

OPERATOR: **Extraction Oil & Gas**
WELL NAME: **Rinn Valley East N17-20-4C**
FIELD NAME: DJ Basin - Wattenberg
DRILLING RIG: Patterson 901
API #: 05-123-47315

LAT/LONG: 40.133876, -105.023986
SURFACE HOLE: SWSE S17-T2N-R68W, 870' FSL, 1772' FEL
BOTTOM HOLE: S8-T2N-R68W, 460' FNL, 960' FEL

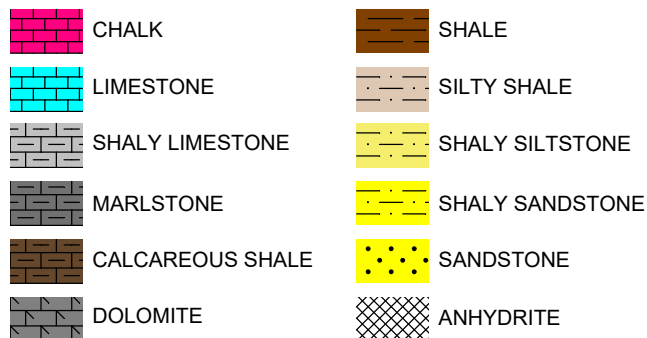


Earth Science Agency, LLC

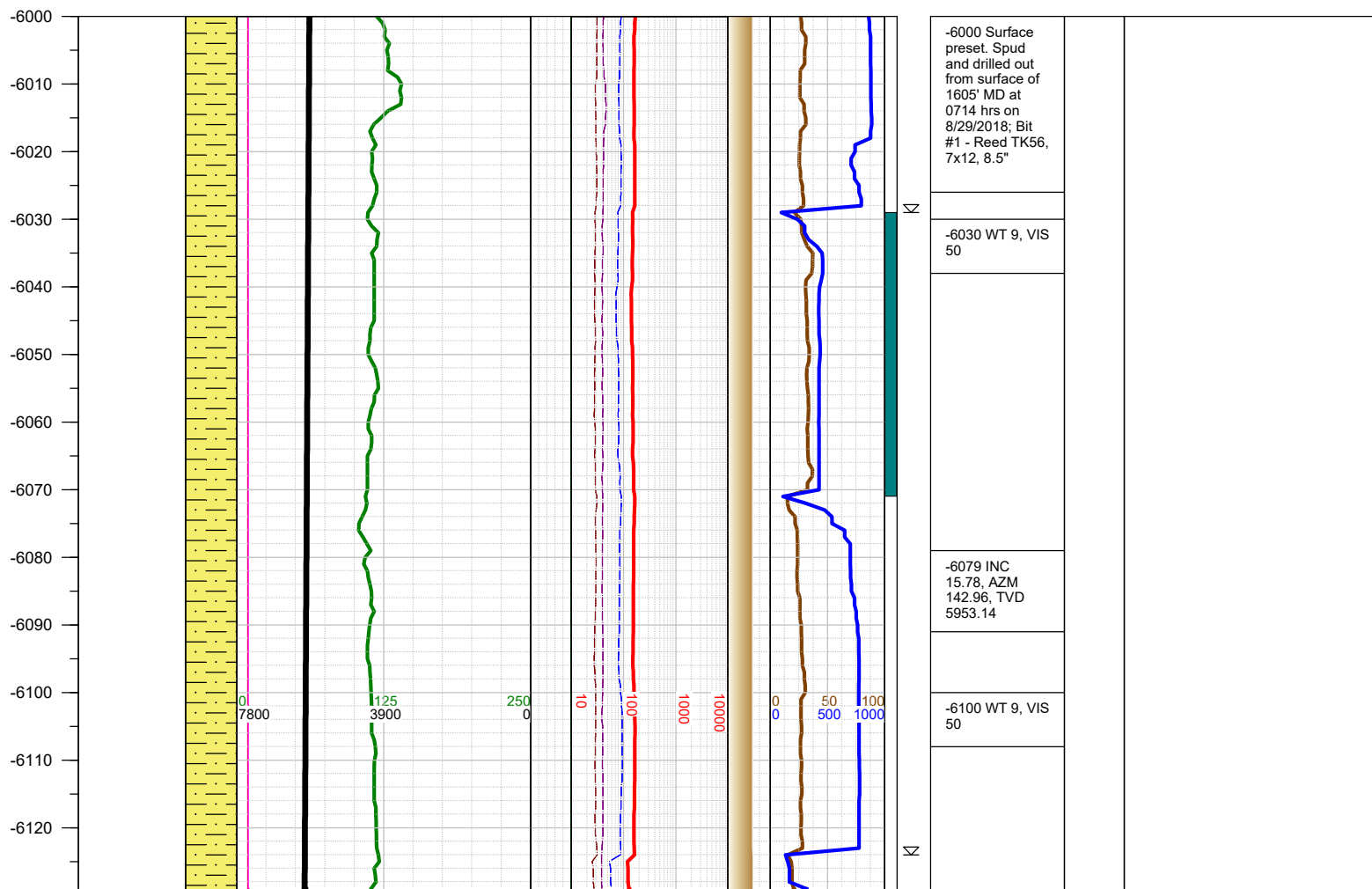
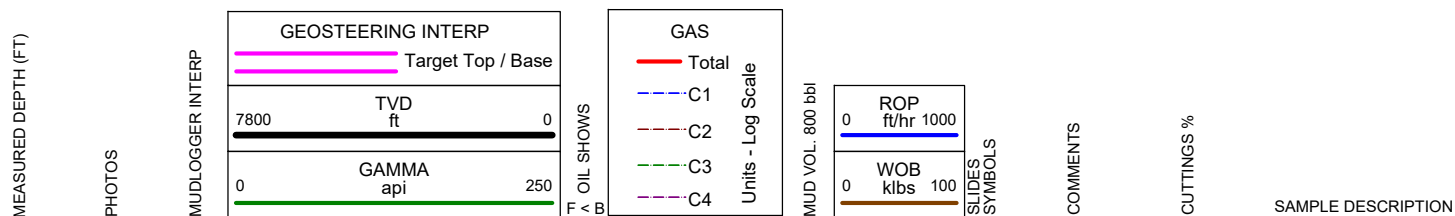
COUNTY: Weld
STATE: Colorado
GROUND ELEVATION: 4918'
KELLY BUSHING: 4947'
DRILLING FLUID: OBM
TVD VS. MD: 7438' / 17508'
SPUD DATE: August 29, 2018
TD DATE: September 2, 2018

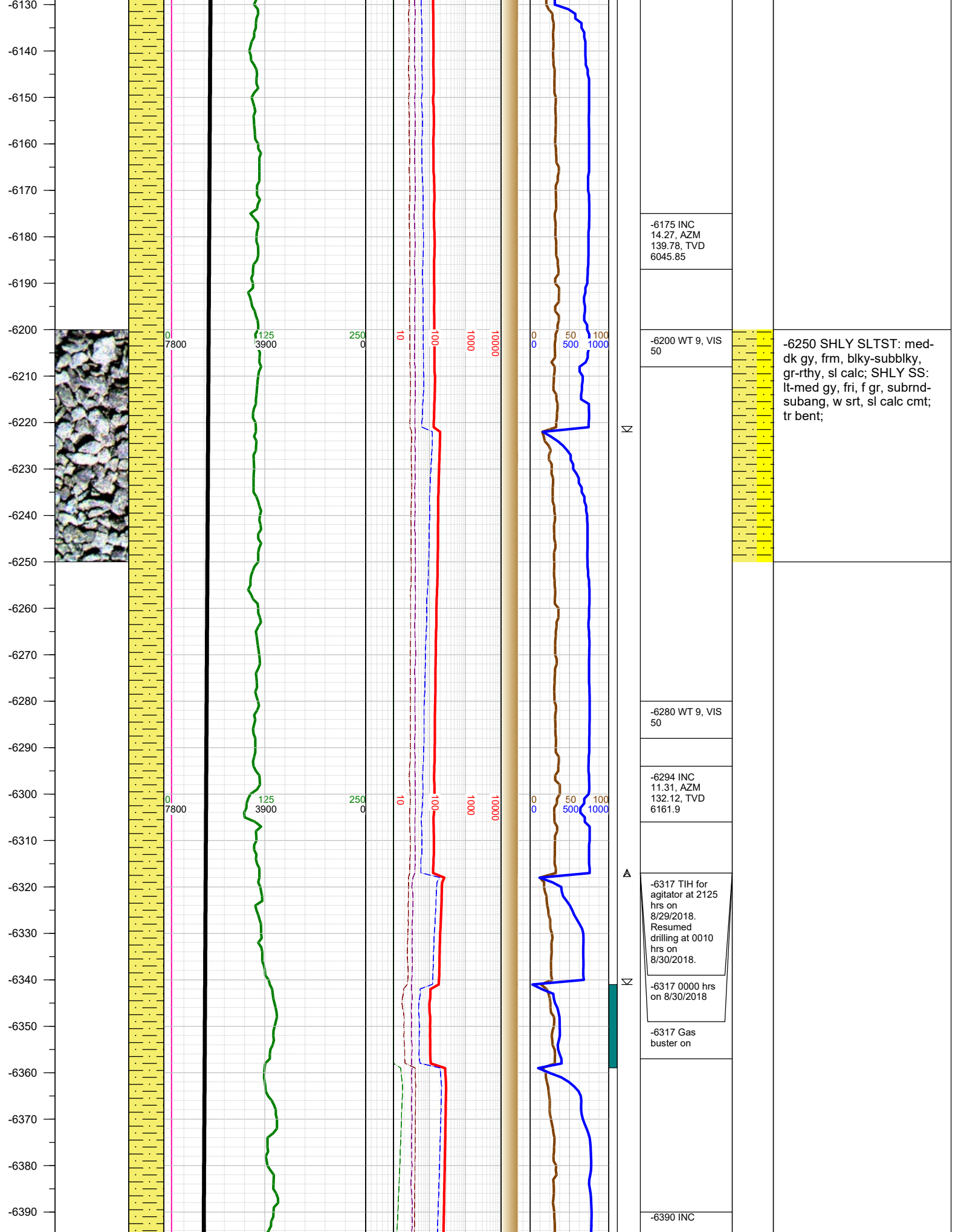
DEPTHS LOGGED: 6000' - 17508'
DATES LOGGED: August 29, 2018 - September 2, 2018
GEOLOGISTS: Blake Eatherton, Dan Jacobs
SCALE: 5" = 100'

