

OPERATOR: **Extraction Oil & Gas**

WELL NAME: **VT LDS 4-16-18**

FIELD NAME: DJ Basin - Wattenberg

DRILLING RIG: Patterson 901

API #: 05-123-44420

LAT/LONG: 40.40128, -104.65697

SURFACE HOLE: SWNW S15-T5N-R65W, 1898' FNL, 531' FWL

BOTTOM HOLE: S18-T5N-R65W, 1672' FNL, 460' FWL



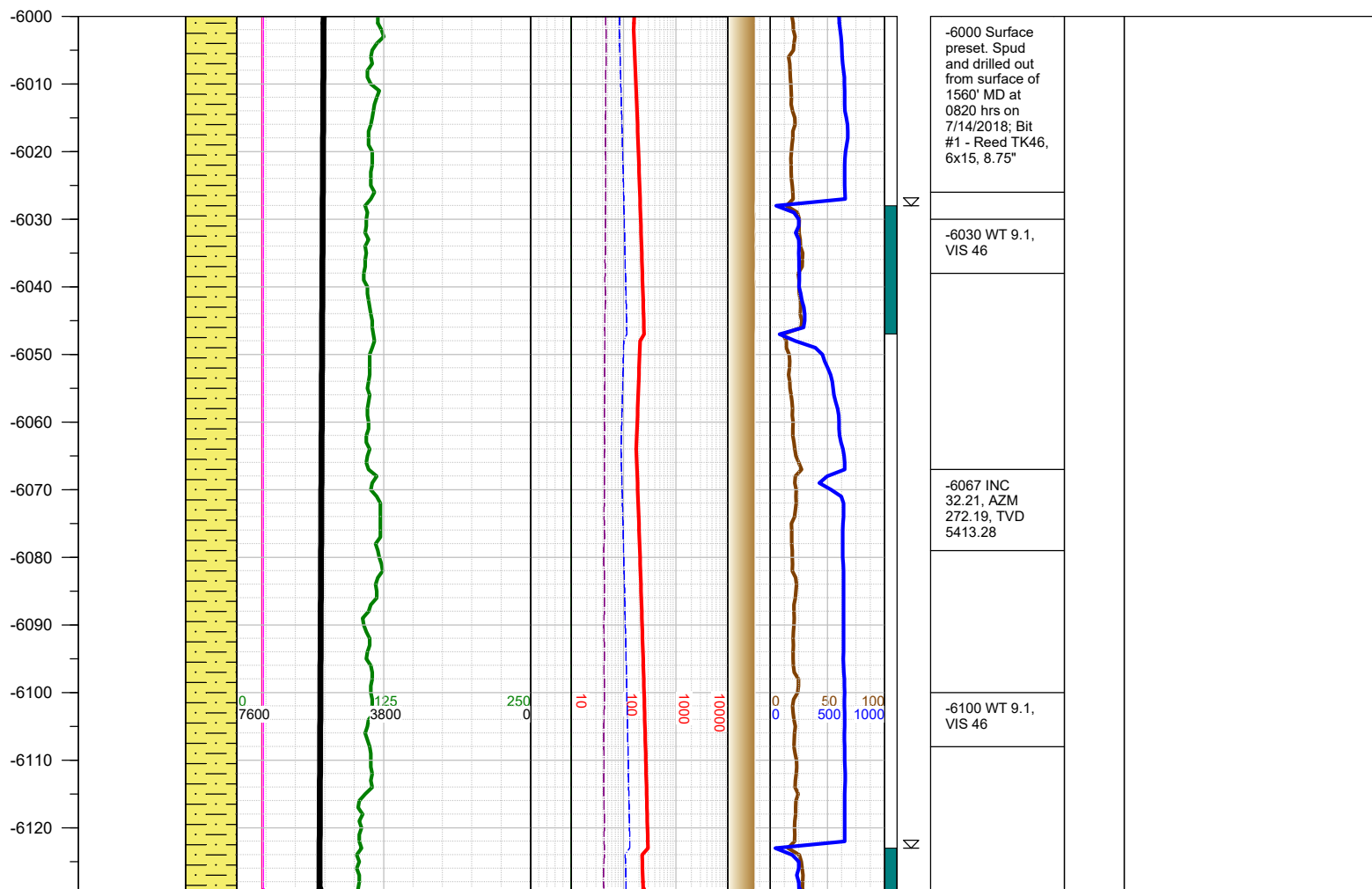
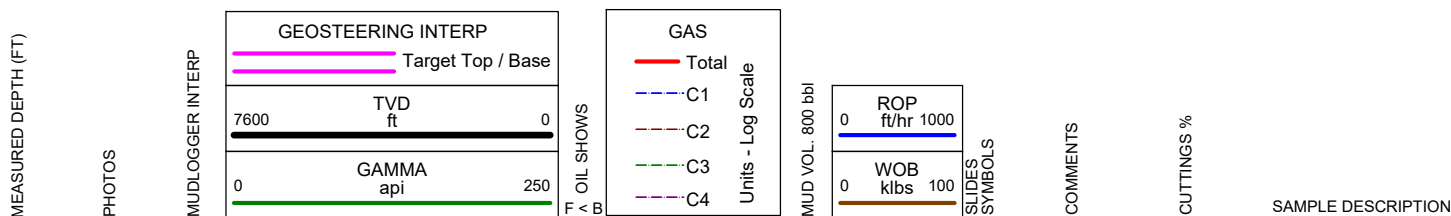
Earth Science Agency, LLC

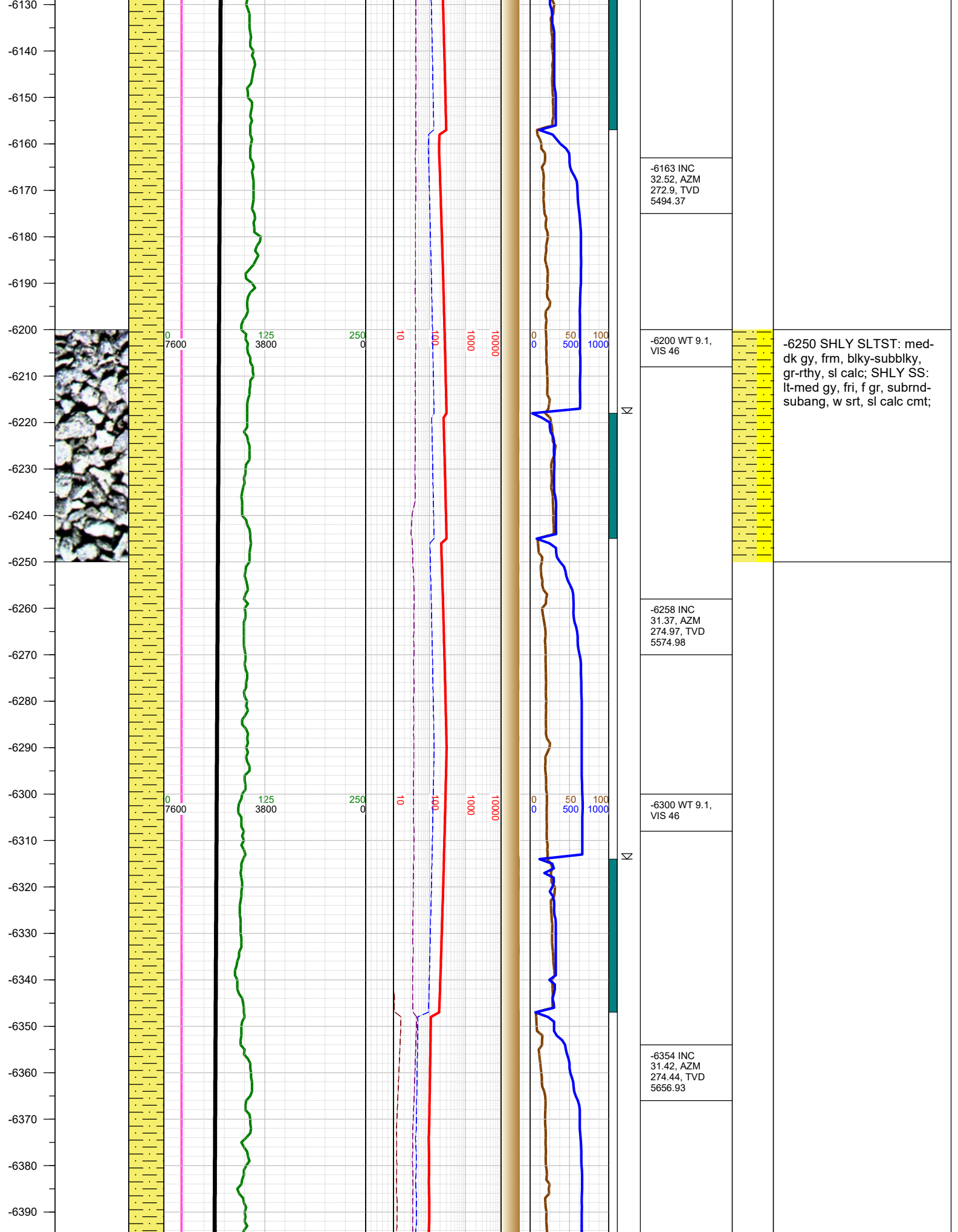
COUNTY: Weld  
STATE: Colorado  
GROUND ELEVATION: 4647'  
KELLY BUSHING: 4676'  
DRILLING FLUID: OBM  
TVD VS. MD: 6874' / 20248'  
SPUD DATE: July 14, 2018  
TD DATE: July 17, 2018  
  
DEPTHS LOGGED: 6000' - 20248'  
DATES LOGGED: July 14, 2018 - July 17, 2018  
GEOLOGISTS: Blake Eatherton, Dan Jacobs  
SCALE: 5" = 100'

