

OPERATOR: **Extraction Oil & Gas**  
WELL NAME: **Darlene East 29N-20-11C**  
FIELD NAME: DJ Basin - Wattenberg  
DRILLING RIG: Patterson 346  
API #: 05-123-45416

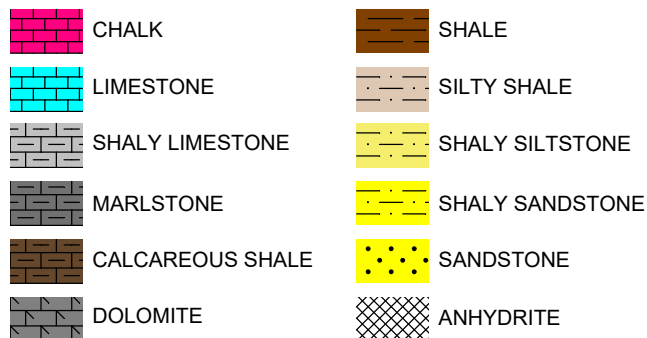
LAT/LONG: 40.974057, -104.227179  
SURFACE HOLE: SWSE S29-T12N-R61W, 363' FSL, 1942' FEL  
BOTTOM HOLE: S20-T12N-R61W, 545' FNL, 574' FEL



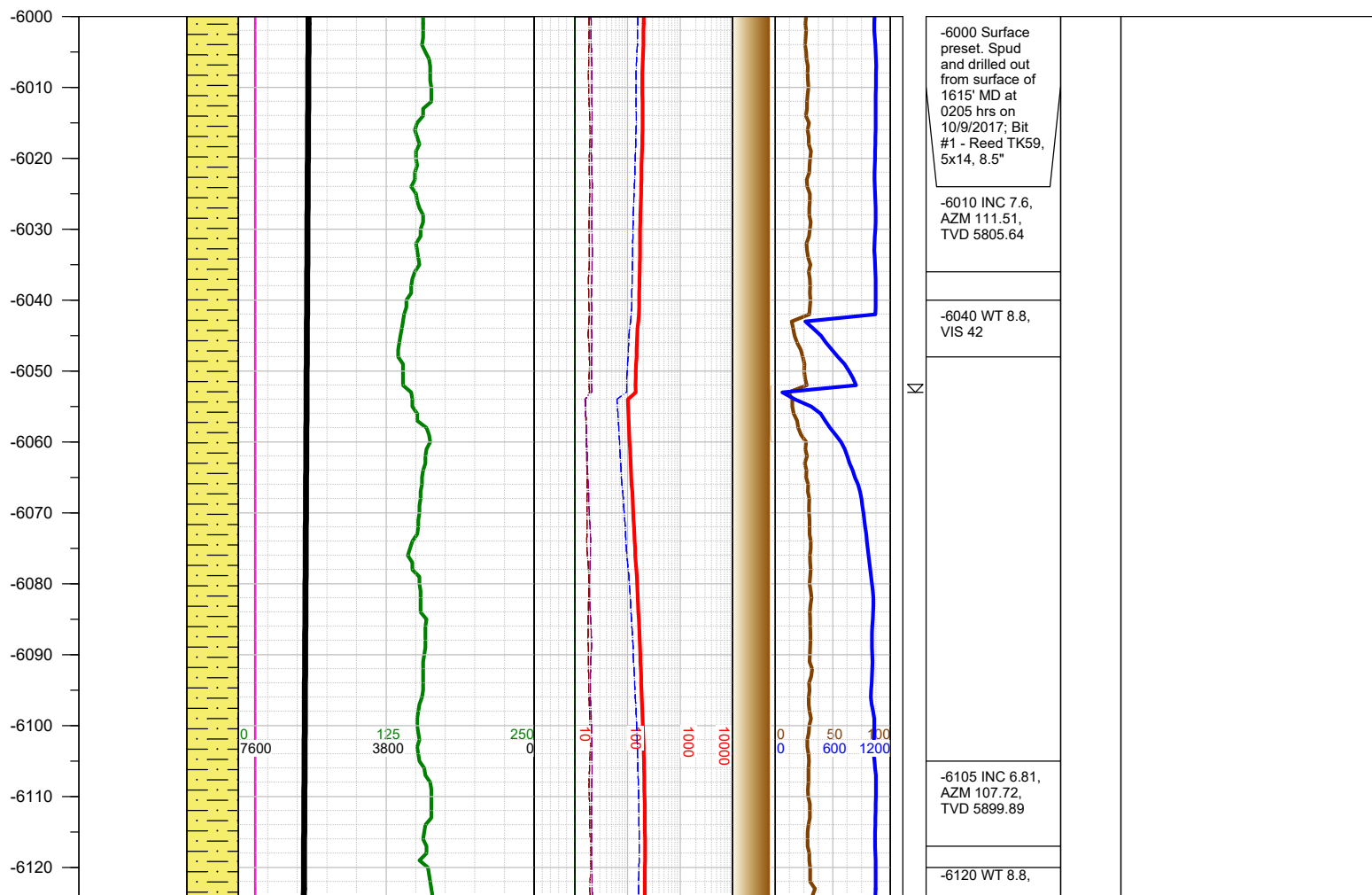
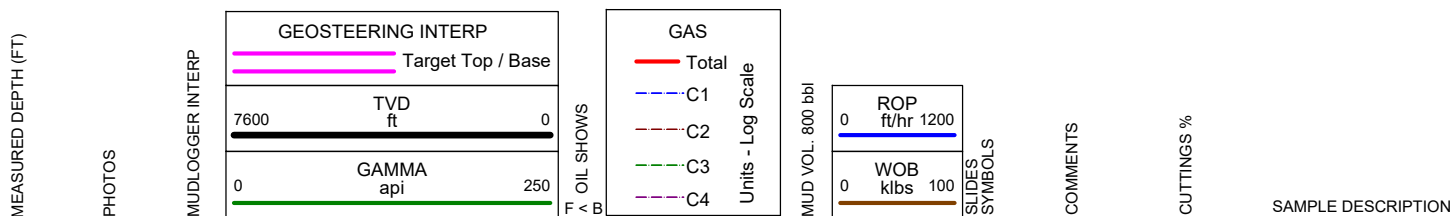
Earth Science Agency, LLC

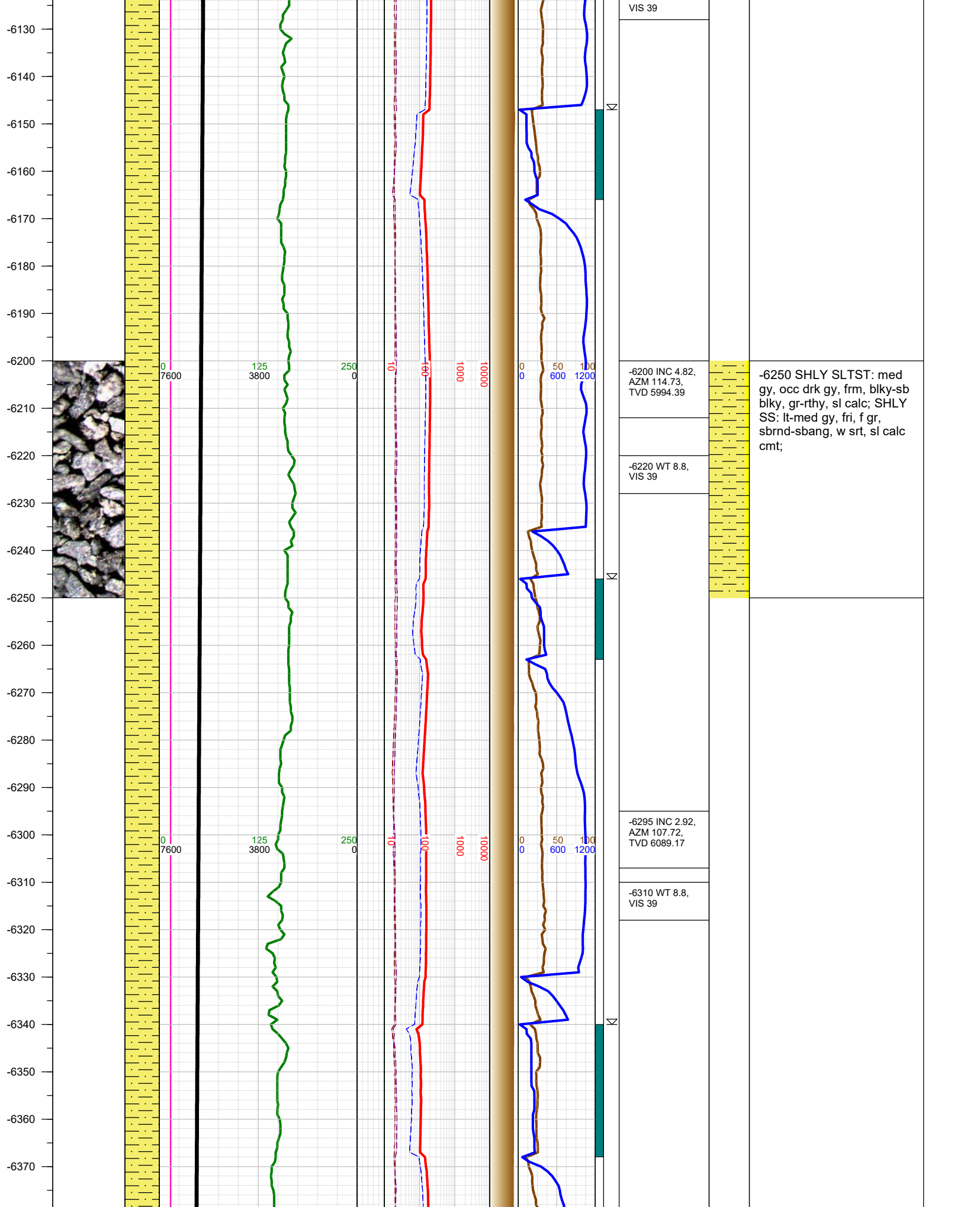
COUNTY: Weld  
STATE: Colorado  
GROUND ELEVATION: 5247'  
KELLY BUSHING: 5272'  
DRILLING FLUID: OBM  
TVD VS. MD: 7149' / 17387'  
SPUD DATE: October 7, 2017  
TD DATE: October 11, 2017  
DEPTHS LOGGED: 6000' - 17387'  
DATES LOGGED: October 9, 2017 - October 11, 2017  
GEOLOGISTS: Ross Apodaca, Scott Snoy  
SCALE: 5" = 100'

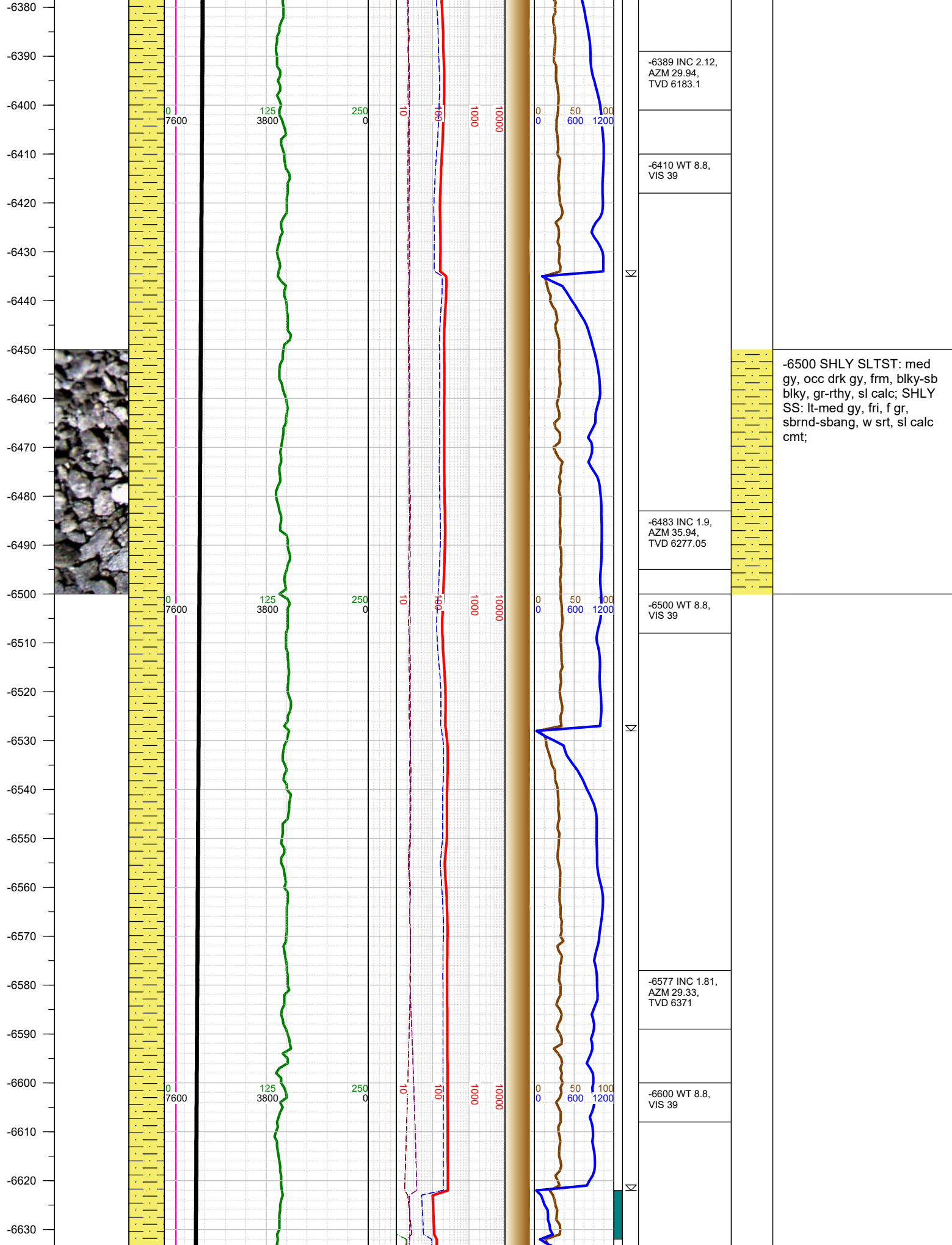
#### LEGEND

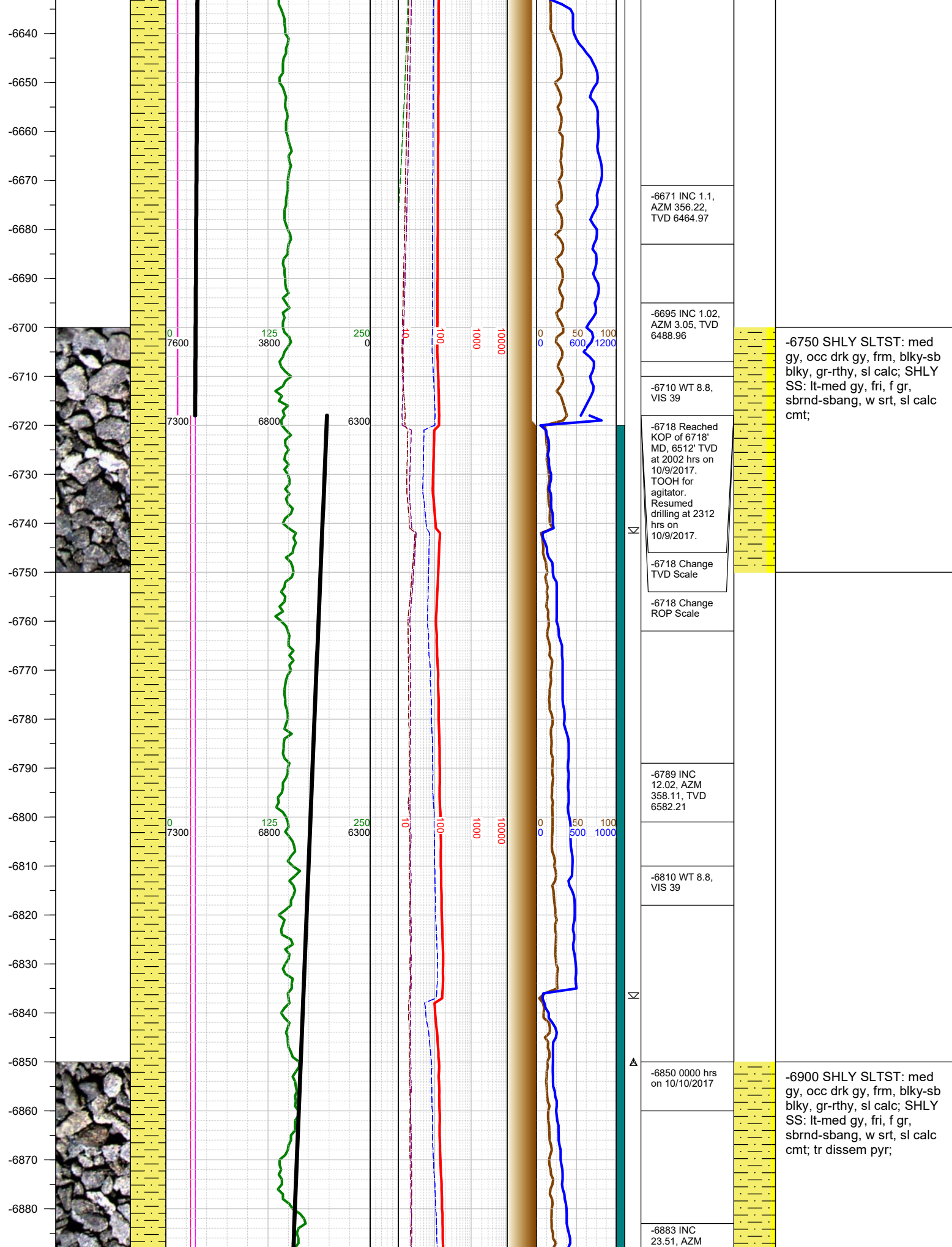


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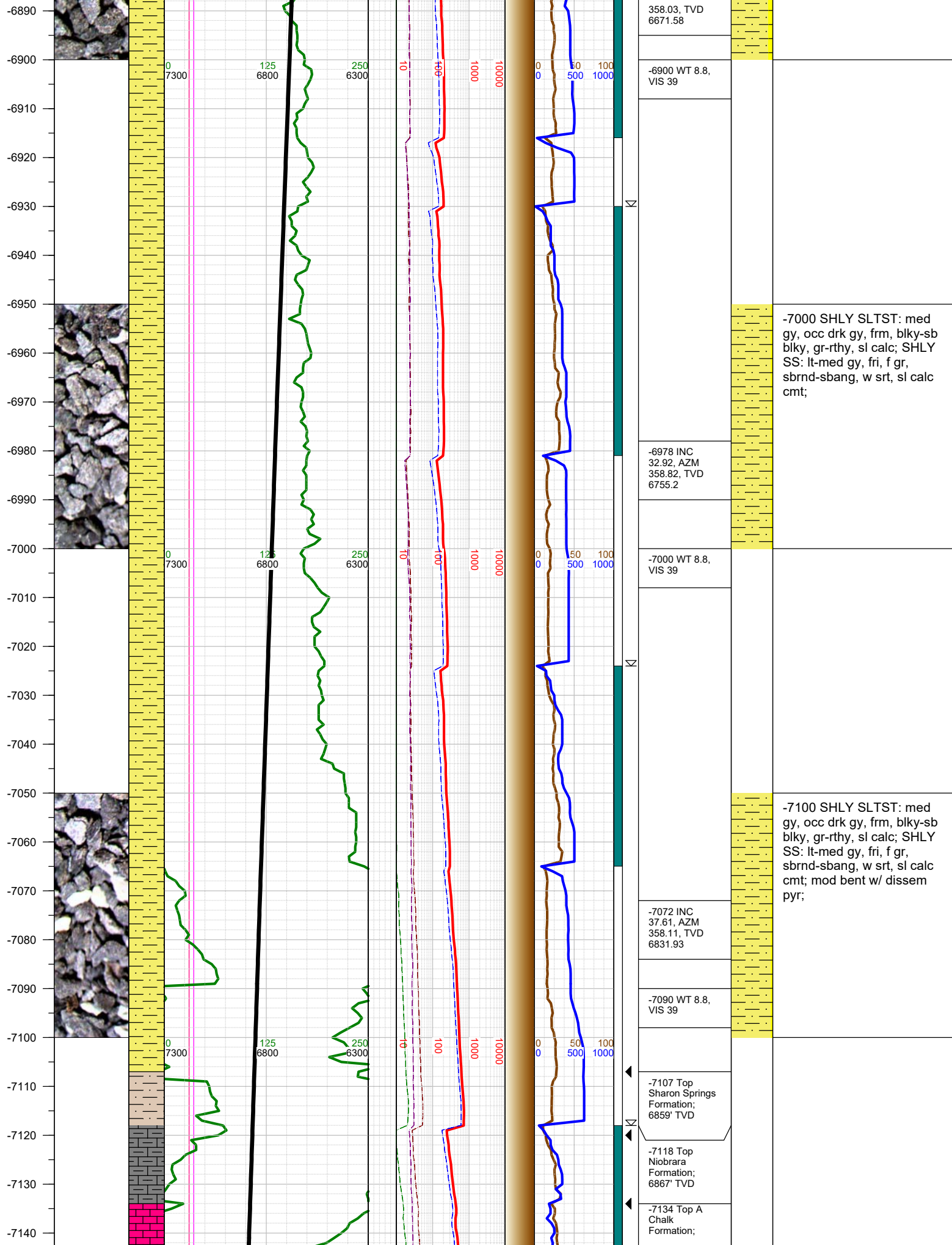


