

OPERATOR: **Extraction Oil & Gas**

WELL NAME: **Varra 10**

FIELD NAME: DJ Basin - Wattenberg

DRILLING RIG: Patterson 341

API #: 05-123-39990

LAT/LONG: 40.512724, -104.923883

SURFACE HOLE: NWSW S5-T6N-R67W, 1511' FSL, 786' FWL

BOTTOM HOLE: S4-T6N-R67W, 650' FSL, 460' FEL

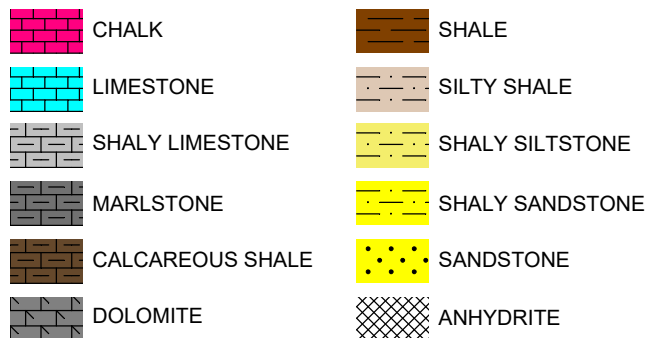


Earth Science Agency, LLC

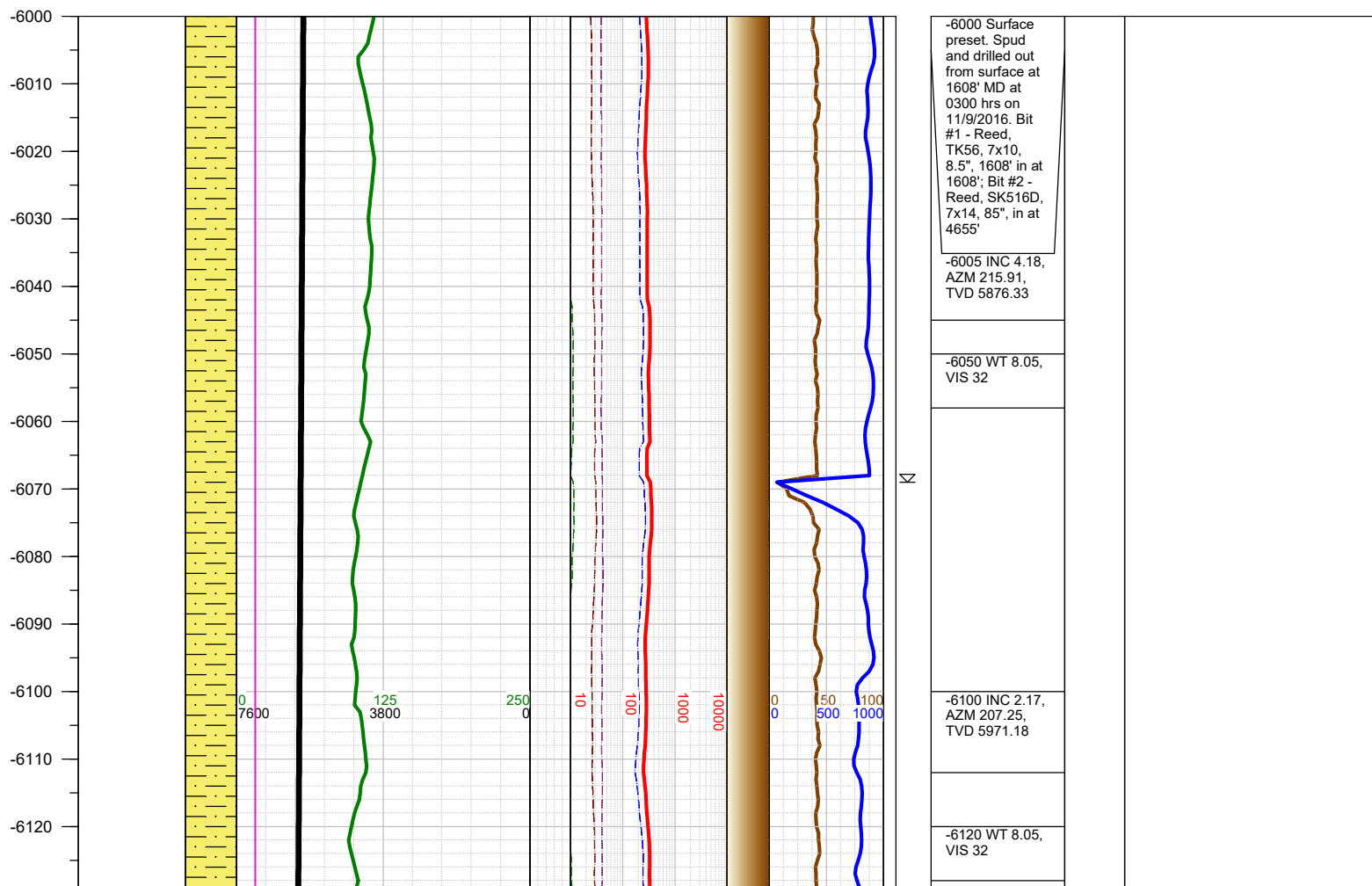
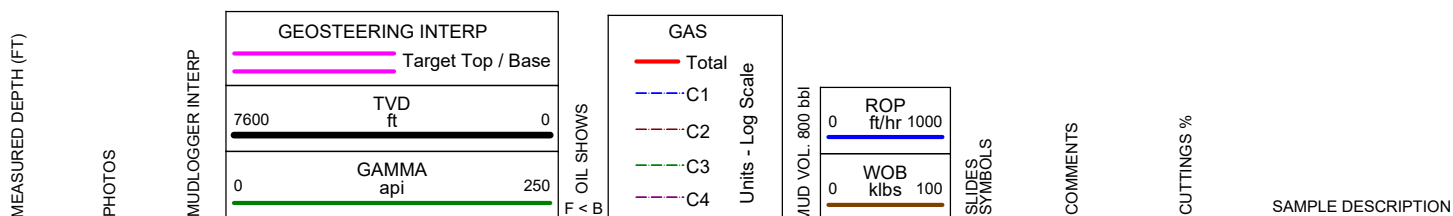
COUNTY: Weld
STATE: Colorado
GROUND ELEVATION: 4872'
KELLY BUSHING: 4897'
DRILLING FLUID: OBM
TVD VS. MD: 7409' / 17140'
SPUD DATE: November 9, 2016
TD DATE: November 14, 2016

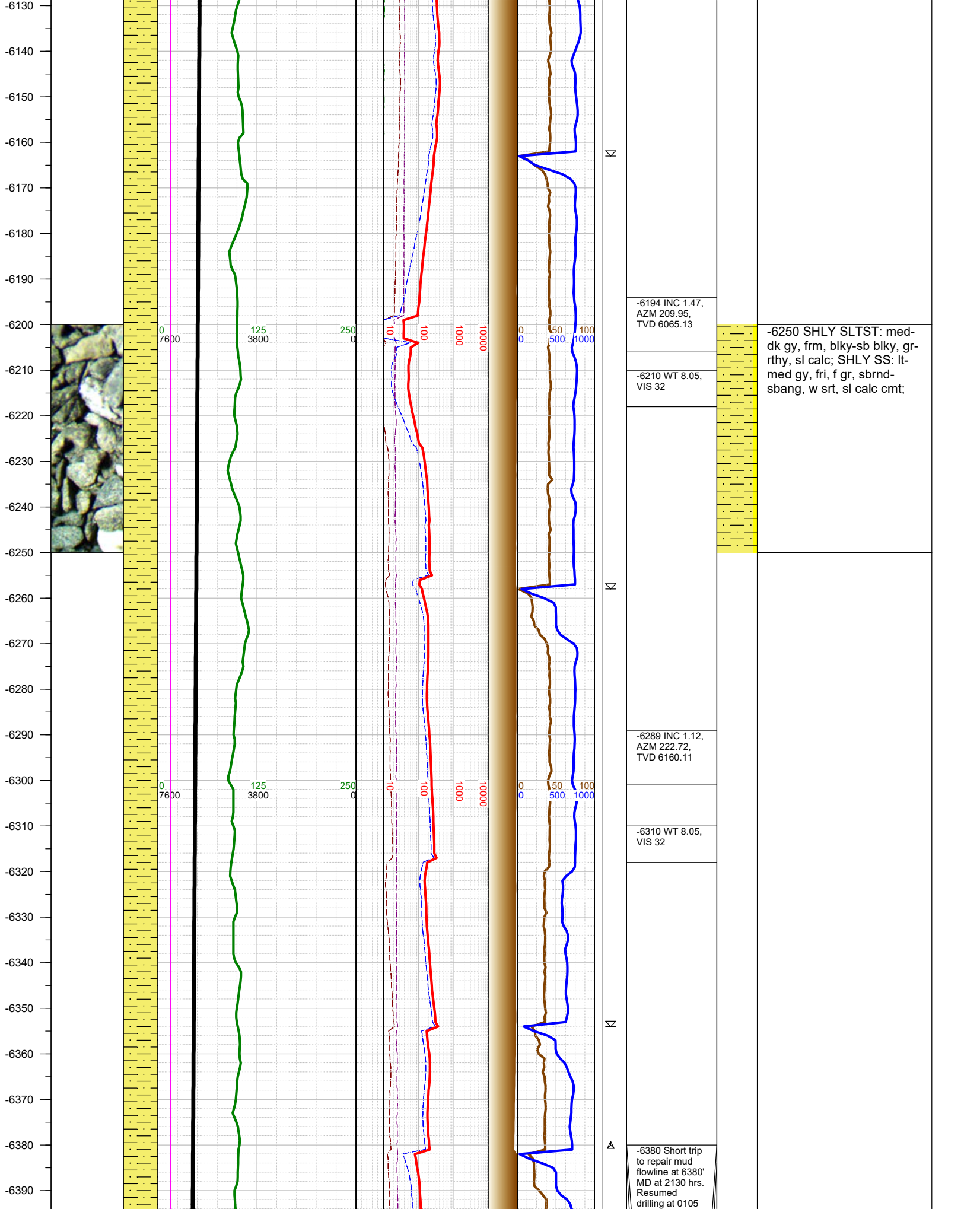
DEPTHS LOGGED: 6000' - 17140'
DATES LOGGED: November 9, 2016 - November 14, 2016
GEOLOGISTS: Blake Eatherton, Jared Gerard
SCALE: 5" = 100'

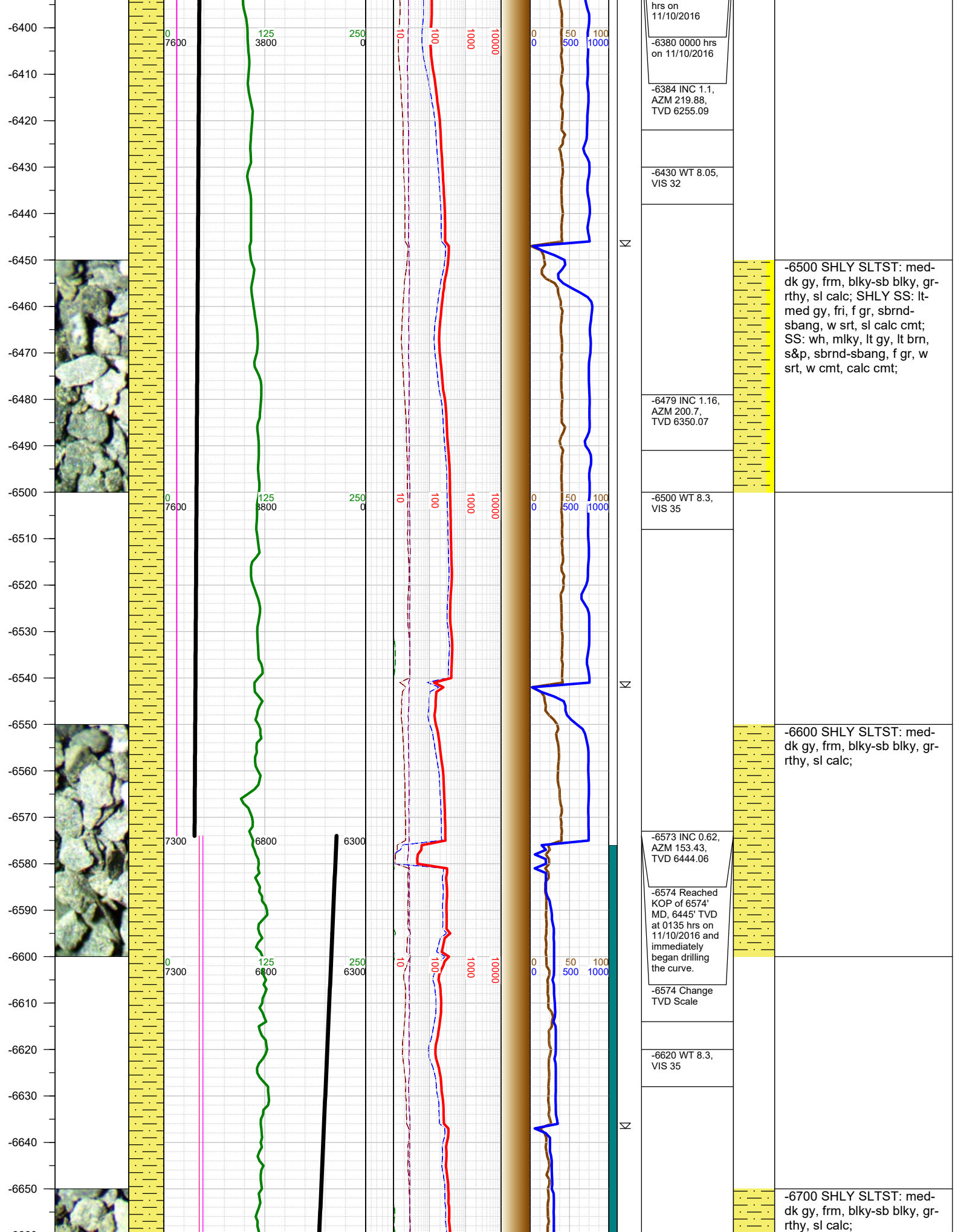
LEGEND

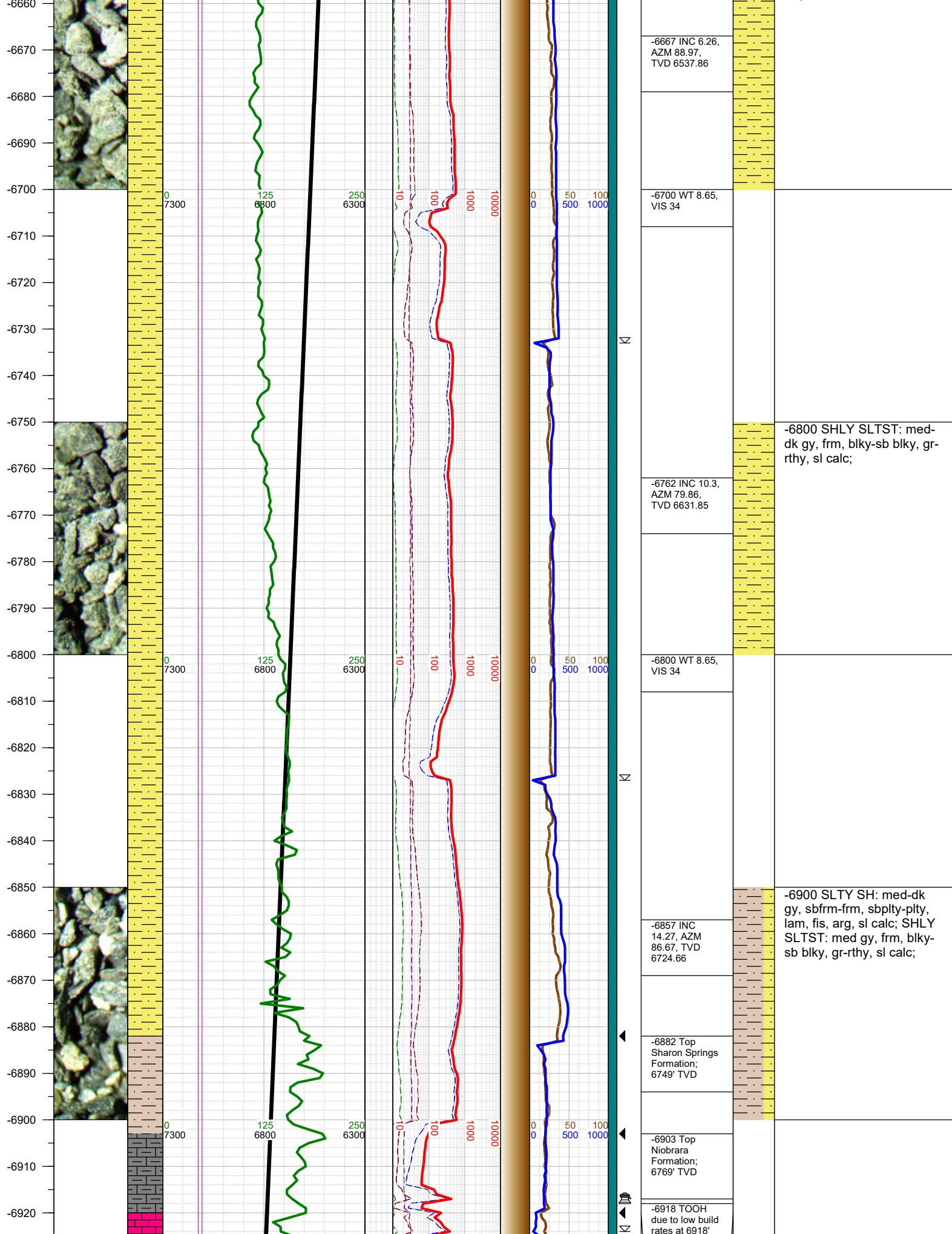


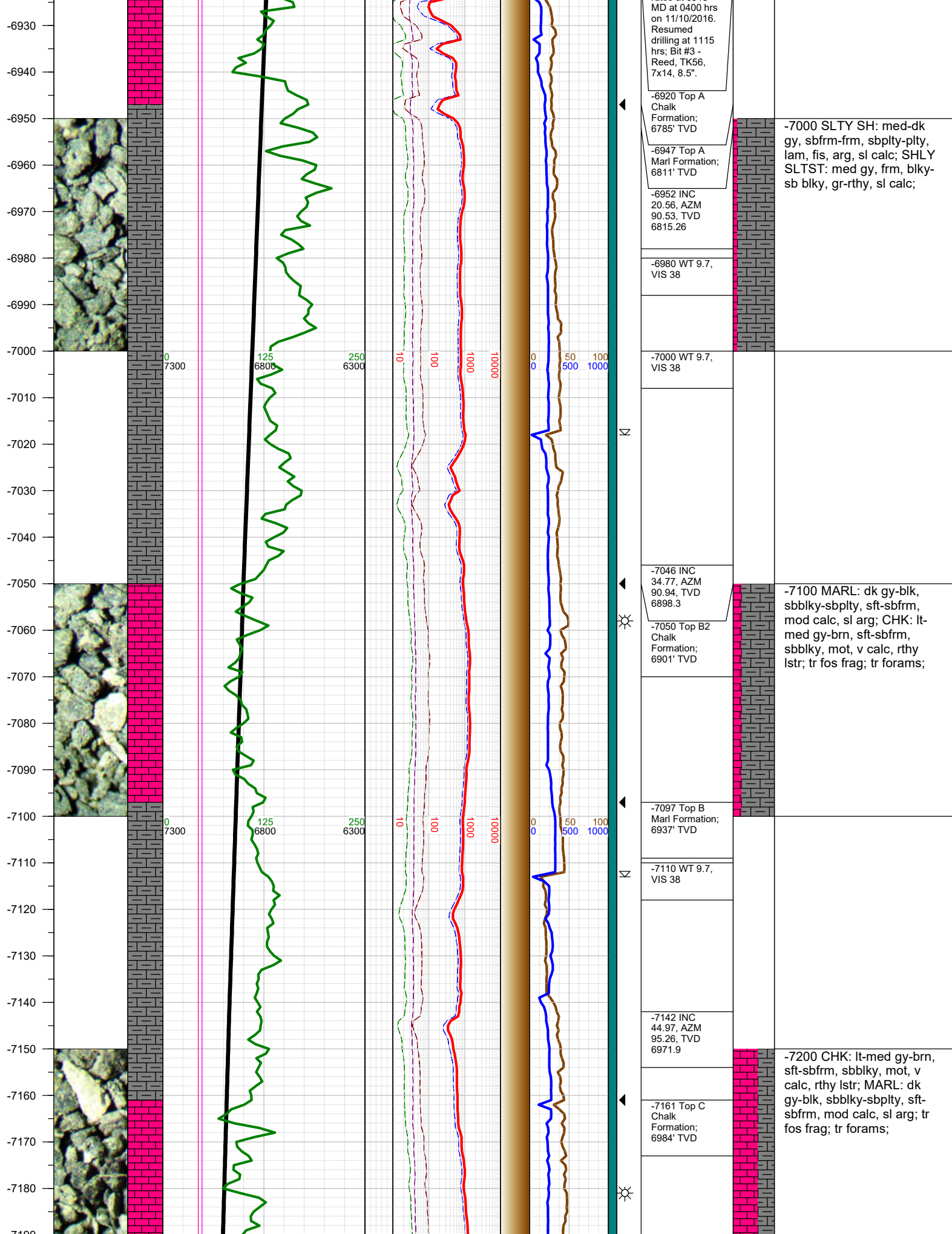
FORMATION \approx CONNECTION Δ MIDNIGHT NEW BIT GAS SHOW FAULT