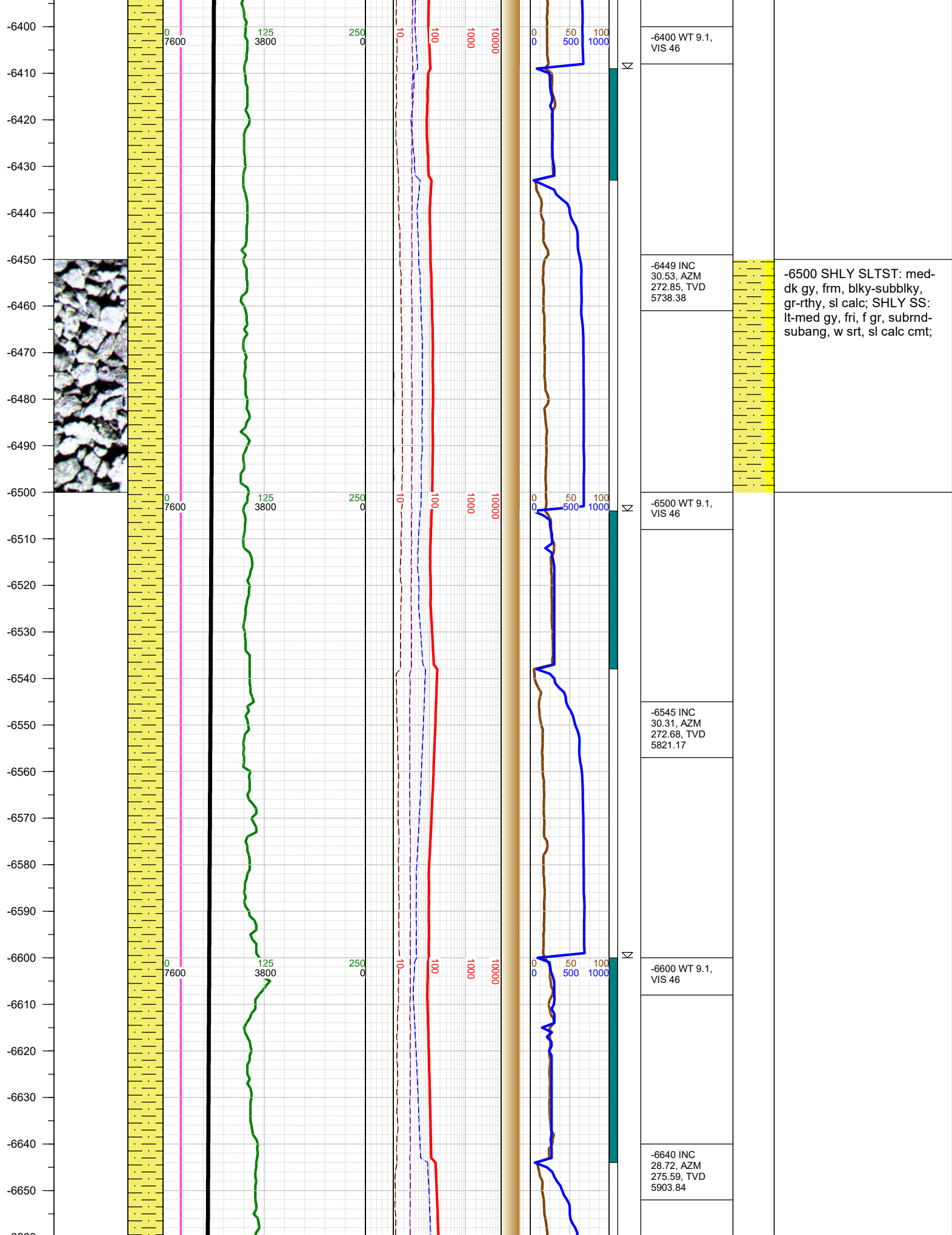
#### LEGEND

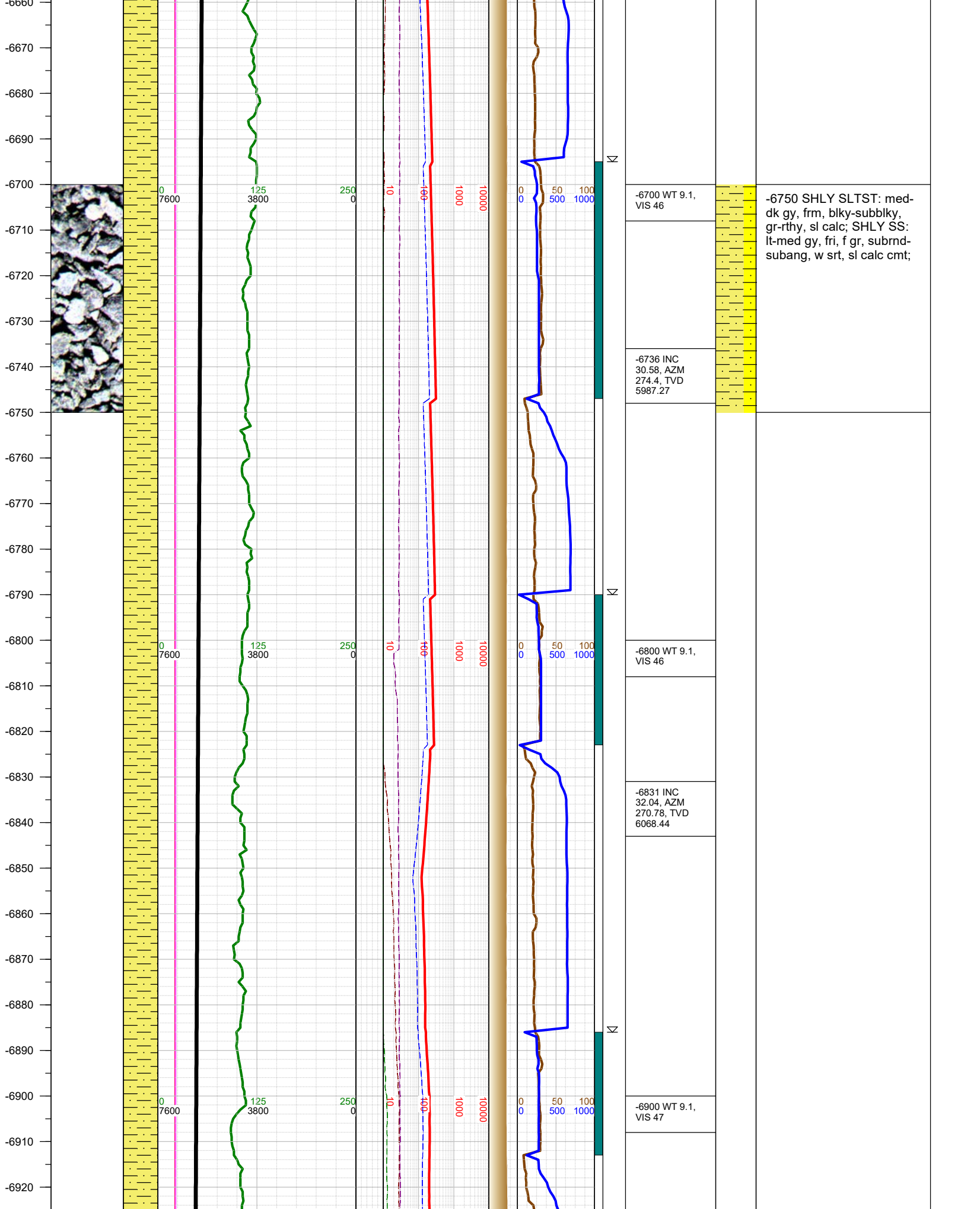


FORMATION  $\approx$  CONNECTION  $\Delta$  MIDNIGHT NEW BIT GAS SHOW FAULT

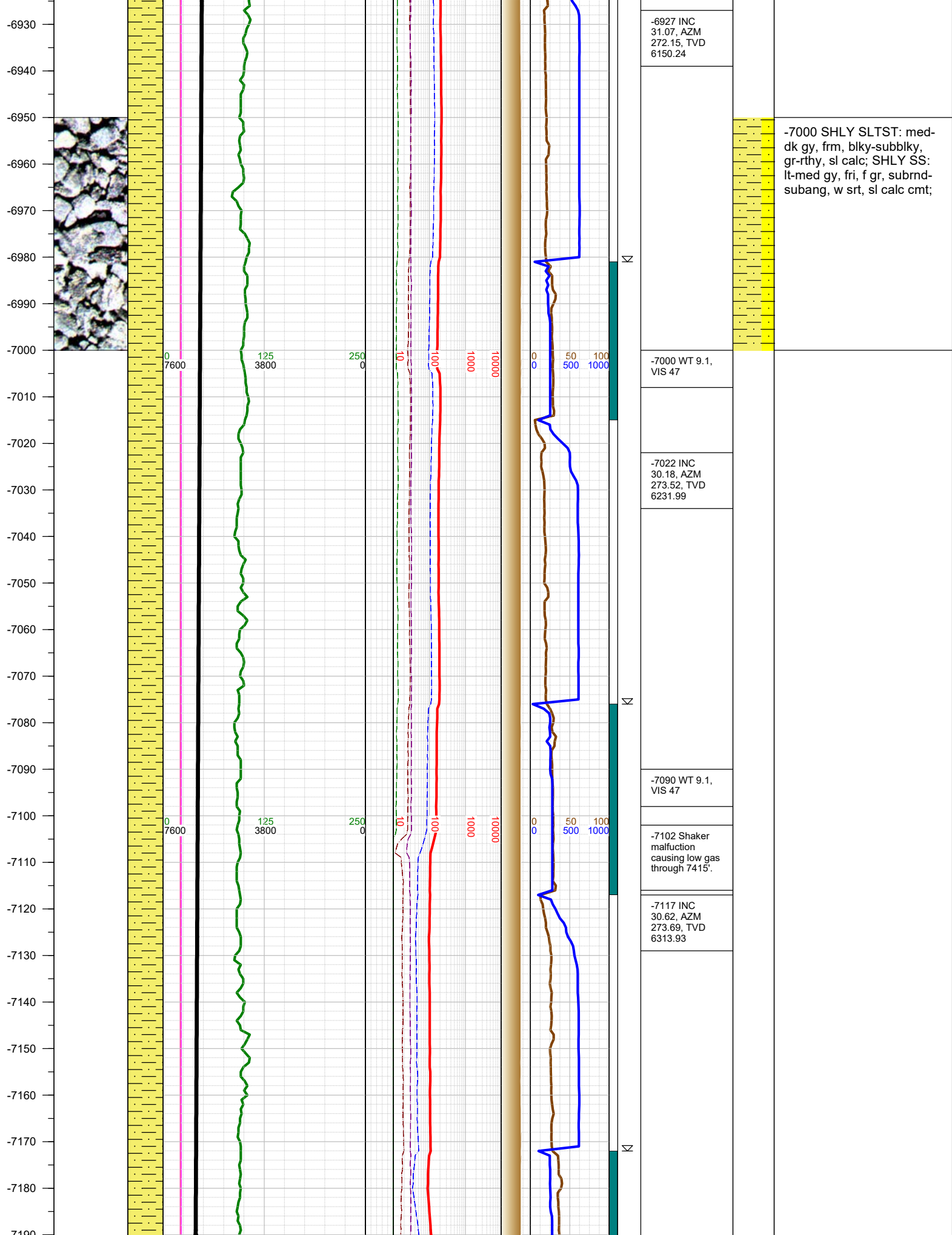


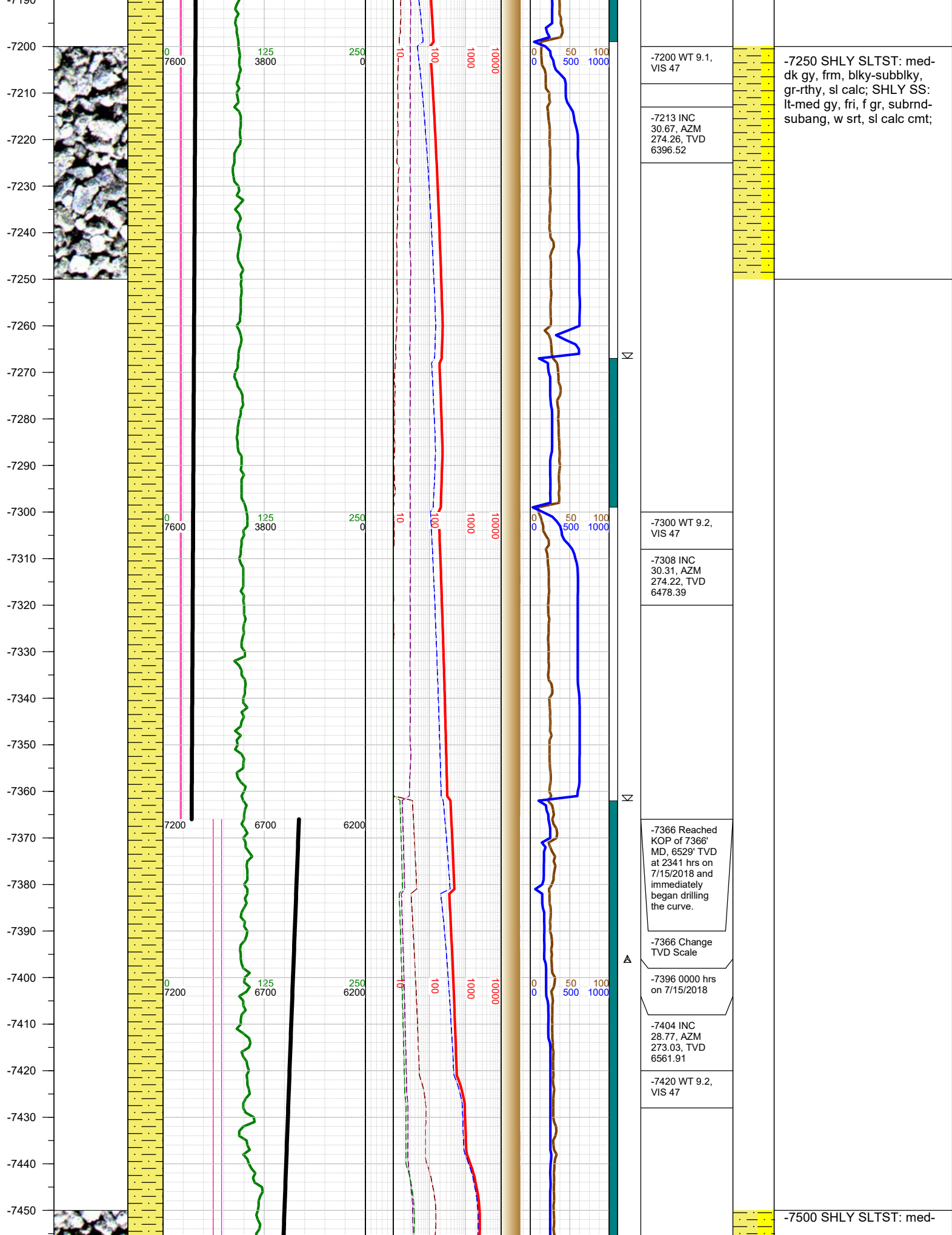


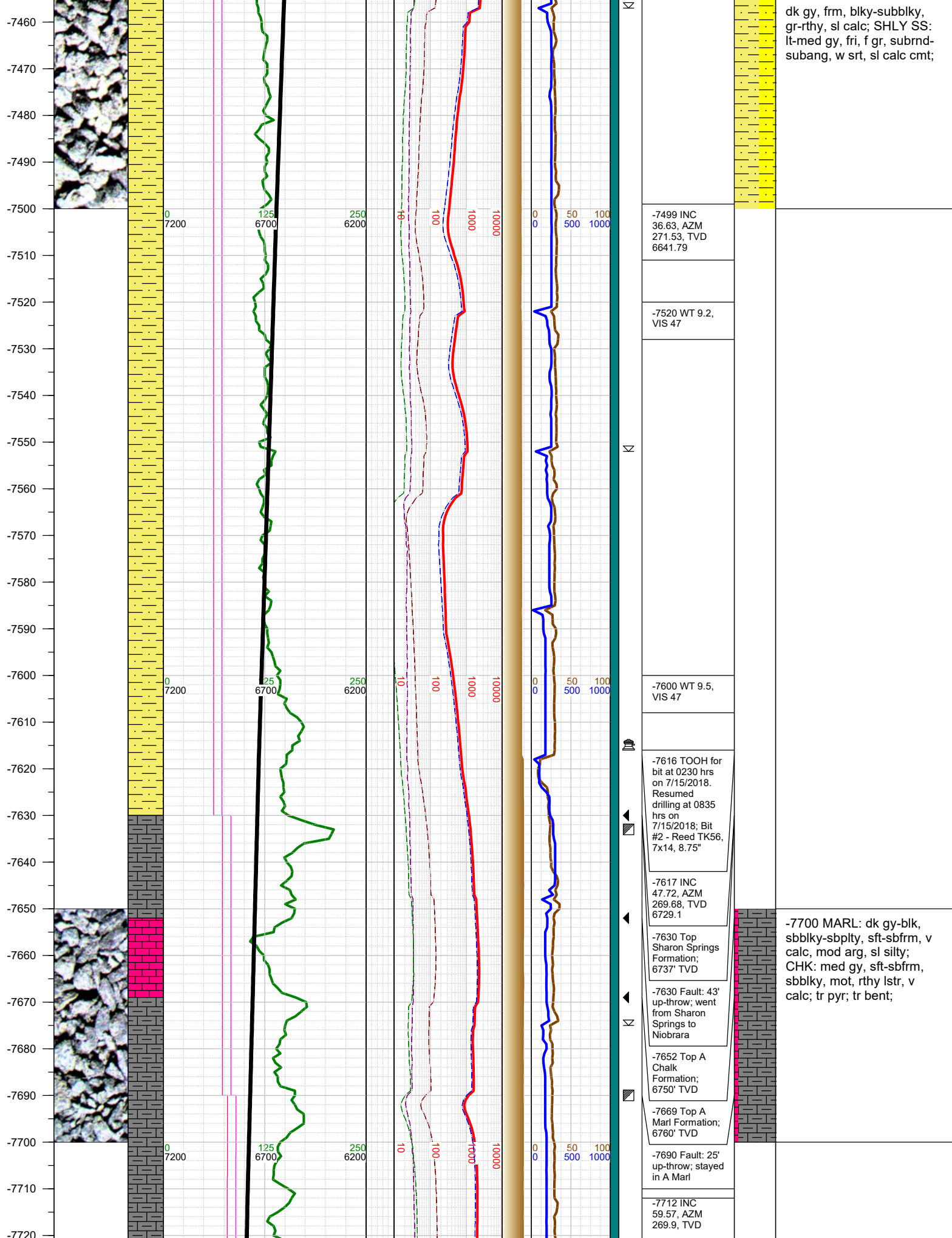




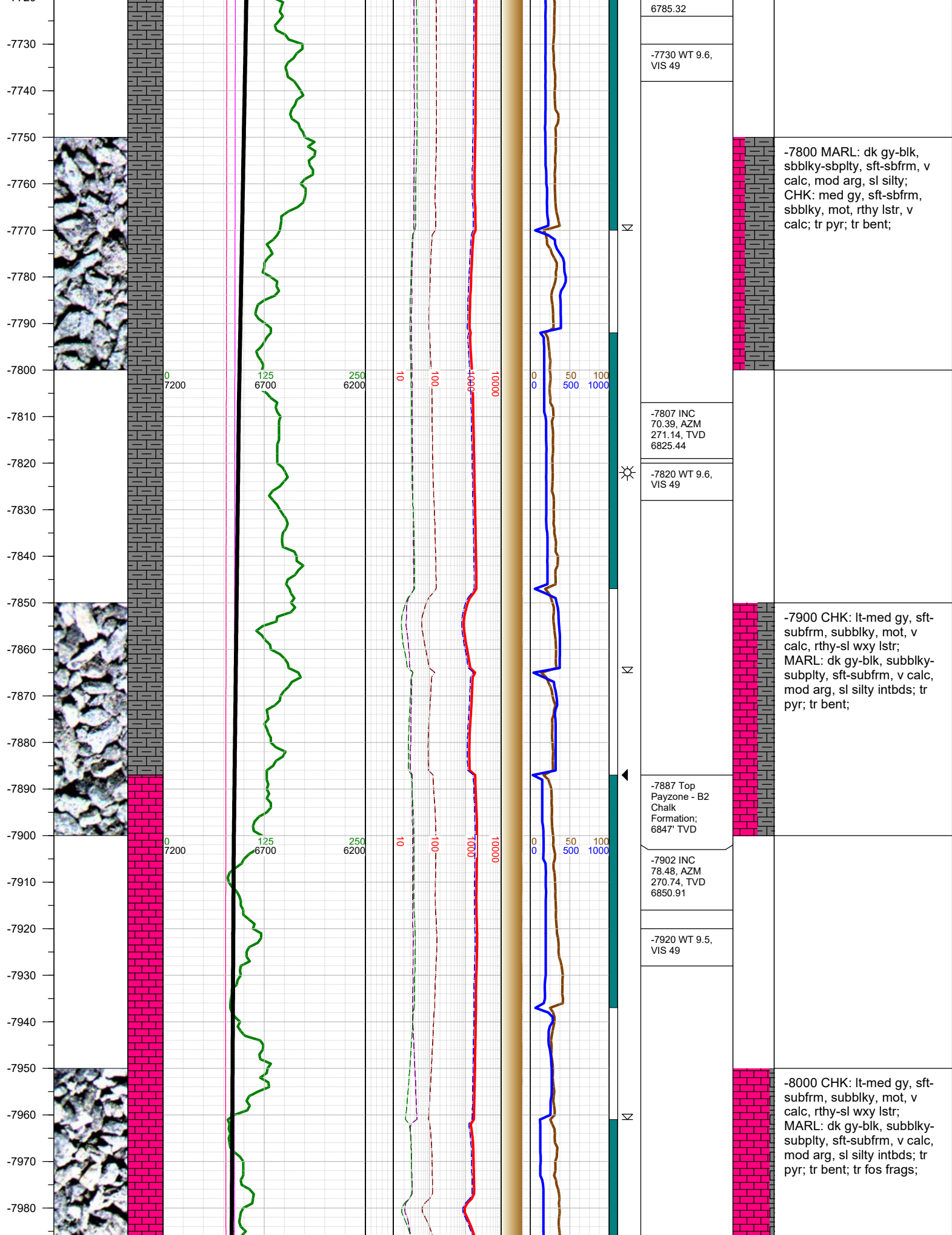




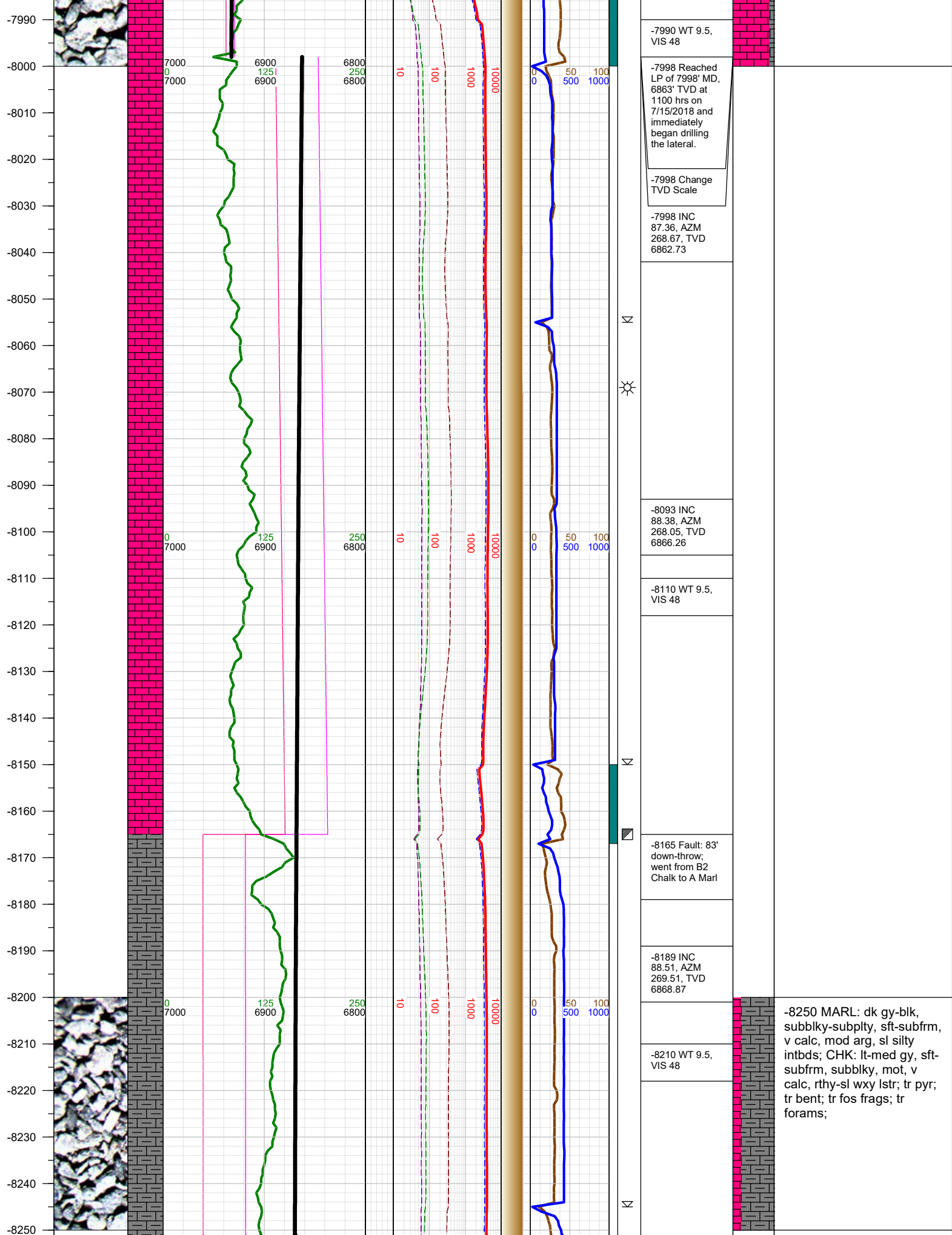






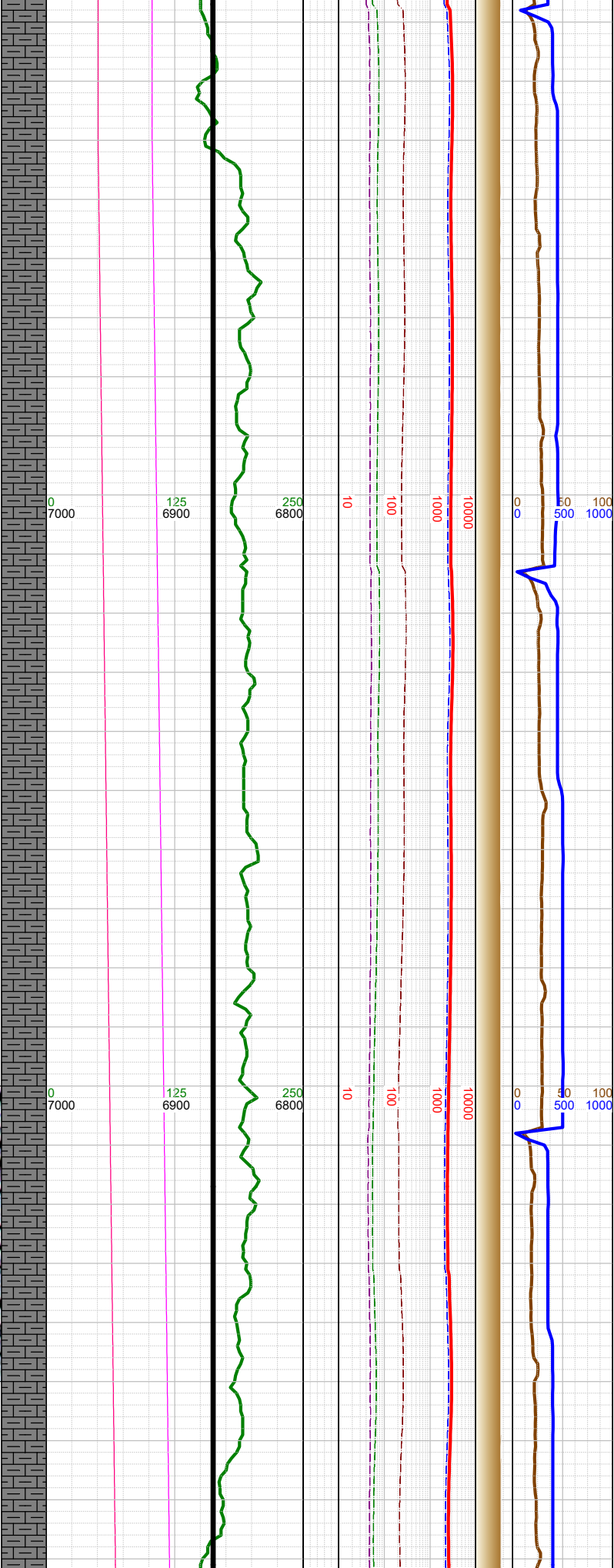
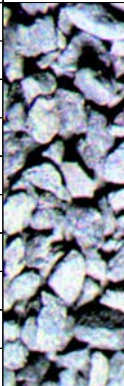






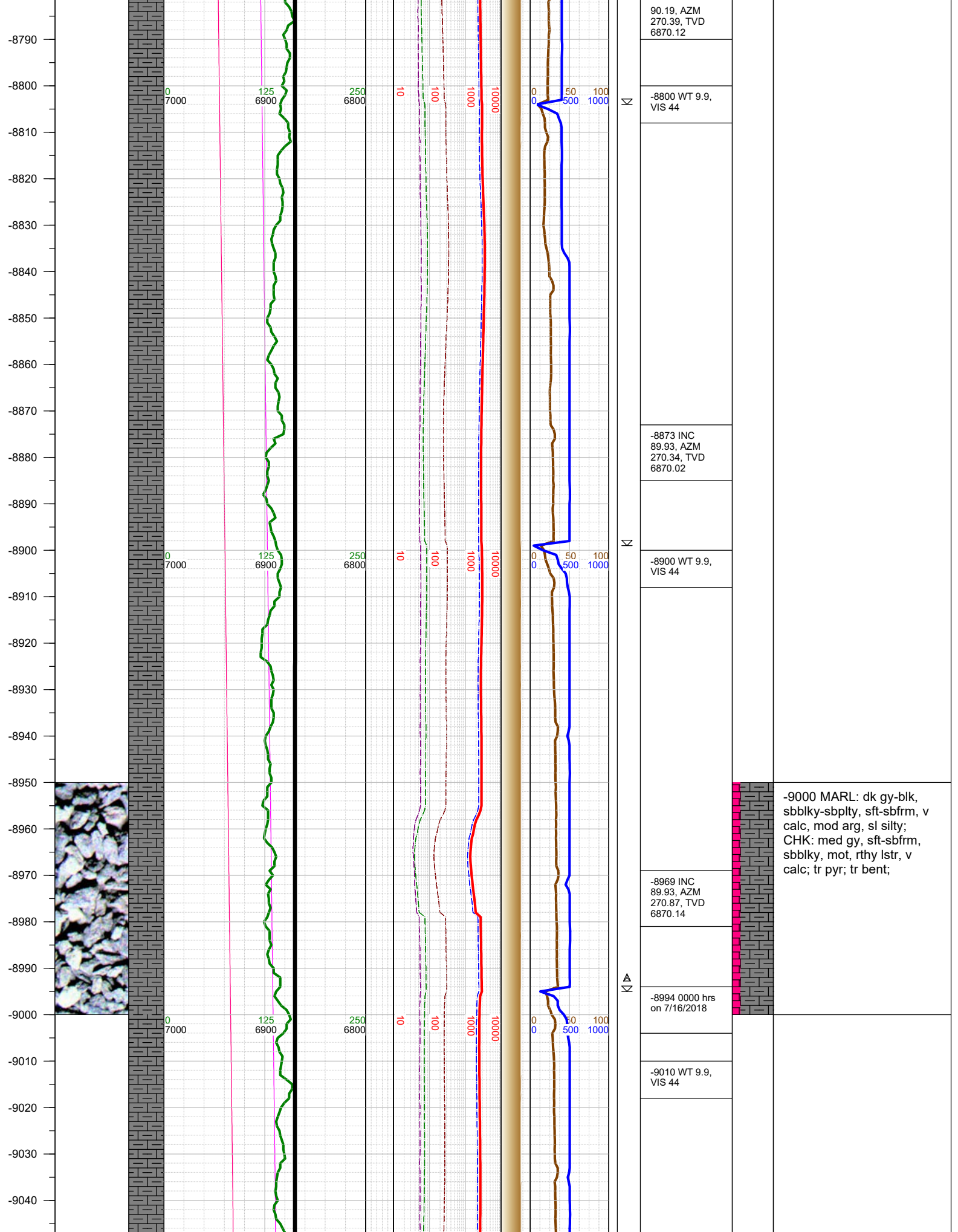


-8520  
-8530  
-8540  
-8550  
-8560  
-8570  
-8580  
-8590  
-8600  
-8610  
-8620  
-8630  
-8640  
-8650  
-8660  
-8670  
-8680  
-8690  
-8700  
-8710  
-8720  
-8730  
-8740  
-8750  
-8760  
-8770  
-8780

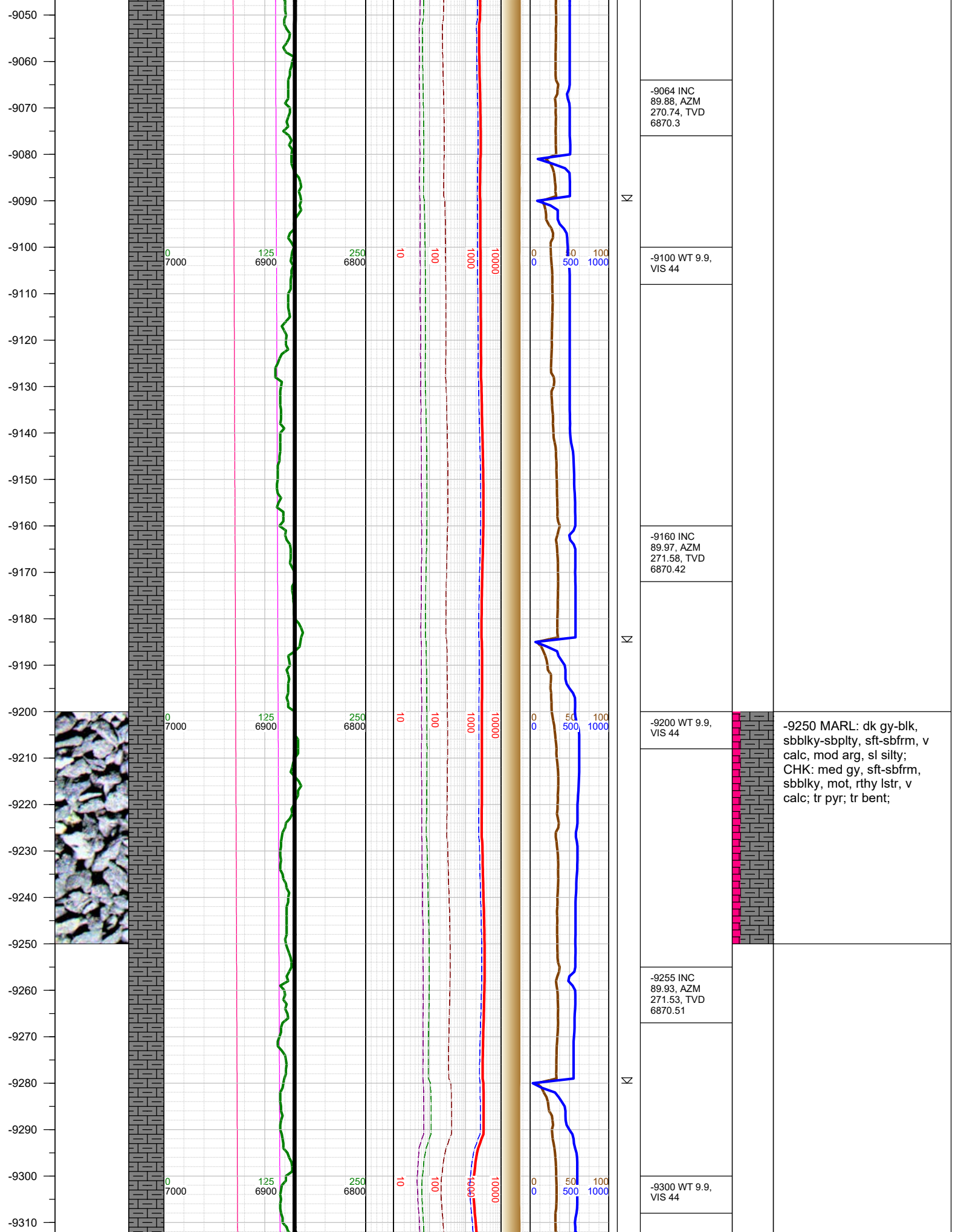


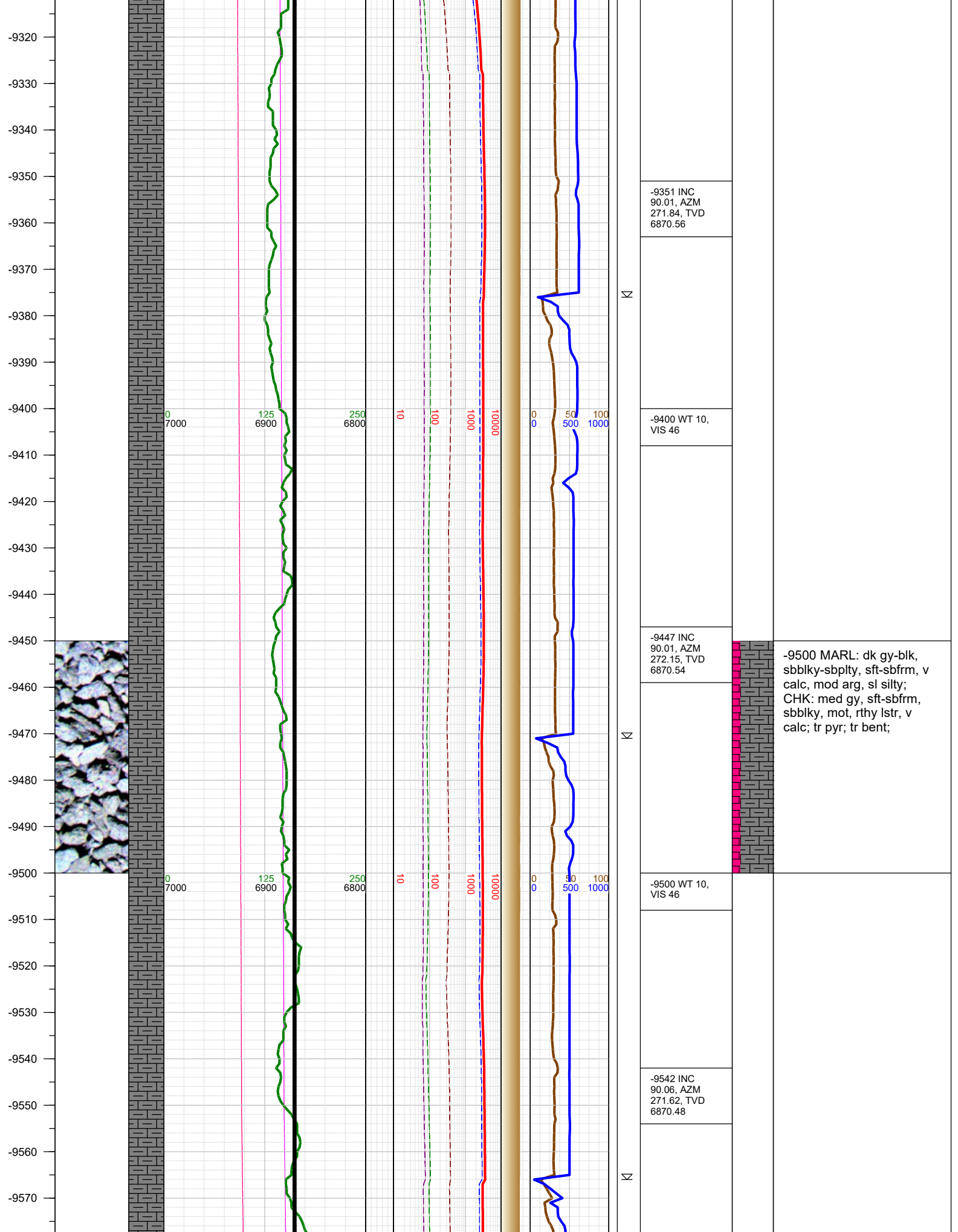
N		-8587 INC 90.06, AZM 268.89, TVD 6870.21		
	☀	-8600 WT 9.8, VIS 49		
N				
		-8683 INC 89.93, AZM 269.11, TVD 6870.22		
N		-8700 WT 9.8, VIS 46		-8750 MARL: dk gy-blk, sbbkly-sbpity, sft-sbfrm, v calc, mod arg, sl silty; CHK: med gy, sft-sbfrm, sbbkly, mot, rthy lstr, v calc; tr pyr; tr bent;
		-8778 INC		

