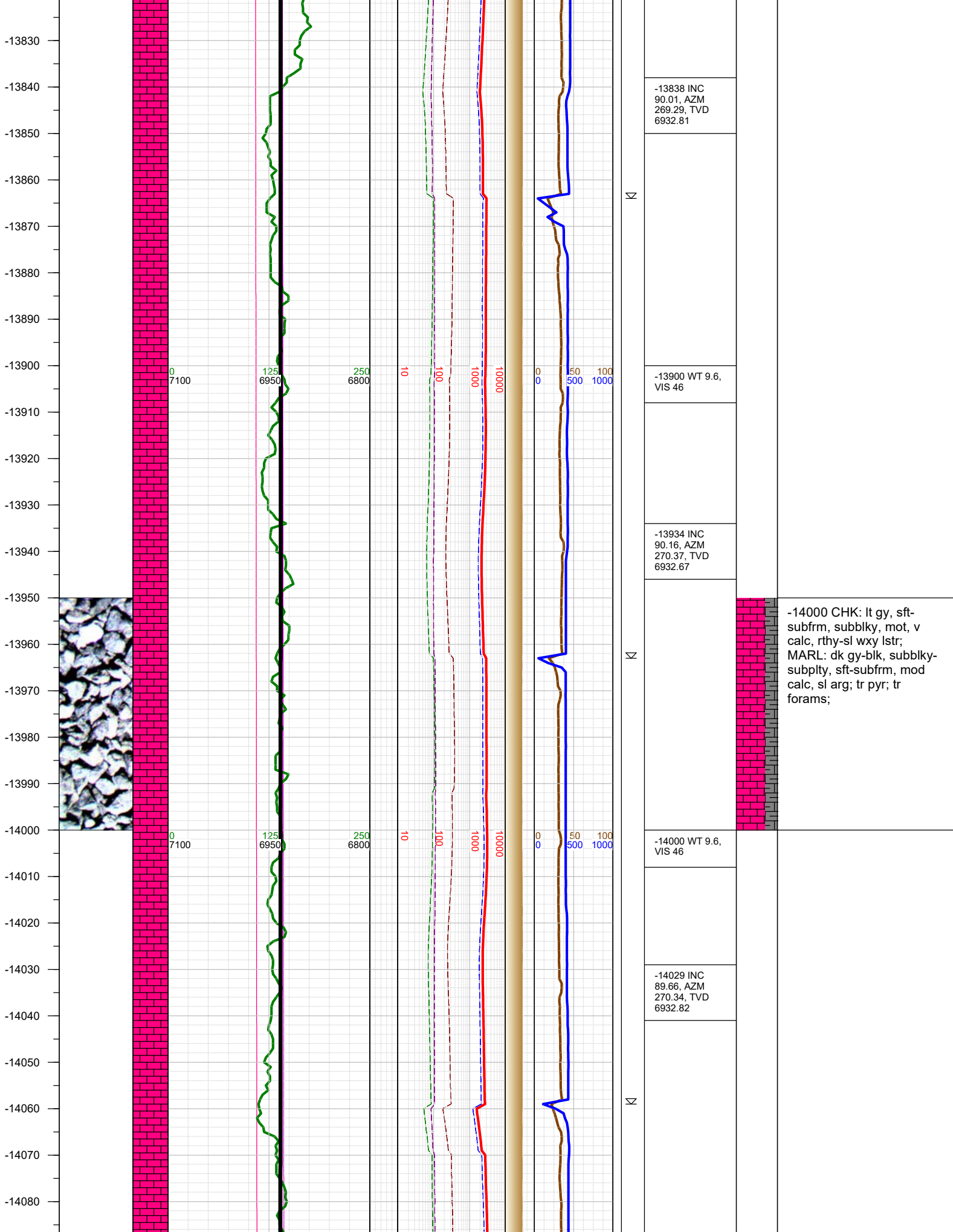
-13200 WT 9.6,  
VIS 46

-13250 CHK: lt gy, sft-  
subfrm, subblky, mot, v  
calc, rthy-sl wxy lstr;  
MARL: dk gy-blk, subblky-  
subply, sft-subfrm, mod  
calc, sl arg; tr forams;

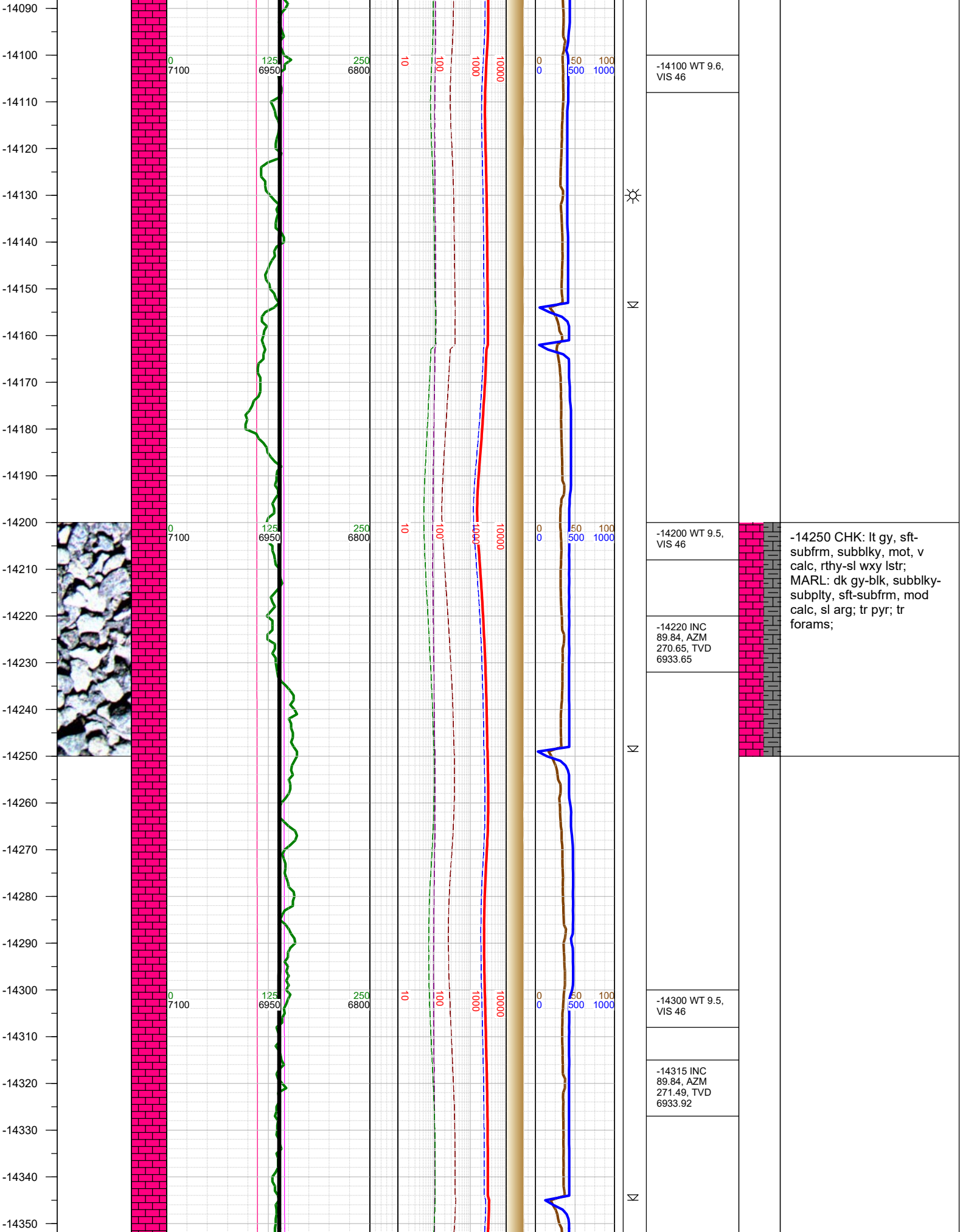








-14000 CHK: lt gy, sft-subfrm, subblky, mot, v calc, rthy-sl wxy lstr; MARL: dk gy-blk, subblky-subplty, sft-subfrm, mod calc, sl arg; tr pyr; tr forams;