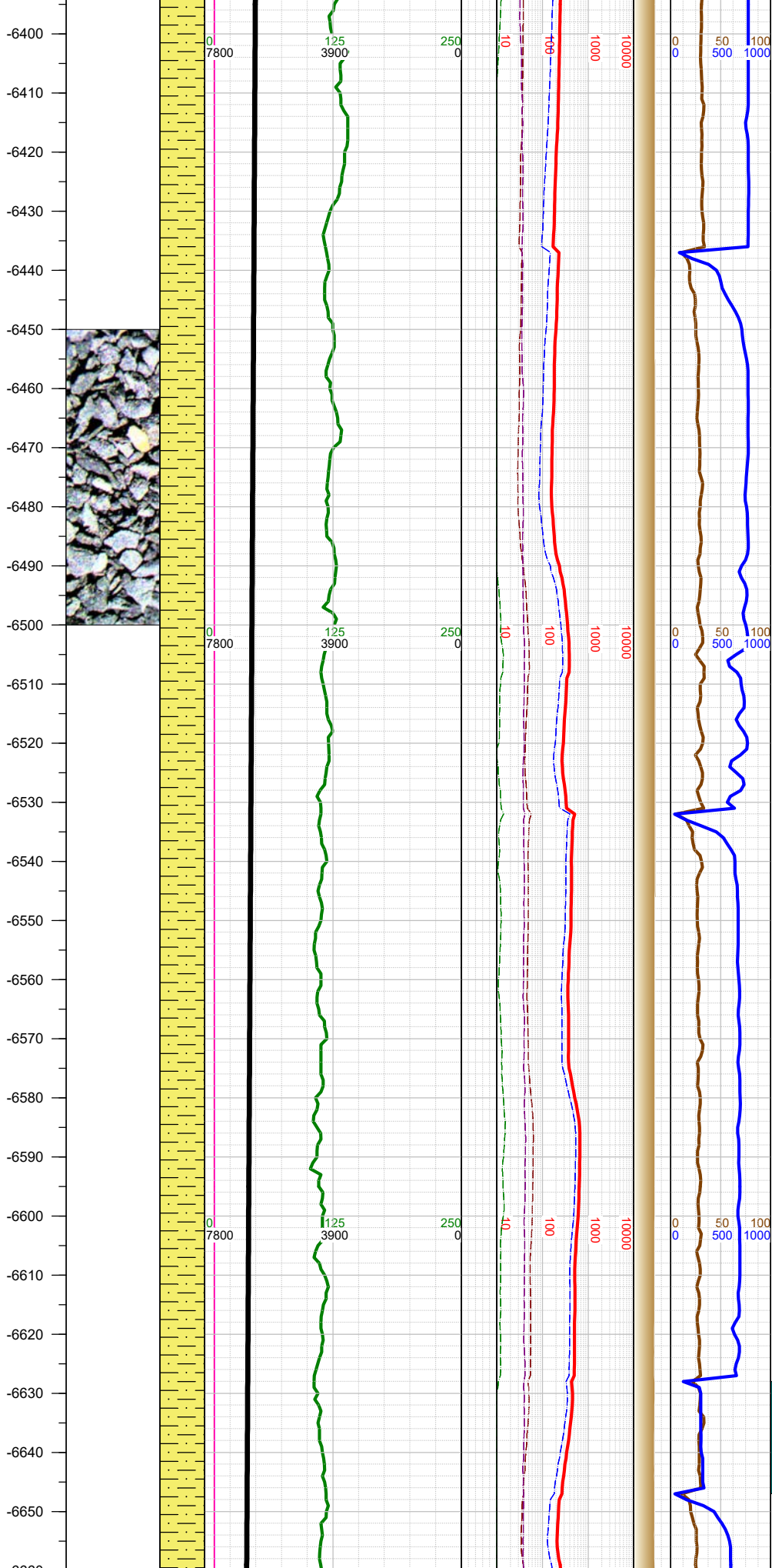
LEGEND



FORMATION CONNECTION MIDNIGHT NEW BIT GAS SHOW FAULT

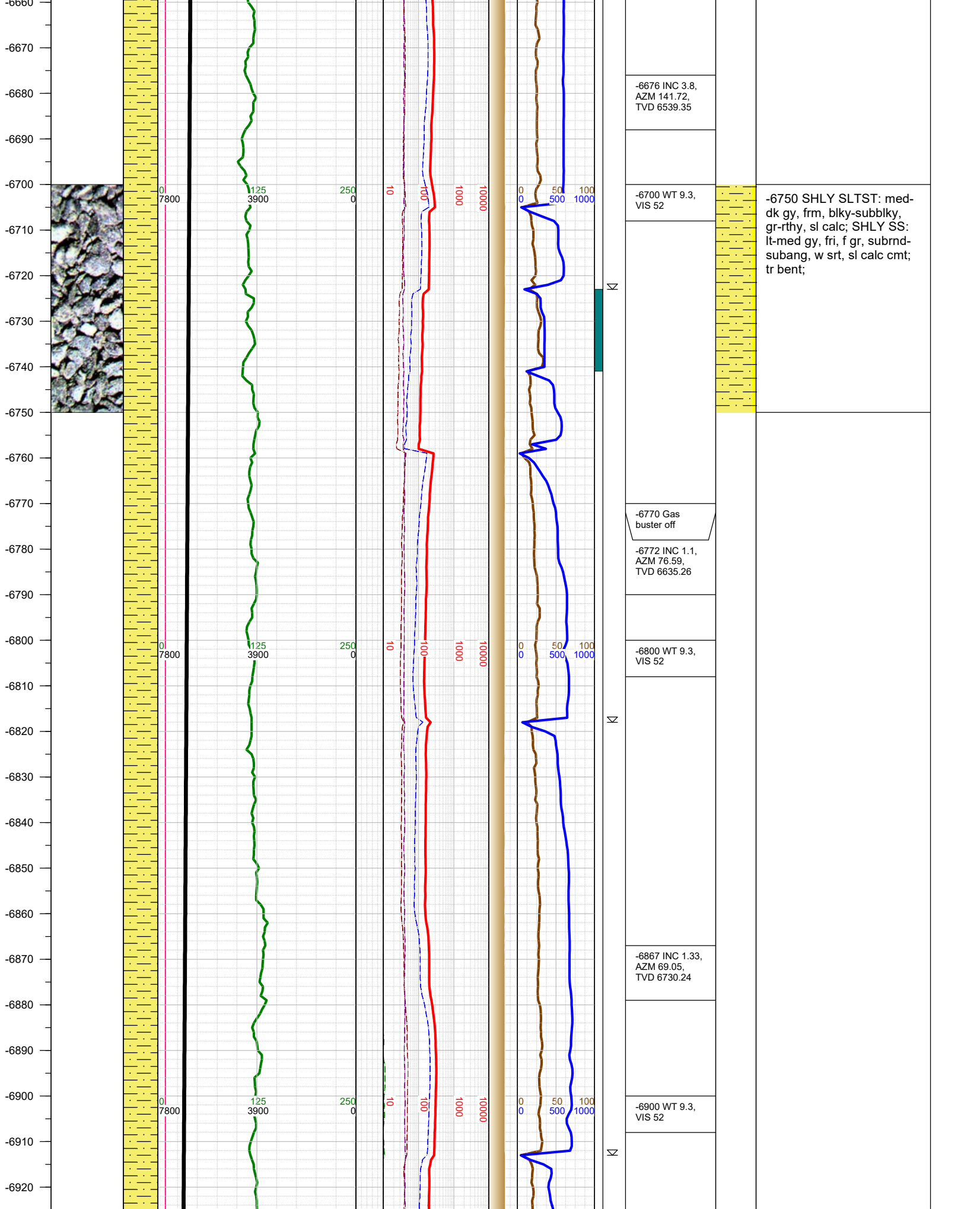


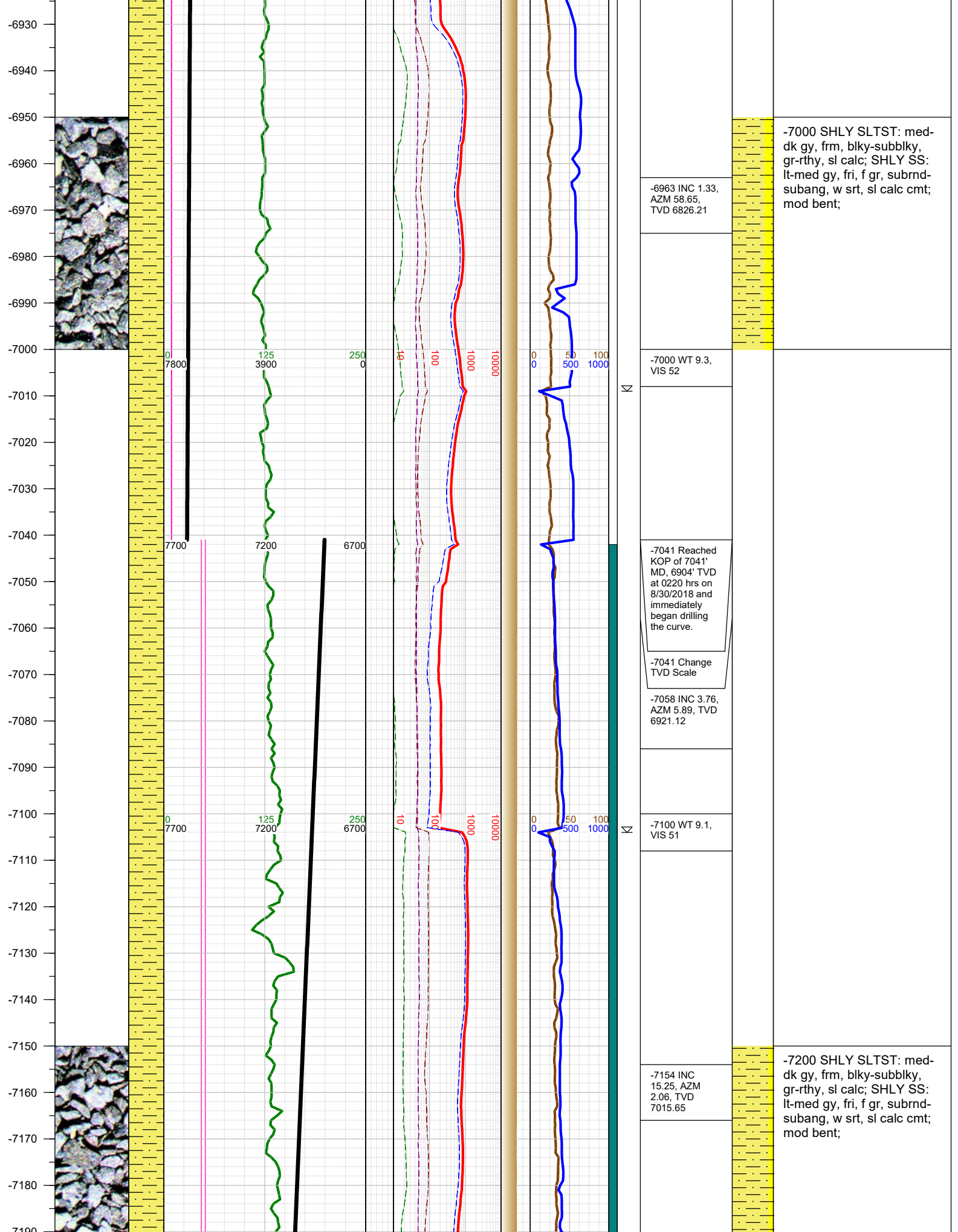


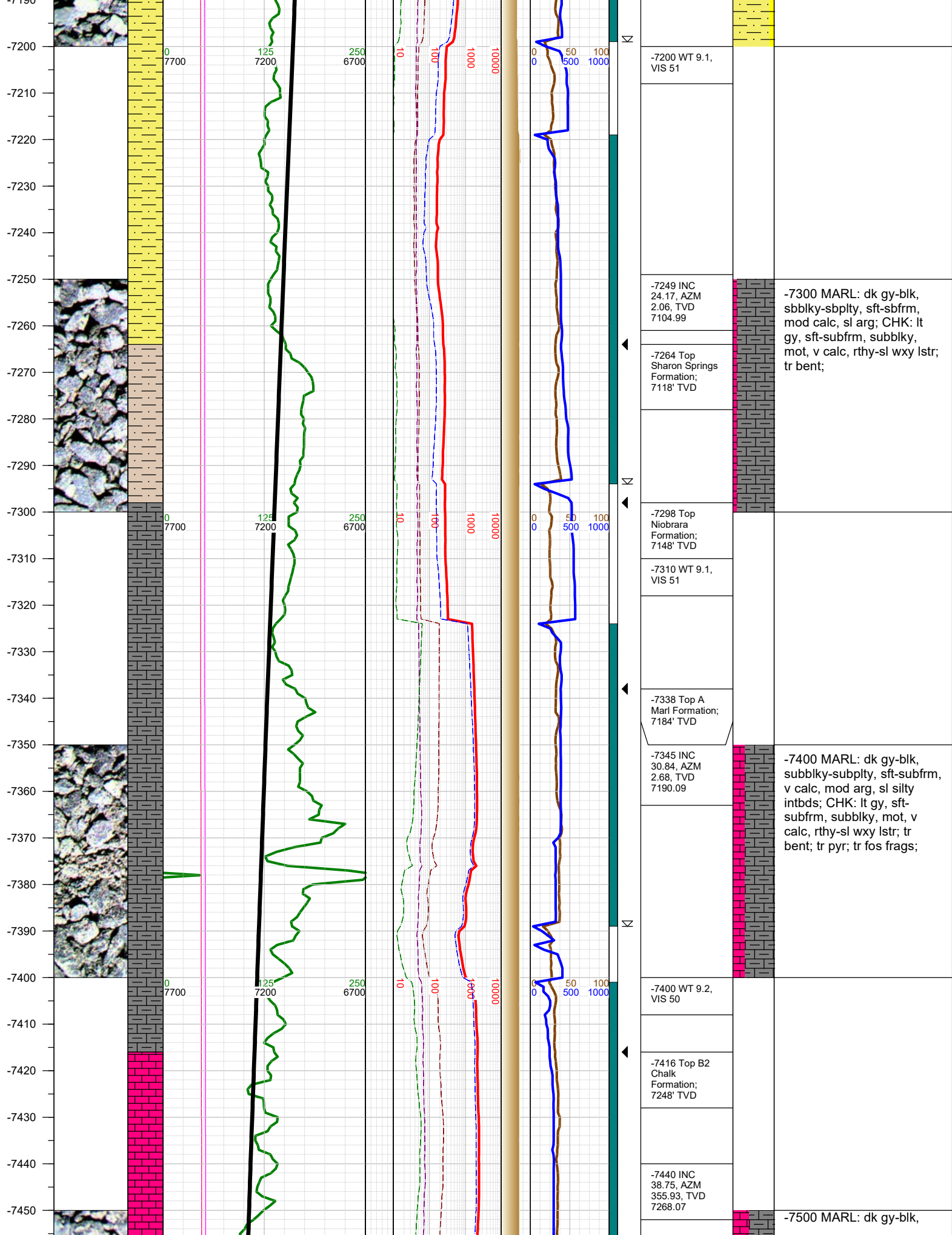


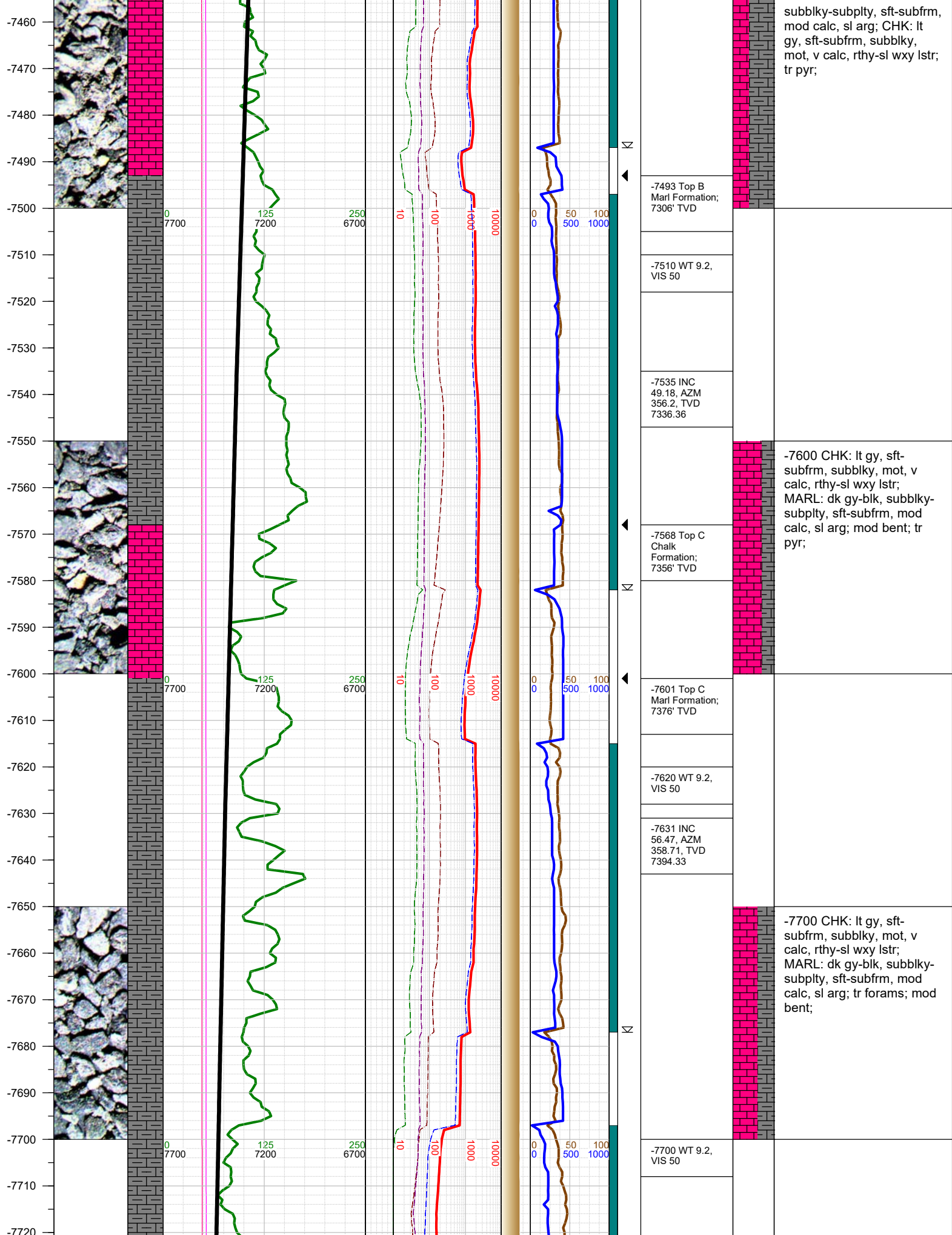
	10.87, AZM 138.06, TVD 6256.11	
	-6410 WT 9, VIS 50	
	-6485 INC 8.93, AZM 136.57, TVD 6349.69	
	-6500 WT 9, VIS 50	
	-6581 INC 6.89, AZM 132.6, TVD 6444.77	
	-6600 WT 9, VIS 50	

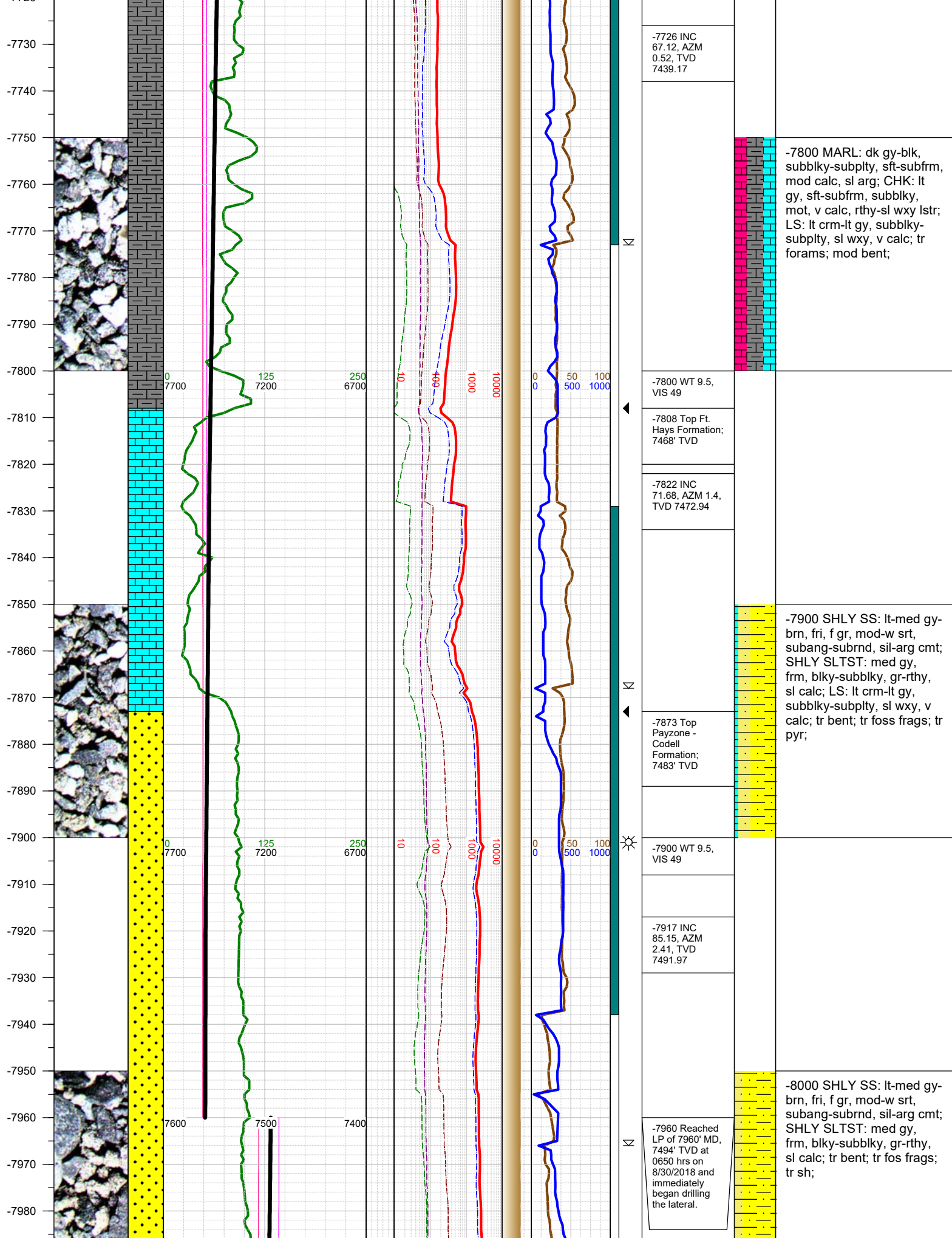
-6500 SHLY SLTST: med-
dk gy, frm, blkly-subblkly,
gr-rthy, sl calc; SHLY SS:
lt-med gy, fri, f gr, subrnd-
subang, w srt, sl calc cmt;
mod bent;

