

OPERATOR: **Extraction Oil & Gas**

WELL NAME: **Livingston S19-25-8C**

FIELD NAME: DJ Basin - Wattenberg

DRILLING RIG: Patterson 901

API #: 05-014-20754

LAT/LONG: 39.978562, -105.039672
SURFACE HOLE: NWSE S7-T1S-R68W, 2331' FSL, 1402' FEL
BOTTOM HOLE: S19-T1S-R68W, 460' FSL, 2564' FEL

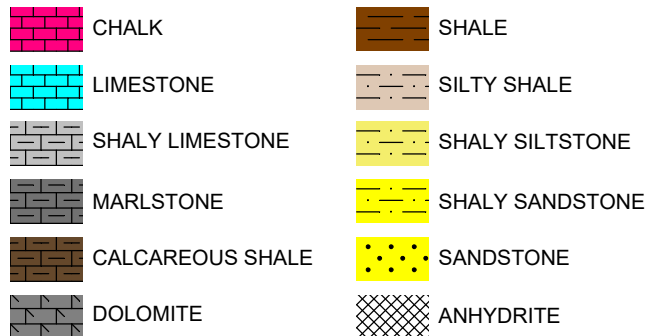


Earth Science Agency, LLC

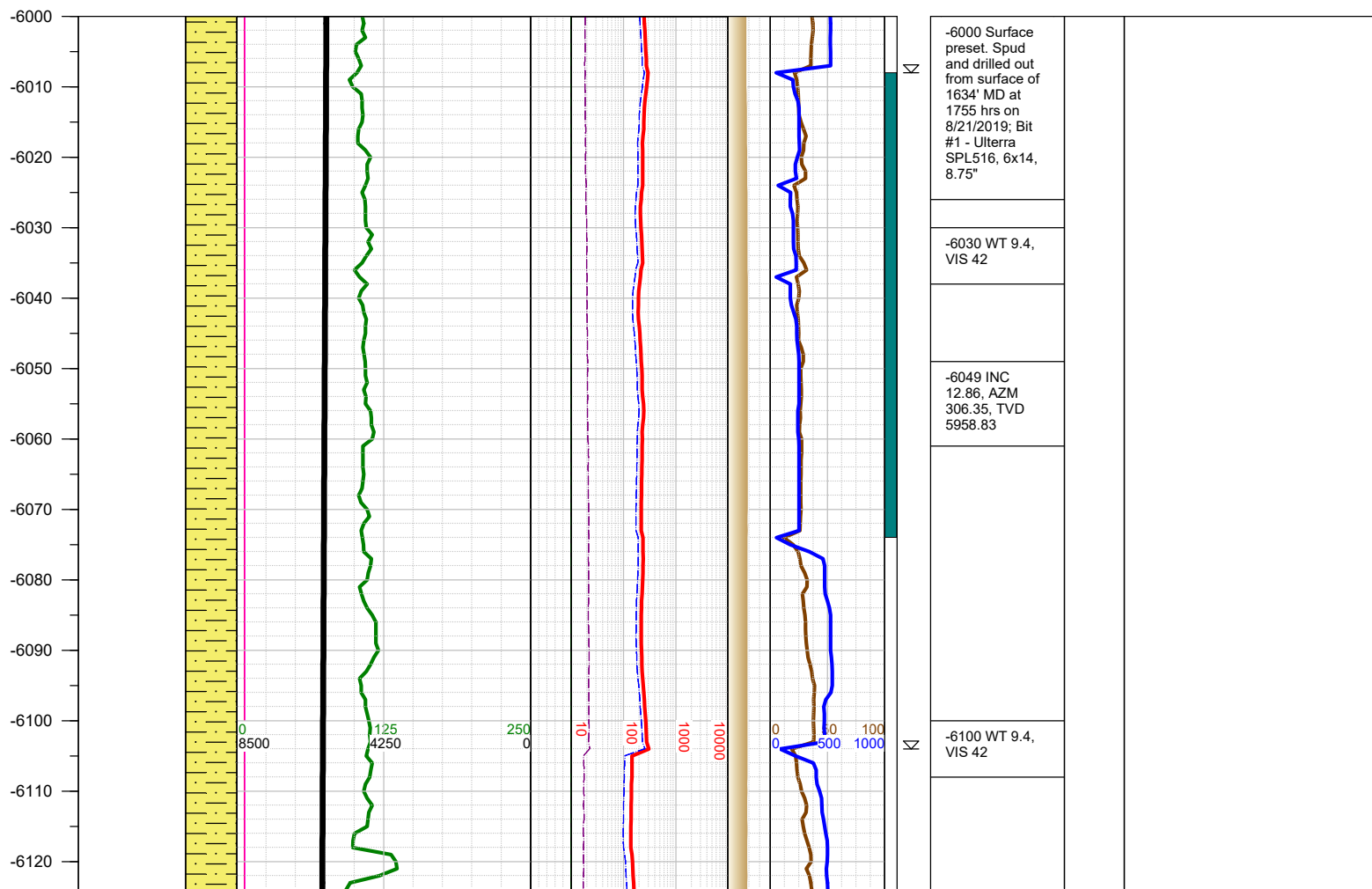
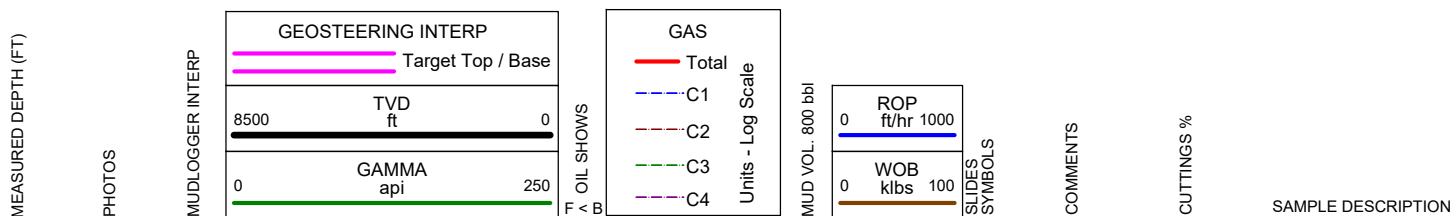
COUNTY: Broomfield
STATE: Colorado
GROUND ELEVATION: 5321'
KELLY BUSHING: 5350'
DRILLING FLUID: OBM
TVD VS. MD: 8409' / 21183'
SPUD DATE: August 21, 2019
TD DATE: August 27, 2019

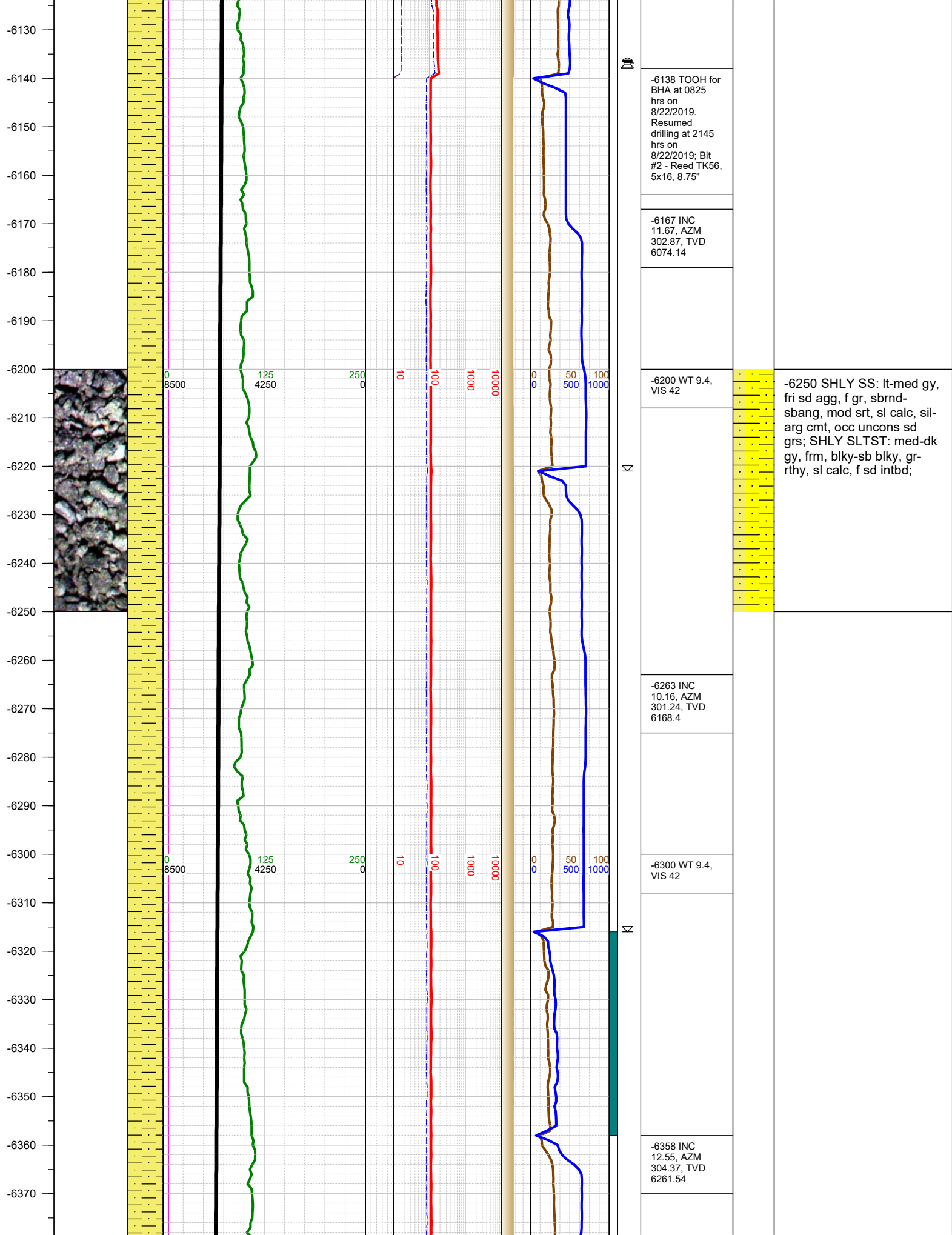
DEPTHS LOGGED: 6000' - 21183'
DATES LOGGED: August 22, 2019 - August 27, 2019
GEOLOGISTS: Ross Apodaca, Kyle Newman
SCALE: 5" = 100'

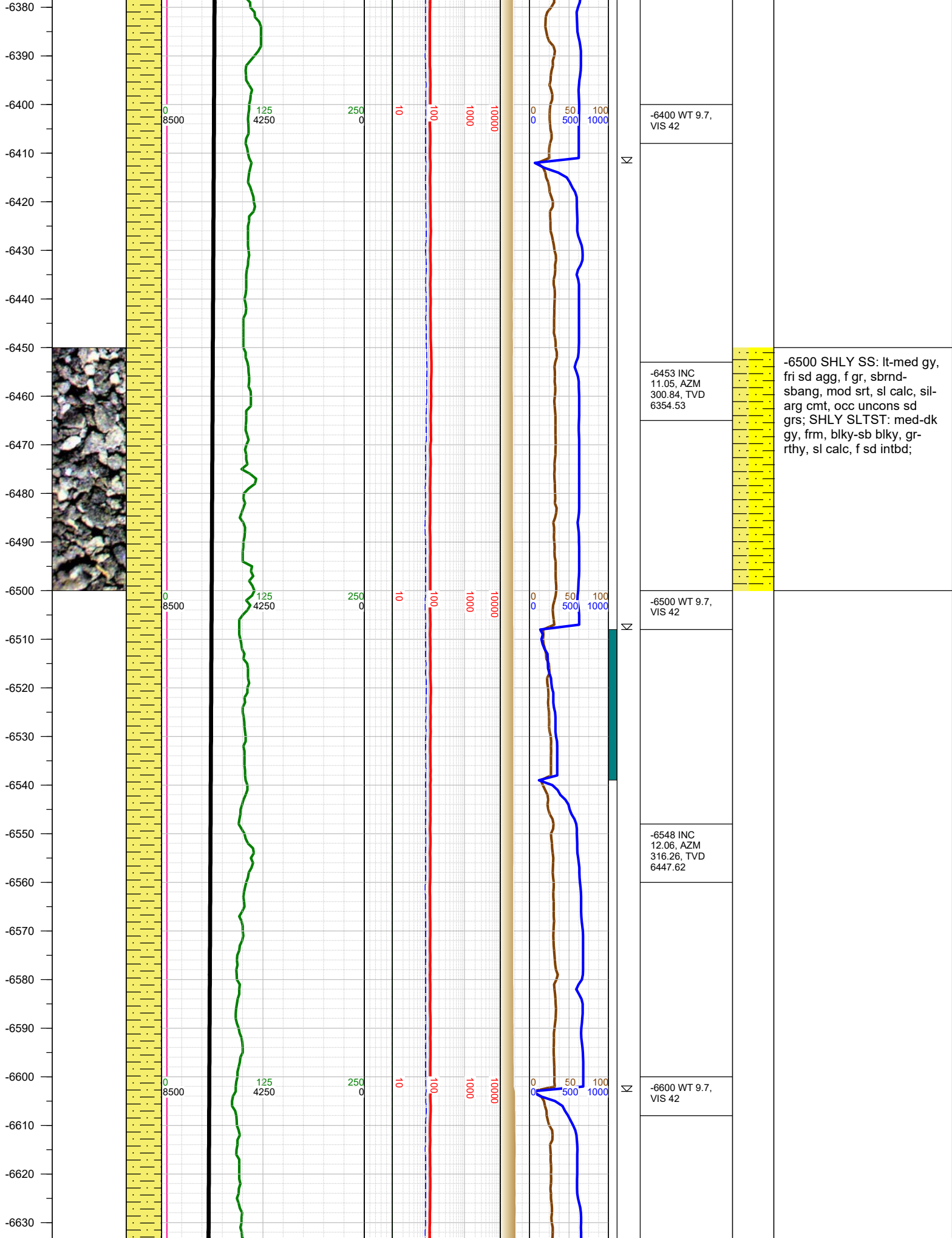
LEGEND

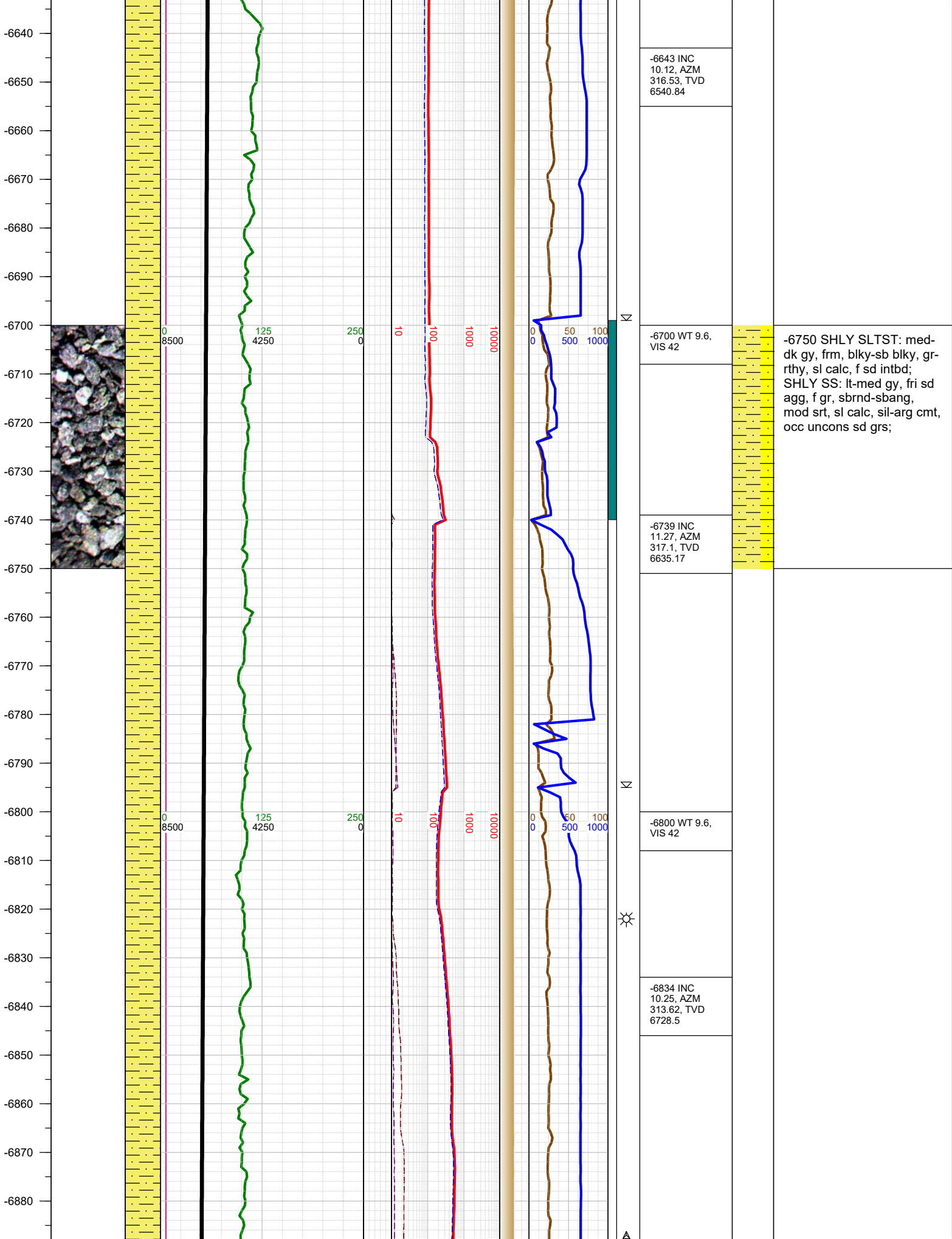


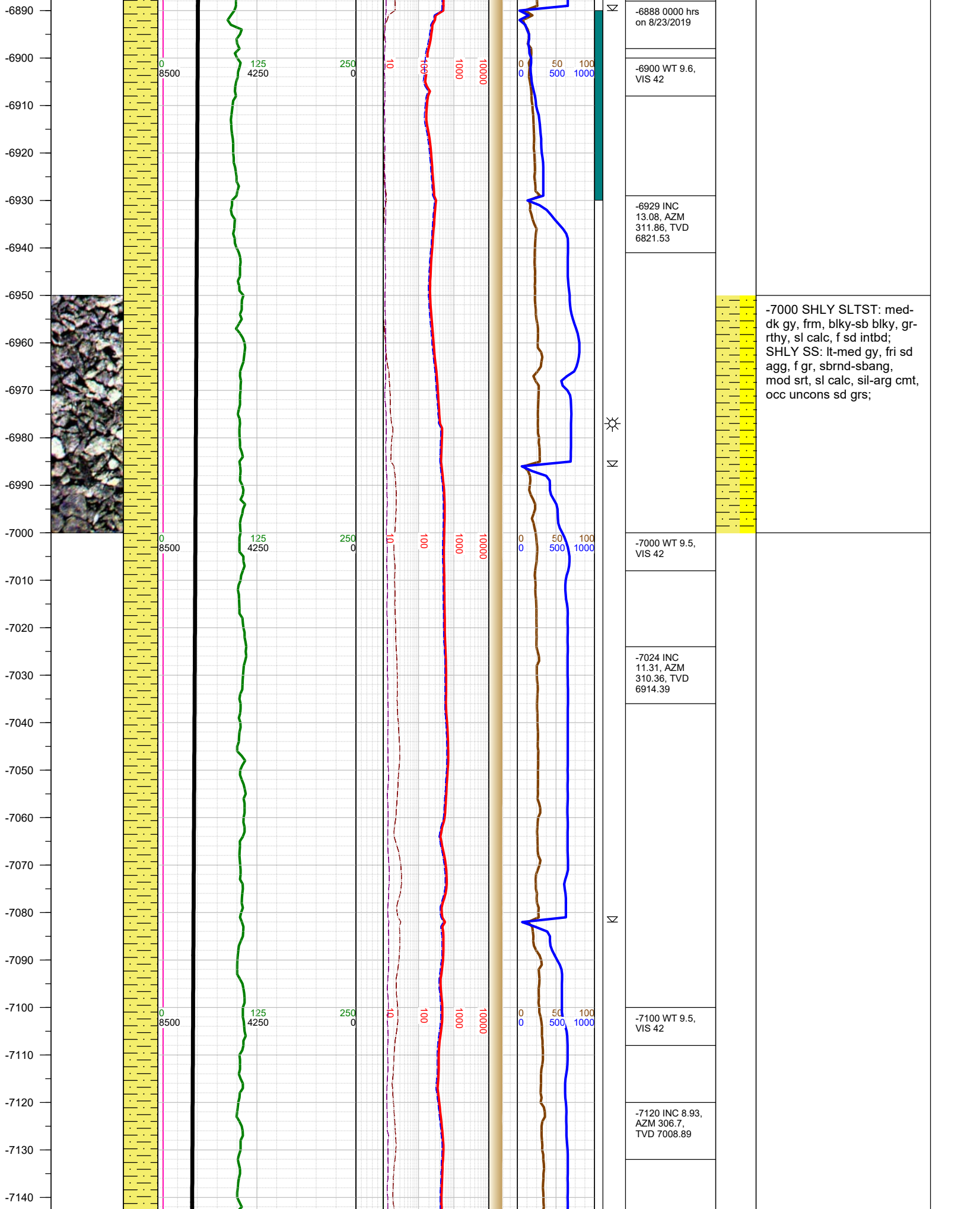
FORMATION CONNECTION MIDNIGHT NEW BIT GAS SHOW FAULT

