

OPERATOR: **Extraction Oil & Gas**

WELL NAME: **Launer 8C**

FIELD NAME: DJ Basin - Wattenberg

DRILLING RIG: Patterson 346

API #: 05-123-45176

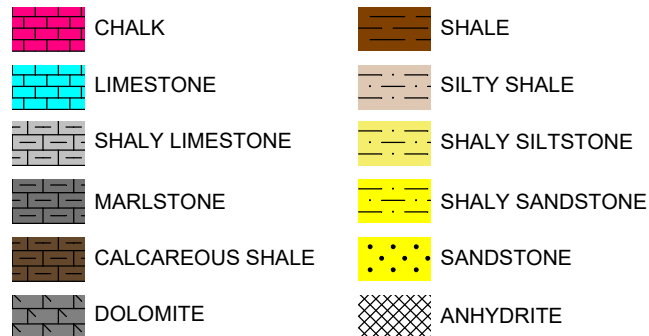
LAT/LONG: 40.539814, -104.852437  
SURFACE HOLE: SESE S26-T7N-R67W, 699' FSL, 412' FEL  
BOTTOM HOLE: S26-T7N-R67W, 1171' FSL, 592' FEL



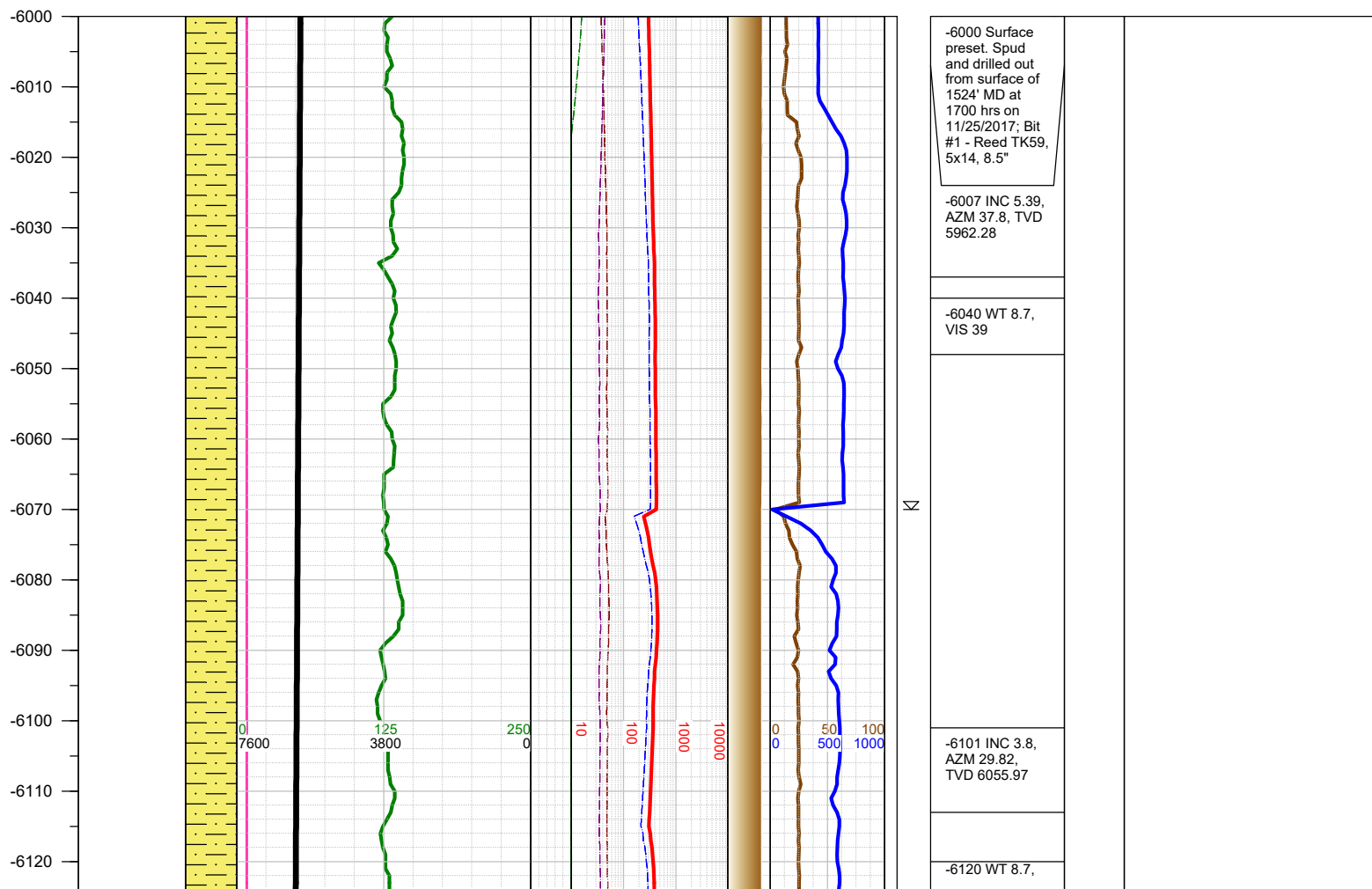
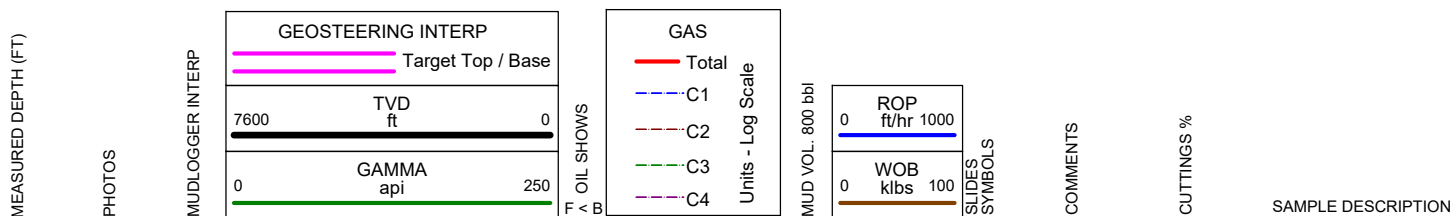
Earth Science Agency, LLC