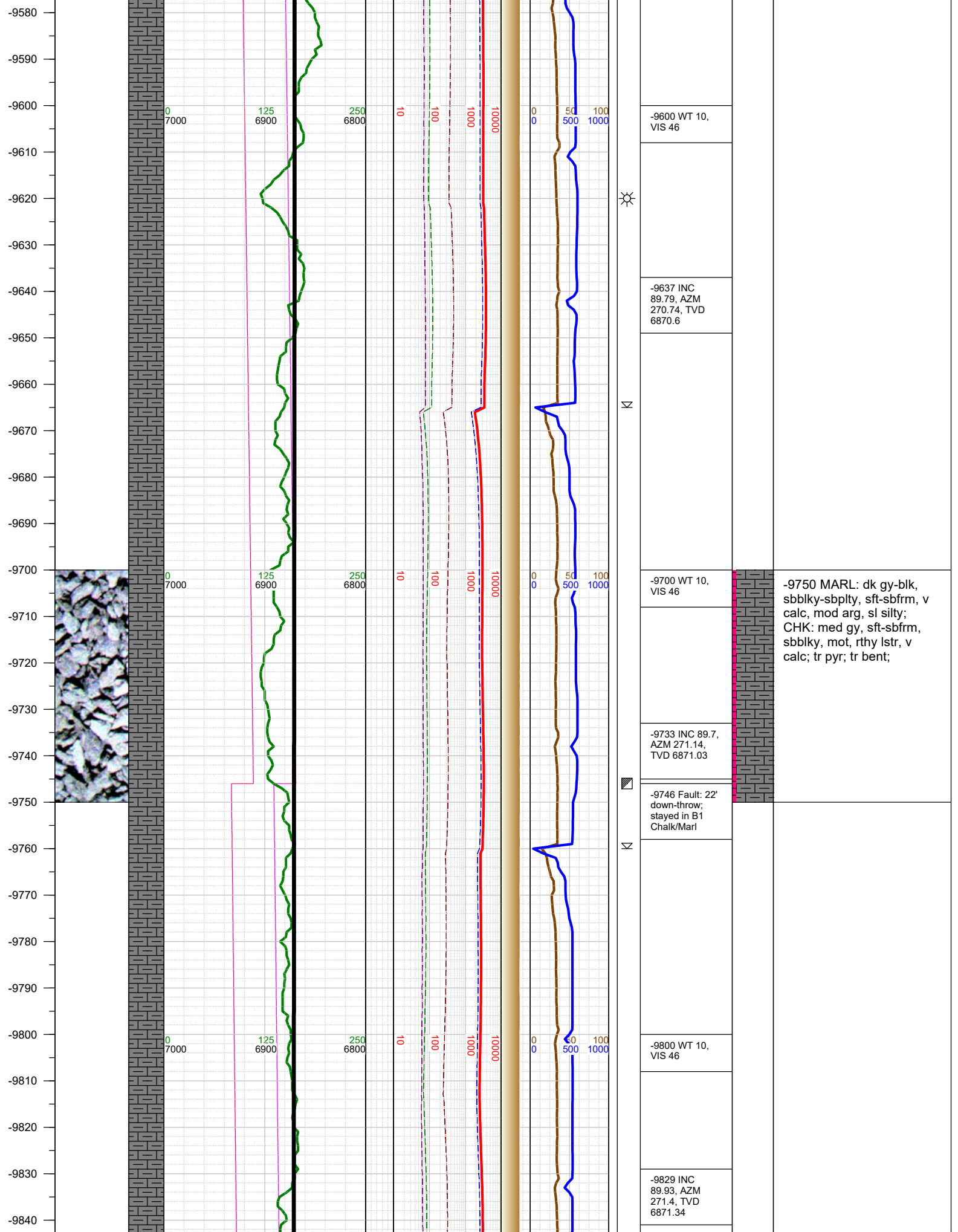




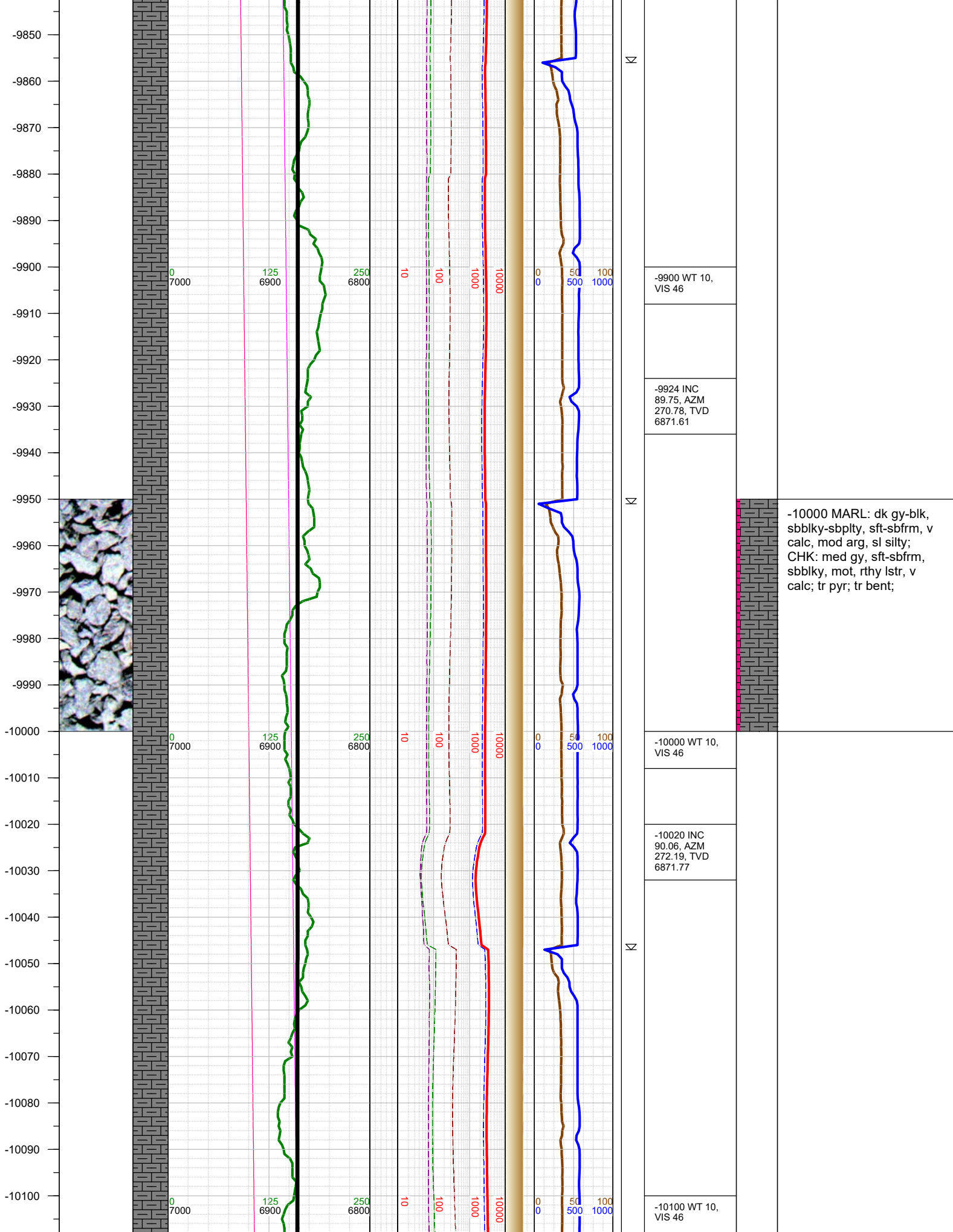




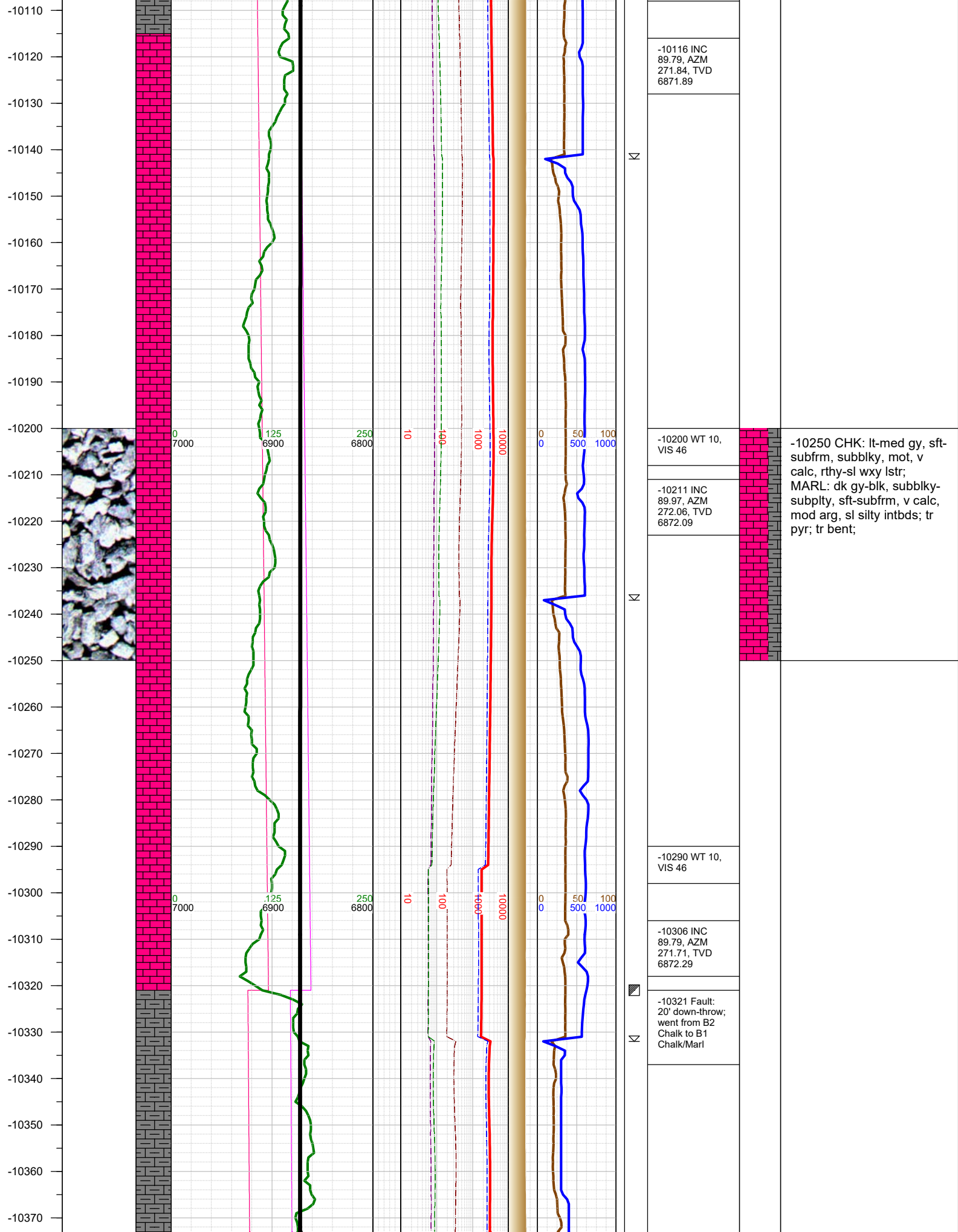




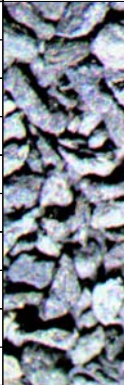








-10380  
-10390  
-10400  
-10410  
-10420  
-10430  
-10440  
-10450  
-10460  
-10470  
-10480  
-10490  
-10500  
-10510  
-10520  
-10530  
-10540  
-10550  
-10560  
-10570  
-10580  
-10590  
-10600  
-10610  
-10620  
-10630



0  
7000

125  
6900

250  
6800

10

100

1000

10000

0  
0

50  
500

100  
1000

0  
7000

125  
6900

250  
6800

10

100

1000

10000

0  
0

50  
500

100  
1000

0  
7000

125  
6900

250  
6800

10

100

1000

10000

0  
0

50  
500

100  
1000

-10401 INC  
90.28, AZM  
270.56, TVD  
6872.23

-10420 WT  
10.1, VIS 47

Σ

-10496 INC  
90.5, AZM  
272.02, TVD  
6871.59

-10510 WT  
10.1, VIS 47

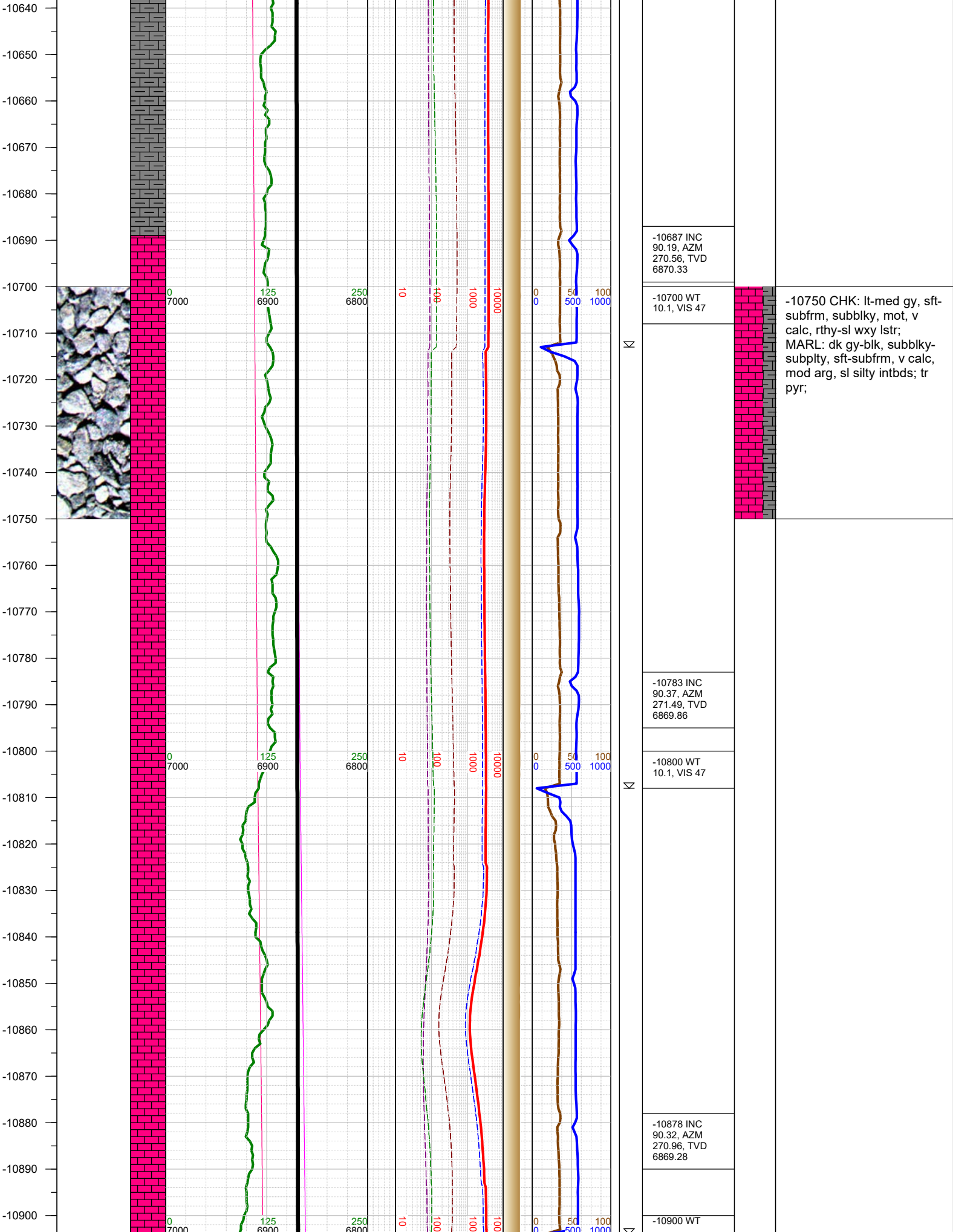
Σ

-10592 INC  
90.41, AZM  
271.66, TVD  
6870.82

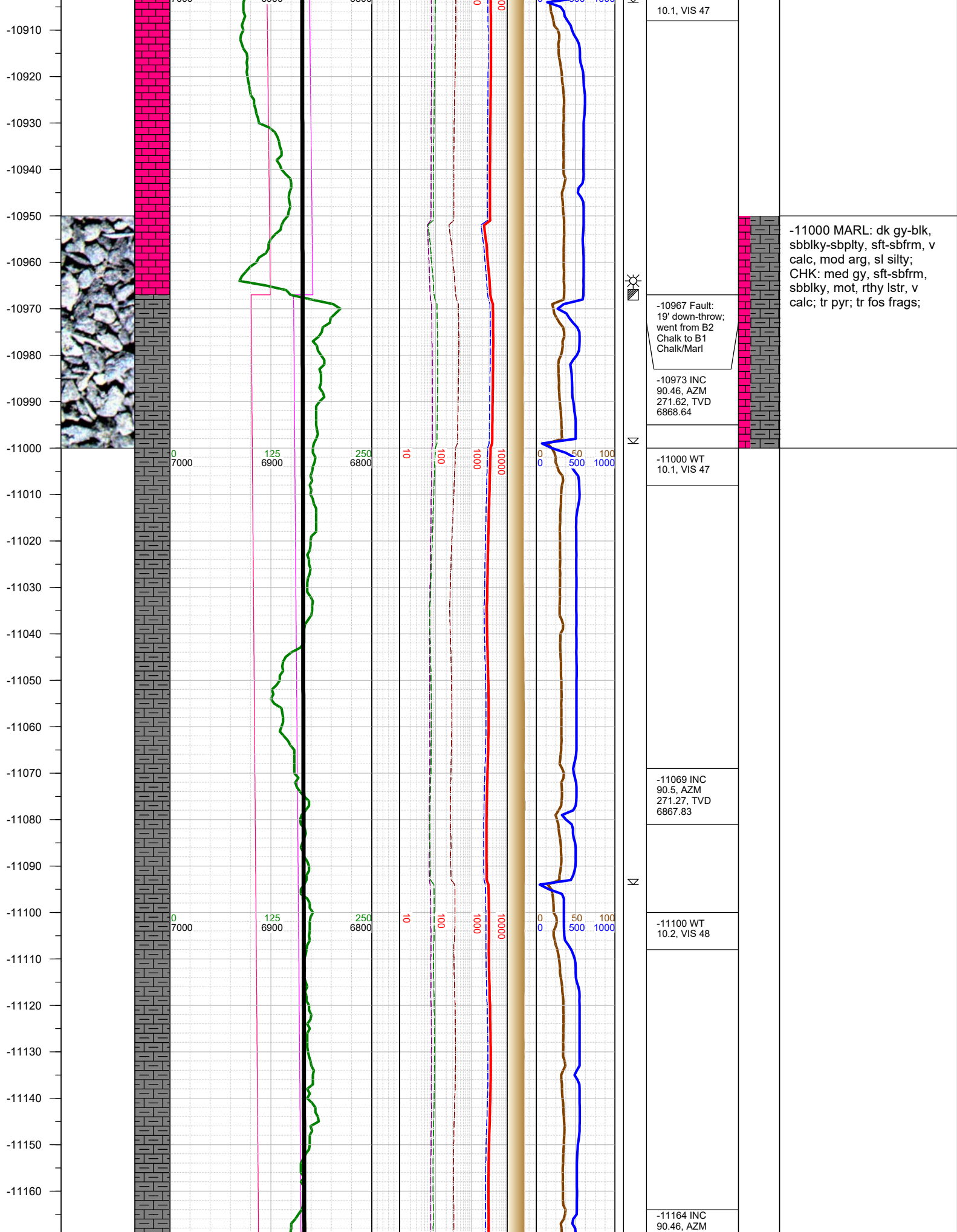
-10610 WT  
10.1, VIS 47

Σ

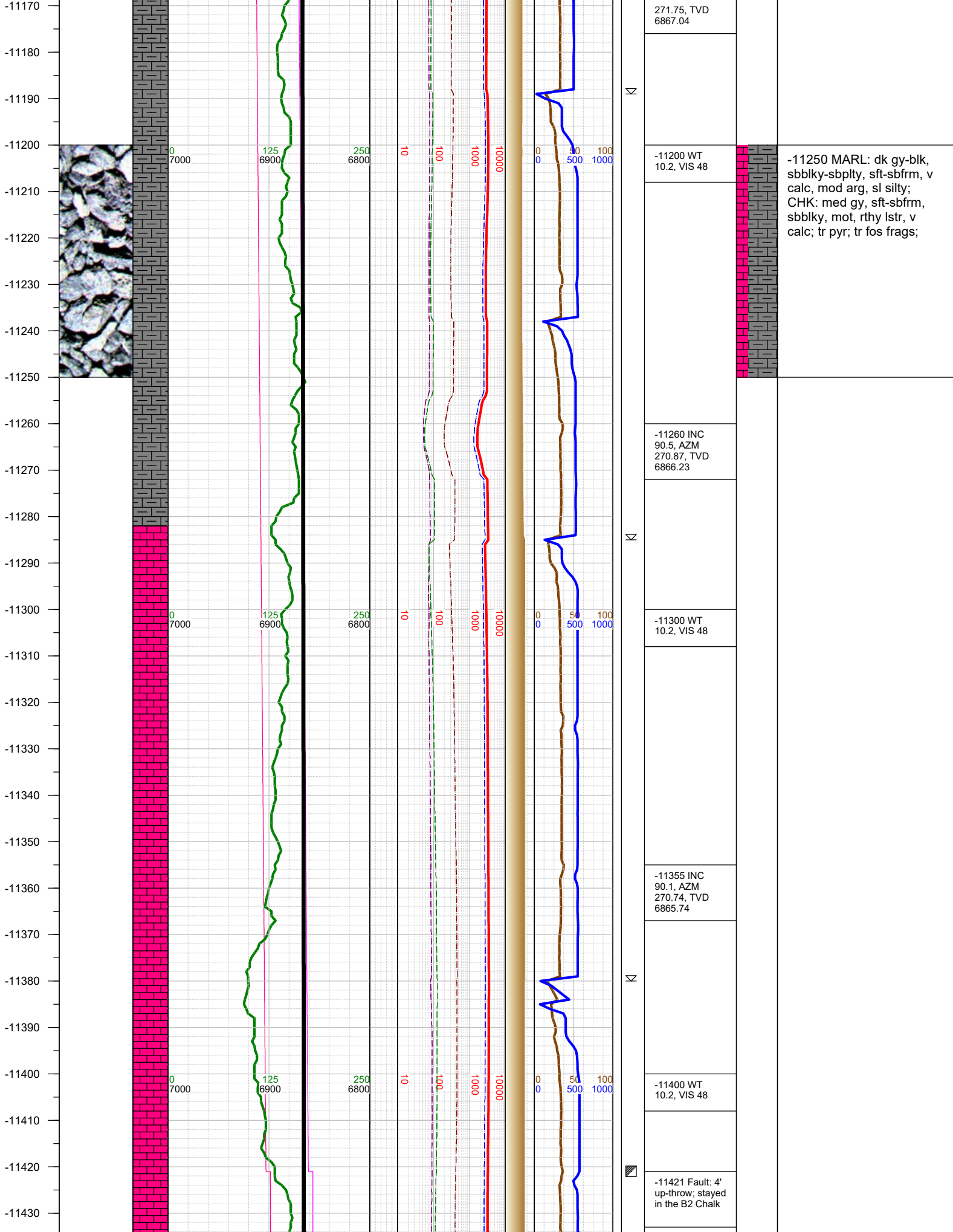
-10500 MARL: dk gy-blk,  
sbbly-sbply, sft-sbfrm, v  
calc, mod arg, sl silty;  
CHK: med gy, sft-sbfrm,  
sbbly, mot, rthy lstr, v  
calc; tr pyr; tr bent;



