

OPERATOR: **Extraction Oil & Gas**

WELL NAME: **Livingston S19-25-11C**

FIELD NAME: DJ Basin - Wattenberg

DRILLING RIG: Patterson 901

API #: 05-014-20749

LAT/LONG: 39.978561, -105.03948

SURFACE HOLE: NWSE S7-T1S-R68W, 2331' FSL, 1348' FEL

BOTTOM HOLE: S19-T1S-R68W, 460' FSL, 1573' FEL



Earth Science Agency, LLC

COUNTY: Broomfield

STATE: Colorado

GROUND ELEVATION: 5324'

KELLY BUSHING: 5353'

DRILLING FLUID: OBM

TVD VS. MD: 8379' / 21226'

SPUD DATE: September 11, 2019

TD DATE: September 17, 2019

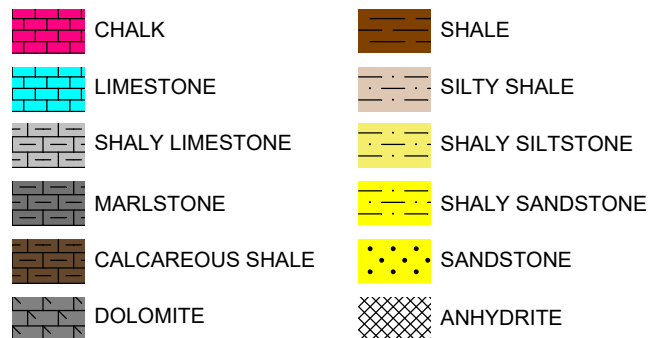
DEPTHS LOGGED: 3000' - 21226'

DATES LOGGED: September 11, 2019 - September 17, 2019

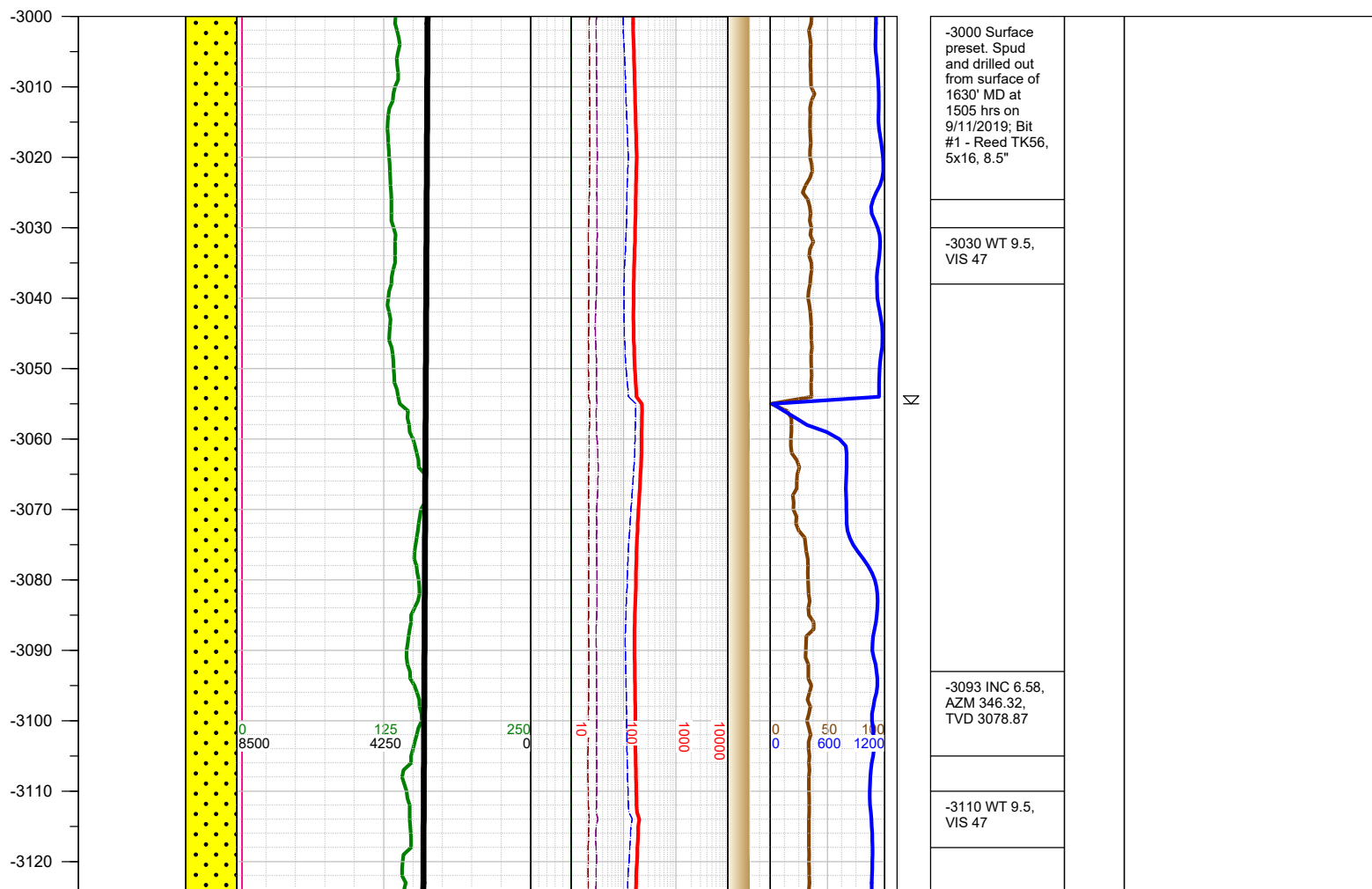
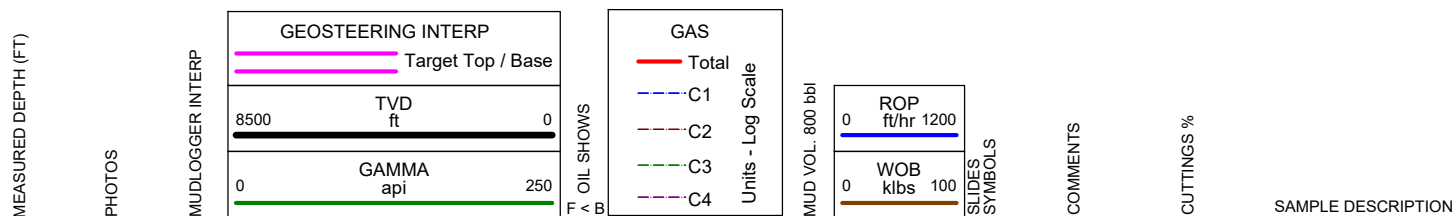
GEOLOGISTS: Ross Apodaca, Dan Jacobs

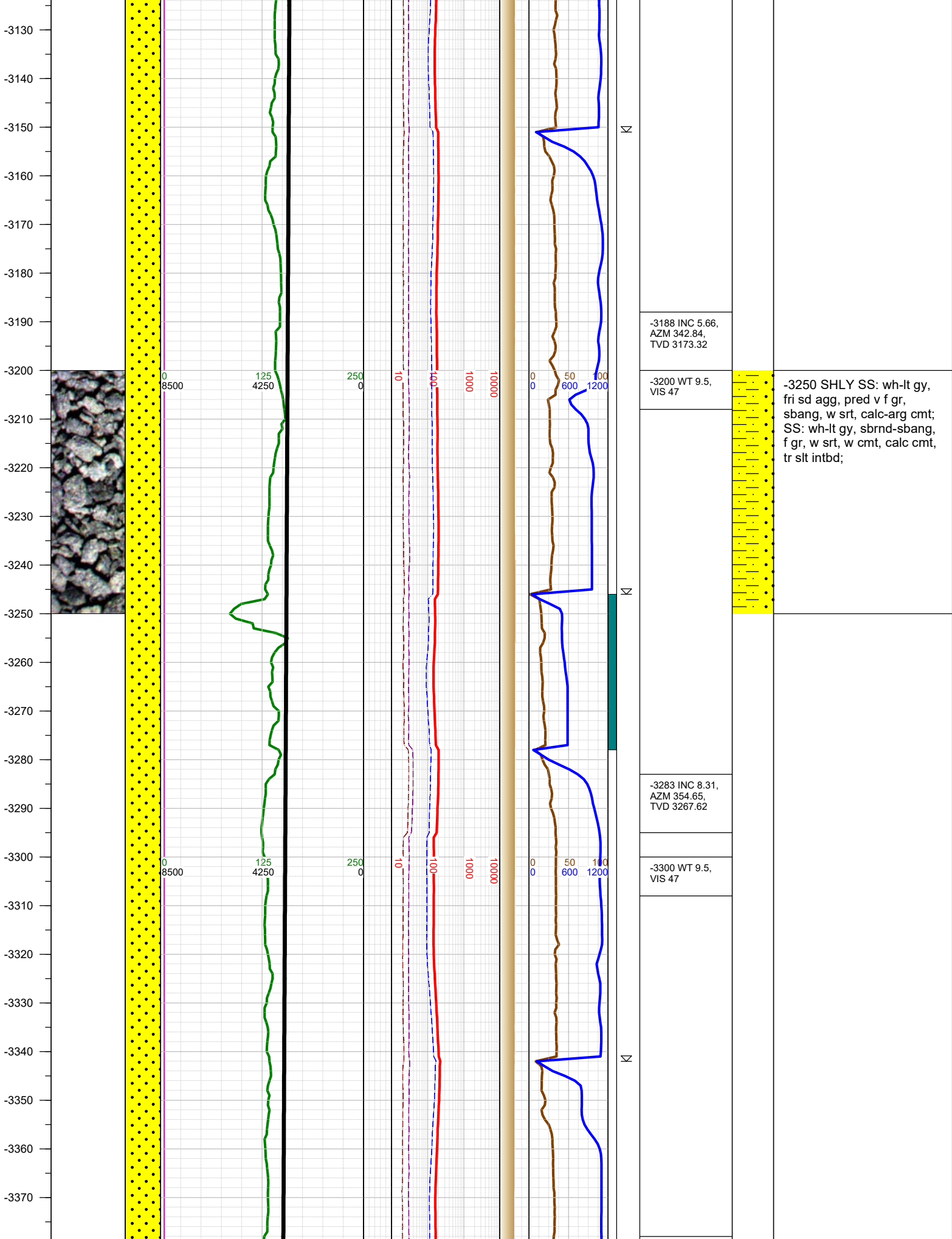
SCALE: 5" = 100'

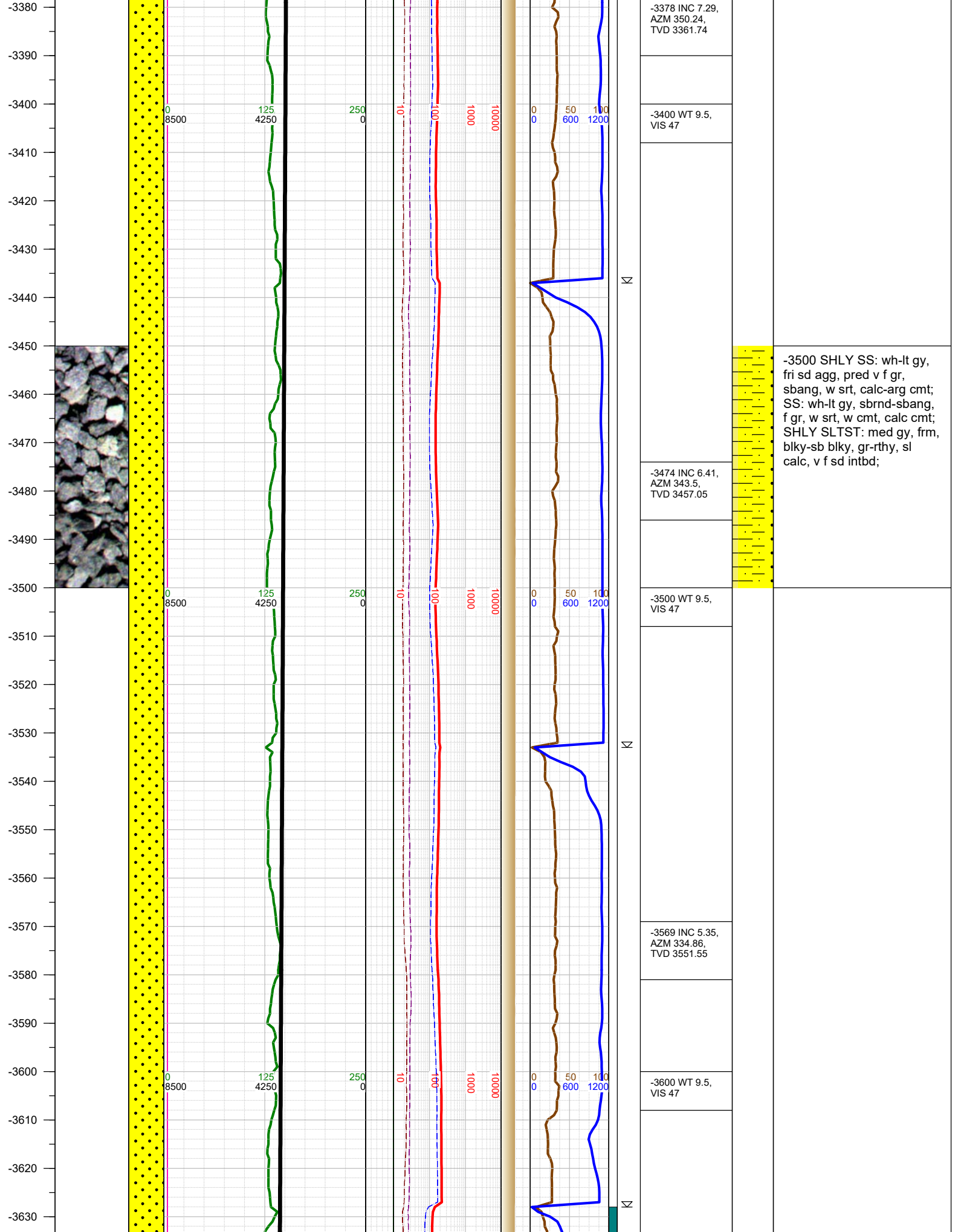
LEGEND

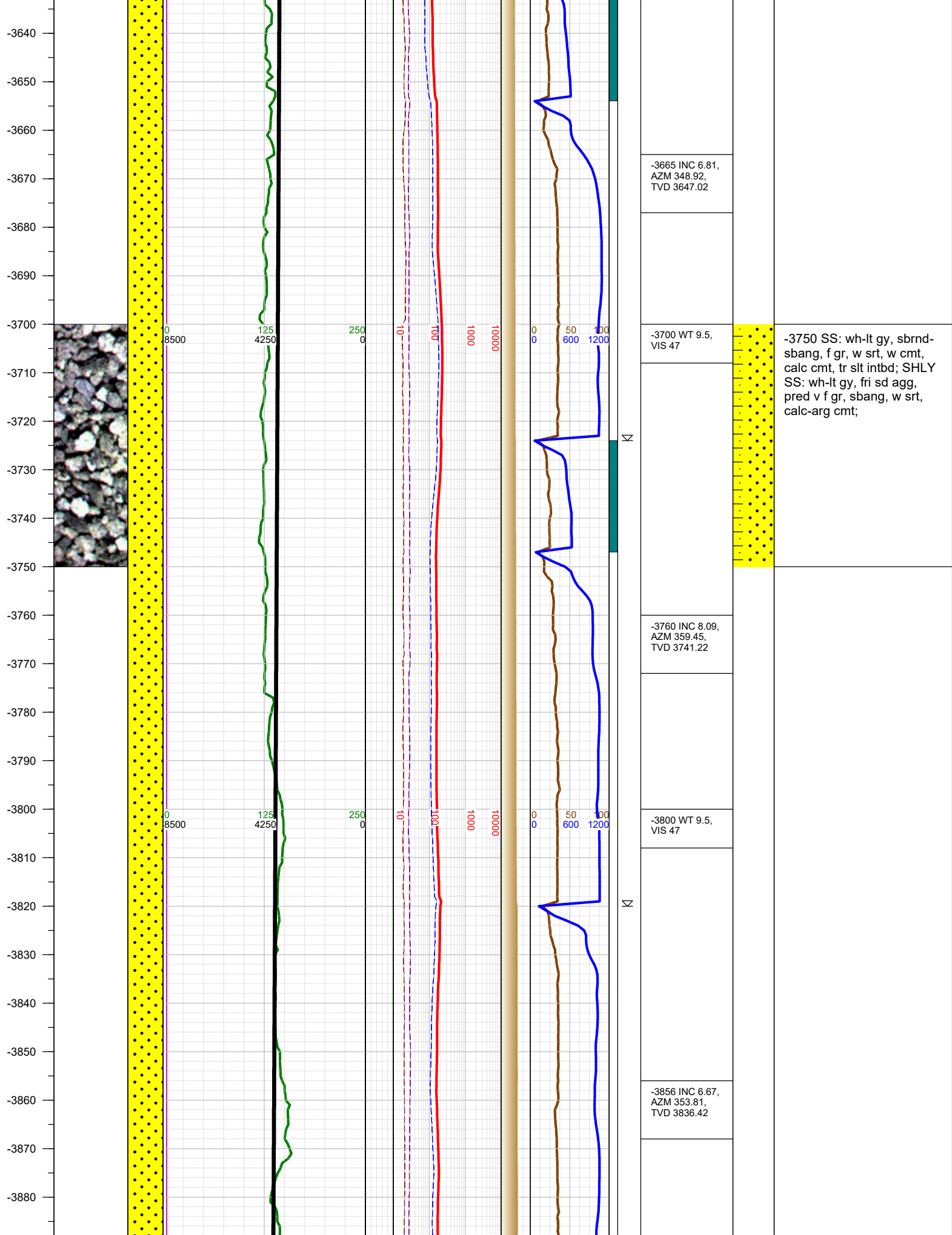


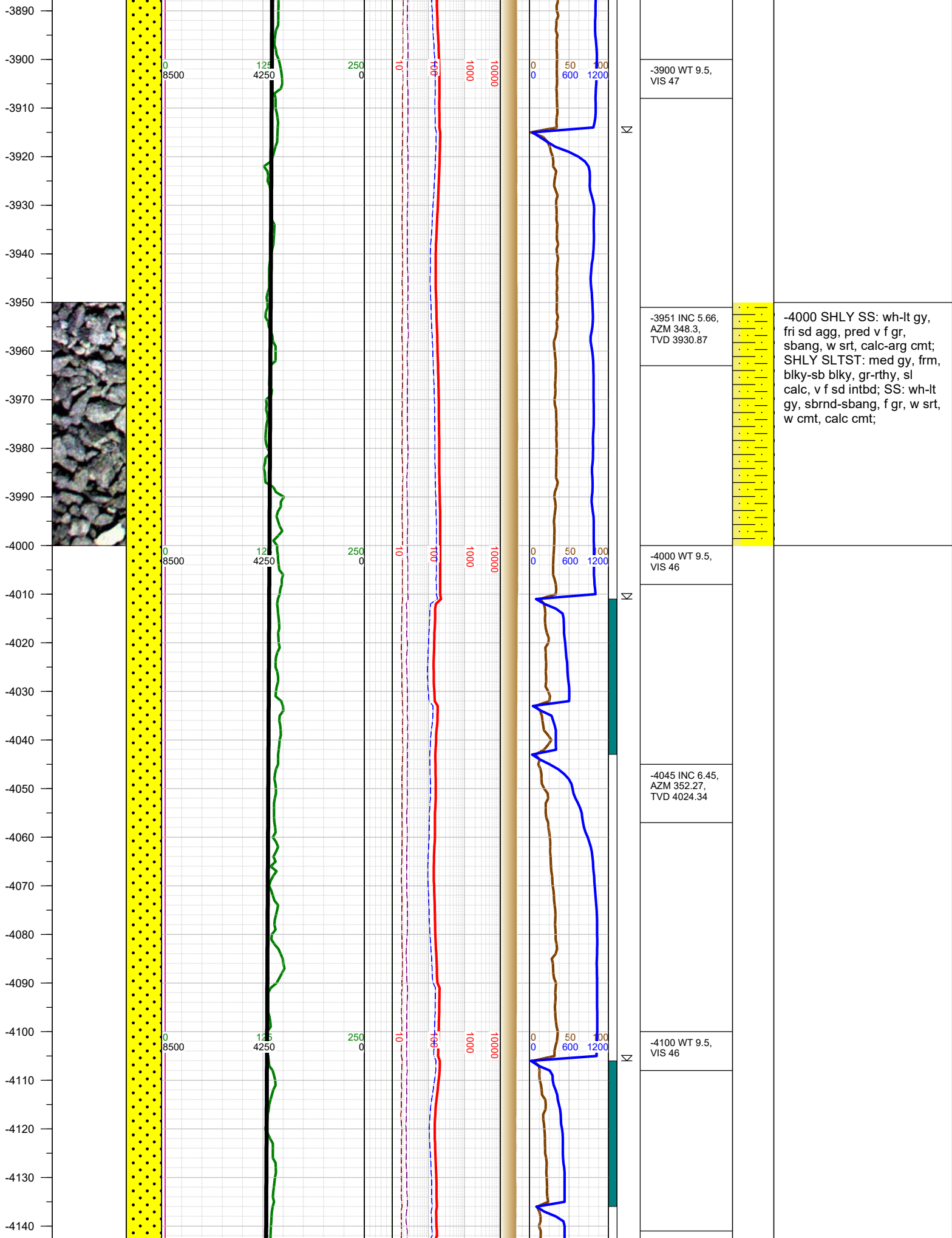
FORMATION CONNECTION MIDNIGHT NEW BIT GAS SHOW FAULT