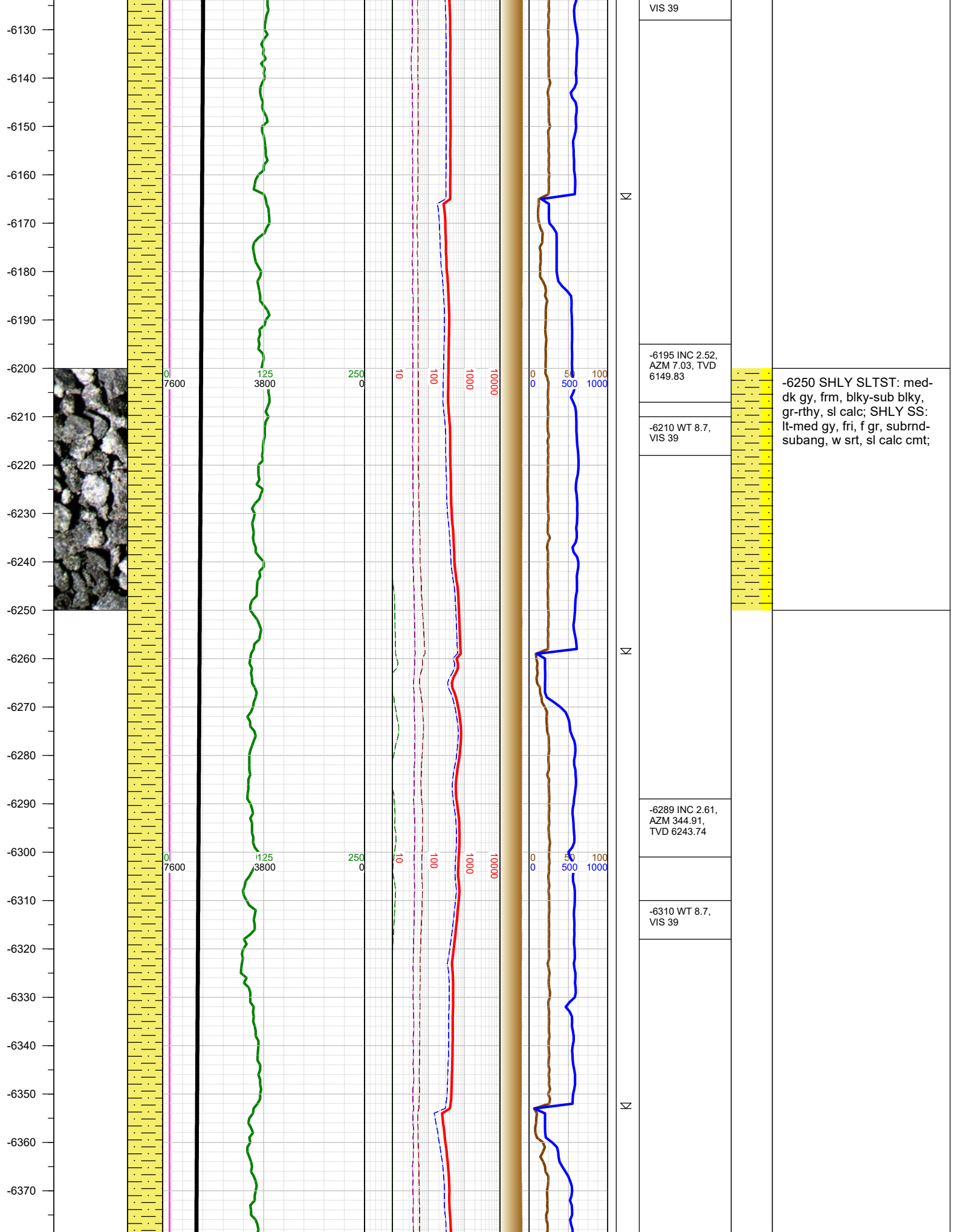
COUNTY: Weld  
STATE: Colorado  
GROUND ELEVATION: 4926'  
KELLY BUSHING: 4951'  
DRILLING FLUID: OBM  
TVD VS. MD: 7207' / 14804'  
SPUD DATE: November 25, 2017  
TD DATE: November 28, 2017  
  
