

OPERATOR: **Extraction Oil & Gas**

WELL NAME: **Livingston S19-25-7N**

FIELD NAME: DJ Basin - Wattenberg

DRILLING RIG: Patterson 901

API #: 05-014-20751

LAT/LONG: 39.978562, -105.039737

SURFACE HOLE: NWSE S7-T1S-R68W, 2332' FSL, 1420' FEL

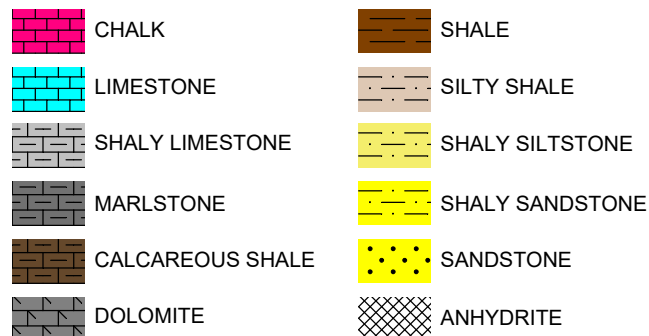
BOTTOM HOLE: S19-T1S-R68W, 460' FSL, 2292' FWL



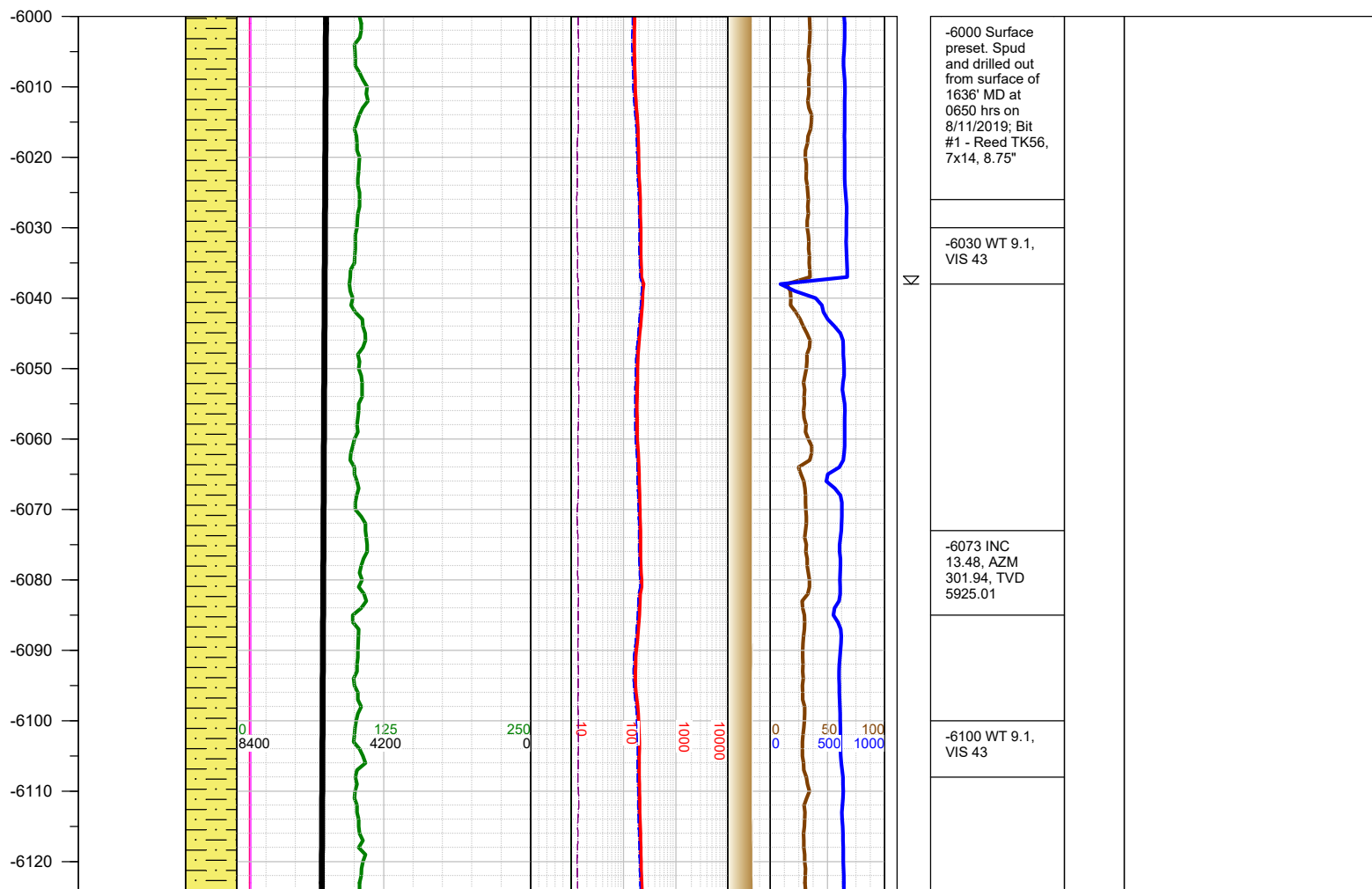
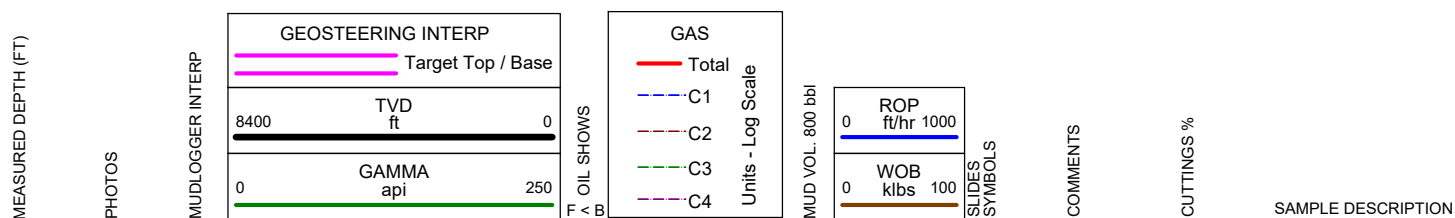
Earth Science Agency, LLC

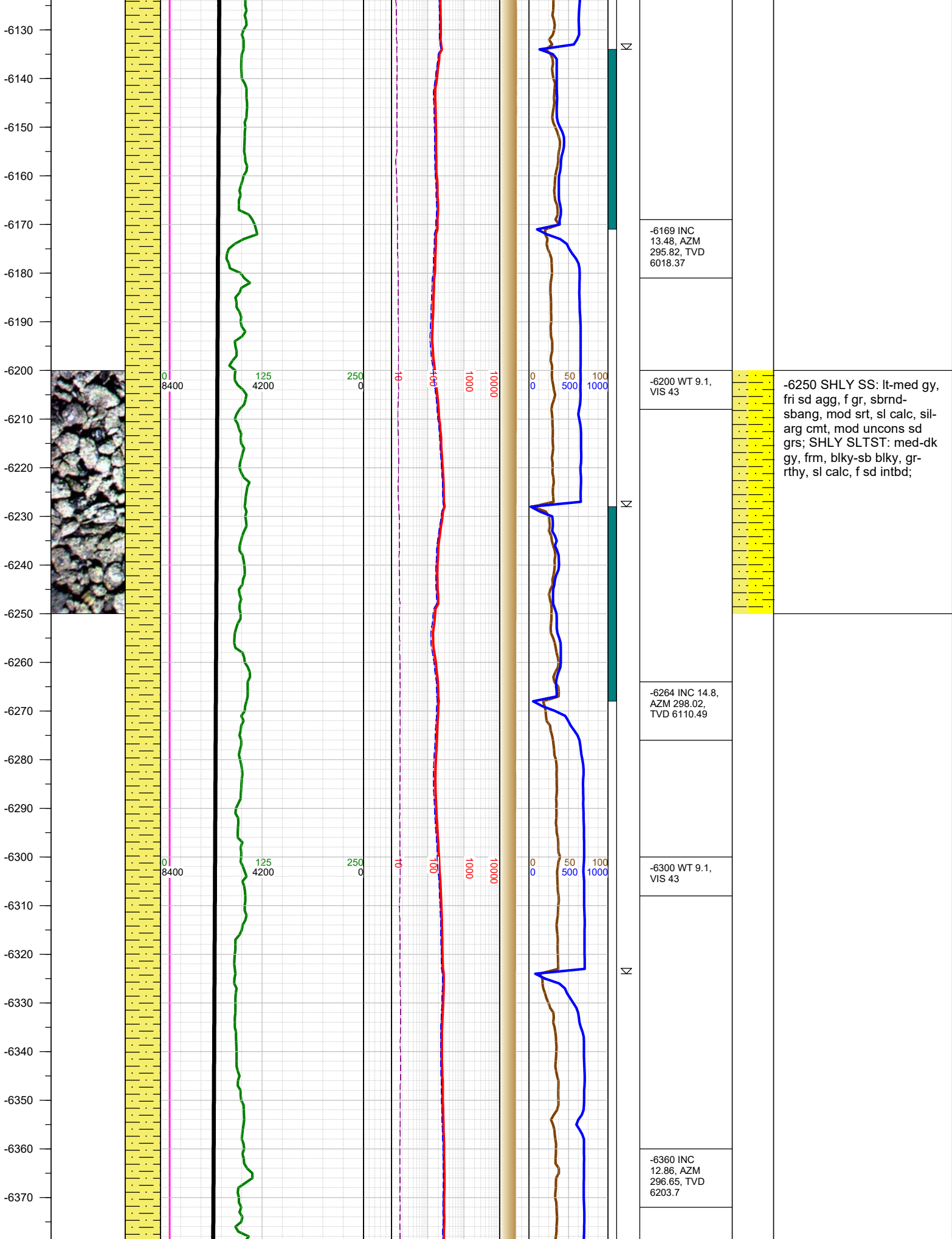
COUNTY: Broomfield  
STATE: Colorado  
GROUND ELEVATION: 5321'  
KELLY BUSHING: 5350'  
DRILLING FLUID: OBM  
TVD VS. MD: 8165' / 21037'  
SPUD DATE: August 11, 2019  
TD DATE: August 18, 2019  
  
DEPTHS LOGGED: 6000' - 21037'  
DATES LOGGED: August 11, 2019 - August 17, 2019  
GEOLOGISTS: Dominic Pitre, Kyle Newman  
SCALE: 5" = 100'

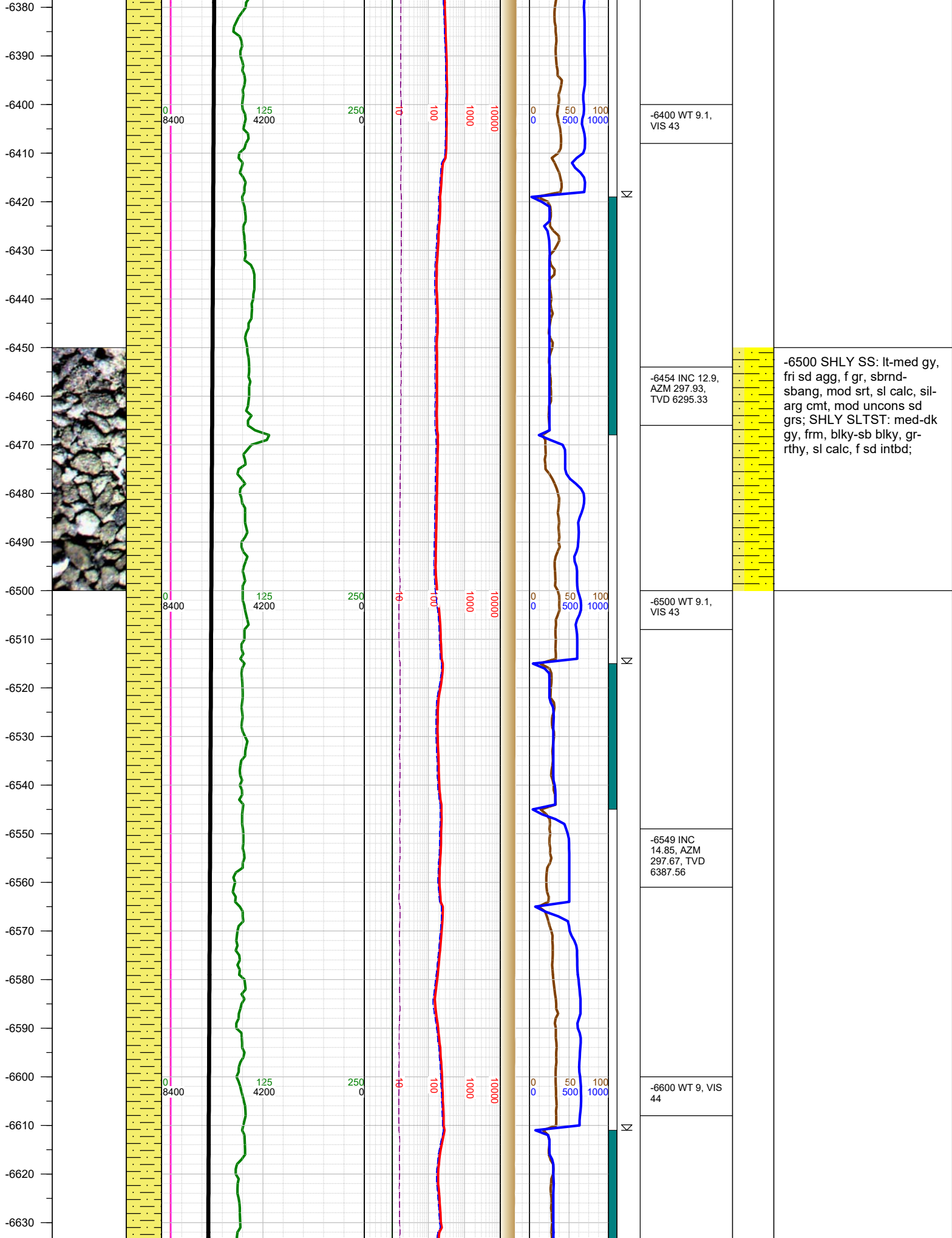
#### LEGEND

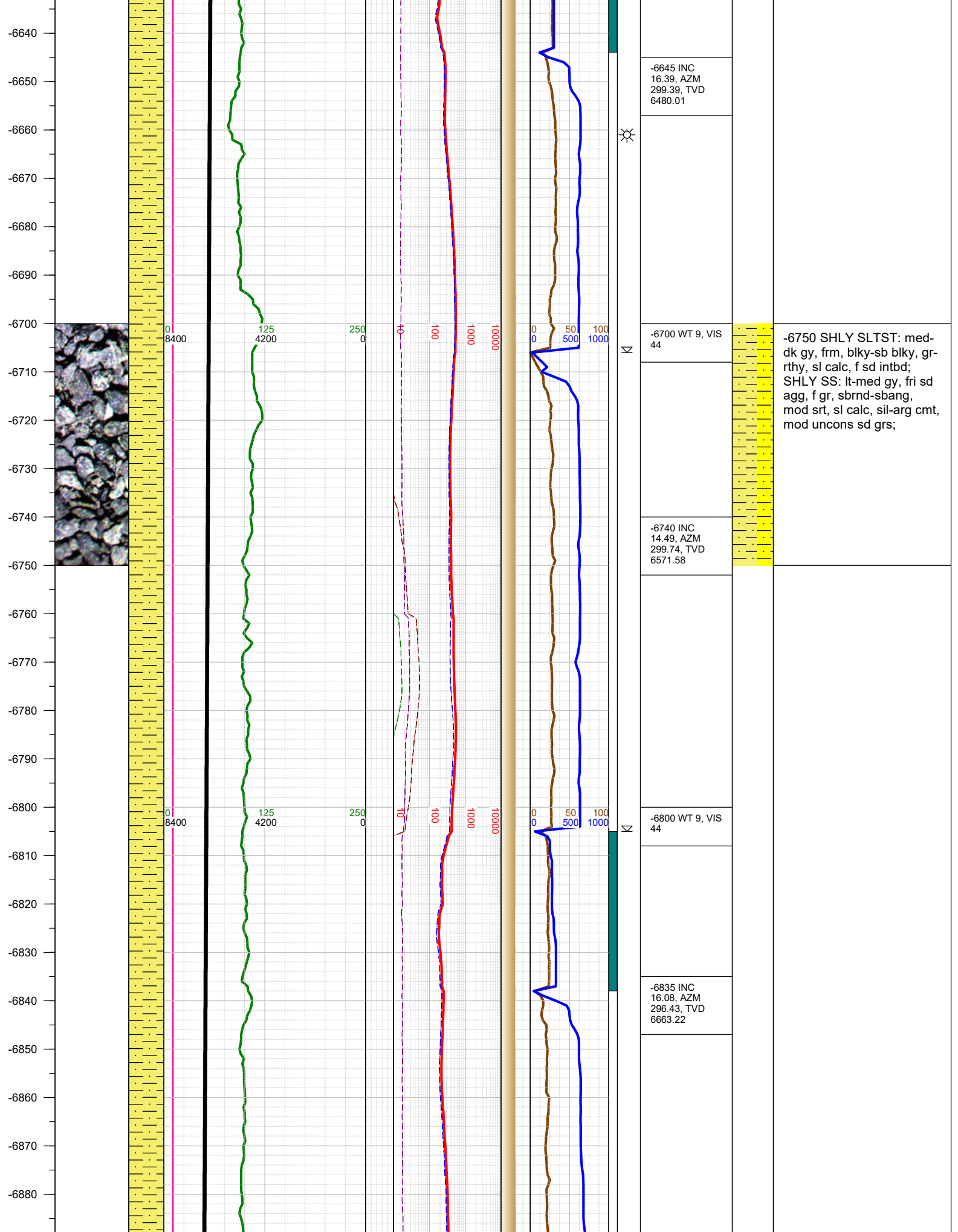


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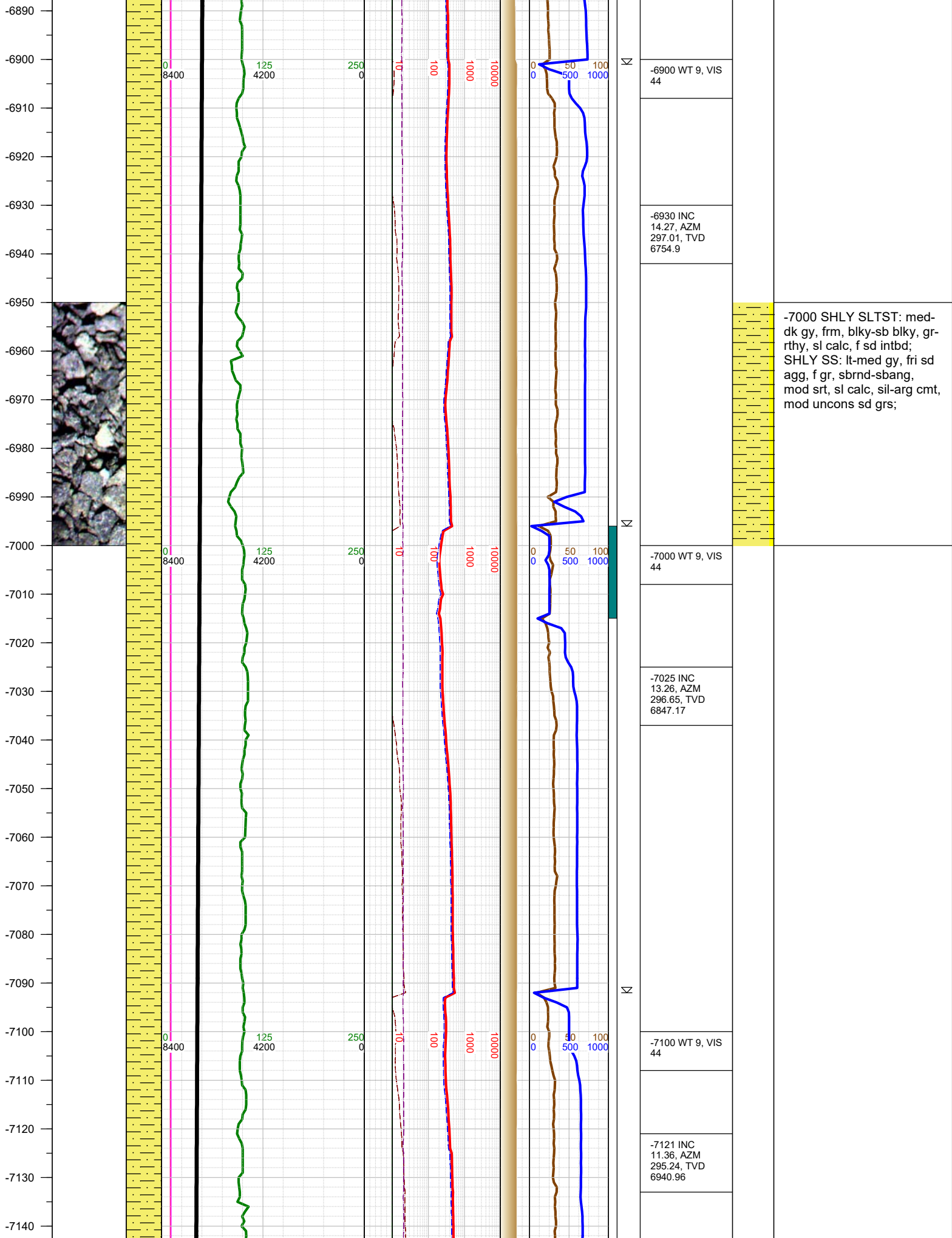


