

OPERATOR: **Extraction Oil & Gas**

WELL NAME: **Leonard 5C ST1**

FIELD NAME: DJ Basin - Wattenberg

DRILLING RIG: Cyclone 37

API #: 05-123-45048

LAT/LONG: 40.121569, -104.90328

SURFACE HOLE: NWSW S21-T2N-R67W, 1852' FSL, 494' FWL

BOTTOM HOLE: S21-T2N-R67W, 1580' FSL, 460' FEL

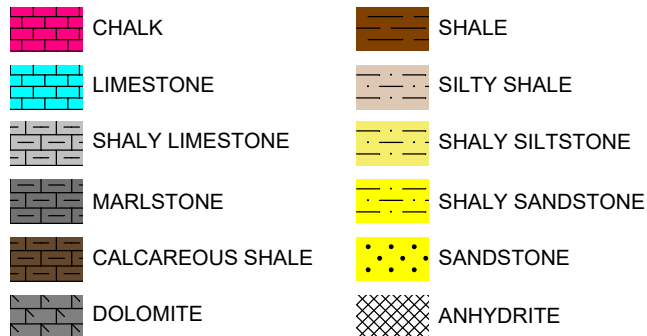


Earth Science Agency, LLC

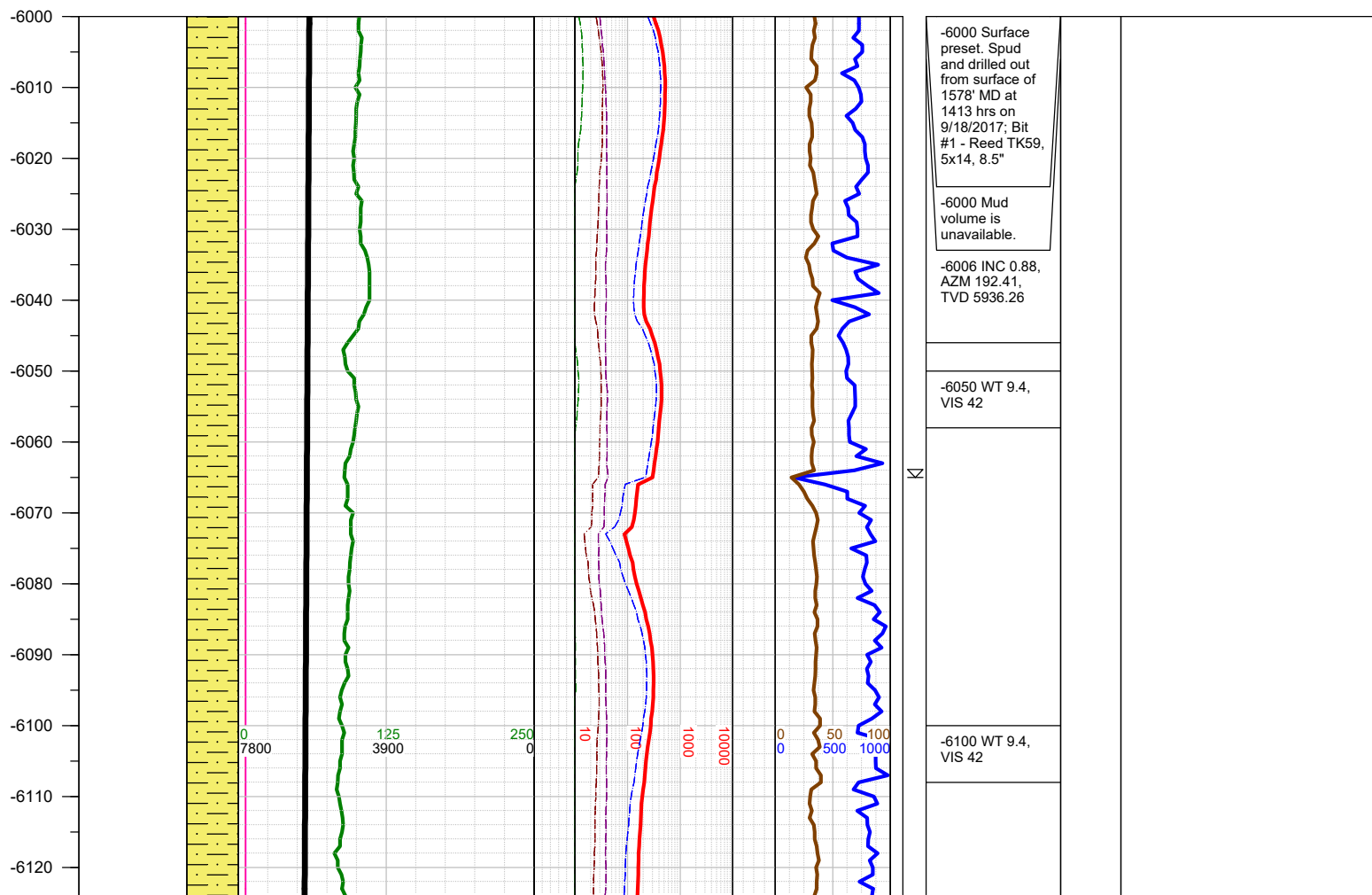
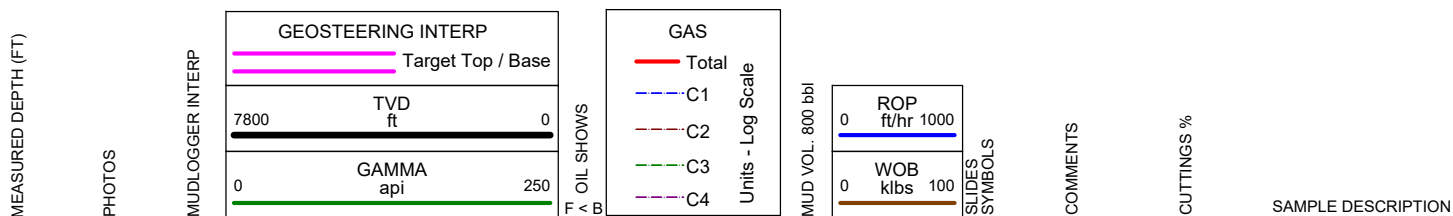
COUNTY: Weld
STATE: Colorado
GROUND ELEVATION: 5003'
KELLY BUSHING: 5031'
DRILLING FLUID: OBM
TVD VS. MD: 7634' / 12295'
SPUD DATE: September 18, 2017
TD DATE: September 20, 2017

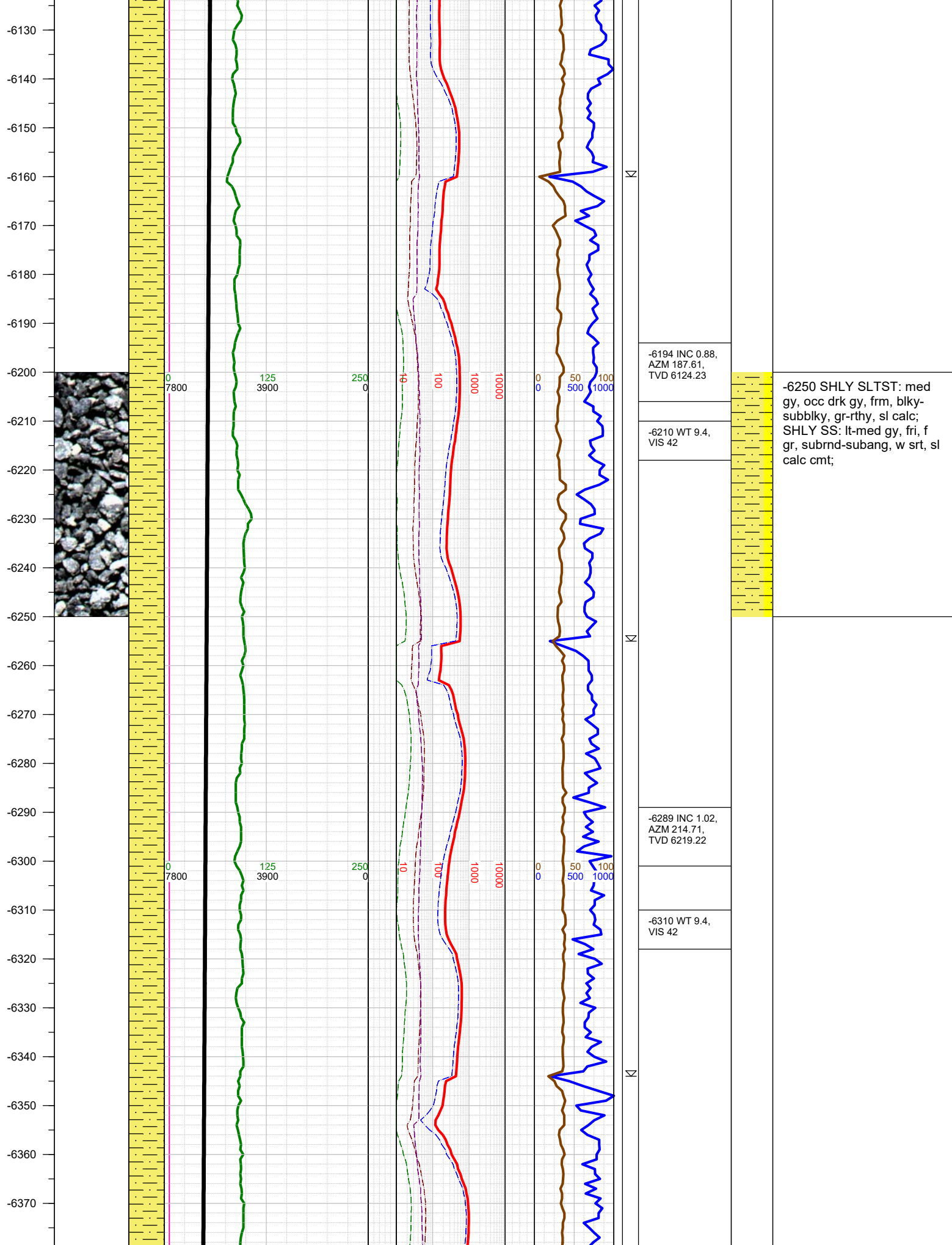
DEPTHS LOGGED: 6000' - 12295'
DATES LOGGED: September 18, 2017 - September 20, 2017
GEOLOGISTS: Kyle Welty, Dan Jacobs
SCALE: 5" = 100'