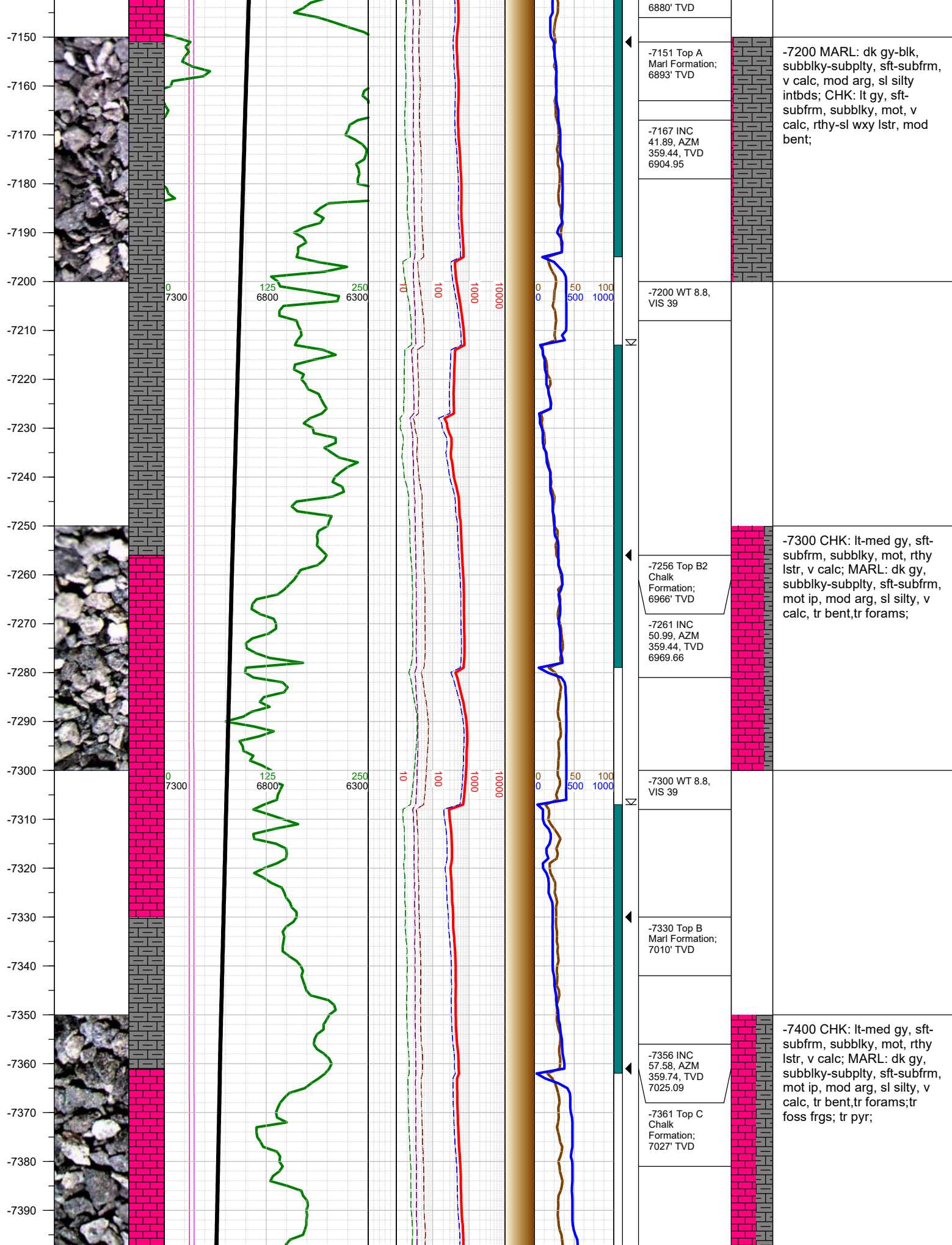


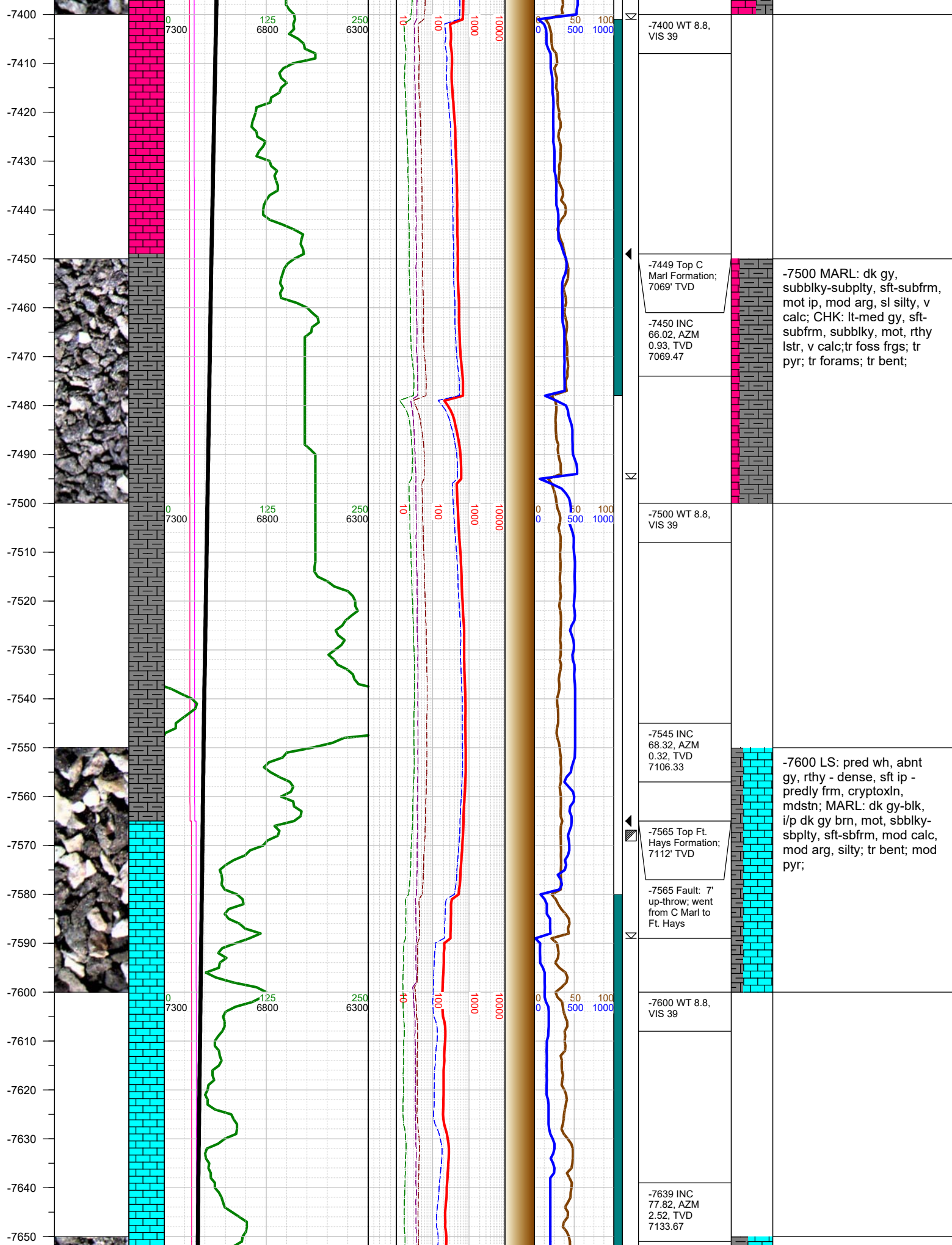




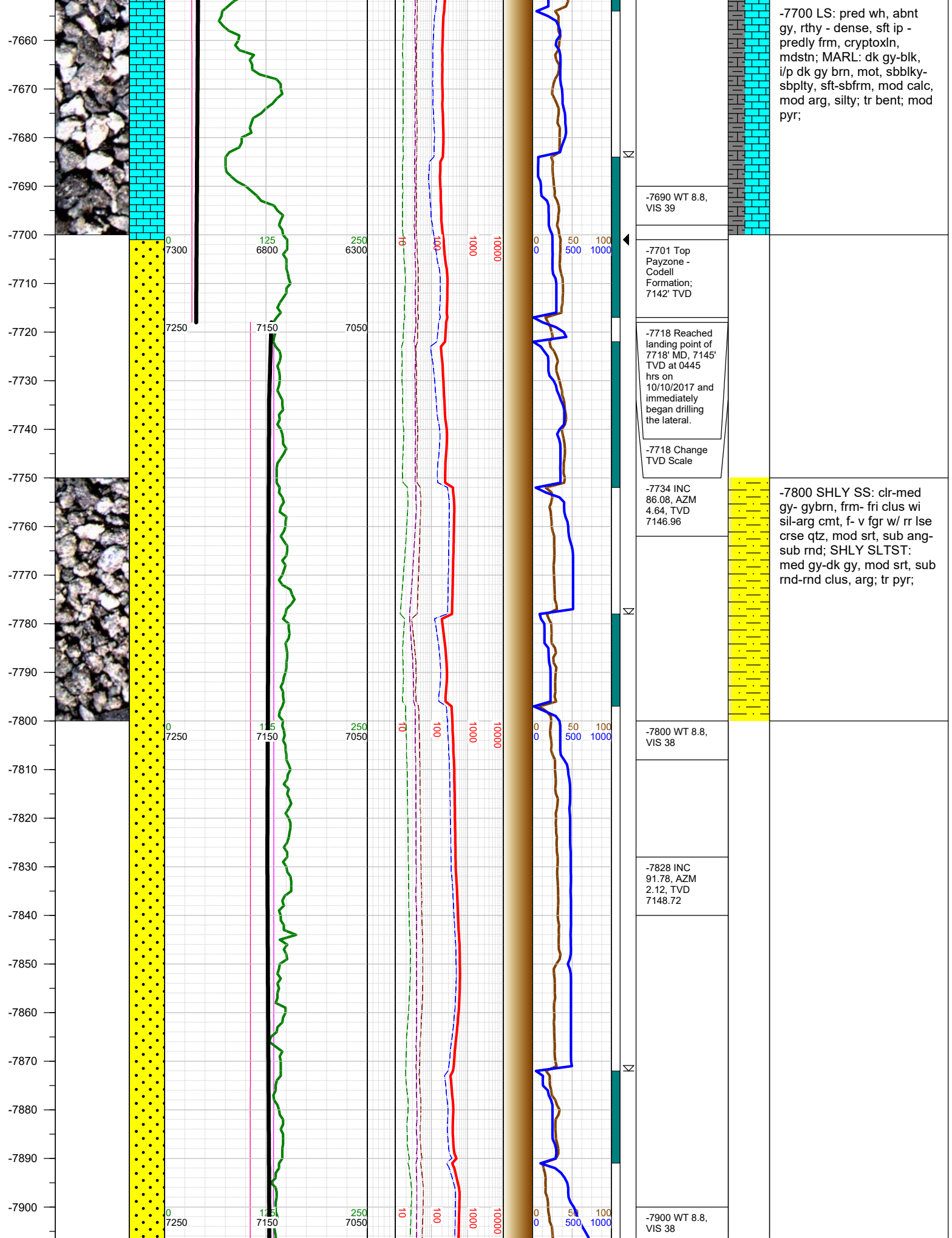




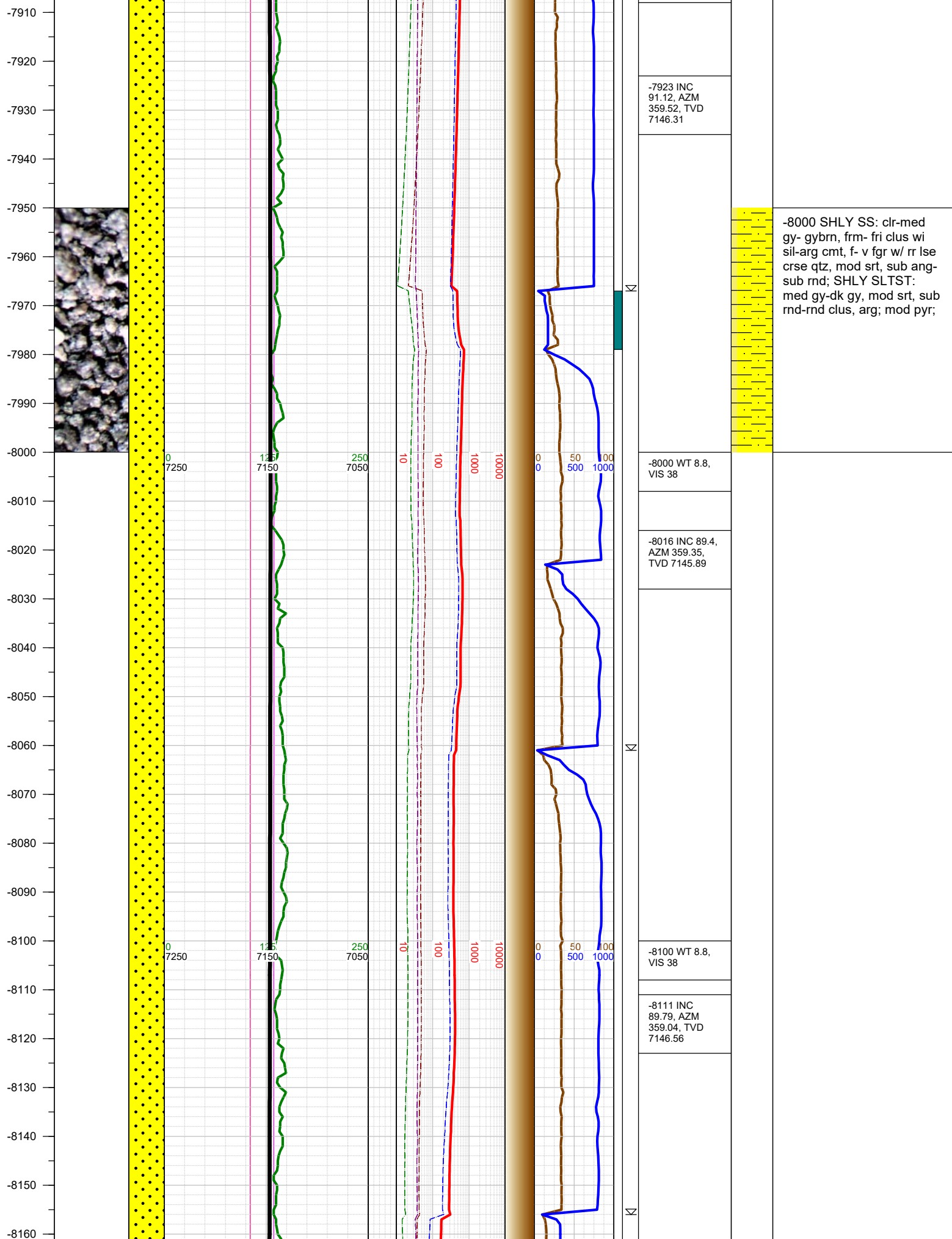


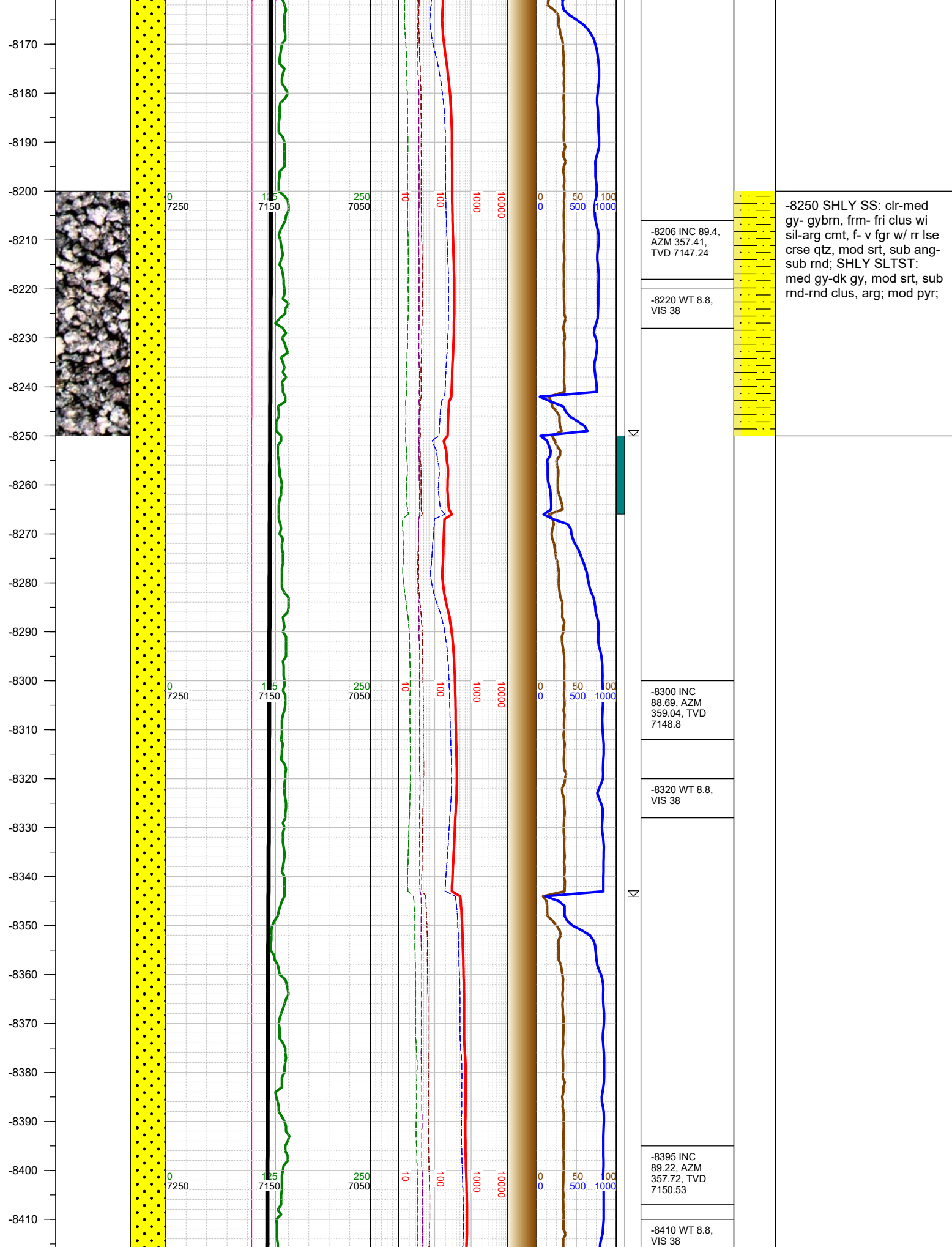




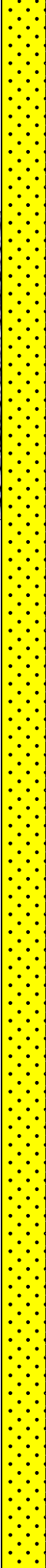
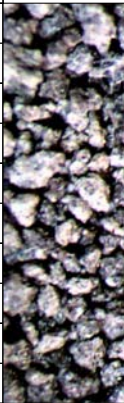








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-8490 INC  
89.62, AZM  
357.72, TVD  
7151.5

