

OPERATOR: **Extraction Oil & Gas**

WELL NAME: **TC CC West 4-9-11**

FIELD NAME: DJ Basin - Wattenberg

DRILLING RIG: Patterson 341

API #: 05-123-43505

LAT/LONG: 40.41434, -104.79868

SURFACE HOLE: SENE S8-T5N-R66W, 2574' FNL, 1192' FEL

BOTTOM HOLE: S11-T5N-R66W, 1918' FSL, 2487' FWL



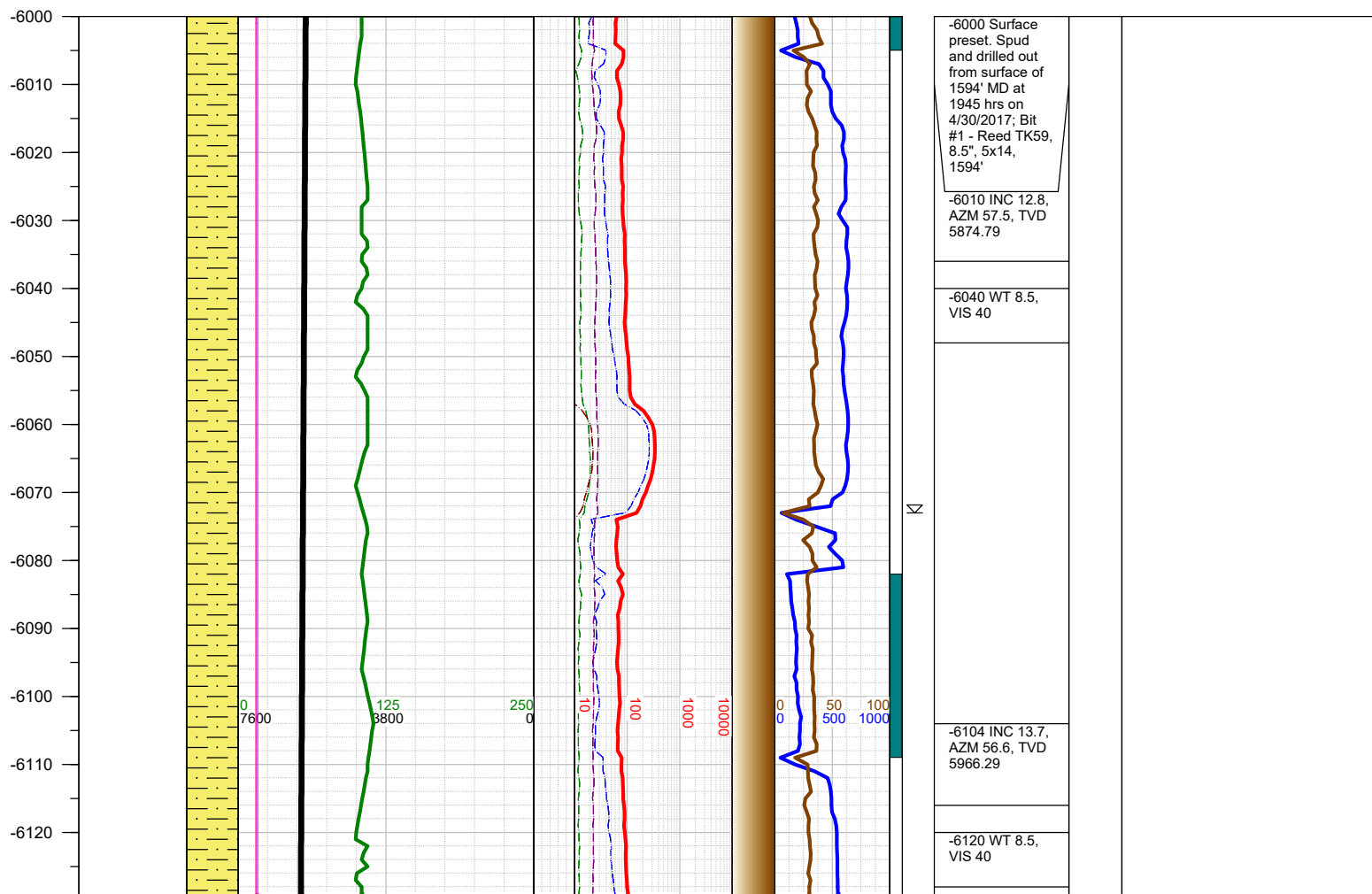
Earth Science Agency, LLC

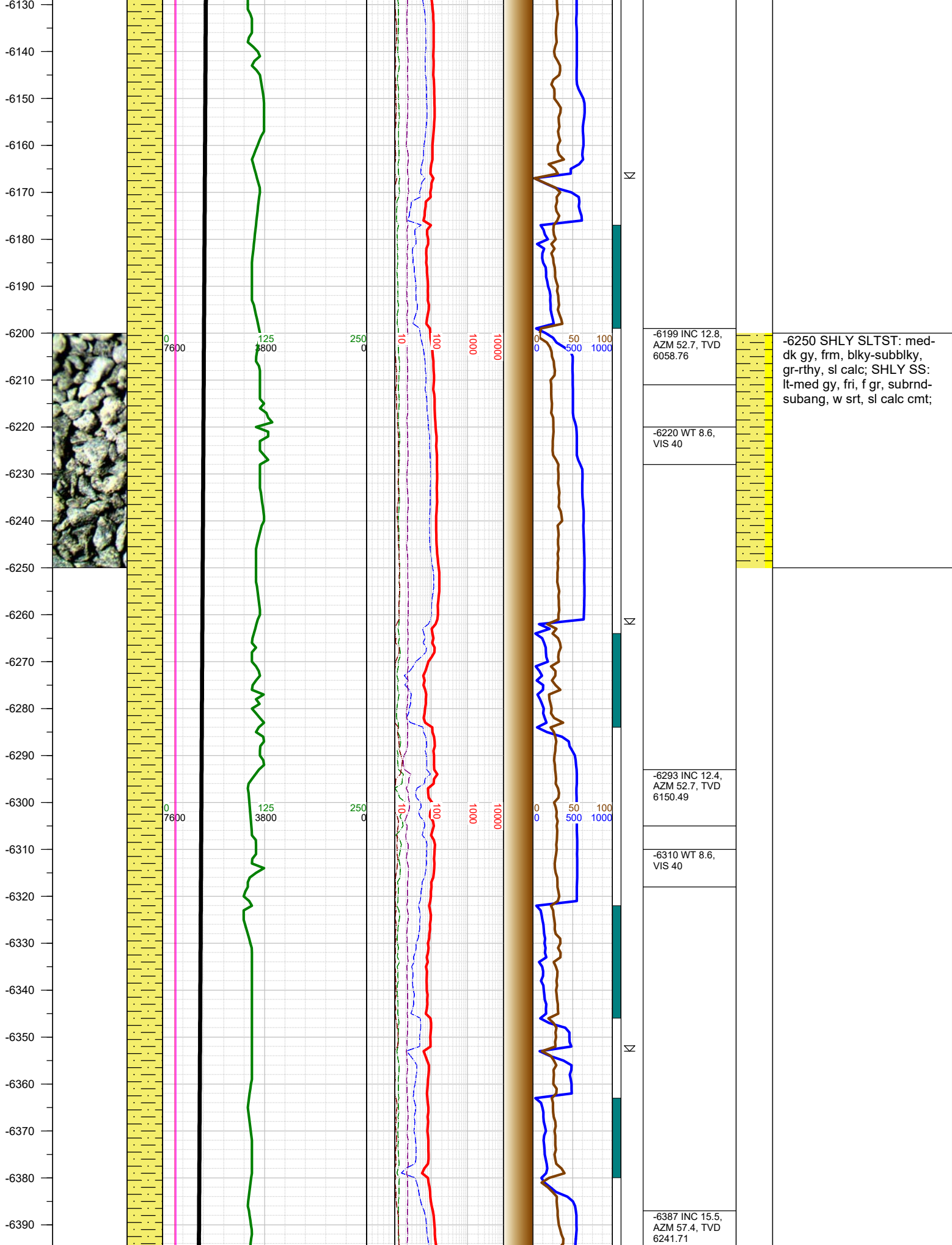
COUNTY: Weld  
STATE: Colorado  
GROUND ELEVATION: 4789'  
KELLY BUSHING: 4814'  
DRILLING FLUID: OBM  
TVD VS. MD: 7058' / 20200'  
SPUD DATE: April 30, 2017  
TD DATE: May 5, 2017  
  
DEPTHS LOGGED: 6000' - 20200'  
DATES LOGGED: May 1, 2017 - May 5, 2017  
GEOLOGISTS: Joe Coon, James Brooks  
SCALE: 5" = 100'