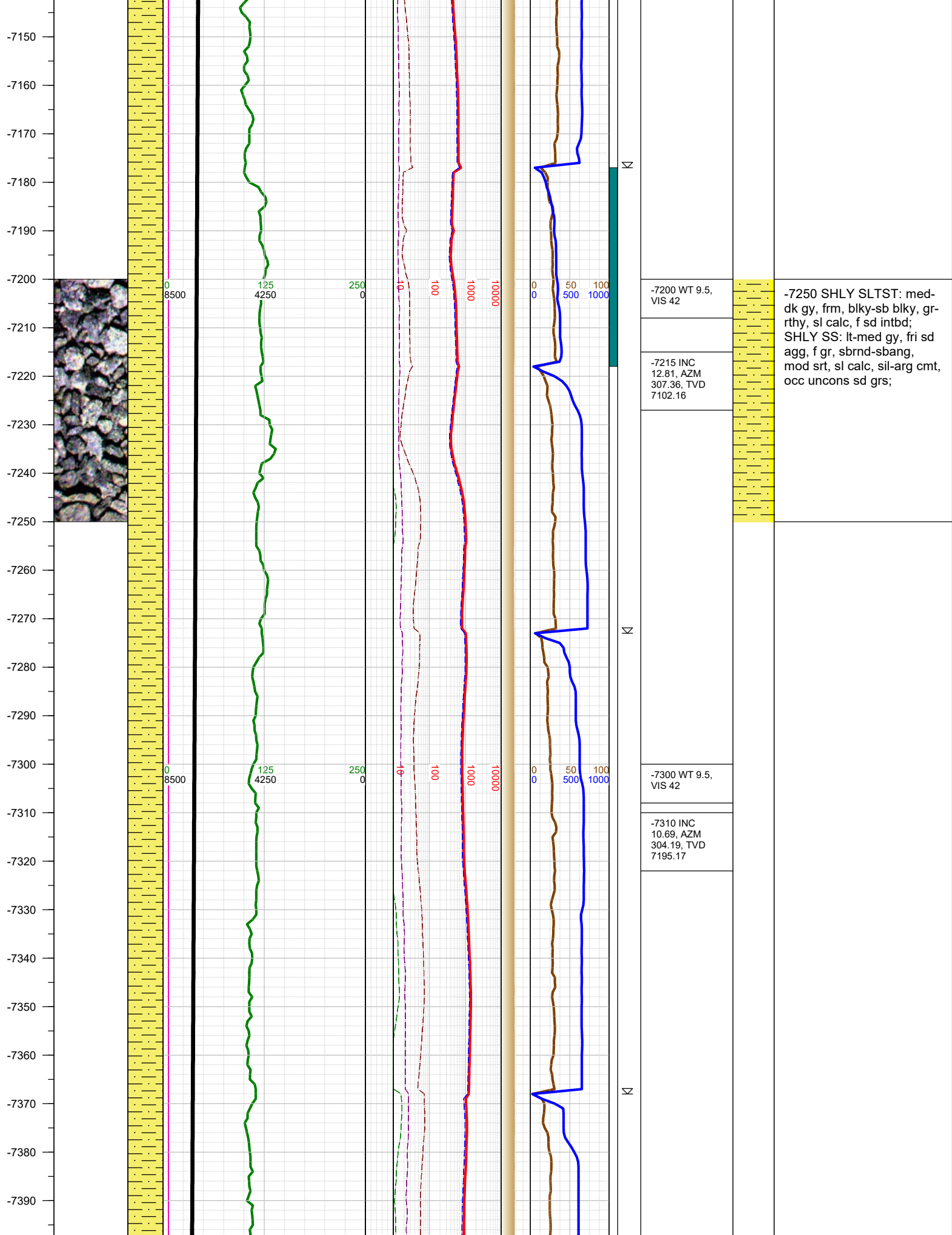


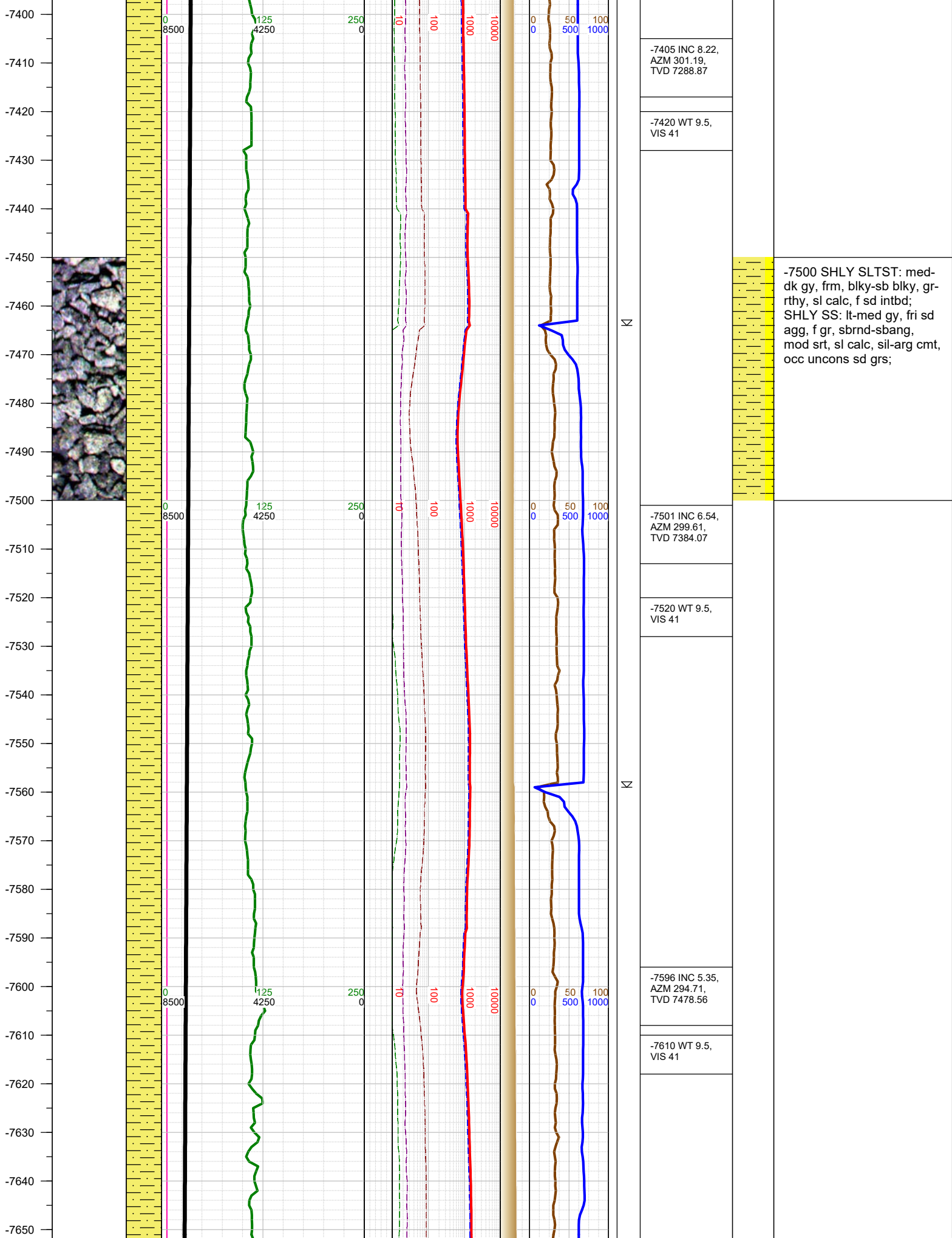


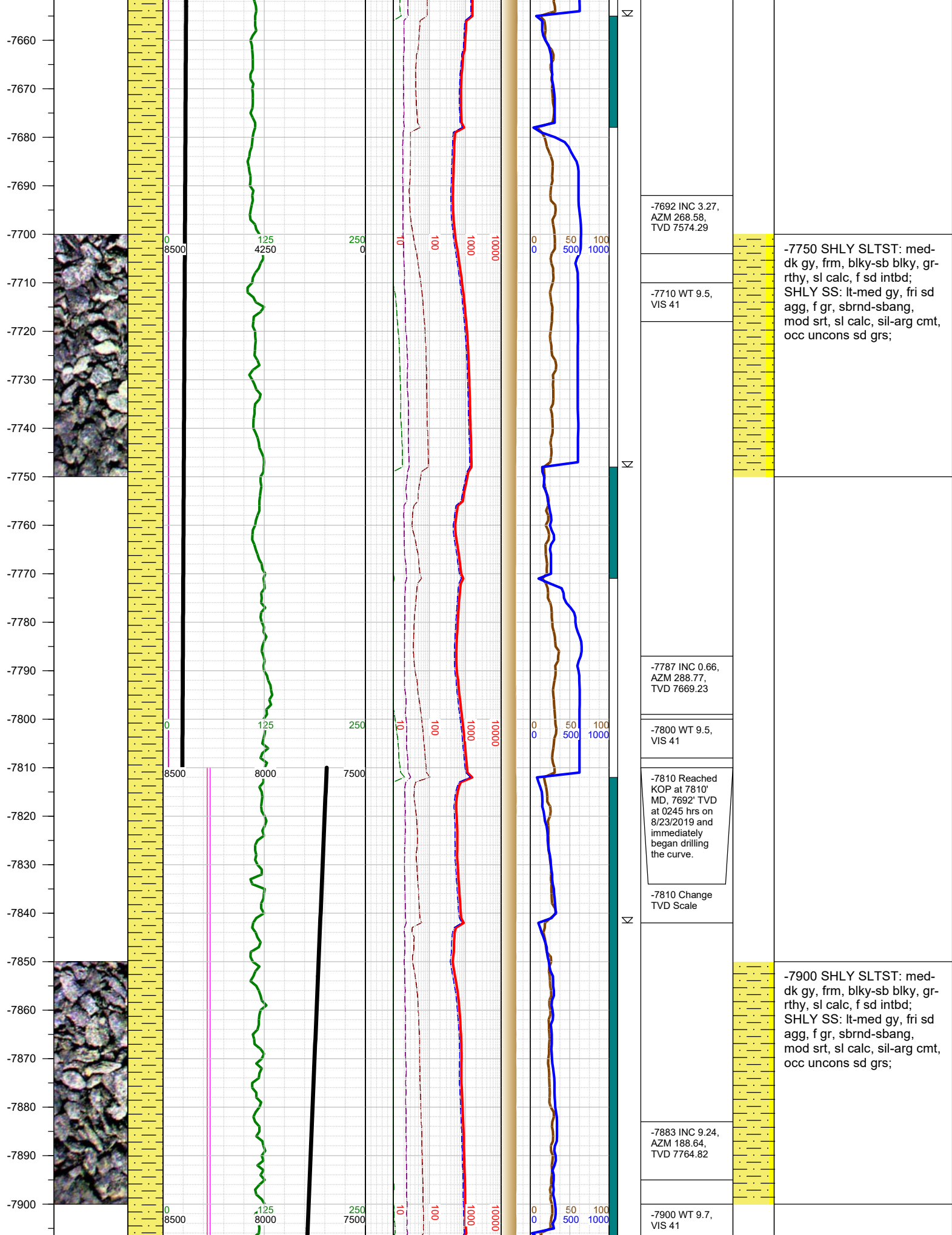


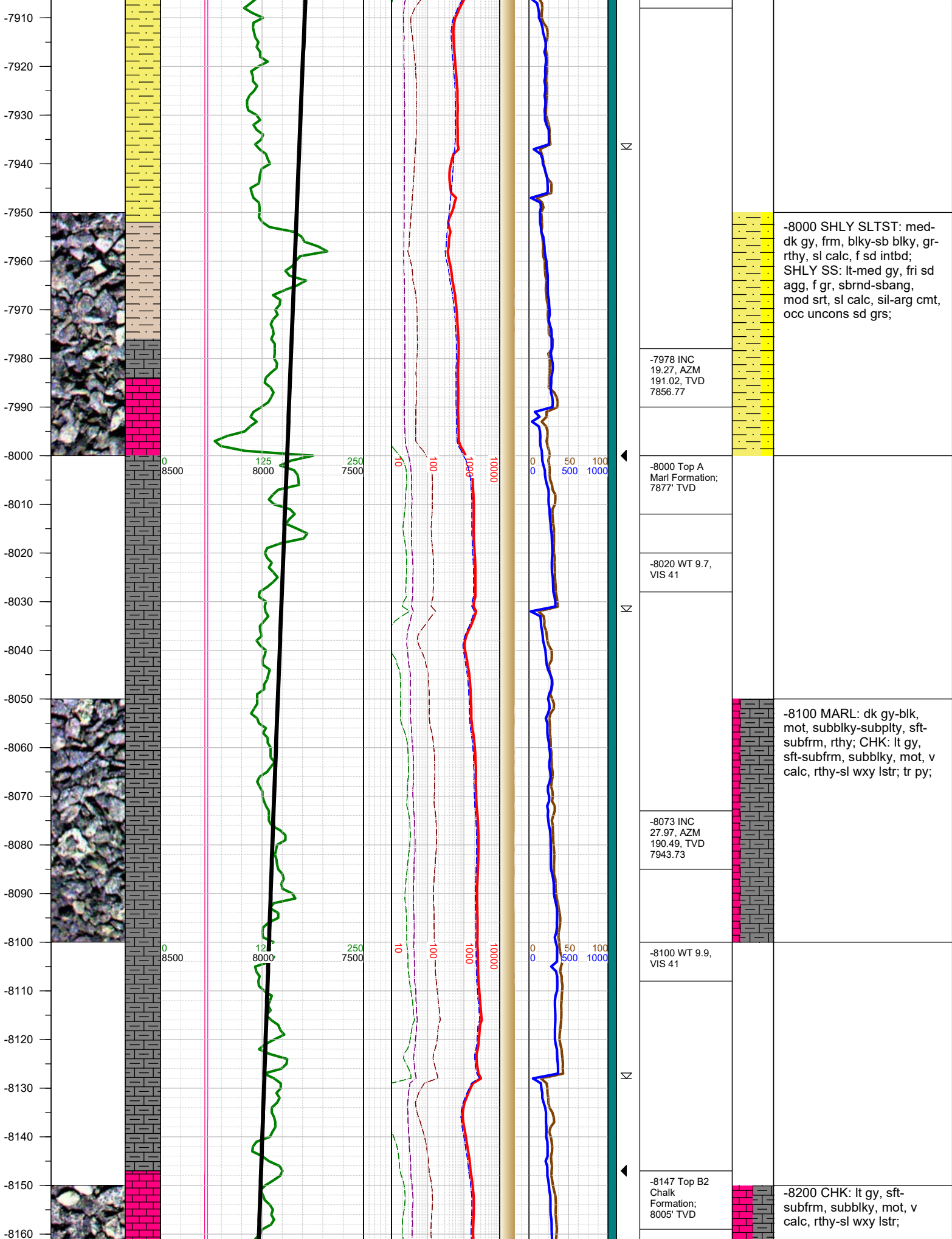


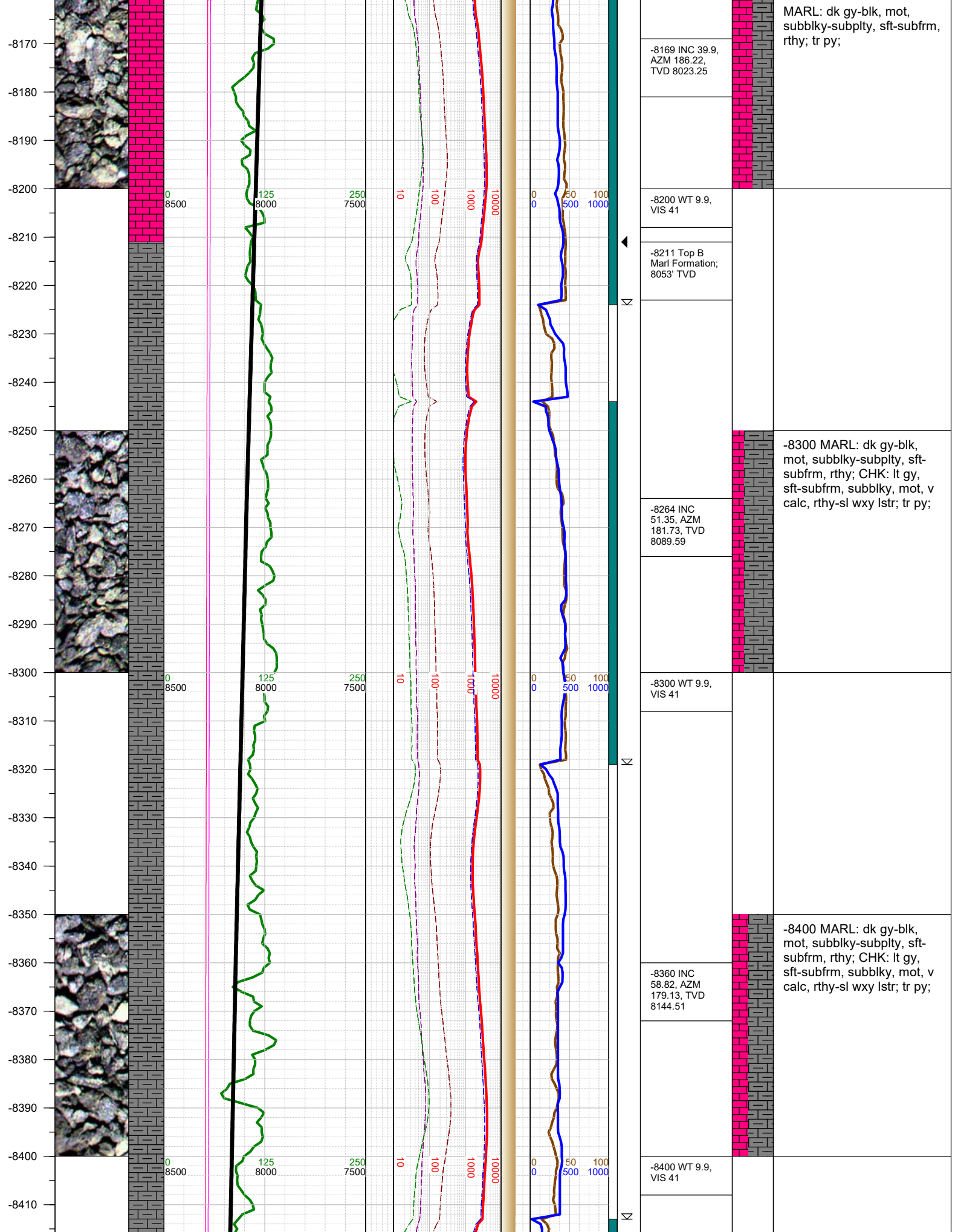


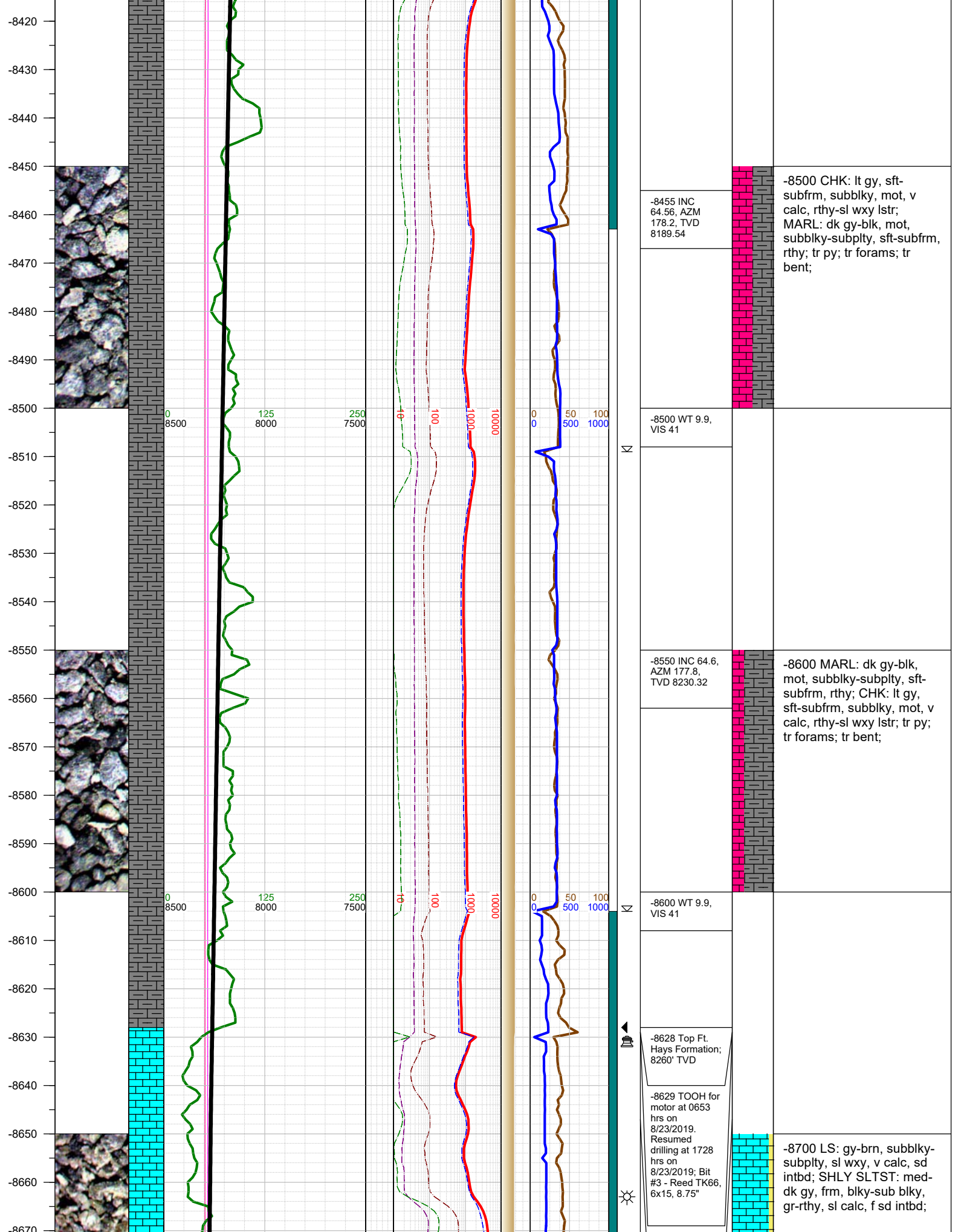


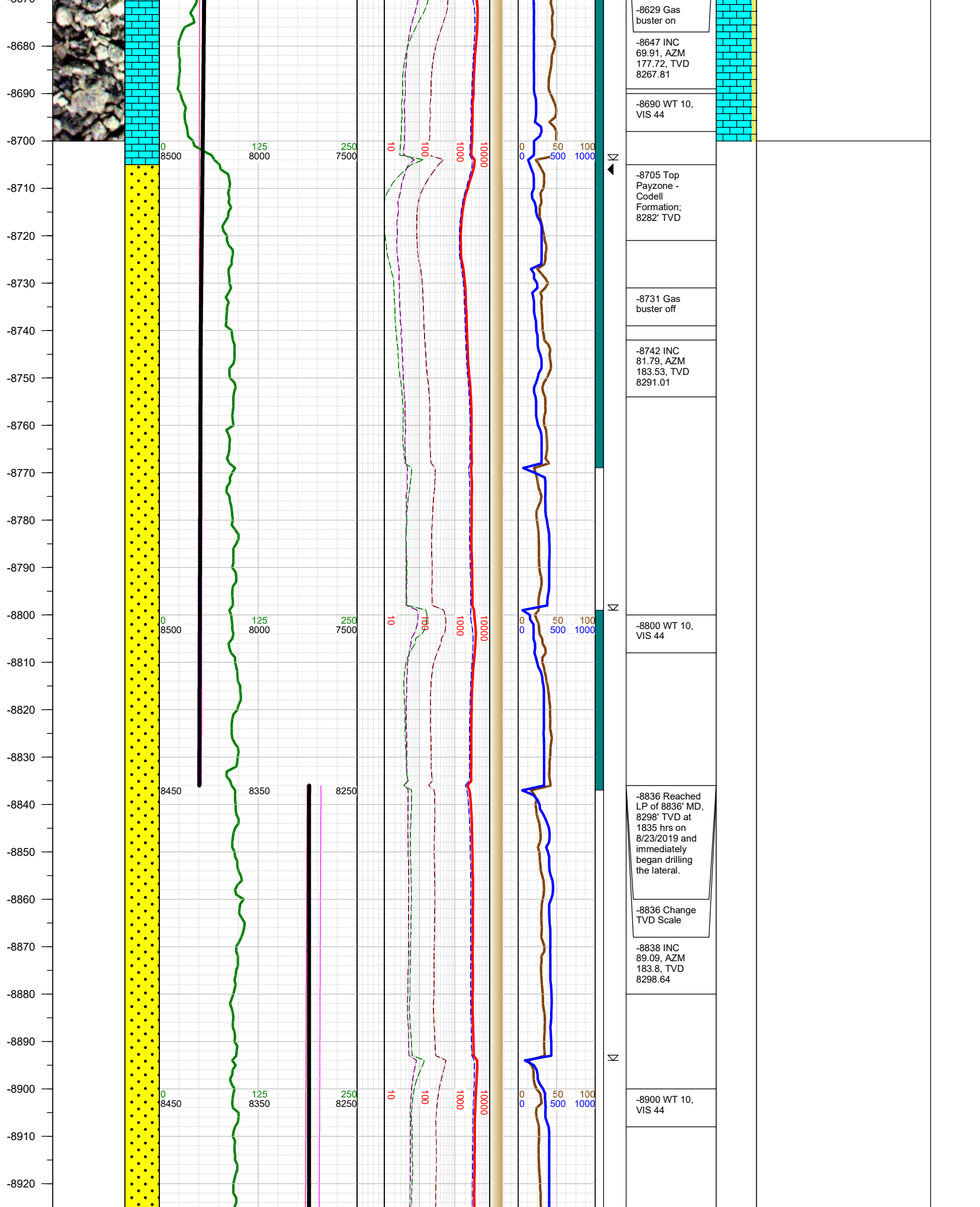


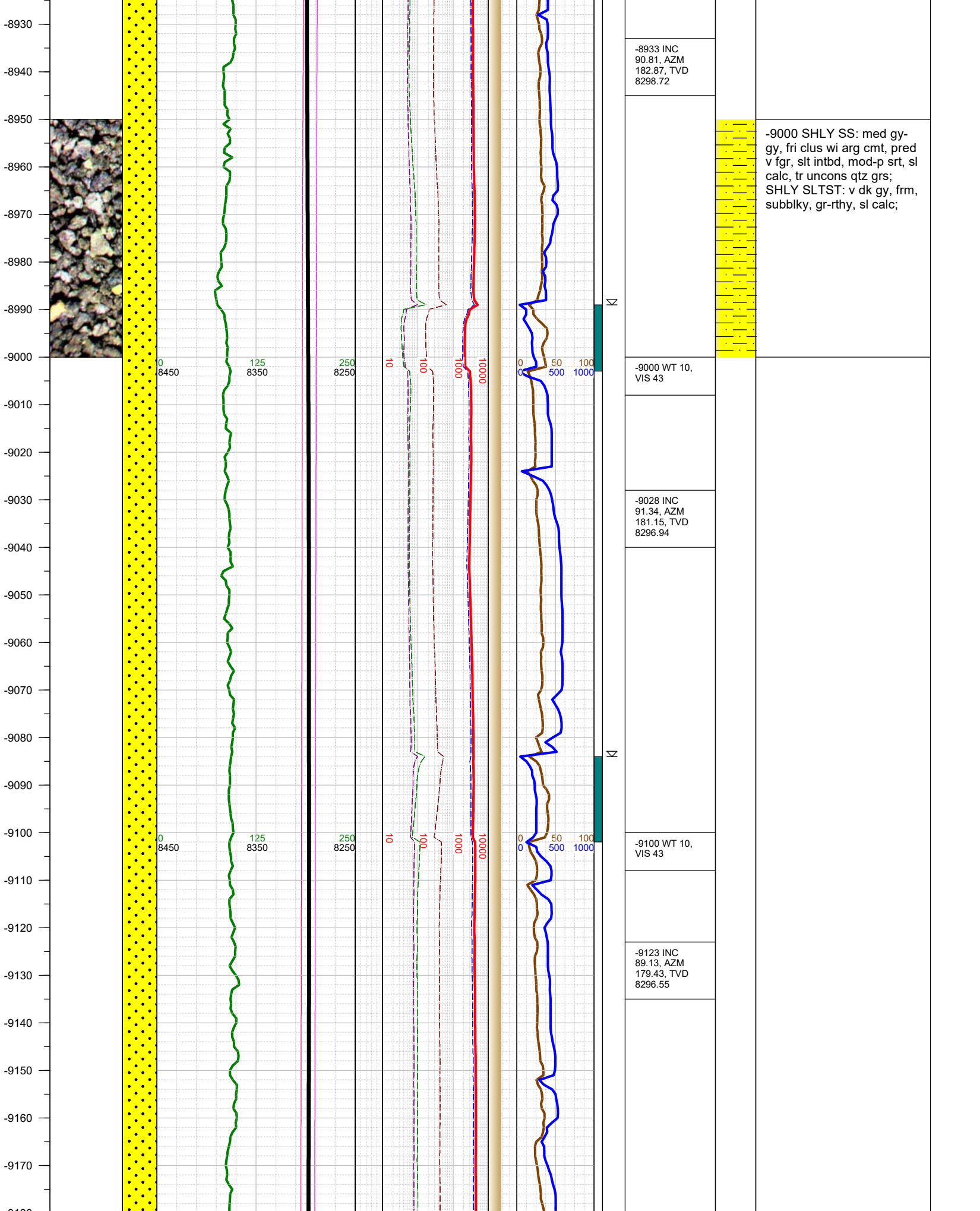


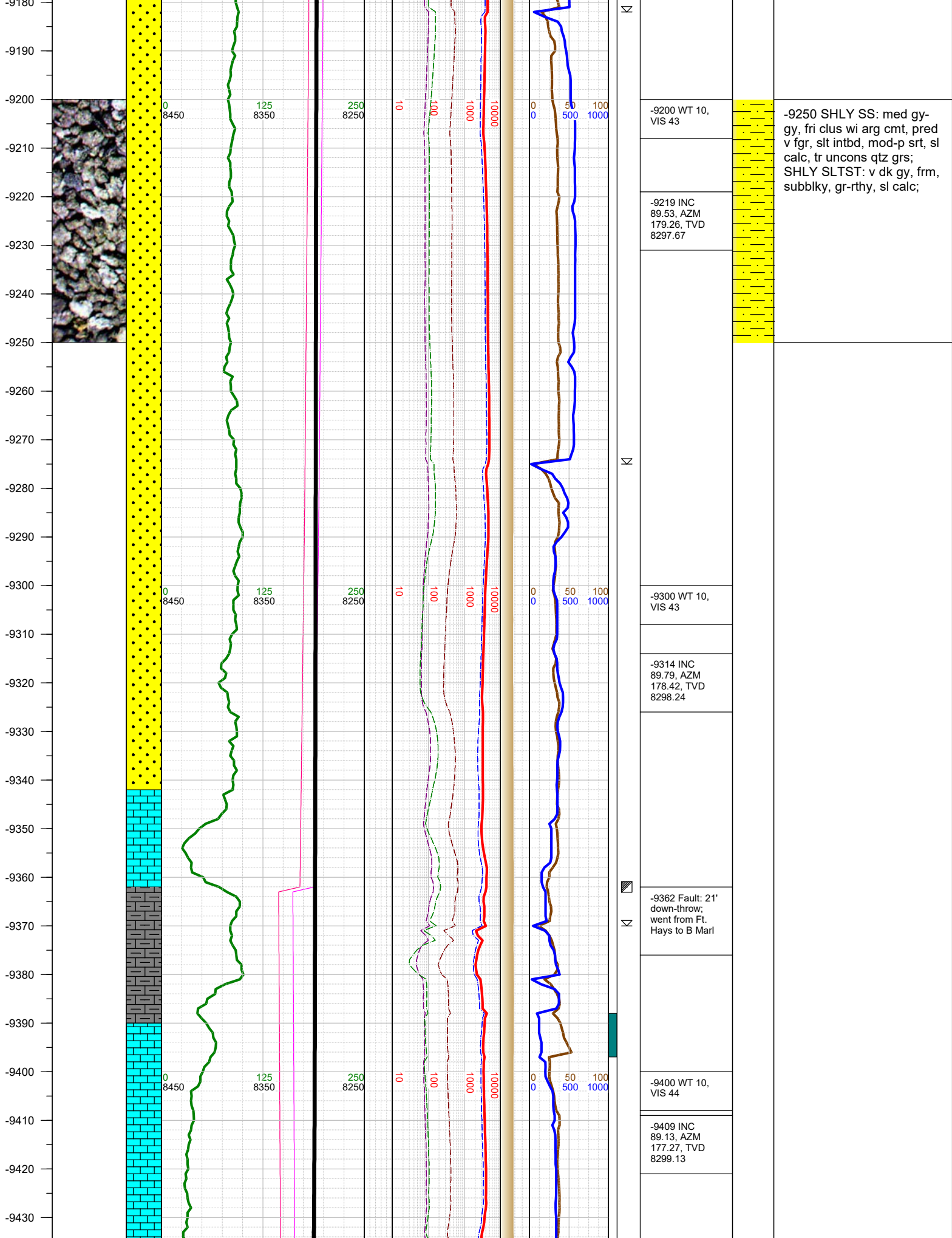




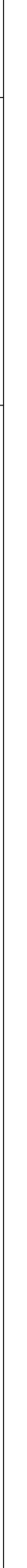
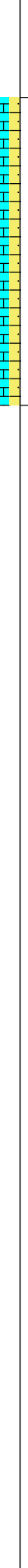
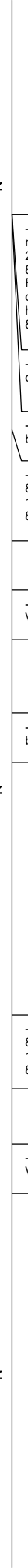
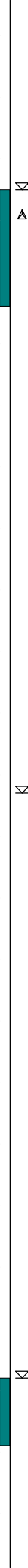
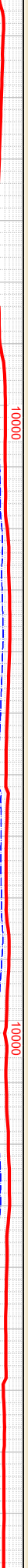
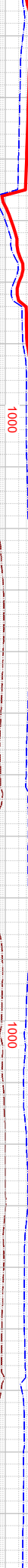
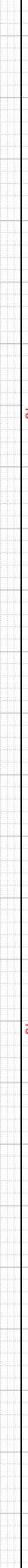
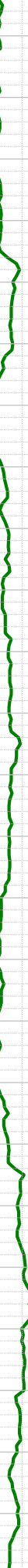
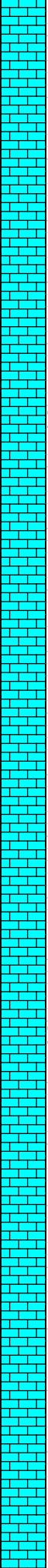
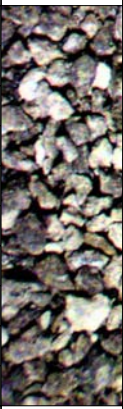








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-9469 TOOH for
new agitator at
2130 hrs on
8/23/2019.
Resumed
drilling at 0450
hrs on
8/24/2019.