-8510 WT 8.8,  
VIS 38

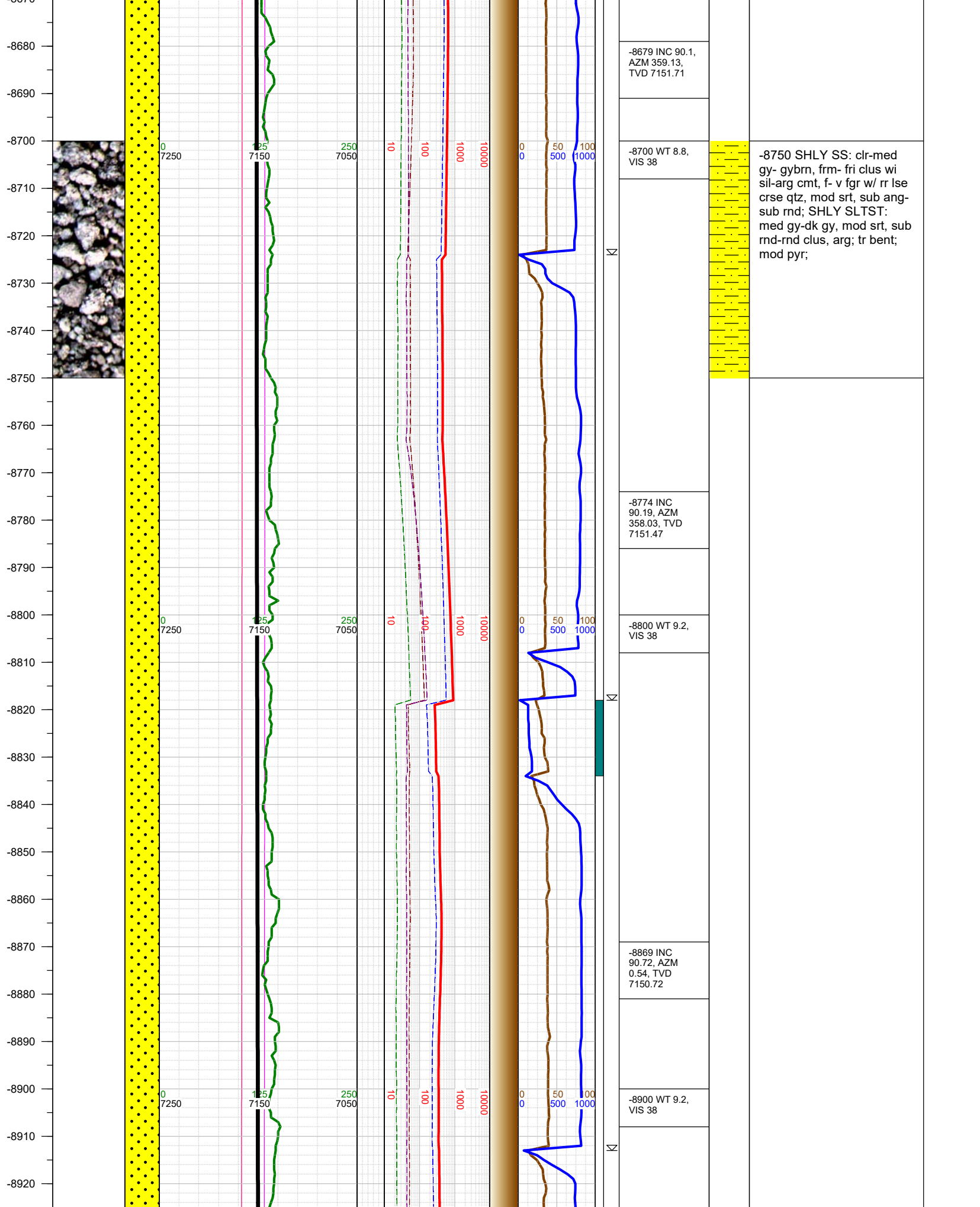
-8585 INC  
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359.92, TVD  
7151.8

-8600 WT 8.8,  
VIS 38

Σ



-8500 SHLY SS: clr-med  
gy- gybrn, frm- fri clus wi  
sil-arg cmt, f- v fgr w/ rr lse  
crse qtz, mod srt, sub ang-  
sub rnd; SHLY SLTST:  
med gy-dk gy, mod srt, sub  
rnd-rnd clus, arg; mod pyr;



-8679 INC 90.1,  
AZM 359.13,  
TVD 7151.71

-8700 WT 8.8,  
VIS 38

-8774 INC  
90.19, AZM  
358.03, TVD  
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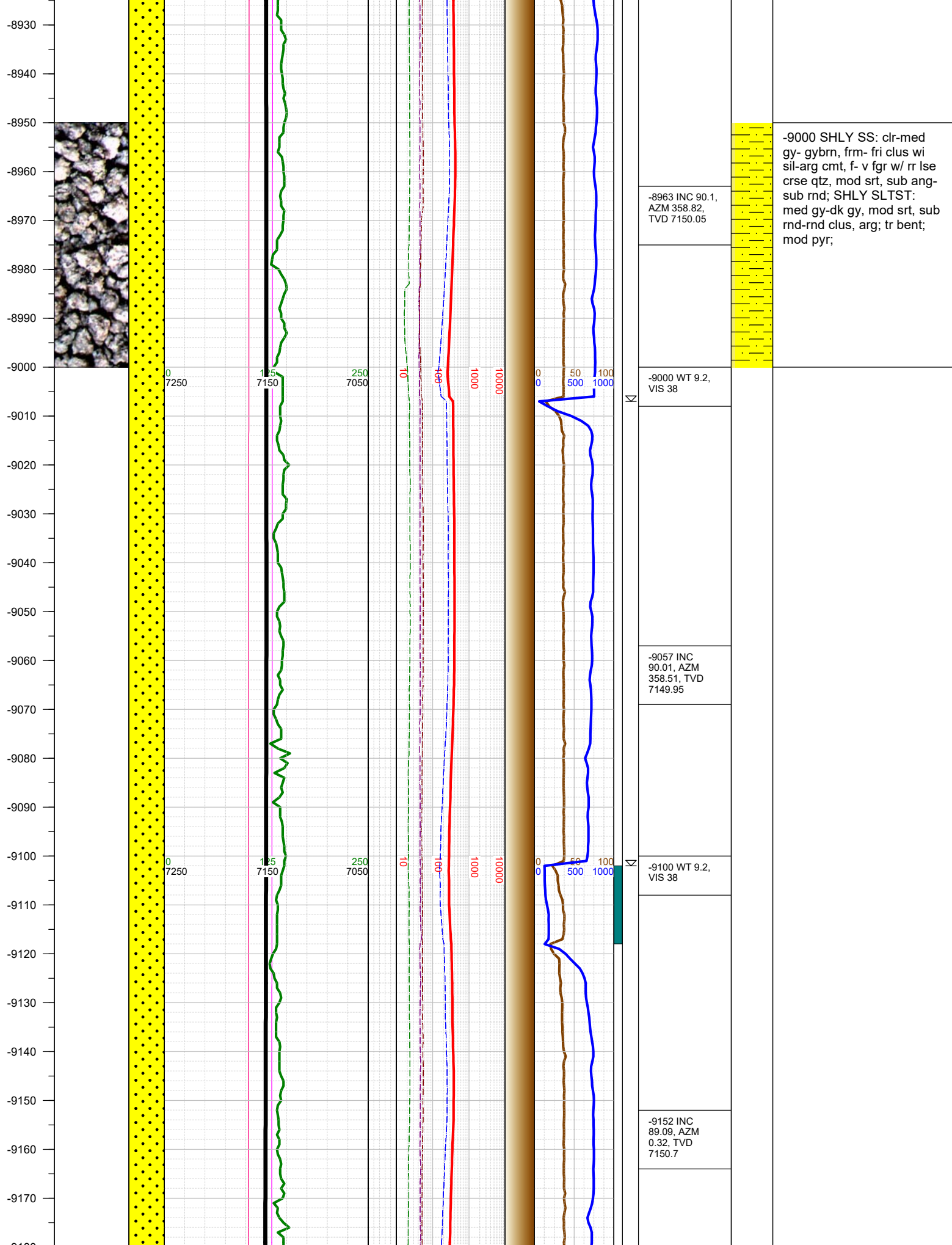
-8800 WT 9.2,  
VIS 38

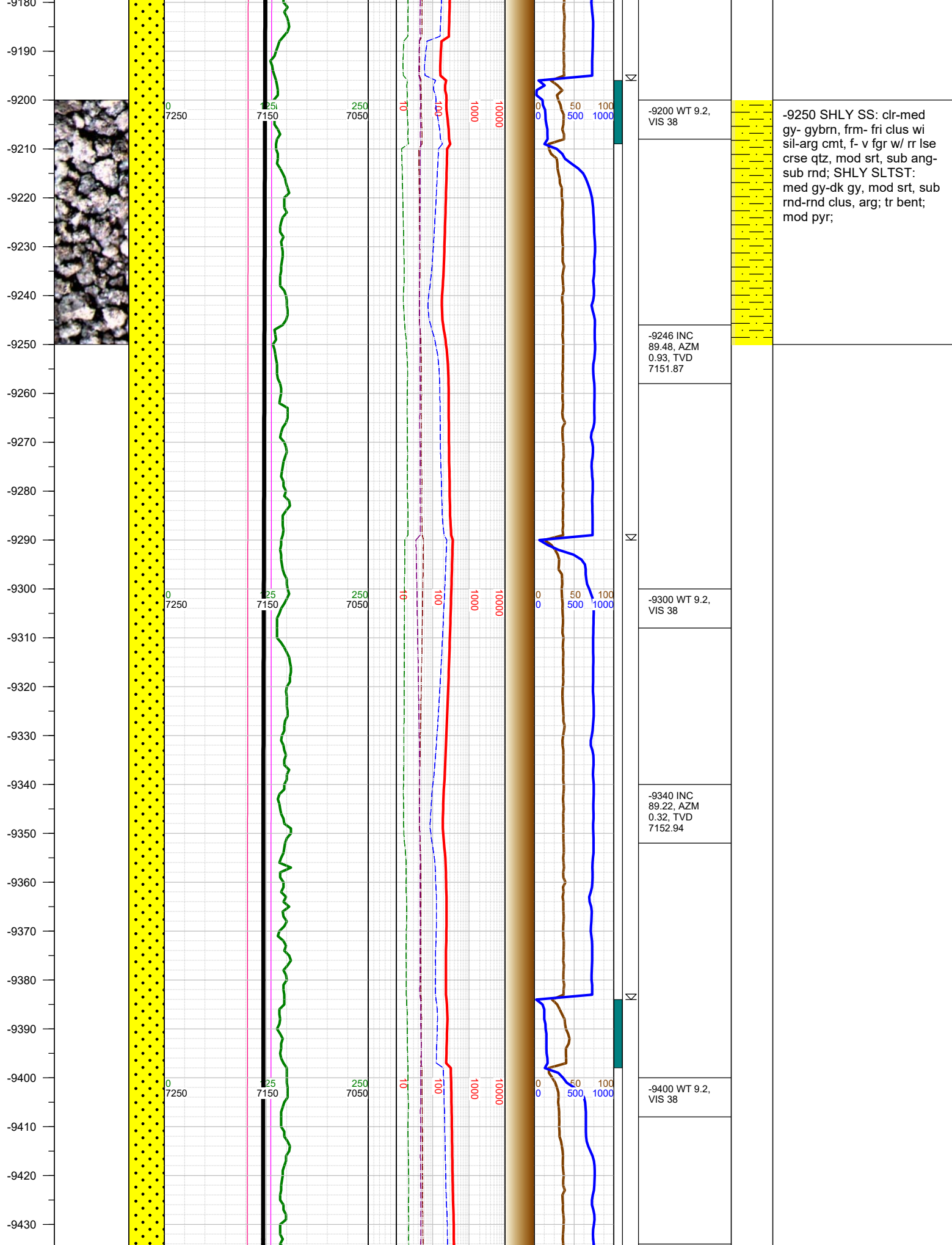
-8869 INC  
90.72, AZM  
0.54, TVD  
7150.72

-8900 WT 9.2,  
VIS 38

-8750 SHLY SS: clr-med  
gy- gybrn, frm- fri clus wi  
sil-arg cmt, f- v fgr w/ rr lse  
crse qtz, mod srt, sub ang-  
sub rnd; SHLY SLTST:  
med gy-dk gy, mod srt, sub  
rnd-rnd clus, arg; tr bent;  
mod pyr;