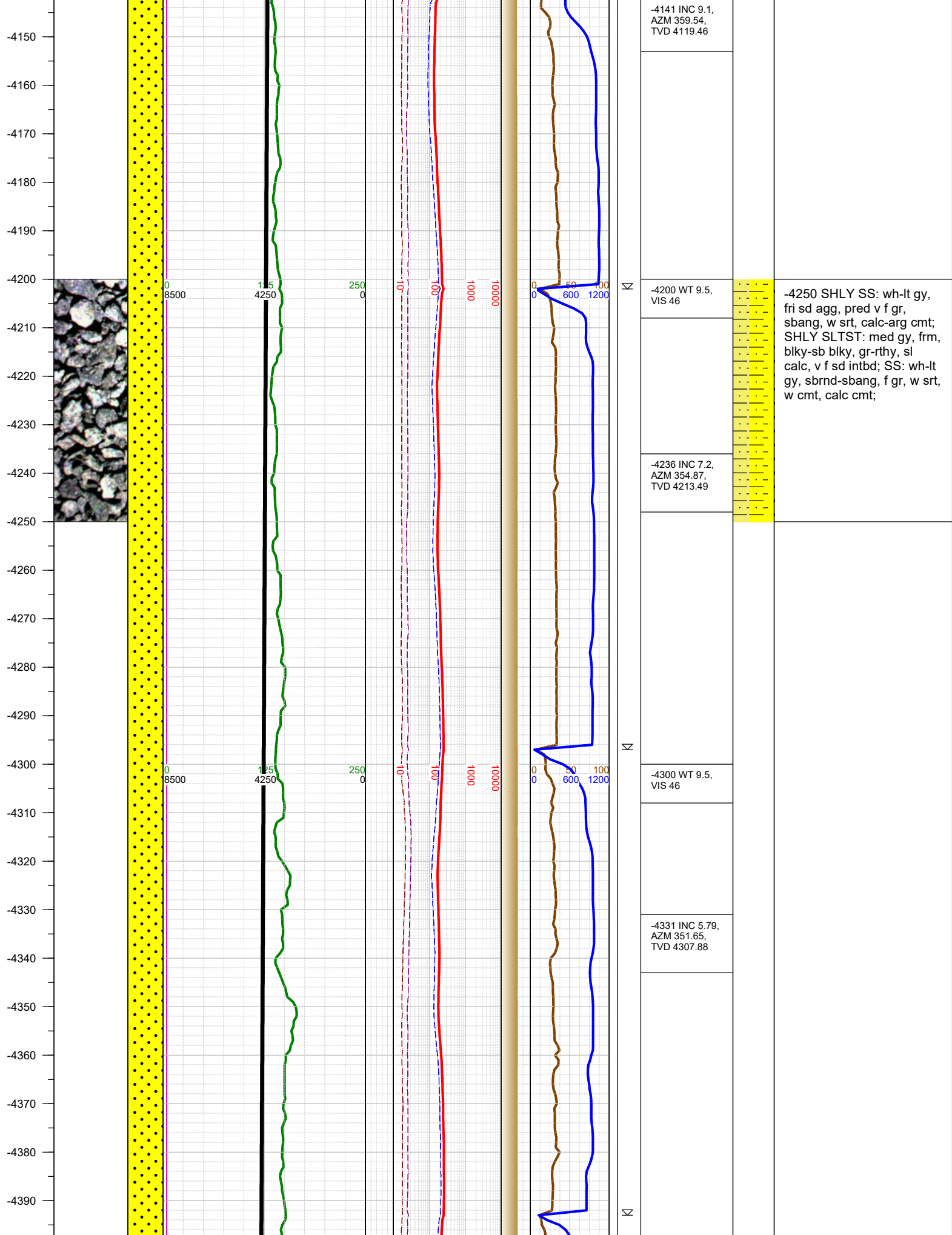


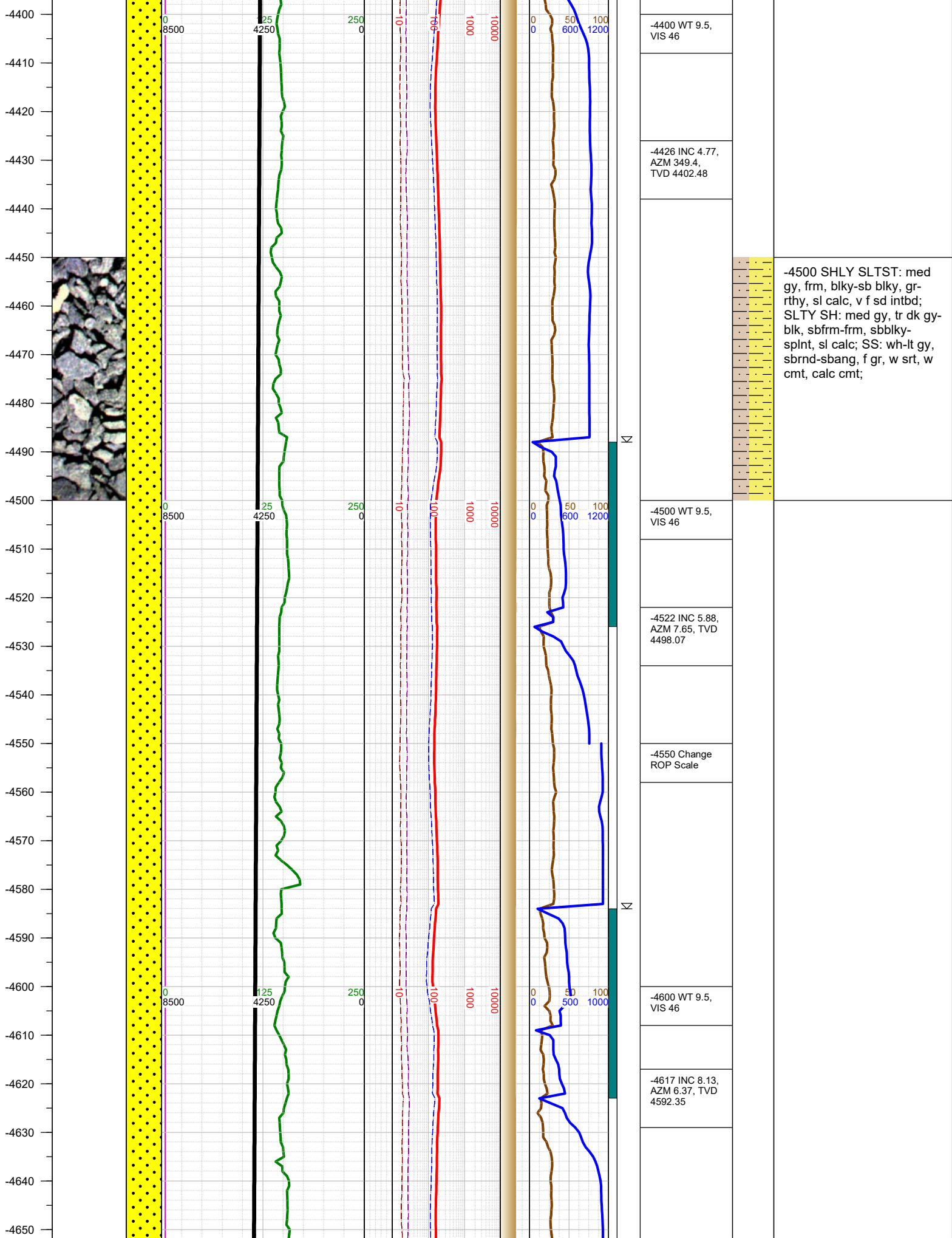


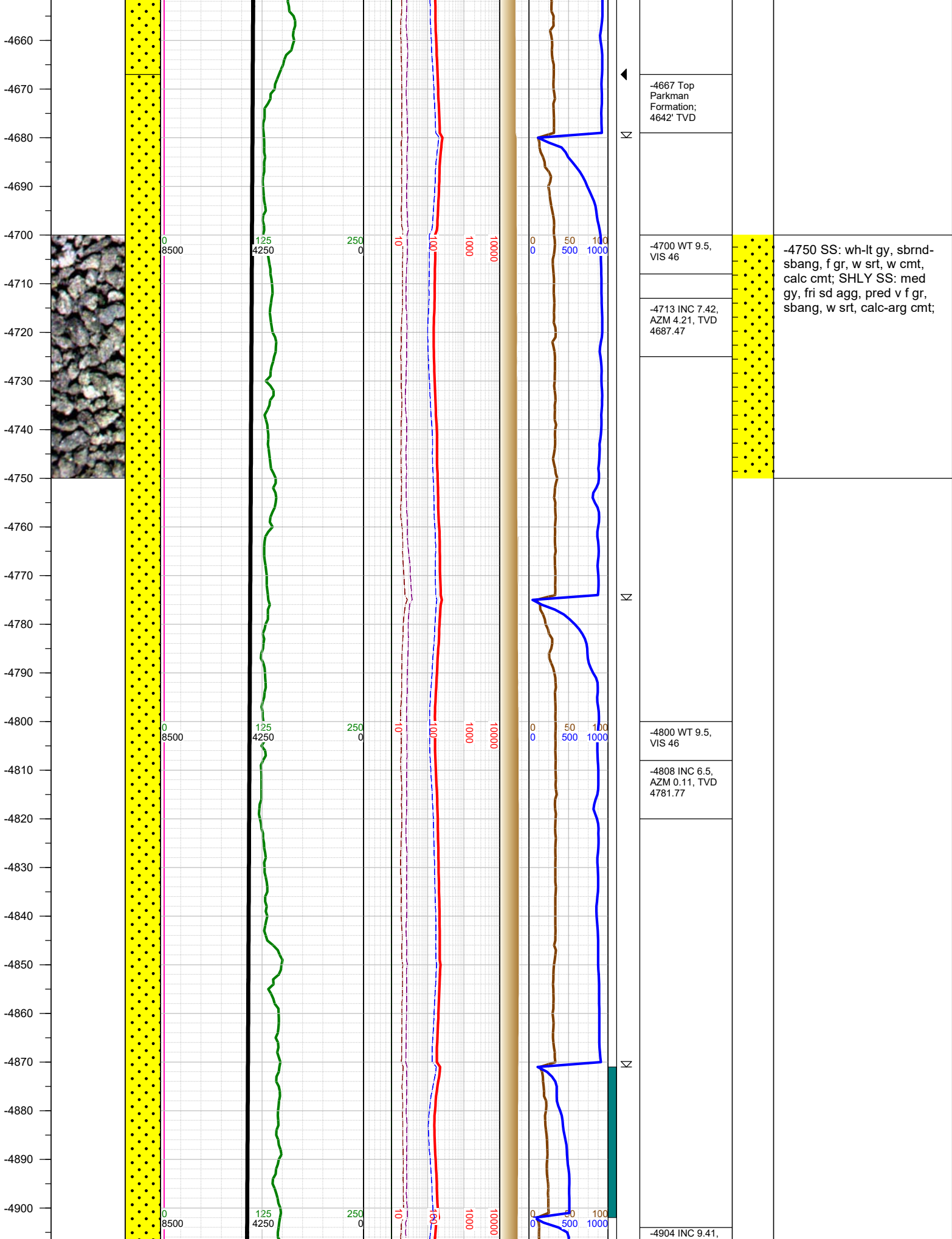


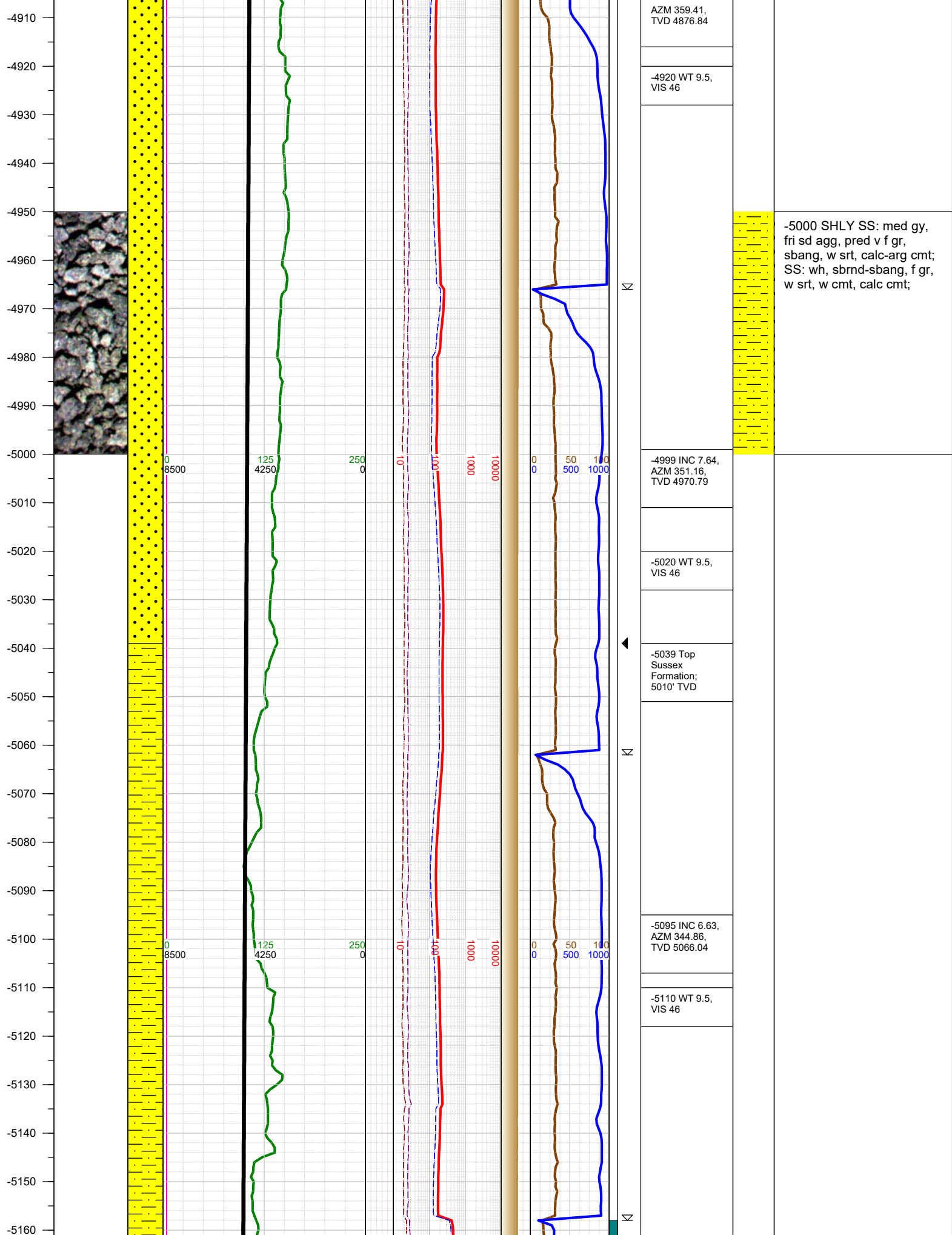


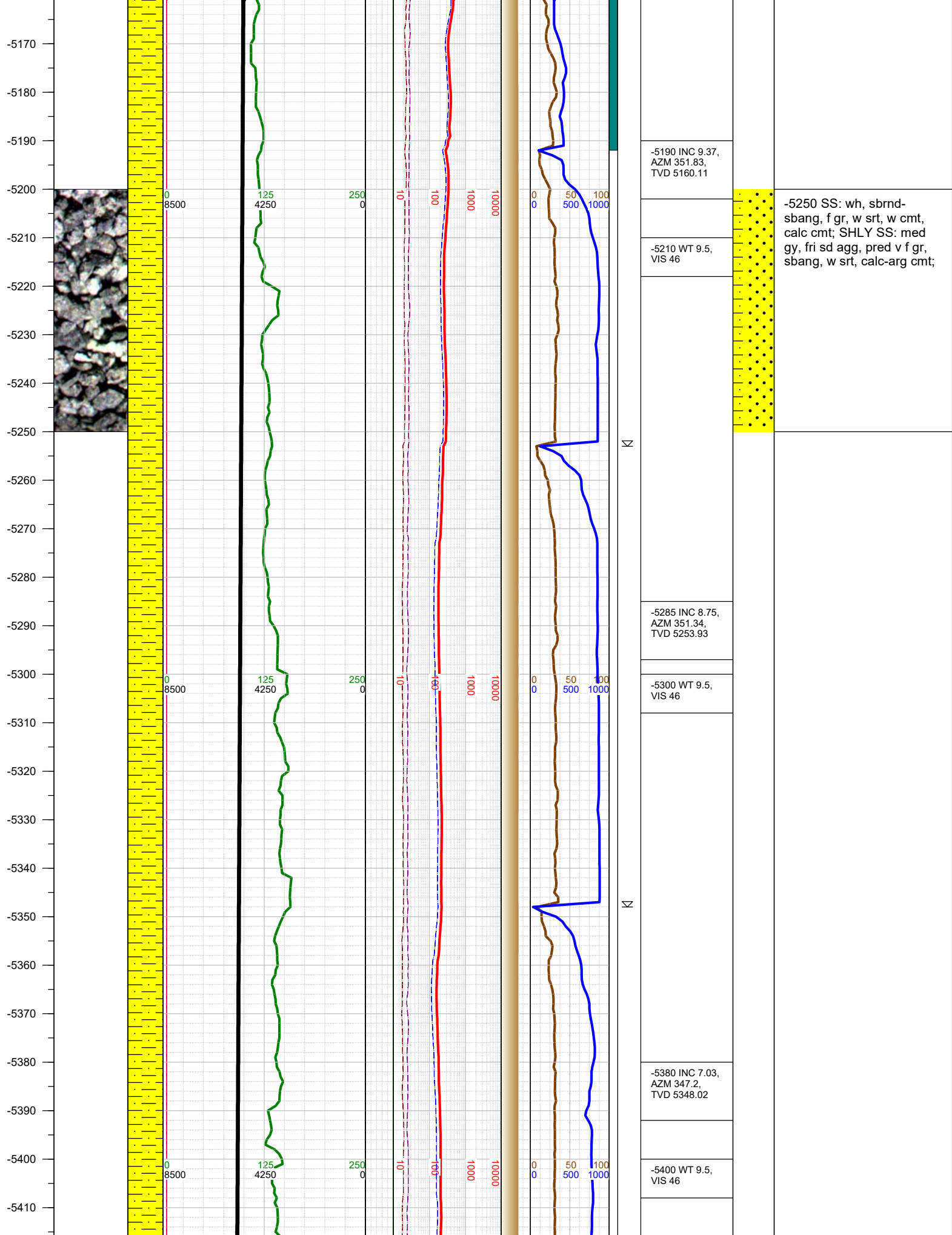


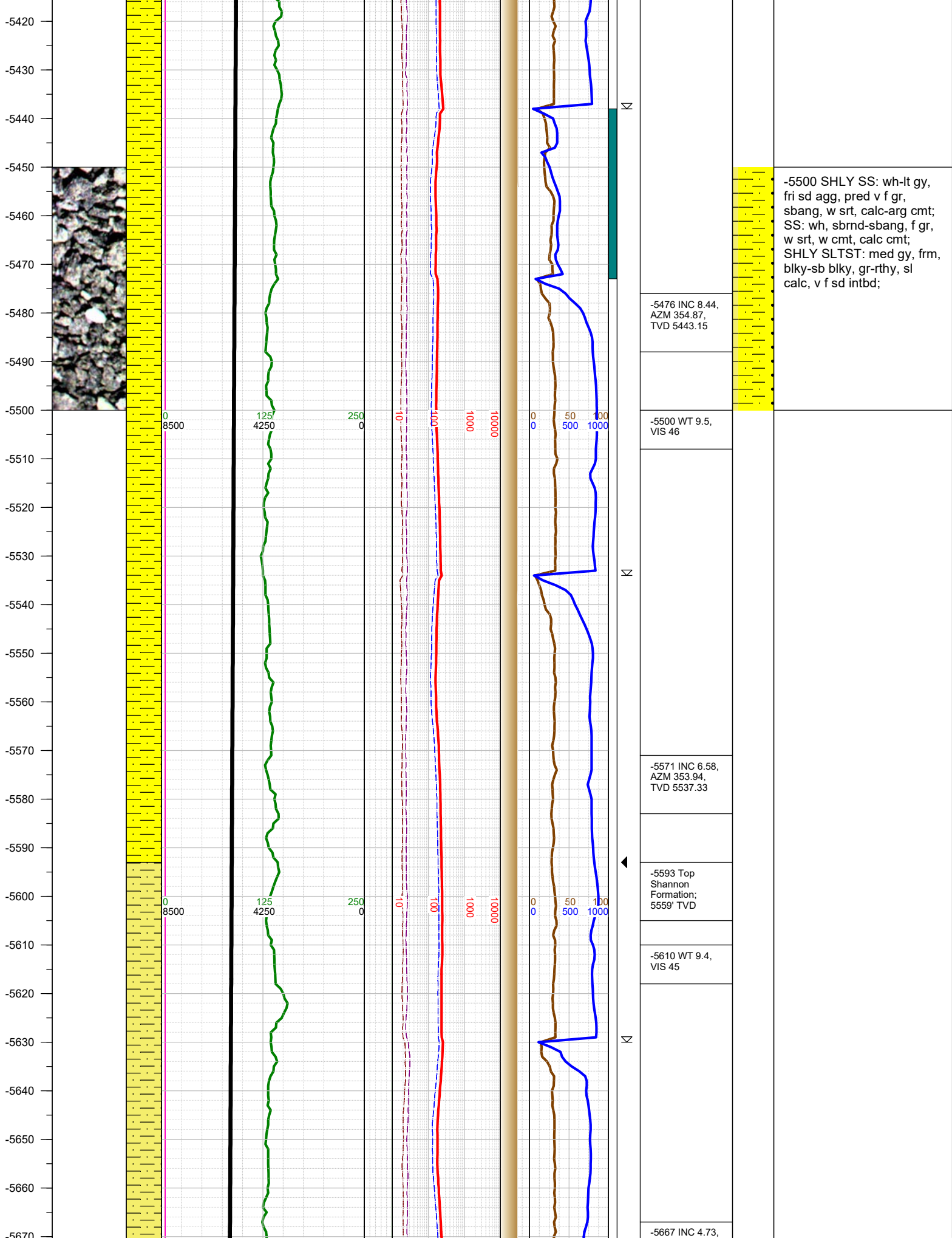


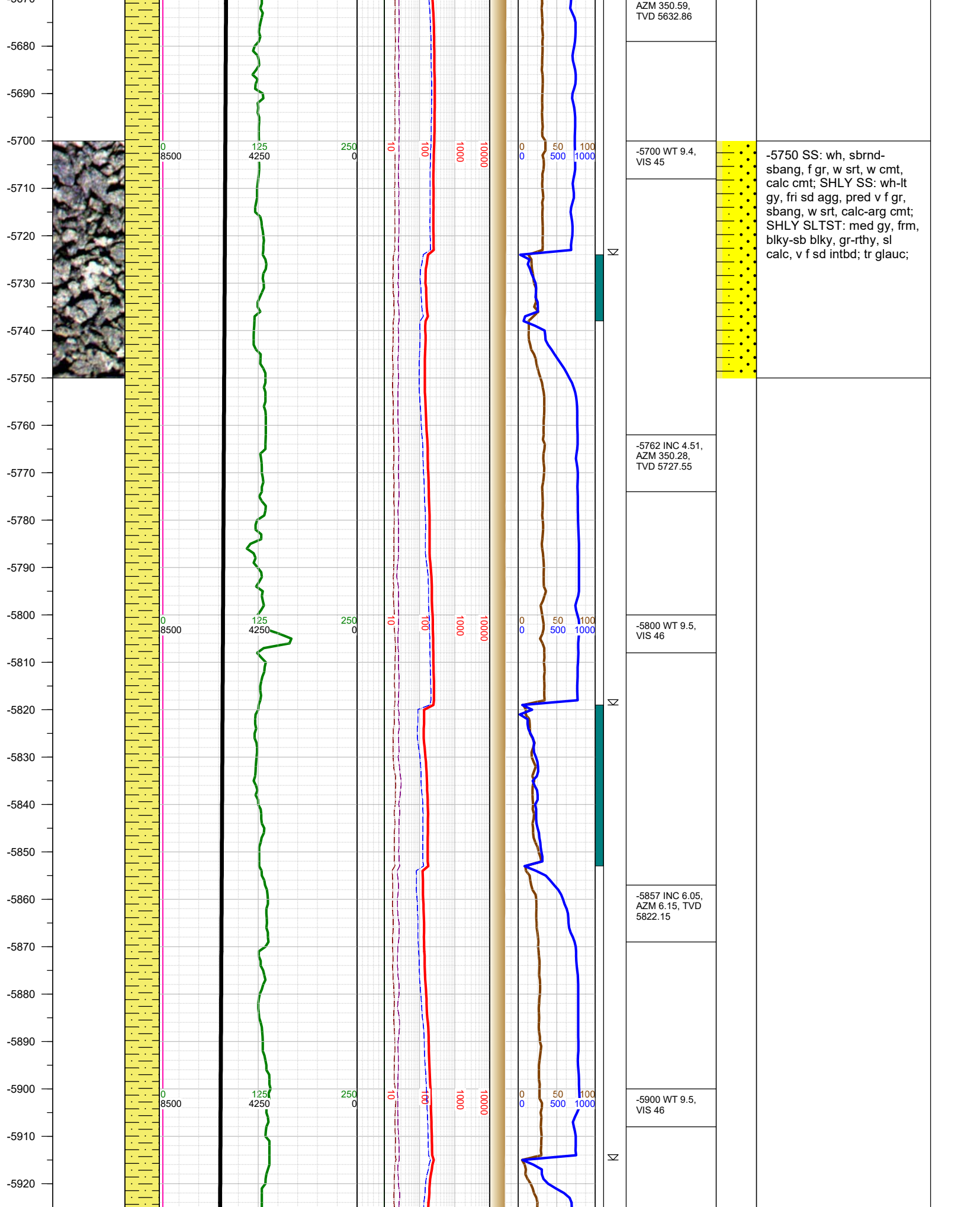


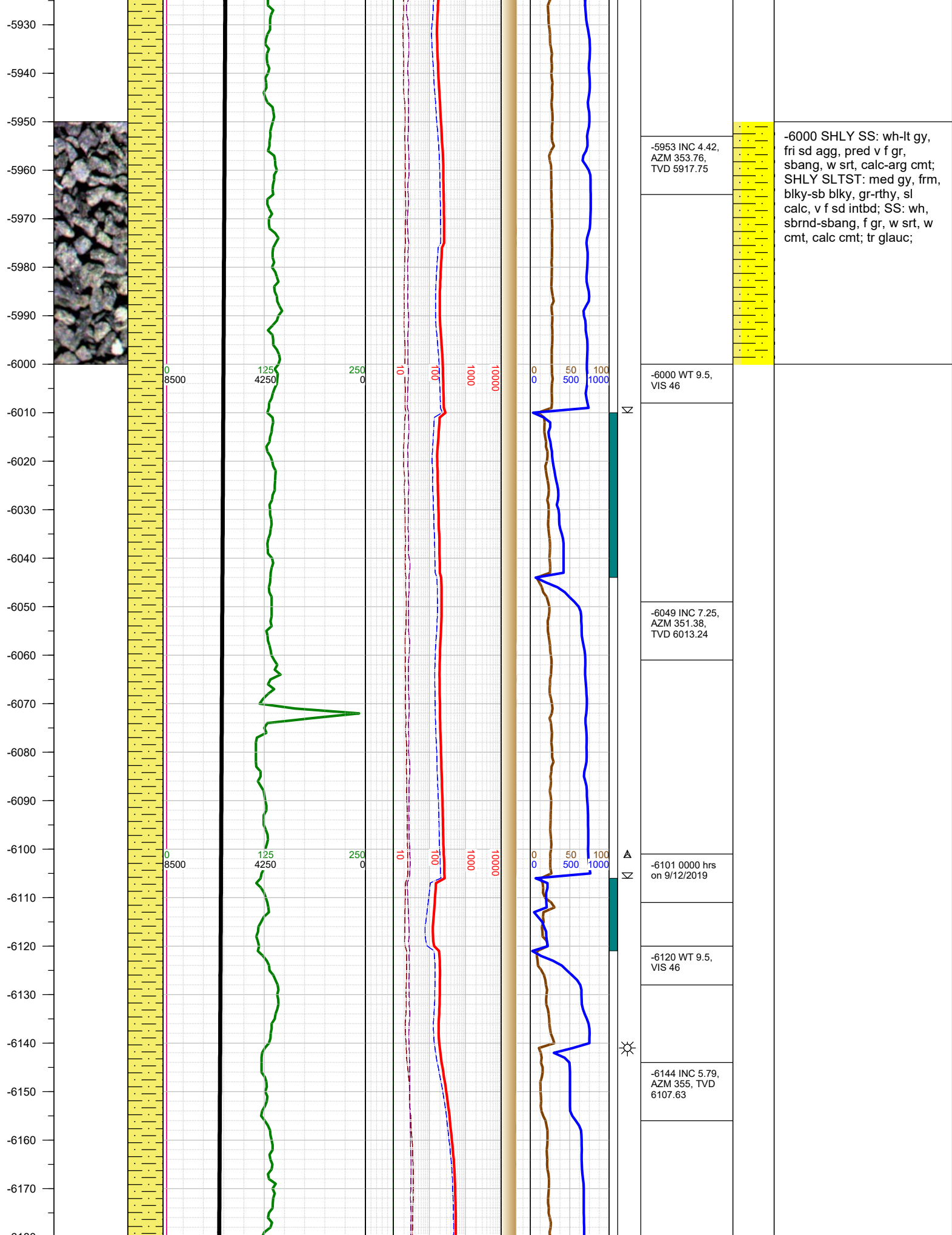


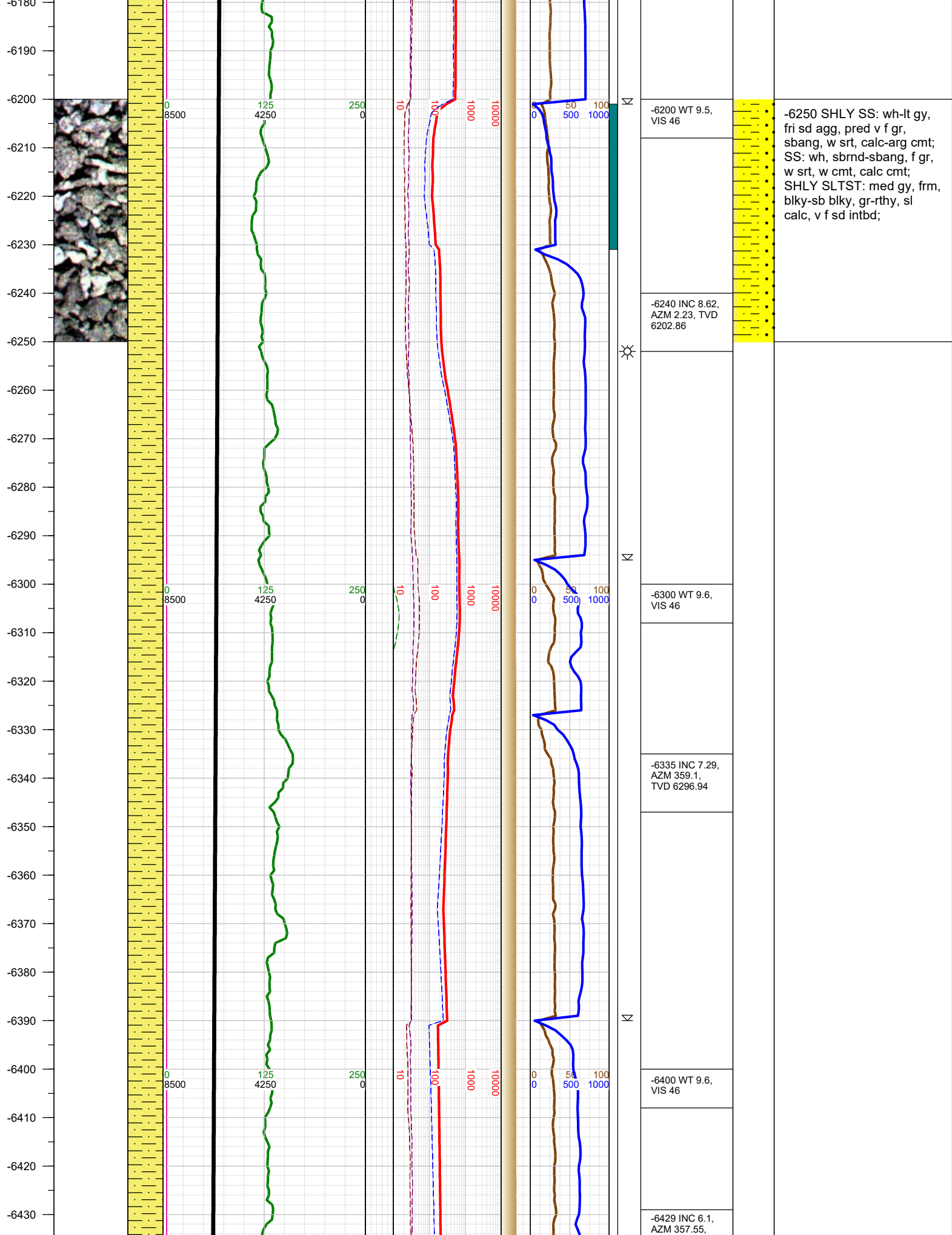


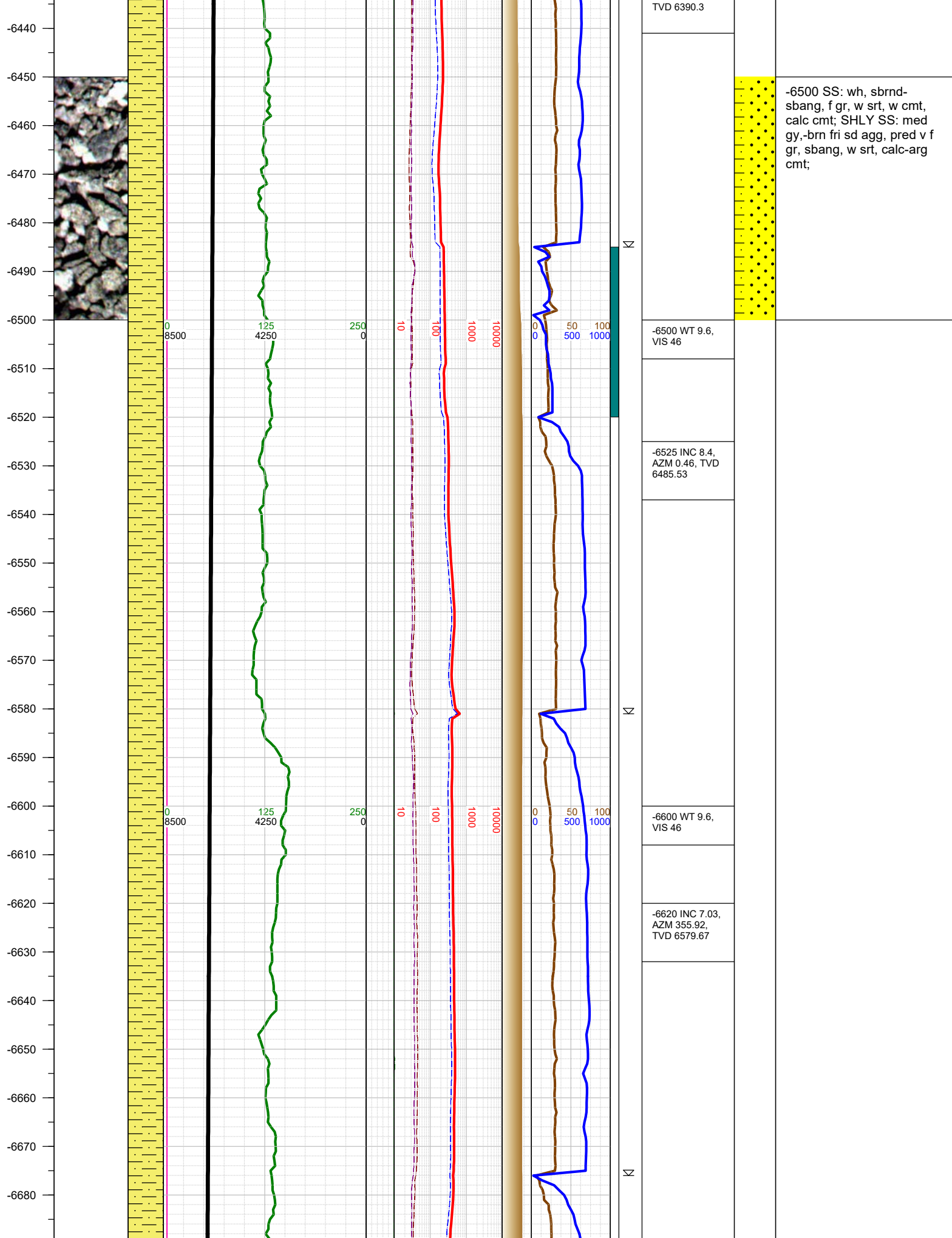


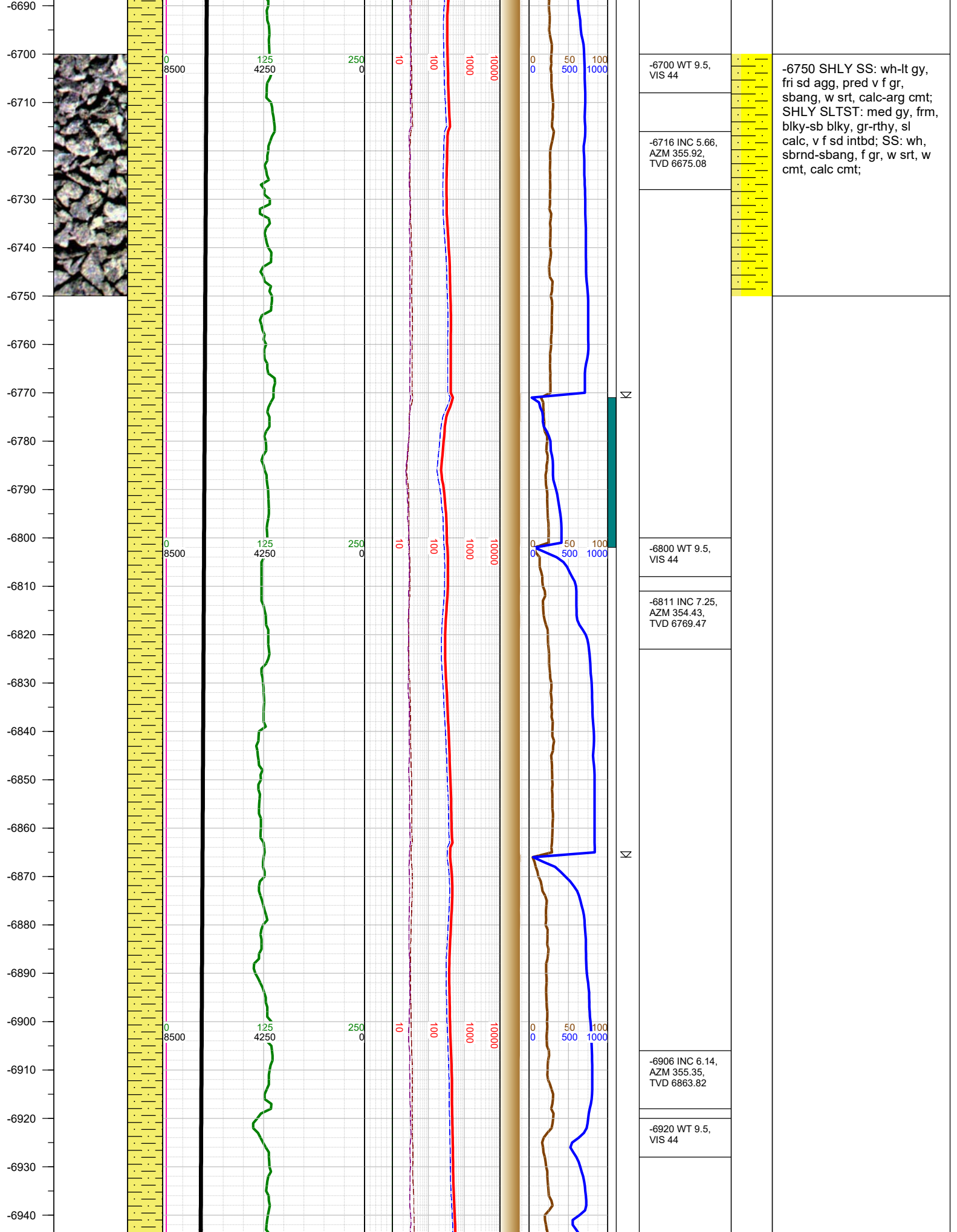


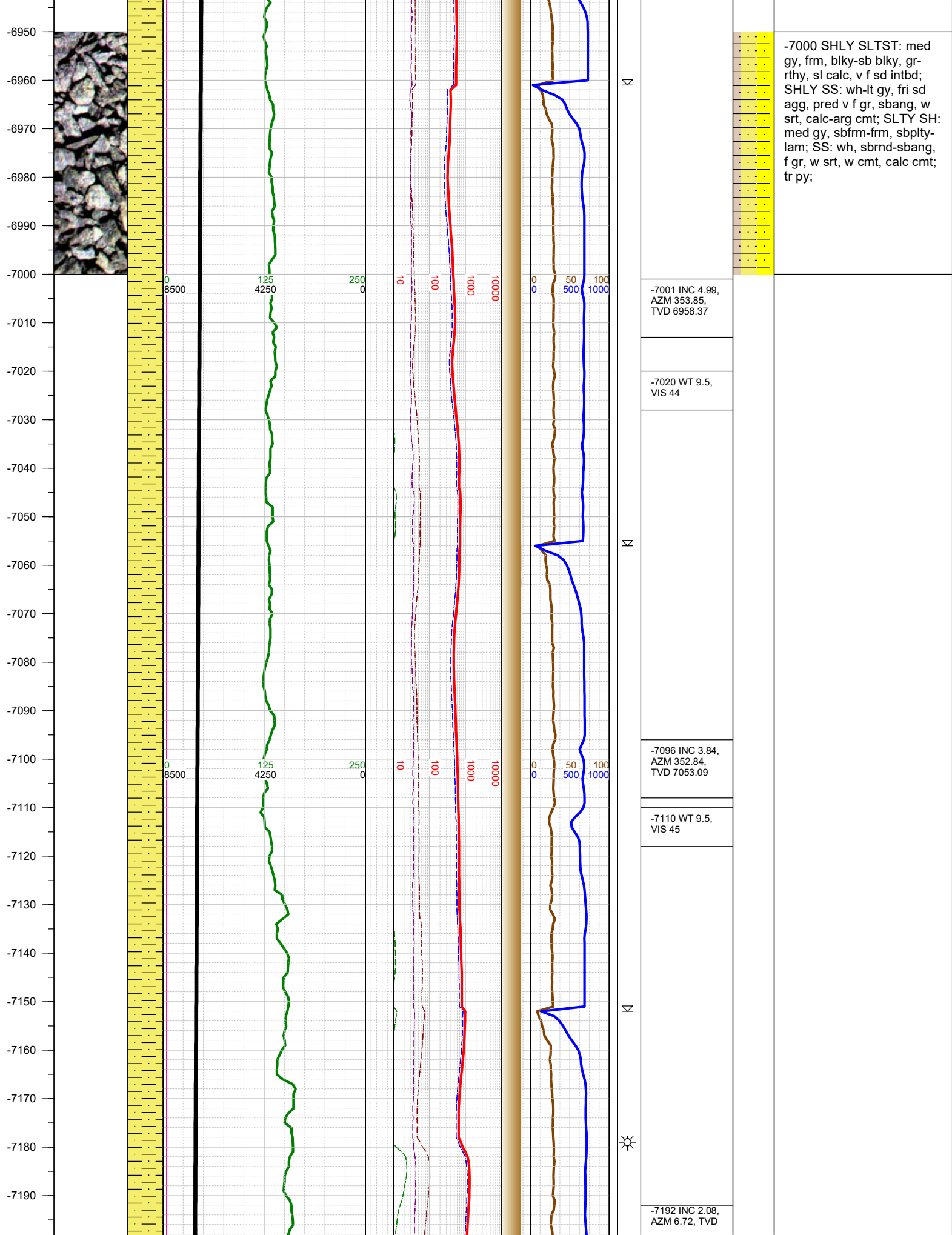