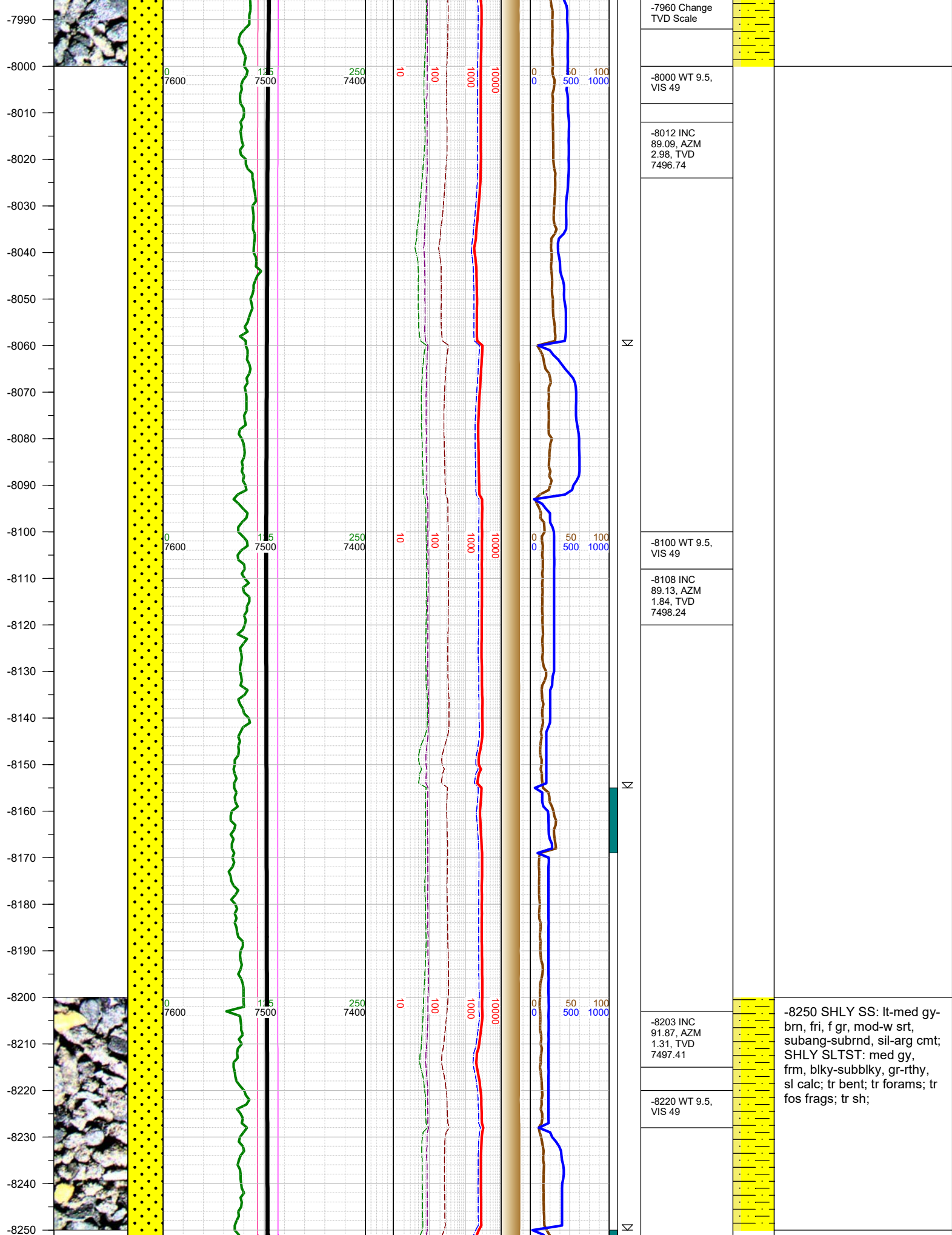


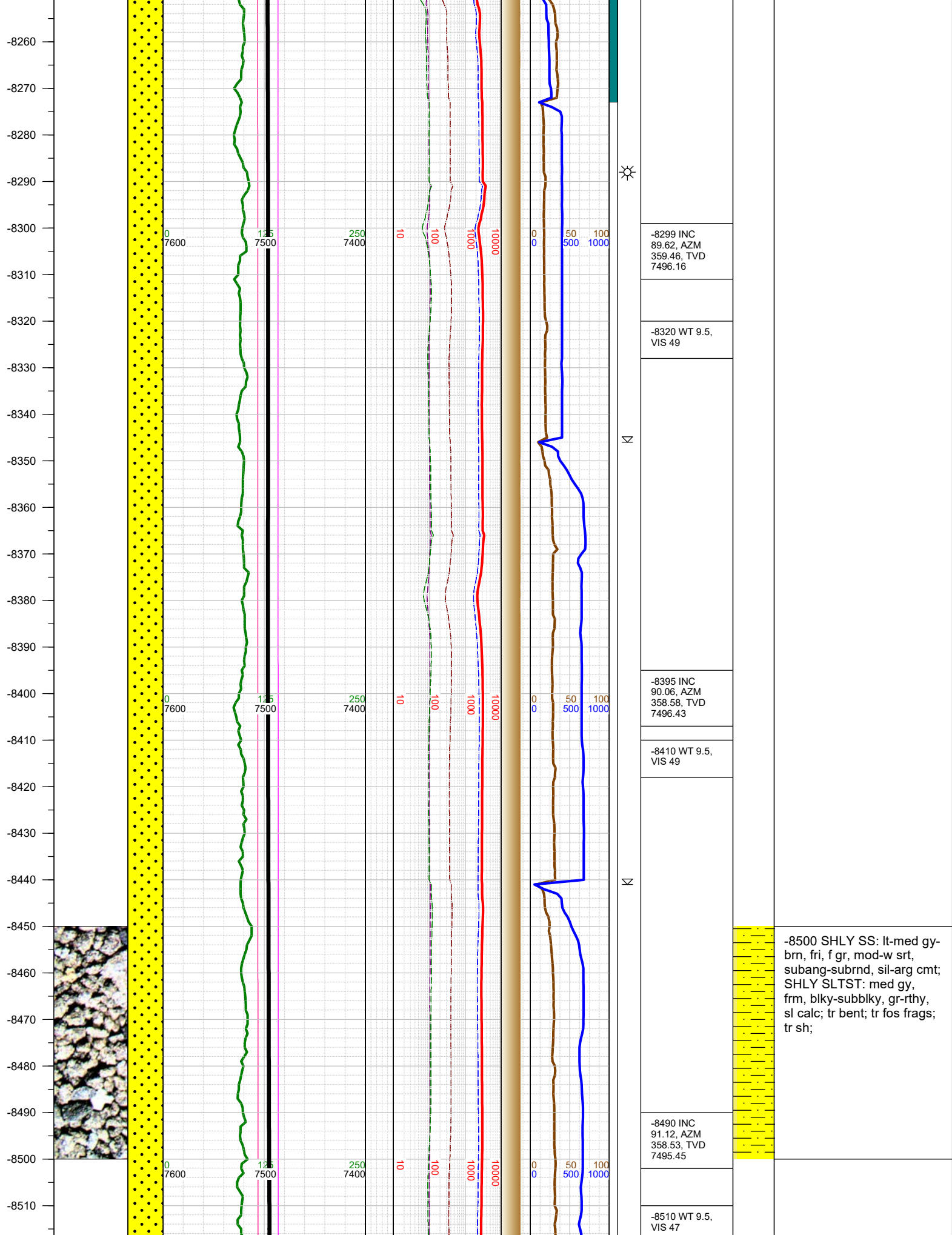


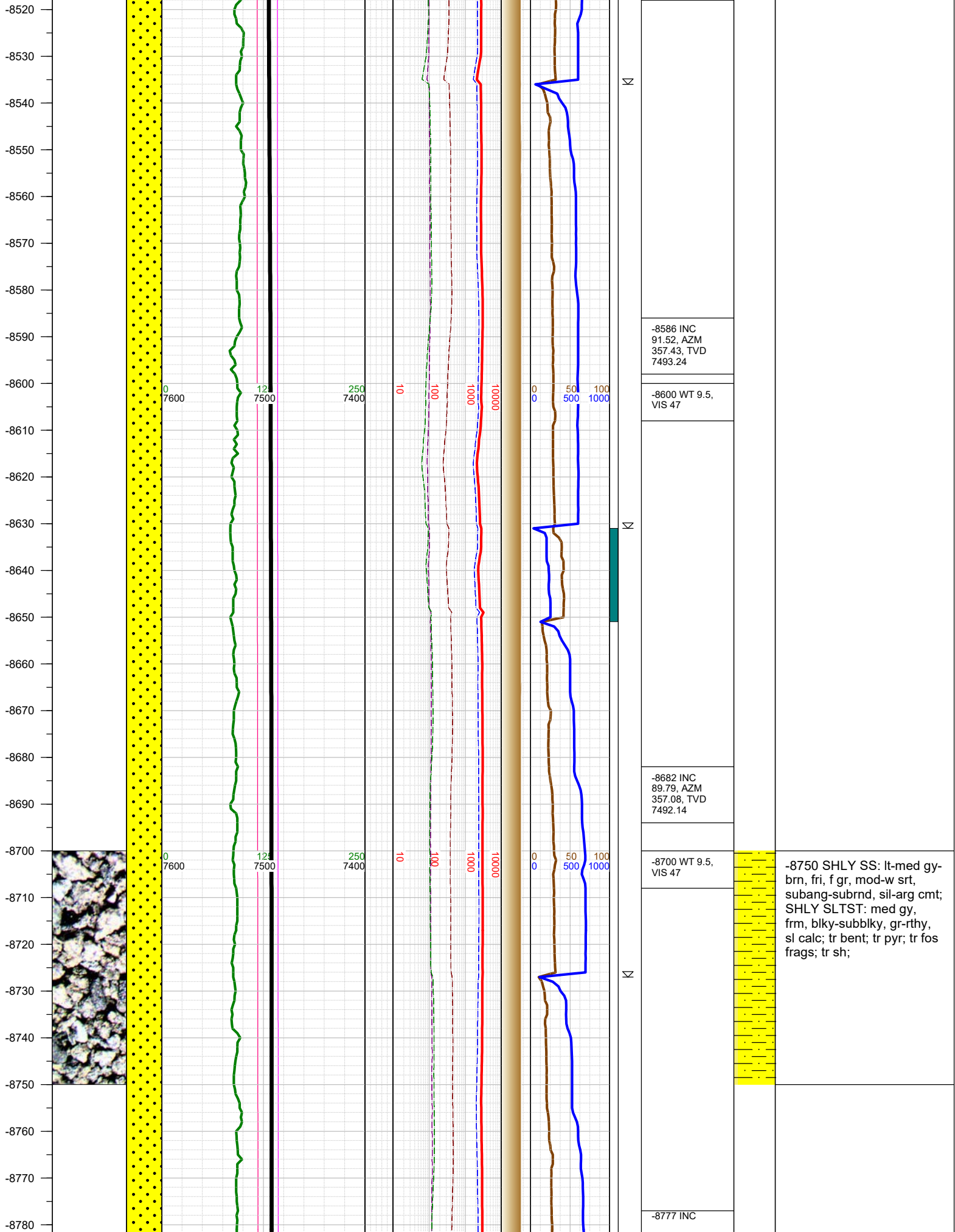




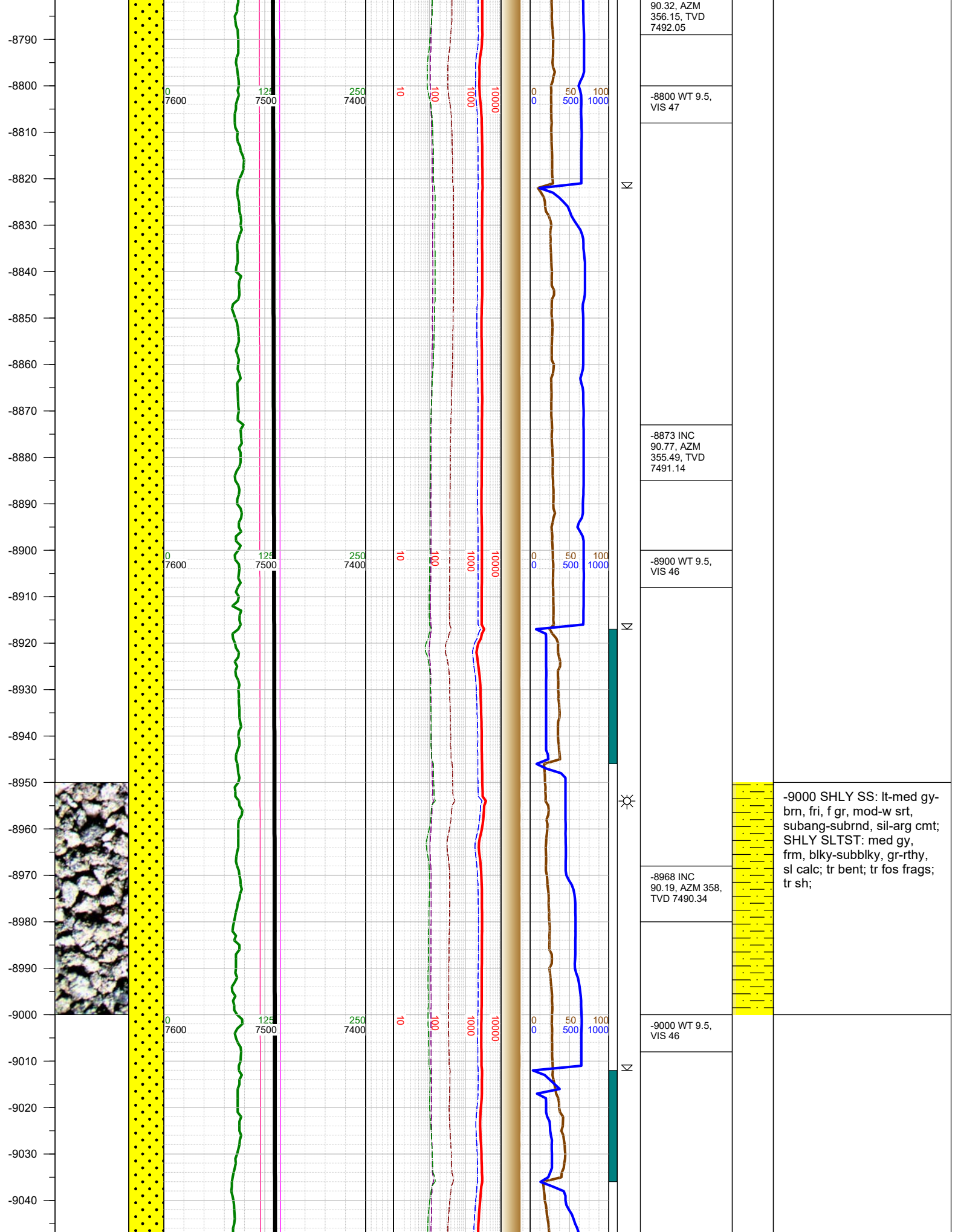


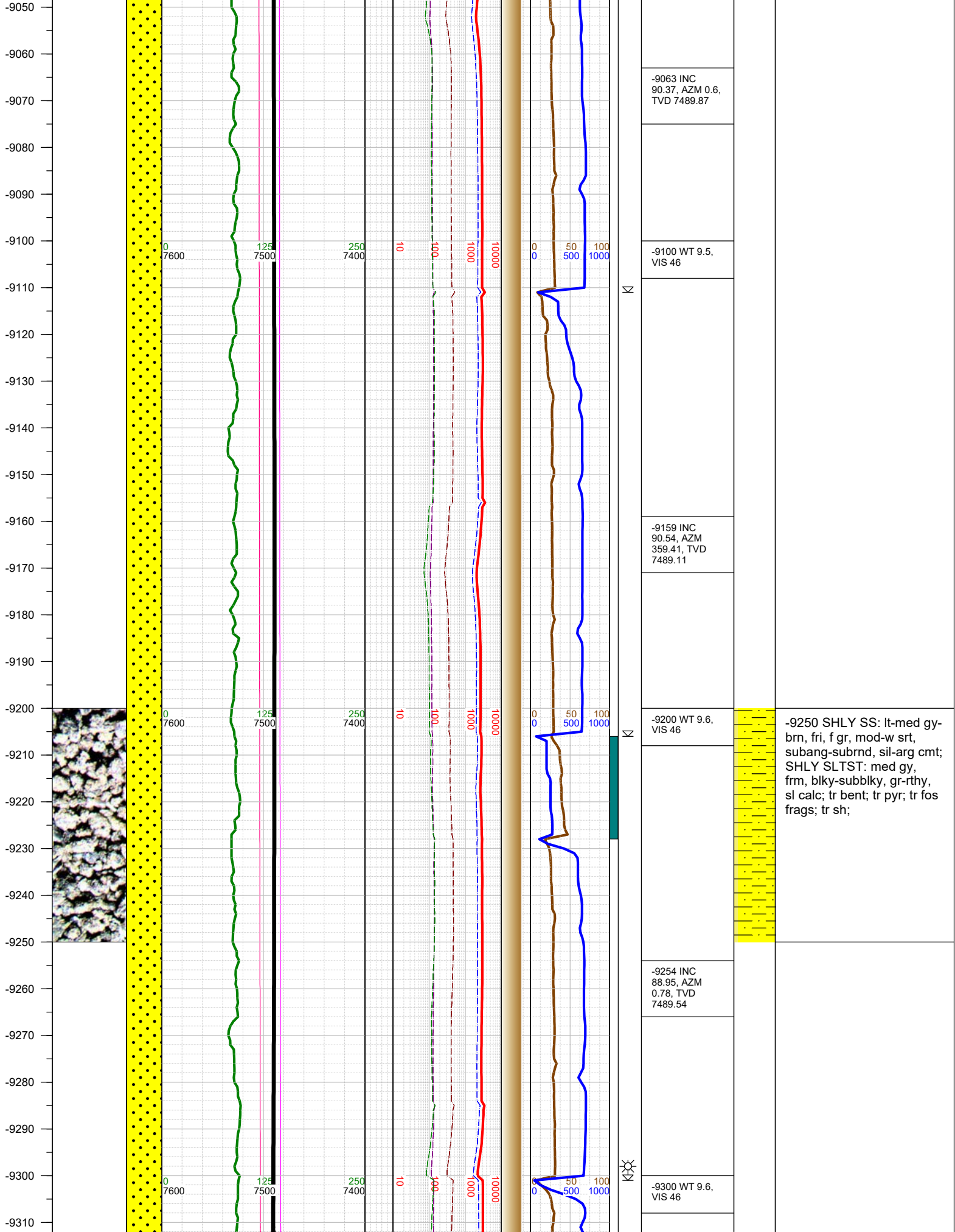


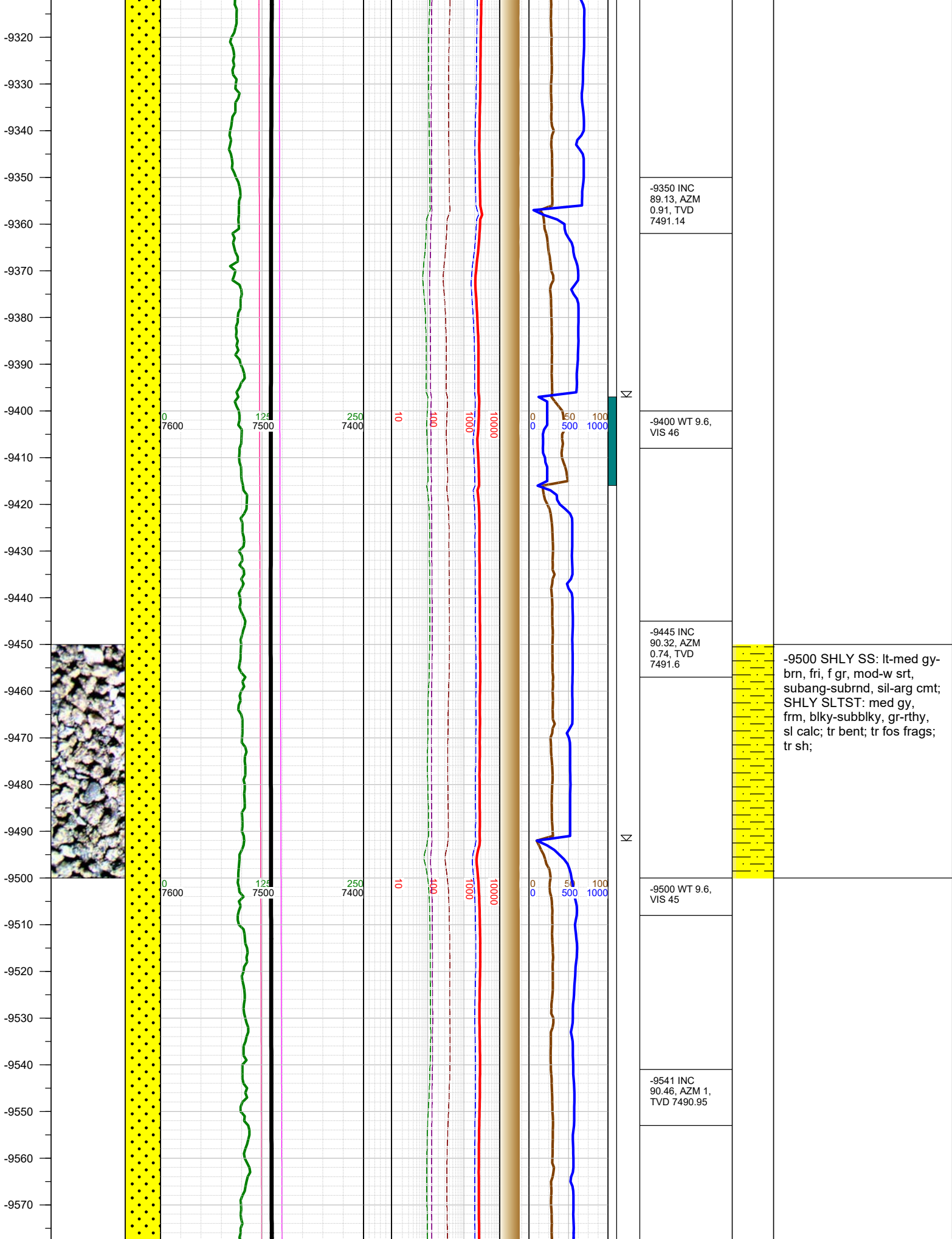


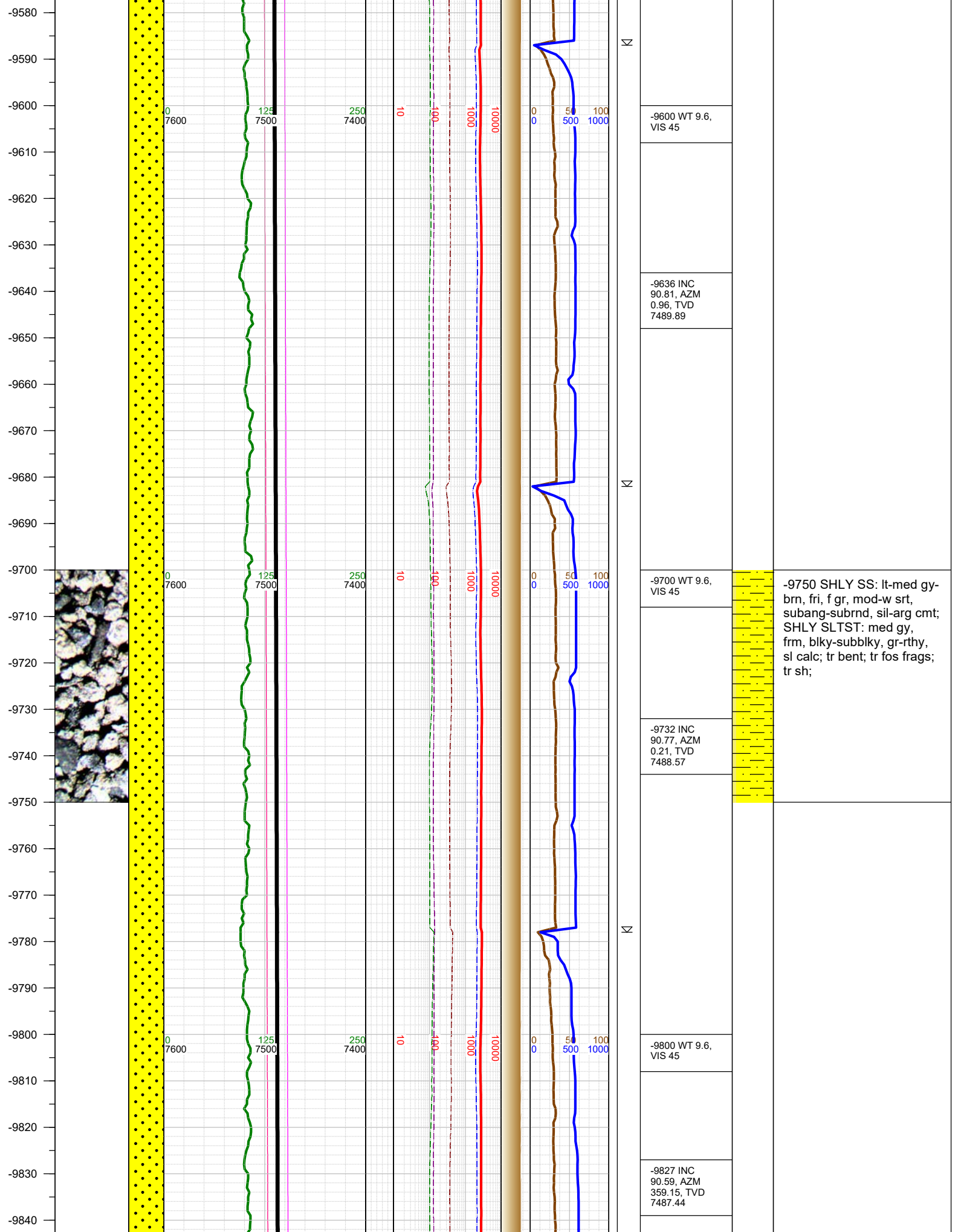


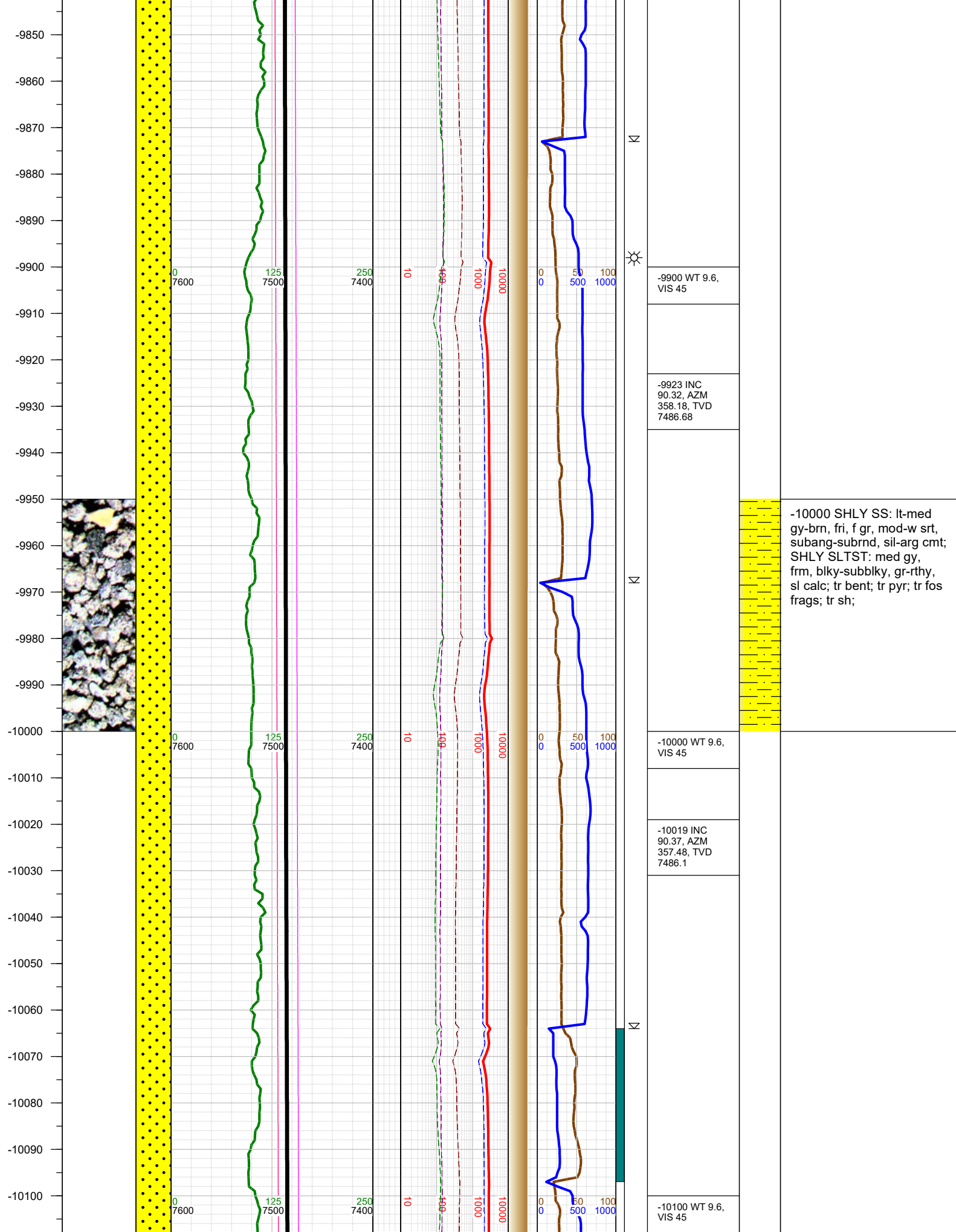
-8750 SHLY SS: lt-med gy-brn, fri, f gr, mod-w srt, subang-subrnd, sil-arg cmt; SHLY SLTST: med gy, frm, blk-subblky, gr-rthy, sl calc; tr bent; tr pyr; tr fos frags; tr sh;