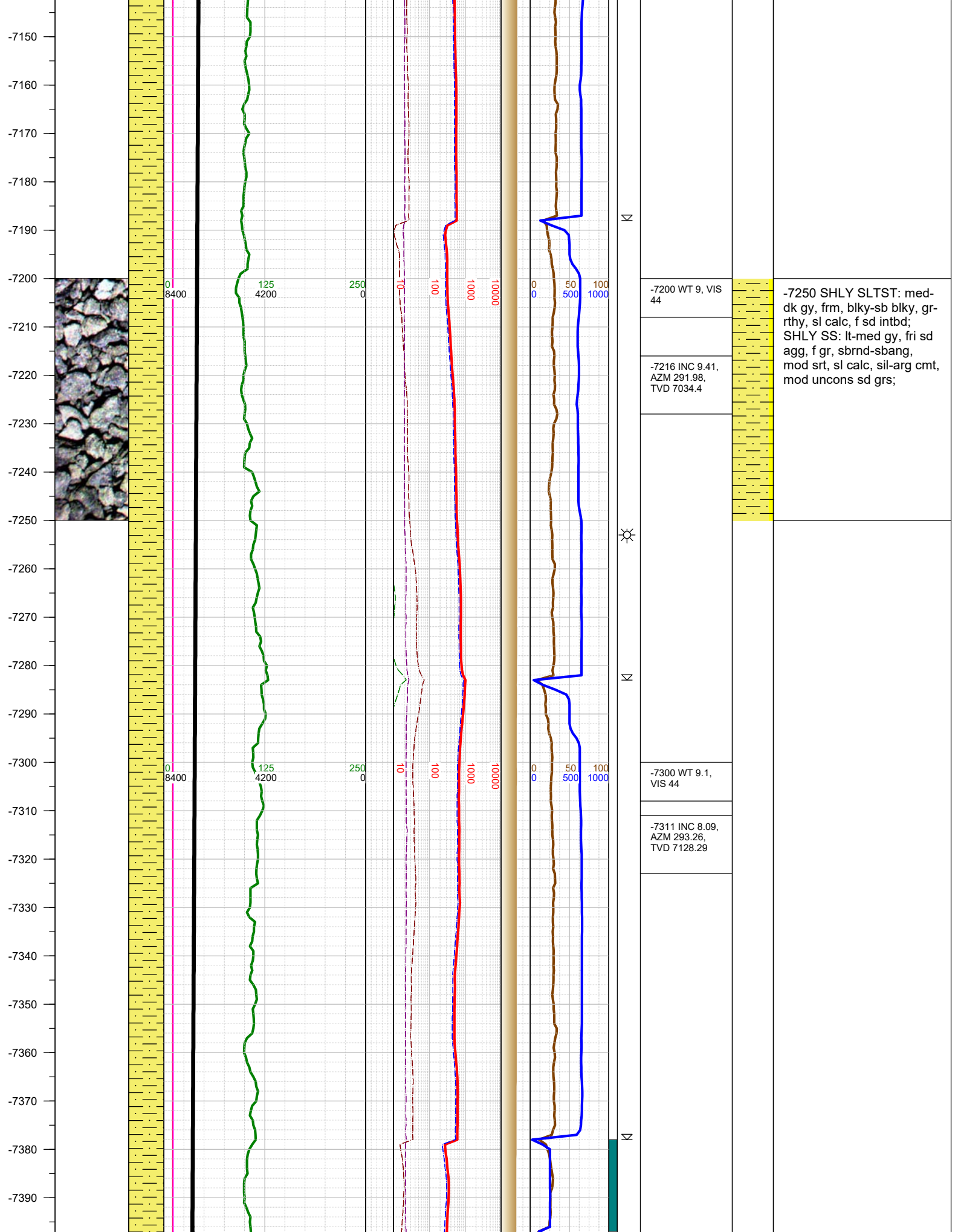






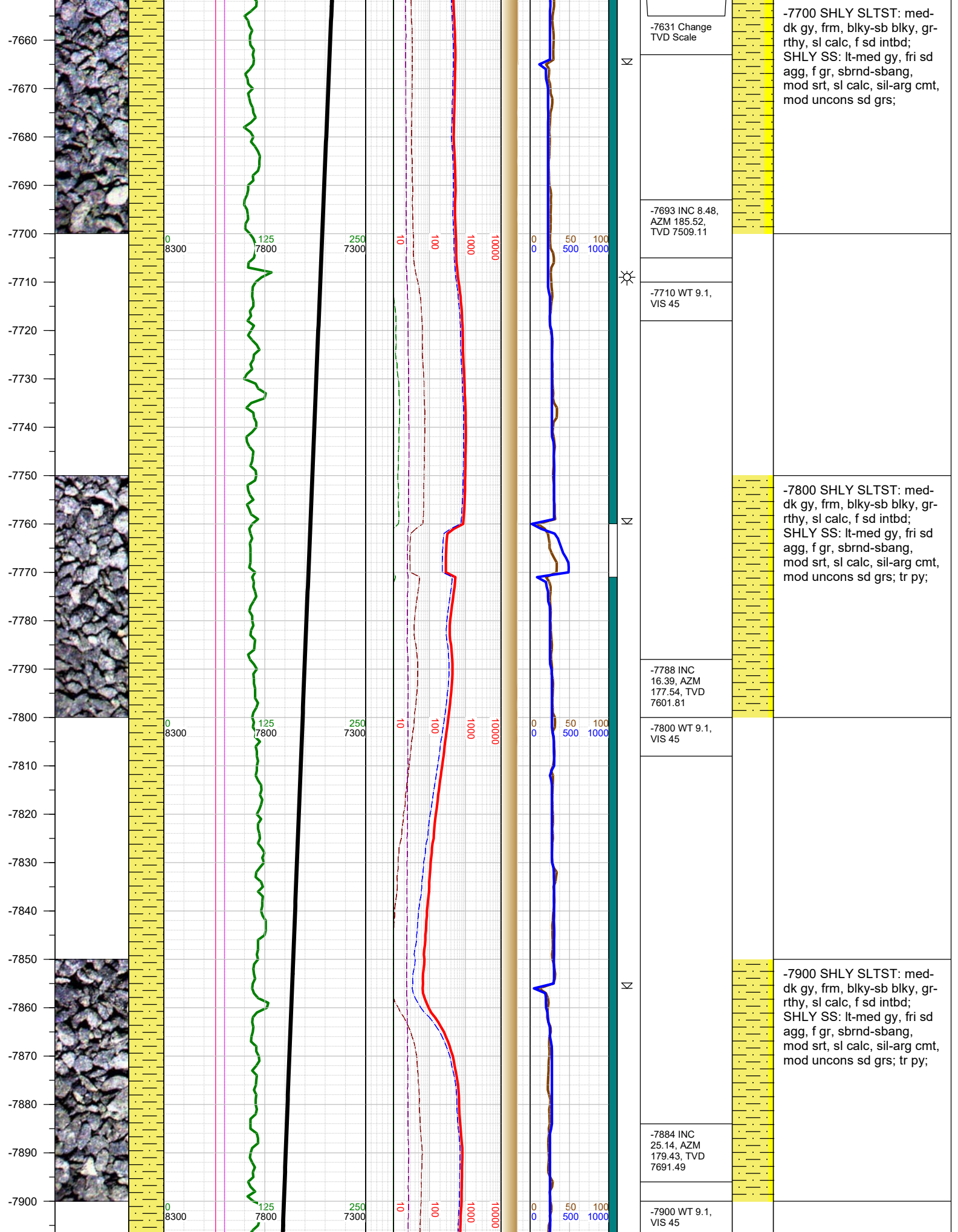




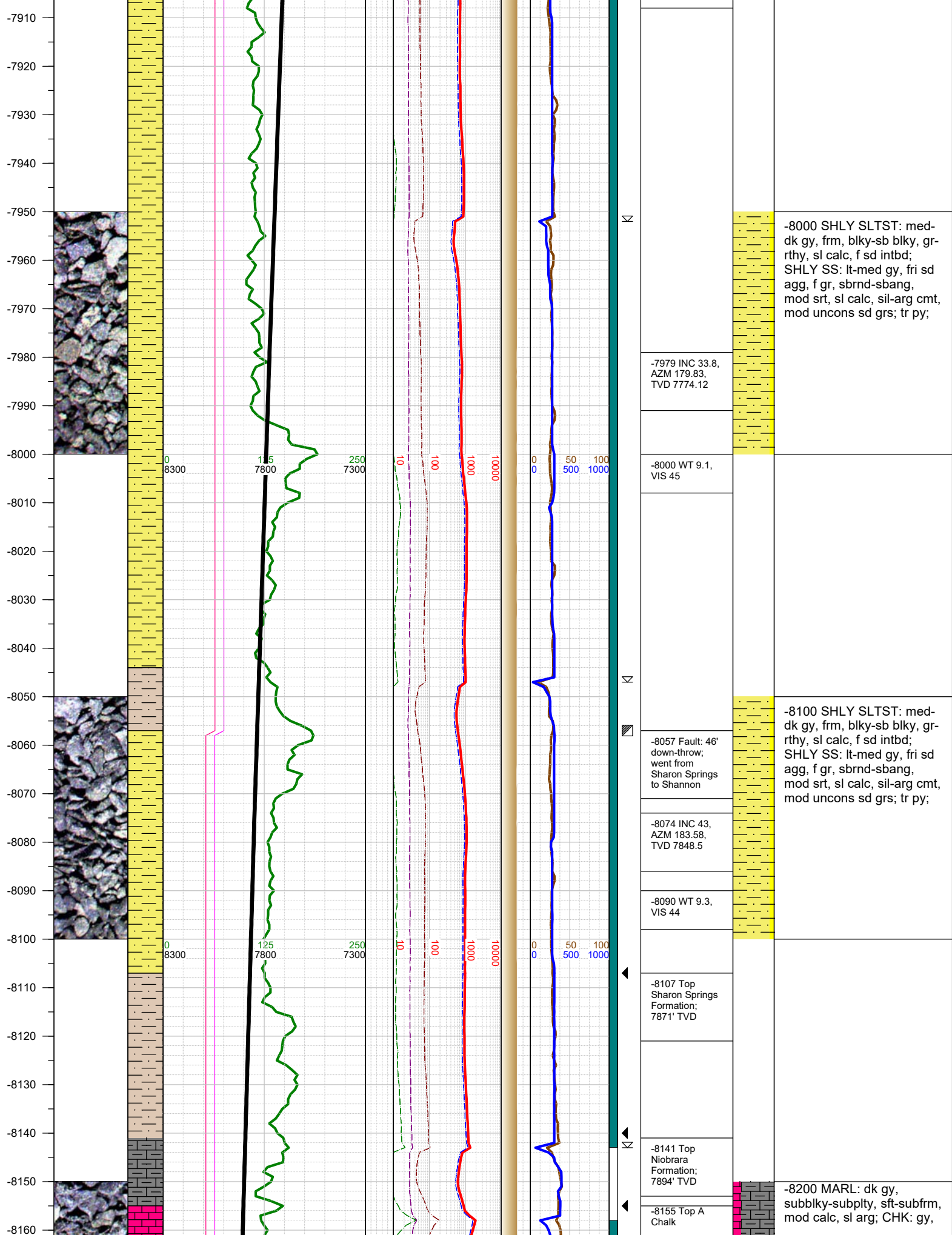


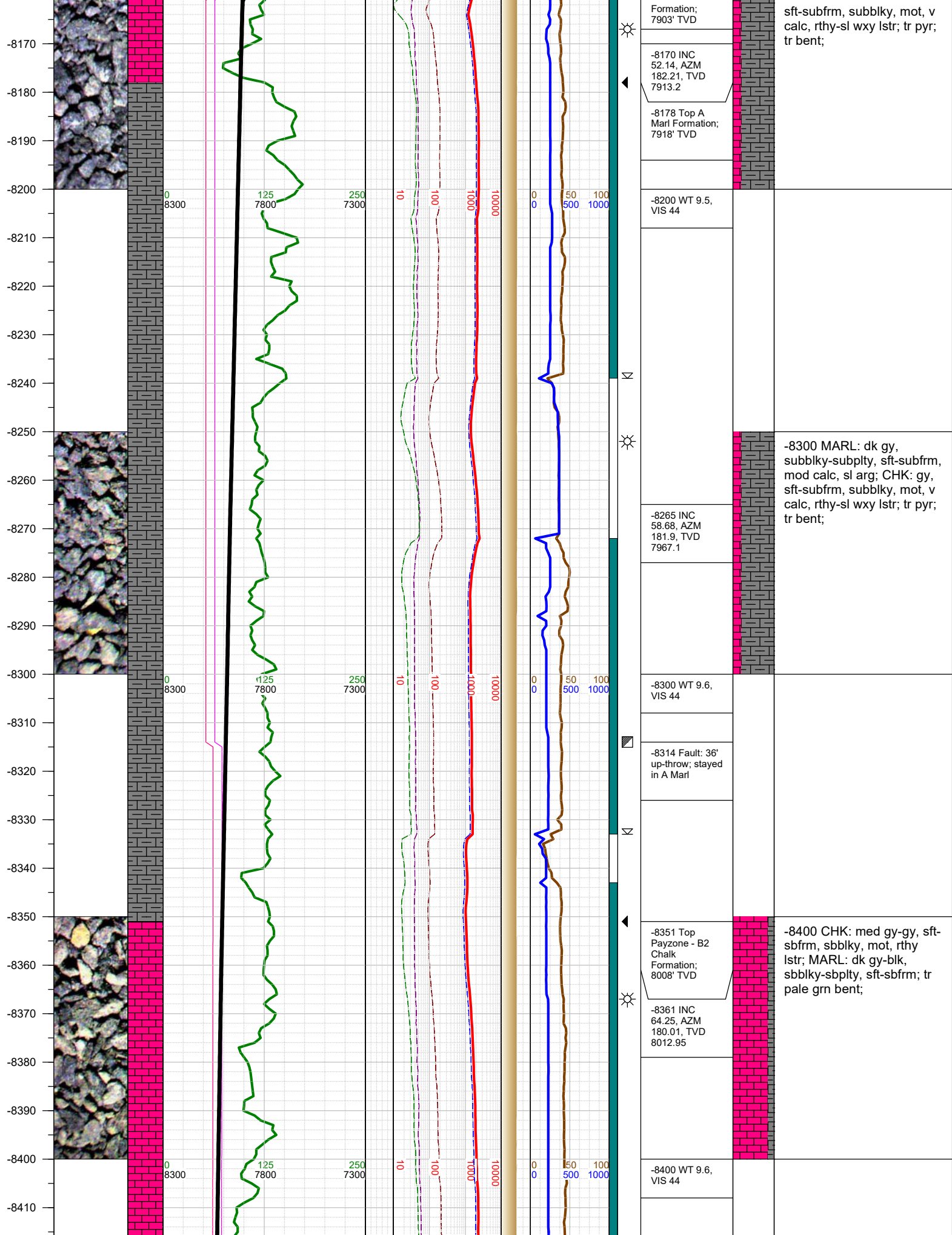


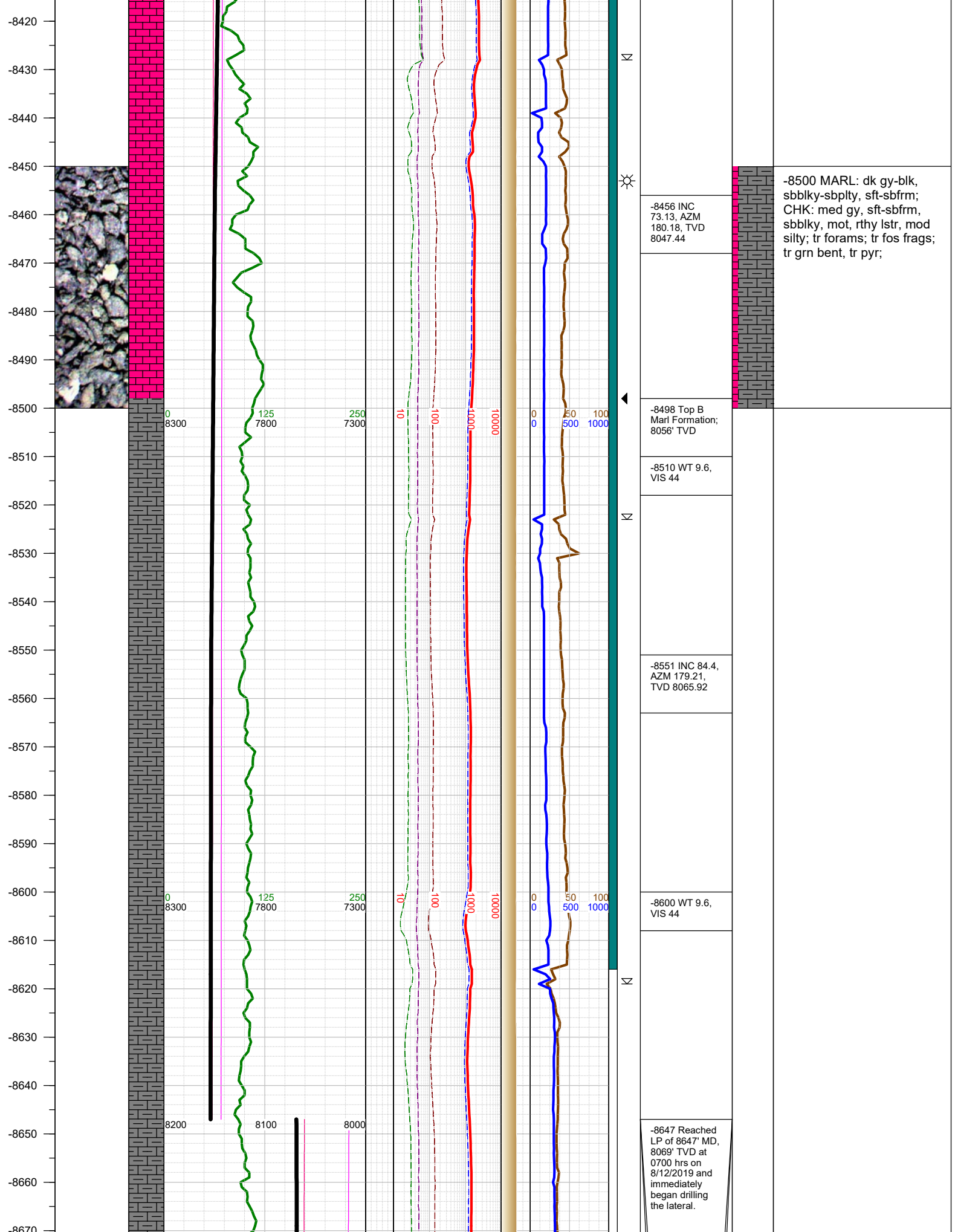




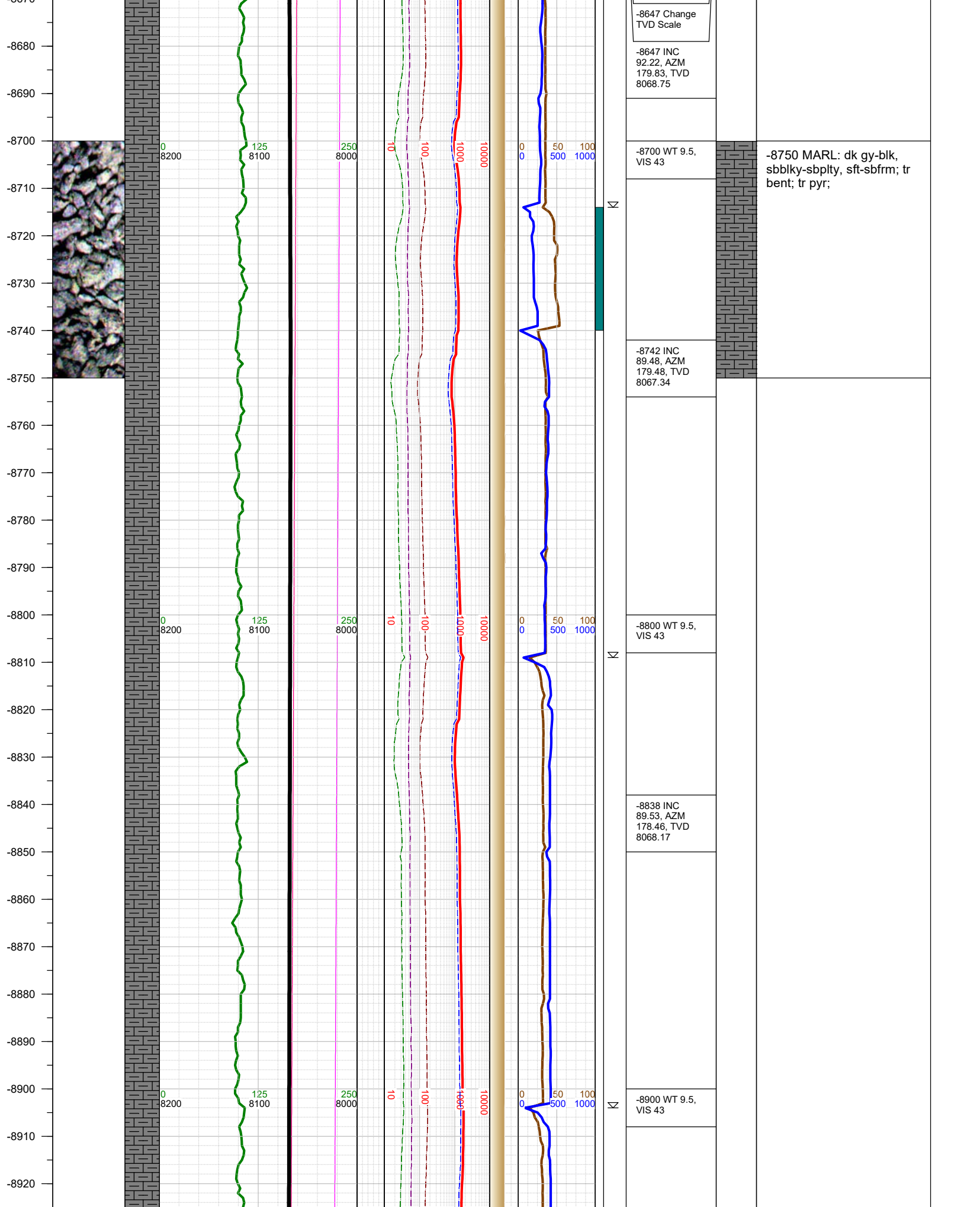




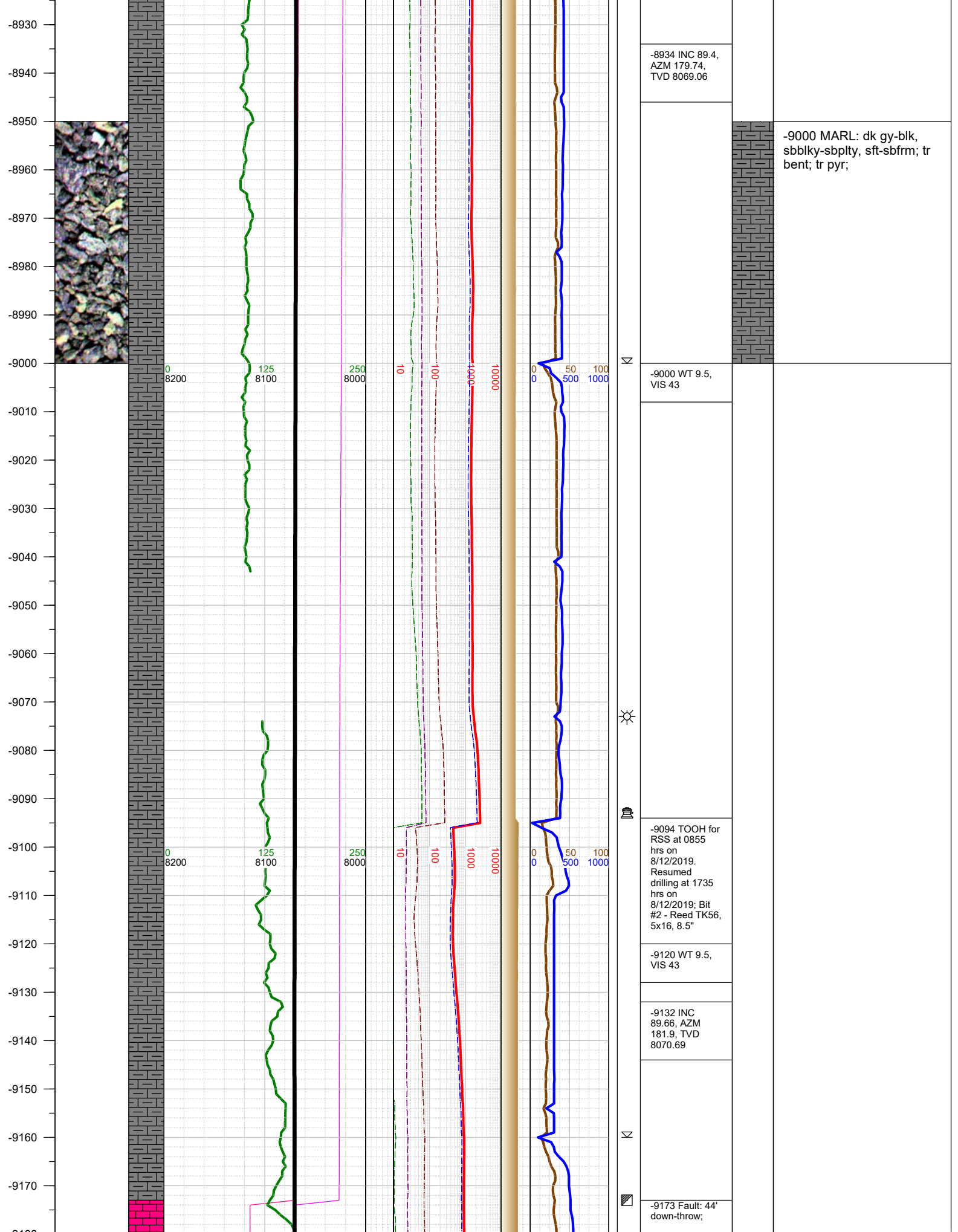


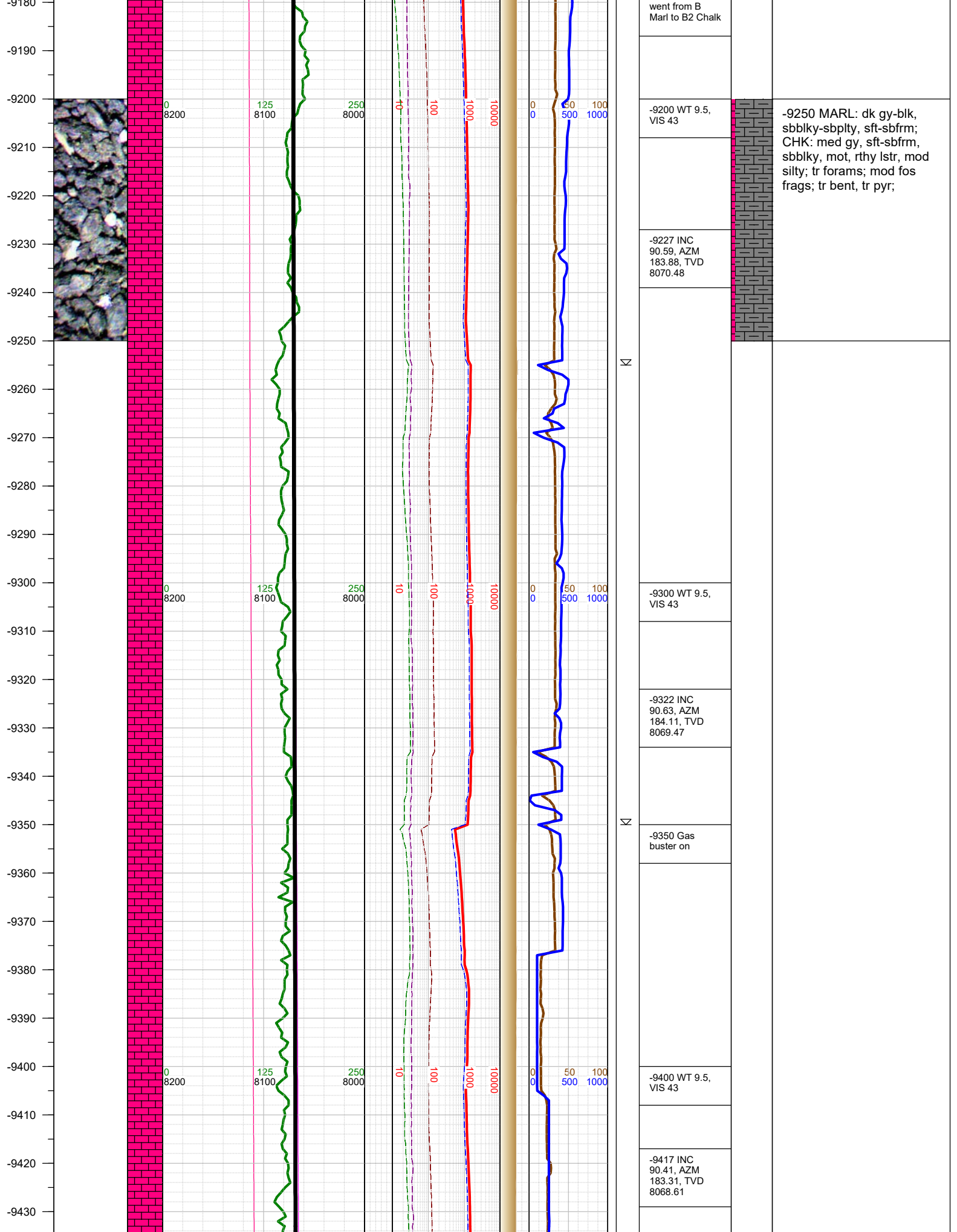




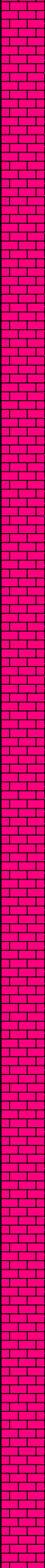
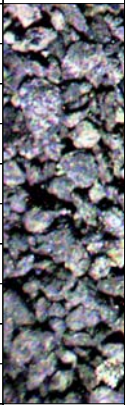








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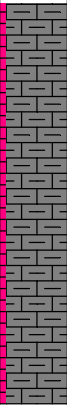
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-9500 WT 9.5,  
VIS 43