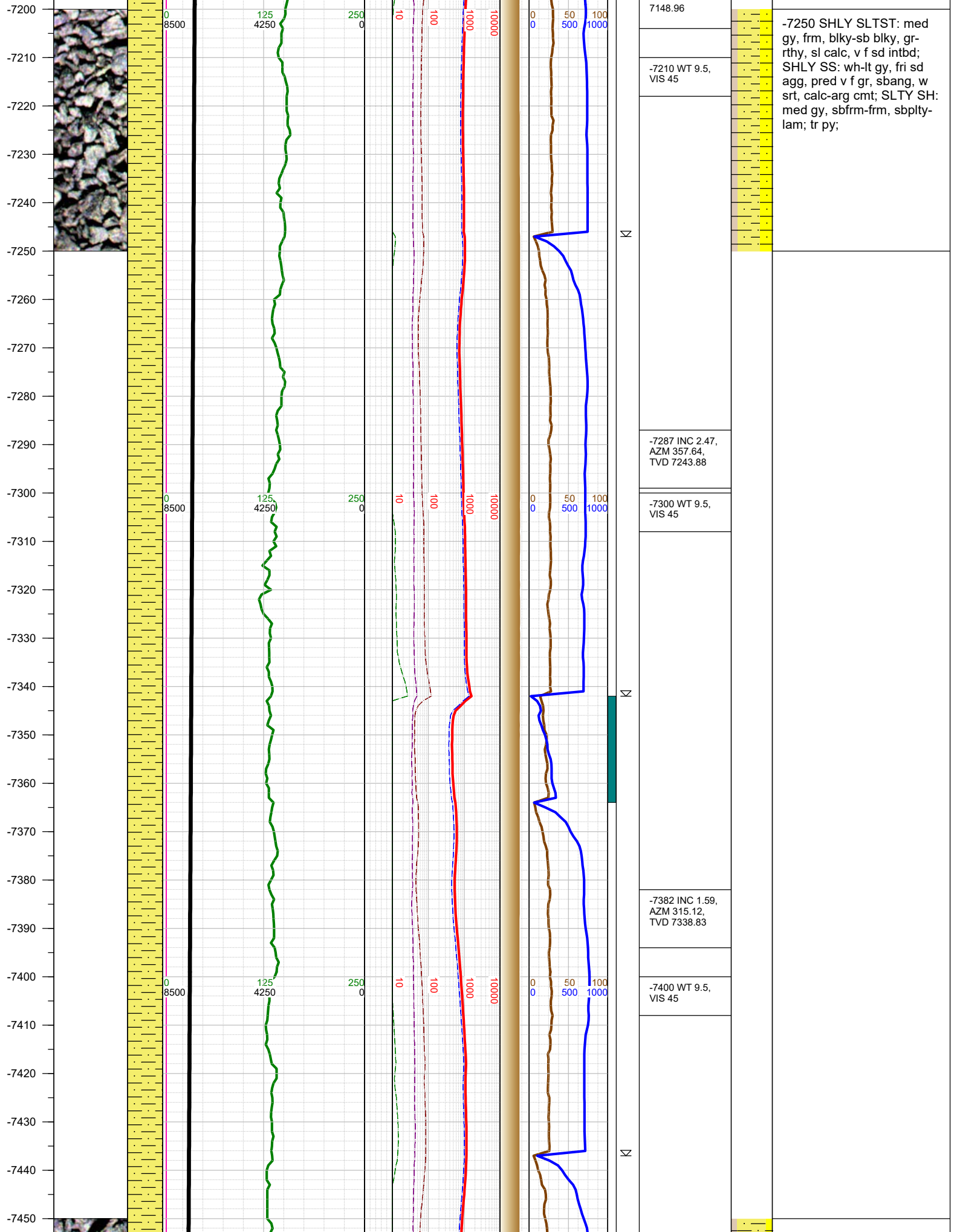


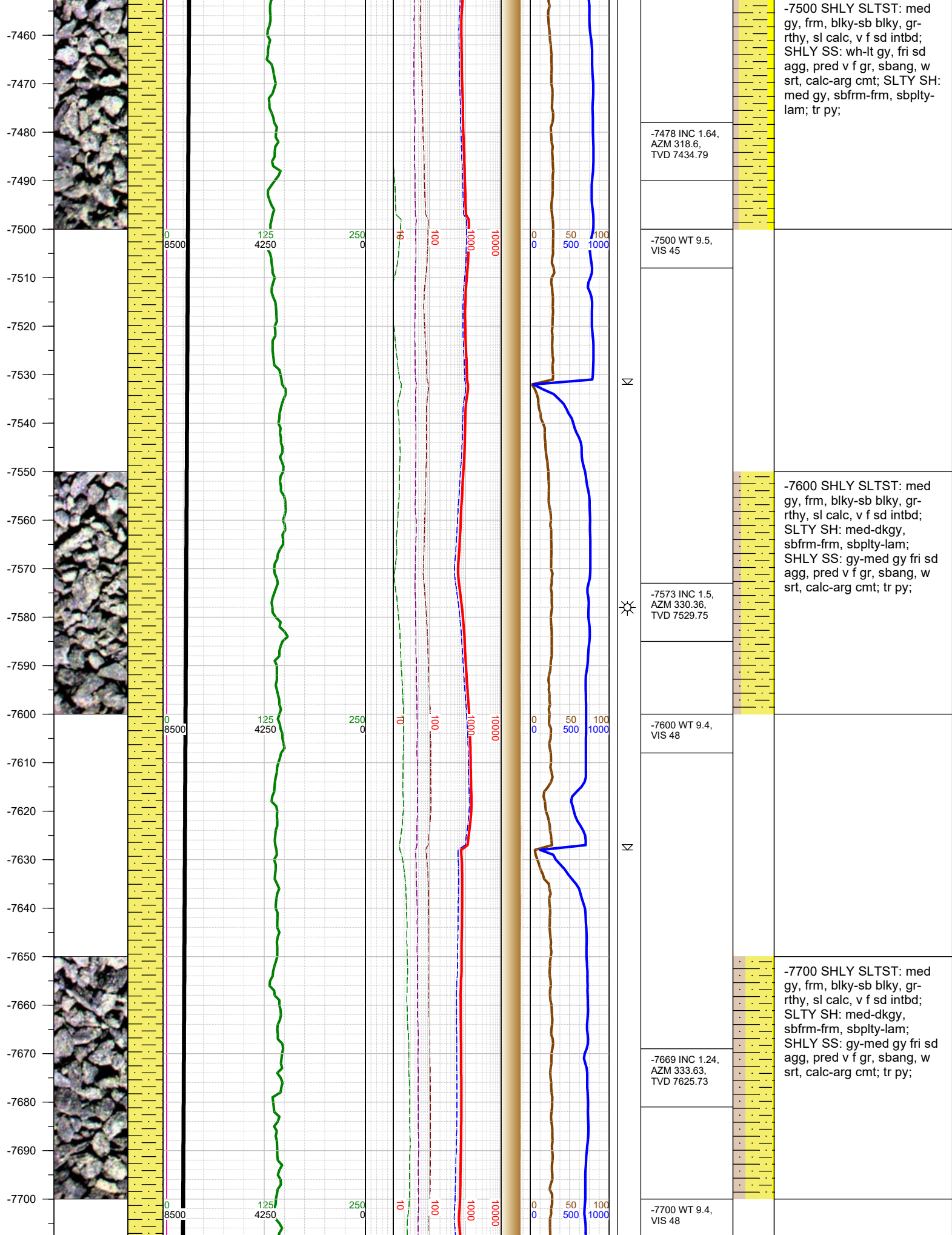


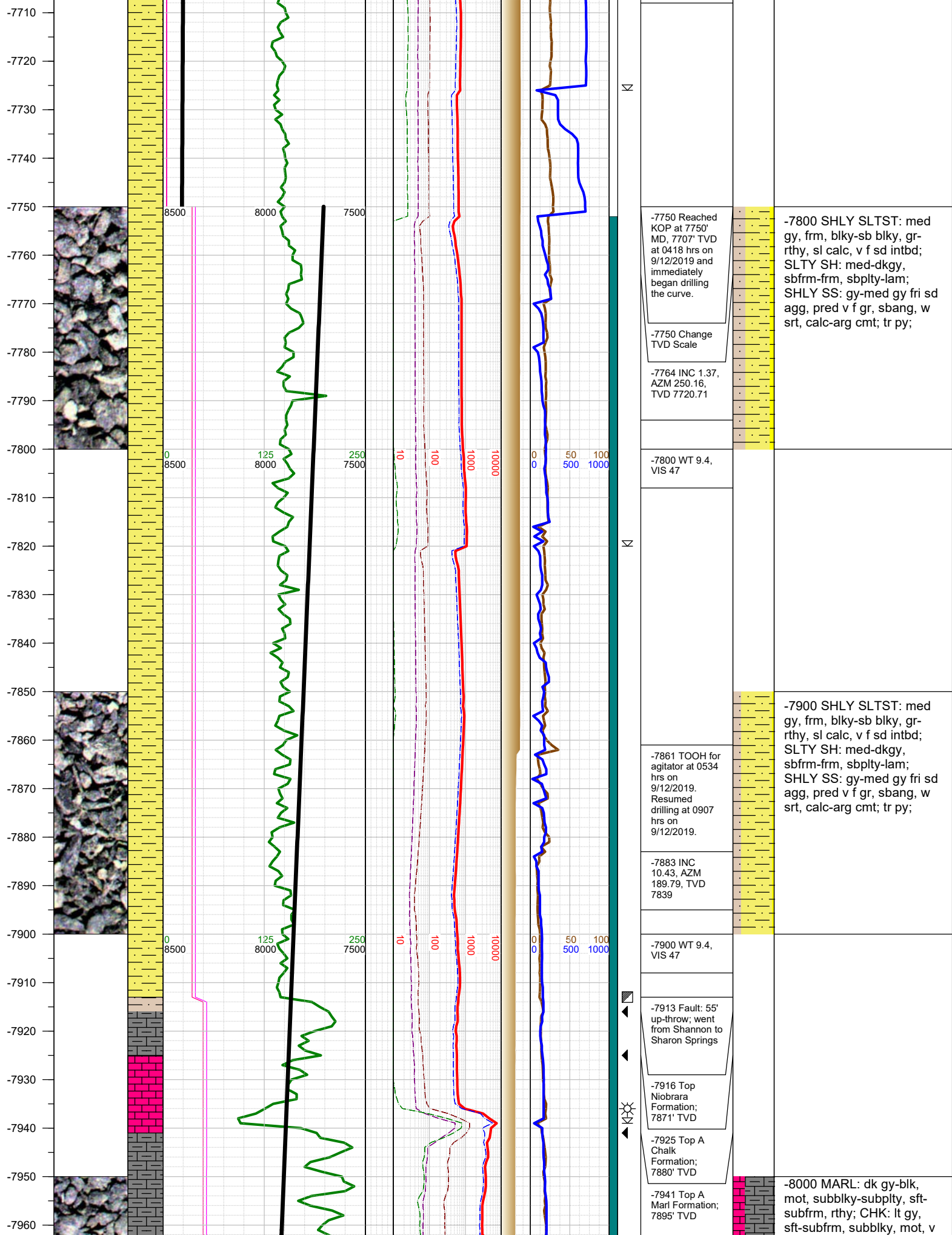


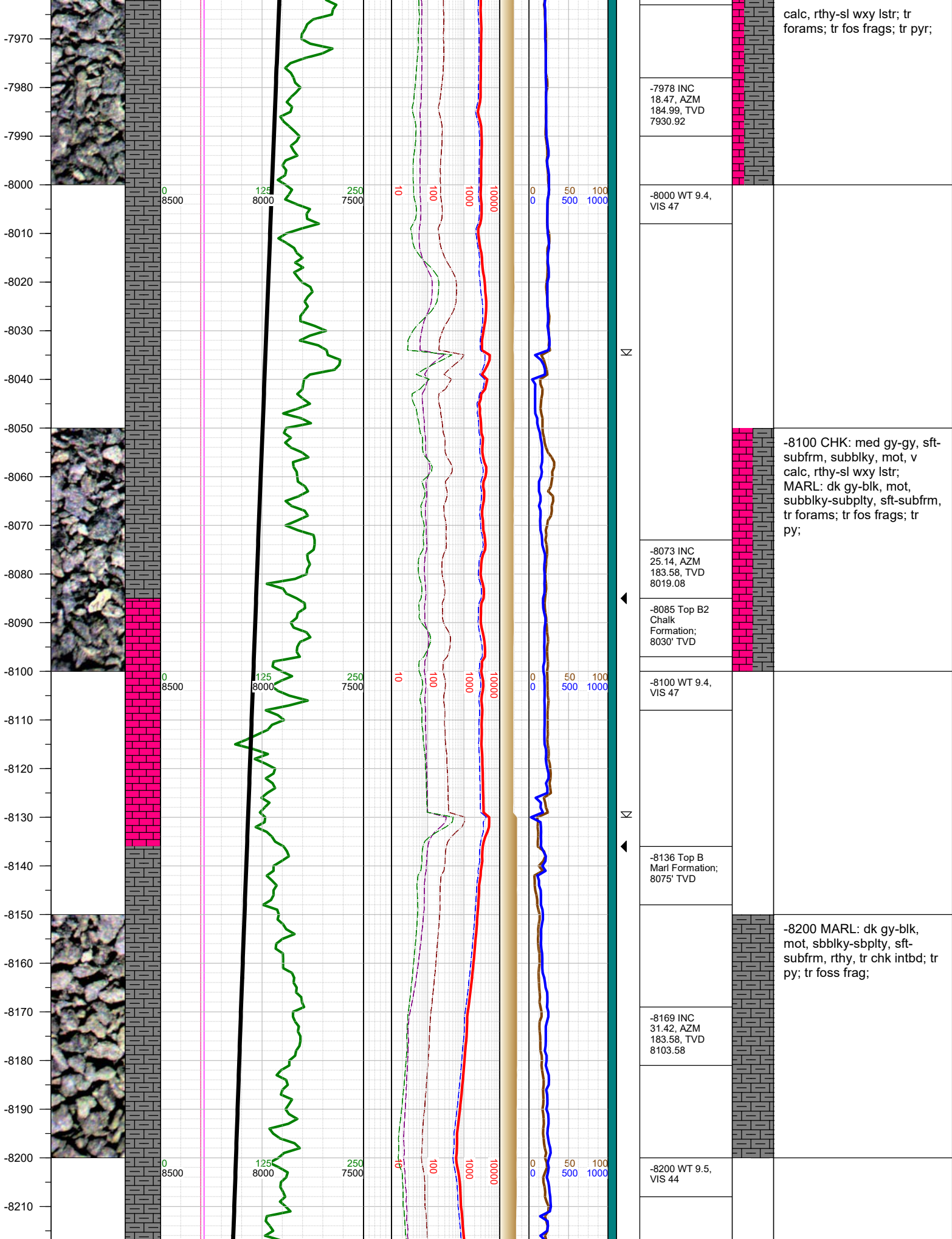


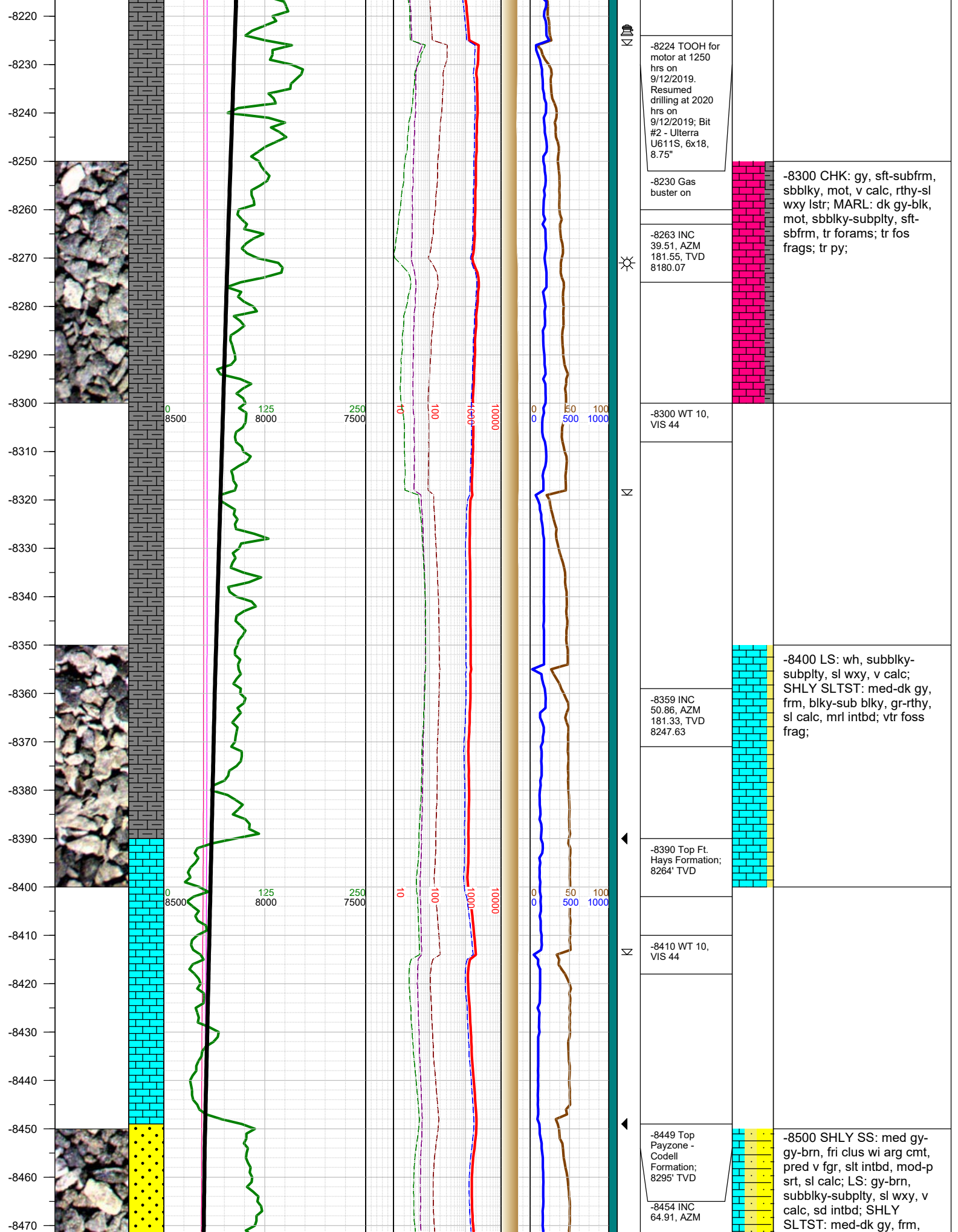


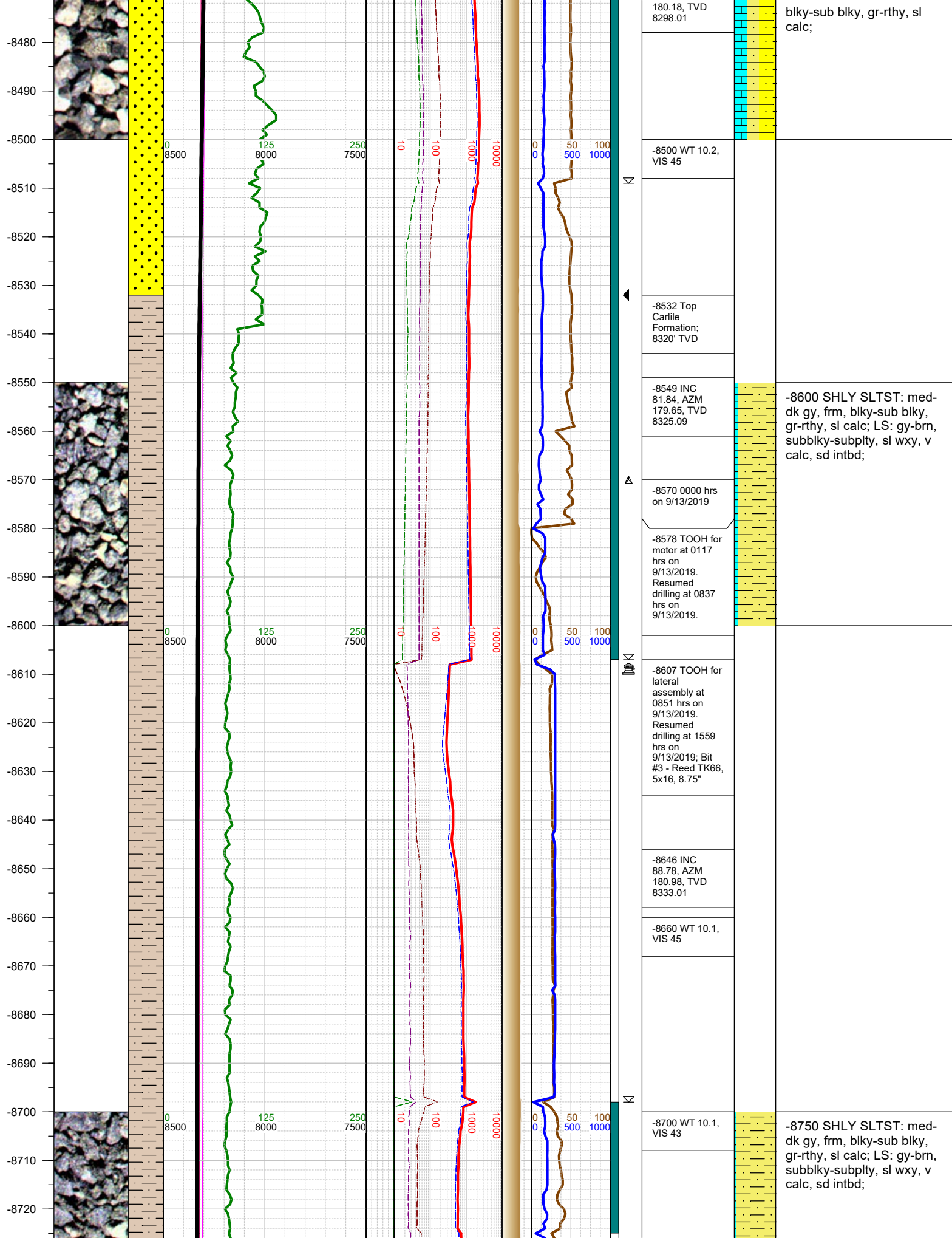


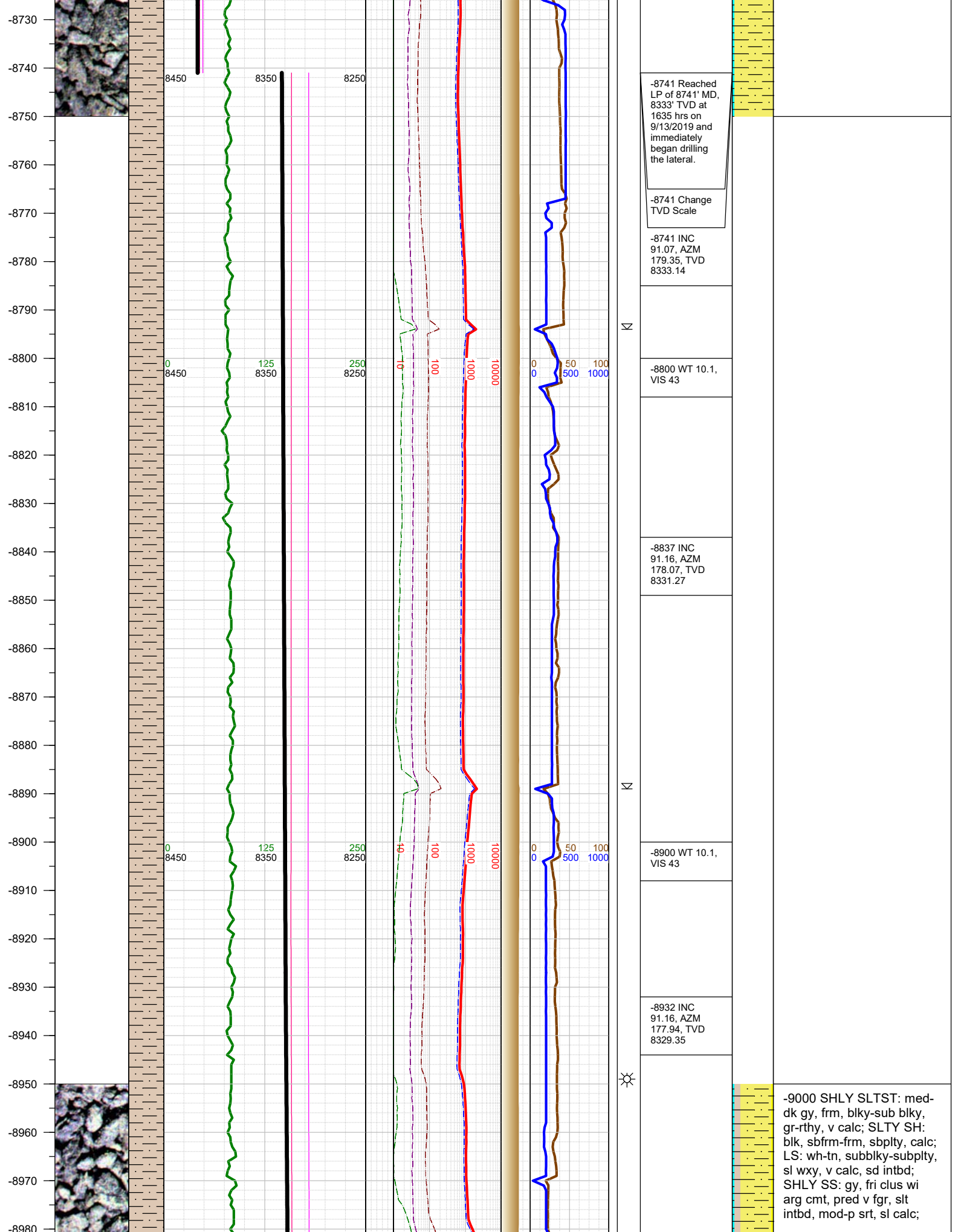


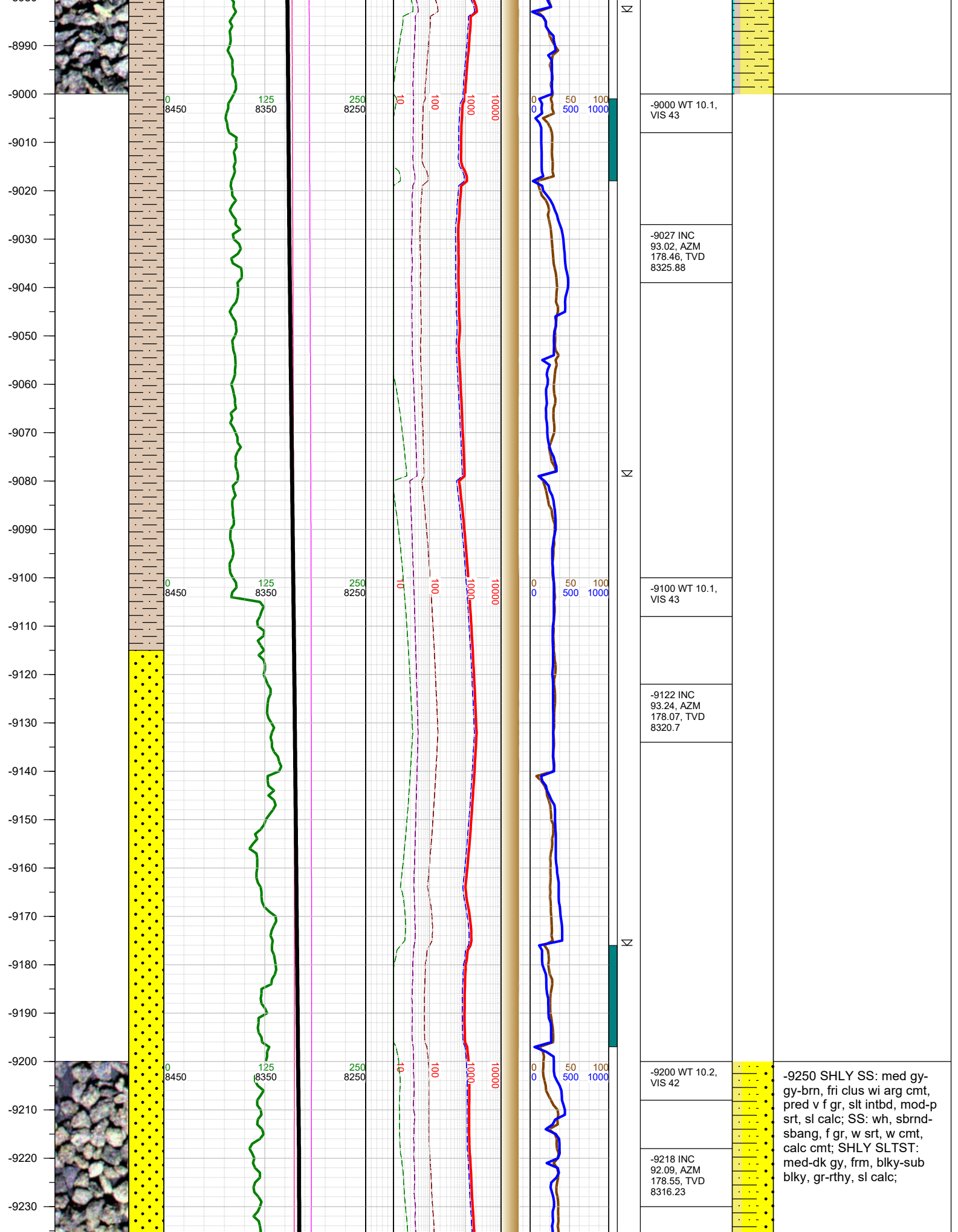




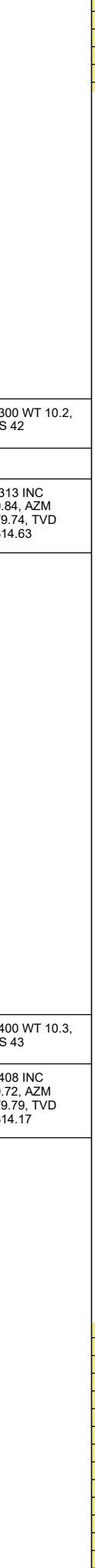
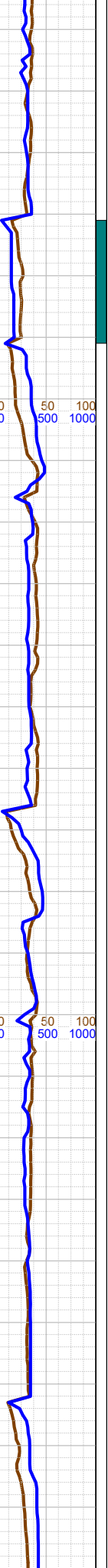
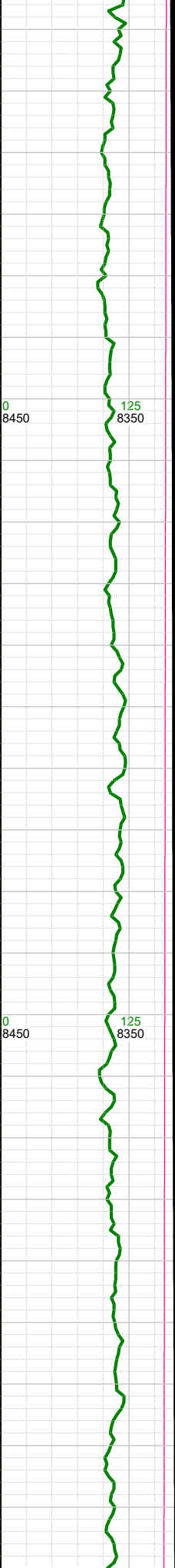
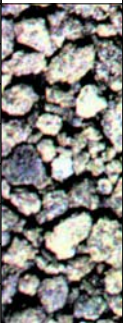
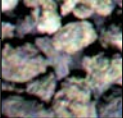