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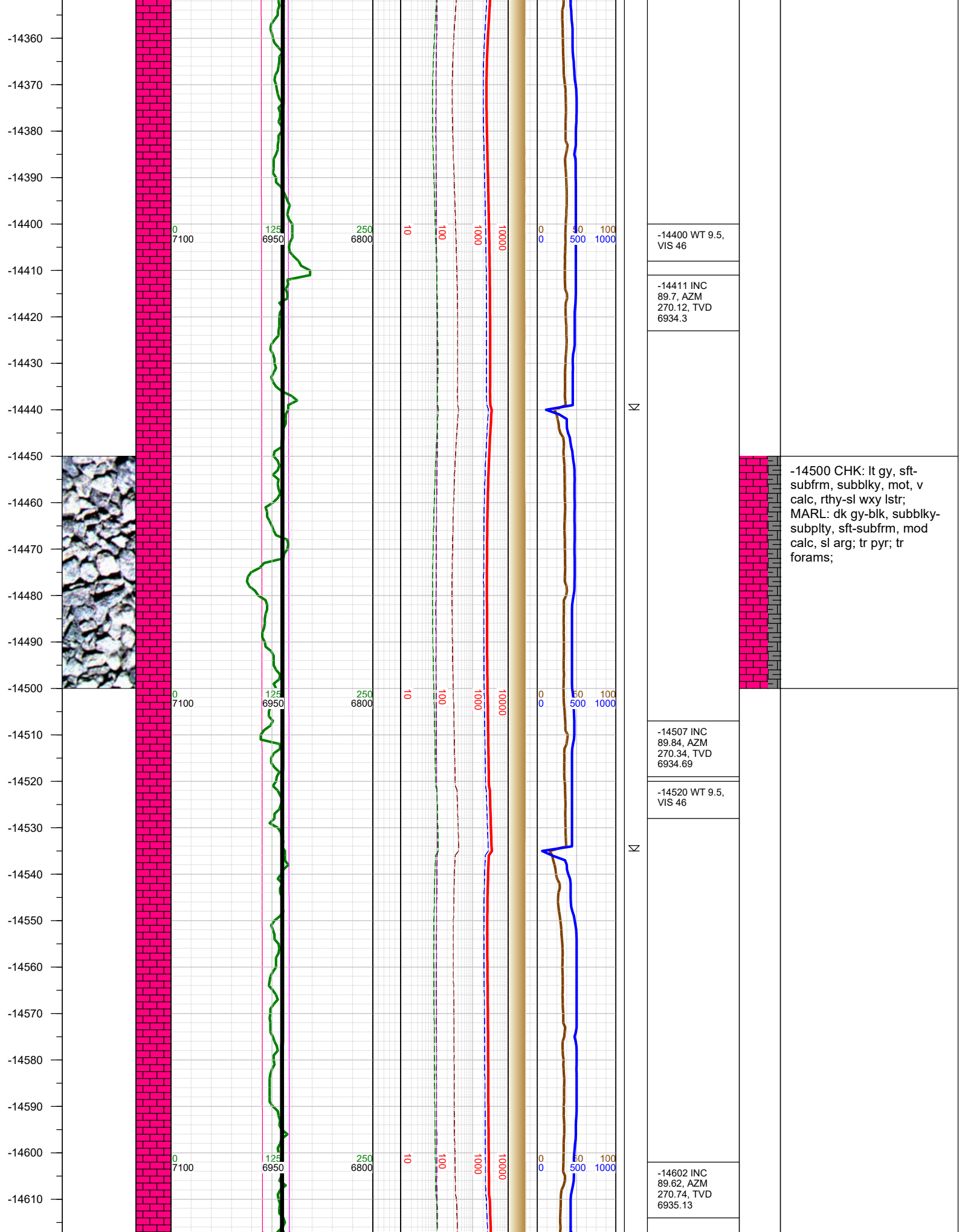
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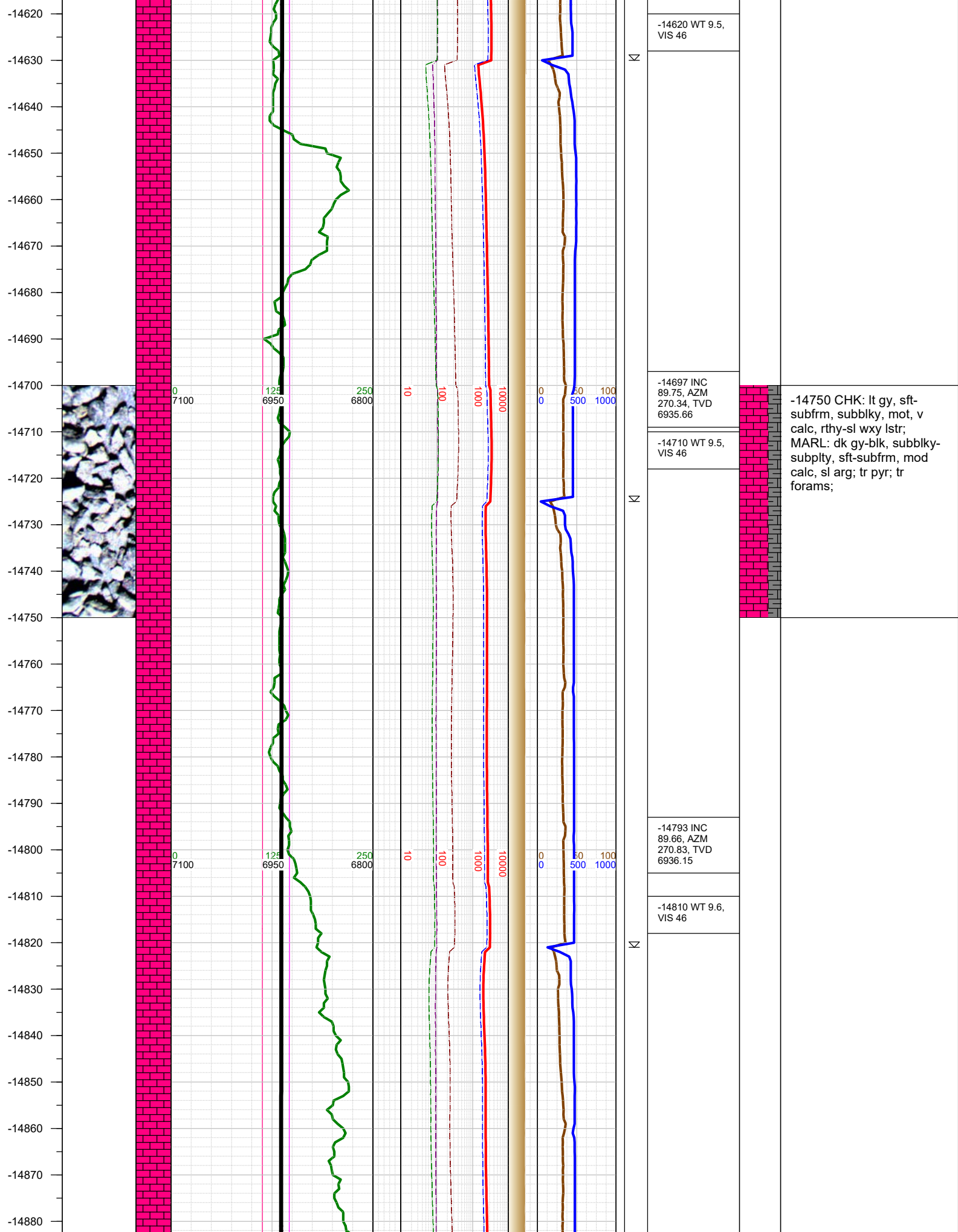
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-14100 WT 9.6, VIS 46	
-14200 WT 9.5, VIS 46	
-14220 INC 89.84, AZM 270.65, TVD 6933.65	
-14300 WT 9.5, VIS 46	
-14315 INC 89.84, AZM 271.49, TVD 6933.92	

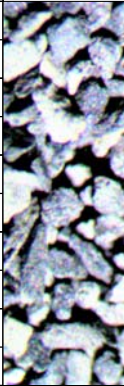
-14250 CHK: lt gy, sft-subfrm, subblky, mot, v calc, rthy-sl wxy lstr; MARL: dk gy-blk, subblky-subply, sft-subfrm, mod calc, sl arg; tr pyr; tr forams;







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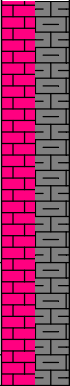
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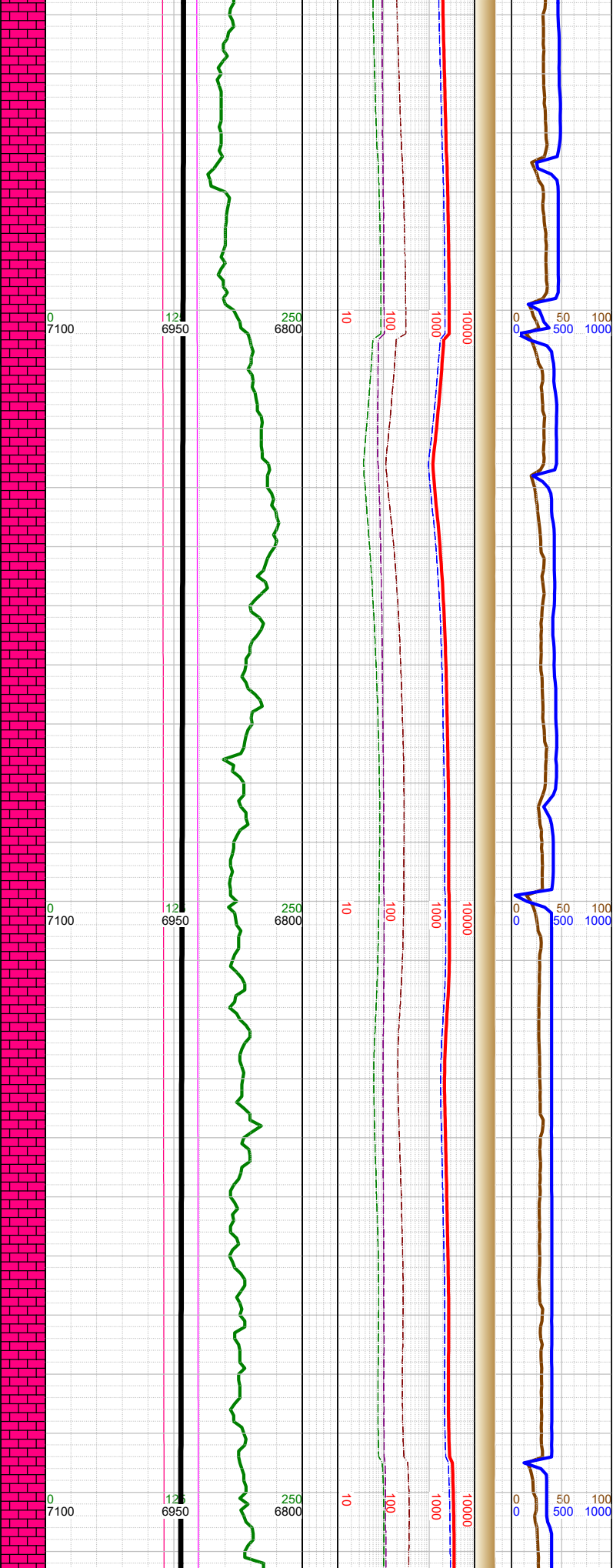
-14888 INC 89.75, AZM 270.96, TVD 6936.64
-14900 WT 9.6, VIS 46
-14984 INC 89.44, AZM 269.33, TVD 6937.32
-15000 WT 9.6, VIS 46
-15049 Fault: 2' up-throw; stayed in the C Marl
-15080 INC 89.53, AZM 270.03, TVD 6938.18
-15100 WT 9.6, VIS 46



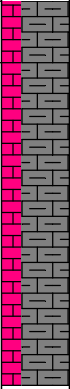
-15000 MARL: dk gy-blk,  
subblky-subply, sft-subfrm,  
mod calc, sl arg; CHK: lt  
gy, sft-subfrm, subblky,  
mot, v calc, rthy-sl wxy lstr;  
tr fos frags; tr pyr; tr bent;