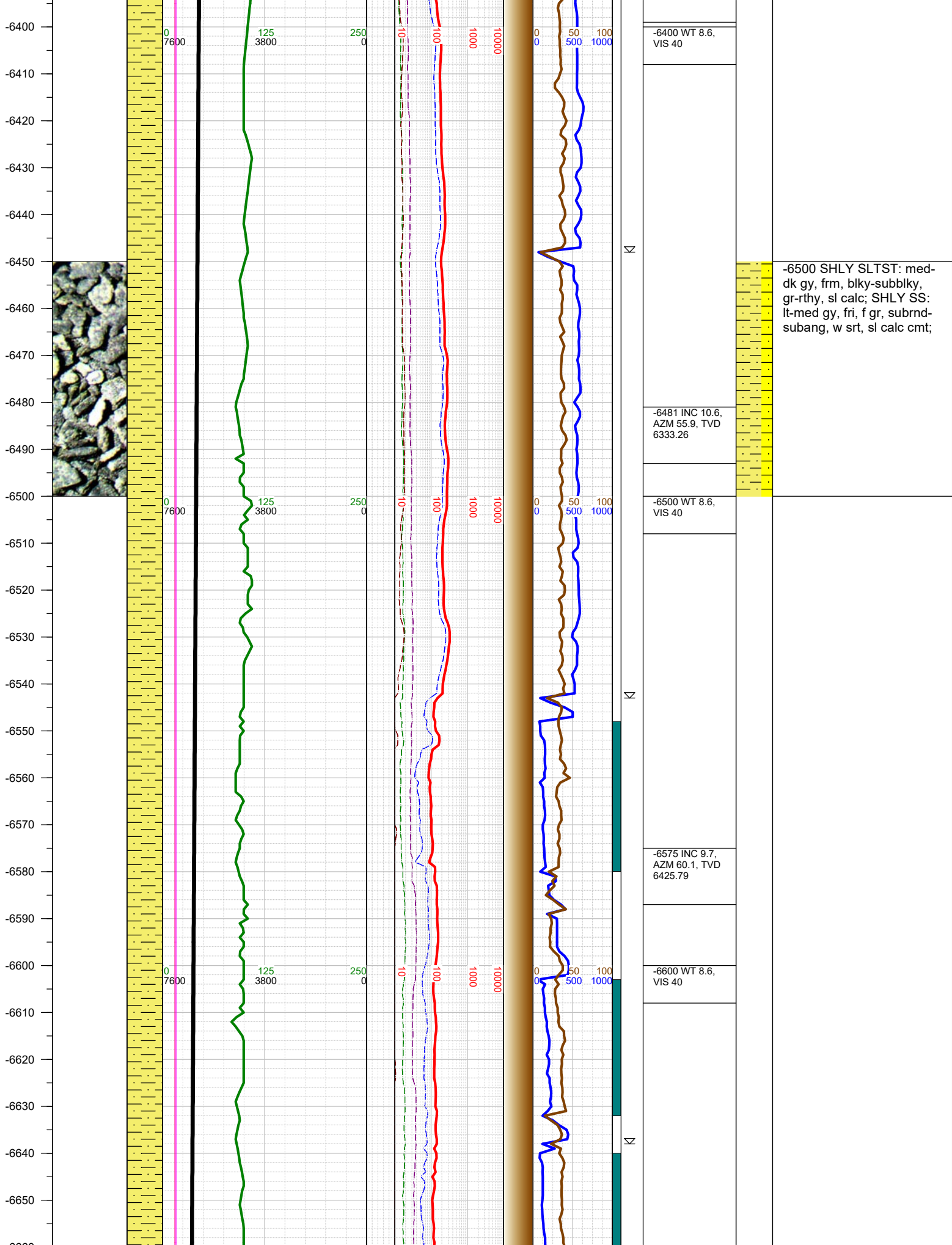
#### LEGEND

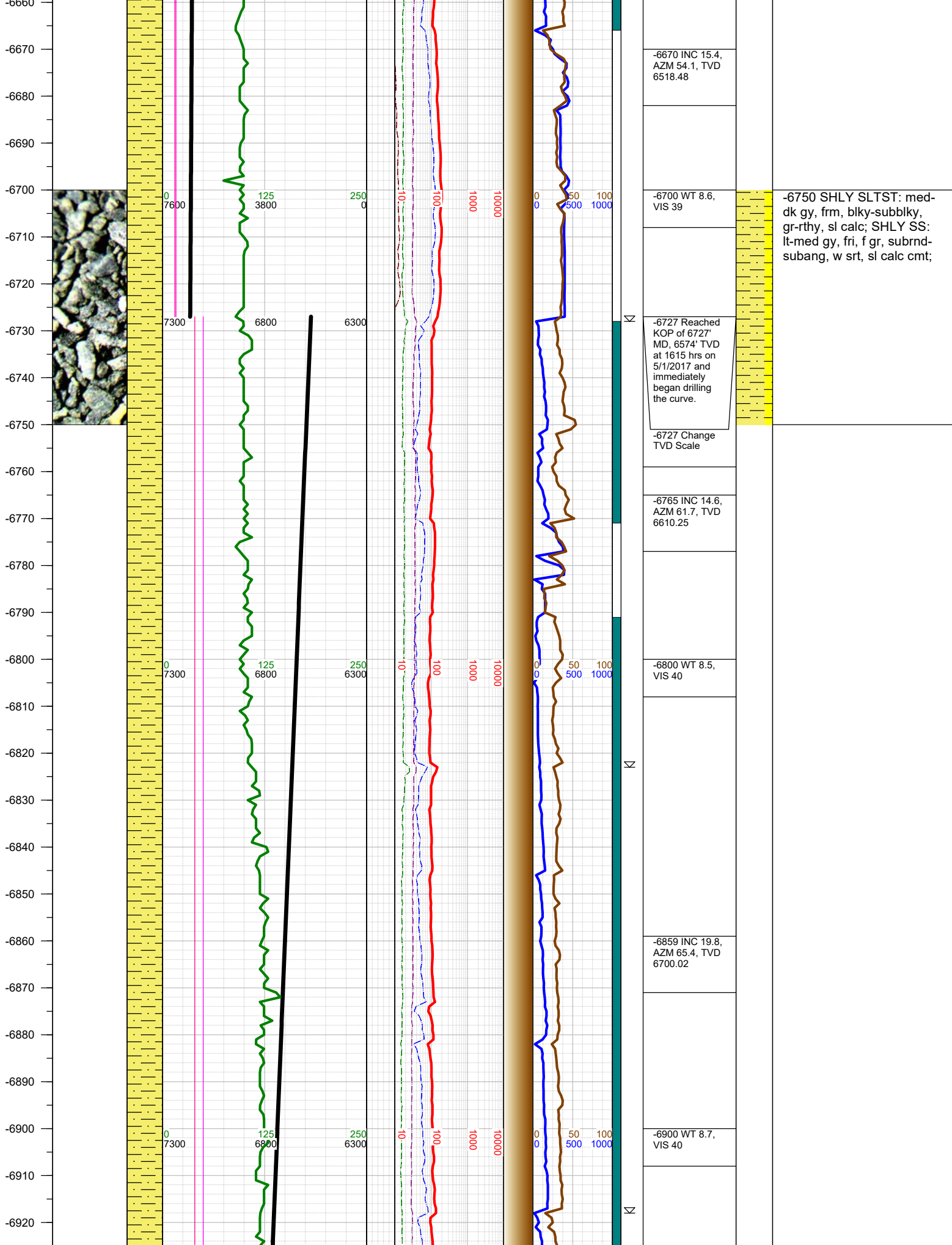


FORMATION  $\approx$  CONNECTION  $\Delta$  MIDNIGHT NEW BIT GAS SHOW FAULT

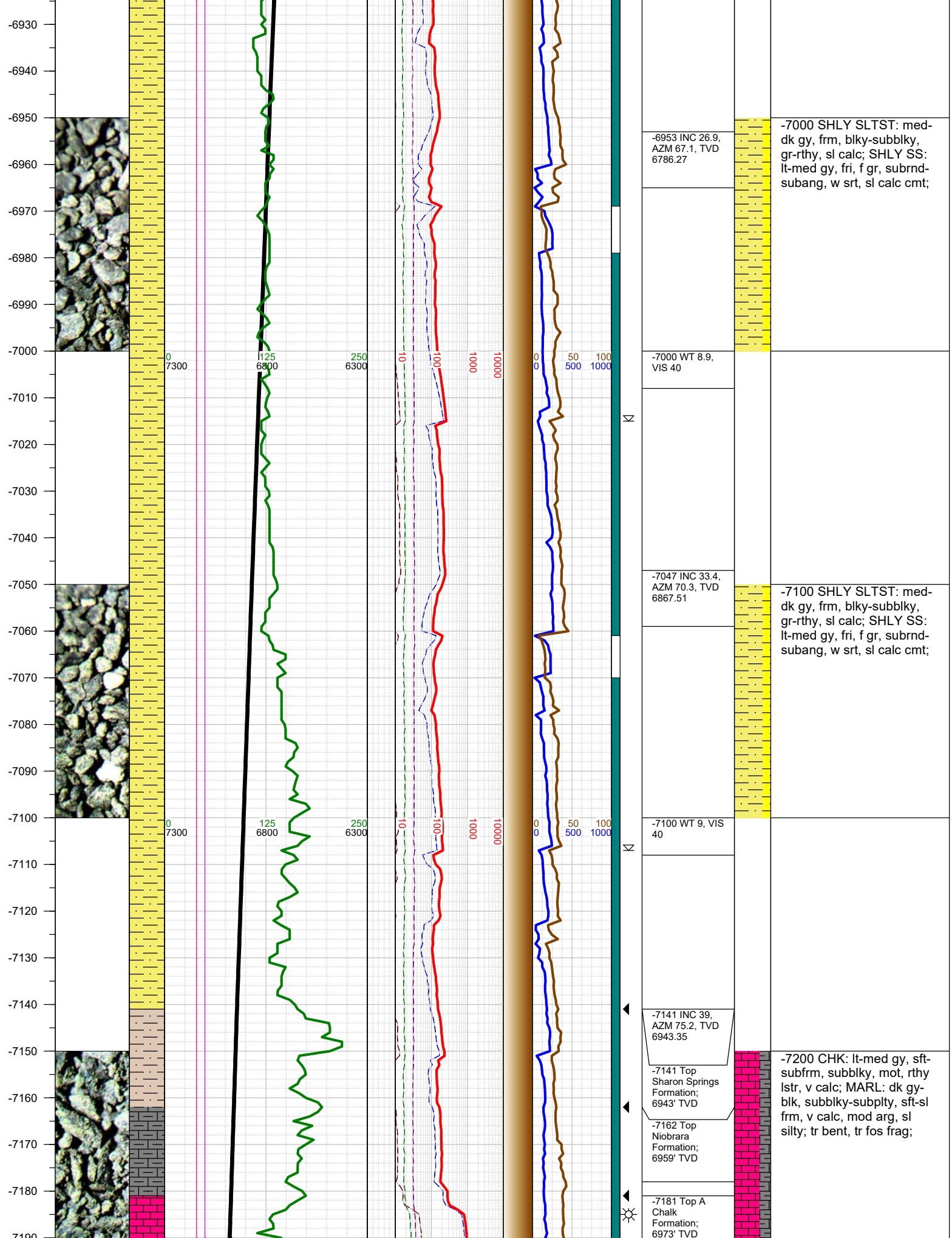


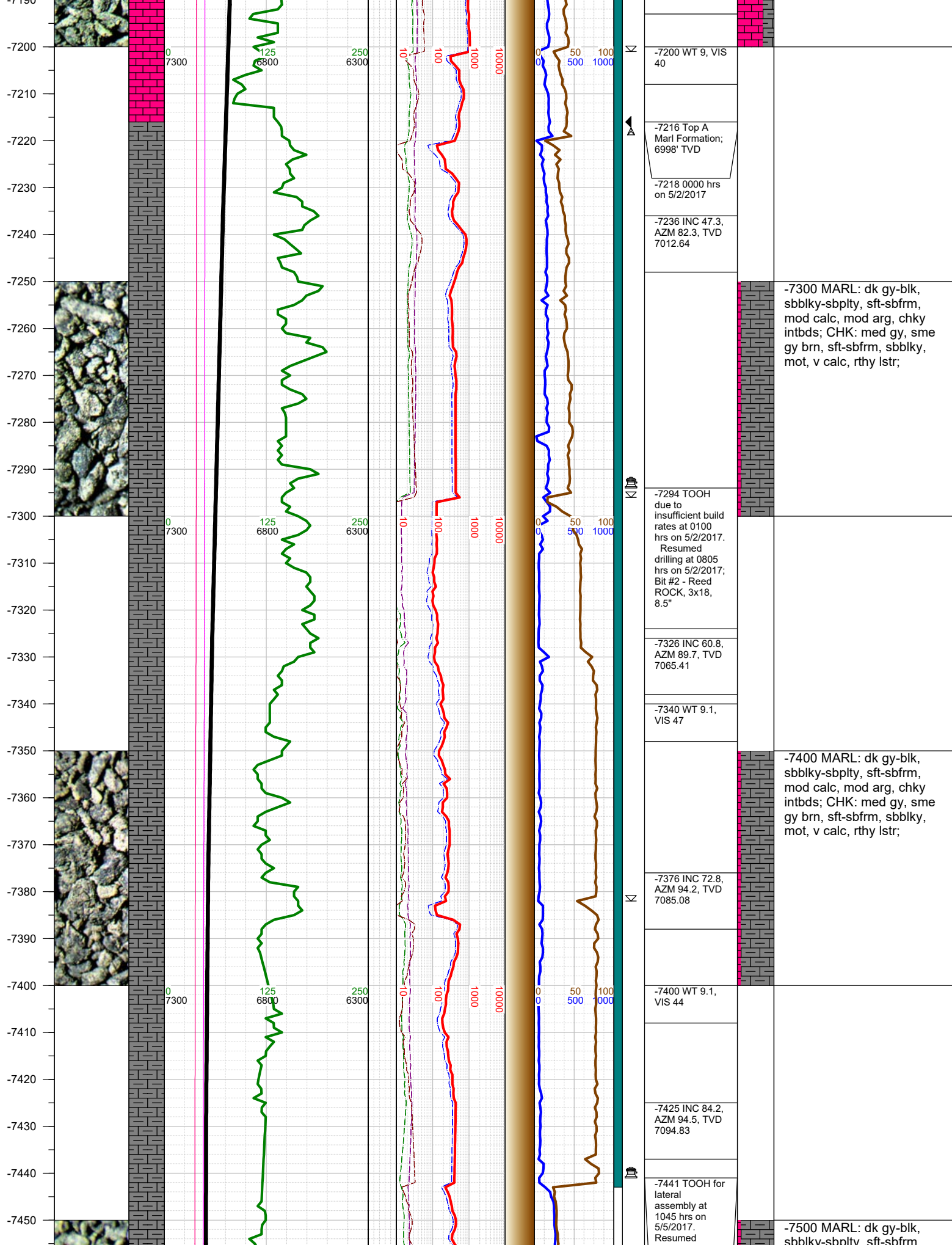


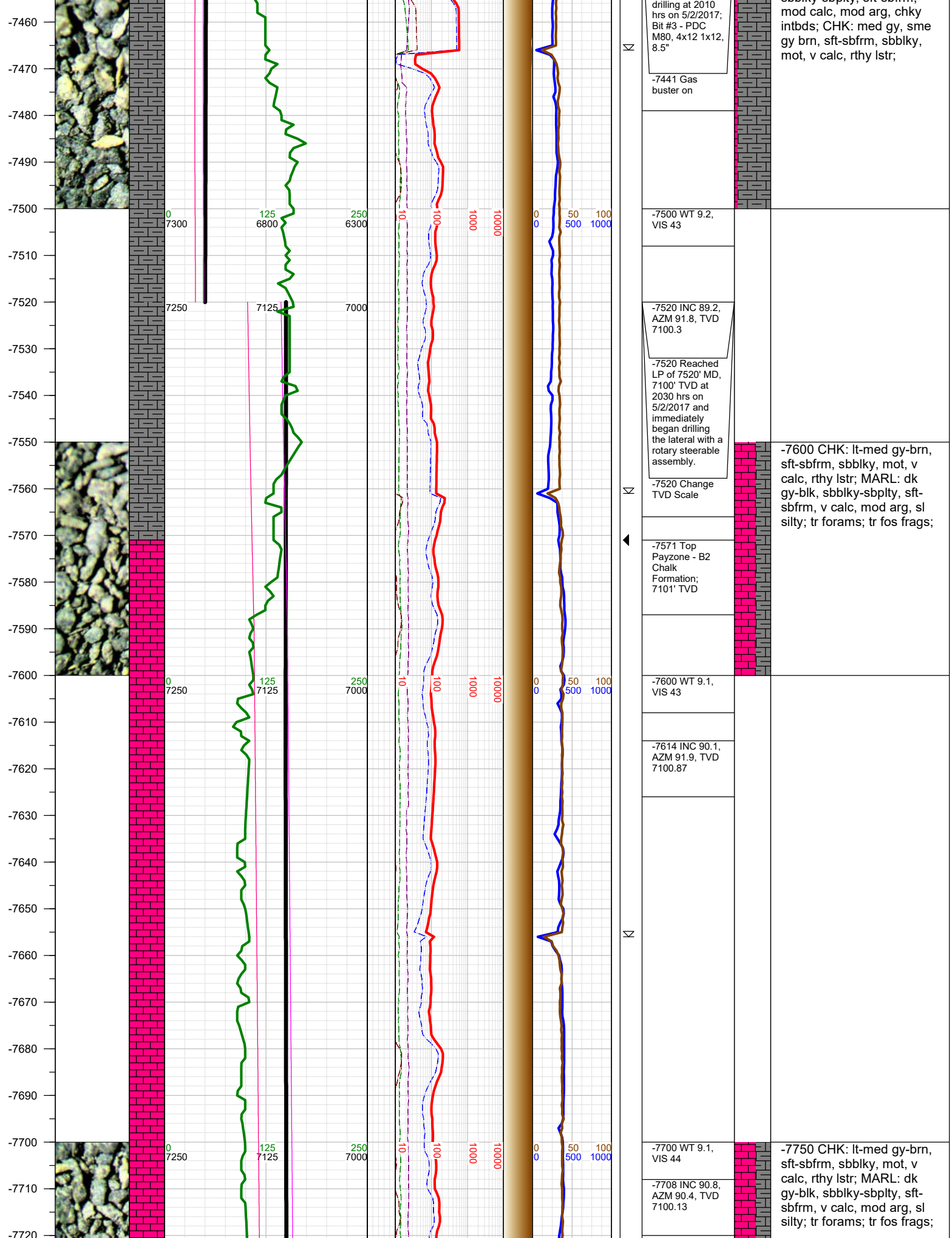








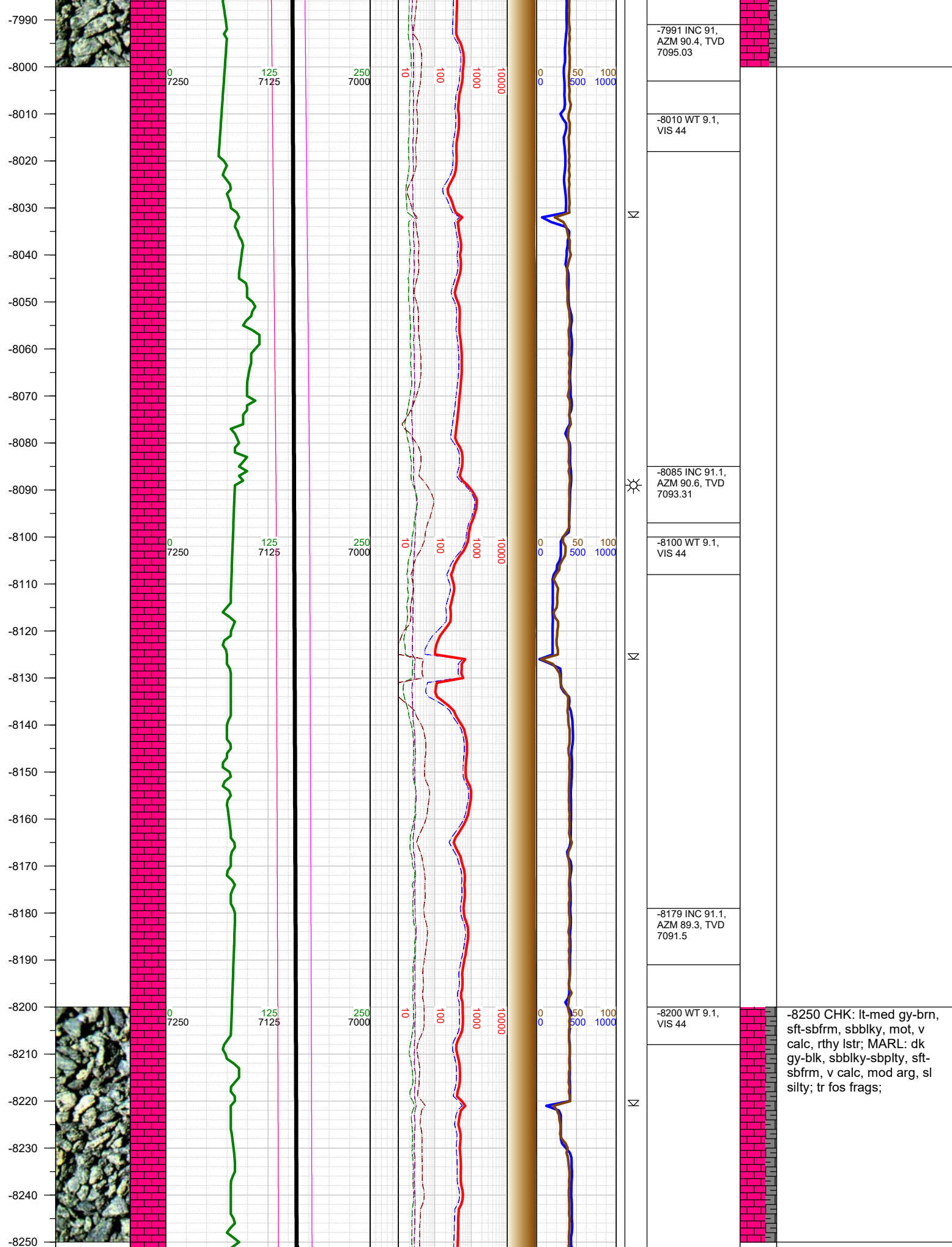


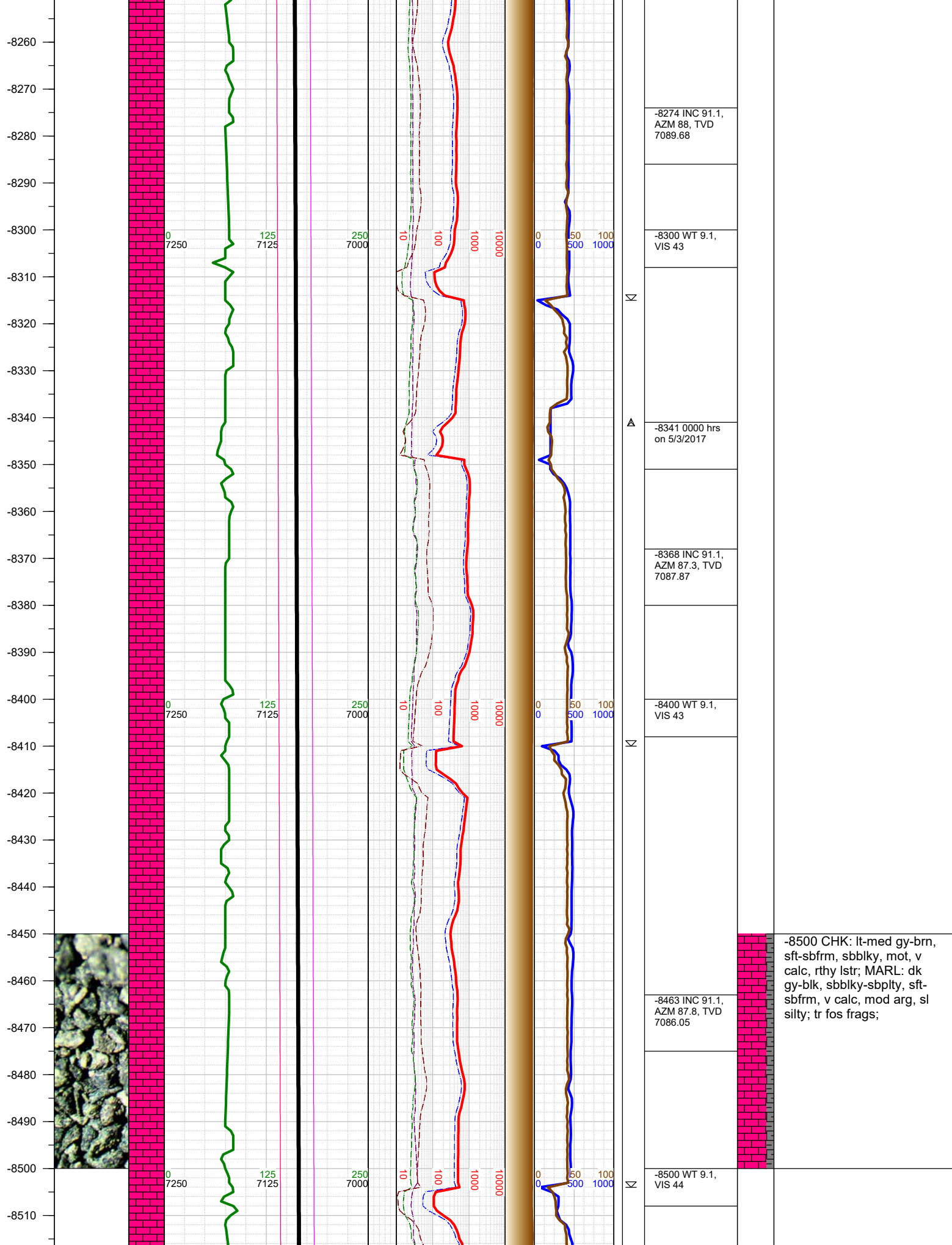




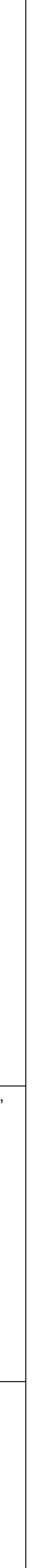
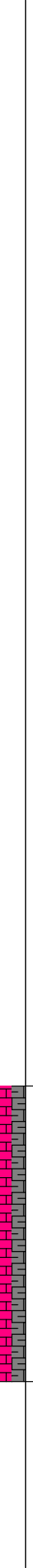
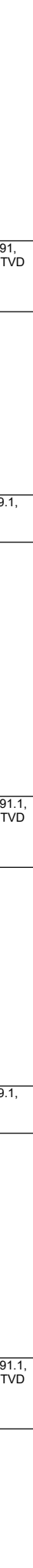
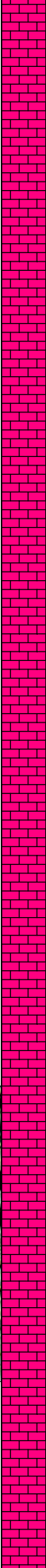
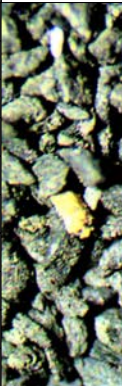








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-8557 INC 91,  
AZM 87.9, TVD  
7084.33



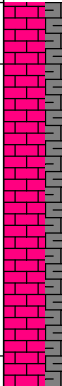
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VIS 44

-8651 INC 91.1,  
AZM 87.8, TVD  
7082.6



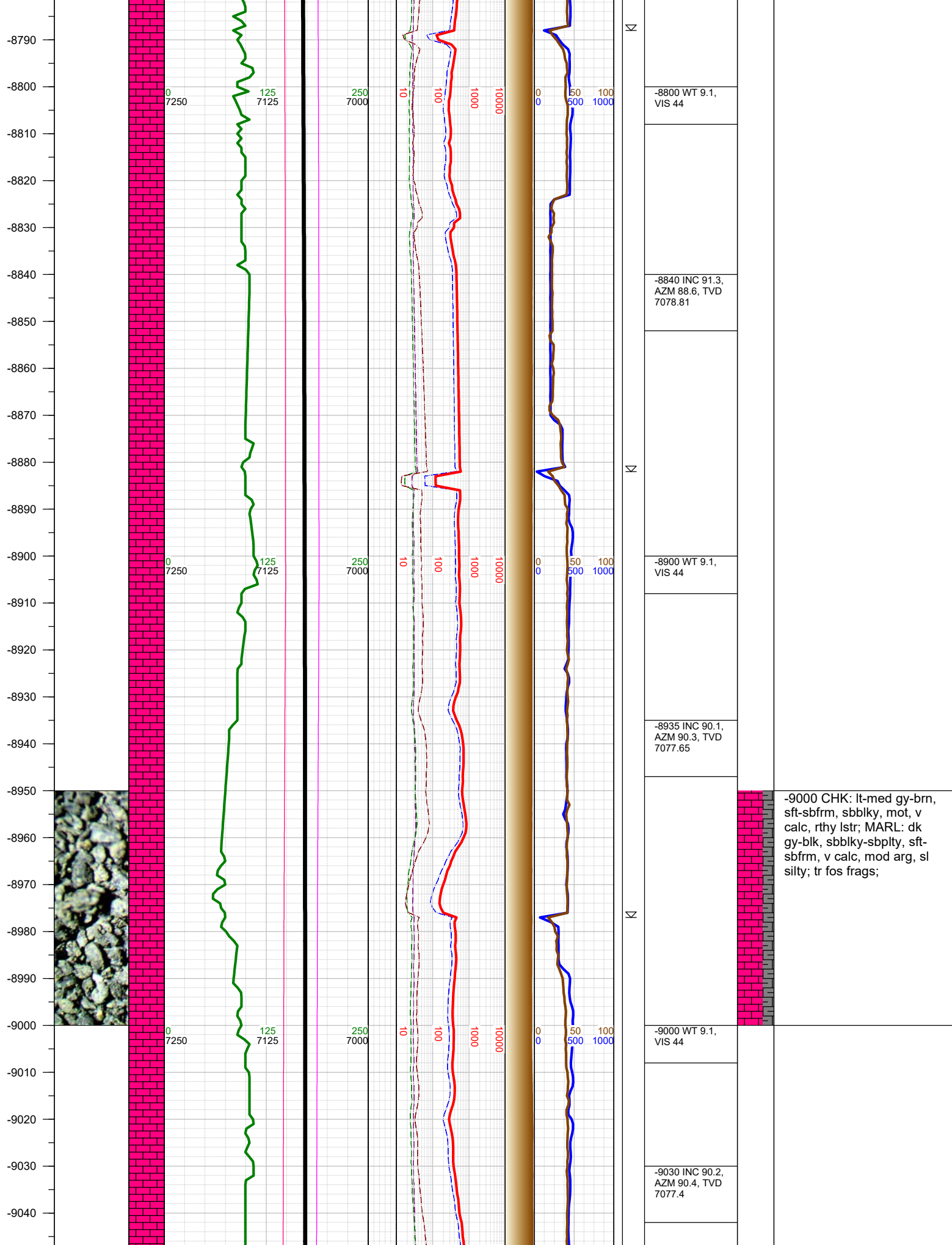
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-8746 INC 91.1,  
AZM 88.3, TVD  
7080.78

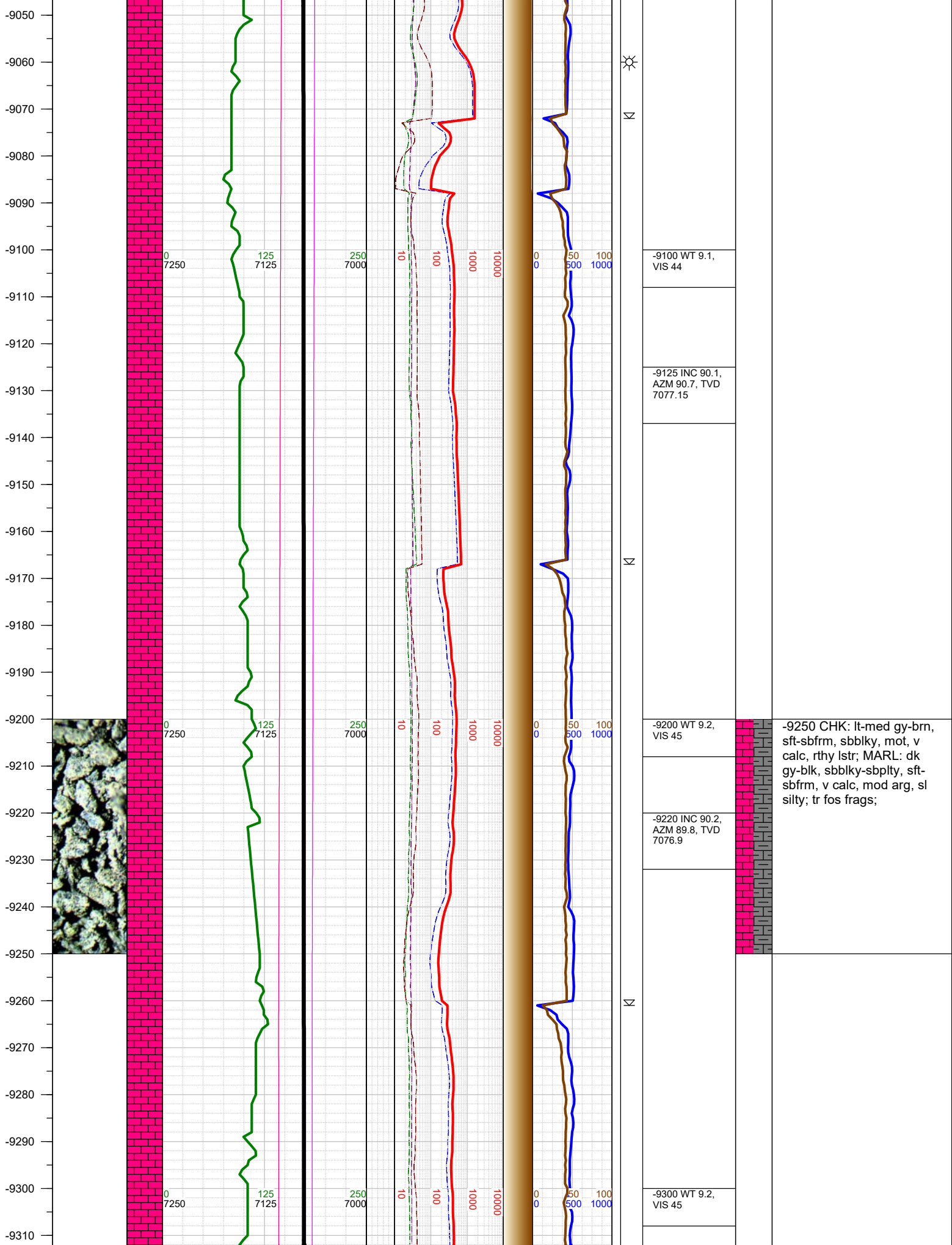


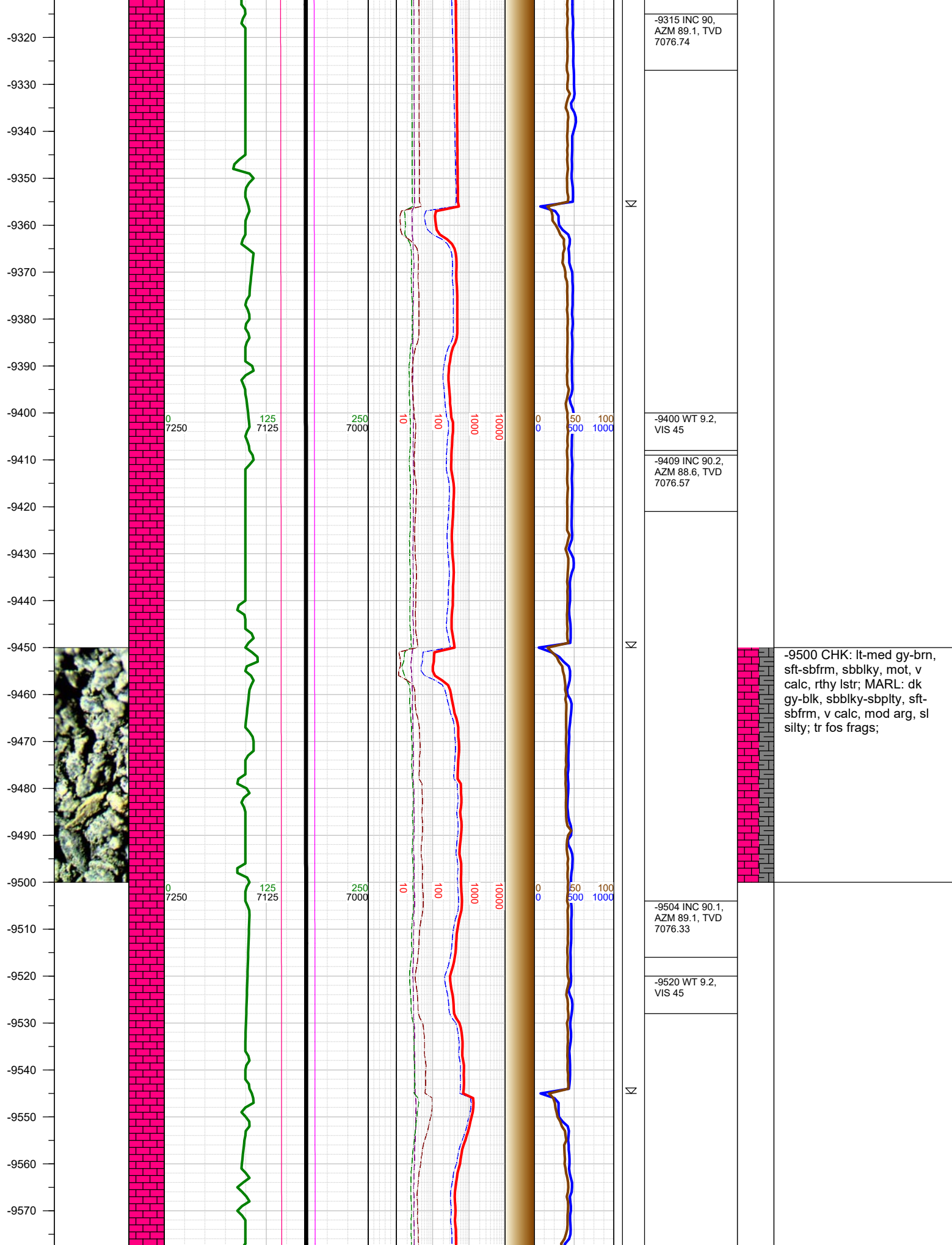
-8750 CHK: lt-med gy-brn,  
sft-sbfrm, sbbly, mot, v  
calc, rthy lstr; MARL: dk  
gy-blk, sbbly-sbply, sft-  
sbfrm, v calc, mod arg, sl  
silty; tr fos frags;