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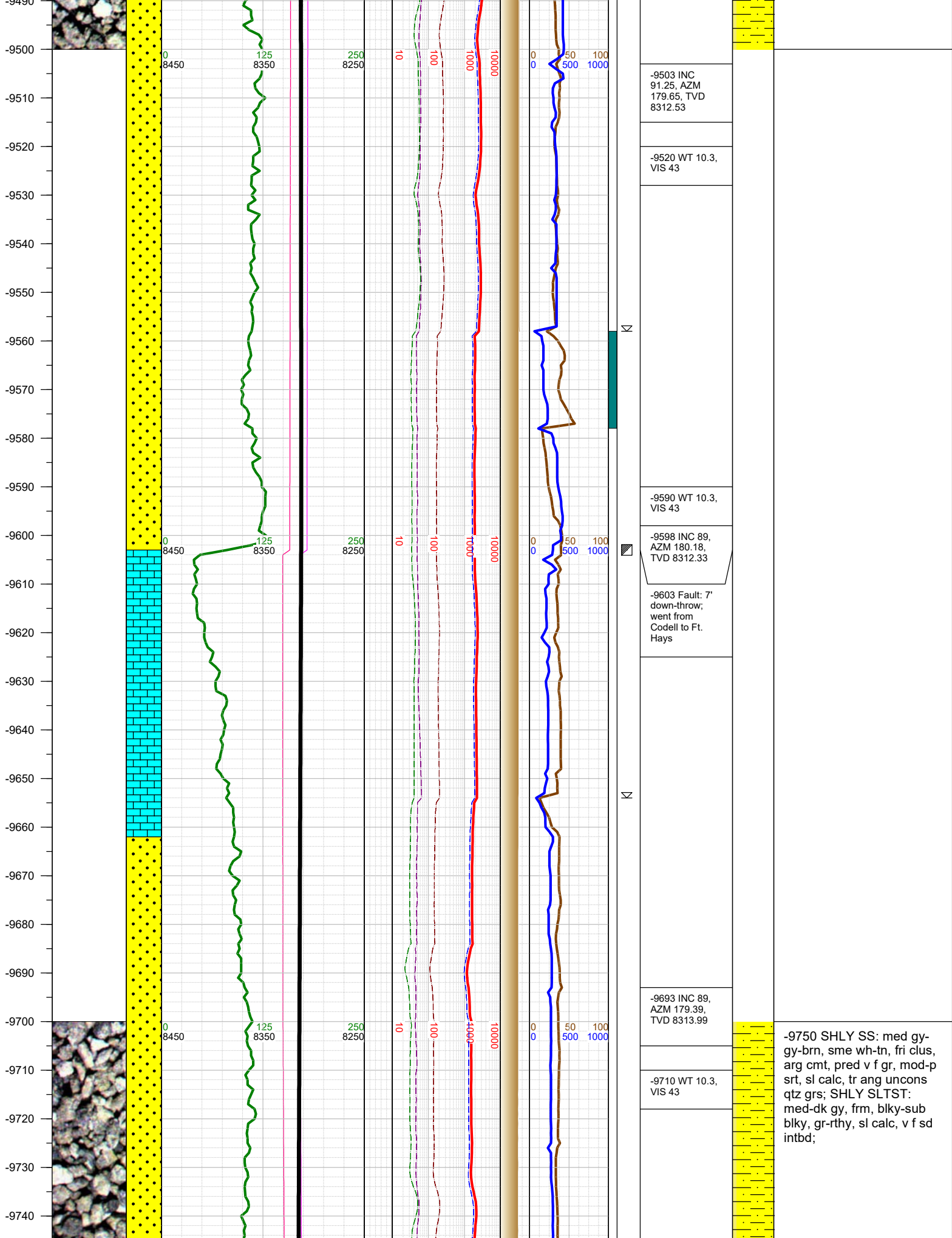
-9300 WT 10.2,
VIS 42

-9313 INC
89.84, AZM
179.74, TVD
8314.63

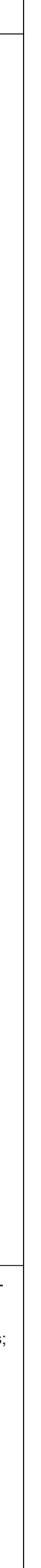
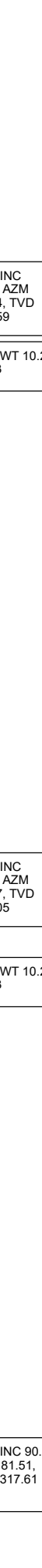
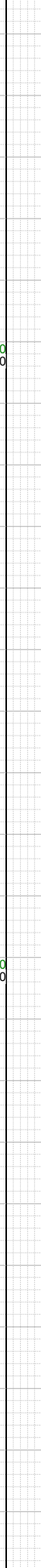
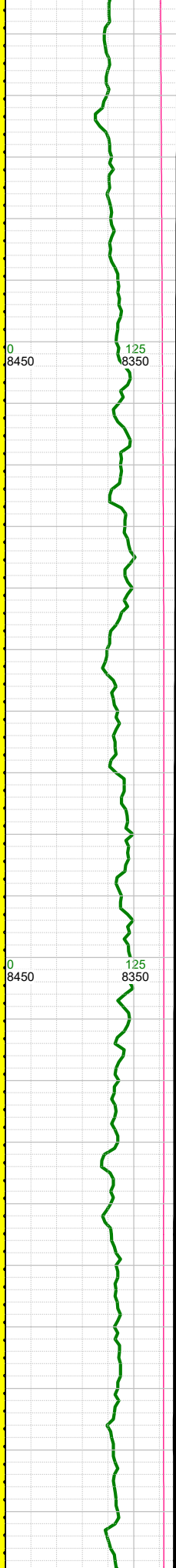
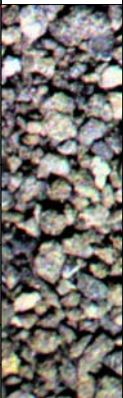
-9400 WT 10.3,
VIS 43

-9408 INC
90.72, AZM
179.79, TVD
8314.17

-9500 SHLY SS: med gy-
gy-brn, fri clus, arg cmt,
pred v f gr, mod-p srt, sl
calc, tr ang uncons qtz grs;
SHLY SLTST: med-dk gy,
frm, blk-sub blk, gr-rthy,
sl calc, v f sd intbd;



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-9787 INC
89.04, AZM
179.04, TVD
8315.59

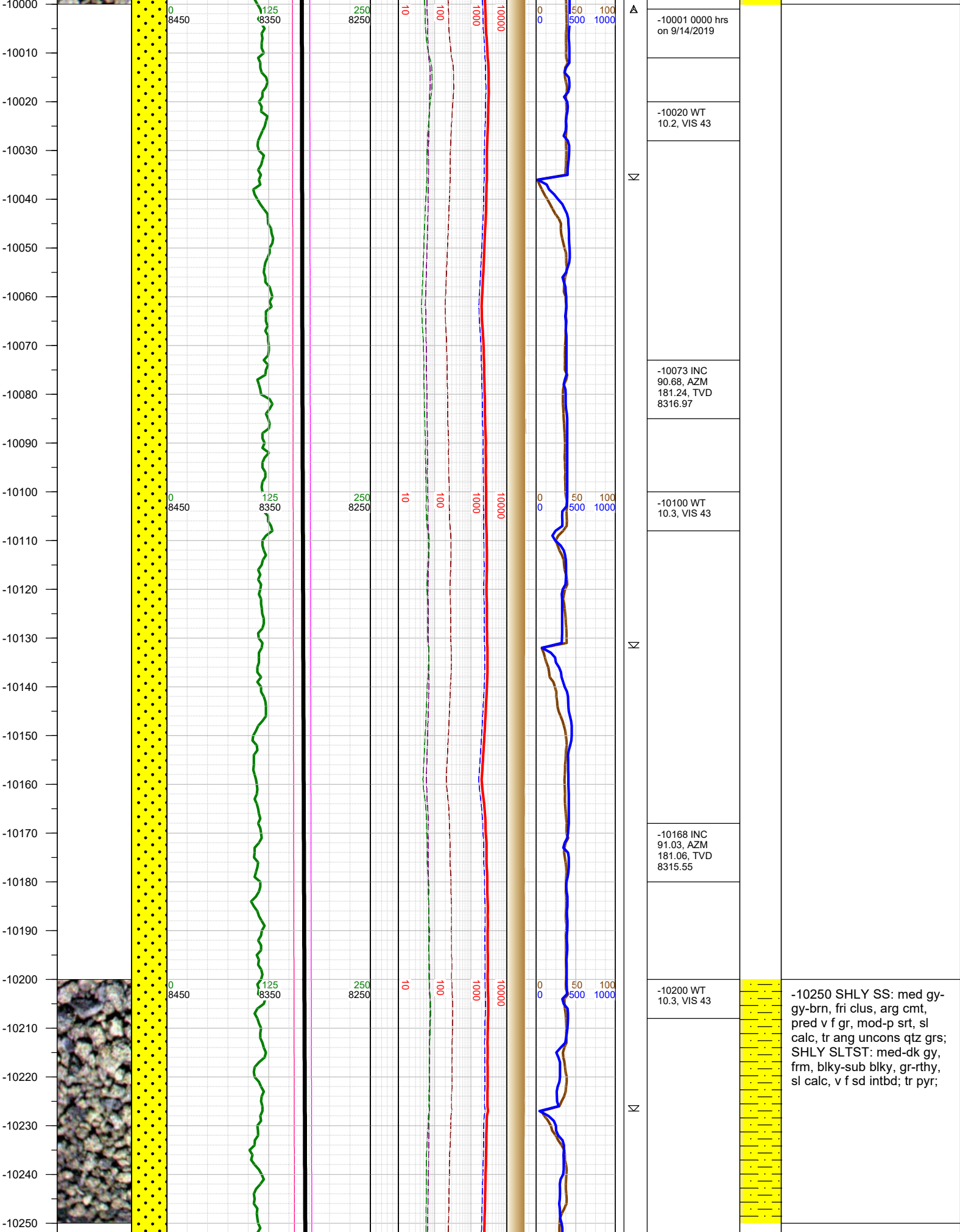
-9800 WT 10.2,
VIS 43

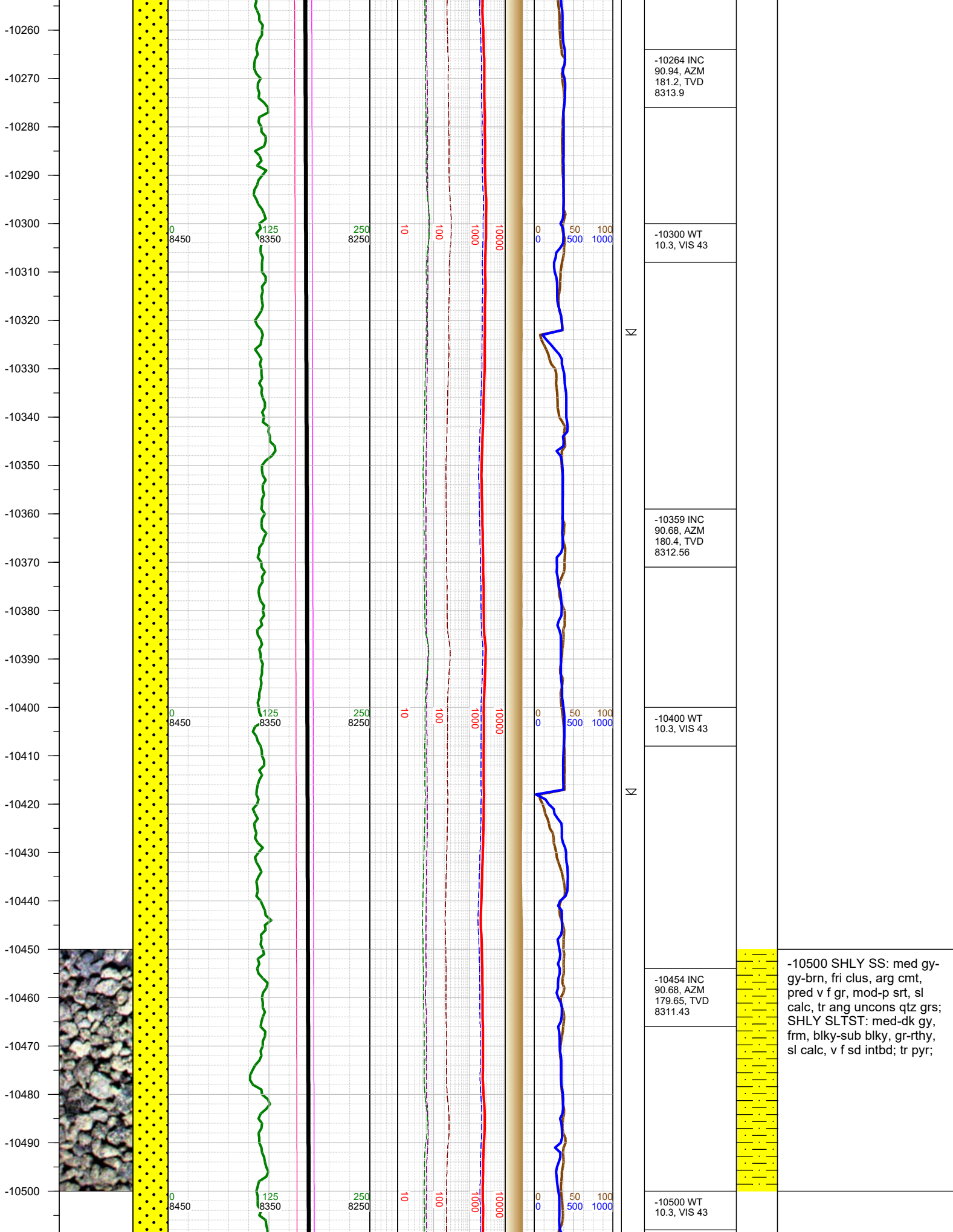
-9883 INC
89.22, AZM
178.77, TVD
8317.05

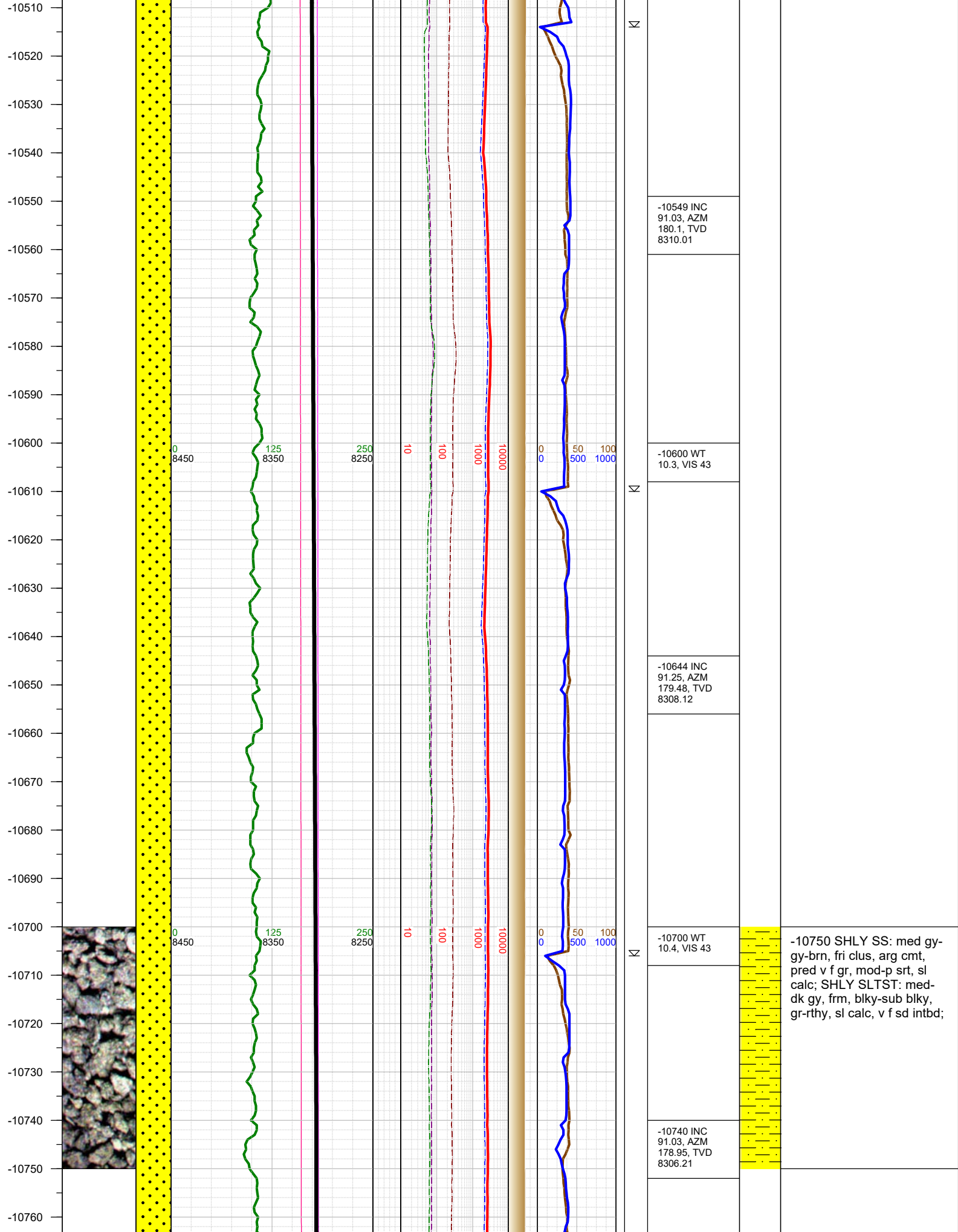
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VIS 43

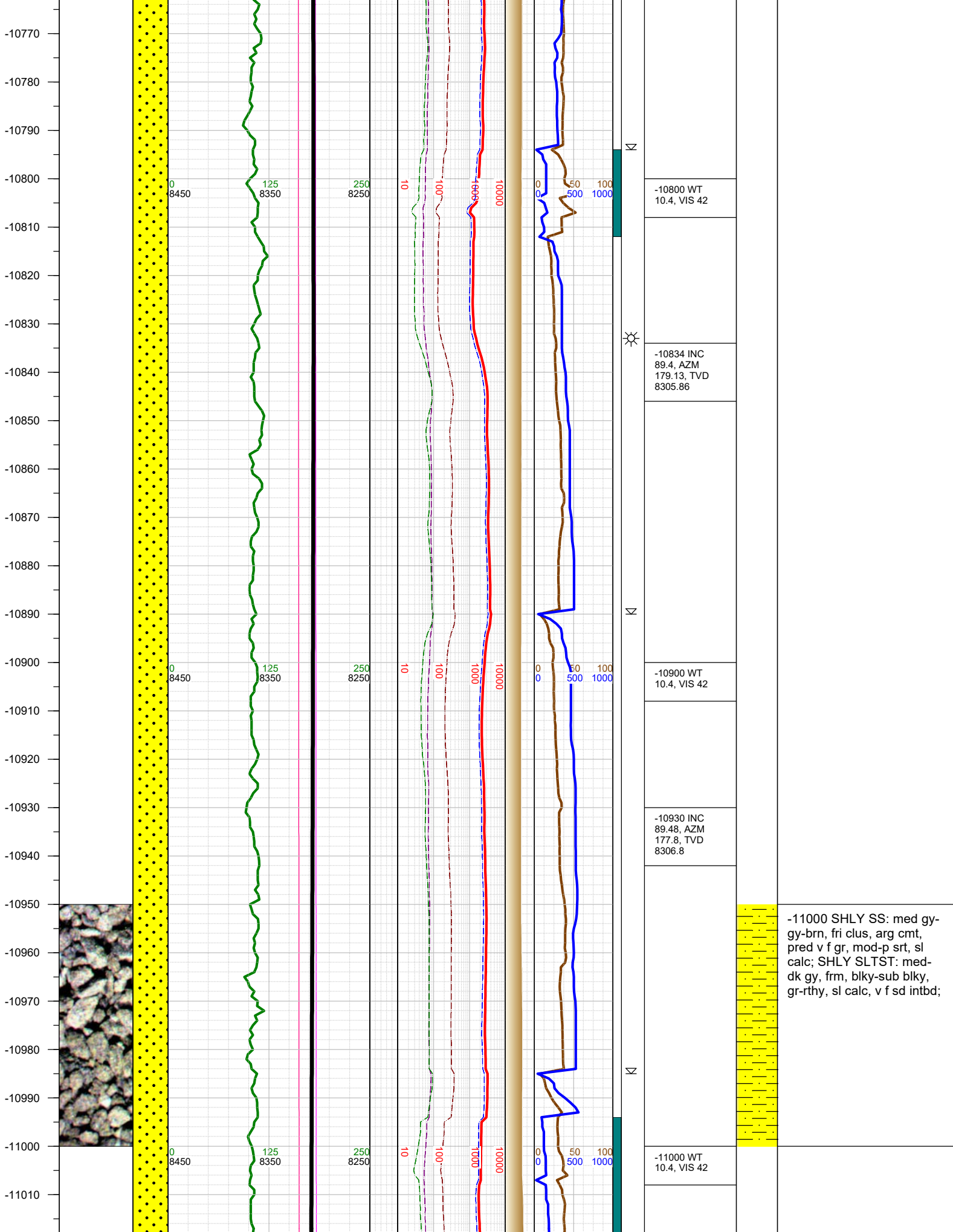
-9978 INC 90.1,
AZM 181.51,
TVD 8317.61

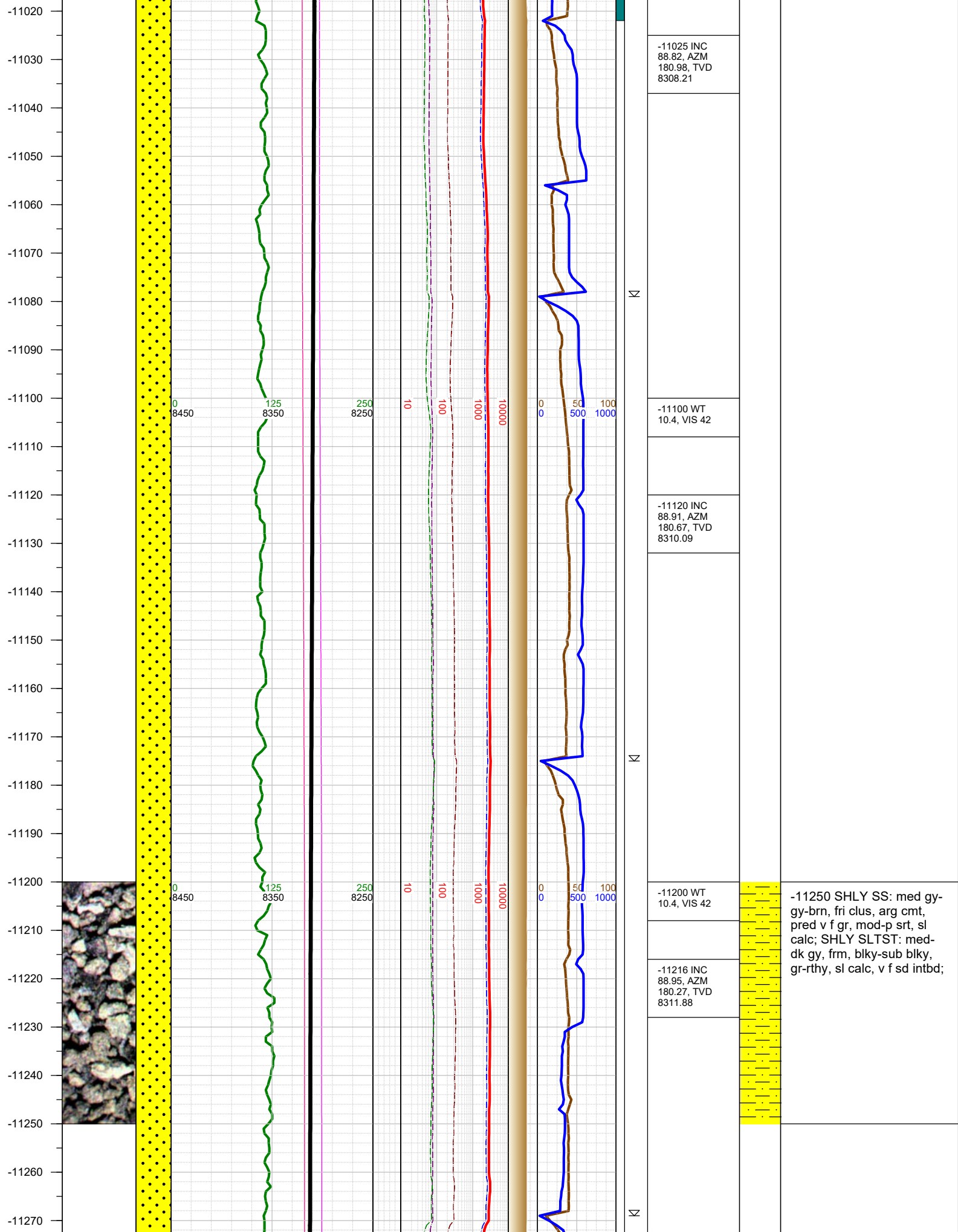
-10000 SHLY SS: med gy-
gy-brn, fri clus, arg cmt,
pred v f gr, mod-p srt, sl
calc, tr ang unconq grs;
SHLY SLTST: med-dk gy,
frm, blk-sub blk, gr-rthy,
sl calc, v f sd intbd; tr pyr;

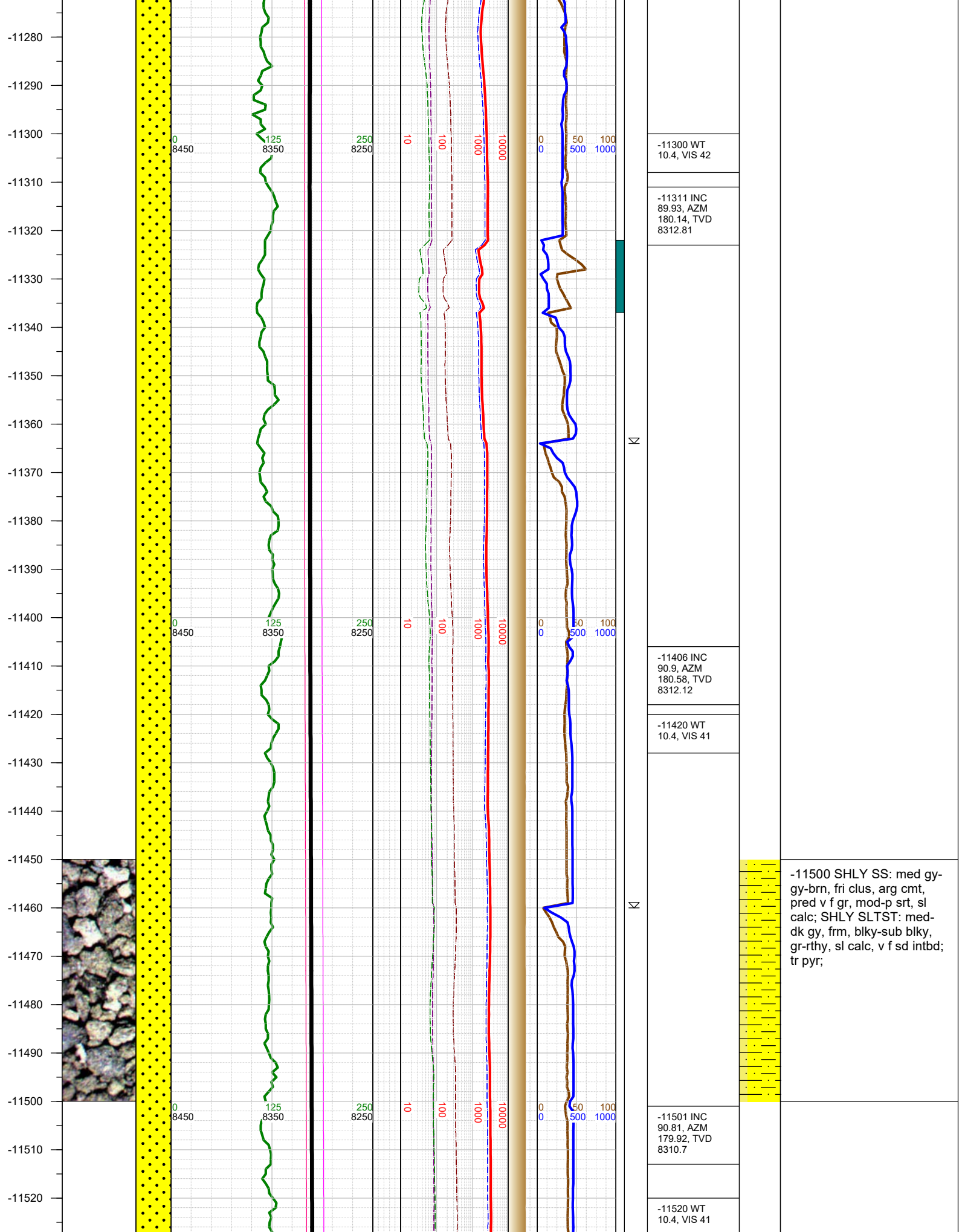




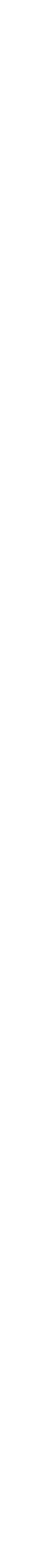
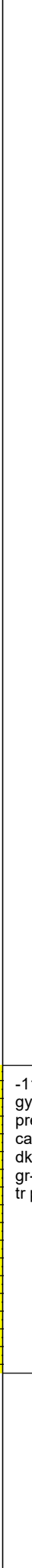
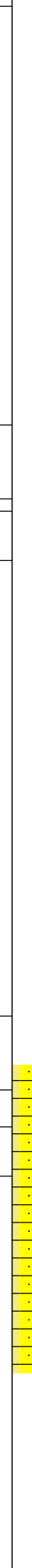
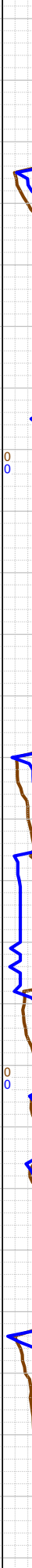
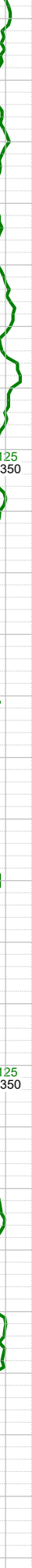
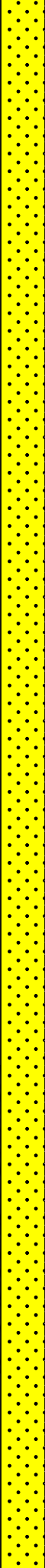
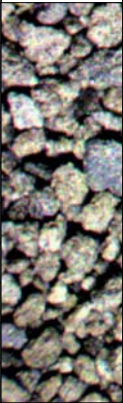