DEPTHS LOGGED: 6000' - 14804'  
DATES LOGGED: November 25, 2017 - November 28, 2017  
GEOLOGISTS: Brian Whitfield, Ross Apodaca  
SCALE: 5" = 100'

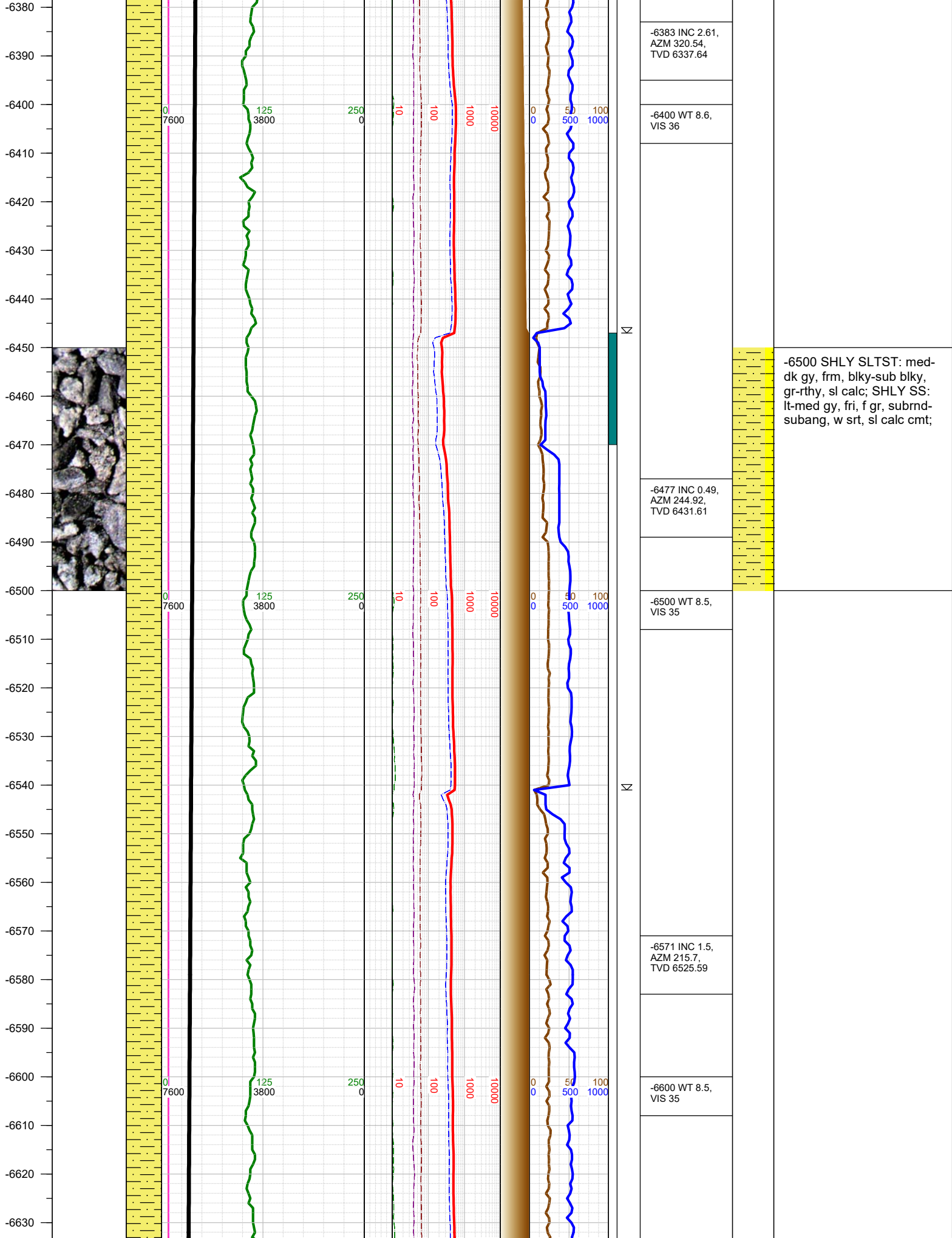