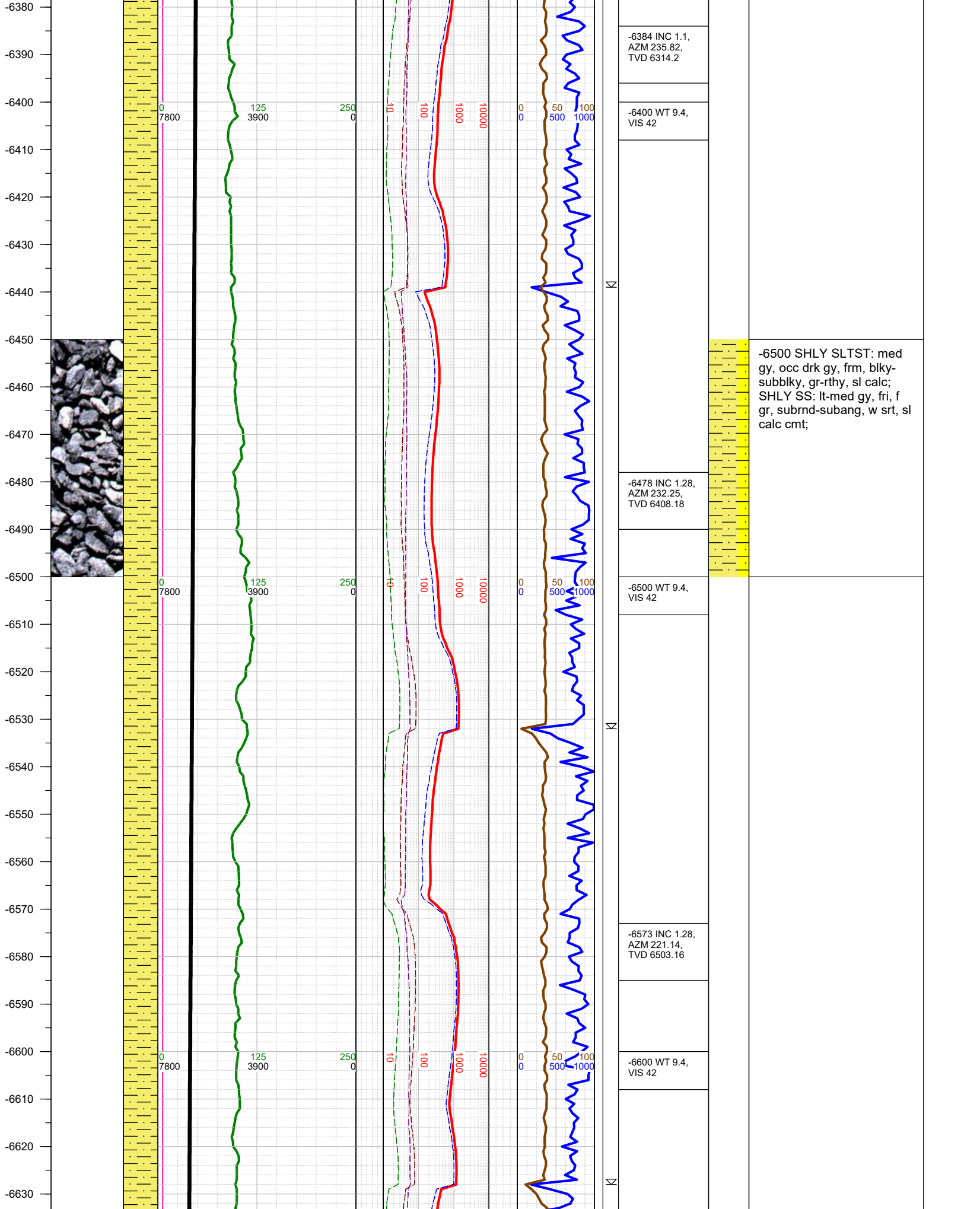
LEGEND

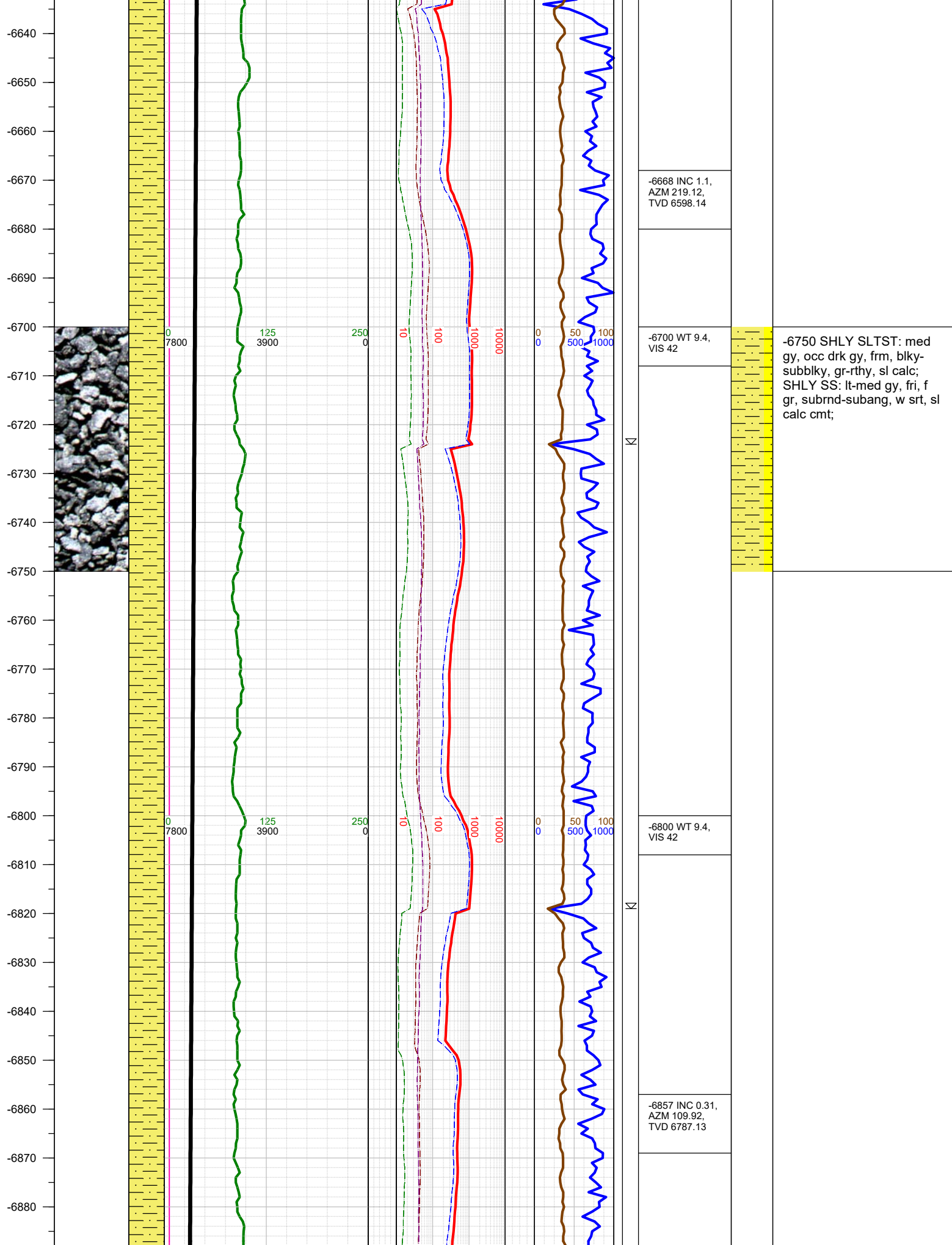


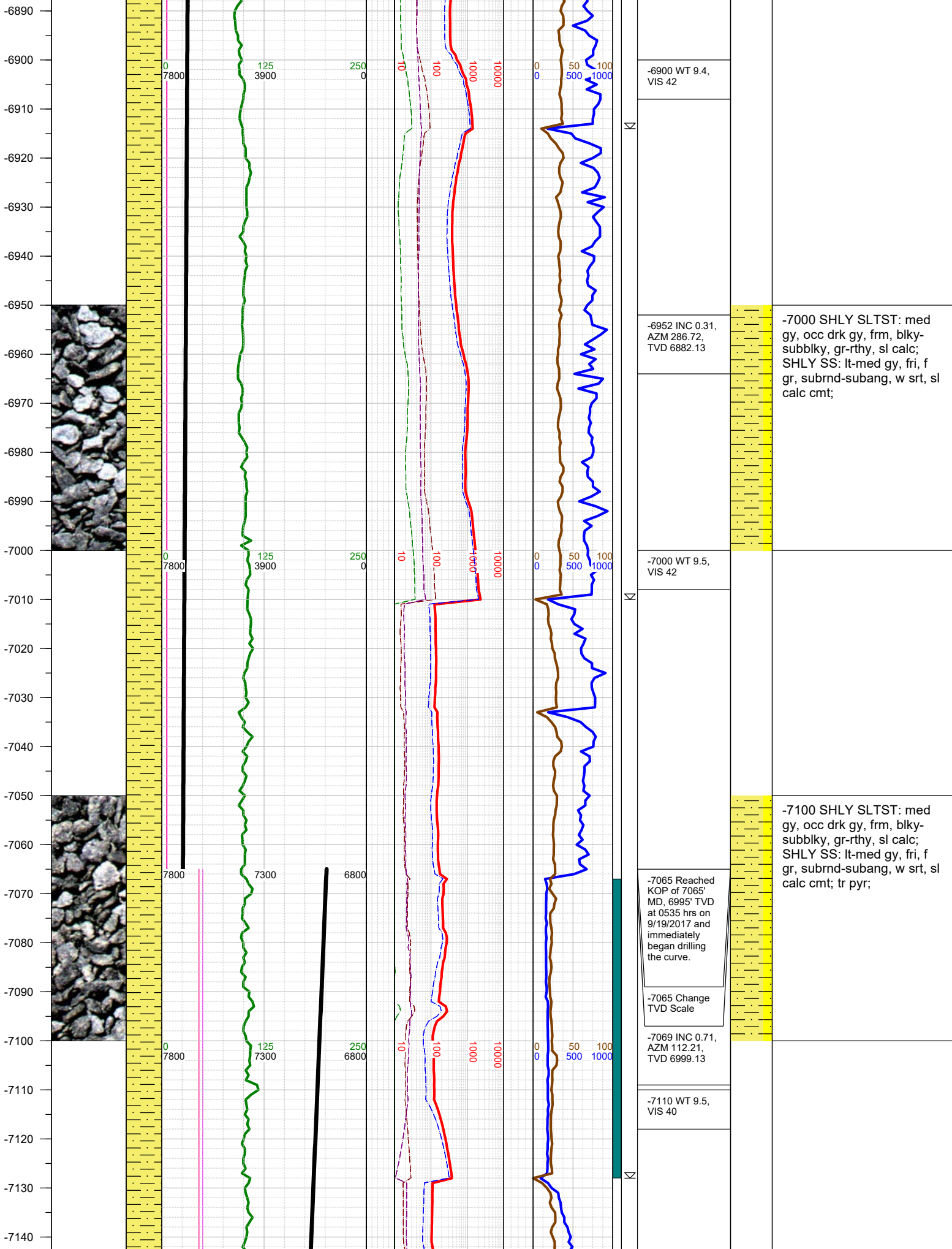
FORMATION \approx CONNECTION Δ MIDNIGHT NEW BIT GAS SHOW FAULT