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-11596 INC
91.47, AZM
179.21, TVD
8308.81

-11610 WT
10.4, VIS 43

-11692 INC
89.44, AZM
179.83, TVD
8308.05

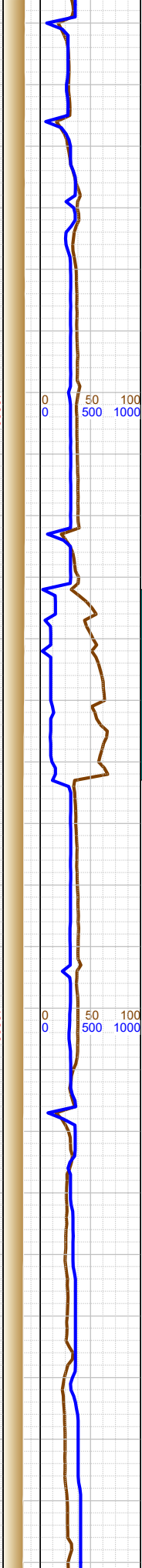
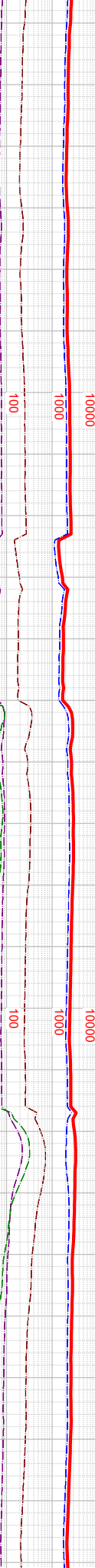
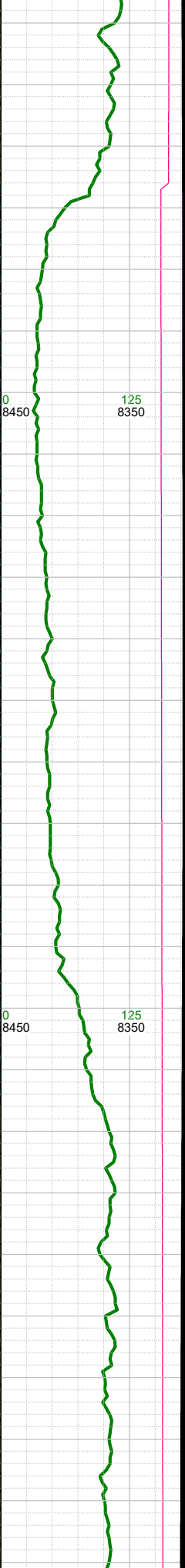
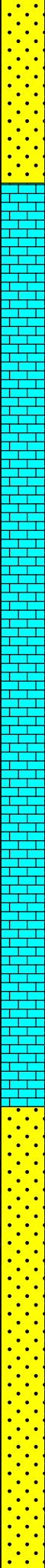
-11710 WT
10.4, VIS 43

-11750 SHLY SS: med gy-
gy-brn, fri clus, arg cmt,
pred v f gr, mod-p srt, sl
calc; SHLY SLTST: med-
dk gy, frm, blk-sub blk,
gr-rthy, sl calc, v f sd intbd;
tr pyr;



	-11787 INC 89.7, AZM 180.4, TVD 8308.76		
	-11800 WT 10.4, VIS 44		
	-11882 INC 89.97, AZM 179.92, TVD 8309.04		
	-11900 WT 10.4, VIS 44		
			-12000 SHLY SS: med gy- gy-brn, fri clus, arg cmt, pred v f gr, mod-p srt, sl calc; SHLY SLTST: med- dk gy, frm, blk-sub blk, gr-rthy, sl calc, v f sd intbd;
	-11978 INC 90.54, AZM 179.96, TVD 8308.61		
	-12000 WT 10.4, VIS 44		

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-12066 Fault: 6' down-throw; went from Codell to Ft. Hays

-12073 INC 91.21, AZM 179.26, TVD 8307.16

-12100 WT 10.5, VIS 44

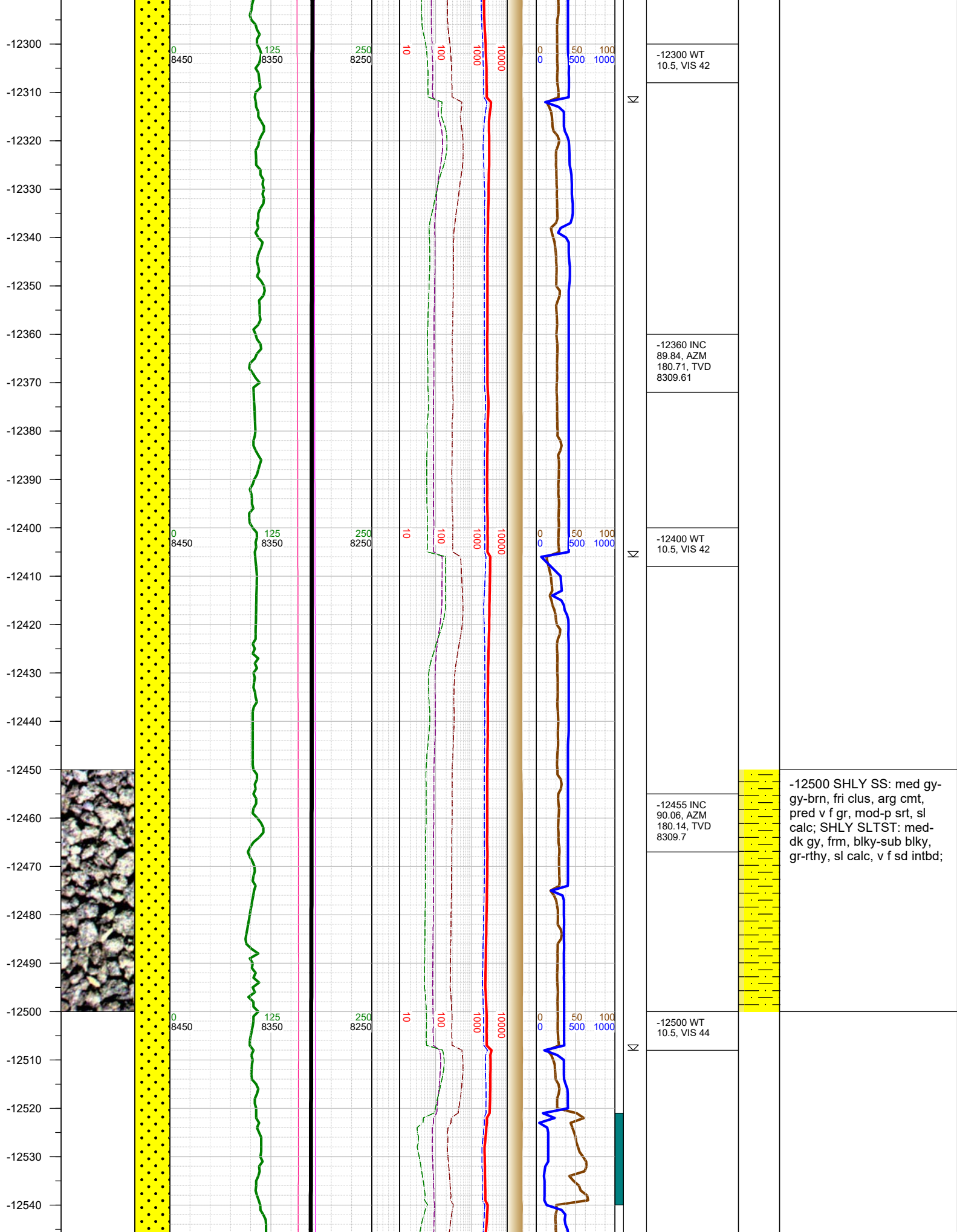
-12169 INC 89.09, AZM 181.46, TVD 8306.91

-12200 WT 10.5, VIS 44

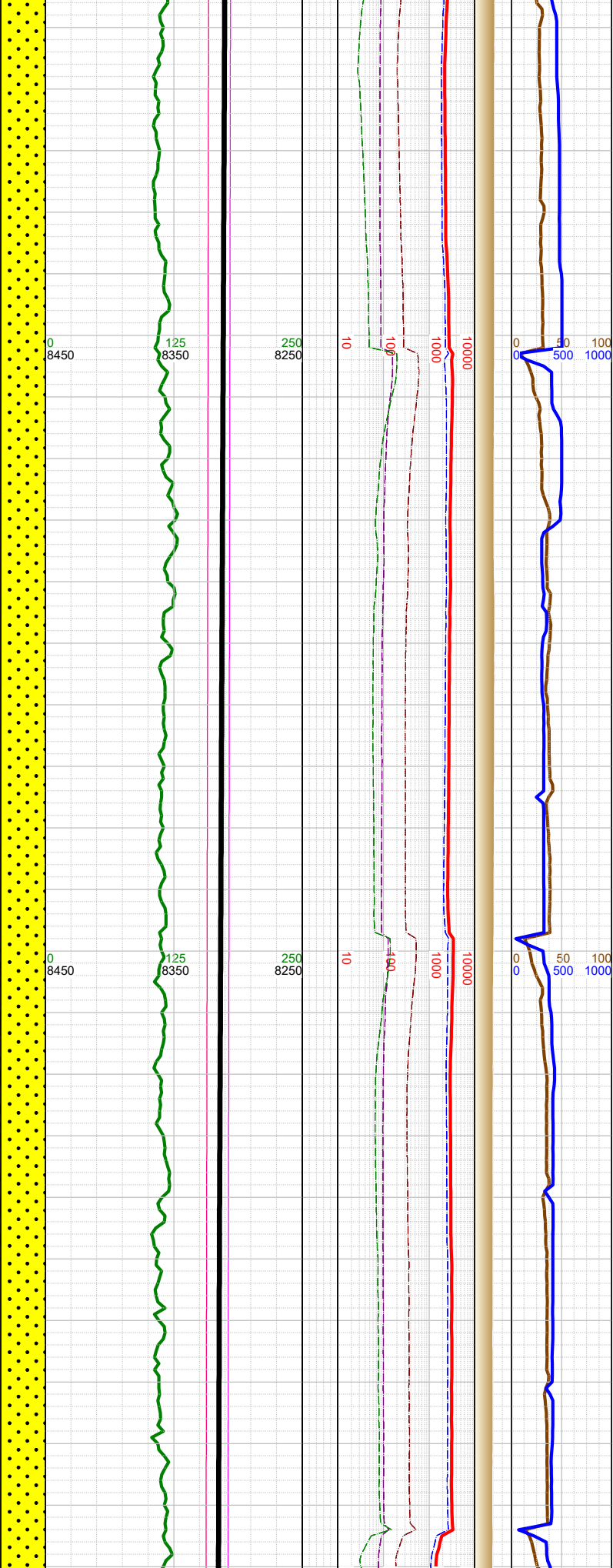
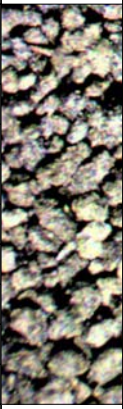
-12264 INC 88.91, AZM 180.67, TVD 8308.57



-12250 SHLY SS: med gy-gy-brn, fri clus, arg cmt, pred v f gr, mod-p srt, sl calc; LS: lt gy-wh, subblky-subply, sl wxy, v calc, sd intbd; SHLY SLTST: med-dk gy, frm, blk-sub blk, gr-rthy, sl calc, v f sd intbd;



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-12551 INC
88.82, AZM
180.54, TVD
8310.64

-12600 WT
10.5, VIS 44

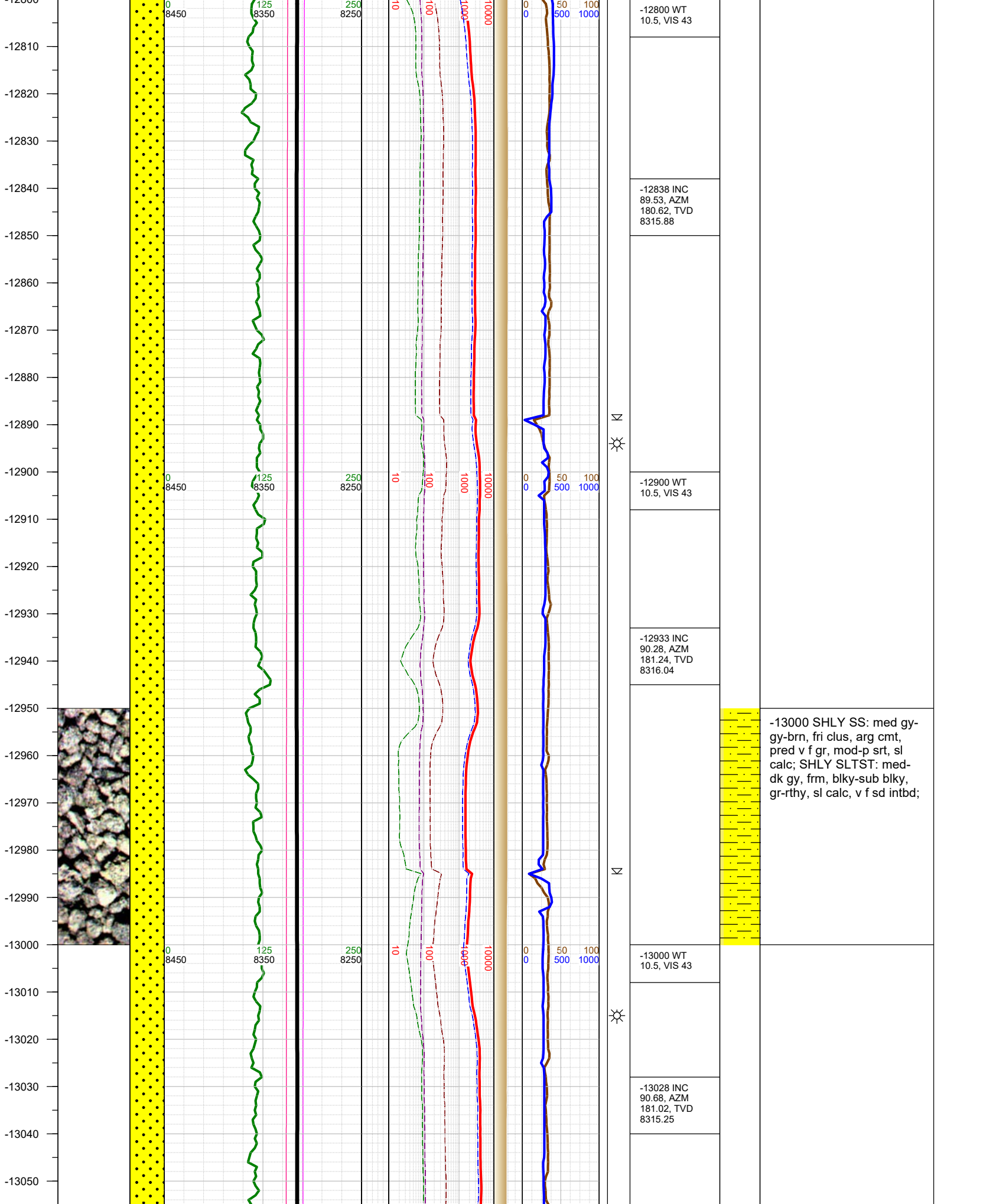
-12647 INC
88.82, AZM
181.42, TVD
8312.61

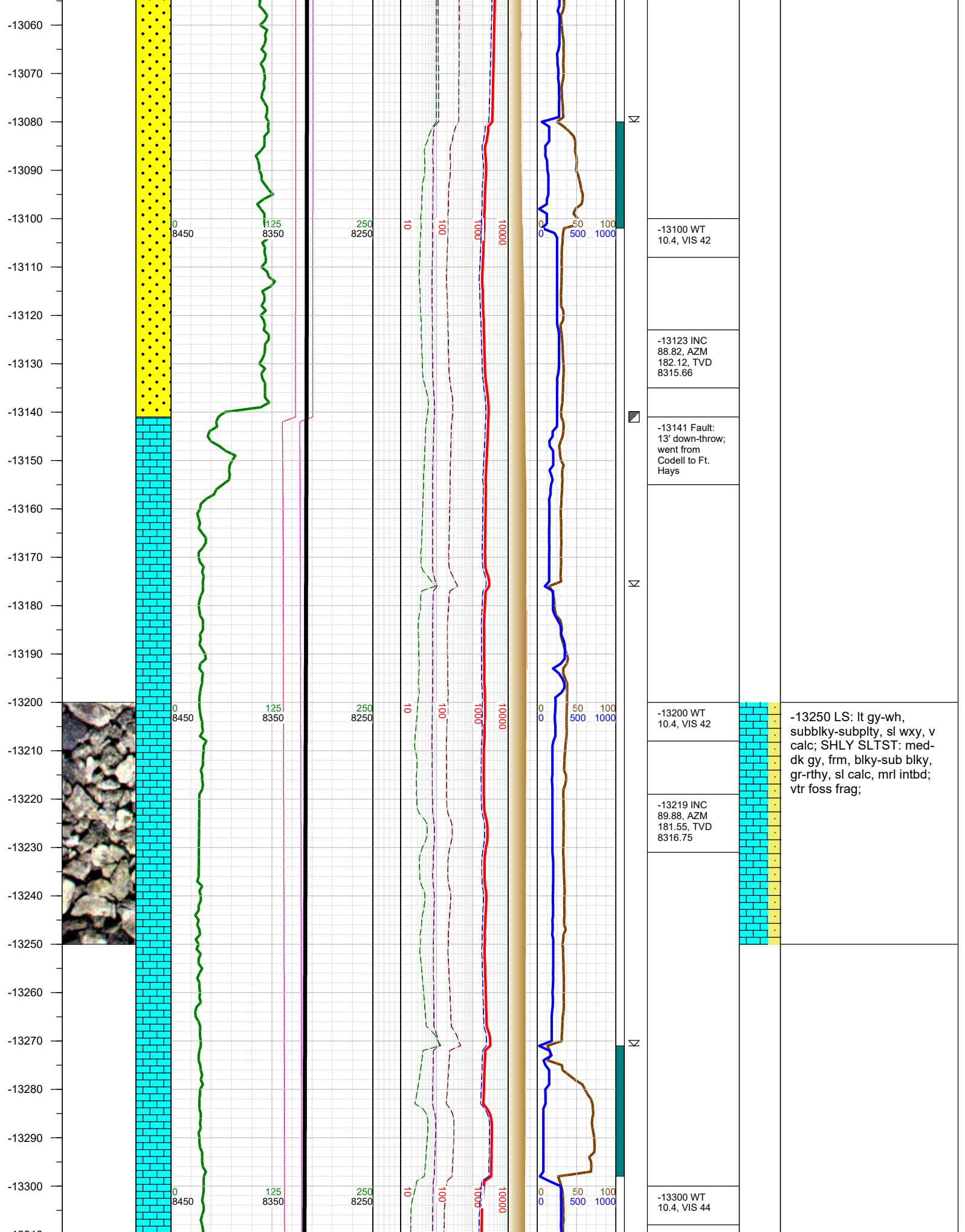
-12700 WT
10.5, VIS 43

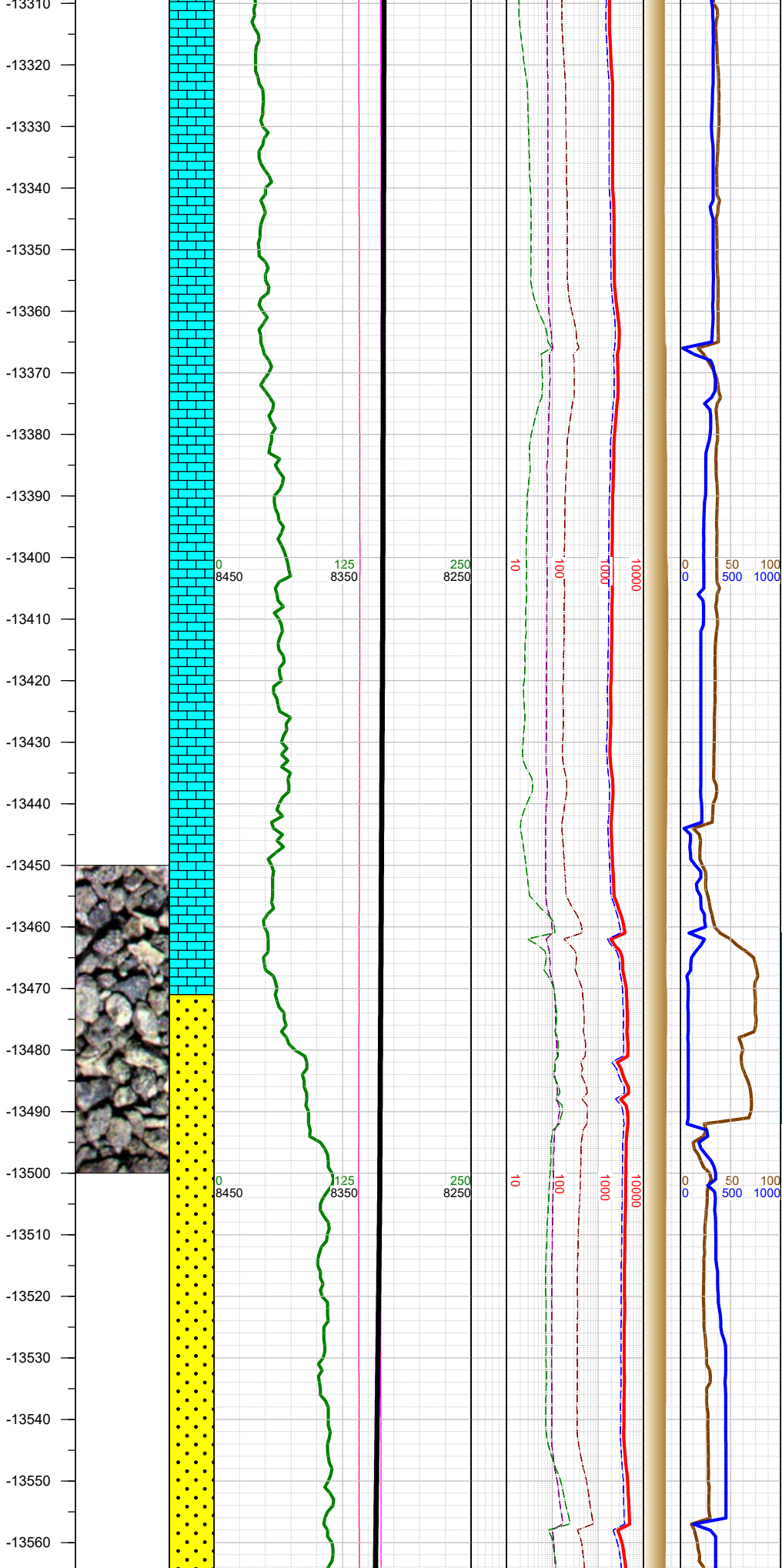
-12742 INC
88.86, AZM
180.93, TVD
8314.54



-12750 SHLY SS: med gy-
gy-brn, fri clus, arg cmt,
pred v f gr, mod-p srt, sl
calc; SHLY SLTST: med-
dk gy, frm, blk-sub blk,
gr-rthy, sl calc, v f sd intbd;







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-13315 INC
88.73, AZM
181.99, TVD
8317.91

-13400 WT
10.4, VIS 44

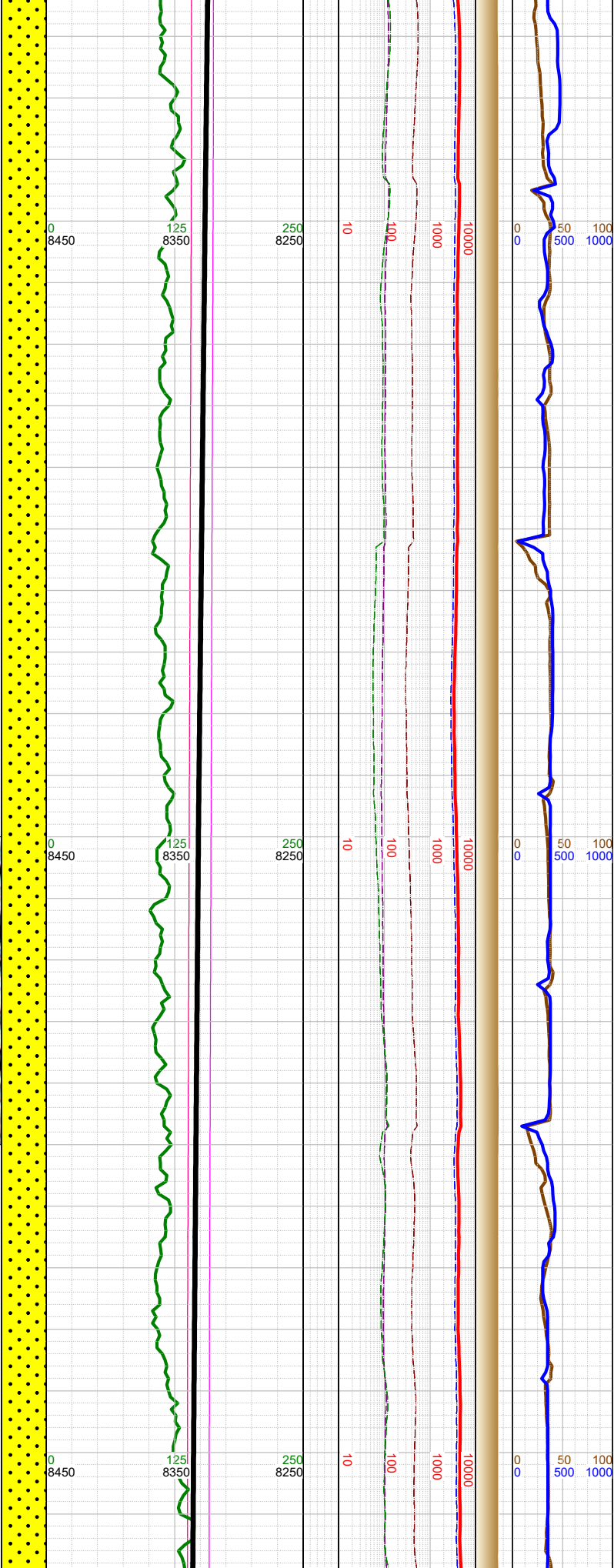
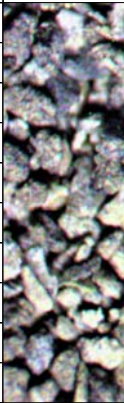
-13410 INC
90.15, AZM
182.25, TVD
8318.84

-13500 SHLY SS: med gy-gy-brn, fri clus, arg cmt, pred v f gr, mod-p srt, sl calc; LS: lt gy-wh, subblky-subply, sl wxy, v calc, sd intbd; SHLY SLTST: med-dk gy, frm, blk-sub blk, gr-rthy, sl calc, v f sd intbd; tr pyr;

-13506 INC
86.96, AZM
182.3, TVD
8321.26

-13520 WT
10.2, VIS 43

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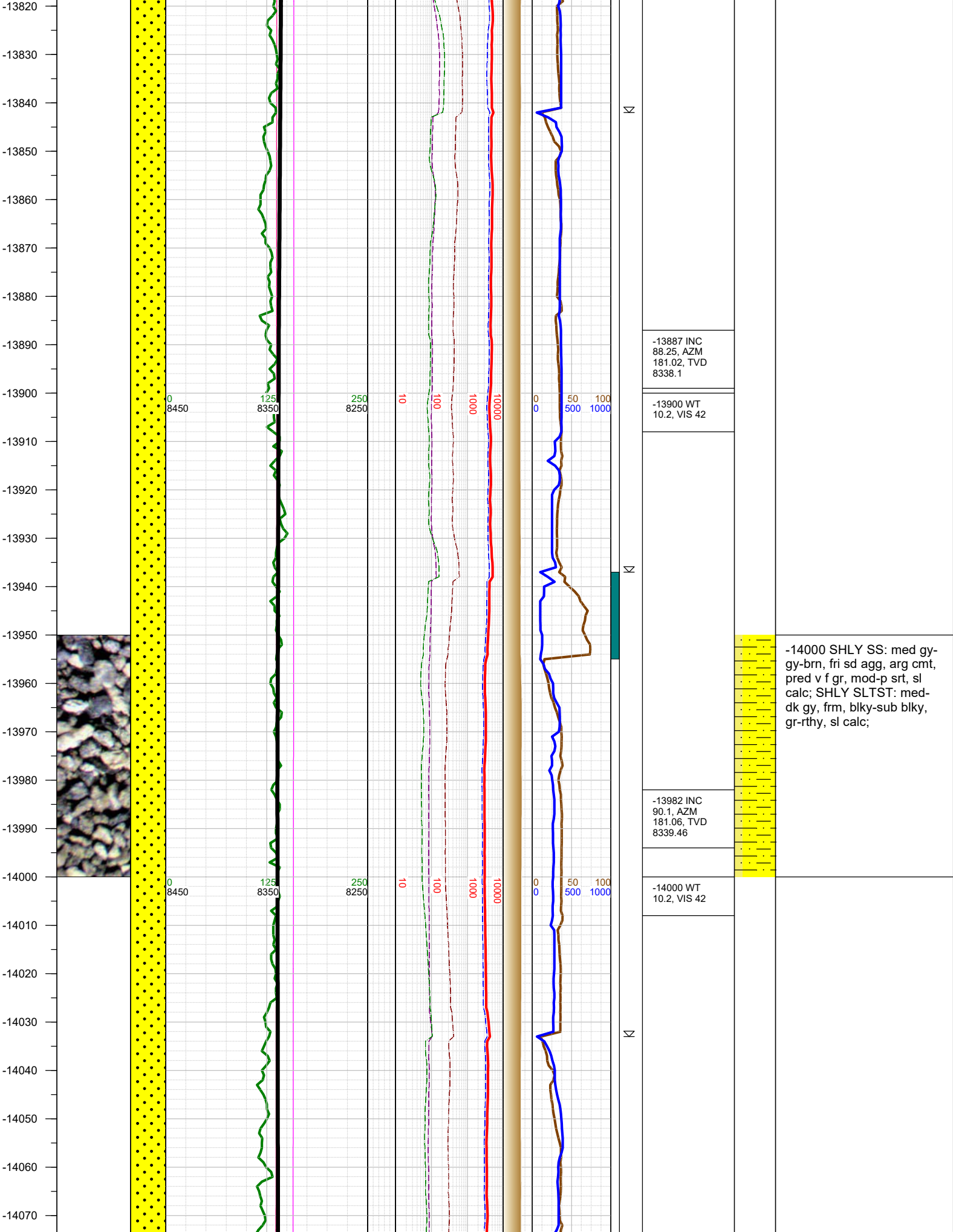