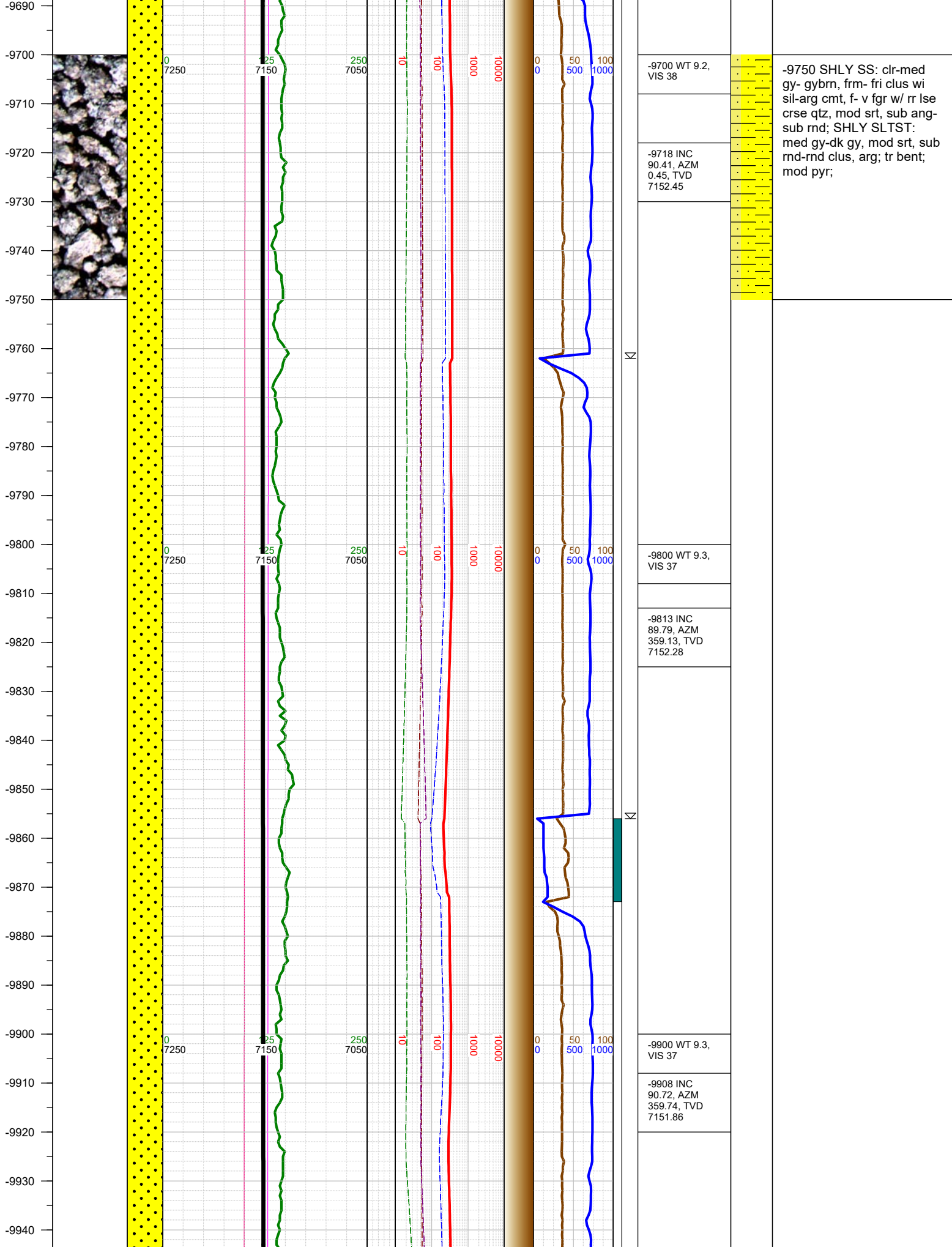




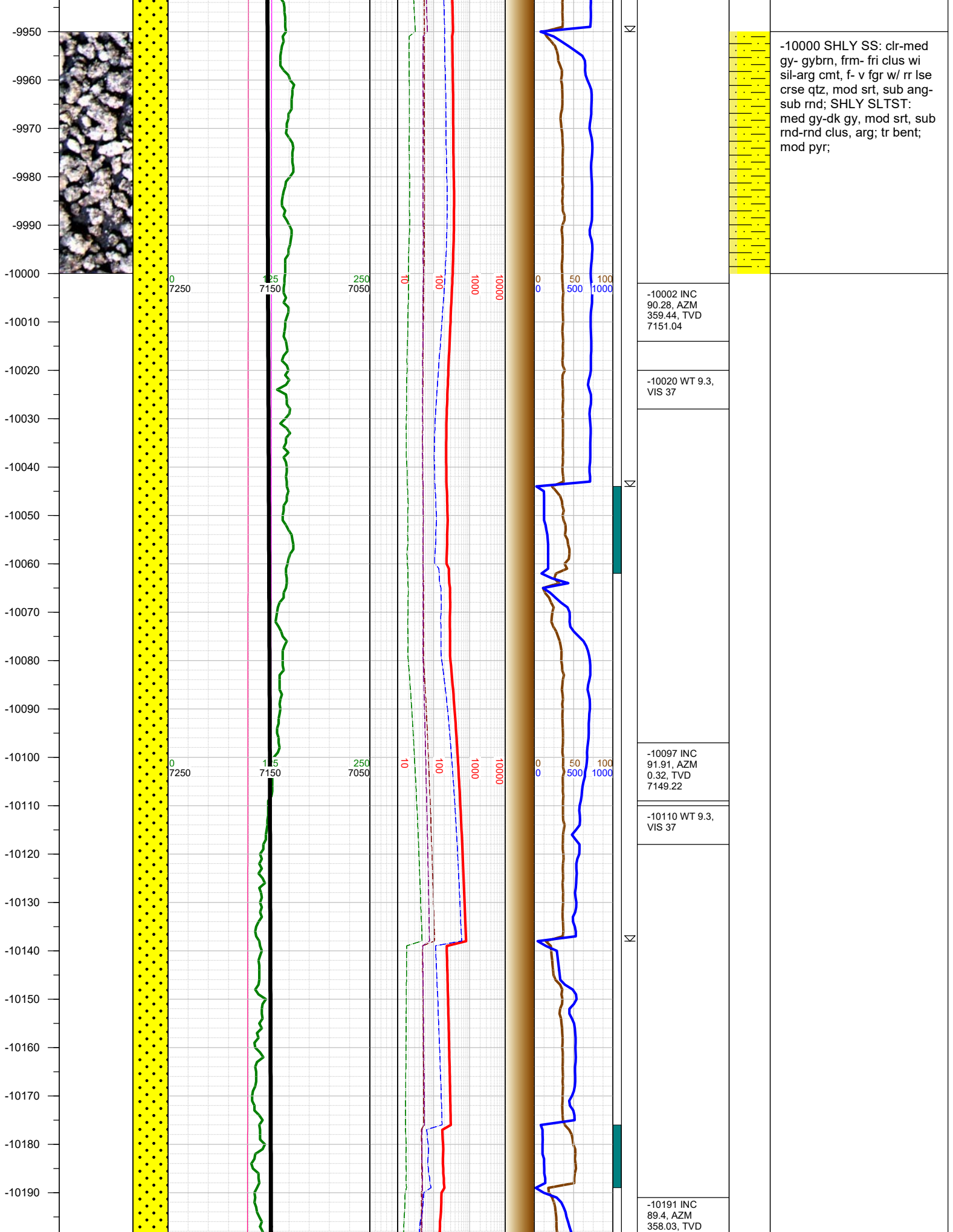


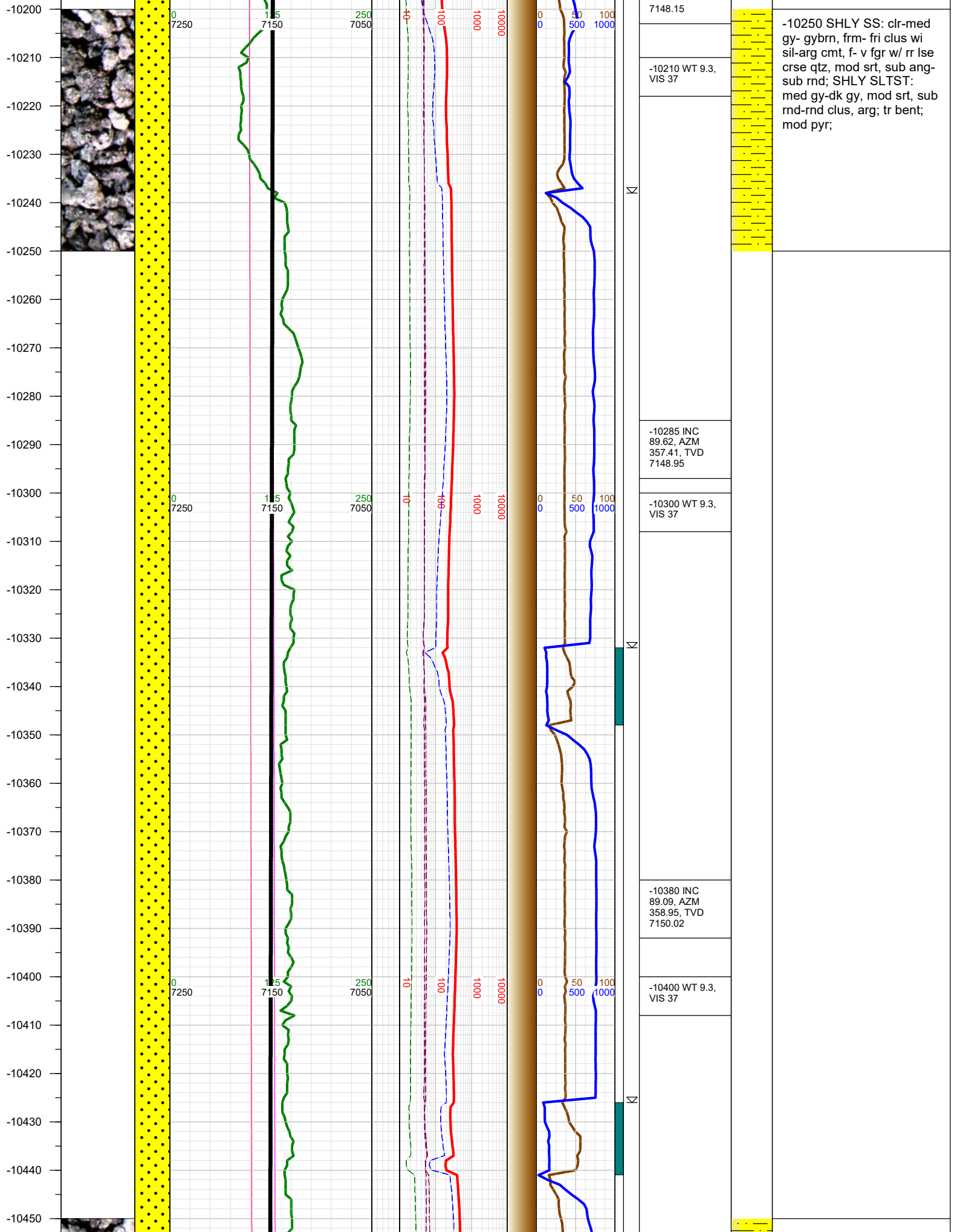


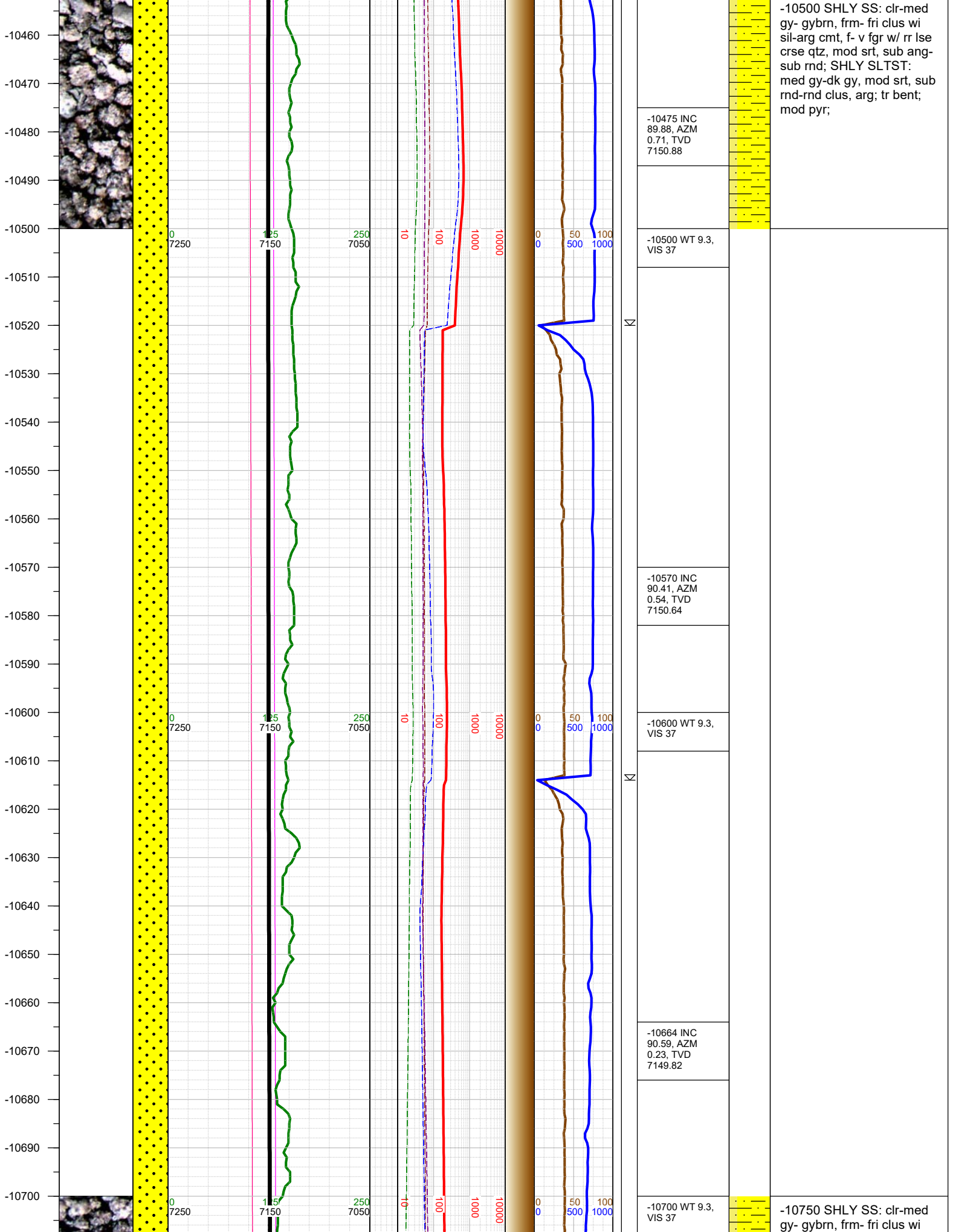


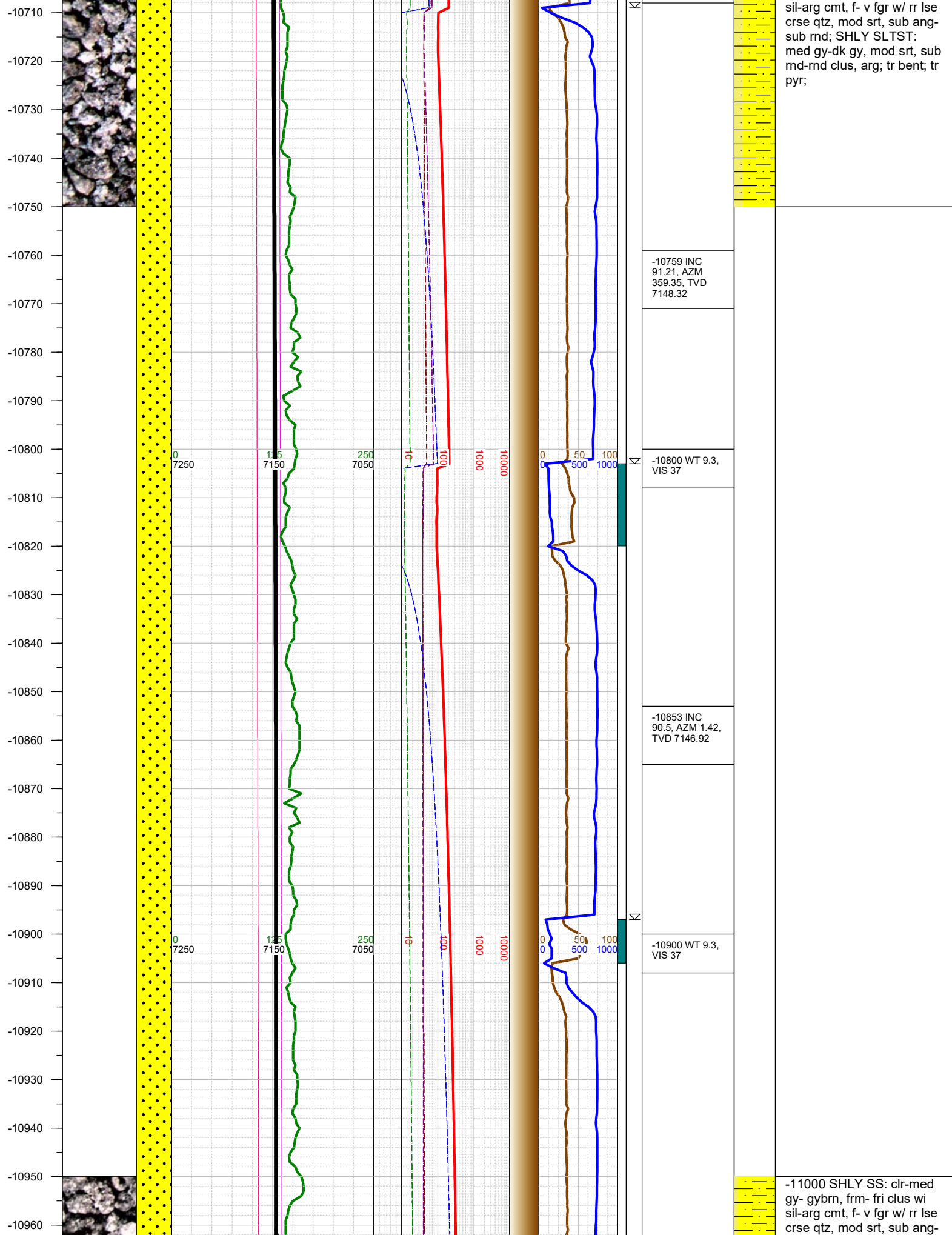




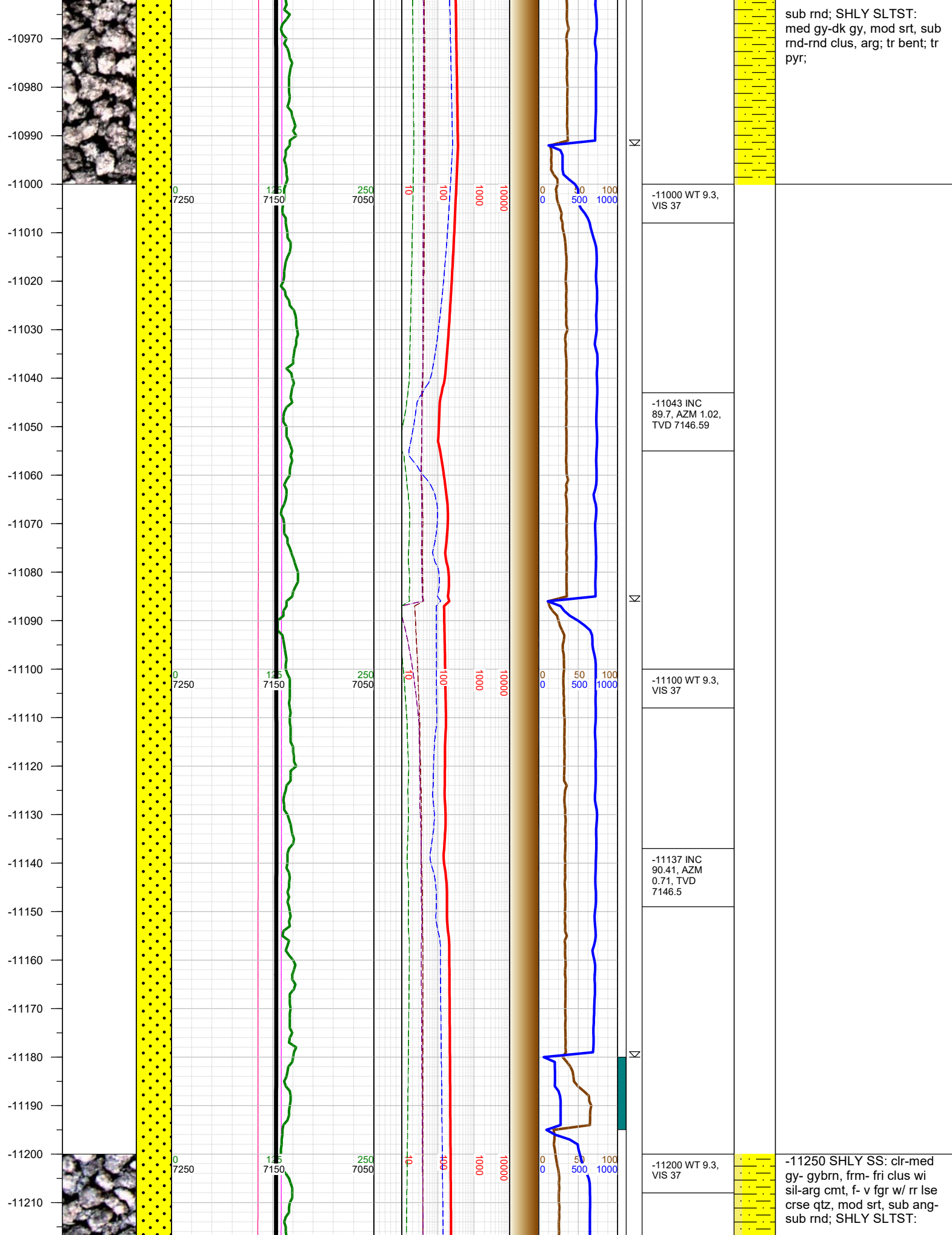




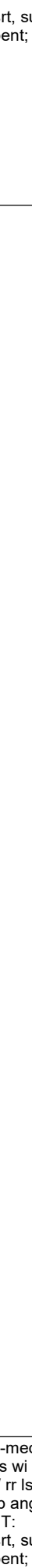
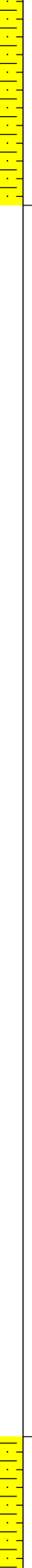
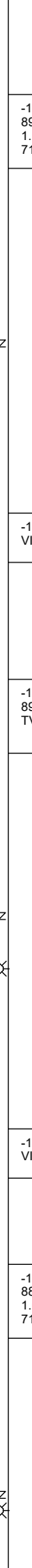
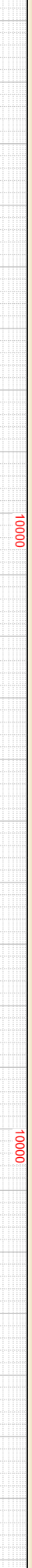
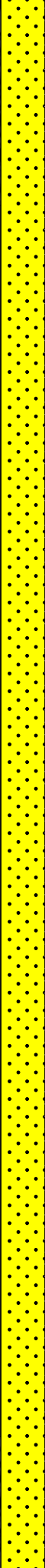
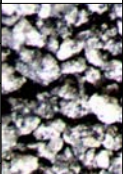








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-11232 INC  
89.09, AZM  
1.11, TVD  
7146.91

-11300 WT 9.3,  
VIS 37

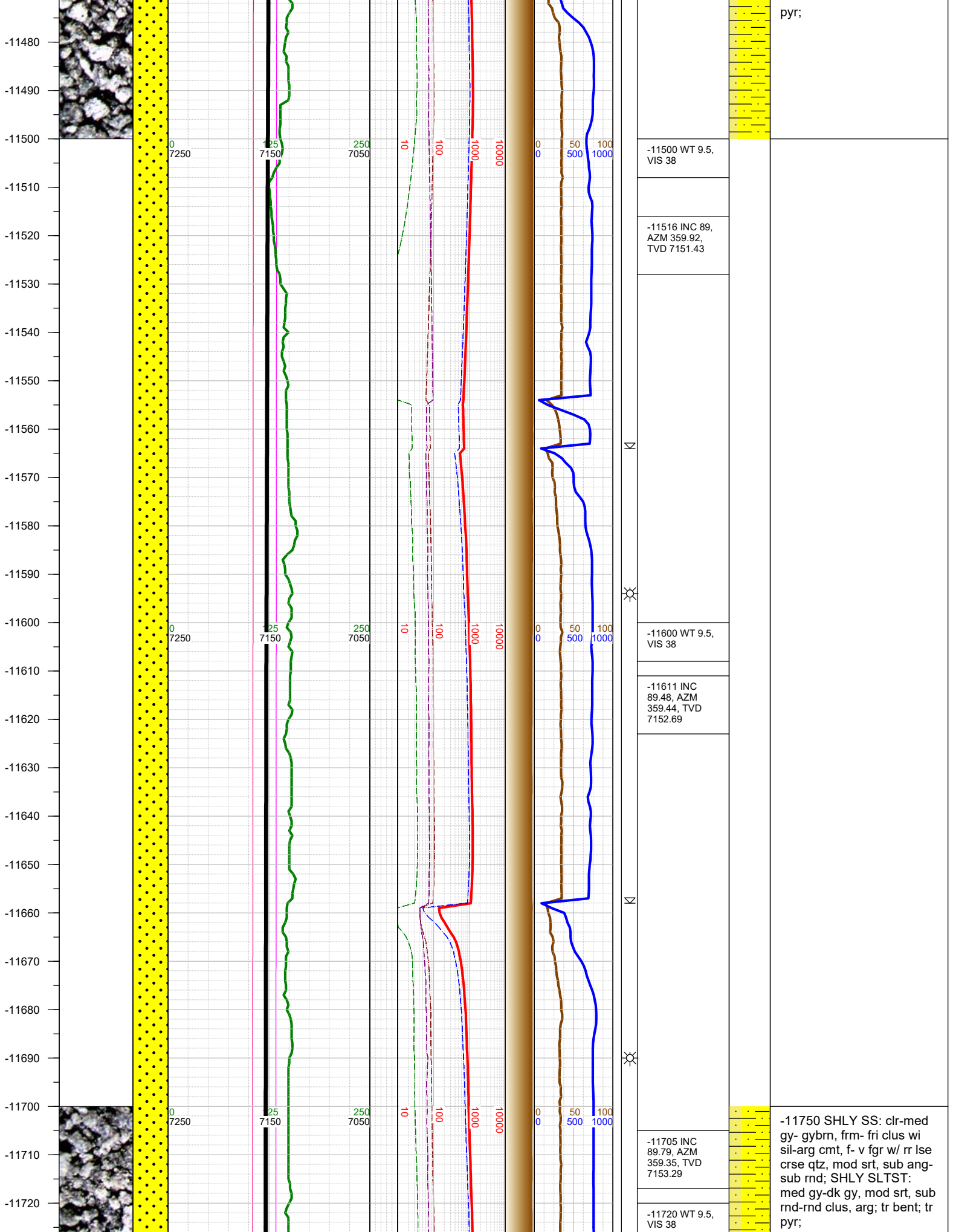
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89.4, AZM 0.71,  
TVD 7148.17

-11400 WT 9.5,  
VIS 38

-11422 INC  
88.82, AZM  
1.02, TVD  
7149.64

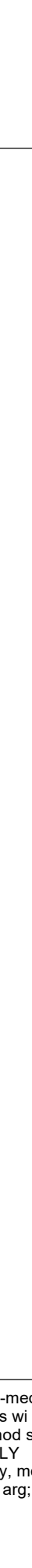
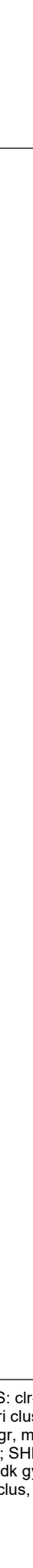
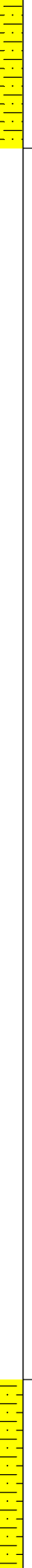
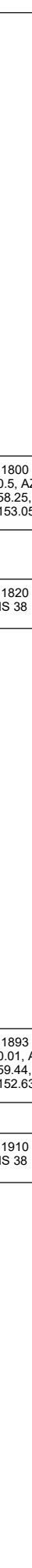
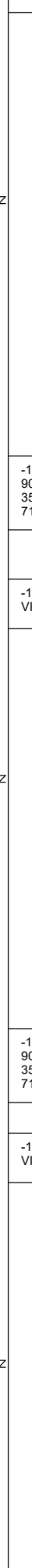
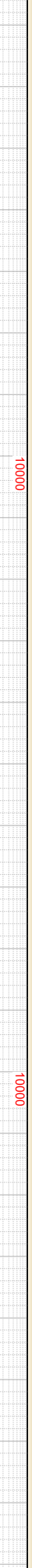
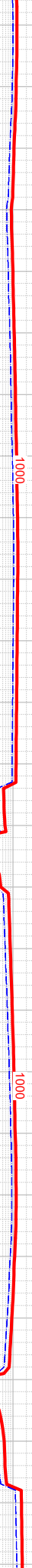
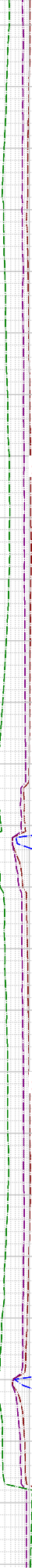
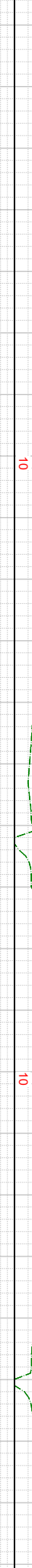
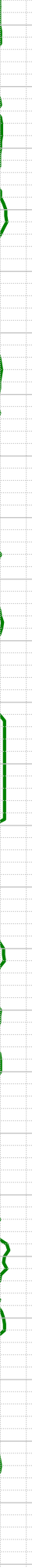
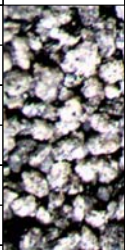
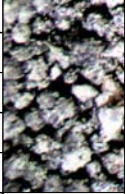
med gy-dk gy, mod srt, sub  
rnd-rnd clus, arg; tr bent; tr  
pyr;