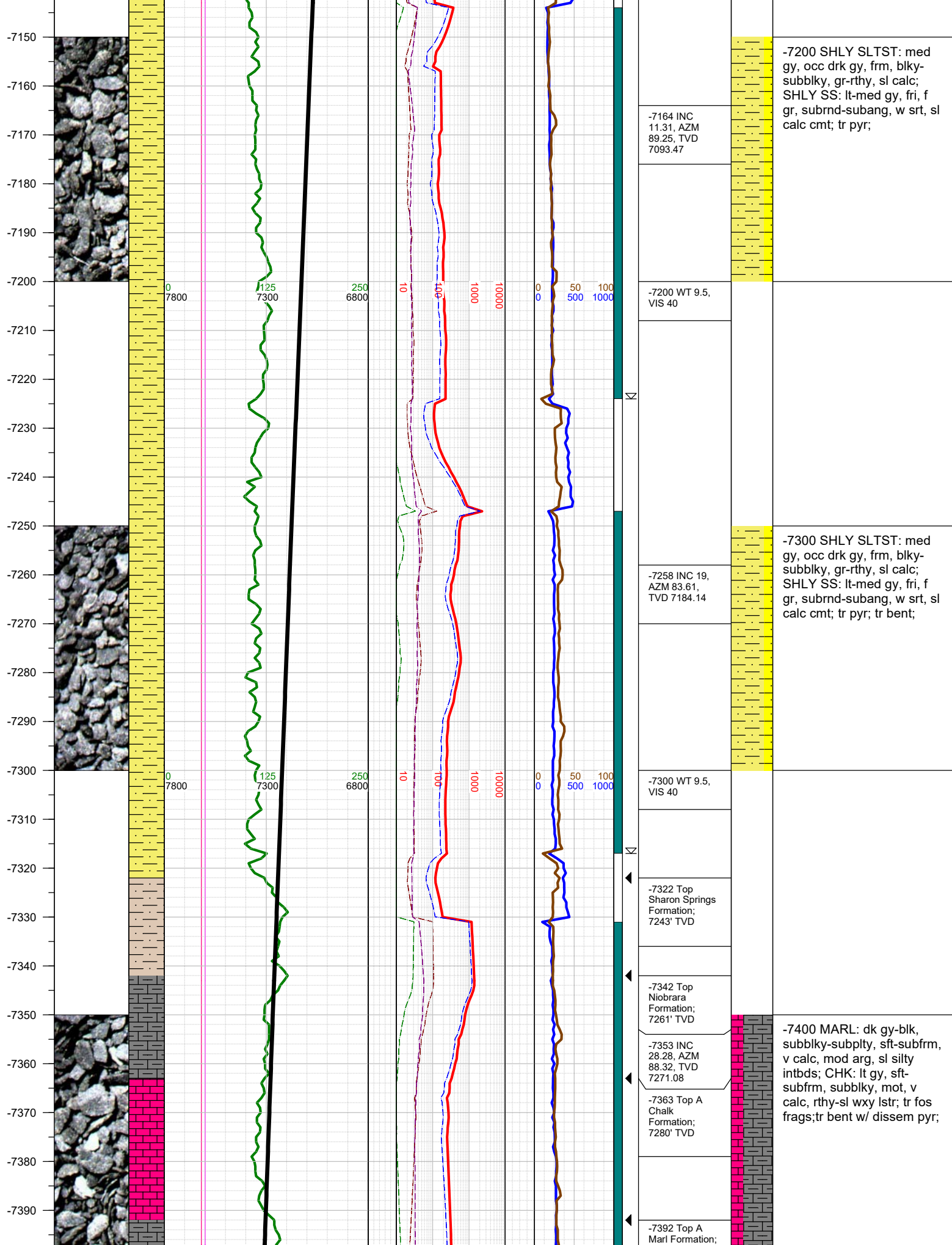


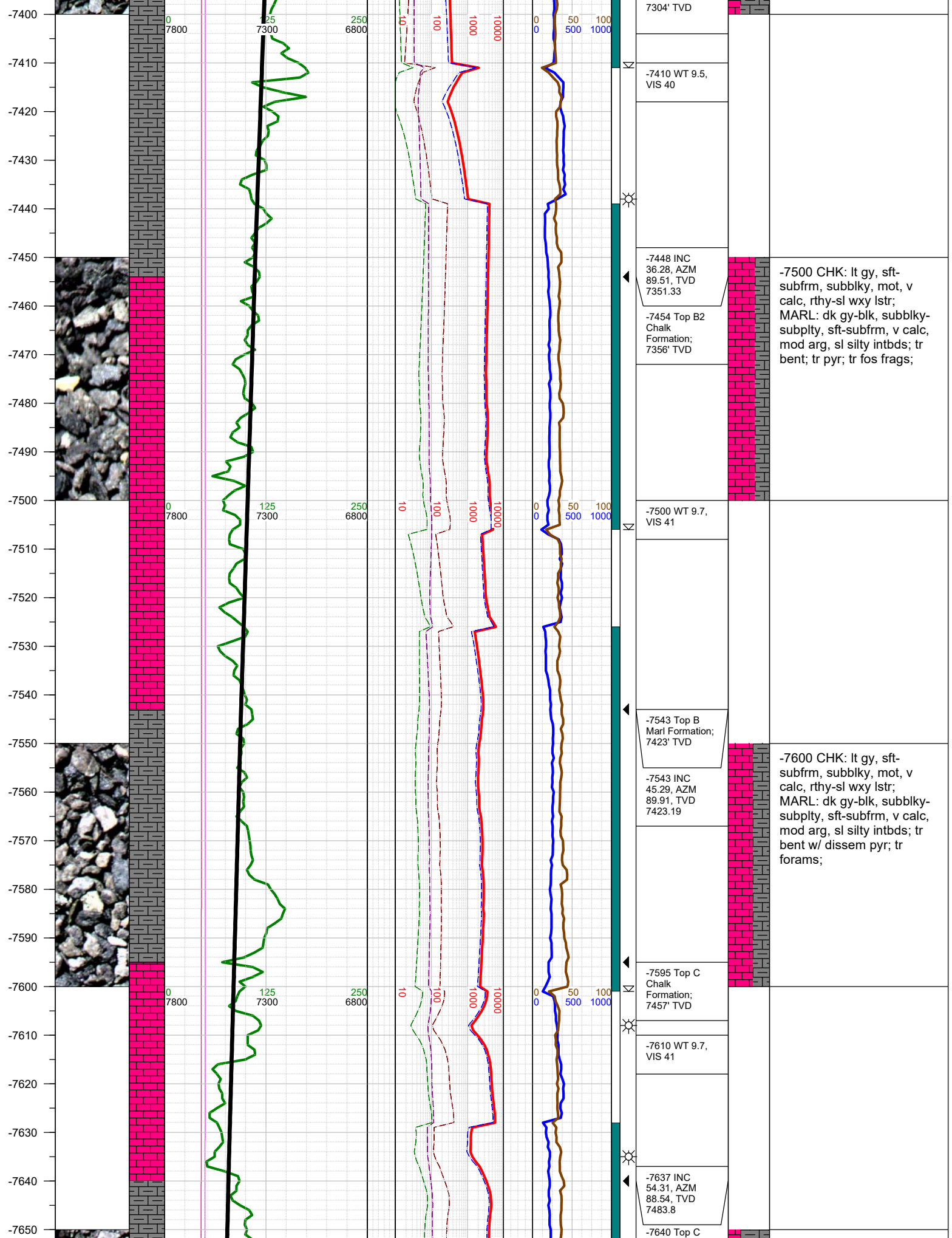


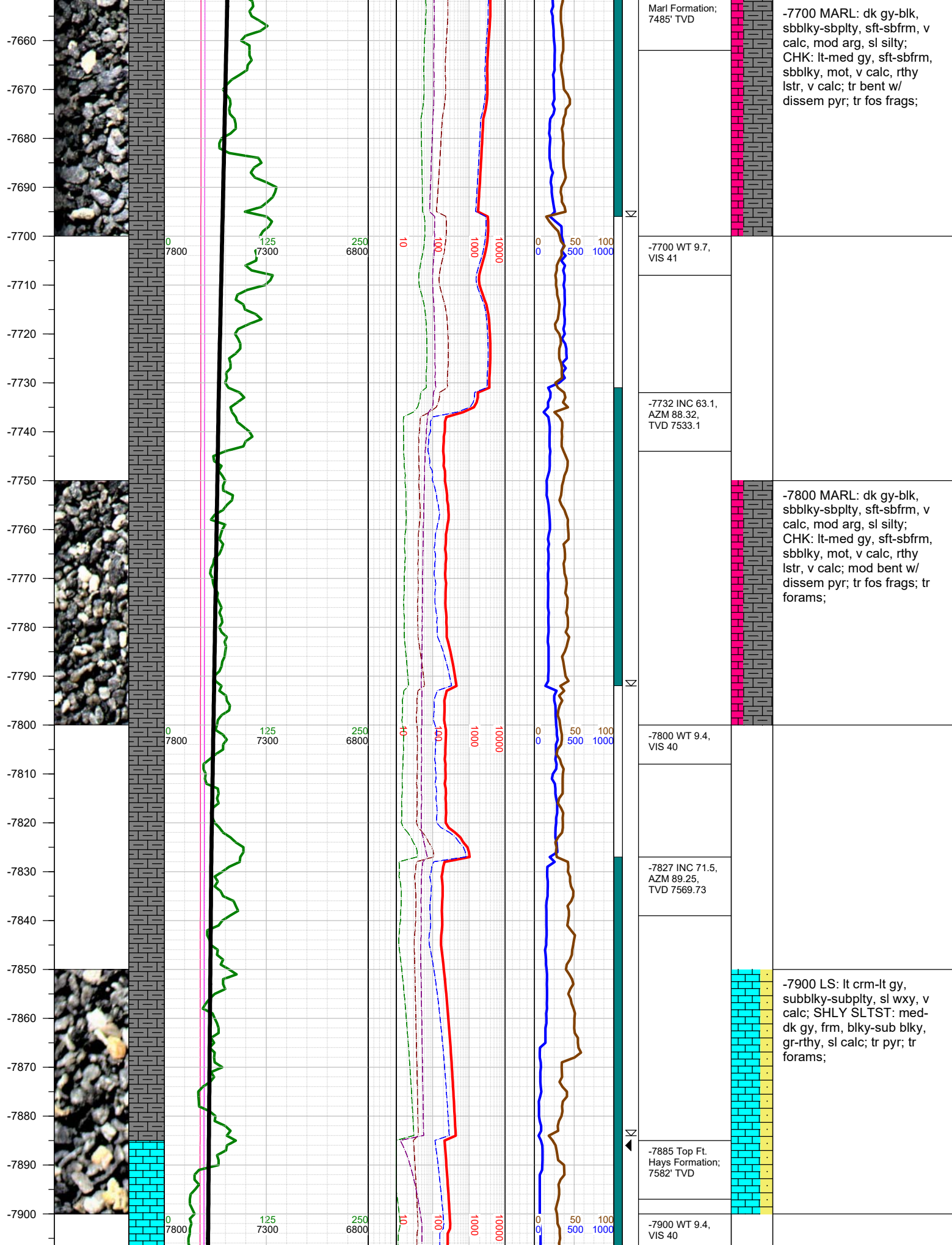




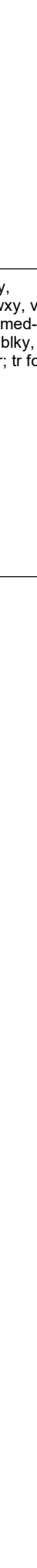
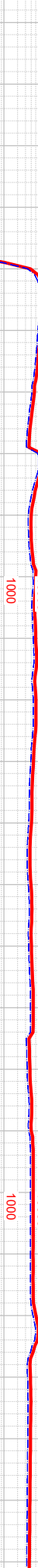
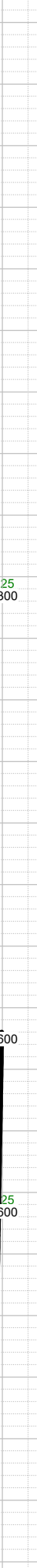
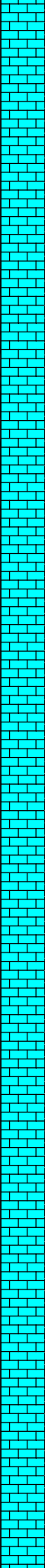








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-8074 Reached LP of 8074' MD, 7601' TVD at 1301 hrs on 9/19/2017 and immediately began drilling the lateral.

-8074 Change TVD Scale

-8074 Drilled original borehole to 9053' MD, 7604' TVD at 1902 hrs on 9/19/2017. A sidetrack was initiated at 8074' MD at 2106 hrs on 9/19/17 to improve in-zone percentage.