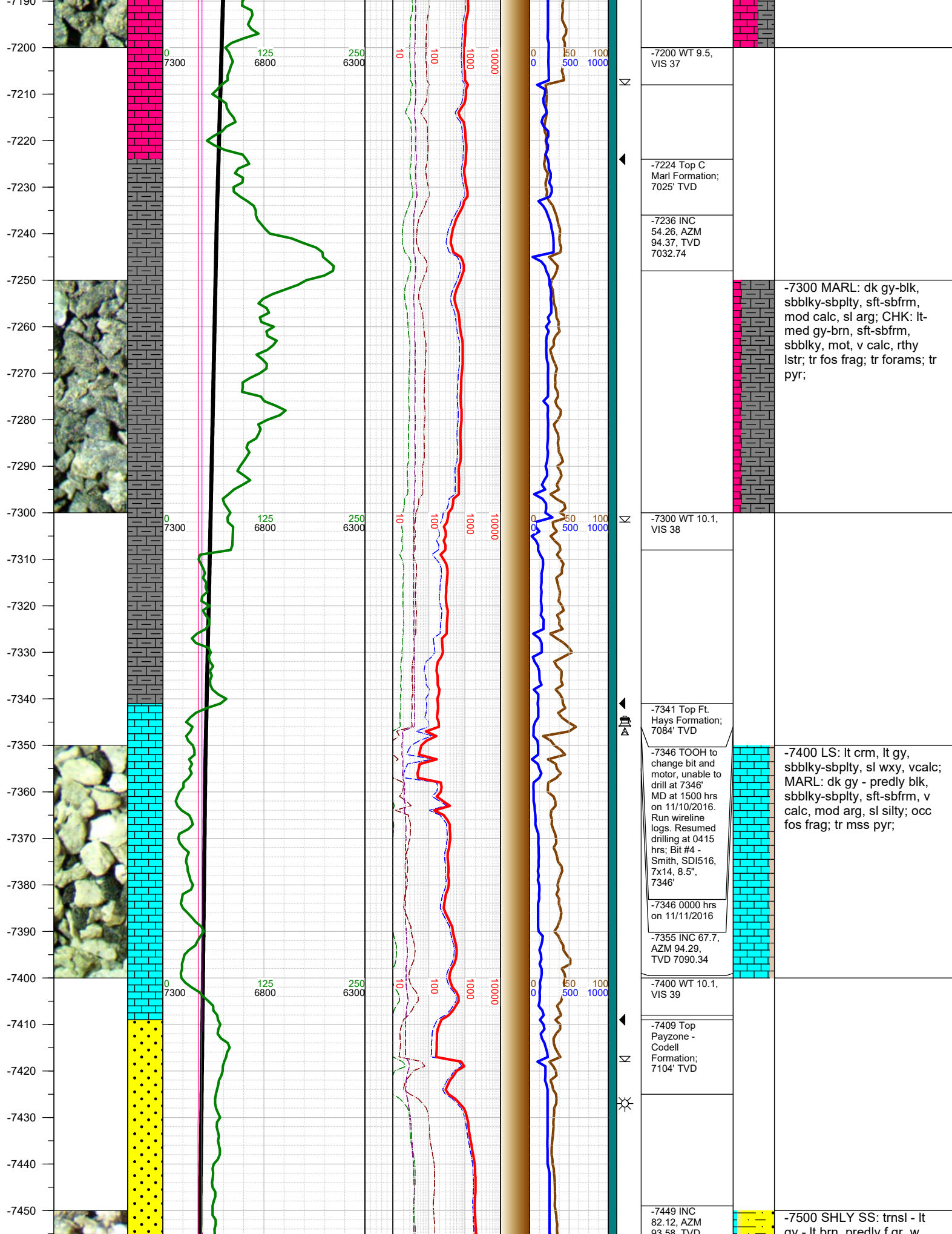


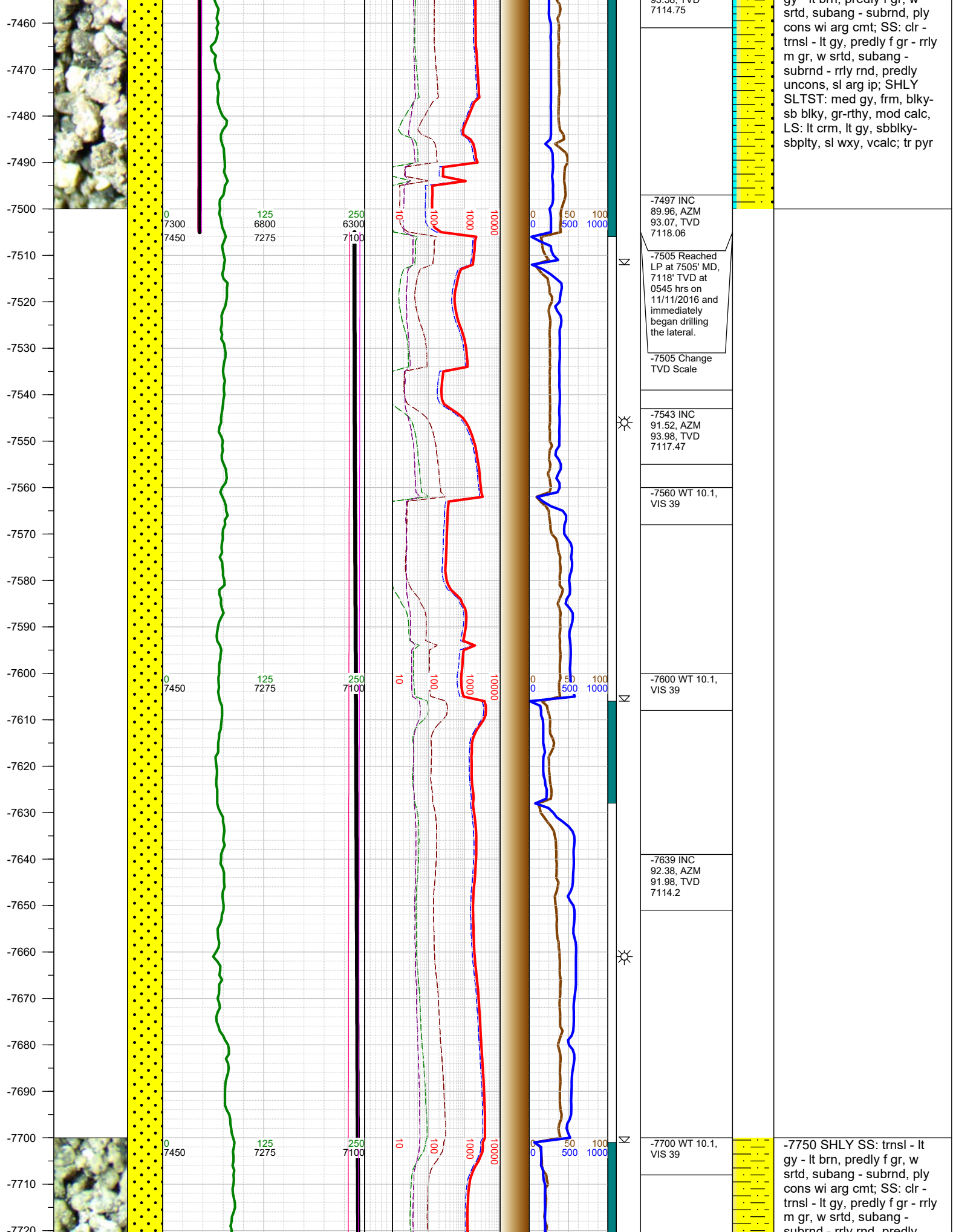


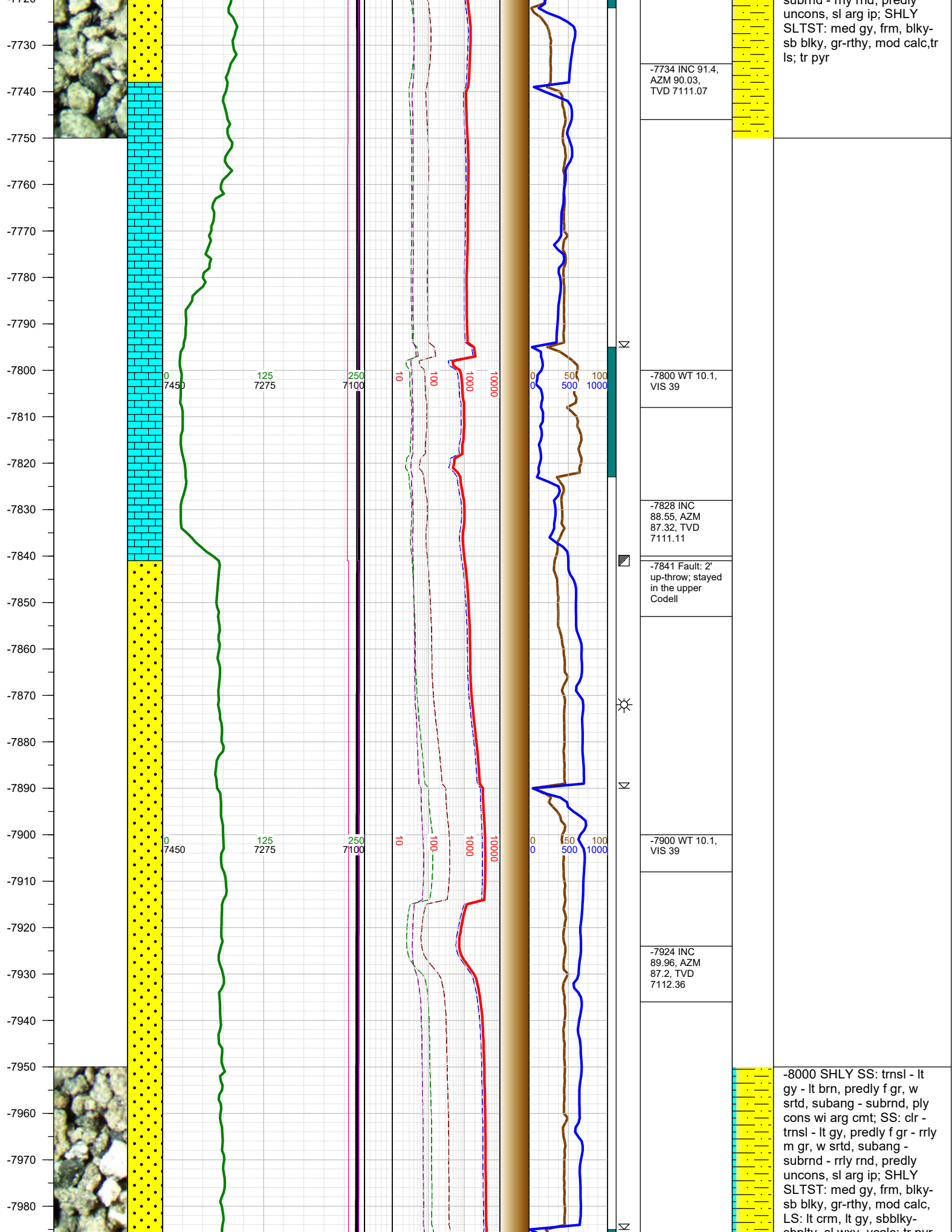


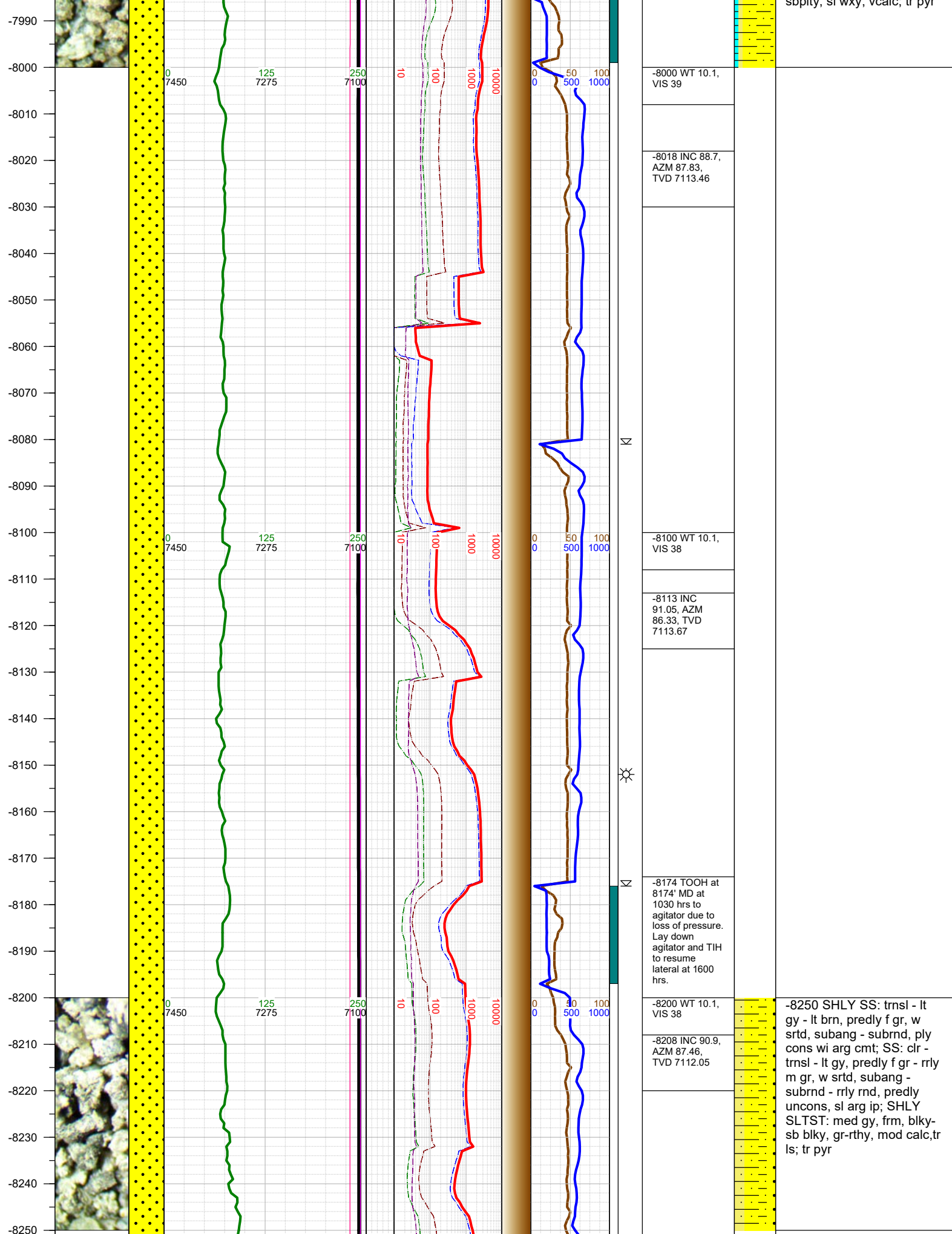


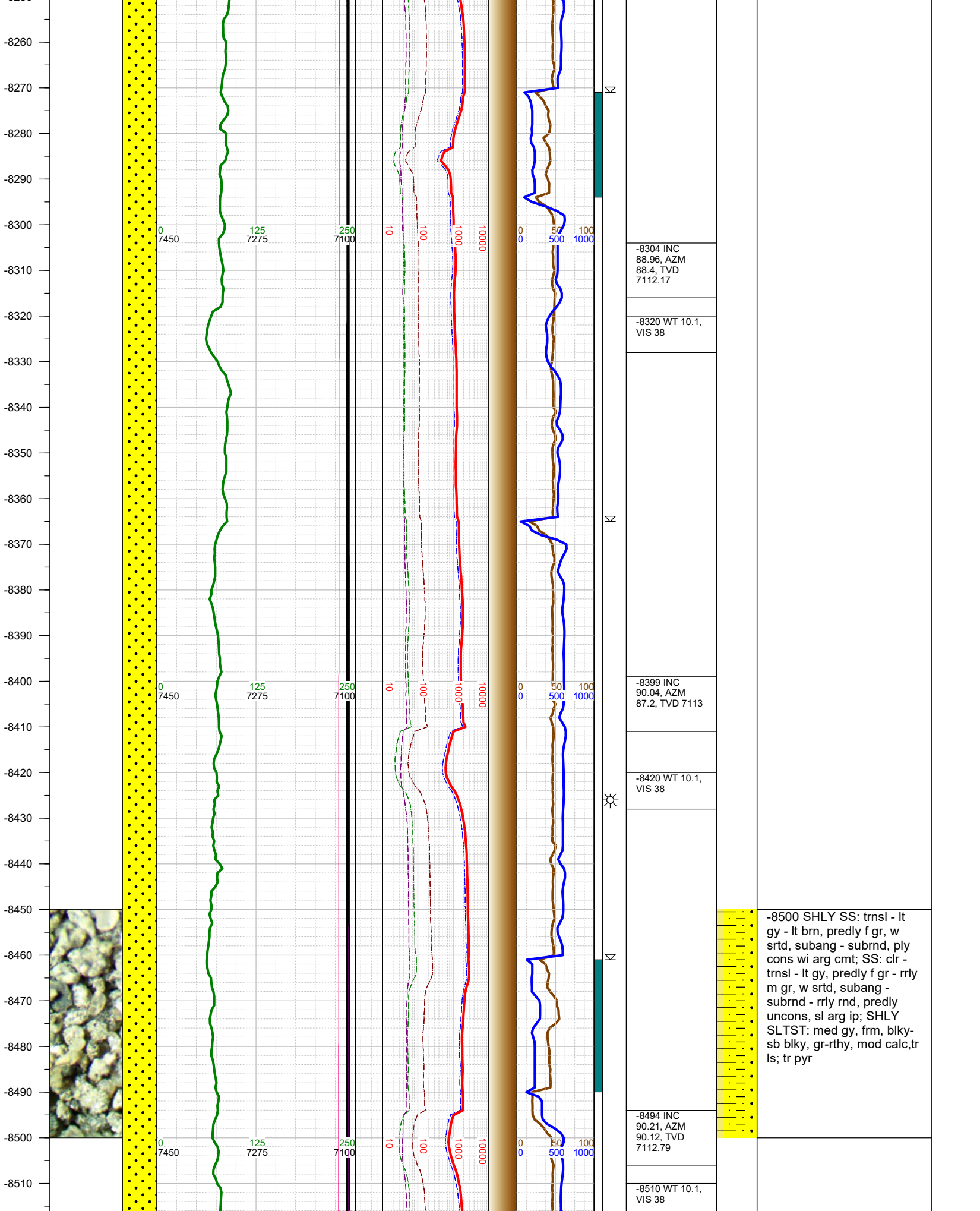


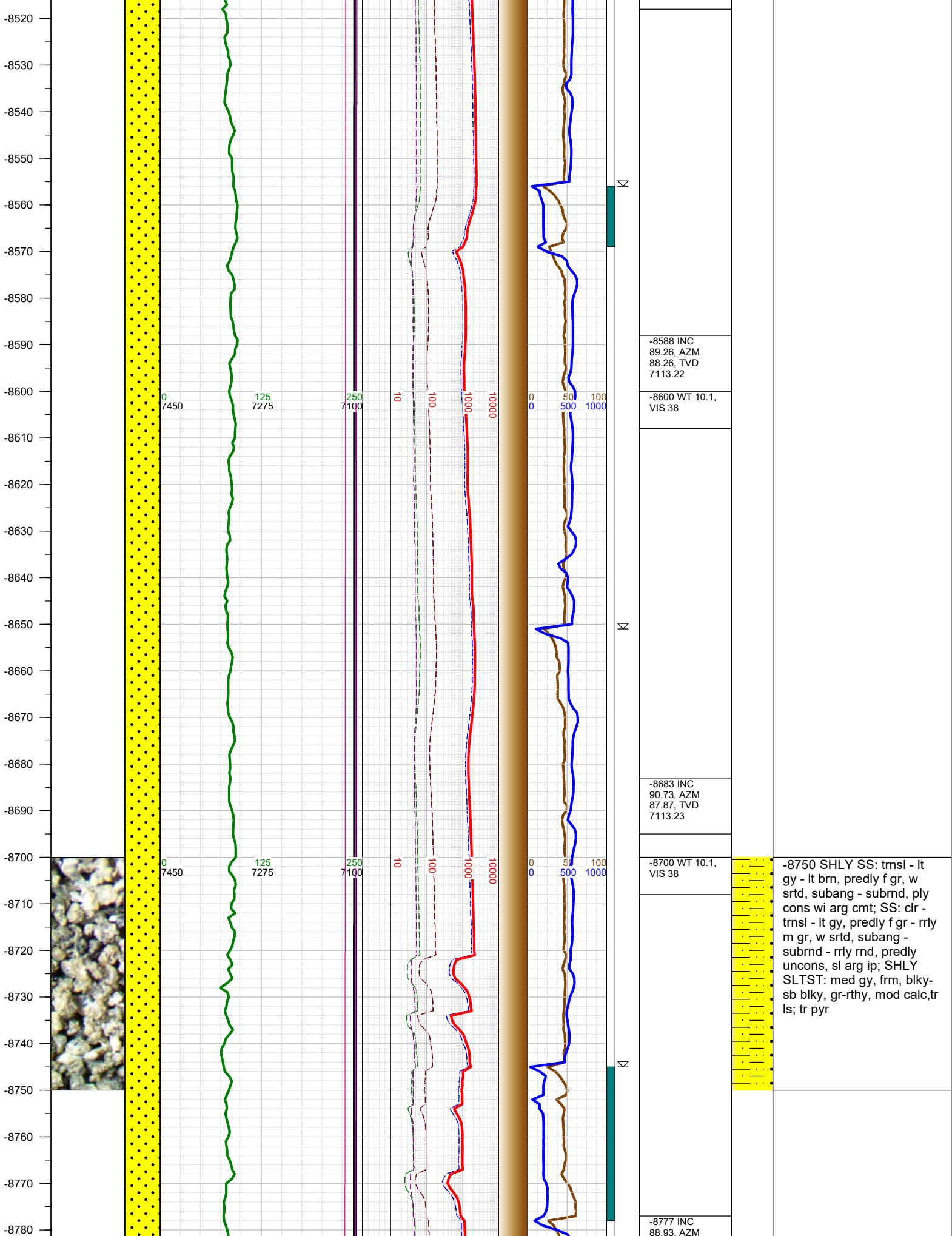


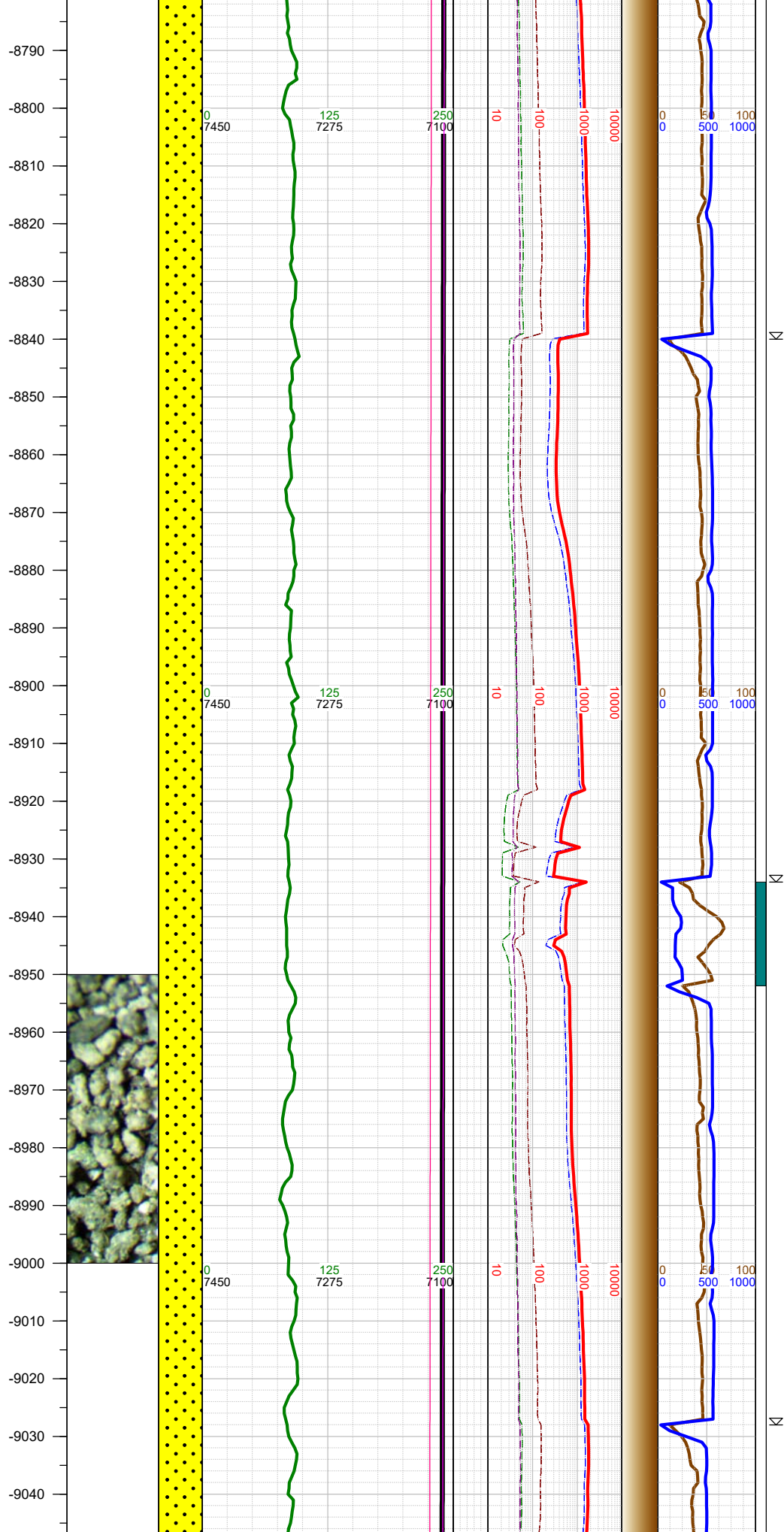






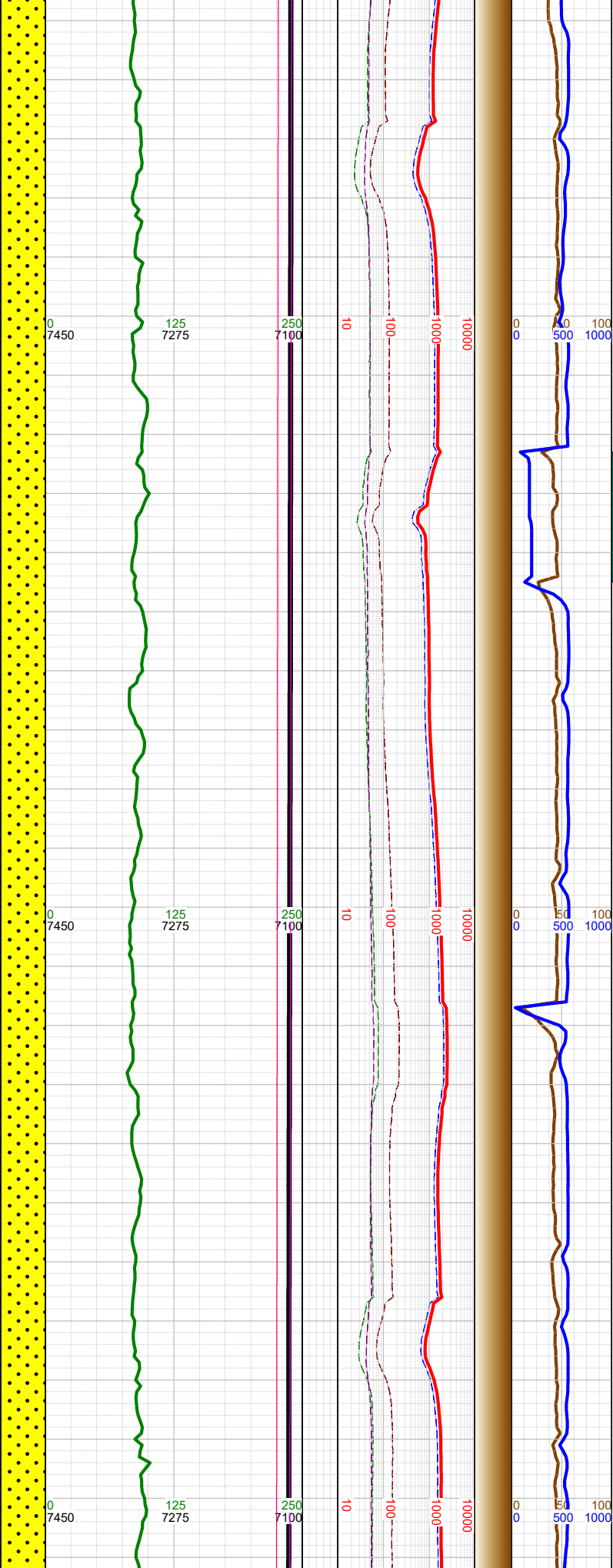




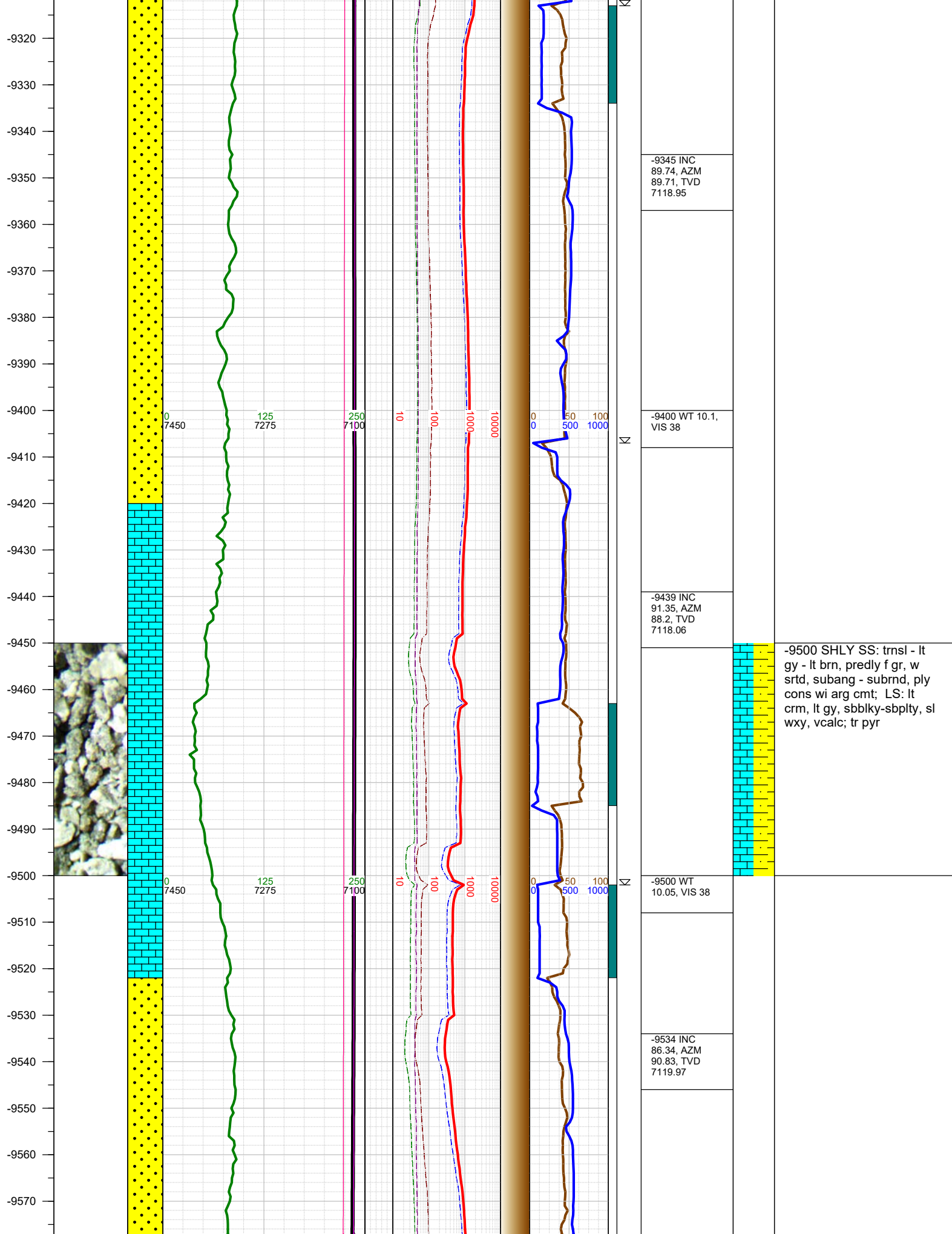


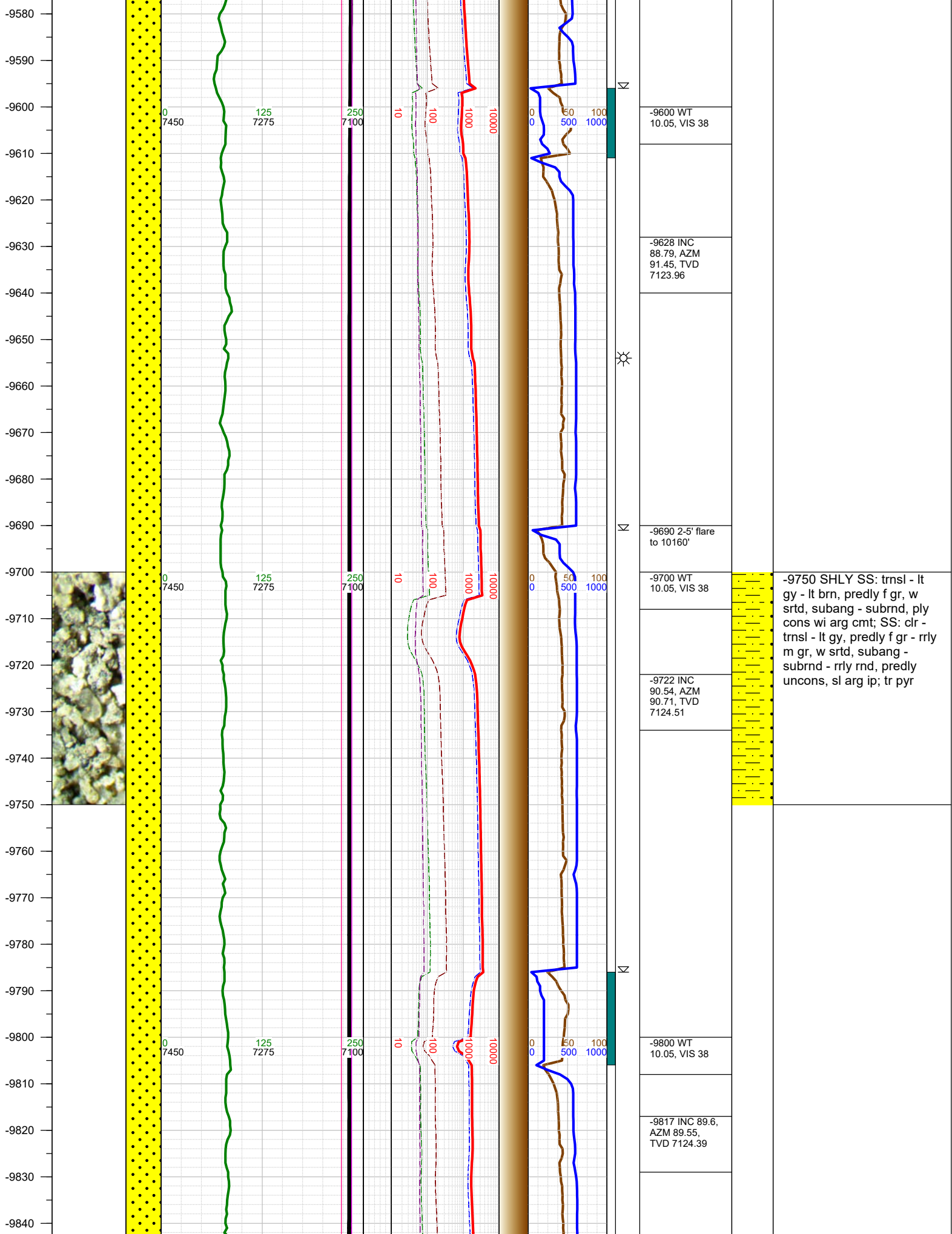
90.01, TVD 7113.51	
-8800 WT 10.1, VIS 38	
-8872 INC 90.01, AZM 88.91, TVD 7114.39	
-8900 WT 10.1, VIS 38	
-8966 INC 88.87, AZM 89.71, TVD 7115.31	-9000 SHLY SS: trnsl - lt gy - lt brn, predly f gr, w srtd, subang - subrnd, ply cons wi arg cmt; SS: clr - trnsl - lt gy, predly f gr - rrly m gr, w srtd, subang - subrnd - rrly rnd, predly uncons, sl arg ip; SHLY SLTST: med gy, frm, blk- sb blk, gr-rthy, mod calc, tr ls; tr pyr
-9000 WT 10.1, VIS 38	