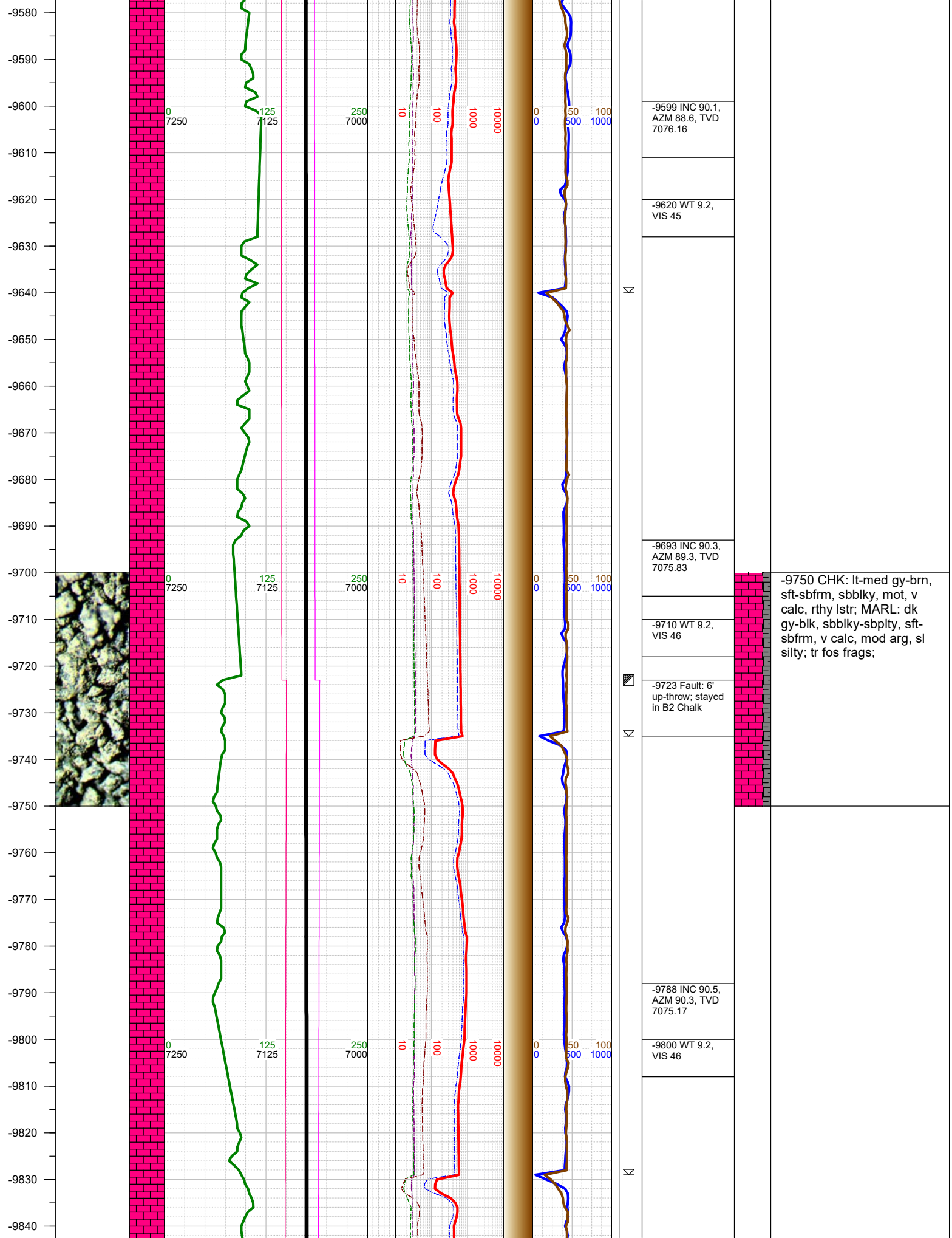


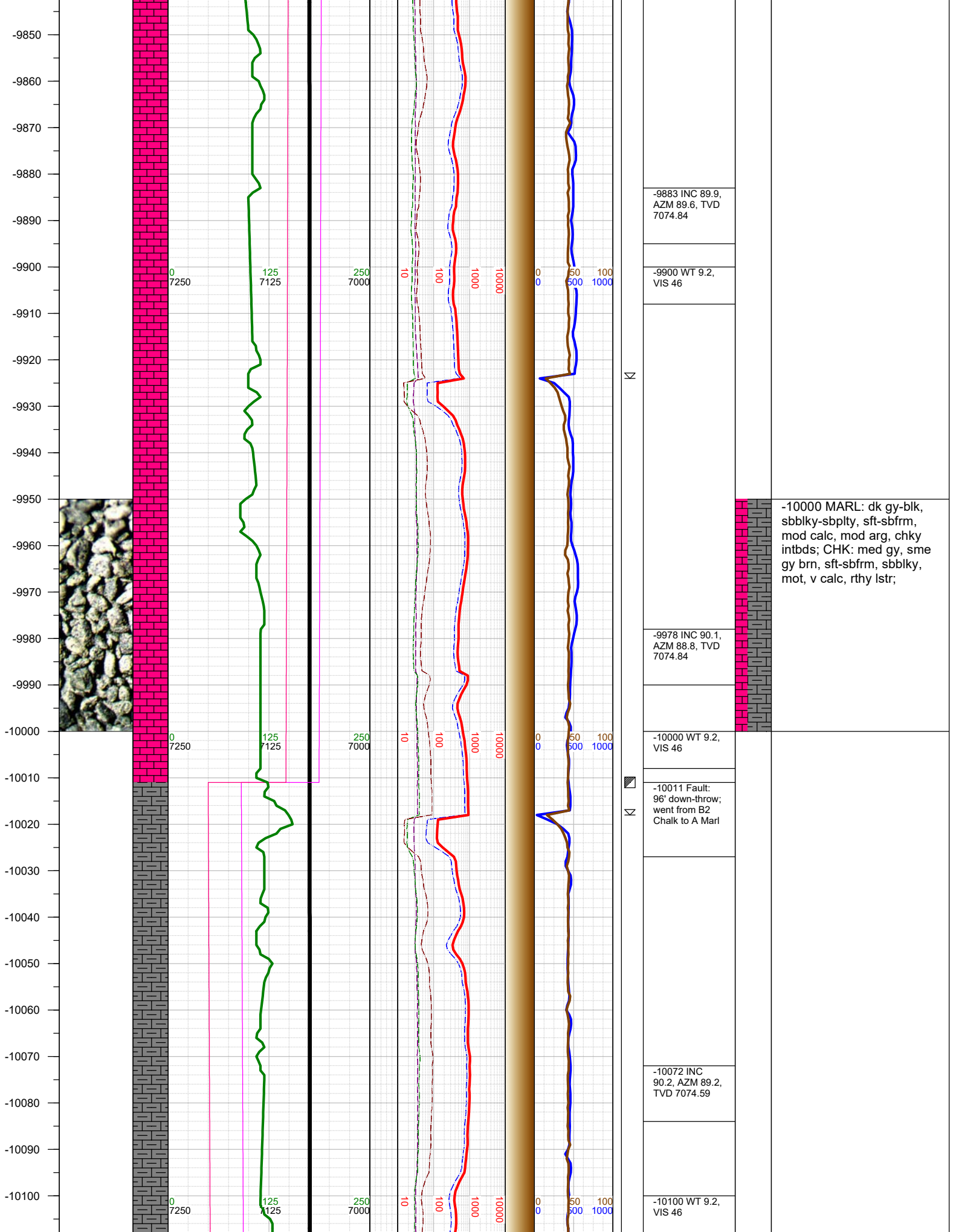




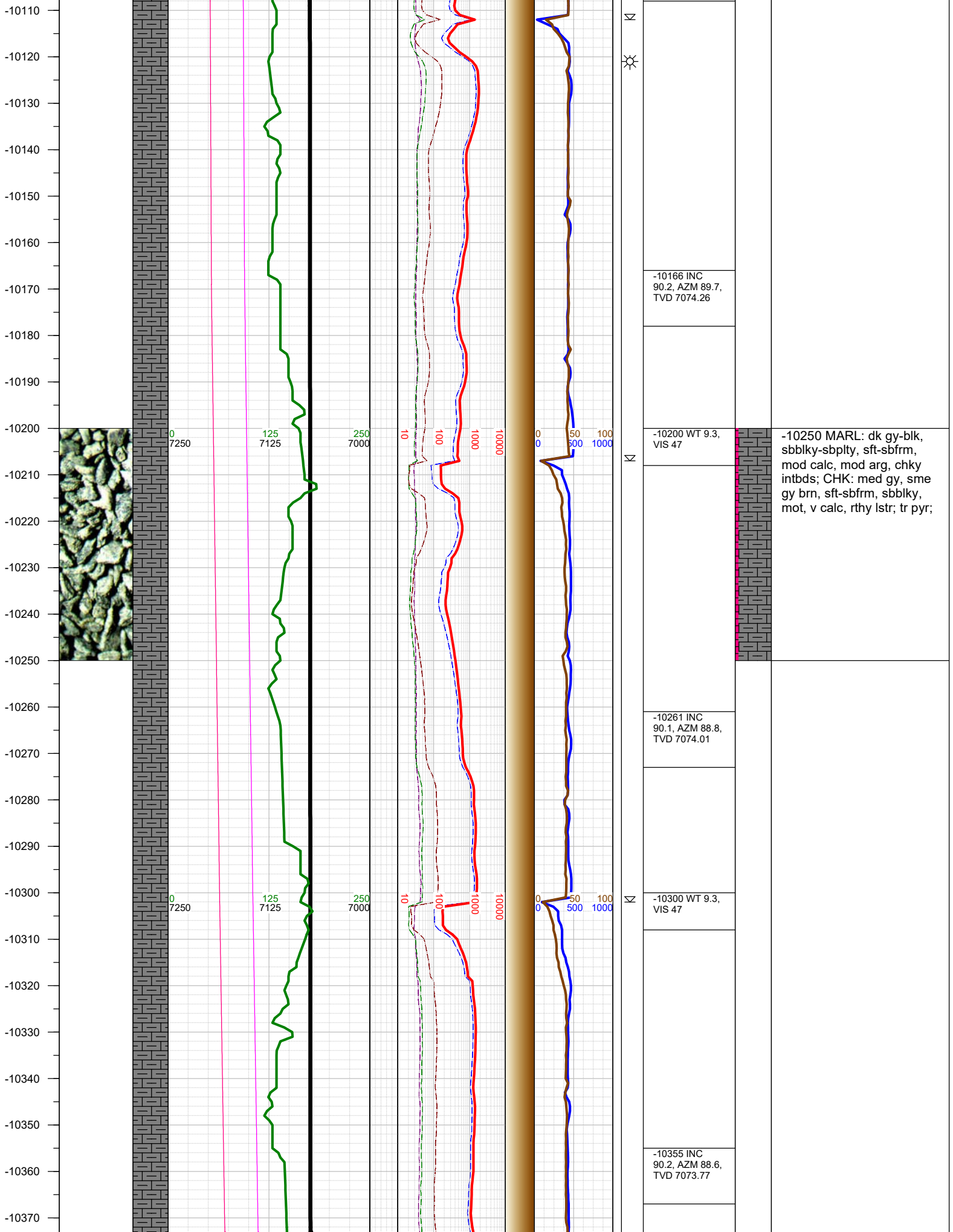




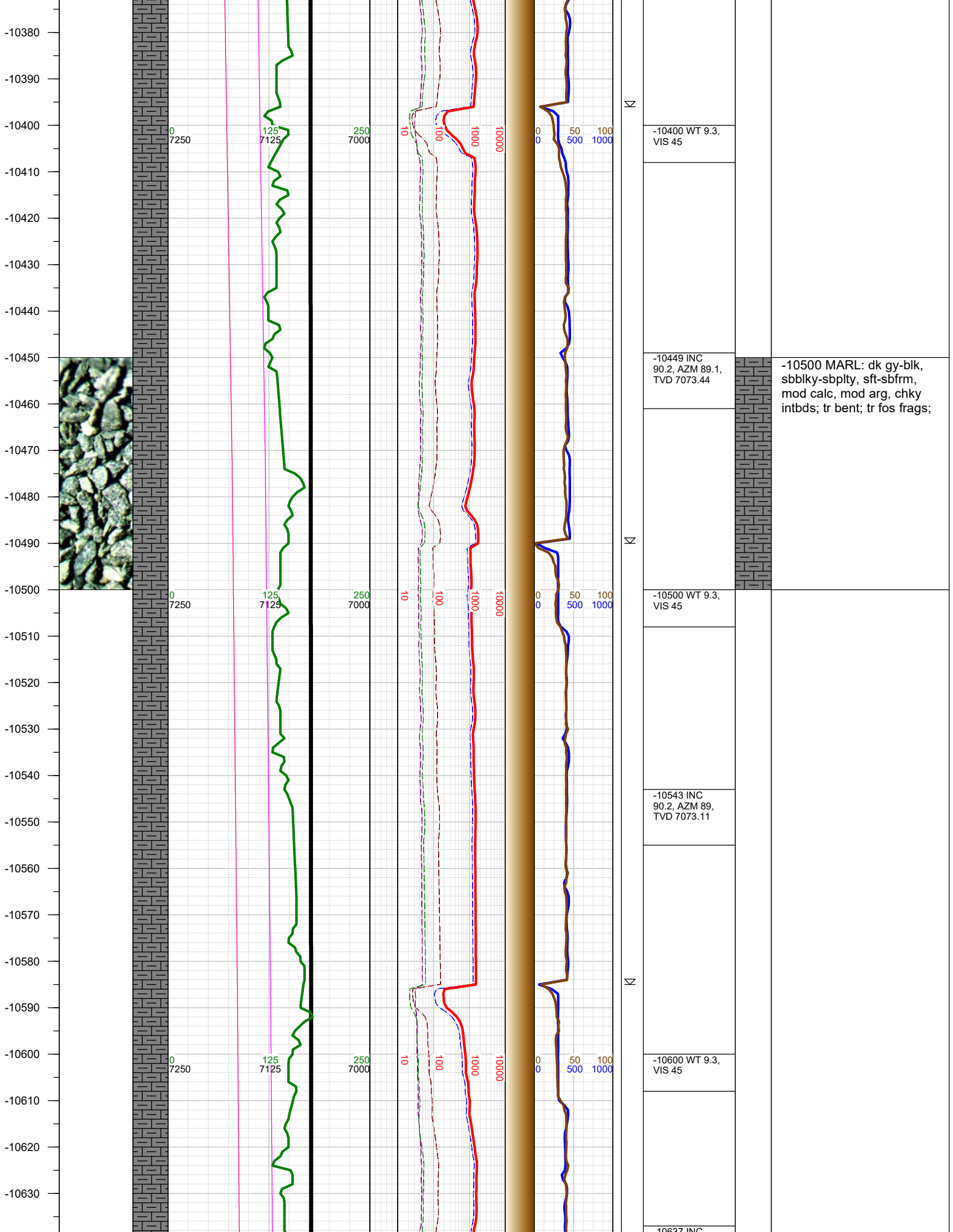


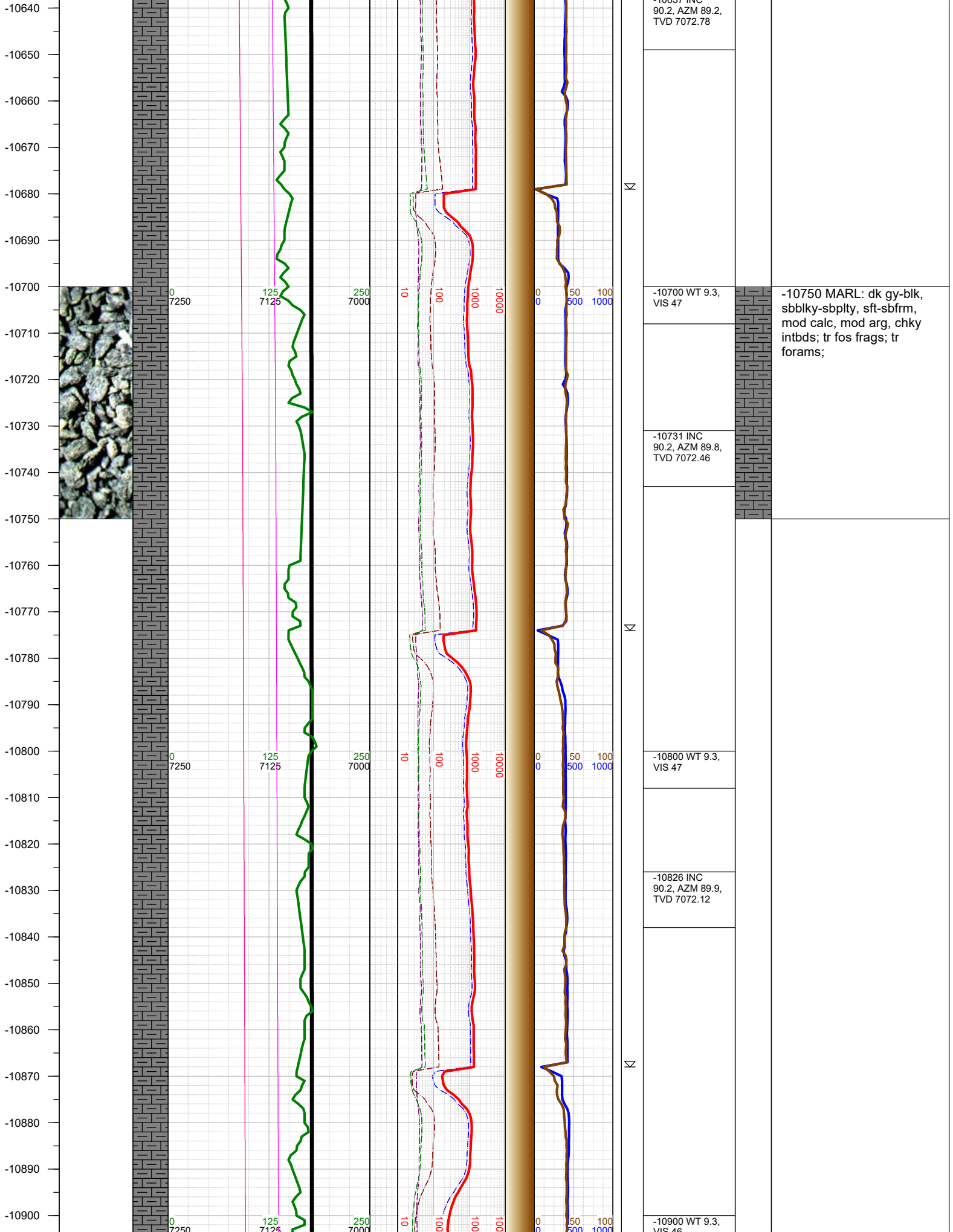


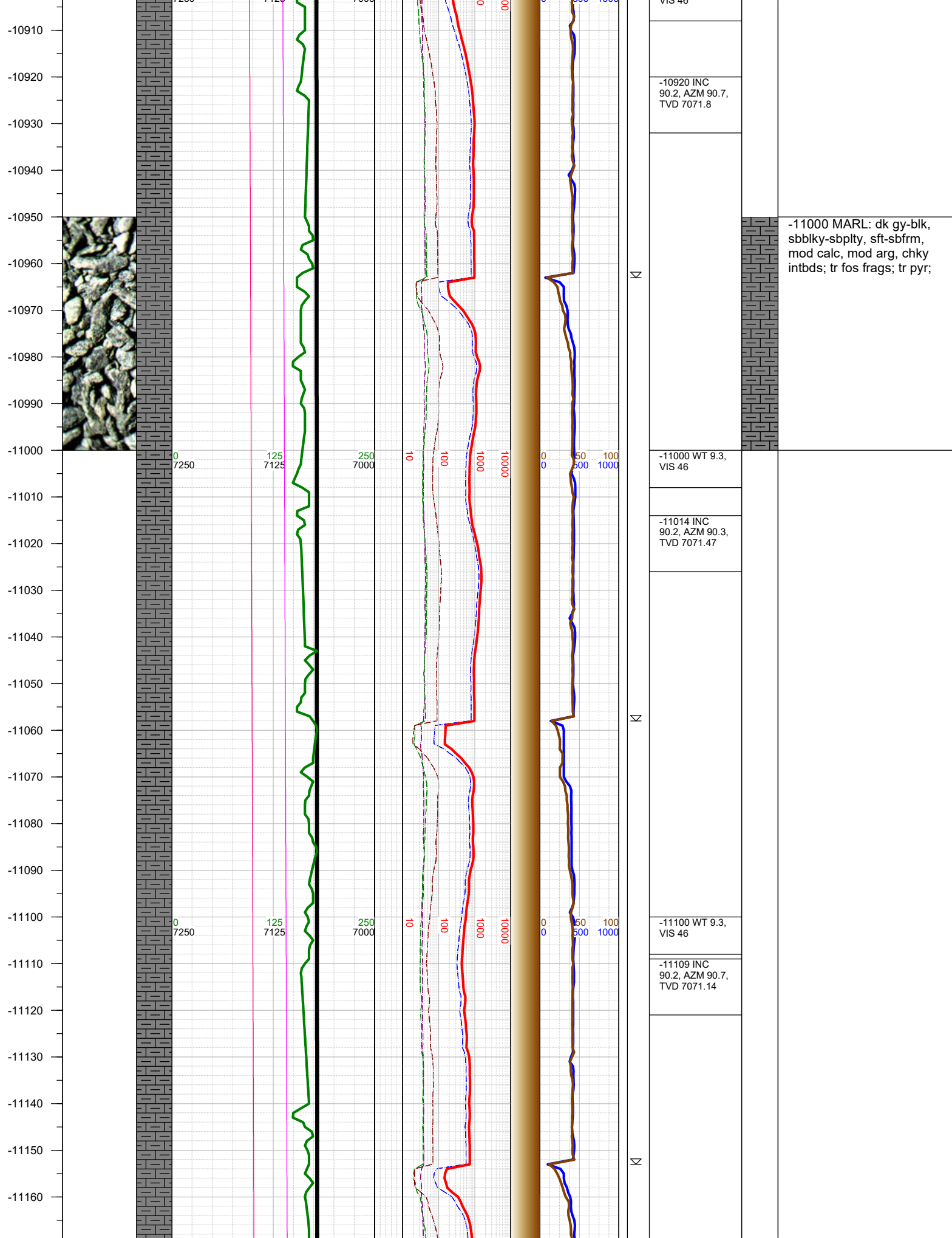




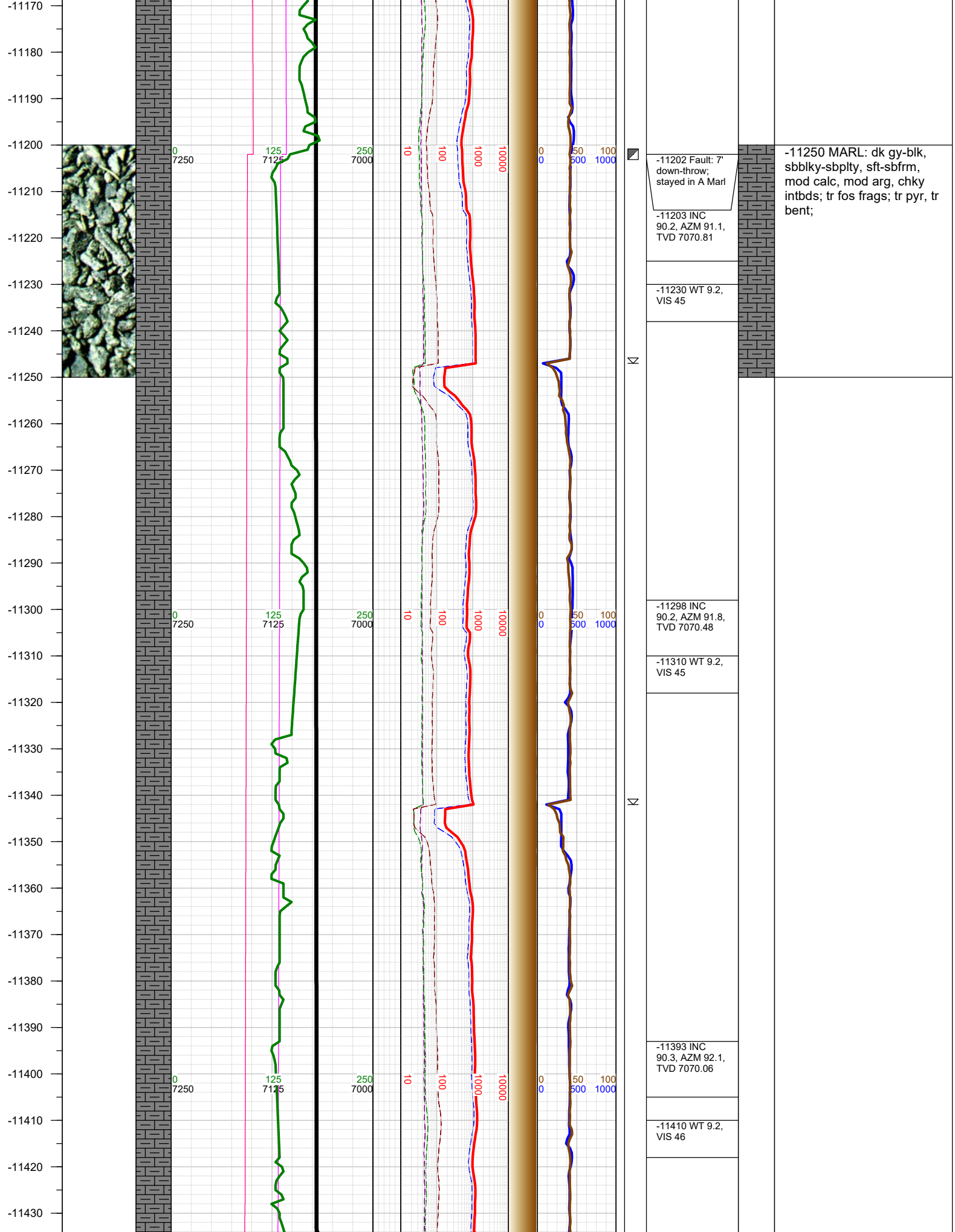
-10250 MARL: dk gy-blk, sbblky-sbplty, sft-sbfrm, mod calc, mod arg, chky intbds; CHK: med gy, sme gy brn, sft-sbfrm, sbblky, mot, v calc, rthy lstr; tr pyr;