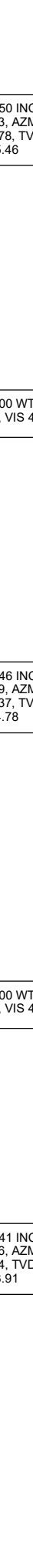
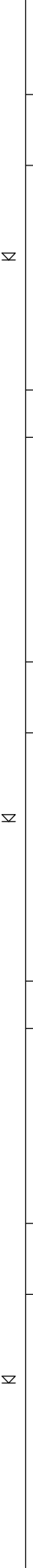
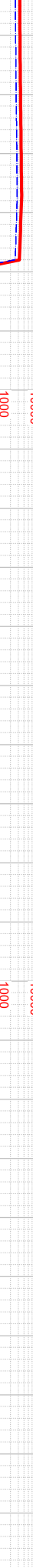
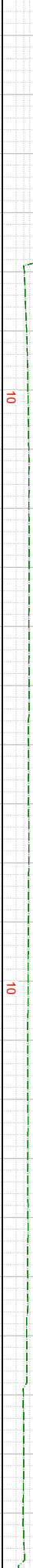
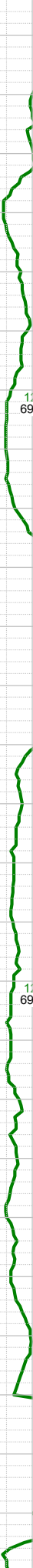
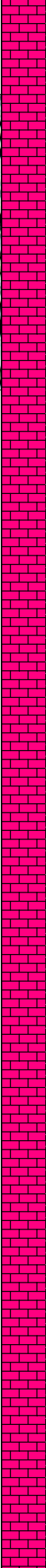
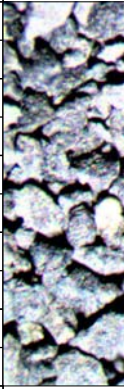








-11440  
-11450  
-11460  
-11470  
-11480  
-11490  
-11500  
-11510  
-11520  
-11530  
-11540  
-11550  
-11560  
-11570  
-11580  
-11590  
-11600  
-11610  
-11620  
-11630  
-11640  
-11650  
-11660  
-11670  
-11680  
-11690



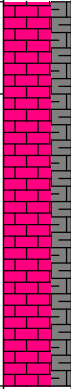
-11450 INC  
90.23, AZM  
270.78, TVD  
6865.46

-11500 WT  
10.2, VIS 48

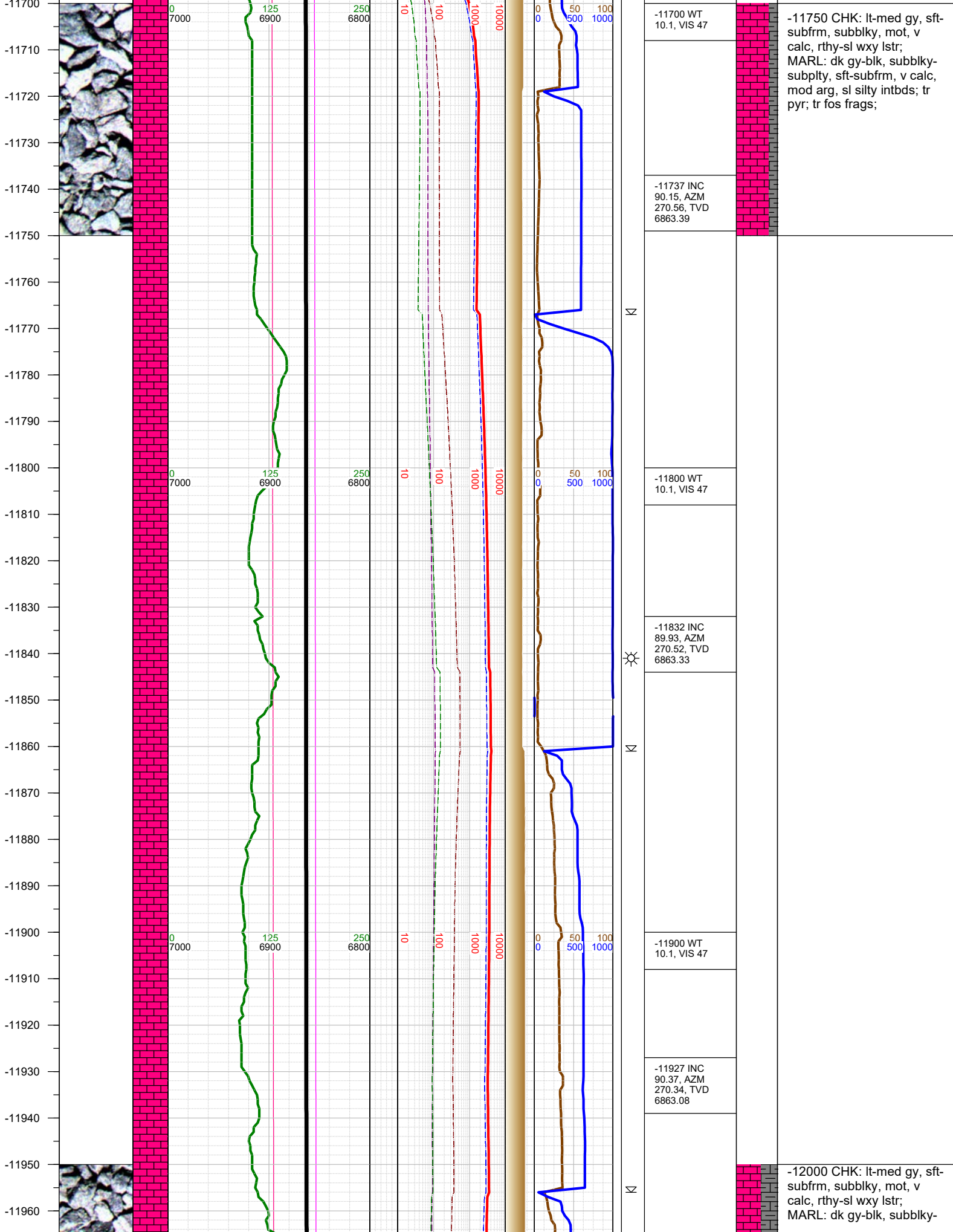
-11546 INC  
90.59, AZM  
272.37, TVD  
6864.78

-11600 WT  
10.2, VIS 48

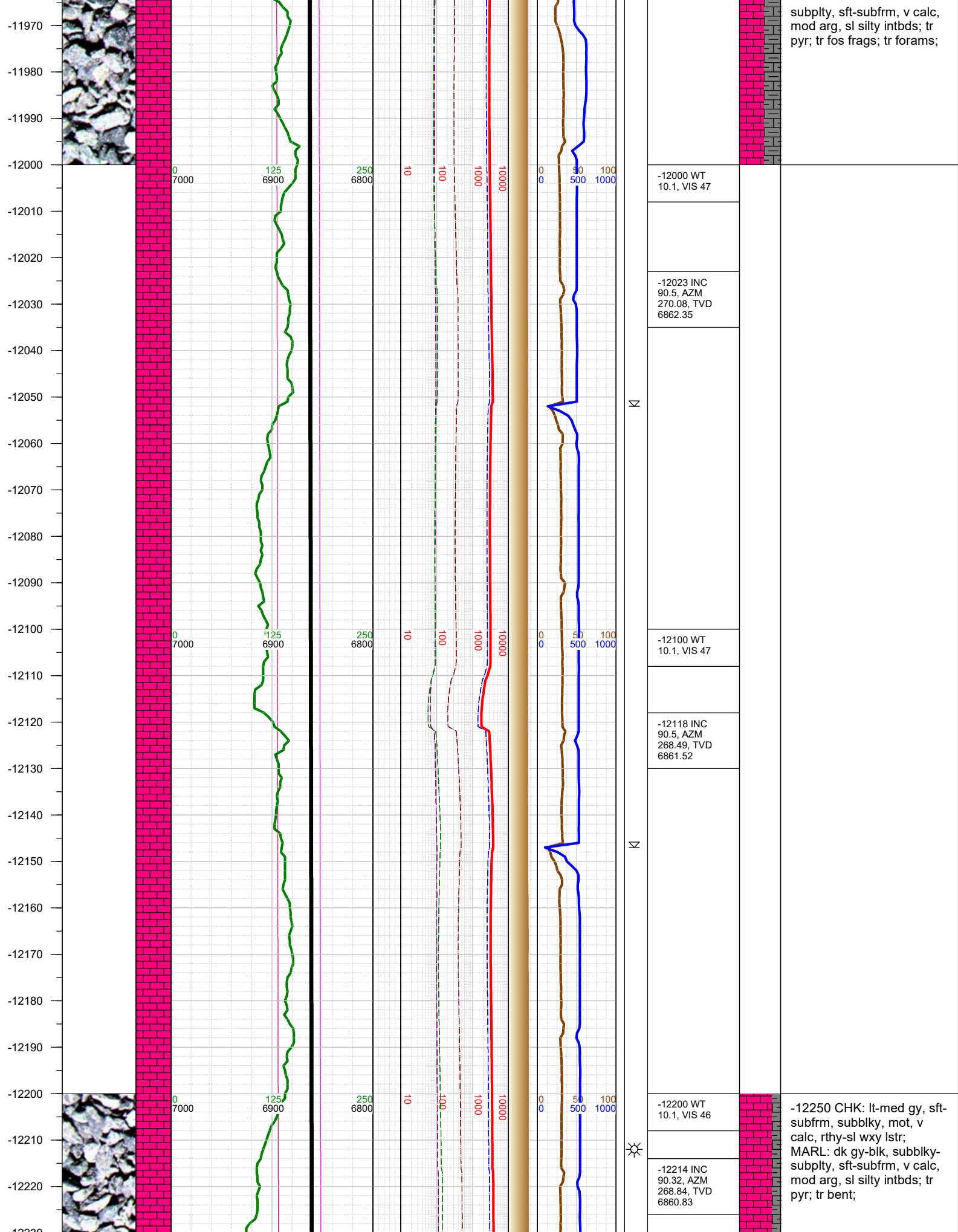
-11641 INC  
90.46, AZM  
271.4, TVD  
6863.91

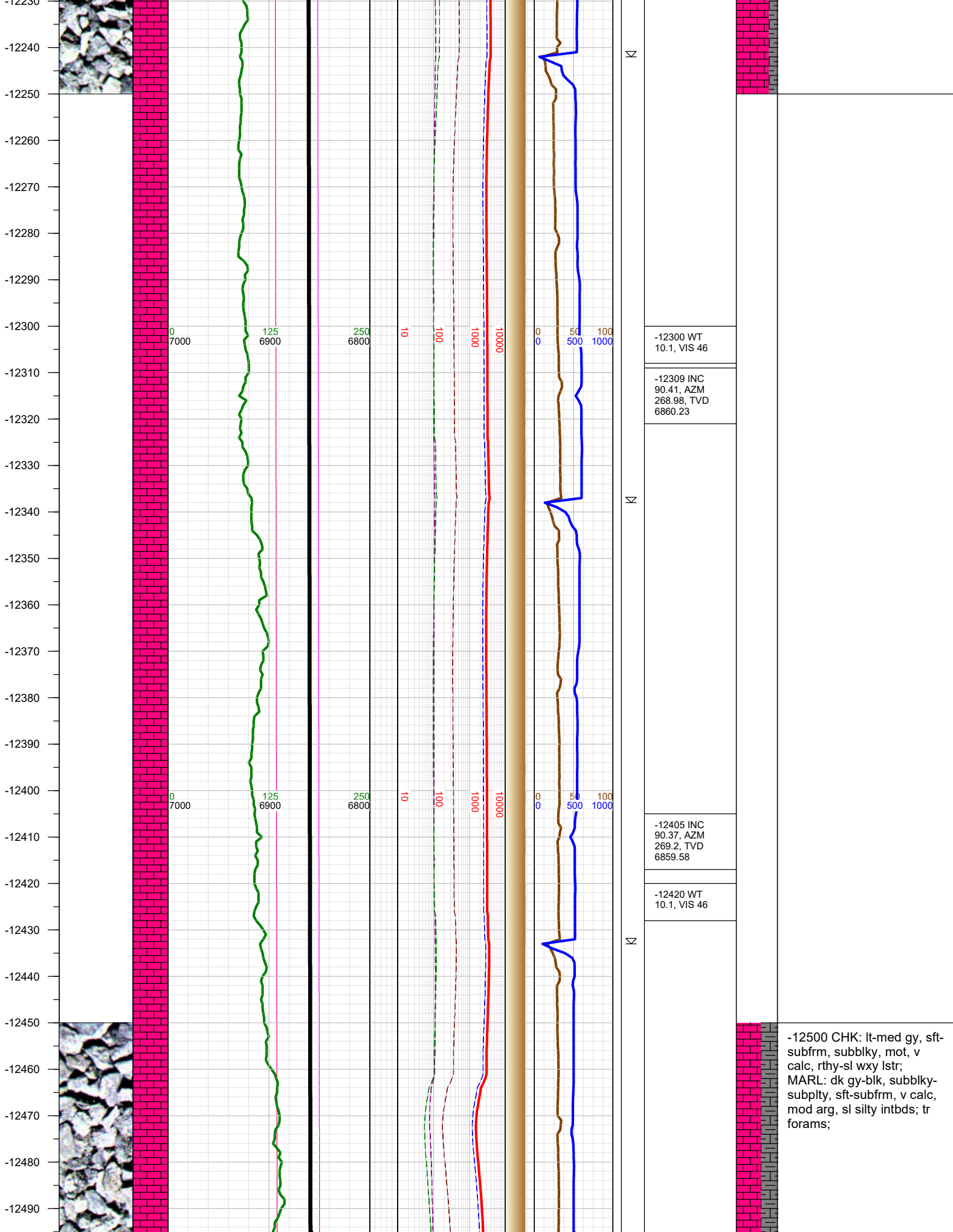


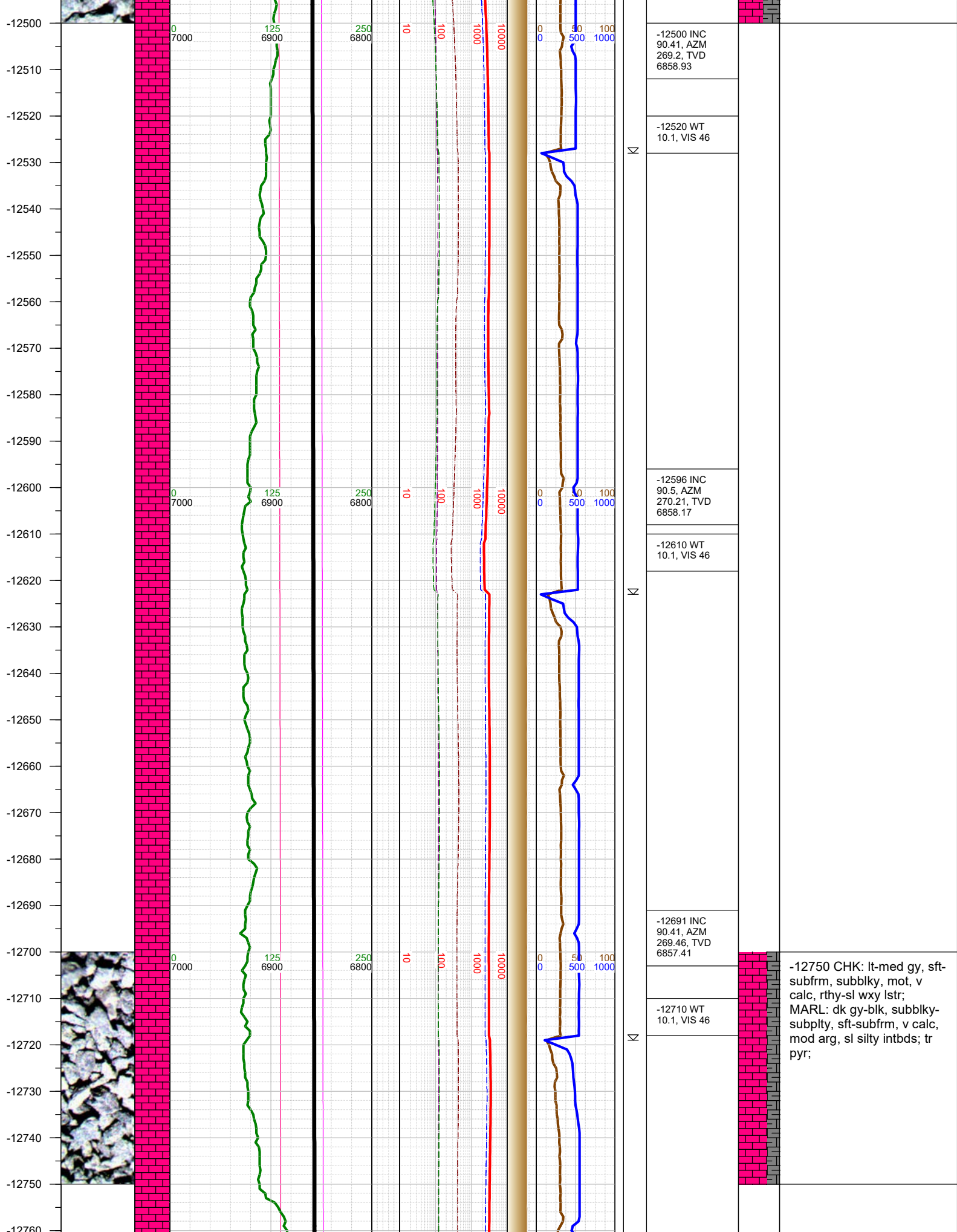
-11500 CHK: lt-med gy, sft-subfrm, subblky, mot, v calc, rthy-sl wxy lstr; MARL: dk gy-blk, subblky-subplty, sft-subfrm, v calc, mod arg, sl silty intbds; tr pyr; tr forams;



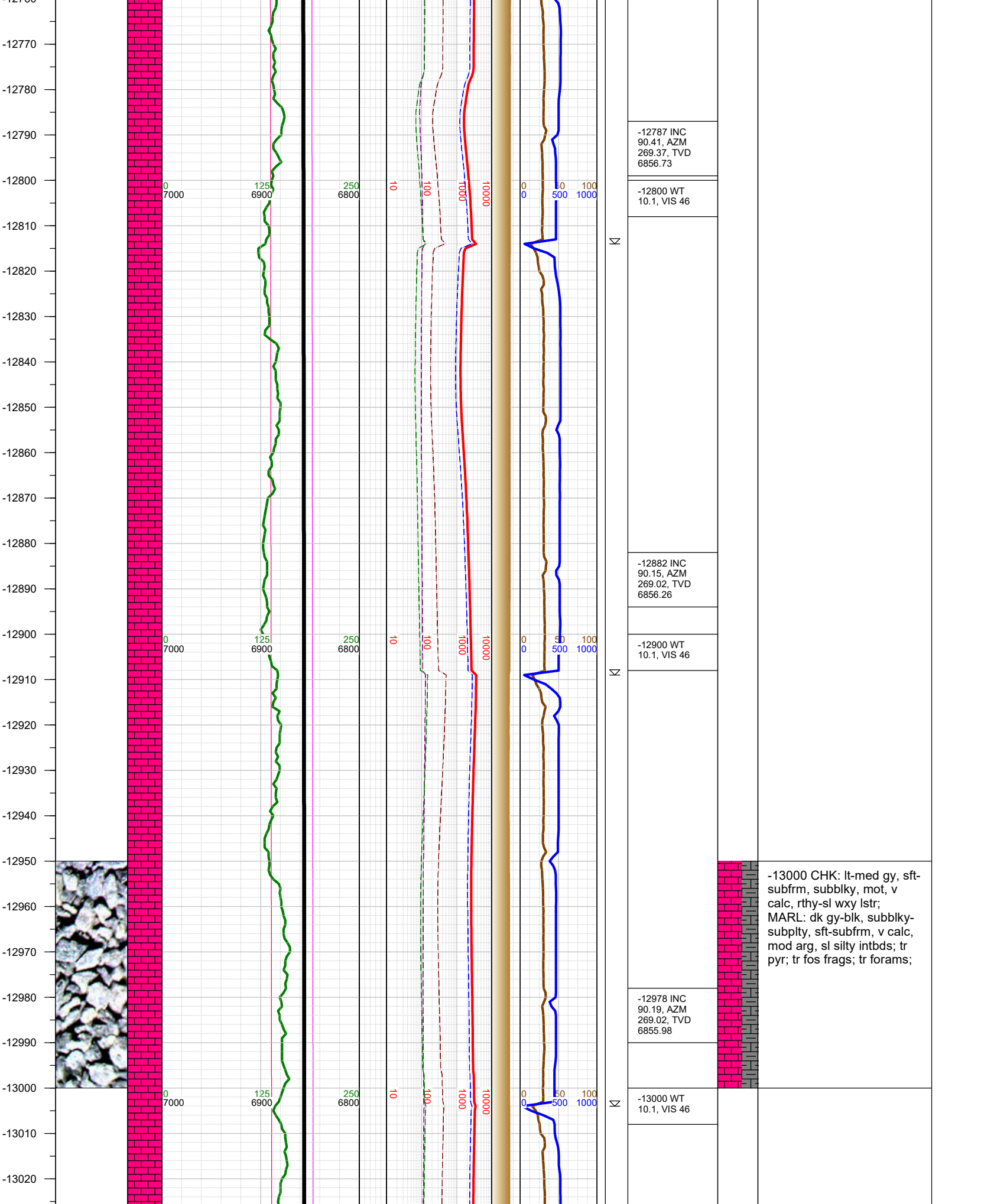




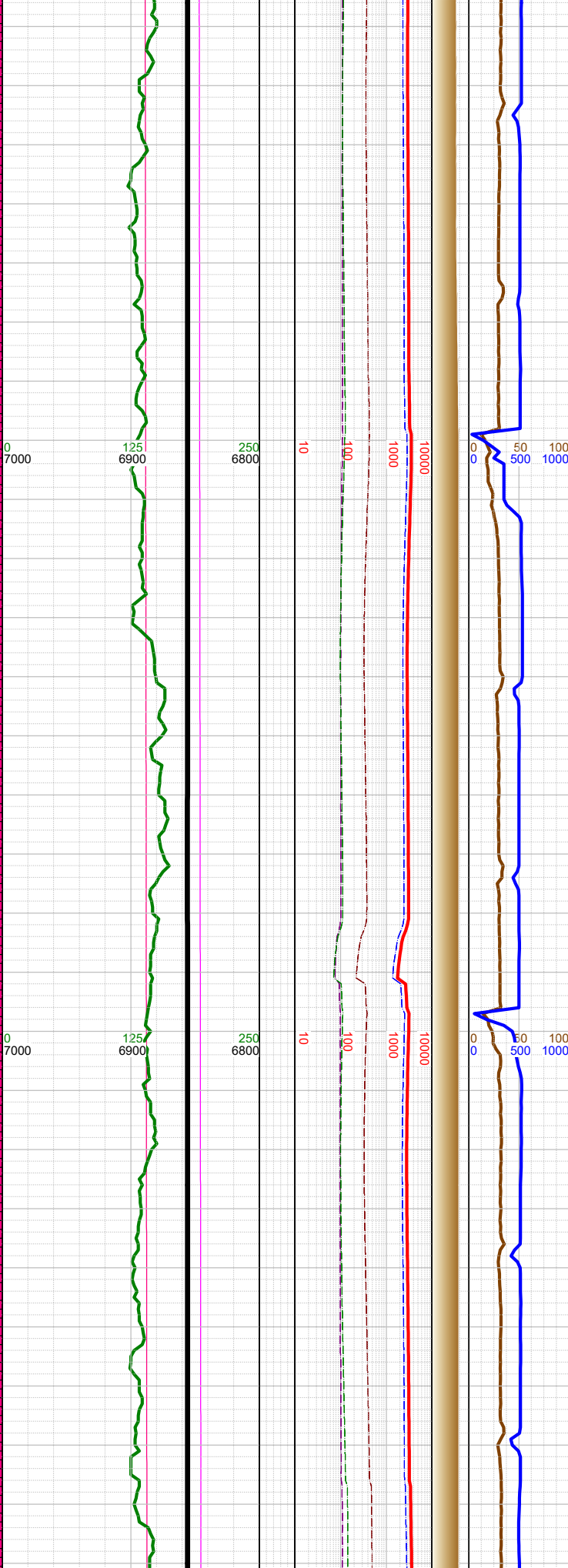
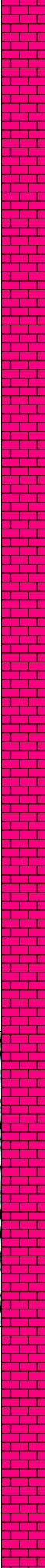
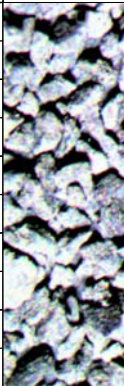