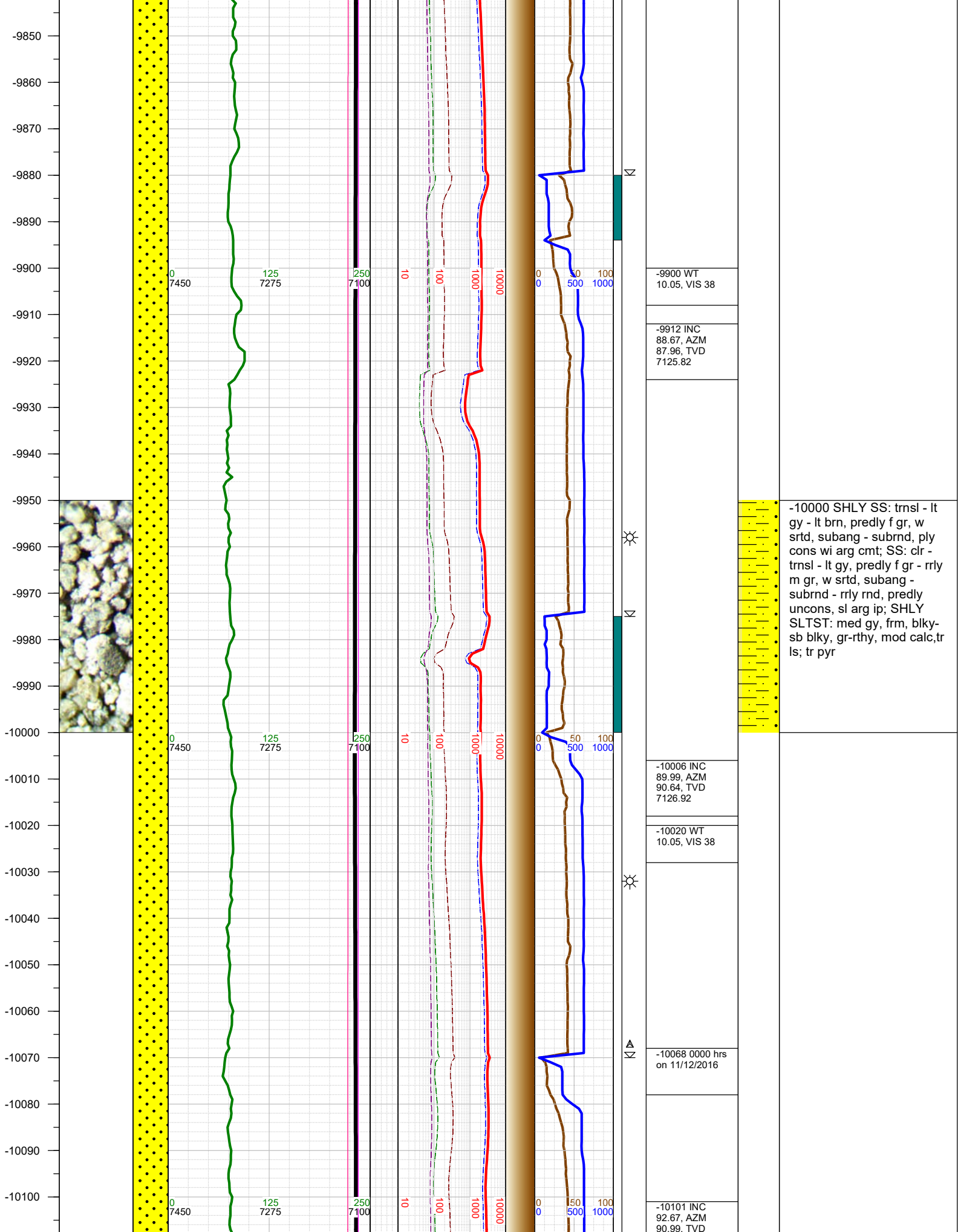
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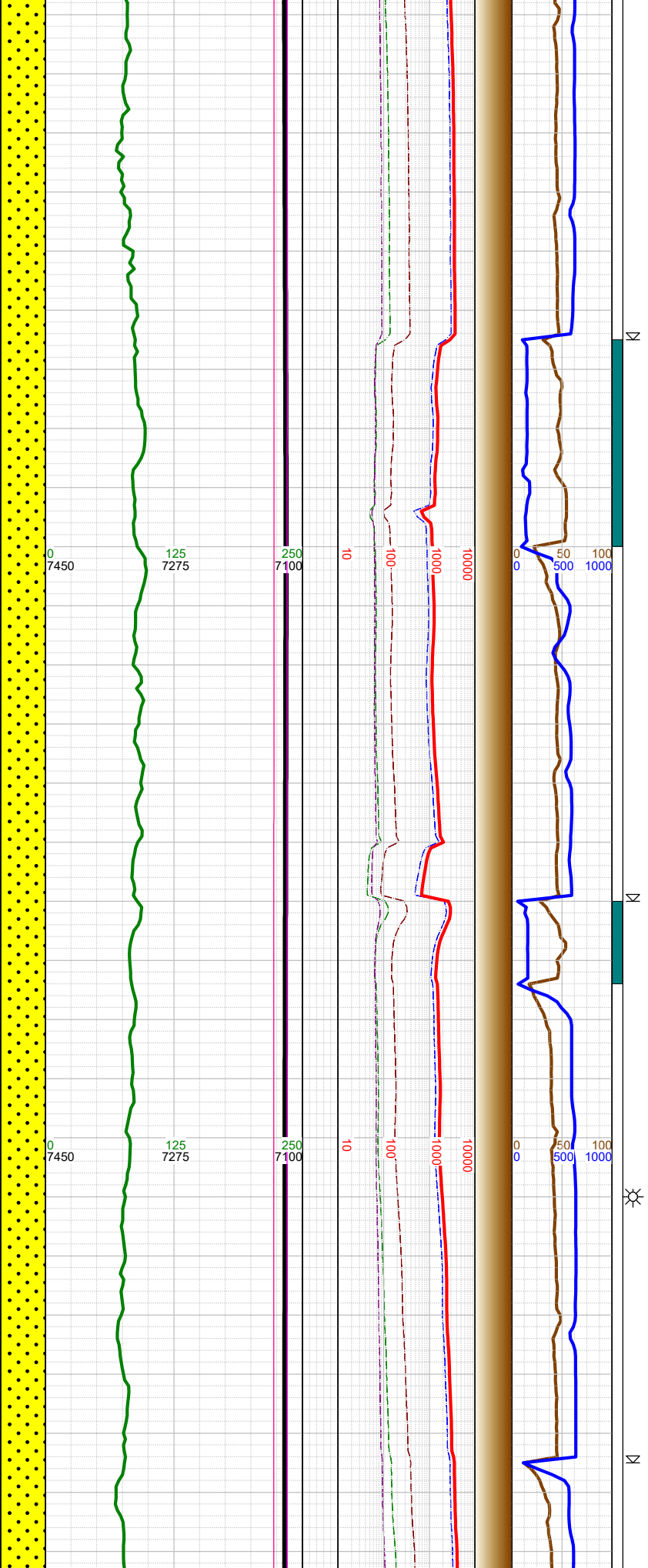
-9061 INC 90.57, AZM 88.57, TVD 7115.77		
-9100 WT 10.1, VIS 38		
-9156 INC 88.5, AZM 88.82, TVD 7116.54		
-9200 WT 10.1, VIS 38		-9250 SHLY SS: trnsl - lt gy - lt brn, predly f gr, w srtd, subang - subrnd, ply cons wi arg cmt; SS: clr - trnsl - lt gy, predly f gr - rrly m gr, w srtd, subang - subrnd - rrly rnd, predly uncons, sl arg ip; tr pyr
-9250 INC 89.42, AZM 87.87, TVD 7118.25		
-9300 WT 10.1, VIS 38		



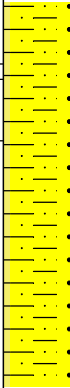




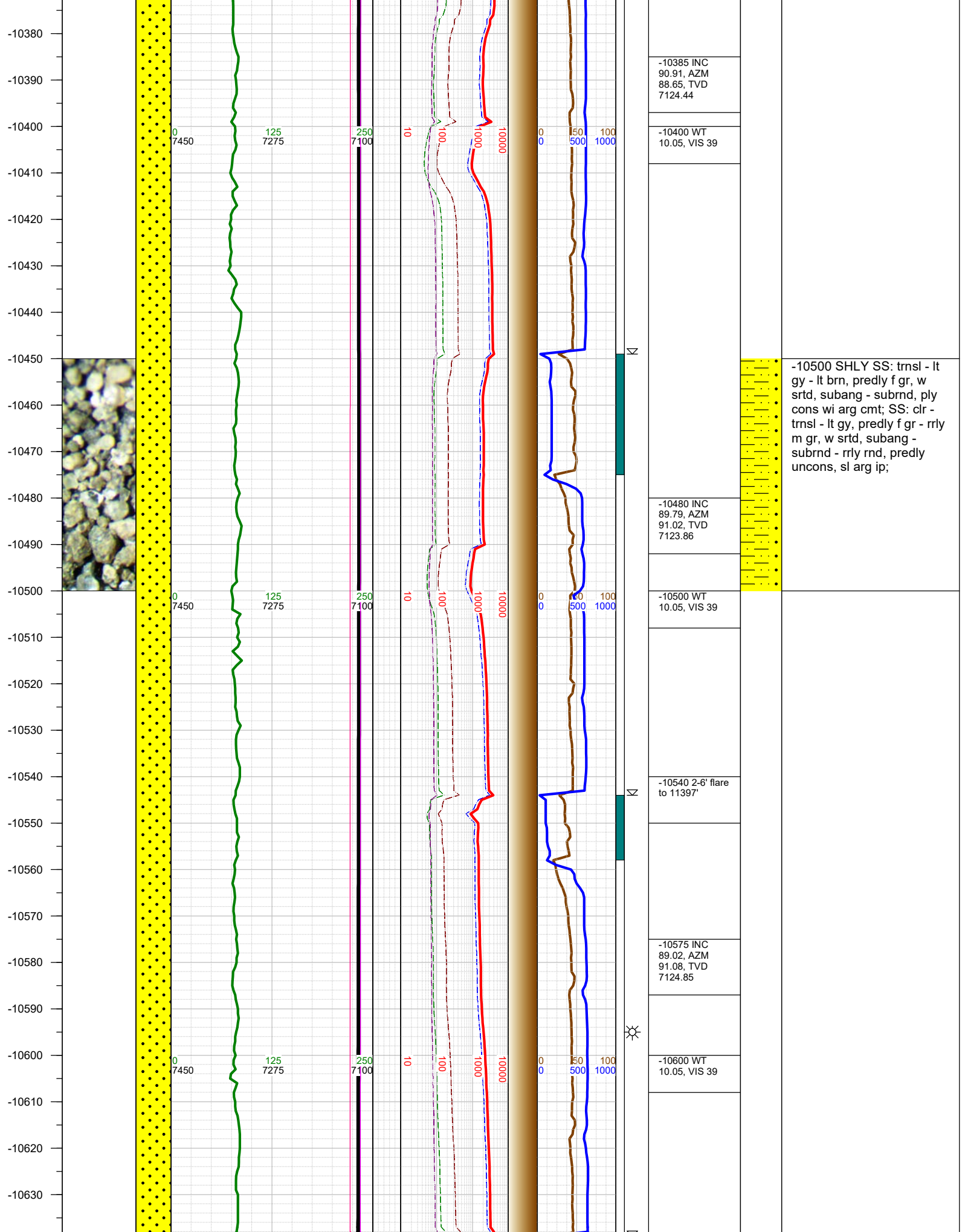
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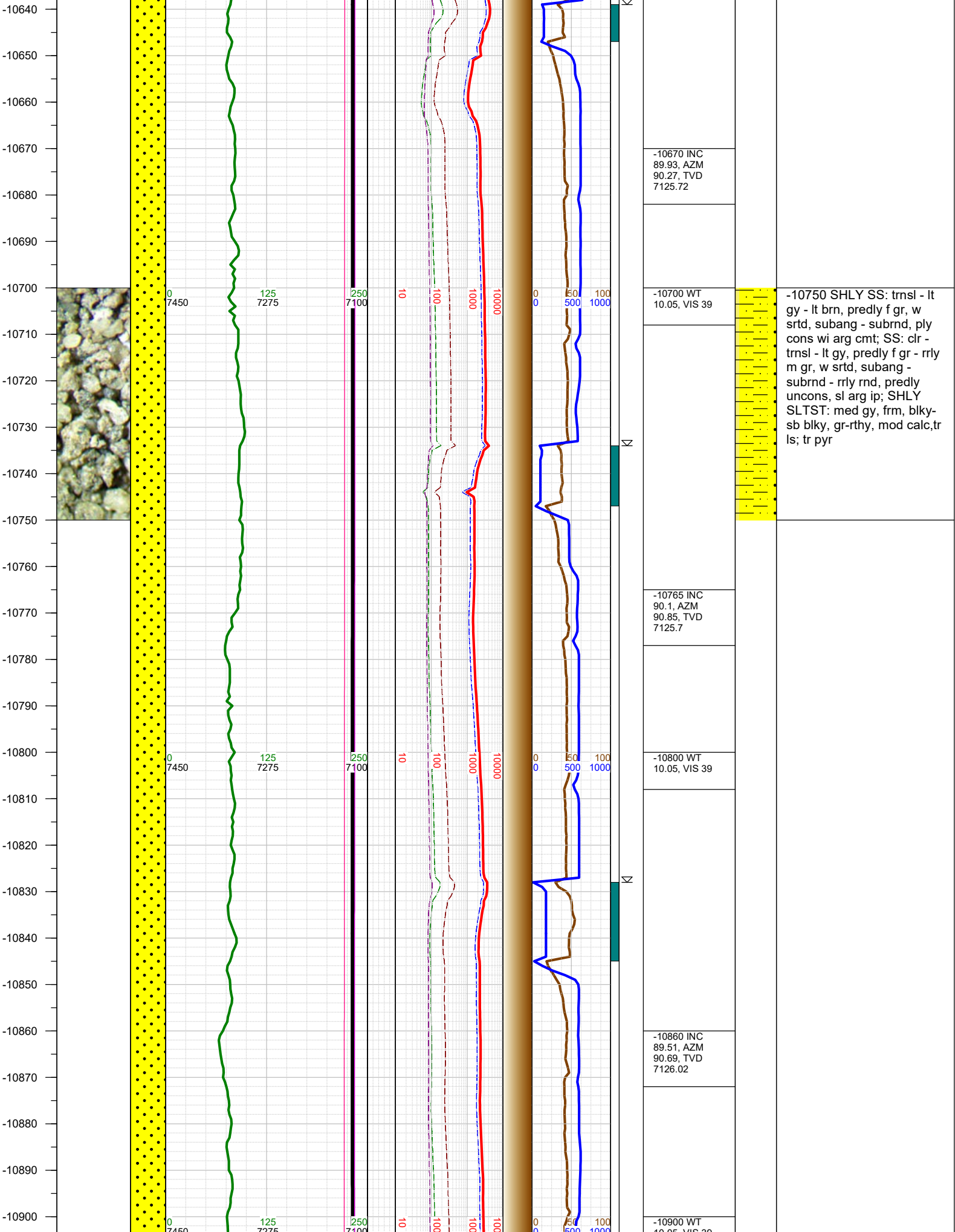


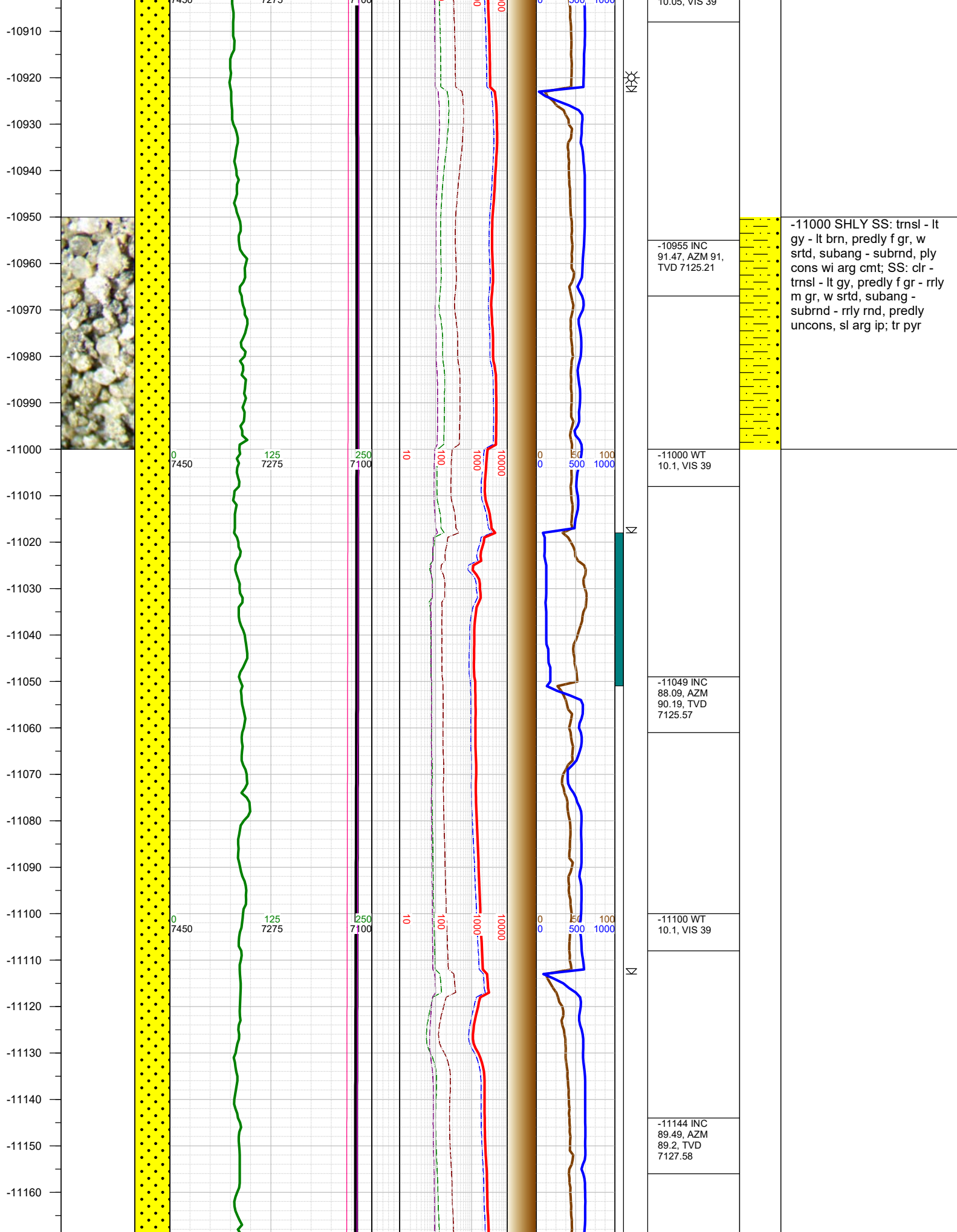
7124.72
-10120 WT 10.05, VIS 38
-10196 INC 90.08, AZM 92.28, TVD 7122.44
-10210 WT 10.05, VIS 39
-10290 INC 88.29, AZM 89.21, TVD 7123.78
-10310 WT 10.05, VIS 39

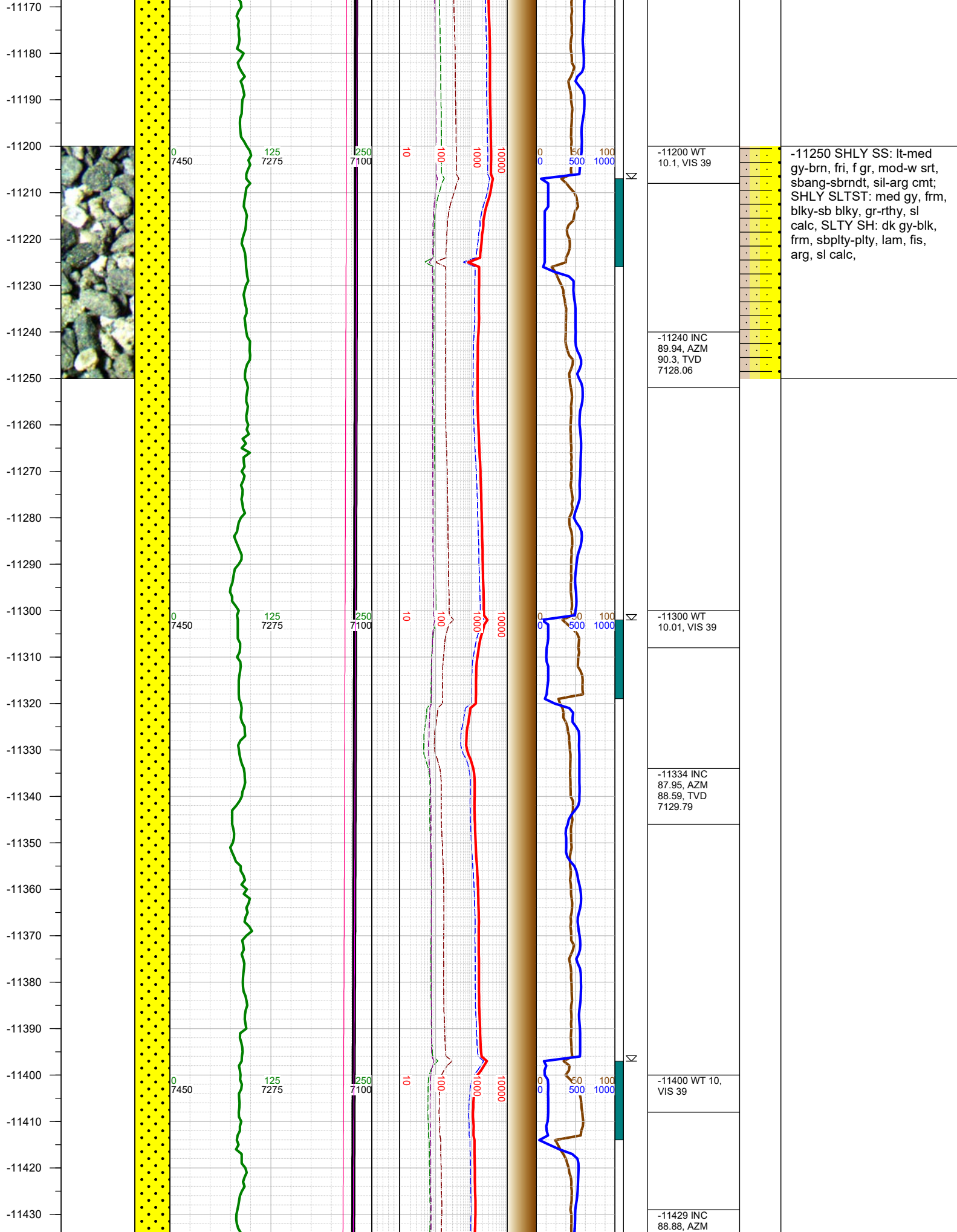


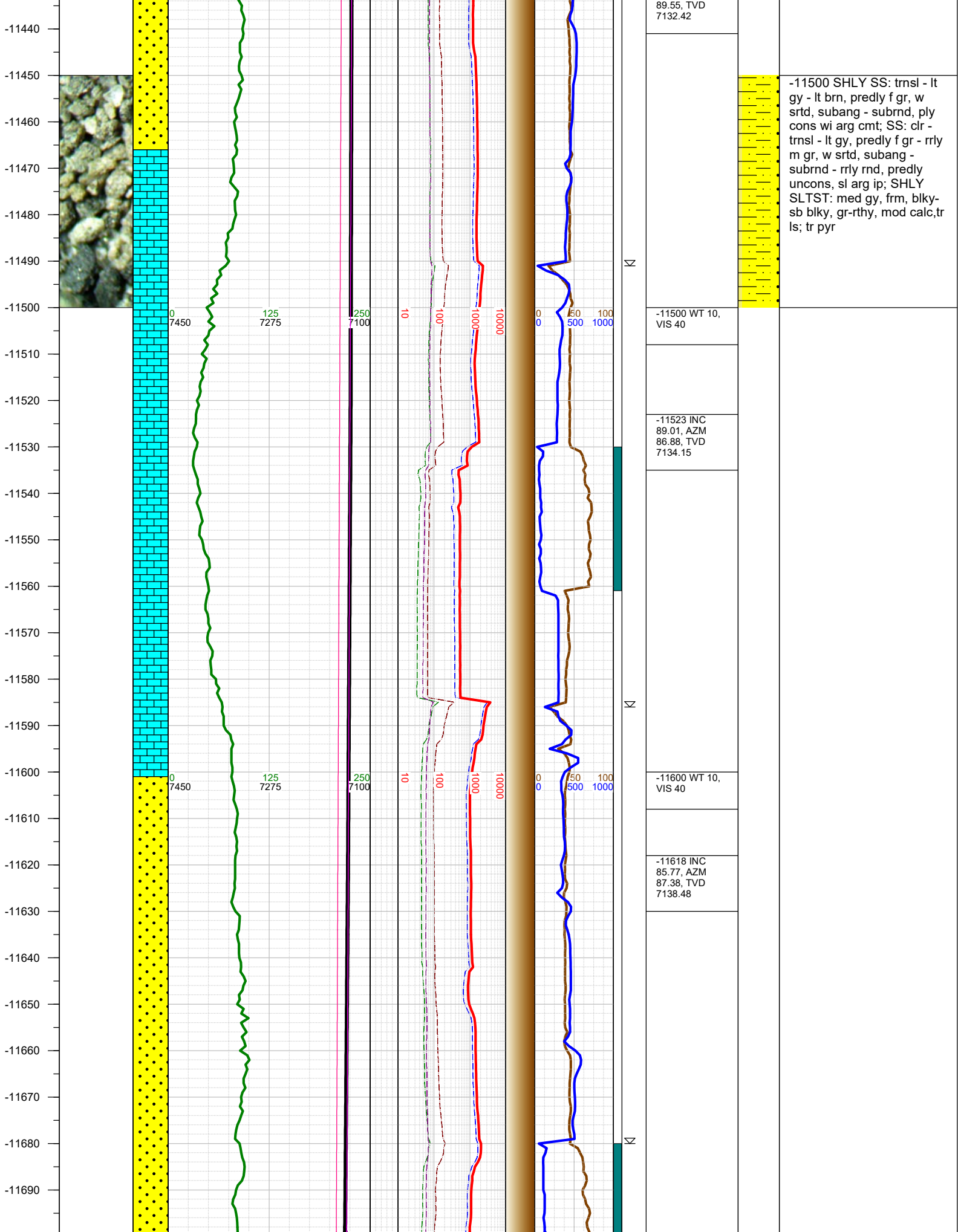
-10250 SHLY SS: trns l - lt gy - lt brn, predly f gr, w srtd, subang - subrnd, ply cons wi arg cmt; SS: clr - trns l - lt gy, predly f gr - rrly m gr, w srtd, subang - subrnd - rrly rnd, predly uncons, sl arg ip; SHLY SLTST: med gy, frm, blkysb blkys, gr-rthy, mod calc, tr ls; tr pyr