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-11487 INC  
90.2, AZM 93,  
TVD 7069.65

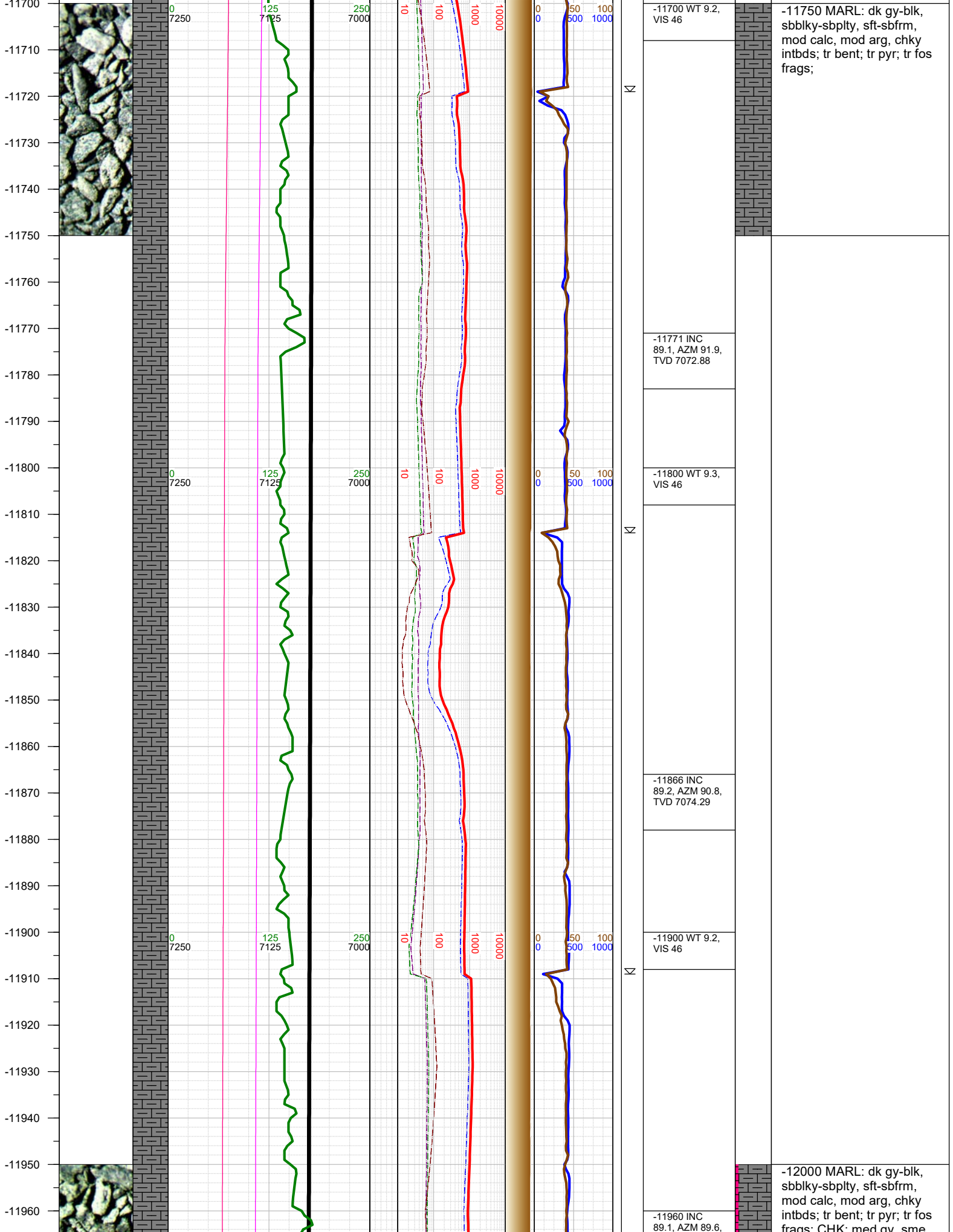
-11500 WT 9.2,  
VIS 46

-11581 INC  
89.2, AZM 93.2,  
TVD 7070.14

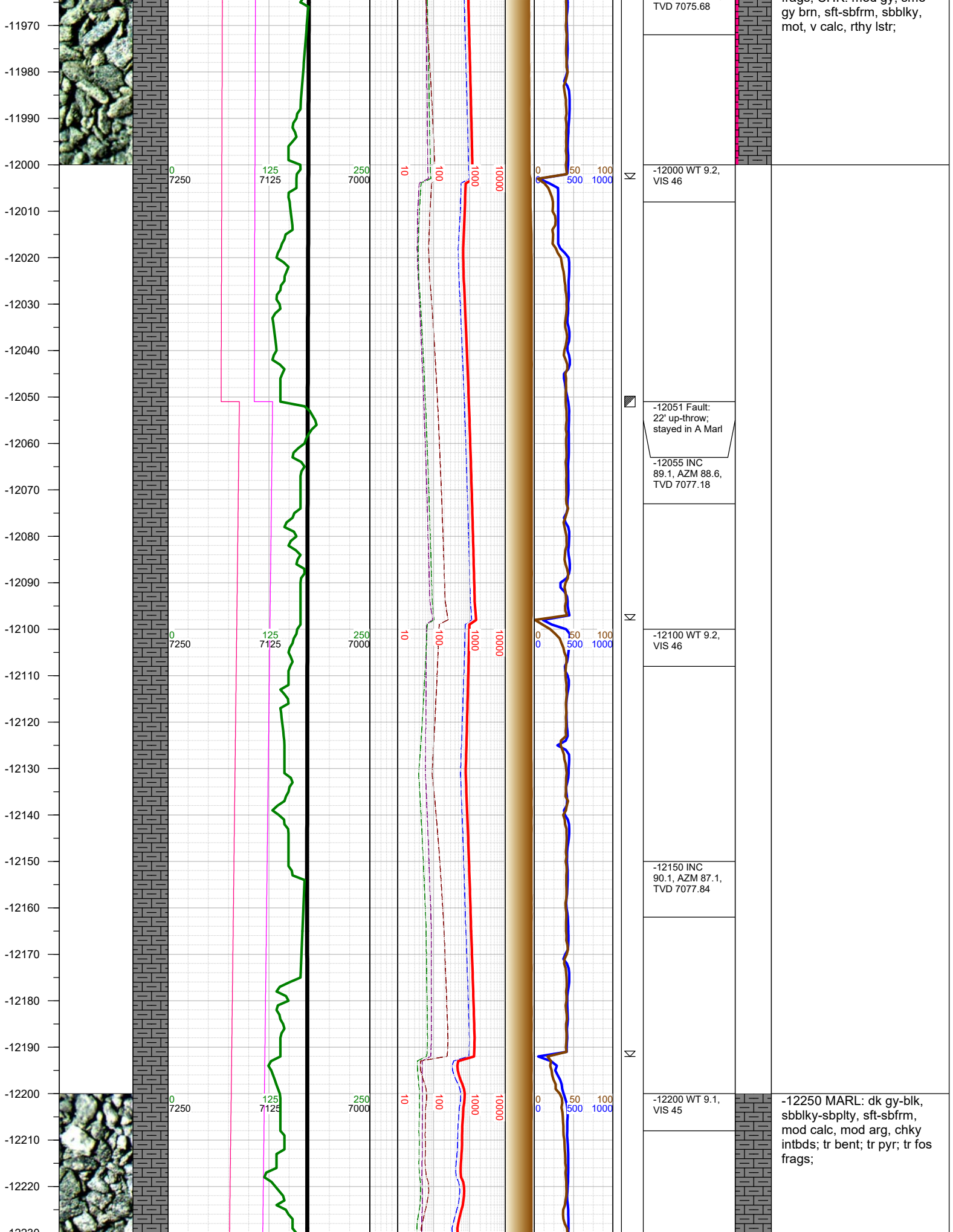
-11600 WT 9.2,  
VIS 46

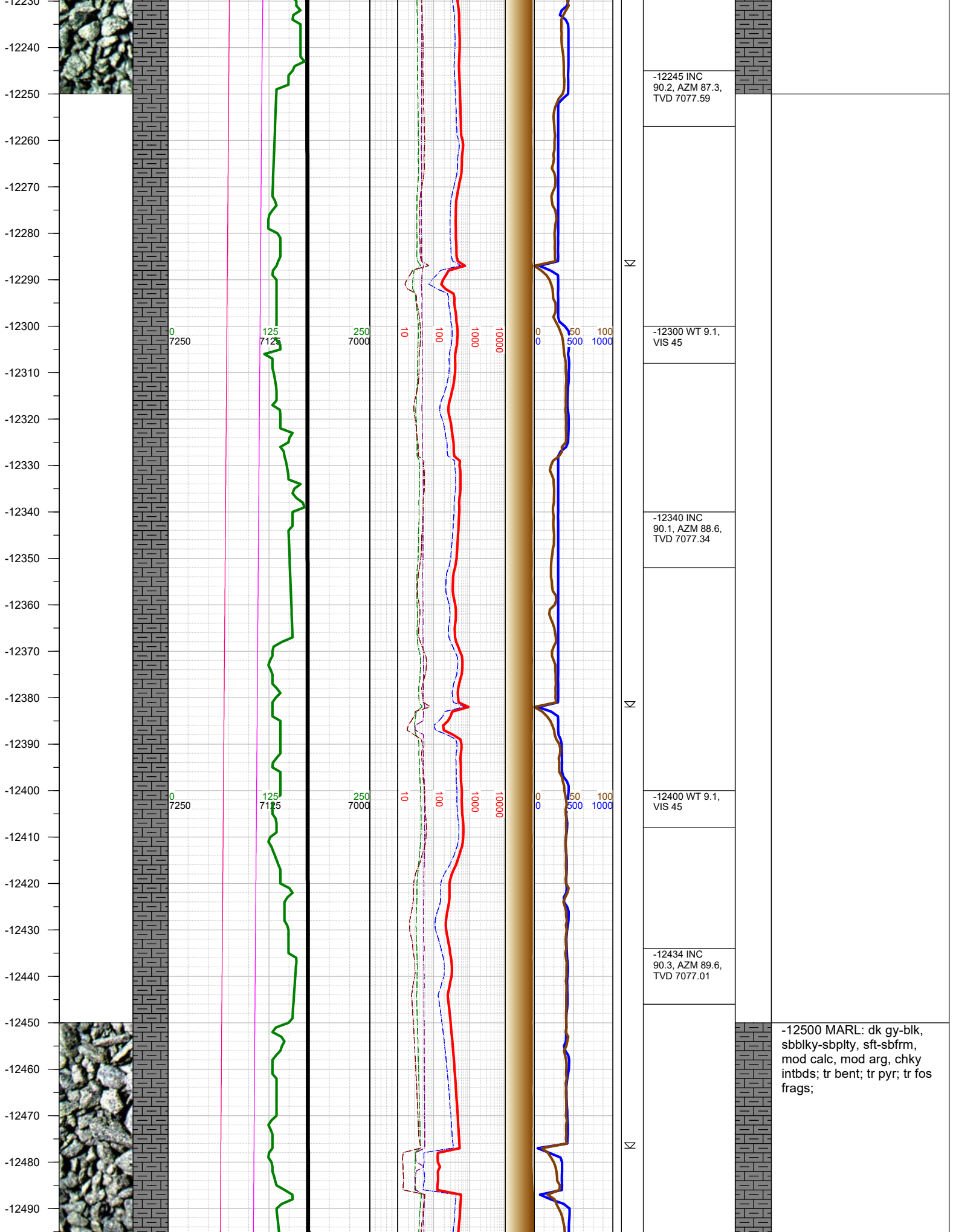
-11676 INC  
89.2, AZM 92.8,  
TVD 7071.47

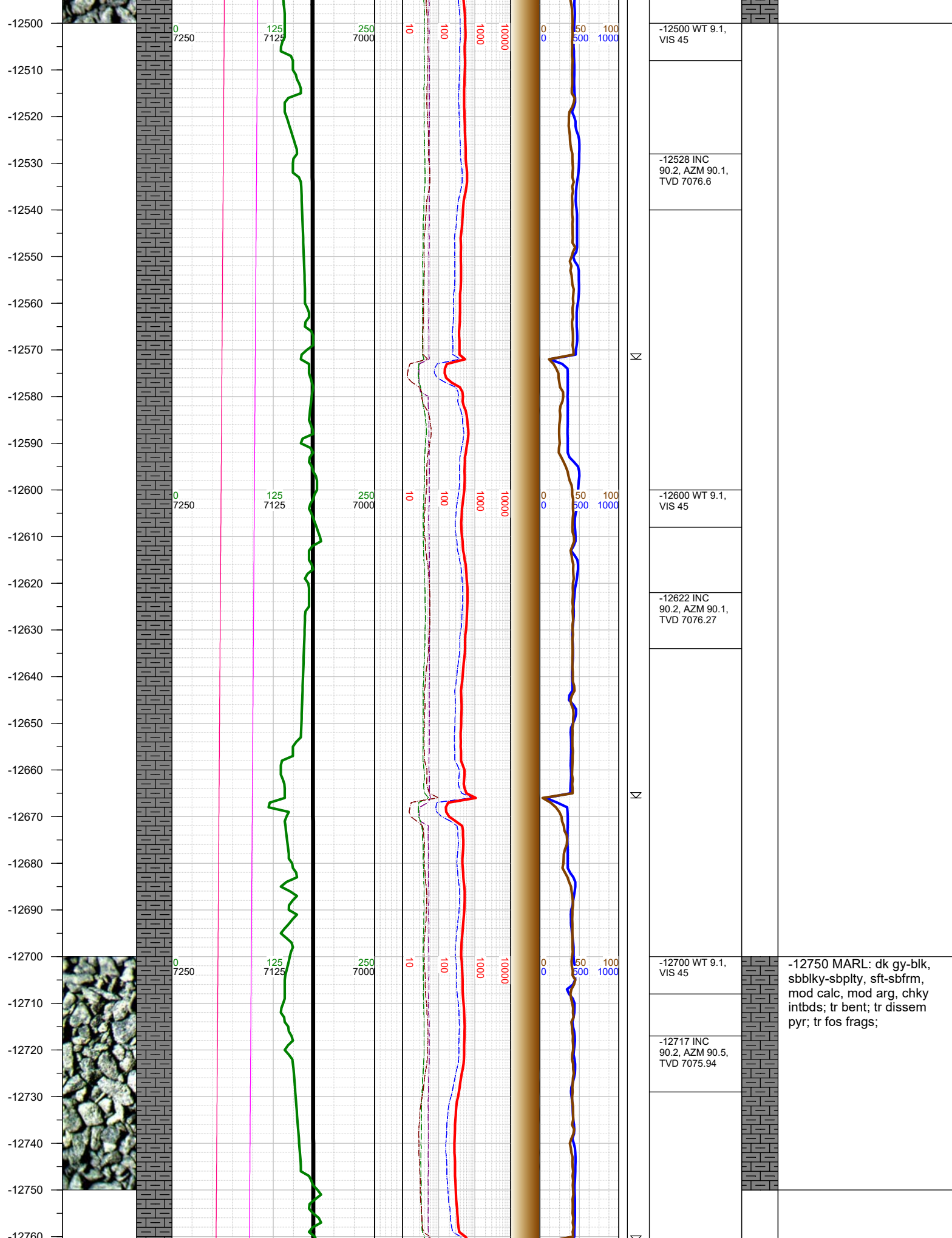
-11500 MARL: dk gy-blk,  
sbbly-sbply, sft-sbfrm,  
mod calc, mod arg, chky  
intbds; tr bent; tr pyr; tr fos  
frags;





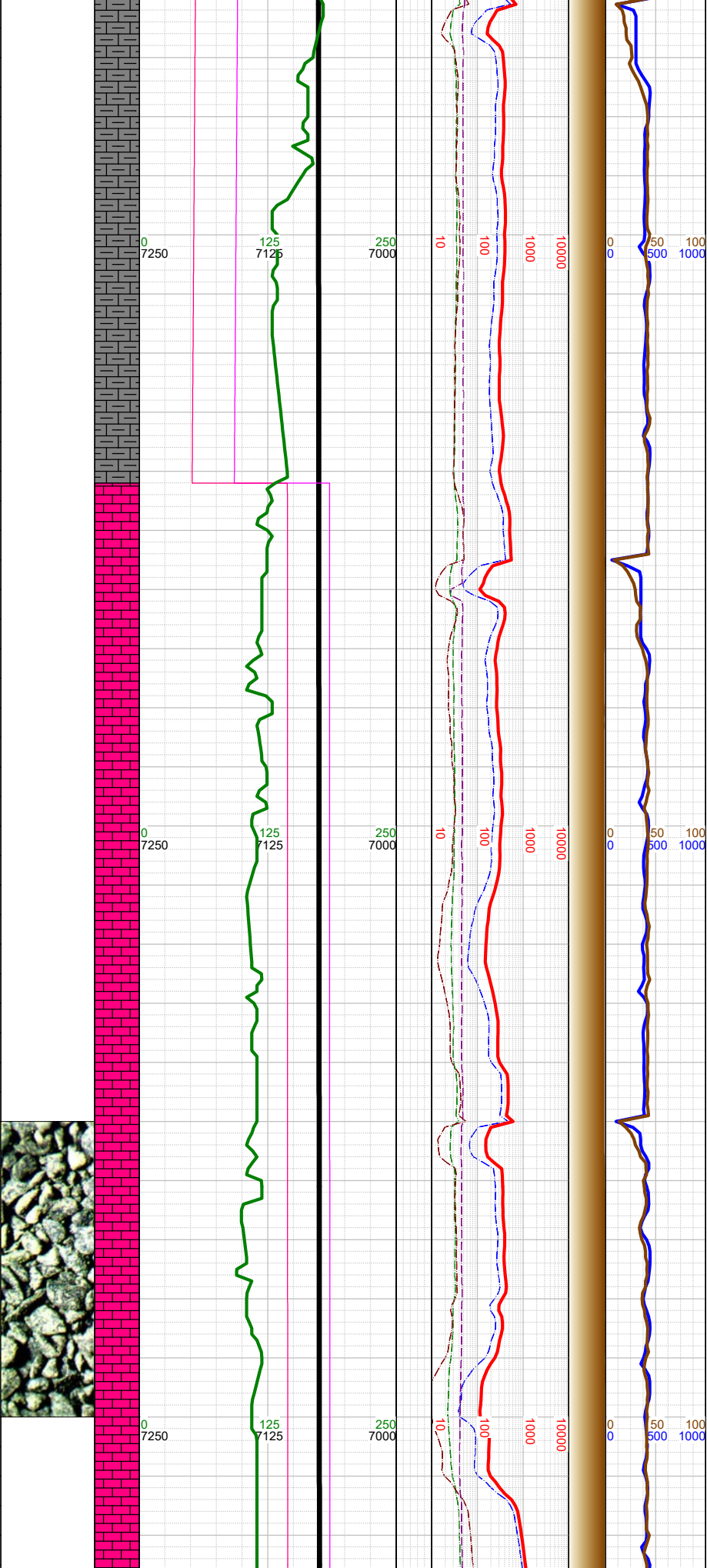






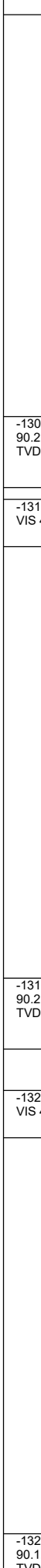
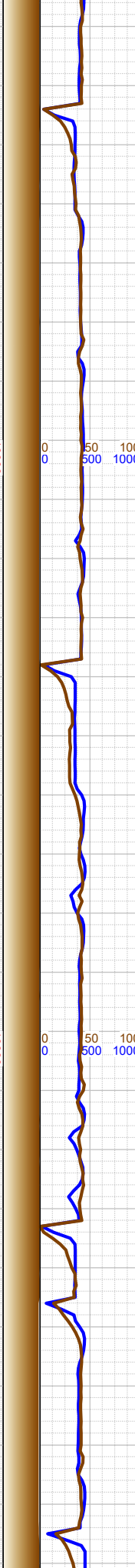
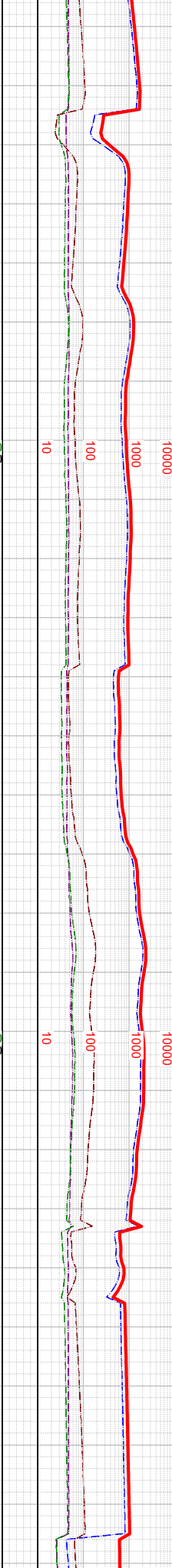
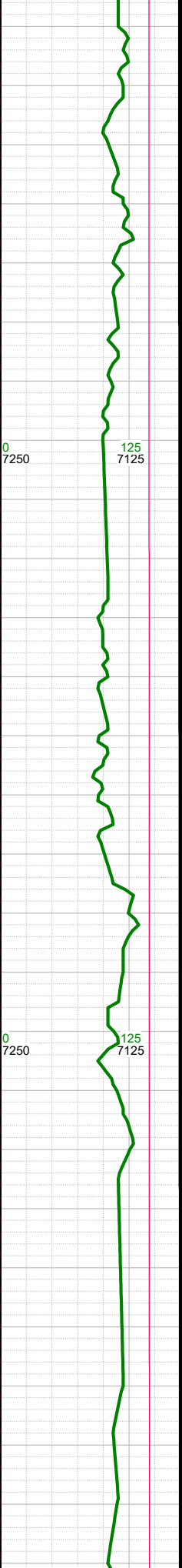
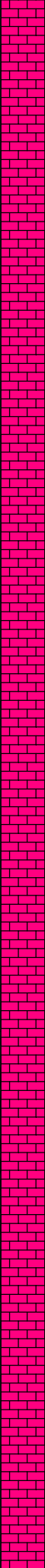