-13030  
-13040  
-13050  
-13060  
-13070  
-13080  
-13090  
-13100  
-13110  
-13120  
-13130  
-13140  
-13150  
-13160  
-13170  
-13180  
-13190  
-13200  
-13210  
-13220  
-13230  
-13240  
-13250  
-13260  
-13270  
-13280  
-13290

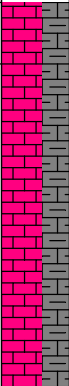


N

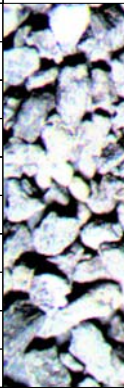
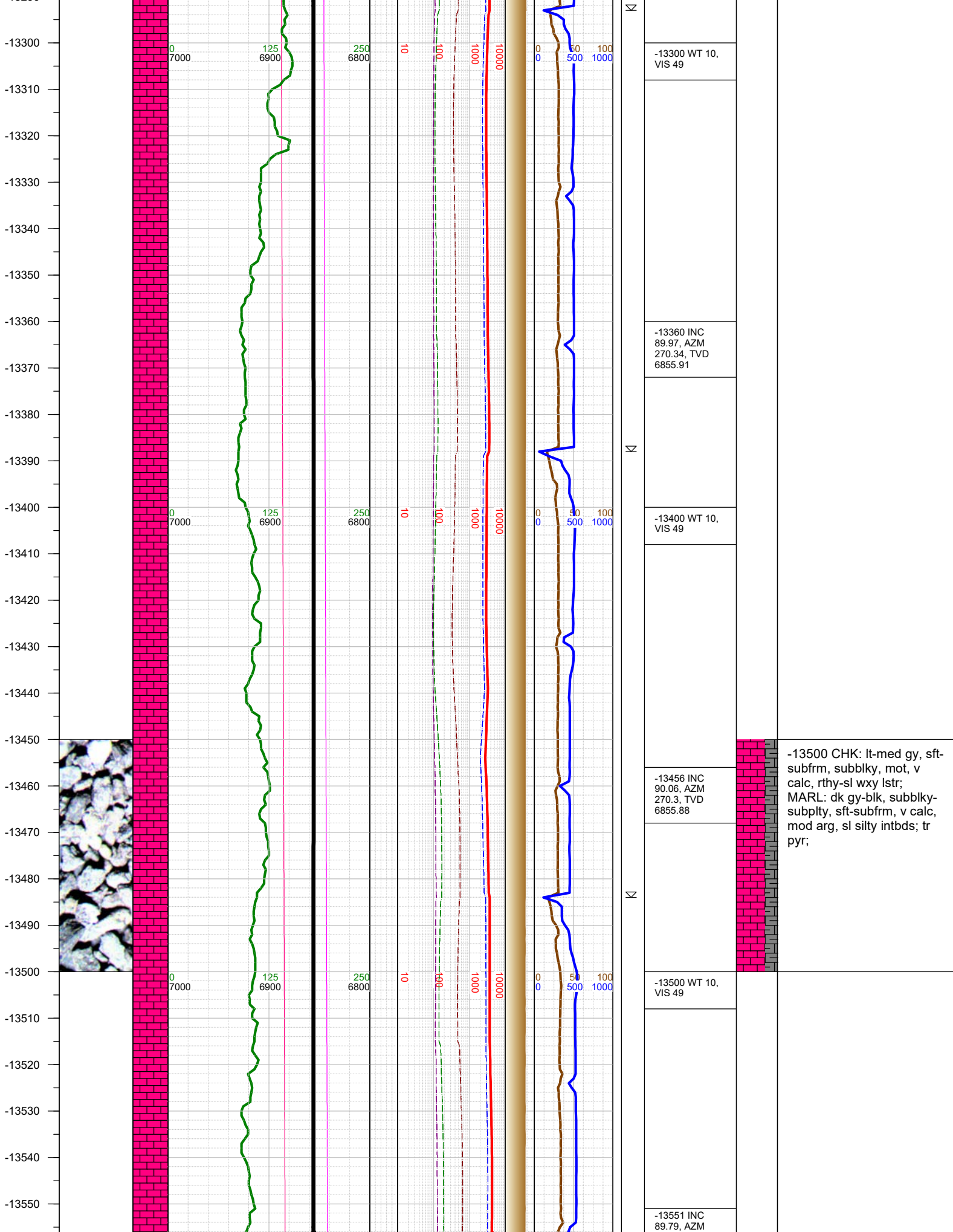
N

☀

	-13074 INC 89.84, AZM 269.46, TVD 6855.95
	-13100 WT 10, VIS 46
	-13169 INC 89.97, AZM 269.64, TVD 6856.11
	-13200 WT 10, VIS 49
	-13264 INC 90.15, AZM 270.48, TVD 6856.01

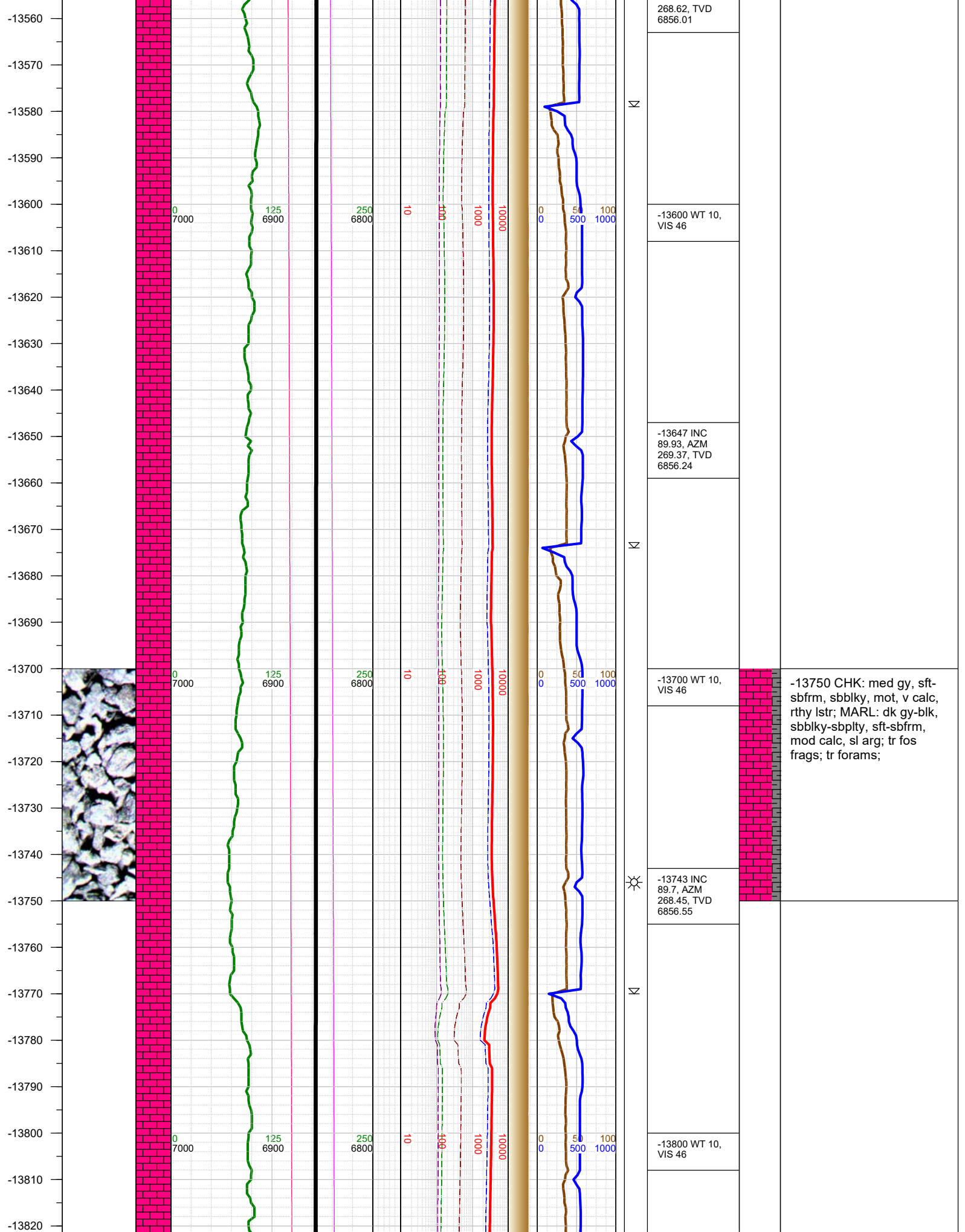


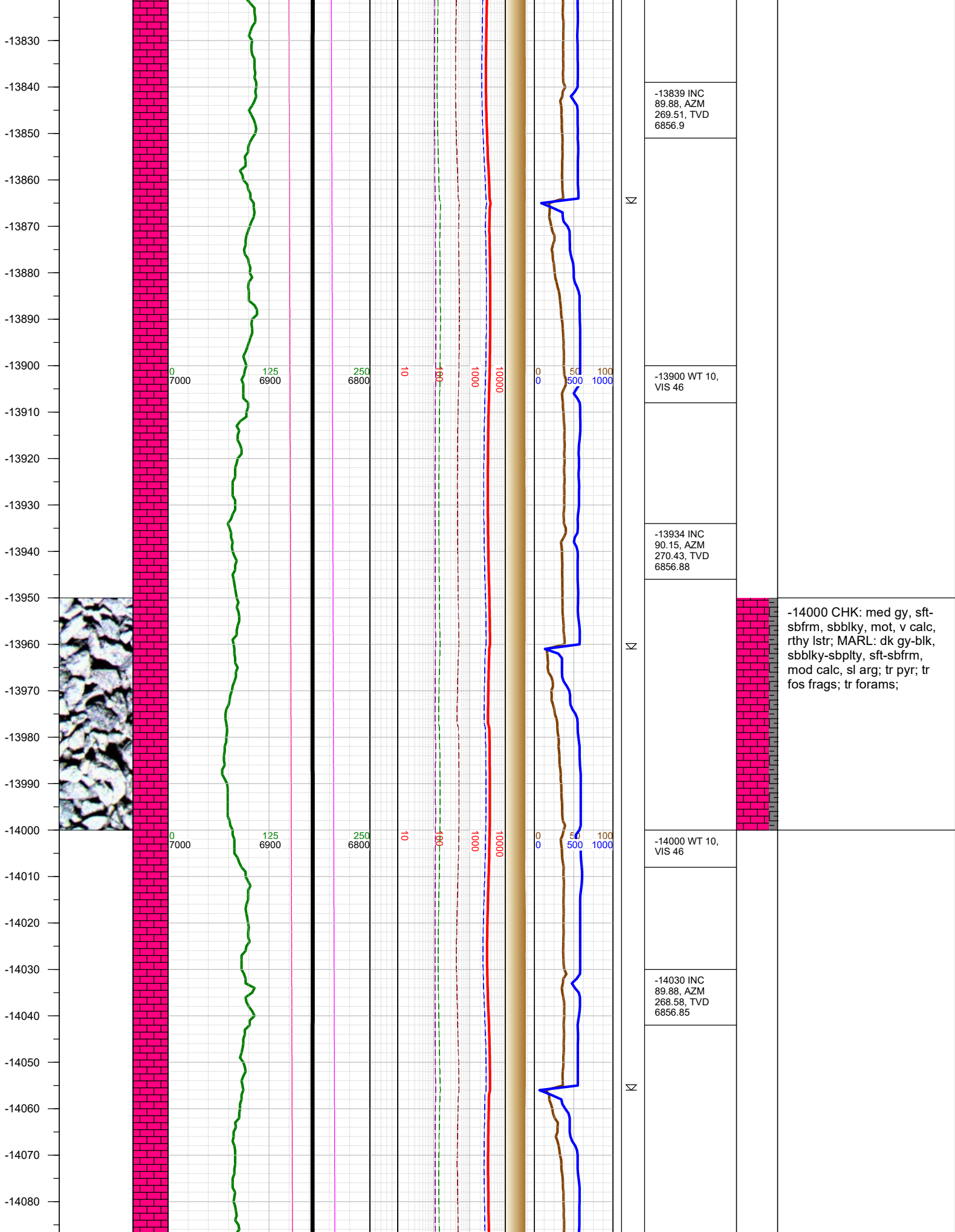
-13250 CHK: lt-med gy, sft-subfrm, subblky, mot, v calc, rthy-sl wxy lstr; MARL: dk gy-blk, subblky-subplty, sft-subfrm, v calc, mod arg, sl silty intbds; tr pyr; tr fos frags; tr forams;

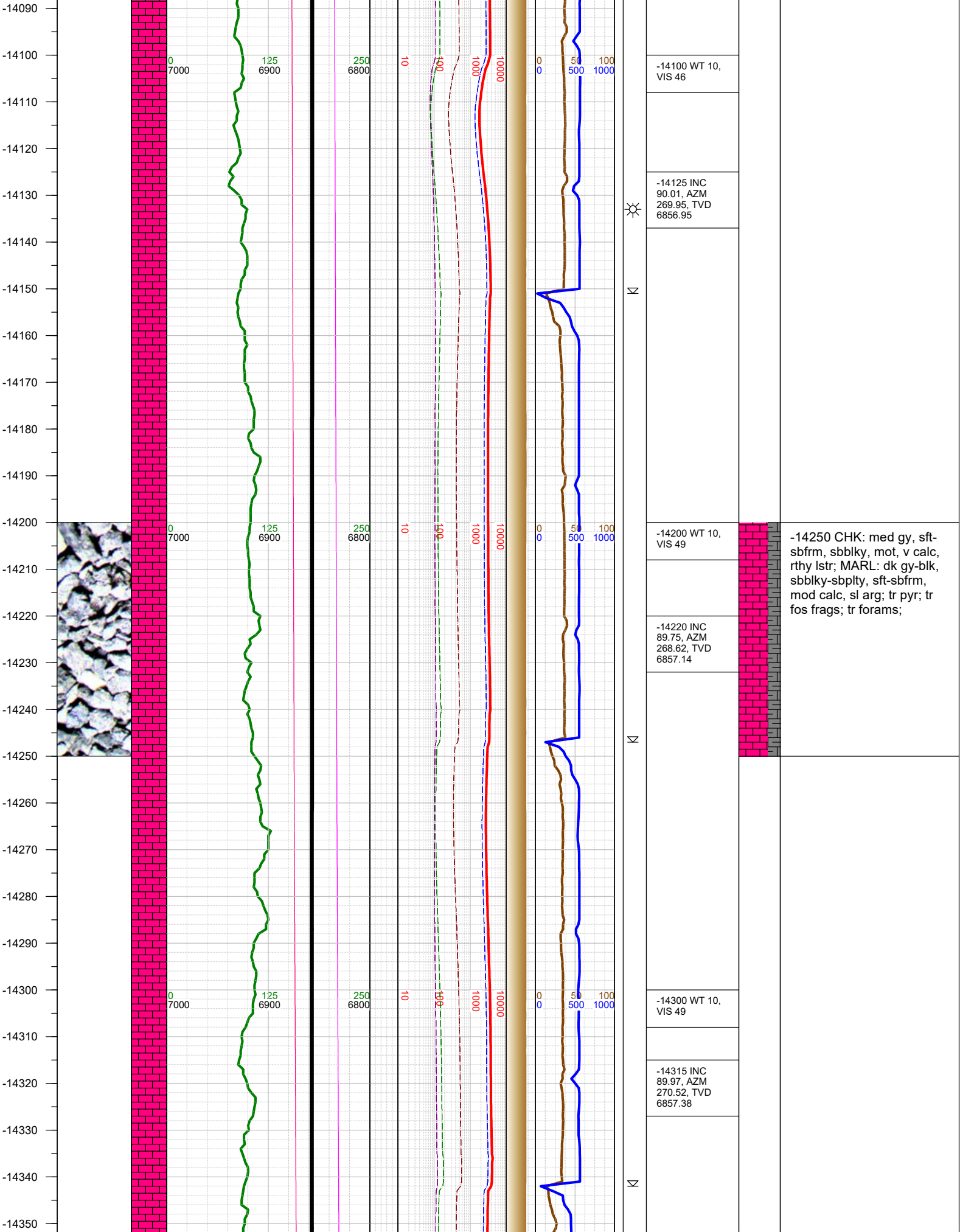


-13500 CHK: lt-med gy, sft-subfrm, subblky, mot, v calc, rthy-sl wxy lstr; MARL: dk gy-blk, subblky-subply, sft-subfrm, v calc, mod arg, sl silty intbds; tr pyr;