-11500 SHLY SS: clr-med  
gy- gybrn, frm- fri clus wi  
sil-arg cmt, f- v fgr w/ rr lse  
crse qtz, mod srt, sub ang-  
sub rnd; SHLY SLTST:  
med gy-dk gy, mod srt, sub  
rnd-rnd clus, arg; tr bent; tr





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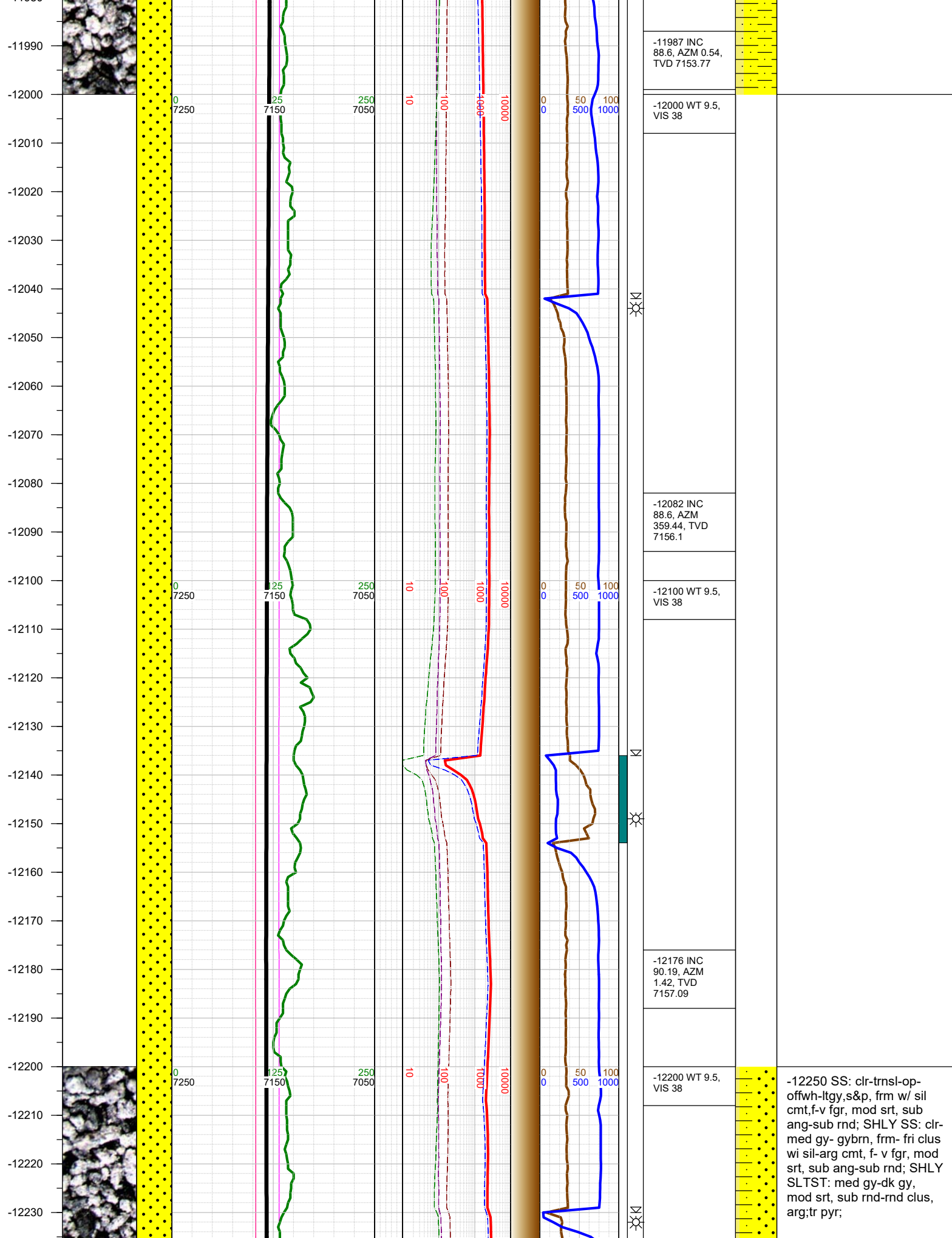
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90.5, AZM  
358.25, TVD  
7153.05

-11820 WT 9.5,  
VIS 38

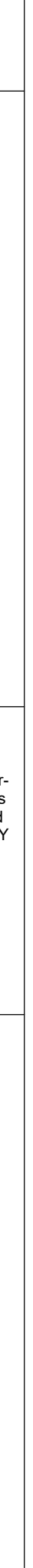
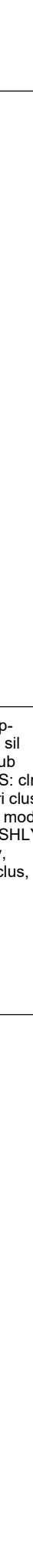
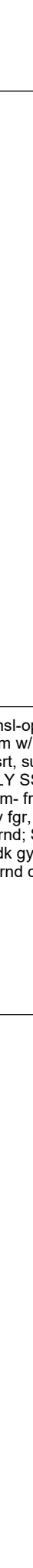
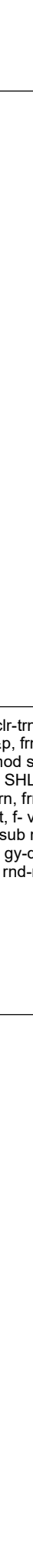
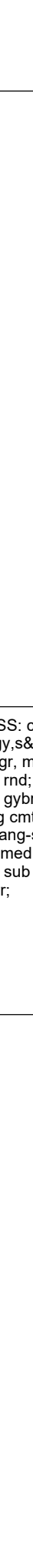
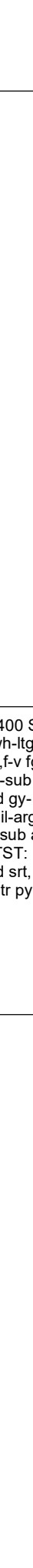
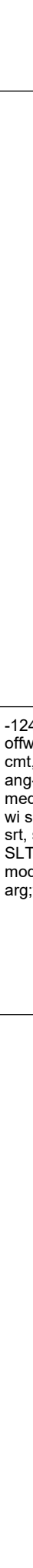
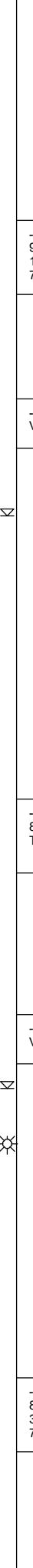
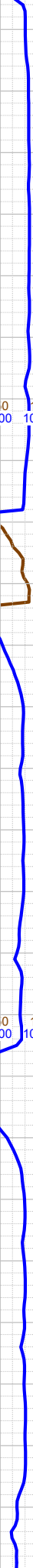
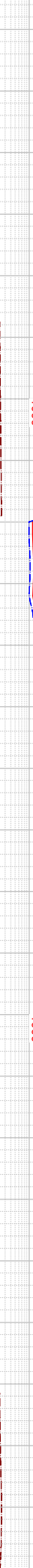
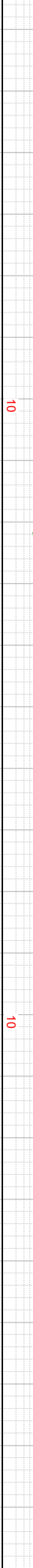
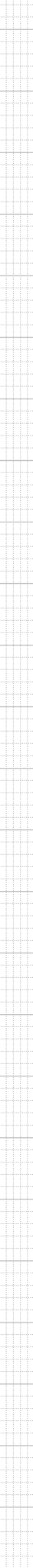
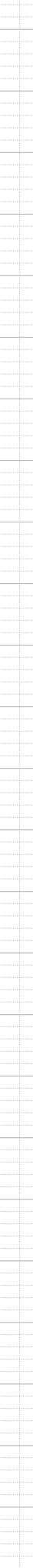
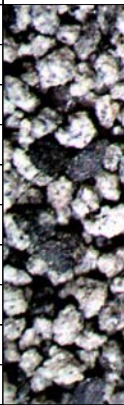
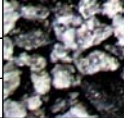
-11893 INC  
90.01, AZM  
359.44, TVD  
7152.63

-11910 WT 9.5,  
VIS 38

-12000 SHLY SS: clr-med  
gy- gybrn, frm- fri clus wi  
sil-arg cmt, f- v fgr, mod srt,  
sub ang-sub rnd; SHLY  
SLTST: med gy-dk gy, mod  
srt, sub rnd-rnd clus, arg;  
tr pyr;



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-12271 INC  
90.72, AZM  
1.42, TVD  
7156.33

-12300 WT 9.5,  
VIS 38

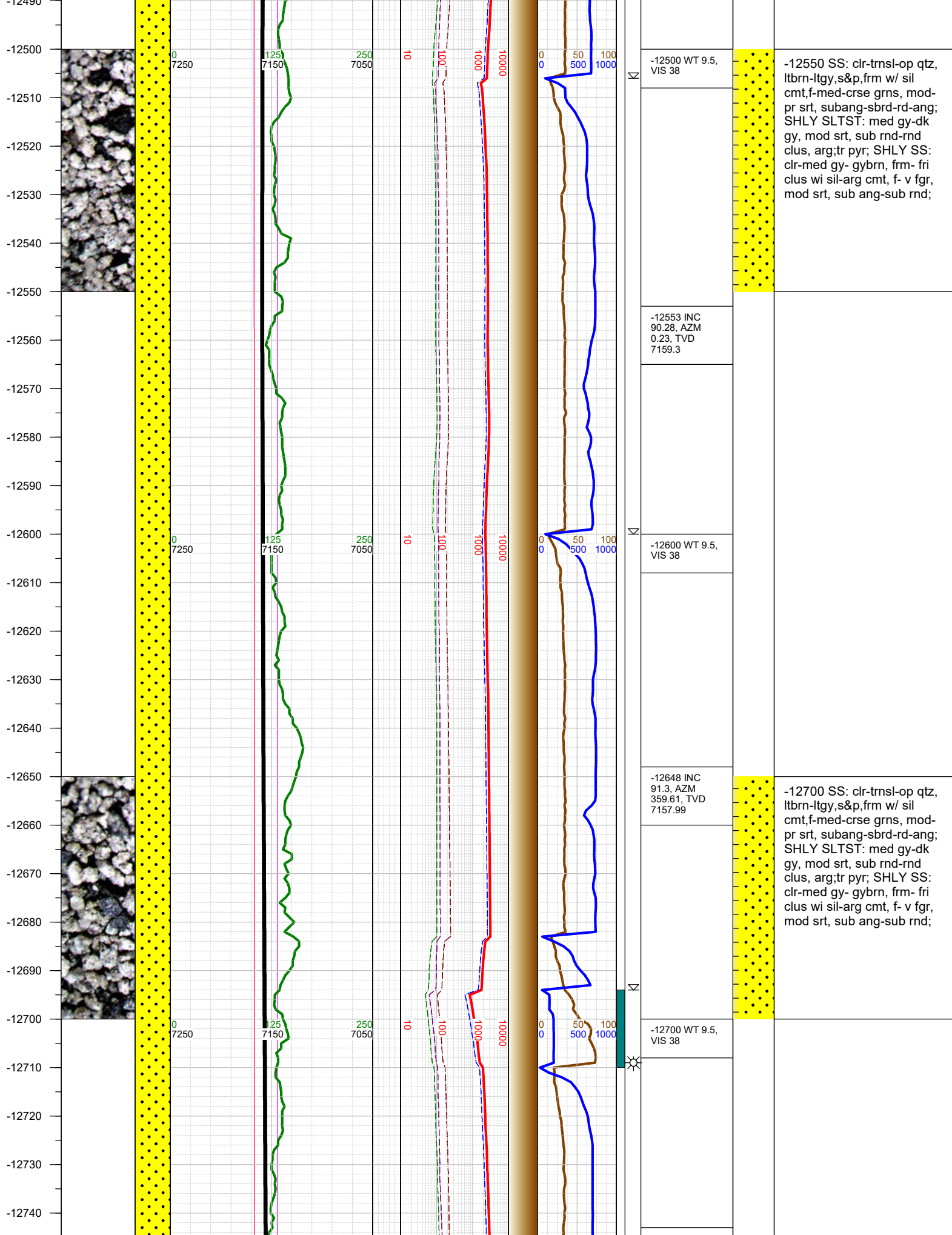
-12365 INC  
88.6, AZM 0.45,  
TVD 7156.89

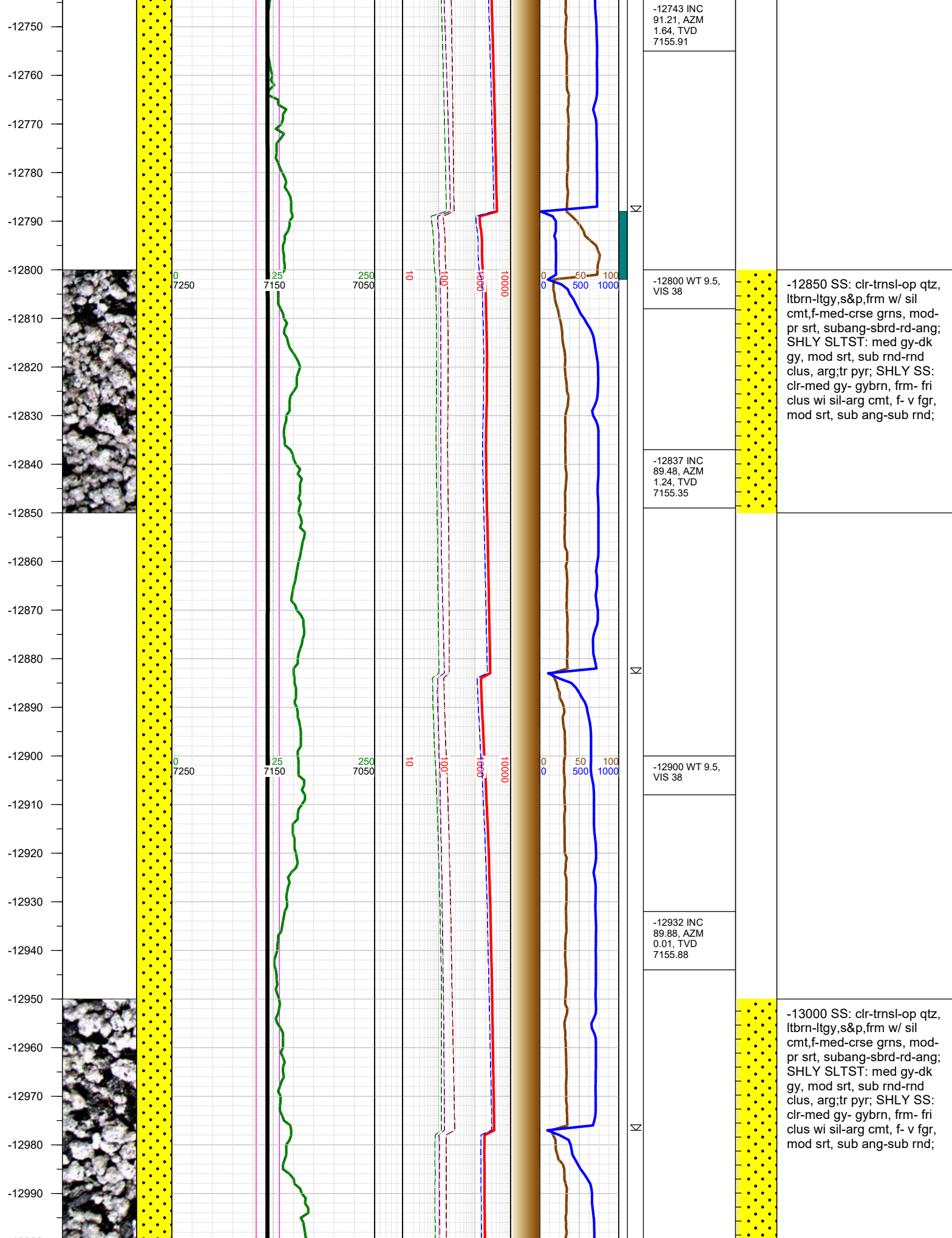
-12400 WT 9.5,  
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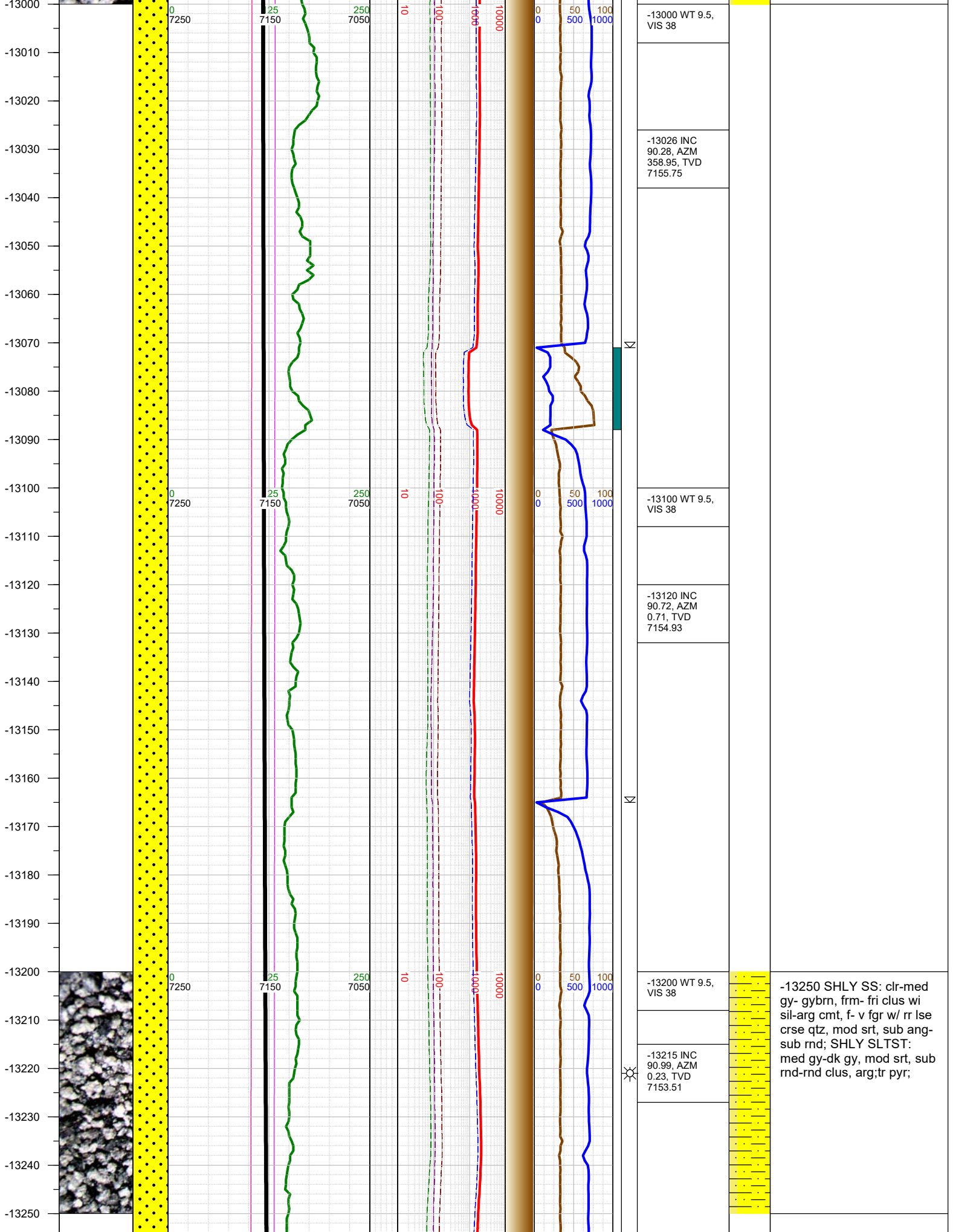
-12459 INC  
89.09, AZM  
359.92, TVD  
7158.79