-10110
-10120
-10130
-10140
-10150
-10160
-10170
-10180
-10190
-10200
-10210
-10220
-10230
-10240
-10250
-10260
-10270
-10280
-10290
-10300
-10310
-10320
-10330
-10340
-10350
-10360
-10370



0
7600

125
7500

250
7400

10

100

1000

10000

0
0

50
500

100
1000

Σ

Σ

Σ

Σ

-10114 INC
91.3, AZM 1.53,
TVD 7484.72

-10200 WT 9.6,
VIS 45

-10209 INC
90.54, AZM
0.87, TVD
7483.19

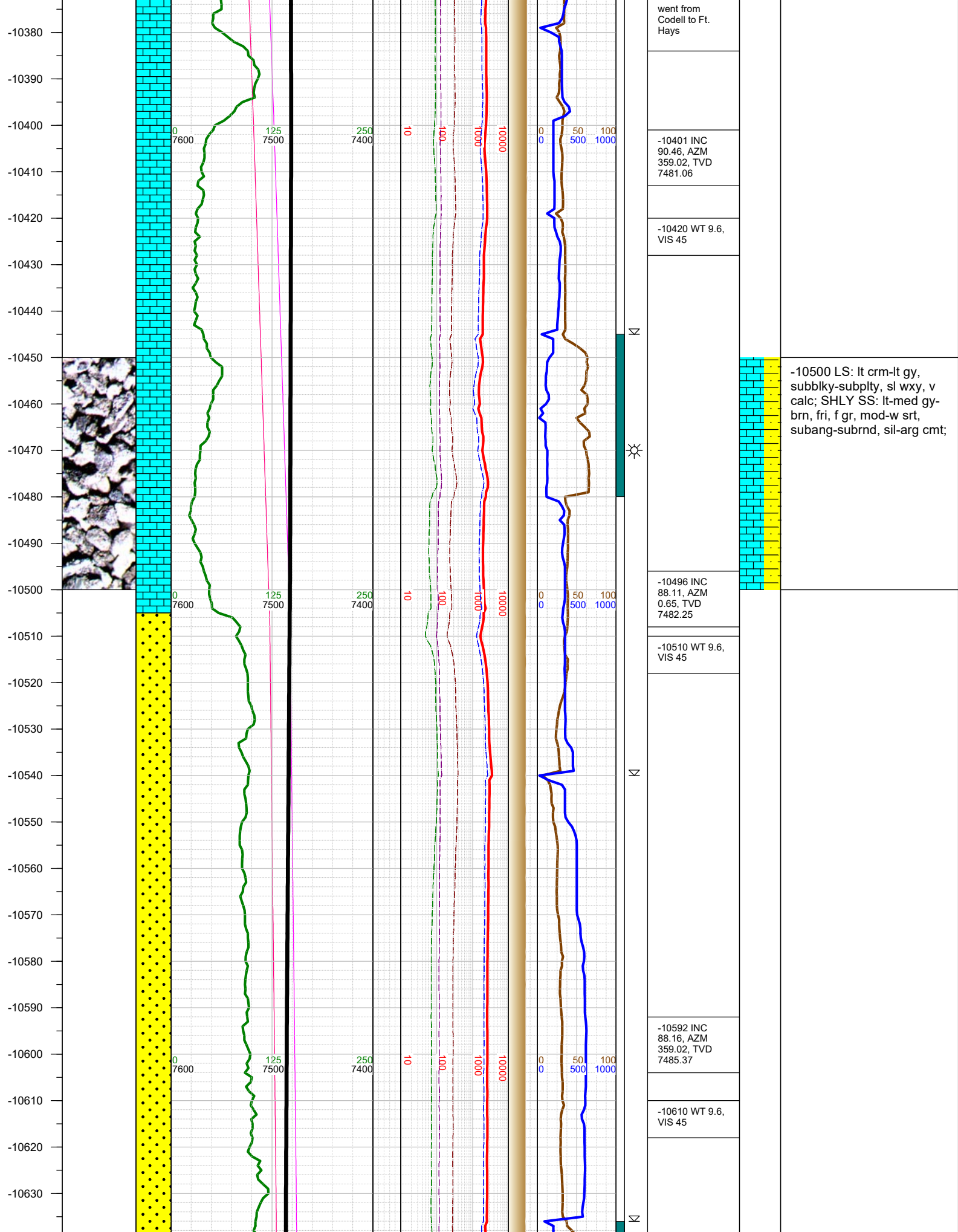
-10305 INC
90.77, AZM
359.86, TVD
7482.09

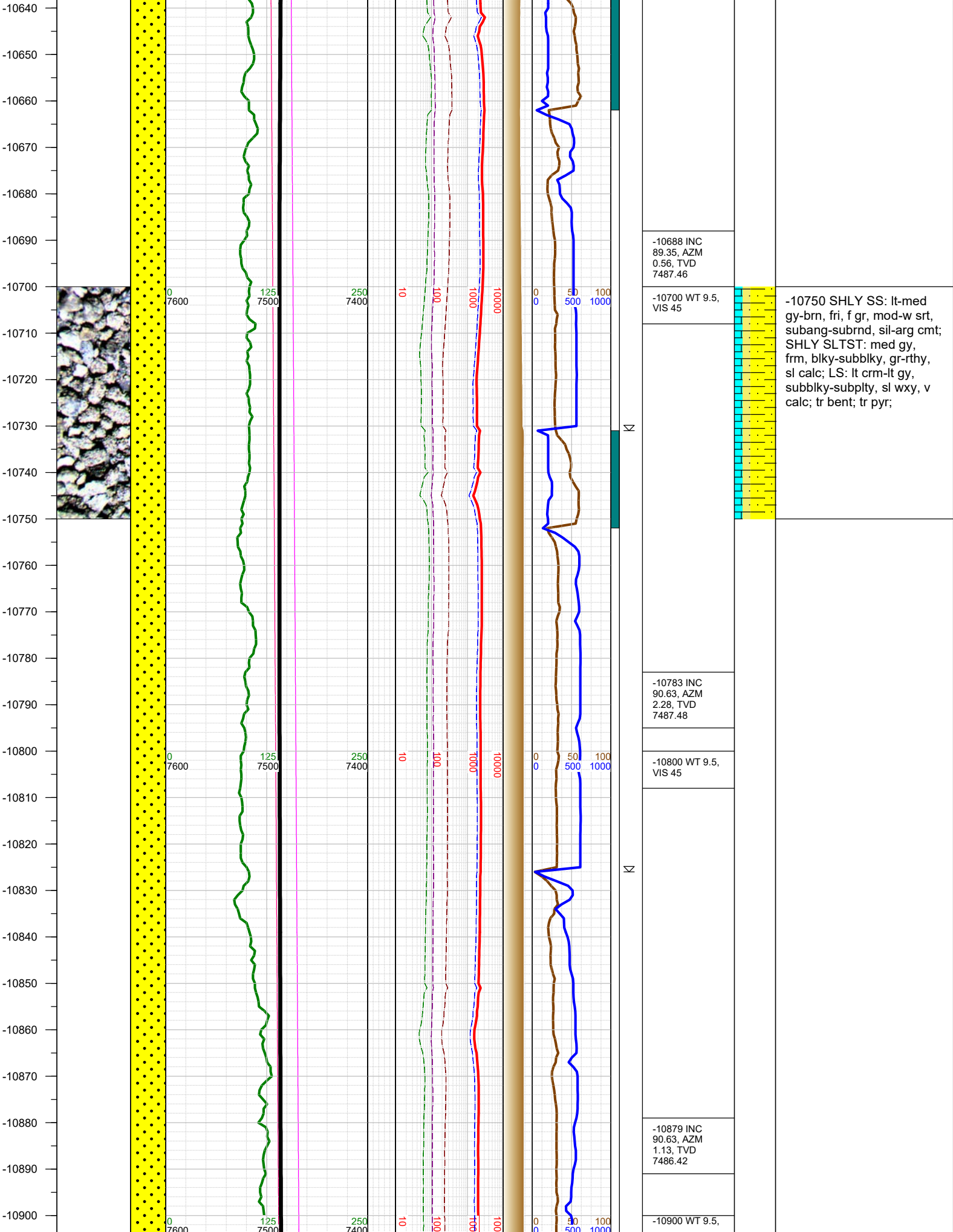
-10320 WT 9.6,
VIS 45

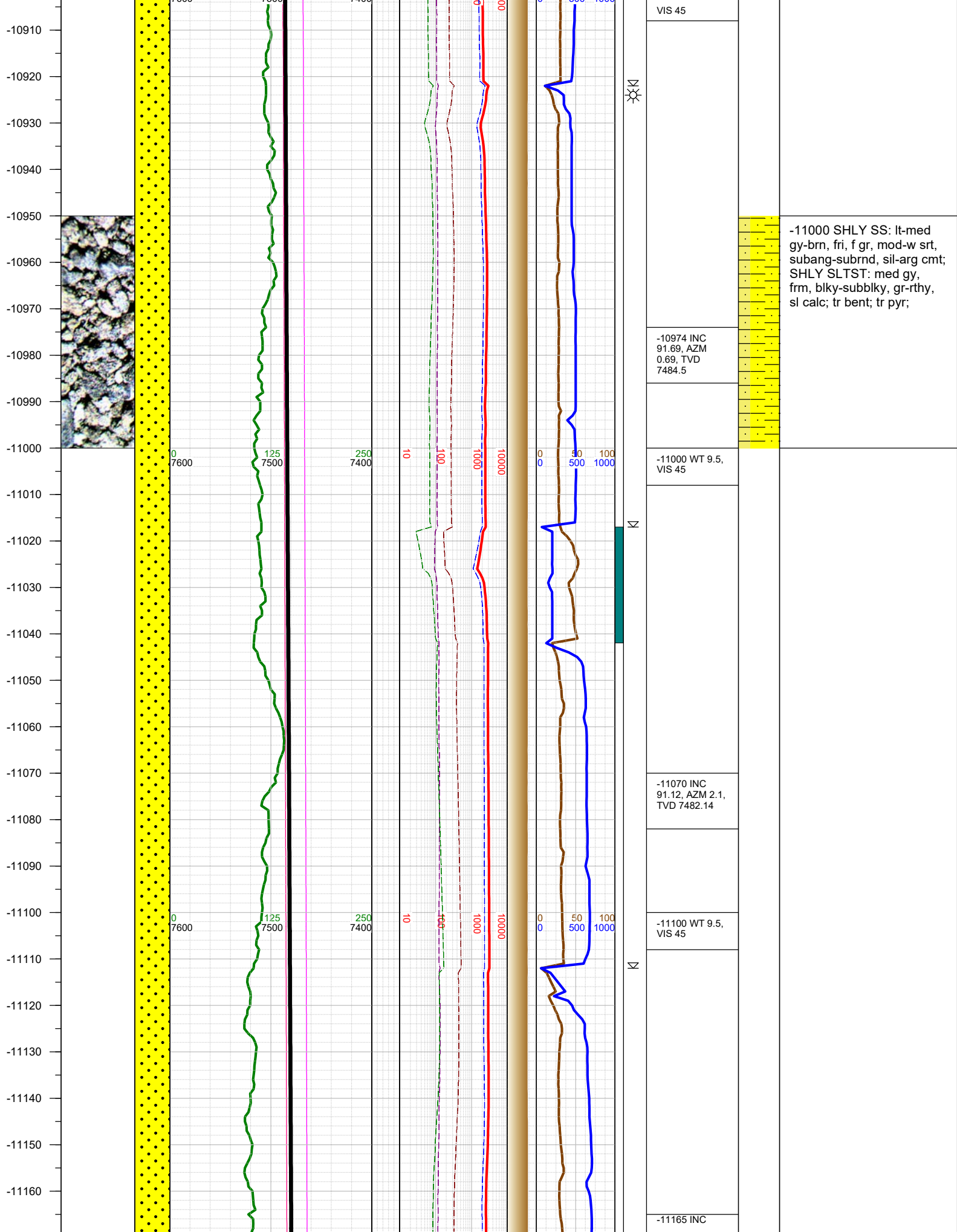
-10368 Fault:
33' down-throw;

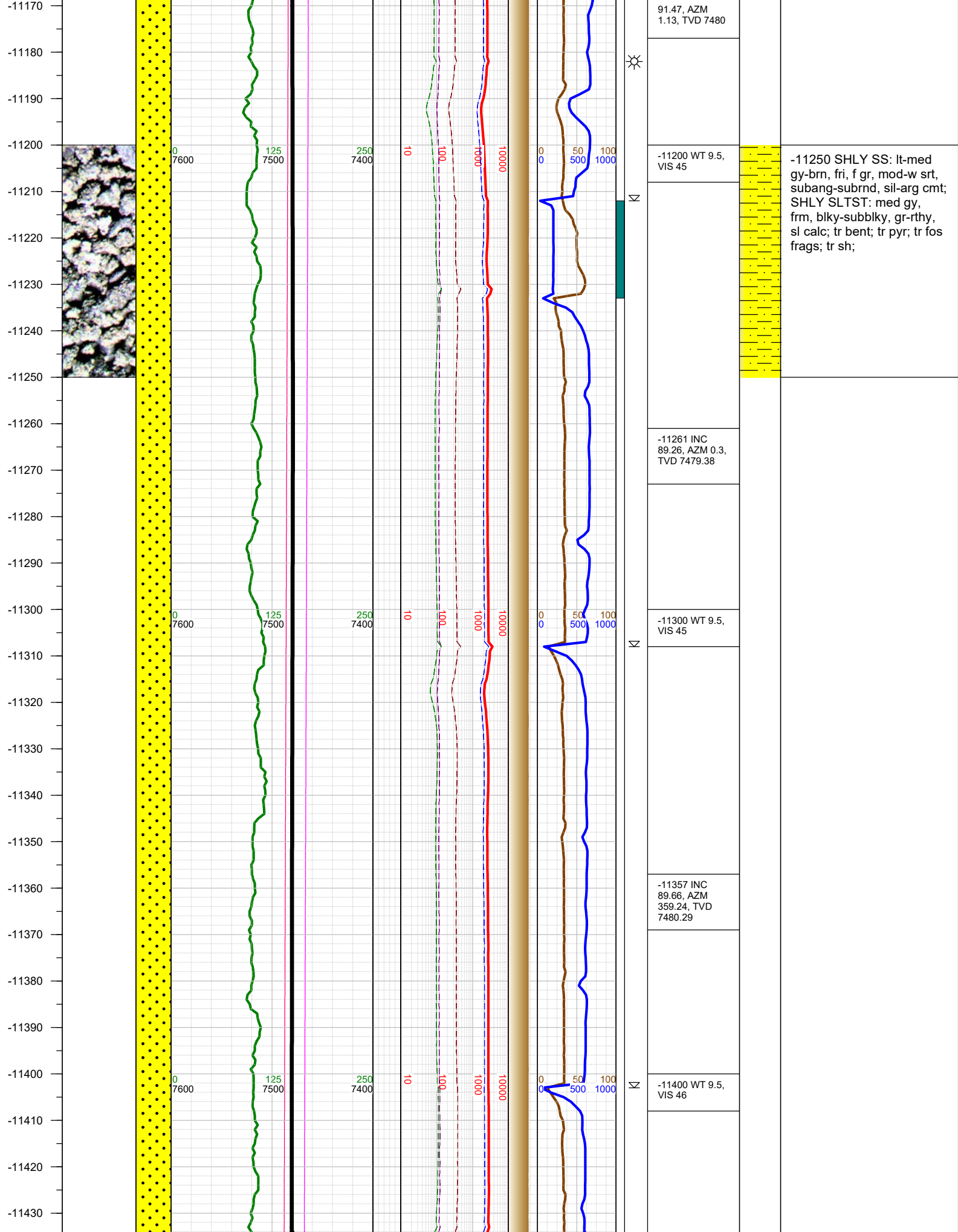


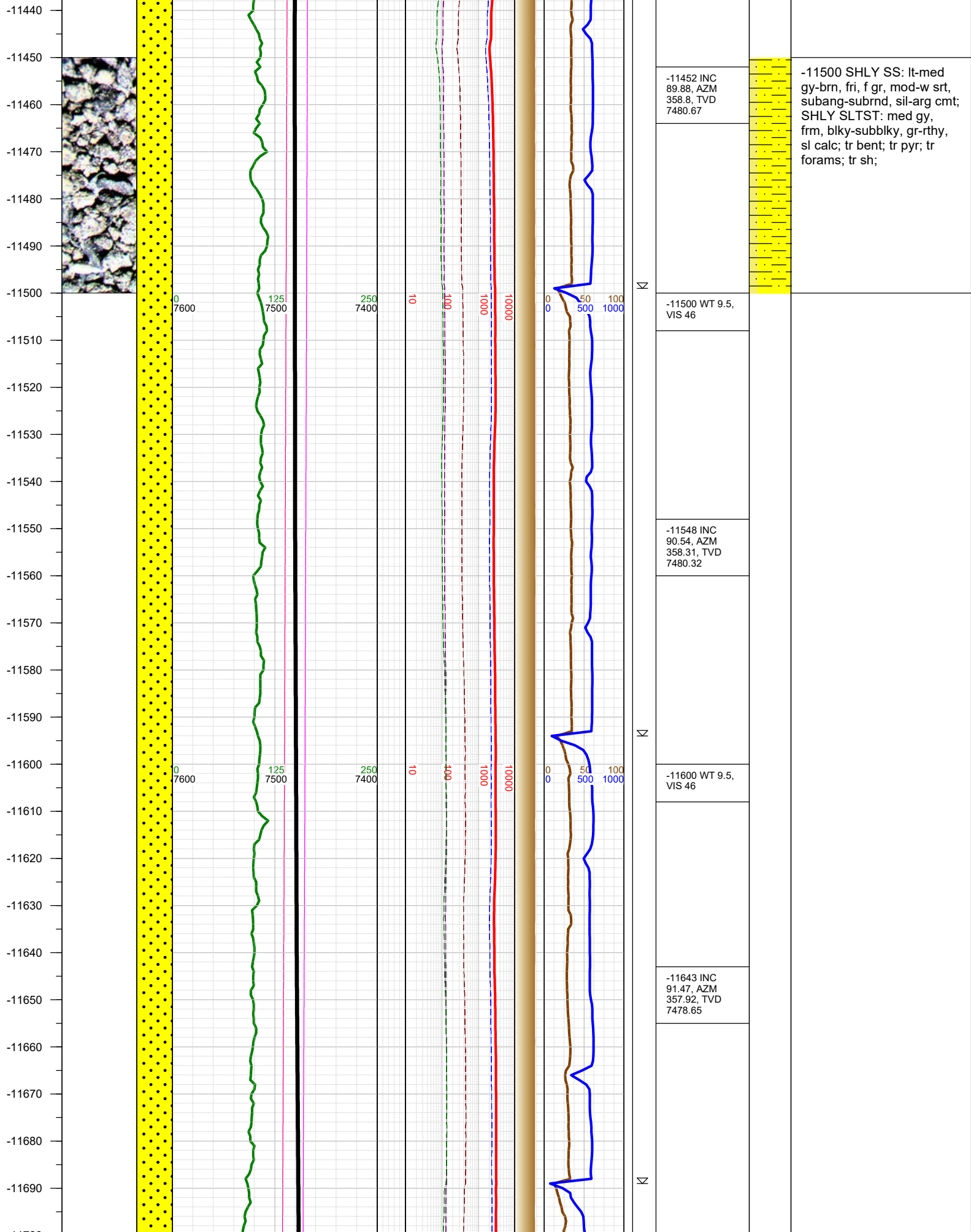
-10250 SHLY SS: lt-med
gy-brn, fri, f gr, mod-w srt;
subang-subrnd, sil-arg cmt;
SHLY SLTST: med gy,
frm, blkly-subblky, gr-rthy,
sl calc; tr bent; tr pyr; tr fos
frags; tr sh;