#### LEGEND

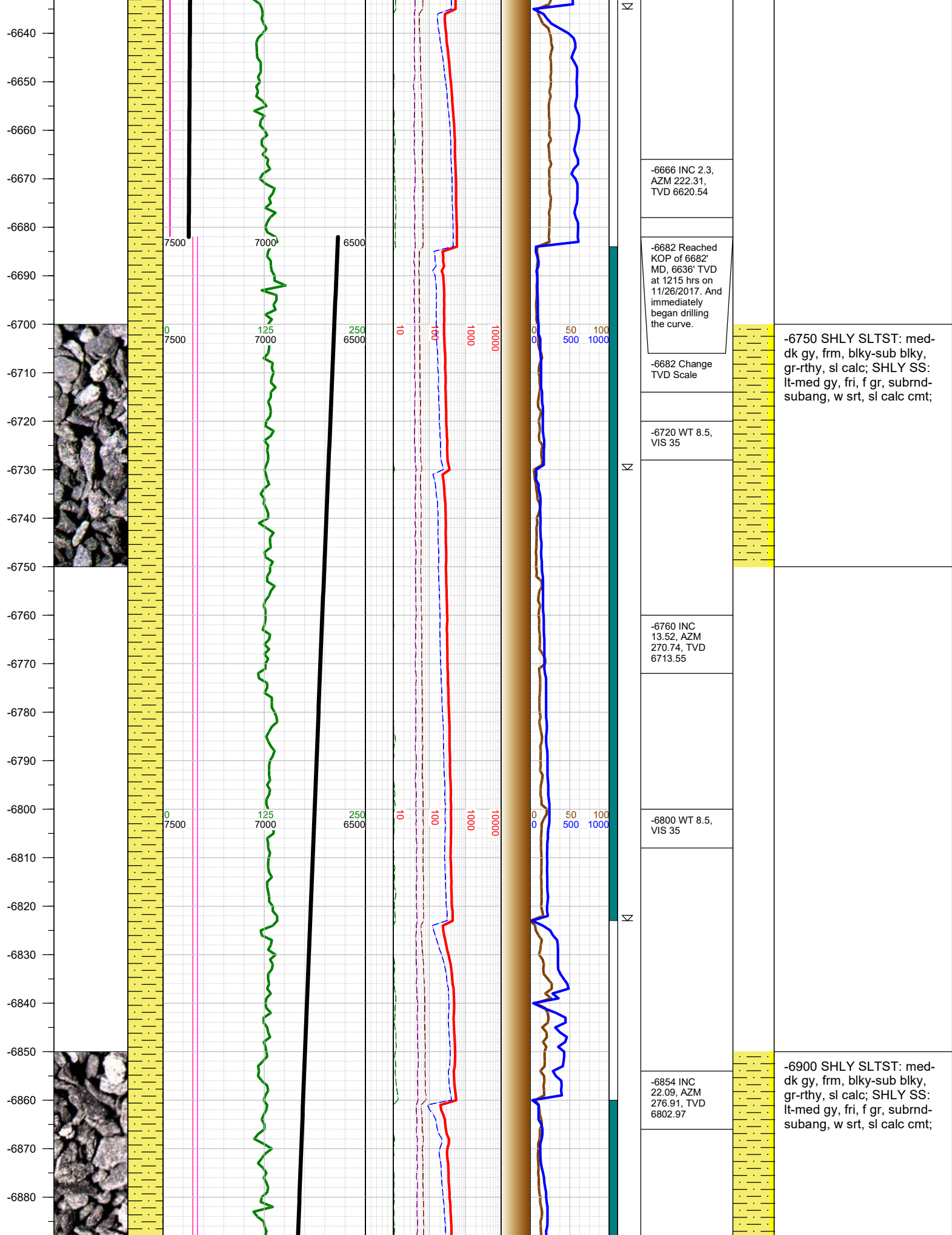


FORMATION  $\approx$  