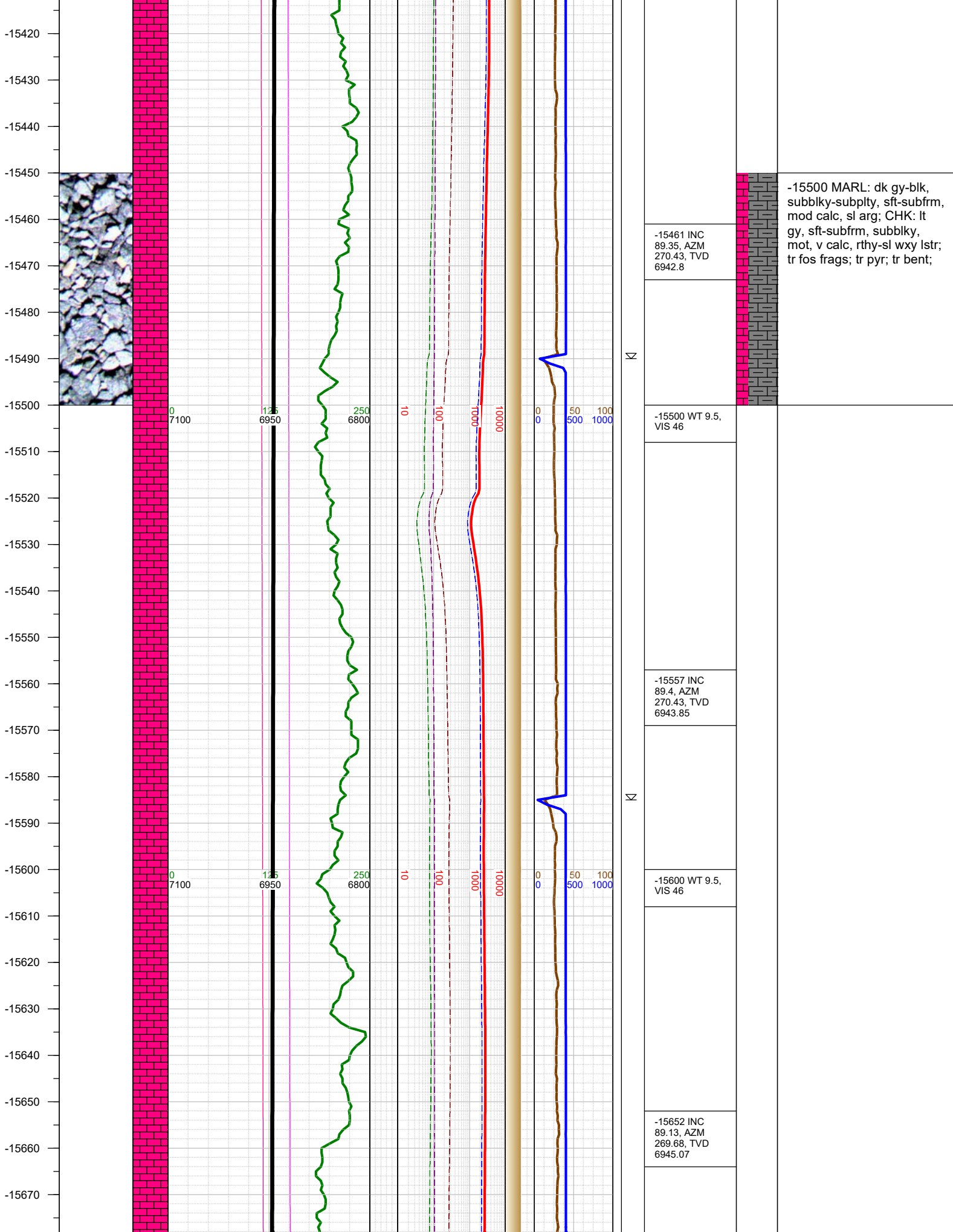
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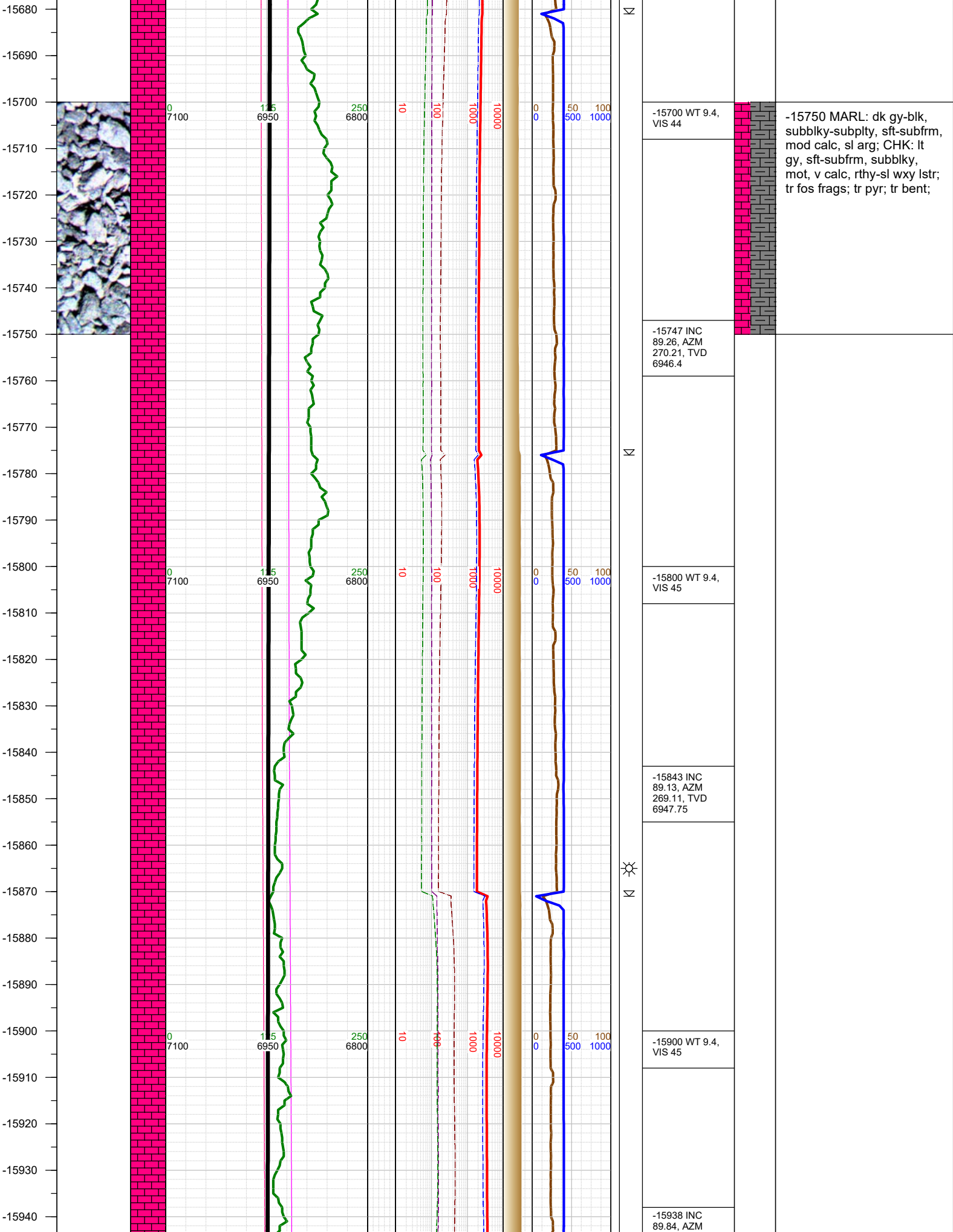


N	-15175 INC 89.44, AZM 270.3, TVD 6939.04	
	-15200 WT 9.6, VIS 47	
N	-15271 INC 89.17, AZM 268.84, TVD 6940.2	
	-15300 WT 9.6, VIS 47	
N	-15366 INC 89.17, AZM 269.15, TVD 6941.58	
	-15400 WT 9.5, VIS 46	