-9512 INC  
90.23, AZM  
180.98, TVD  
8068.08

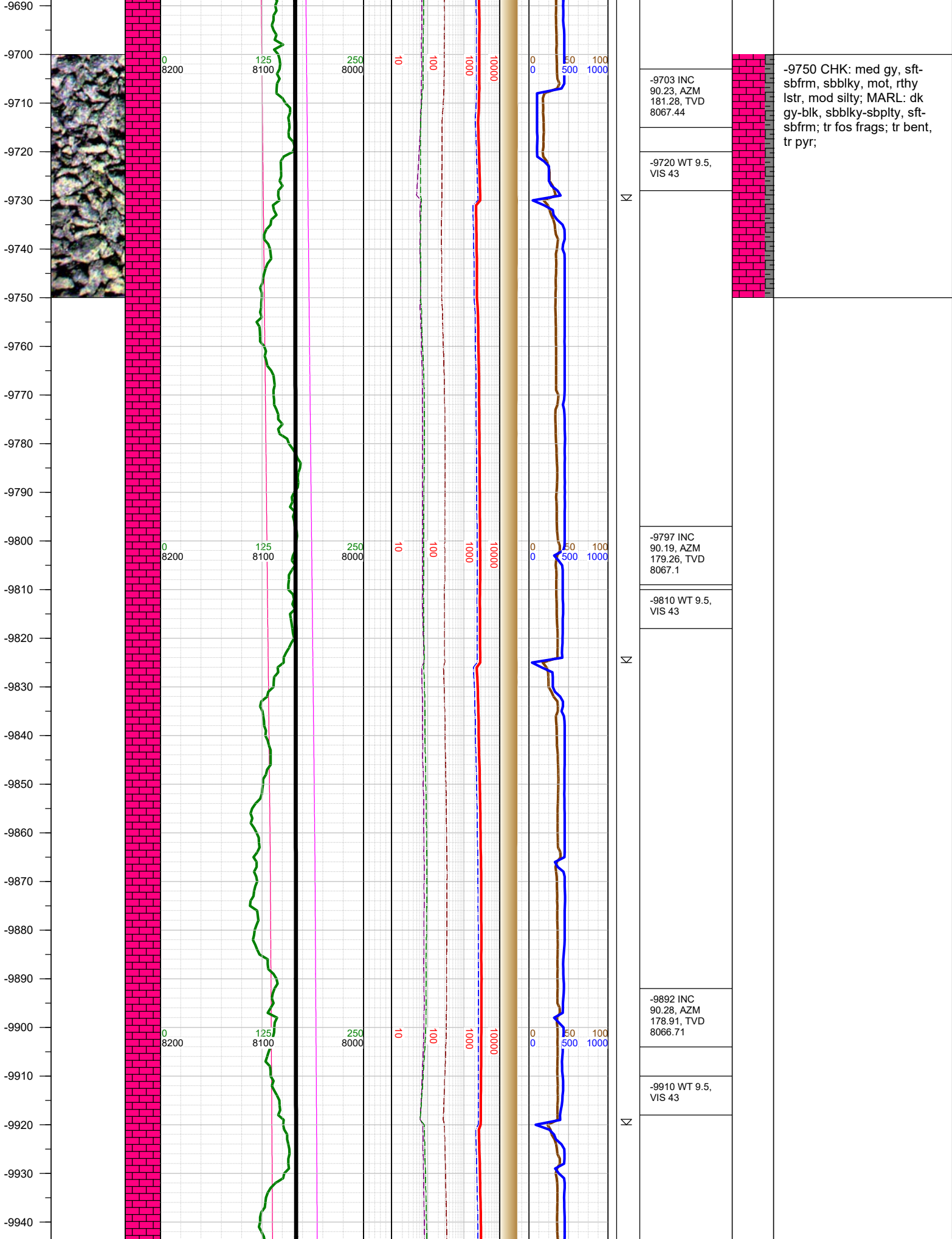
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-9608 INC  
90.15, AZM  
181.33, TVD  
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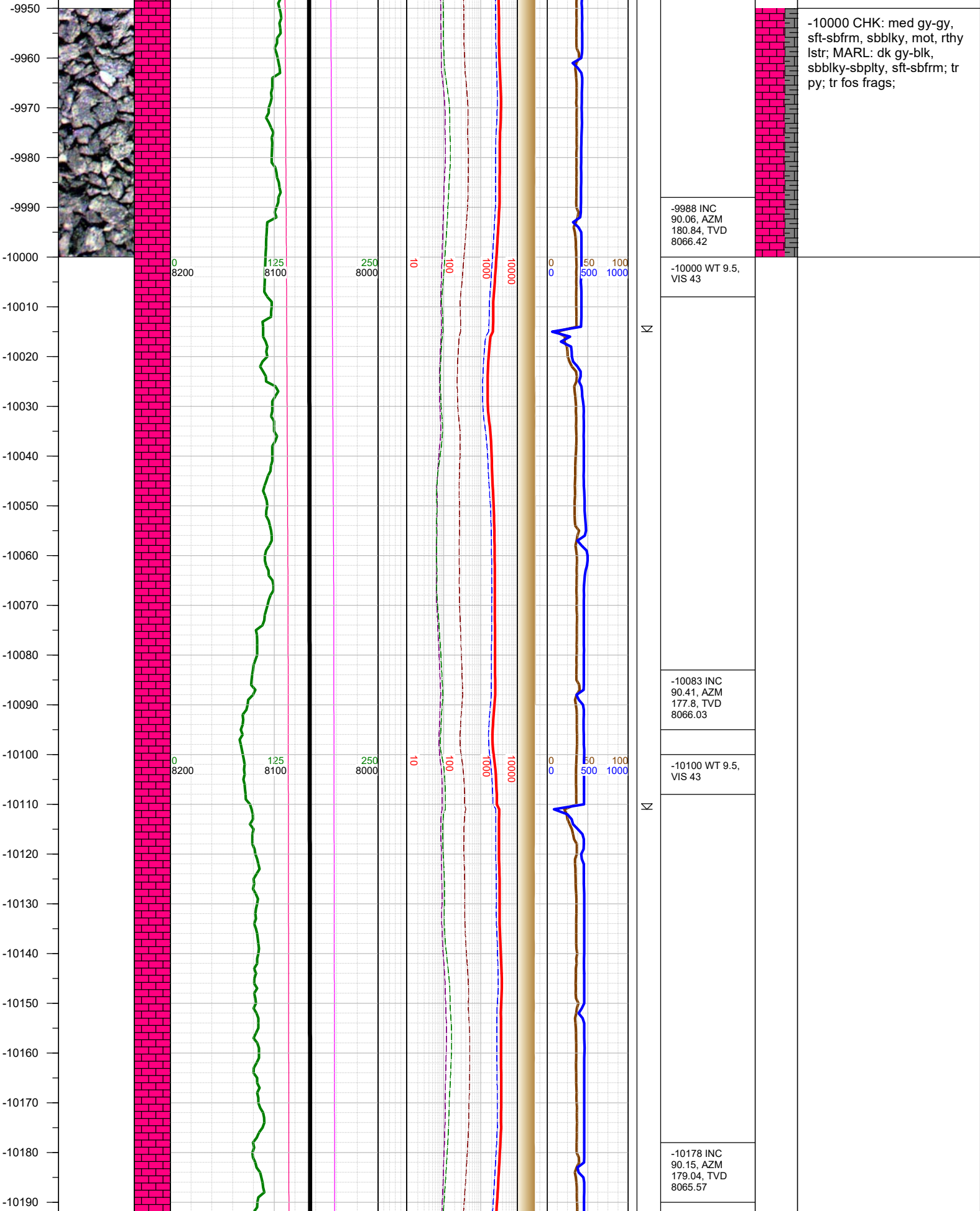


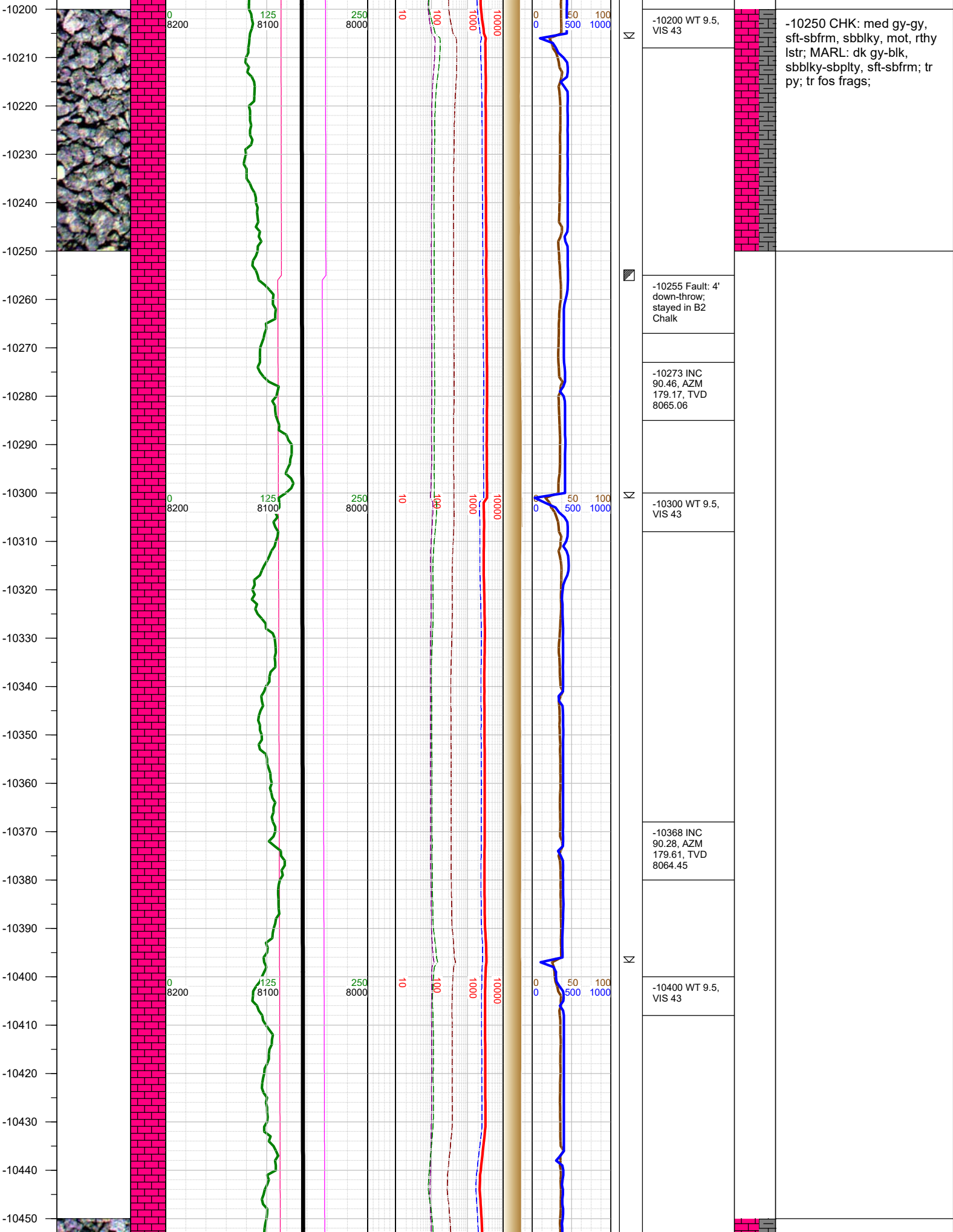
-9500 MARL: dk gy-blk,  
sbbly-sbply, sft-sbfrm;  
CHK: med gy, sft-sbfrm,  
sbbly, mot, rthy lstr, mod  
silty; tr forams; mod fos  
frags; tr bent, tr pyr;

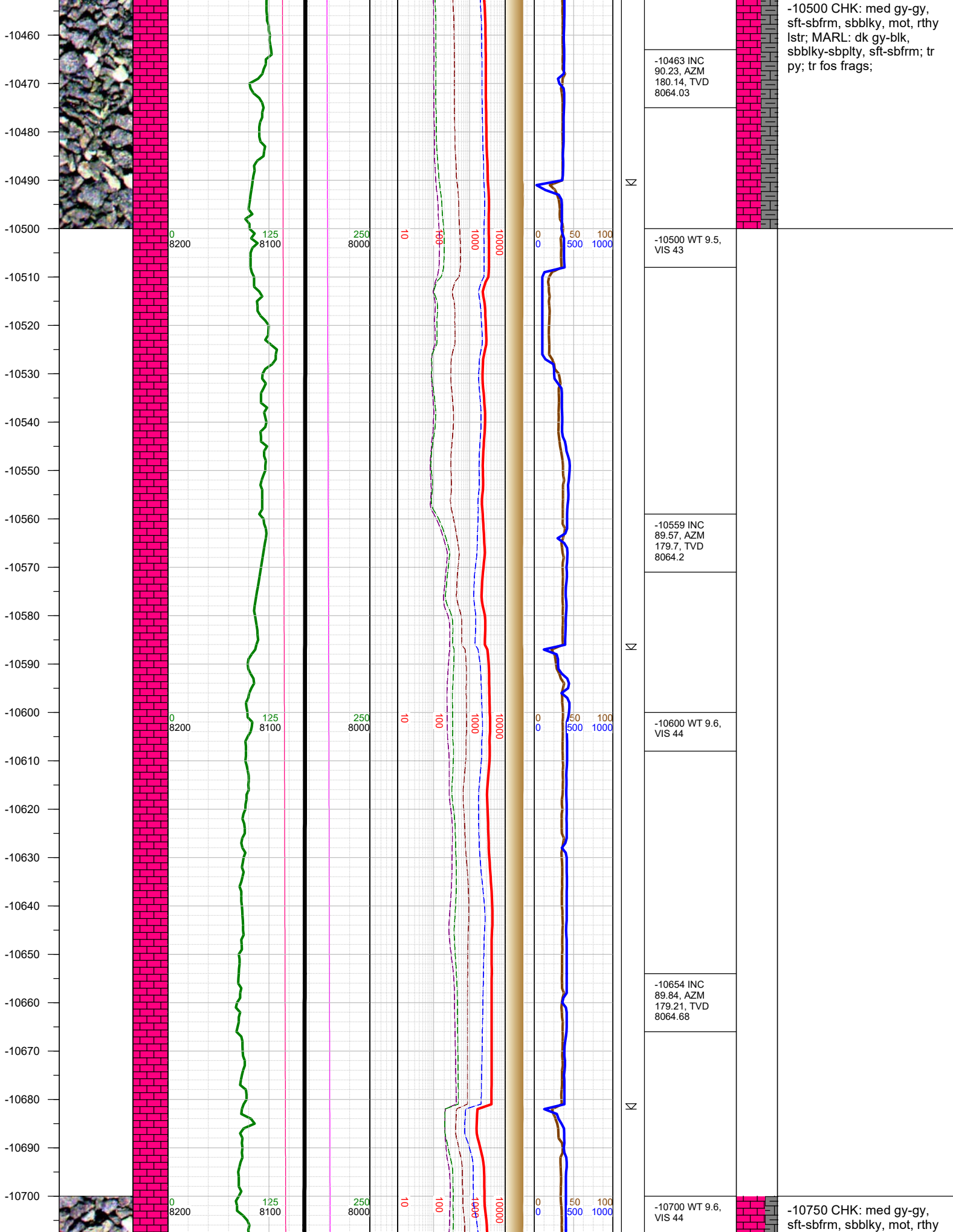












-10500 CHK: med gy-gy, sft-sbfrm, sbblky, mot, rthy lstr; MARL: dk gy-blk, sbblky-sbply, sft-sbfrm; tr py; tr fos frags;

-10463 INC  
90.23, AZM  
180.14, TVD  
8064.03

-10500 WT 9.5,  
VIS 43

-10559 INC  
89.57, AZM  
179.7, TVD  
8064.2

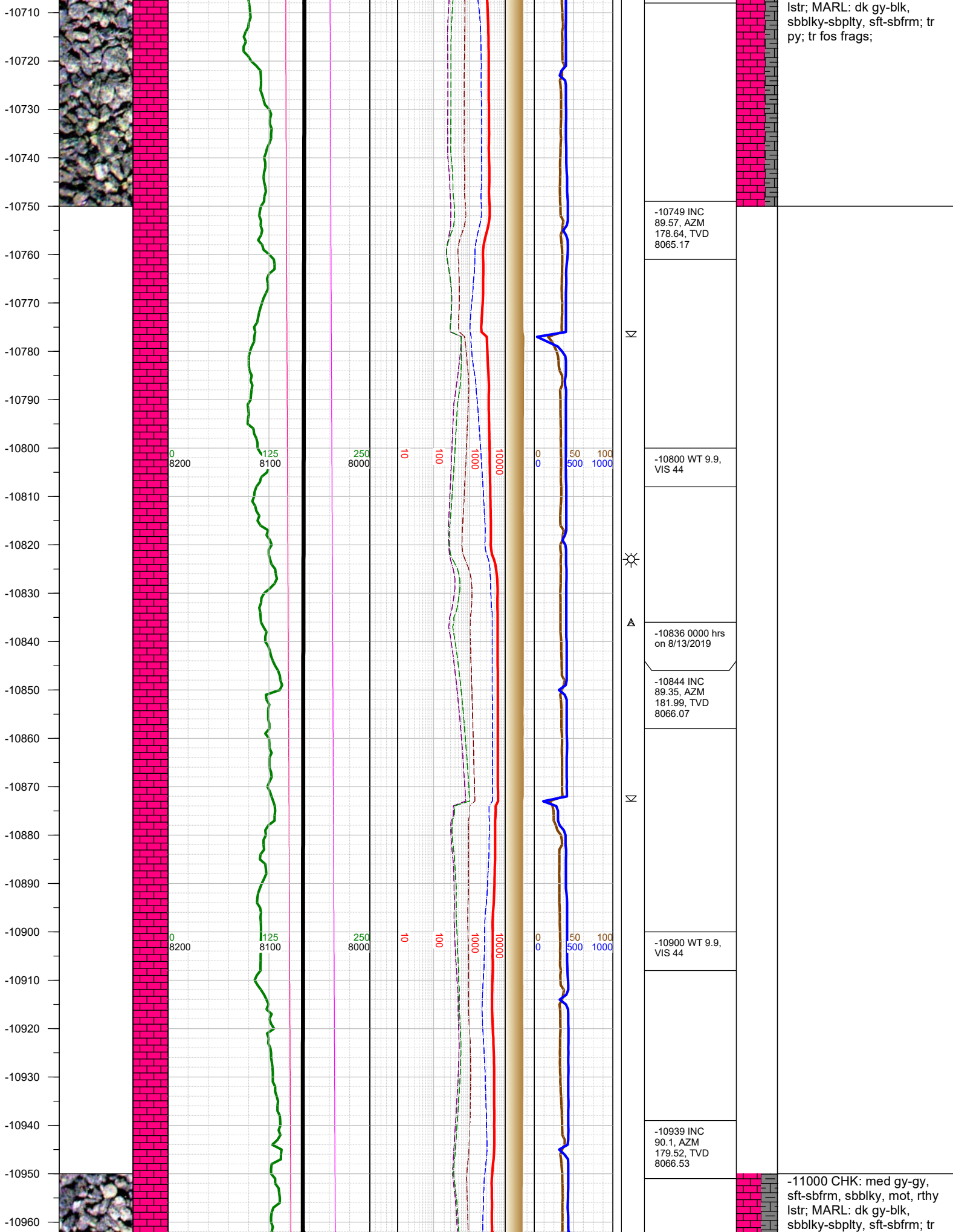
-10600 WT 9.6,  
VIS 44

-10654 INC  
89.84, AZM  
179.21, TVD  
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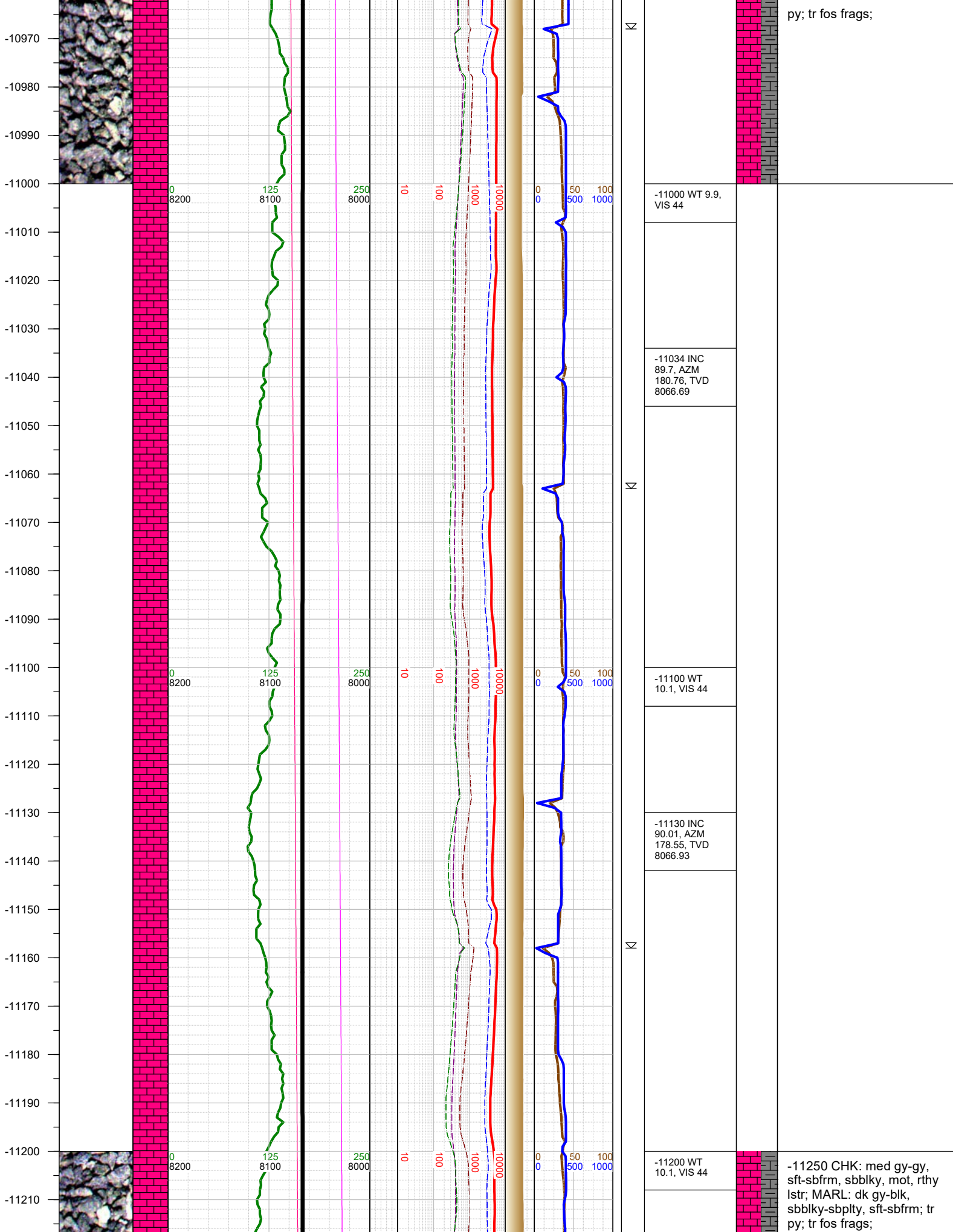
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VIS 44

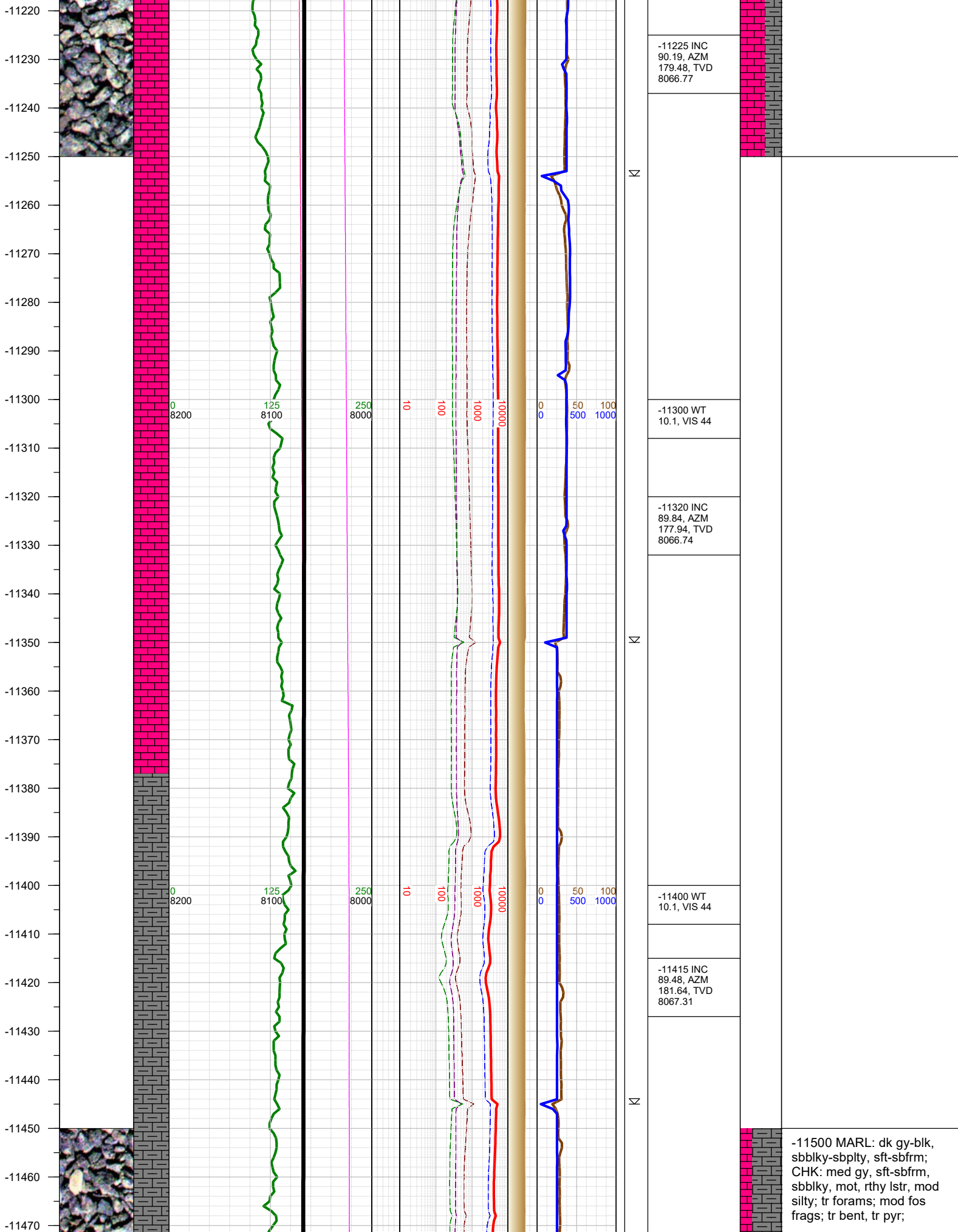
-10750 CHK: med gy-gy, sft-sbfrm, sbblky, mot, rthy



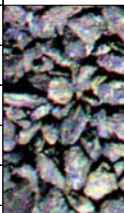
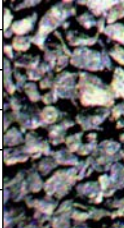