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|---|--|
|   | -12800 WT 9.2,<br>VIS 45   |
|   | -12812 INC<br>90.2, AZM 90.9,<br>TVD 7075.61   |
|   |  |
| ▨ | -12842 Fault:<br>92' up-throw;<br>went from A<br>Marl to B2 Chalk  |
| ▨ |  |
|   | -12907 INC<br>90.2, AZM 91.2,<br>TVD 7075.28   |
|   | -12920 WT 9.2,<br>VIS 45   |
| ▨ |  |
|   | -13000 CHK: lt-med gy-<br>brn, sft-sbfrm, sbblky, mot,<br>v calc, rthy lstr; MARL: dk<br>gy-blk, sbblky-sbplty, sft-<br>sbfrm, v calc, mod arg, sl<br>silty; tr fos frags; |
|   | -13002 INC<br>90.2, AZM 91,<br>TVD 7074.95   |
|   | -13020 WT 9.2,<br>VIS 45   |

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-13096 INC  
90.2, AZM 92.2,  
TVD 7074.62

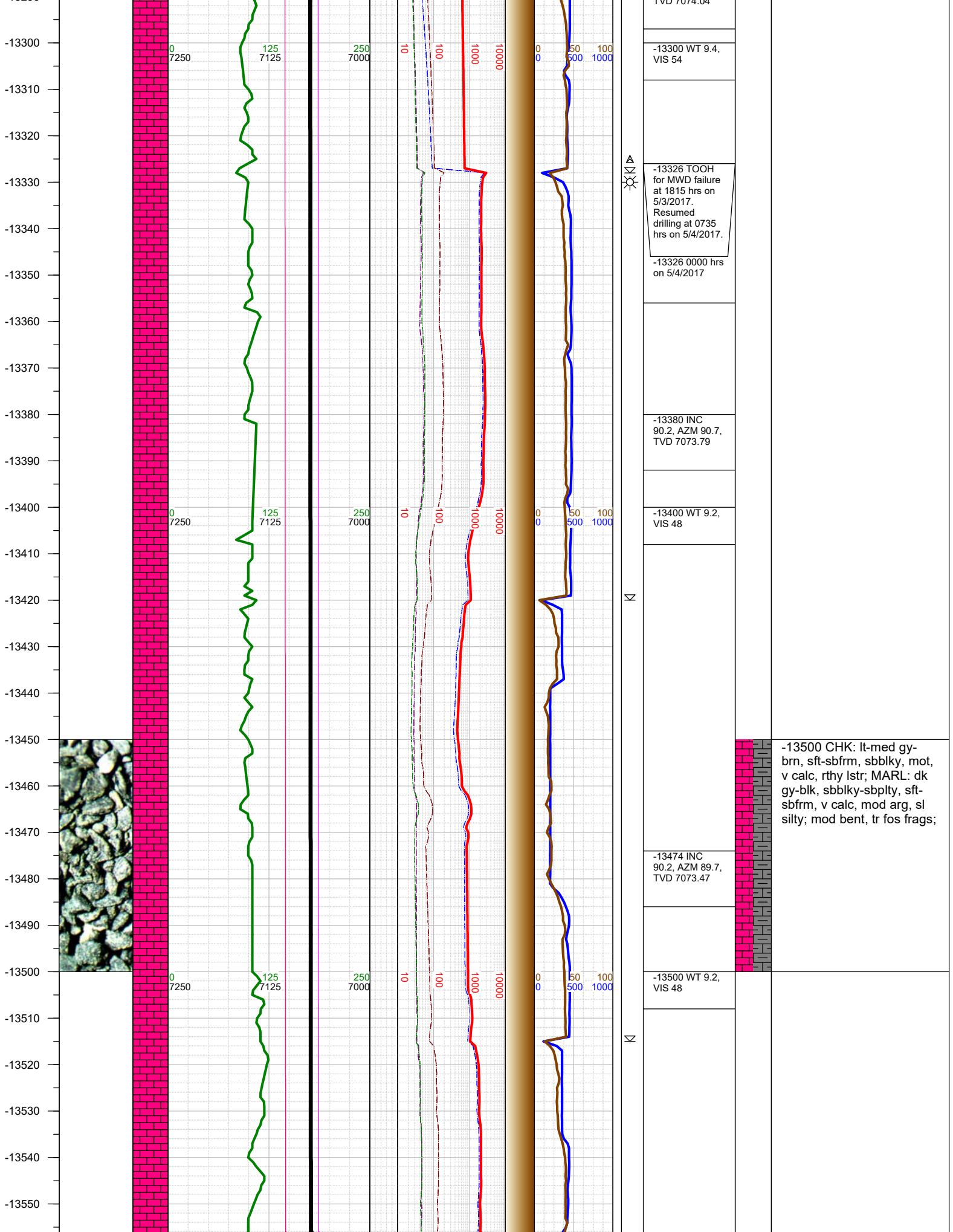
-13110 WT 9.2,  
VIS 43

-13191 INC  
90.2, AZM 92.4,  
TVD 7074.29

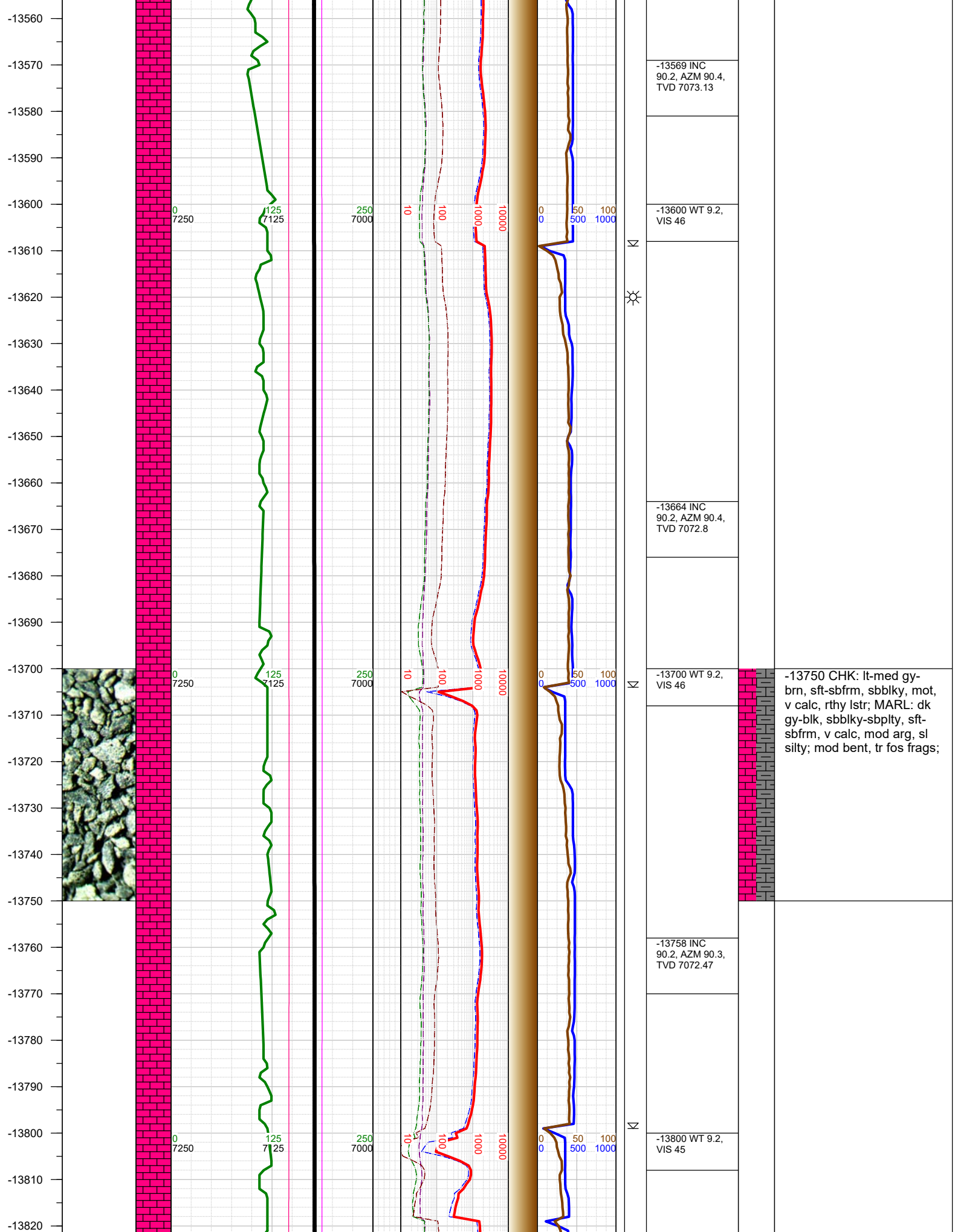
-13210 WT 9.2,  
VIS 43

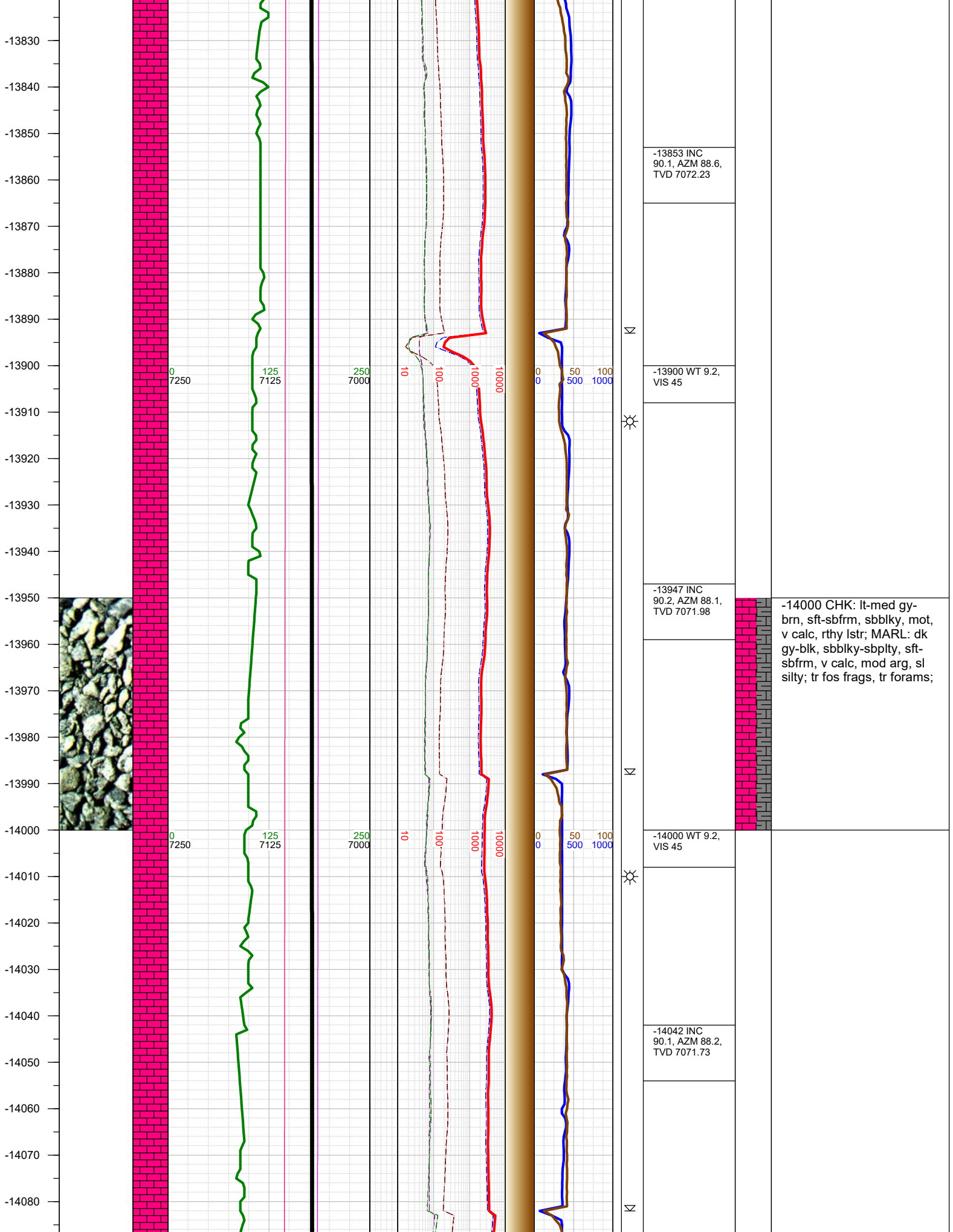
-13285 INC  
90.1, AZM 91.8,  
TVD 7074.01

-13250 CHK: lt-med gy-  
brn, sft-sbfrm, sbblky, mot,  
v calc, rthy lstr; MARL: dk  
gy-blk, sbblky-sbplty, sft-  
sbfrm, v calc, mod arg, sl  
silty; tr fos frags;

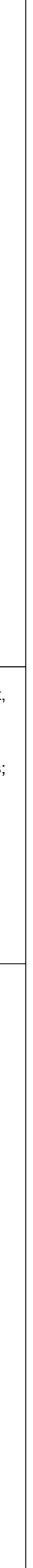
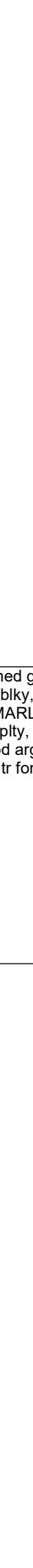
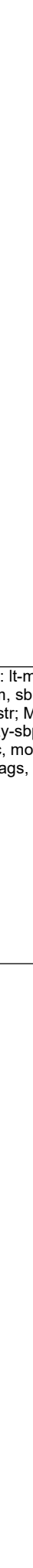
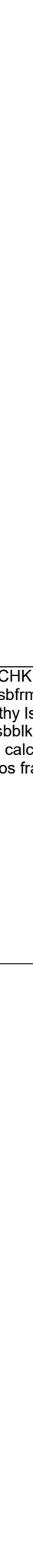
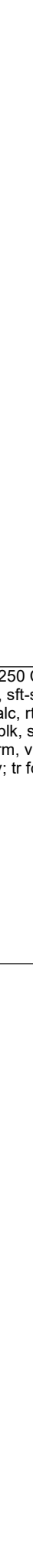
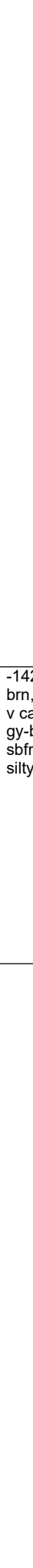
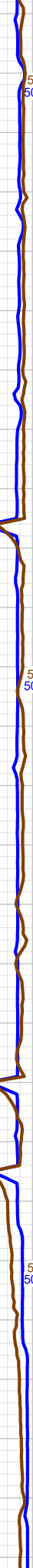
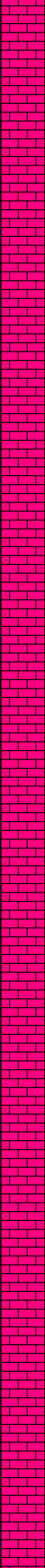








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-14100 WT 9.2,  
VIS 45

-14136 INC  
90.2, AZM 88,  
TVD 7071.48

-14200 WT 9.2,  
VIS 45

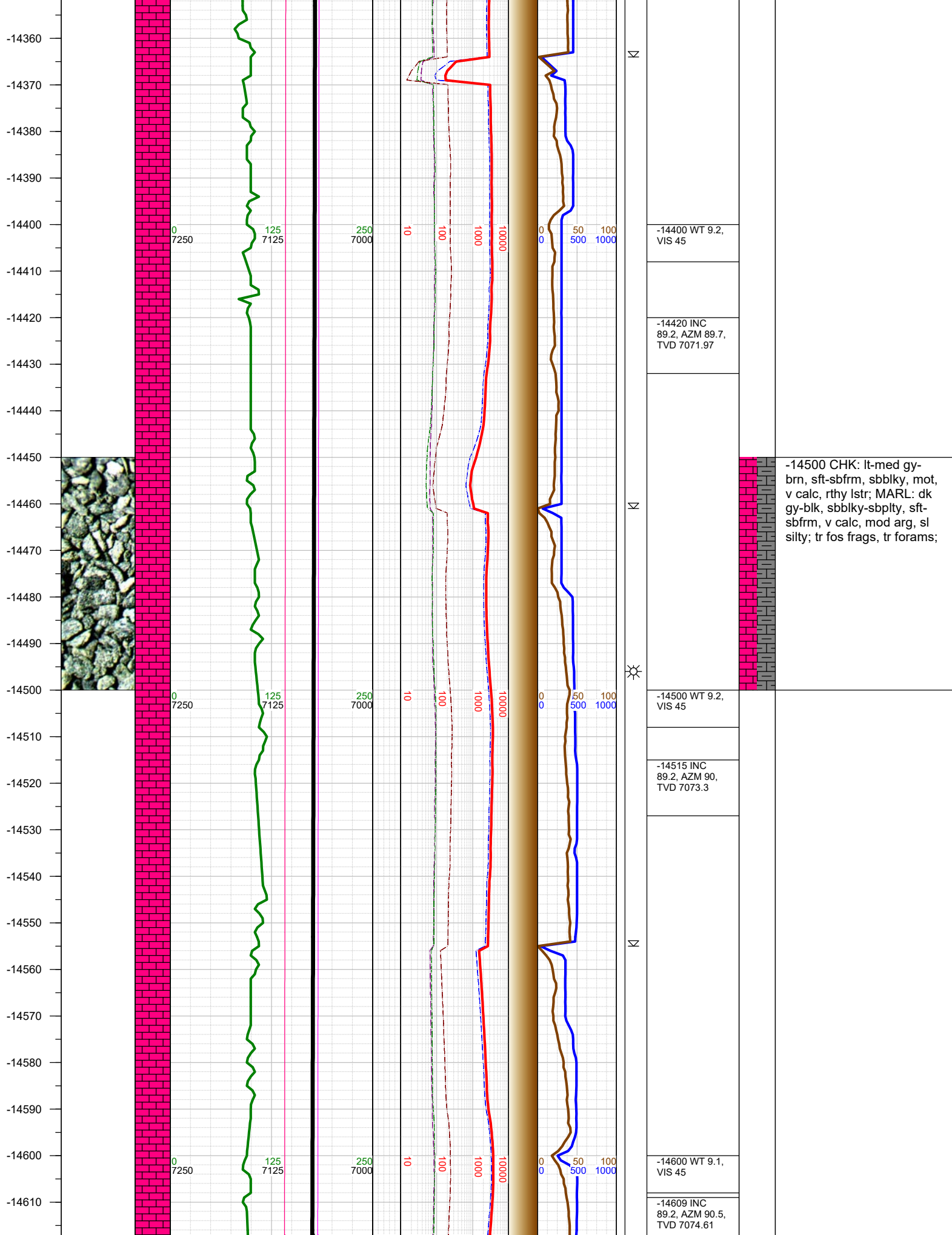
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90.1, AZM 87.3,  
TVD 7071.24

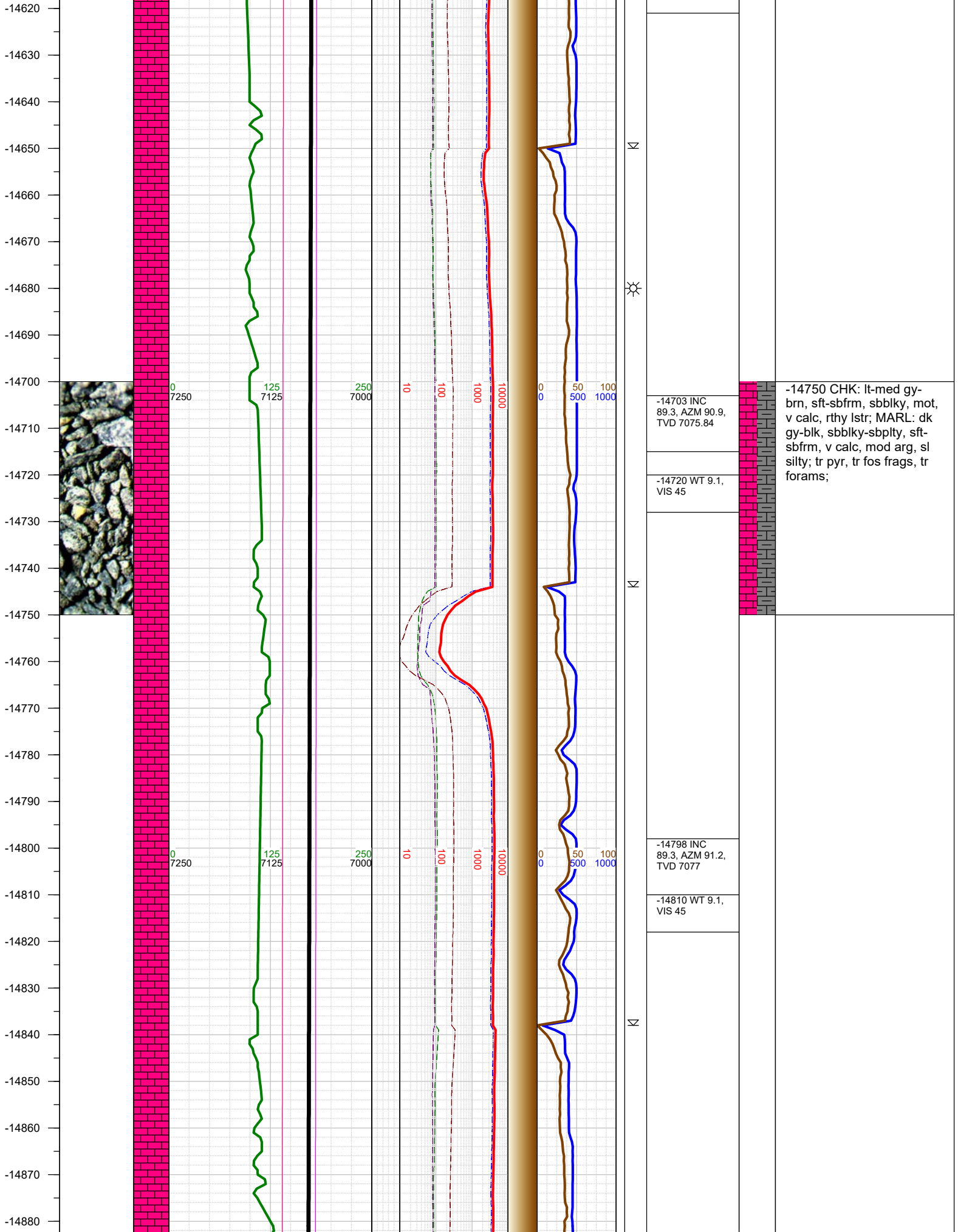
-14300 WT 9.2,  
VIS 45

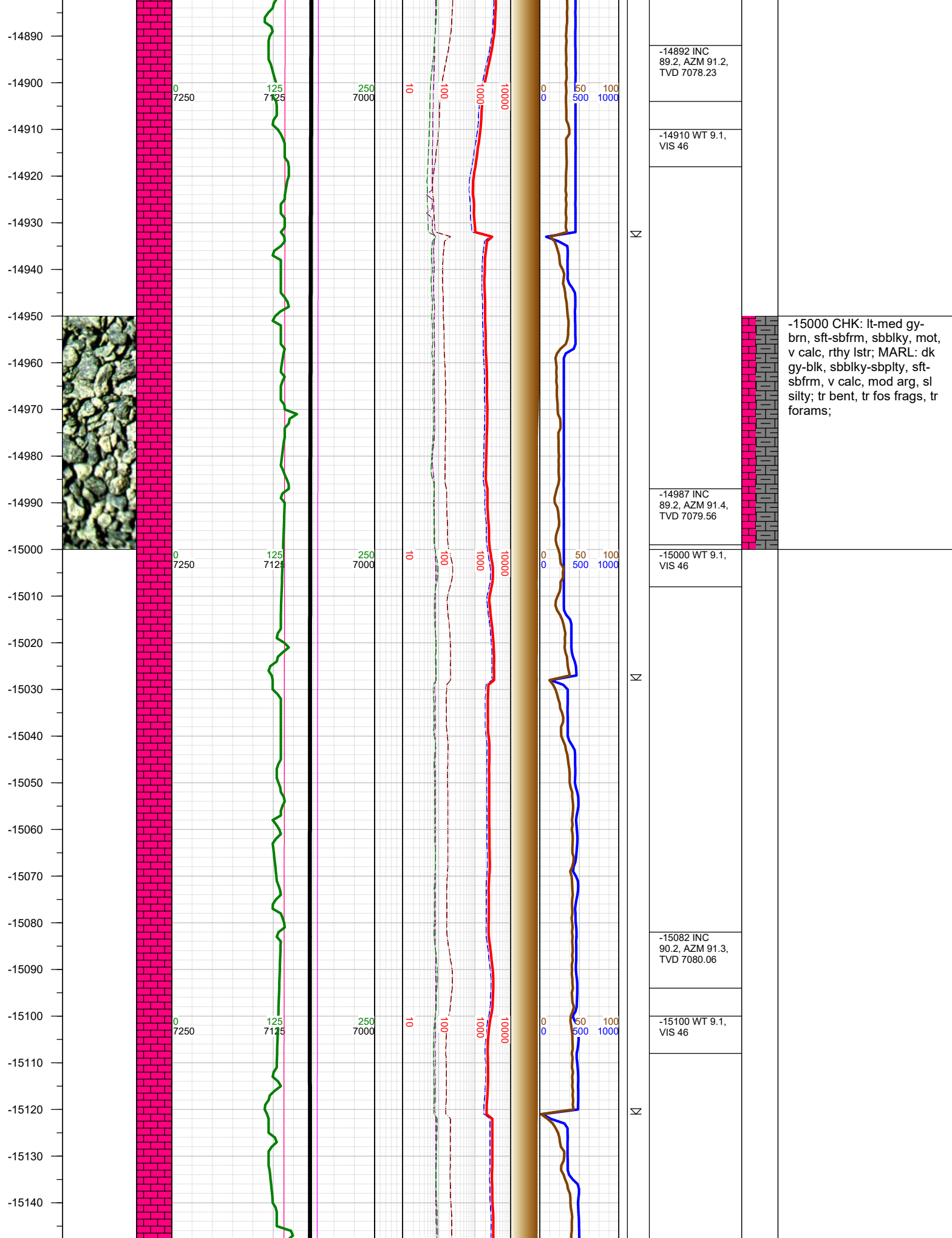
-14326 INC  
89.9, AZM 88.2,  
TVD 7071.24