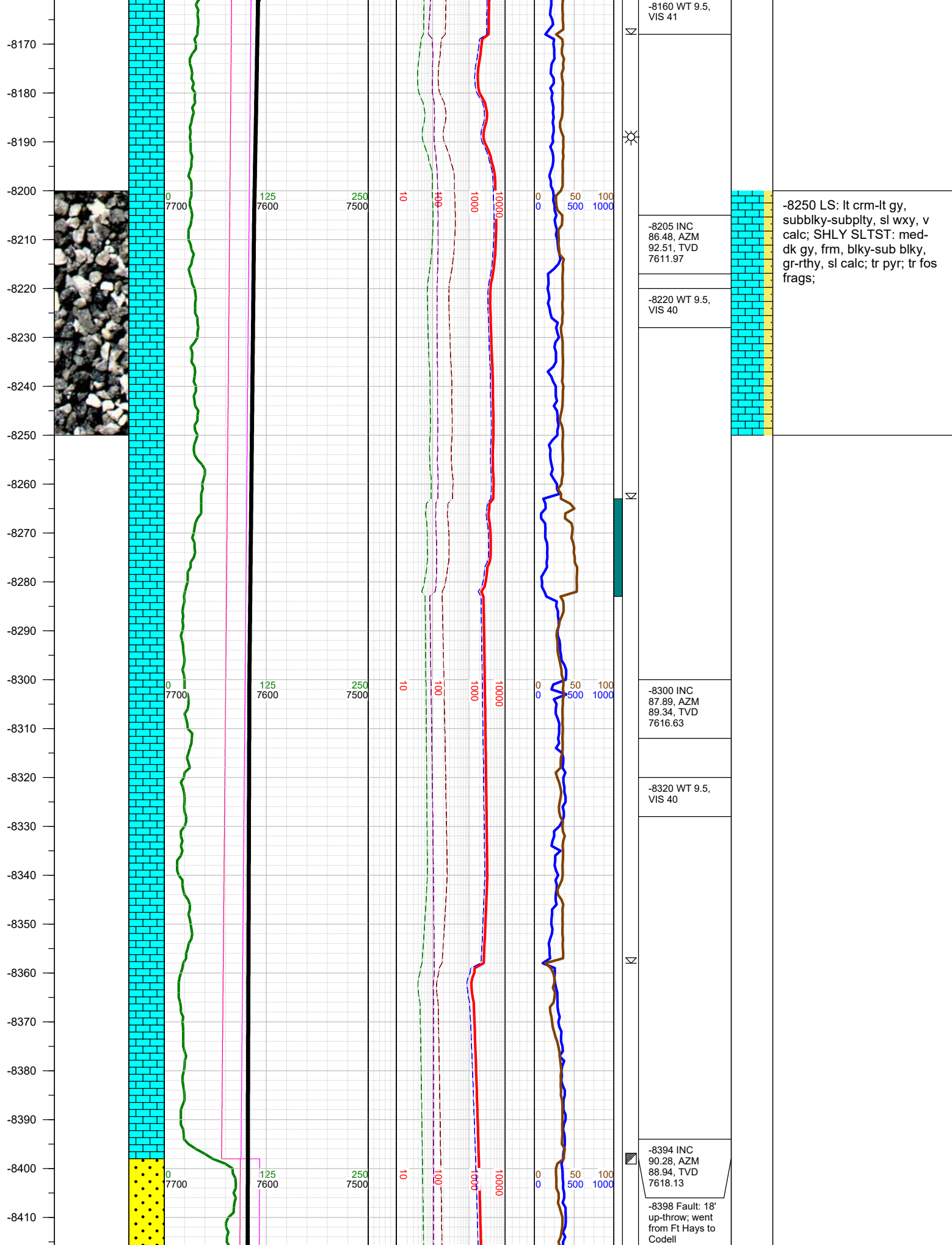
-8081 0000 hrs on 9/20/2017

-8110 INC 83.52, AZM 96.21, TVD 7603.68

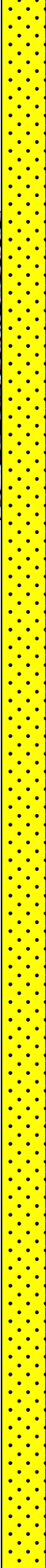
-7921 INC 84.71, AZM 91.41, TVD 7589.06



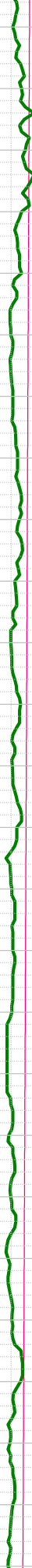
-8000 LS: lt crm-lt gy, subblky-subplty, sl wxy, v calc; SHLY SLTST: med-dk gy, frm, blk-sub blk, gr-rthy, sl calc; tr pyr; tr fos frags;



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125
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7500



10



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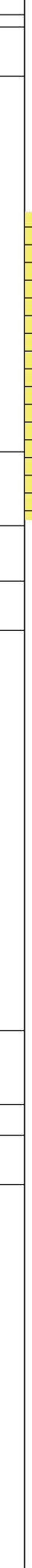
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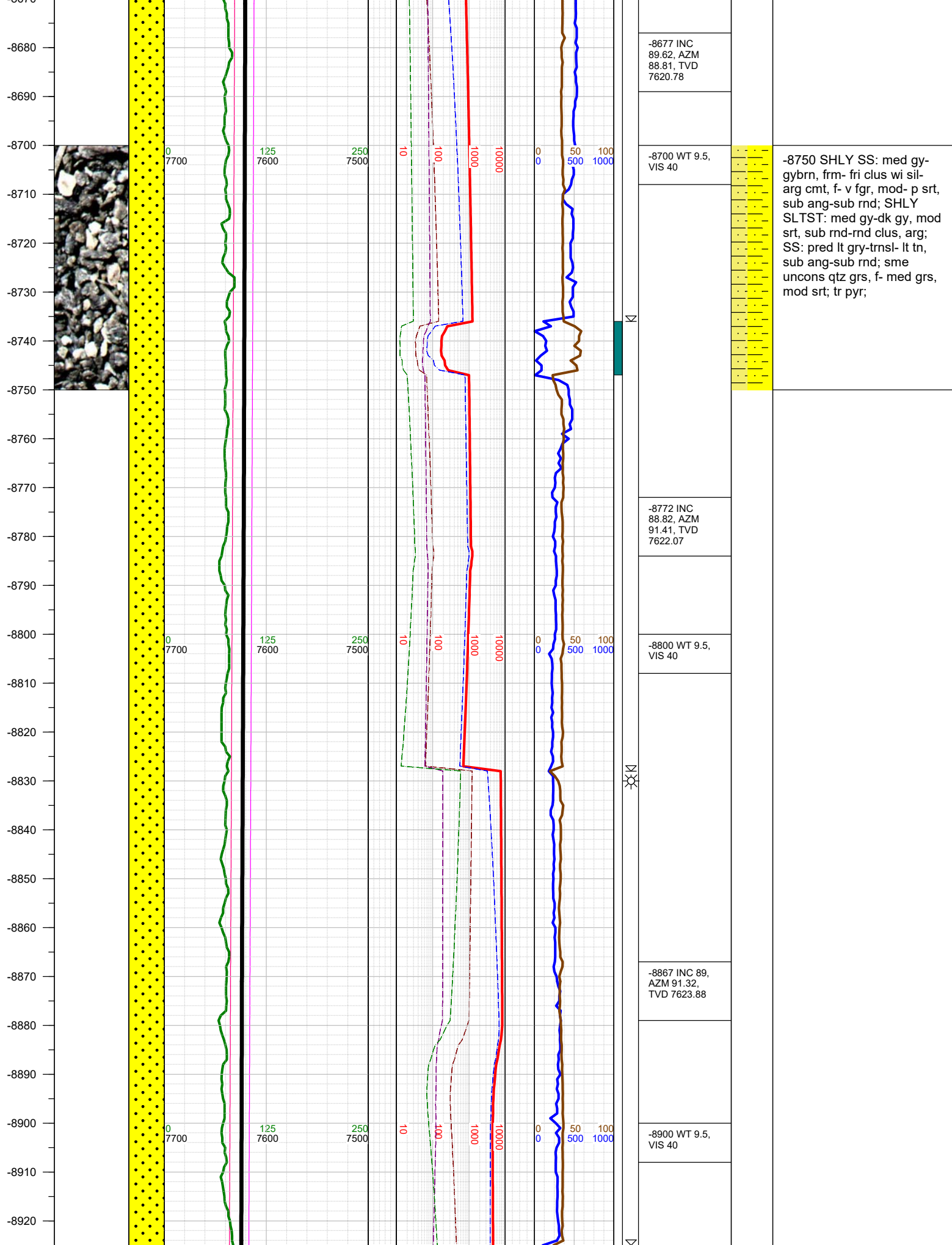
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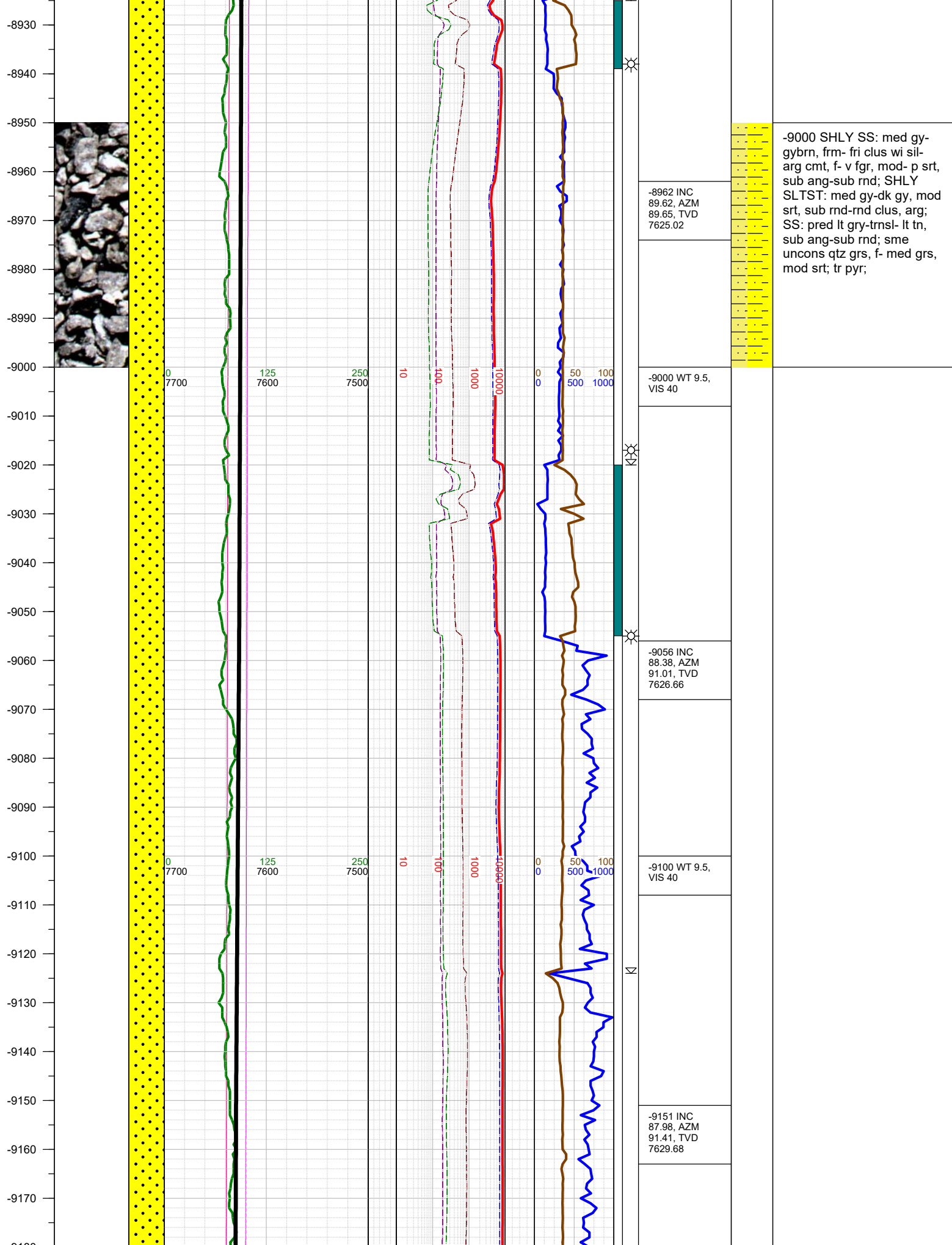