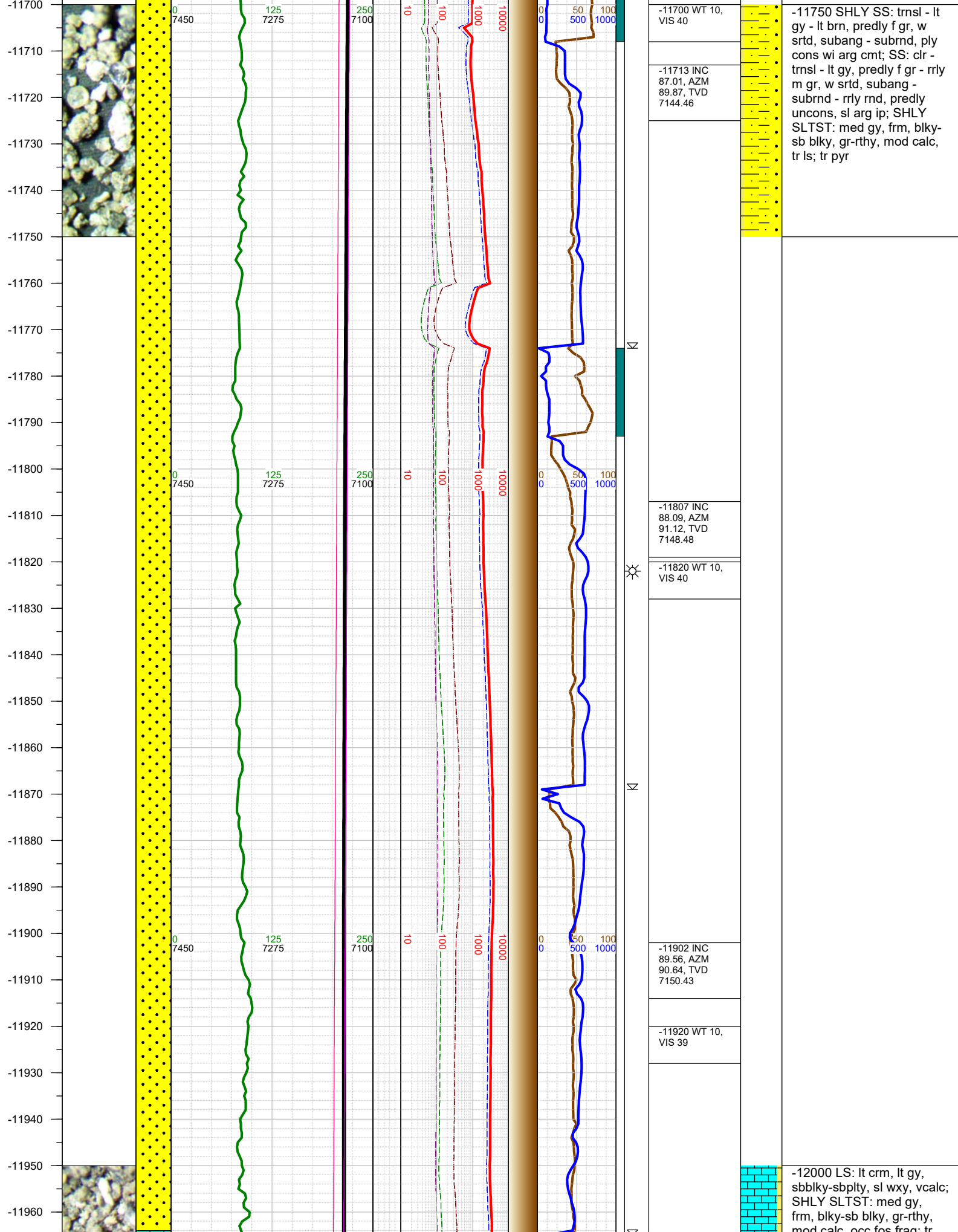


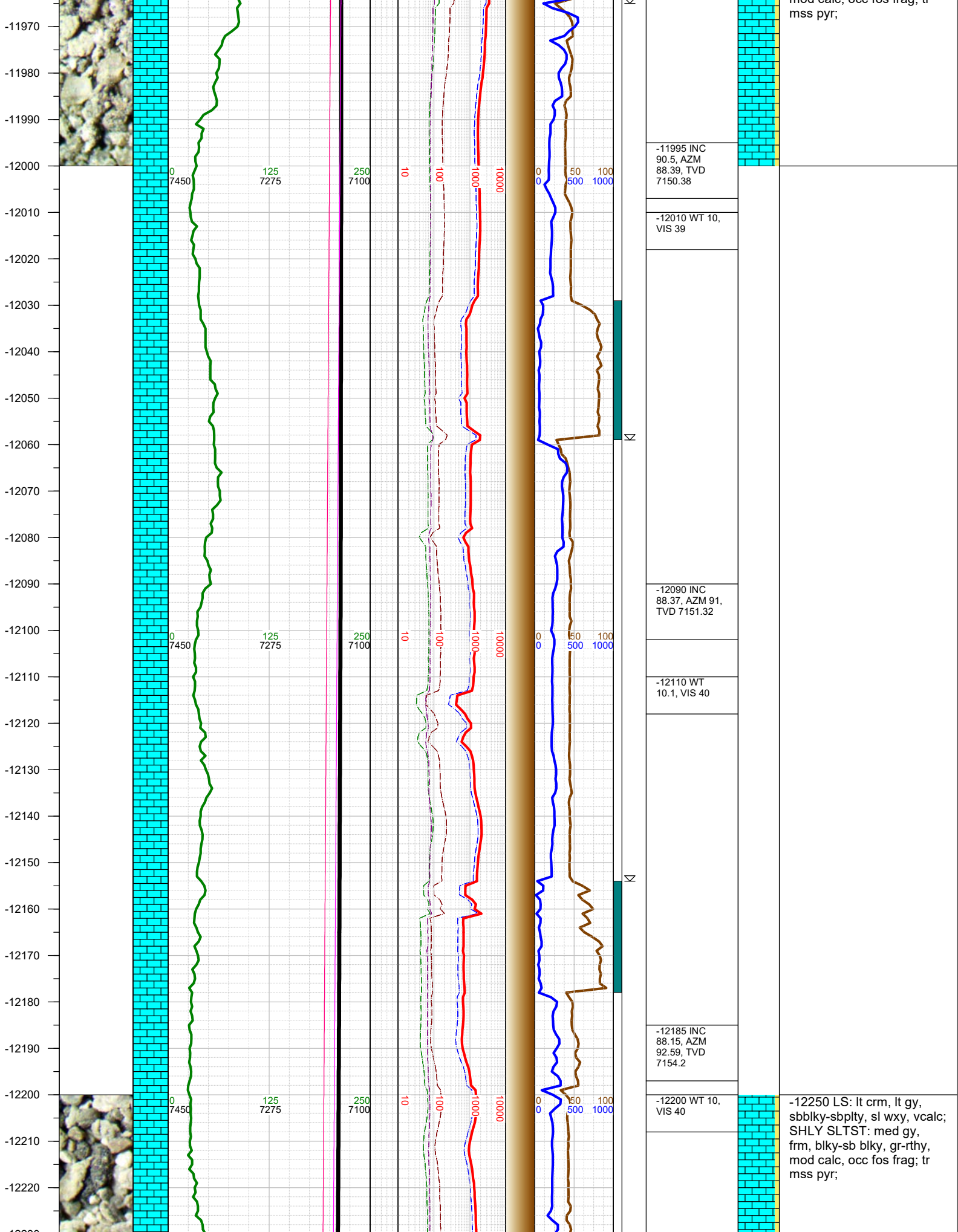


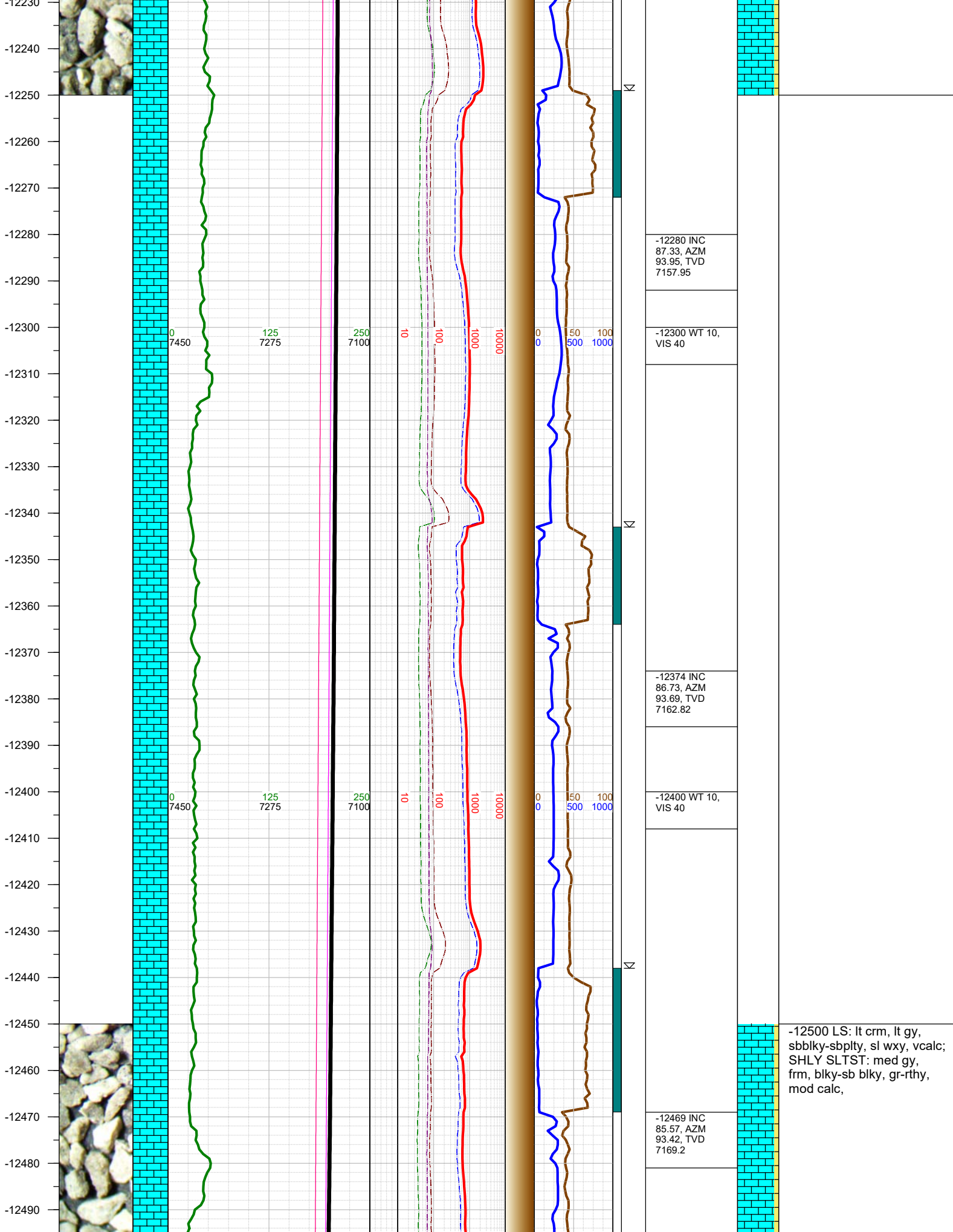




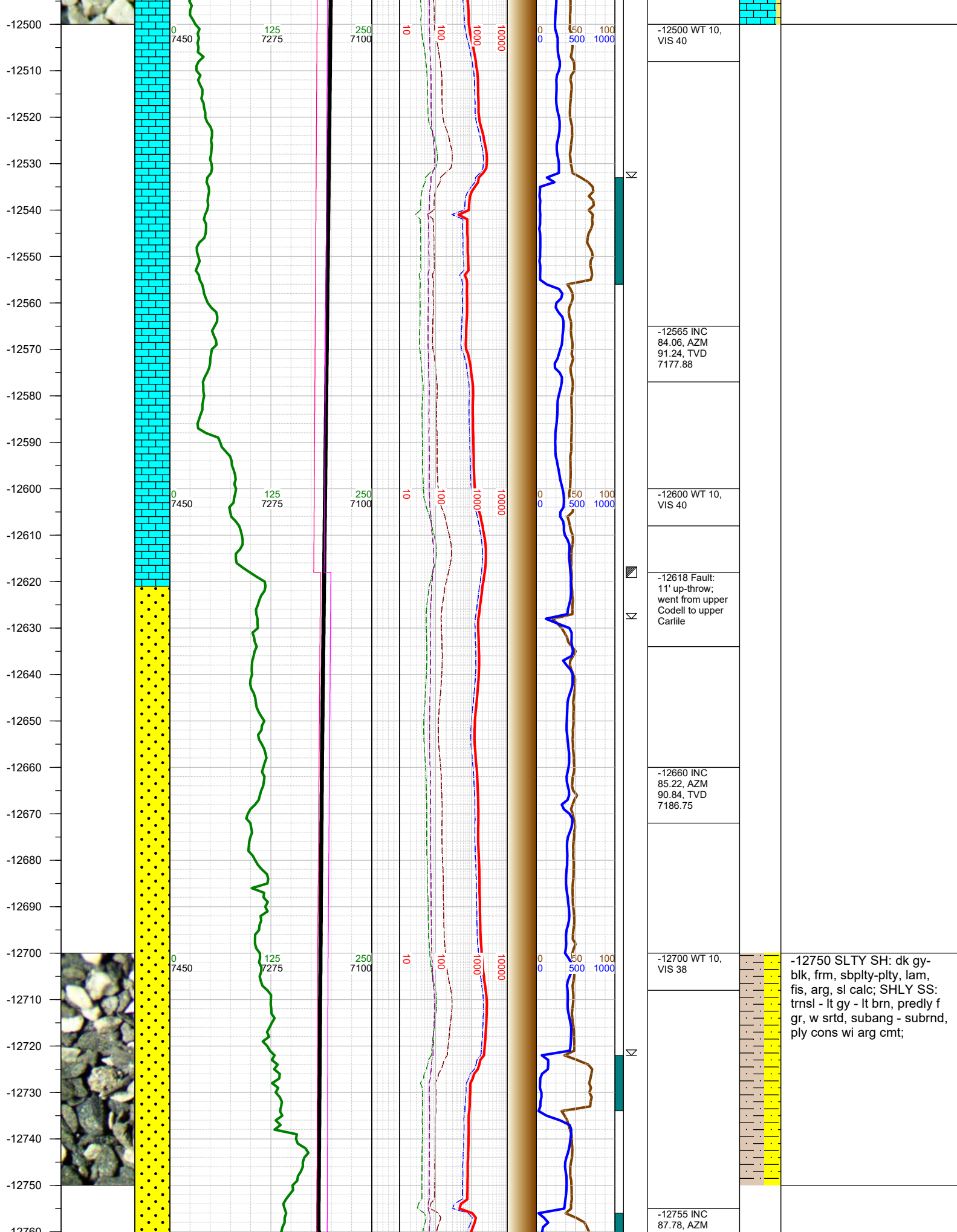




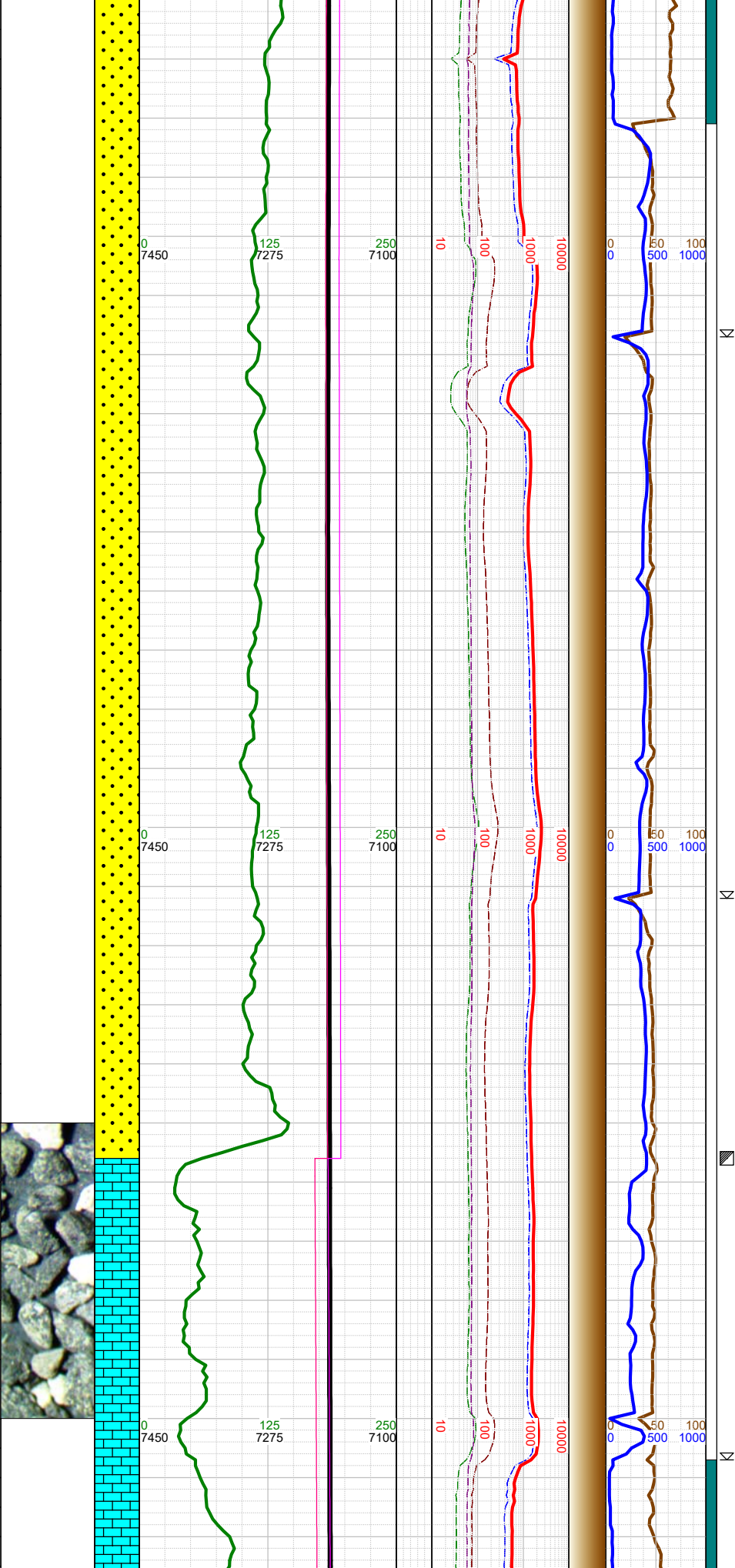




-12500 LS: lt crm, lt gy, sbblky-sbplty, sl wxy, vcalc; SHLY SLTST: med gy, frm, blk-y-sb blk-y, gr-rthy, mod calc,