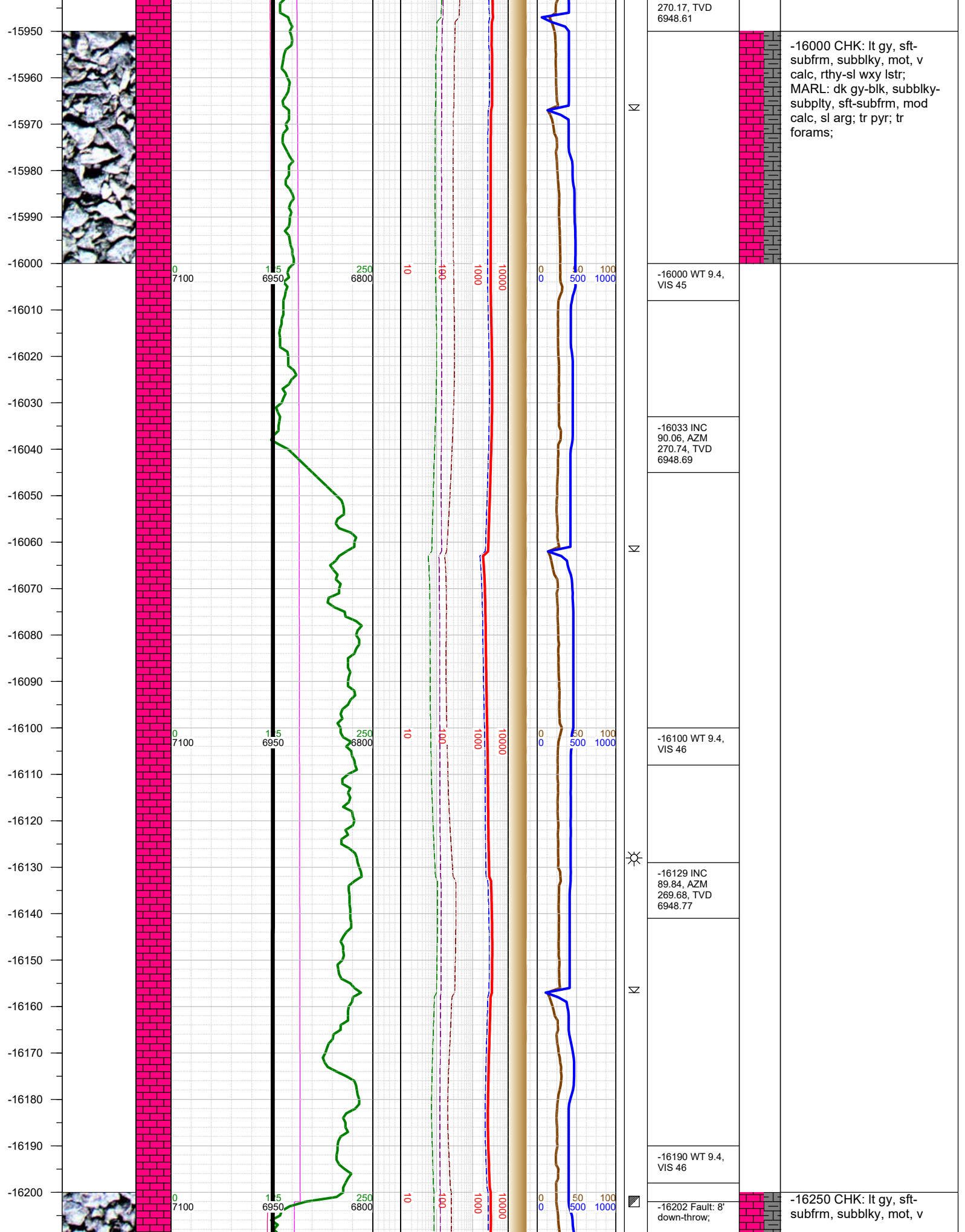


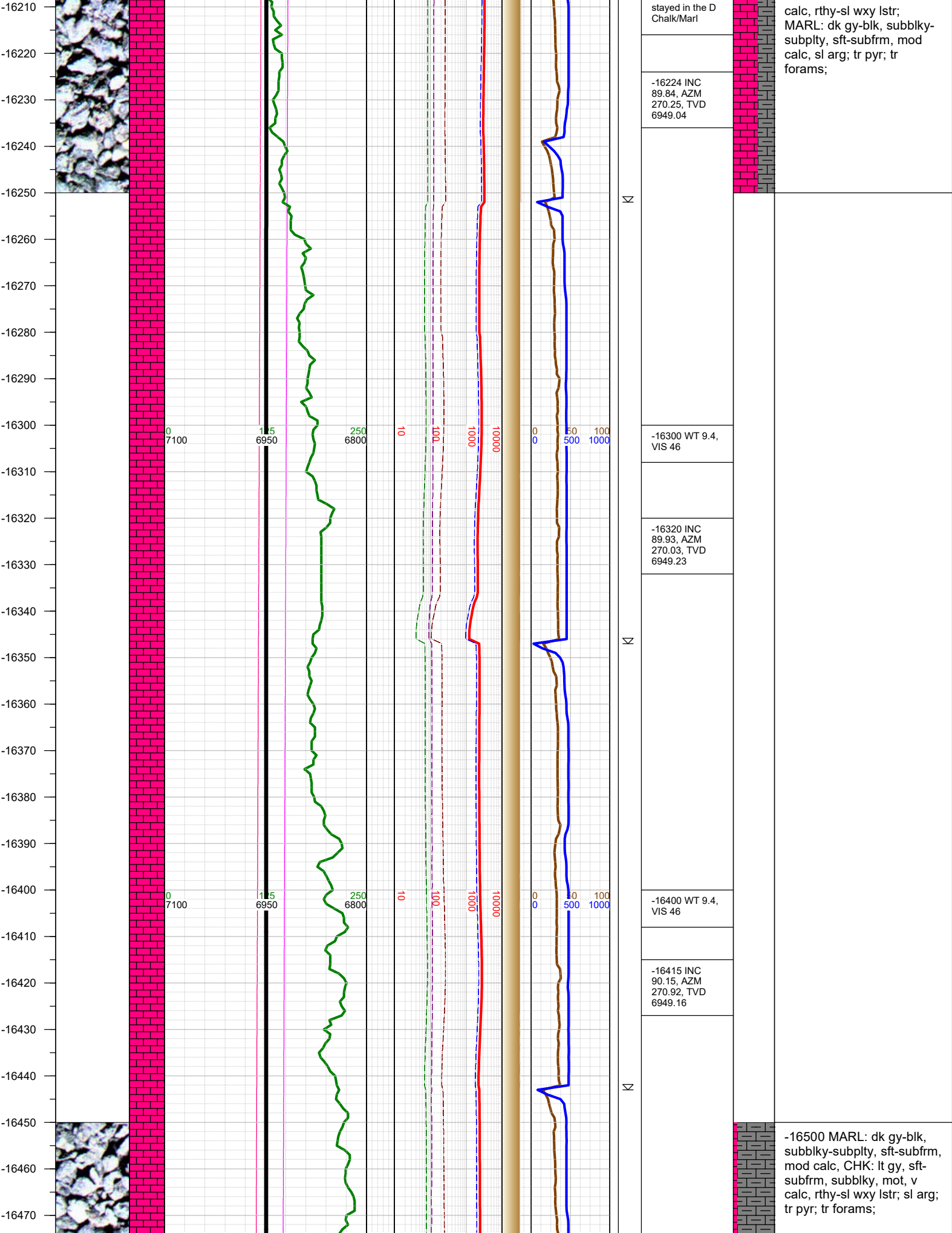
-15250 MARL: dk gy-blk, subblky-subplty, sft-subfrm, mod calc, sl arg; CHK: lt gy, sft-subfrm, subblky, mot, v calc, rthy-sl wxy lstr; tr fos frags; tr pyr; tr bent;