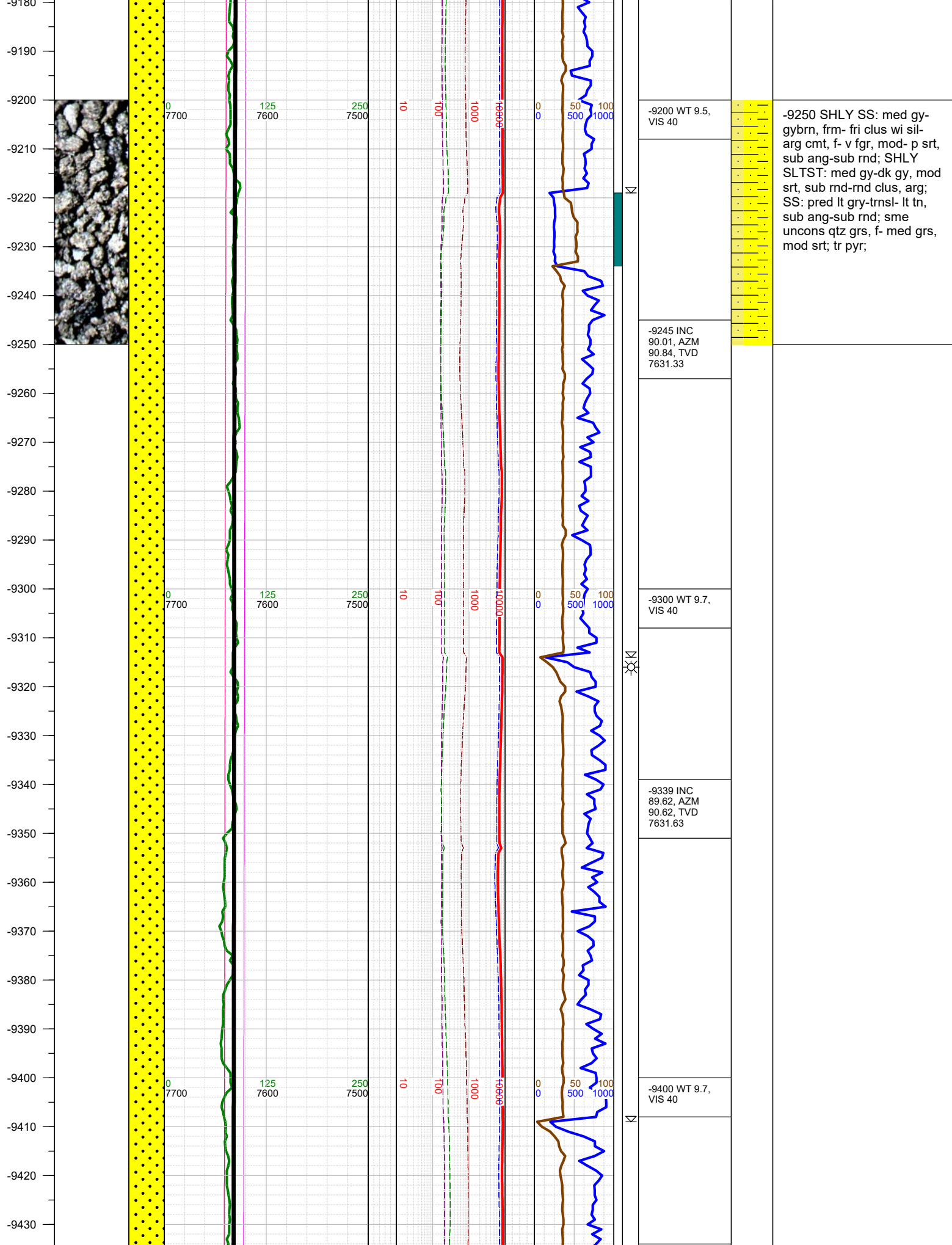
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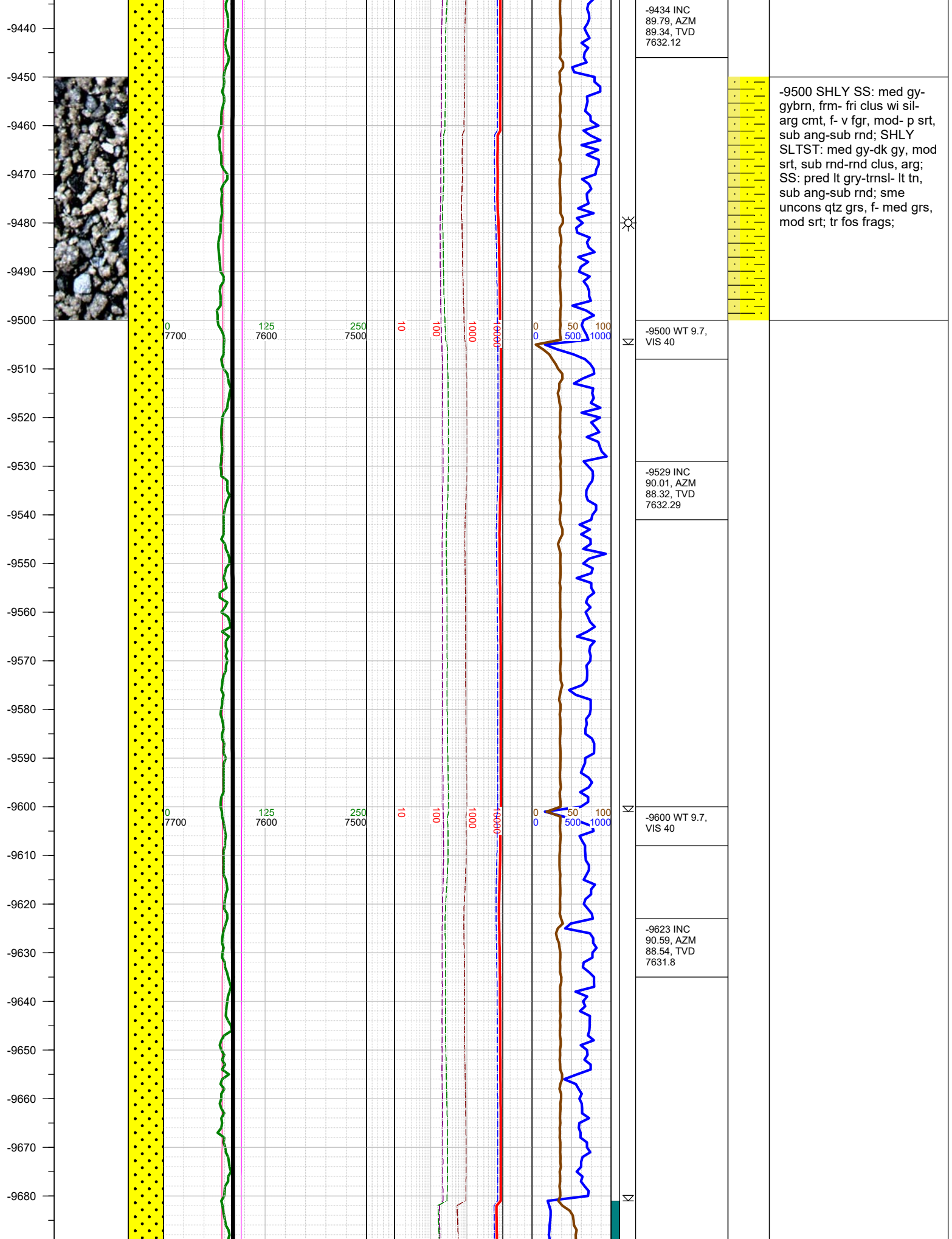