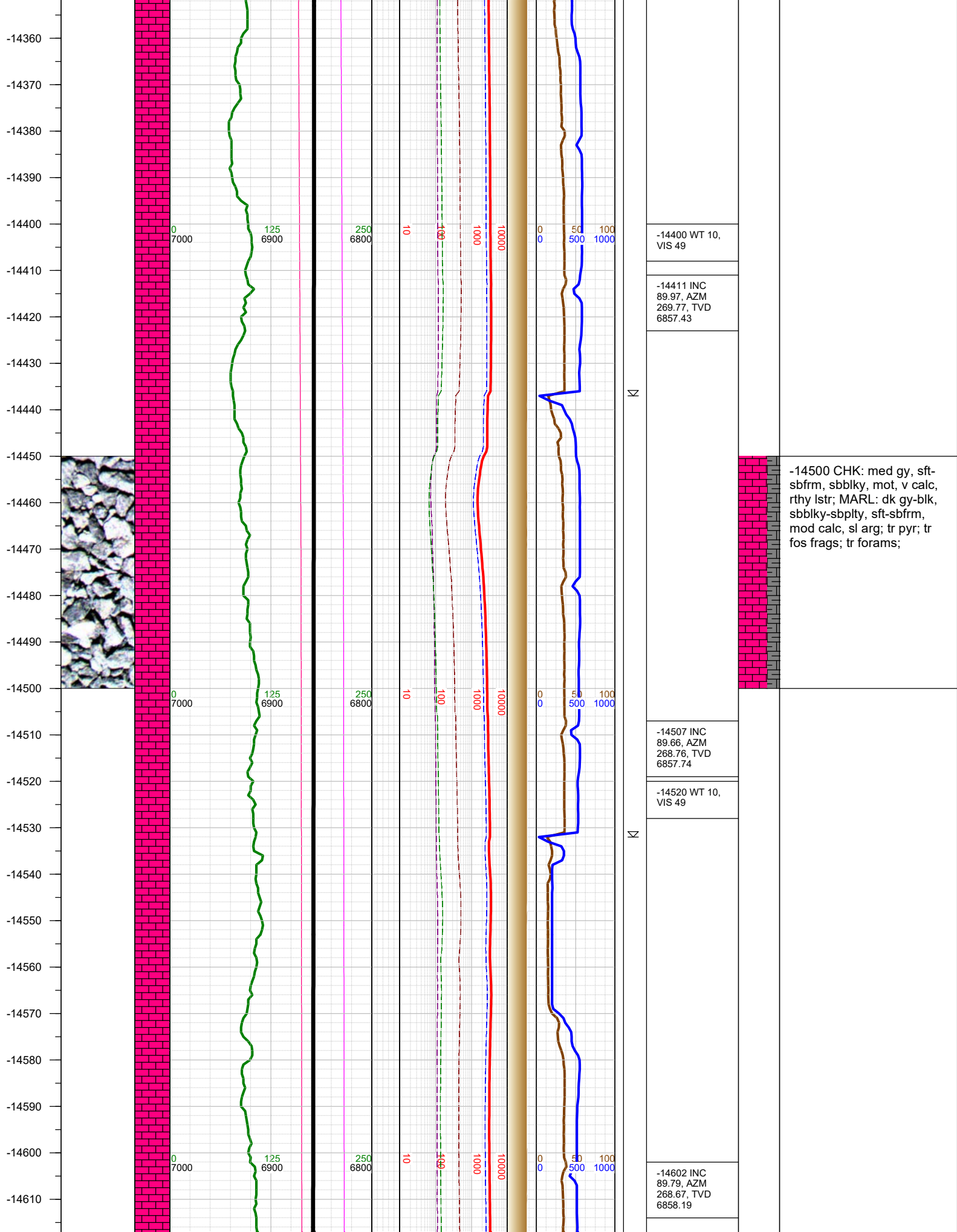


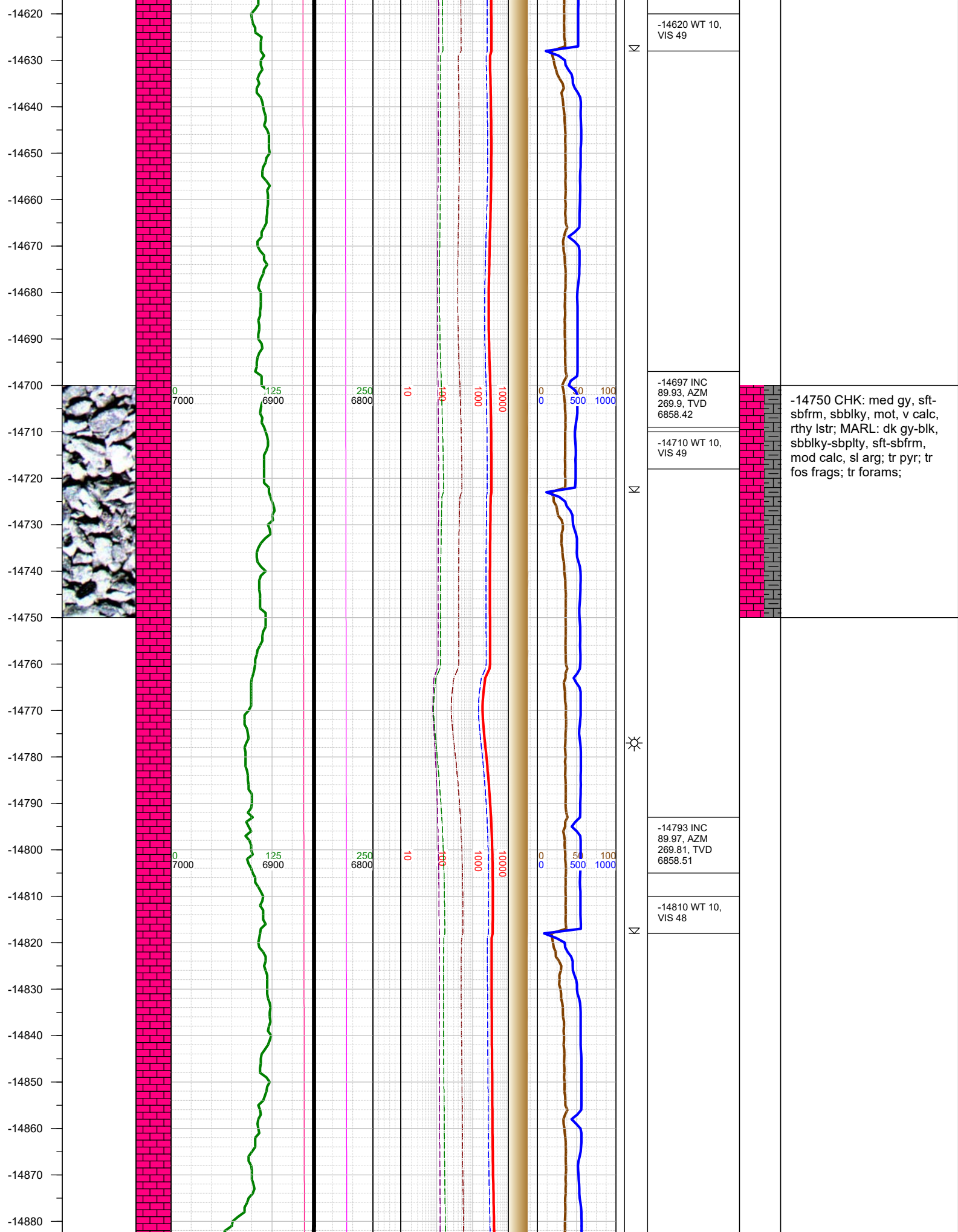


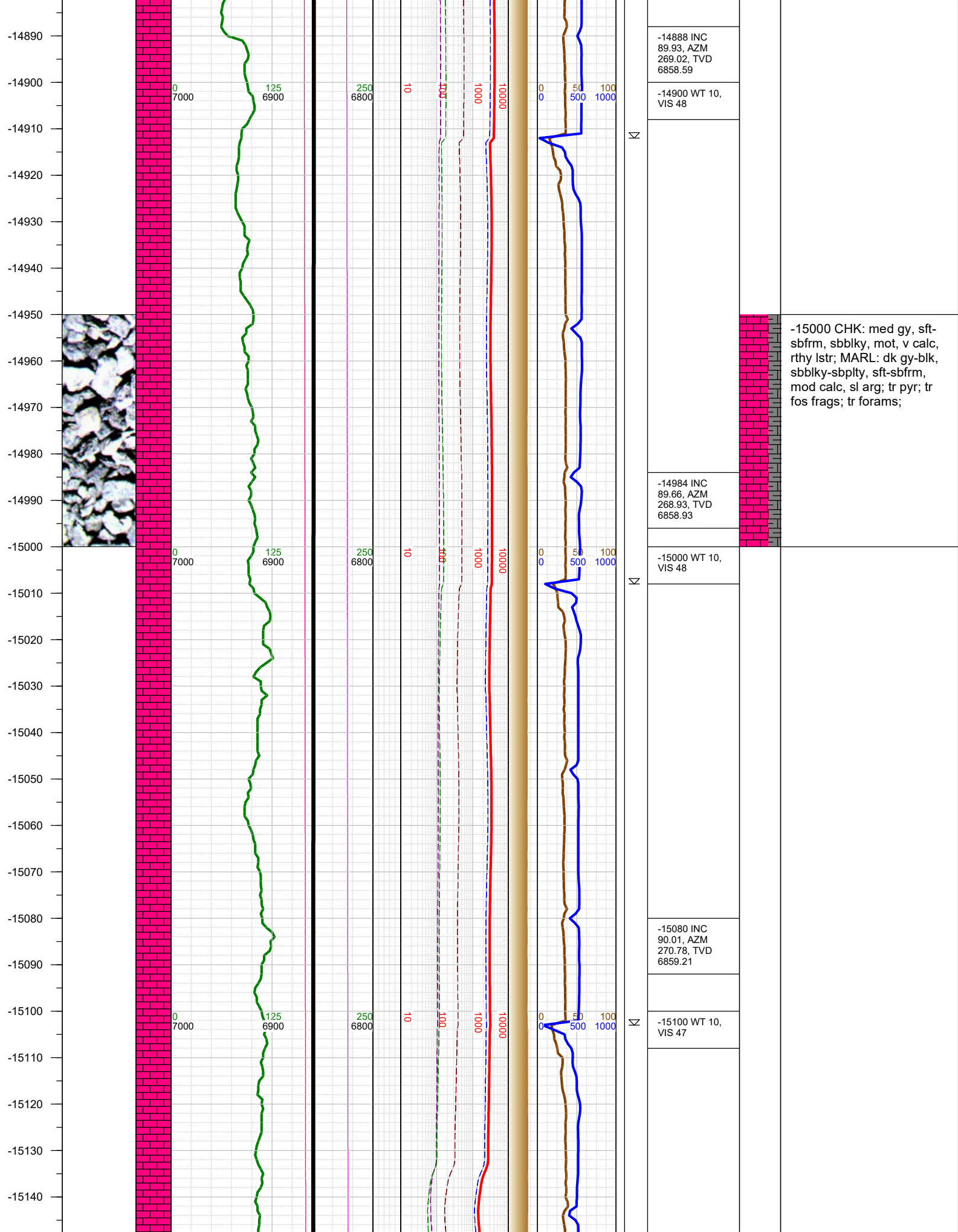




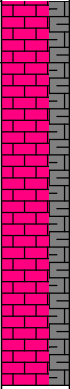
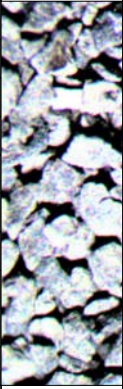
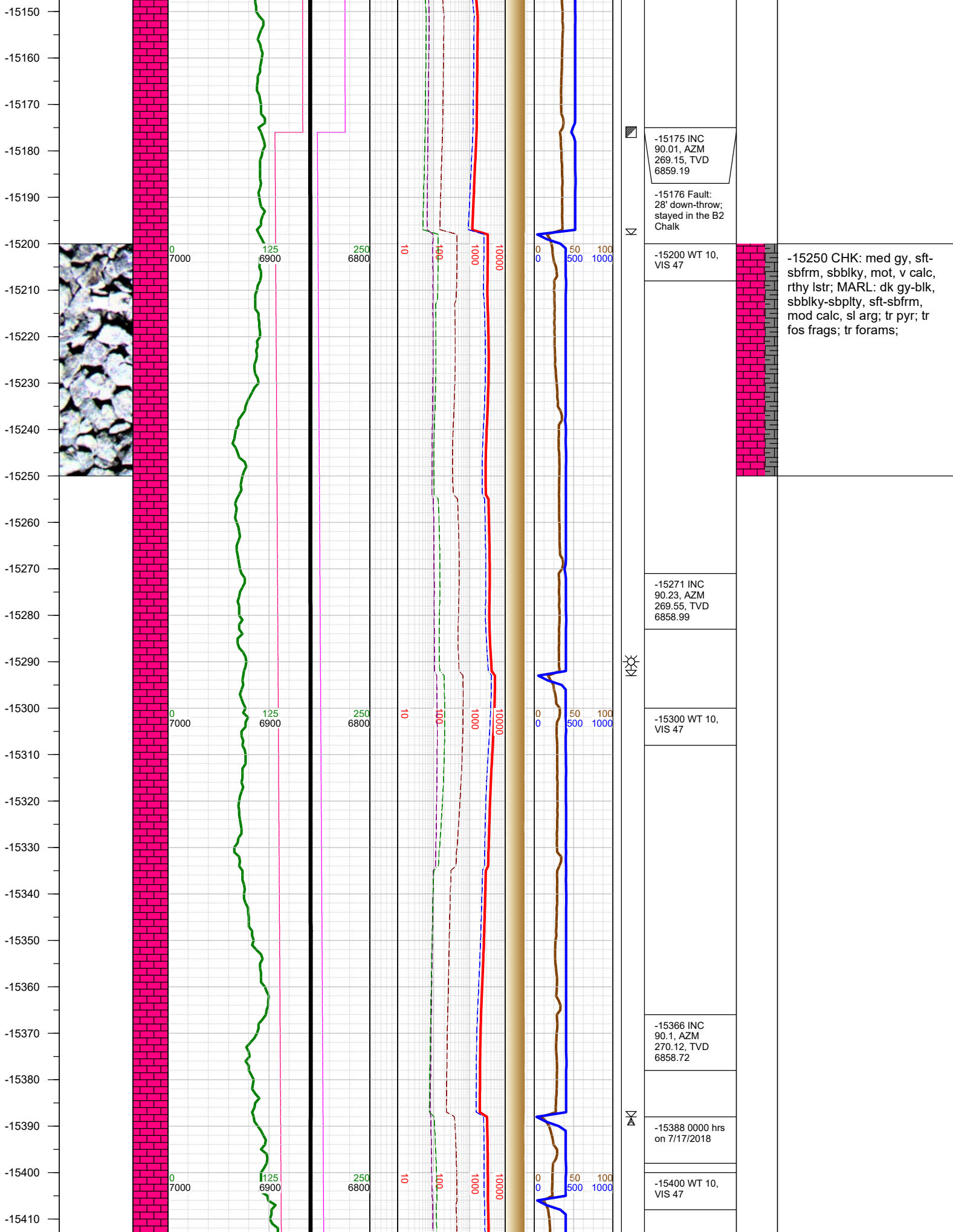




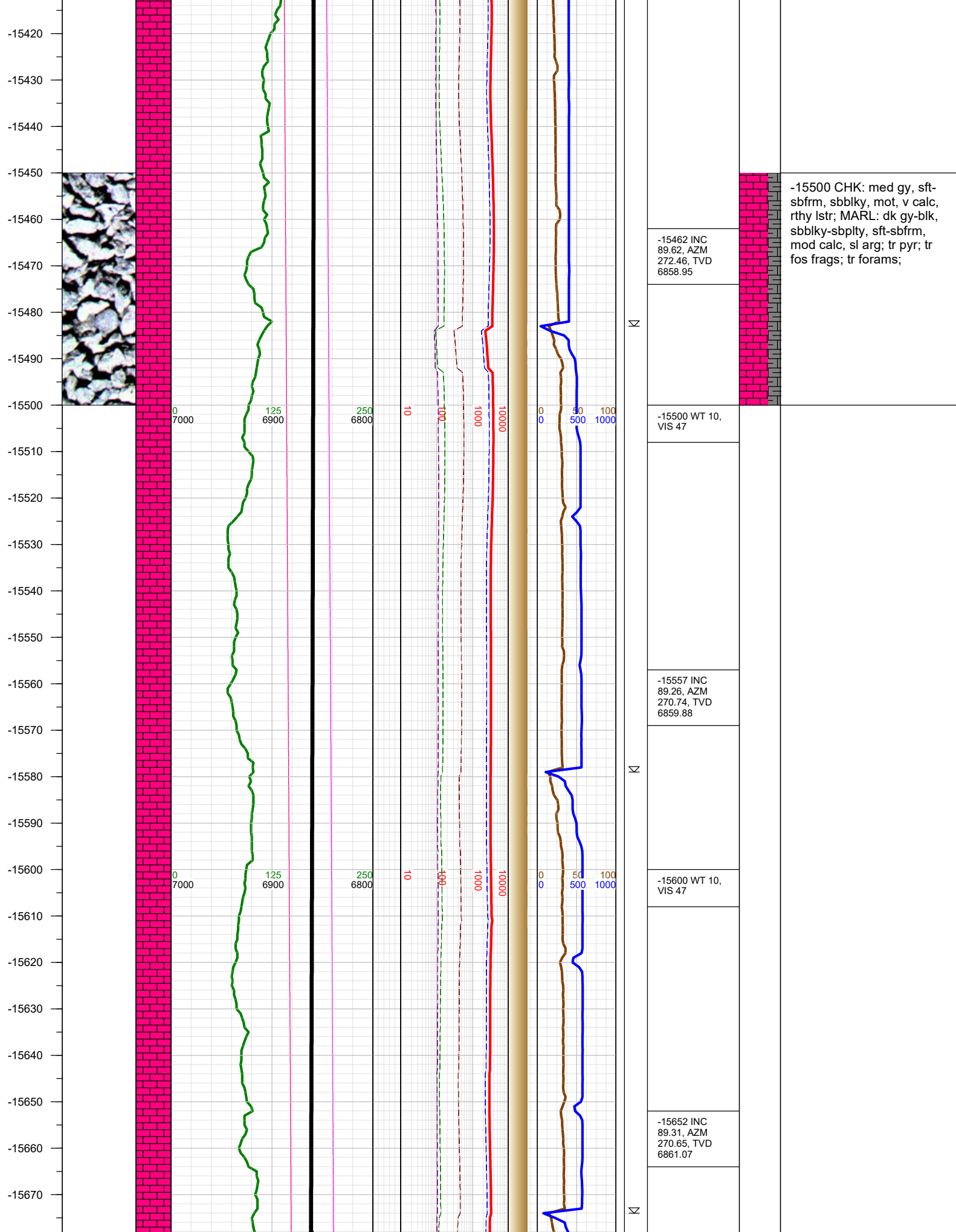


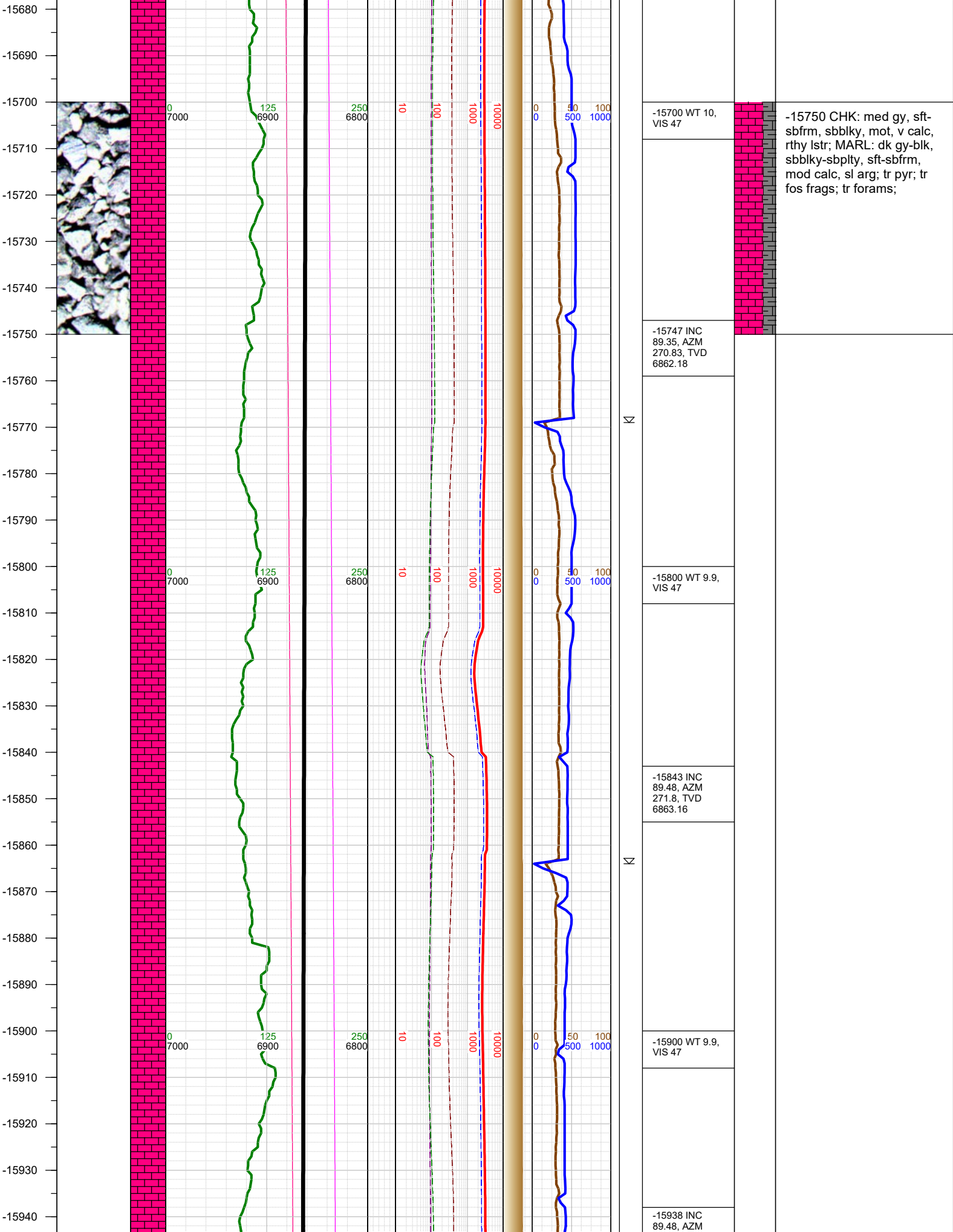




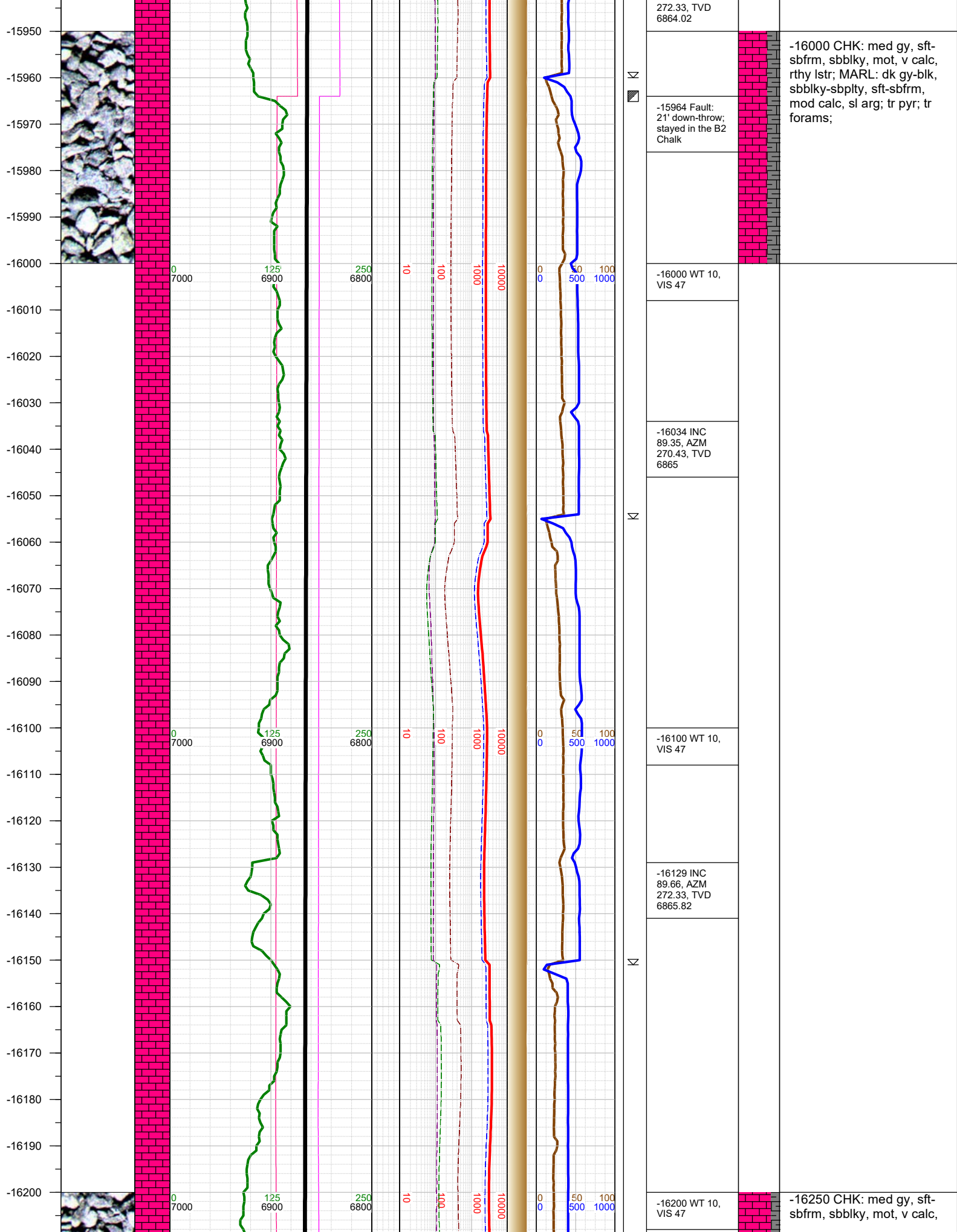


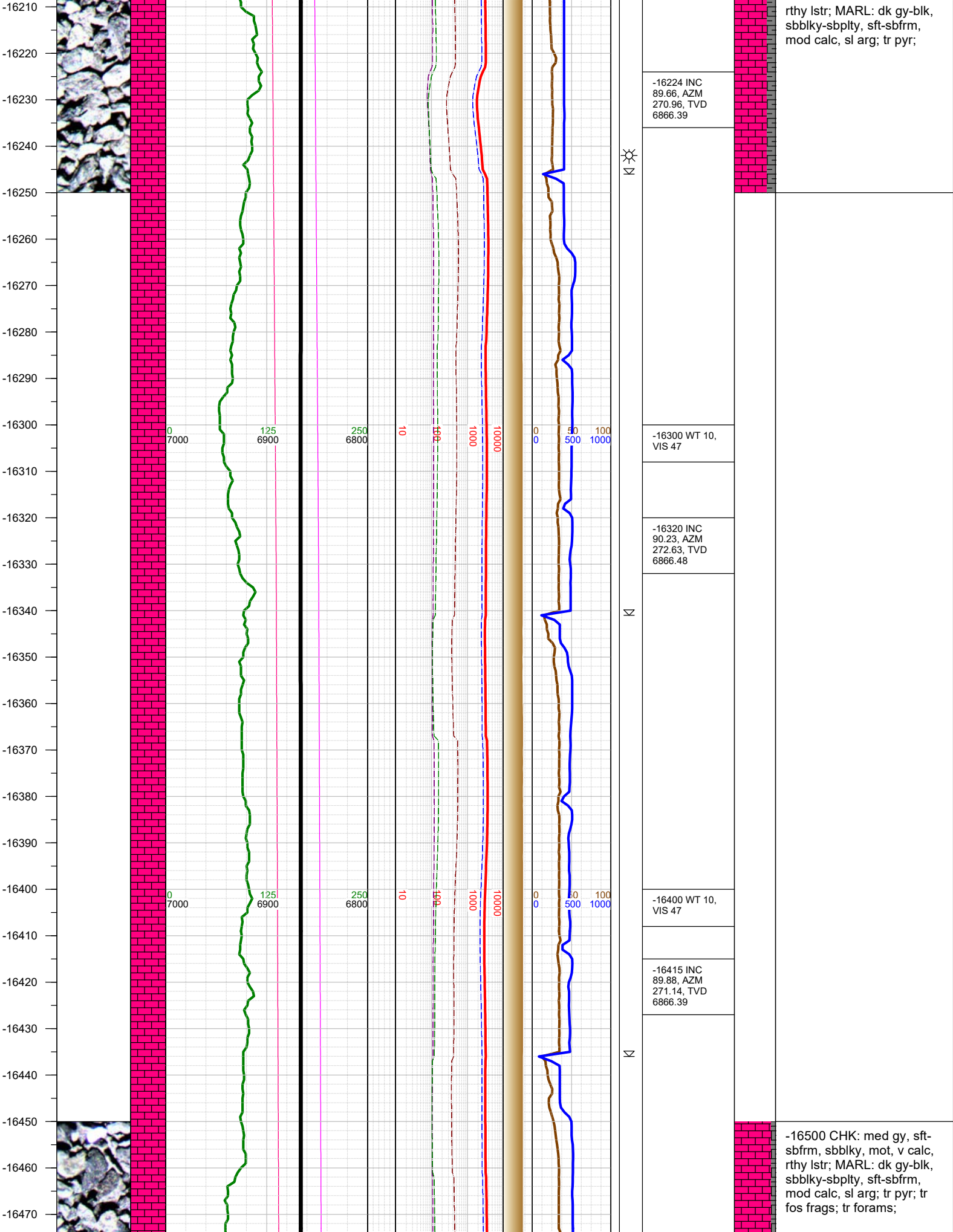
-15250 CHK: med gy, sft-sbfrm, sbblky, mot, v calc, rthy lstr; MARL: dk gy-blk, sbblky-sbply, sft-sbfrm, mod calc, sl arg; tr pyr; tr fos frags; tr forams;



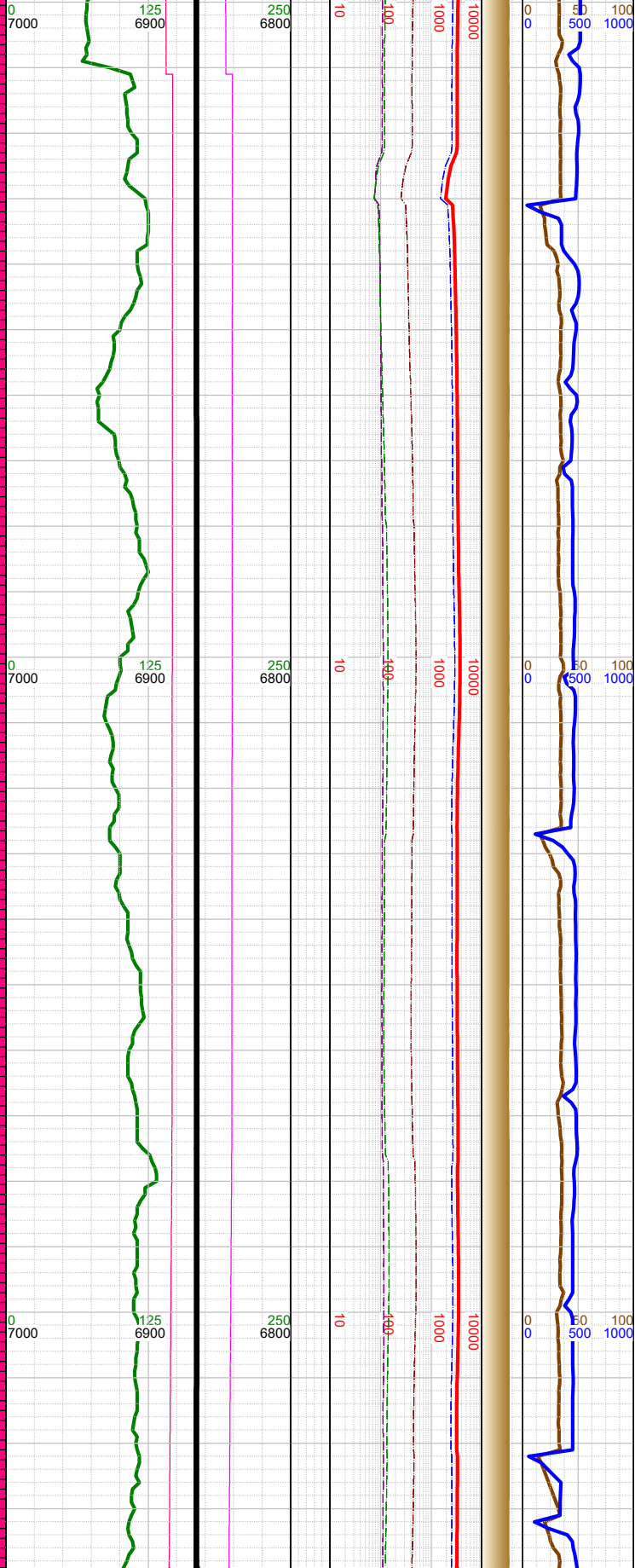
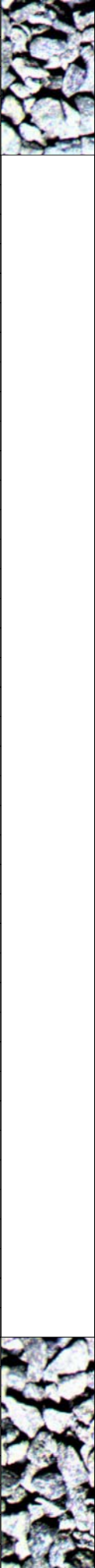