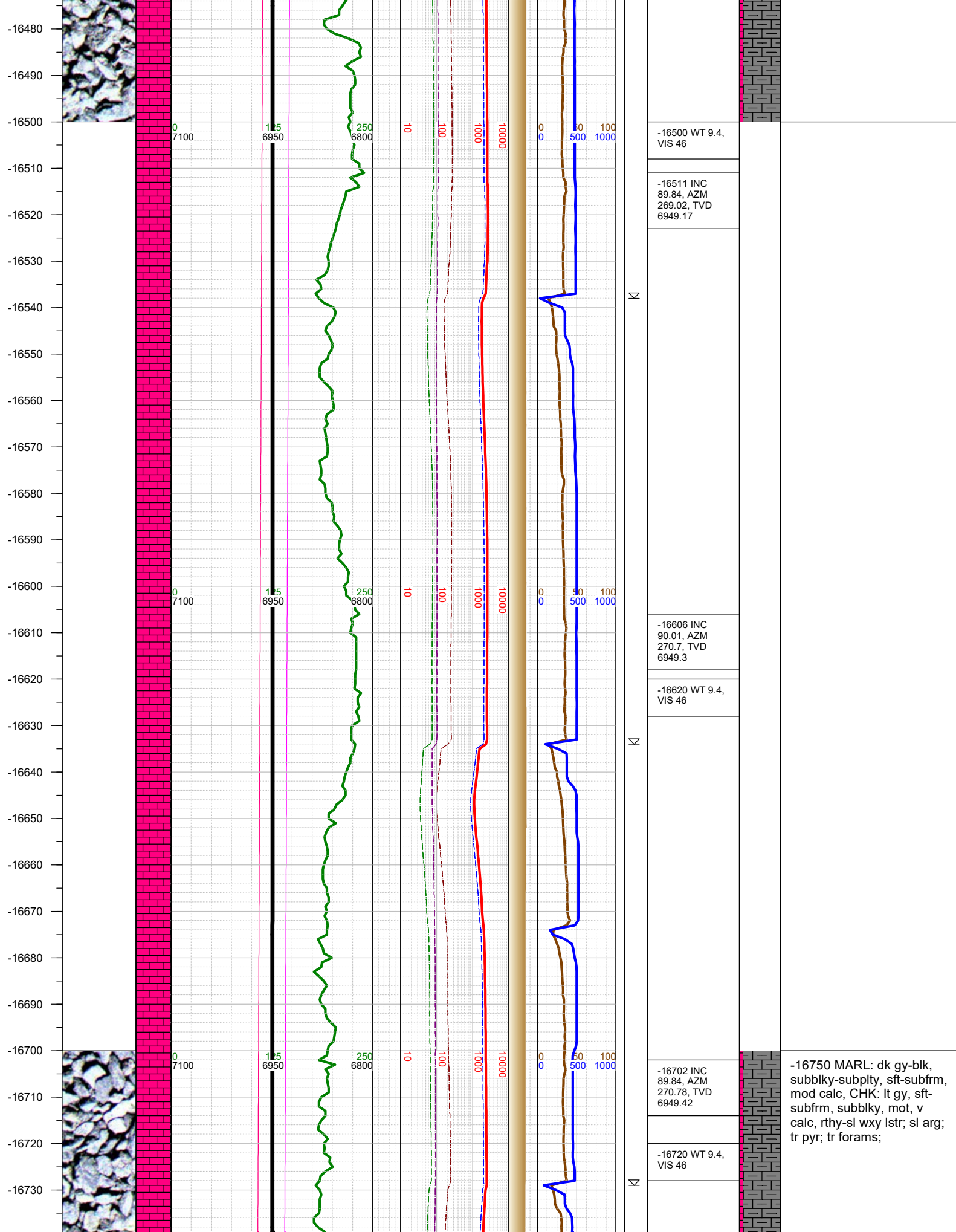




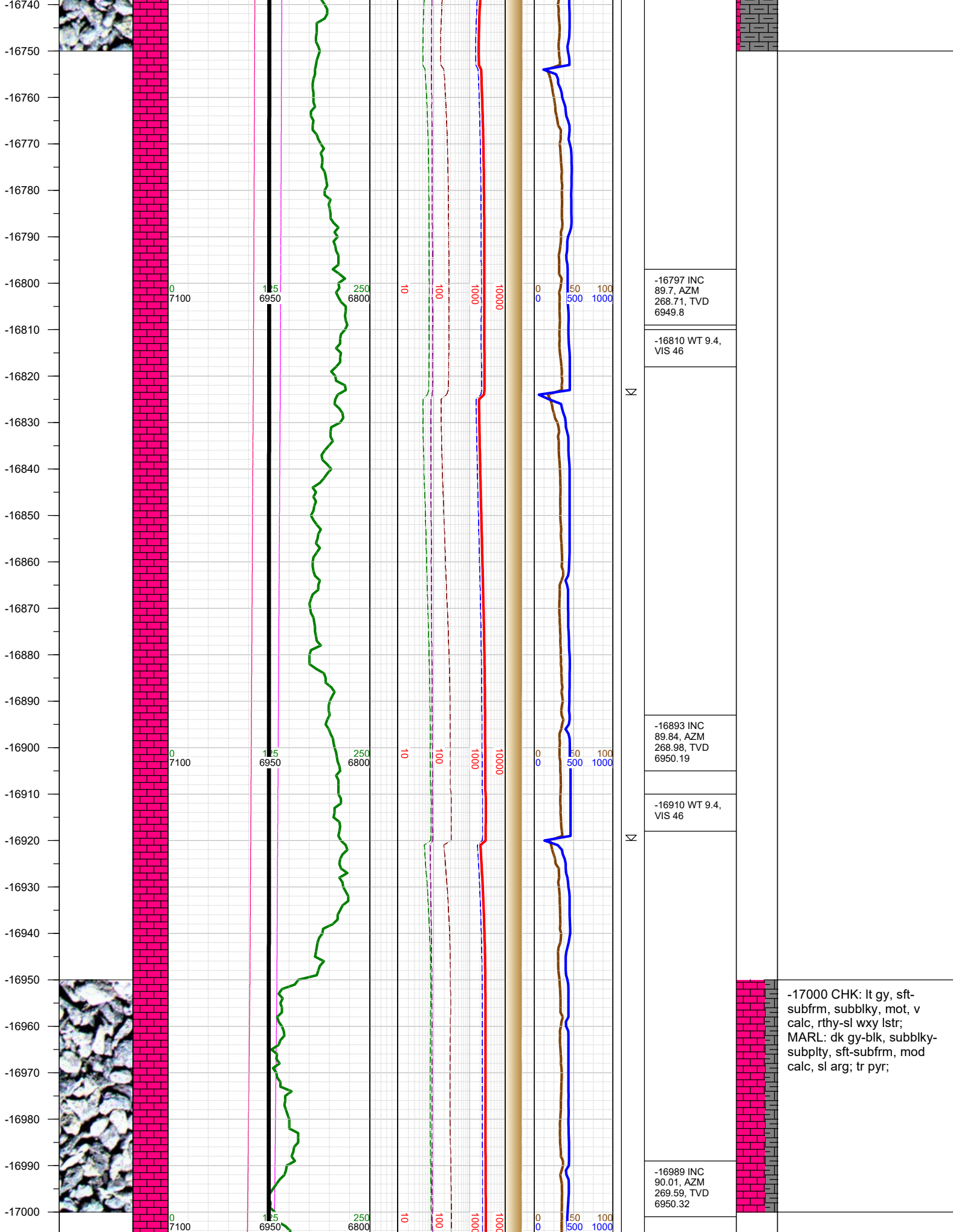


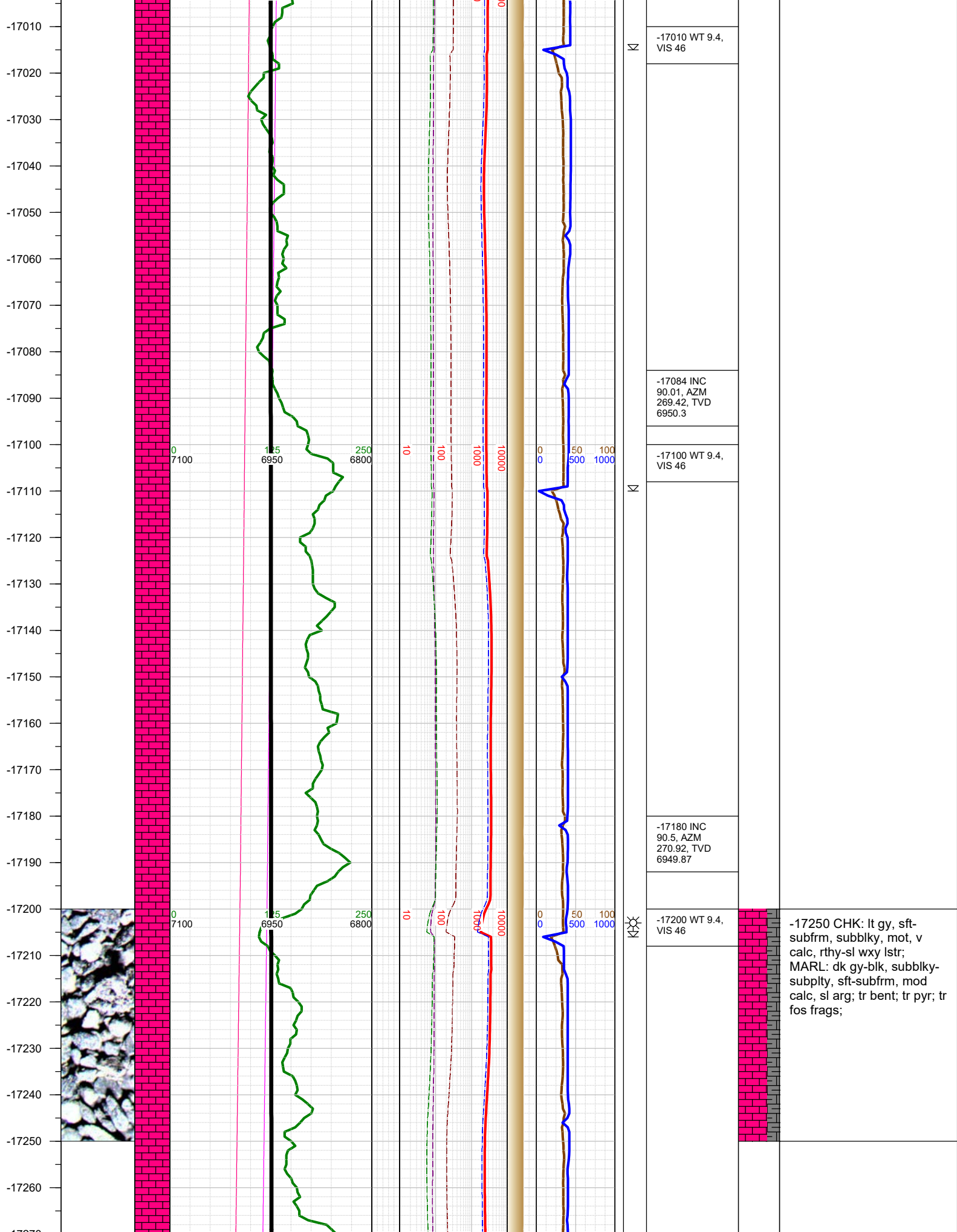




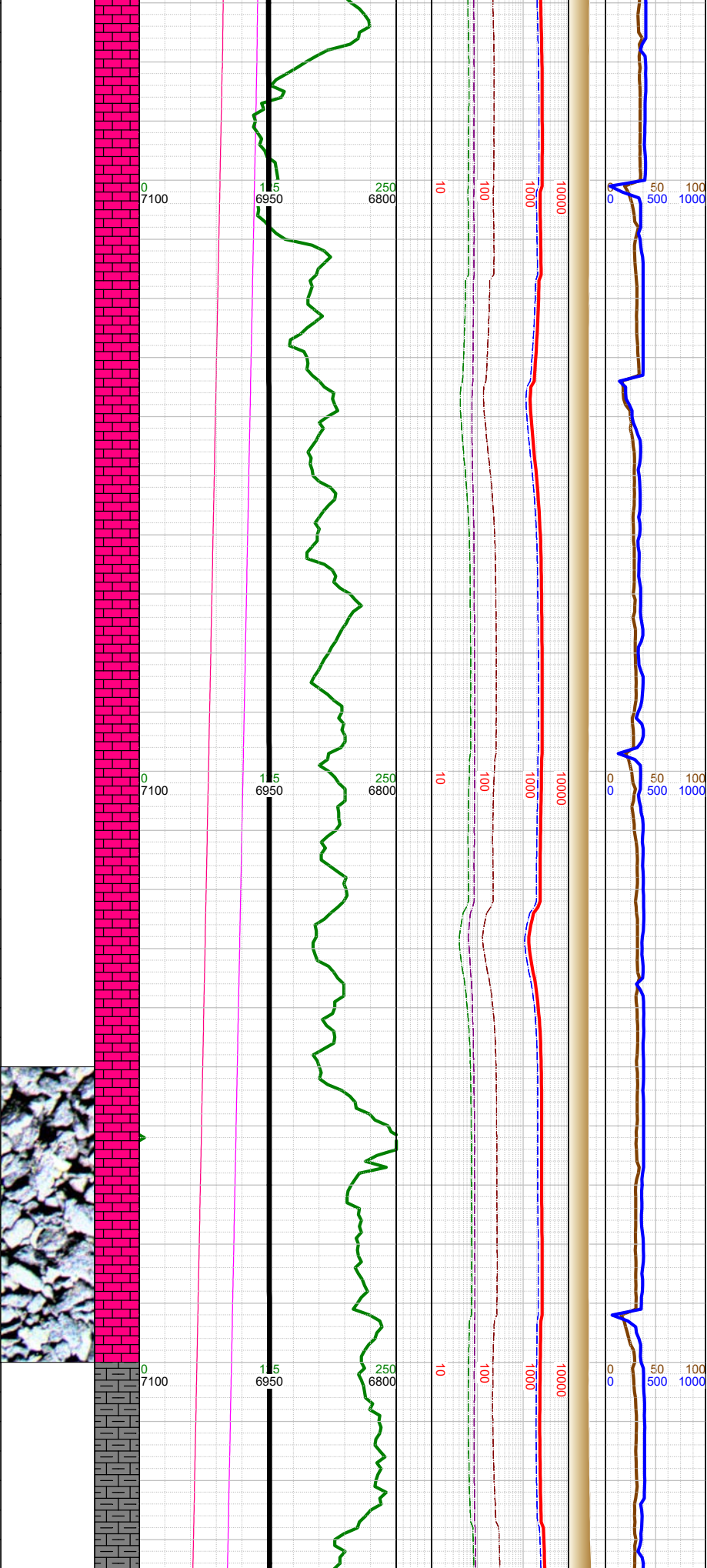








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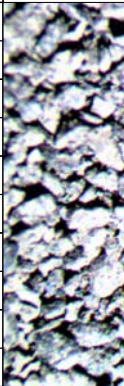


N	-17275 INC 90.37, AZM 270.56, TVD 6949.15
	-17300 WT 9.6, VIS 44
N	-17371 INC 90.28, AZM 269.55, TVD 6948.61
	-17400 WT 9.6, VIS 44
N	-17466 INC 90.1, AZM 269.11, TVD 6948.29
	-17500 WT 9.6, VIS 44

-17500 MARL: dk gy-blk,  
sbbiky-sbplty, sft-sbfrm,  
mod calc, sl arg; CHK: med  
gy, sft-sbfrm, sbbiky, mot,  
v calc, rthy lstr; tr fos frags;  
tr forams; tr bent; tr pyr;



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-17730  
-17740  
-17750  
-17760  
-17770  
-17780  
-17790  
17800



0  
7100

1.5  
6950

250  
6800

10

100

1000

10000

0  
0

50  
500

100  
1000

N

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-17562 INC  
90.19, AZM  
269.81, TVD  
6948.05