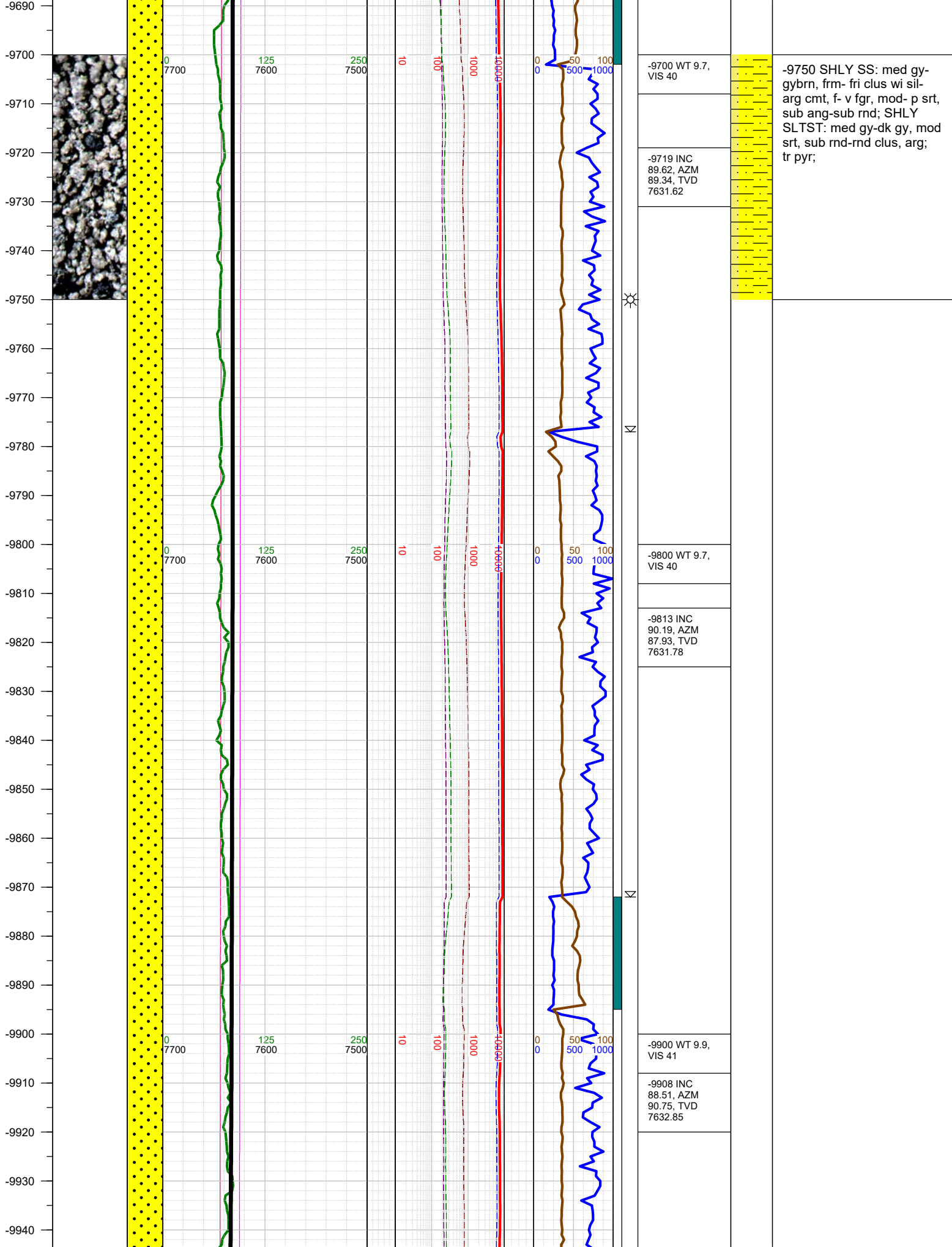
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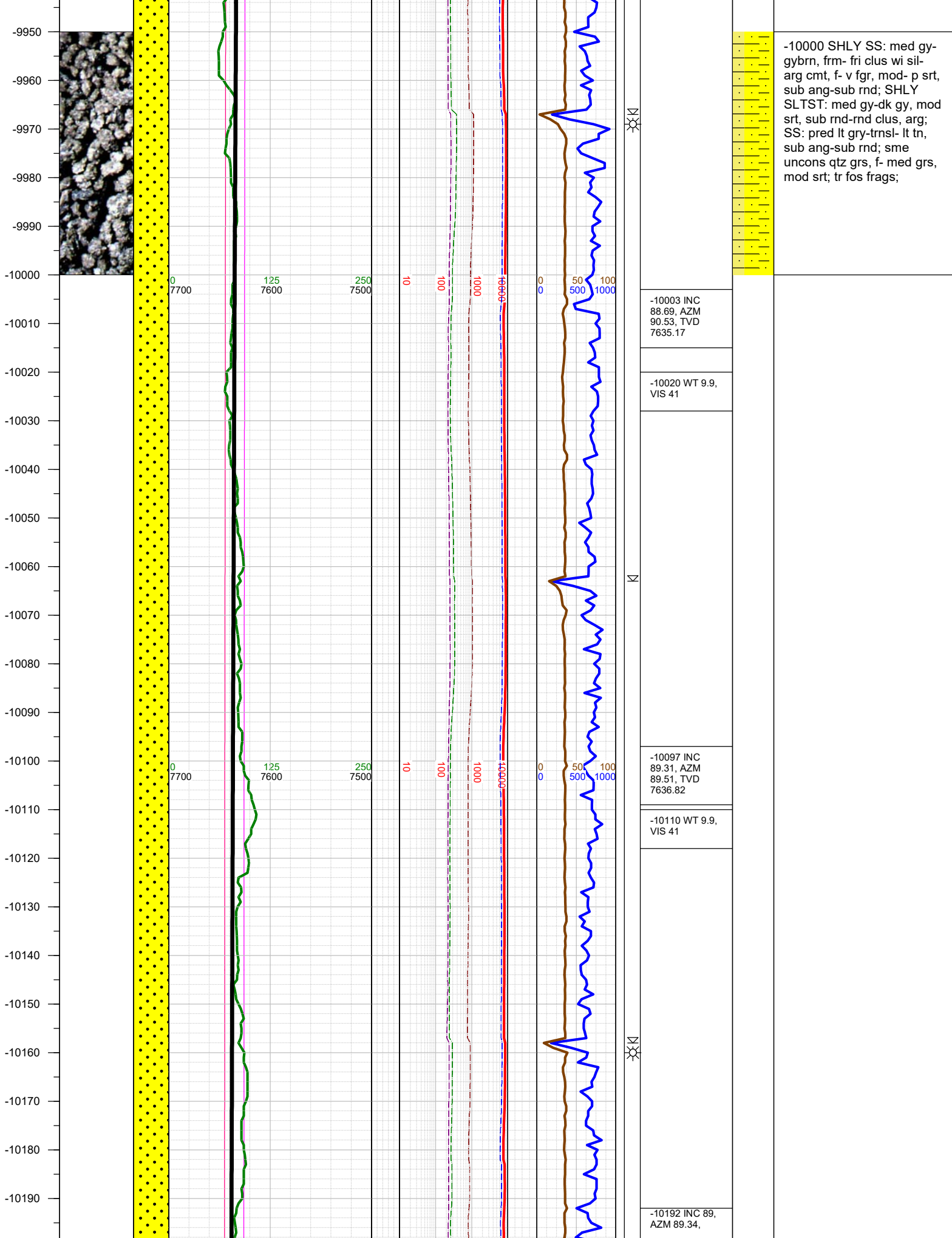












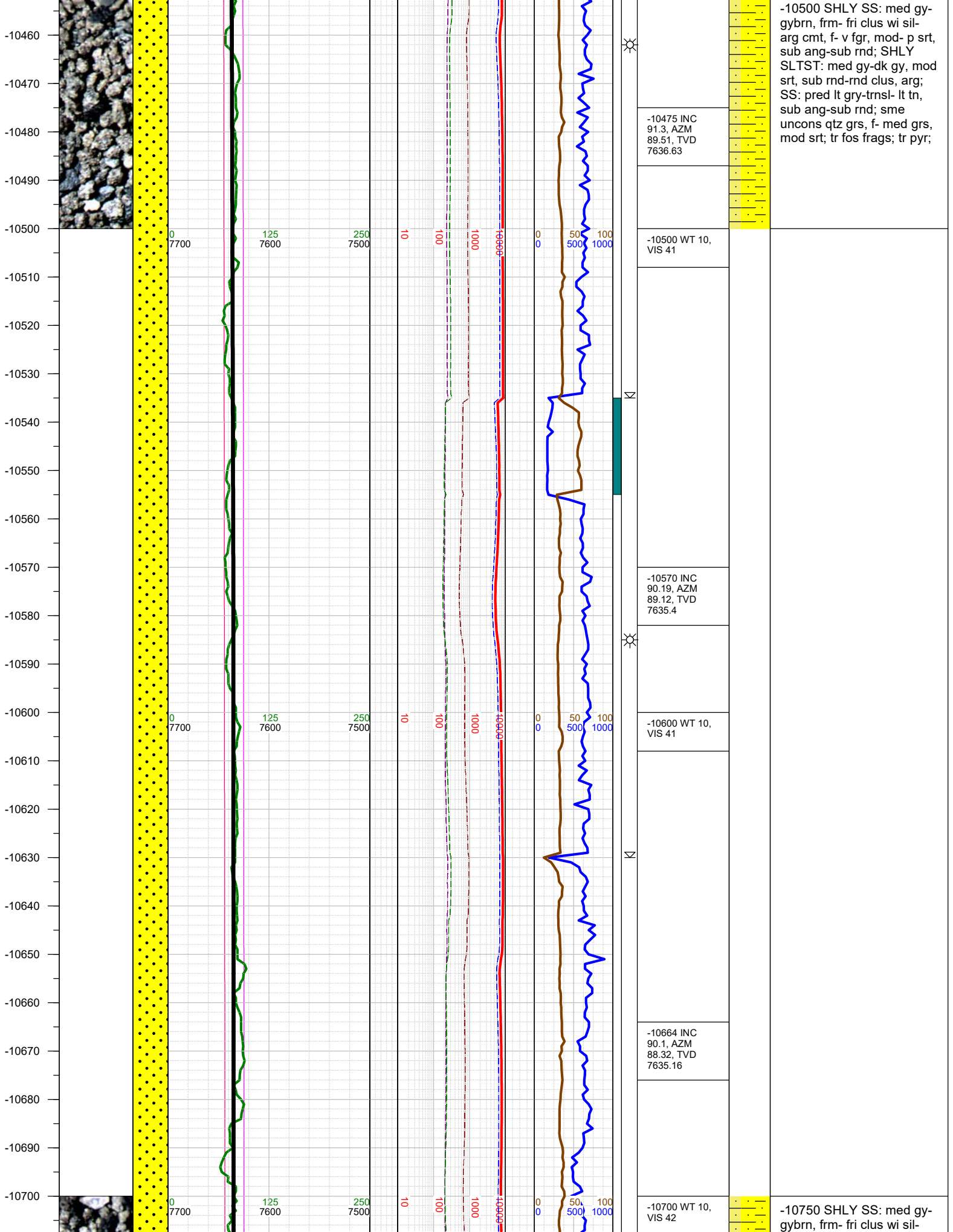
-10200
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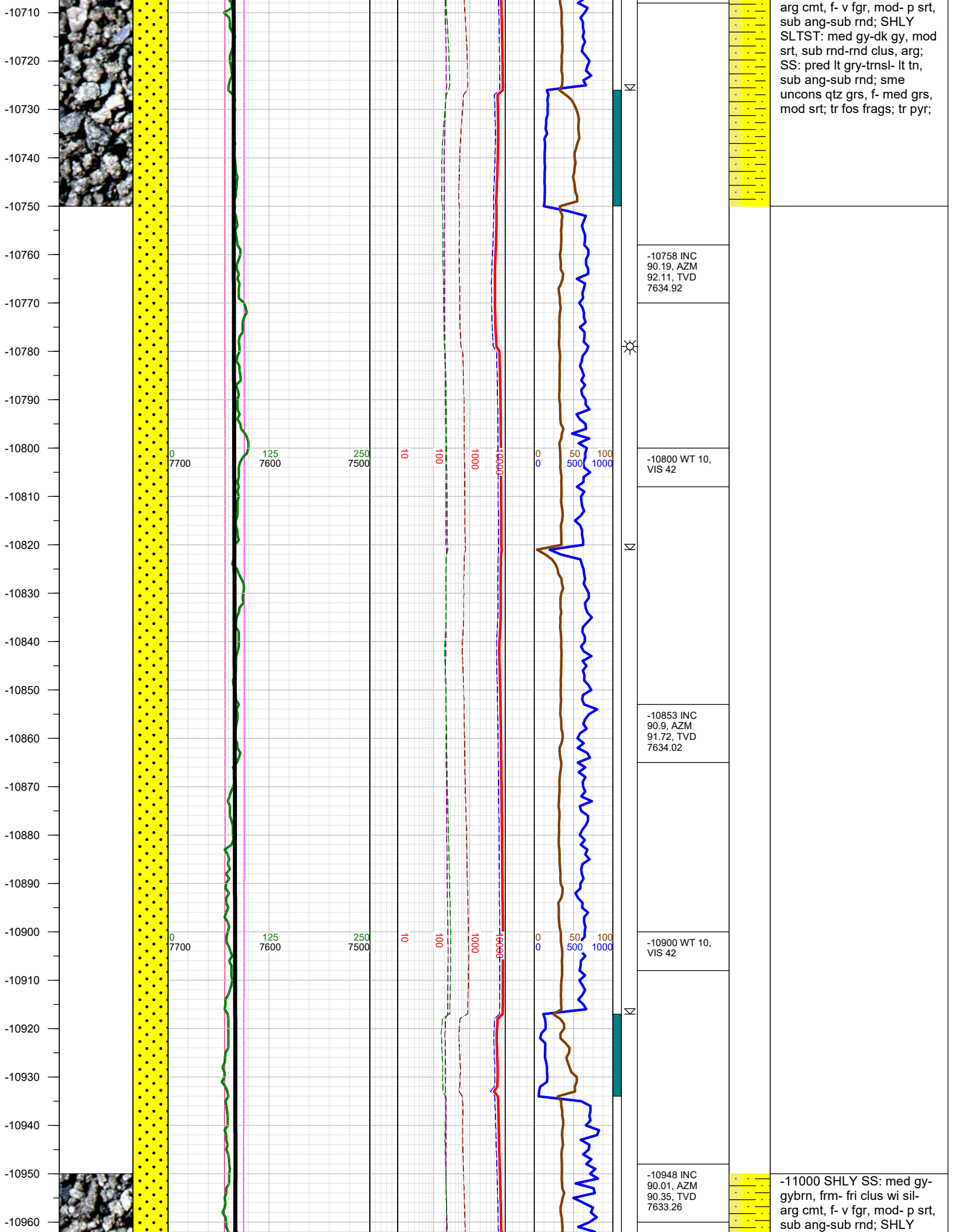