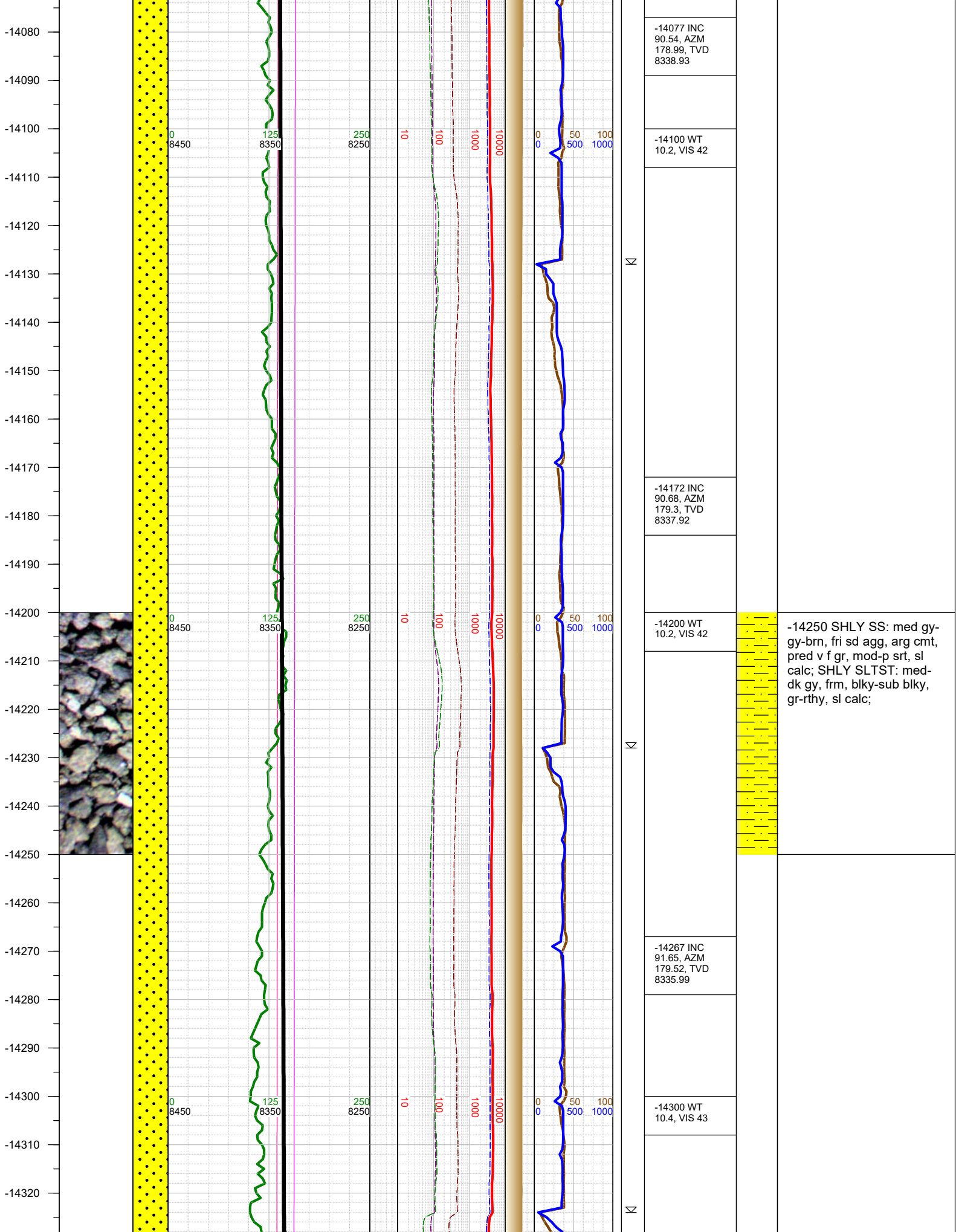
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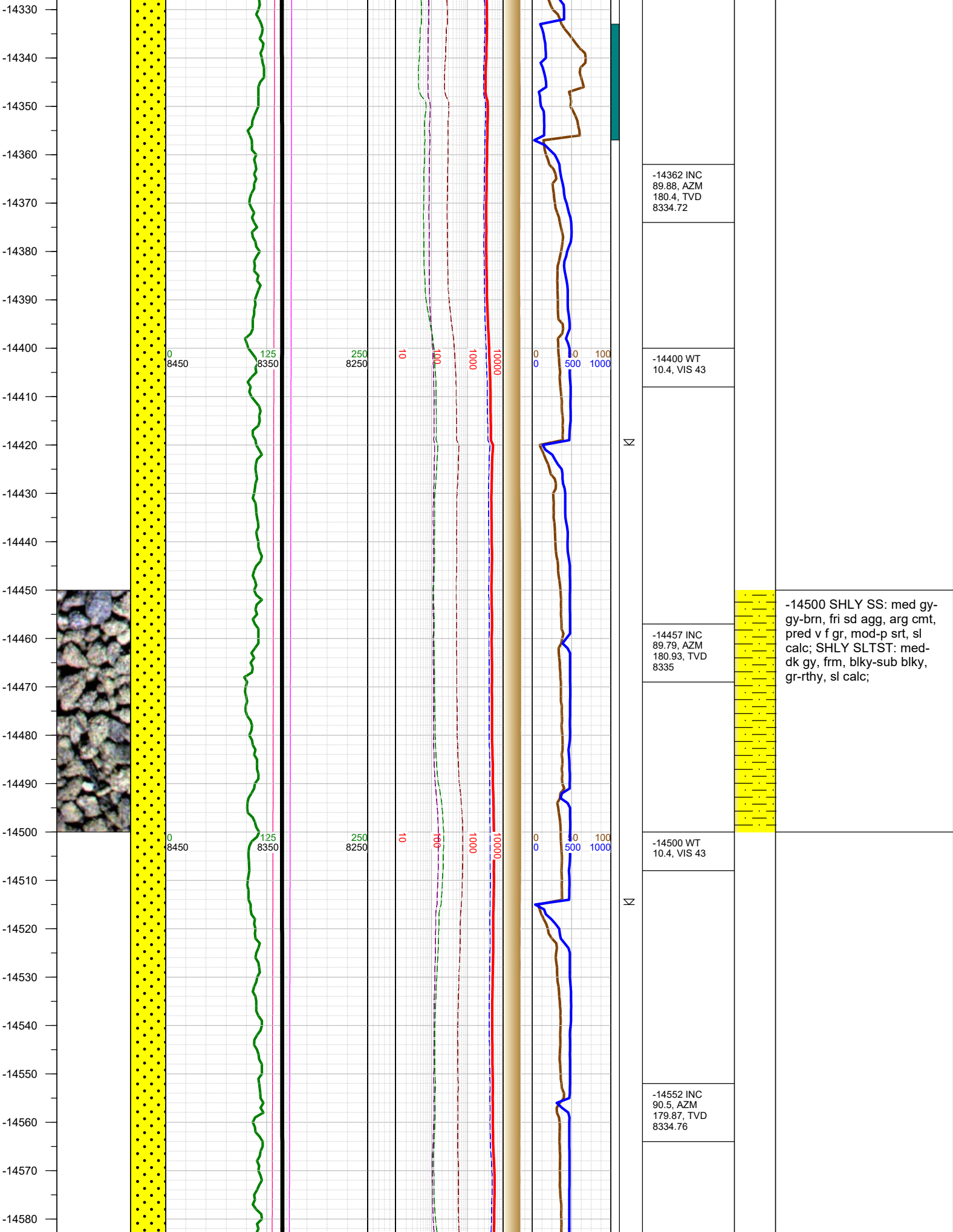
-13601 INC 86.66, AZM 181.77, TVD 8326.55
-13620 WT 10.2, VIS 43
-13697 INC 87.41, AZM 181.11, TVD 8331.52
-13710 WT 10.2, VIS 43
-13792 INC 88.2, AZM 180.98, TVD 8335.15
-13810 WT 10.2, VIS 42



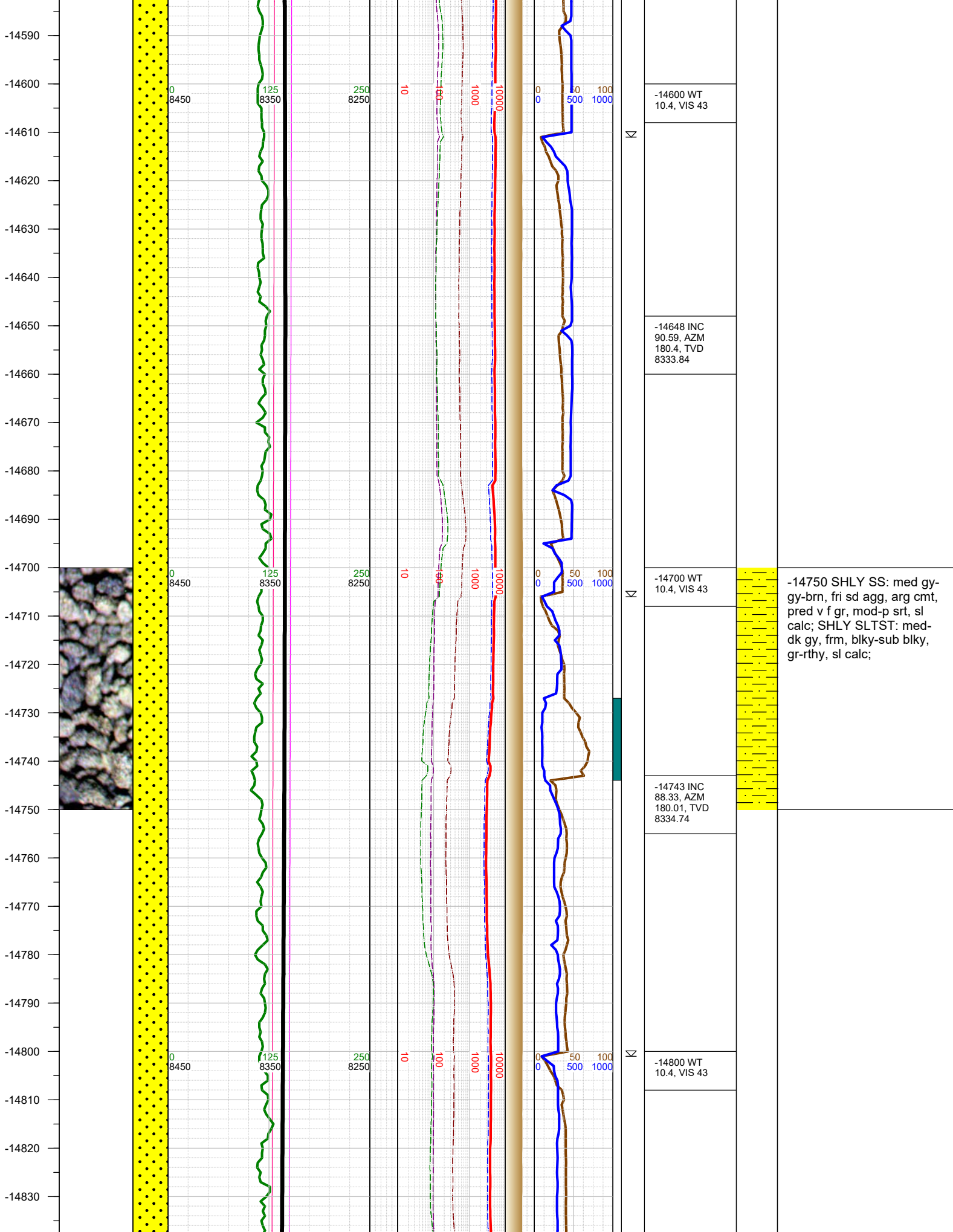
-13750 SHLY SS: med gy-gy-brn, fri sd agg, arg cmt, pred v f gr, mod-p srt, sl calc; SHLY SLTST: med-dk gy, frm, blk-sub blk, gr-rthy, sl calc;

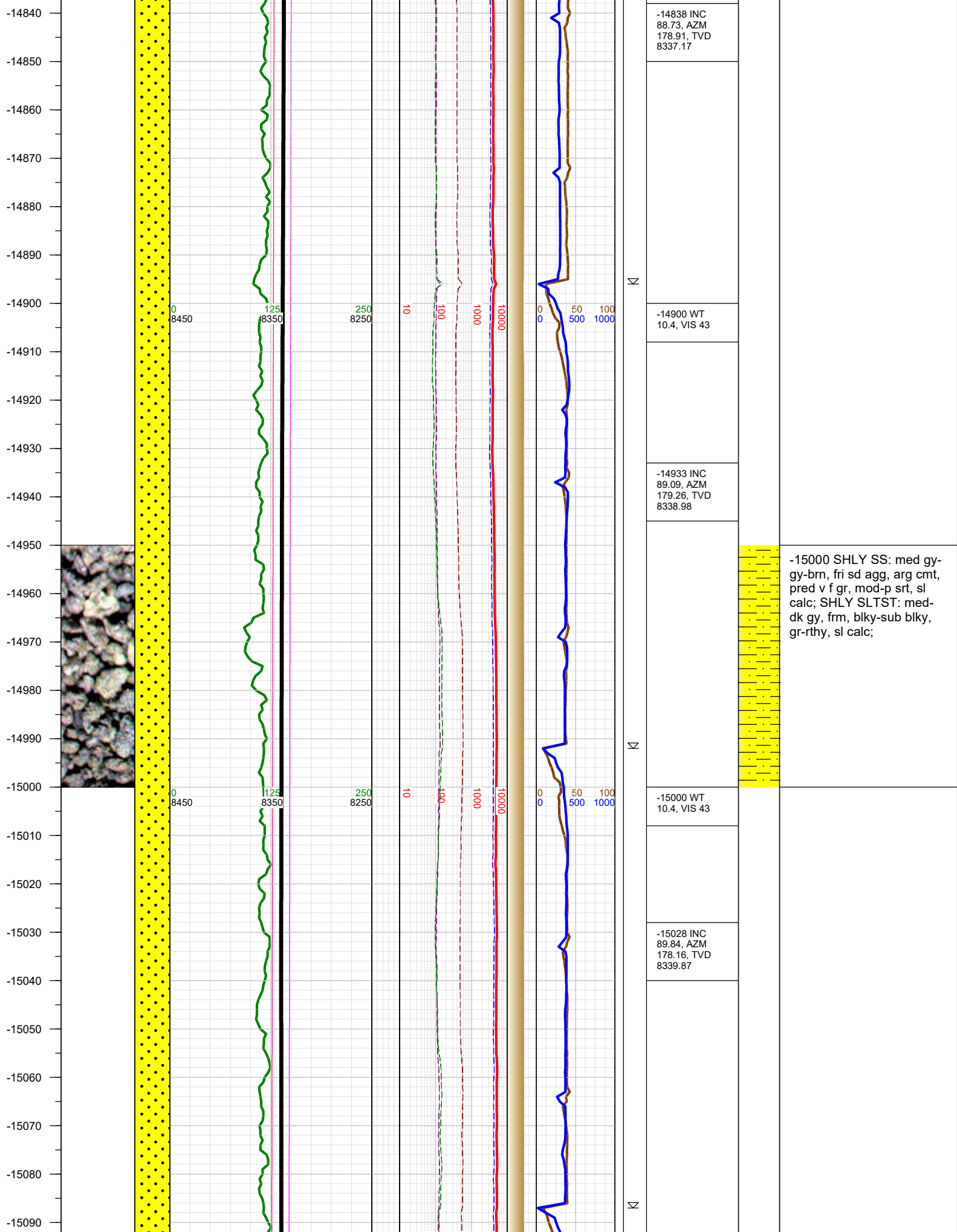


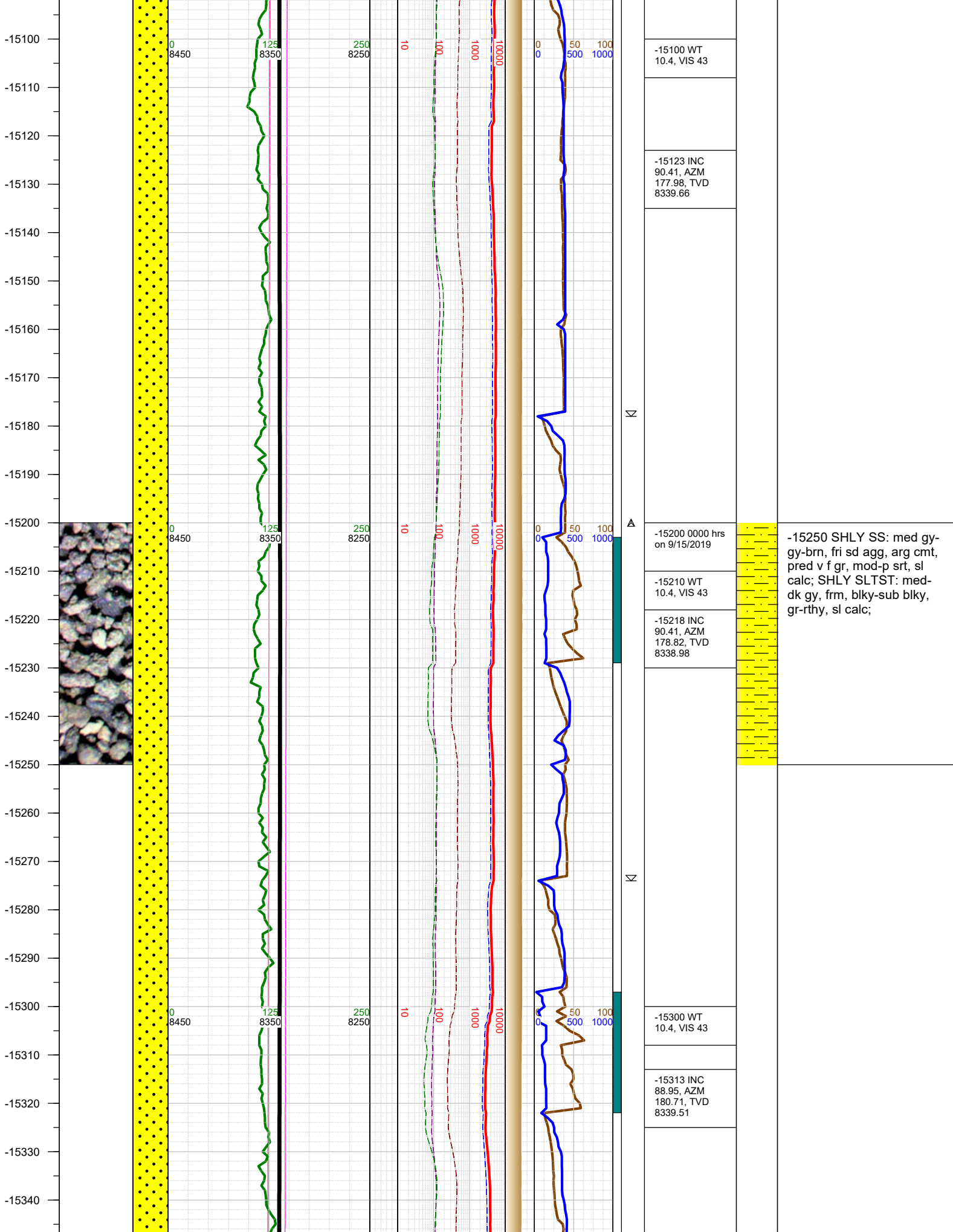




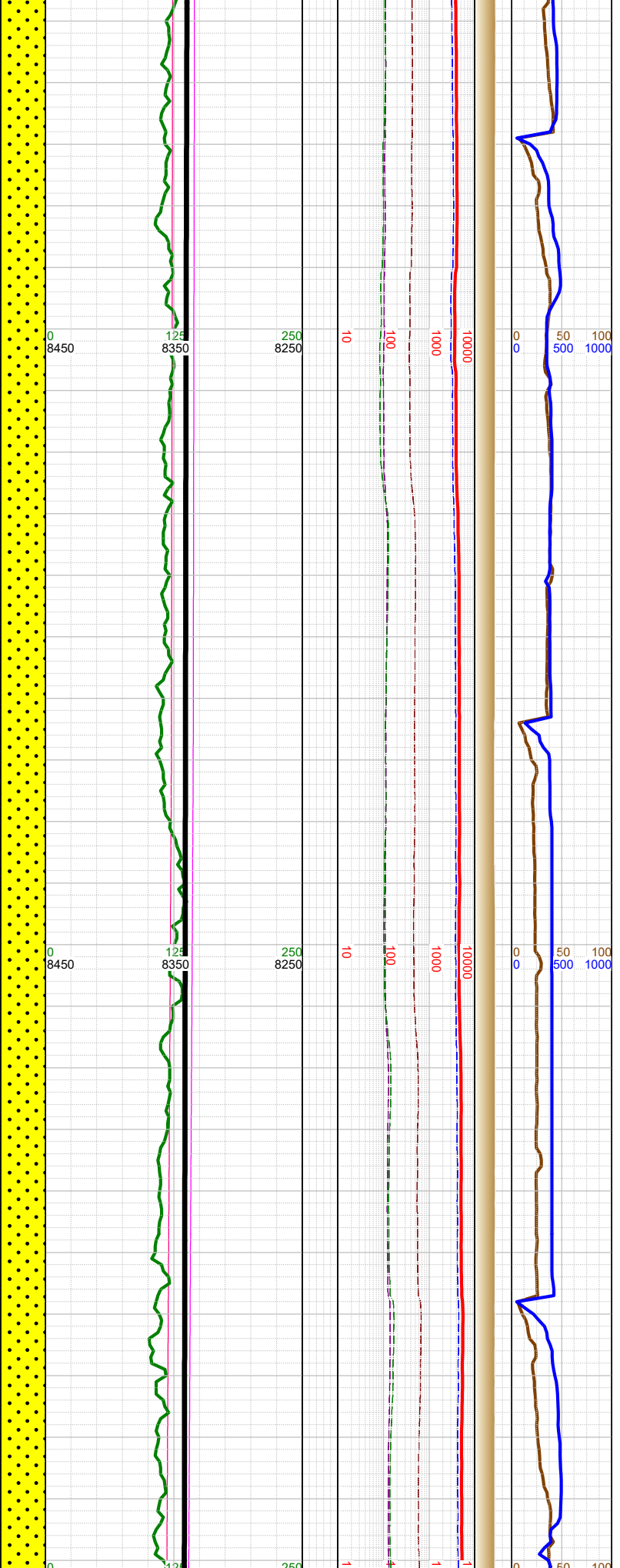
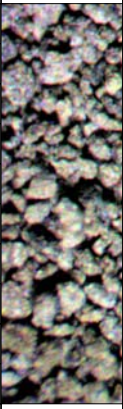
-14500 SHLY SS: med gy-gy-brn, fri sd agg, arg cmt, pred v f gr, mod-p srt, sl calc; SHLY SLTST: med-dk gy, frm, blk-sub blk, gr-rthy, sl calc;





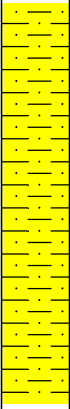


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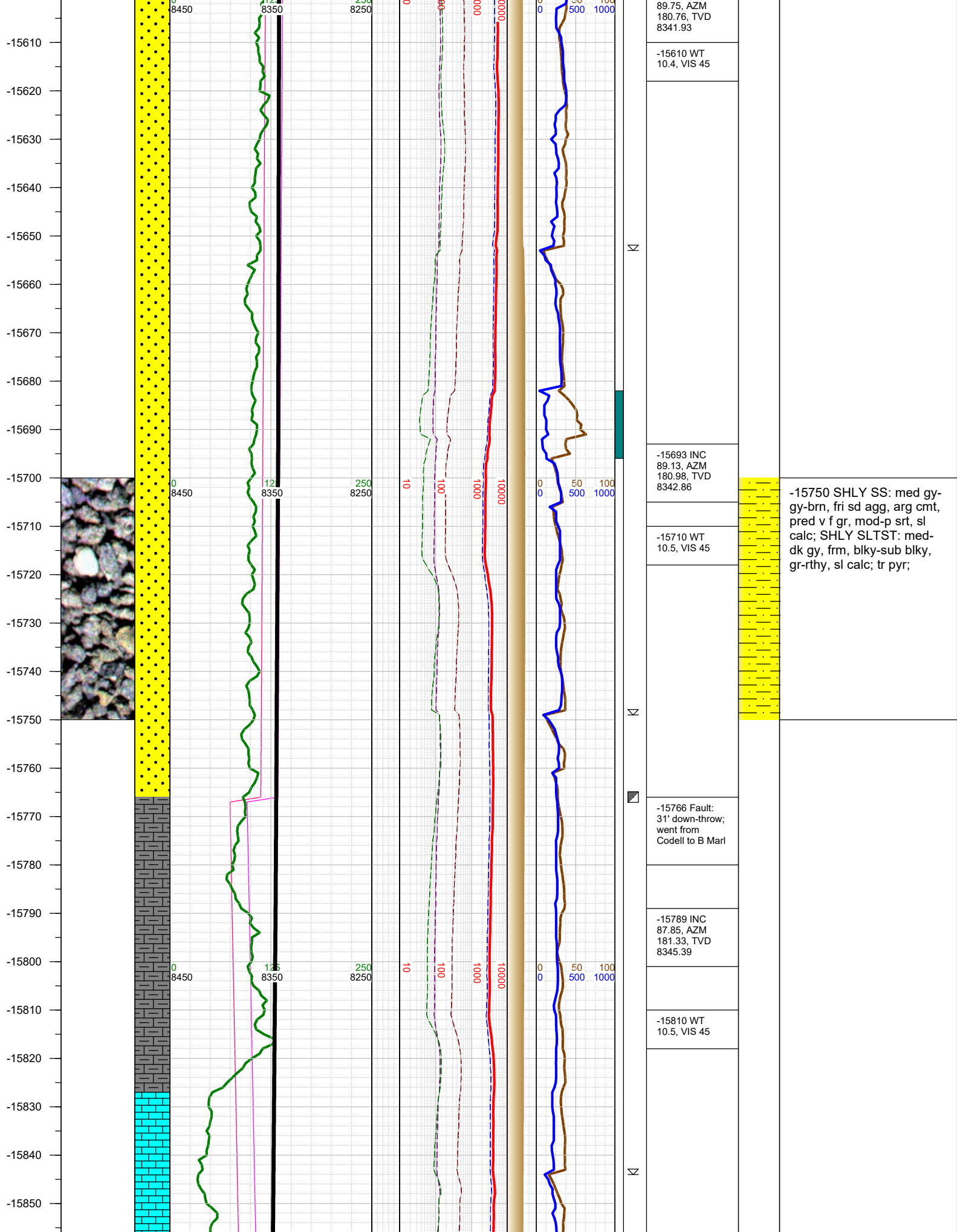


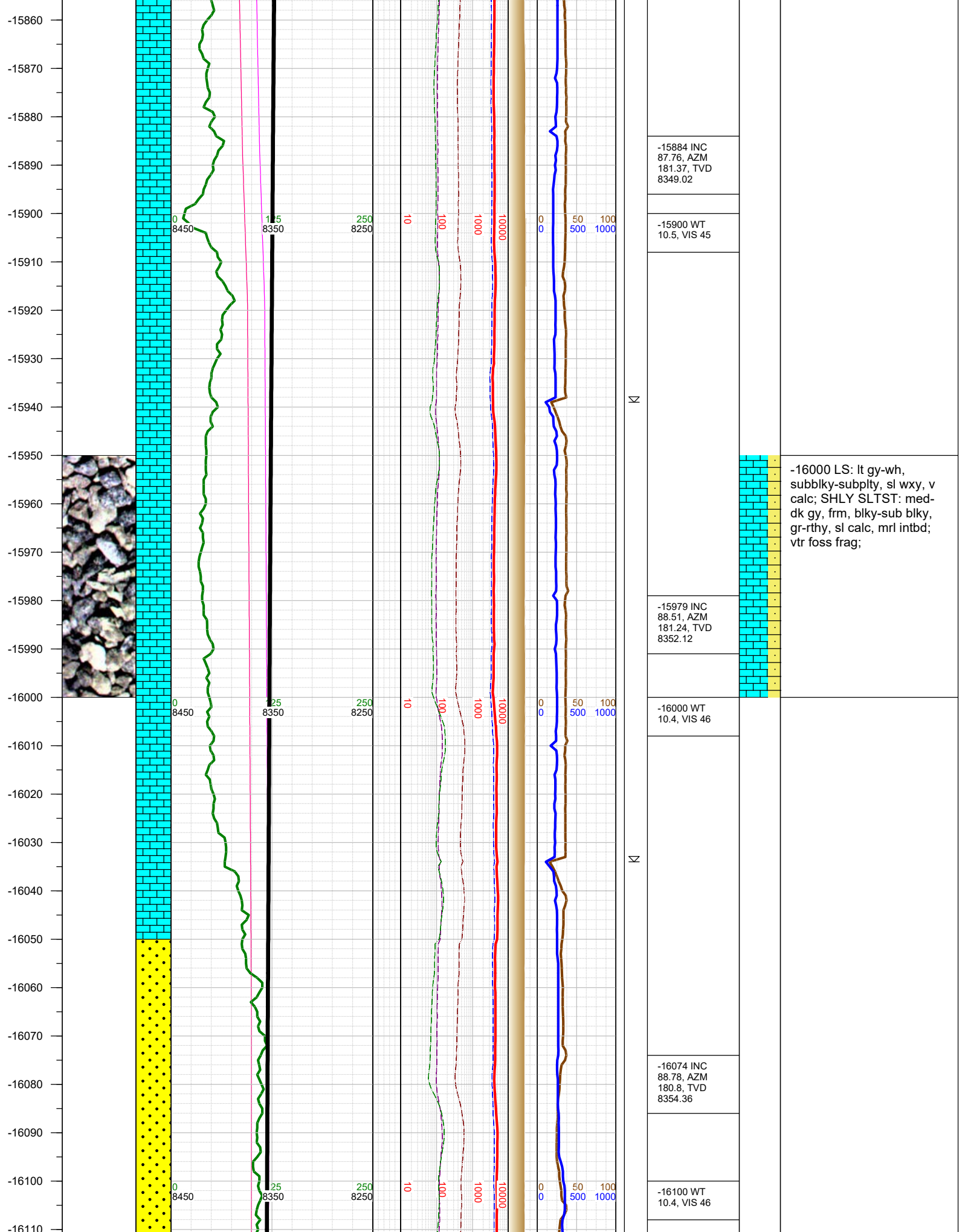
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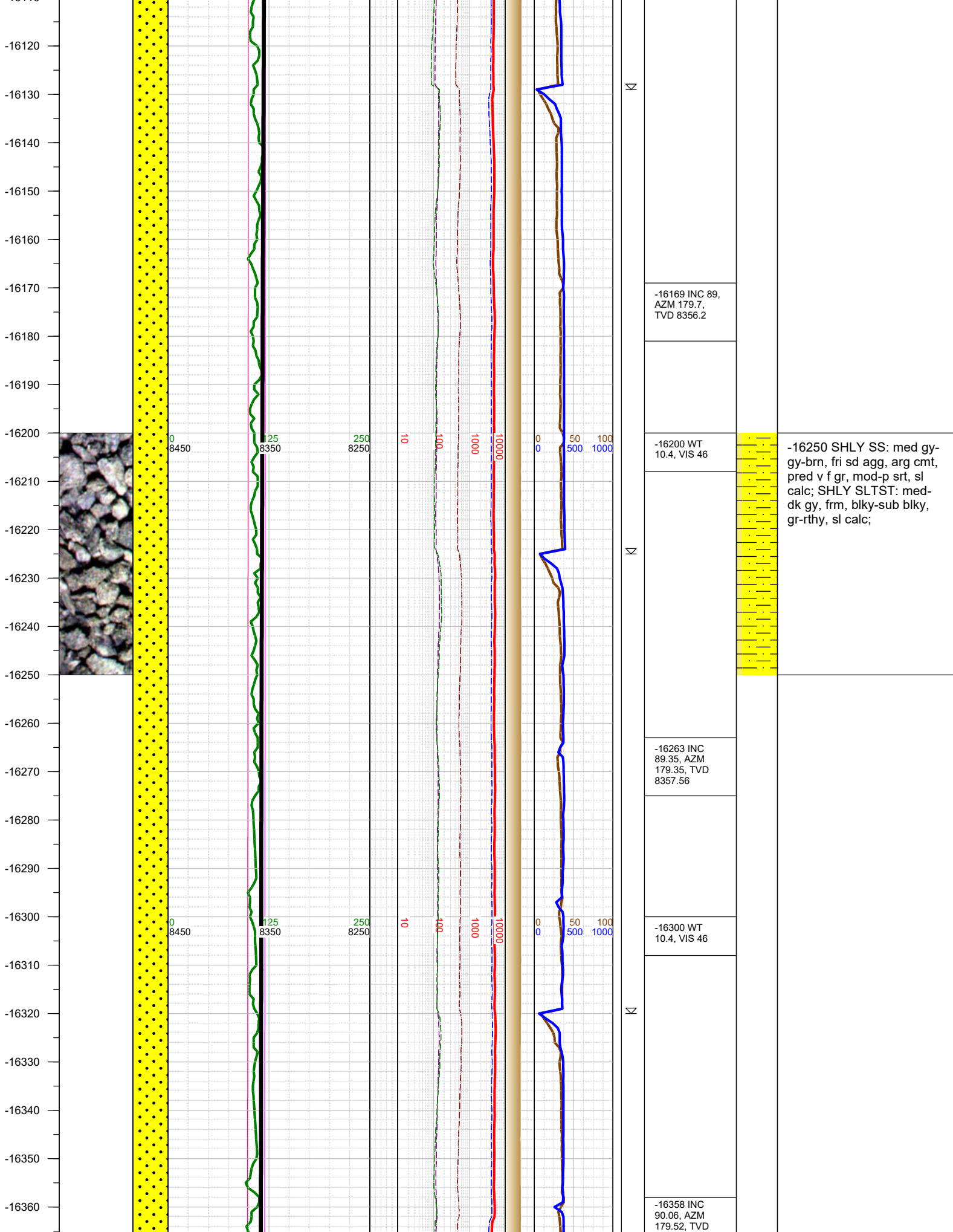
-15407 INC 89.66, AZM 181.64, TVD 8340.65
-15420 WT 10.4, VIS 43
-15503 INC 89.53, AZM 180.89, TVD 8341.33
-15520 WT 10.4, VIS 45
-15598 INC