-14250 CHK: lt-med gy-  
brn, sft-sbfrm, sbbkly, mot,  
v calc, rthy lstr; MARL: dk  
gy-blk, sbbkly-sbplty, sft-  
sbfrm, v calc, mod arg, sl  
silty; tr fos frags, tr forams;

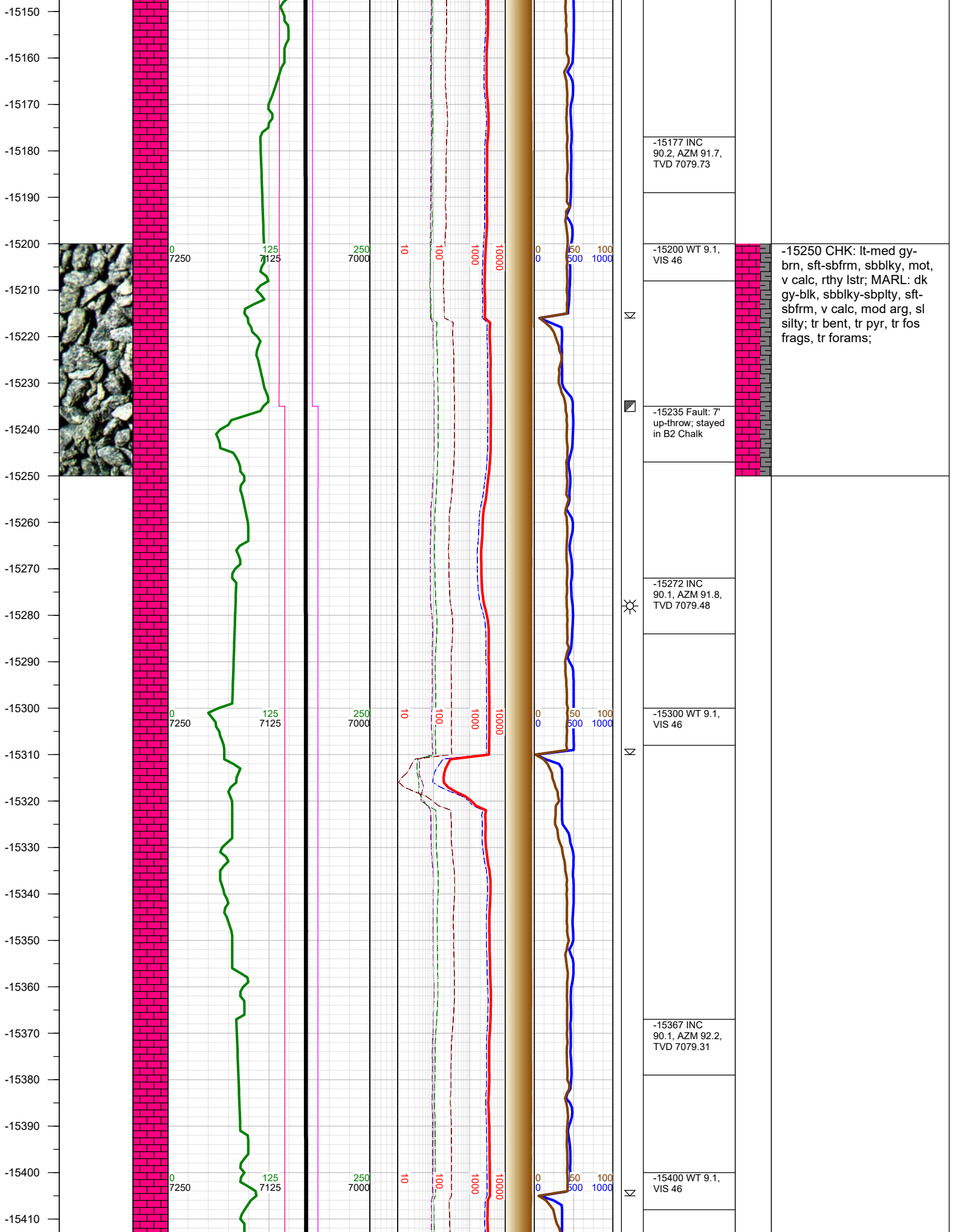


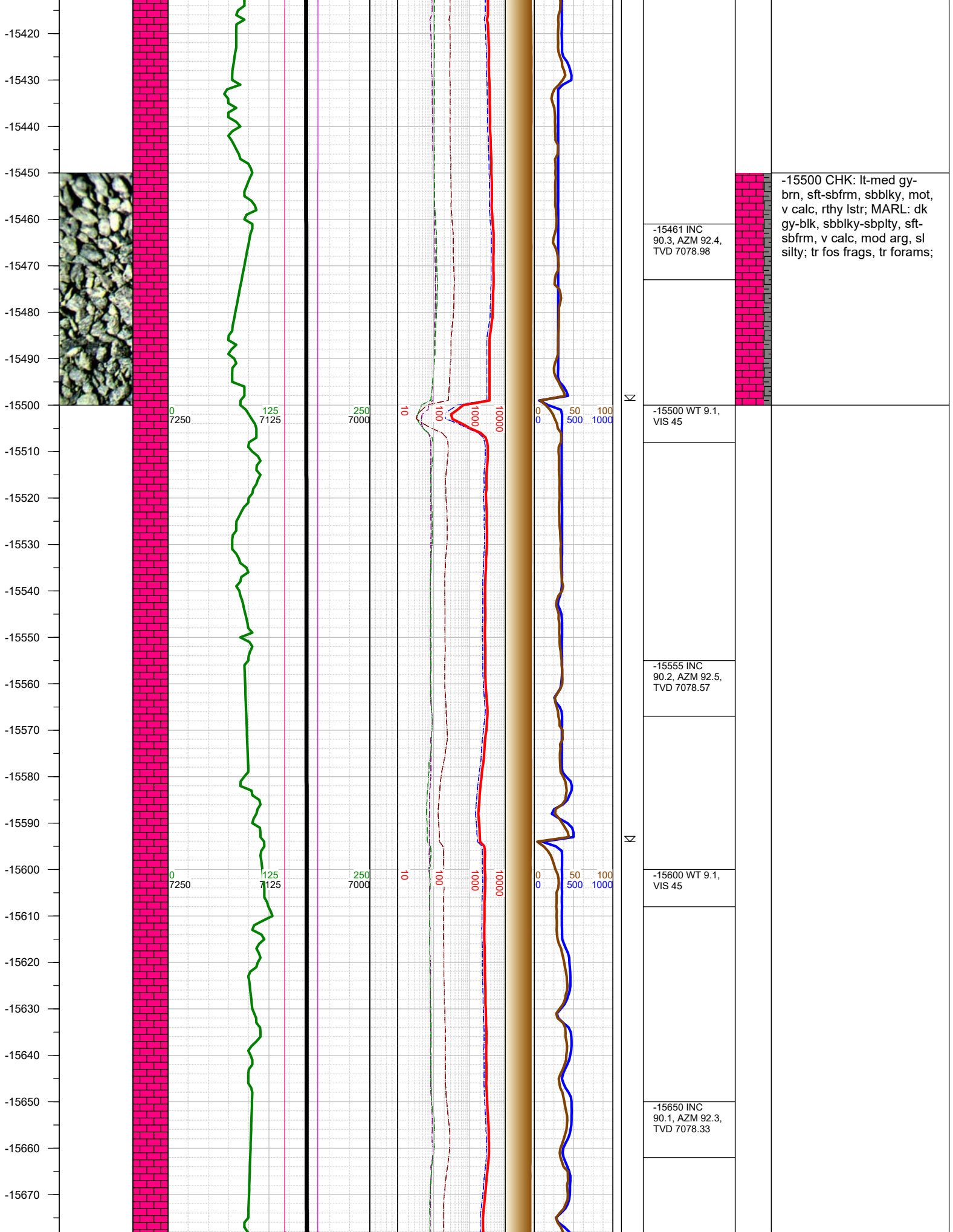


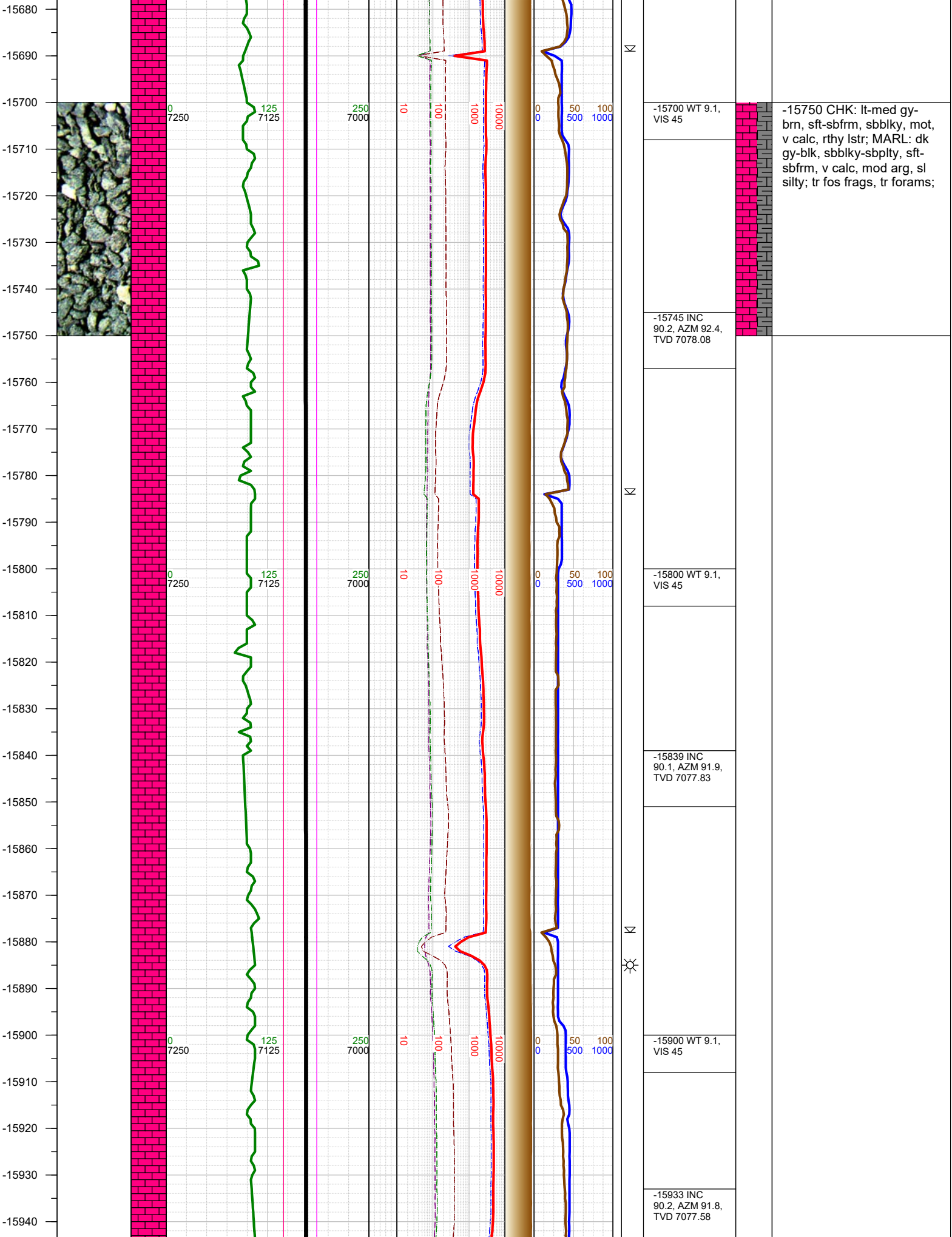




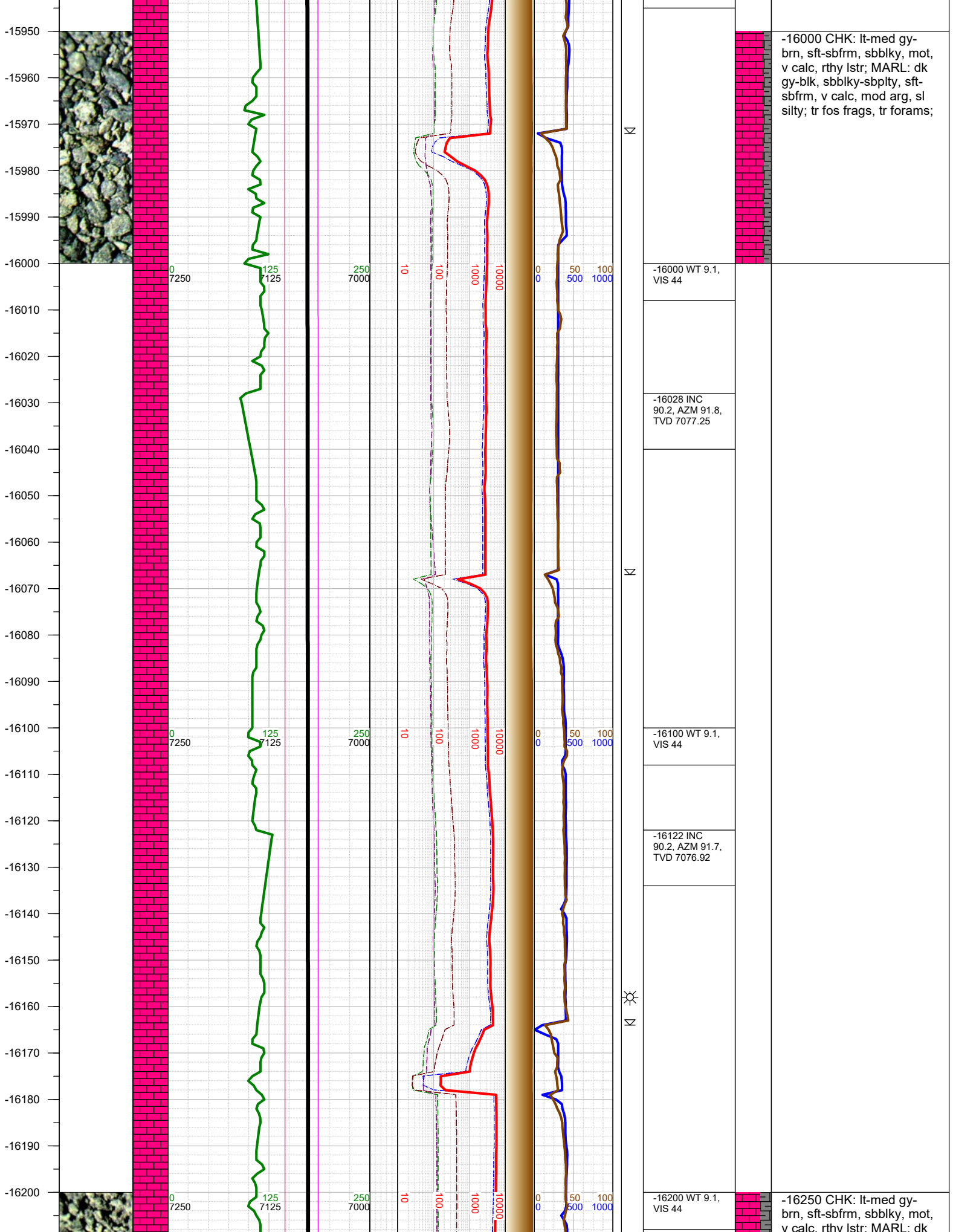


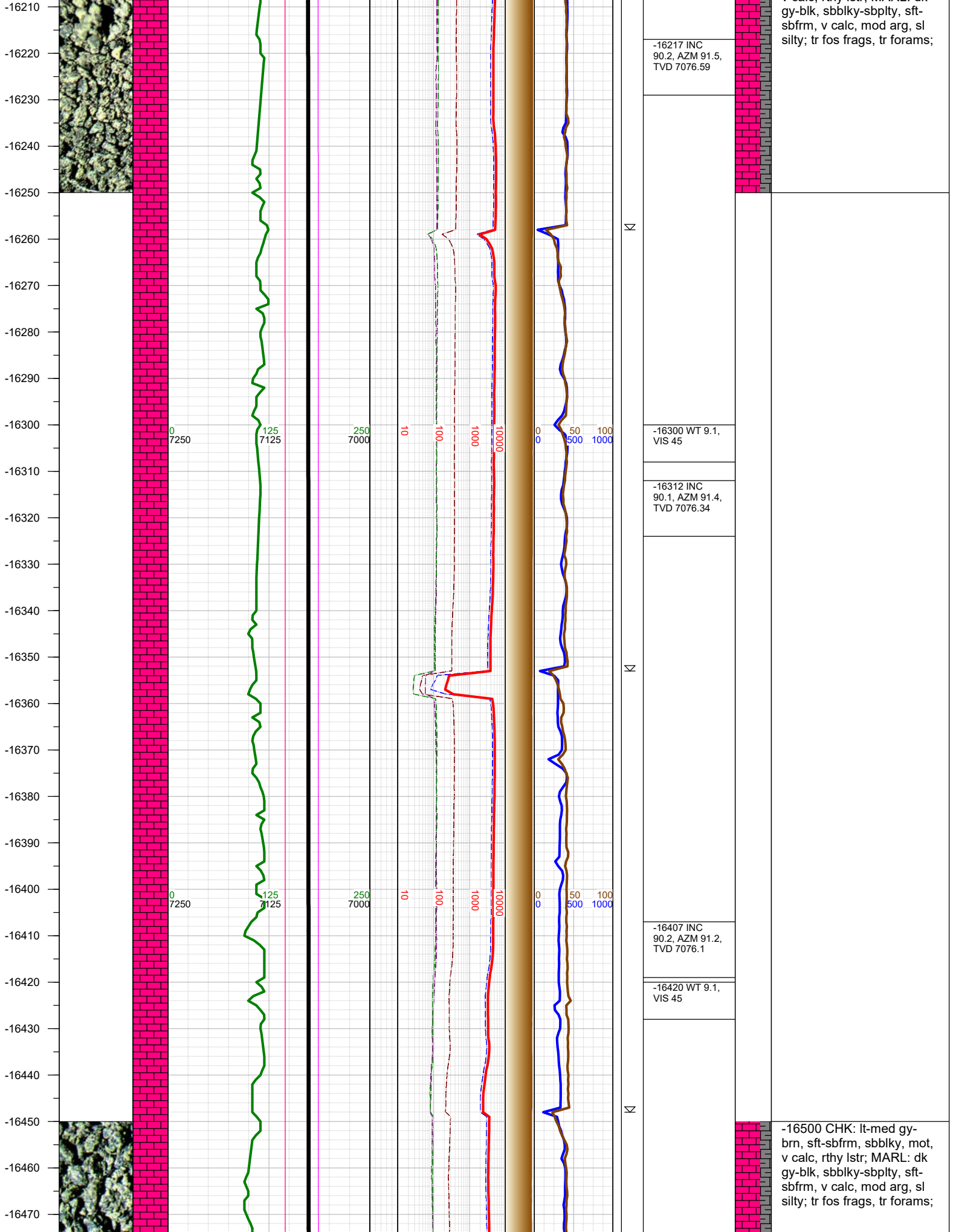




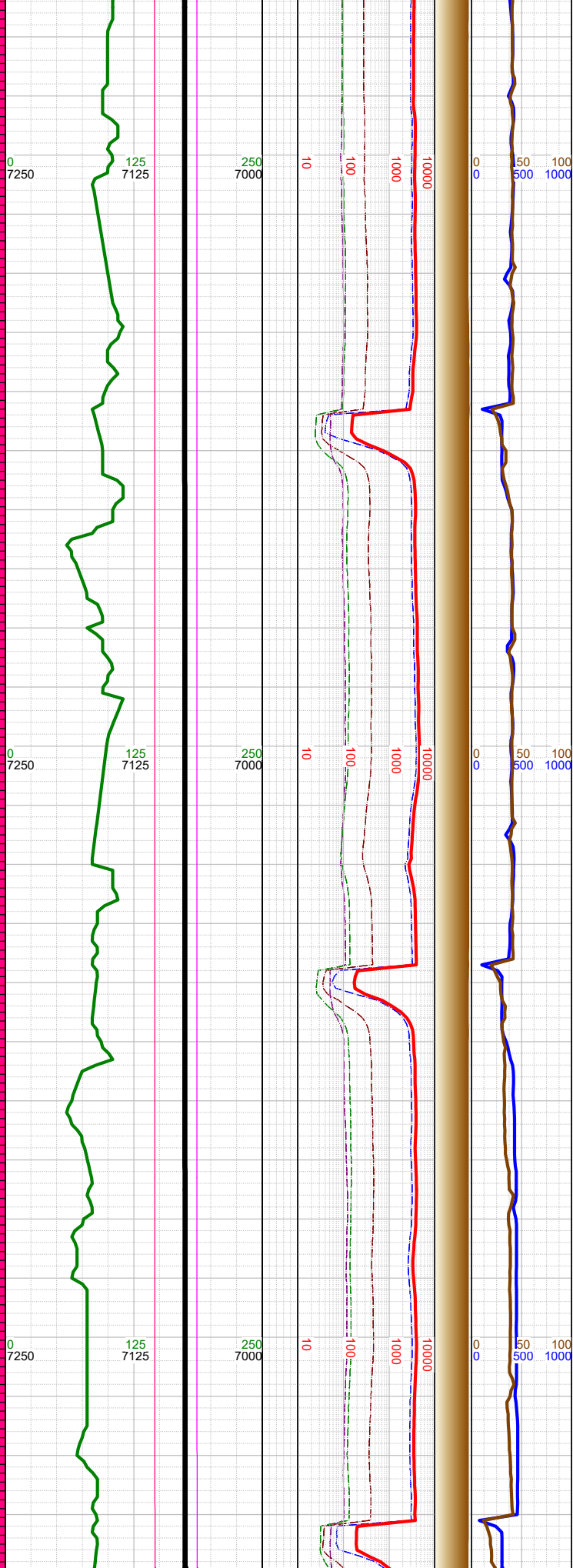
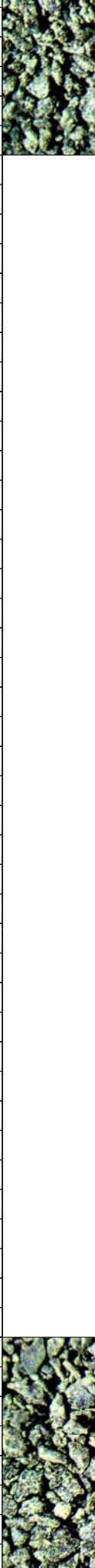