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-11500 WT  
10.1, VIS 44

-11510 INC  
89.79, AZM  
179.52, TVD  
8067.91

-11606 INC  
89.35, AZM  
180.62, TVD  
8068.63

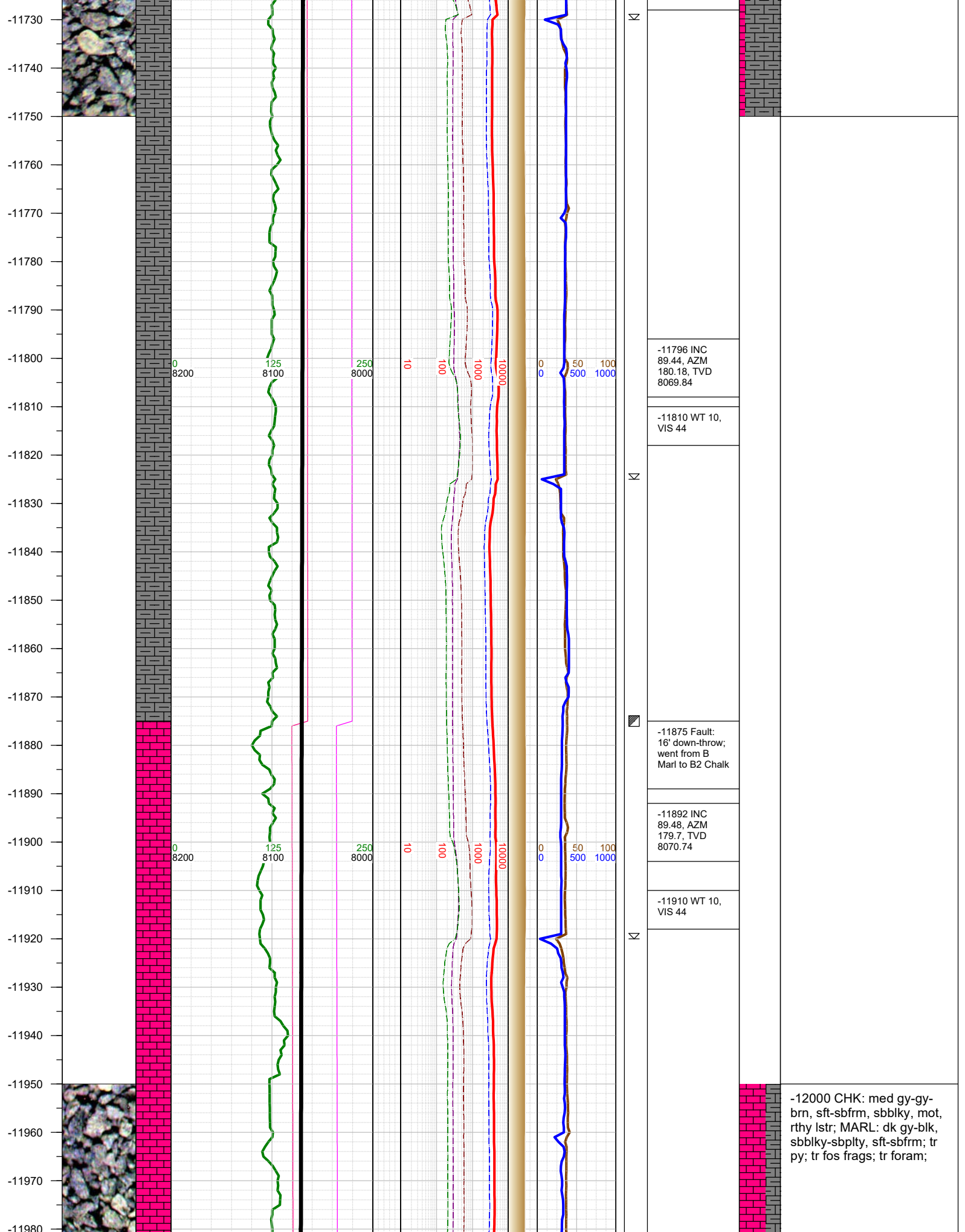
-11620 WT  
10.1, VIS 44

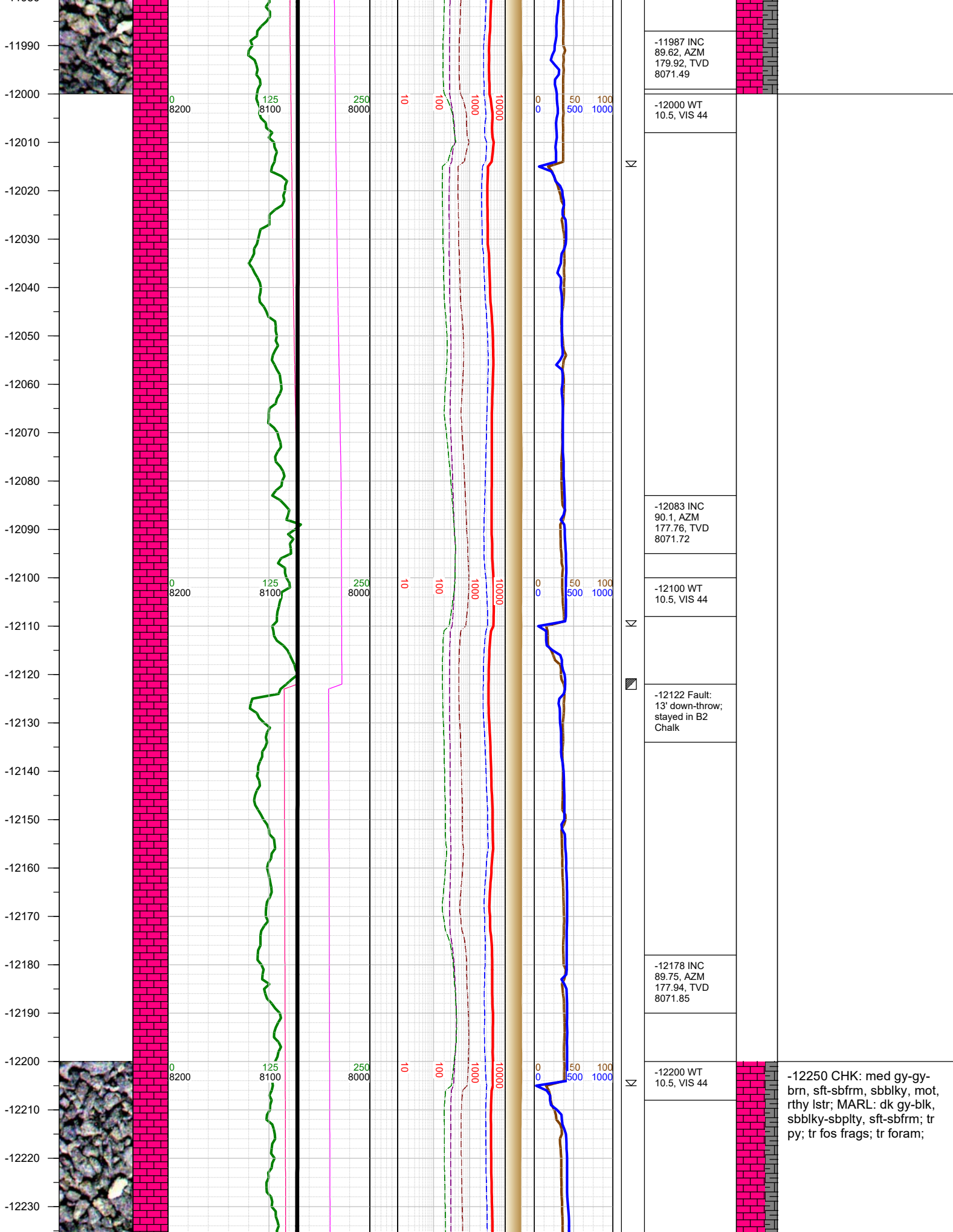
-11701 INC  
89.88, AZM  
179.3, TVD  
8069.27

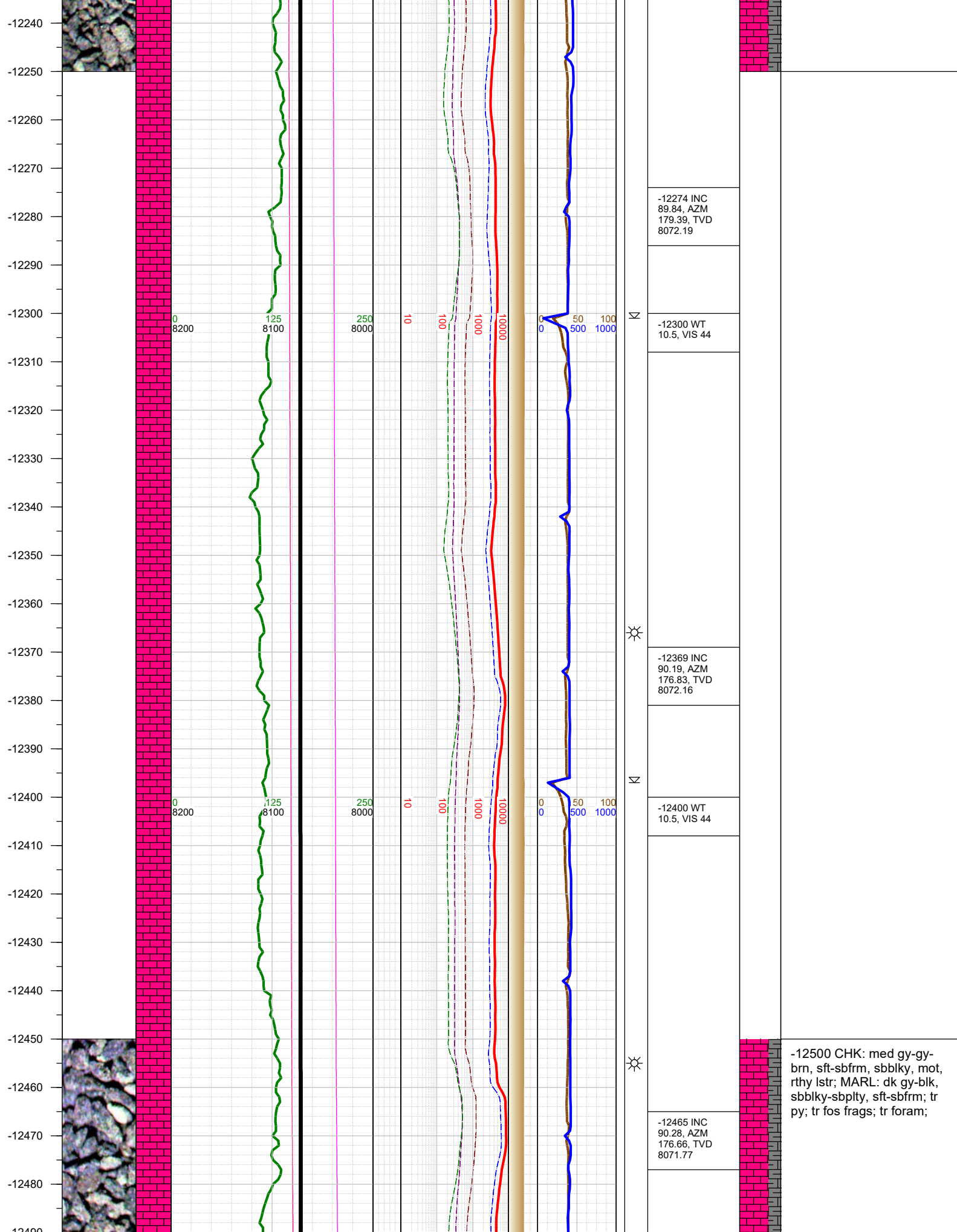
-11720 WT  
10.1, VIS 44

-11750 MARL: dk gy-blk,  
sbbly-sbply, sft-sbfrm;  
CHK: med gy, sft-sbfrm,  
sbbly, mot, rthy lstr, mod  
silty; mod forams; mod fos  
frags; tr grn bent, tr pyr;

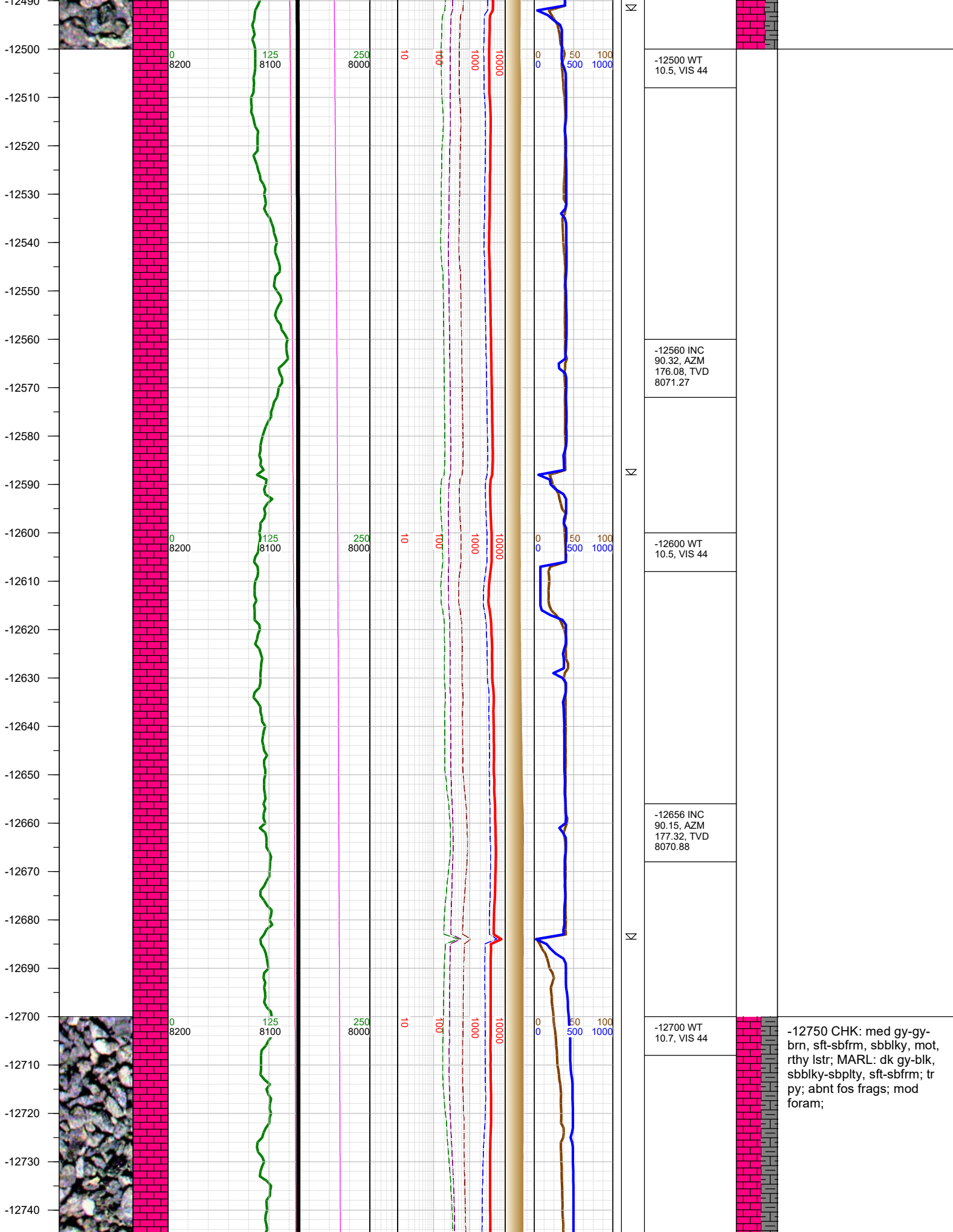


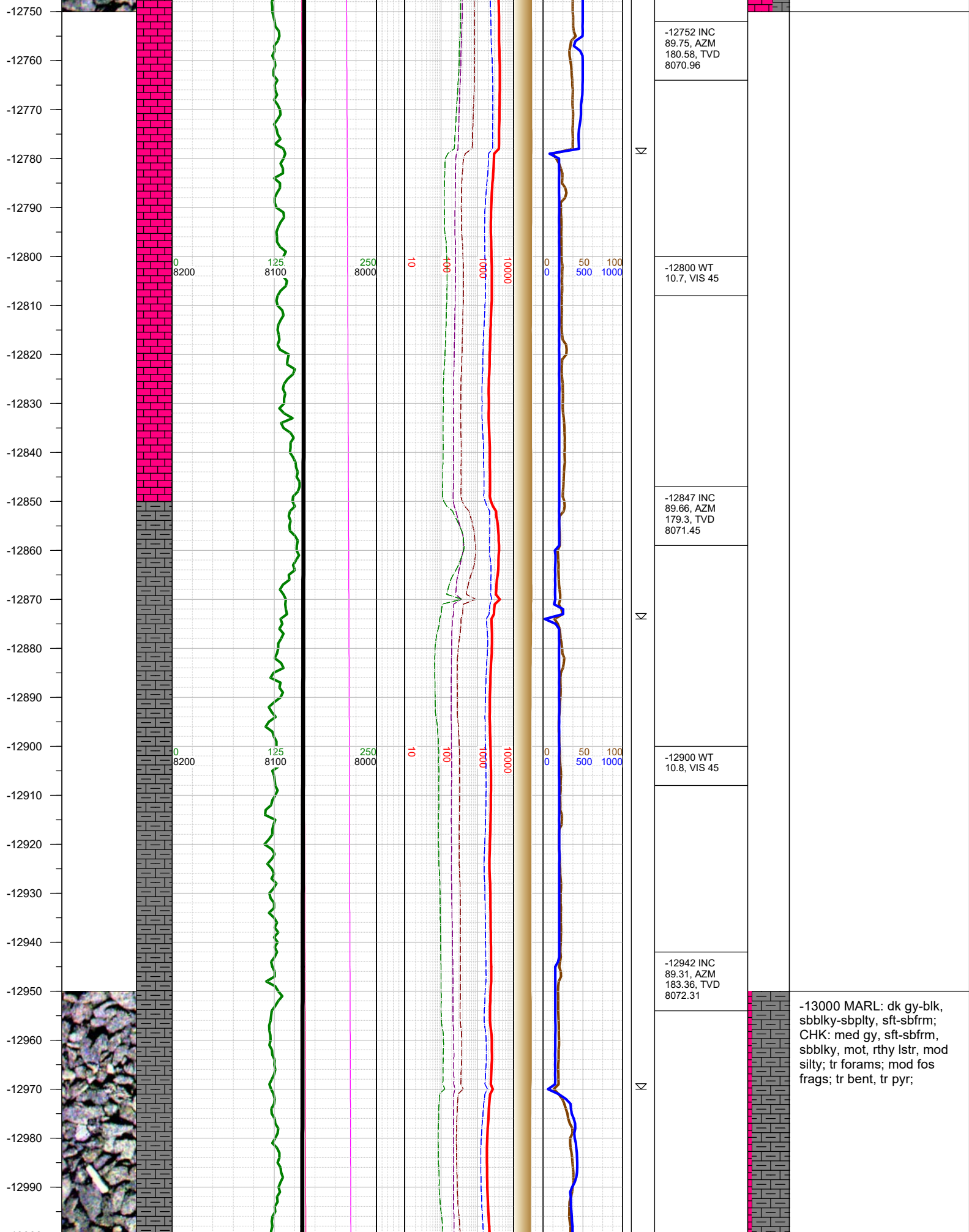












-12752 INC  
89.75, AZM  
180.58, TVD  
8070.96

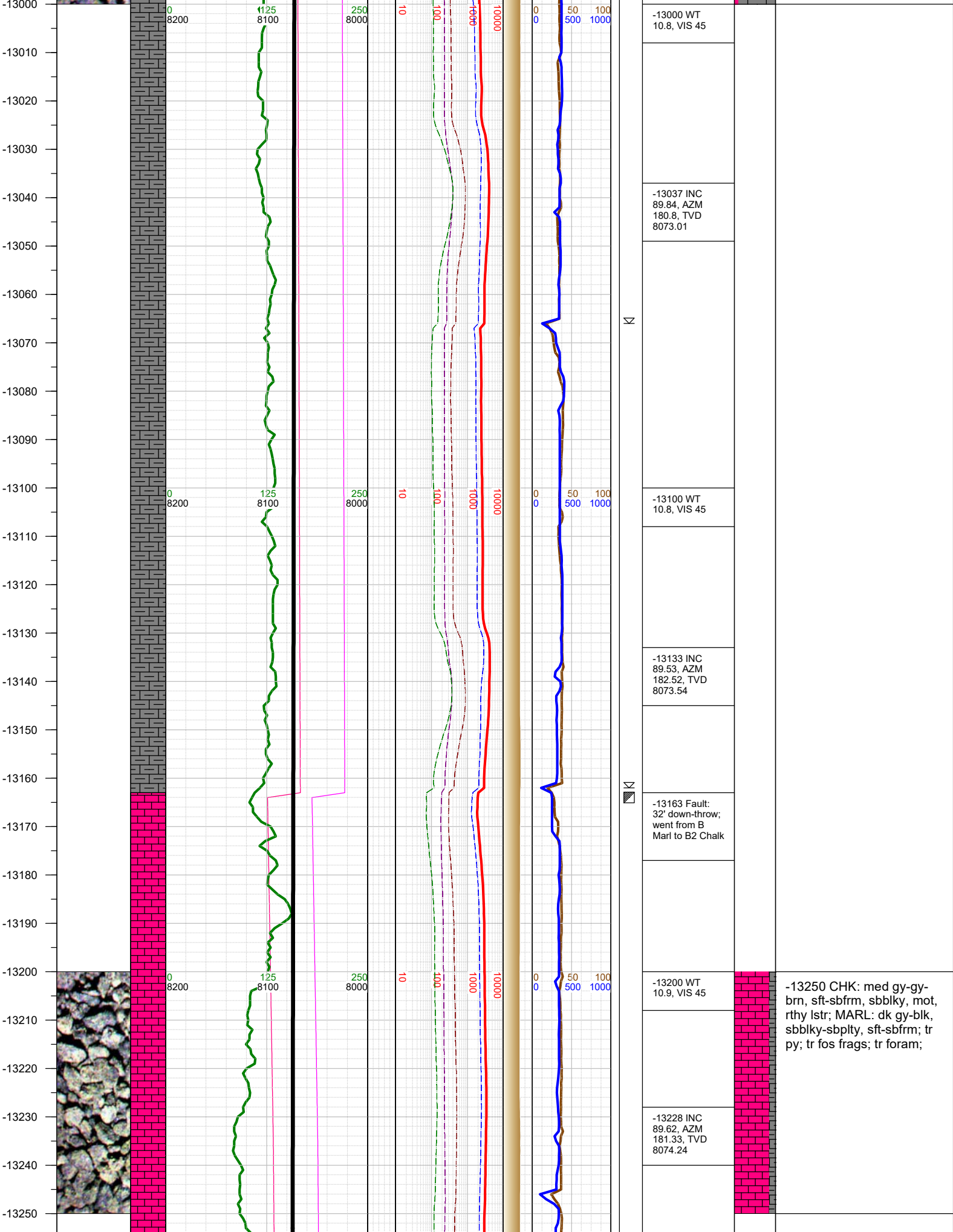
-12800 WT  
10.7, VIS 45

-12847 INC  
89.66, AZM  
179.3, TVD  
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-12900 WT  
10.8, VIS 45

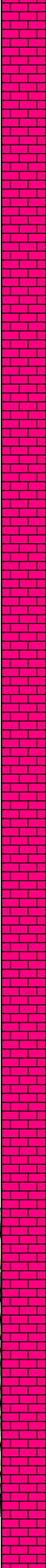
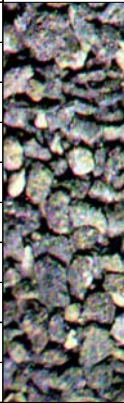
-12942 INC  
89.31, AZM  
183.36, TVD  
8072.31

-13000 MARL: dk gy-blk,  
sbbly-sbpity, sft-sbfrm;  
CHK: med gy, sft-sbfrm,  
sbbly, mot, rthy lstr, mod  
silty; tr forams; mod fos  
frags; tr bent, tr pyr;





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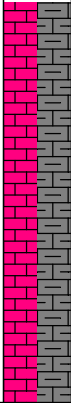
-13300 WT  
10.9, VIS 45