-17600 WT 9.6,  
VIS 44

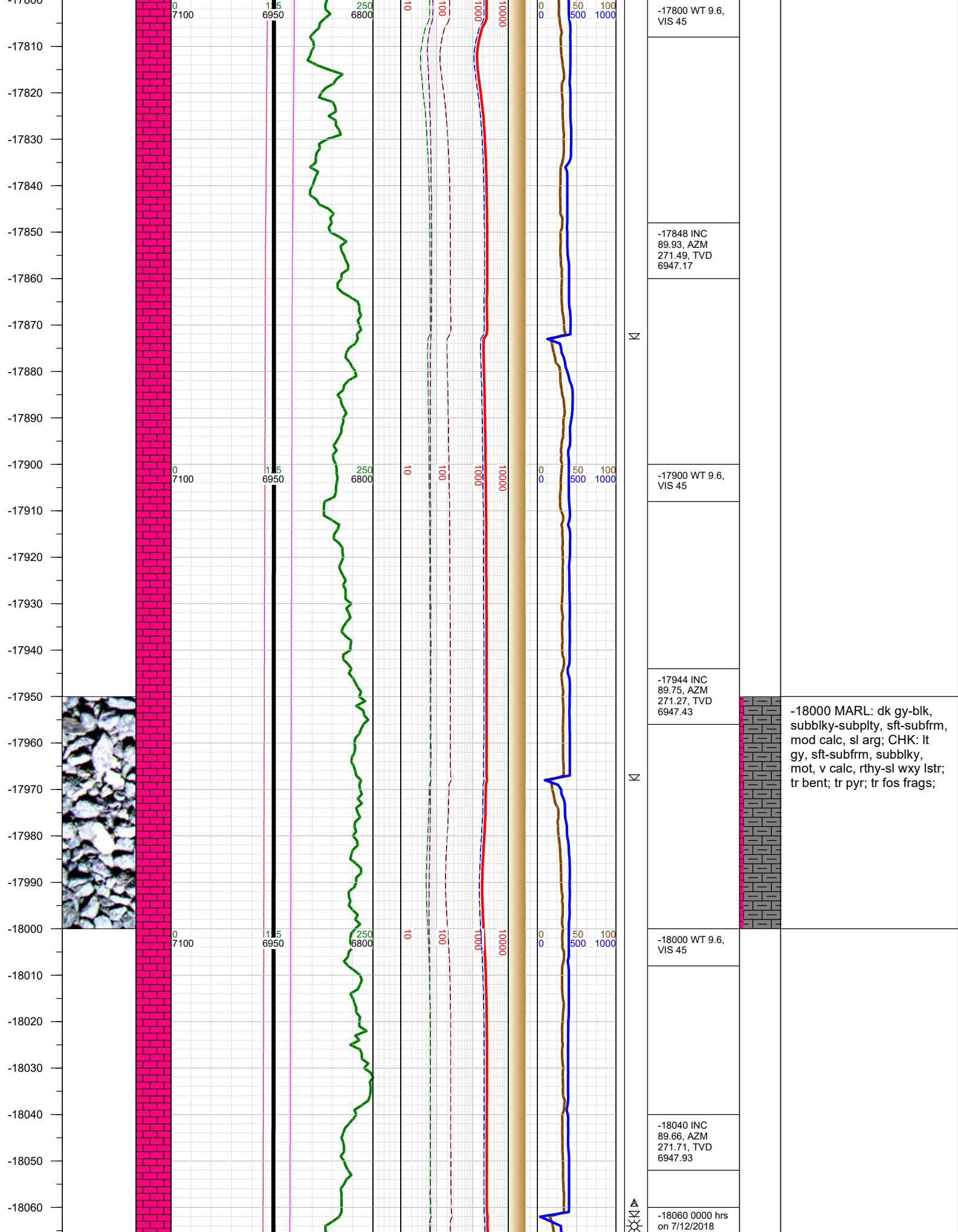
-17657 INC  
90.1, AZM  
269.2, TVD  
6947.81

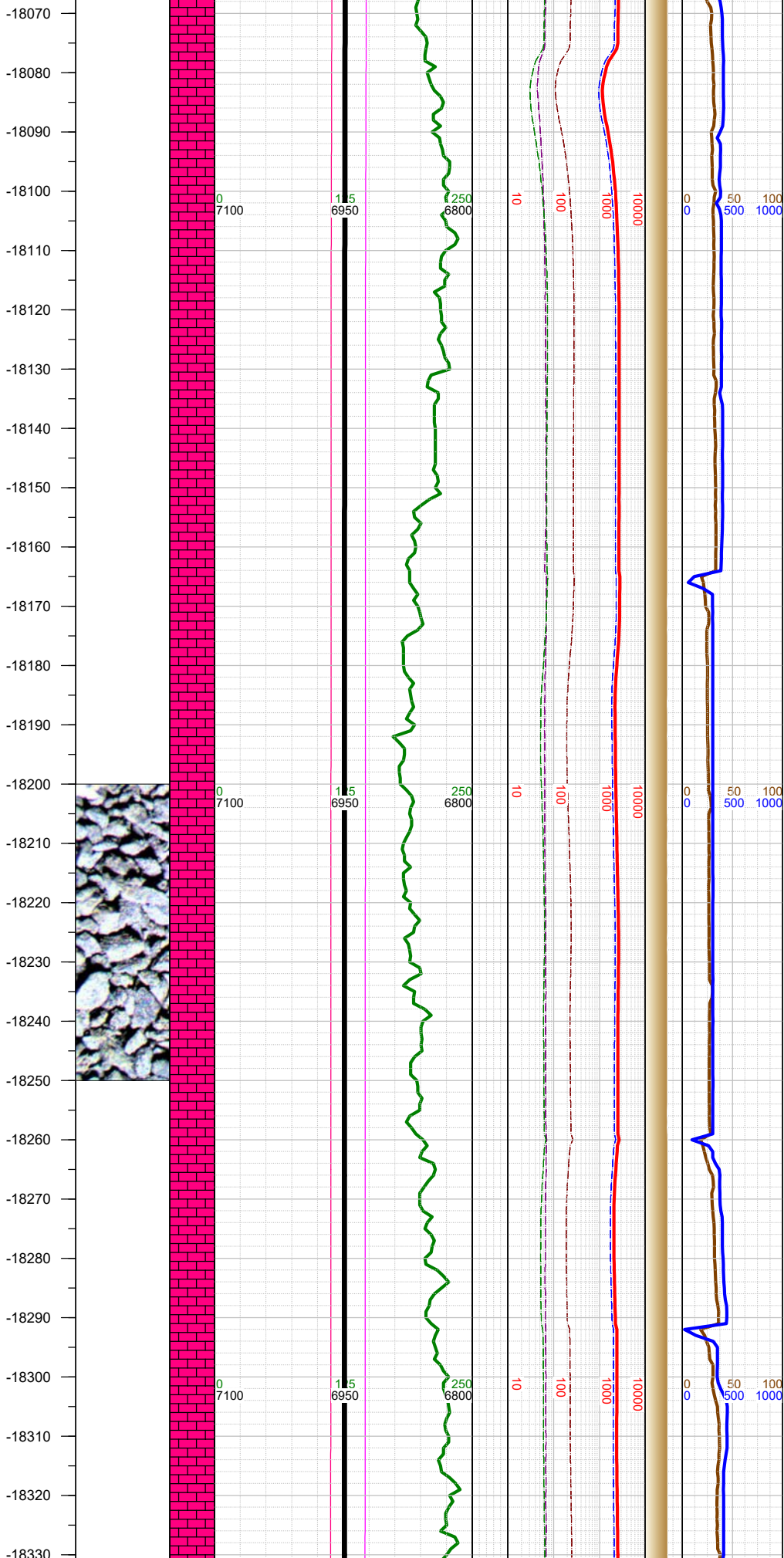
-17700 WT 9.6,  
VIS 45

-17747 Fault:  
111' up-throw;  
went from B2  
Chalk to D  
Chalk/Marl

-17753 INC  
90.37, AZM  
271.18, TVD  
6947.41

-17750 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;

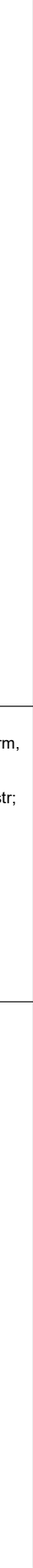
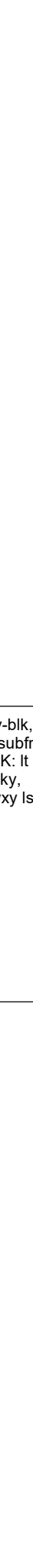
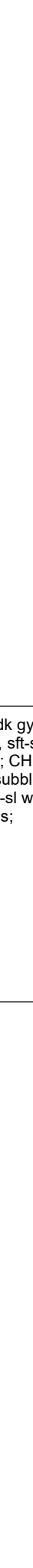
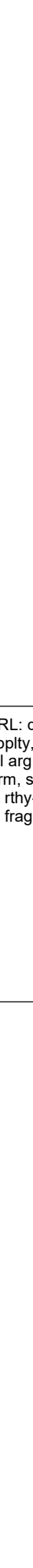
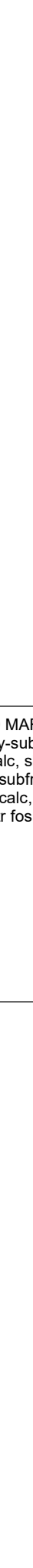
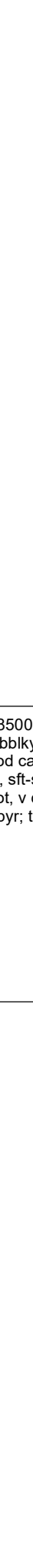
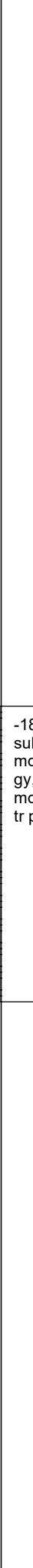
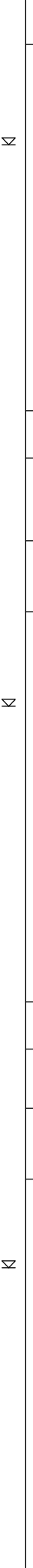
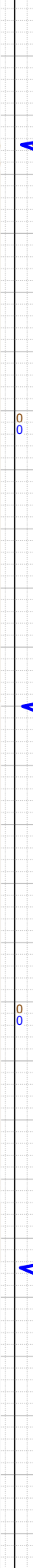
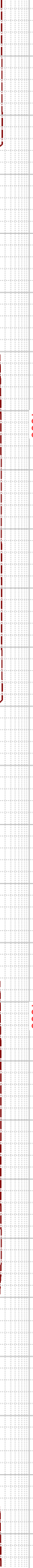
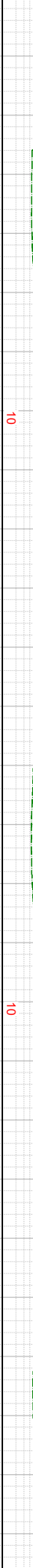
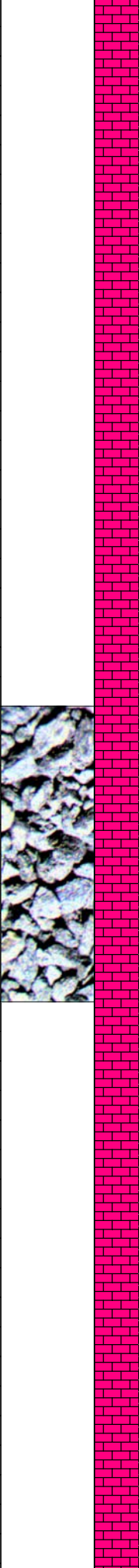