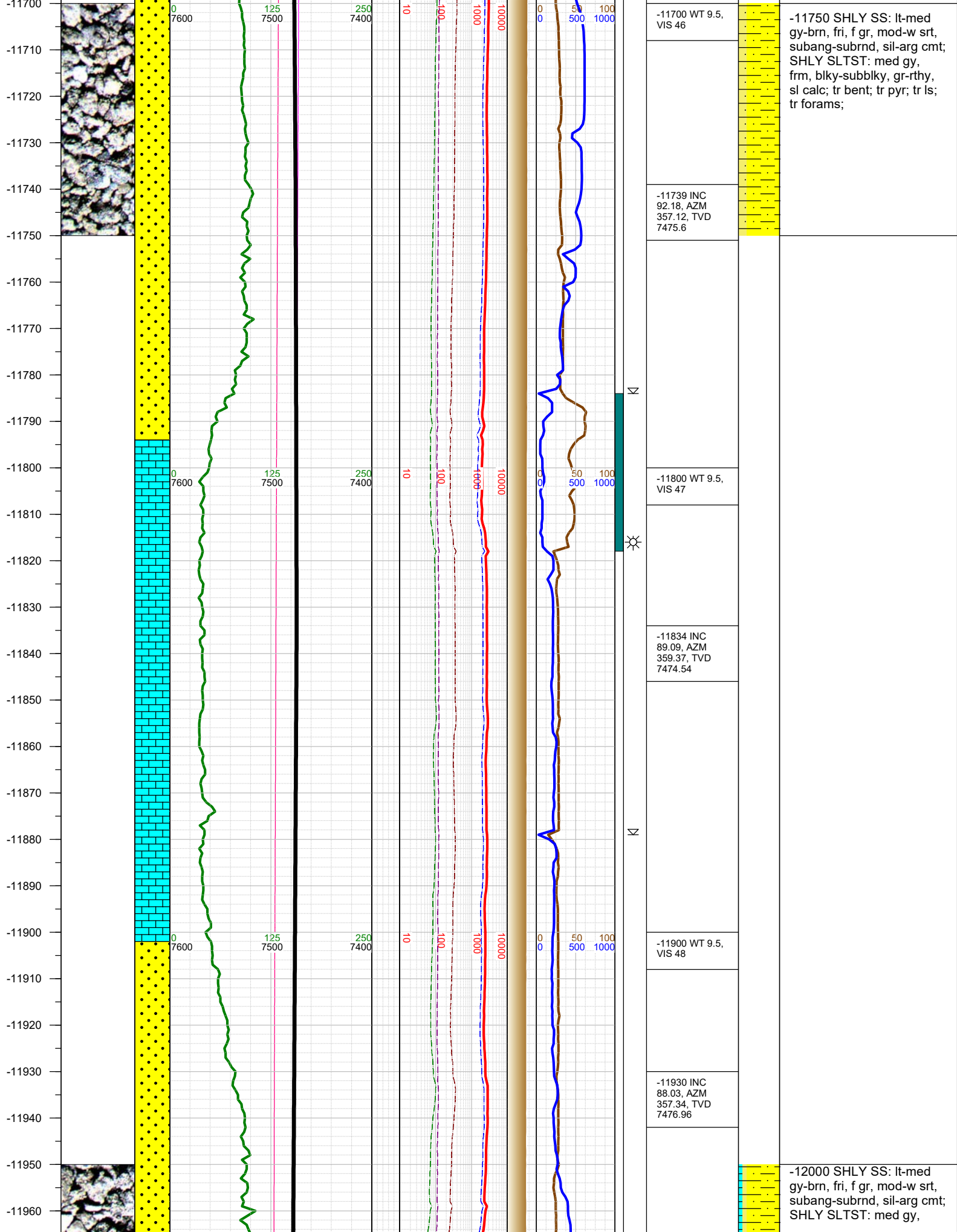


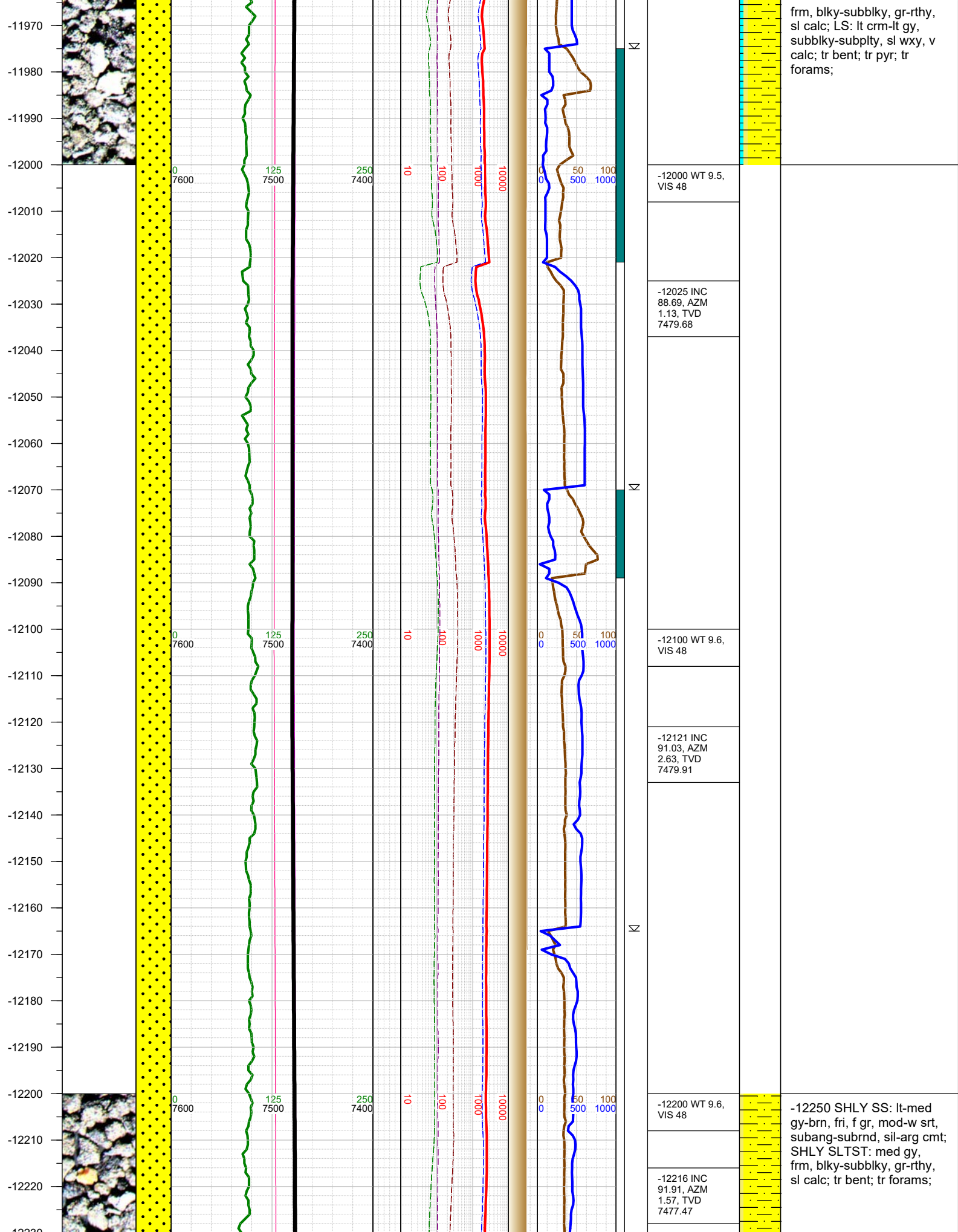


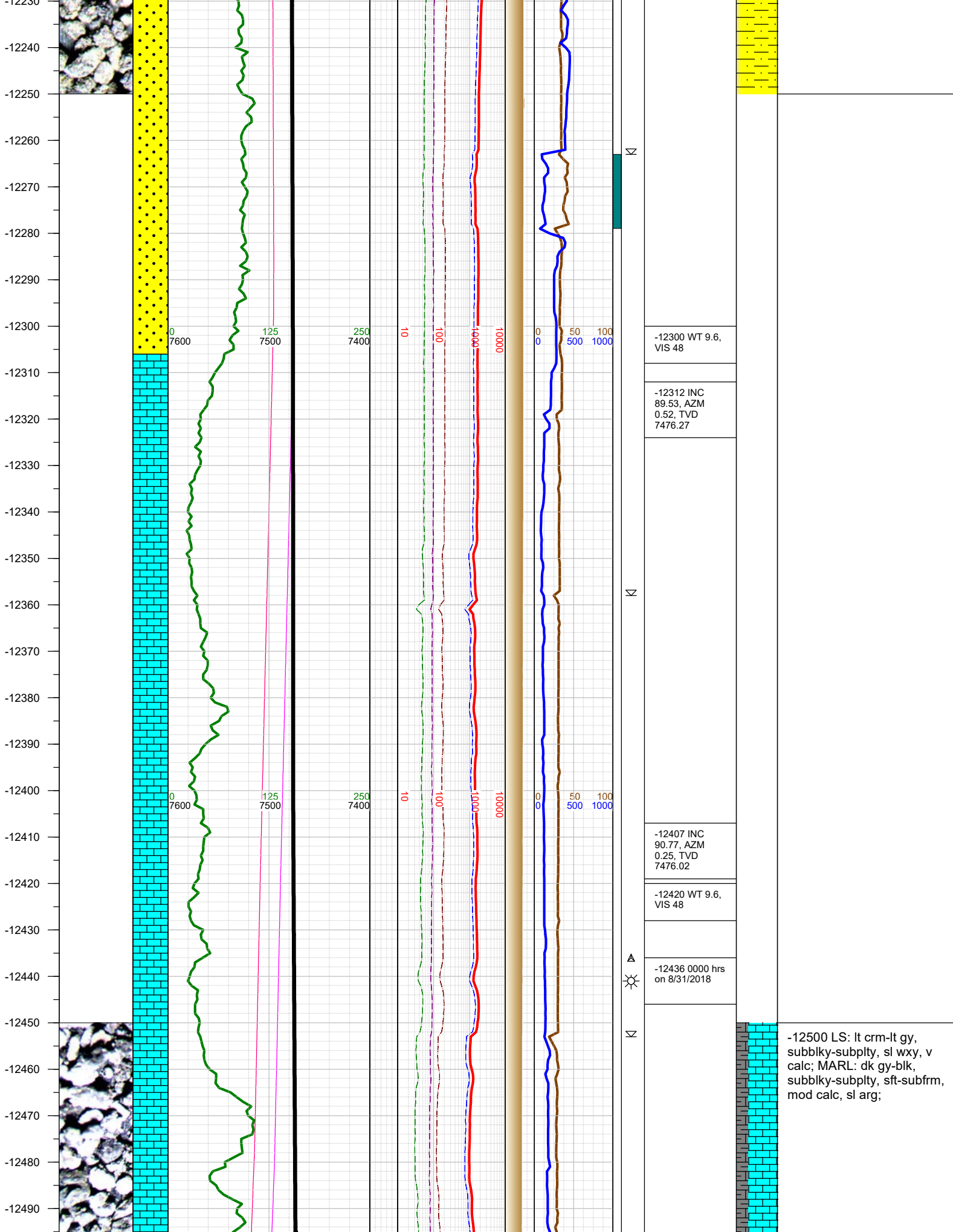


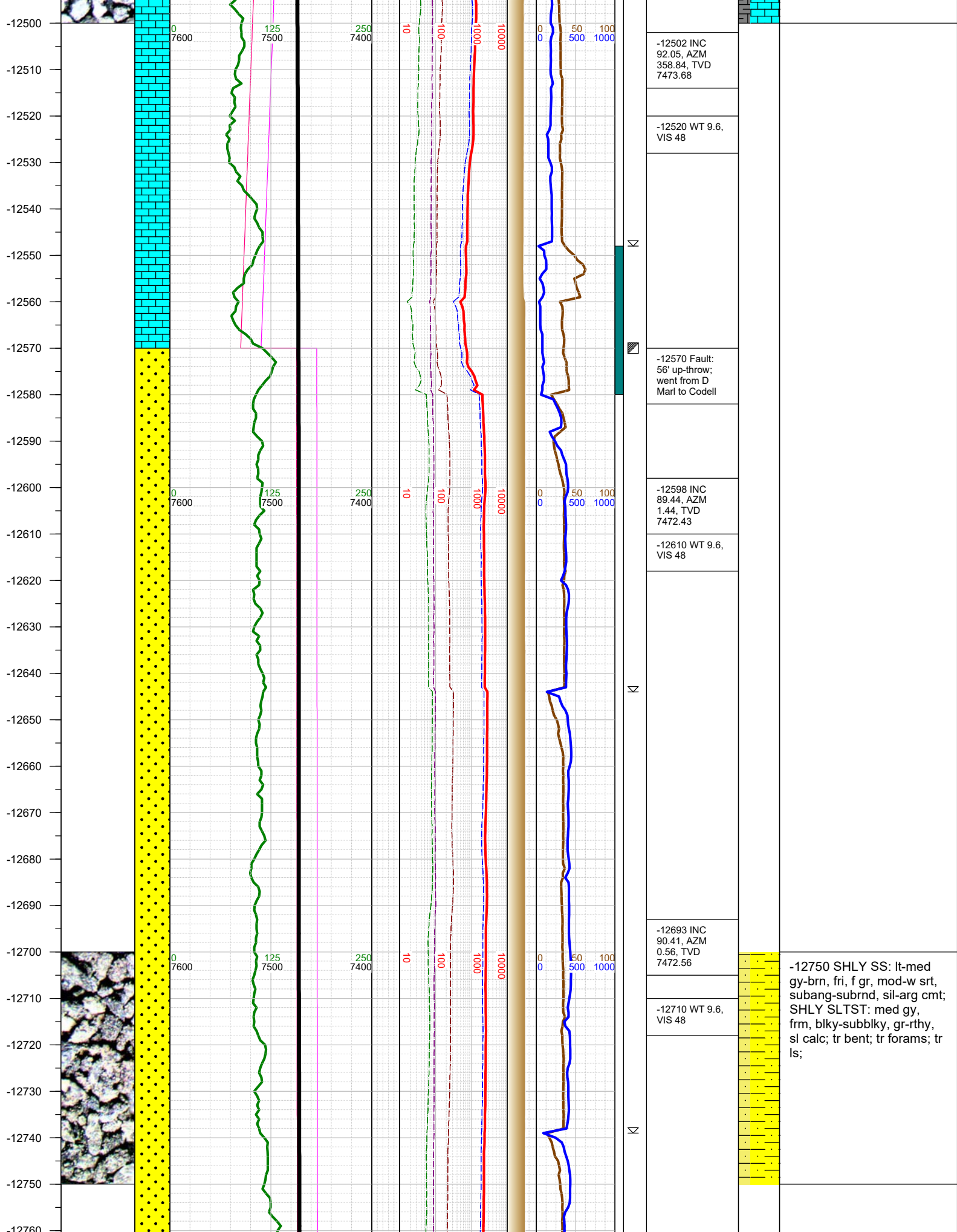


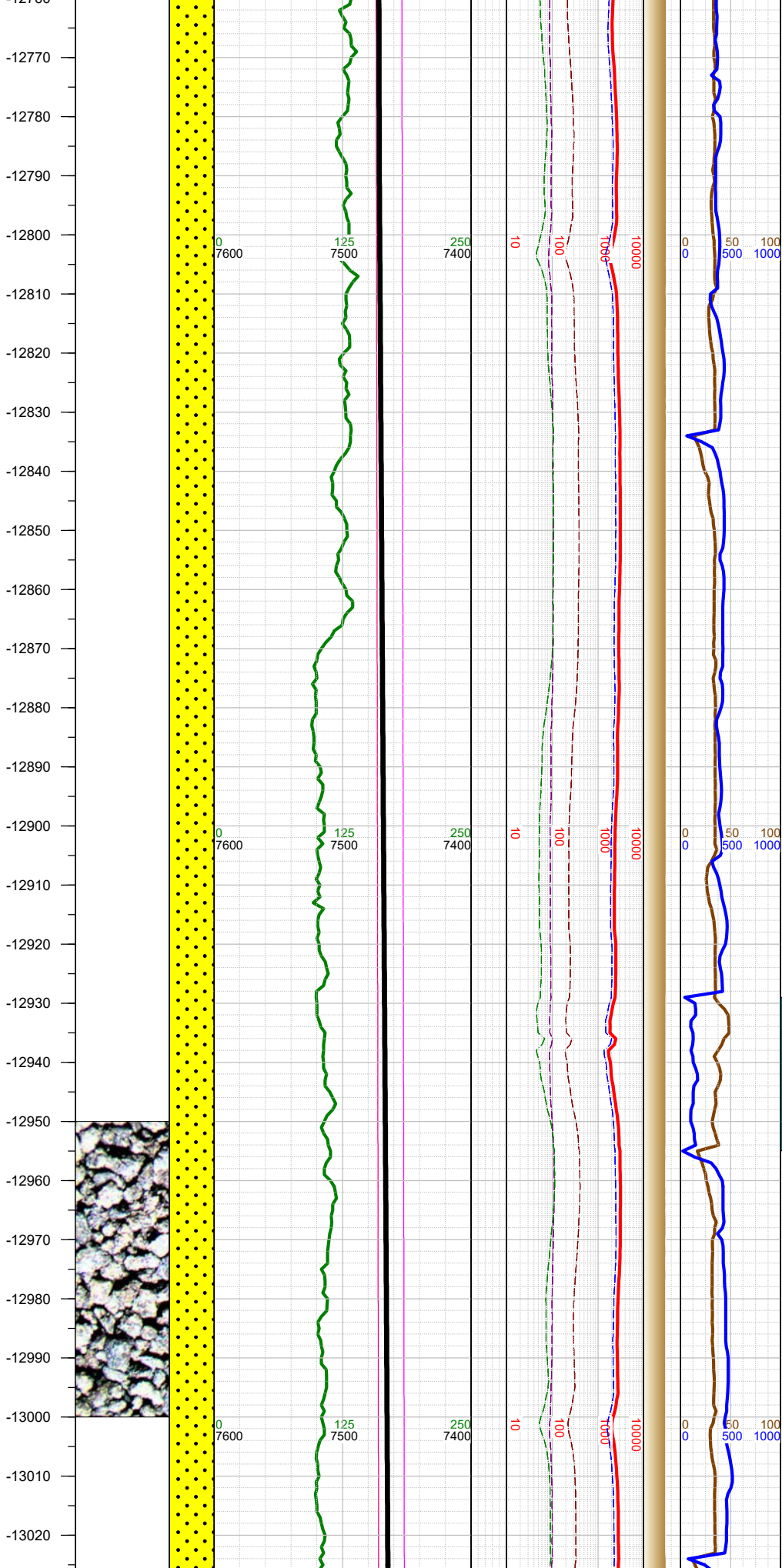










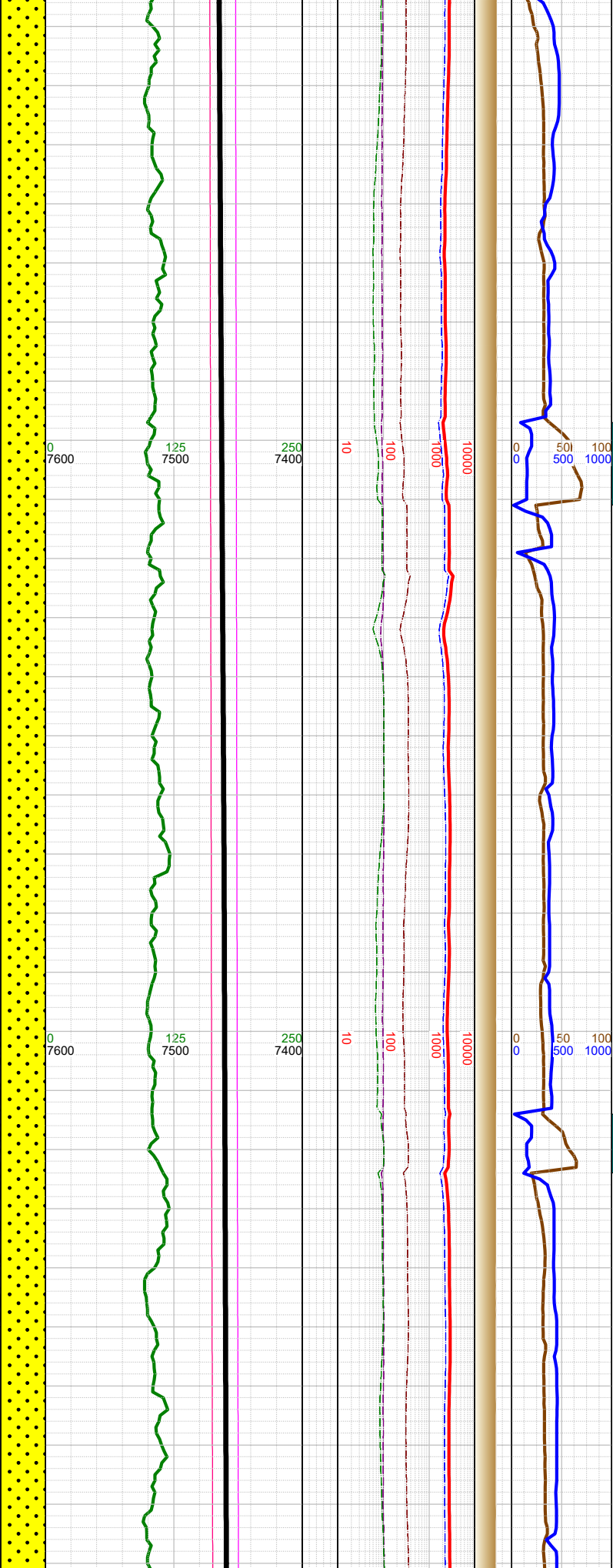
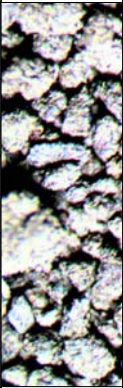