-9469 0000 hrs
on 8/24/2019

-9469 Gas
buster on

-9504 INC
87.67, AZM
178.2, TVD
8301.78

-9530 WT 10,
VIS 44

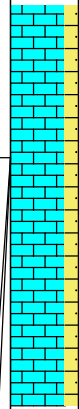
-9550 Gas
buster off

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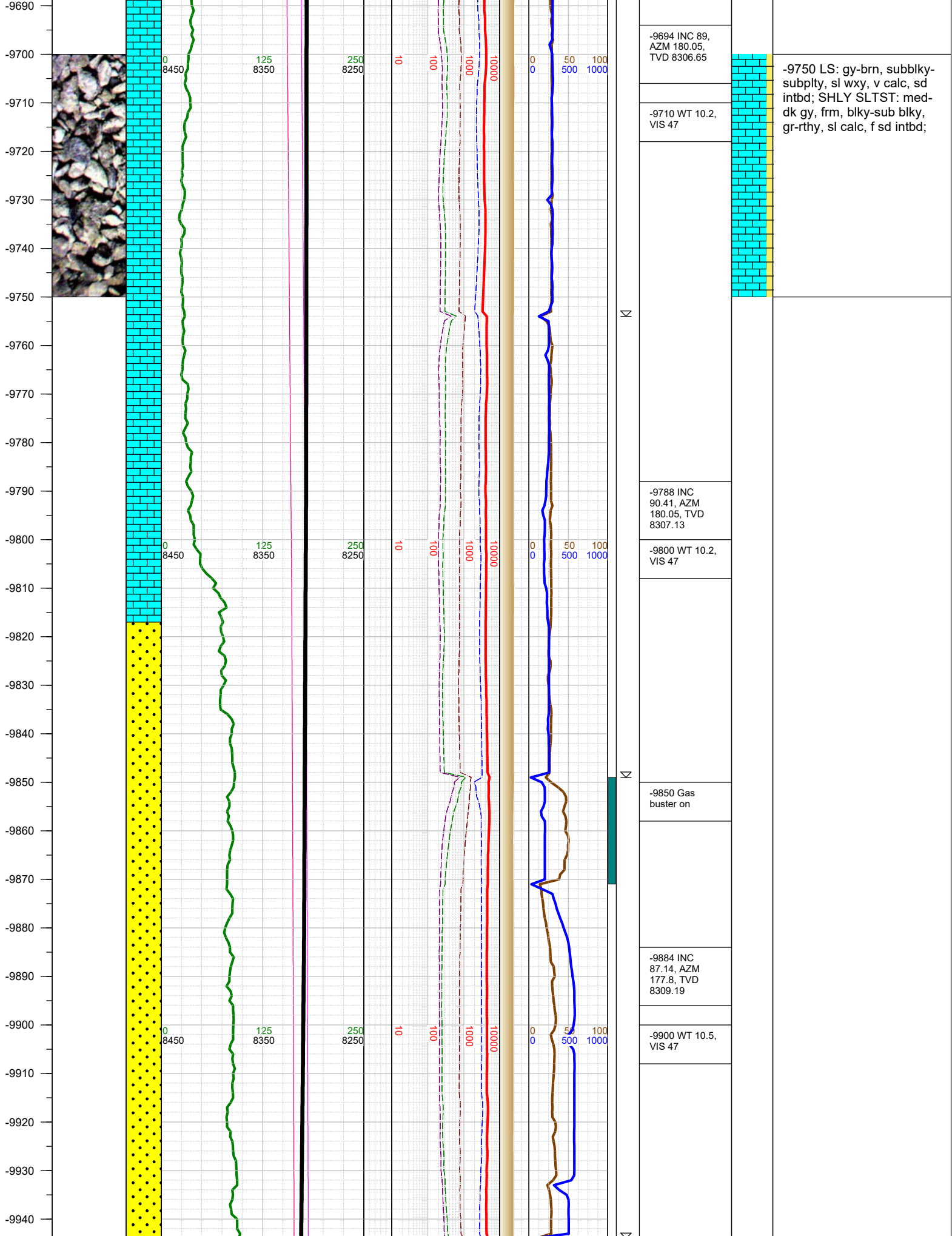
-9599 INC
88.73, AZM
178.38, TVD
8304.77

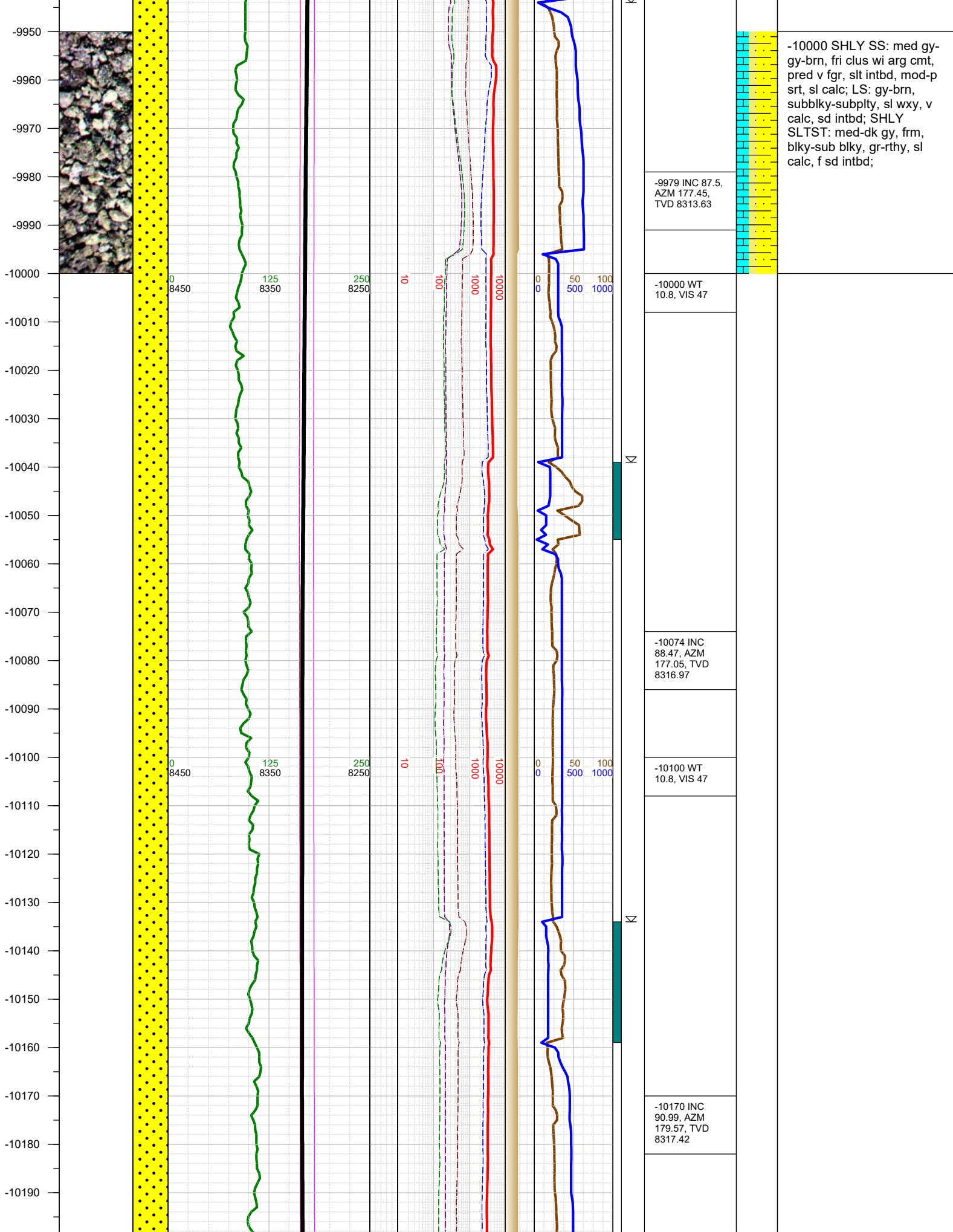
-9620 WT 10,
VIS 44

Σ



-9500 LS: gy-brn, subblky-
subply, sl wxy, v calc, sd
intbd; SHLY SLTST: med-
dk gy, frm, blk-sub blk, y,
gr-rthy, sl calc, f sd intbd;





-10000 SHLY SS: med gy-gy-brn, fri clus wi arg cmt, pred v fgr, slt intbd, mod-p srt, sl calc; LS: gy-brn, subblky-subplty, sl wxy, v calc, sd intbd; SHLY SLTST: med-dk gy, frm, blky-sub blky, gr-rthy, sl calc, f sd intbd;

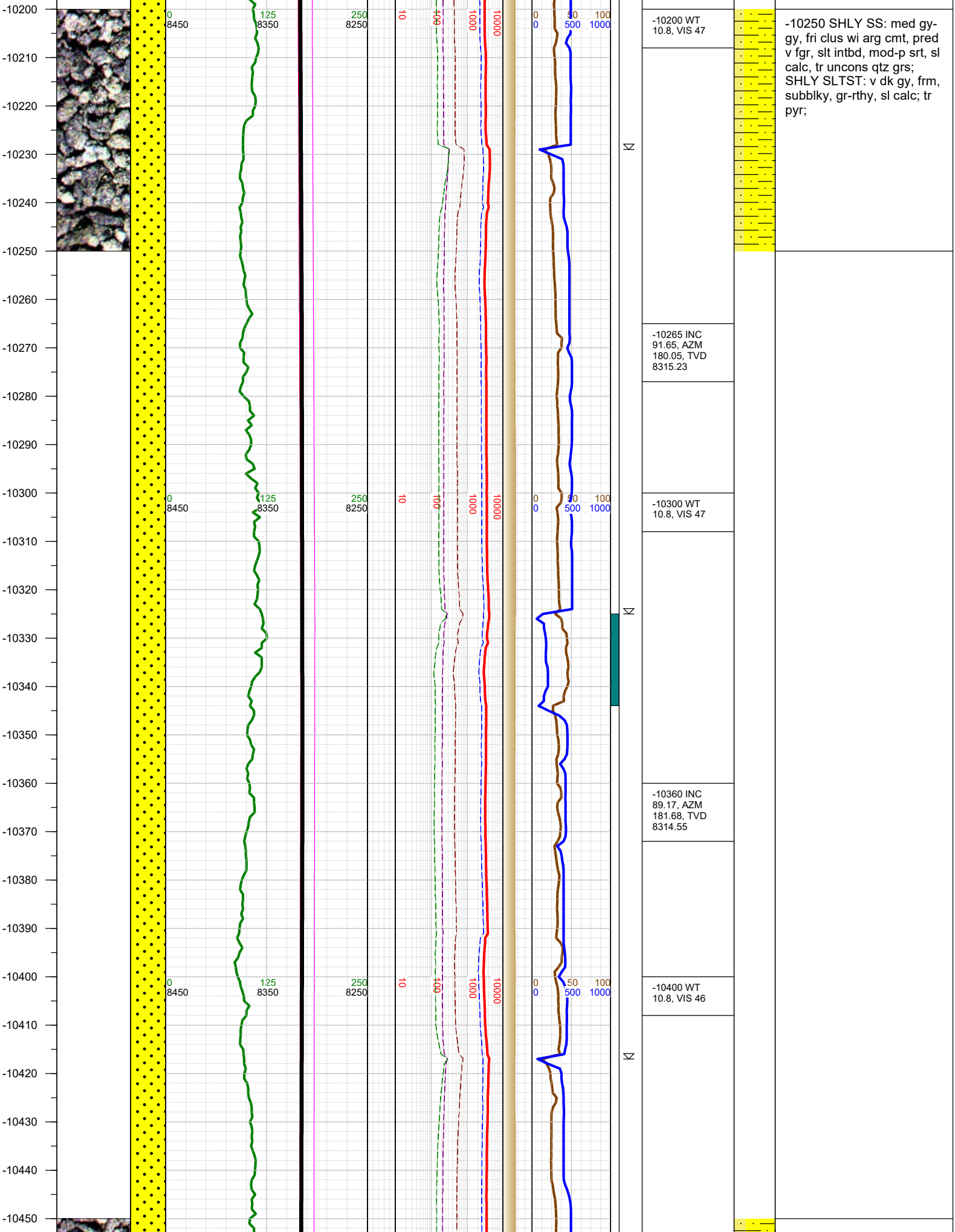
-9979 INC 87.5, AZM 177.45, TVD 8313.63

-10000 WT 10.8, VIS 47

-10074 INC 88.47, AZM 177.05, TVD 8316.97

-10100 WT 10.8, VIS 47

-10170 INC 90.99, AZM 179.57, TVD 8317.42



-10200 WT
10.8, VIS 47

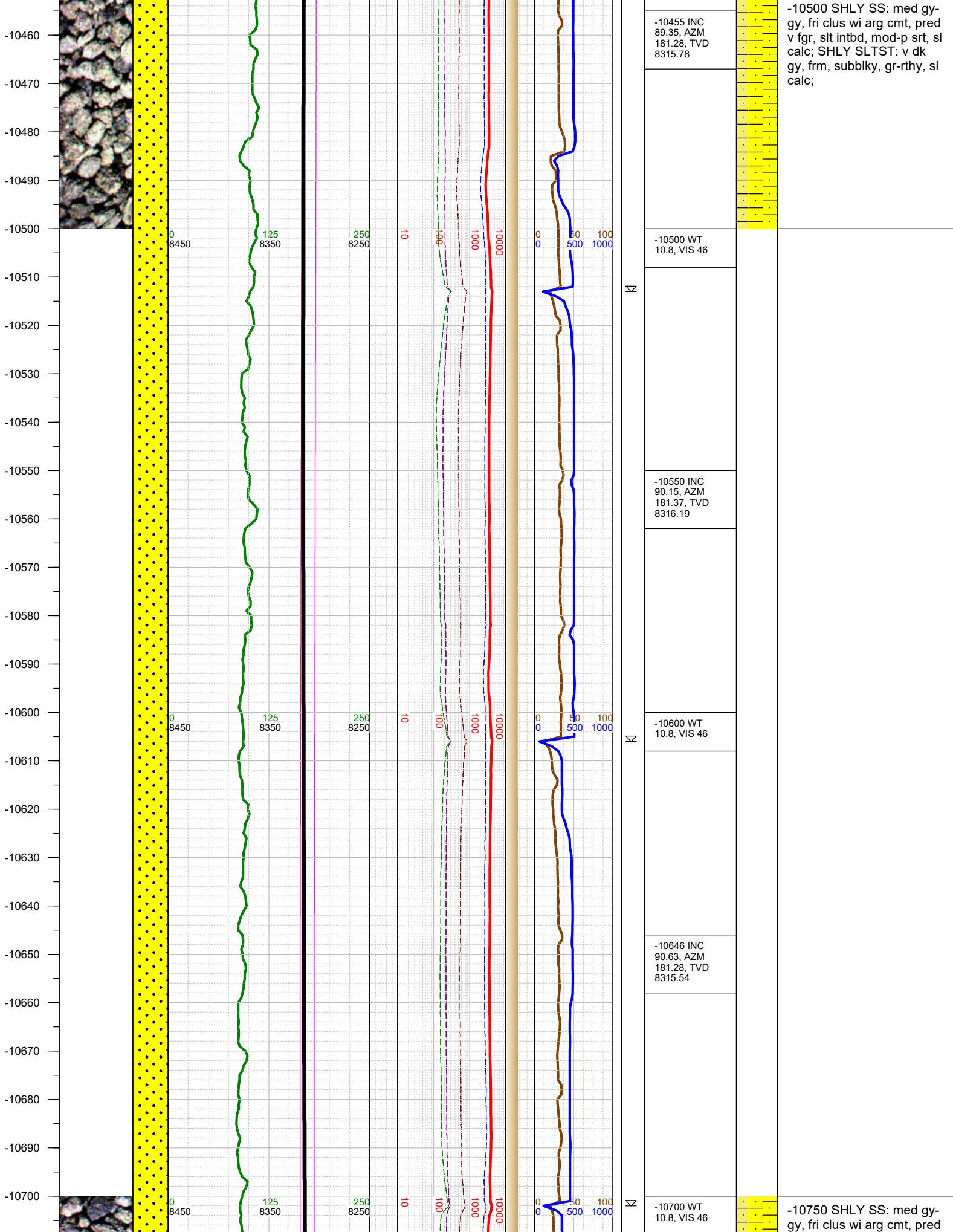
-10265 INC
91.65, AZM
180.05, TVD
8315.23

-10300 WT
10.8, VIS 47

-10360 INC
89.17, AZM
181.68, TVD
8314.55

-10400 WT
10.8, VIS 46

-10250 SHLY SS: med gy-
gy, fri clus wi arg cmt, pred
v fgr, slt intbd, mod-p srt, sl
calc, tr uncons qtz grs;
SHLY SLTST: v dk gy, frm,
subblky, gr-rthy, sl calc; tr
pyr;



-10455 INC
89.35, AZM
181.28, TVD
8315.78

-10500 WT
10.8, VIS 46

-10550 INC
90.15, AZM
181.37, TVD
8316.19

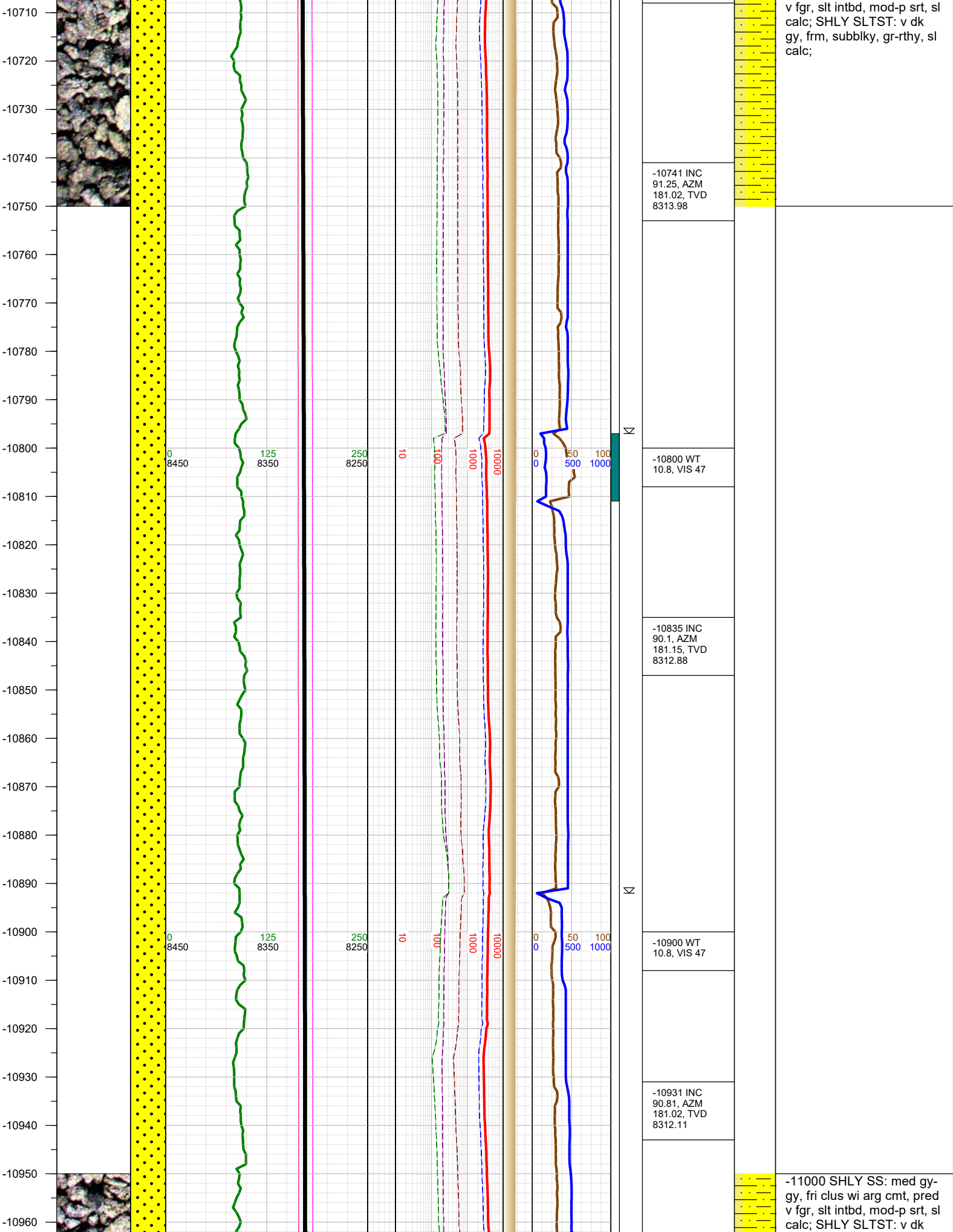
-10600 WT
10.8, VIS 46

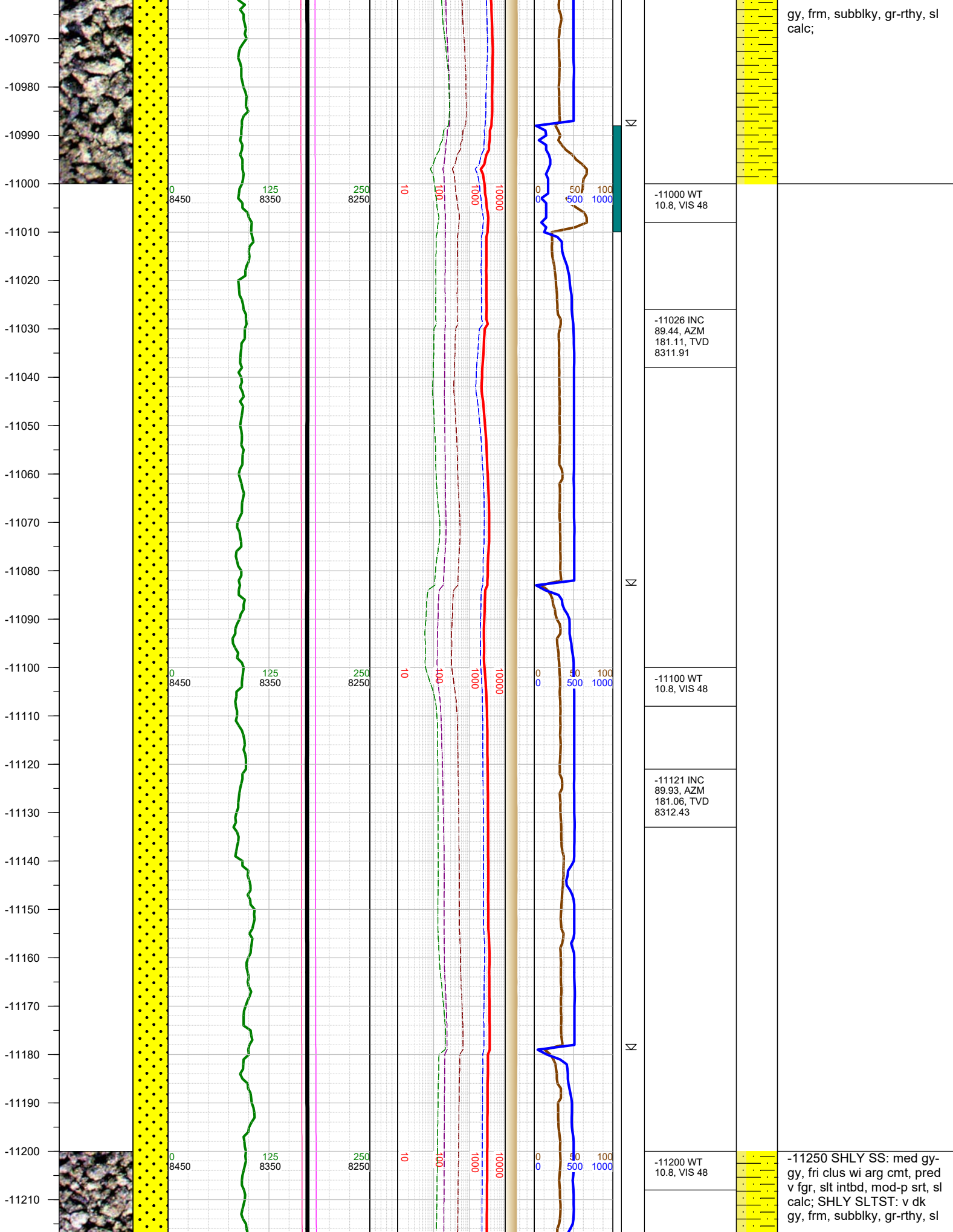
-10646 INC
90.63, AZM
181.28, TVD
8315.54