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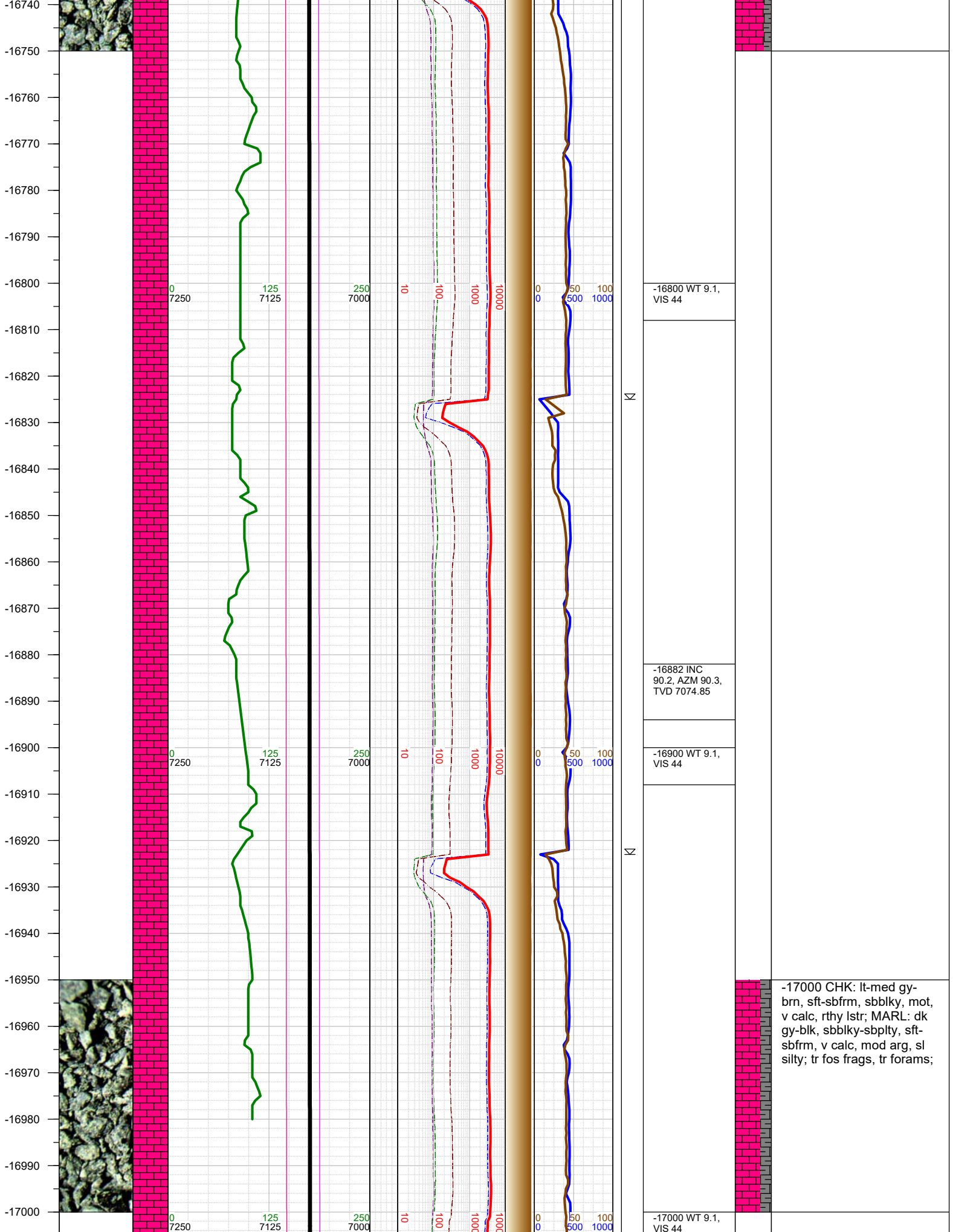
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| -16502 INC<br>90.2, AZM 90.9,<br>TVD 7075.76 |
| -16520 WT 9.1,<br>VIS 45                     |
| -16598 INC<br>90.1, AZM 90.7,<br>TVD 7075.51 |
| -16610 WT 9.1,<br>VIS 45                     |
| -16692 INC<br>90.1, AZM 90.7,<br>TVD 7075.35 |
| -16710 WT 9.1,<br>VIS 45                     |

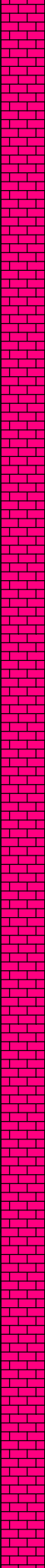
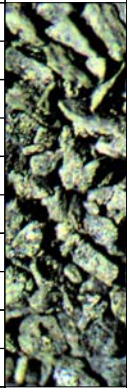


-16750 CHK: lt-med gy-  
brn, sft-sbfrm, sbblky, mot,  
v calc, rthy lstr; MARL: dk  
gy-blk, sbblky-sbplty, sft-  
sbfrm, v calc, mod arg, sl  
silty; tr fos frags, tr forams;





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10000



-17071 INC  
90.3, AZM 90.4,  
TVD 7074.03

-17100 WT 9.1,  
VIS 44

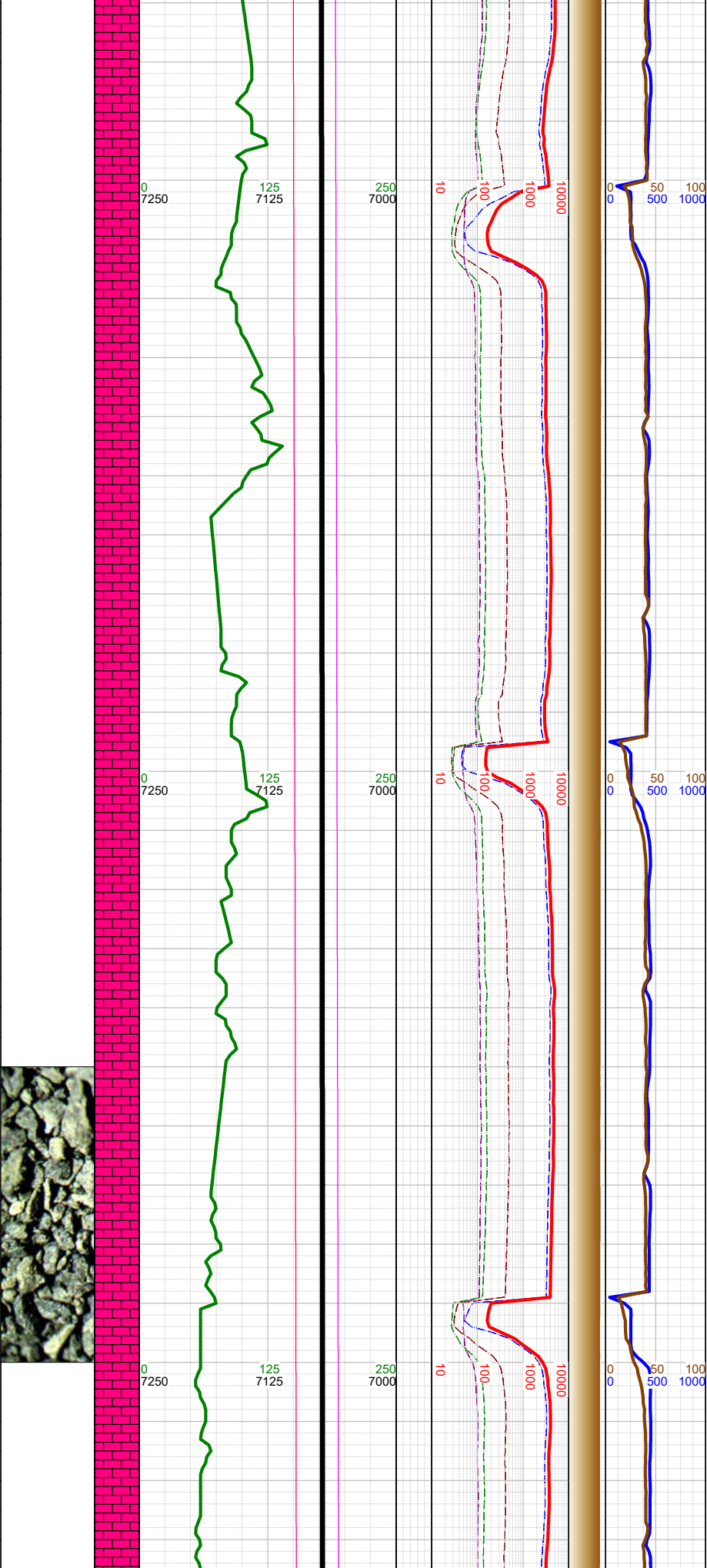
-17166 INC  
90.3, AZM 90.3,  
TVD 7073.53

-17200 WT 9.2,  
VIS 47

-17260 INC  
90.4, AZM 89.9,  
TVD 7072.96

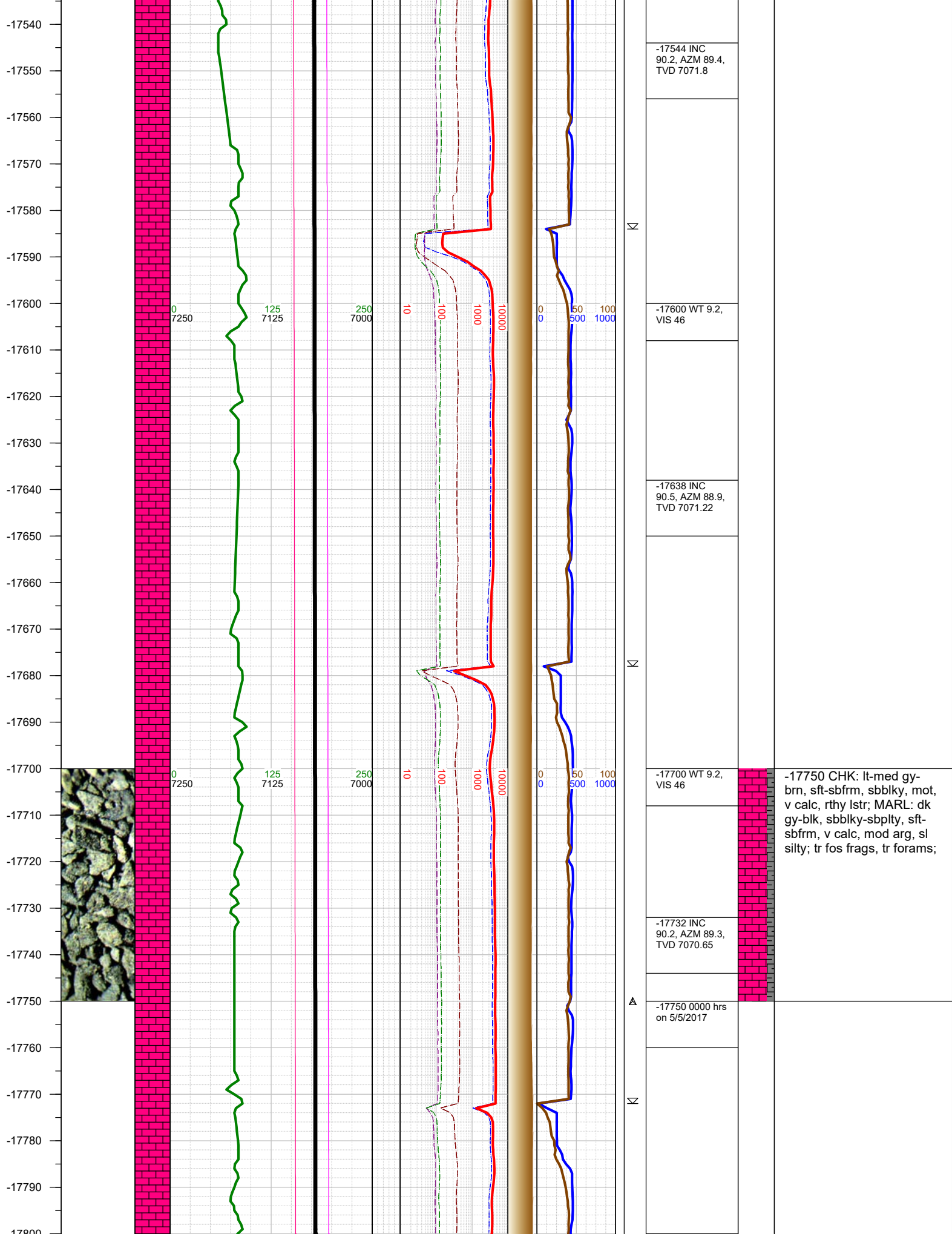
-17250 CHK: lt-med gy-  
brn, sft-sbfrm, sbblky, mot,  
v calc, rthy lstr; MARL: dk  
gy-blk, sbblky-sbplty, sft-  
sbfrm, v calc, mod arg, sl  
silty; tr fos frags, tr forams;

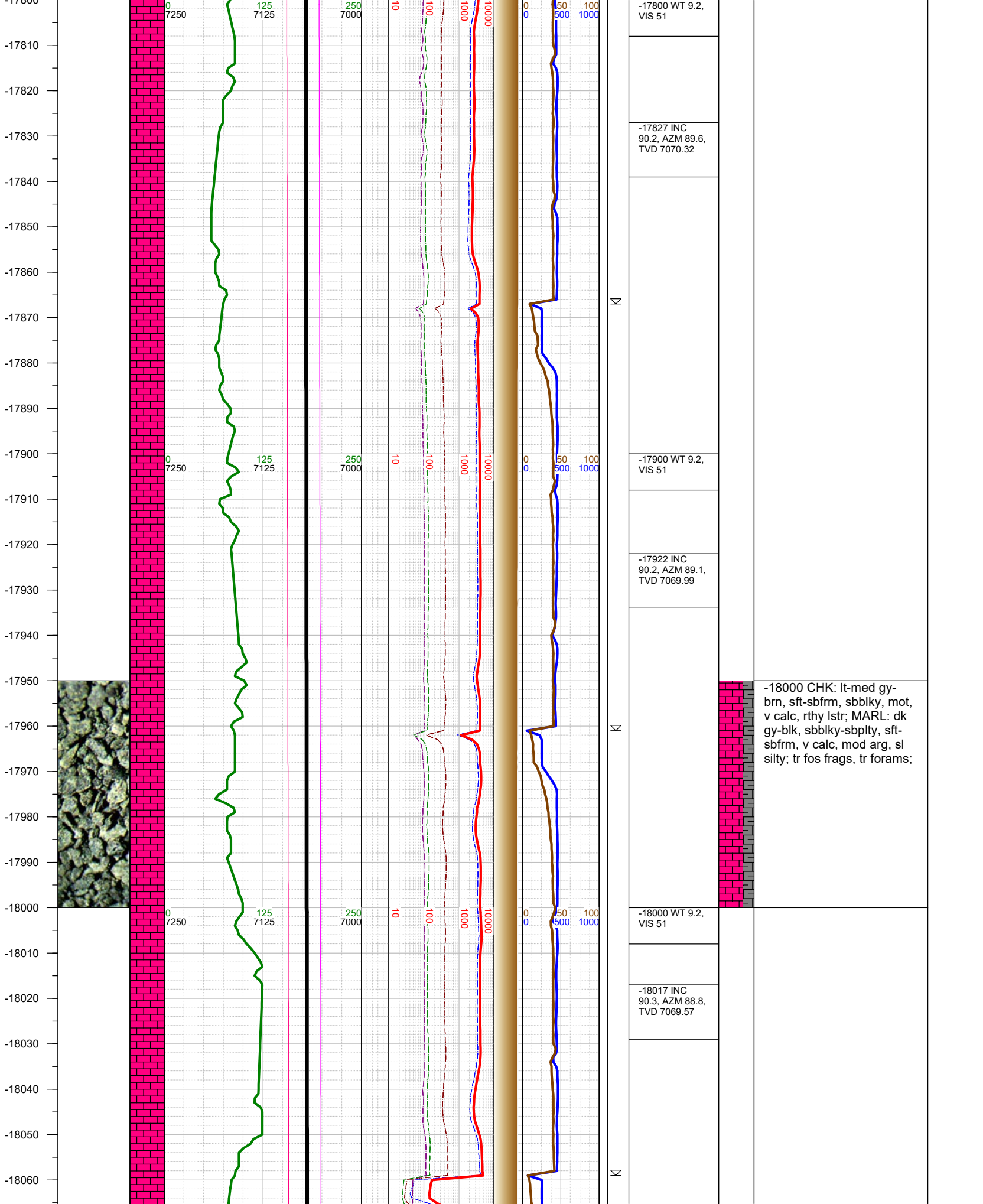
-17270  
-17280  
-17290  
-17300  
-17310  
-17320  
-17330  
-17340  
-17350  
-17360  
-17370  
-17380  
-17390  
-17400  
-17410  
-17420  
-17430  
-17440  
-17450  
-17460  
-17470  
-17480  
-17490  
-17500  
-17510  
-17520  
-17530



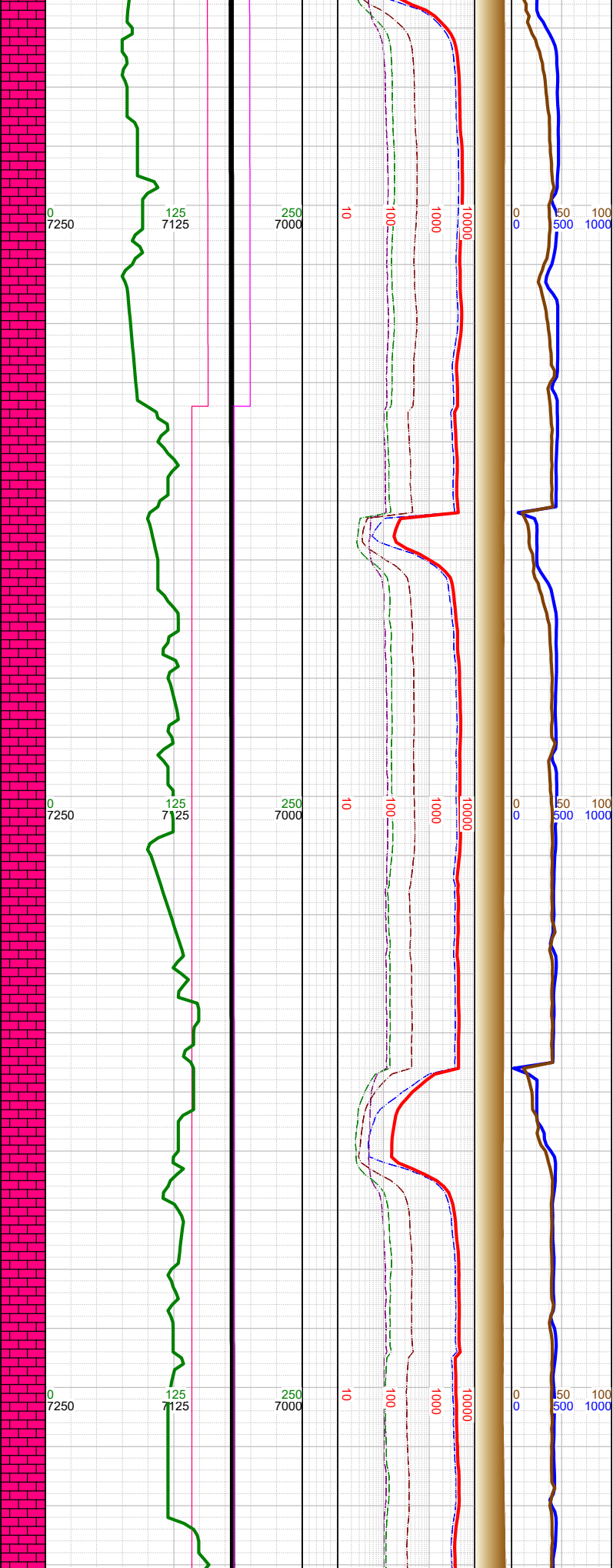
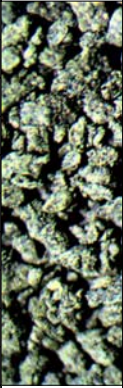
|   |  |   |
|---|--|---|
| Σ |  |   |
|   | -17300 WT 9.2,<br>VIS 47                     |   |
|   | -17355 INC<br>90.3, AZM 89.9,<br>TVD 7072.37 |   |
| Σ |  |   |
|   | -17400 WT 9.2,<br>VIS 47                     |   |
|   | -17449 INC<br>90.1, AZM 89.6,<br>TVD 7072.05 |   |
|   |  | -17500 CHK: lt-med gy-<br>brn, sft-sbfrm, sbblky, mot,<br>v calc, rthy lstr; MARL: dk<br>gy-blk, sbblky-sbplty, sft-<br>sbfrm, v calc, mod arg, sl<br>silty; tr fos frags, tr forams; |
| Σ |  |   |
|   | -17500 WT 9.2,<br>VIS 46                     |   |







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



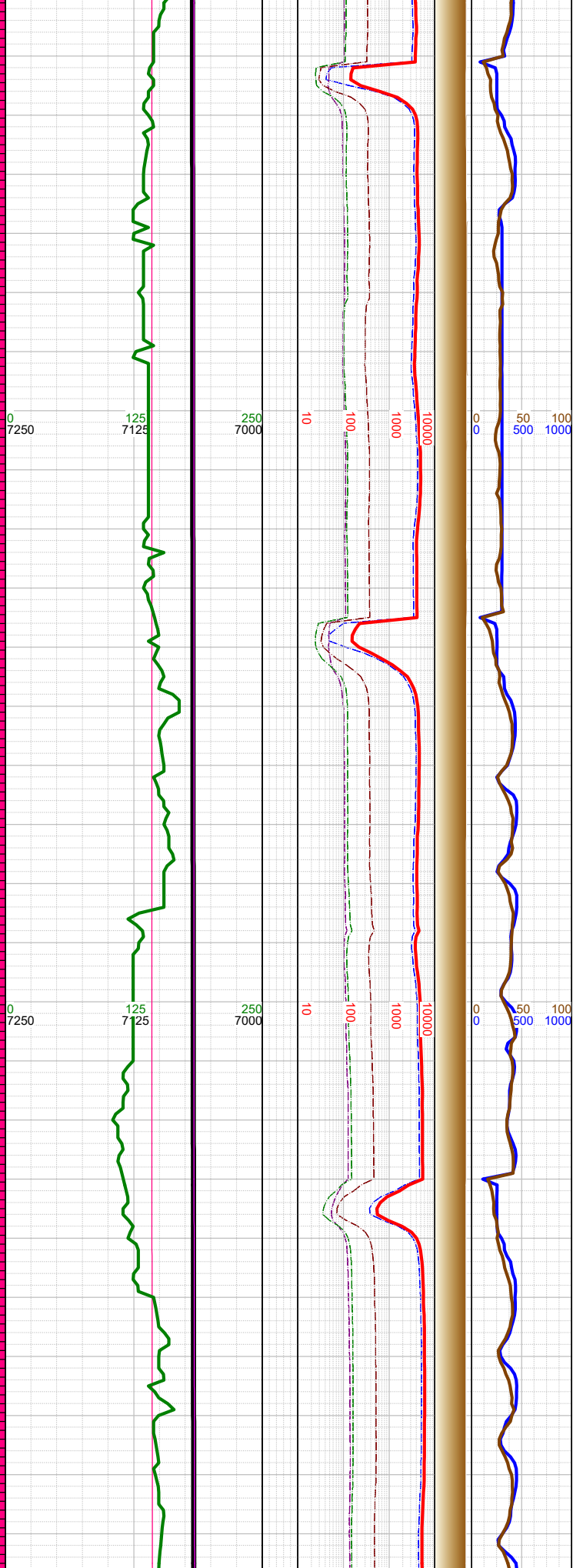
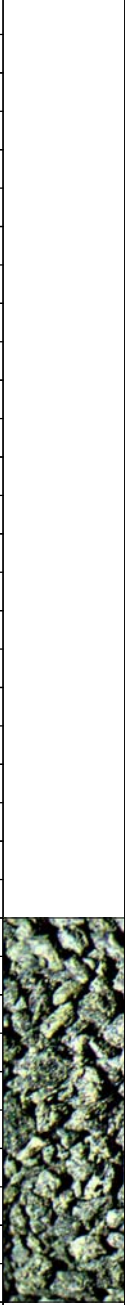
|   |   |
|---|---|
|   | -18100 WT 9.2,<br>VIS 51                                  |
|   | -18112 INC<br>90.3, AZM 88.8,<br>TVD 7069.07              |
| ▣ | -18134 Fault:<br>16' down-throw;<br>stayed in B2<br>Chalk |
| ▣ |   |
|   | -18207 INC<br>90.3, AZM 88.3,<br>TVD 7068.58              |
|   | -18220 WT 9.4,<br>VIS 48                                  |
| ▣ |   |
|   | -18301 INC<br>90.2, AZM 88.1,<br>TVD 7068.17              |
|   | -18320 WT 9.4,<br>VIS 48                                  |