-12789 INC 90.85, AZM 359.68, TVD 7471.5	-12810 WT 9.6, VIS 48	-12884 INC 92.44, AZM 359.33, TVD 7468.77	-12900 WT 9.6, VIS 48
-12979 INC 90.9, AZM 2.9, TVD 7466	-13000 WT 9.6, VIS 48		



-13000 SHLY SS: lt-med
gy-brn, fri, f gr, mod-w srt,
subang-subrnd, sil-arg cmt;
SHLY SLTST: med gy,
frm, blk-subblky, gr-rthy,
sl calc; tr bent; tr pyr;

-13030
-13040
-13050
-13060
-13070
-13080
-13090
-13100
-13110
-13120
-13130
-13140
-13150
-13160
-13170
-13180
-13190
-13200
-13210
-13220
-13230
-13240
-13250
-13260
-13270
-13280
-13290

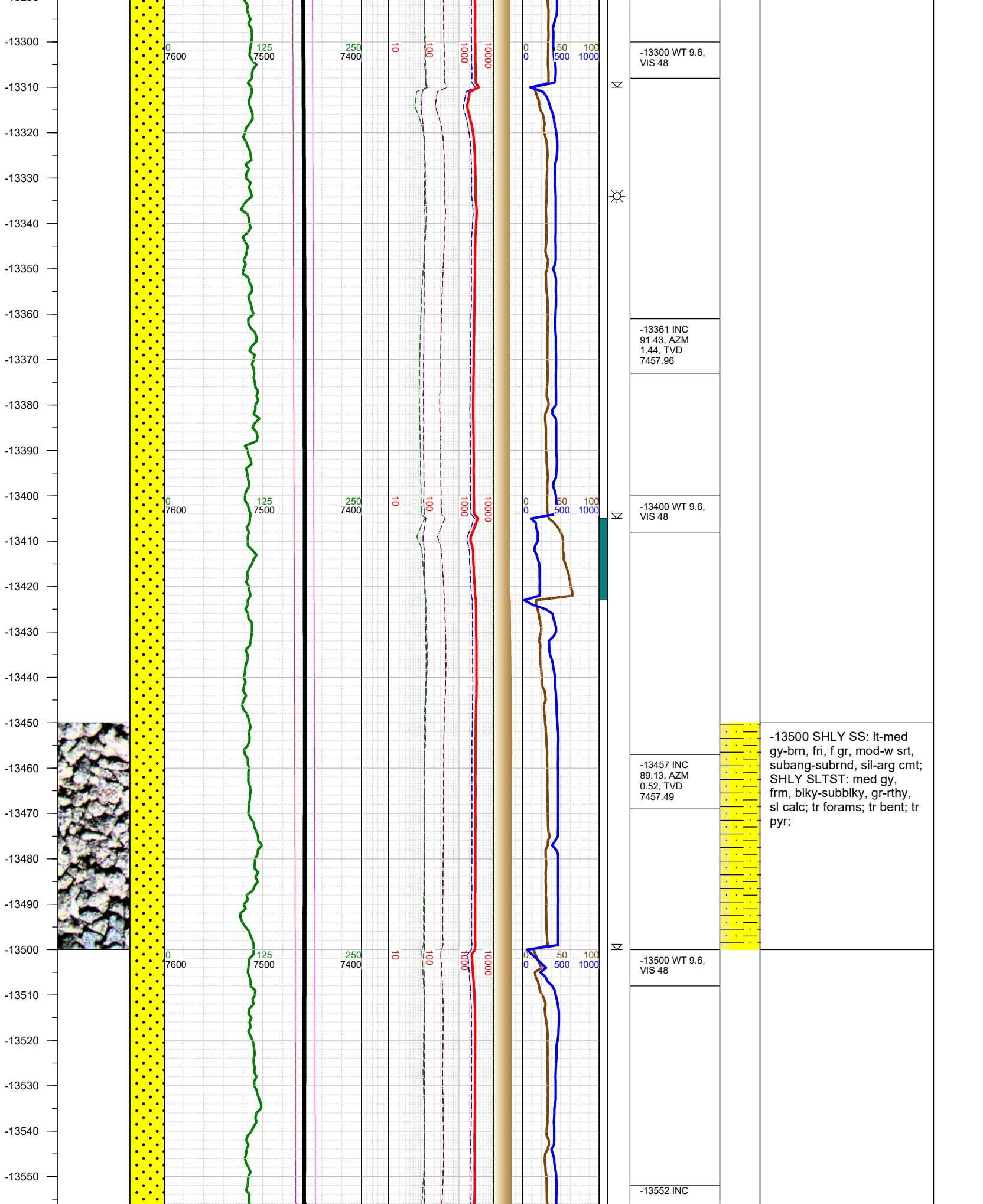


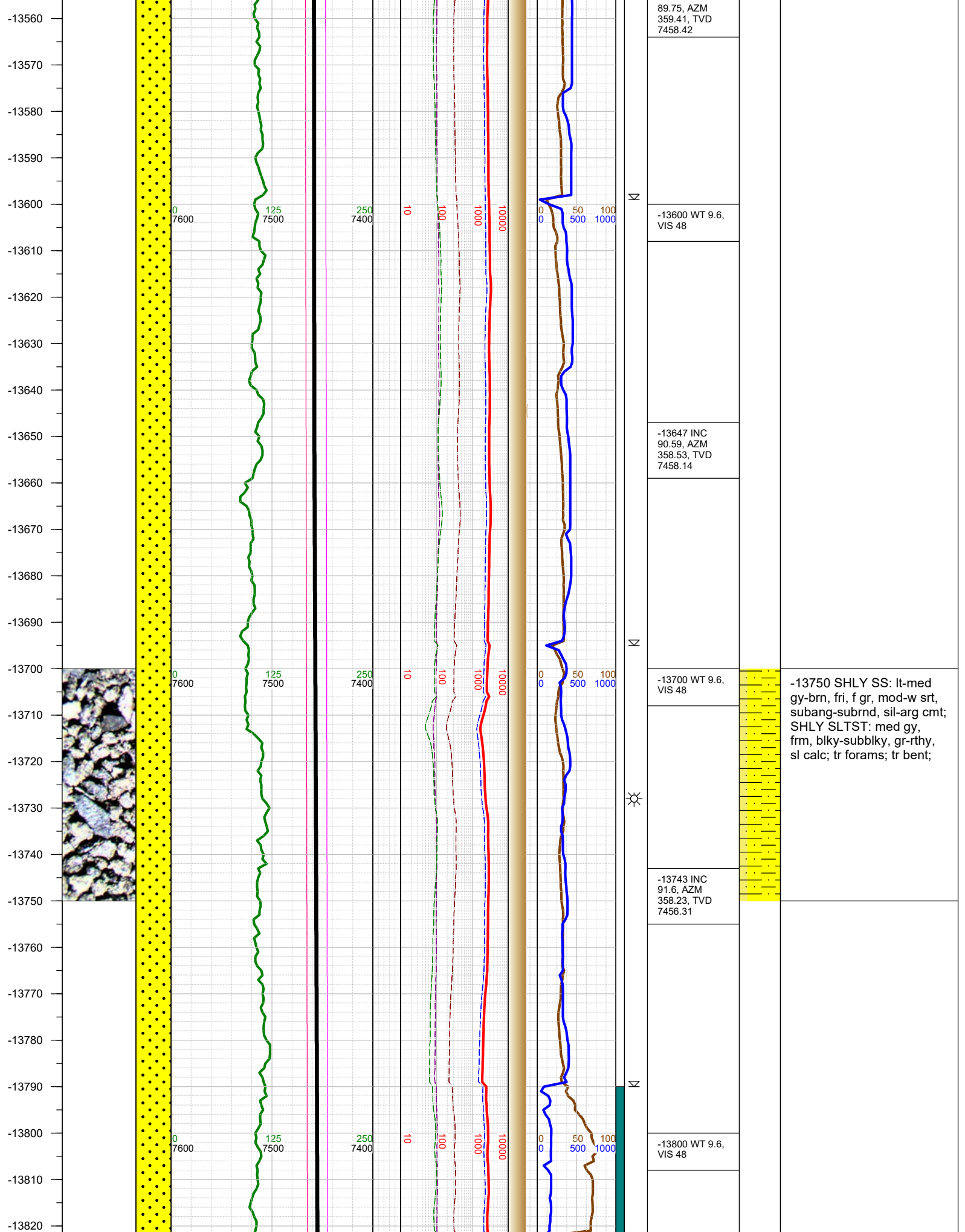
7600 7500 7400 10 100 1000 10000 0 50 100 500 1000

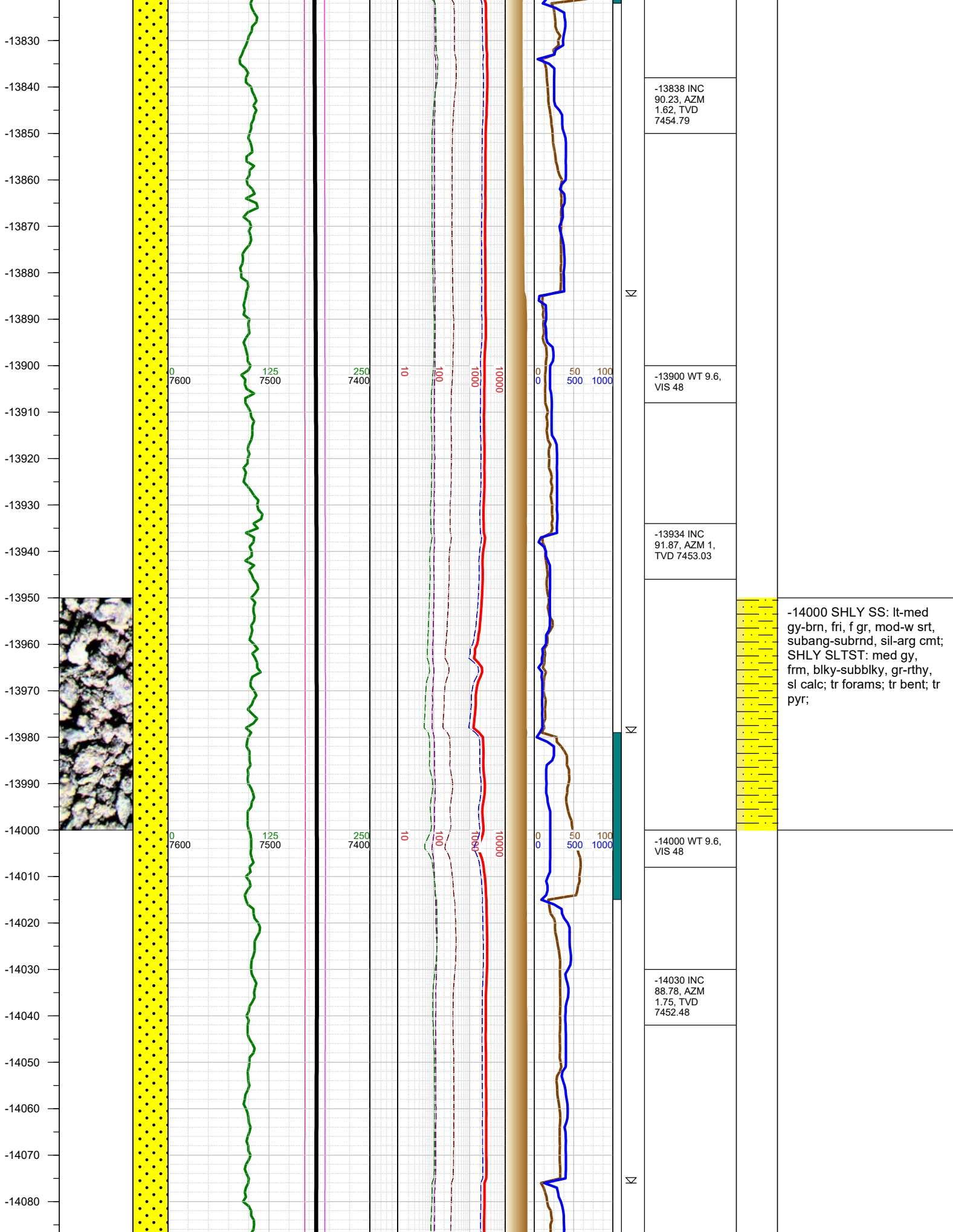
	-13074 INC 92, AZM 1.79, TVD 7463.6
	-13100 WT 9.6, VIS 48
	-13170 INC 91.07, AZM 2.1, TVD 7461.03
	-13200 WT 9.6, VIS 48
	-13266 INC 90.59, AZM 2.54, TVD 7459.64

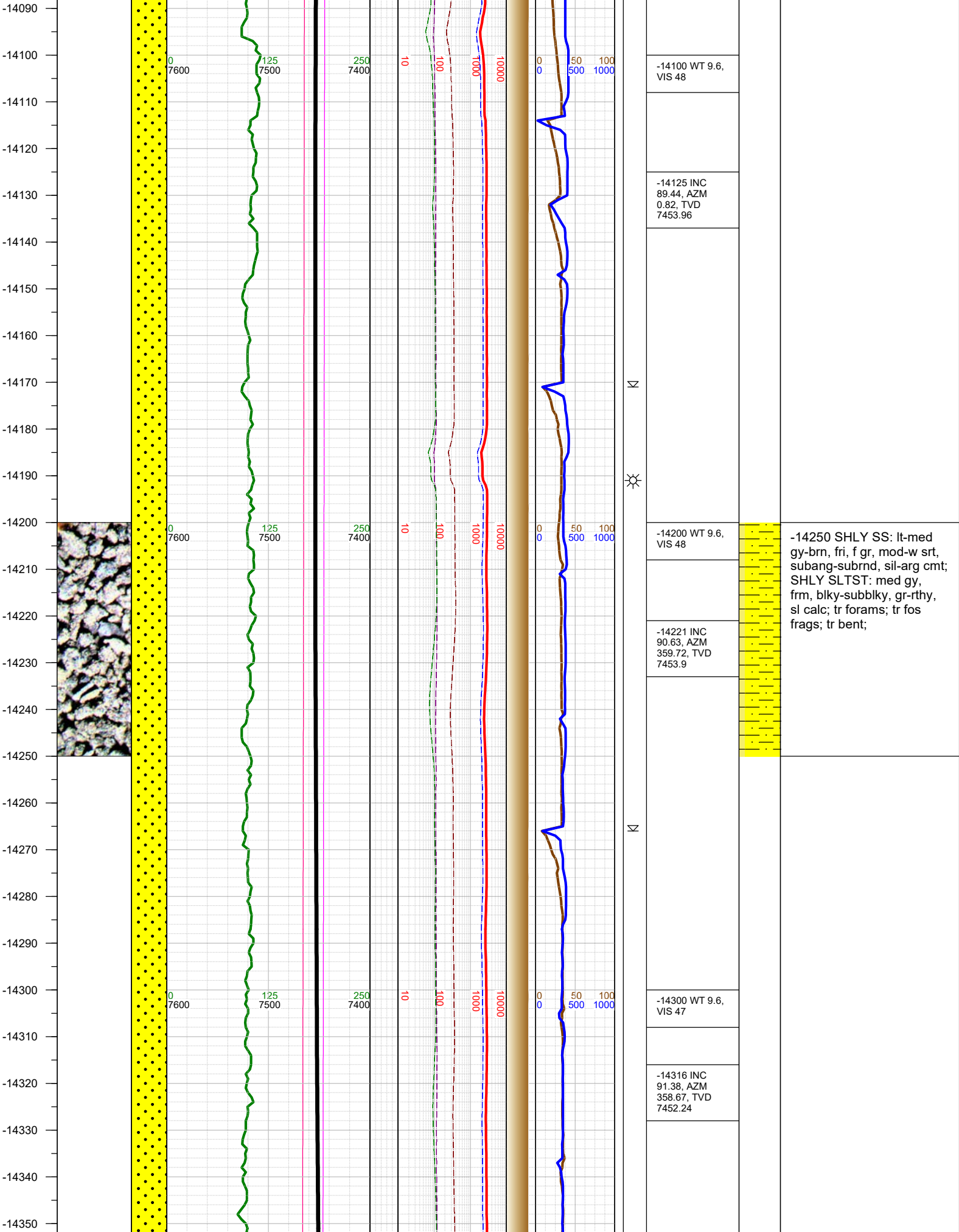


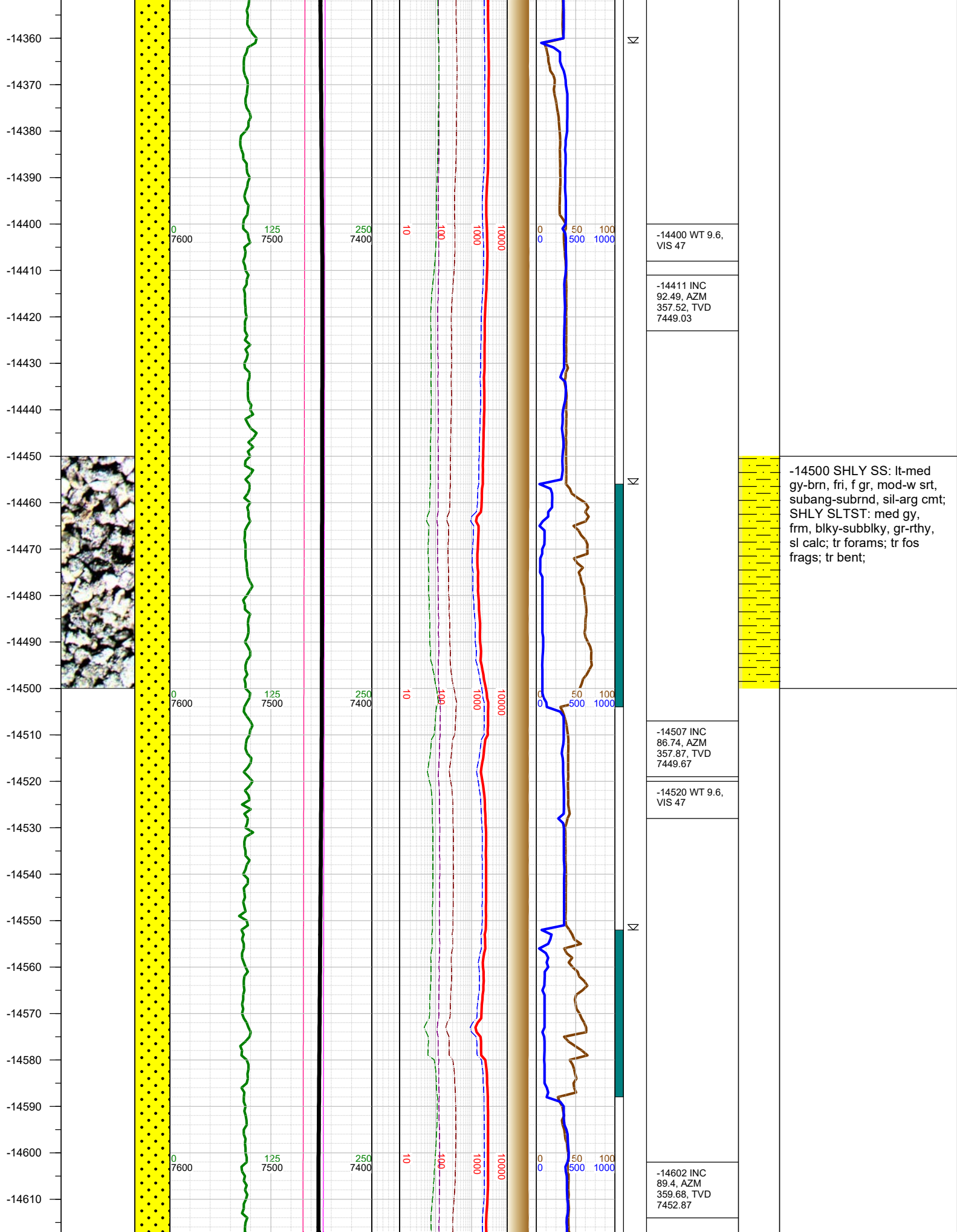
-13250 SHLY SS: lt-med
gy-brn, fri, f gr, mod-w srt,
subang-subrnd, sil-arg cmt;
SHLY SLTST: med gy,
frm, blkly-subblky, gr-rthy,
sl calc; tr bent; tr pyr;