-16480  
-16490  
-16500  
-16510  
-16520  
-16530  
-16540  
-16550  
-16560  
-16570  
-16580  
-16590  
-16600  
-16610  
-16620  
-16630  
-16640  
-16650  
-16660  
-16670  
-16680  
-16690  
-16700  
-16710  
-16720  
-16730



-16500 WT 10,  
VIS 47

-16511 Fault: 4'  
up-throw; stayed  
in the B2 Chalk

-16511 INC  
90.19, AZM  
272.06, TVD  
6866.33

-16606 INC  
89.97, AZM  
271.58, TVD  
6866.2

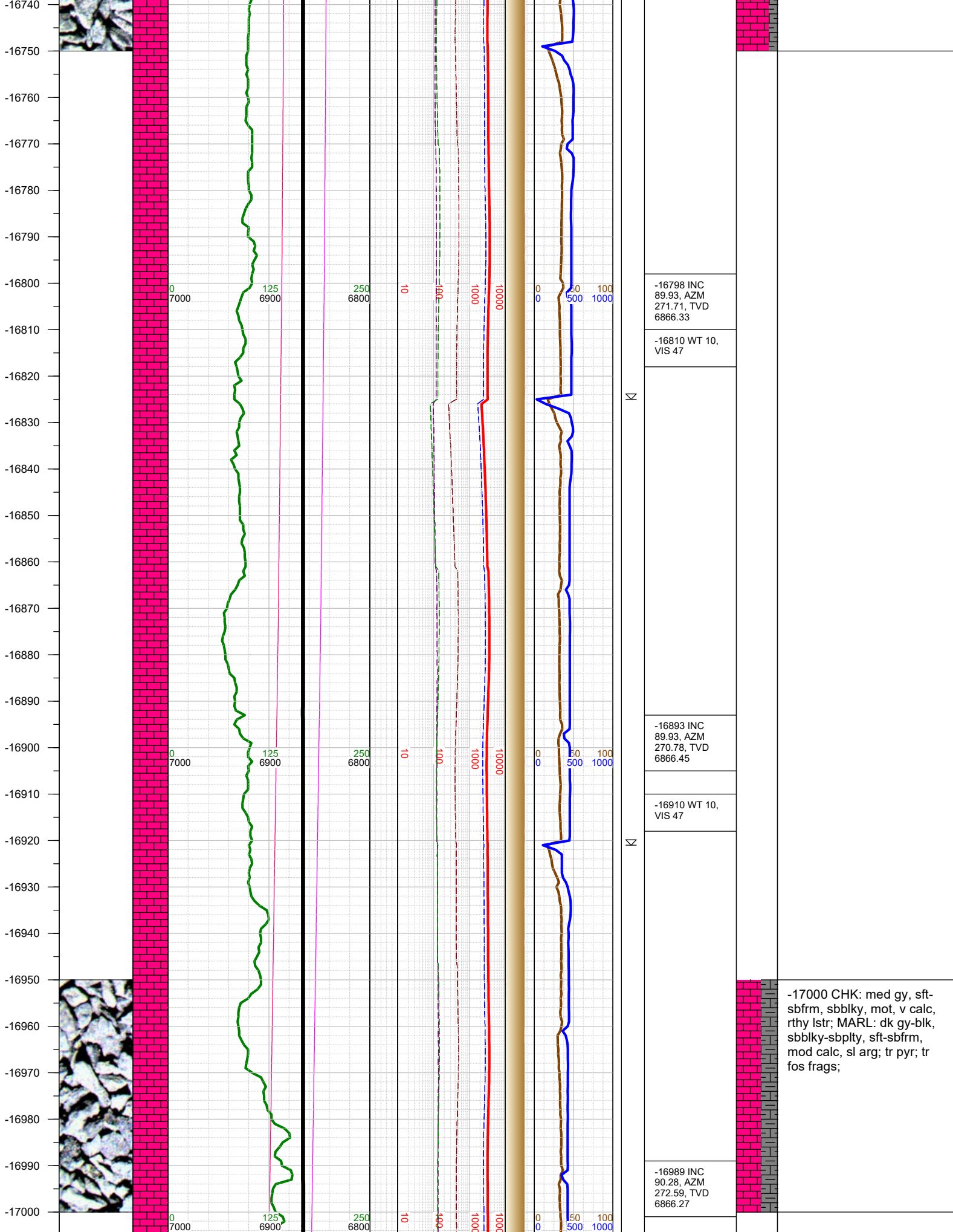
-16620 WT 10,  
VIS 47

-16702 INC  
89.97, AZM  
270.78, TVD  
6866.25

-16720 WT 10,  
VIS 47

-16750 CHK: med gy, sft-  
sbfrm, sbblky, mot, v calc,  
rthy lstr; MARL: dk gy-blk,  
sbblky-sbplty, sft-sbfrm,  
mod calc, sl arg; tr pyr; tr  
fos frags; tr forams;





-16798 INC  
89.93, AZM  
271.71, TVD  
6866.33

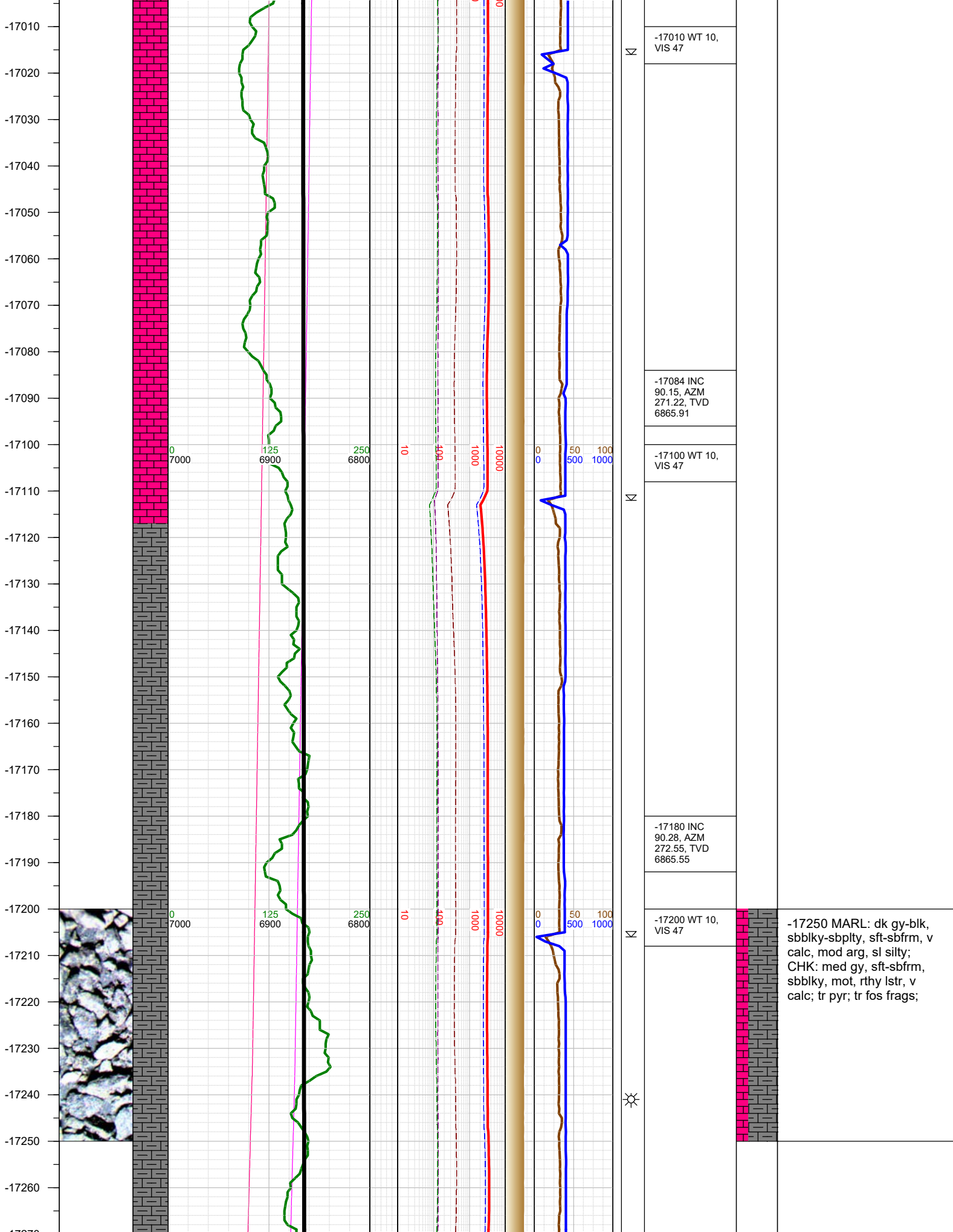
-16810 WT 10,  
VIS 47

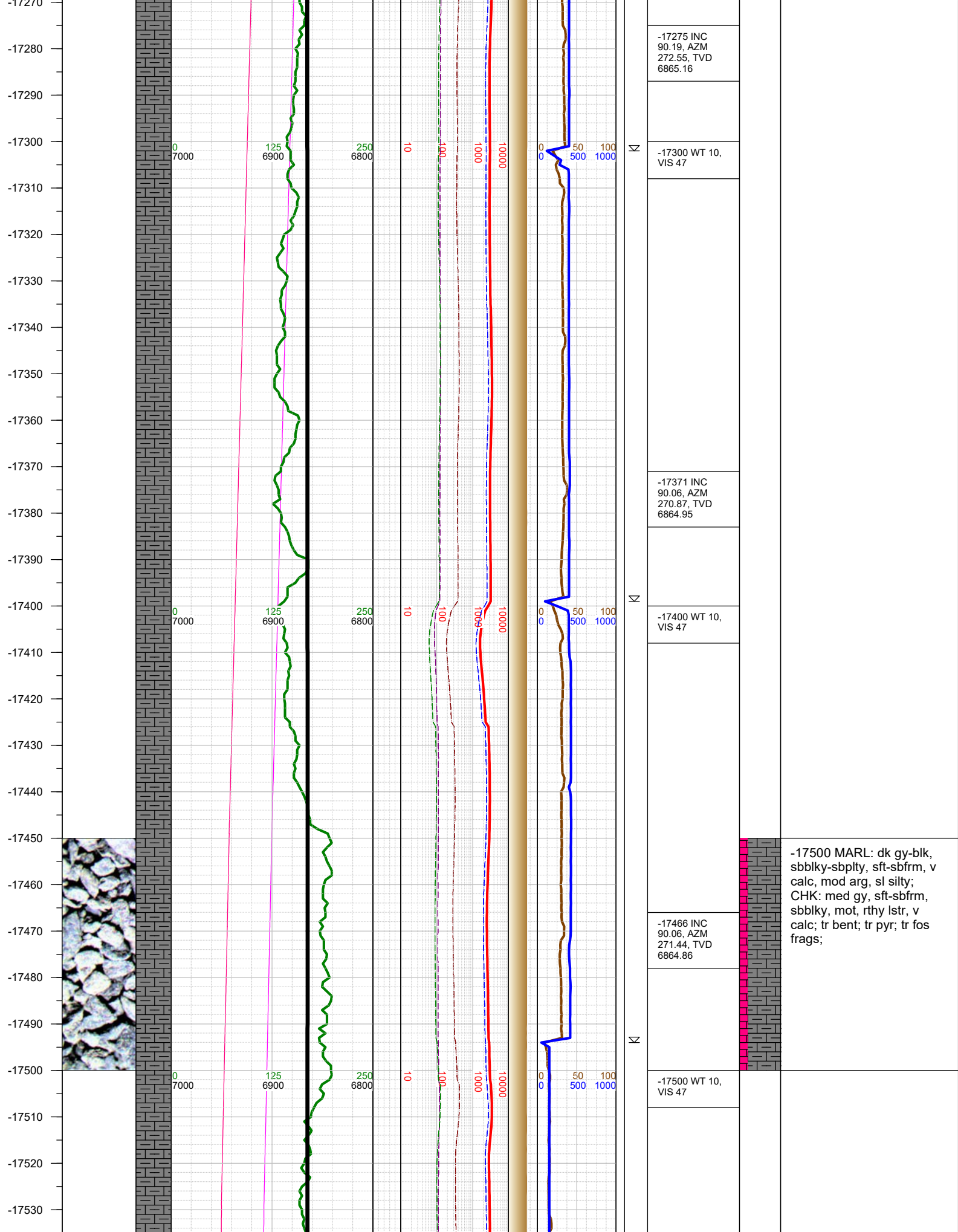
-16893 INC  
89.93, AZM  
270.78, TVD  
6866.45

-16910 WT 10,  
VIS 47

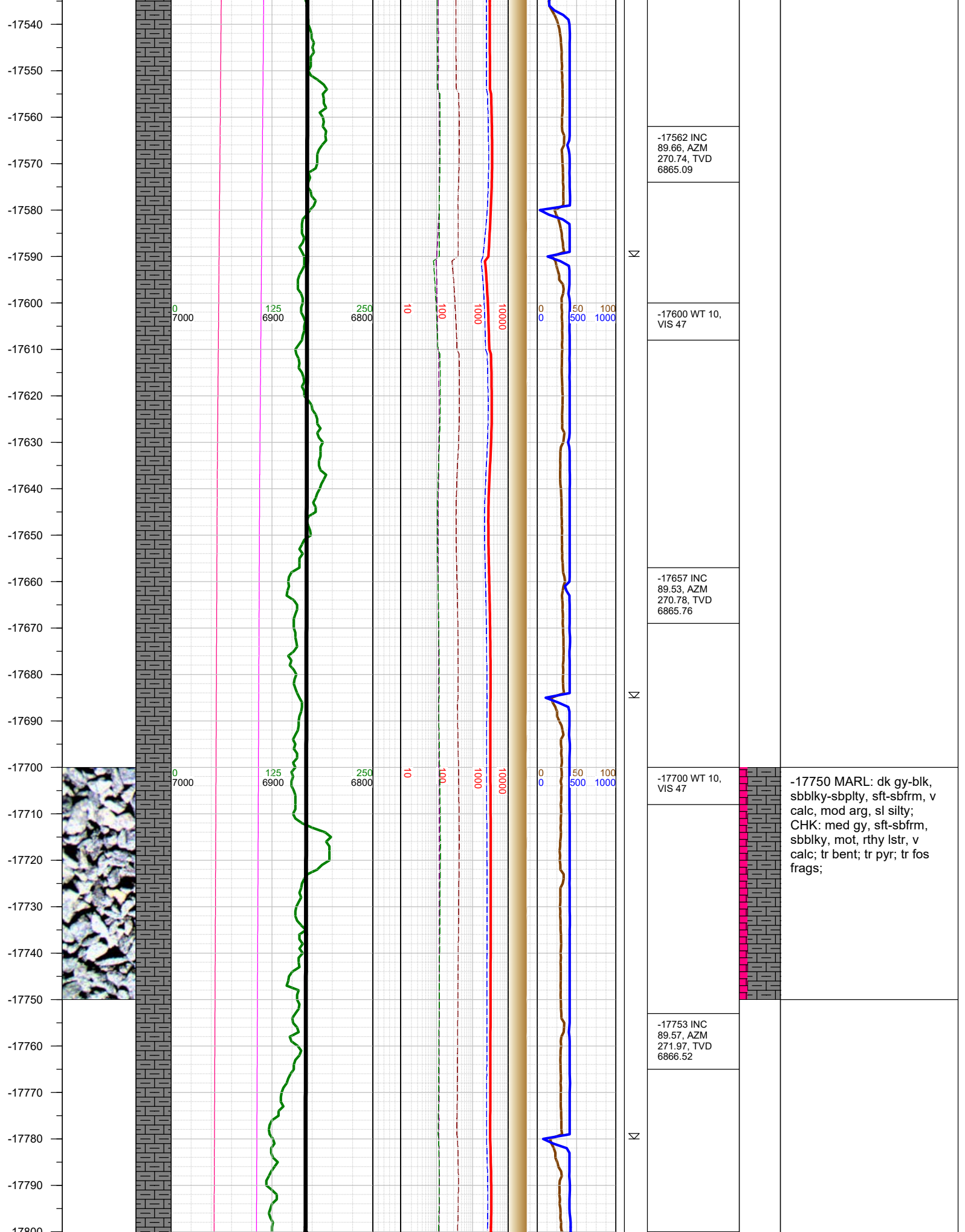
-16989 INC  
90.28, AZM  
272.59, TVD  
6866.27

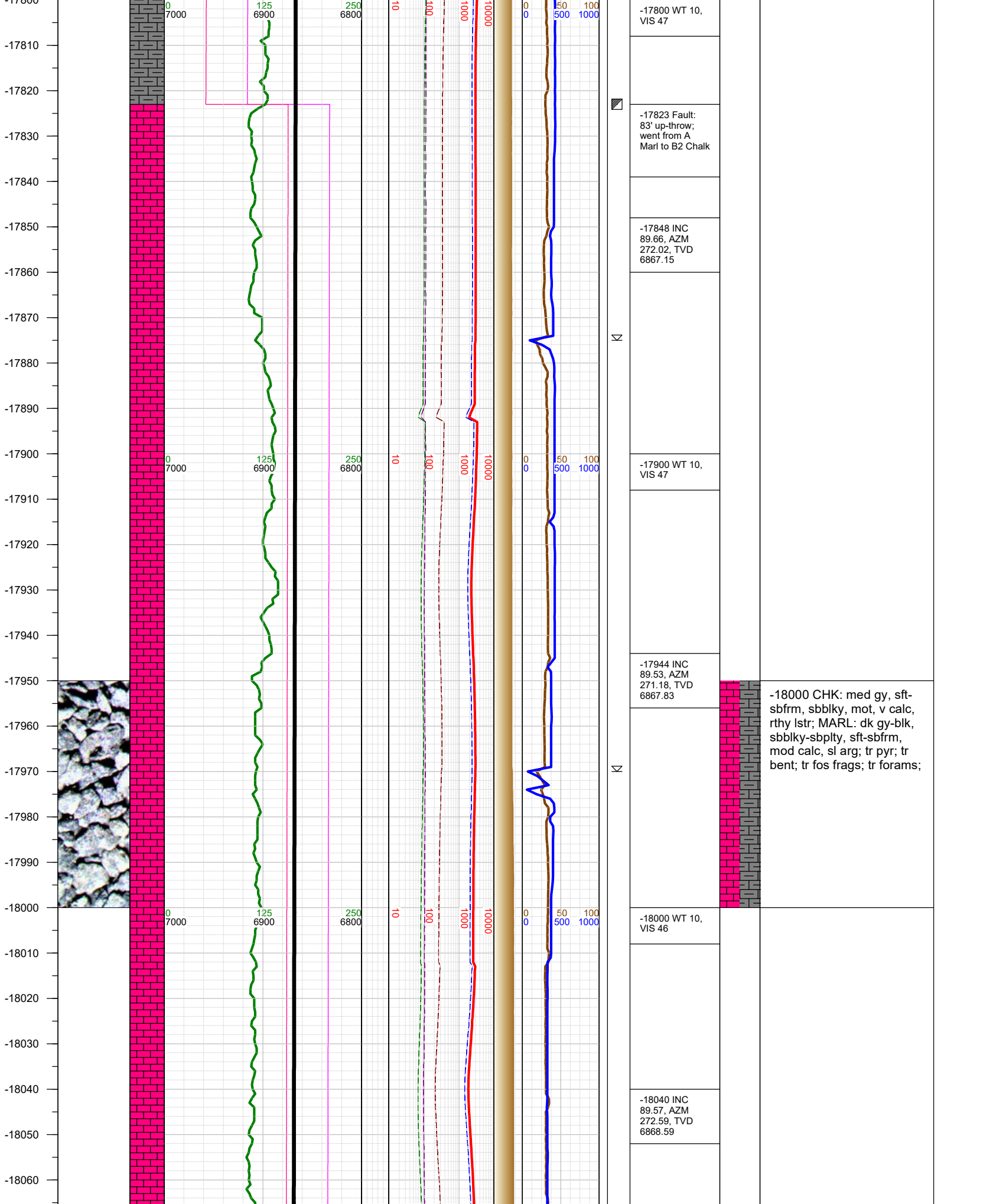
-17000 CHK: med gy, sft-  
sbfrm, sbblky, mot, v calc,  
rthy lstr; MARL: dk gy-blk,  
sbblky-sbplty, sft-sbfrm,  
mod calc, sl arg; tr pyr; tr  
fos frags;



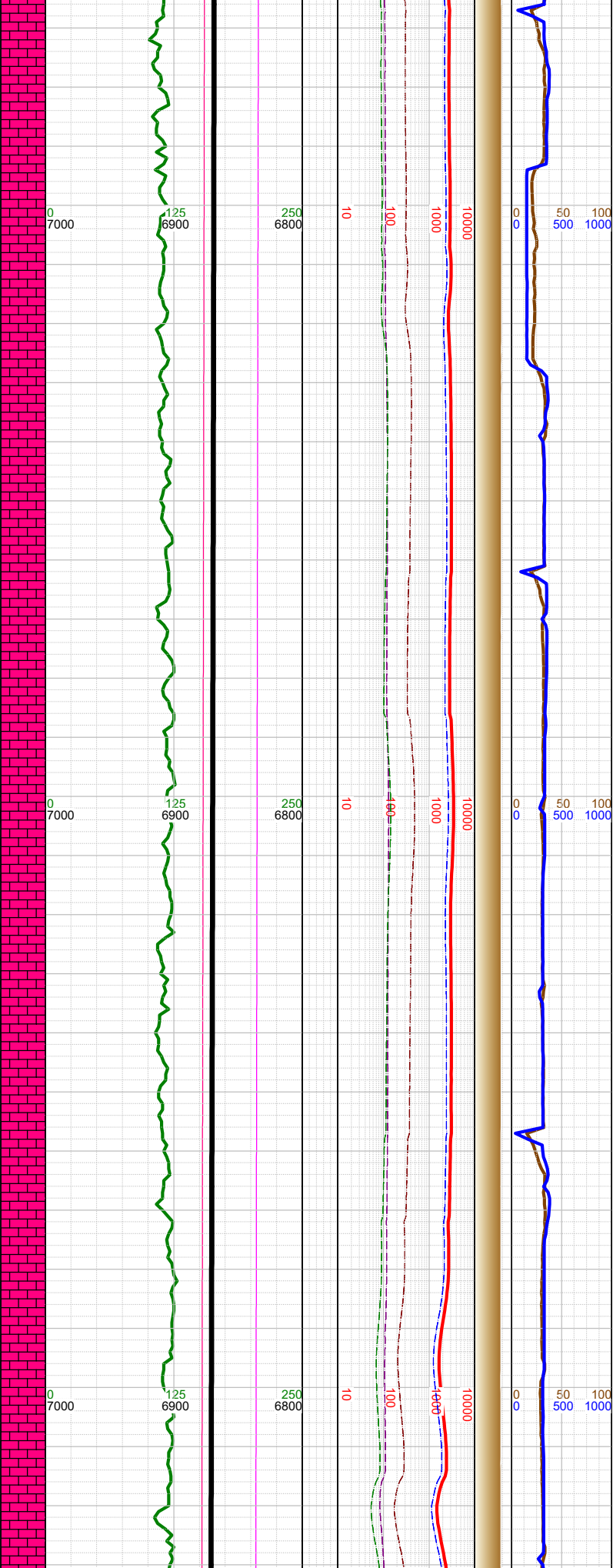
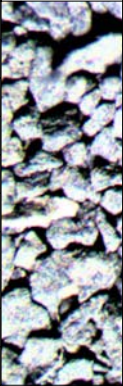