-18250 CHK: lt-med gy-brn, sft-sbfrm, sbblky, mot, v calc, rthy lstr; MARL: dk gy-blk, sbblky-sbplty, sft-sbfrm, v calc, mod arg, sl silty; tr fos frags, tr forams;



-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



Δ  
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Δ

-18396 INC  
90.2, AZM 87.9,  
TVD 7067.84

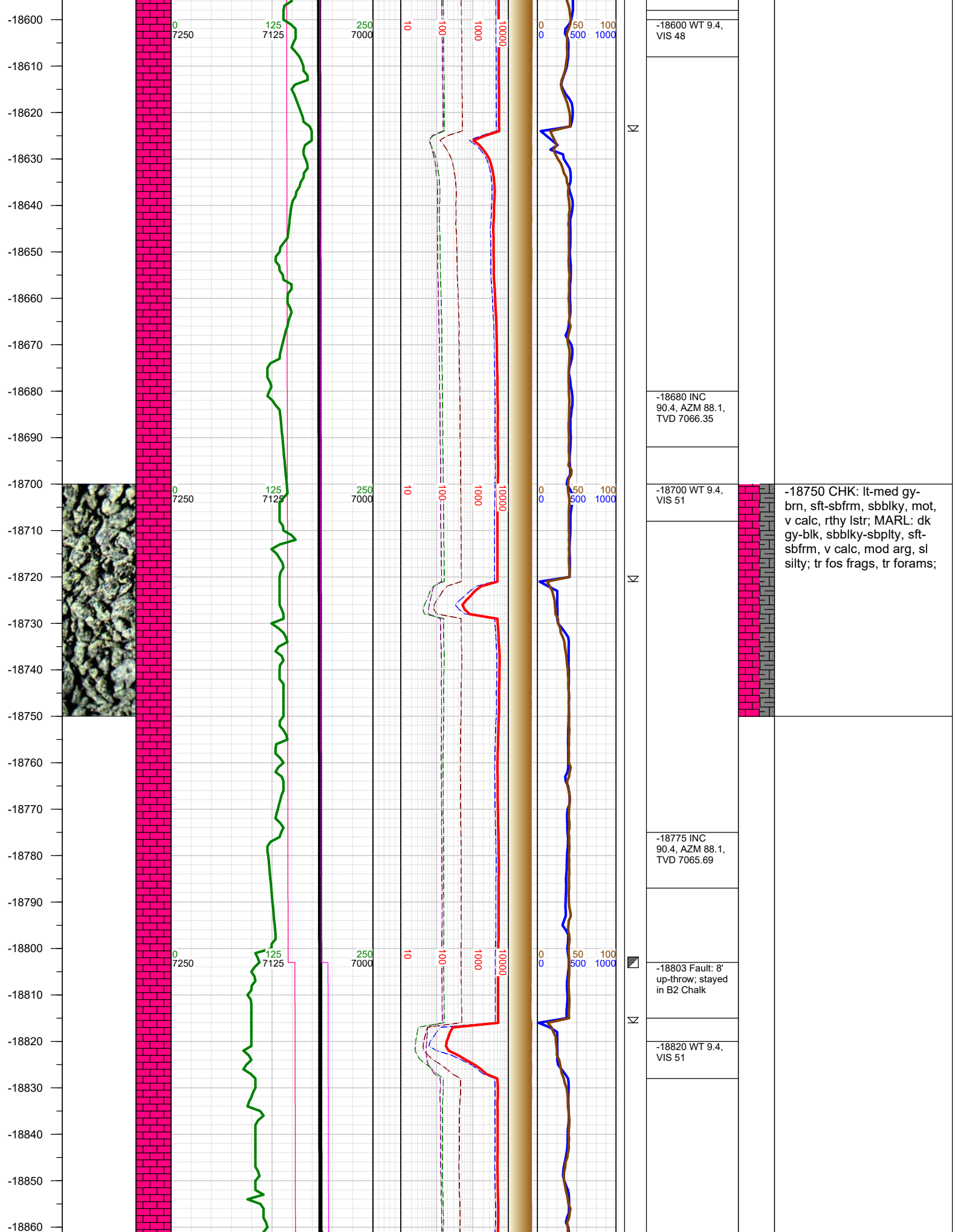
-18410 WT 9.4,  
VIS 48

-18491 INC  
90.3, AZM 87.9,  
TVD 7067.42

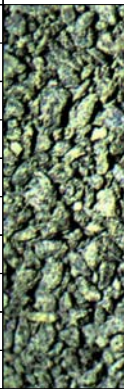
-18510 WT 9.4,  
VIS 48

-18586 INC  
90.3, AZM 88.1,  
TVD 7066.92

-18500 CHK: lt-med gy-  
brn, sft-sbfrm, sbblky, mot,  
v calc, rthy lstr; MARL: dk  
gy-blk, sbblky-sbplty, sft-  
sbfrm, v calc, mod arg, sl  
silty; tr fos frags, tr forams;



-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



0  
7250

125  
7125

250  
7000

10

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1000

10000

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7250

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7125

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7000

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7250

125  
7125

250  
7000

10

100

1000

10000

0  
0

50

100

1000

-18870 INC  
90.2, AZM 88.4,  
TVD 7065.19

-18900 WT 9.4,  
VIS 52

-18965 INC  
90.2, AZM 88.5,  
TVD 7064.86

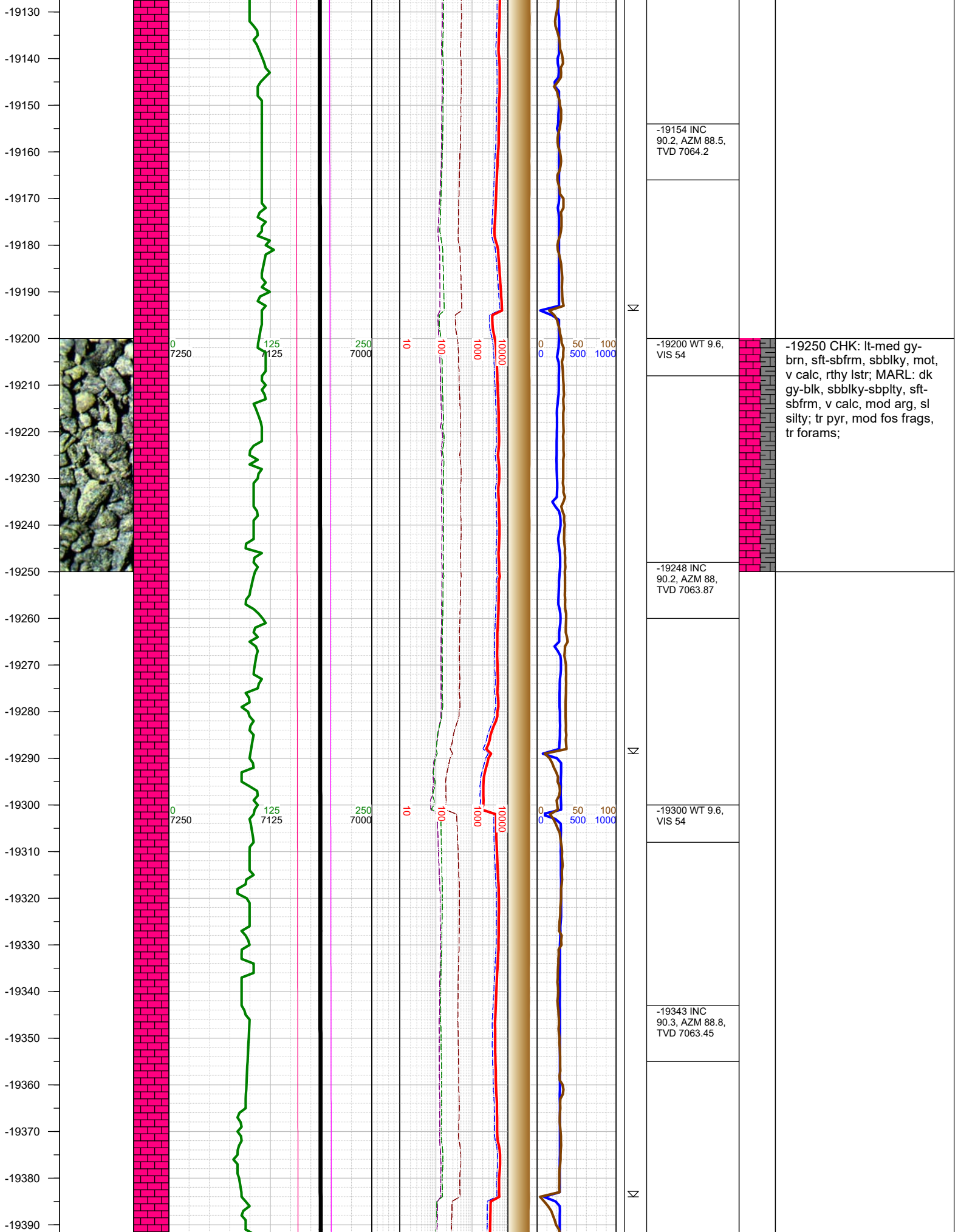
-19000 WT 9.4,  
VIS 52

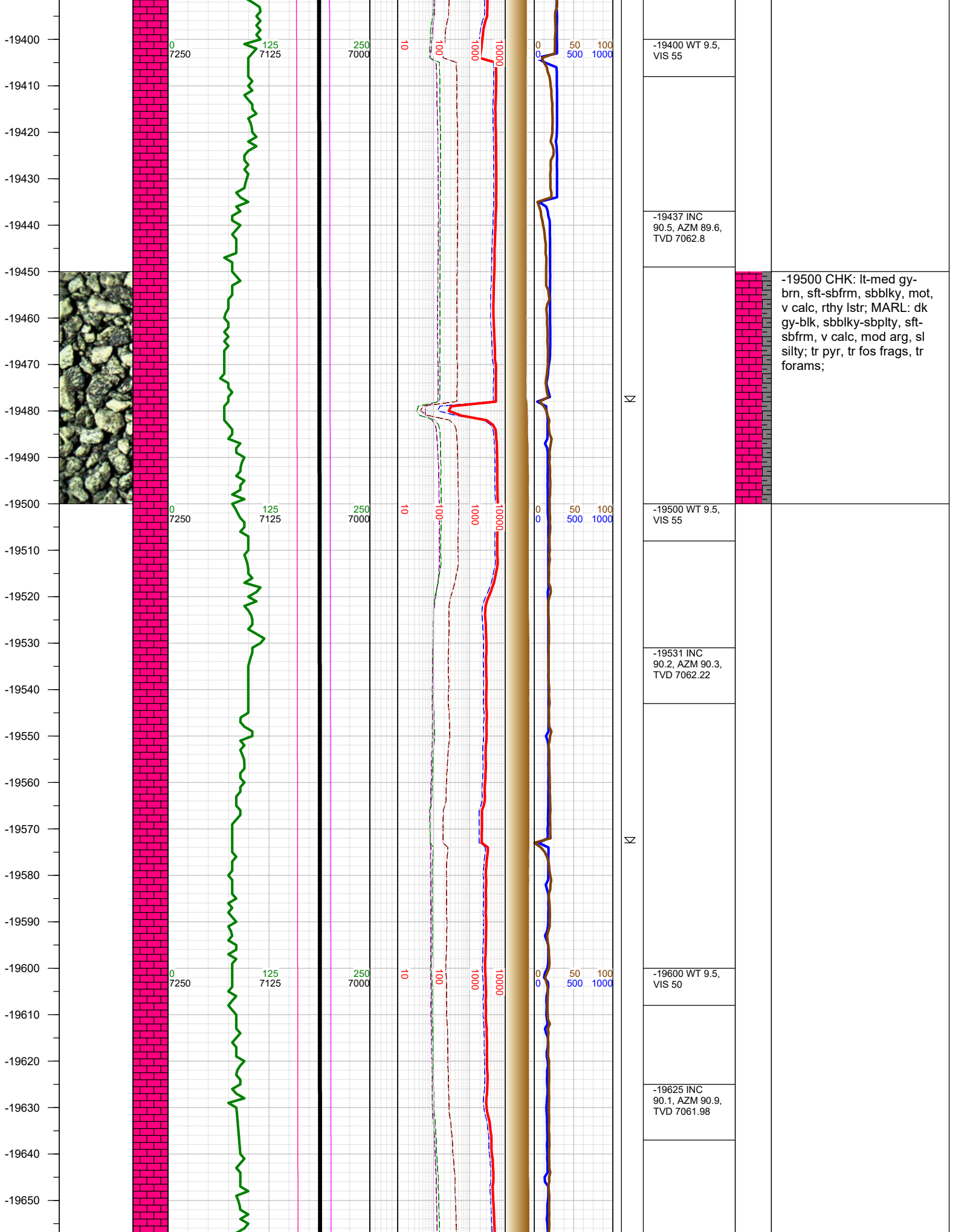
-19059 INC  
90.2, AZM 88.5,  
TVD 7064.53

-19100 WT 9.6,  
VIS 52

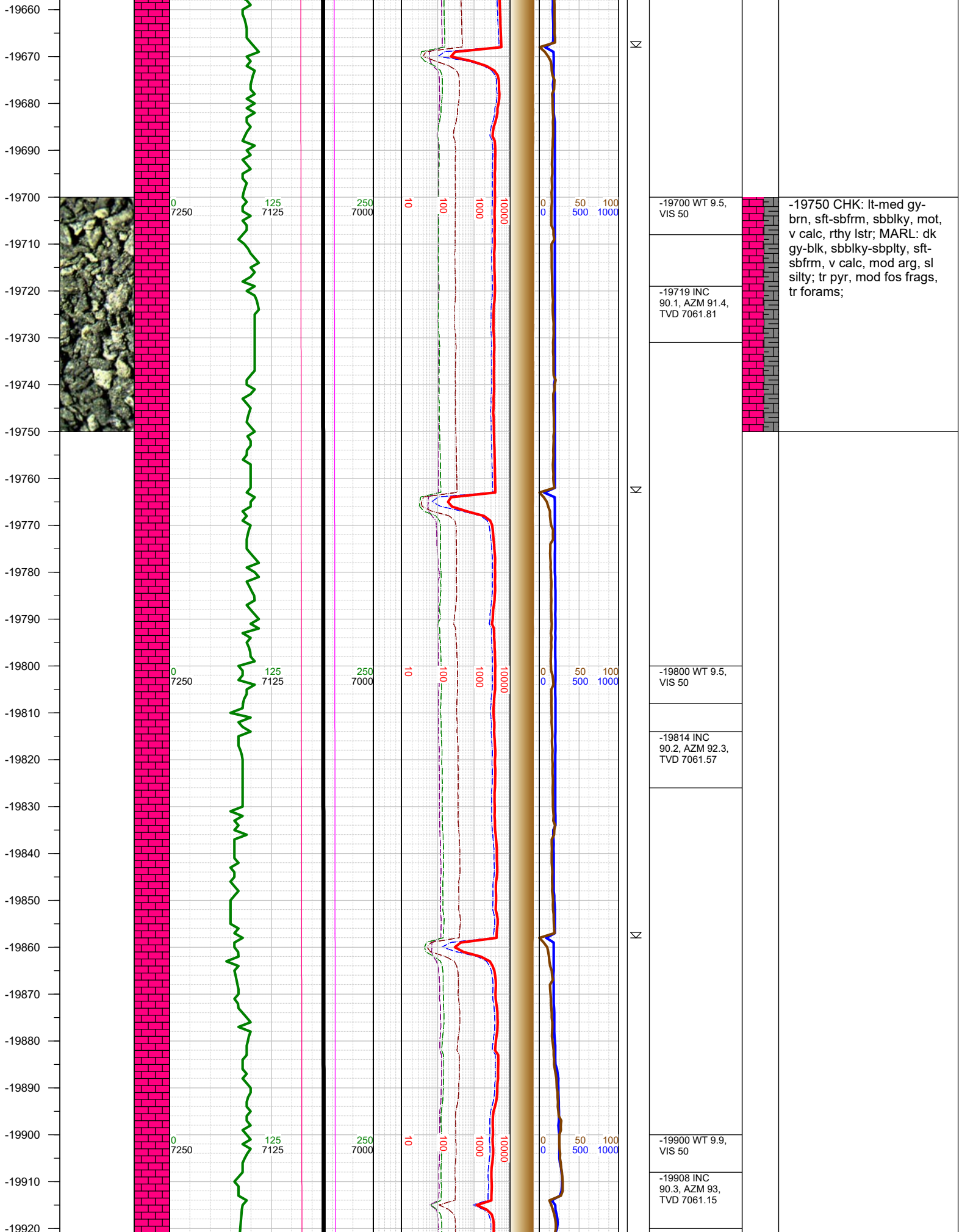
-19000 CHK: lt-med gy-  
brn, sft-sbfrm, sbblky, mot,  
v calc, rthy lstr; MARL: dk  
gy-blk, sbblky-sbplty, sft-  
sbfrm, v calc, mod arg, sl  
silty; tr fos frags, tr forams;



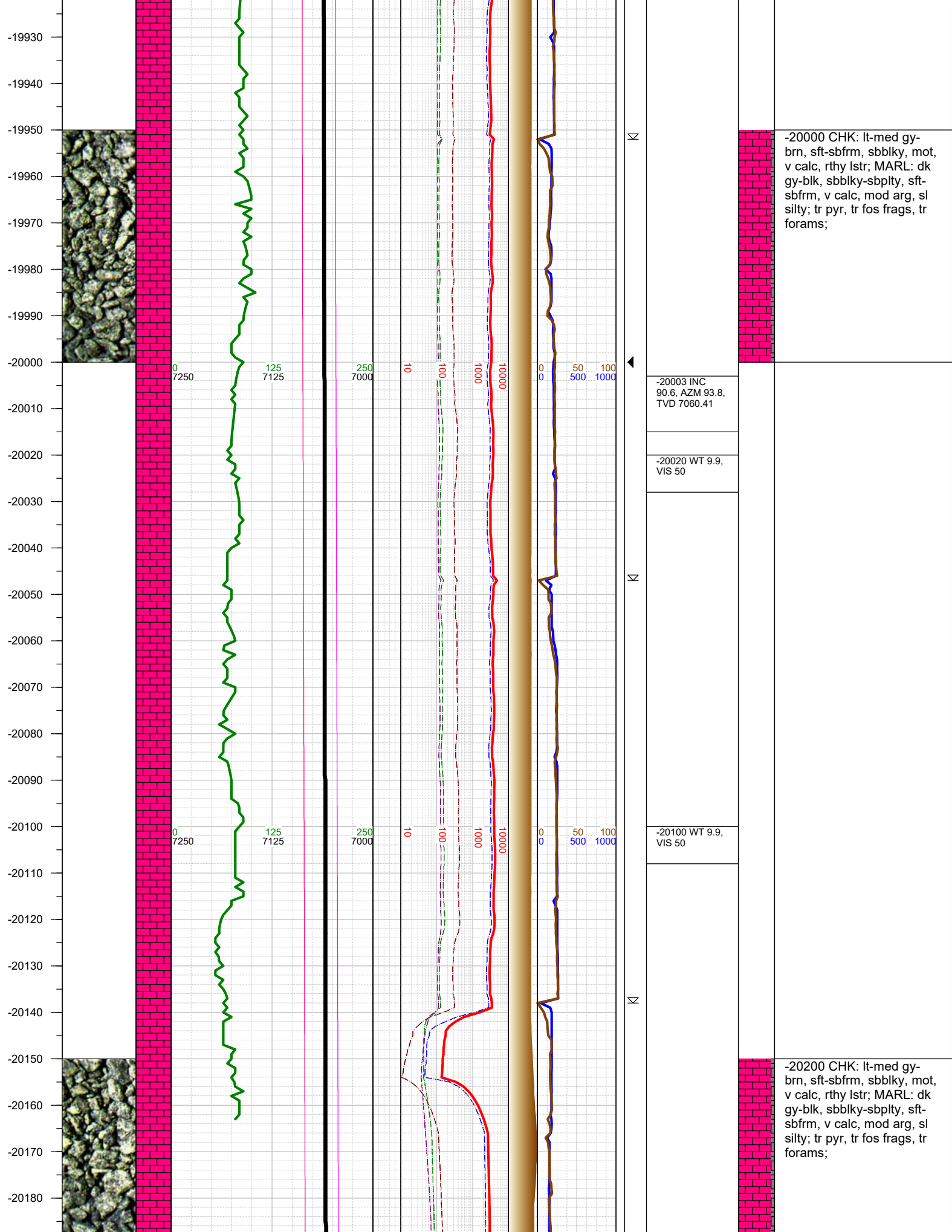


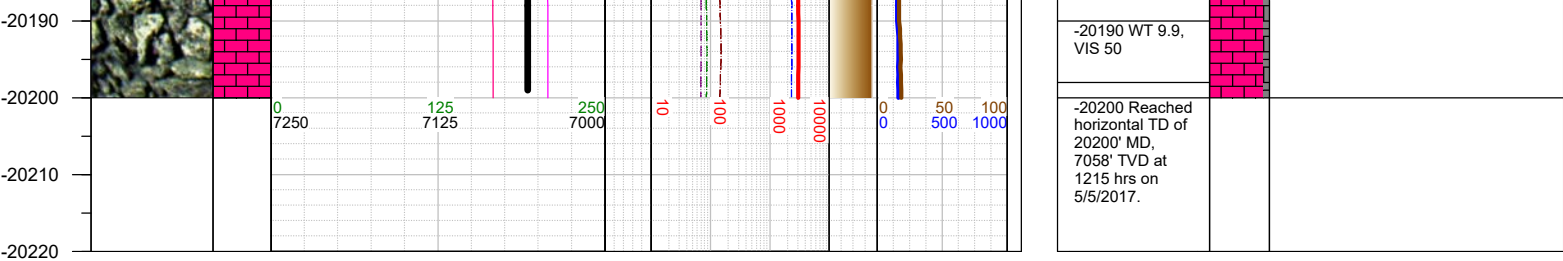


-19500 CHK: lt-med gy-brn, sft-sbfrm, sbblky, mot, v calc, rthy lstr; MARL: dk gy-blk, sbblky-sbplty, sft-sbfrm, v calc, mod arg, sl silty; tr pyr, tr fos frags, tr forams;









TOTAL DEPTH = 20200'

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