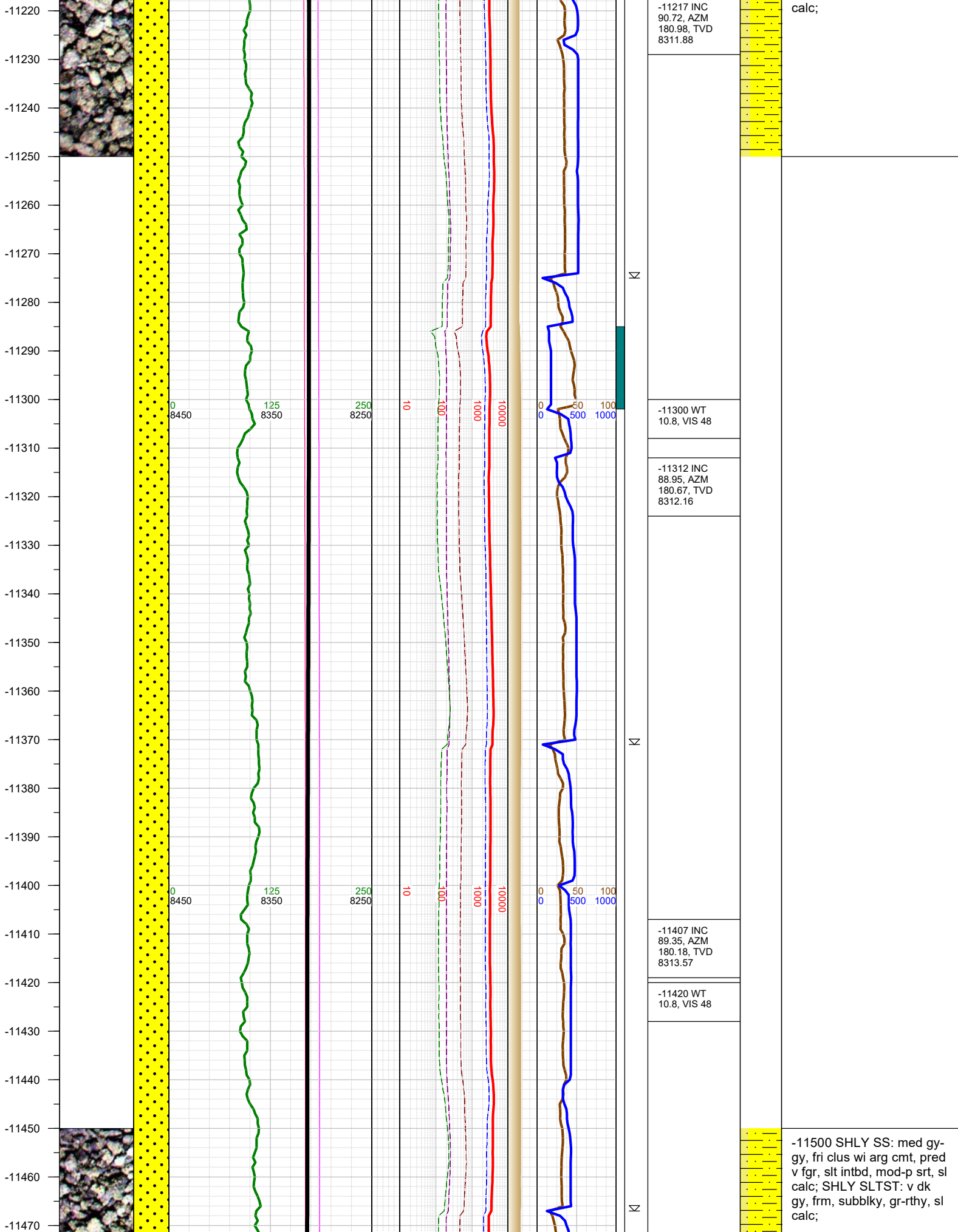
-10700 WT
10.8, VIS 46

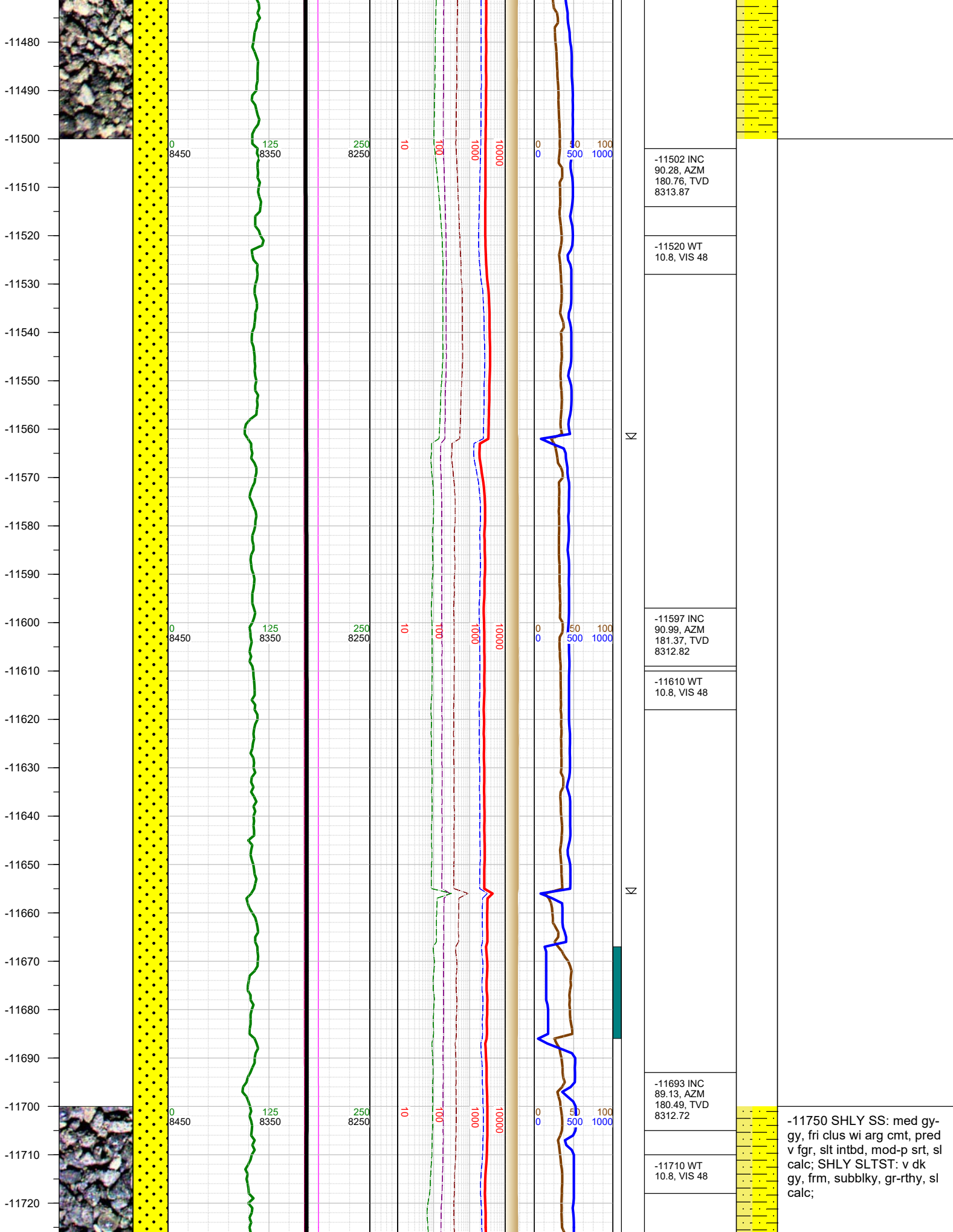
-10500 SHLY SS: med gy-
gy, fri clus wi arg cmt, pred
v fgr, slt intbd, mod-p srt, sl
calc; SHLY SLTST: v dk
gy, frm, subblky, gr-rthy, sl
calc;

-10750 SHLY SS: med gy-
gy, fri clus wi arg cmt, pred



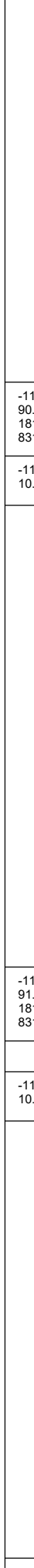
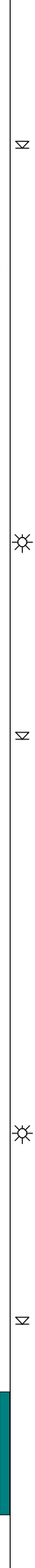
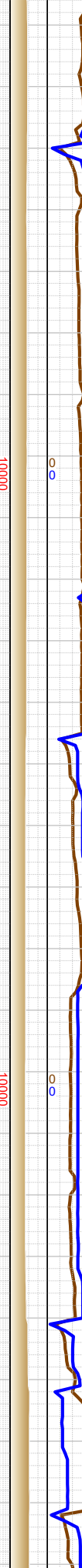
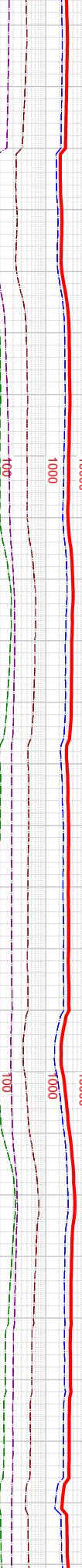
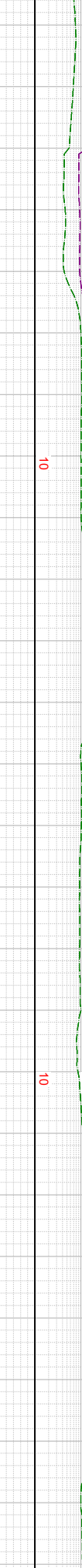
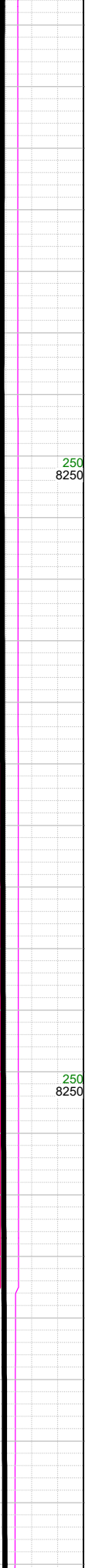
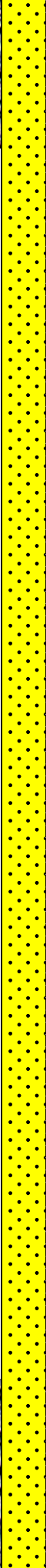
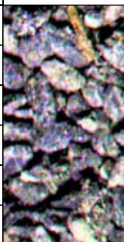
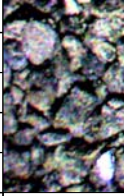






-11750 SHLY SS: med gy, fri clus wi arg cmt, pred v fgr, slt intbd, mod-p srt, sl calc; SHLY SLTST: v dk gy, frm, subblky, gr-rthy, sl calc;

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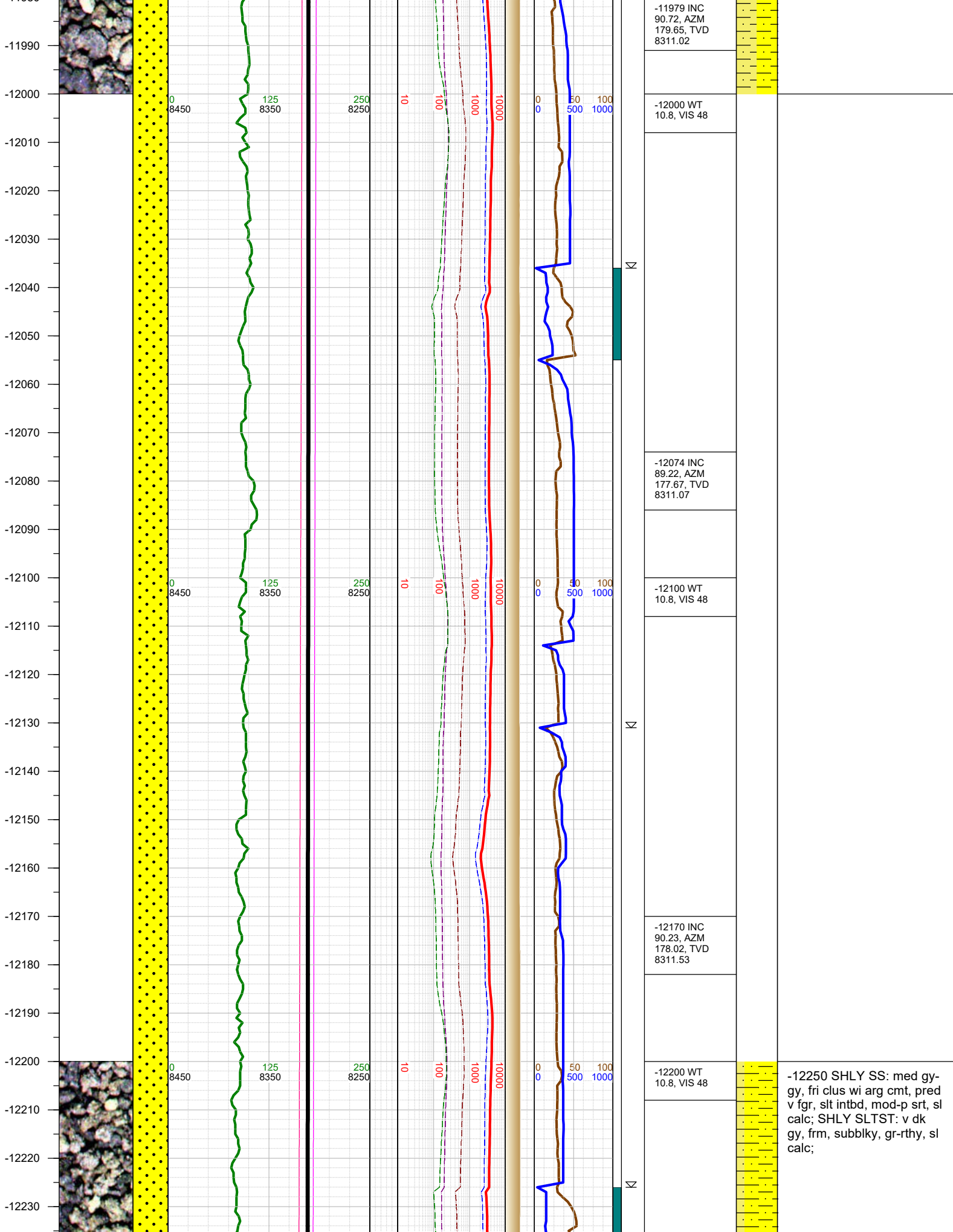
-11788 INC
90.06, AZM
181.02, TVD
8313.39

-11800 WT
10.8, VIS 48

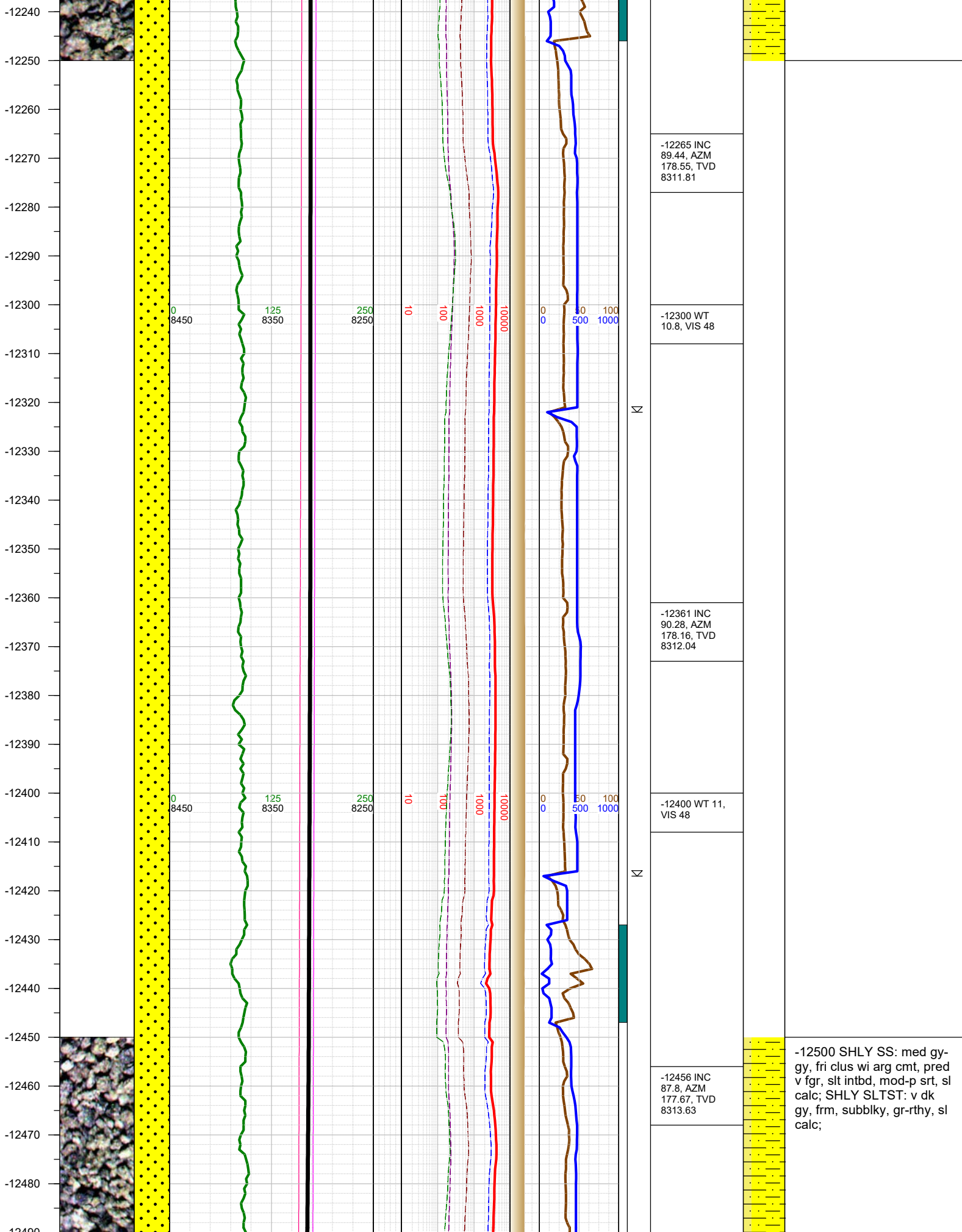
-11883 INC
91.03, AZM
181.33, TVD
8312.49

-11900 WT
10.8, VIS 48

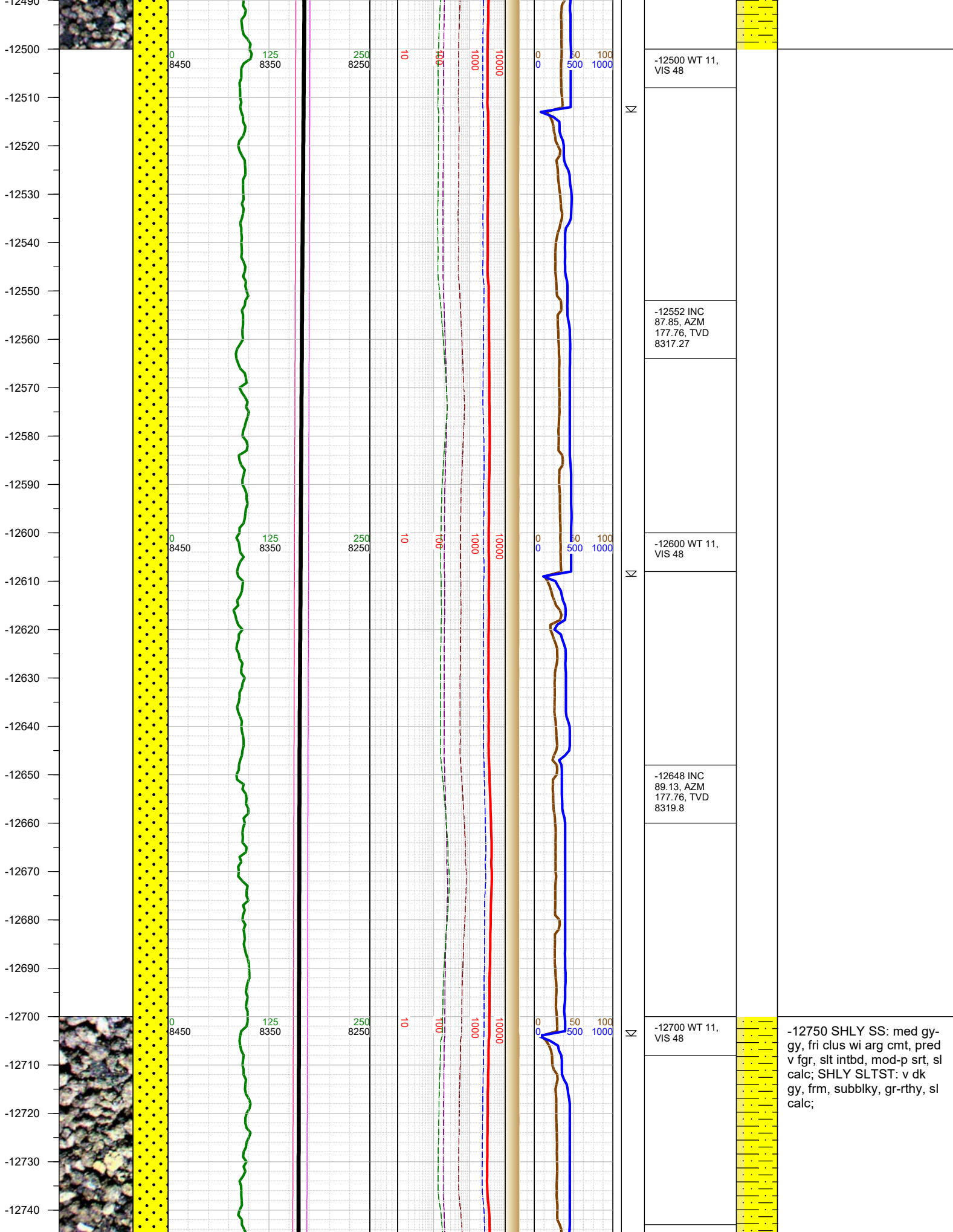
-12000 SHLY SS: med gy-
gy, fri clus wi arg cmt, pred
v fgr, slt intbd, mod-p srt, sl
calc; SHLY SLTST: v dk
gy, frm, subblky, gr-rthy, sl
calc;



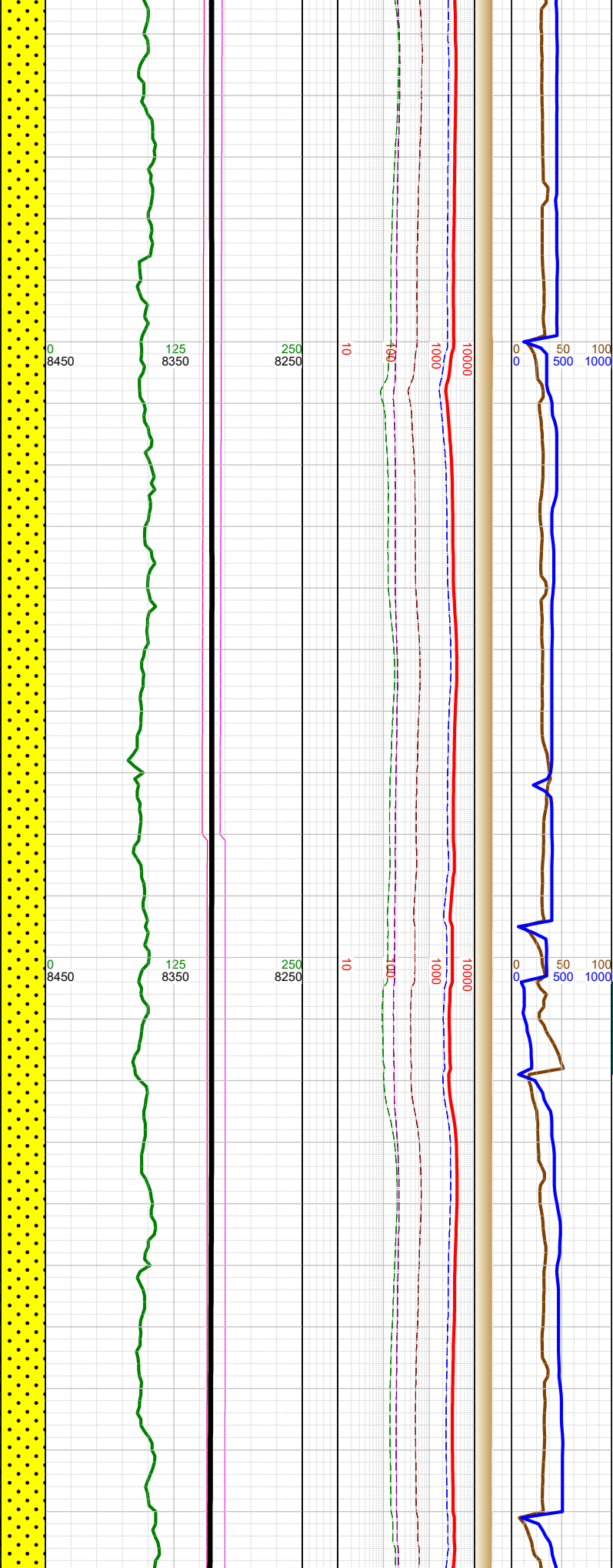
-12250 SHLY SS: med gy, fri clus wi arg cmt, pred v fgr, slt intbd, mod-p srt, sl calc; SHLY SLTST: v dk gy, frm, subblky, gr-rthy, sl calc;



-12500 SHLY SS: med gy-gy, fri clus wi arg cmt, pred v fgr, slt intbd, mod-p srt, sl calc; SHLY SLTST: v dk gy, frm, subblky, gr-rthy, sl calc;