-12400 SS: clr-trnsl-op-  
offwh-ltgy,s&p, frm w/ sil  
cmt,f-v fgr, mod srt, sub  
ang-sub rnd; SHLY SS: clr-  
med gy- gybrn, frm- fri clus  
wi sil-arg cmt, f- v fgr, mod  
srt, sub ang-sub rnd; SHLY  
SLTST: med gy-dk gy,  
mod srt, sub rnd-rnd clus,  
arg;tr pyr;



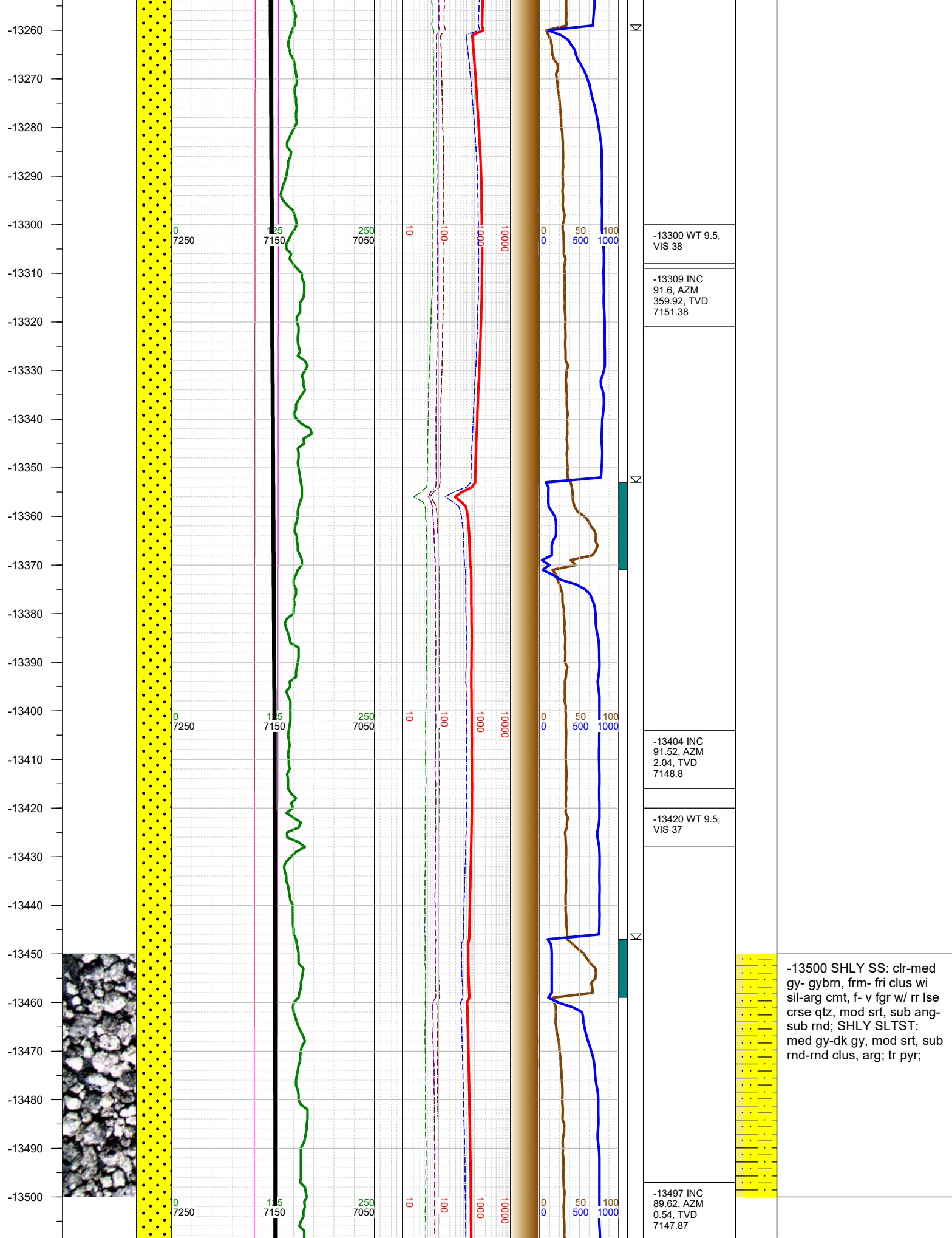


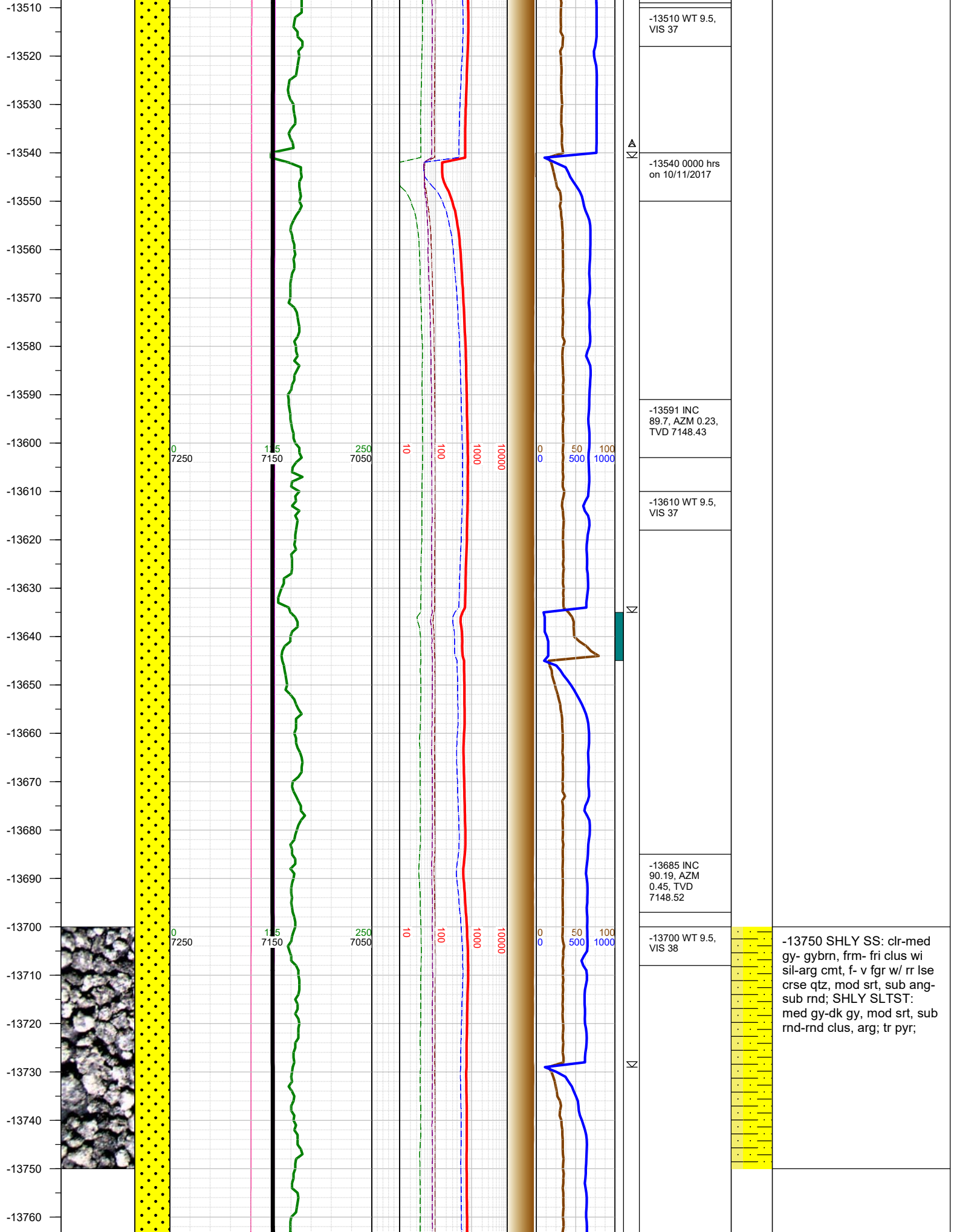


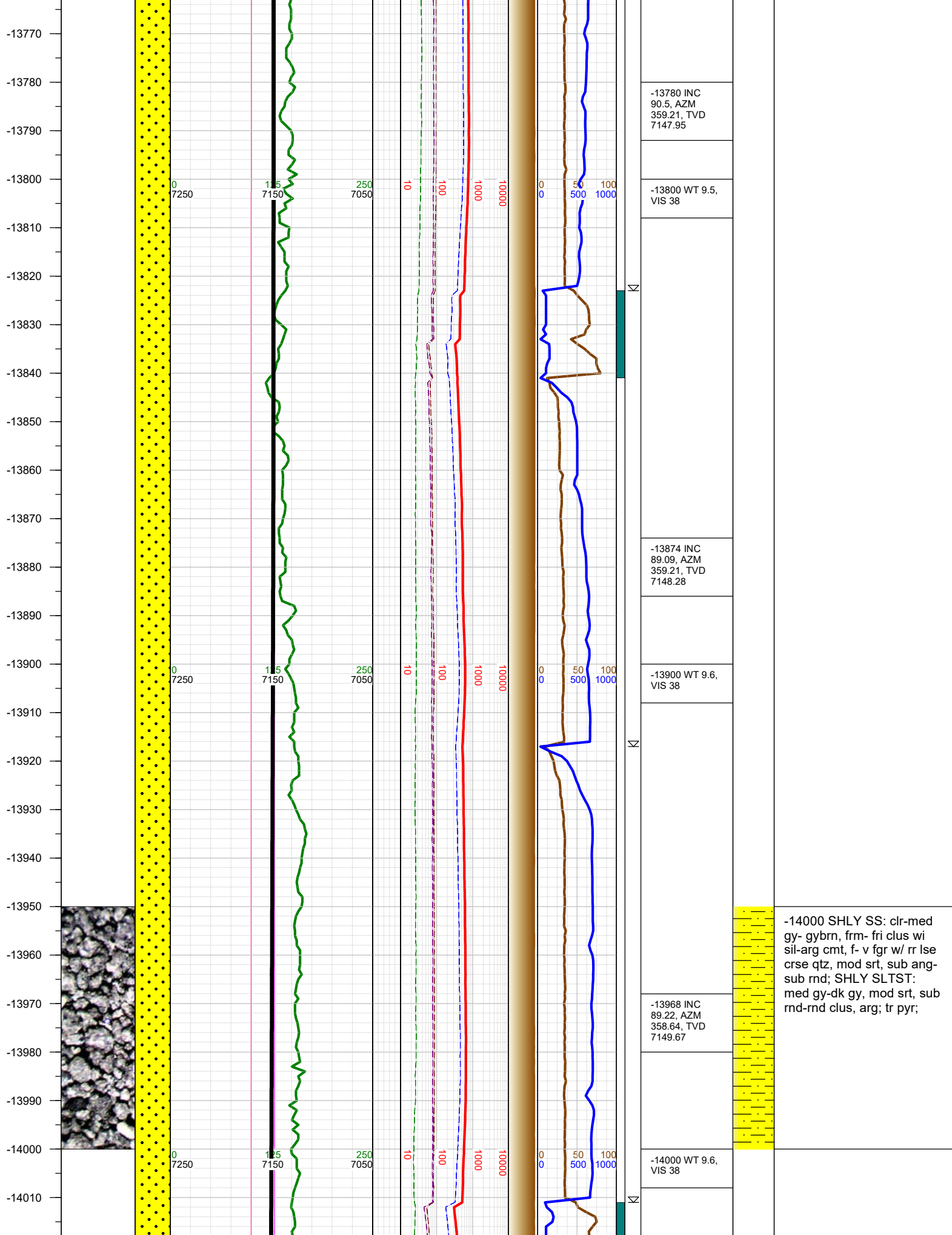


-13250 SHLY SS: clr-med gy- gybrn, frm- fri clus wi sil-arg cmt, f- v fgr w/ rr lse crse qtz, mod srt, sub ang-sub rnd; SHLY SLTST: med gy-dk gy, mod srt, sub rnd-rnd clus, arg;tr pyr;



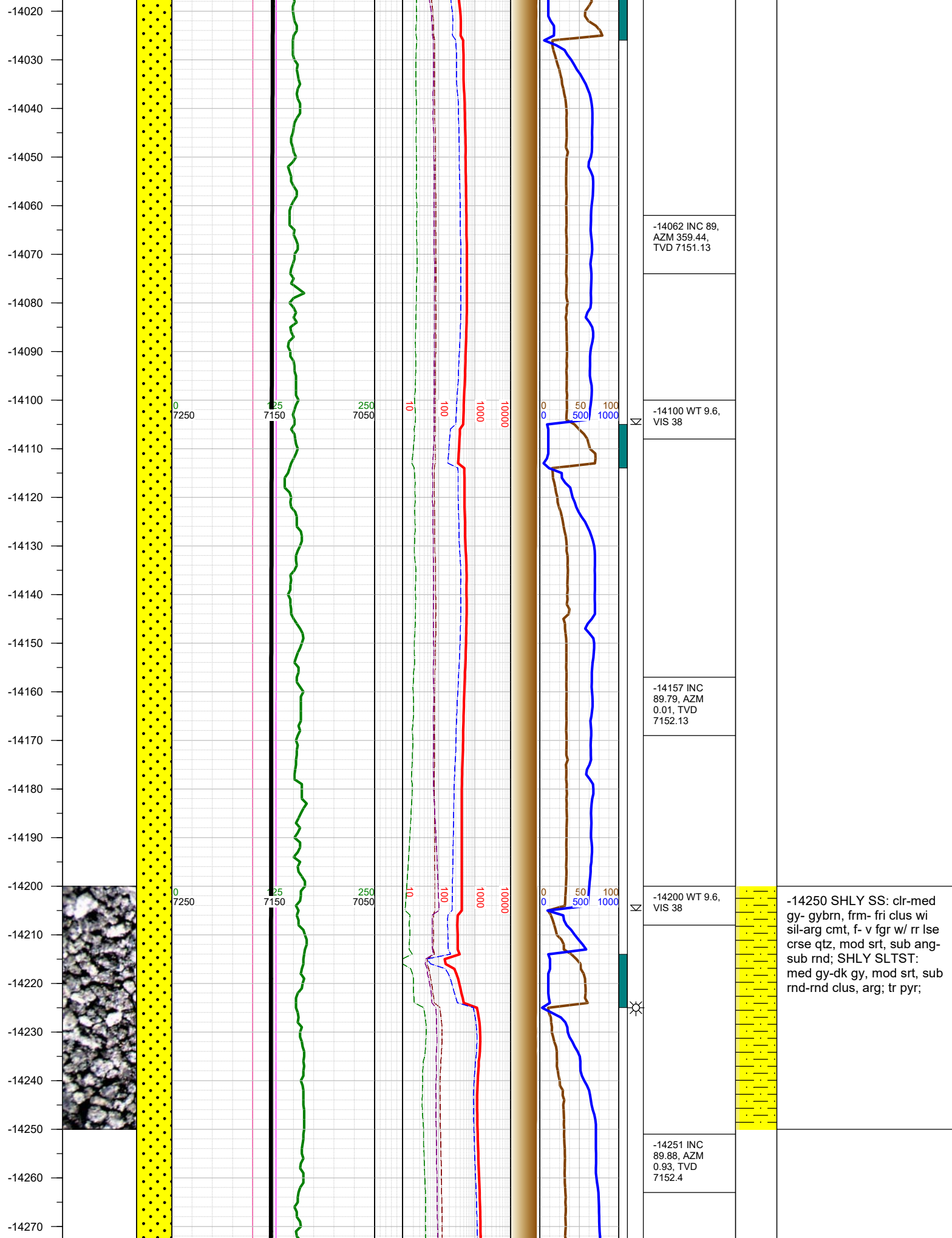


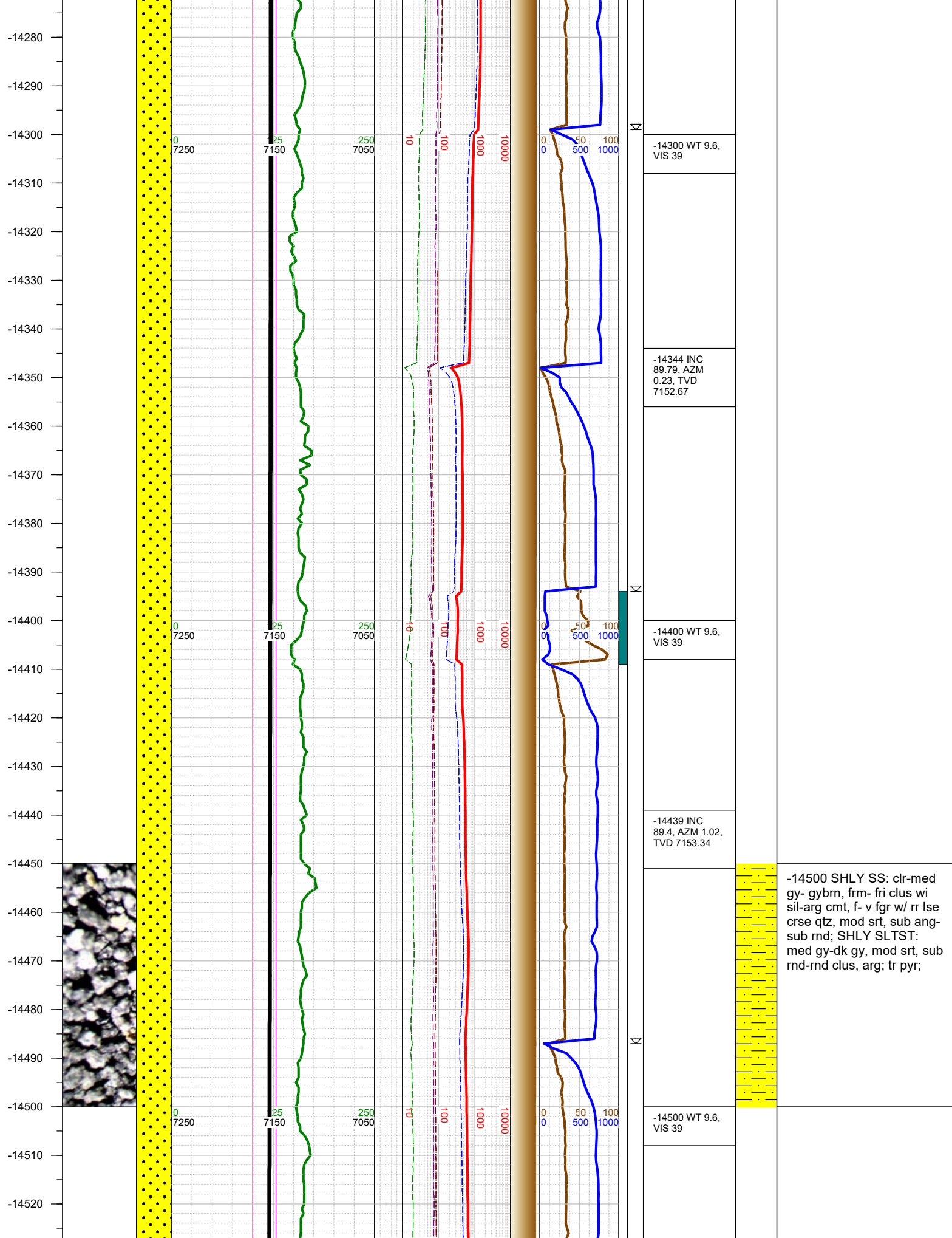


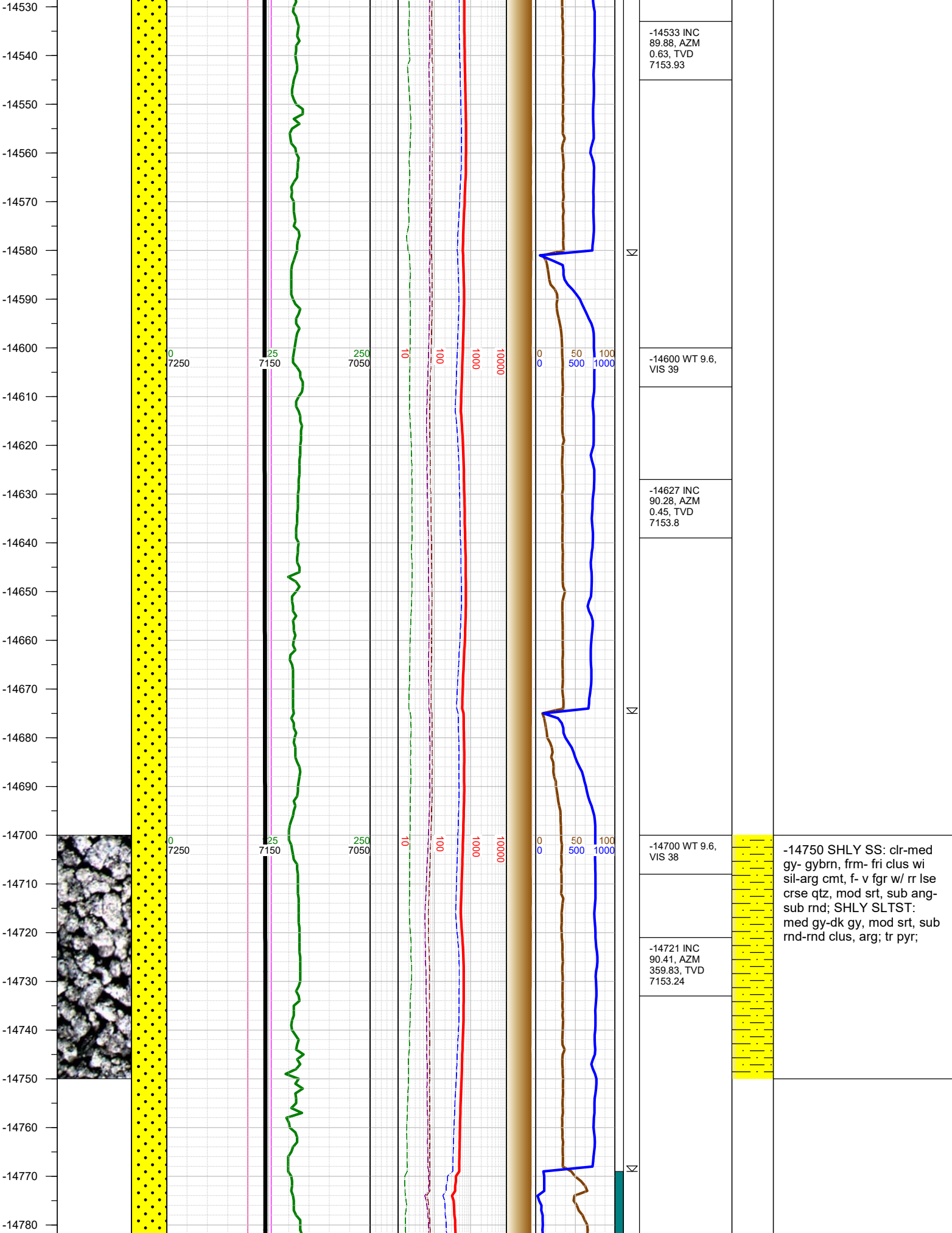


-14000 SHLY SS: clr-med gy- gybrn, frm- fri clus wi sil-arg cmt, f- v fgr w/ rr lse crse qtz, mod srt, sub ang-sub rnd; SHLY SLTST: med gy-dk gy, mod srt, sub rnd-rnd clus, arg; tr pyr;