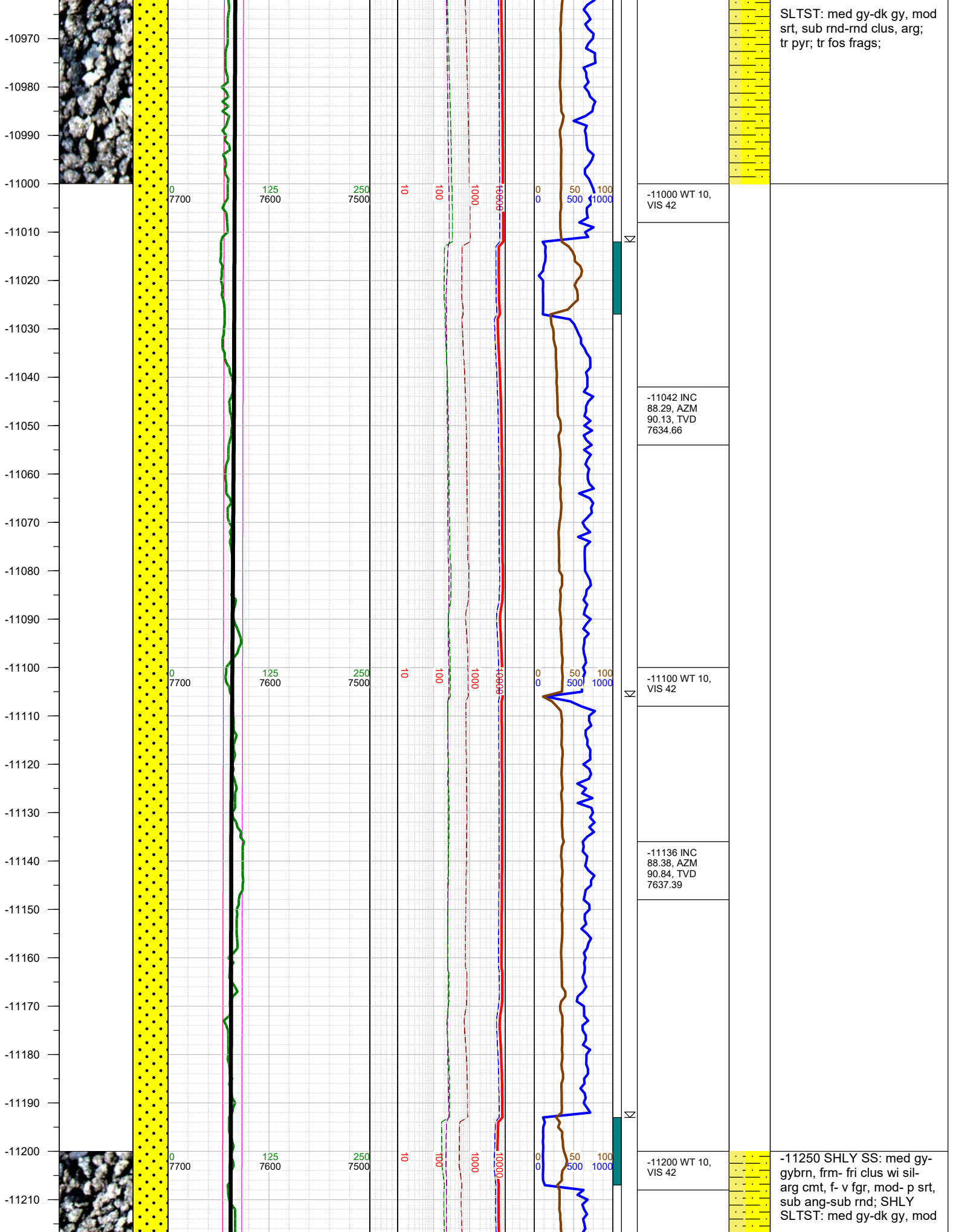
TVD 7638.22
-10210 WT 10, VIS 41
-10287 INC 90.1, AZM 90.84, TVD 7638.96
-10300 WT 10, VIS 41
-10381 INC 90.72, AZM 90.22, TVD 7638.29
-10400 WT 10, VIS 41

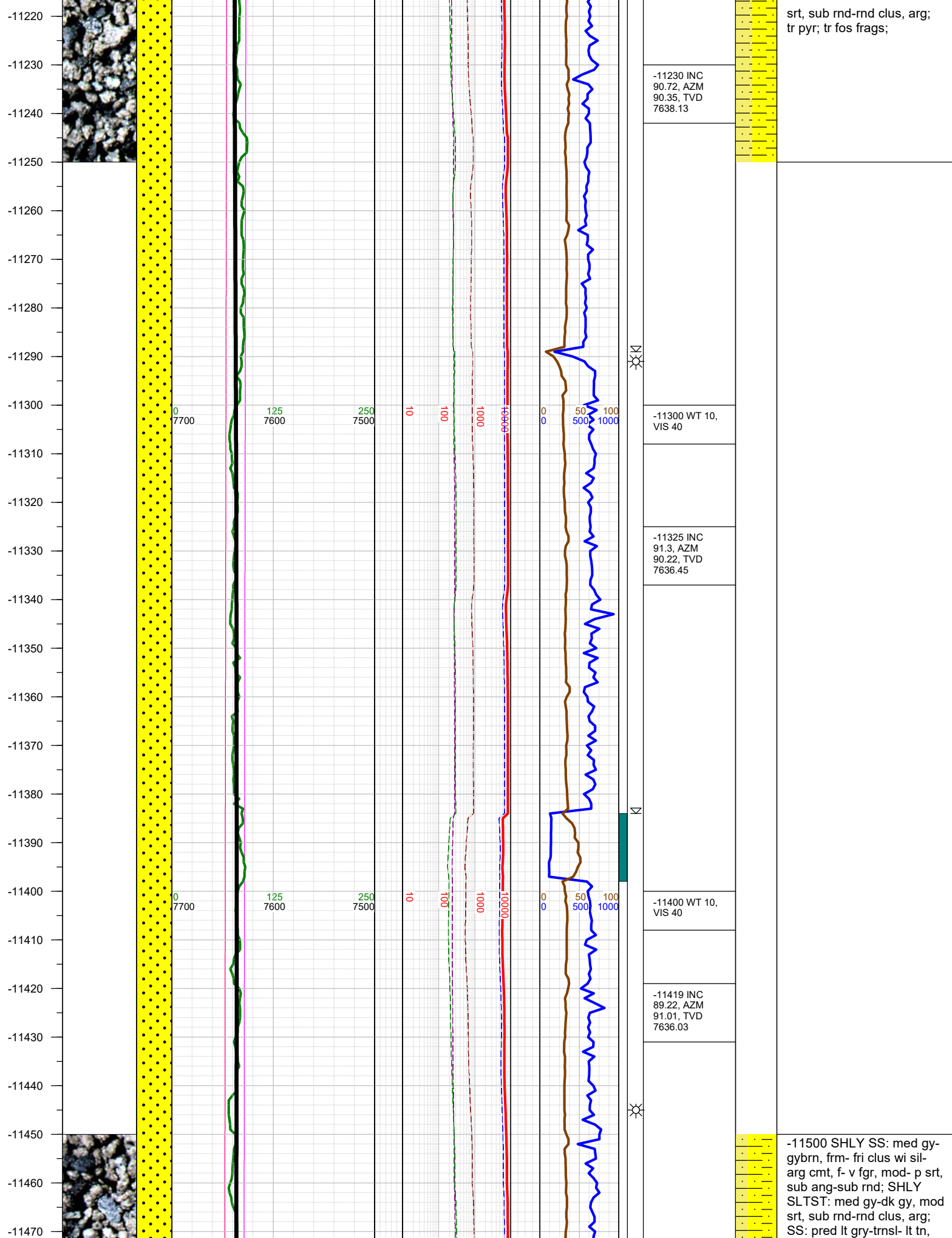


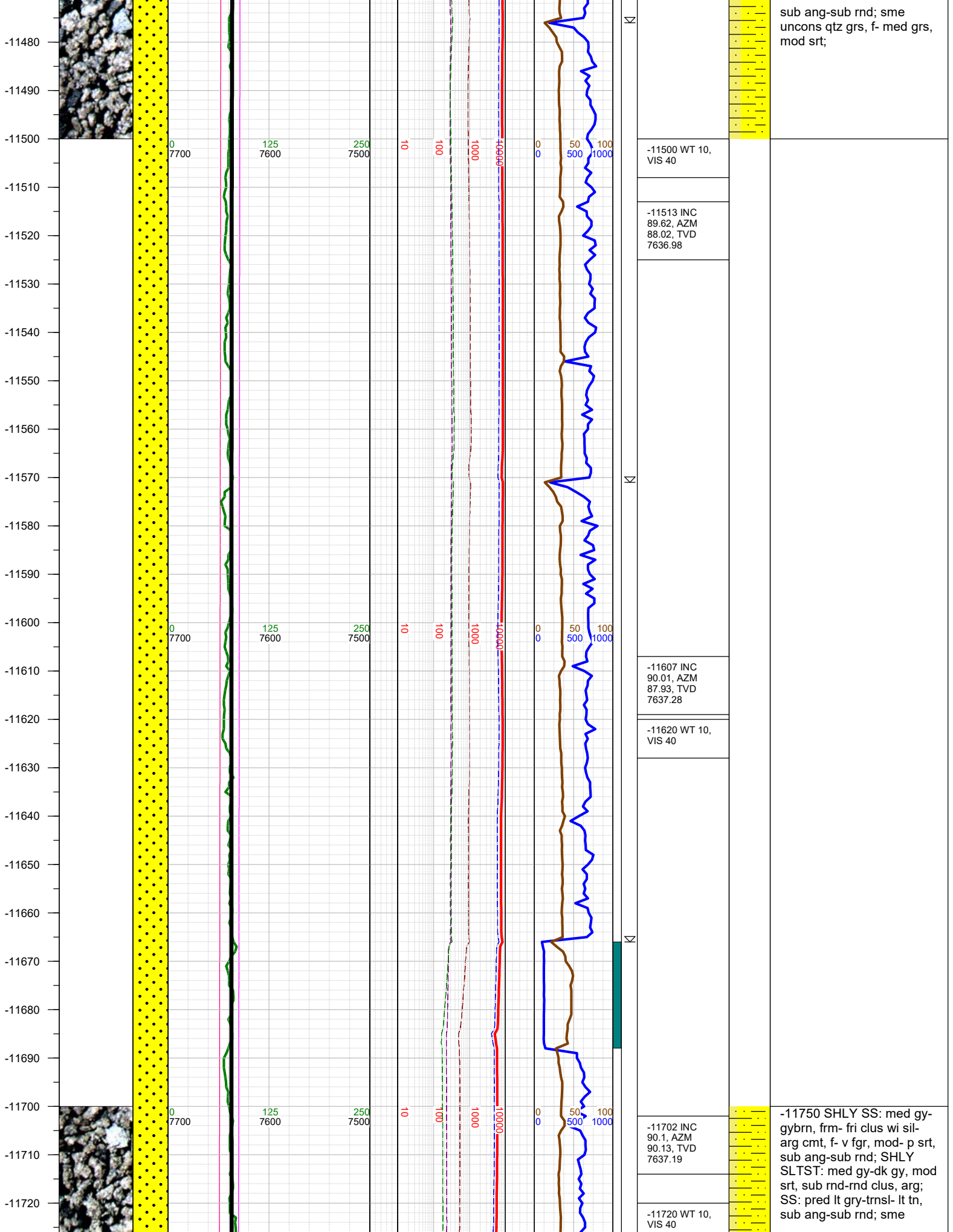
-10250 SHLY SS: med gy-gybrn, frm- fri clus wi sil-arg cmt, f- v fgr, mod- p srt, sub ang-sub rnd; SHLY SLTST: med gy-dk gy, mod srt, sub rnd-rnd clus, arg; SS: pred lt gry-trnsl- lt tn, sub ang-sub rnd; sme uncons qtz grs, f- med grs, mod srt; tr fos frags; tr pyr;











sub ang-sub rnd; sme
unconsl qtz grs, f- med grs,
mod srt;