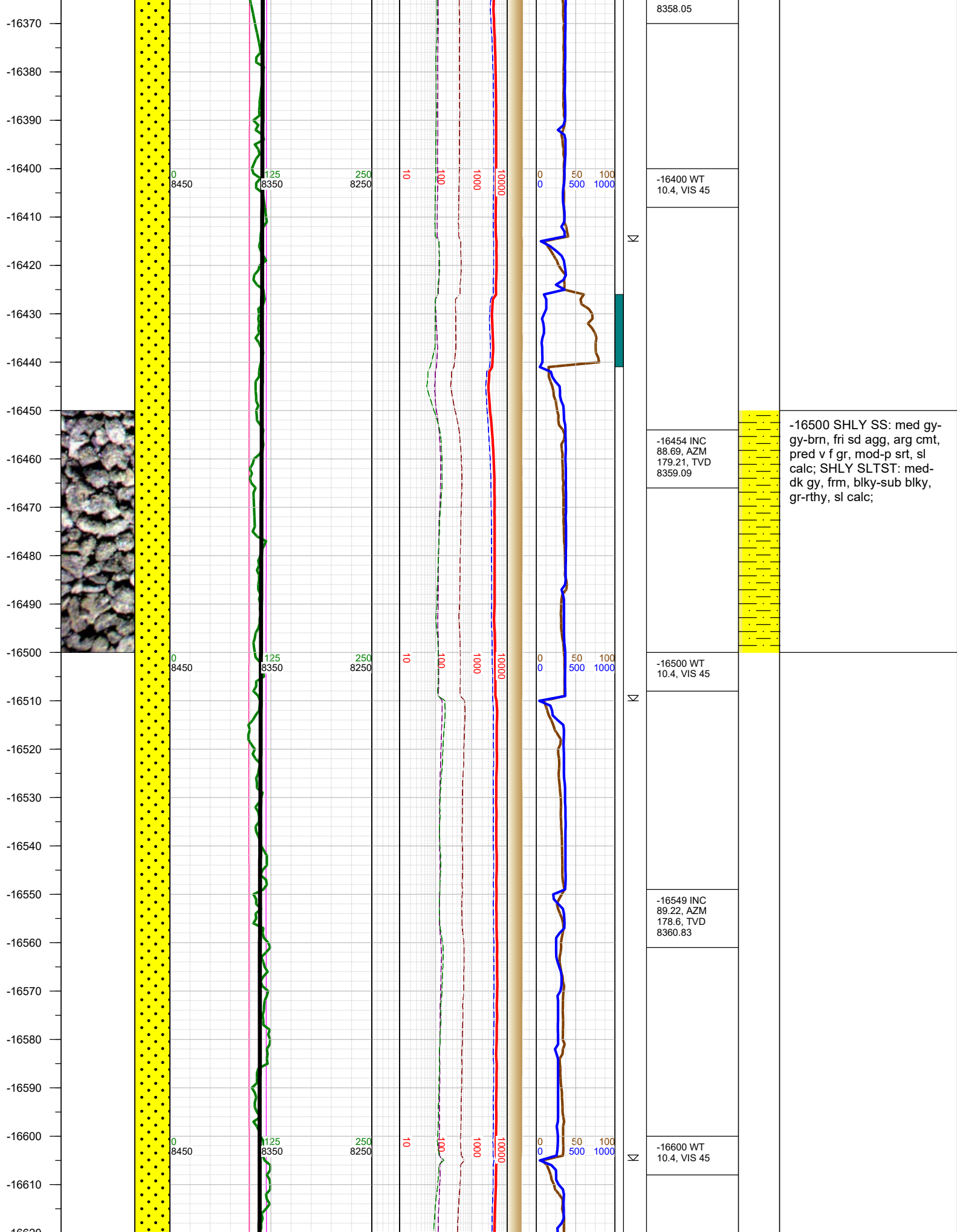


-15500 SHLY SS: med gy-gy-brn, fri sd agg, arg cmt, pred v f gr, mod-p srt, sl calc; SHLY SLTST: med-dk gy, frm, blk-sub blk, gr-rthy, sl calc; tr pyr;

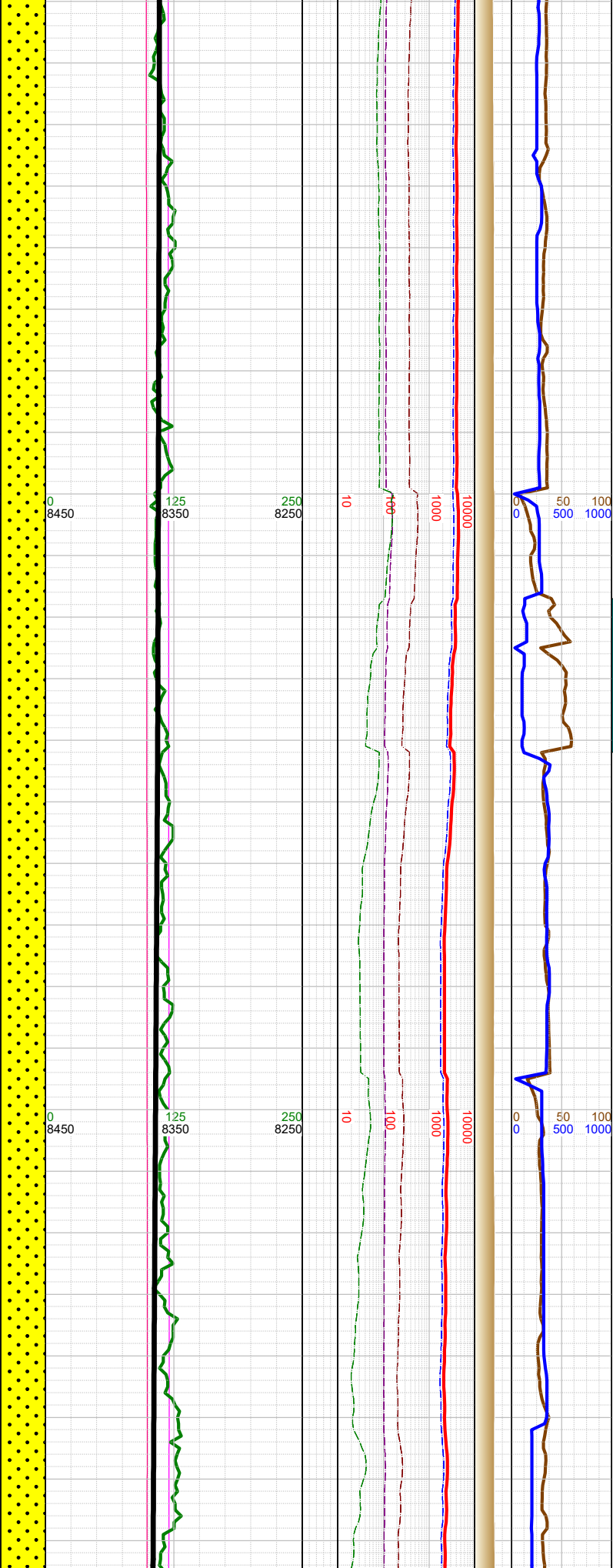
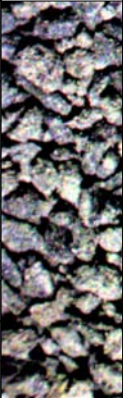








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-16644 INC
90.01, AZM
179.96, TVD
8361.46

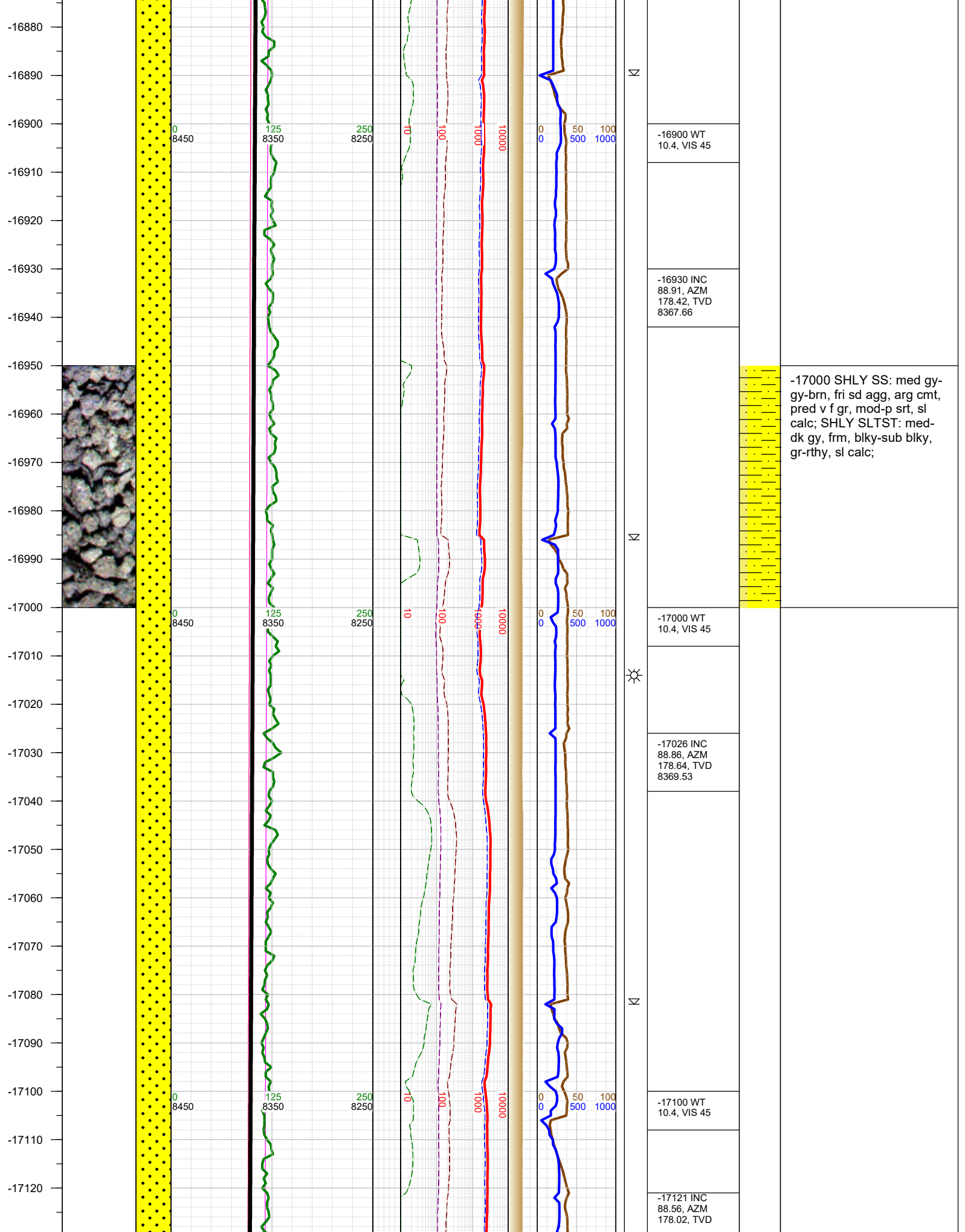
-16700 WT
10.4, VIS 45

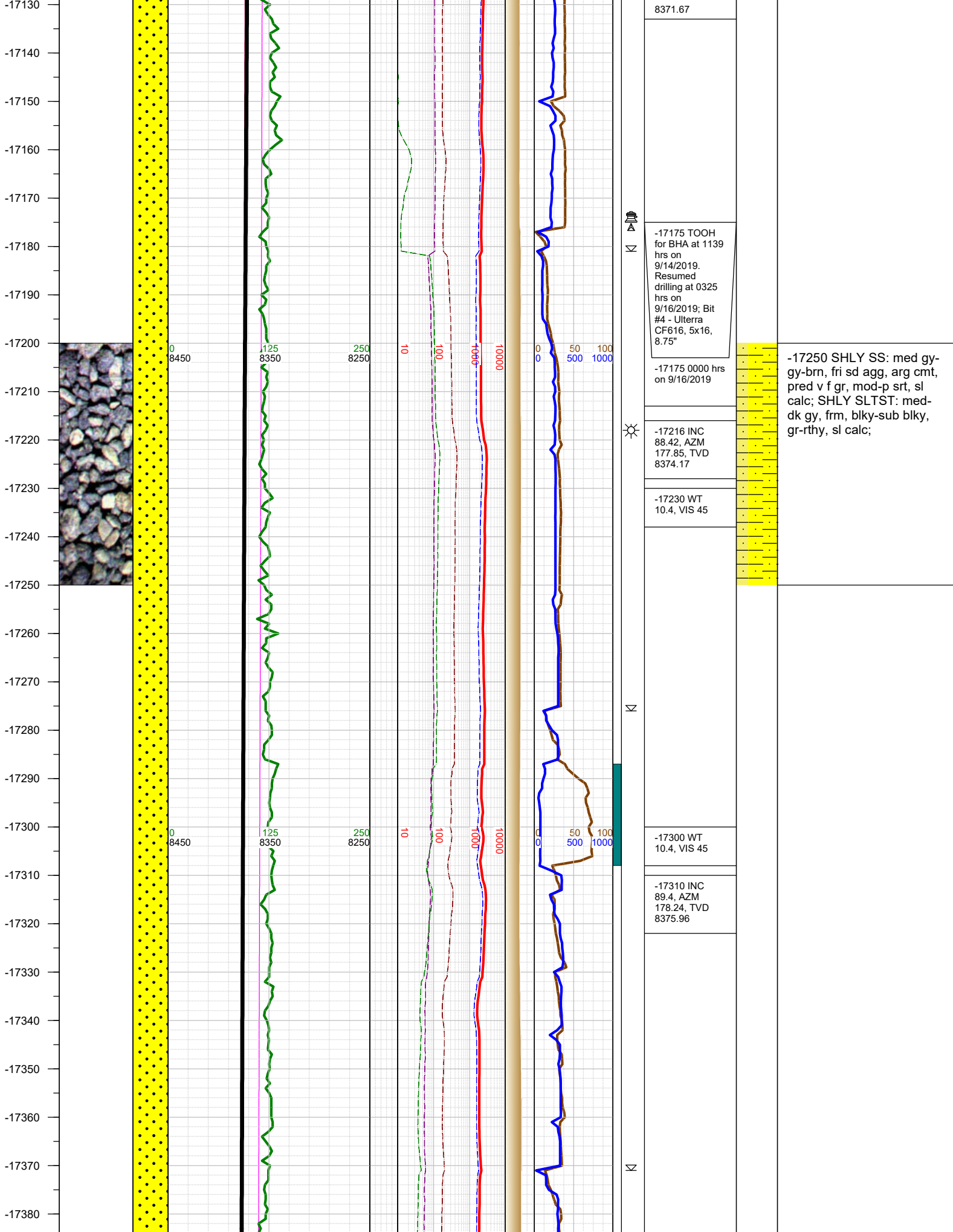
-16740 INC
88.56, AZM
179.96, TVD
8362.66

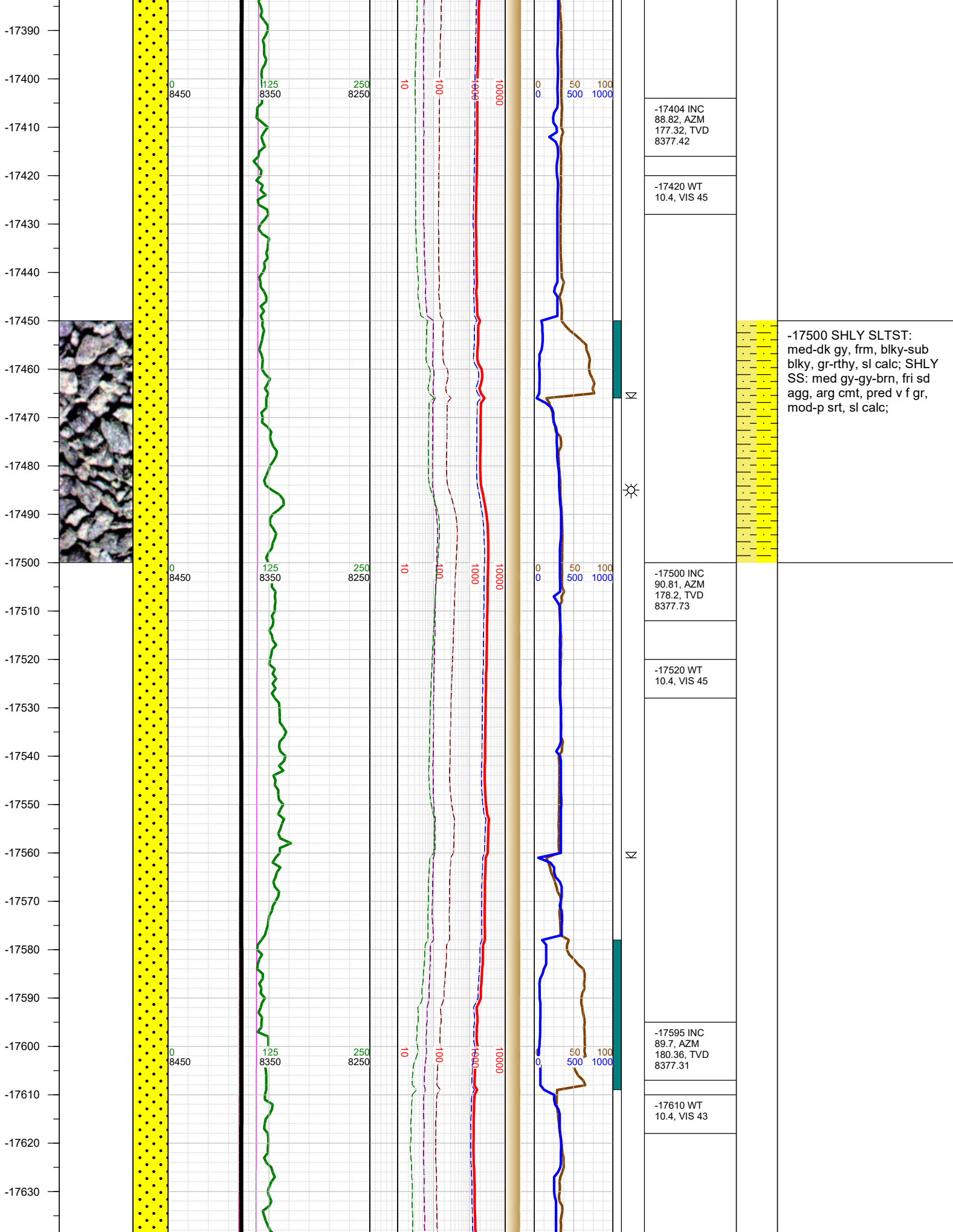
-16800 WT
10.4, VIS 45

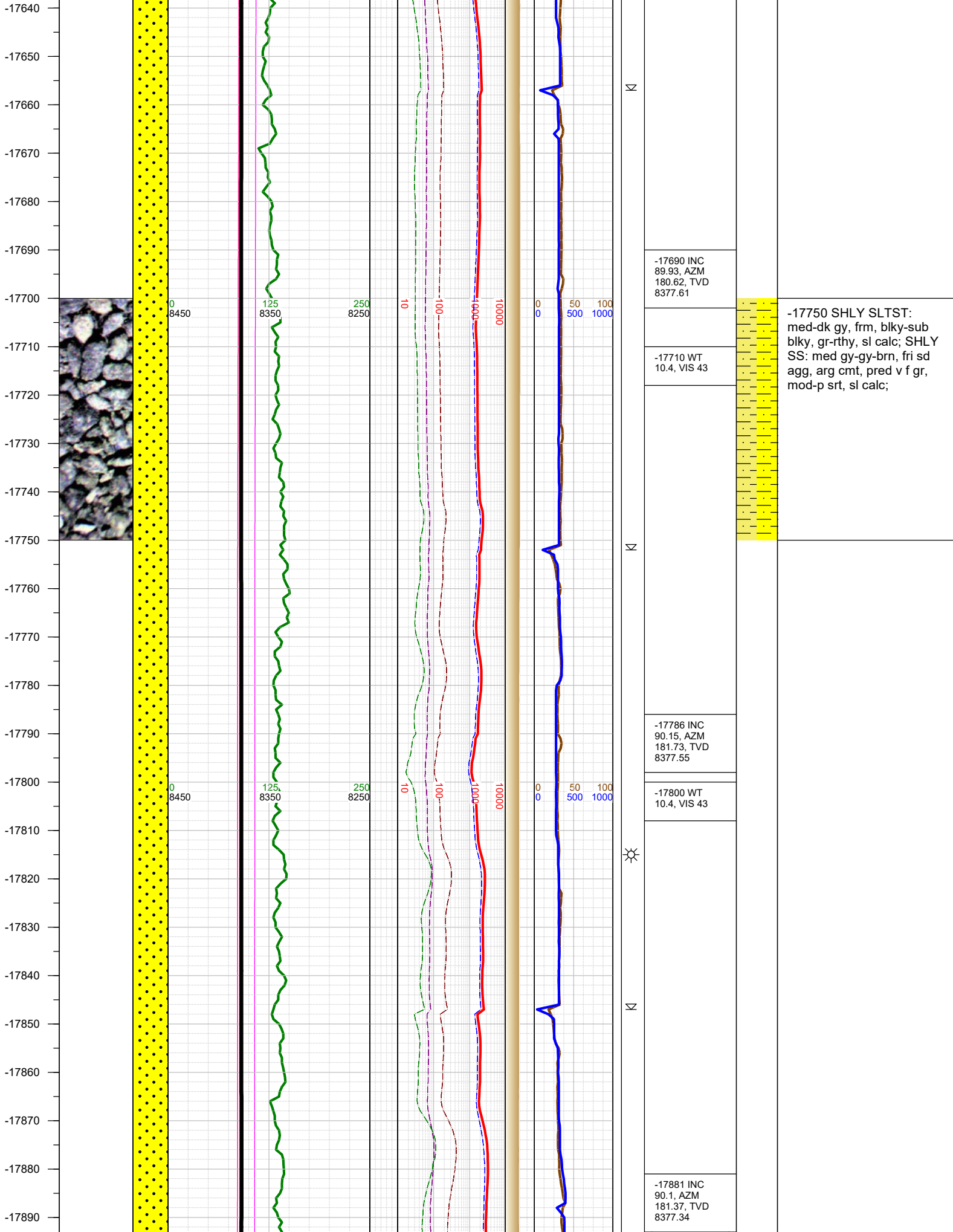
-16835 INC
88.25, AZM
179.13, TVD
8365.31

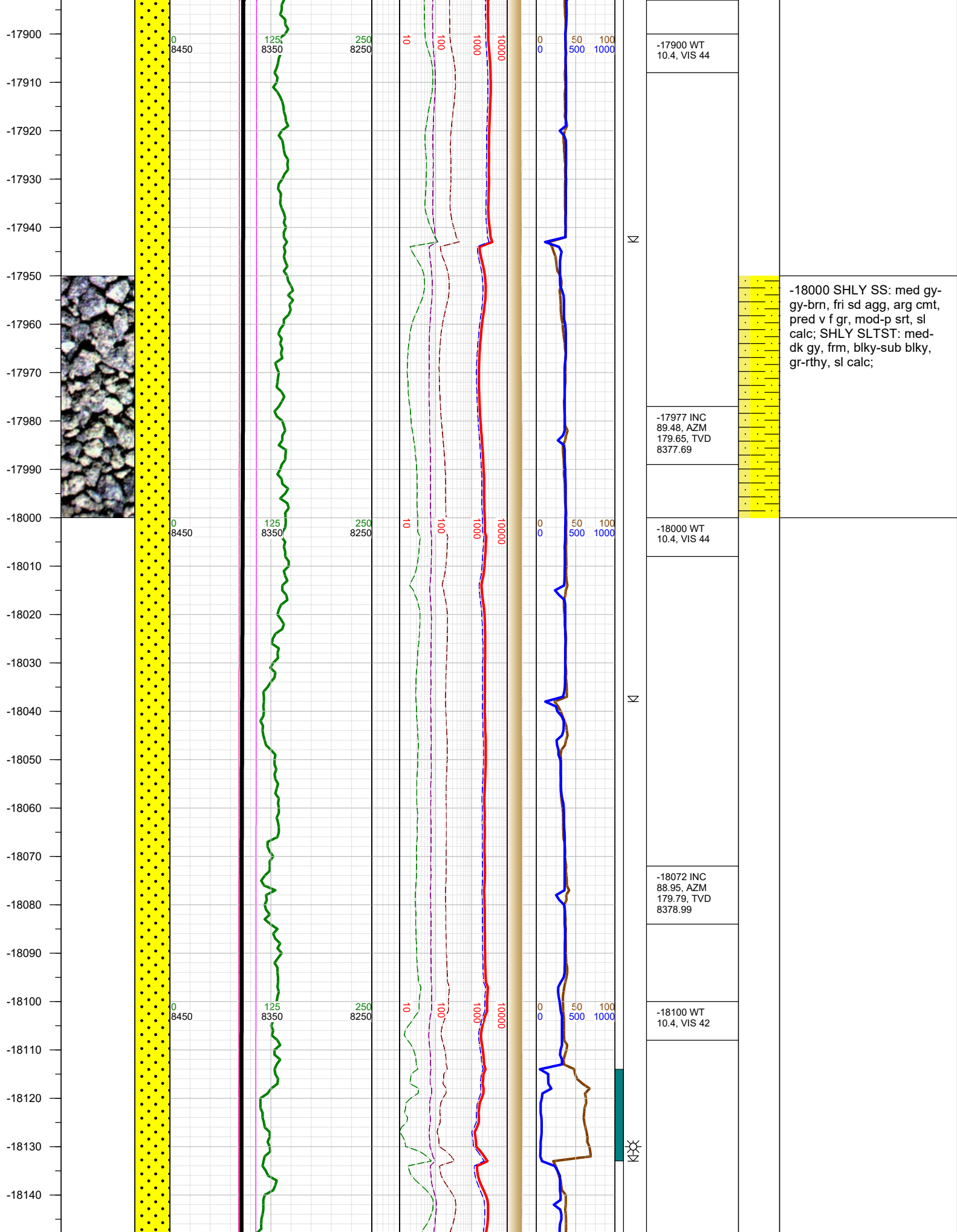
-16750 SHLY SS: med gy-gy-brn, fri sd agg, arg cmt, pred v f gr, mod-p srt, sl calc; SHLY SLTST: med-dk gy, frm, blk-sub blk, gr-rthy, sl calc;



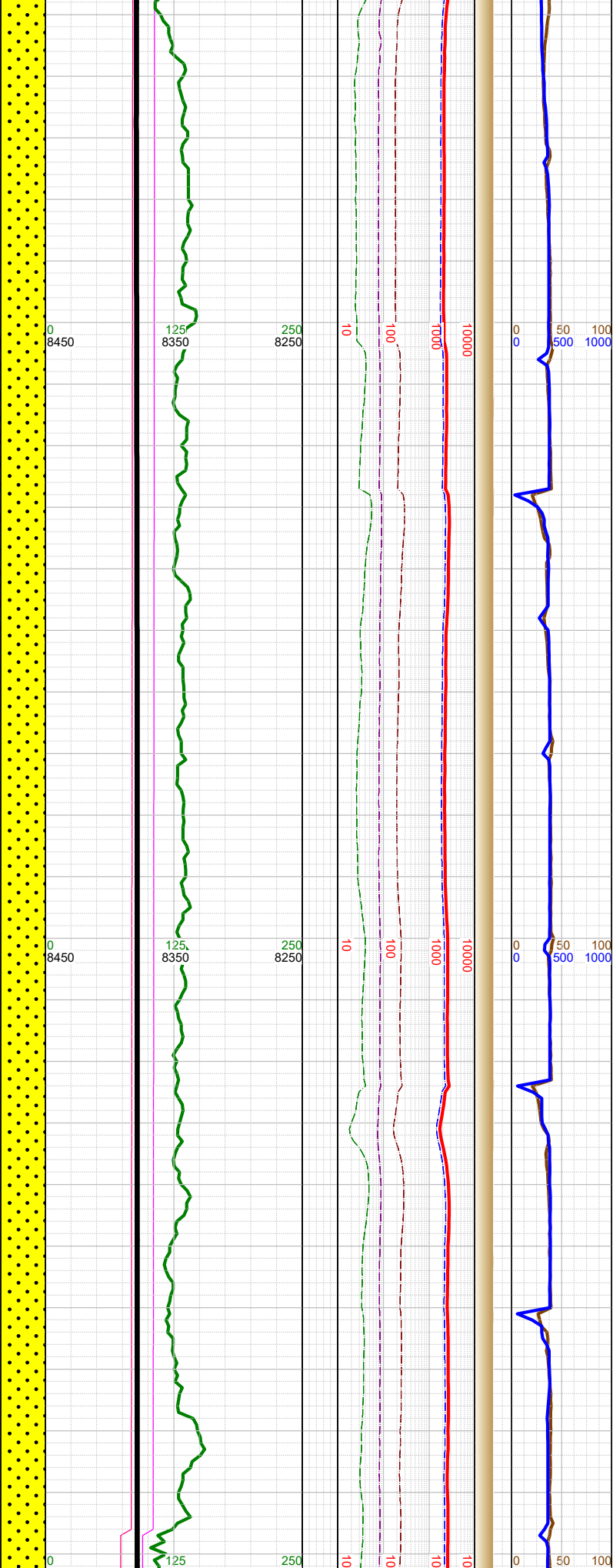
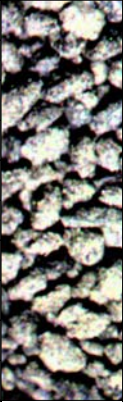