-13324 INC  
89.66, AZM  
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-13400 WT 11,  
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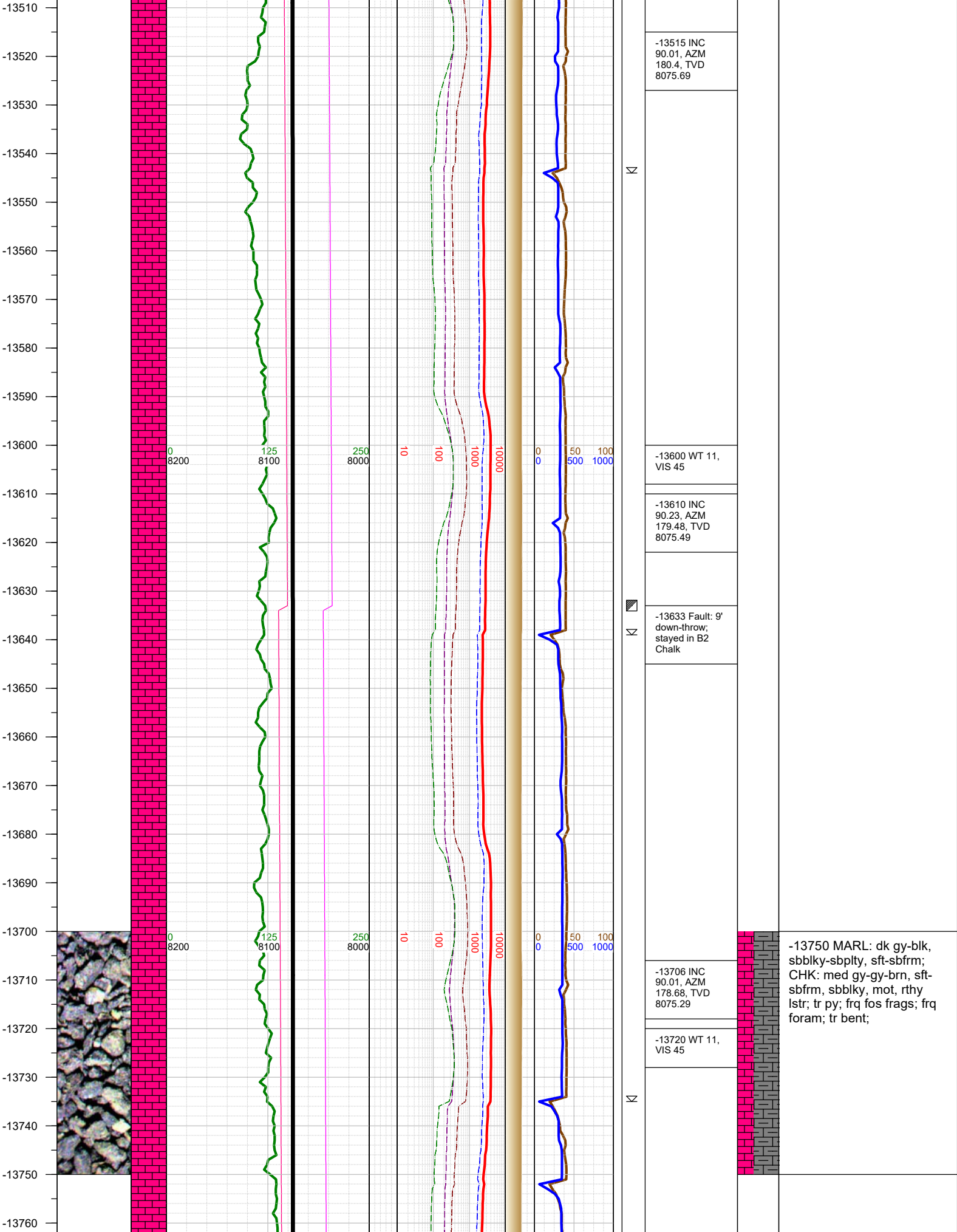
-13420 INC  
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180.93, TVD  
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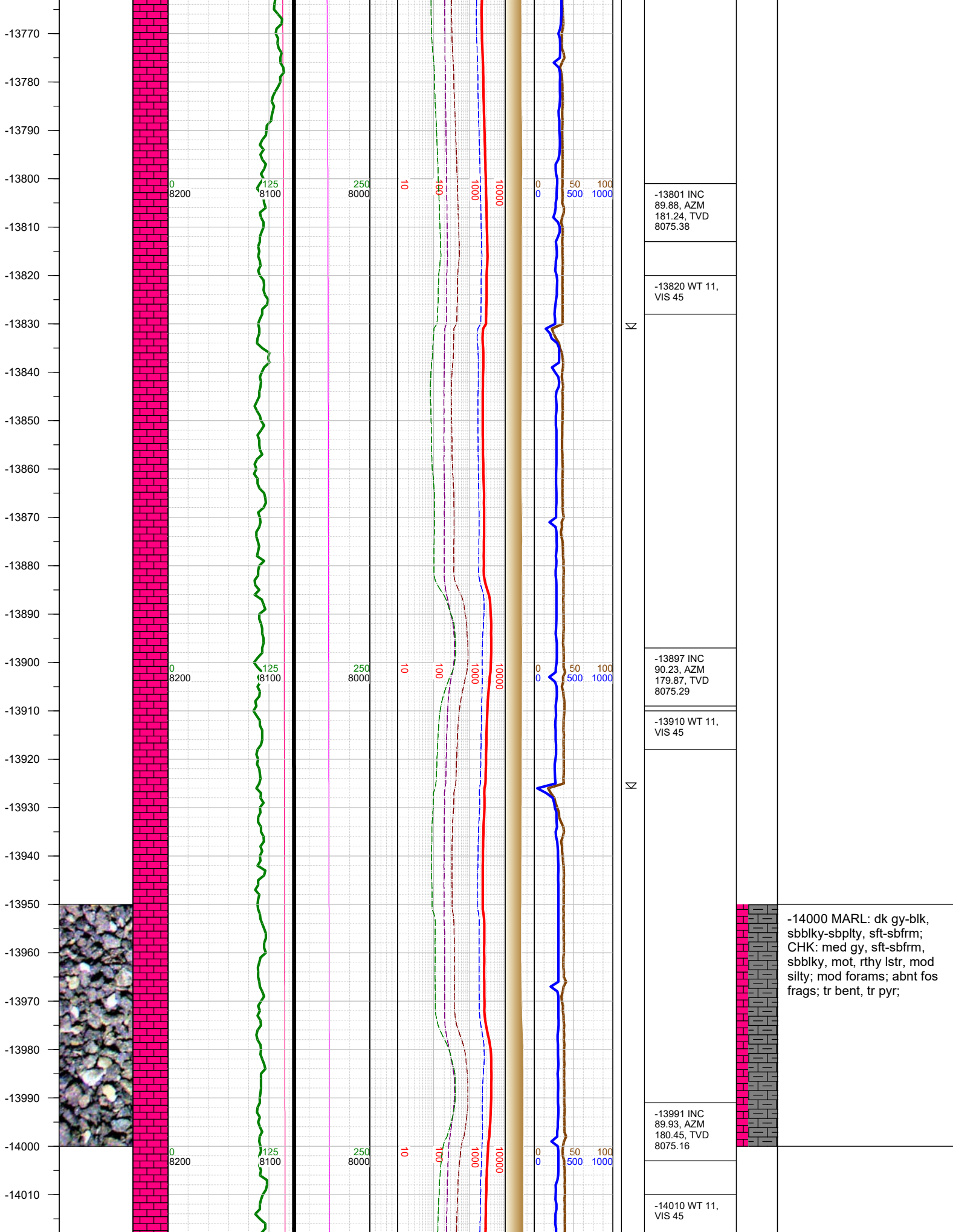
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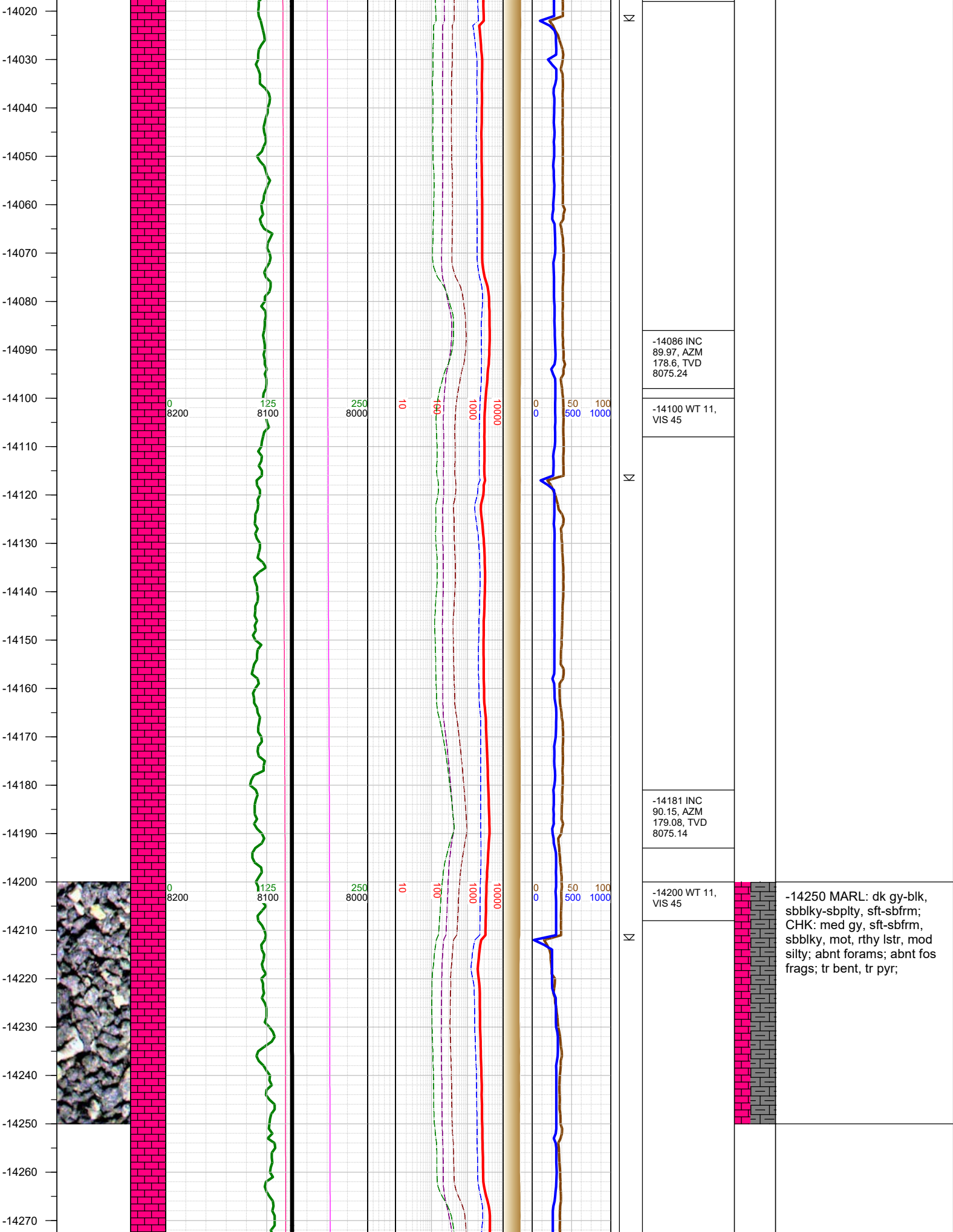
-13500 CHK: med gy-gy-brn, sft-sbfrm, sbblky, mot, rthy lstr; MARL: dk gy-blk, sbblky-sbplty, sft-sbfrm; tr py; abnt fos frags; abnt foram;

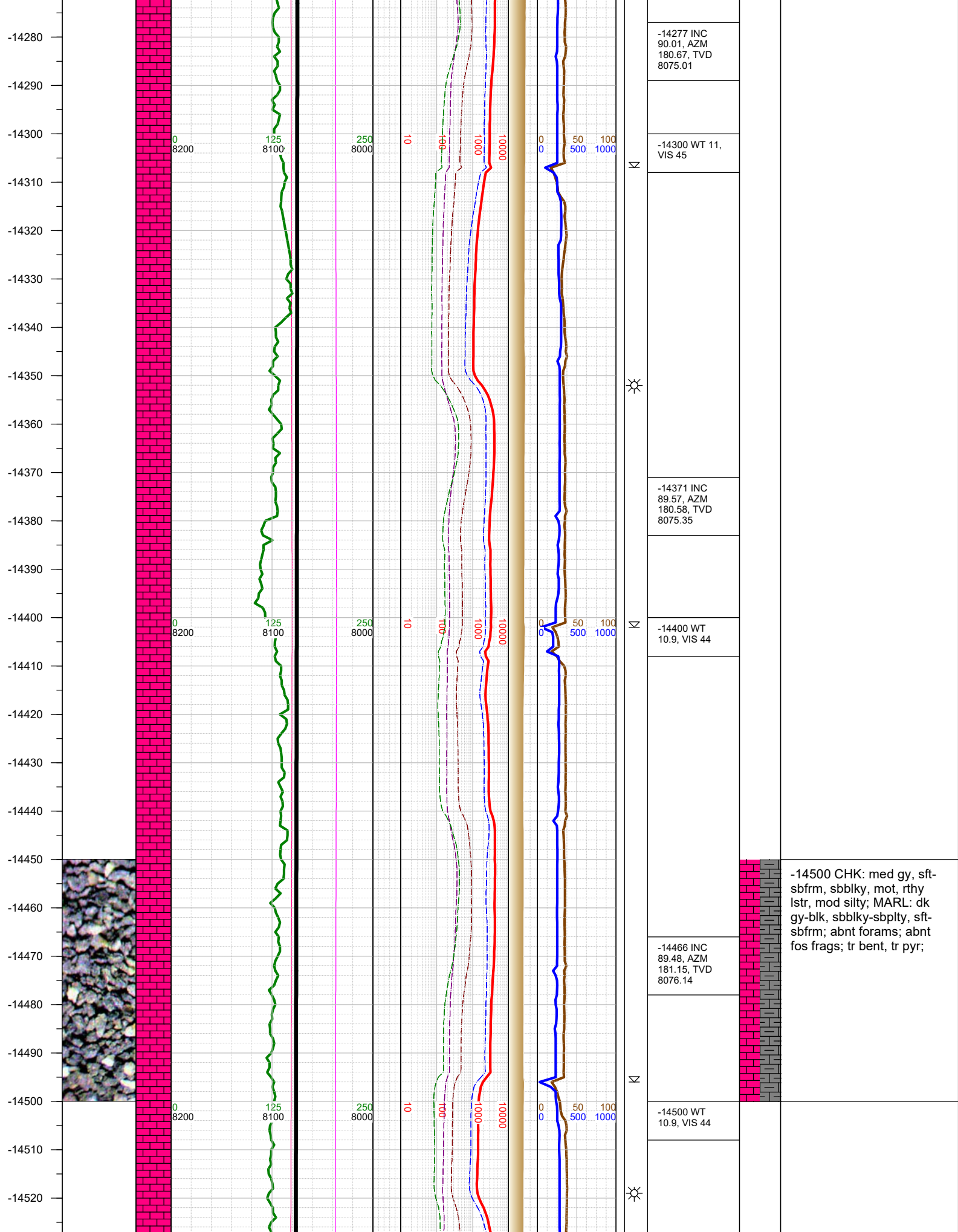
-13500 WT 11,  
VIS 45



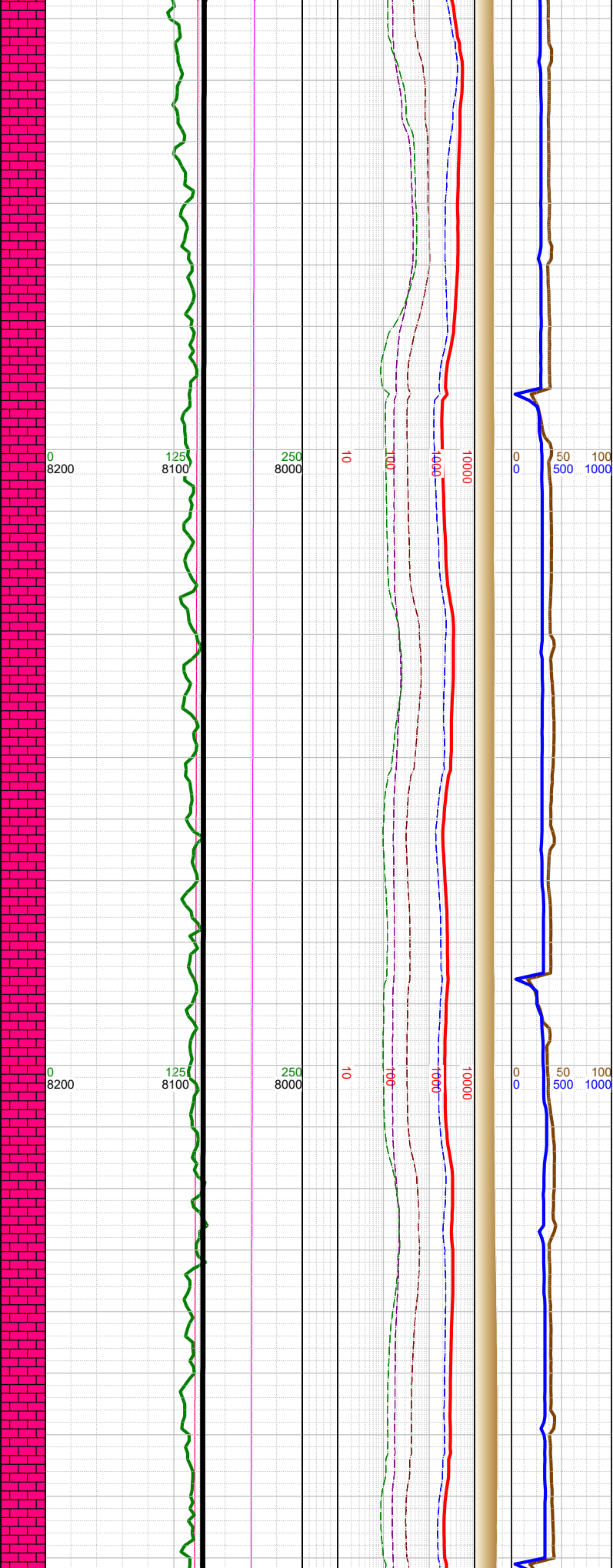
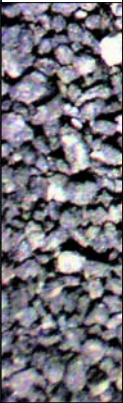








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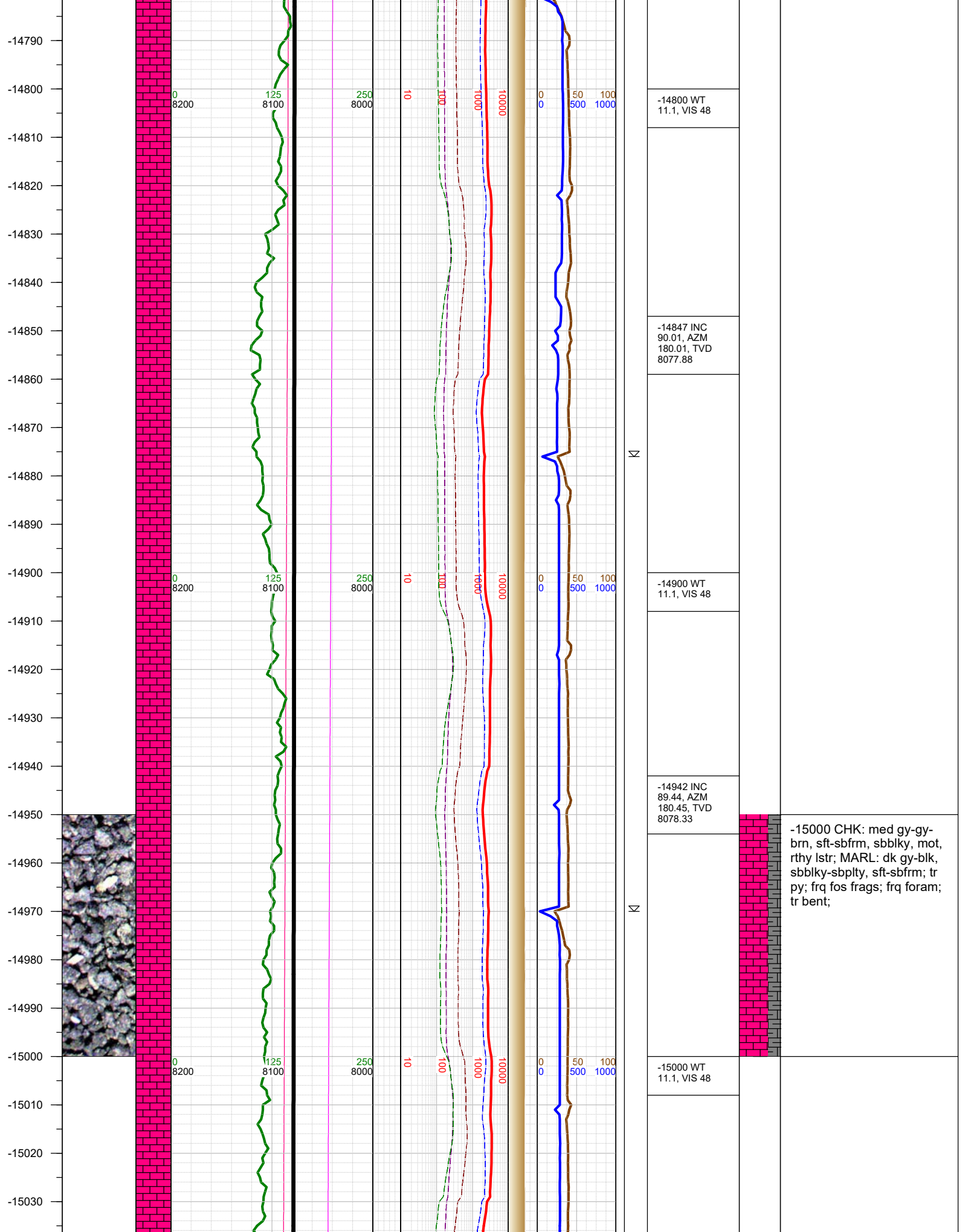
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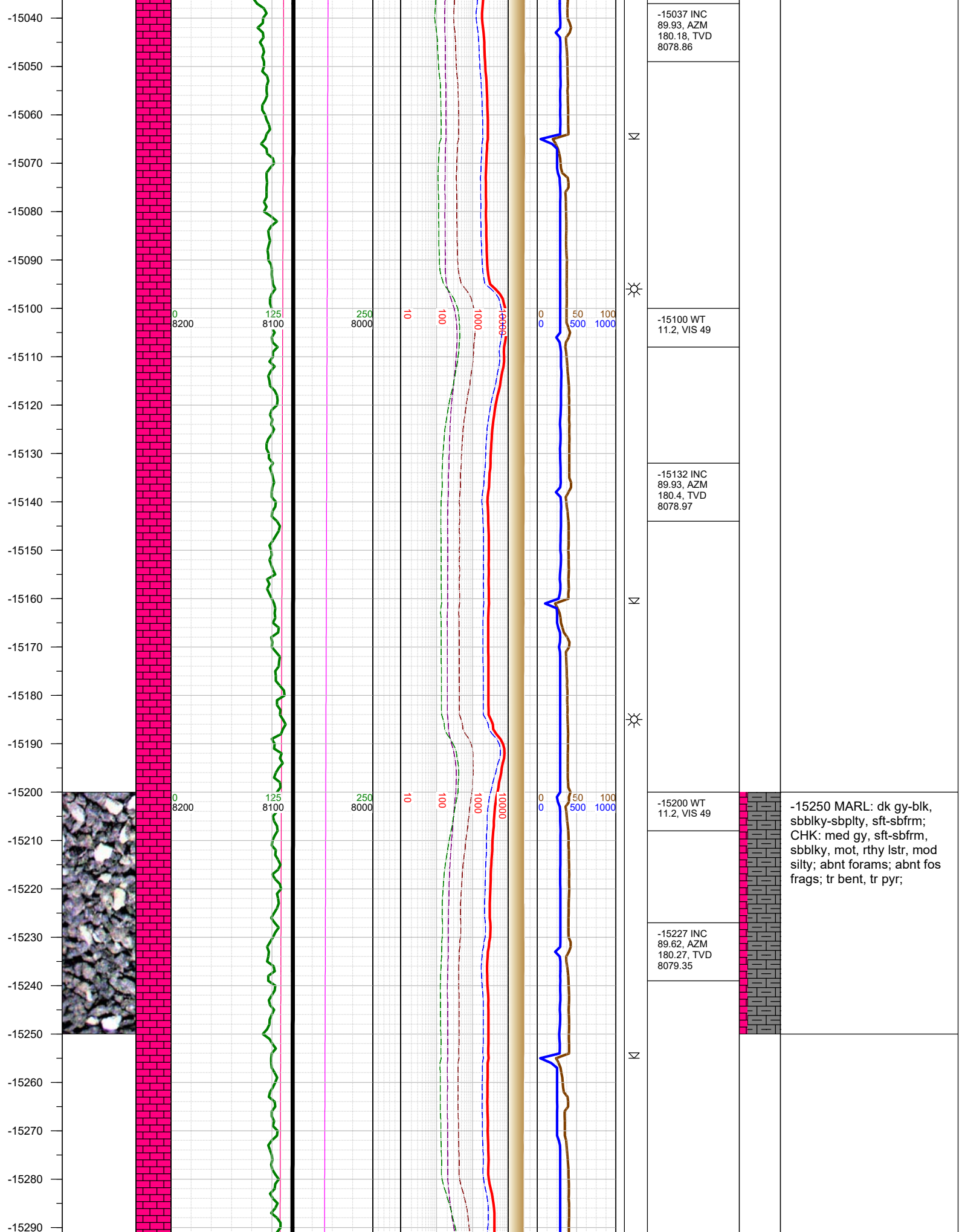
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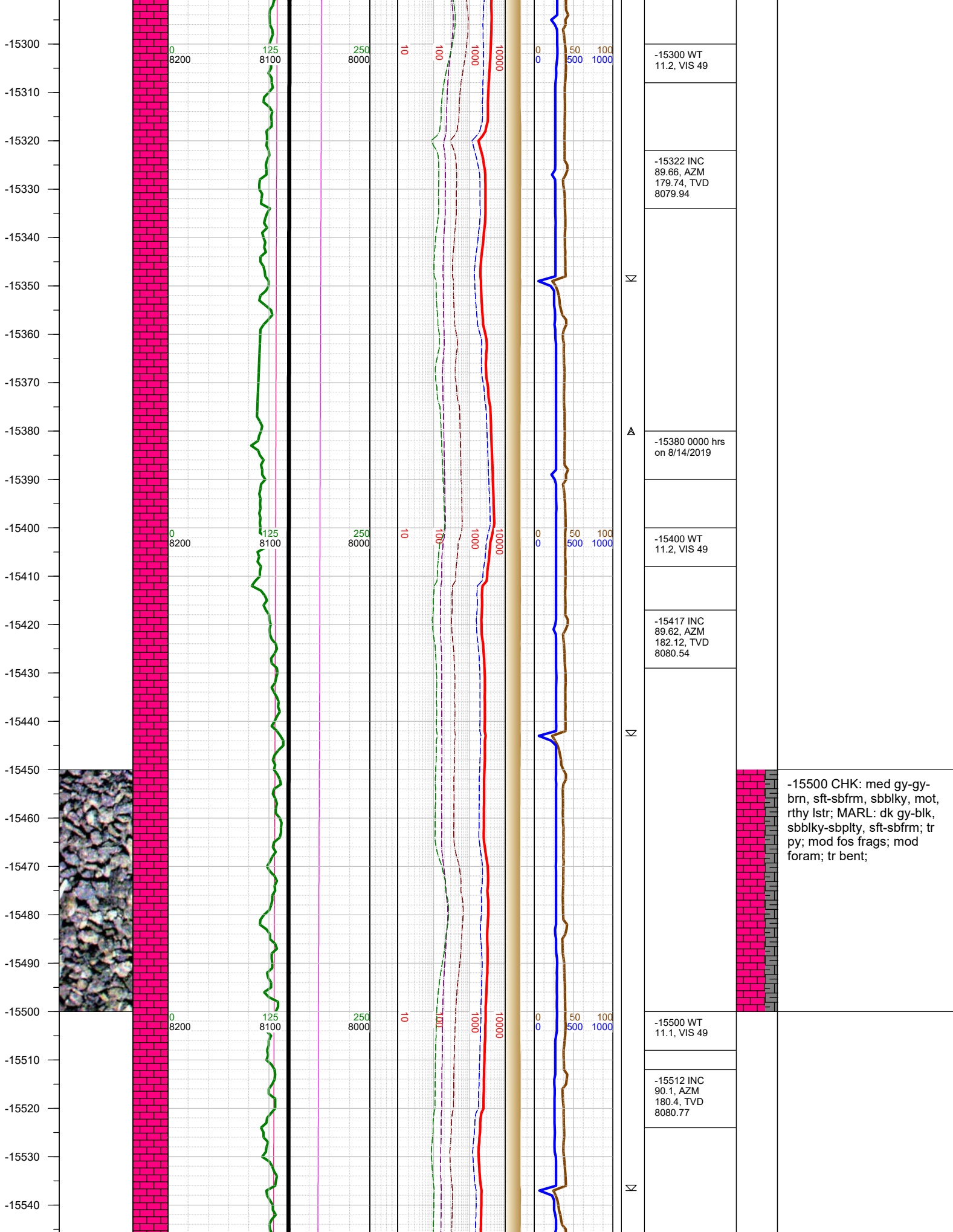
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		-14562 INC 89.84, AZM 180.1, TVD 8076.71	
		-14600 WT 10.9, VIS 44	
		-14657 INC 89.75, AZM 179.92, TVD 8077.05	
		-14700 WT 10.9, VIS 44	-14750 CHK: med gy-gy- brn, sft-sbfrm, sbbly, mot, rthy lstr; MARL: dk gy-blk, sbbly-sbply, sft-sbfrm; tr py; abnt fos frags; abnt foram; tr bent;
		-14752 INC 89.62, AZM 180.62, TVD 8077.57	