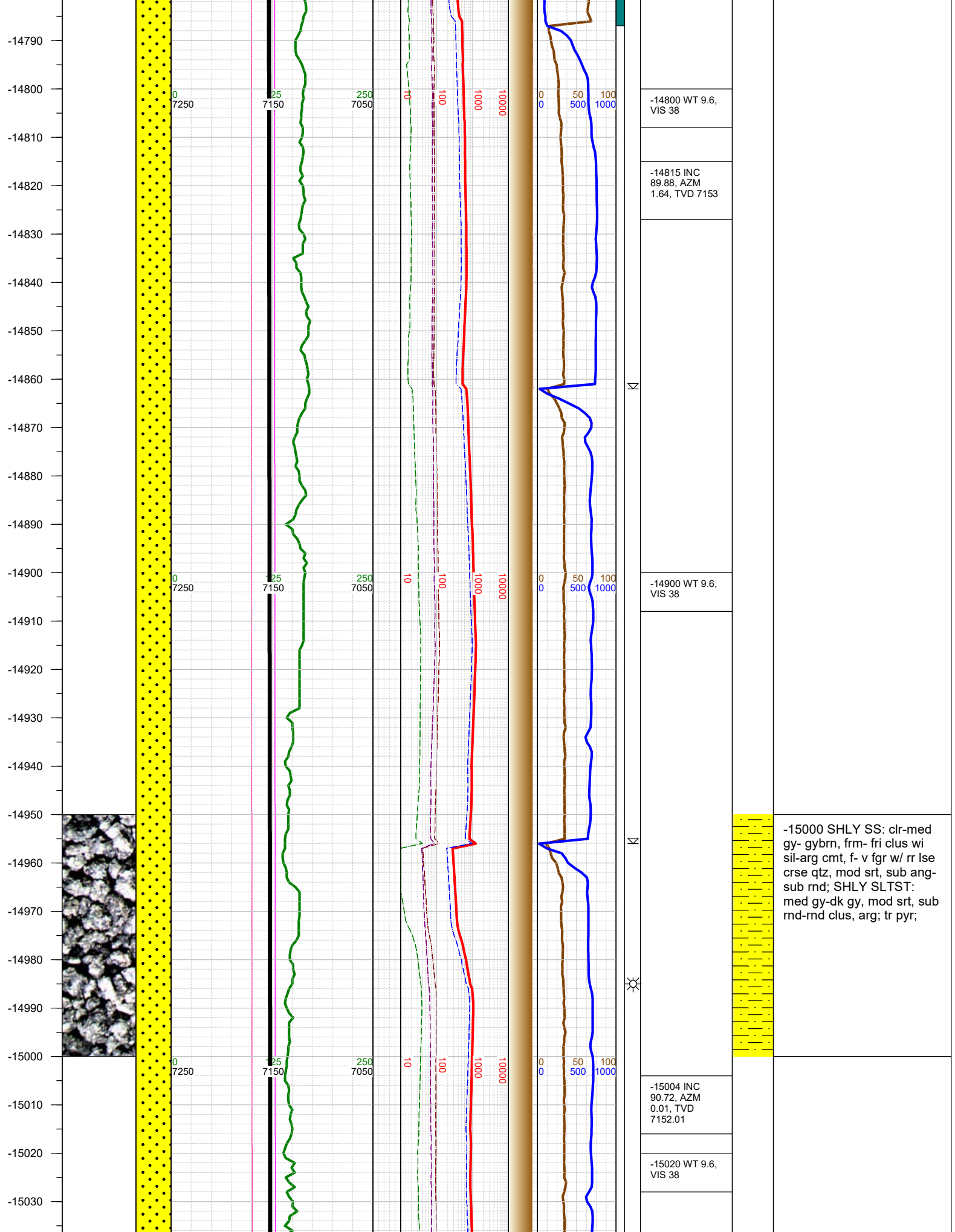


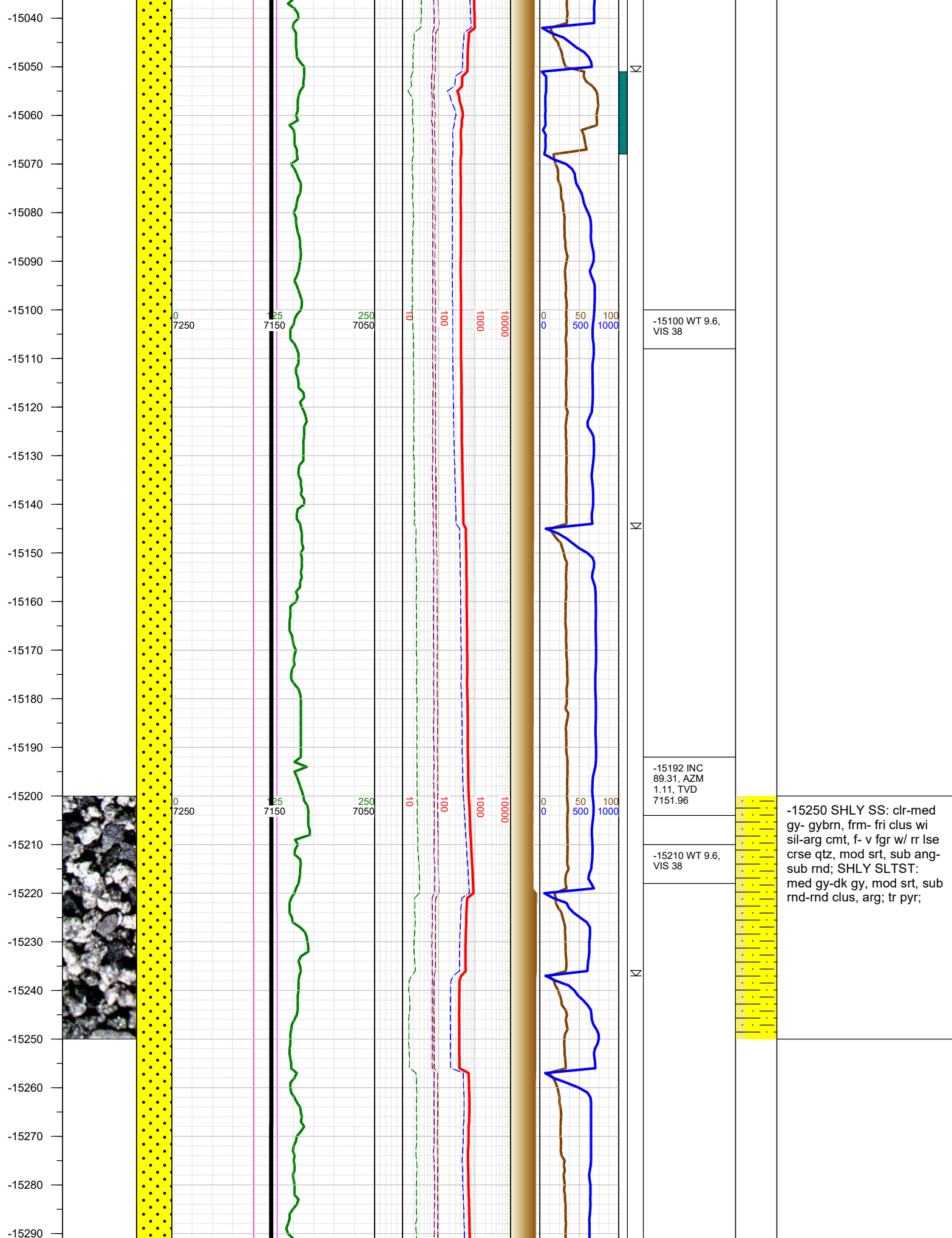


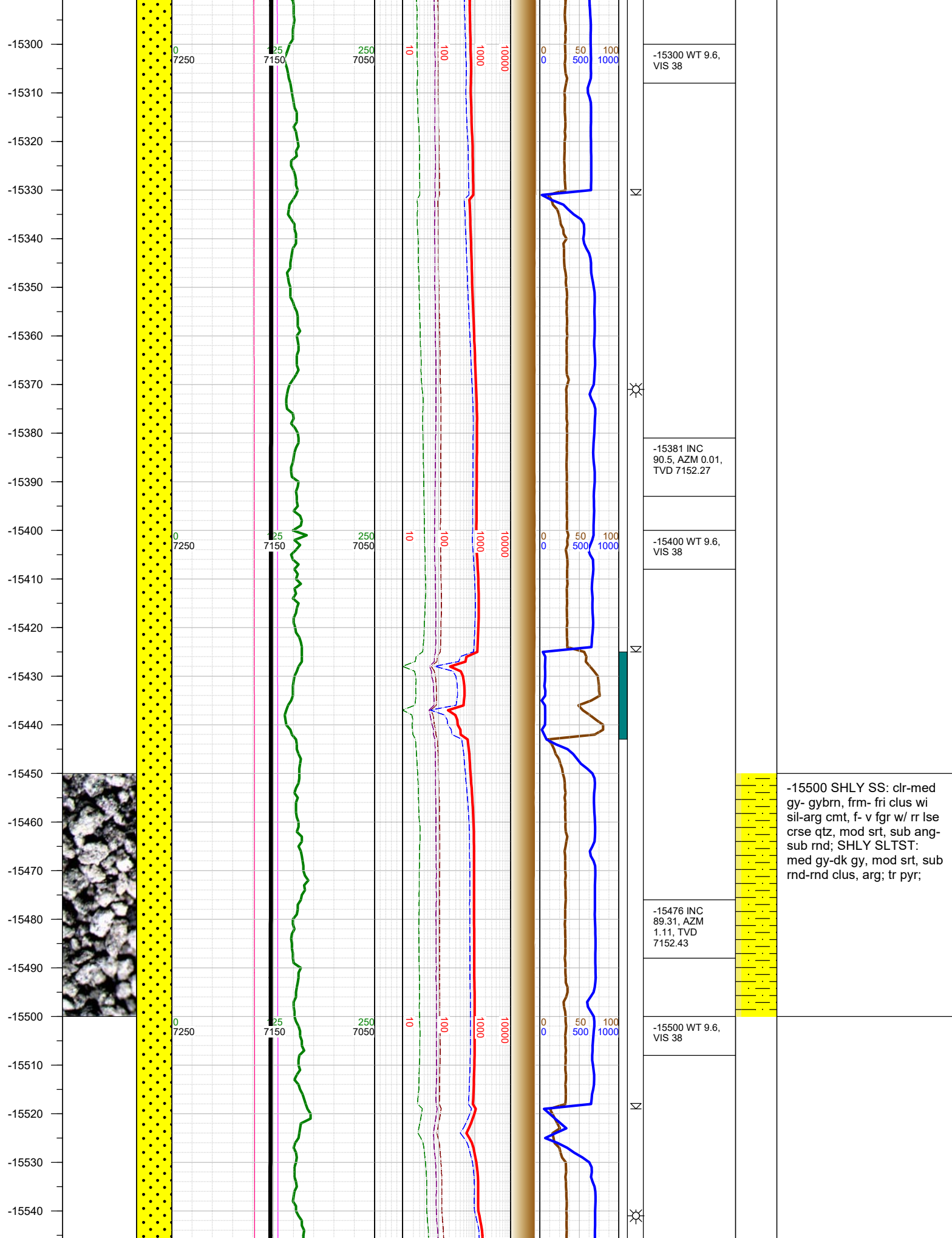






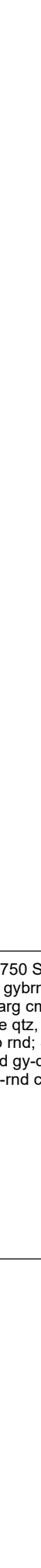
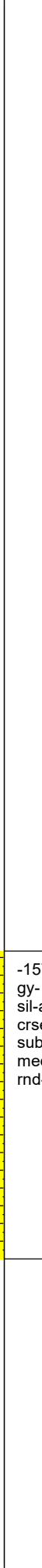
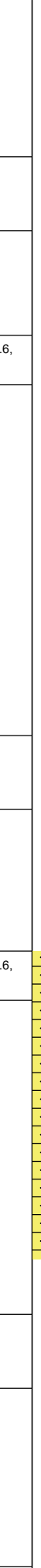
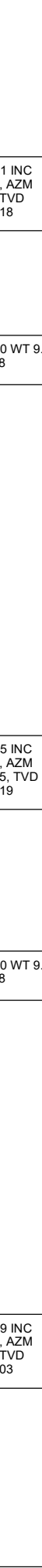
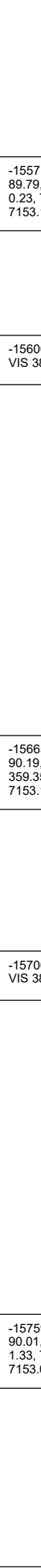
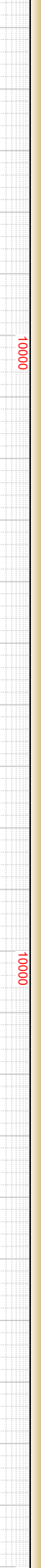
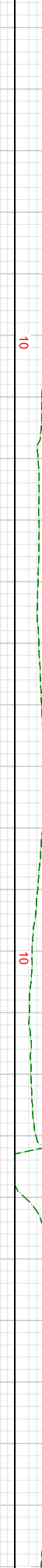
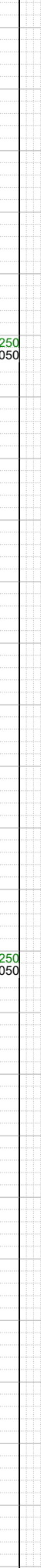
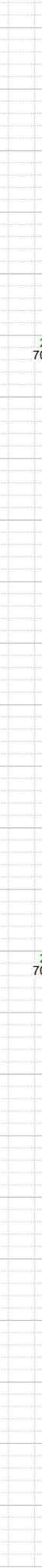
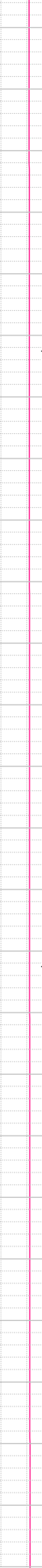
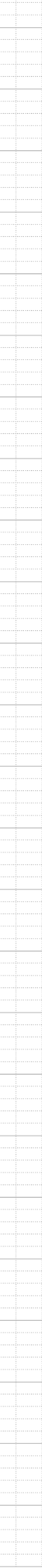








-15550  
-15560  
-15570  
-15580  
-15590  
-15600  
-15610  
-15620  
-15630  
-15640  
-15650  
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-15670  
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-15720  
-15730  
-15740  
-15750  
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-15800