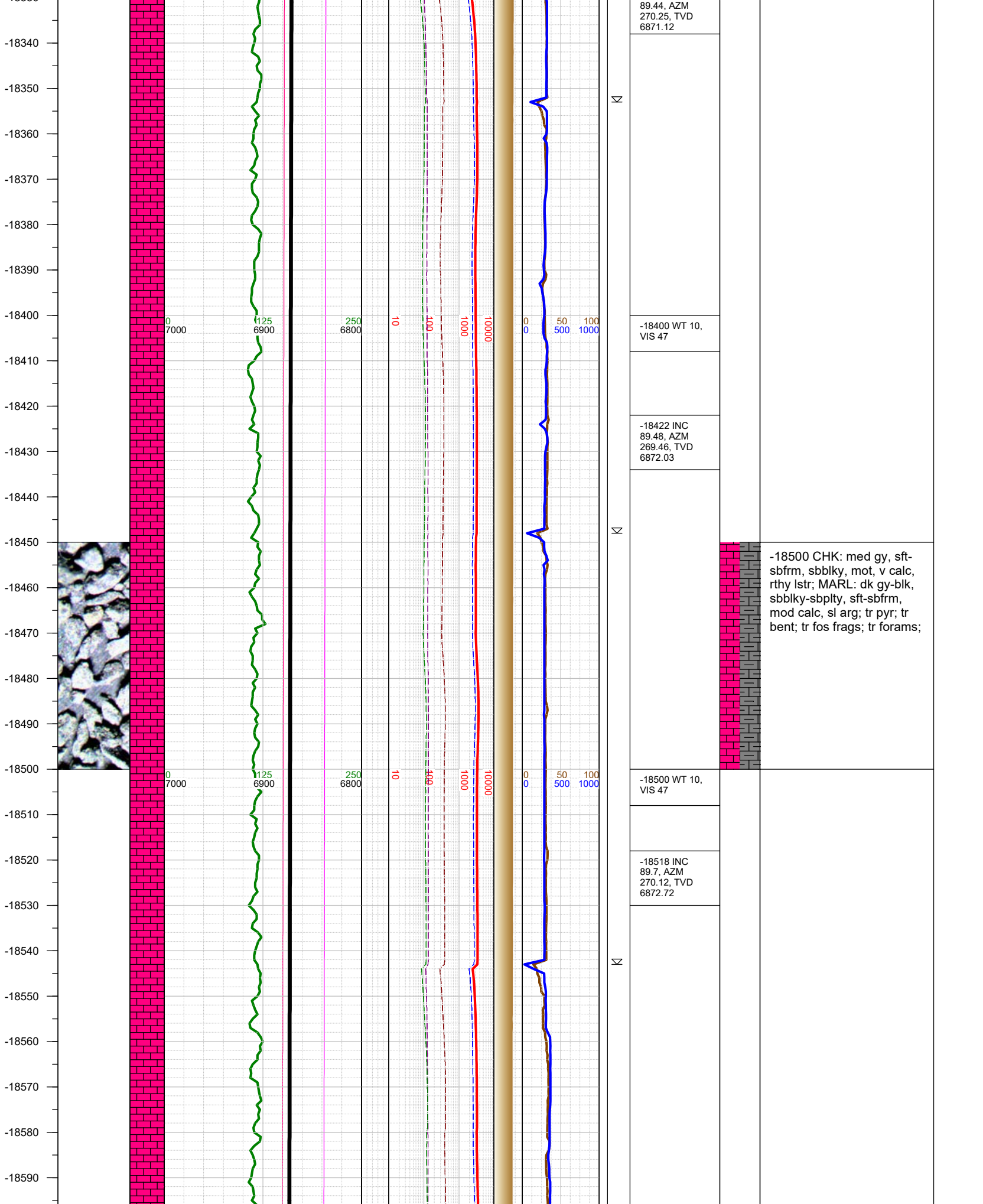


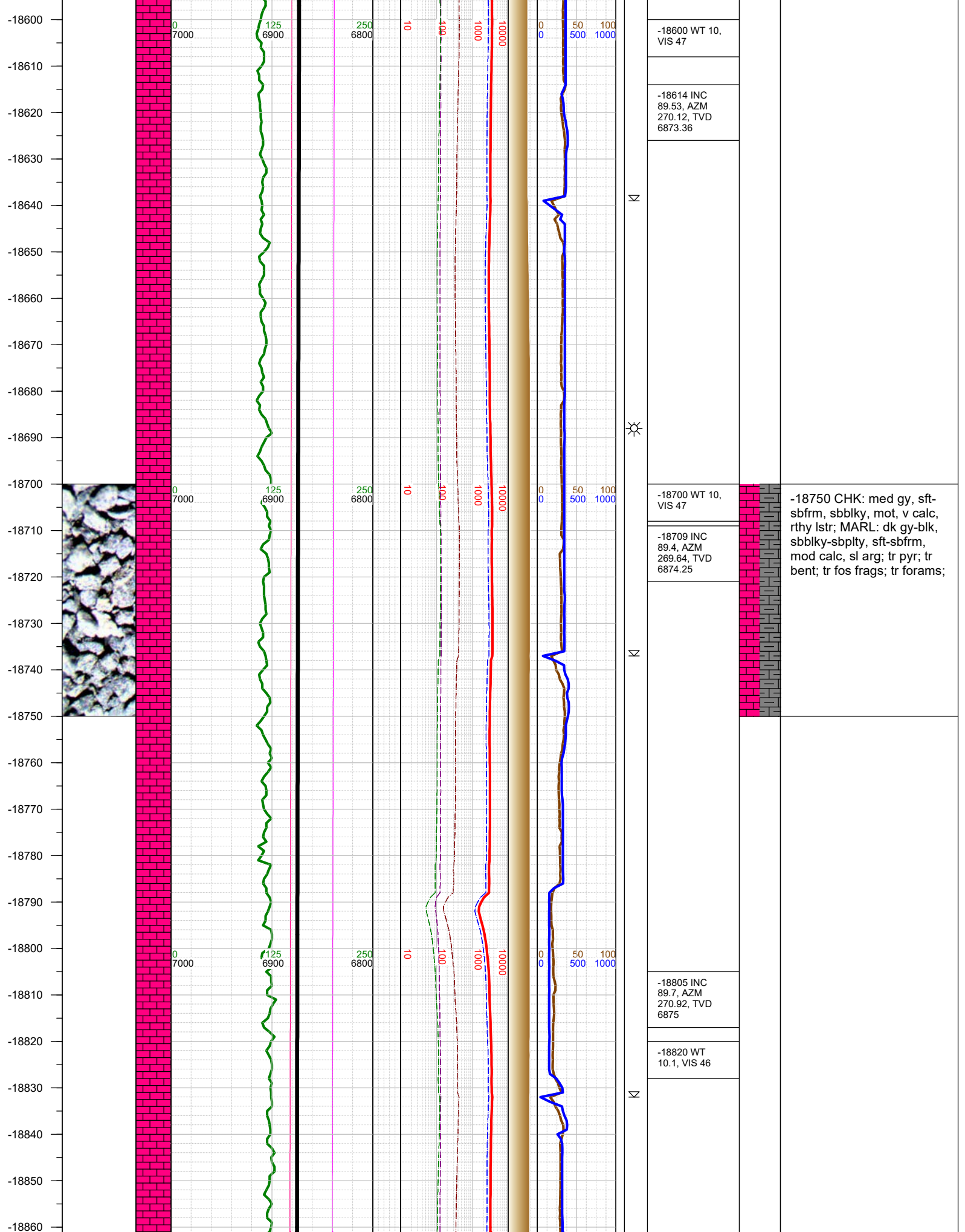
-18070  
-18080  
-18090  
-18100  
-18110  
-18120  
-18130  
-18140  
-18150  
-18160  
-18170  
-18180  
-18190  
-18200  
-18210  
-18220  
-18230  
-18240  
-18250  
-18260  
-18270  
-18280  
-18290  
-18300  
-18310  
-18320  
-18330

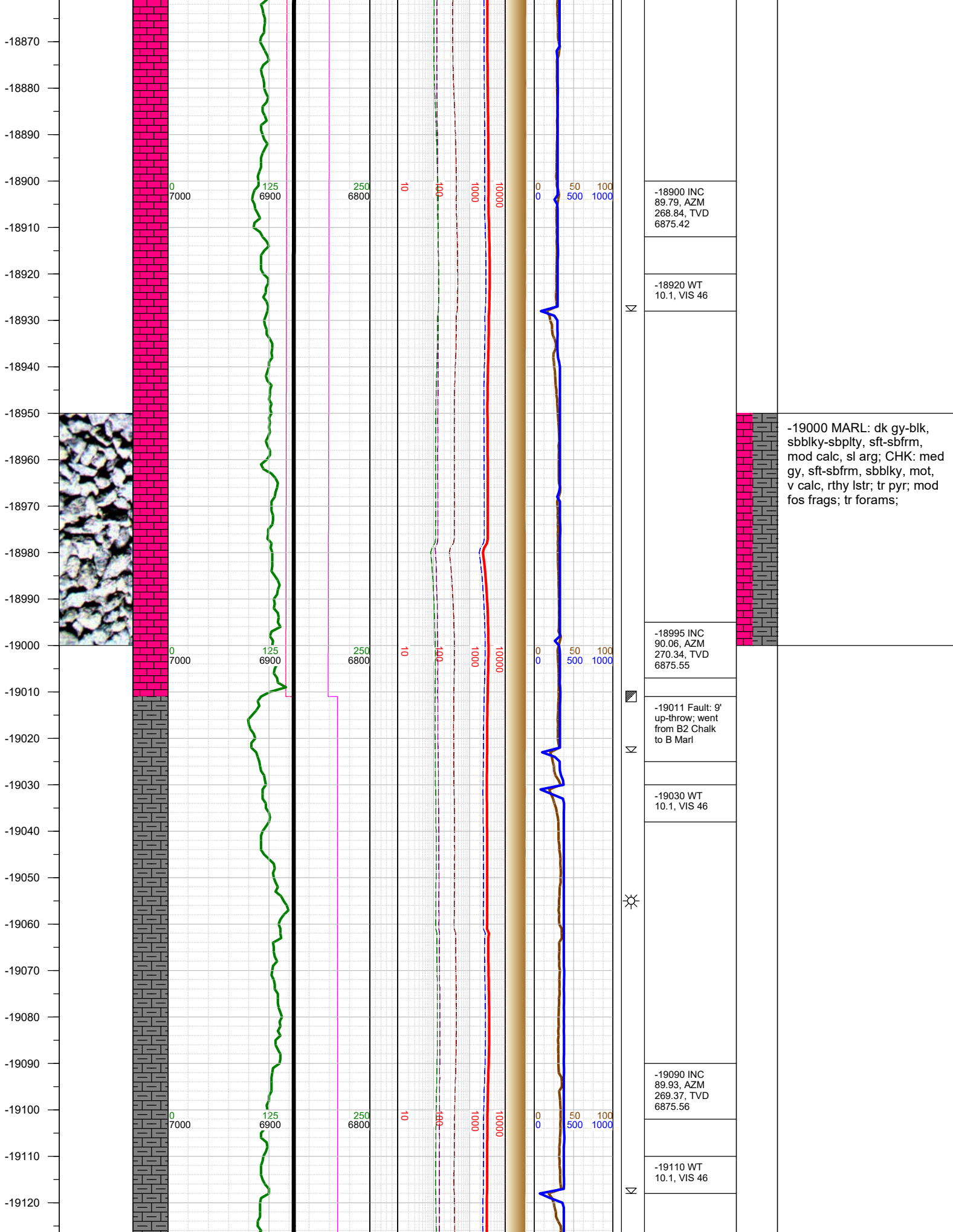


N			
	-18100 WT 10, VIS 46		
N			
	-18135 INC 89.57, AZM 272.59, TVD 6869.3		
N	-18200 WT 10, VIS 46		-18250 CHK: med gy, sft-sbfrm, sbblky, mot, v calc, rthy lstr; MARL: dk gy-blk, sbblky-sbplty, sft-sbfrm, mod calc, sl arg; tr pyr; tr bent; tr fos frags;
	-18231 INC 89.4, AZM 271.44, TVD 6870.16		
N			
	-18300 WT 10, VIS 46		
	-18326 INC		

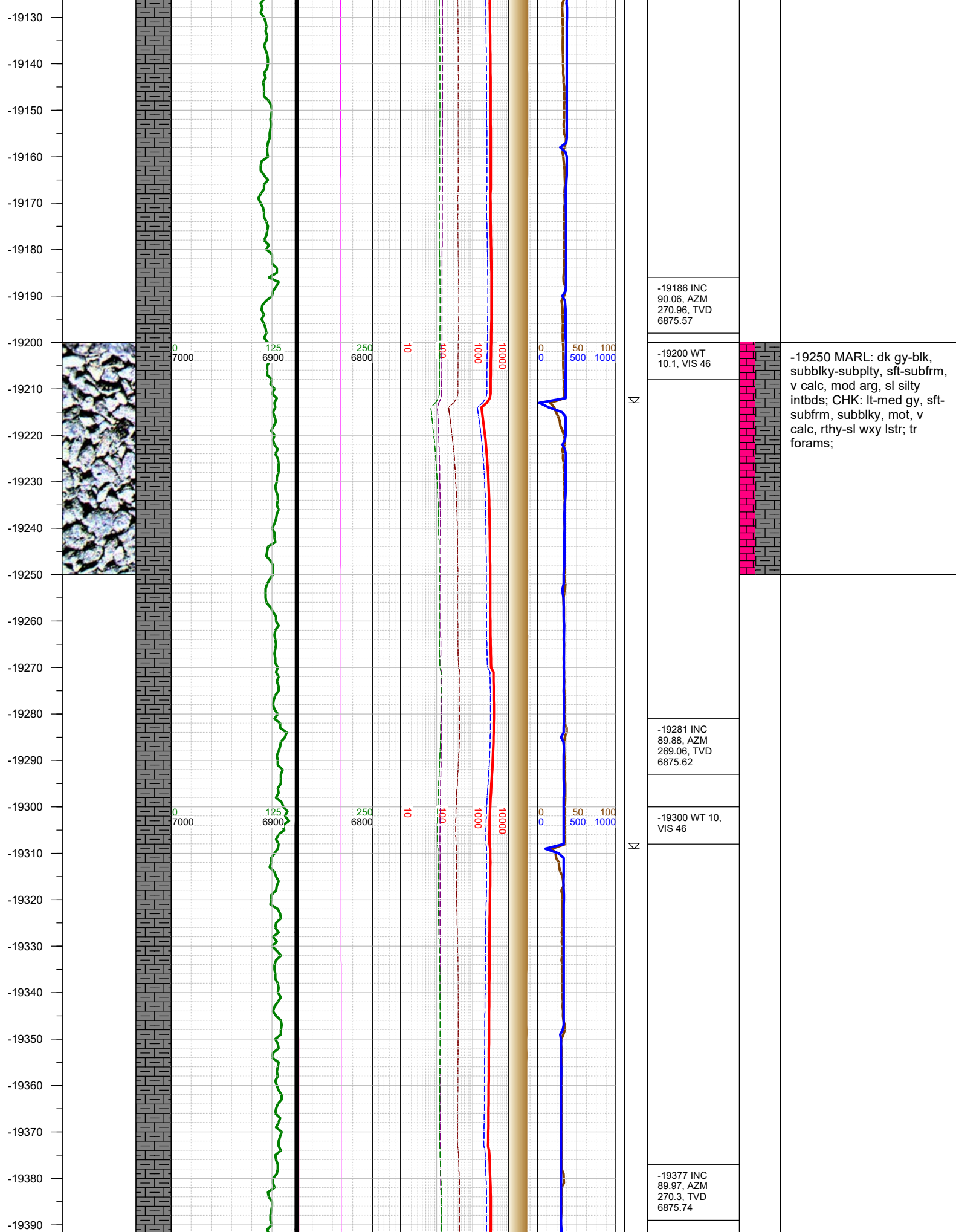


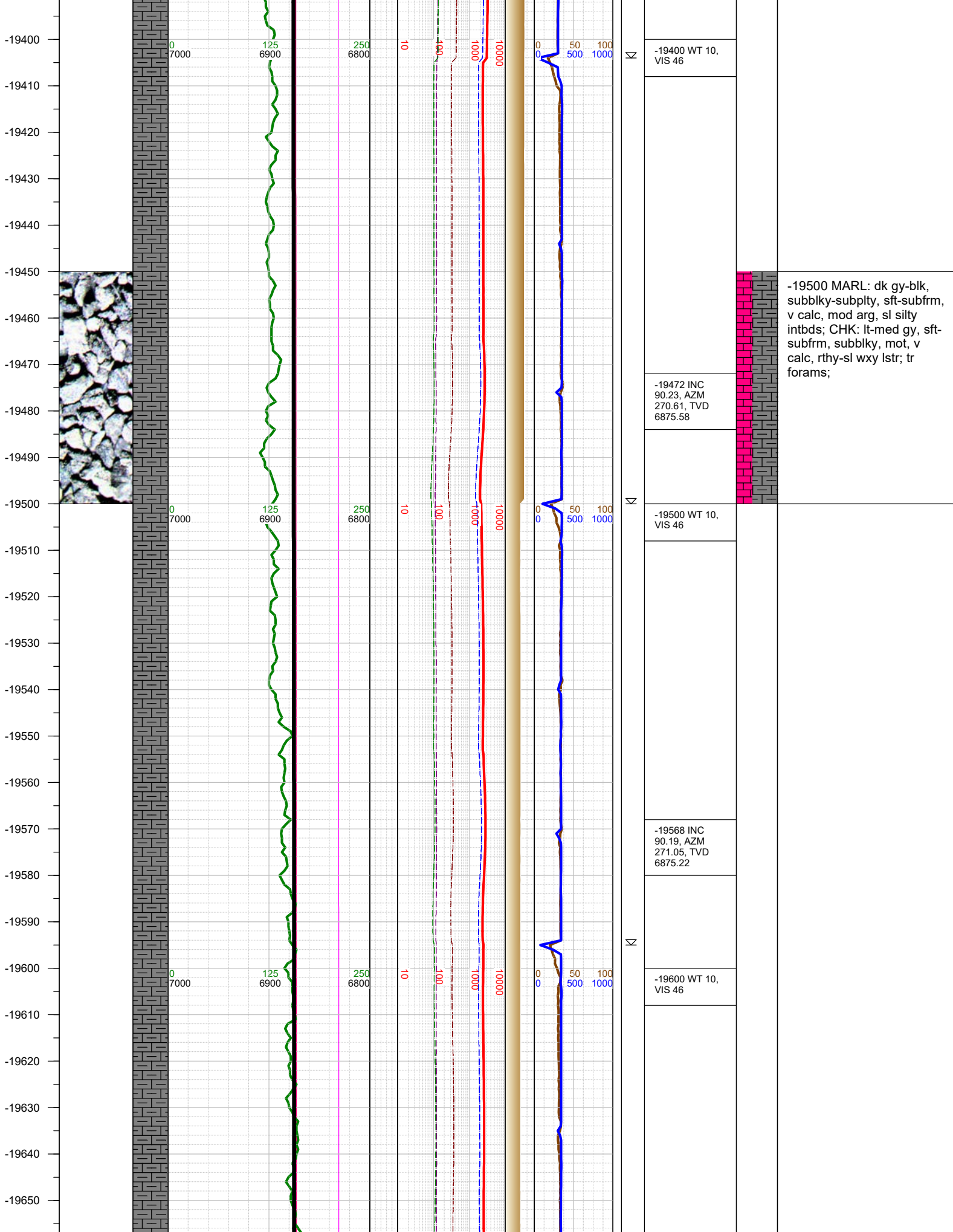






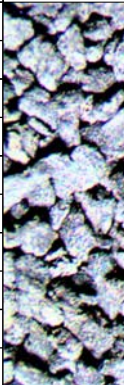






-19500 MARL: dk gy-blk, subblky-subplty, sft-subfrm, v calc, mod arg, sl silty intbds; CHK: lt-med gy, sft-subfrm, subblky, mot, v calc, rthy-sl wxy lstr; tr forams;

-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



0  
7000

125  
6900

250  
6800

10

100

1000

10000

0  
0

50  
500

100  
1000

Σ

-19663 INC  
89.79, AZM  
268.89, TVD  
6875.24

-19700 WT 10,  
VIS 46

-19759 INC  
89.93, AZM  
269.11, TVD  
6875.47

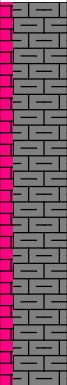
-19800 WT 10,  
VIS 46

-19854 INC  
90.19, AZM  
270.43, TVD  
6875.38

-19900 WT 10,  
VIS 46

Σ

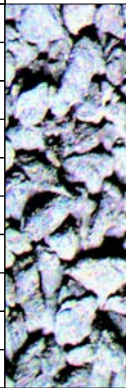
Σ



-19750 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 forams; tr foss  
frags; tr pyr; mod bent;



-19930  
-19940  
-19950  
-19960  
-19970  
-19980  
-19990  
-20000  
-20010  
-20020  
-20030  
-20040  
-20050  
-20060  
-20070  
-20080  
-20090  
-20100  
-20110  
-20120  
-20130  
-20140  
-20150  
-20160  
-20170  
-20180



0  
7000

125  
6900

250  
6800

10

100

1000

10000

0

0

50

500

1000

Σ

-19950 INC  
90.1, AZM  
270.34, TVD  
6875.13

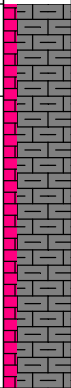
-20000 WT 10,  
VIS 46

-20045 INC  
90.15, AZM  
270.3, TVD  
6874.92

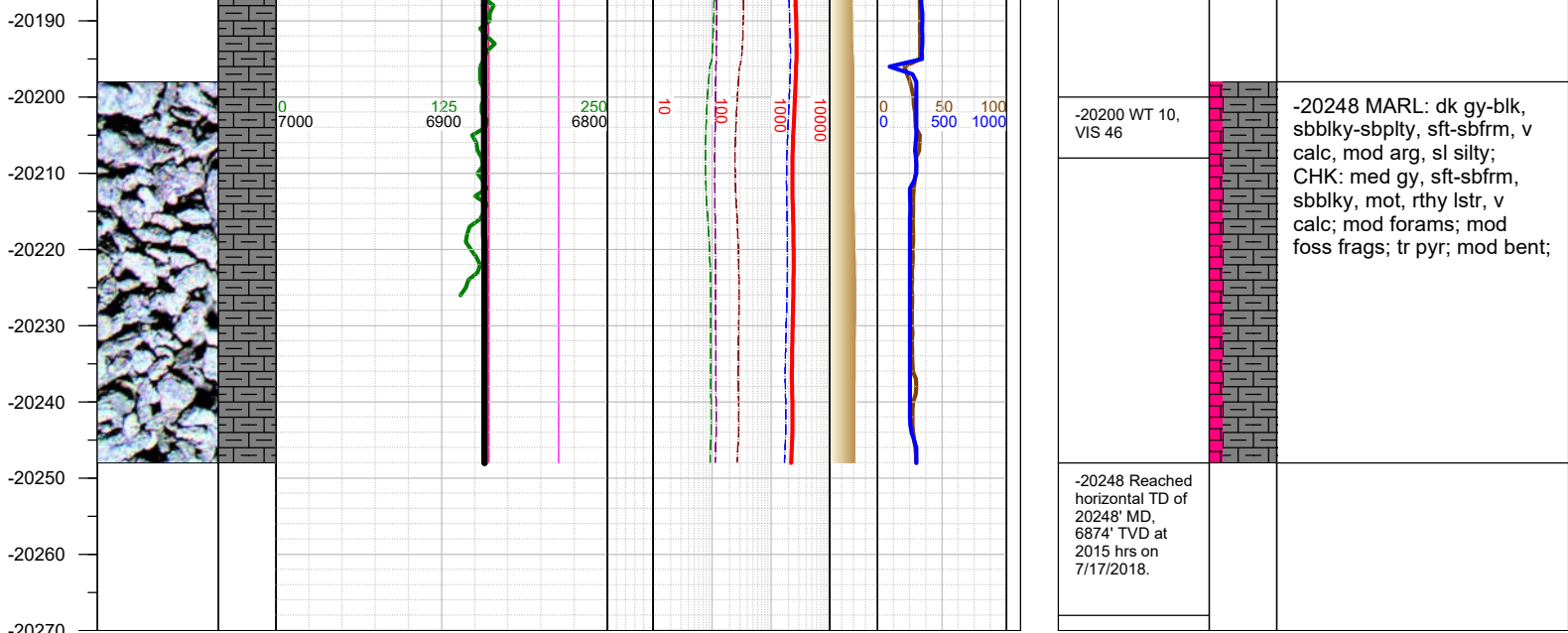
-20100 WT 10,  
VIS 46

-20140 INC  
90.23, AZM  
270.92, TVD  
6874.61

Σ



-20000 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; mod forams; tr foss  
frags; tr pyr; mod bent;



TOTAL DEPTH = 20248'

Thank you for using Earth Science Agency