CONNECTION  $\Delta$  MIDNIGHT NEW BIT GAS SHOW FAULT

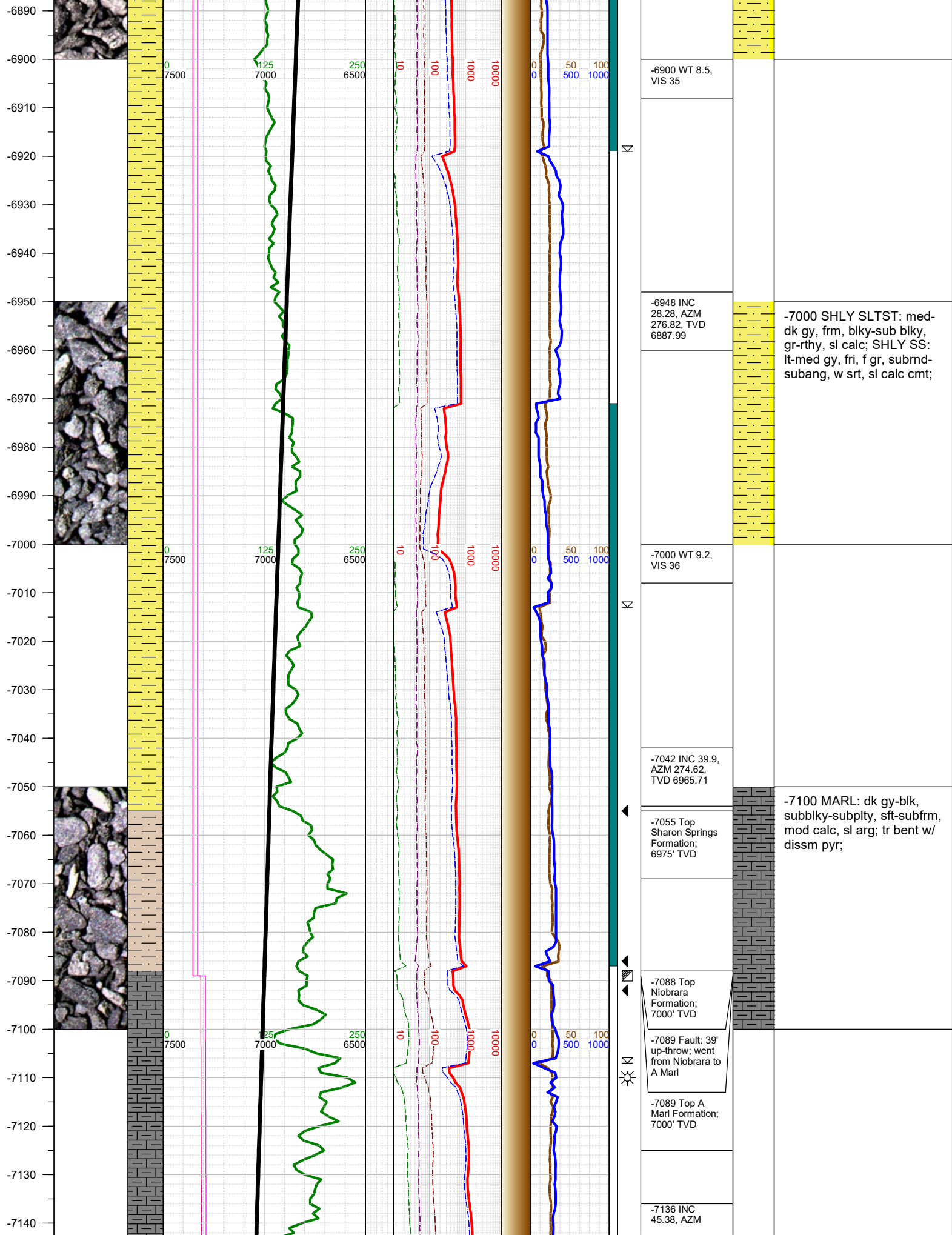