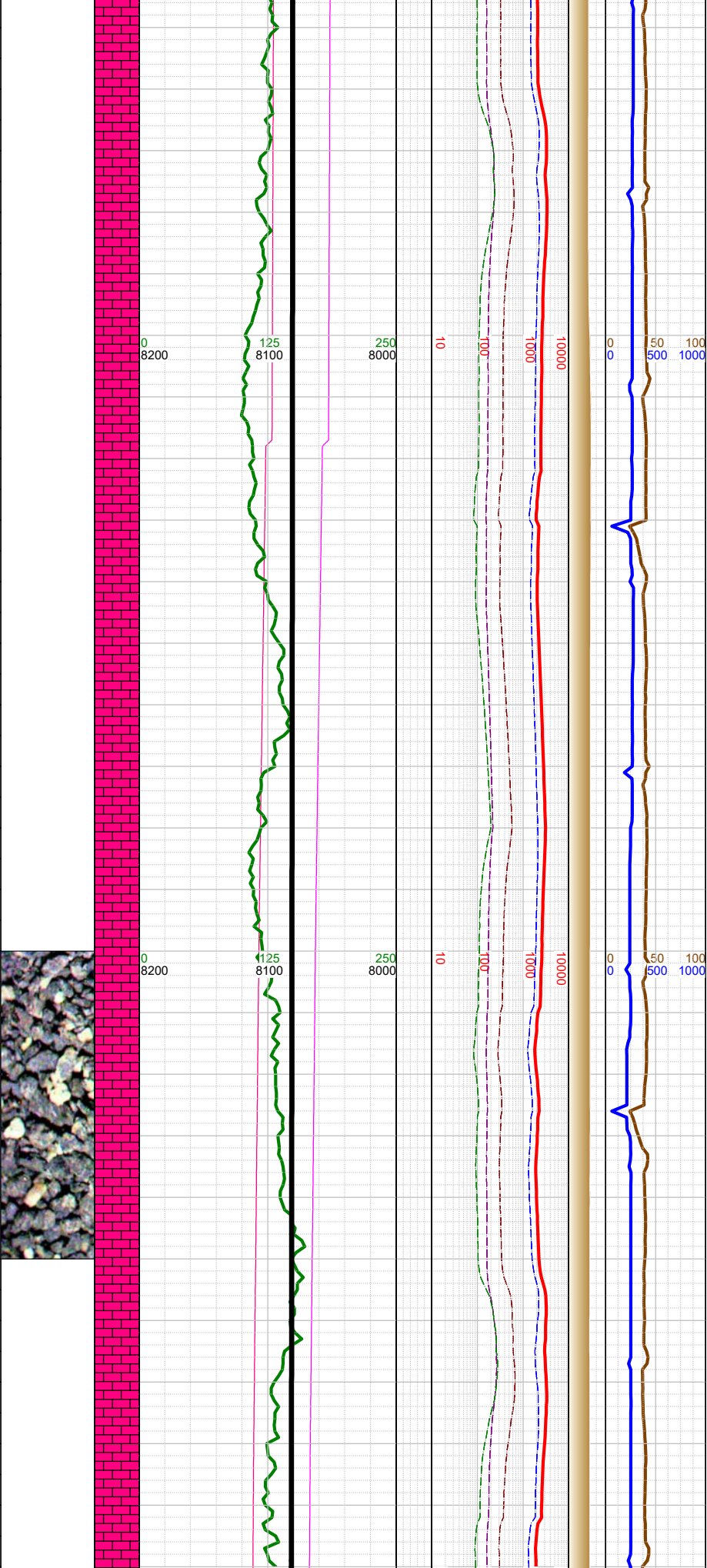




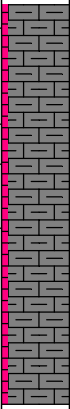




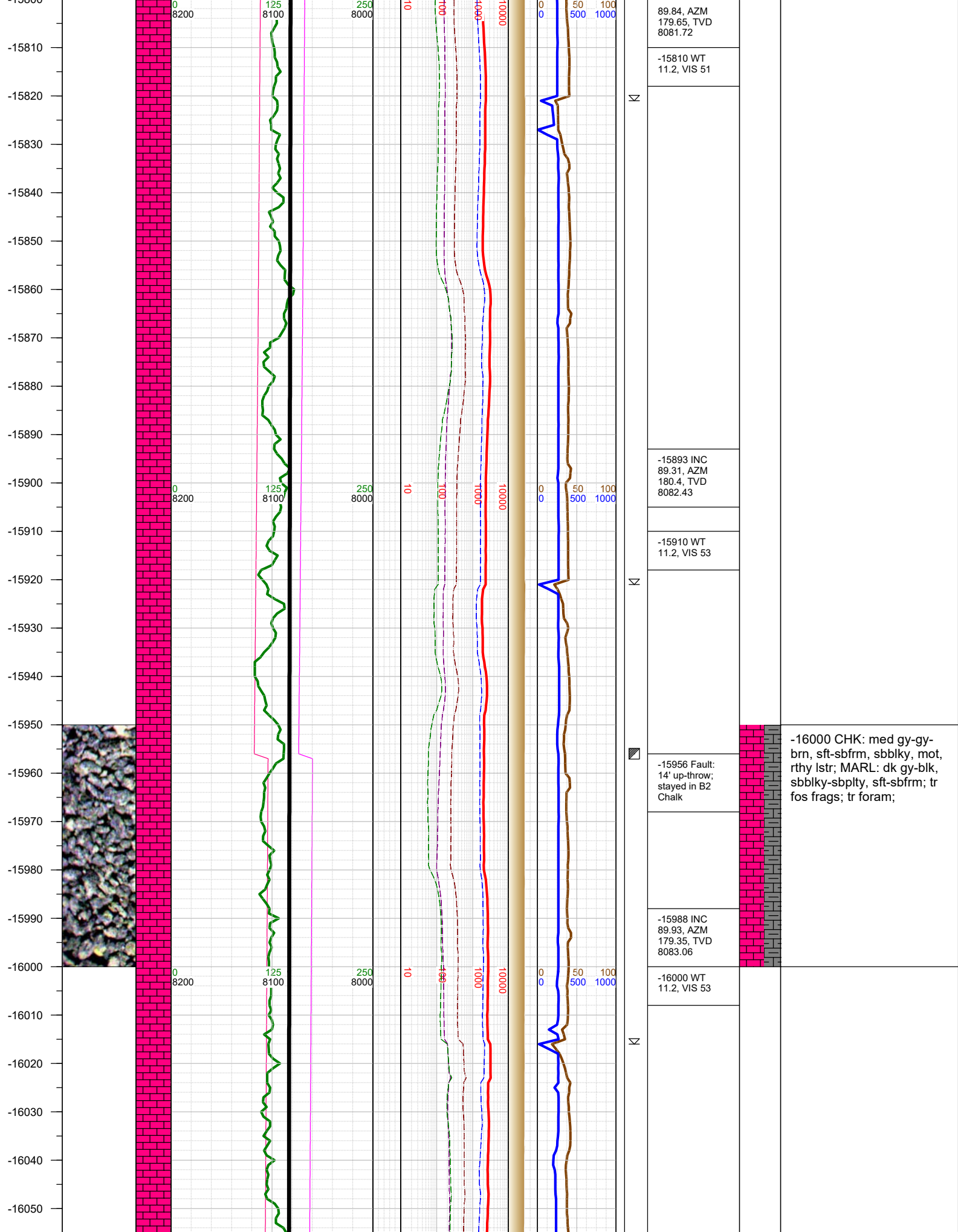
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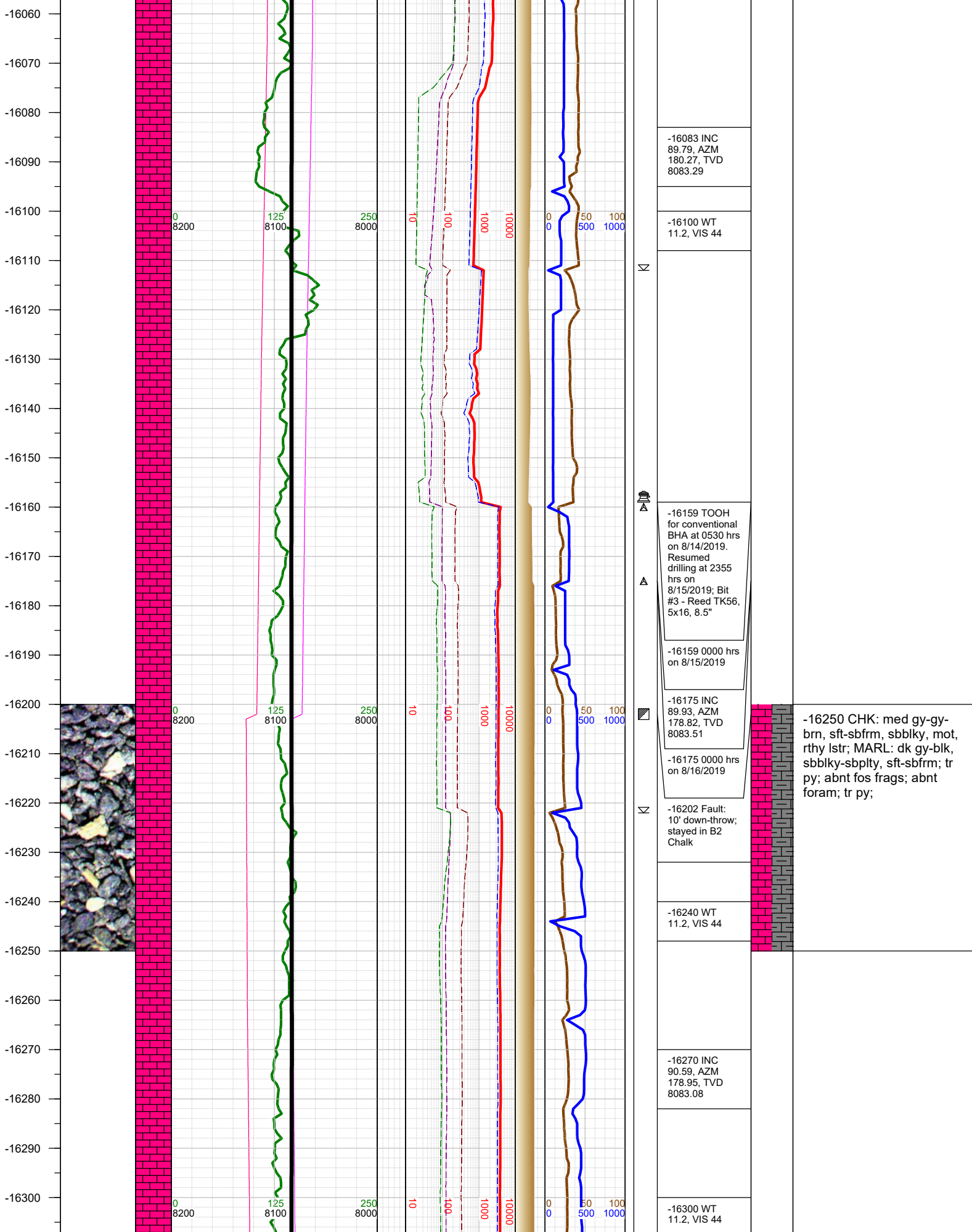


	-15590 WT 11.2, VIS 51
	-15607 INC 89.84, AZM 179.61, TVD 8080.82
▣	-15617 Fault: 5' down-throw; stayed in B2 Chalk
▣	
	-15703 INC 89.62, AZM 181.42, TVD 8081.27
	-15720 WT 11.2, VIS 51
	-15798 INC



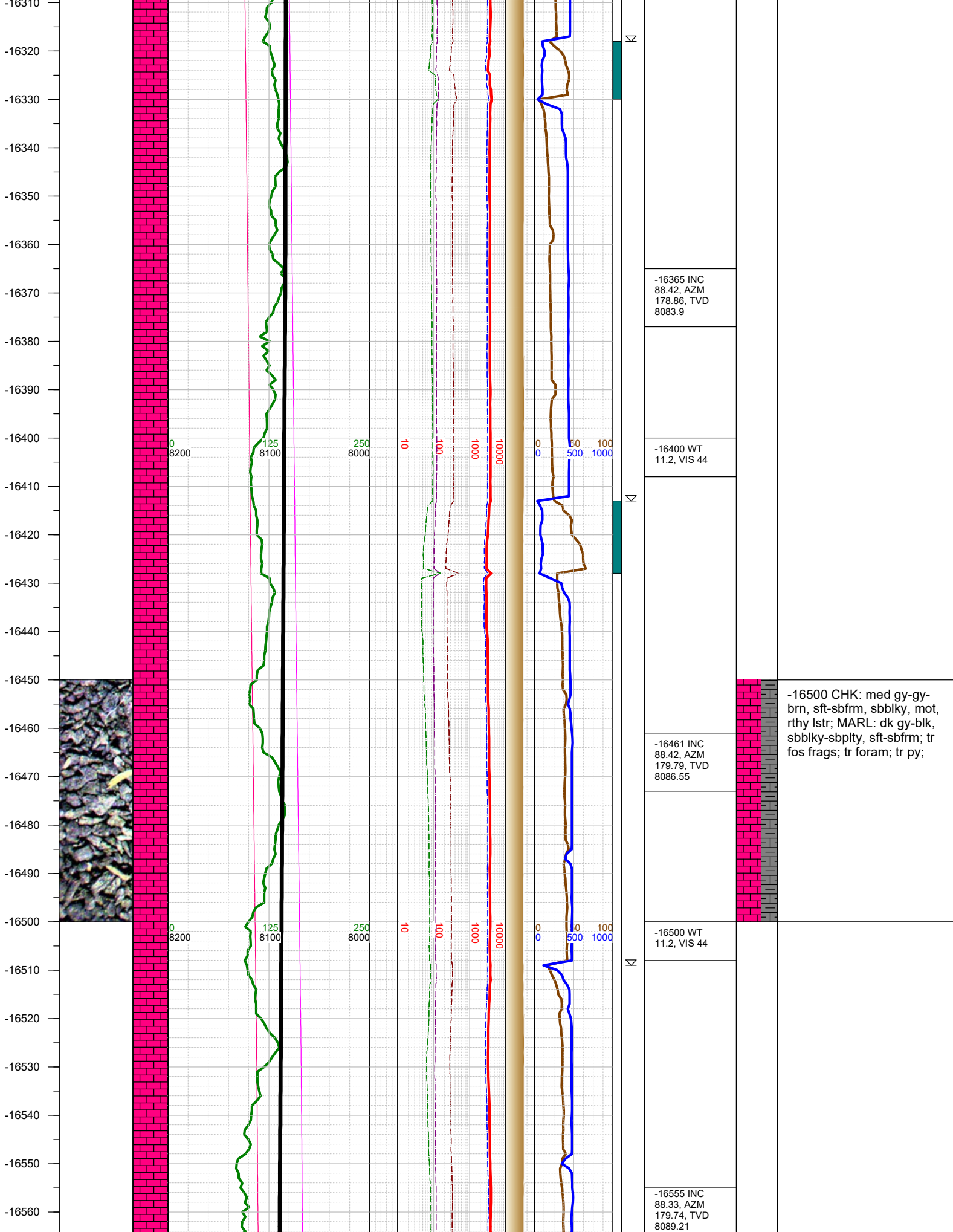
-15750 MARL: dk gy-blk,  
sbbly-sbply, sft-sbfrm;  
CHK: med gy, sft-sbfrm,  
sbbly, mot, rthy lstr, mod  
silty; abnt forams; abnt fos  
frags; tr bent, tr pyr;





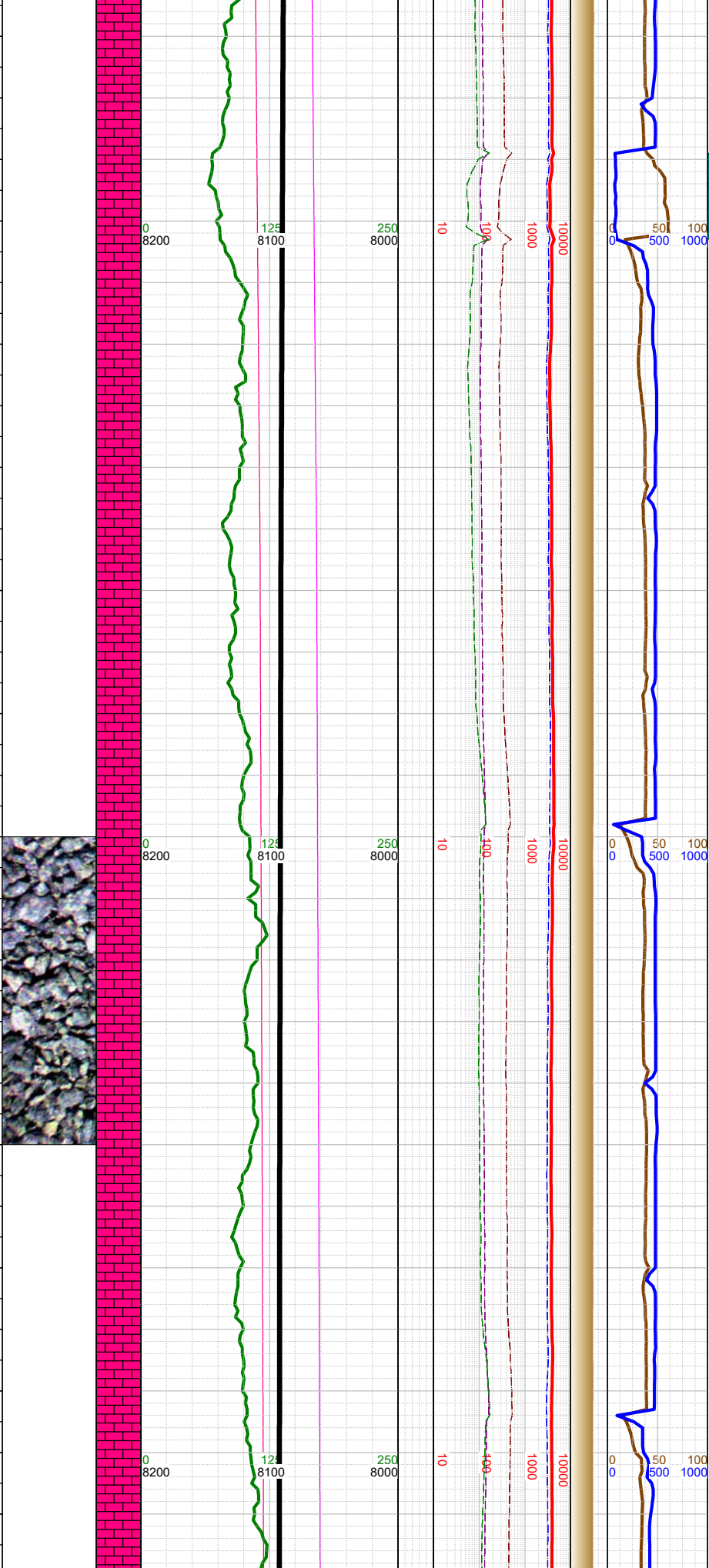
-16250 CHK: med gy-gy-brn, sft-sbfrm, sbbly, mot, rthy lstr; MARL: dk gy-blk, sbbly-sbply, sft-sbfrm; tr py; abnt fos frags; abnt foram; tr py;





-16500 CHK: med gy-gy-brn, sft-sbfrm, sbbkly, mot, rthy lstr; MARL: dk gy-blk, sbbkly-sbplty, sft-sbfrm; tr fos frags; tr foram; tr py;

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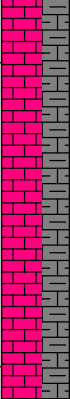
-16600 WT 11.1, VIS 42

-16651 INC 89.4, AZM 182.08, TVD 8091.12

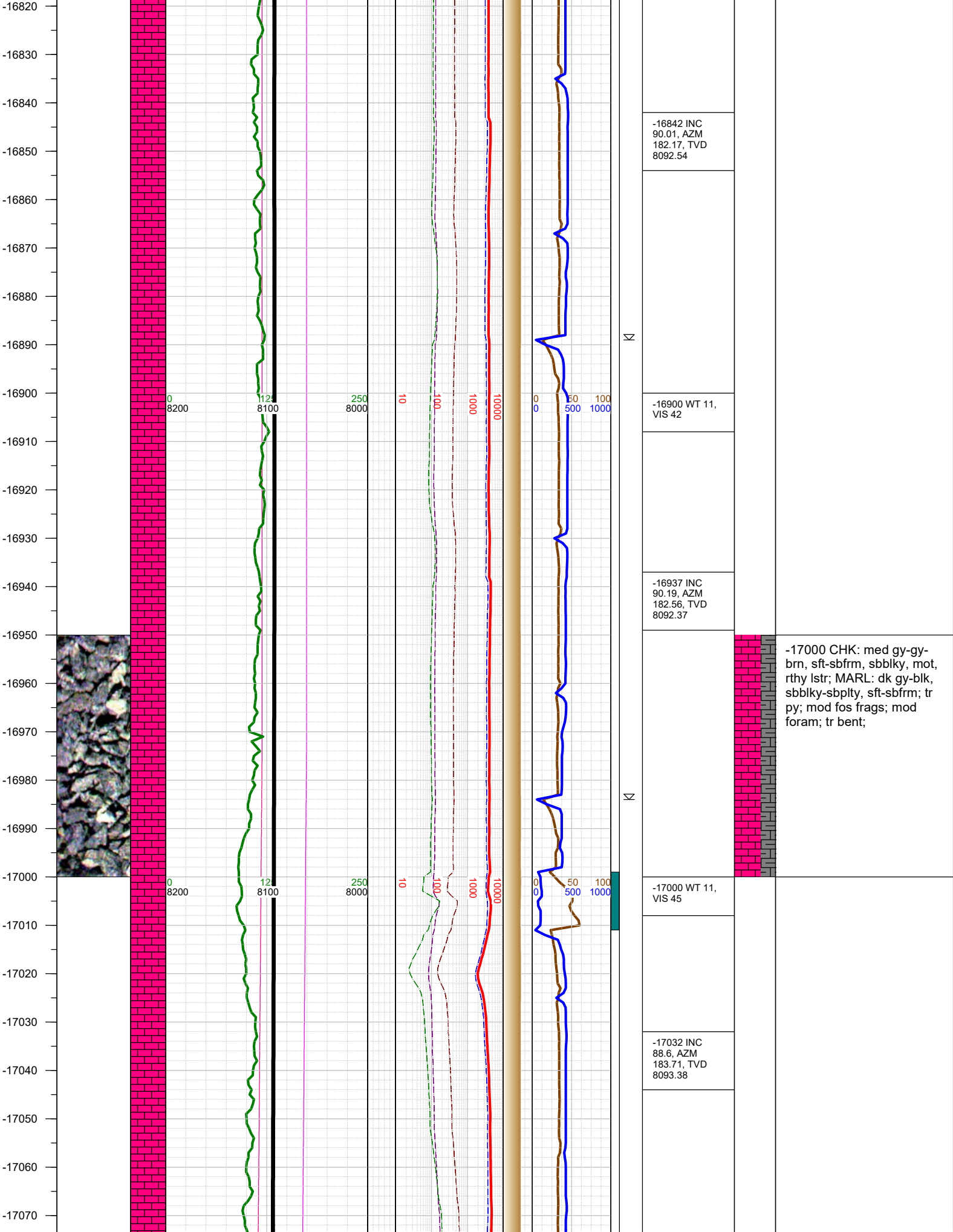
-16700 WT 11, VIS 42

-16746 INC 89.44, AZM 181.9, TVD 8092.08

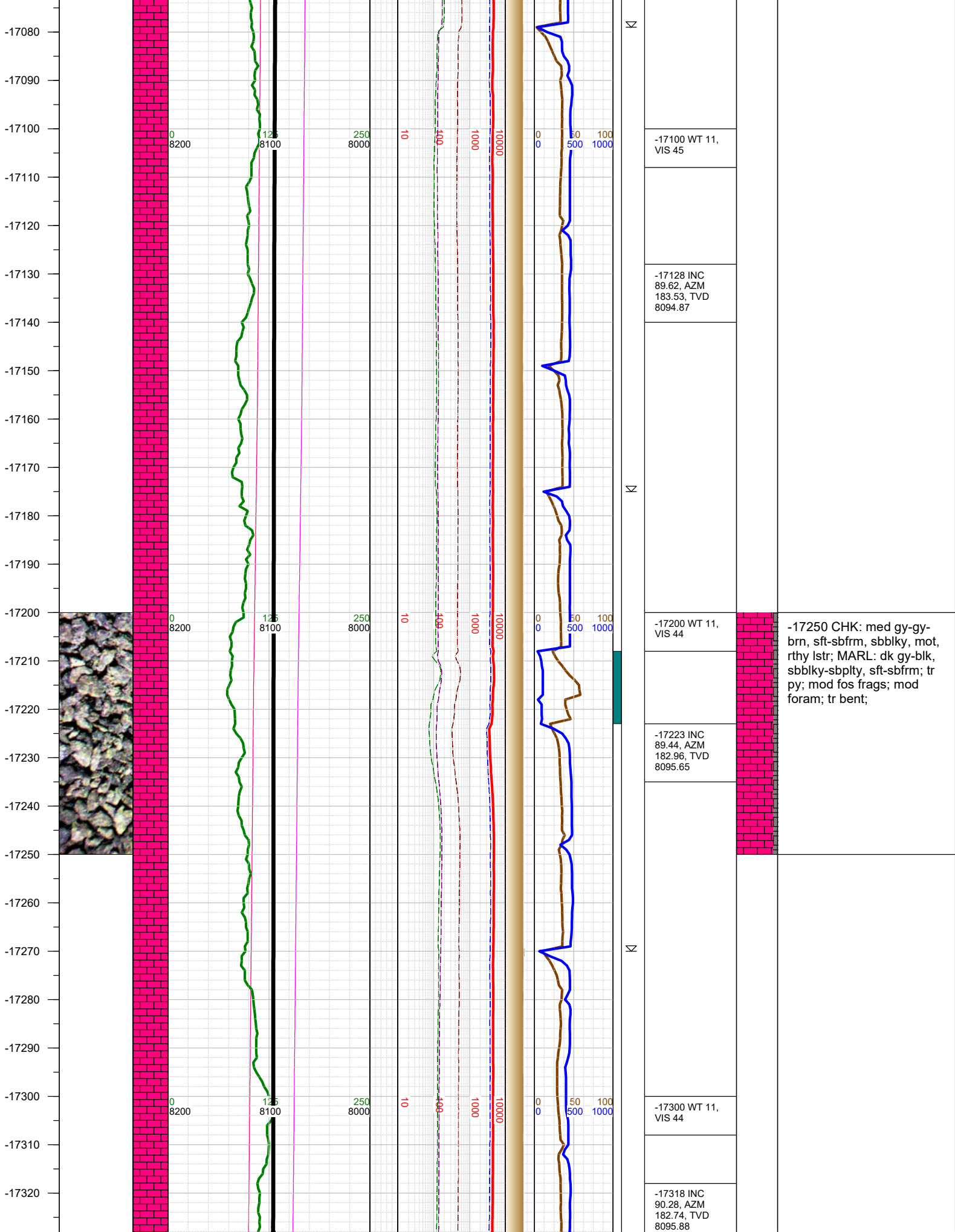
-16800 WT 11, VIS 42

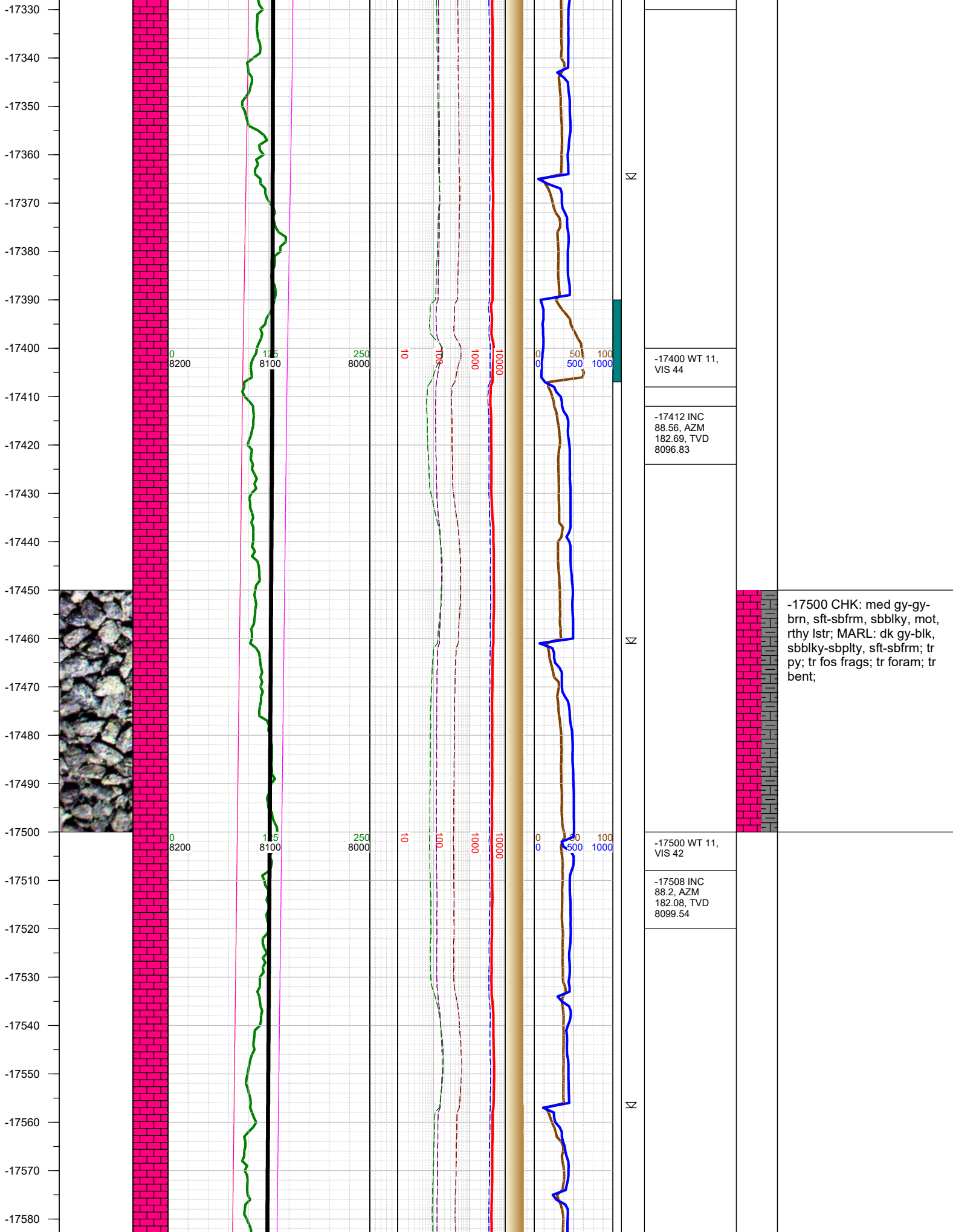


-16750 CHK: med gy-gy-brn, sft-sbfrm, sbblky, mot, rthy lstr; MARL: dk gy-blk, sbblky-sbplty, sft-sbfrm; tr fos frags; tr foram; tr py;