-18100 WT 9.6, VIS 44		
-18135 INC 89.35, AZM 269.86, TVD 6948.75		
-18200 WT 9.6, VIS 44	-18250 MARL: dk gy-blk, subblky-subplty, sft-subfrm, mod calc, sl arg; CHK: lt gy, sft-subfrm, subblky, mot, v calc, rthy-sl wxy lstr; tr pyr;	
-18231 INC 90.23, AZM 272.11, TVD 6949.1		
-18300 WT 9.6, VIS 44		
-18326 INC		



-18340  
-18350  
-18360  
-18370  
-18380  
-18390  
-18400  
-18410  
-18420  
-18430  
-18440  
-18450  
-18460  
-18470  
-18480  
-18490  
-18500  
-18510  
-18520  
-18530  
-18540  
-18550  
-18560  
-18570  
-18580  
-18590

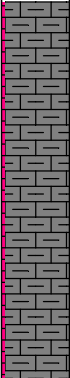


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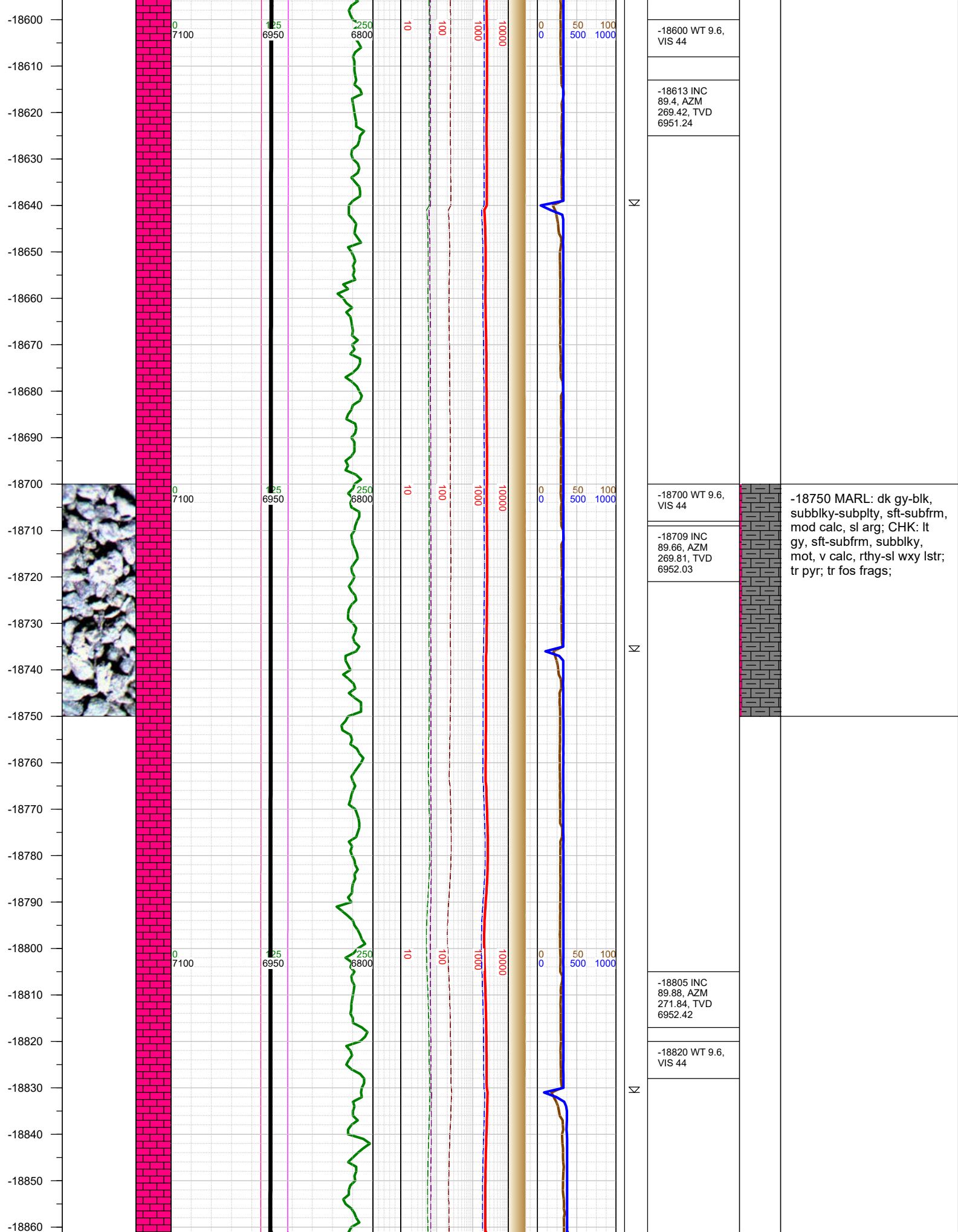
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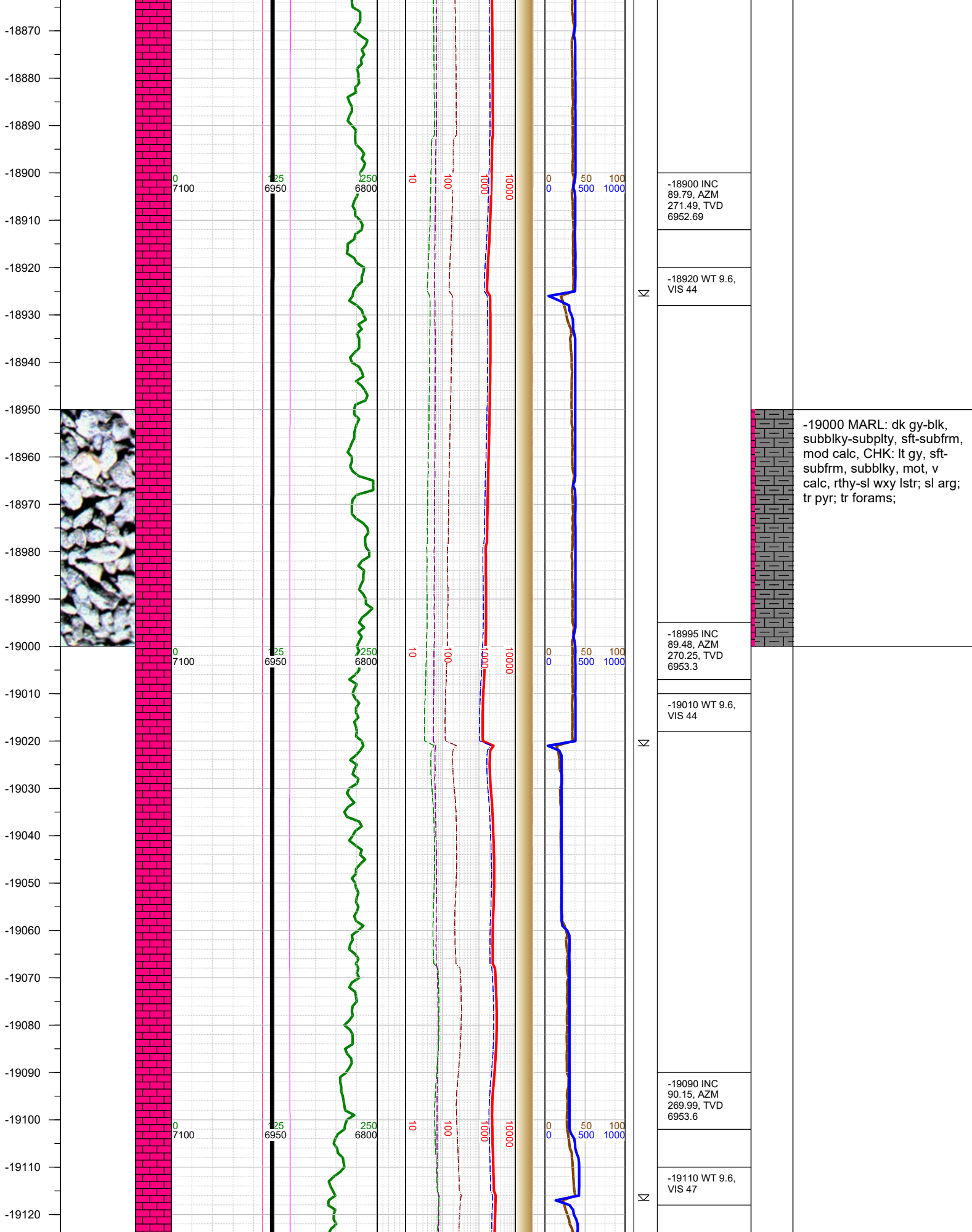
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89.93, AZM 269.9, TVD 6948.97
-18400 WT 9.6, VIS 44
-18422 INC 89.57, AZM 269.68, TVD 6949.39
-18500 WT 9.6, VIS 44
-18518 INC 89.4, AZM 269.37, TVD 6950.25