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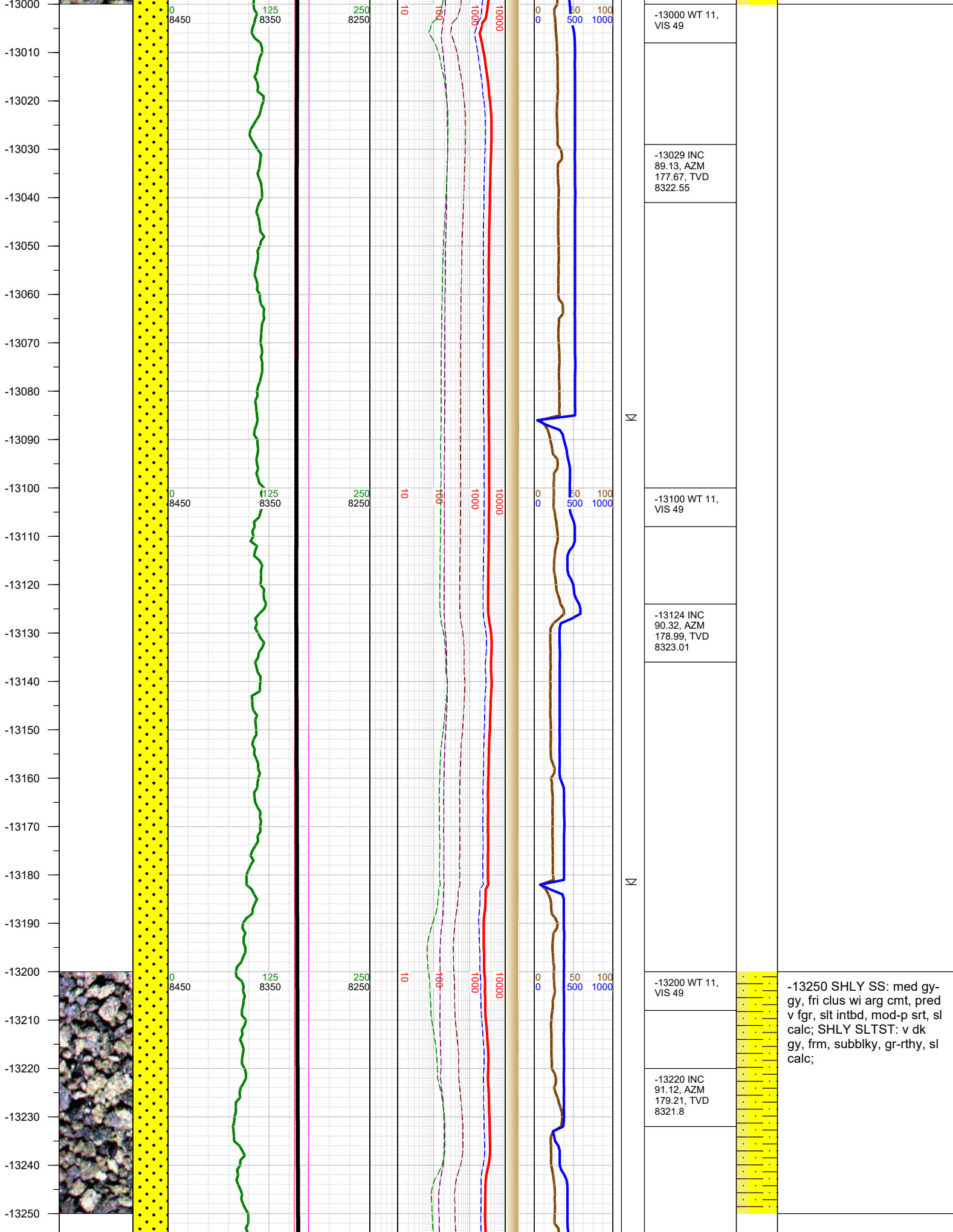


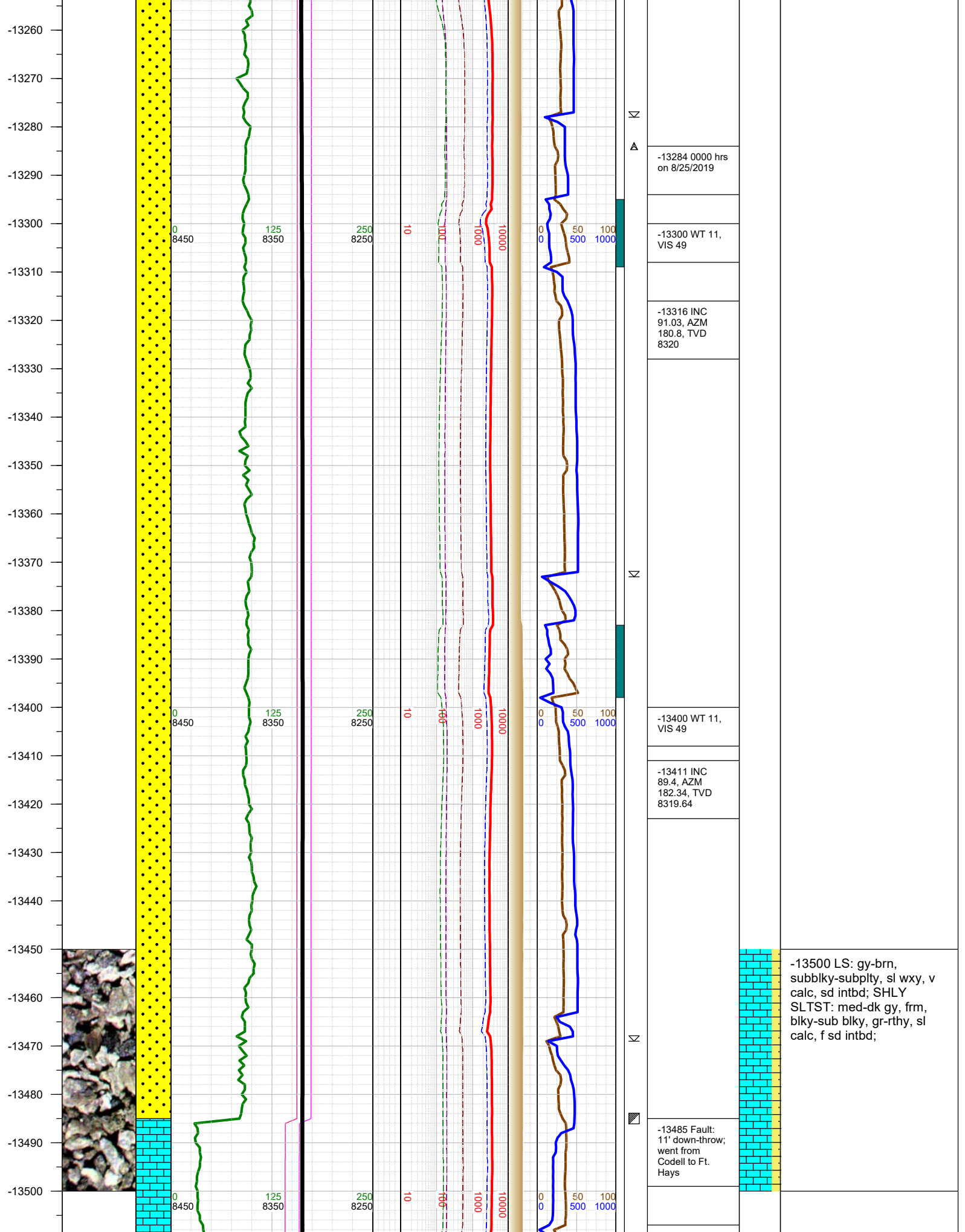
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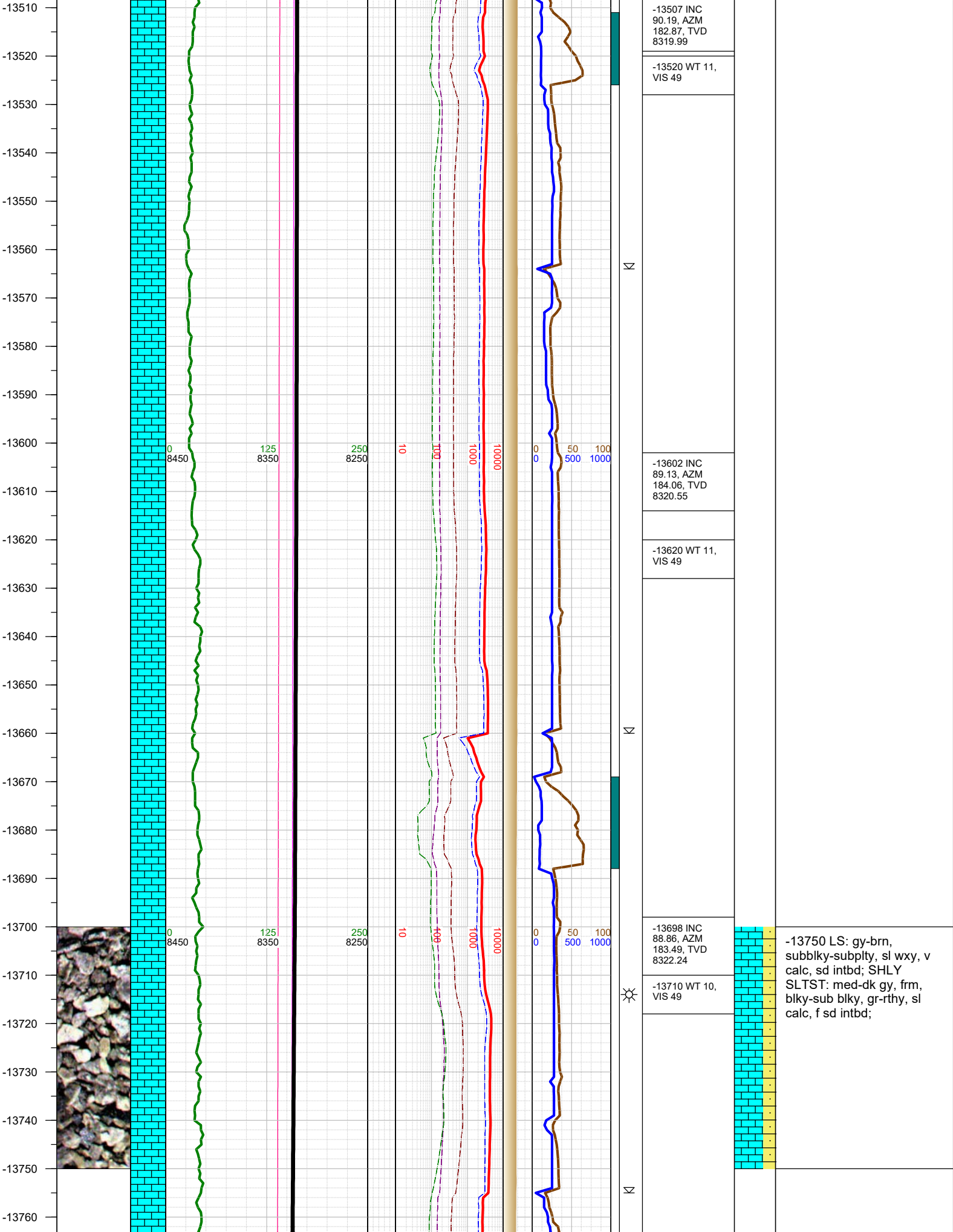
-12743 INC 89.66, AZM 178.33, TVD 8320.81	
-12800 WT 11, VIS 48	
-12839 INC 90.77, AZM 178.46, TVD 8320.45	
-12880 Fault: 4' up-throw; stayed in Codell	
-12900 WT 11, VIS 48	
-12934 INC 88.78, AZM 177.89, TVD 8320.82	

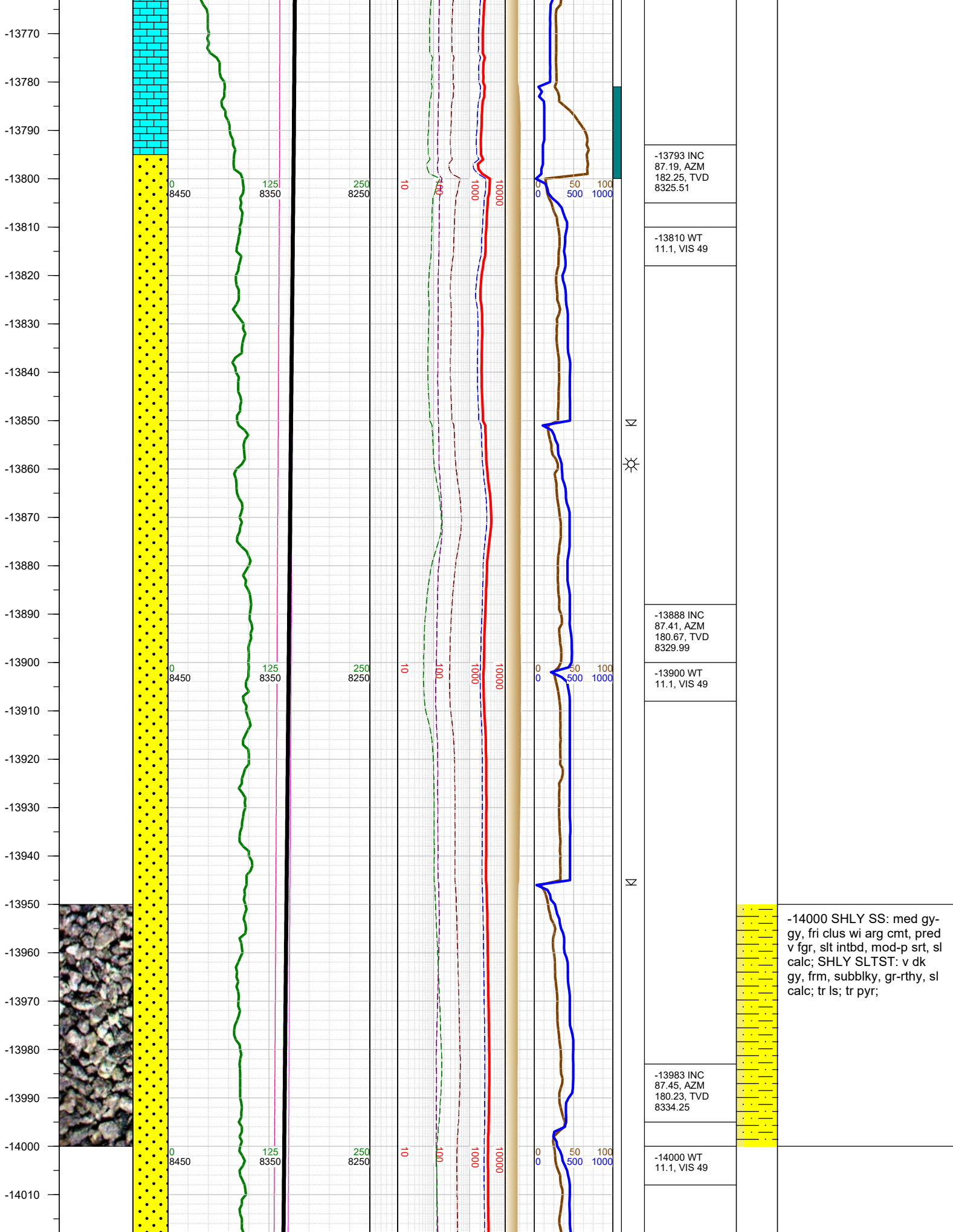


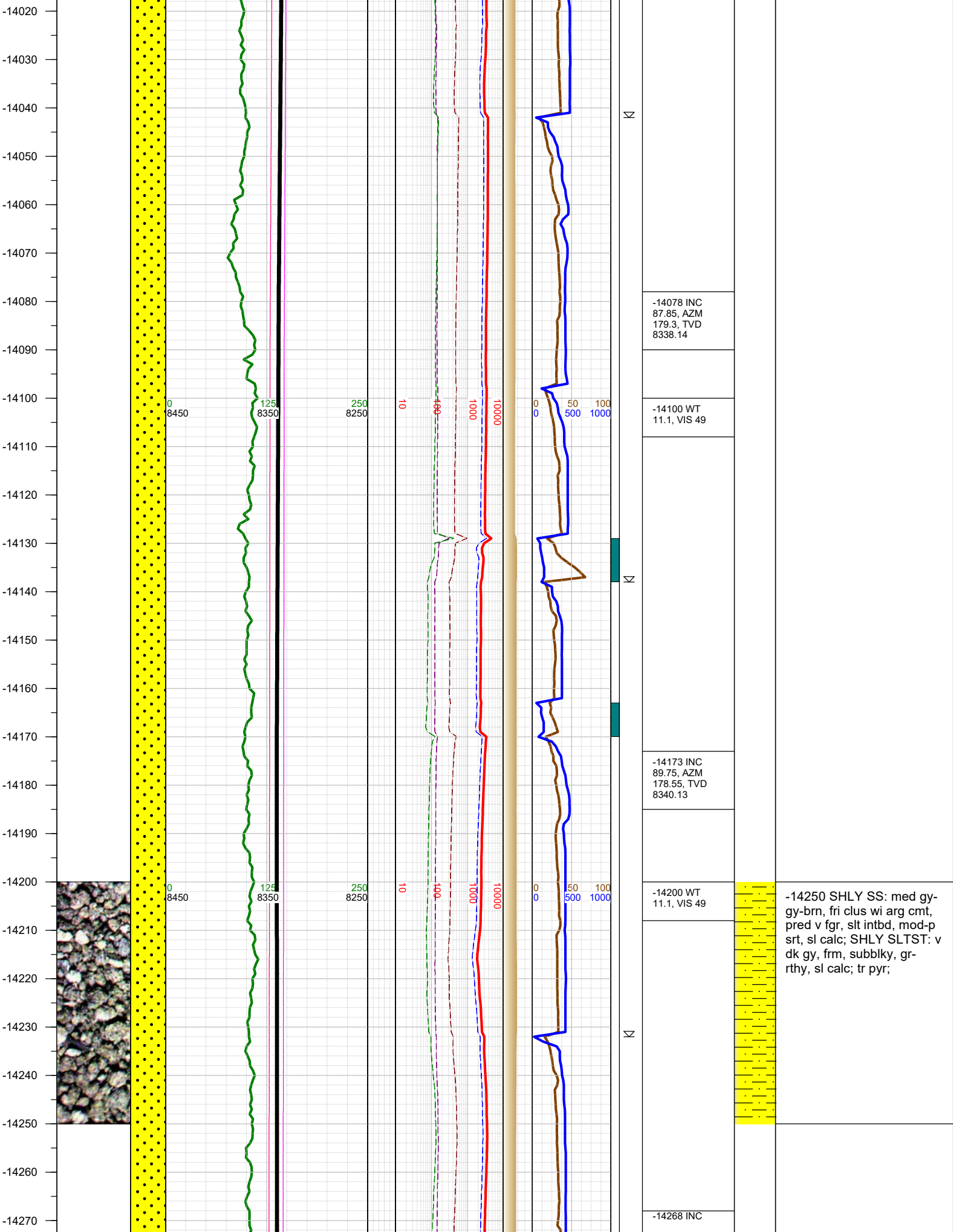
-13000 SHLY SS: med gy-
gy, fri clus wi arg cmt, pred
v fgr, slt intbd, mod-p srt, sl
calc; SHLY SLTST: v dk
gy, frm, subblky, gr-rthy, sl
calc;