-15571 INC  
89.79, AZM  
0.23, TVD  
7153.18

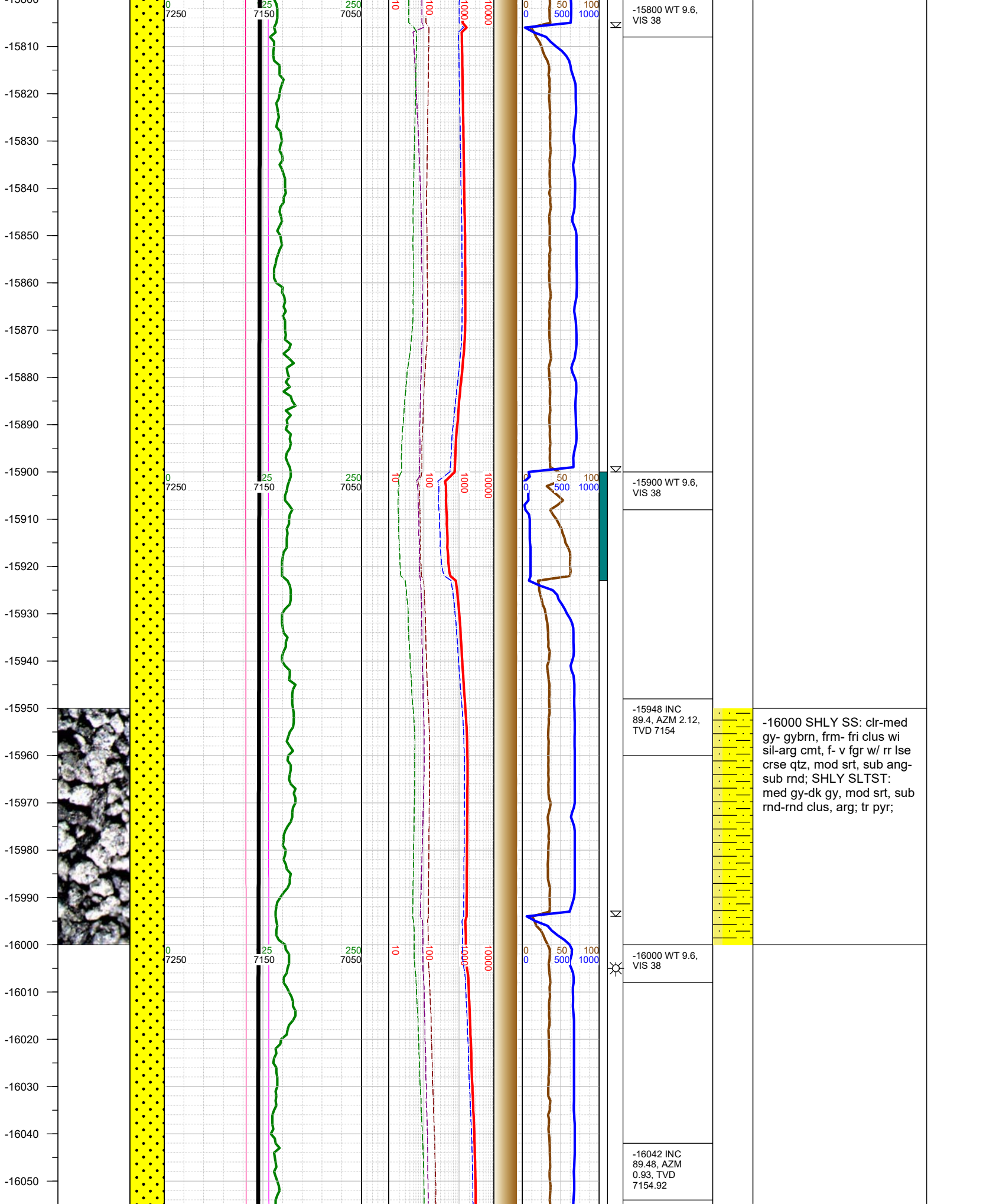
-15600 WT 9.6,  
VIS 38

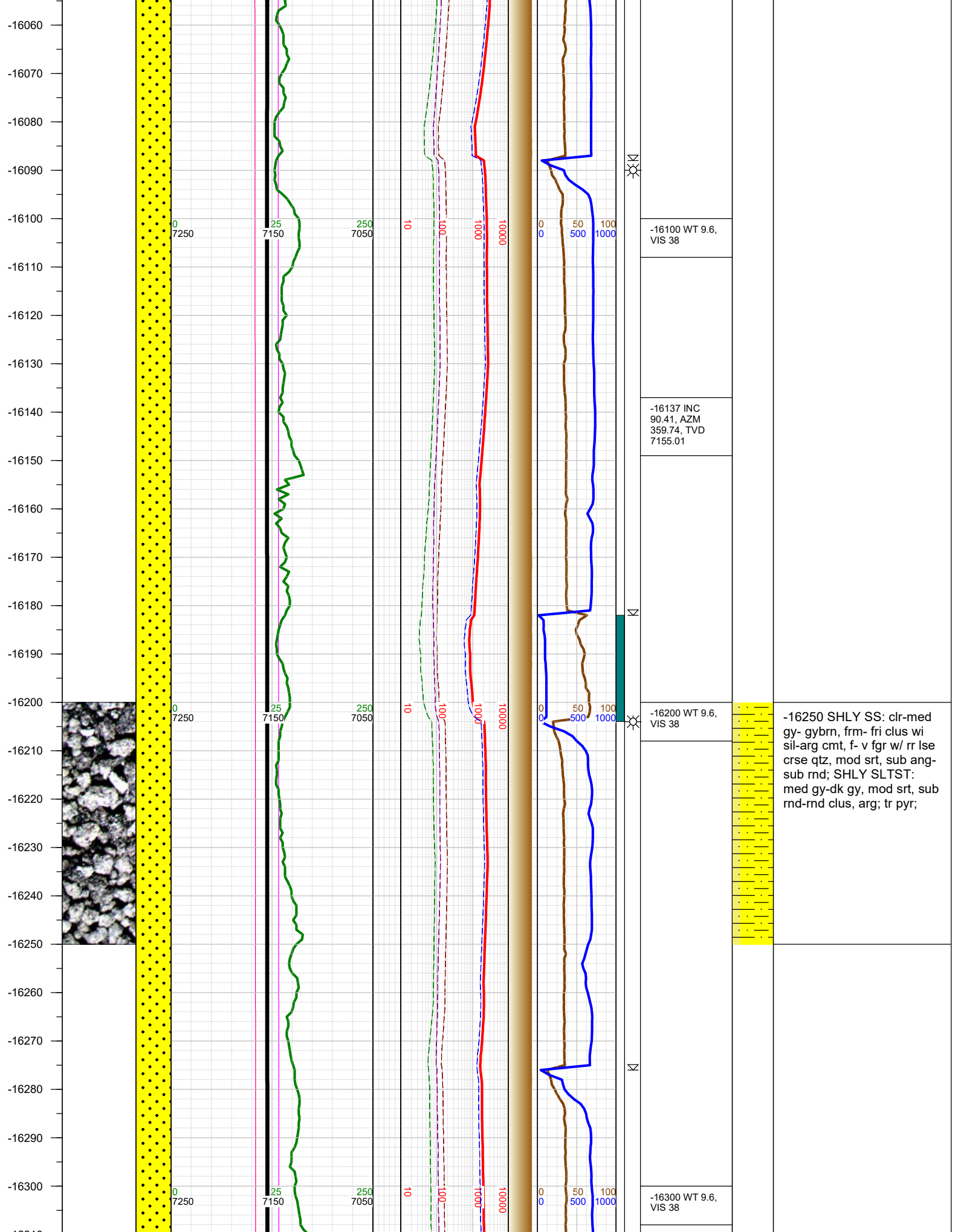
-15665 INC  
90.19, AZM  
359.35, TVD  
7153.19

-15700 WT 9.6,  
VIS 38

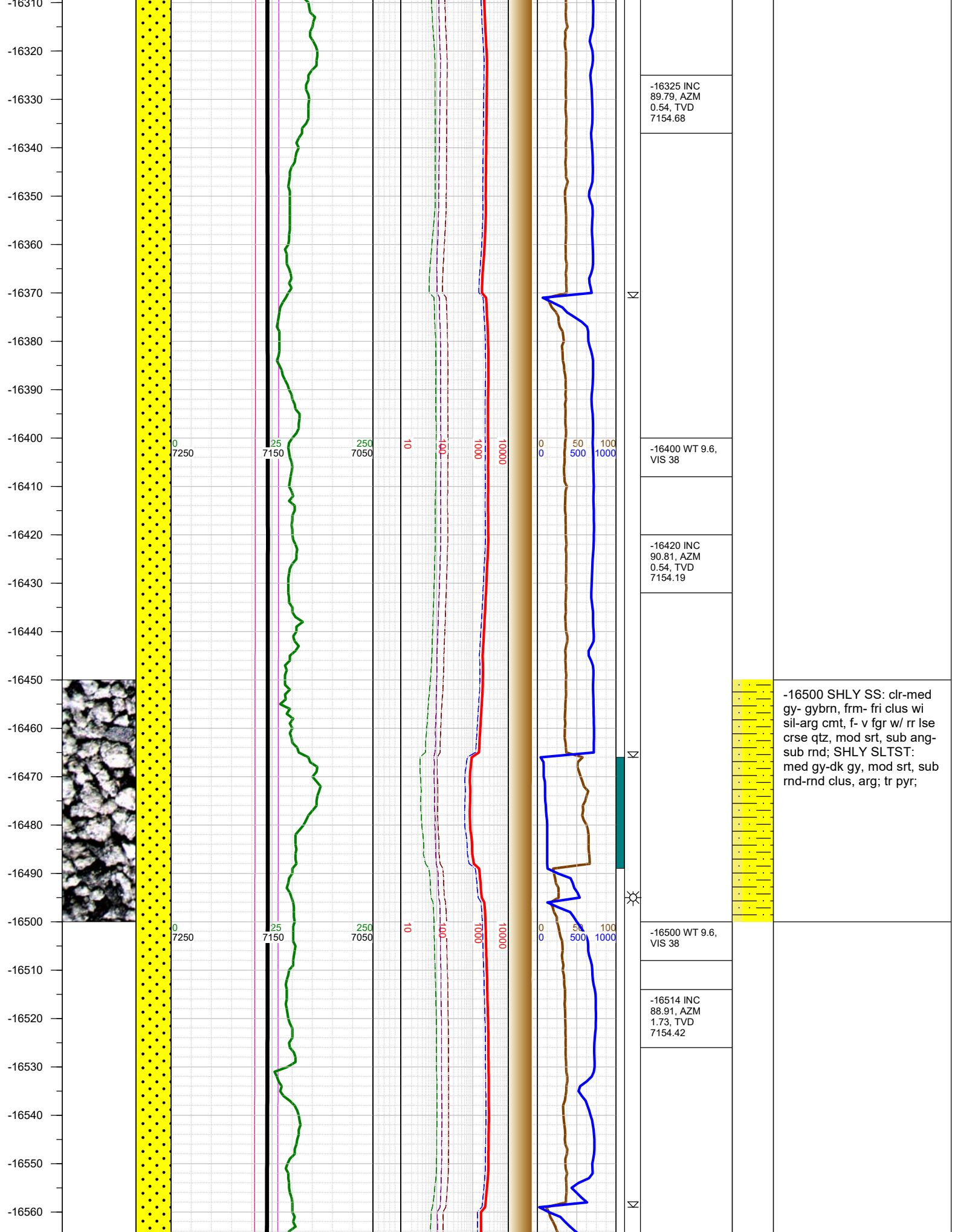
-15759 INC  
90.01, AZM  
1.33, TVD  
7153.03

-15750 SHLY SS: clr-med  
gy- gybrn, frm- fri clus wi  
sil-arg cmt, f- v fgr w/ rr lse  
crse qtz, mod srt, sub ang-  
sub rnd; SHLY SLTST:  
med gy-dk gy, mod srt, sub  
rnd-rnd clus, arg; tr pyr;

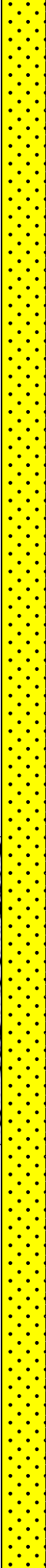
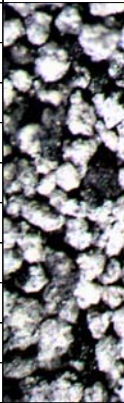








-16570  
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-16600  
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-16620  
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-16650  
-16660  
-16670  
-16680  
-16690  
-16700  
-16710  
-16720  
-16730  
-16740  
-16750  
-16760  
-16770  
-16780  
-16790  
-16800  
-16810



0  
7250

25  
7150

250  
7050

10

100

1000

10000

0  
0

50  
500

100  
1000



-16600 WT 9.6,  
VIS 38

-16608 INC  
89.4, AZM 1.11,  
TVD 7155.8

-16702 INC  
90.72, AZM  
1.55, TVD  
7155.7

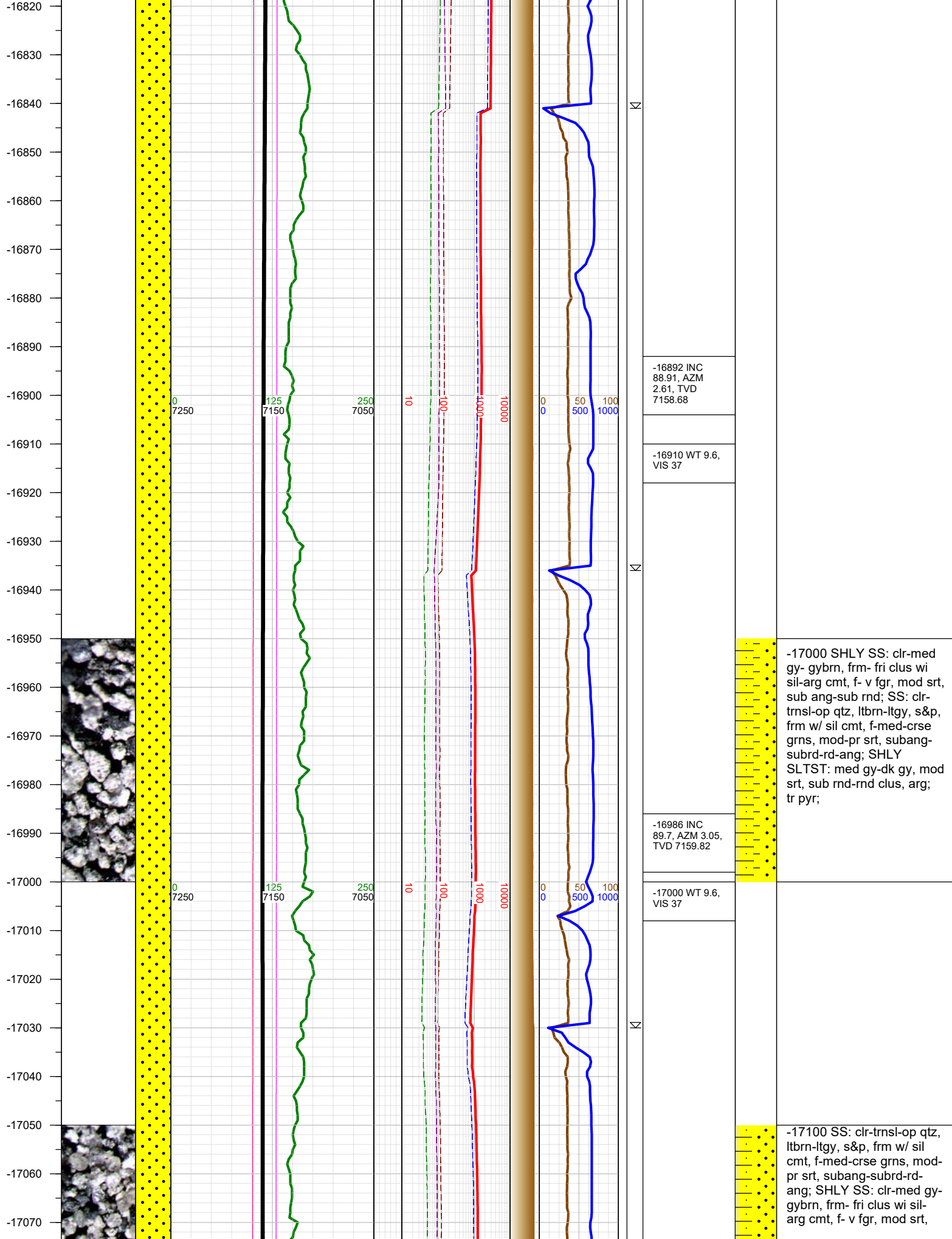
-16720 WT 9.6,  
VIS 38

-16798 INC  
88.38, AZM  
4.15, TVD  
7156.46

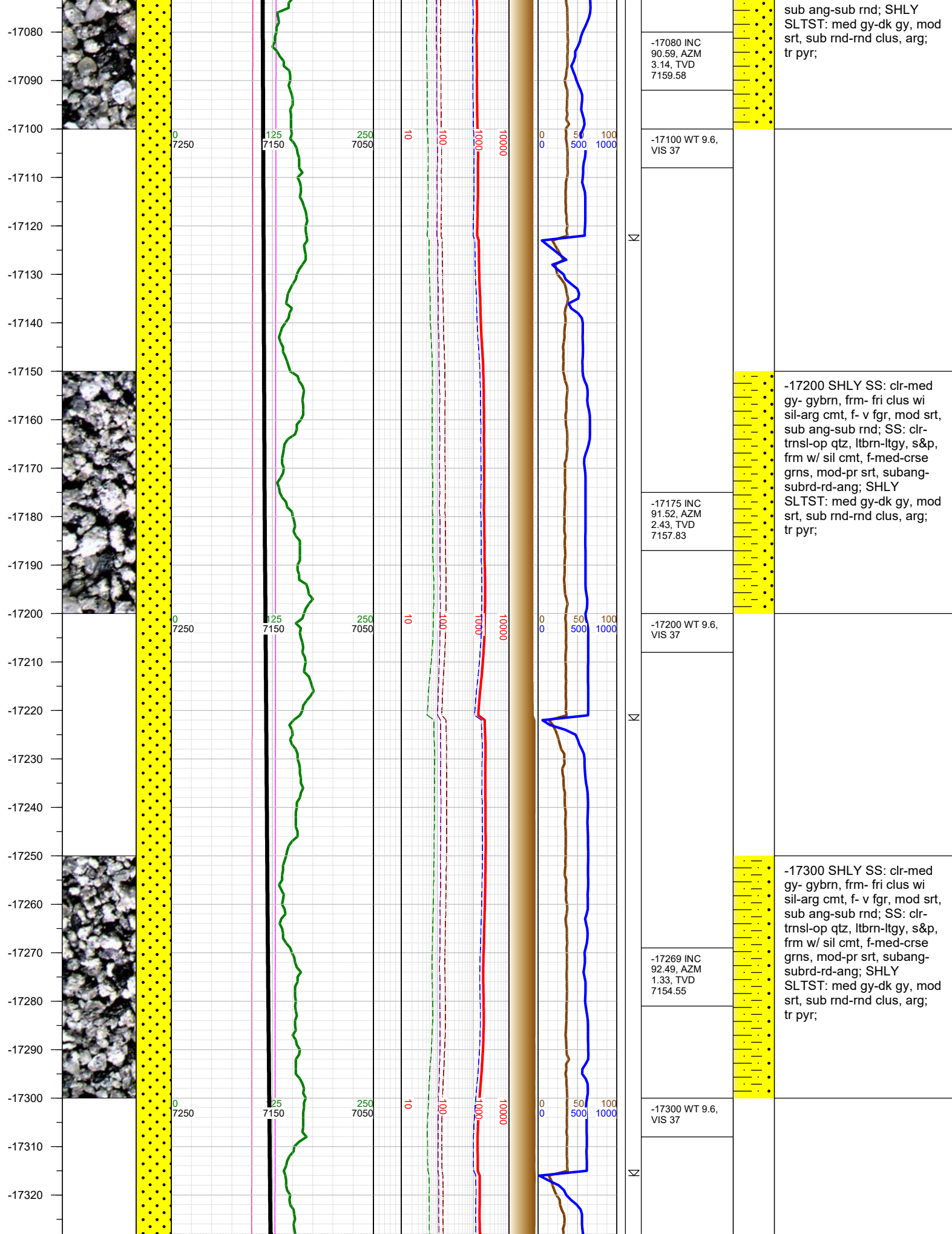
-16810 WT 9.6,  
VIS 37

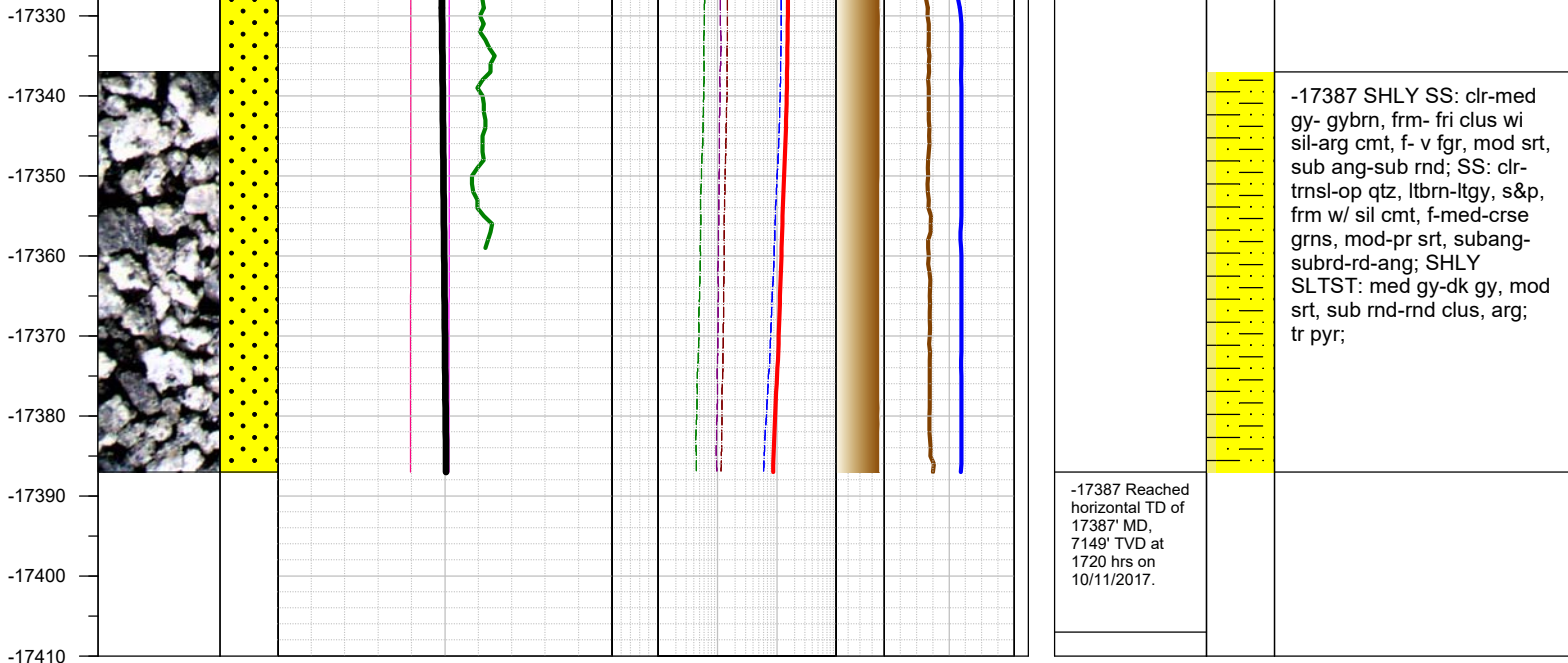


-16750 SHLY SS: clr-med  
gy- gybrn, frm- fri clus wi  
sil-arg cmt, f- v fgr w/ rr lse  
crse qtz, mod srt, sub ang-  
sub rnd; SHLY SLTST:  
med gy-dk gy, mod srt, sub  
rnd-rnd clus, arg; tr pyr;









TOTAL DEPTH = 17387'

Thank you for using Earth Science Agency