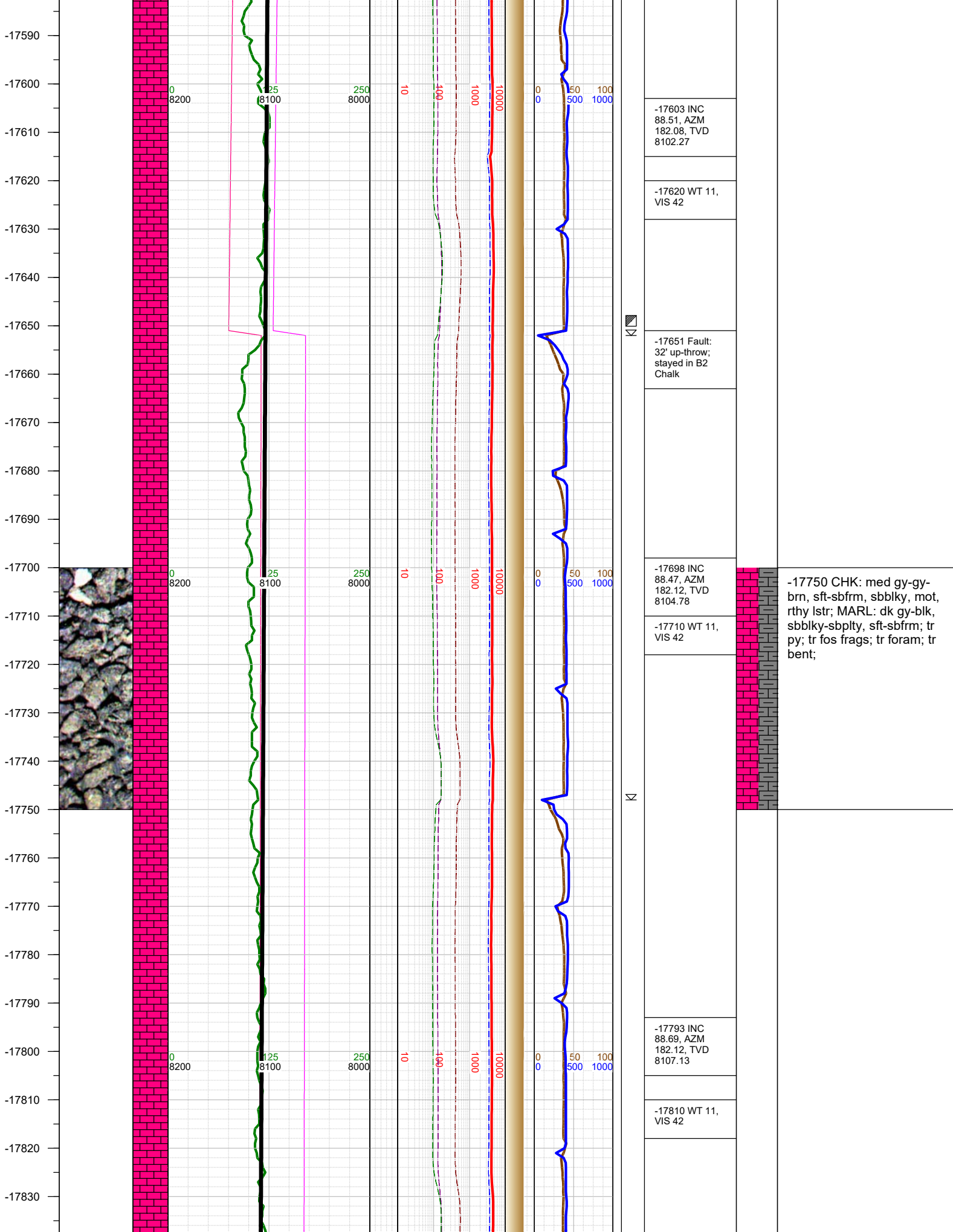
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VIS 44

-17412 INC  
88.56, AZM  
182.69, TVD  
8096.83

-17500 CHK: med gy-gy-  
brn, sft-sbfrm, sbblky, mot,  
rthy lstr; MARL: dk gy-blk,  
sbblky-sbplty, sft-sbfrm; tr  
py; tr fos frags; tr foram; tr  
bent;

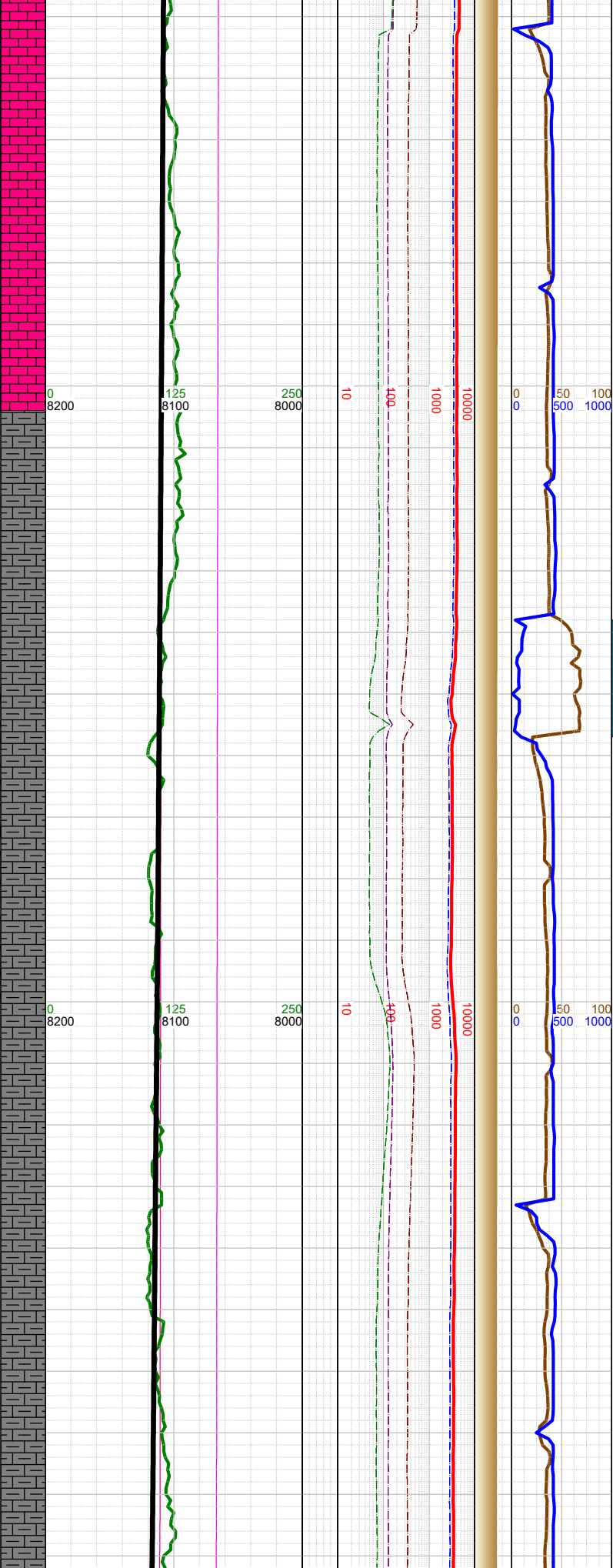
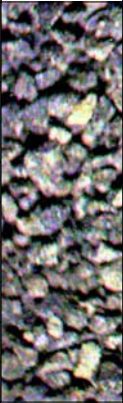
-17500 WT 11,  
VIS 42

-17508 INC  
88.2, AZM  
182.08, TVD  
8099.54





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-17889 INC  
88.56, AZM  
181.11, TVD  
8109.43

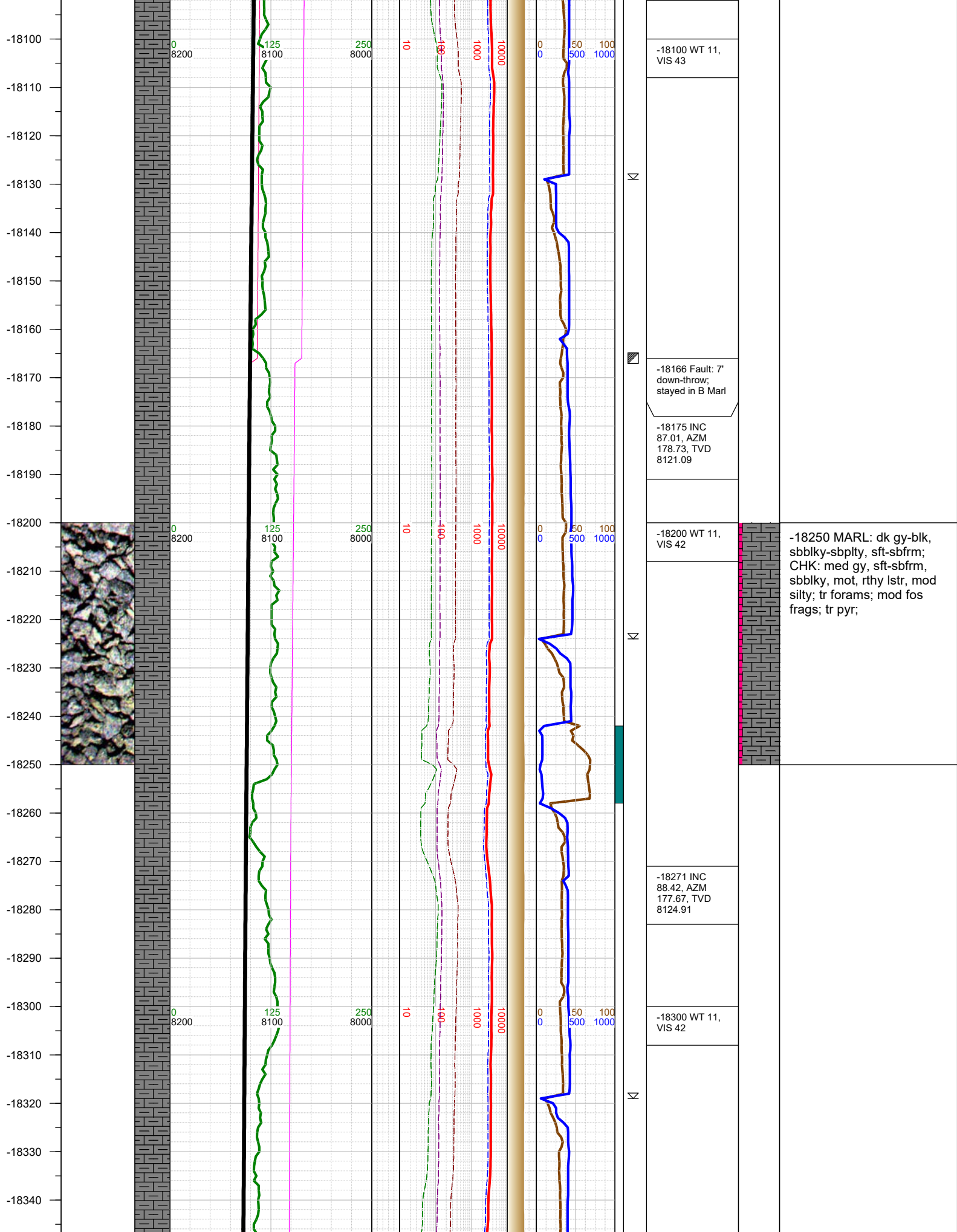
-17910 WT 11,  
VIS 43

-17984 INC  
87.8, AZM  
179.57, TVD  
8112.45

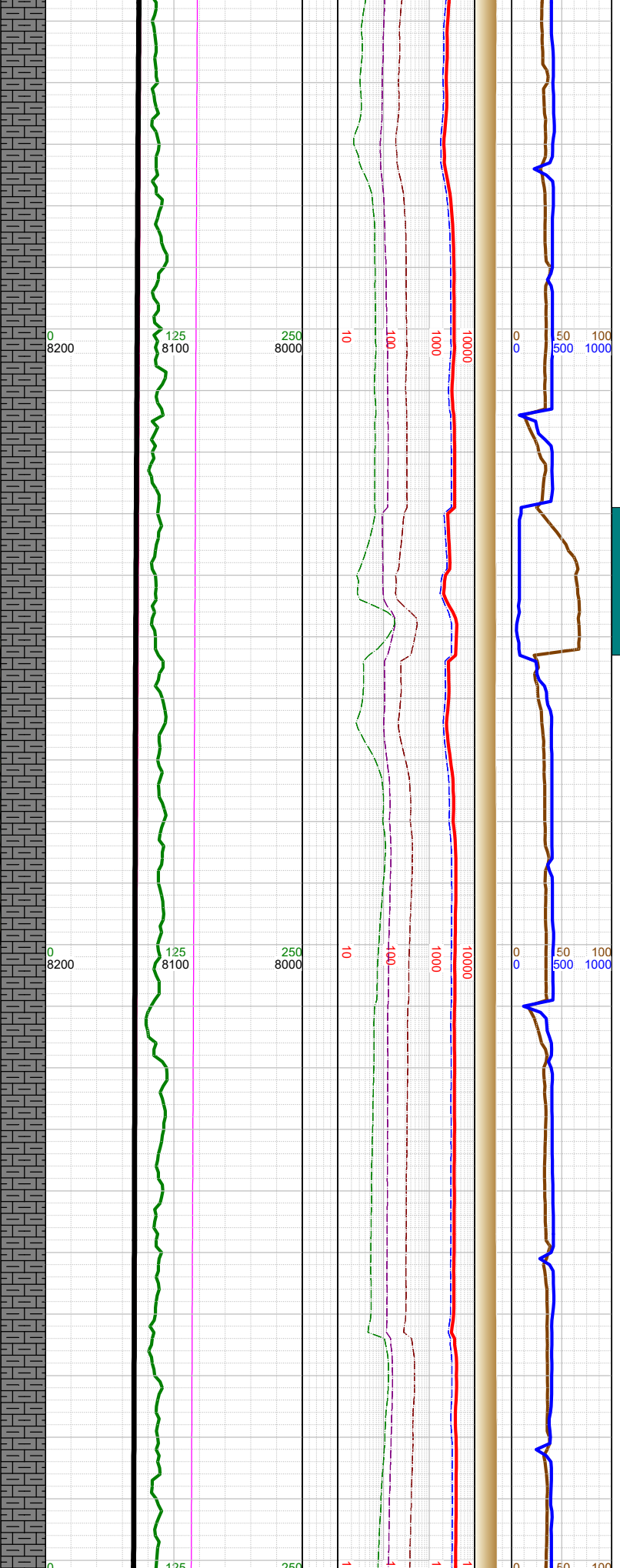
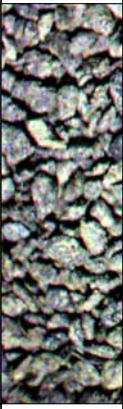
-18000 WT 11,  
VIS 43

-18080 INC  
87.41, AZM  
179.3, TVD  
8116.46

-18000 MARL: dk gy-blk,  
sbbly-sbply, sft-sbfrm;  
CHK: med gy, sft-sbfrm,  
sbbly, mot, rthy lstr, mod  
silty; tr forams; mod fos  
frags; tr bent; tr pyr;



-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  
-18600



Σ

Σ

-18366 INC  
87.98, AZM  
177.41, TVD  
8127.9

-18400 WT 11,  
VIS 42

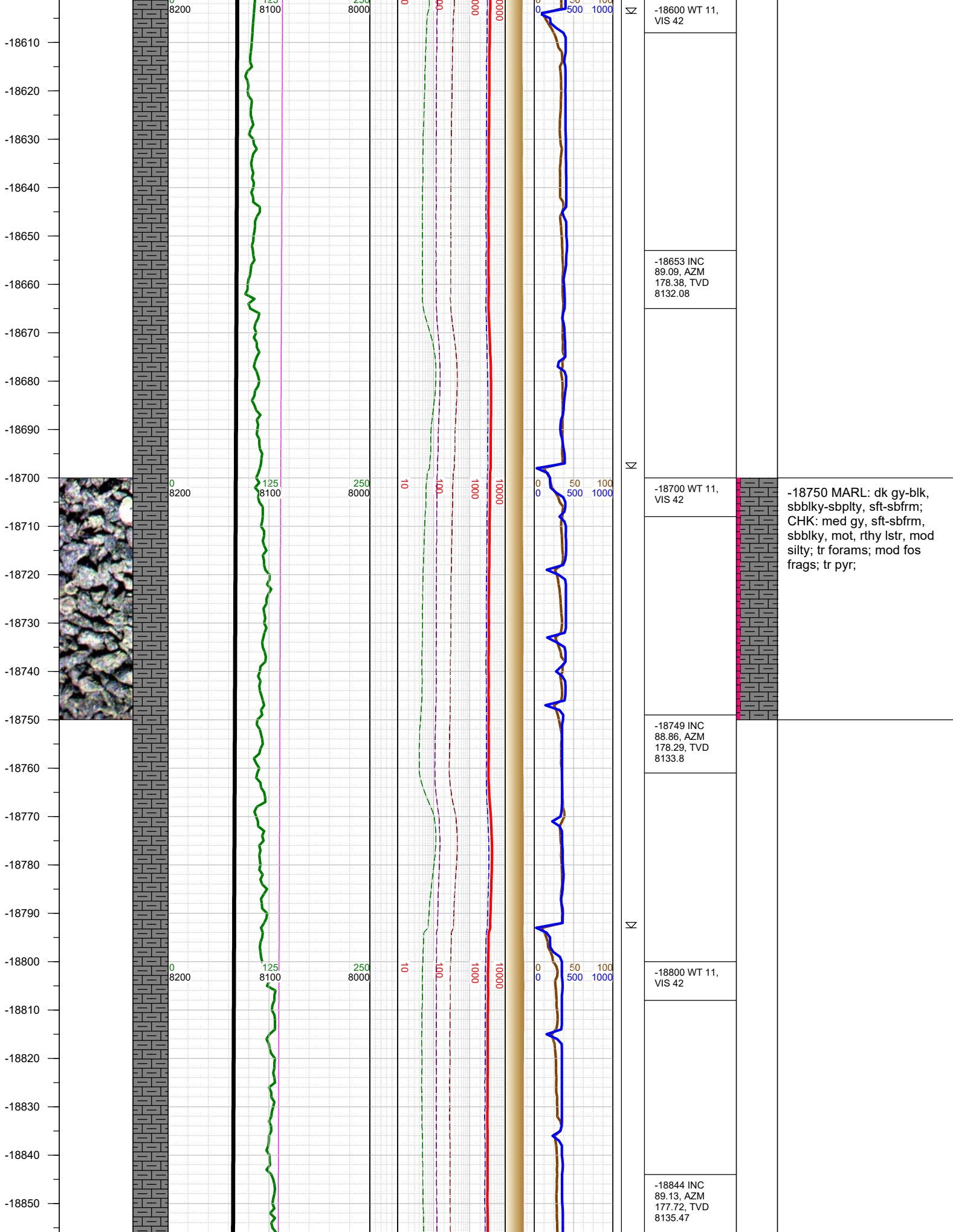
-18462 INC  
89.48, AZM  
179.26, TVD  
8130.03

-18500 WT 11,  
VIS 42

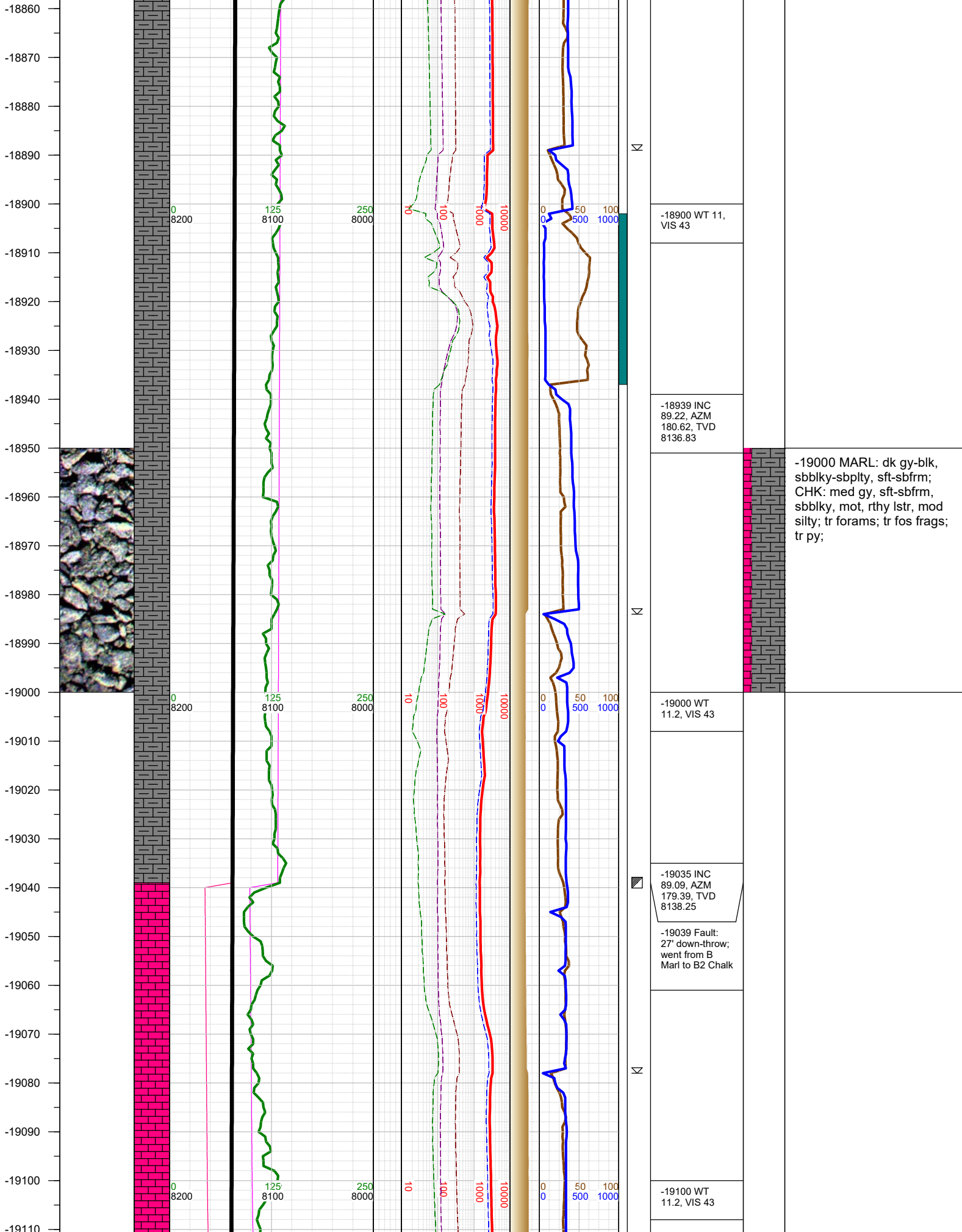
-18558 INC  
89.48, AZM  
178.64, TVD  
8130.9

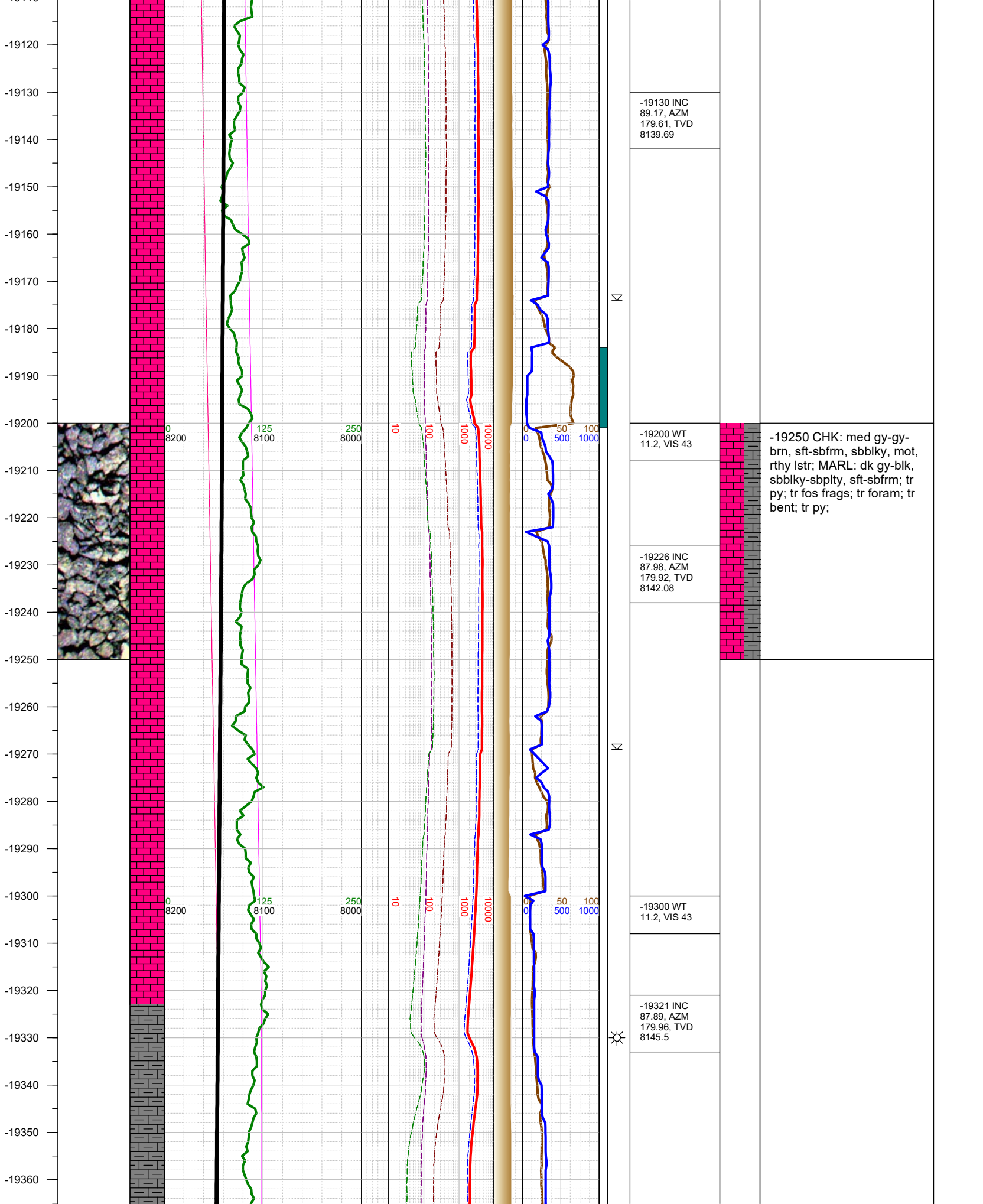
-18500 MARL: dk gy-blk,  
sbbly-sbplty, sft-sbfrm;  
CHK: med gy, sft-sbfrm,  
sbbly, mot, rthy lstr, mod  
silty; tr forams; mod fos  
frags; tr pyr;