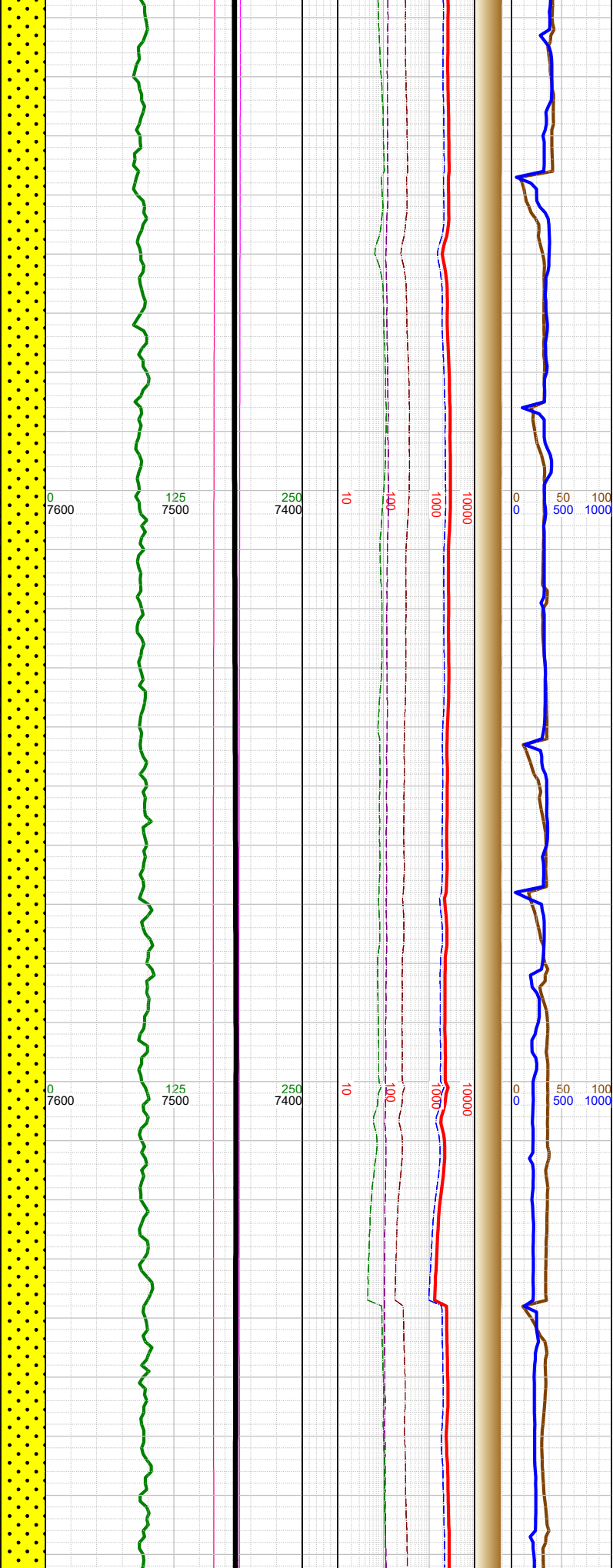
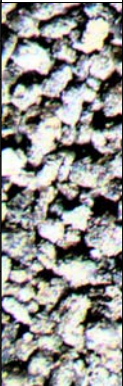








-14620
-14630
-14640
-14650
-14660
-14670
-14680
-14690
-14700
-14710
-14720
-14730
-14740
-14750
-14760
-14770
-14780
-14790
-14800
-14810
-14820
-14830
-14840
-14850
-14860
-14870
-14880



1

1

1

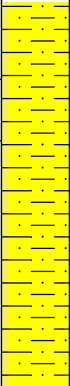
-14620 WT 9.6,
VIS 47

-14698 INC
90.63, AZM
359.19, TVD
7452.85

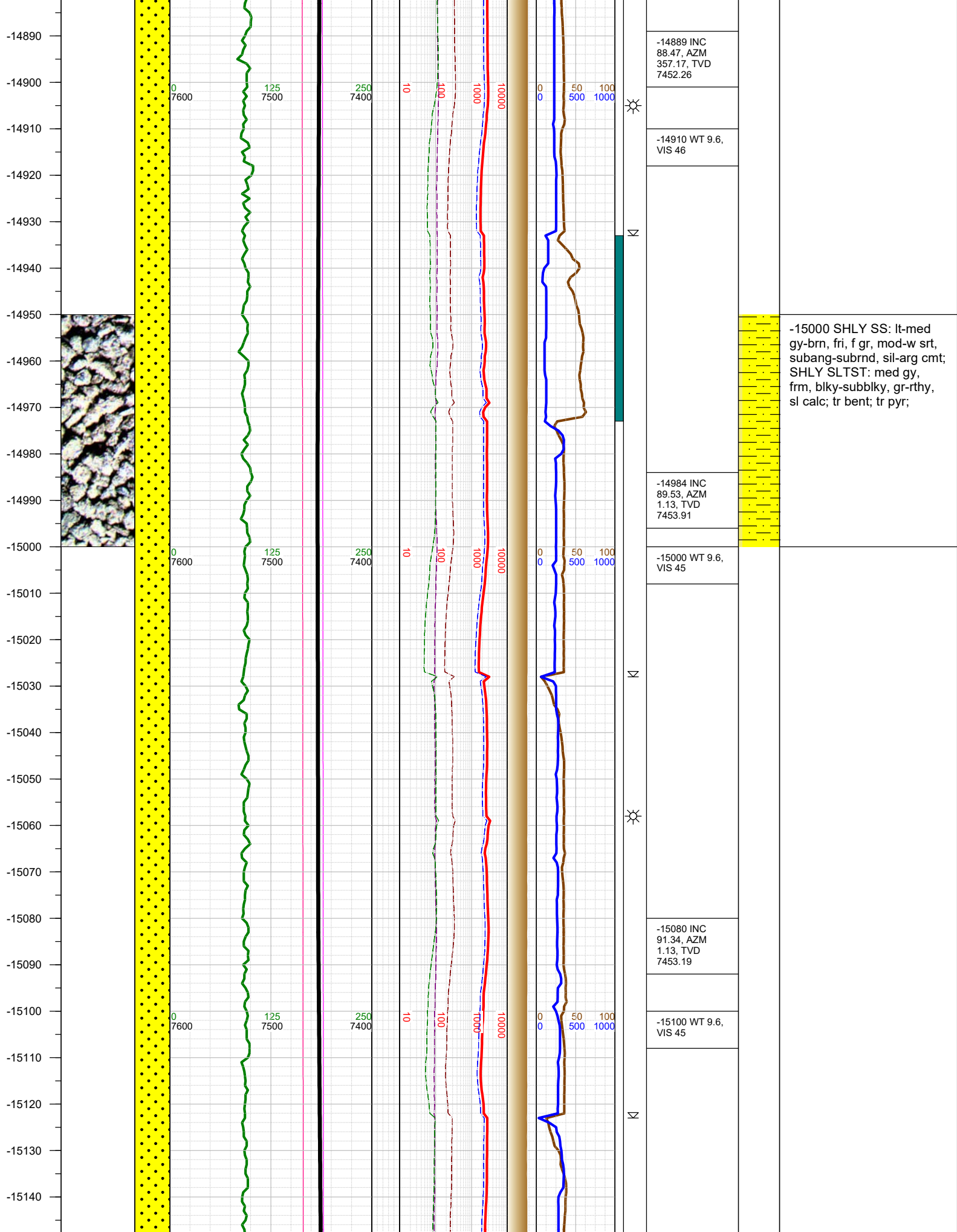
-14710 WT 9.6,
VIS 47

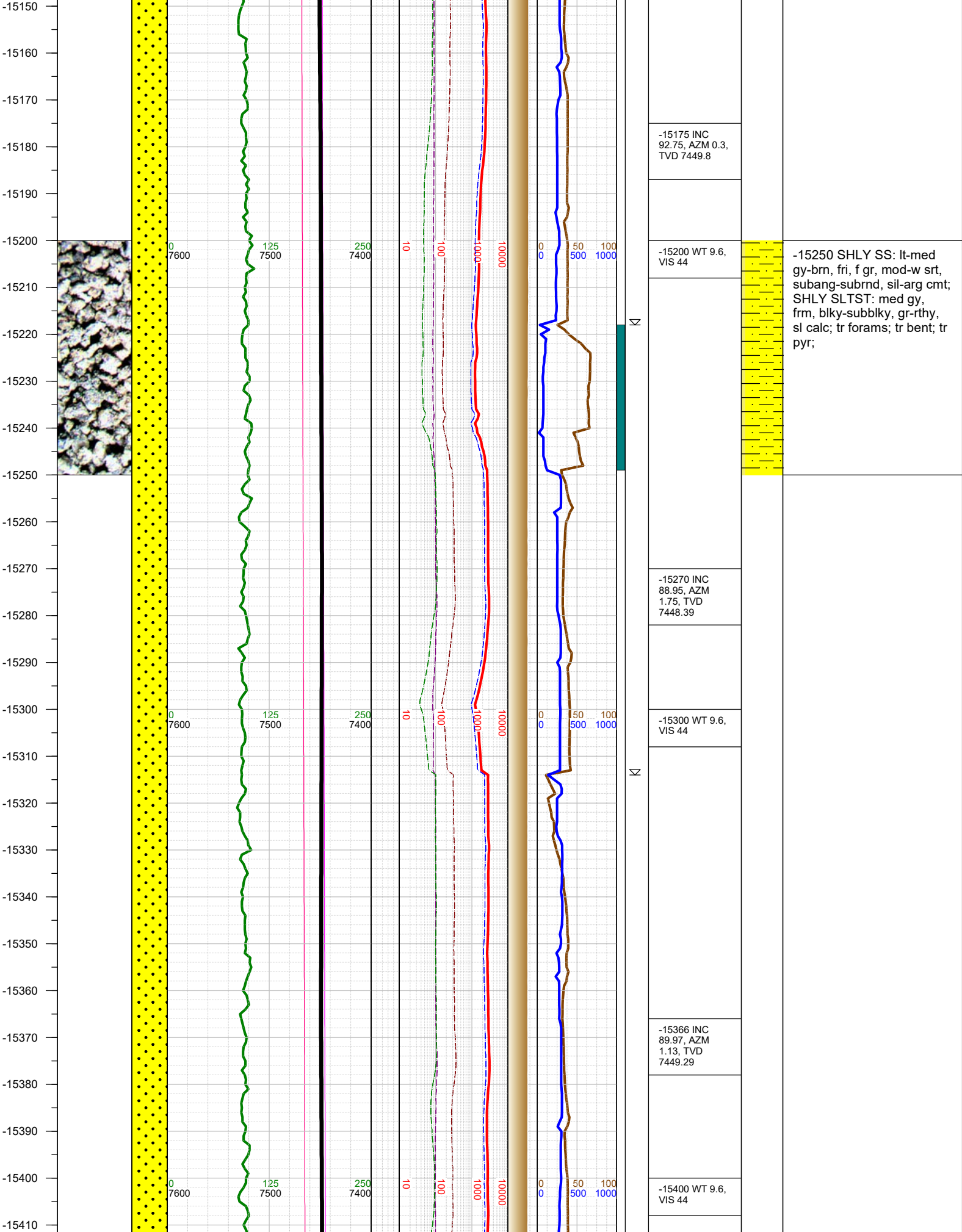
-14793 INC
90.81, AZM
358.4, TVD
7451.65

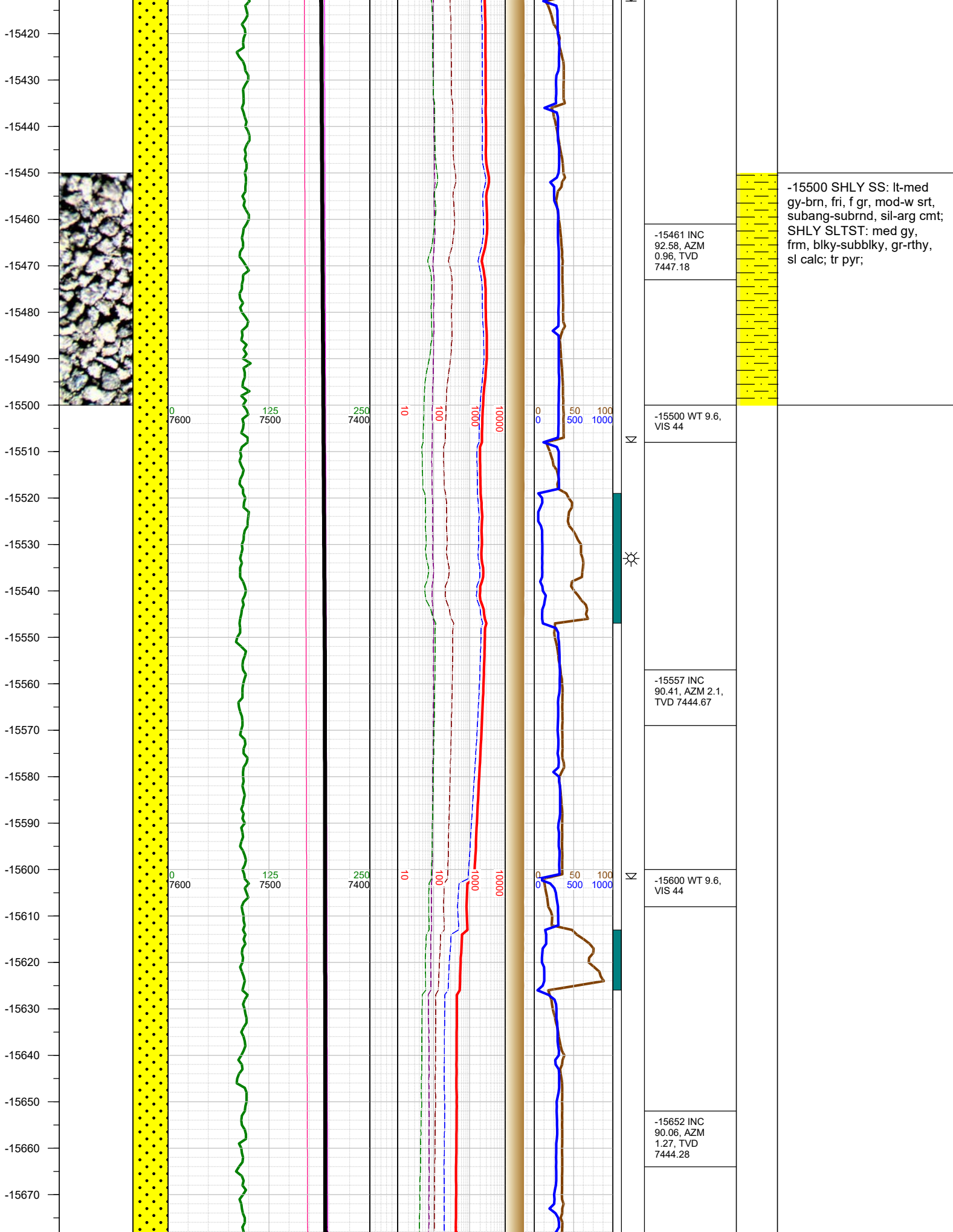
-14810 WT 9.6,
VIS 46

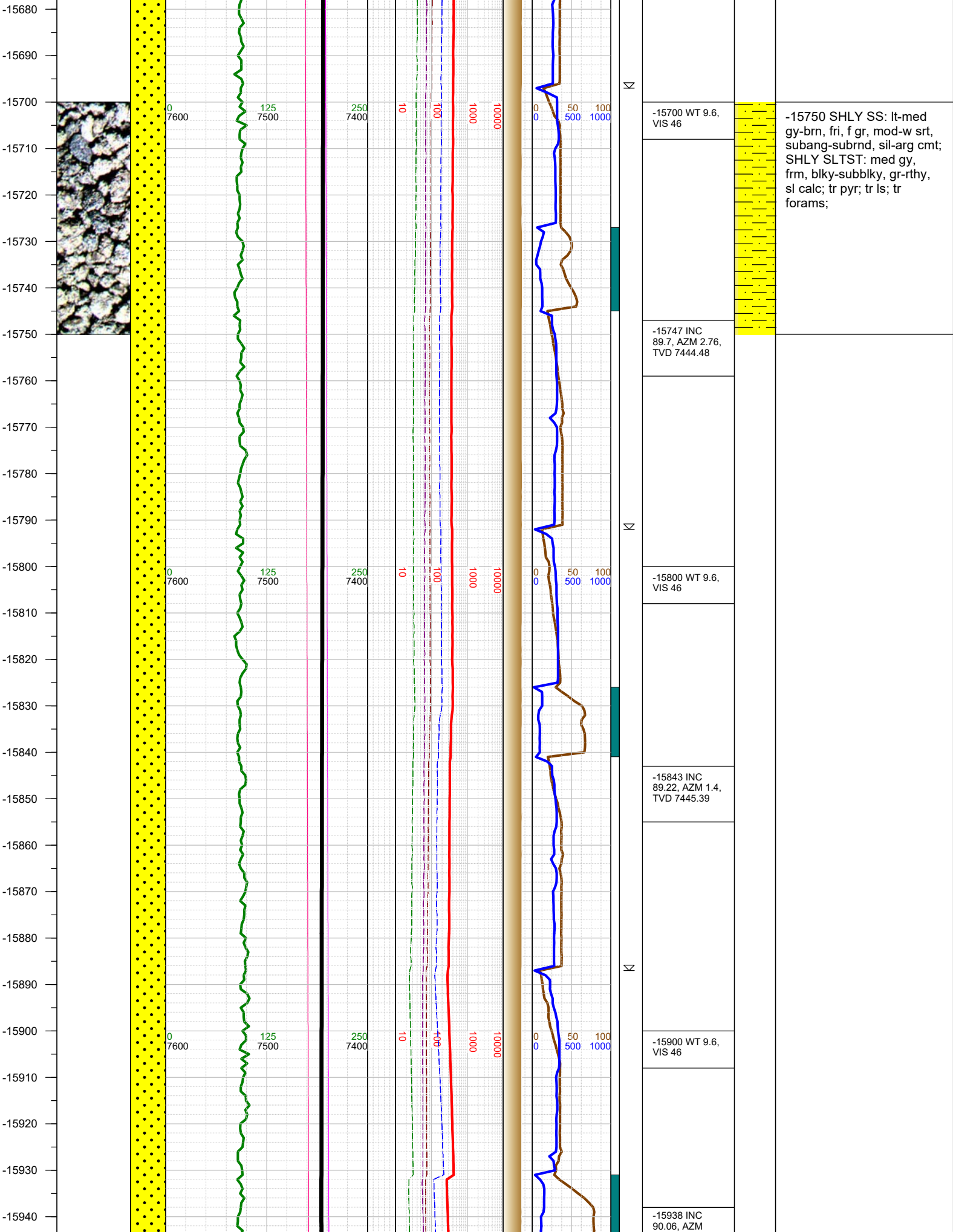


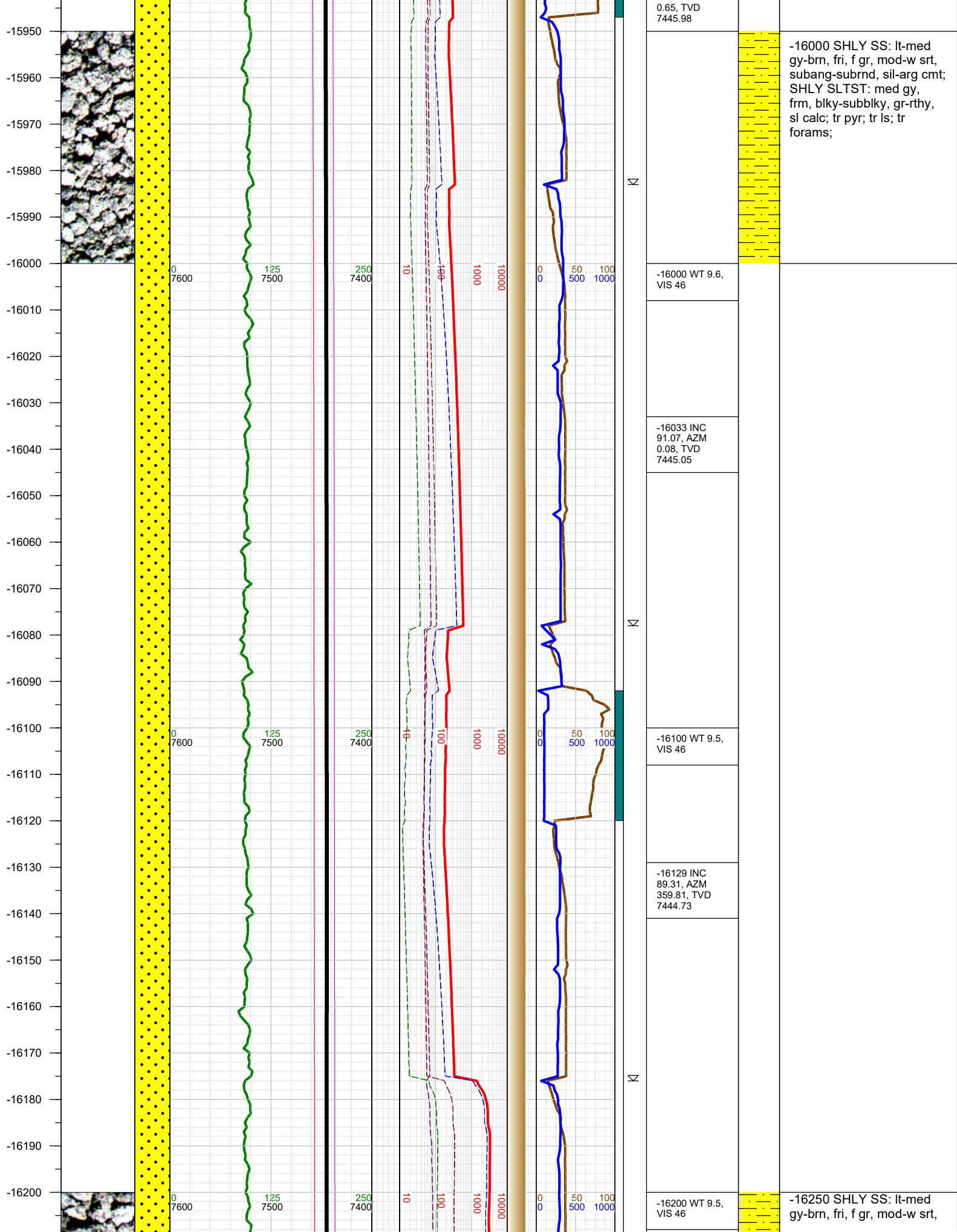
-14750 SHLY SS: lt-med
gy-brn, fri, f gr, mod-w srt,
subang-subrnd, sil-arg cmt;
SHLY SLTST: med gy,
frm, blkly-subblky, gr-rthy,
sl calc; tr forams; tr fos
frags; tr bent; tr pyr;