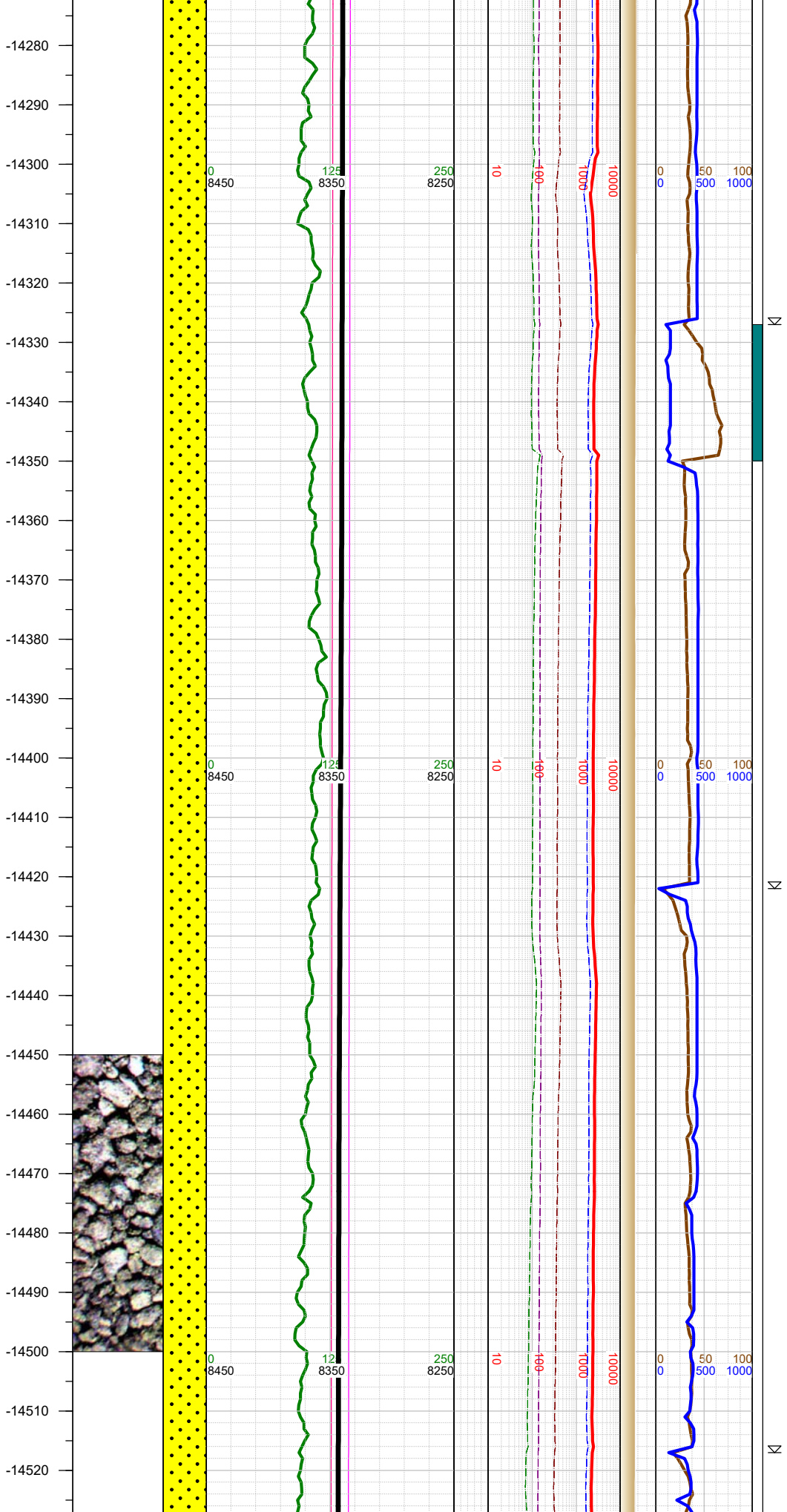






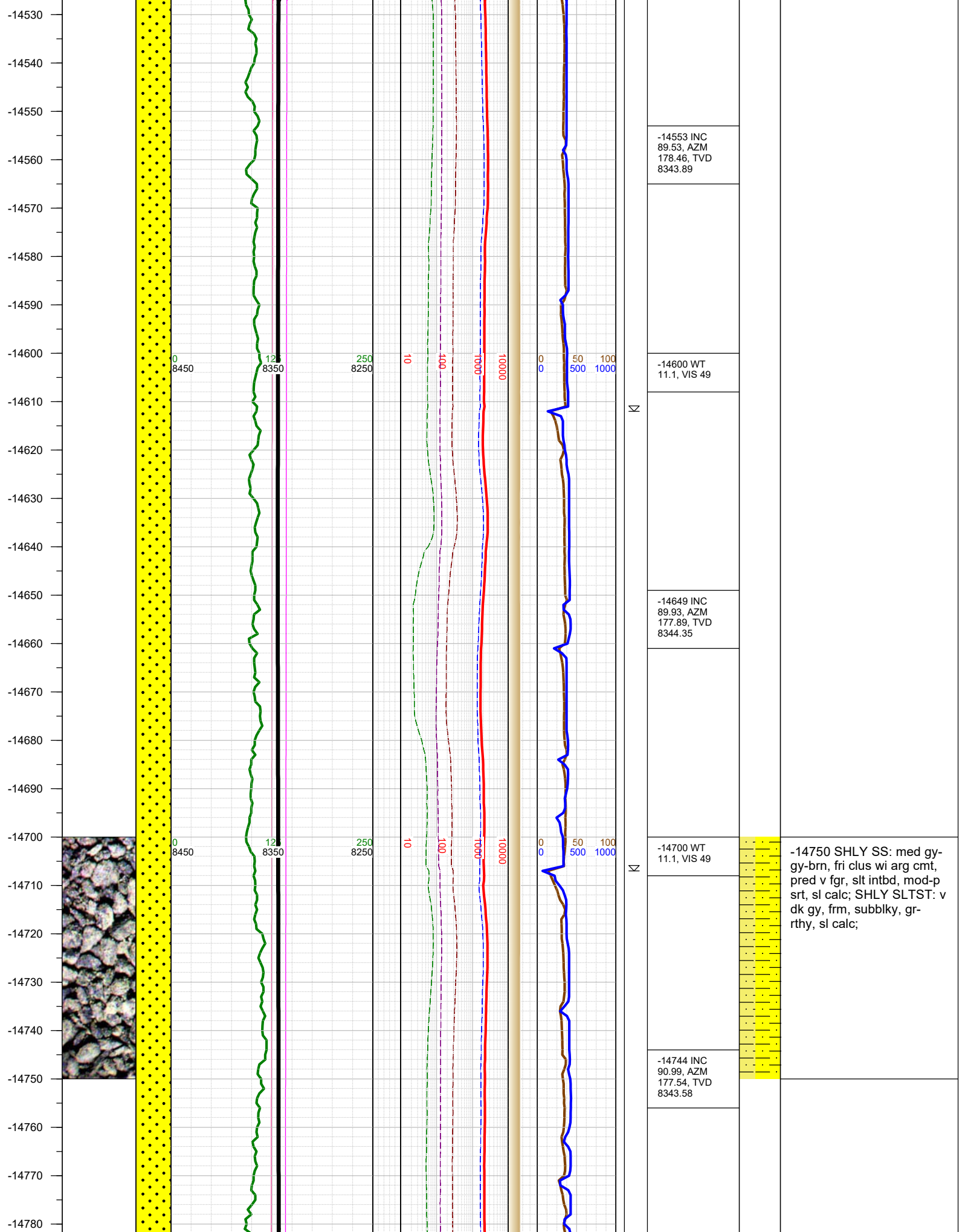


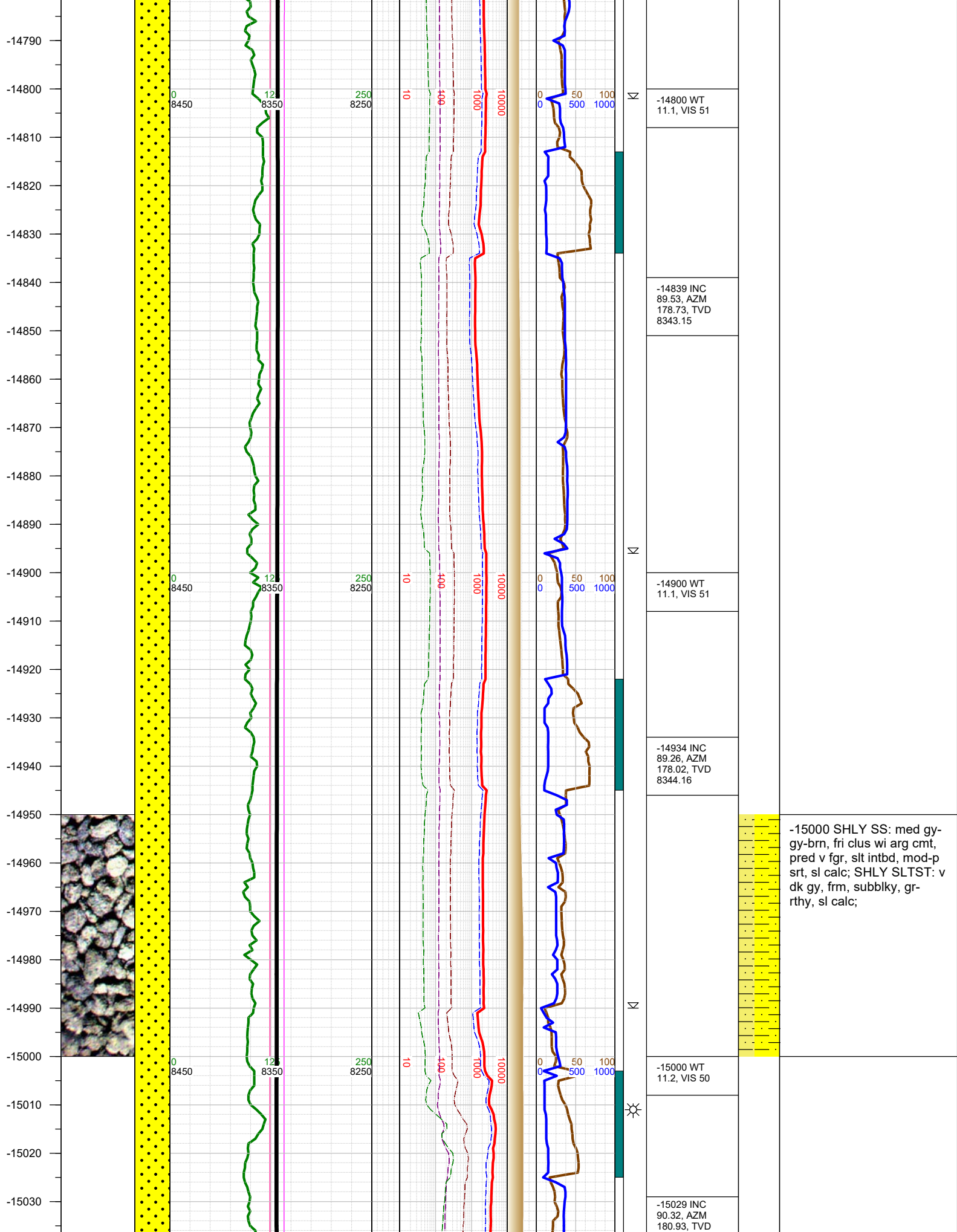


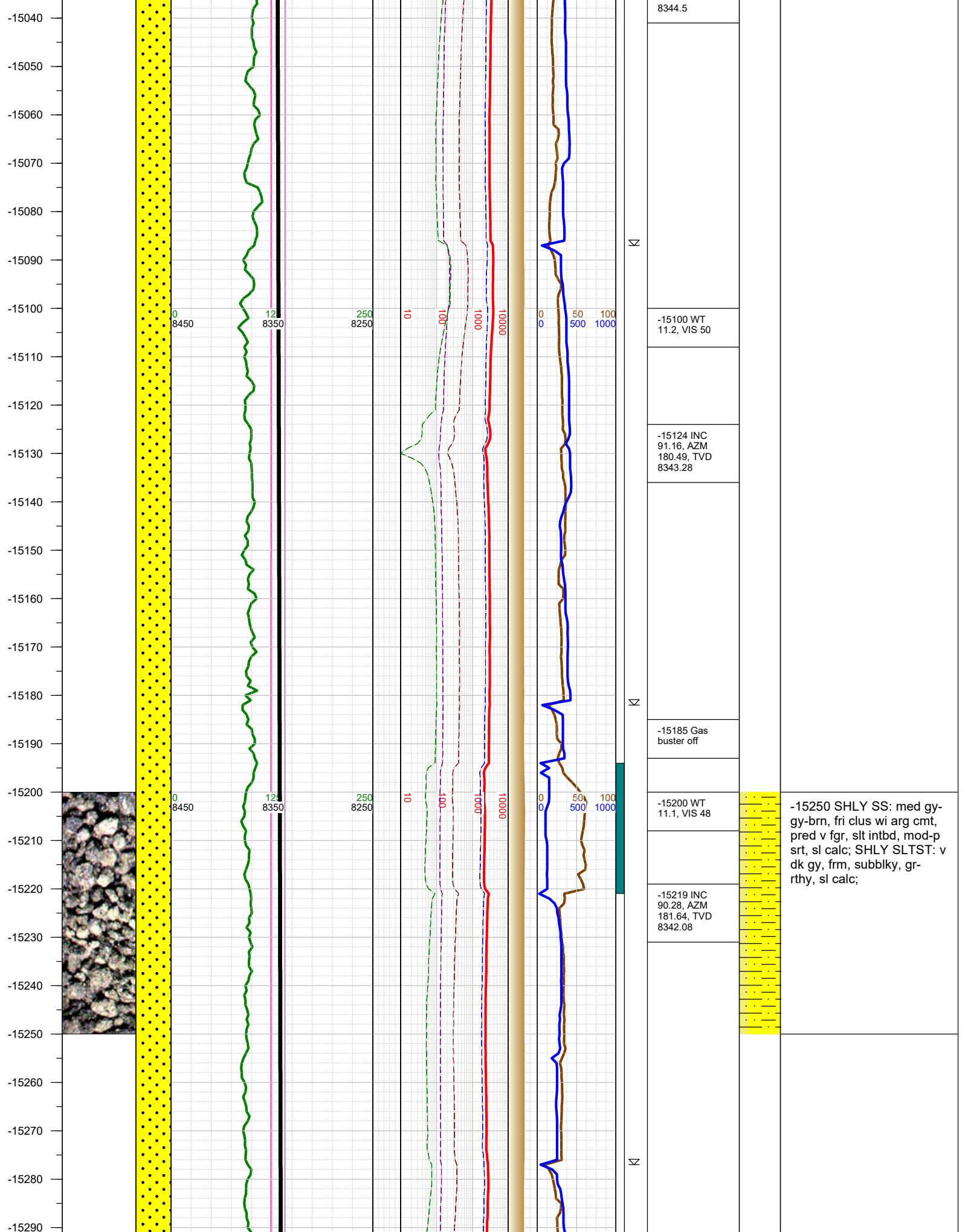


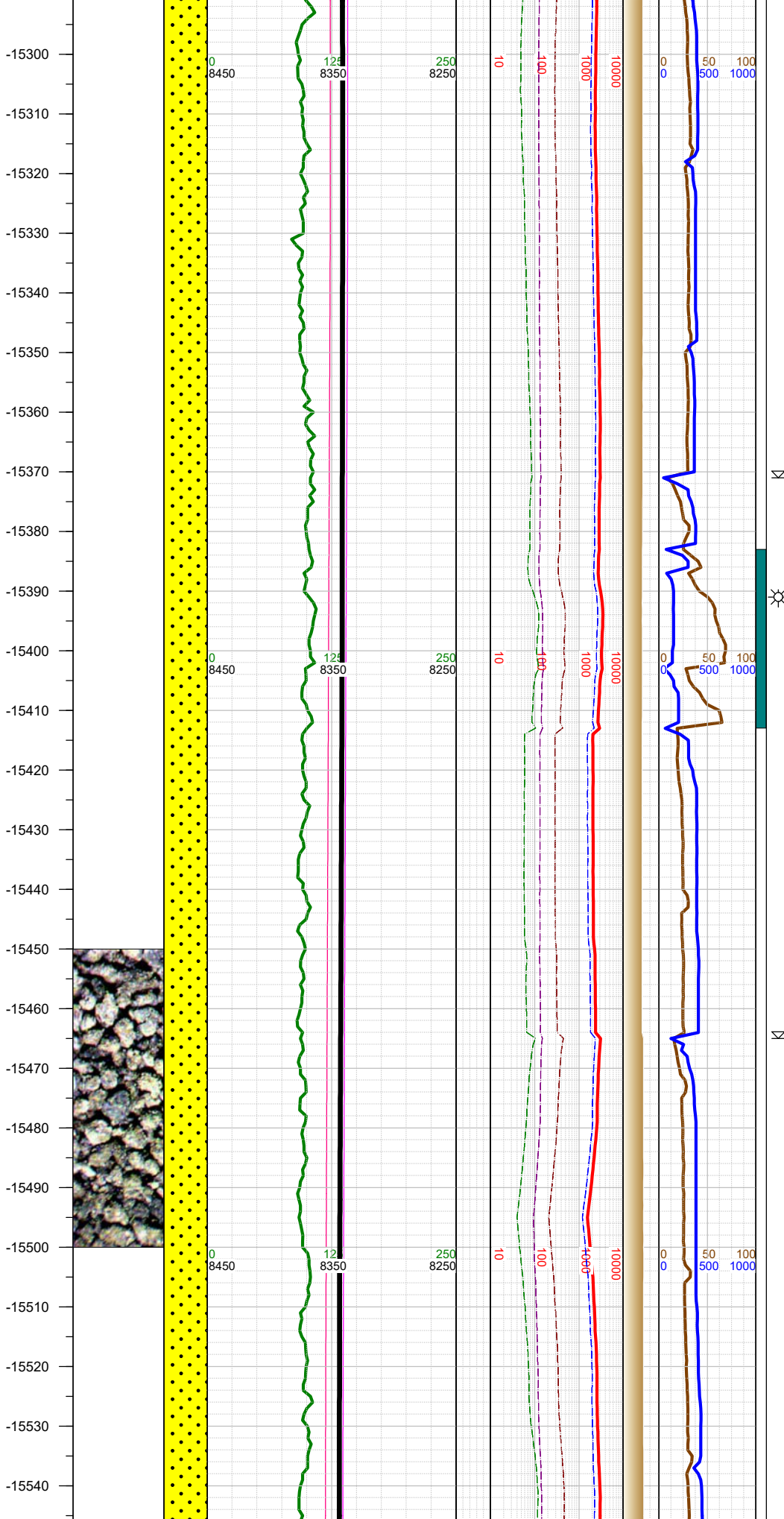
90.59, AZM 179.26, TVD 8339.85
-14300 WT 11.1, VIS 49
-14363 INC 88.33, AZM 178.99, TVD 8340.74
-14400 WT 11.1, VIS 49
-14458 INC 89.17, AZM 178.99, TVD 8342.82
-14500 WT 11.1, VIS 49

-14500 SHLY SS: med gy-
gy-brn, fri clus wi arg cmt,
pred v fgr, slt intbd, mod-p
srt, sl calc; SHLY SLTST: v
dk gy, frm, subblky, gr-
rthy, sl calc;









-15300 WT
11.1, VIS 47

-15314 INC
90.77, AZM
182.21, TVD
8341.21

-15400 WT
11.1, VIS 47

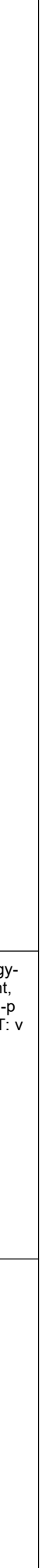
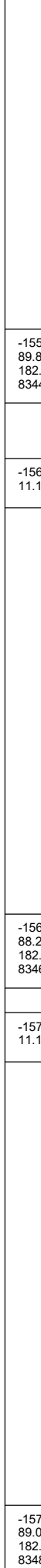
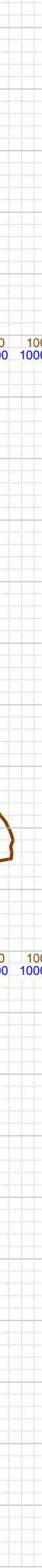
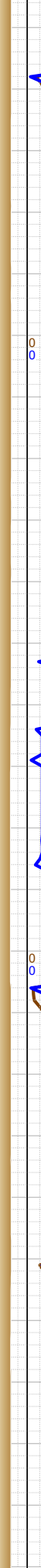
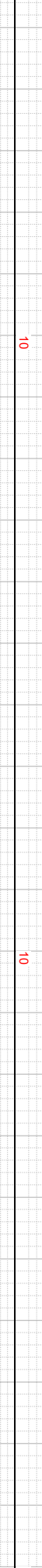
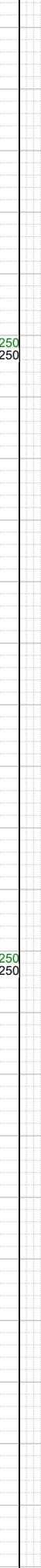
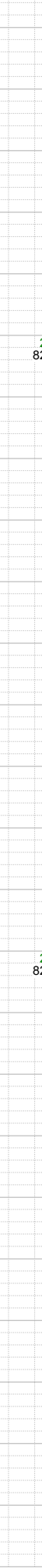
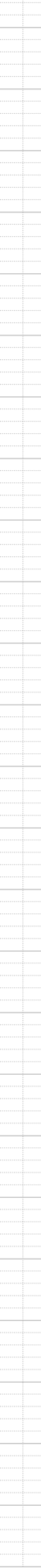
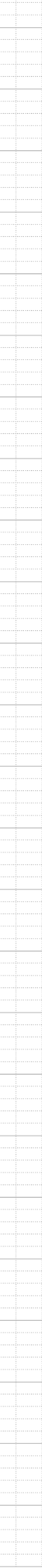
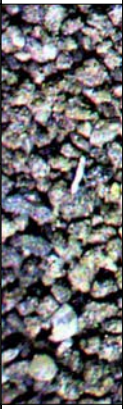
-15408 INC
88.56, AZM
182.61, TVD
8341.76

-15500 SHLY SS: med gy-gy-brn, fri clus wi arg cmt, pred v fgr, slt intbd, mod-p srt, sl calc; SHLY SLTST: v dk gy, frm, subblky, gr-rthy, sl calc;

-15504 INC
89.17, AZM
182.43, TVD
8343.66

-15520 WT
11.1, VIS 47

-15550
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-15599 INC
89.88, AZM
182.47, TVD
8344.45

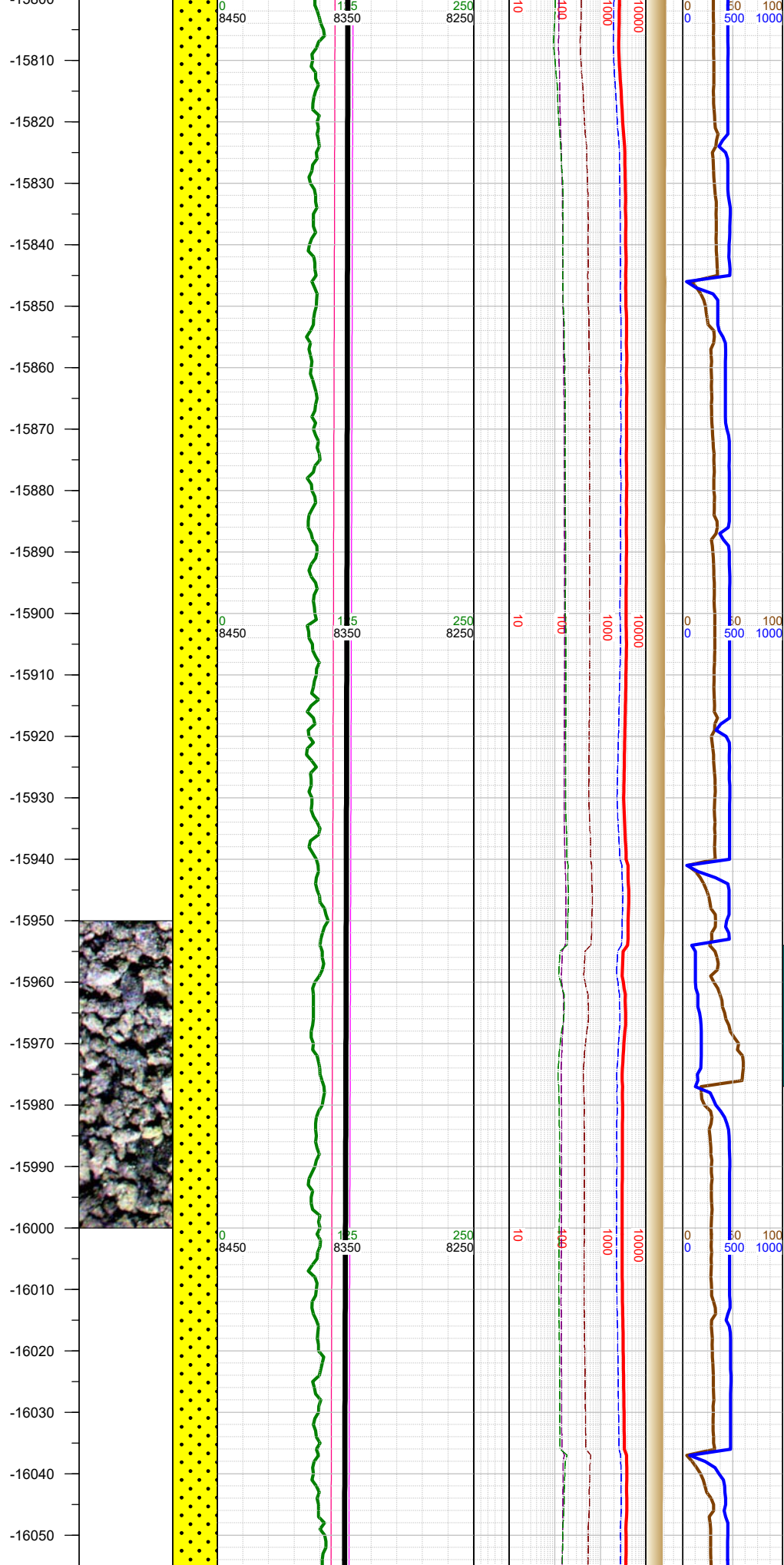
-15620 WT
11.1, VIS 47

-15694 INC
88.25, AZM
182.78, TVD
8346

-15710 WT
11.1, VIS 48

-15790 INC
89.09, AZM
182.87, TVD
8348.23

-15750 SHLY SS: med gy-
gy-brn, fri clus wi arg cmt,
pred v fgr, slt intbd, mod-p
srt, sl calc; SHLY SLTST: v
dk gy, frm, subblky, gr-
rthy, sl calc;



-15810 WT
11.1, VIS 48

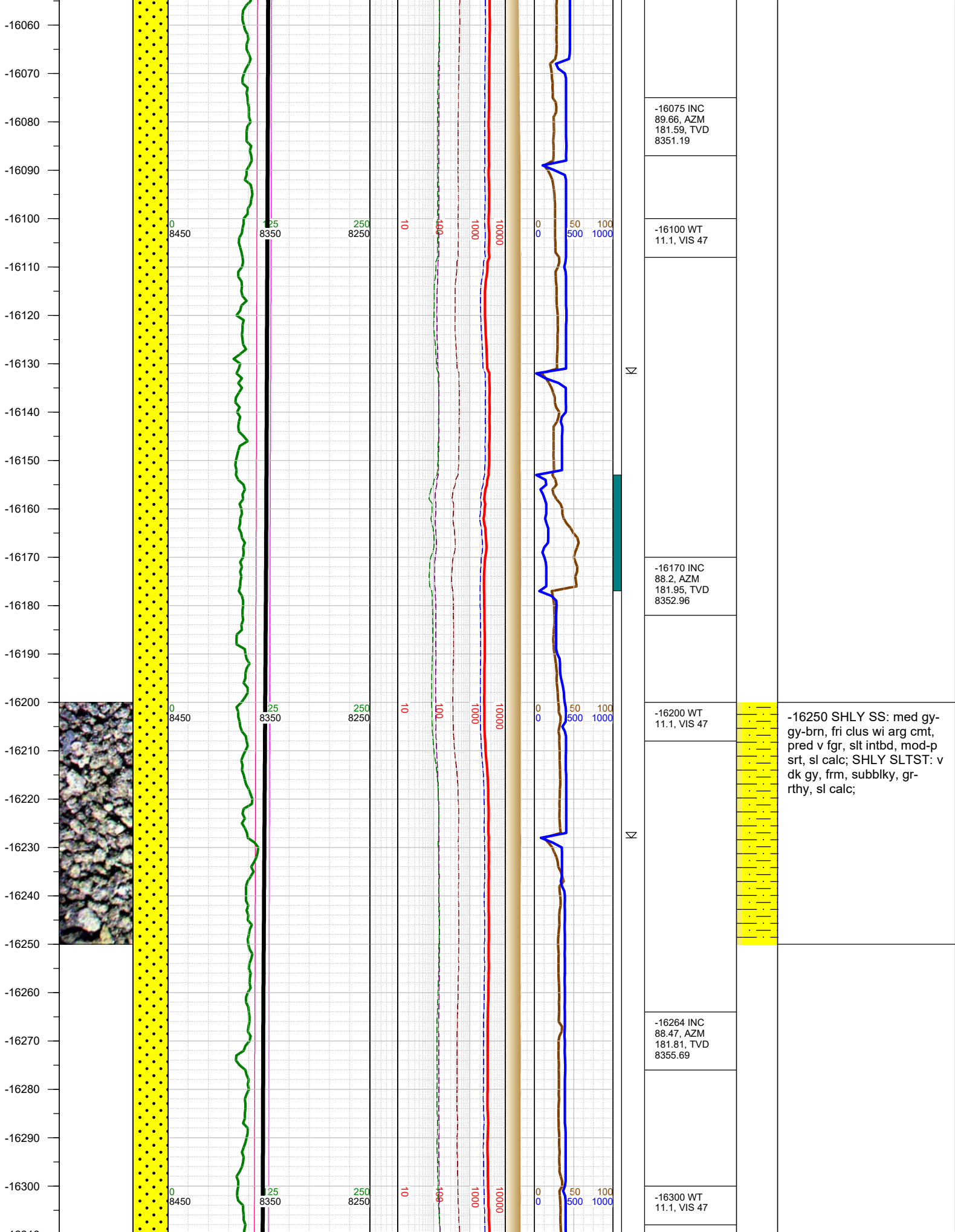
-15885 INC
90.06, AZM
182.69, TVD
8348.93

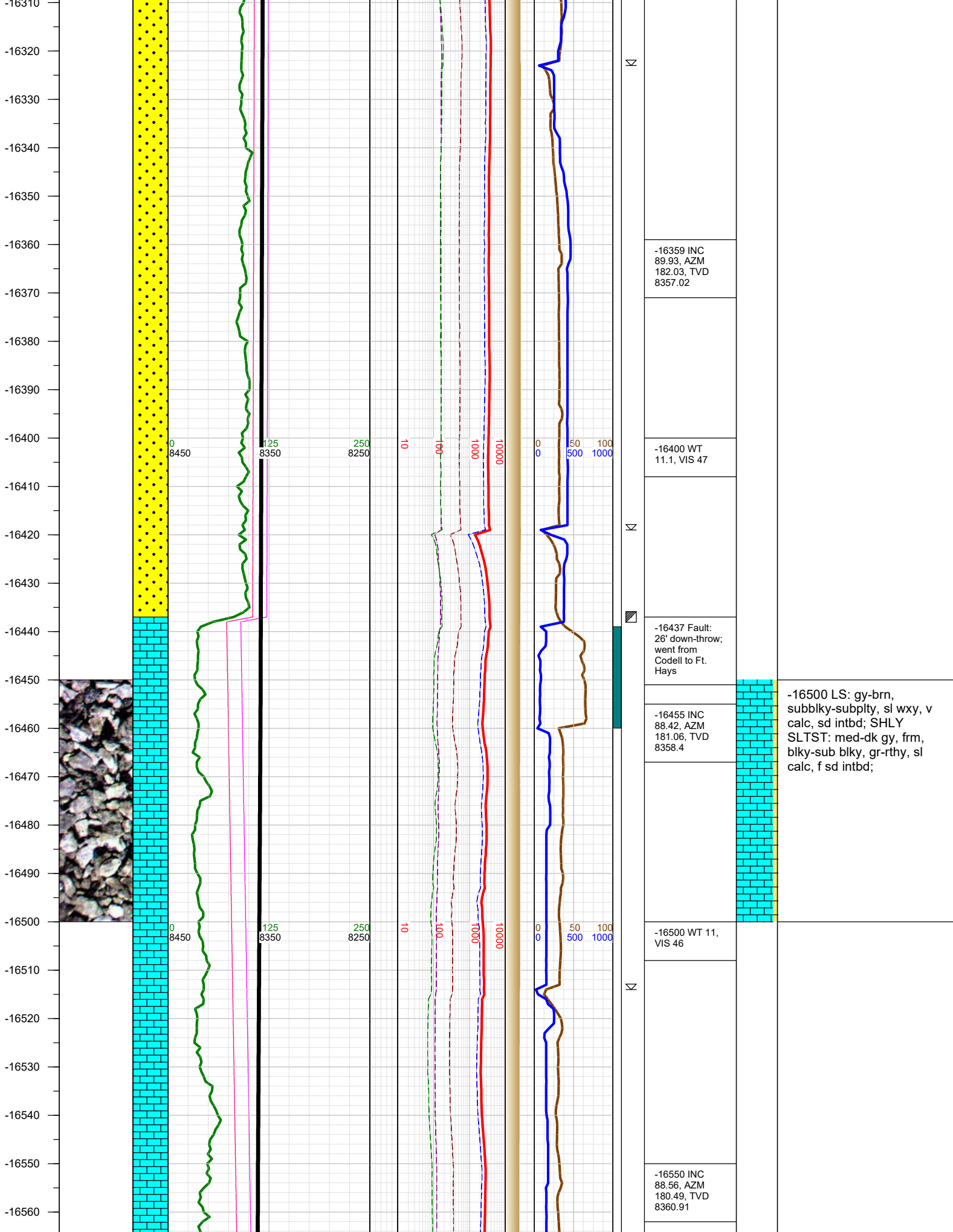
-15900 WT
11.1, VIS 47

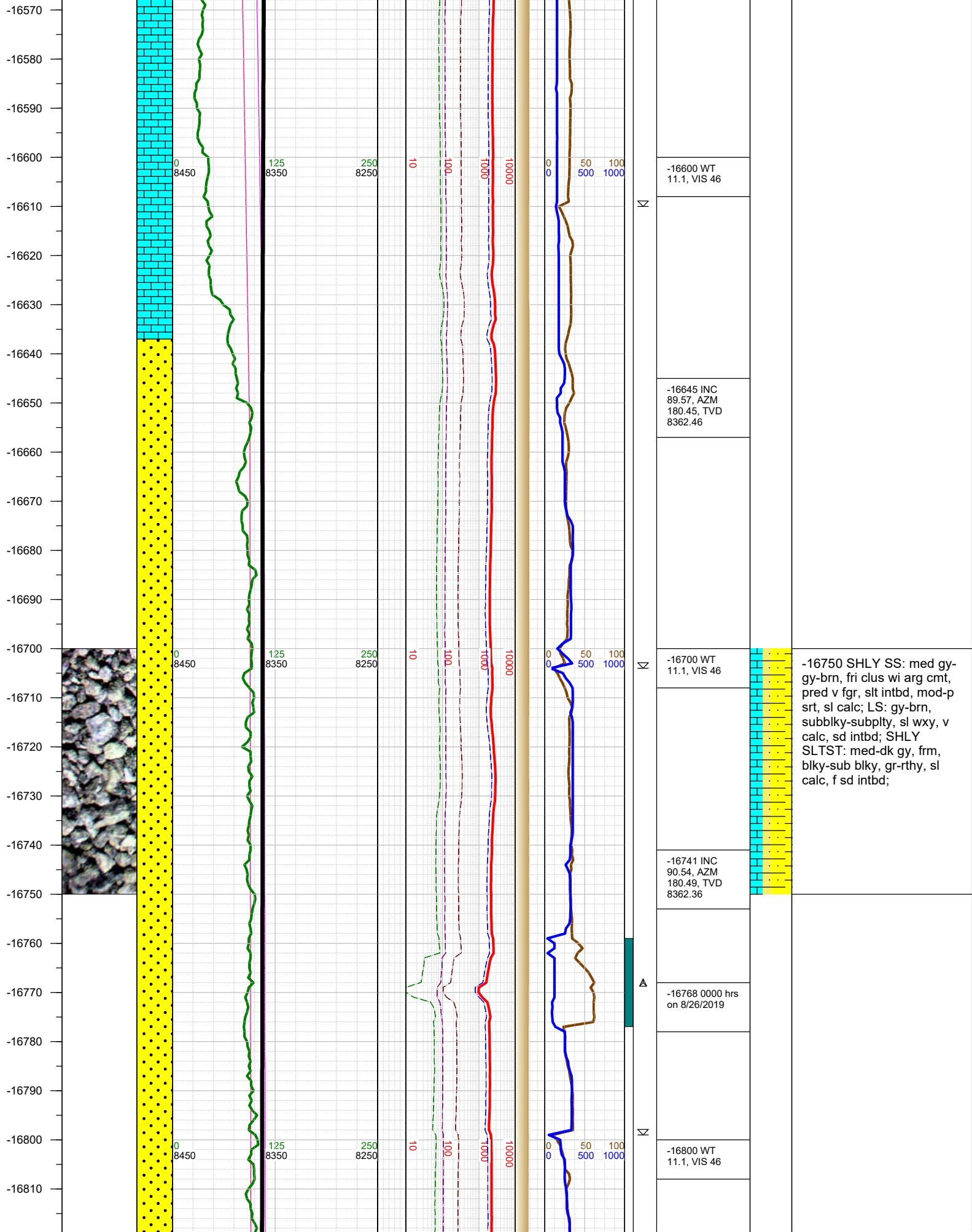
-15980 INC
88.78, AZM
182.08, TVD
8349.9