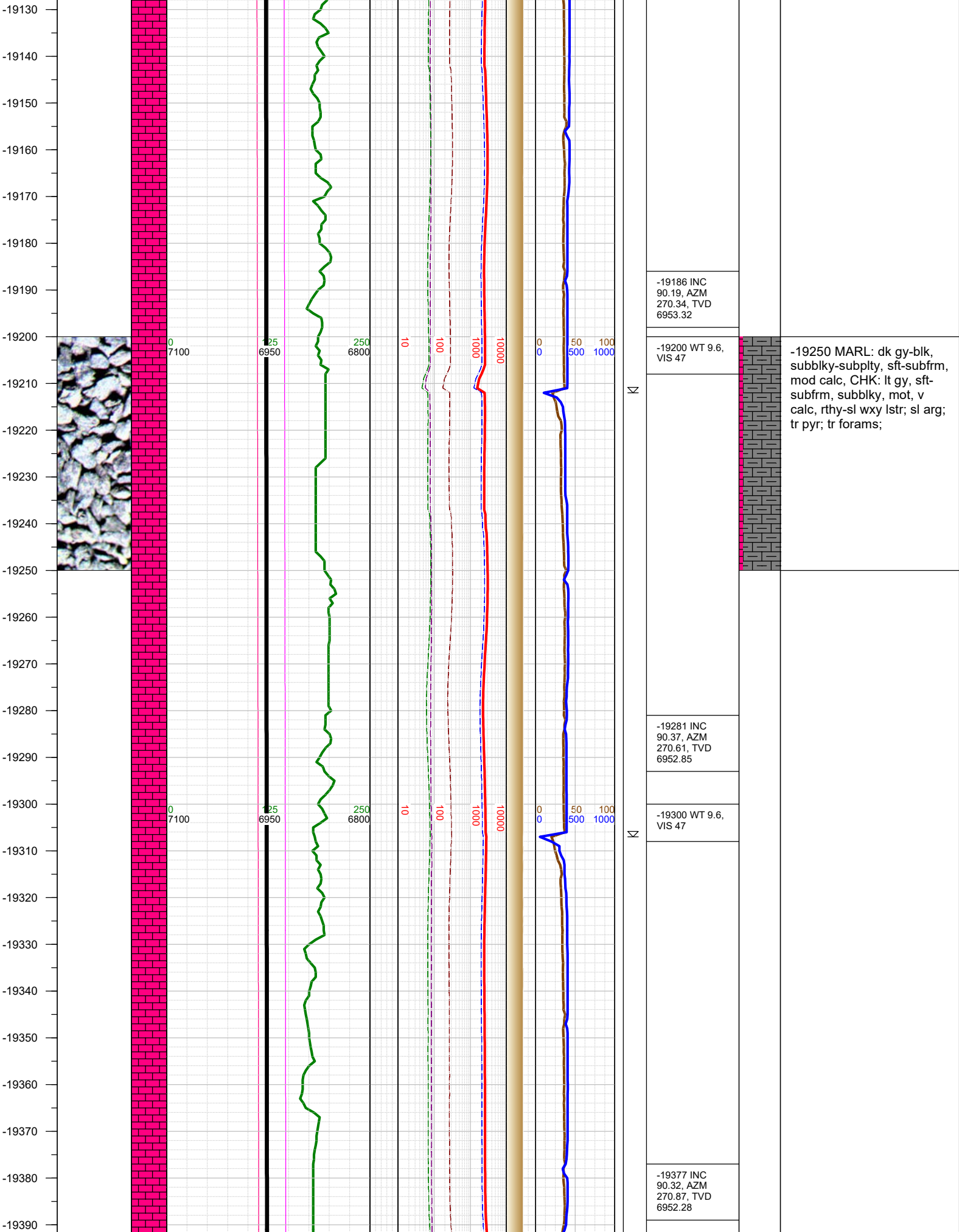


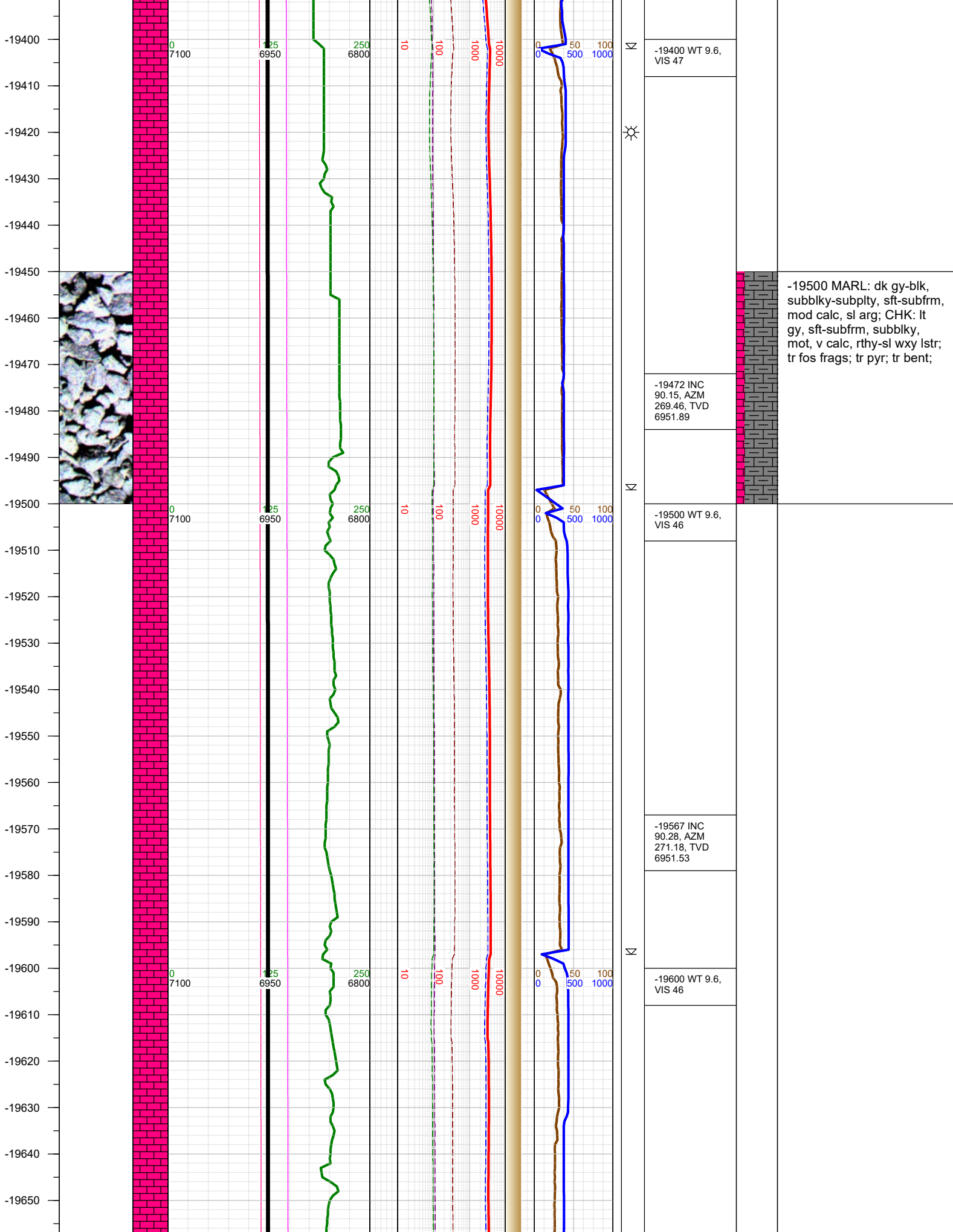
-18500 MARL: dk gy-blk,  
subblky-subplty, sft-subfrm,  
mod calc, sl arg; CHK: lt  
gy, sft-subfrm, subblky,  
mot, v calc, rthy-sl wxy lstr;  
tr pyr; tr fos frags;





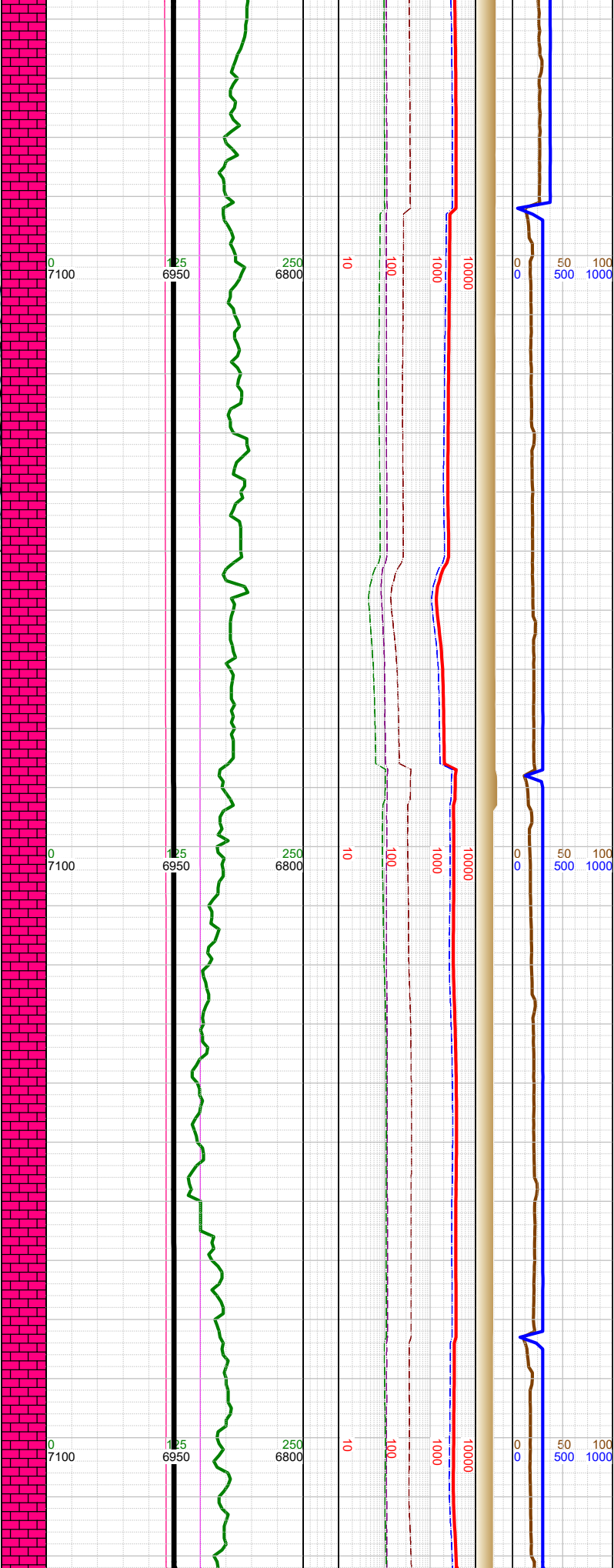
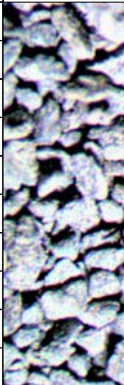






-19500 MARL: dk gy-blk, subblky-subplty, sft-subfrm, mod calc, sl arg; CHK: lt gy, sft-subfrm, subblky, mot, v calc, rthy-sl wxy lstr; tr fos frags; tr pyr; tr bent;

-19660  
-19670  
-19680  
-19690  
-19700  
-19710  
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-19800  
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-19880  
-19890  
-19900  
-19910  
-19920



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-19663 INC  
89.75, AZM  
269.33, TVD  
6951.5

-19700 WT 9.6,  
VIS 46

-19758 INC  
90.23, AZM  
269.73, TVD  
6951.52

-19800 WT 9.6,  
VIS 46

-19854 INC  
90.19, AZM  
270.25, TVD  
6951.17

-19900 WT 9.6,  
VIS 47

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