-11500 WT 10,
VIS 40

-11513 INC
89.62, AZM
88.02, TVD
7636.98

-11607 INC
90.01, AZM
87.93, TVD
7637.28

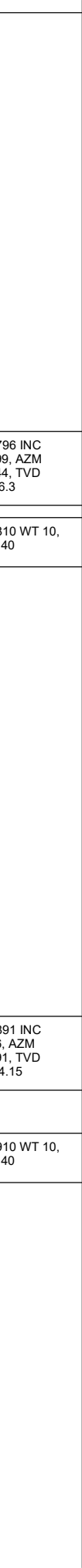
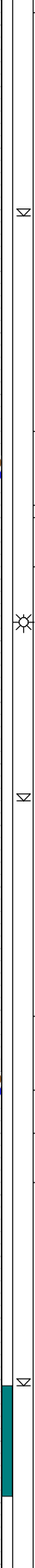
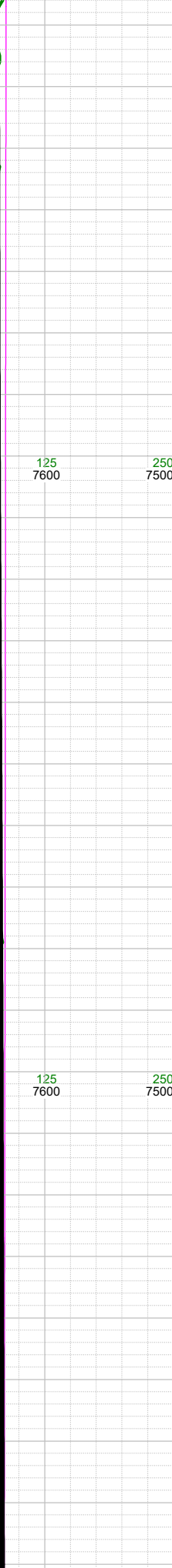
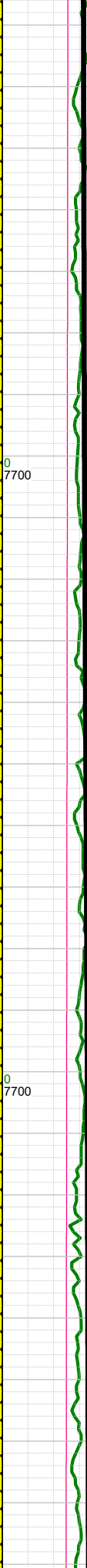
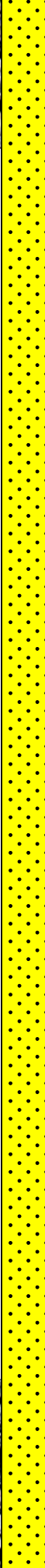
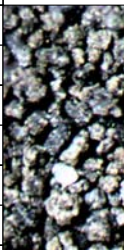
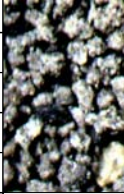
-11620 WT 10,
VIS 40

-11702 INC
90.1, AZM
90.13, TVD
7637.19

-11720 WT 10,
VIS 40

-11750 SHLY SS: med gy-
gybrn, frm- fri clus wi sil-
arg cmt, f- v fgr, mod- p srt,
sub ang-sub rnd; SHLY
SLTST: med gy-dk gy, mod
srt, sub rnd-rnd clus, arg;
SS: pred lt gry-trnsl- lt tn,
sub ang-sub rnd; sme

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uncons qtz grs, f- med grs,
mod srt; tr fos frags;

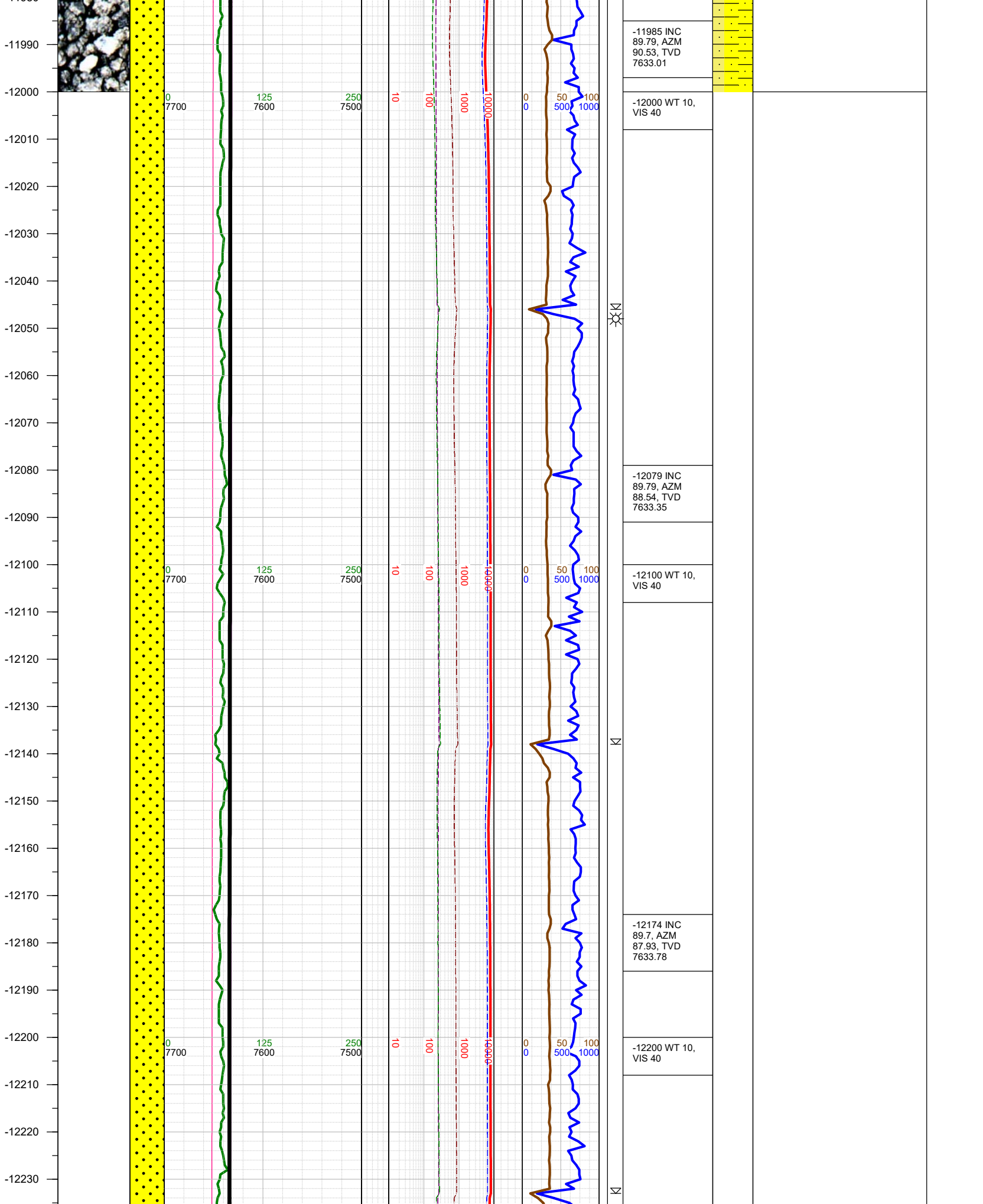
-12000 SHLY SS: med gy-
gybrn, frm- fri clus wi sil-
arg cmt, f- v fgr, mod- p srt,
sub ang-sub rnd; SHLY
SLTST: med gy-dk gy, mod
srt, sub rnd-rnd clus, arg;
tr pyr;

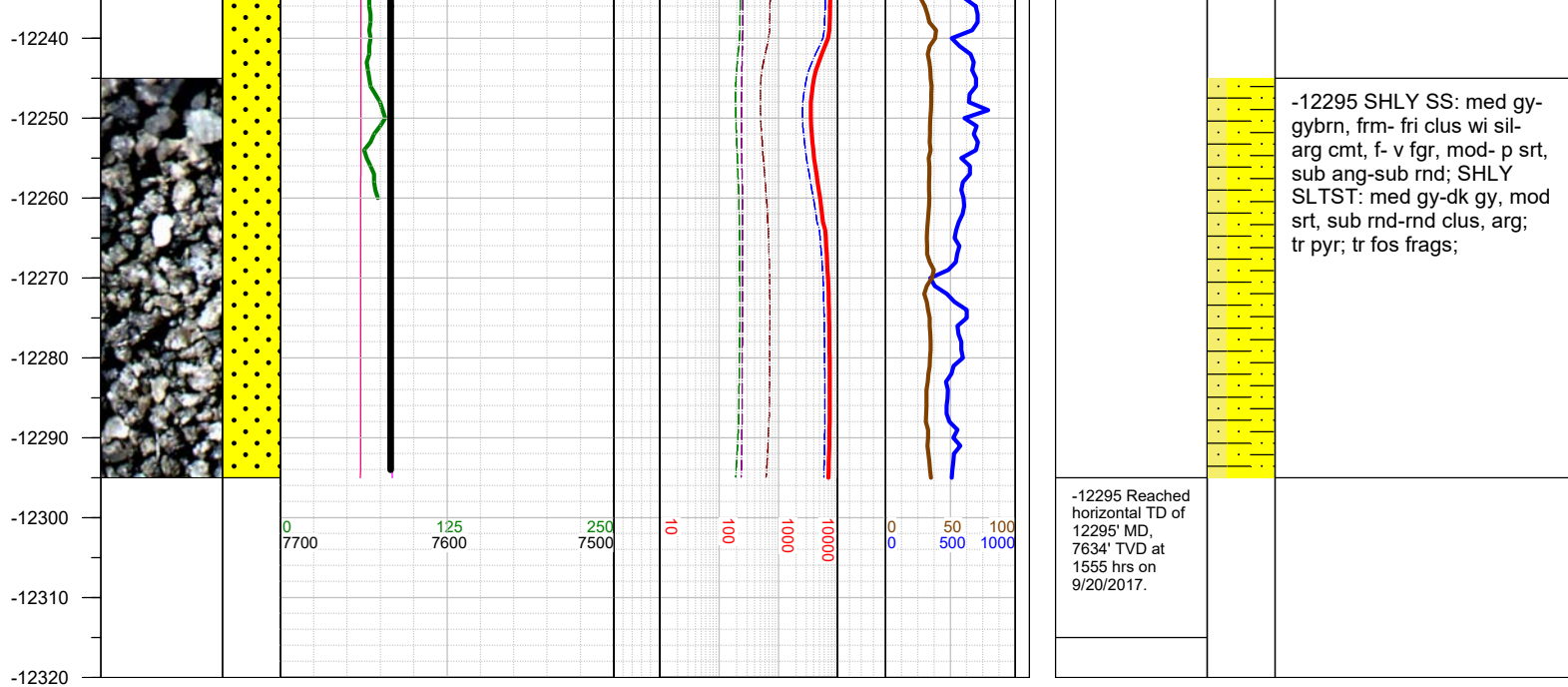
-11796 INC
90.99, AZM
90.44, TVD
7636.3

-11810 WT 10,
VIS 40

-11891 INC
91.6, AZM
89.91, TVD
7634.15

-11910 WT 10,
VIS 40





TOTAL DEPTH = 12295'

Thank you for using Earth Science Agency