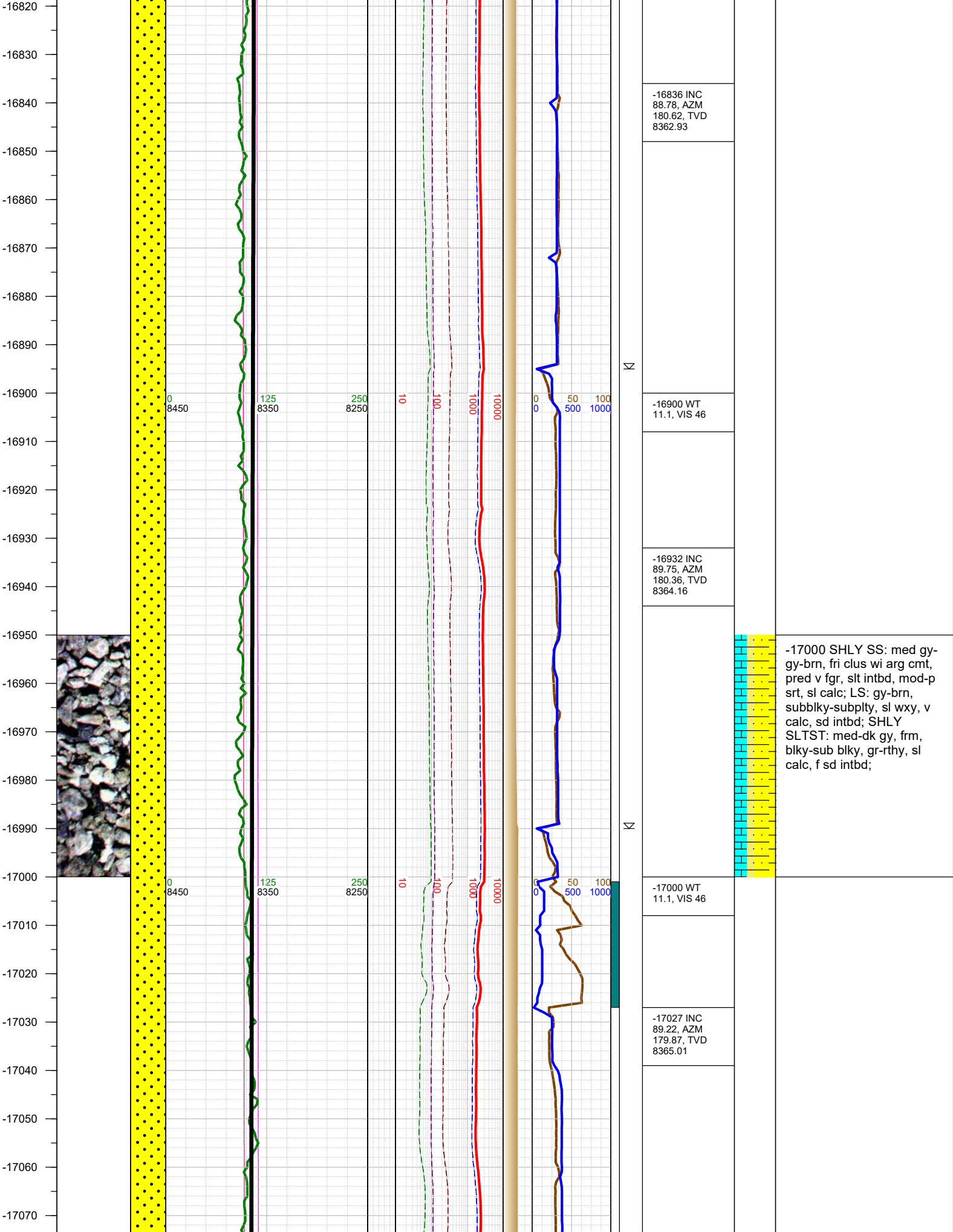
-16000 WT
11.1, VIS 47

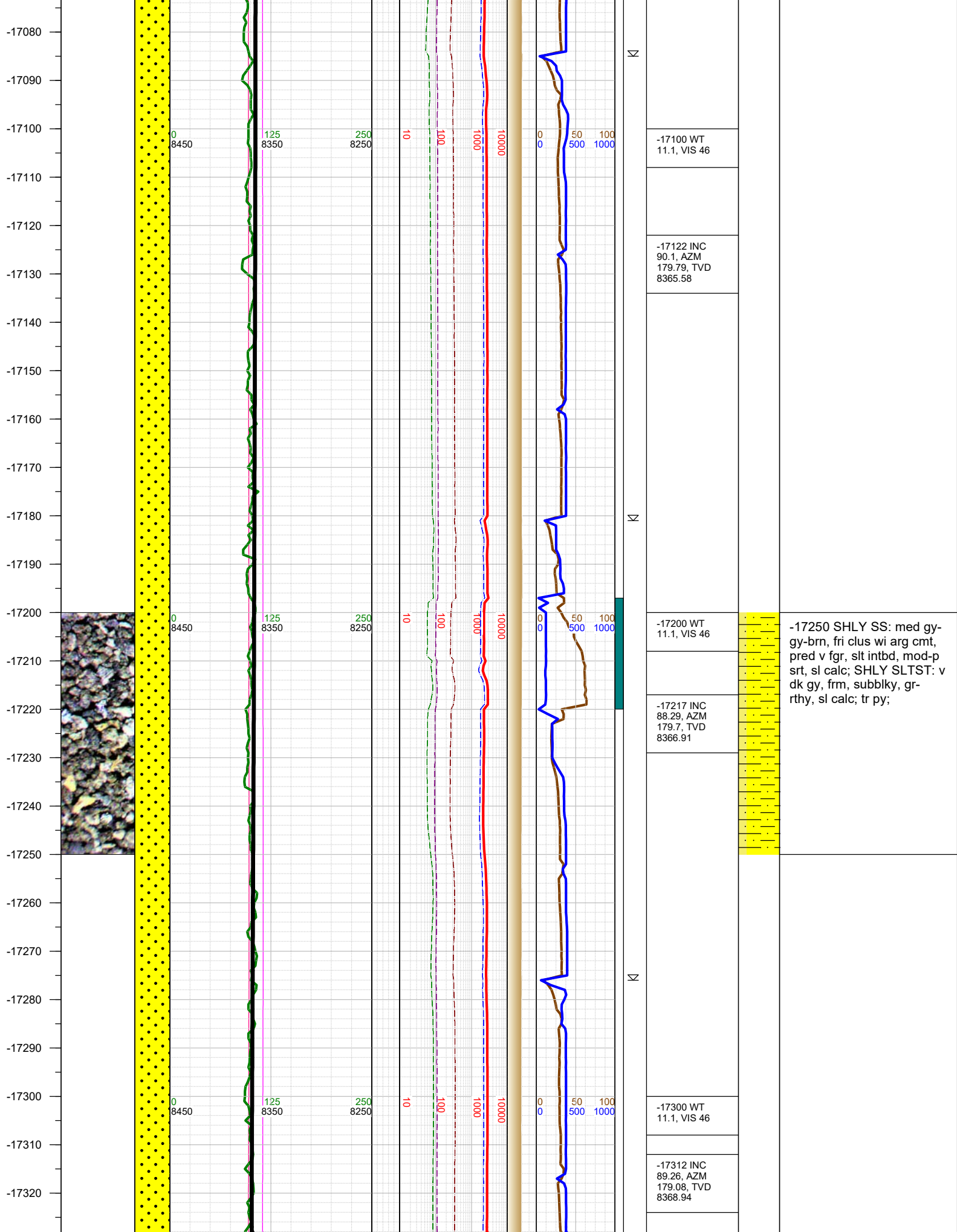
-16000 SHLY SS: med gy-gy-brn, fri clus wi arg cmt, pred v fgr, slt intbd, mod-p srt, sl calc; SHLY SLTST: v dk gy, frm, subblky, gr-rthy, sl calc;

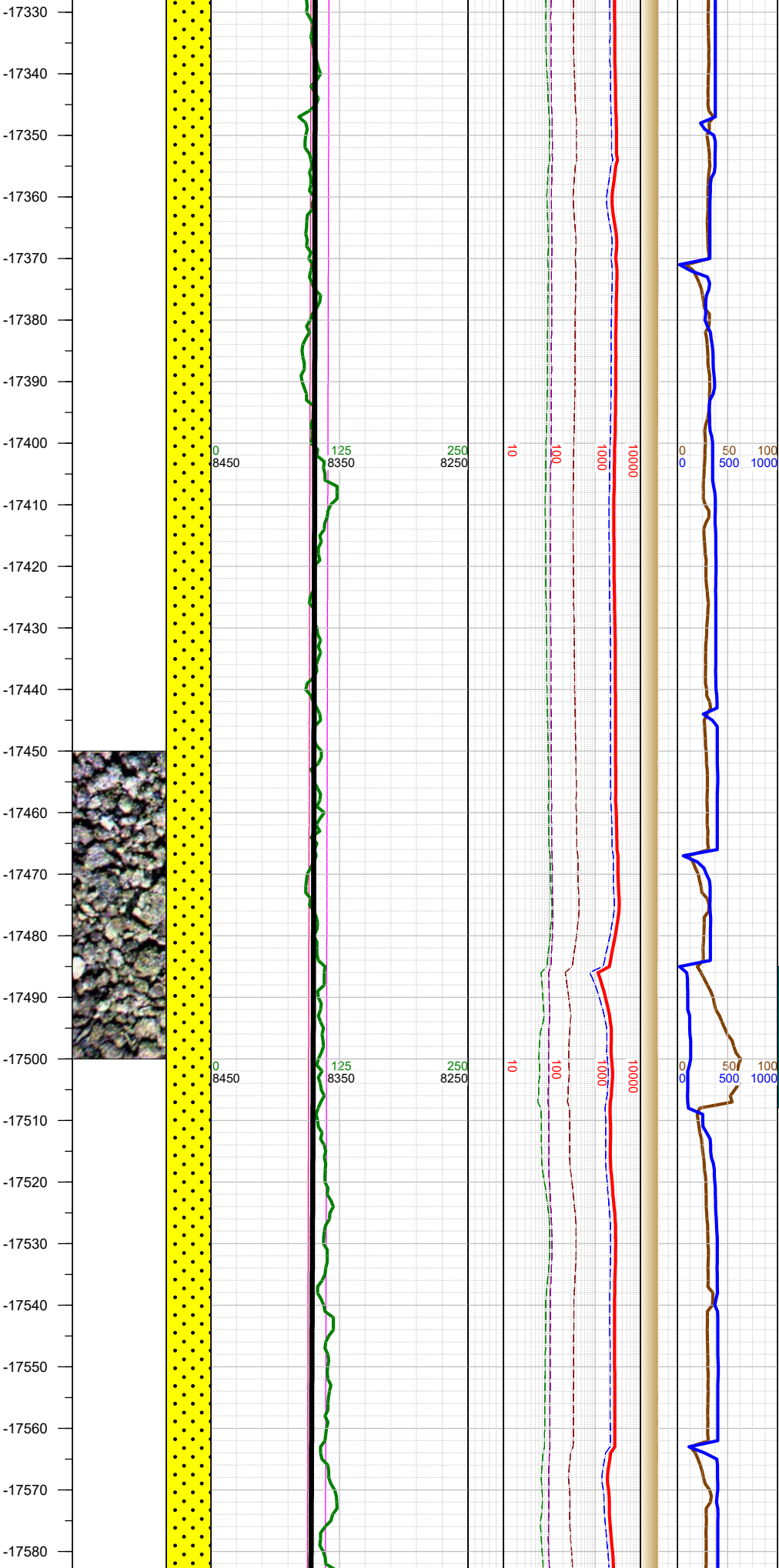












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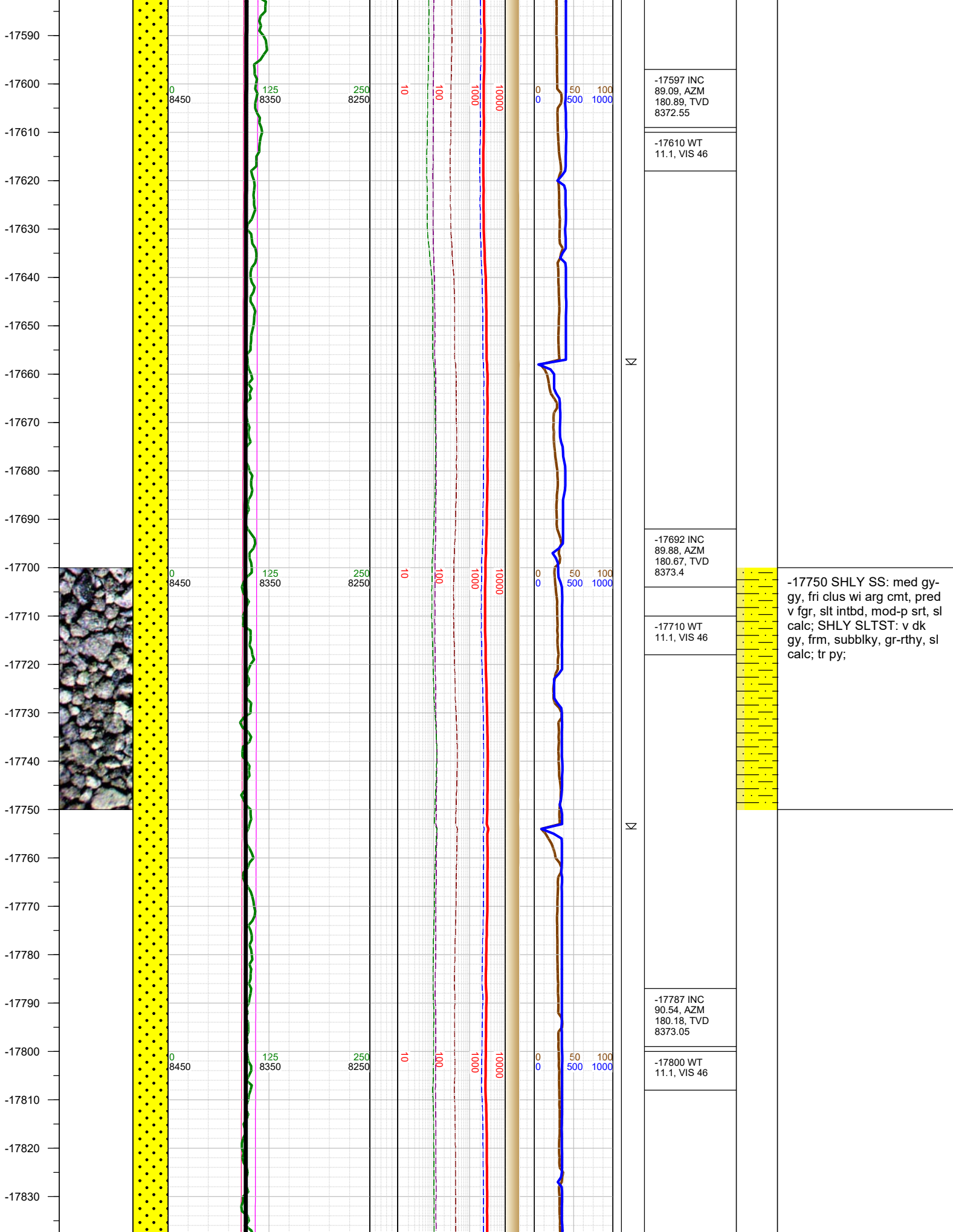
-17406 INC
90.15, AZM
179.3, TVD
8369.43

-17420 WT 11,
VIS 47

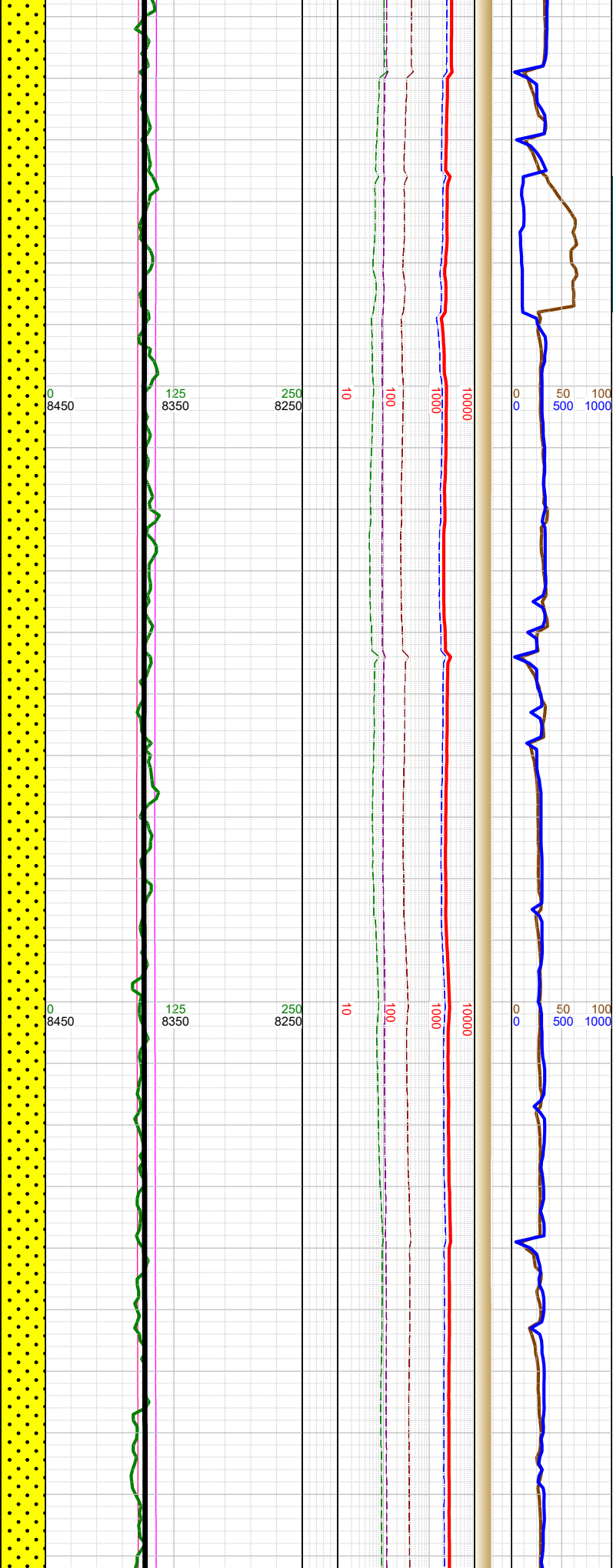
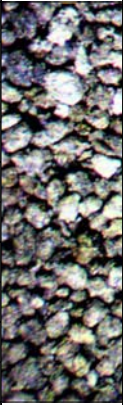
-17500 SHLY SS: med gy-
gy-brn, fri clus wi arg cmt,
pred v fgr, slt intbd, mod-p
srt, sl calc; SHLY SLTST: v
dk gy, frm, subblky, gr-
rthy, sl calc; tr py;

-17501 INC
88.51, AZM
180.49, TVD
8370.54

-17520 WT 11,
VIS 47



-17840
-17850
-17860
-17870
-17880
-17890
-17900
-17910
-17920
-17930
-17940
-17950
-17960
-17970
-17980
-17990
-18000
-18010
-18020
-18030
-18040
-18050
-18060
-18070
-18080
-18090



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Σ
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-17883 INC
89.4, AZM
180.05, TVD
8373.1

-17900 Gas
buster on

-17910 WT
11.2, VIS 49

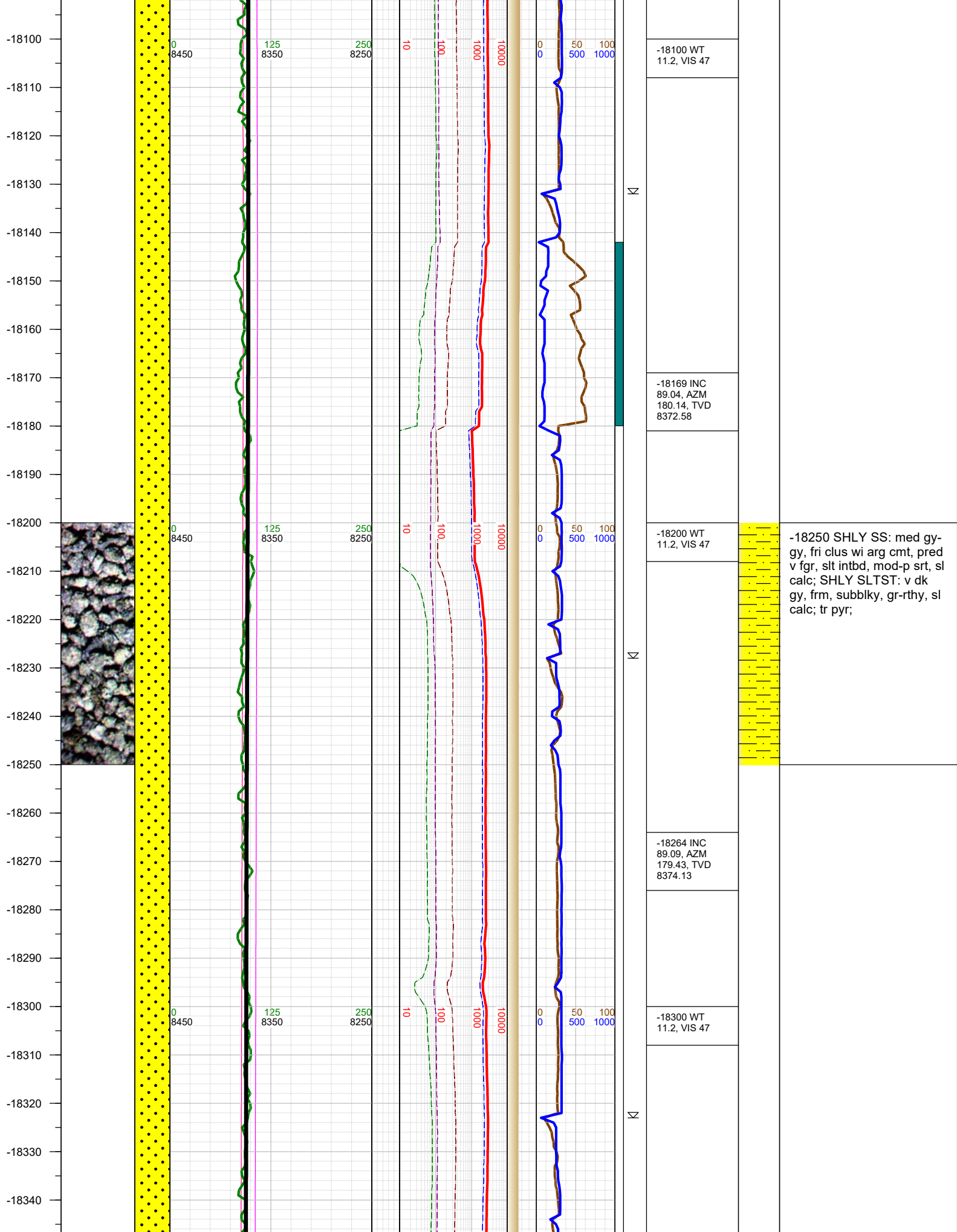
-17978 INC
90.19, AZM
179.57, TVD
8373.44