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-13020



90.7, TVD
7192.55

-12800 WT 10,
VIS 38

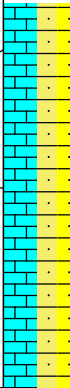
-12850 INC
90.69, AZM
89.64, TVD
7193.82

-12900 WT 10,
VIS 38

-12945 INC
92.04, AZM
90.36, TVD
7191.56

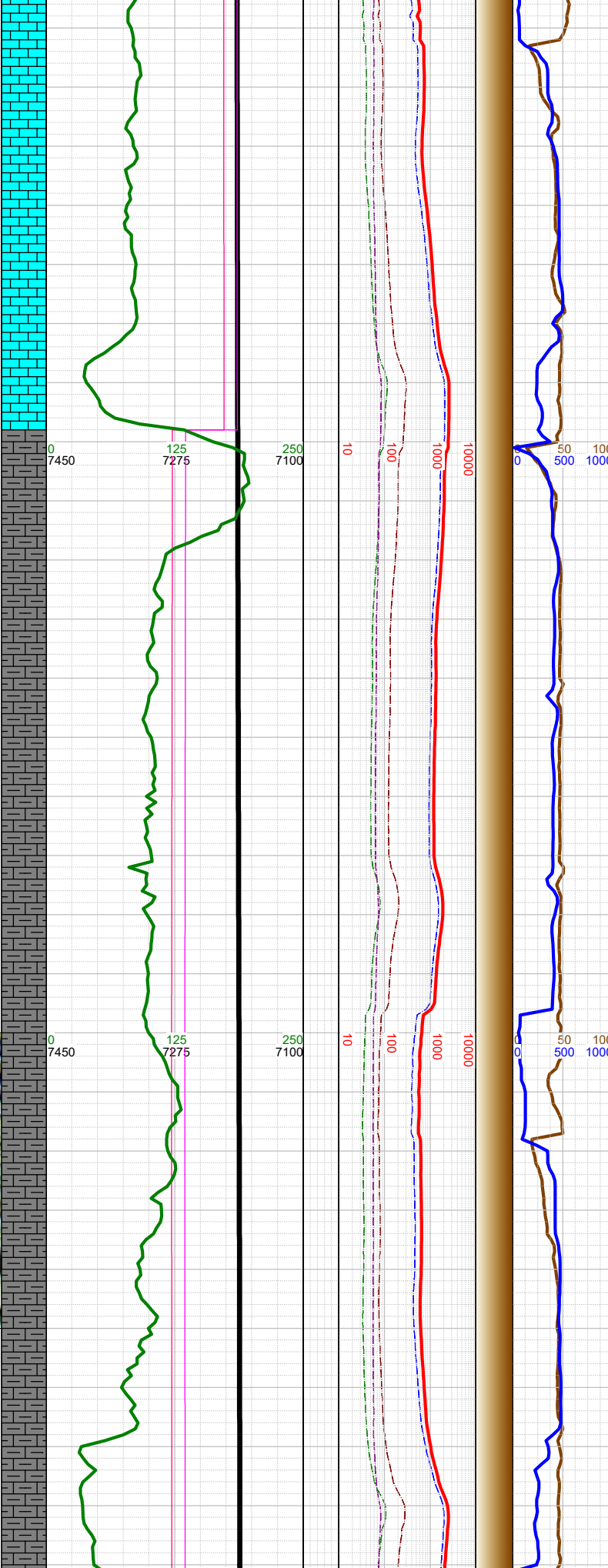
-12956 Fault:
18' down-throw;
went from upper
Carlile to lower
Ft Hays

-13000 WT 10,
VIS 38

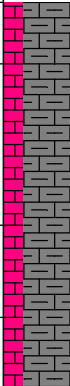


-13000 LS: lt crm, lt gy,
sbbkly-sbplty, sl wxy, vcalc;
SHLY SLTST: med gy,
frm, blkly-sb blkly, gr-rthy,
mod calc, SHLY SS: trnsl -
lt gy - lt brn, predly f gr, w
srtd, subang - subrnd, ply
cons wi arg cmt;

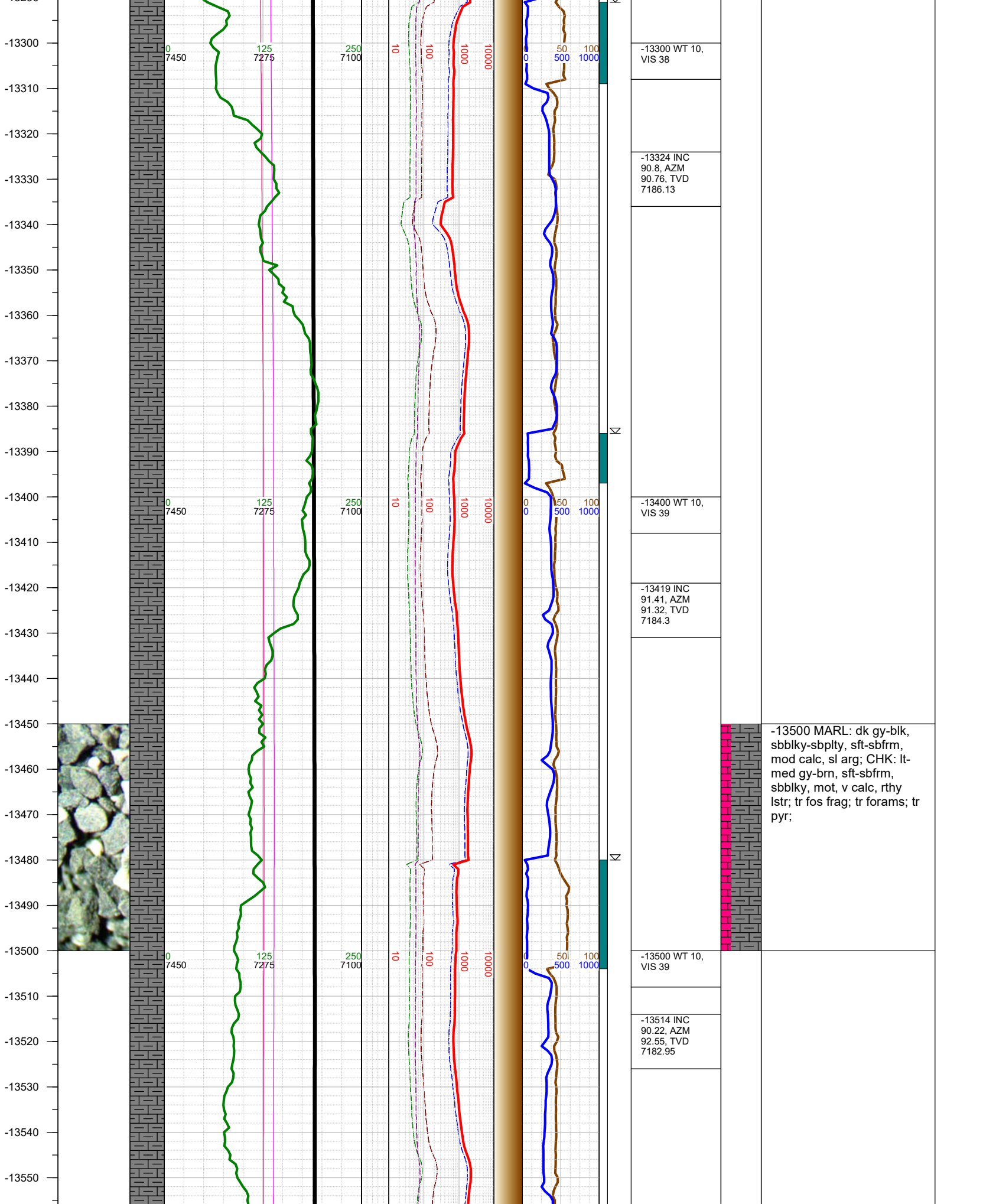
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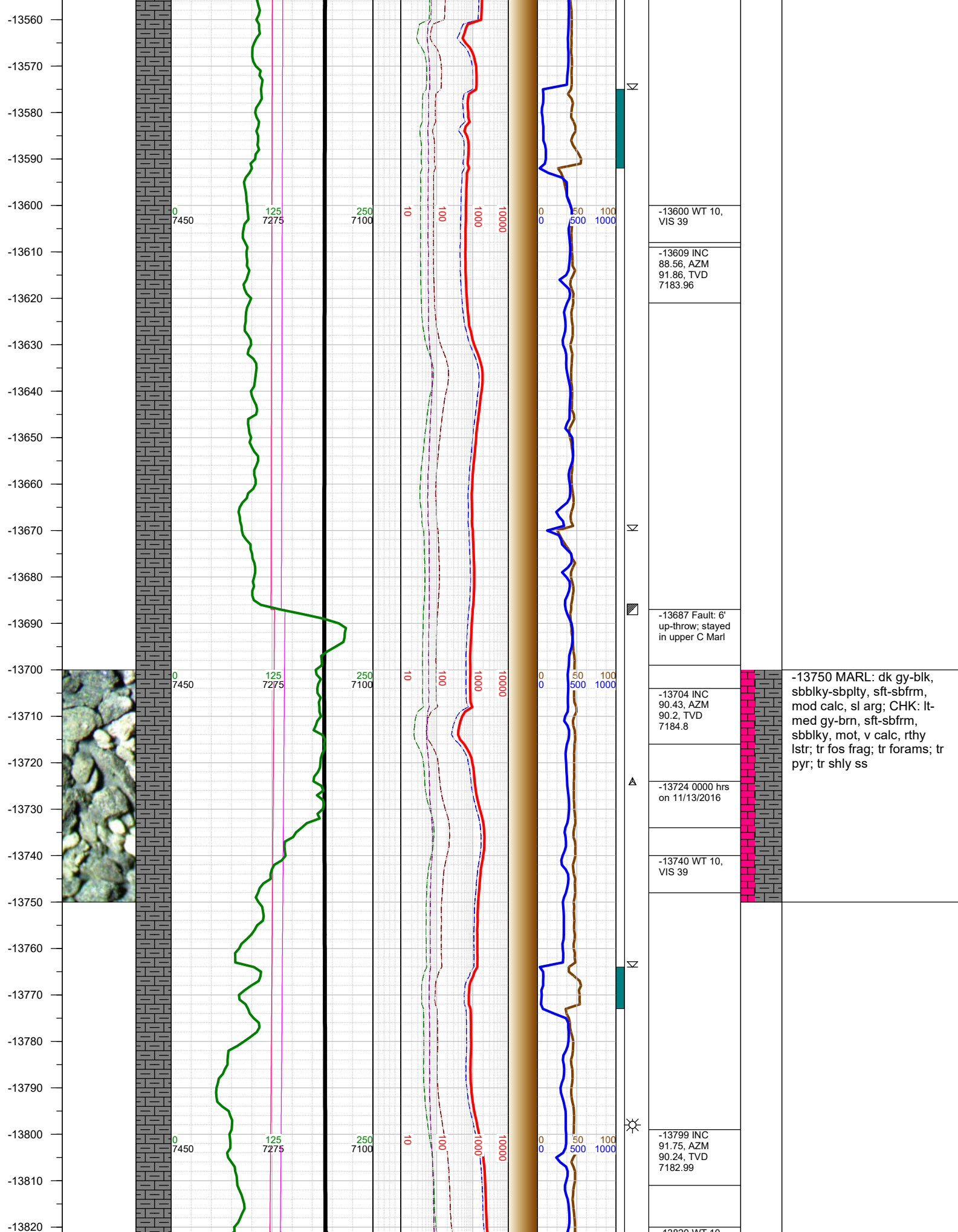


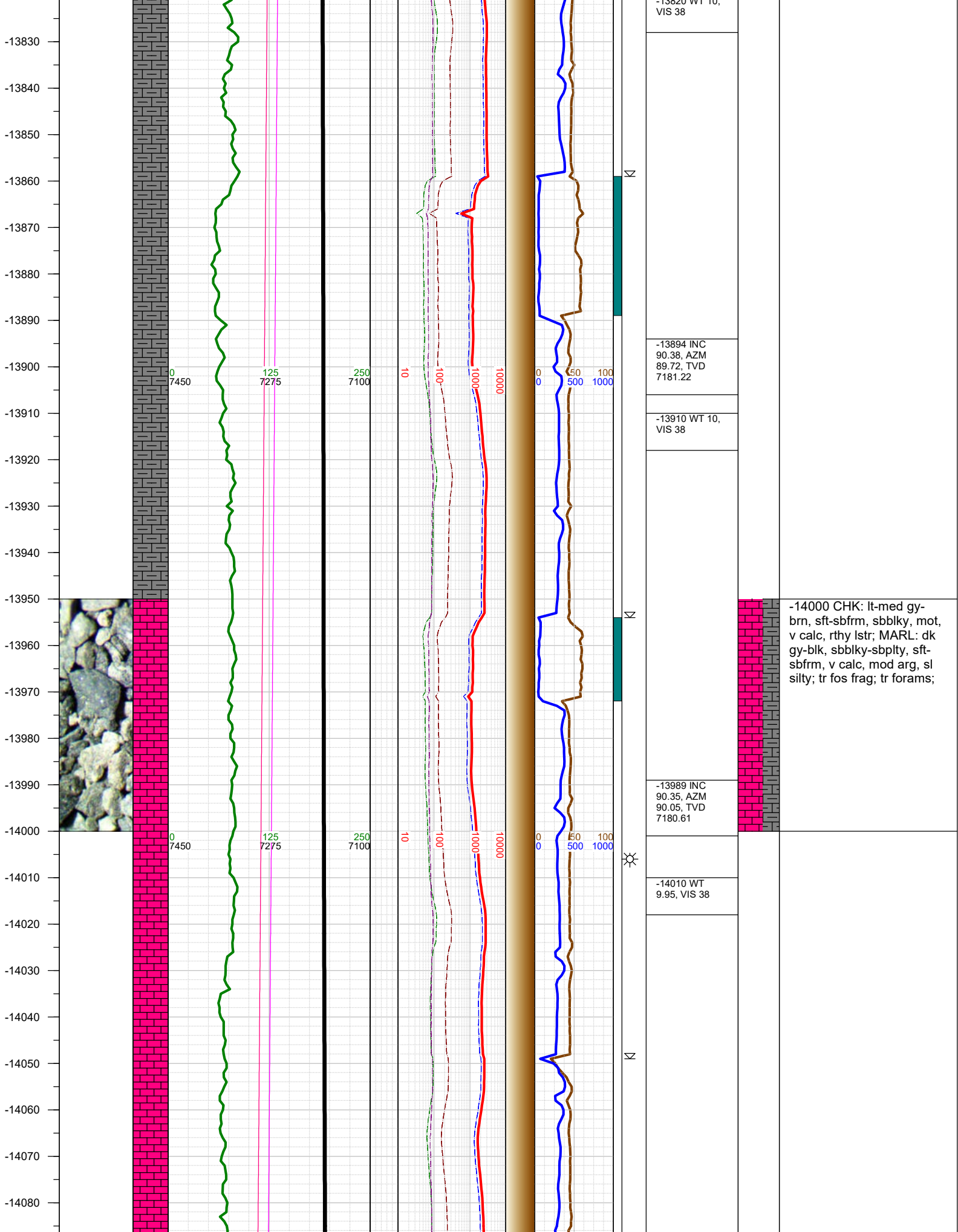
-13039 INC 89.67, AZM 89.71, TVD 7190.16
-13098 Fault: 70' down-throw; went from lower Ft Hays to upper C Marl
-13120 WT 10, VIS 38
-13134 INC 91.74, AZM 88.64, TVD 7188.99
-13200 WT 10, VIS 38
-13229 INC 90.45, AZM 89.19, TVD 7187.17



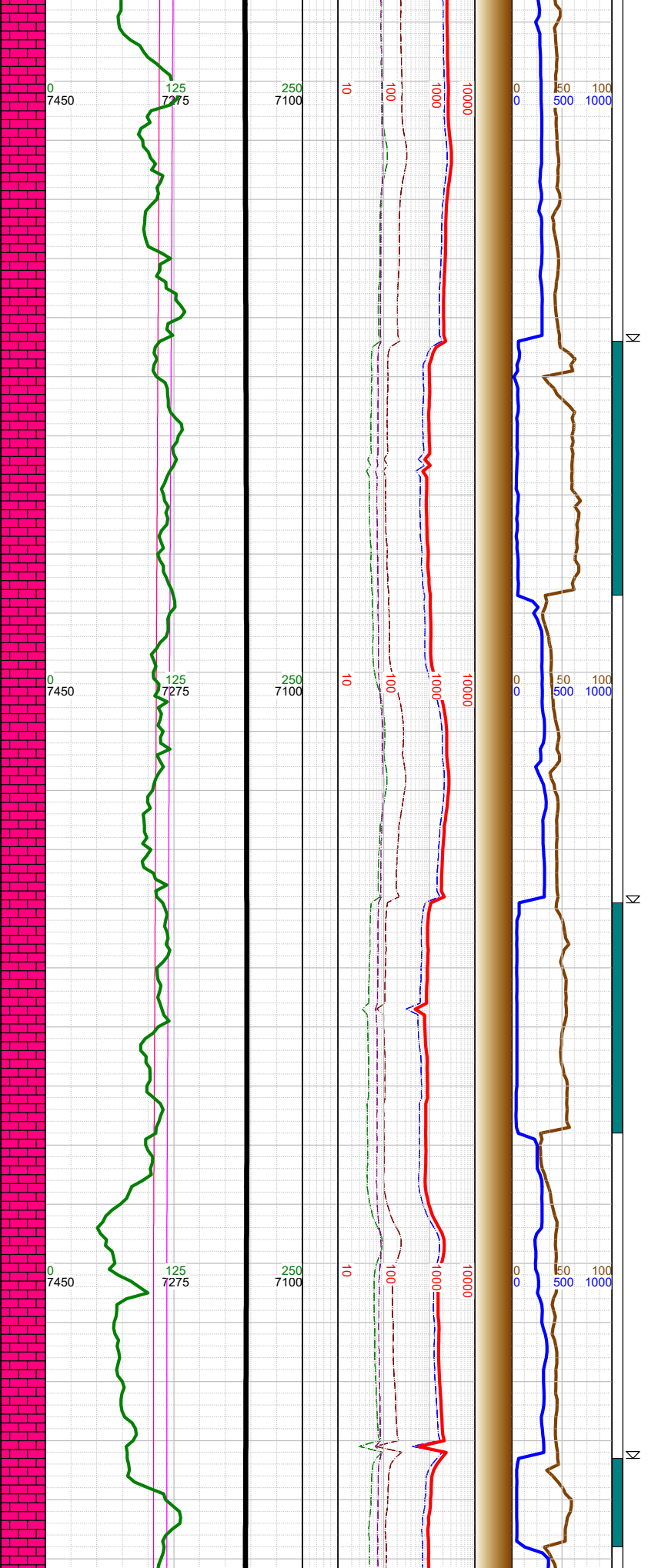
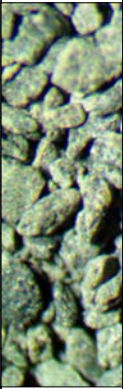
-13250 MARL: dk gy-blk,
sbbkly-sbplty, sft-sbfrm,
mod calc, sl arg; CHK: lt-
med gy-brn, sft-sbfrm,
sbbkly, mot, v calc, rthy
lstr; tr fos frag; tr forams; tr
pyr;