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-18168 INC
90.68, AZM
180.1, TVD
8379.3

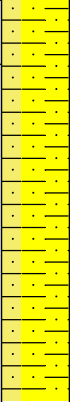
-18200 WT
10.4, VIS 43

-18263 INC
90.15, AZM
179.83, TVD
8378.61

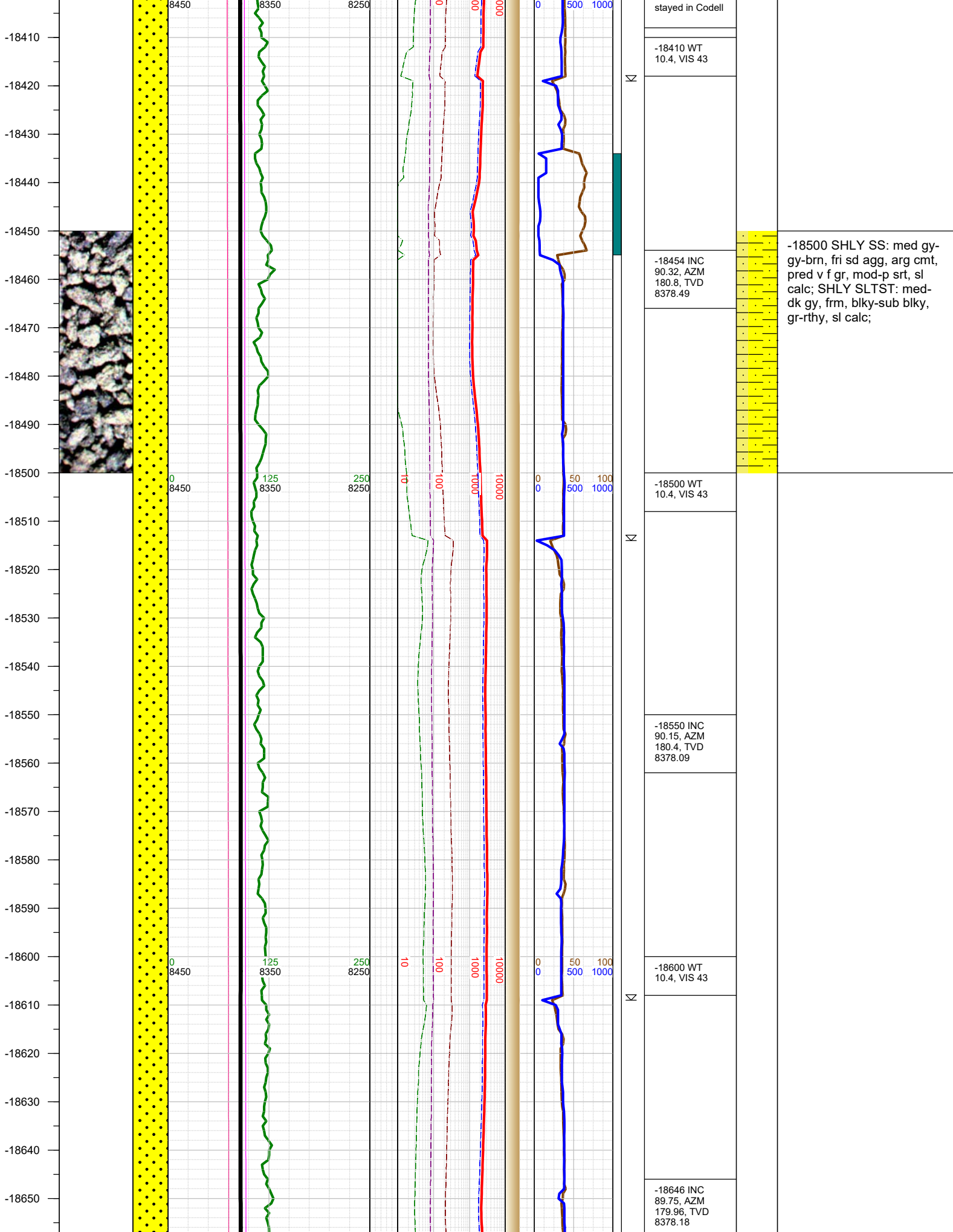
-18300 WT
10.4, VIS 43

-18358 INC
89.84, AZM
179.52, TVD
8378.62

-18396 Fault: 8'
down-throw;

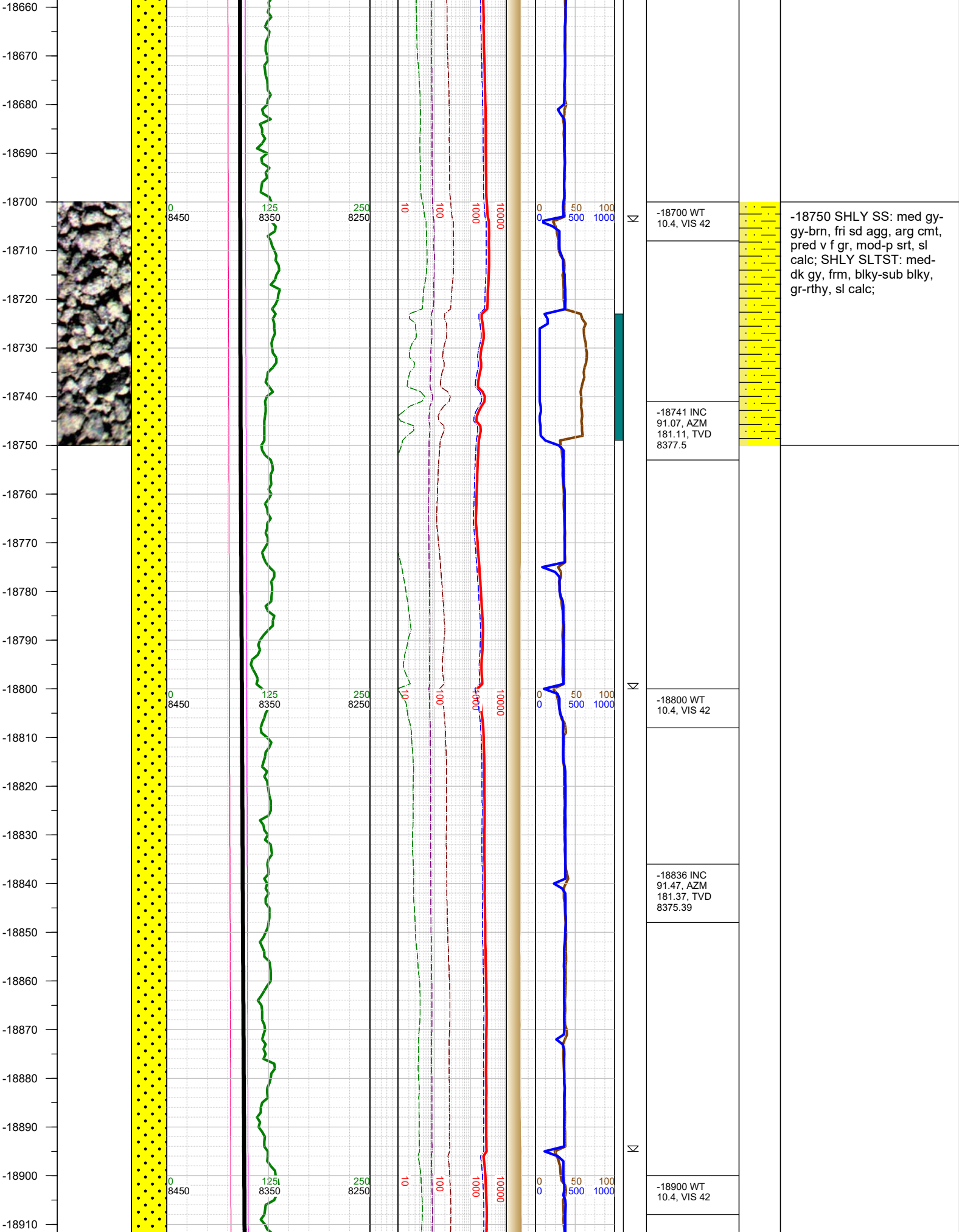


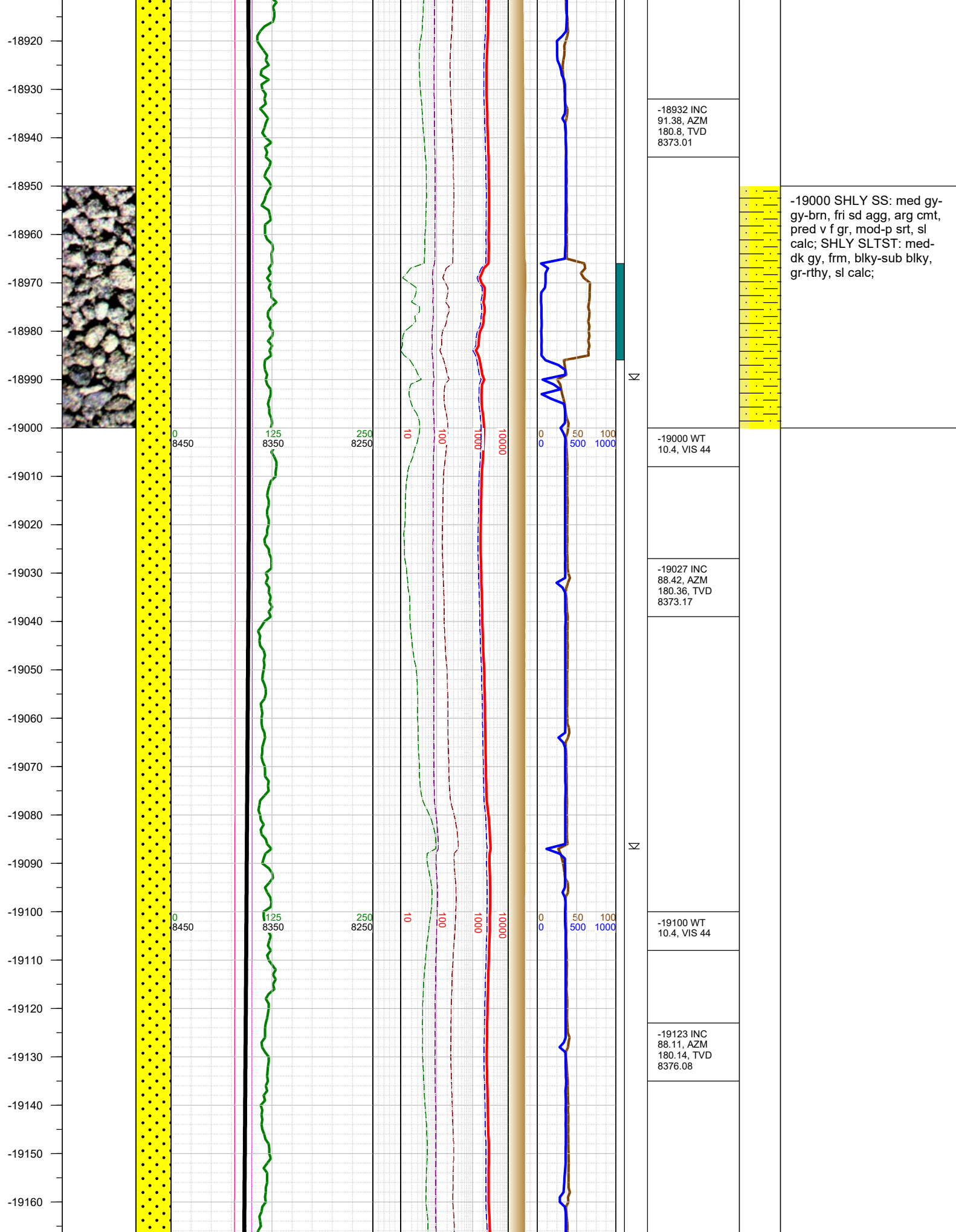
-18250 SHLY SS: med gy-
gy-brn, fri sd agg, arg cmt,
pred v f gr, mod-p srt, sl
calc; SHLY SLTST: med-
dk gy, frm, blk-sub blk, y,
gr-rthy, sl calc;

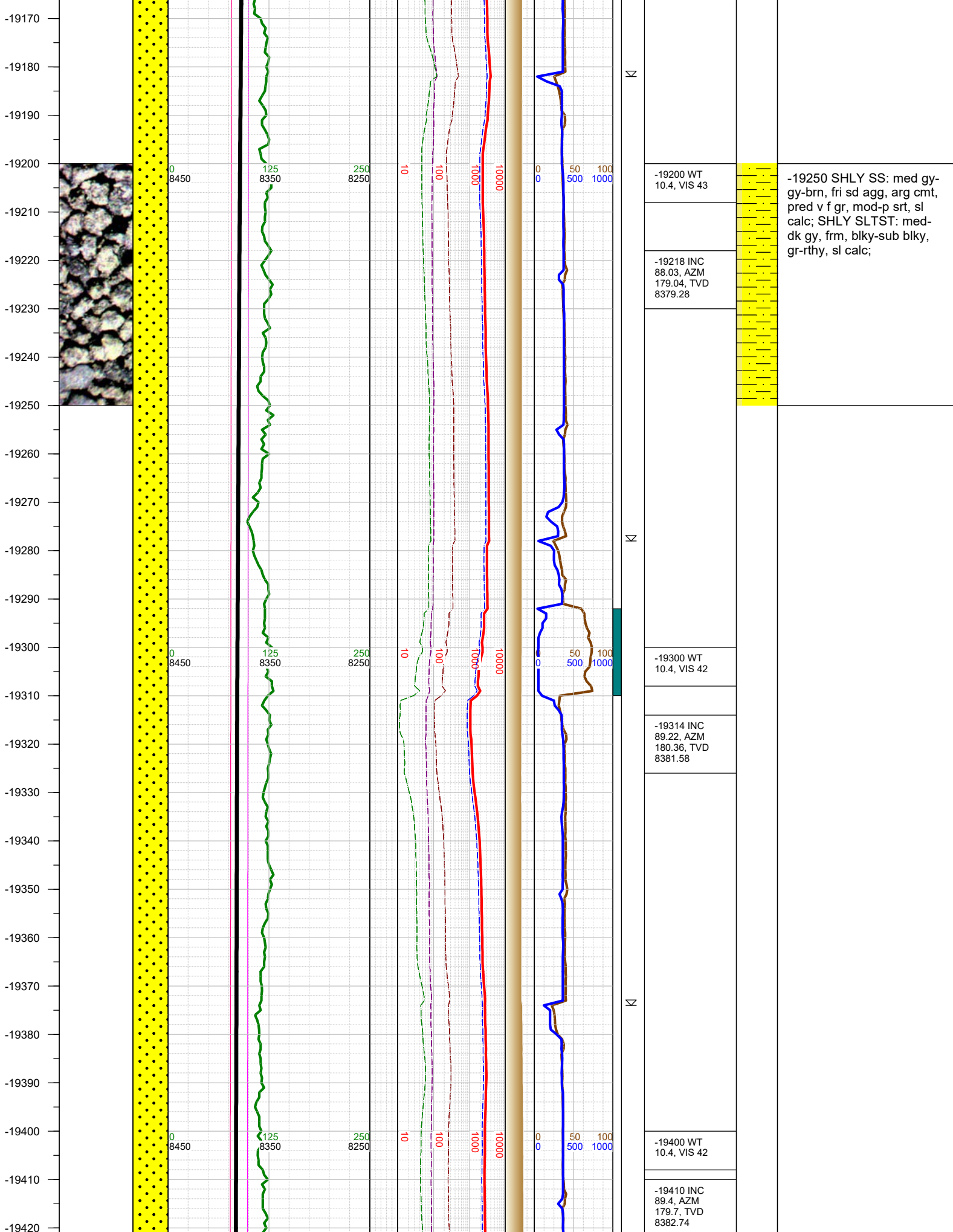


stayed in Codell
-18410 WT 10.4, VIS 43
-18454 INC 90.32, AZM 180.8, TVD 8378.49
-18500 WT 10.4, VIS 43
-18550 INC 90.15, AZM 180.4, TVD 8378.09
-18600 WT 10.4, VIS 43
-18646 INC 89.75, AZM 179.96, TVD 8378.18

-18500 SHLY SS: med gy-
gy-brn, fri sd agg, arg cmt,
pred v f gr, mod-p srt, sl
calc; SHLY SLTST: med-
dk gy, frm, blk-sub blk,
gr-rthy, sl calc;

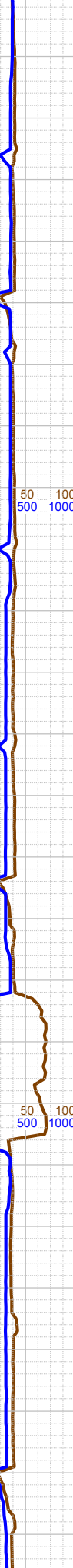
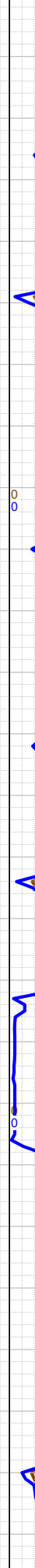
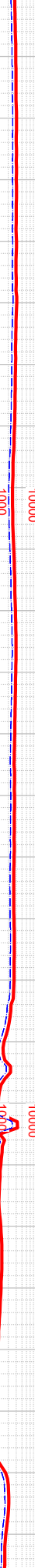
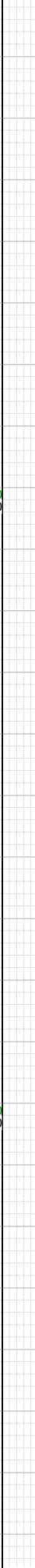
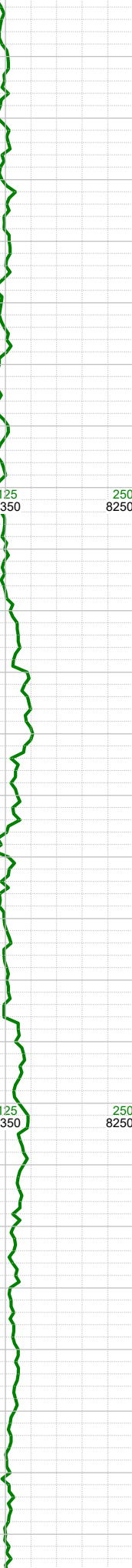
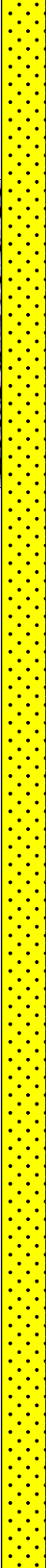
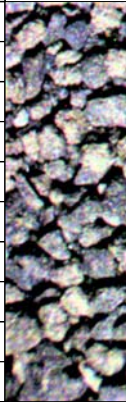






-19250 SHLY SS: med gy-gy-brn, fri sd agg, arg cmt, pred v f gr, mod-p srt, sl calc; SHLY SLTST: med-dk gy, frm, blk-sub blk, gr-rthy, sl calc;

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-19504 INC
89.13, AZM
179.21, TVD
8383.94

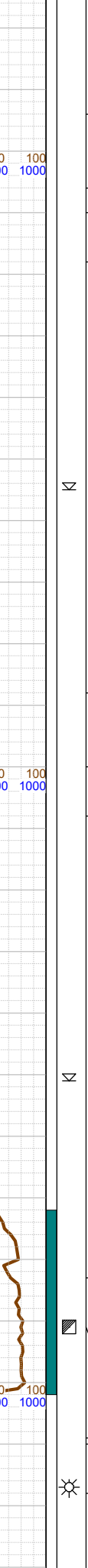
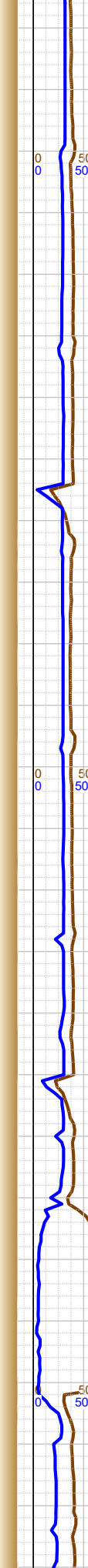
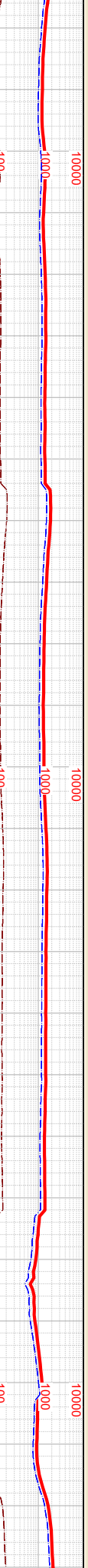
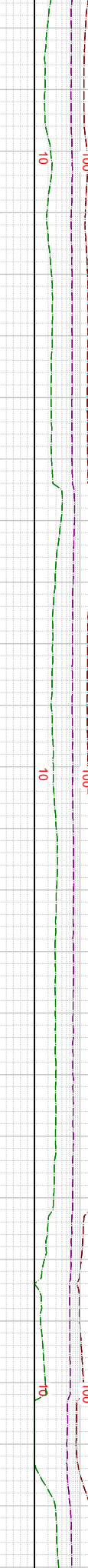
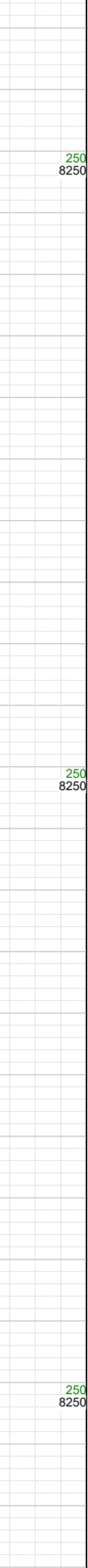
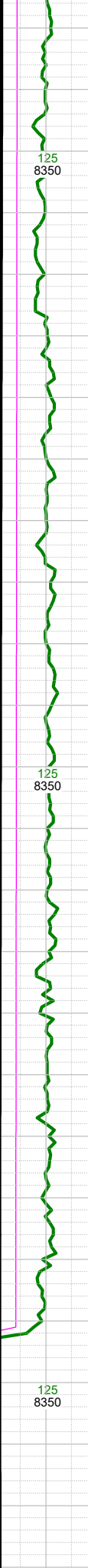
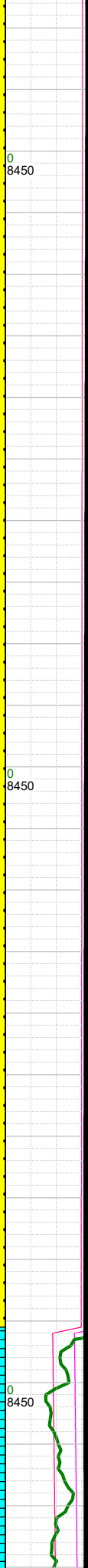
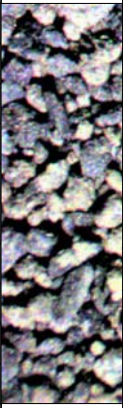
-19520 WT
10.4, VIS 43

-19599 INC
89.66, AZM
180.84, TVD
8384.95

-19620 WT
10.4, VIS 43

-19500 SHLY SLTST:
med-dk gy, frm, blkyl-sub
blkyl, gr-rthy, sl calc; SHLY
SS: med gy-gy-brn, fri sd
agg, arg cmt, pred v f gr,
mod-p srt, sl calc;

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-19930



-19694 INC
89.57, AZM
181.15, TVD
8385.58

-19710 WT
10.5, VIS 45

-19788 INC
89.35, AZM
179.87, TVD
8386.47

-19800 WT
10.5, VIS 45

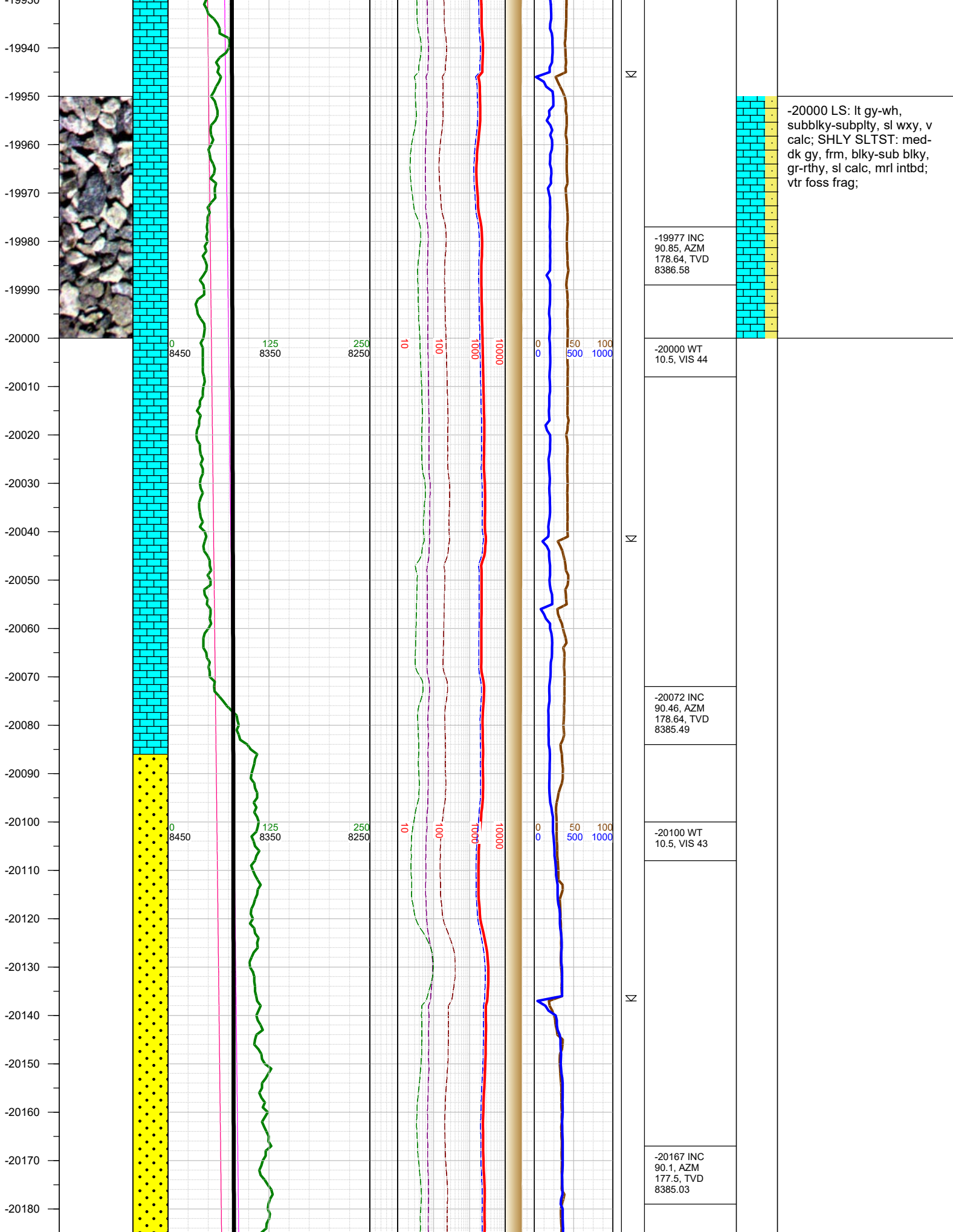
-19883 INC
89.84, AZM
179.65, TVD
8387.14

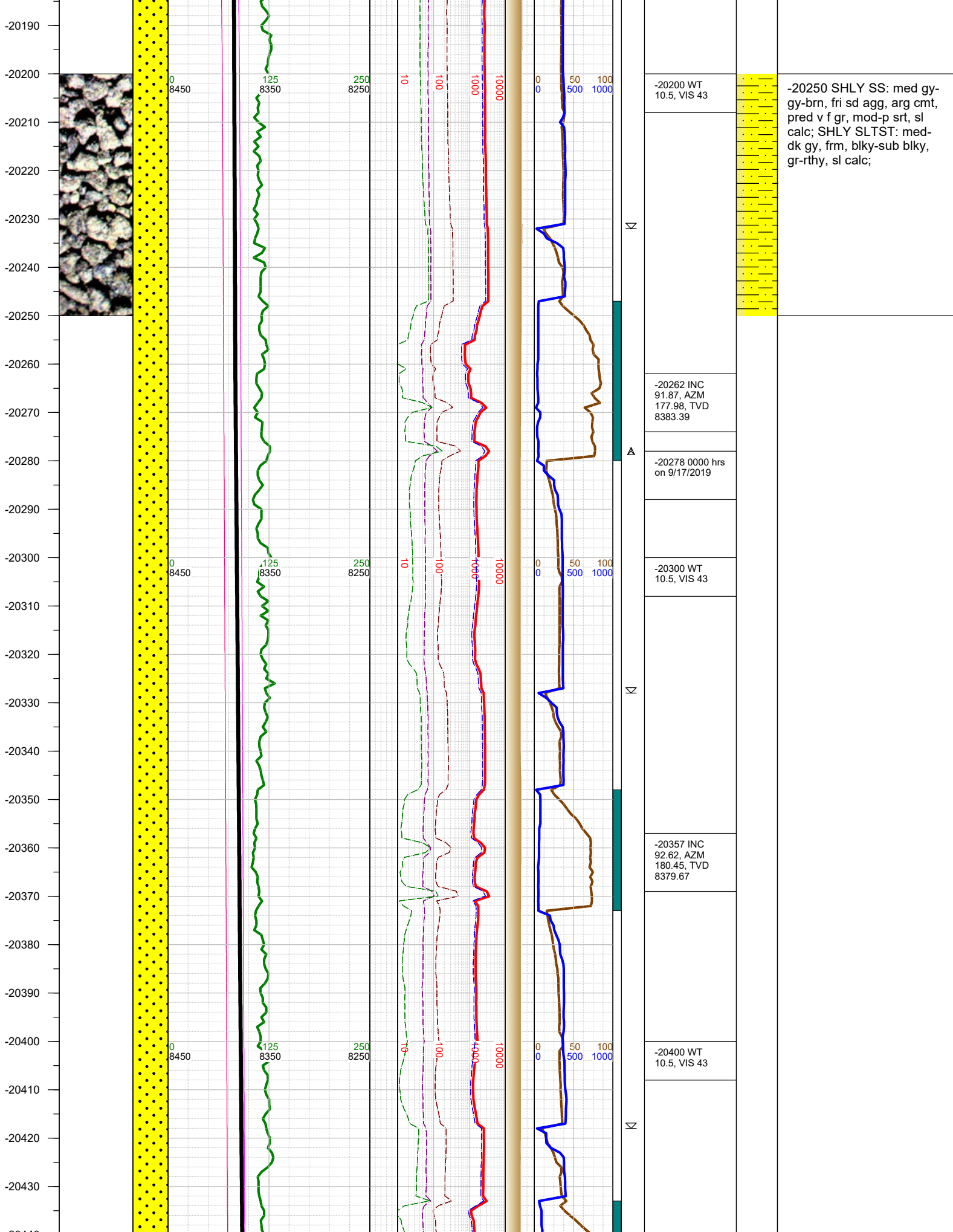
-19891 Fault:
22' down-throw;
went from
Codell to Ft.
Hays

-19910 WT
10.5, VIS 43



-19750 SHLY SLTST:
med-dk gy, frm, blk-sub
blk, gr-rthy, sl calc; SHLY
SS: med gy-gy-brn, fri sd
agg, arg cmt, pred v f gr,
mod-p srt, sl calc;





-20250 SHLY SS: med gy-gy-brn, fri sd agg, arg cmt, pred v f gr, mod-p srt, sl calc; SHLY SLTST: med-dk gy, frm, blk-sub blk, gr-rthy, sl calc;