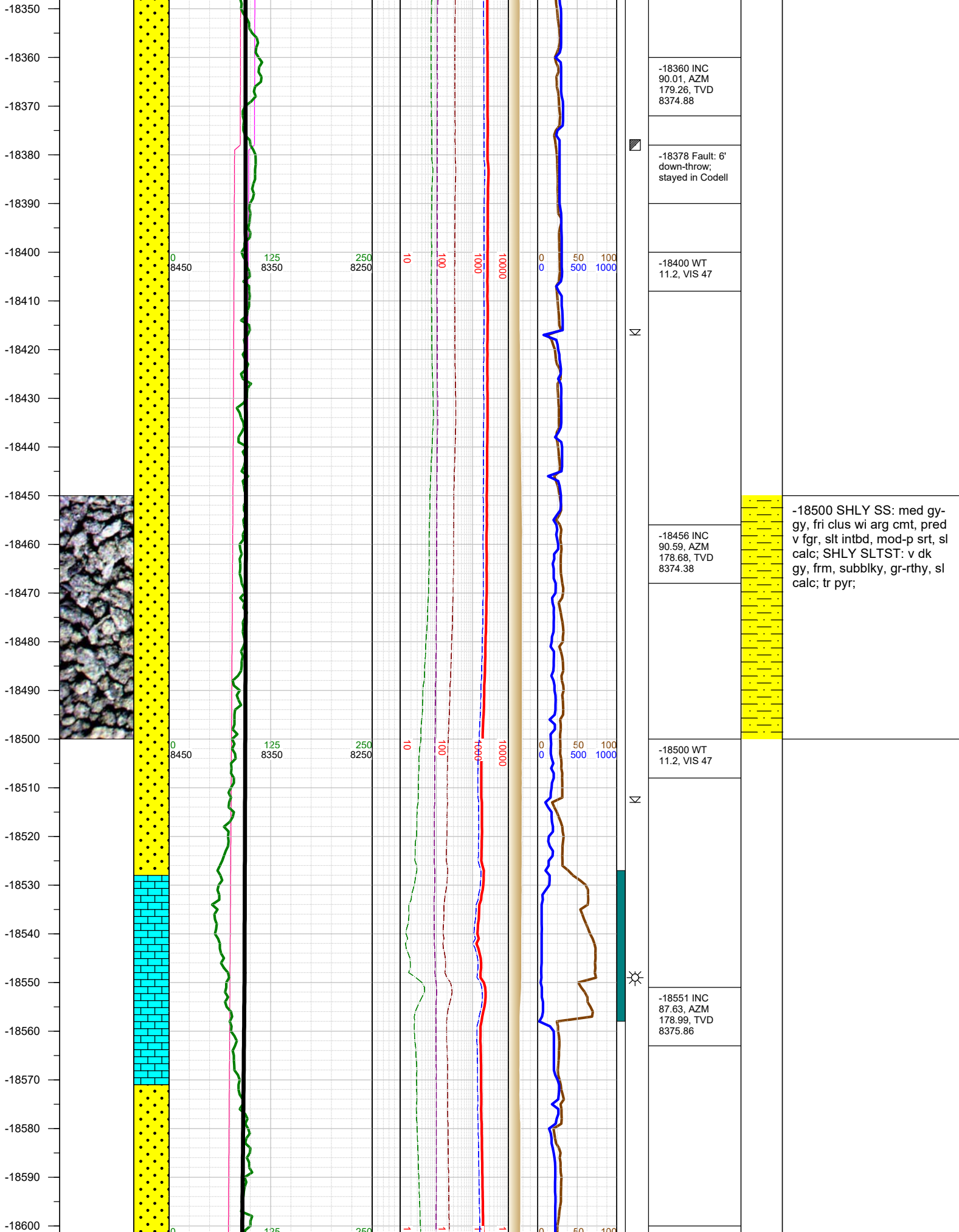
-18000 WT
11.2, VIS 49

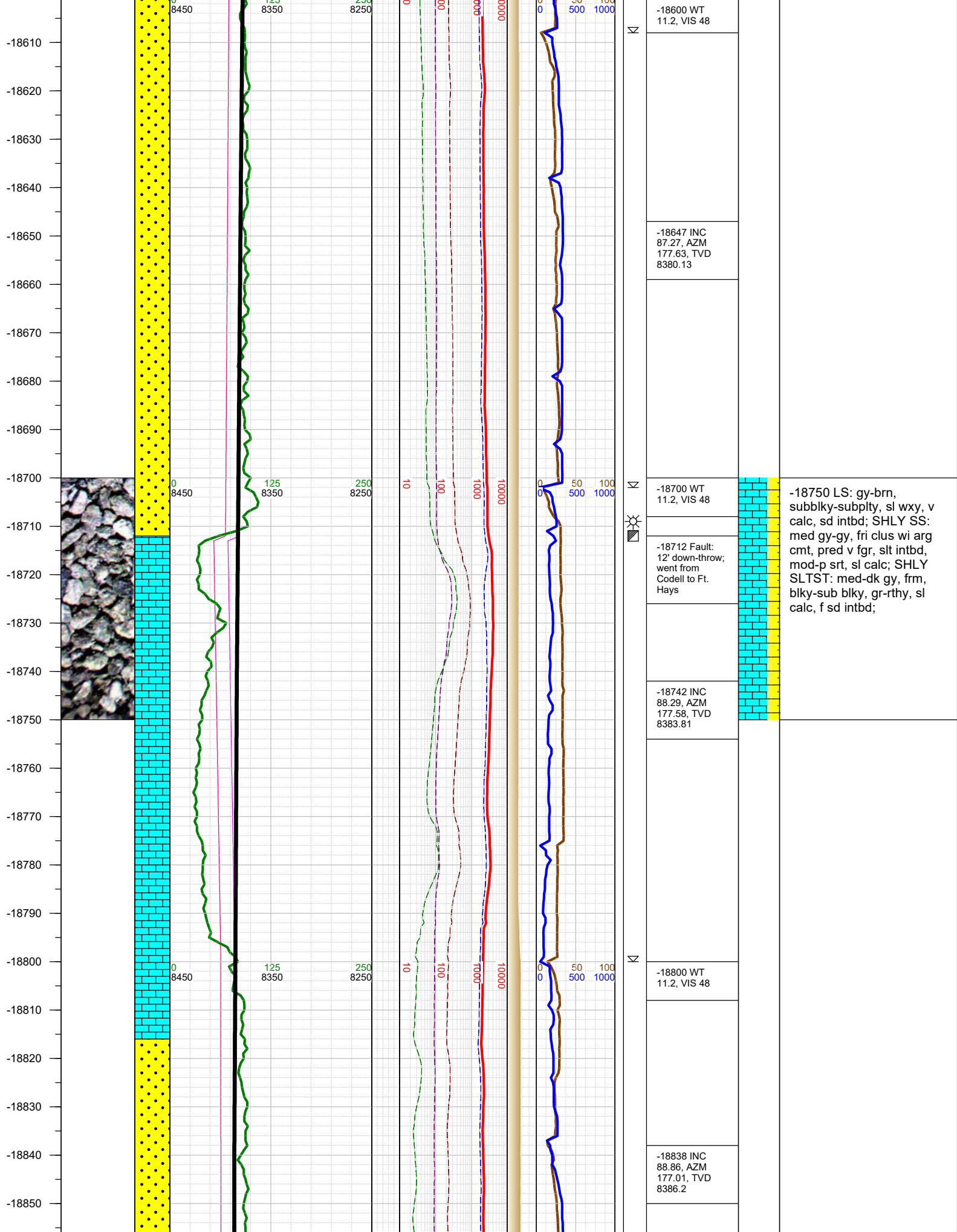
-18074 INC
90.9, AZM
179.48, TVD
8372.53



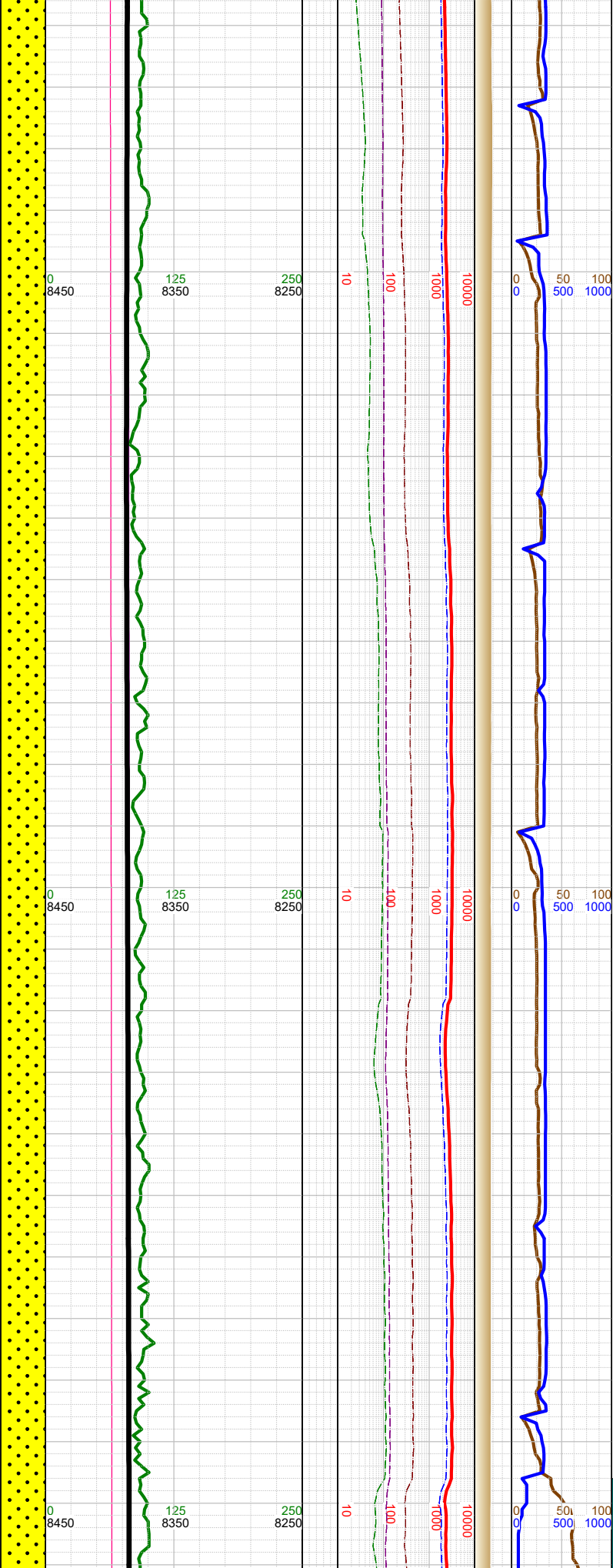
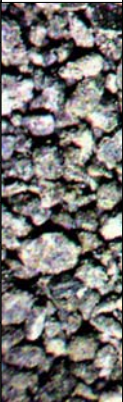
-18000 SHLY SS: med gy-
gy, fri clus wi arg cmt, pred
v fgr, slt intbd, mod-p srt, sl
calc; SHLY SLTST: v dk
gy, frm, subblky, gr-rthy, sl
calc;







-18860
-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



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N

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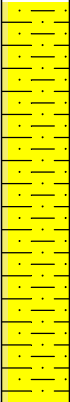
-18900 WT
11.2, VIS 48

-18933 INC
90.15, AZM
177.45, TVD
8387.02

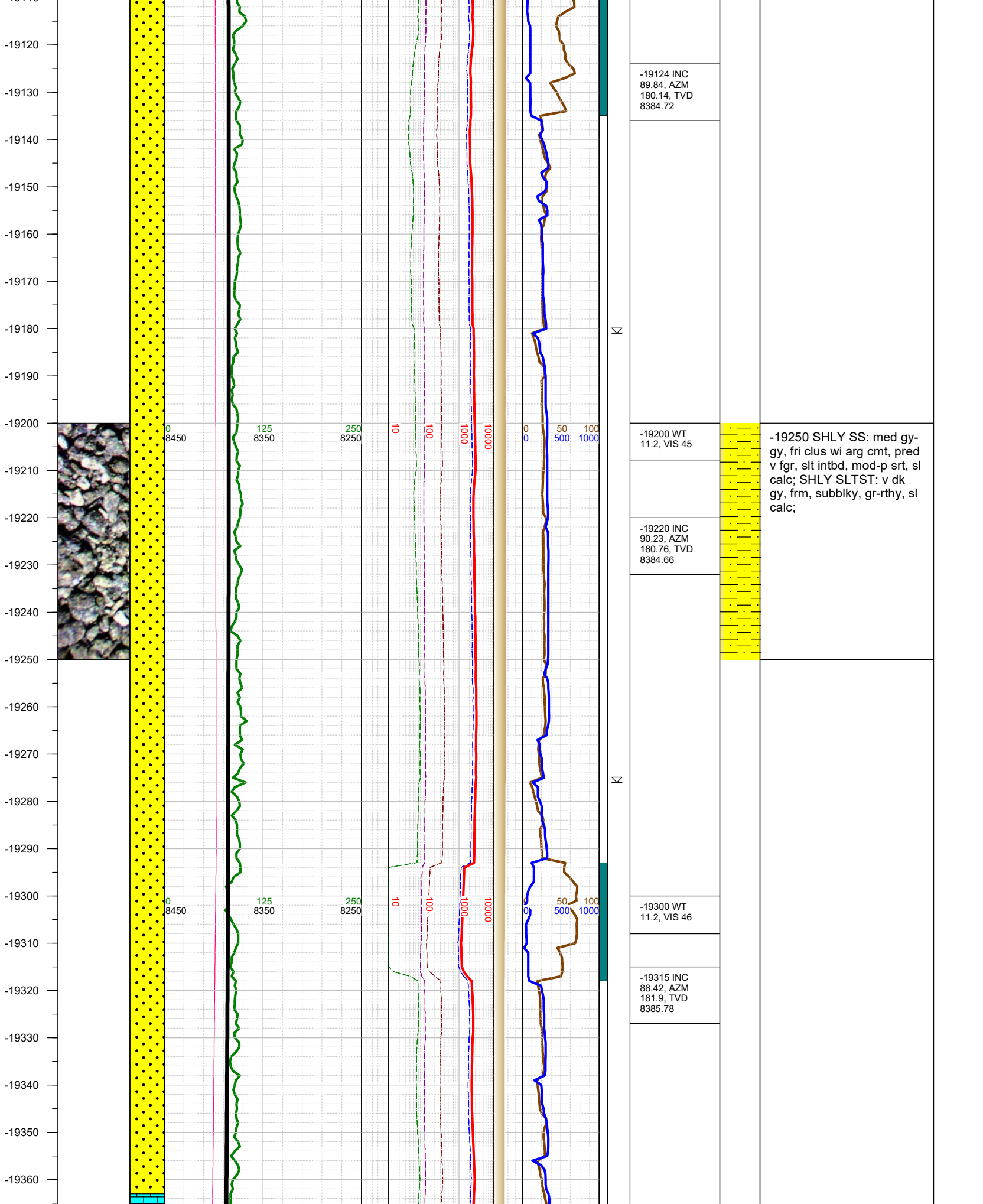
-19000 WT
11.2, VIS 47

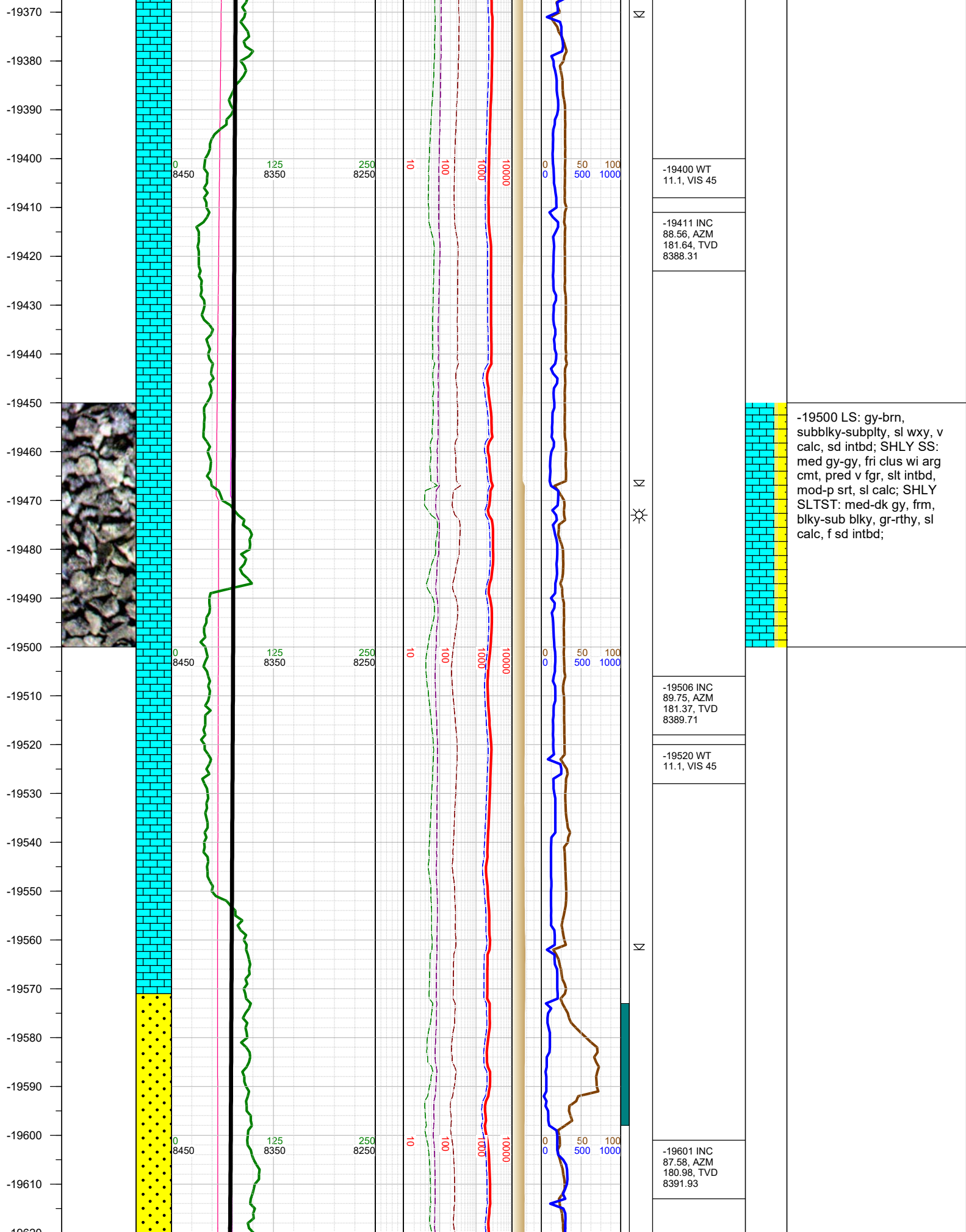
-19029 INC
91.38, AZM
177.14, TVD
8385.74

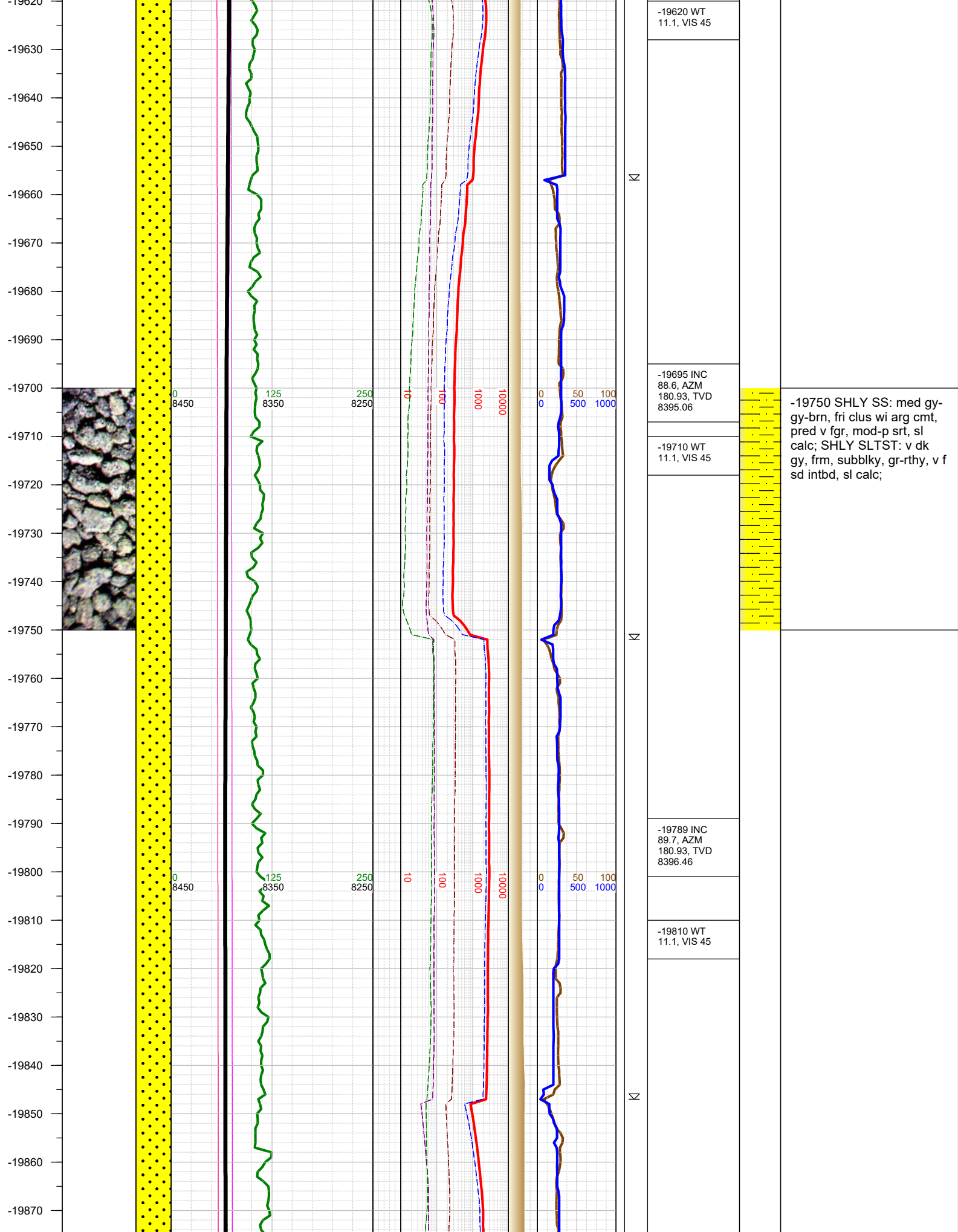
-19100 WT
11.2, VIS 45

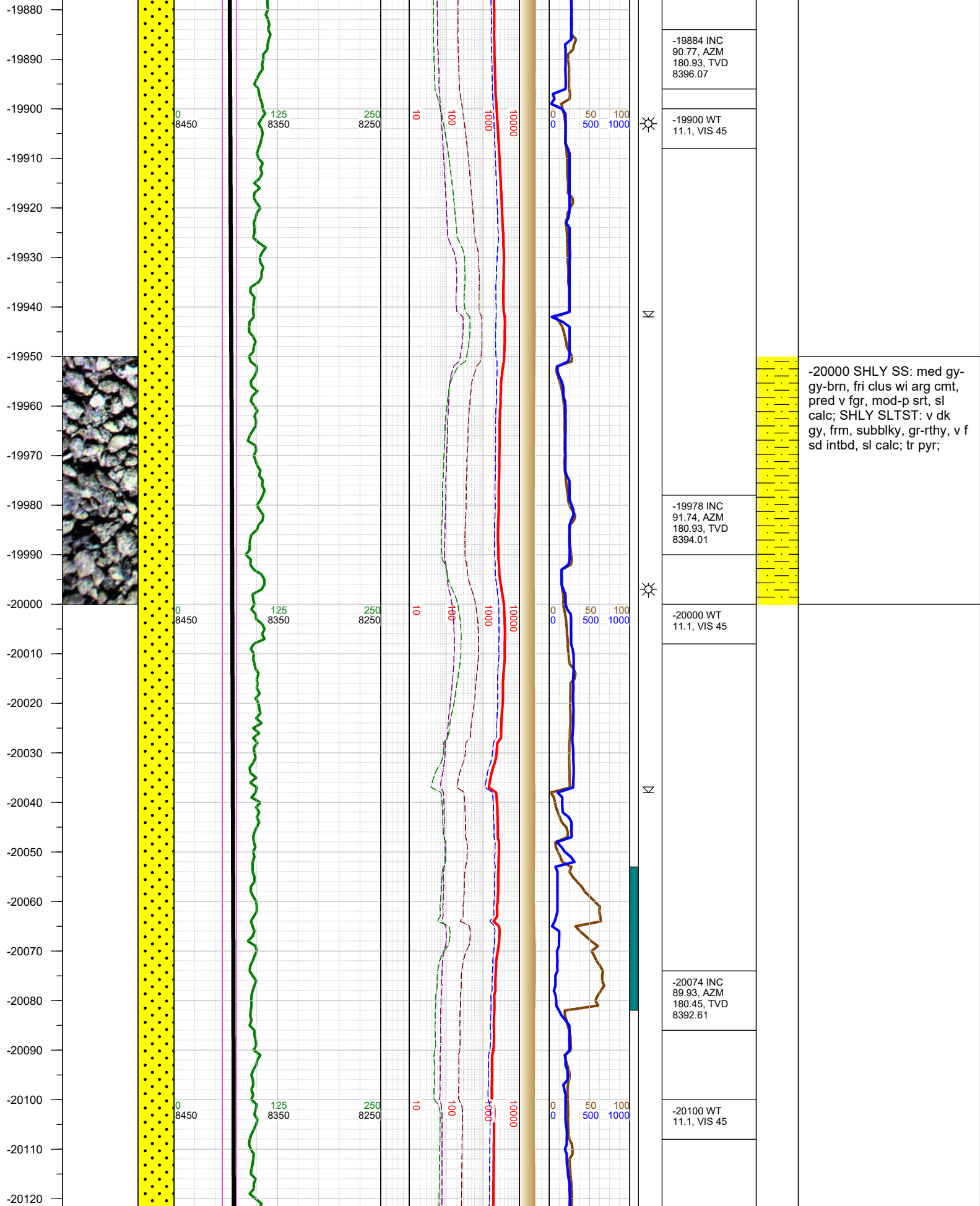


-19000 SHLY SS: med gy-
gy, fri clus wi arg cmt, pred
v fgr, slt intbd, mod-p srt, sl
calc; SHLY SLTST: v dk
gy, frm, subblky, gr-rthy, sl
calc;









-20000 SHLY SS: med gy-gy-brn, fri clus wi arg cmt, pred v fgr, mod-p srt, sl calc; SHLY SLTST: v dk gy, frm, subblky, gr-rthy, v f sd intbd, sl calc; tr pyr;