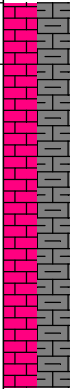




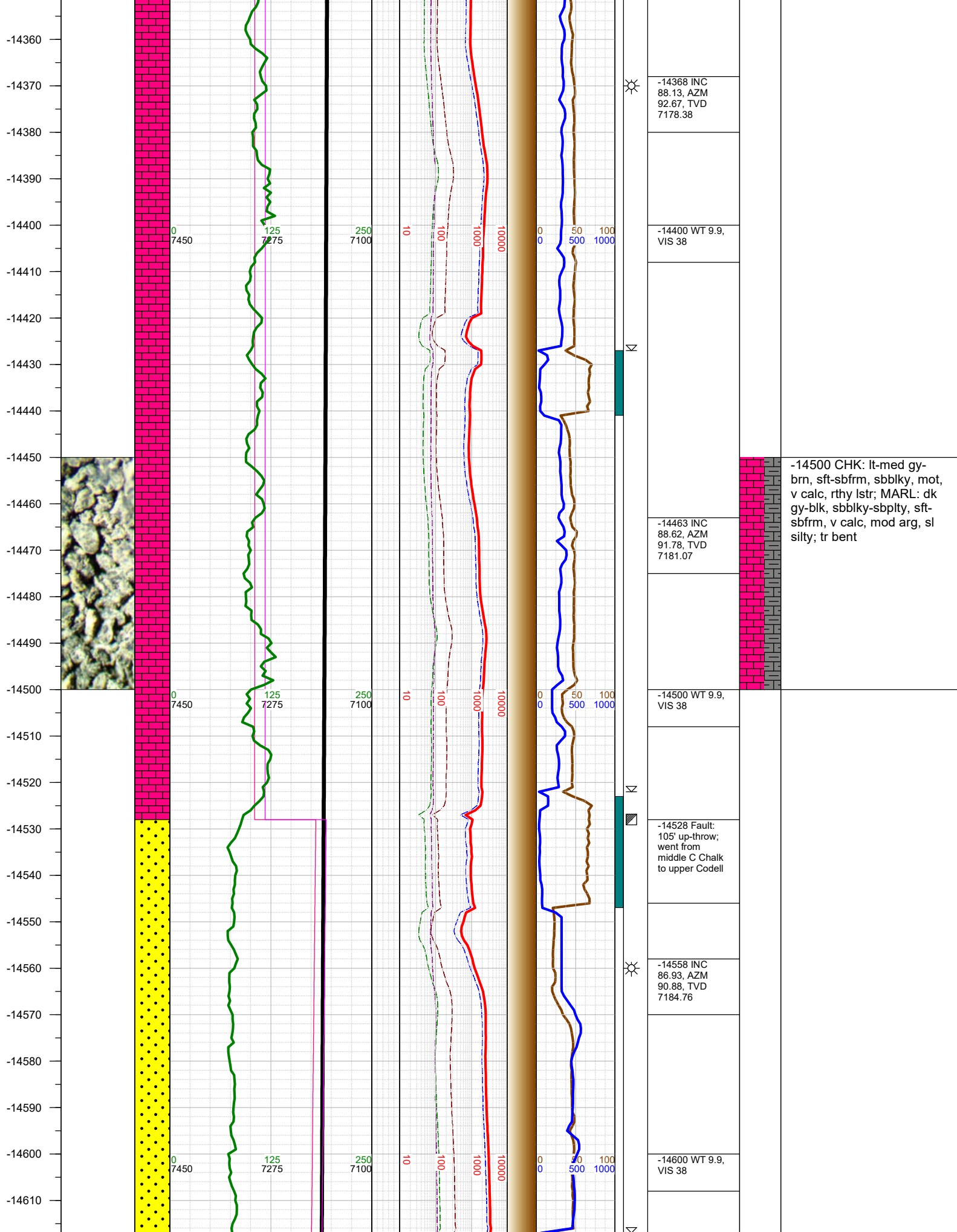
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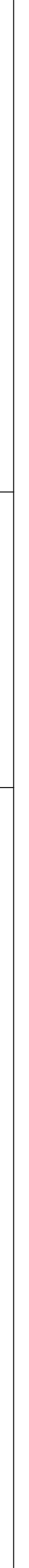
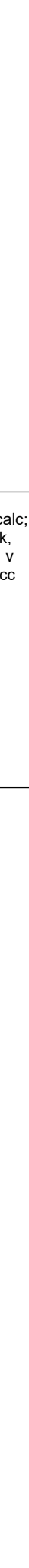
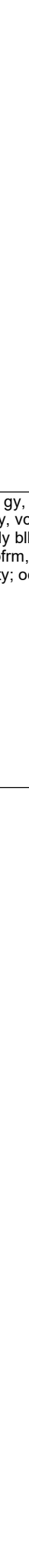
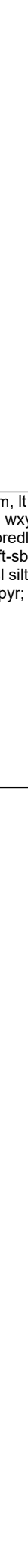
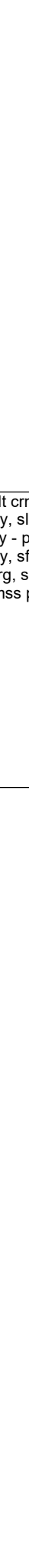
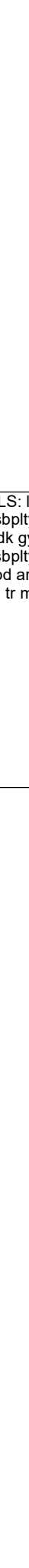
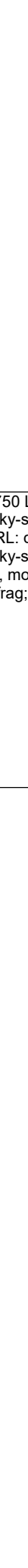
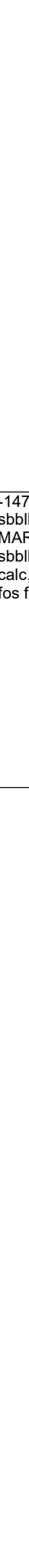
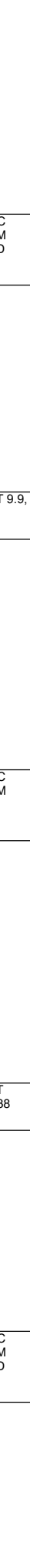
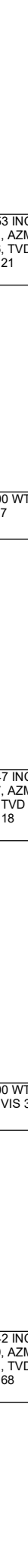
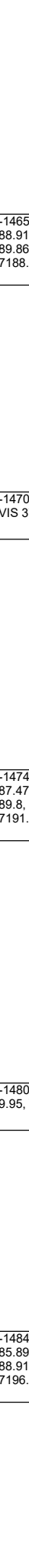
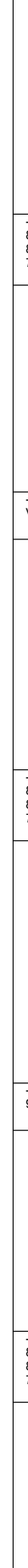
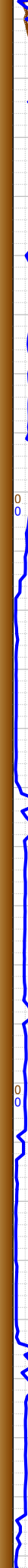
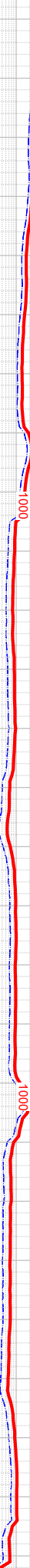
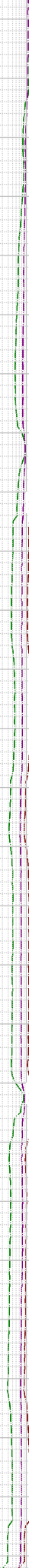
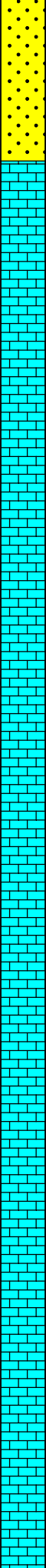
-14100 WT 10, VIS 38
-14179 INC 92.15, AZM 90.48, TVD 7176.47
-14200 WT 10, VIS 37
-14274 INC 88.69, AZM 92.83, TVD 7175.77
-14300 WT 9.9, VIS 38



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



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-14880



-14653 INC
88.91, AZM
89.86, TVD
7188.21

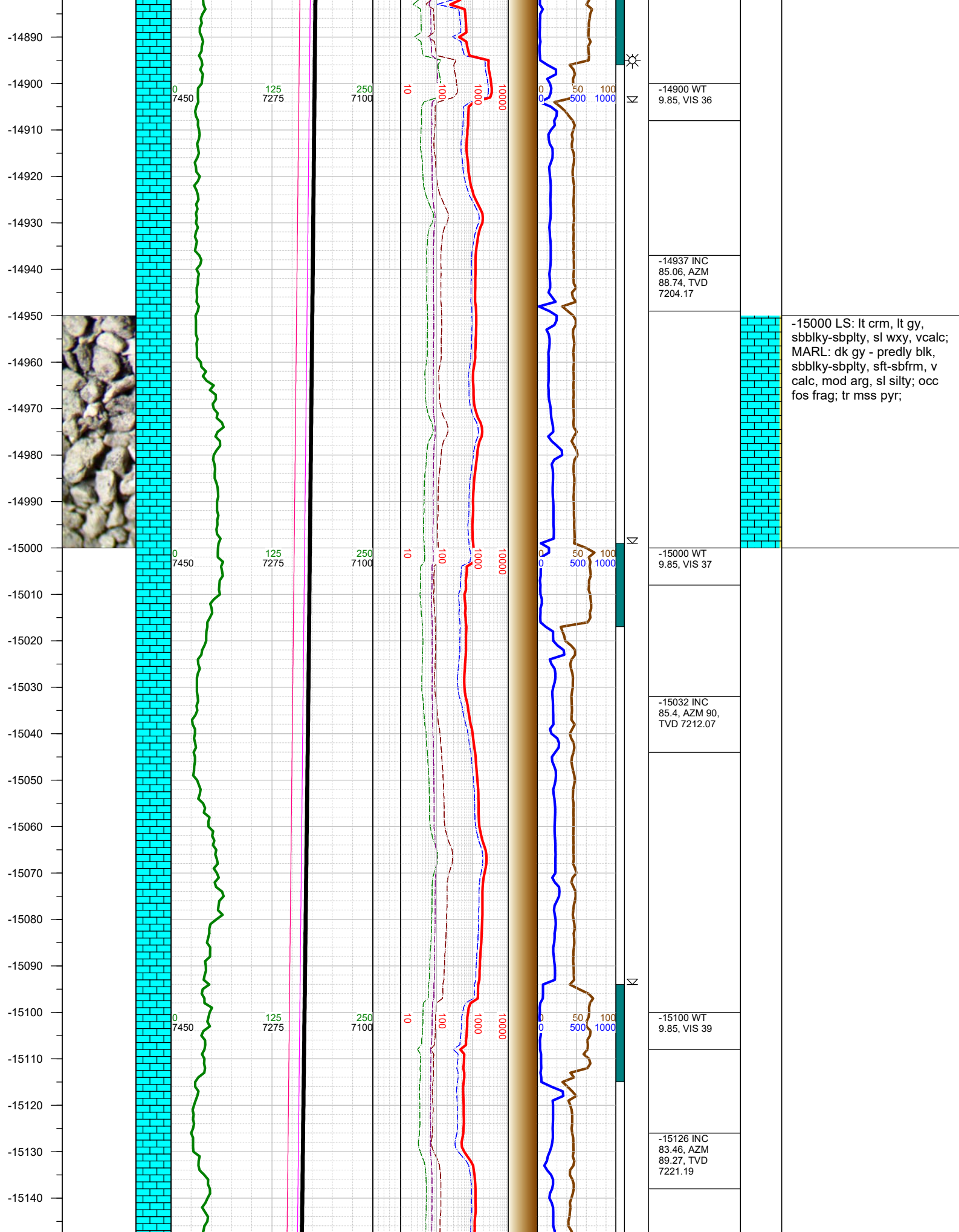
-14700 WT 9.9,
VIS 37

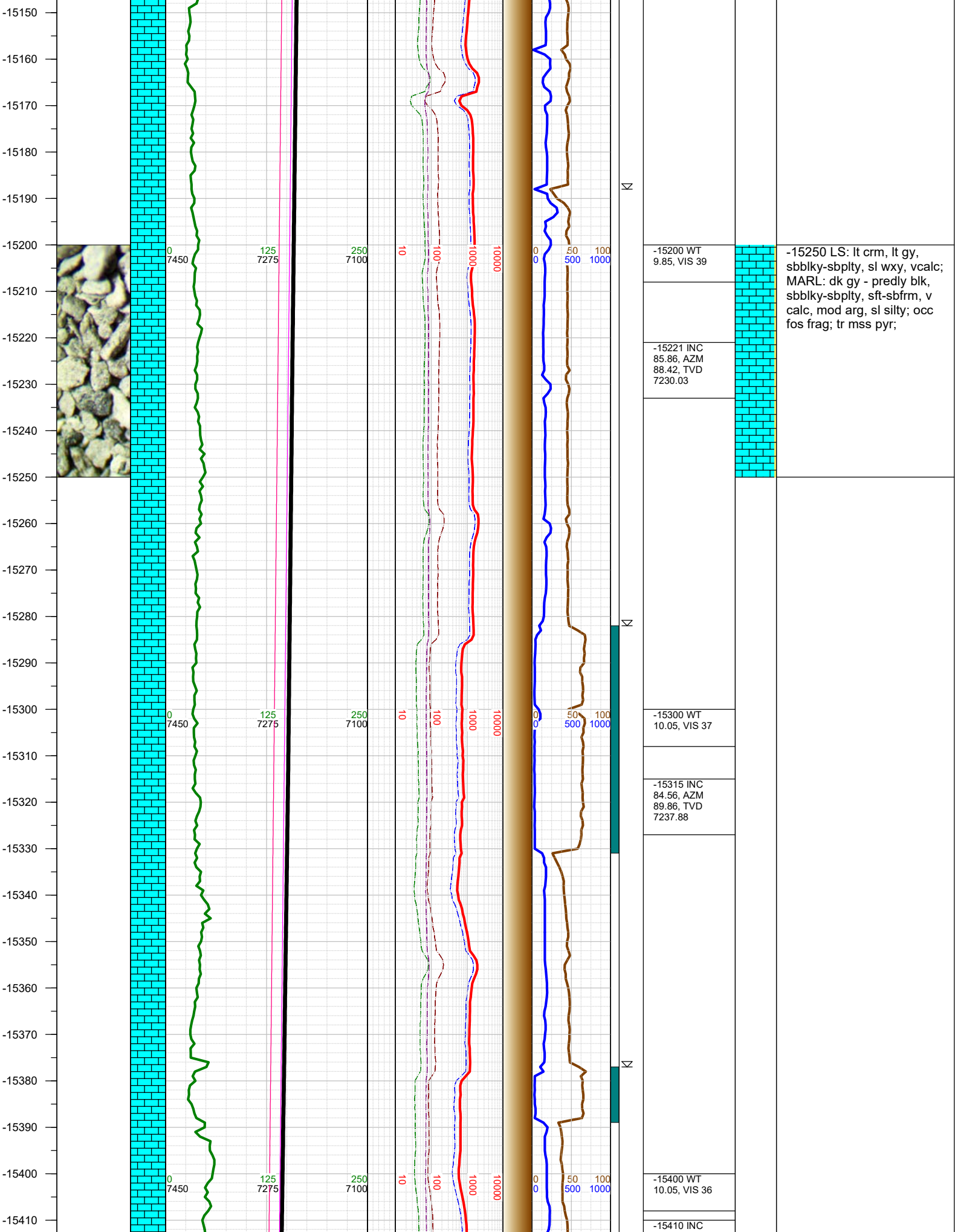
-14747 INC
87.47, AZM
89.8, TVD
7191.18

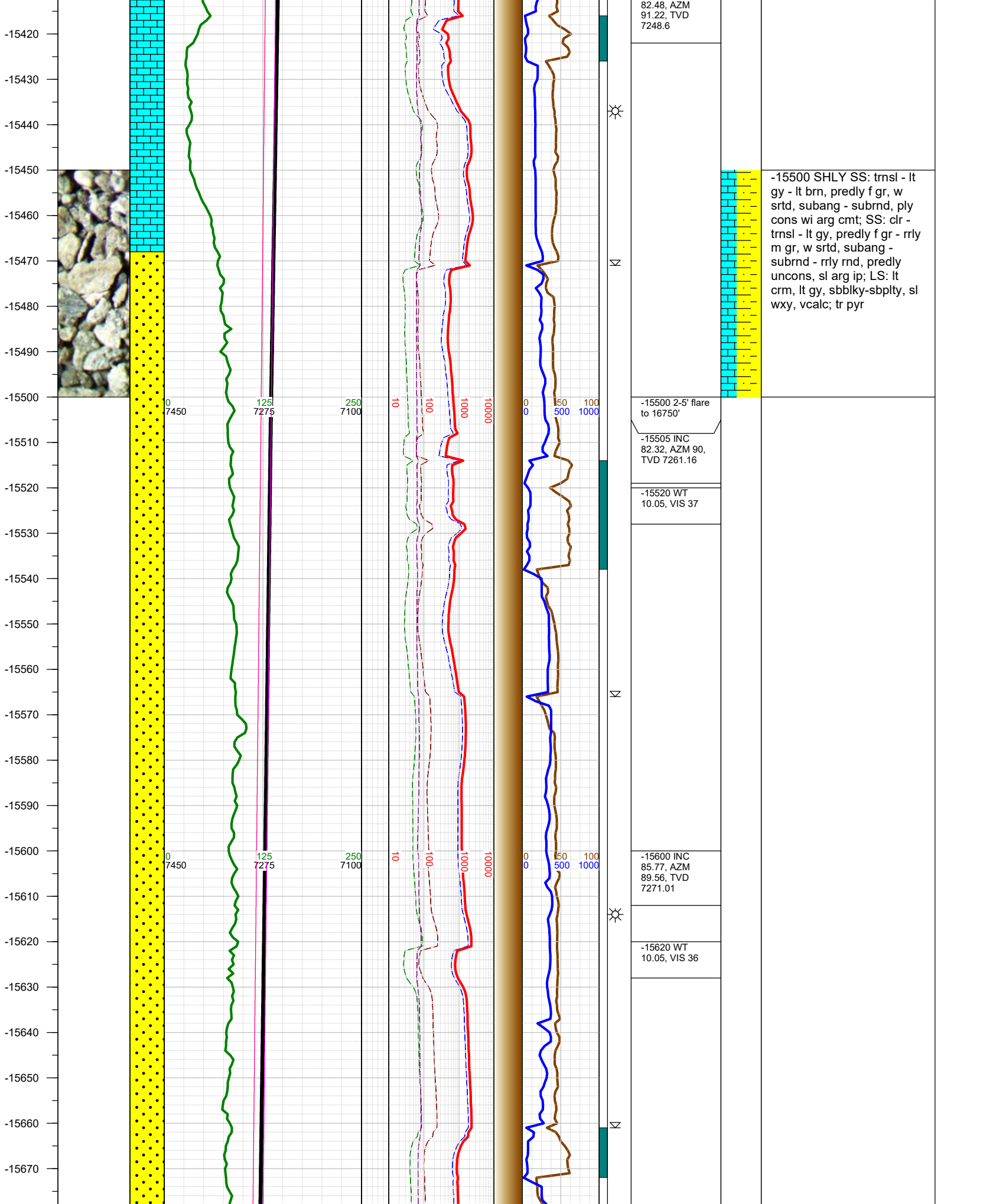
-14800 WT
9.95, VIS 38

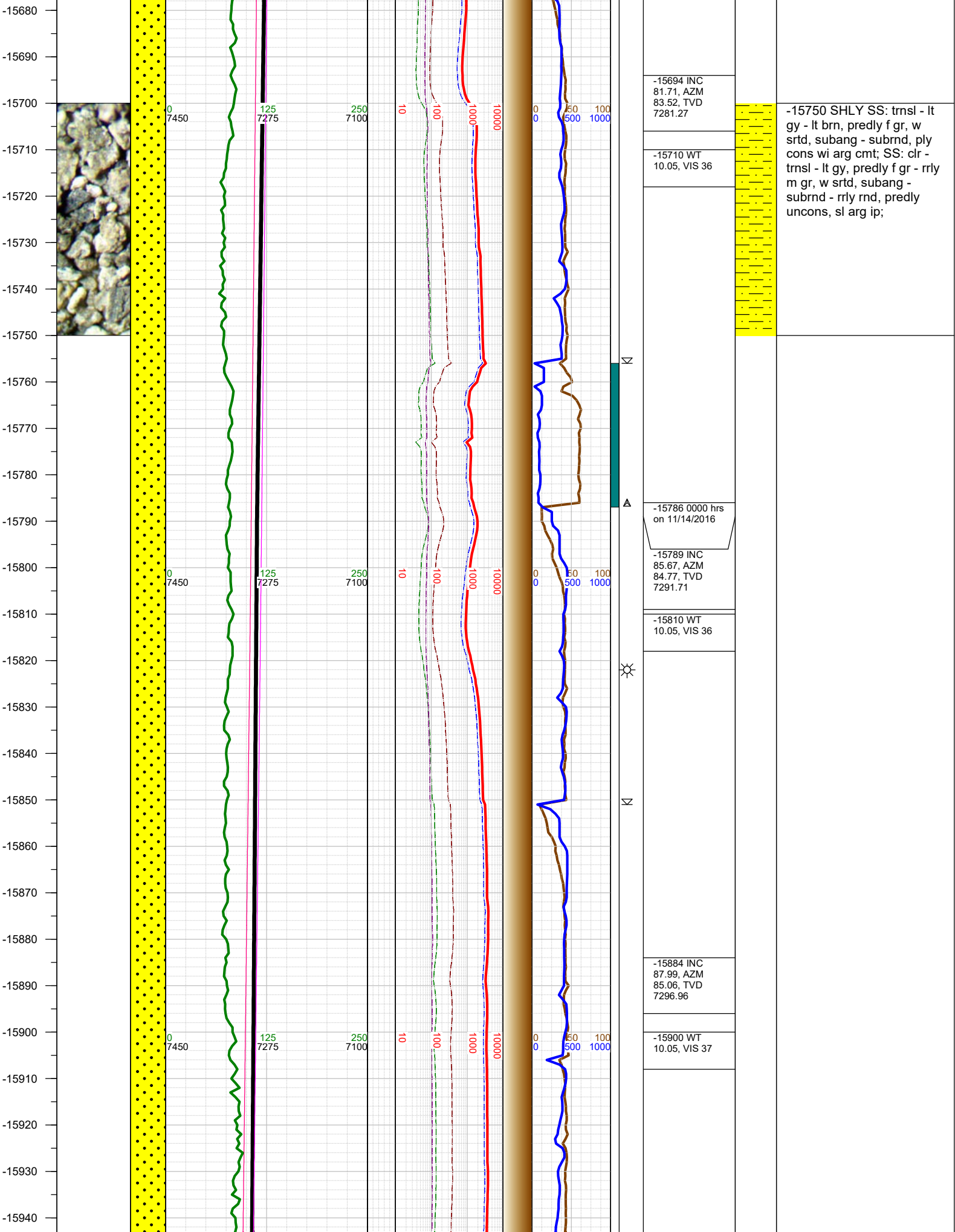
-14842 INC
85.89, AZM
88.91, TVD
7196.68