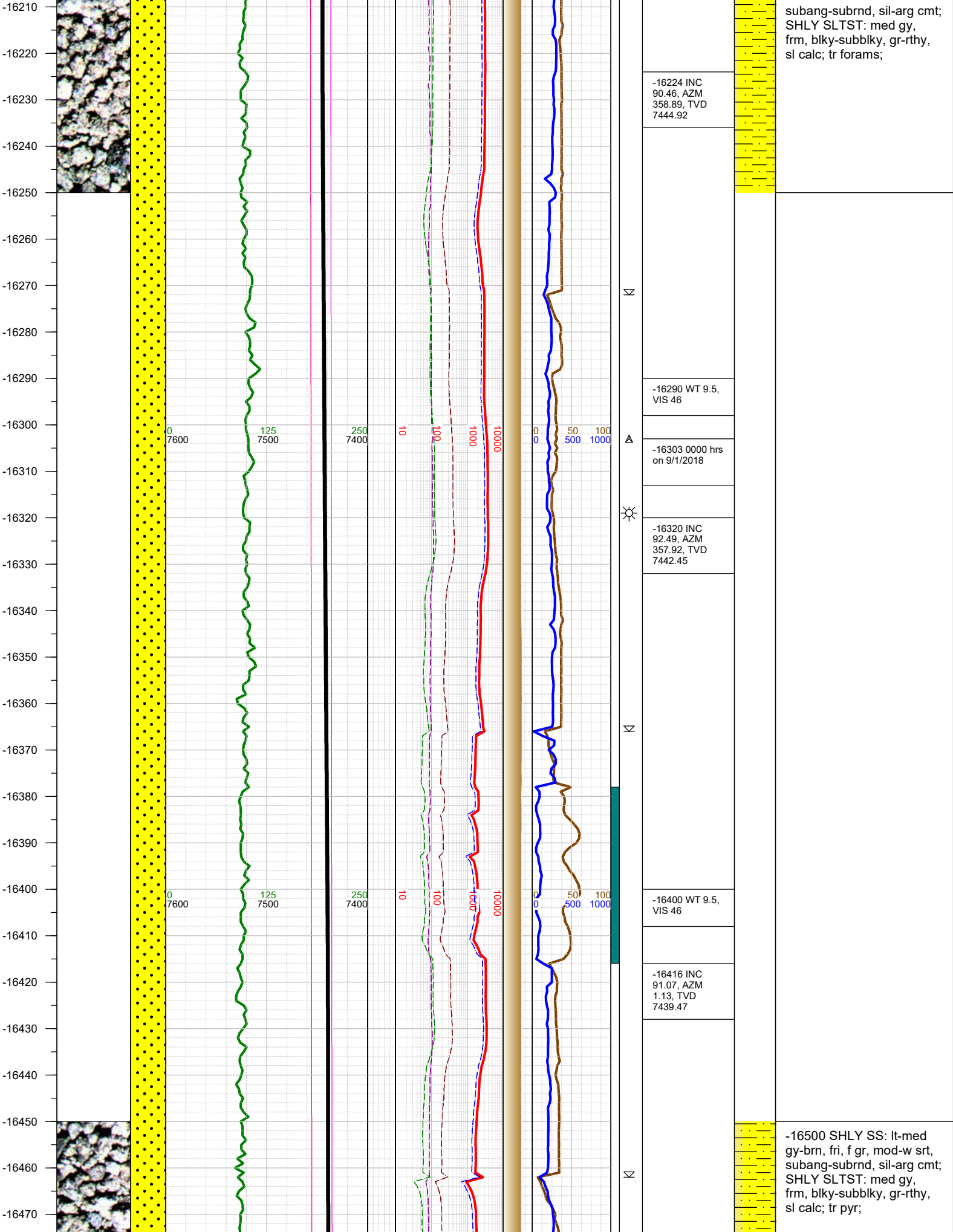




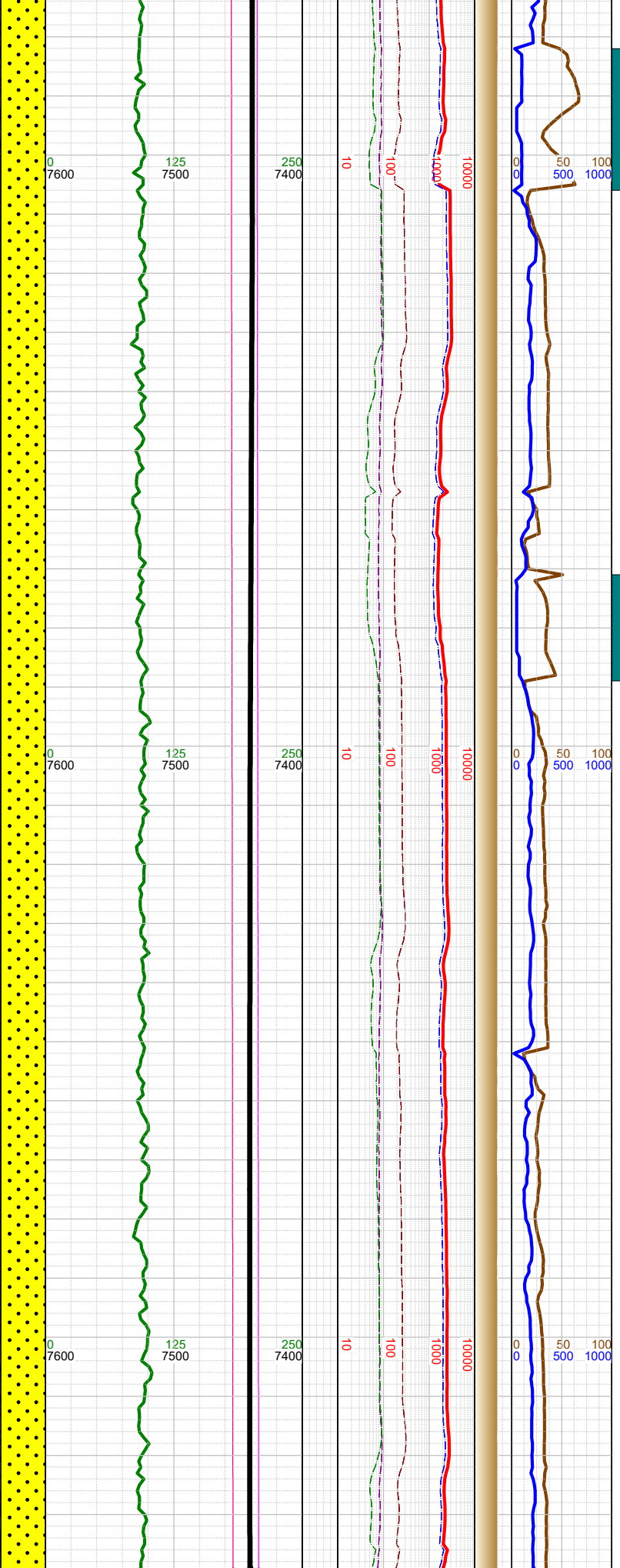








-16480
-16490
-16500
-16510
-16520
-16530
-16540
-16550
-16560
-16570
-16580
-16590
-16600
-16610
-16620
-16630
-16640
-16650
-16660
-16670
-16680
-16690
-16700
-16710
-16720
-16730



-16500 WT 9.5,
VIS 46

-16511 INC
89.44, AZM
2.72, TVD
7439.04

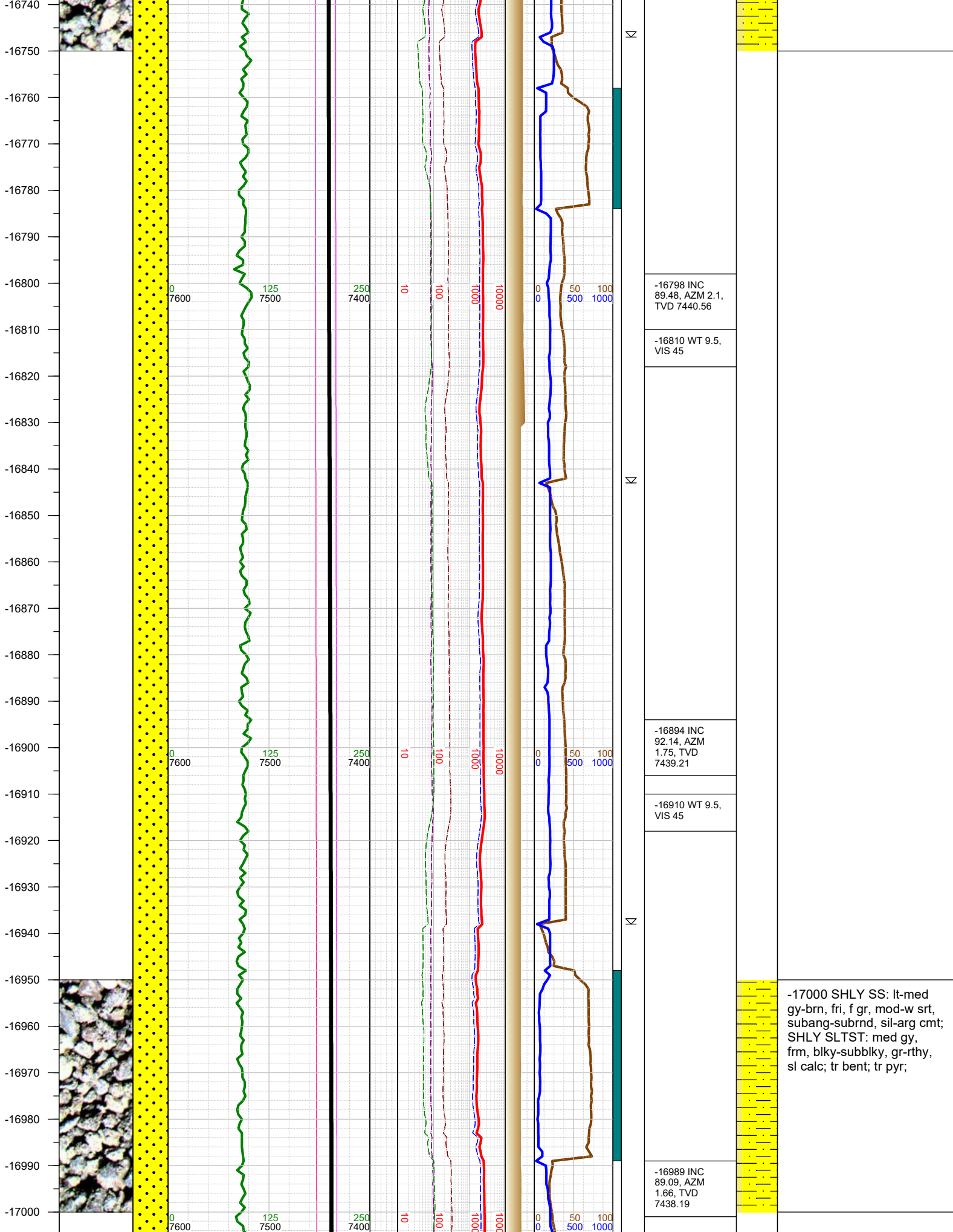
-16607 INC
88.42, AZM
2.85, TVD
7440.84

-16620 WT 9.5,
VIS 46

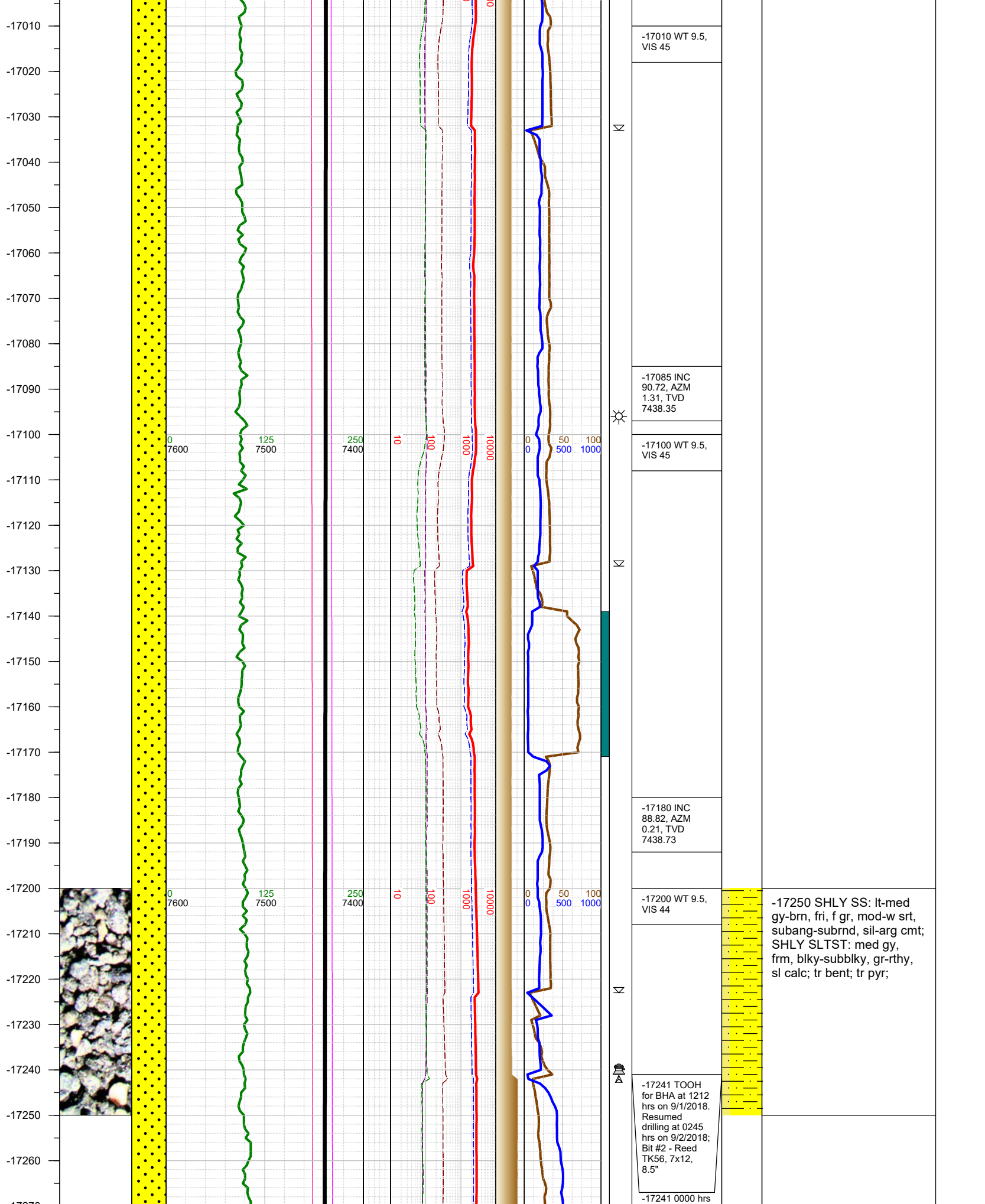
-16702 INC
91.21, AZM
2.54, TVD
7441.14

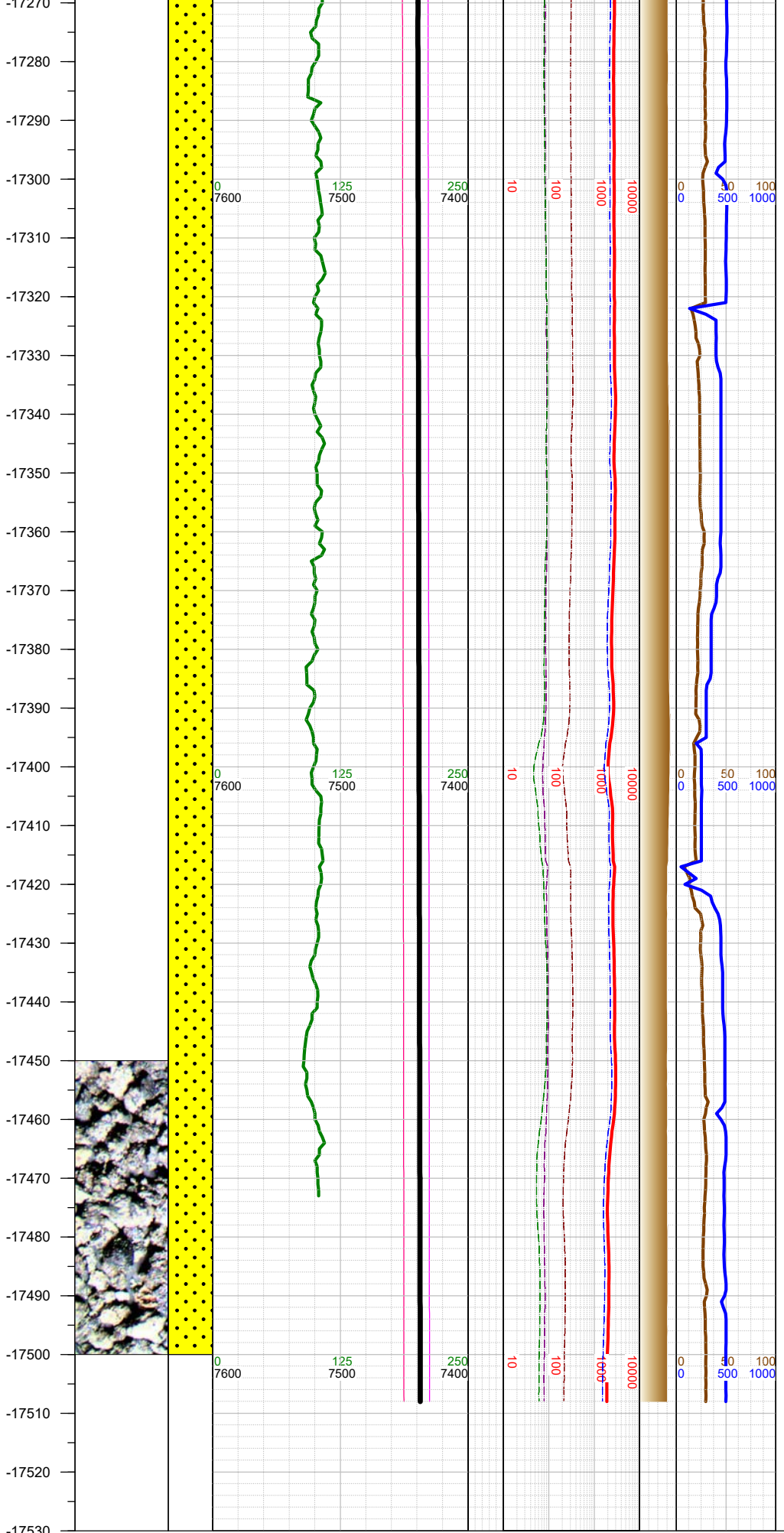
-16720 WT 9.5,
VIS 46

-16750 SHLY SS: lt-med
gy-brn, fri, f gr, mod-w srt,
subang-subrnd, sil-arg cmt;
SHLY SLTST: med gy,
frm, blk-y-subblky, gr-rthy,
sl calc; tr bent; tr pyr;



-17000 SHLY SS: lt-med gy-brn, fri, f gr, mod-w srt, subang-subrnd, sil-arg cmt; SHLY SLTST: med gy, frm, blk-subblky, gr-rthy, sl calc; tr bent; tr pyr;





on 9/2/2018
-17275 INC 90.32, AZM 359.77, TVD 7439.44
-17300 WT 9.5, VIS 44
-17371 INC 90.5, AZM 358.4, TVD 7438.75
-17400 WT 9.5, VIS 44
-17500 WT 9.5, VIS 44
-17508 Reached horizontal TD of 17508' MD, 7438' TVD at 0335 hrs on 9/2/2018.

-17500 SHLY SS: lt-med
gy-brn, fri, f gr, mod-w srt,
subang-subrnd, sil-arg cmt;
SHLY SLTST: med gy,
frm, blkly-subblky, gr-rthy,
sl calc; tr bent; tr pyr;

TOTAL DEPTH = 17508'

Thank you for using Earth Science Agency