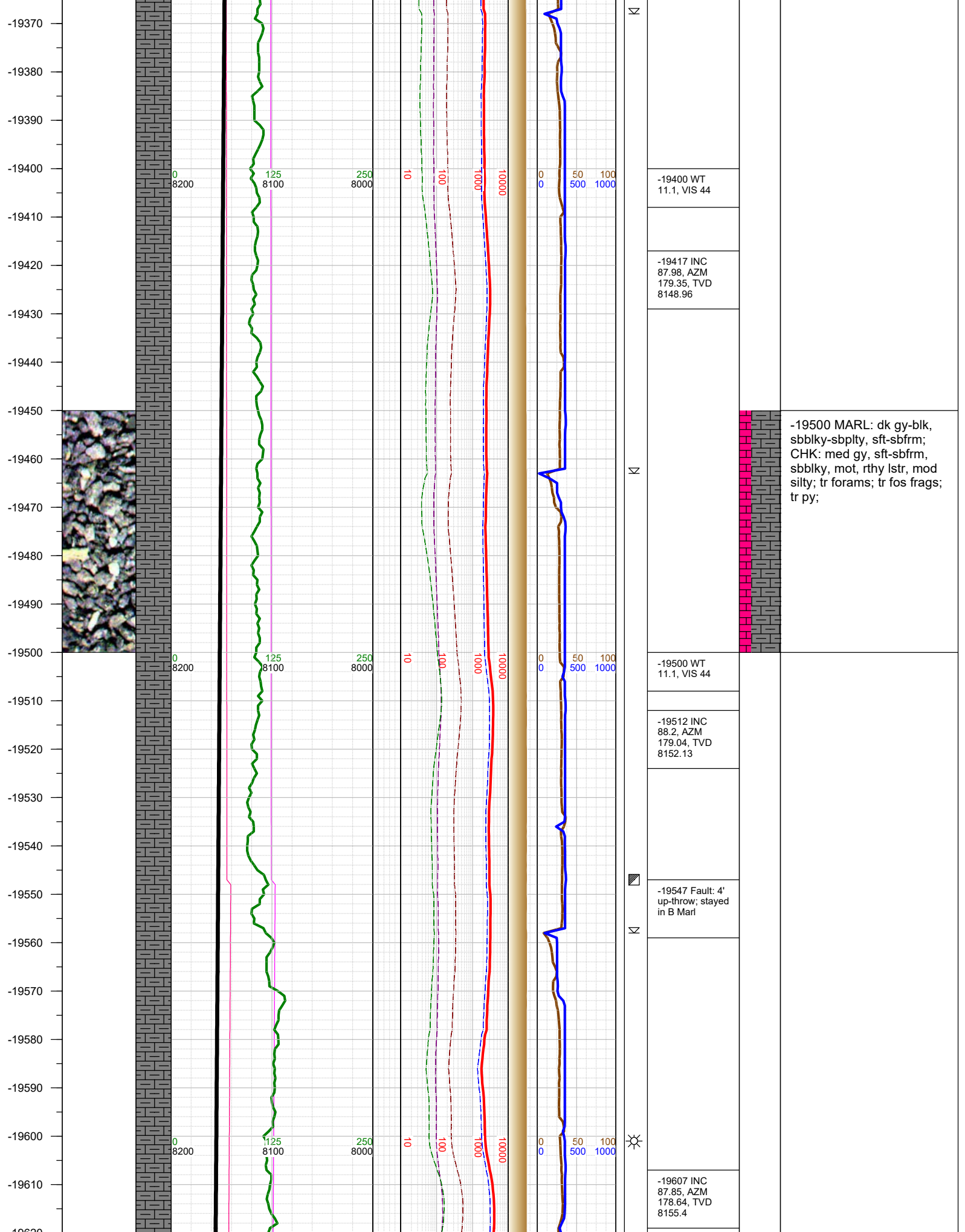


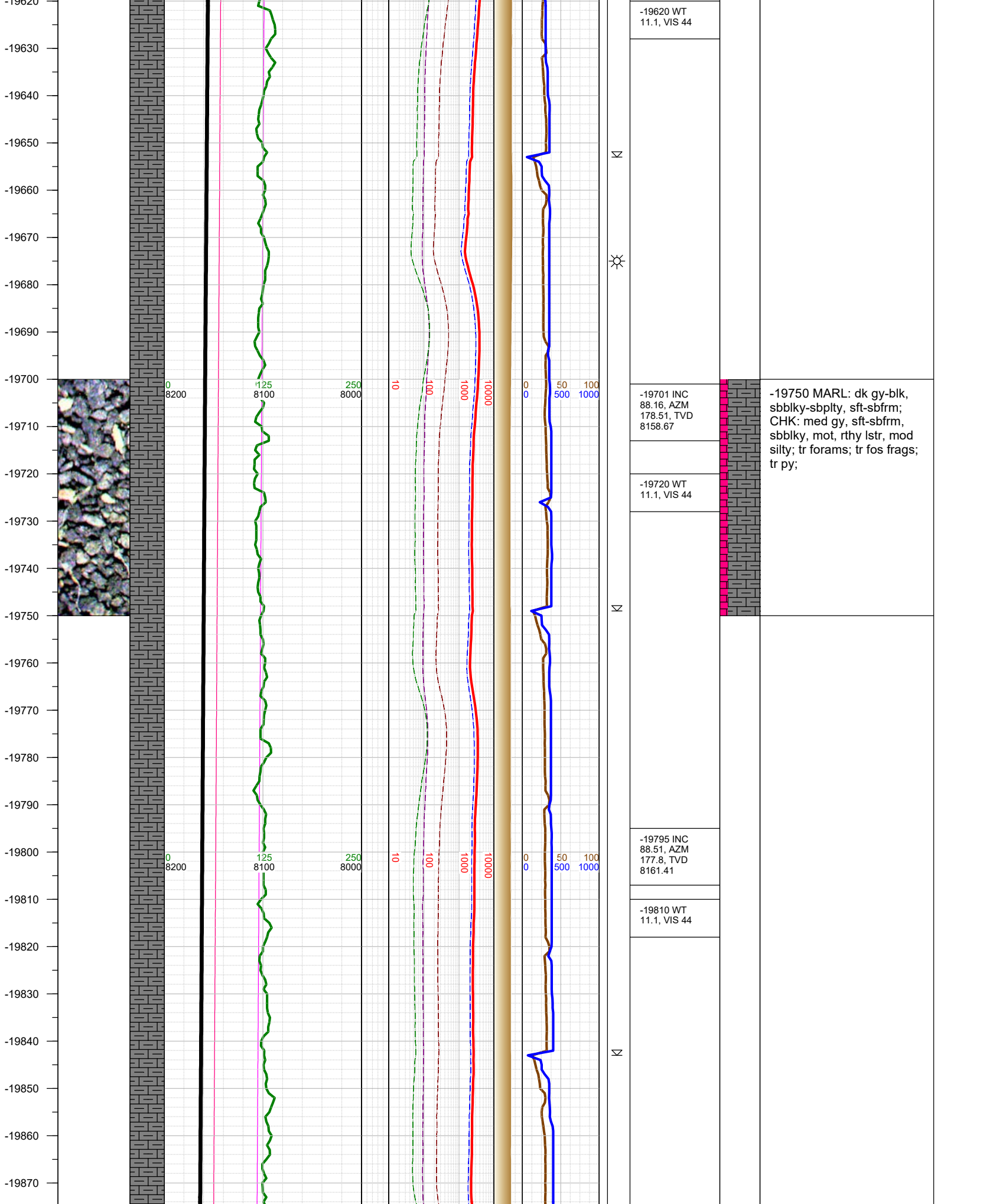
-18750 MARL: dk gy-blk, sbblky-sbplty, sft-sbfrm; CHK: med gy, sft-sbfrm, sbblky, mot, rthy lstr, mod silty; tr forams; mod fos frags; tr pyr;

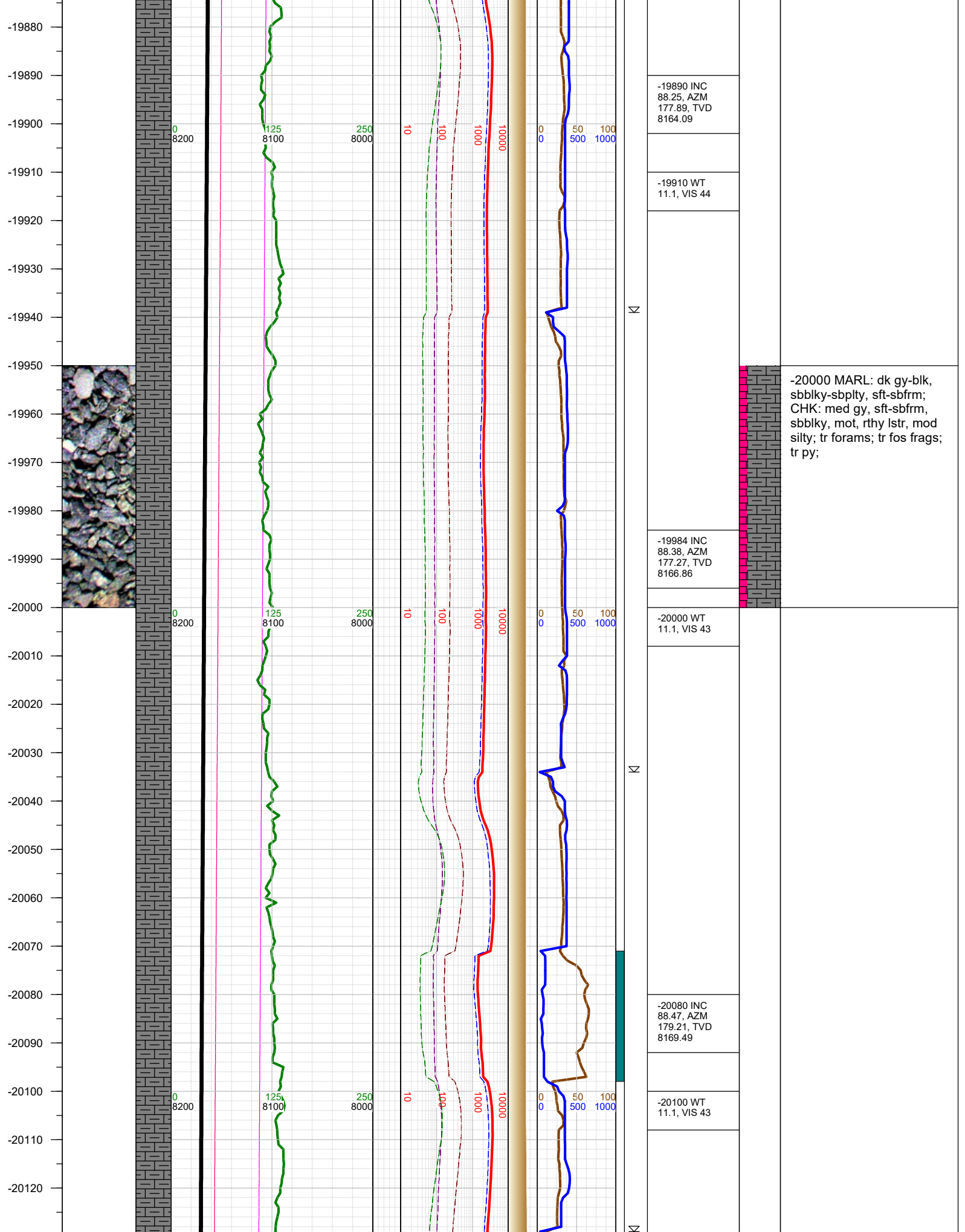




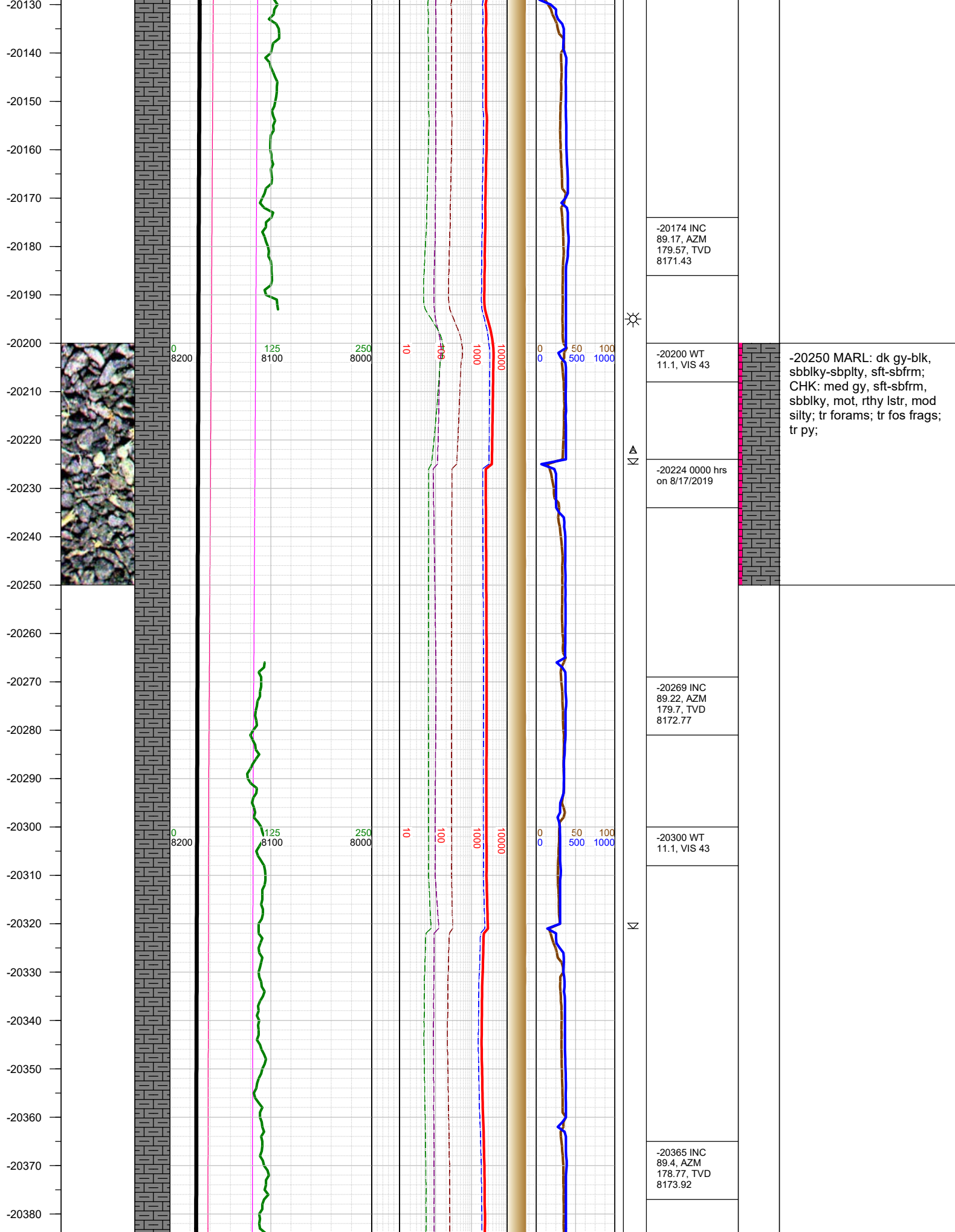


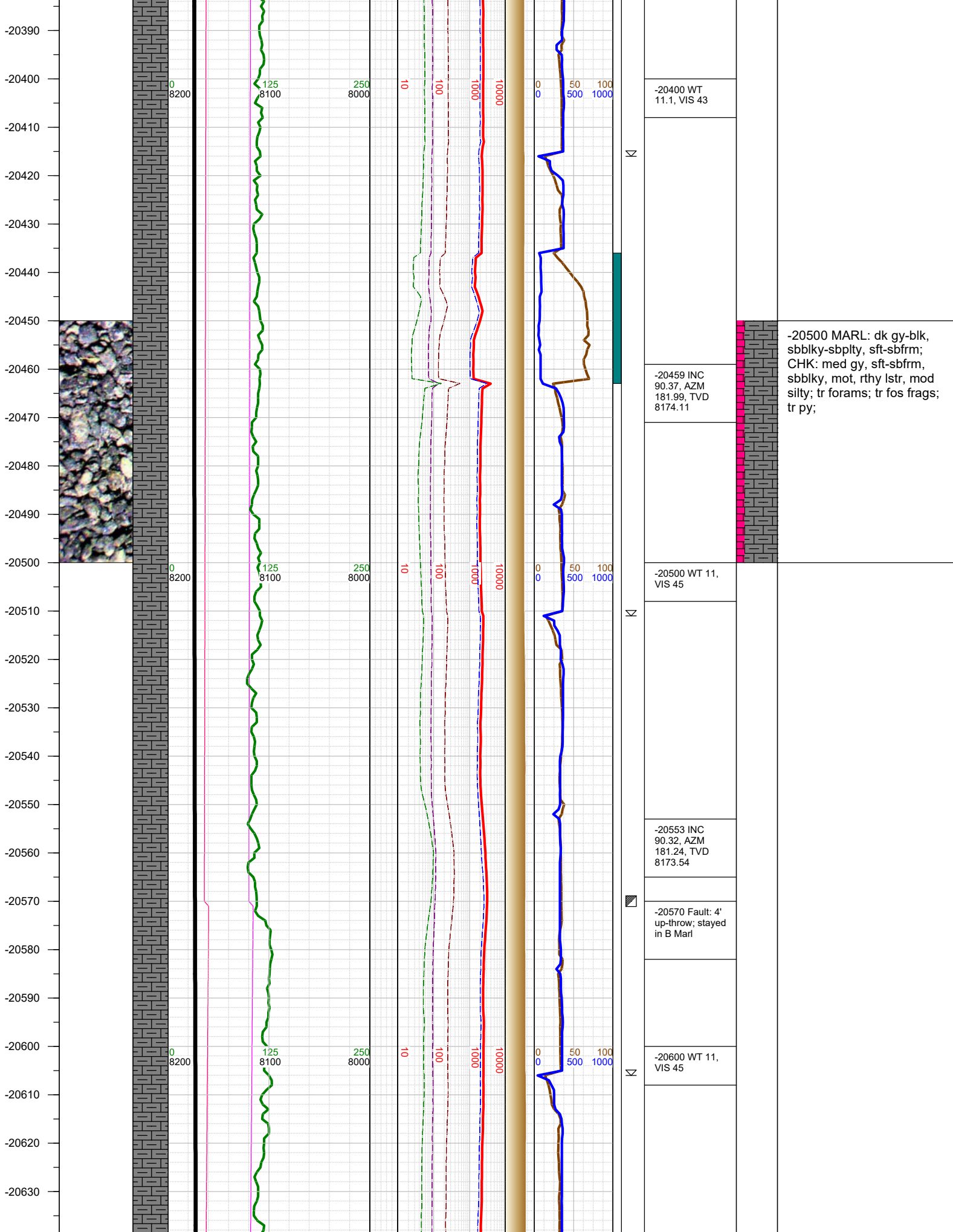


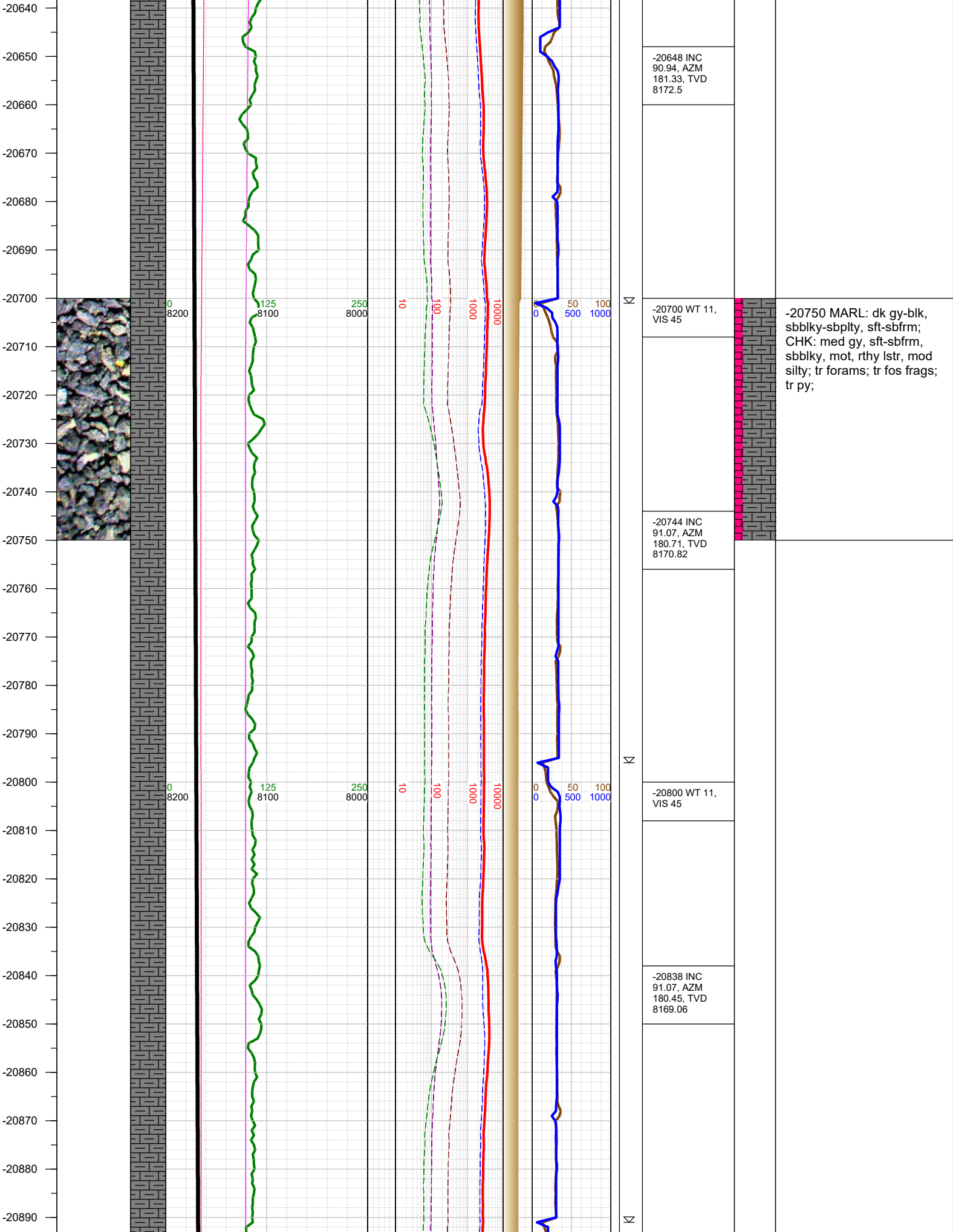




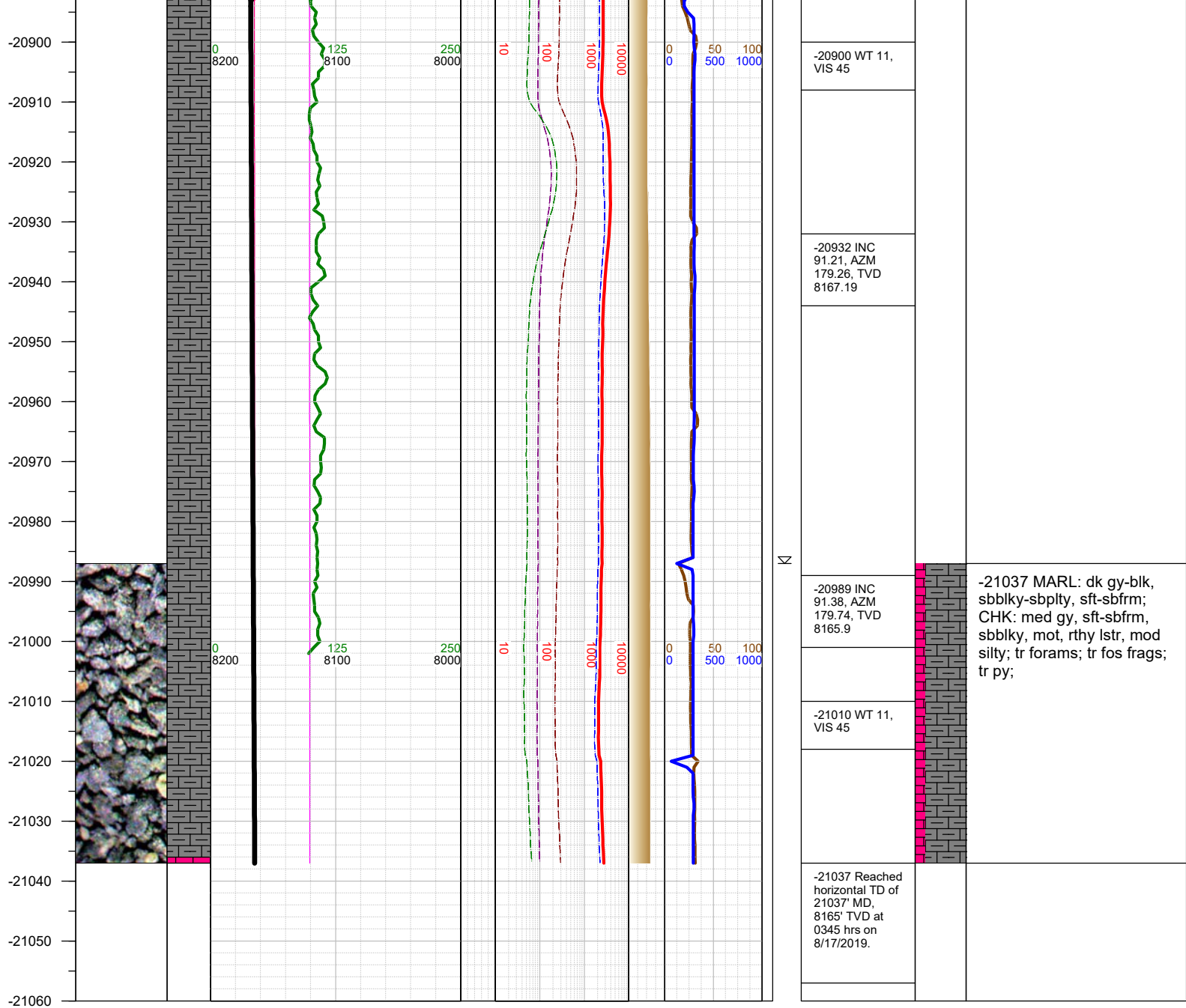












TOTAL DEPTH = 21037'

Thank you for using Earth Science Agency