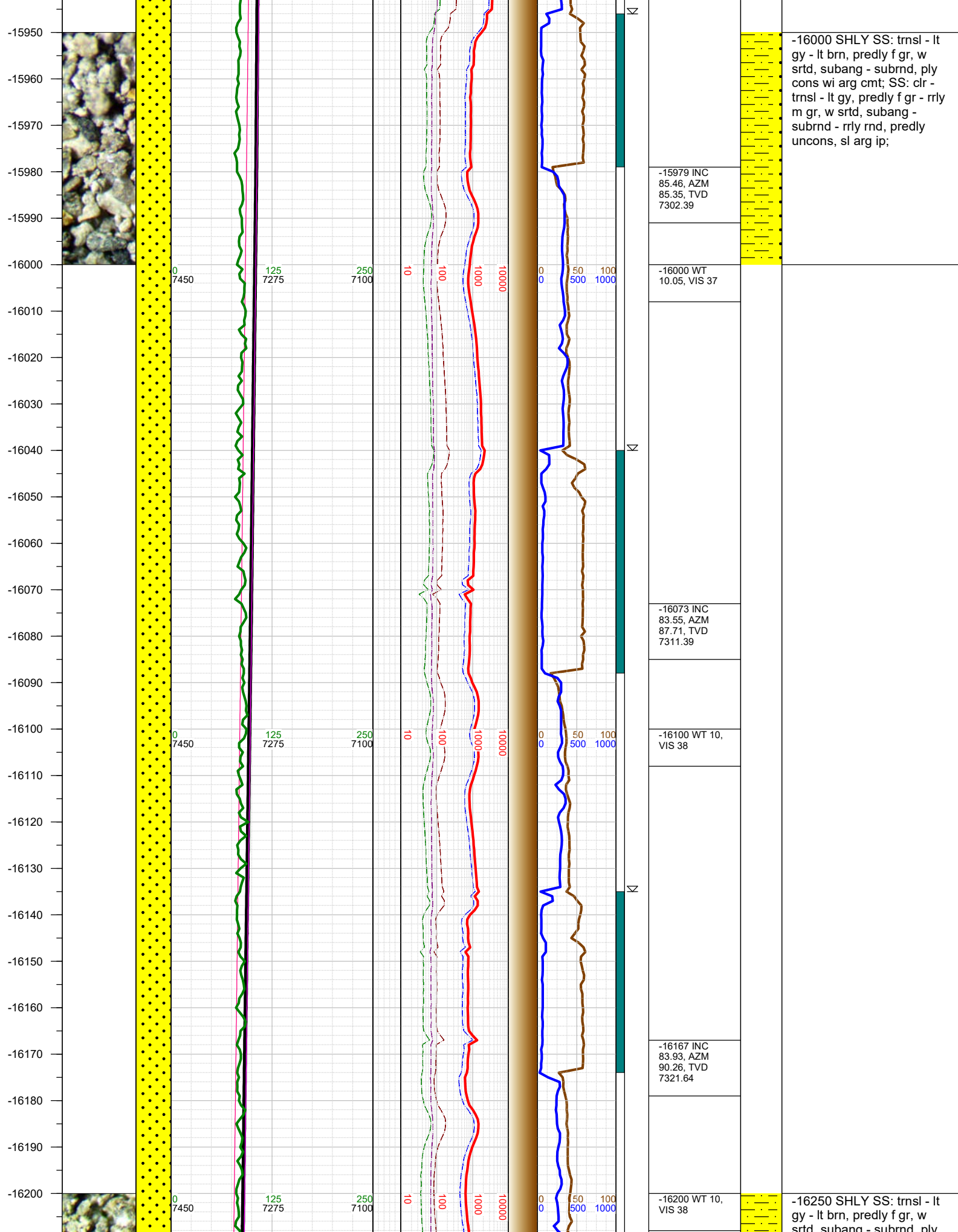
-14750 LS: lt crm, lt gy,
sbbiky-sbplty, sl wxy, vcalc;
MARL: dk gy - predly blk,
sbbiky-sbplty, sft-sbfrm, v
calc, mod arg, sl silty; occ
fos frag; tr mss pyr;

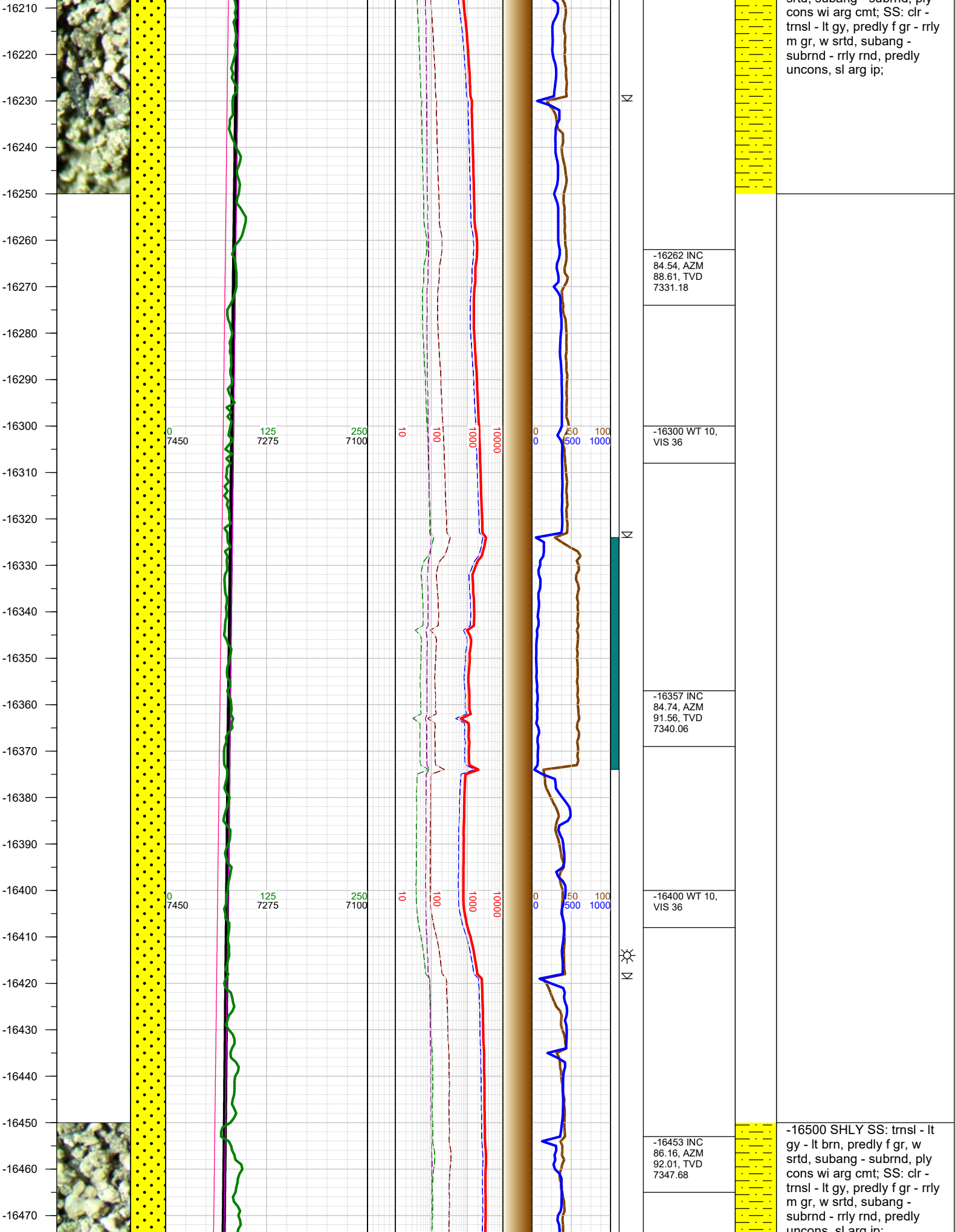


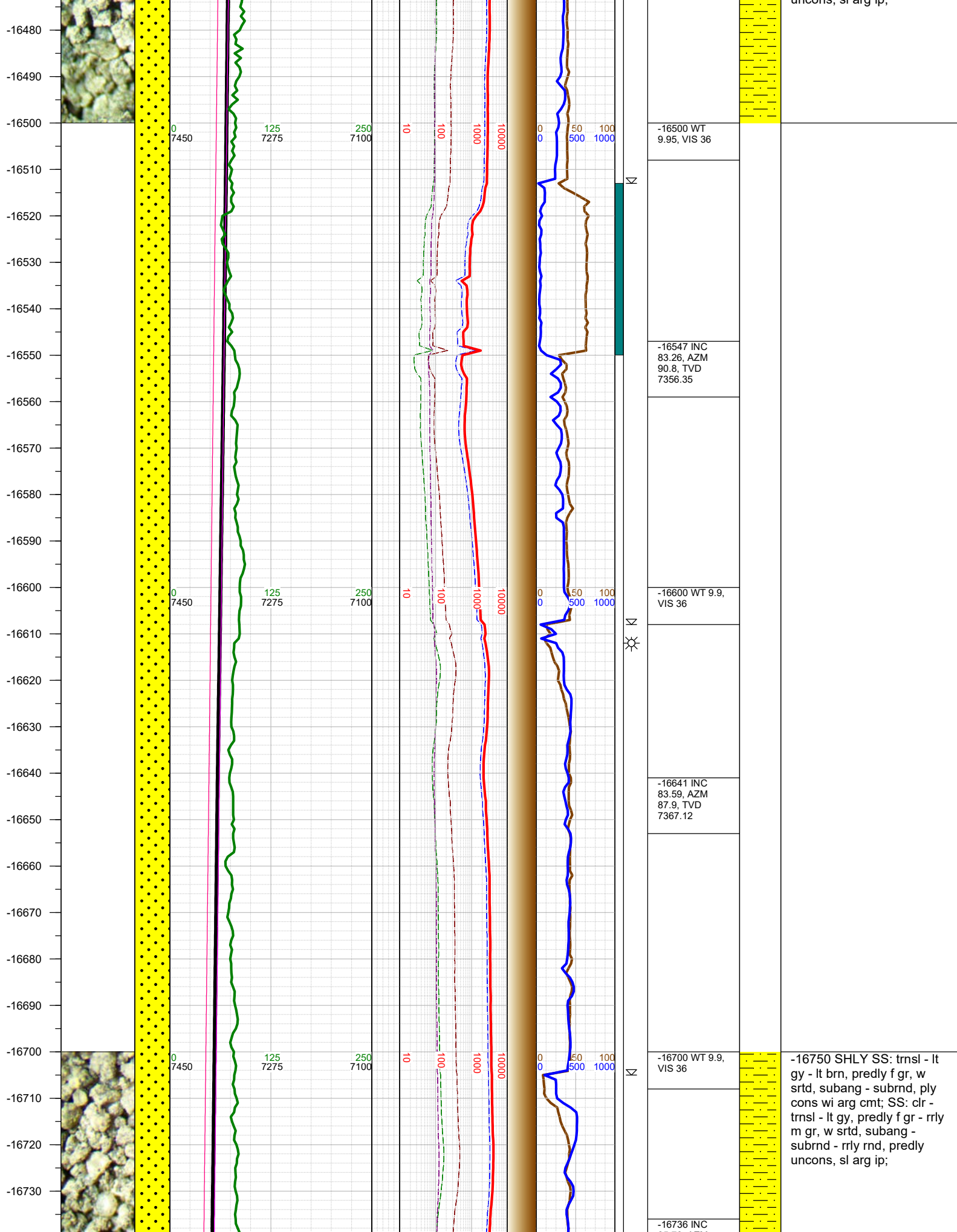


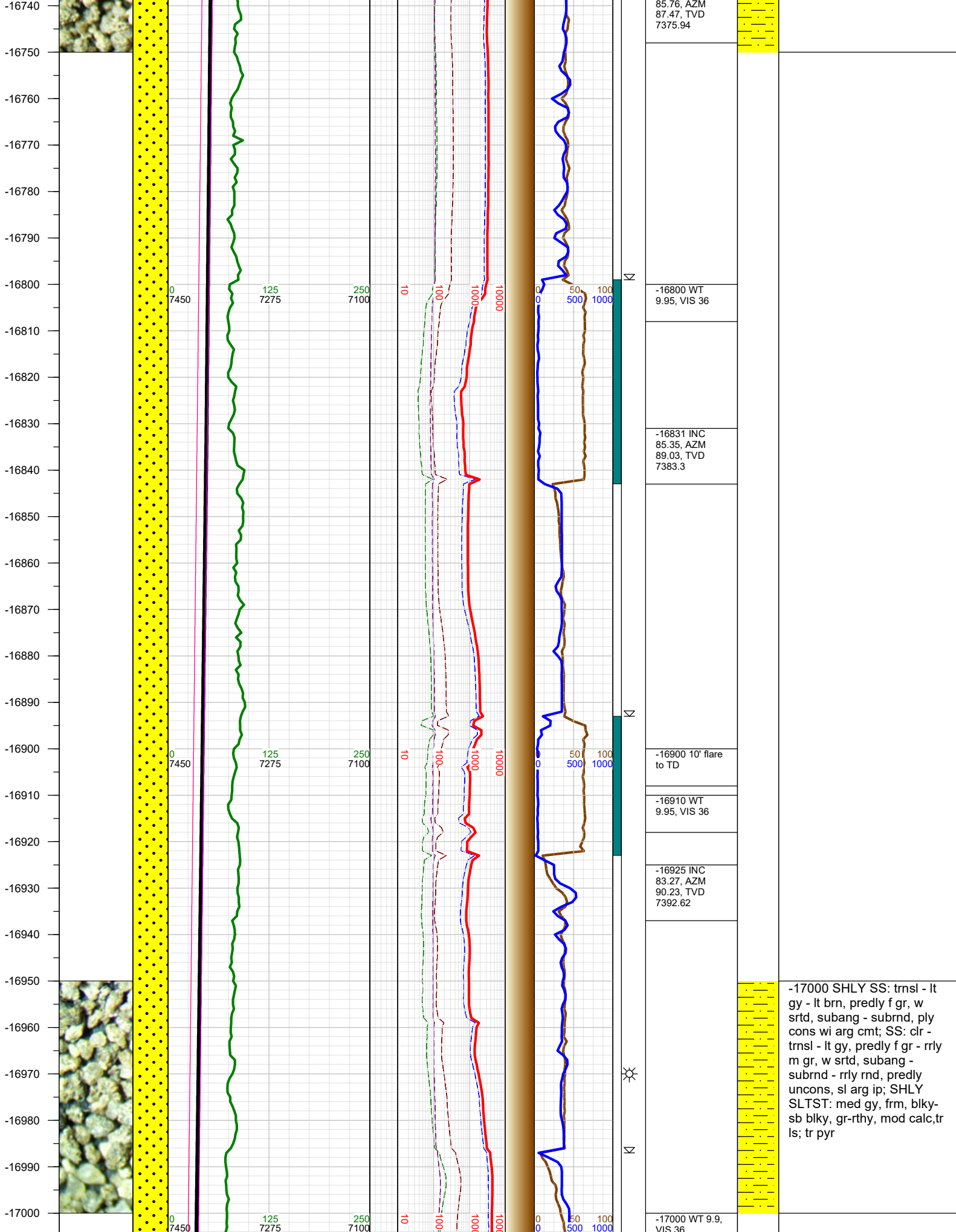


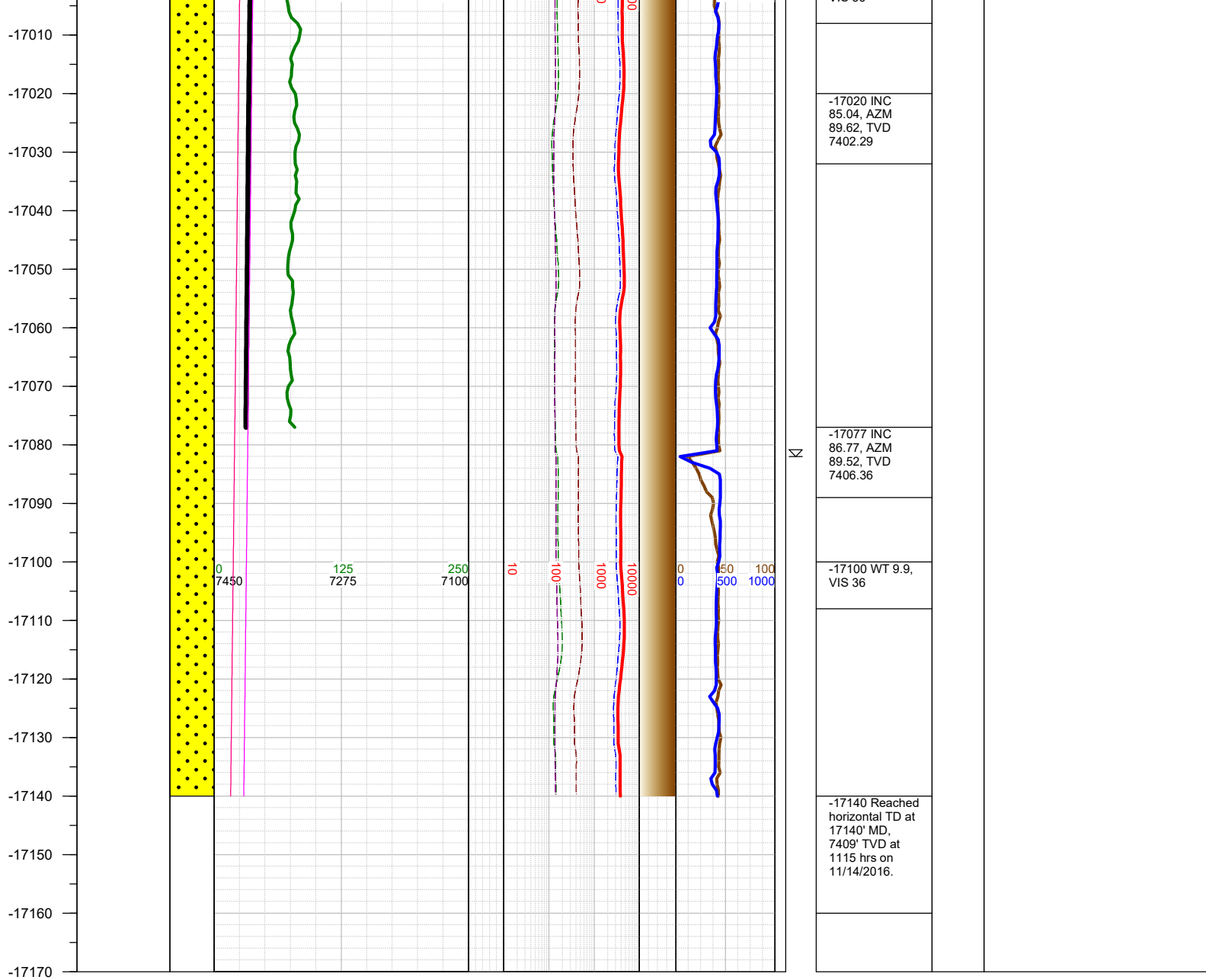












TOTAL DEPTH = 17140'

Thank you for using Earth Science Agency