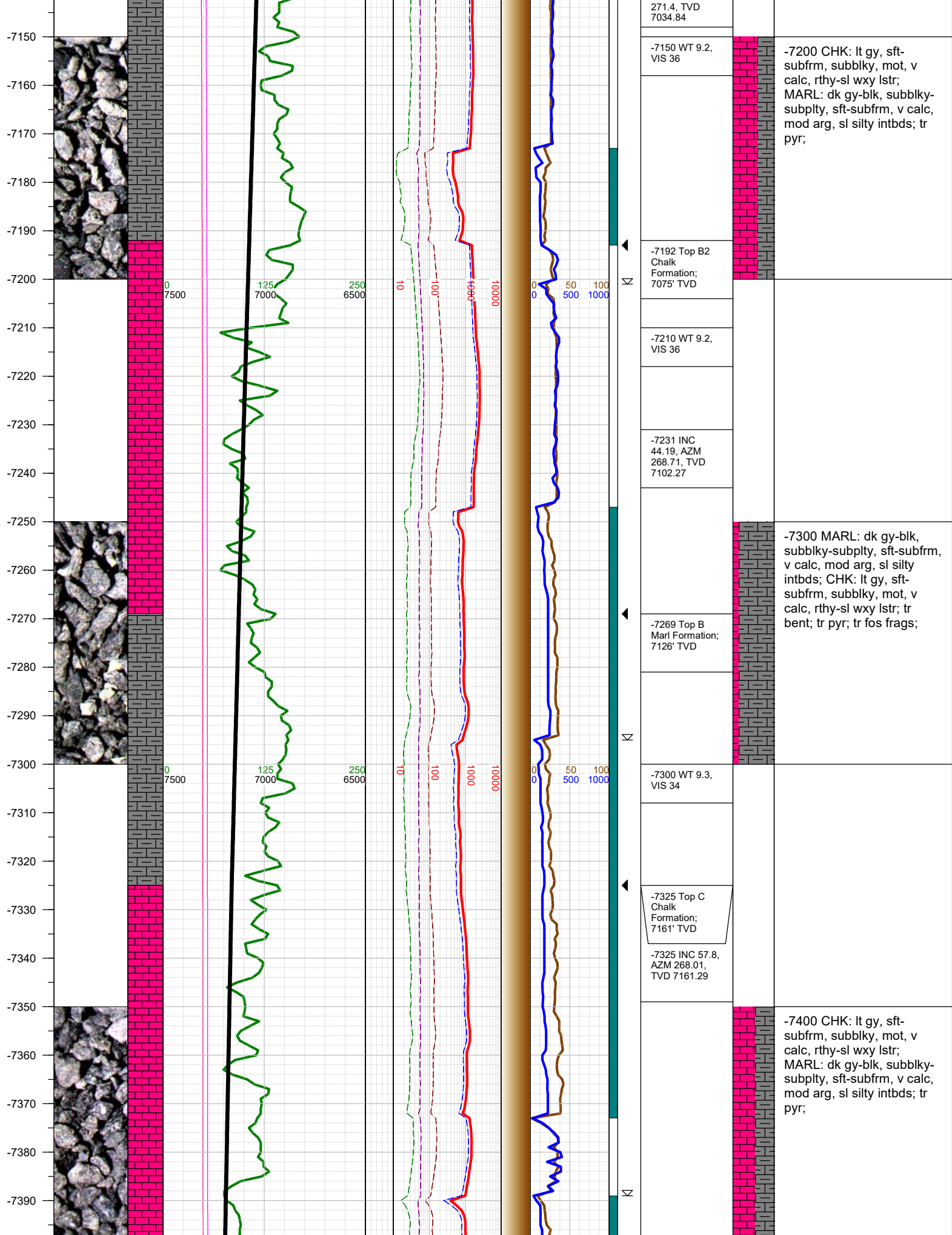


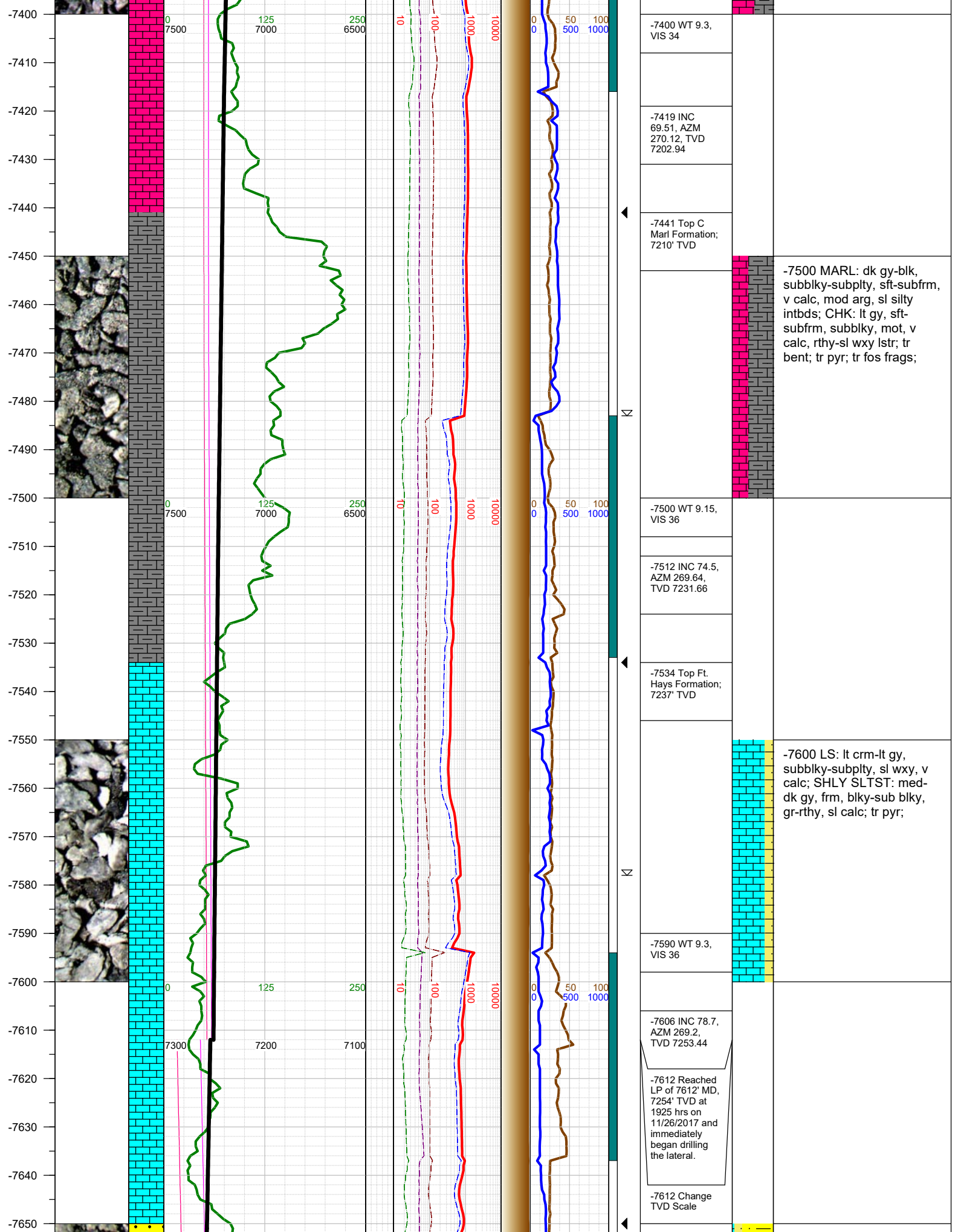




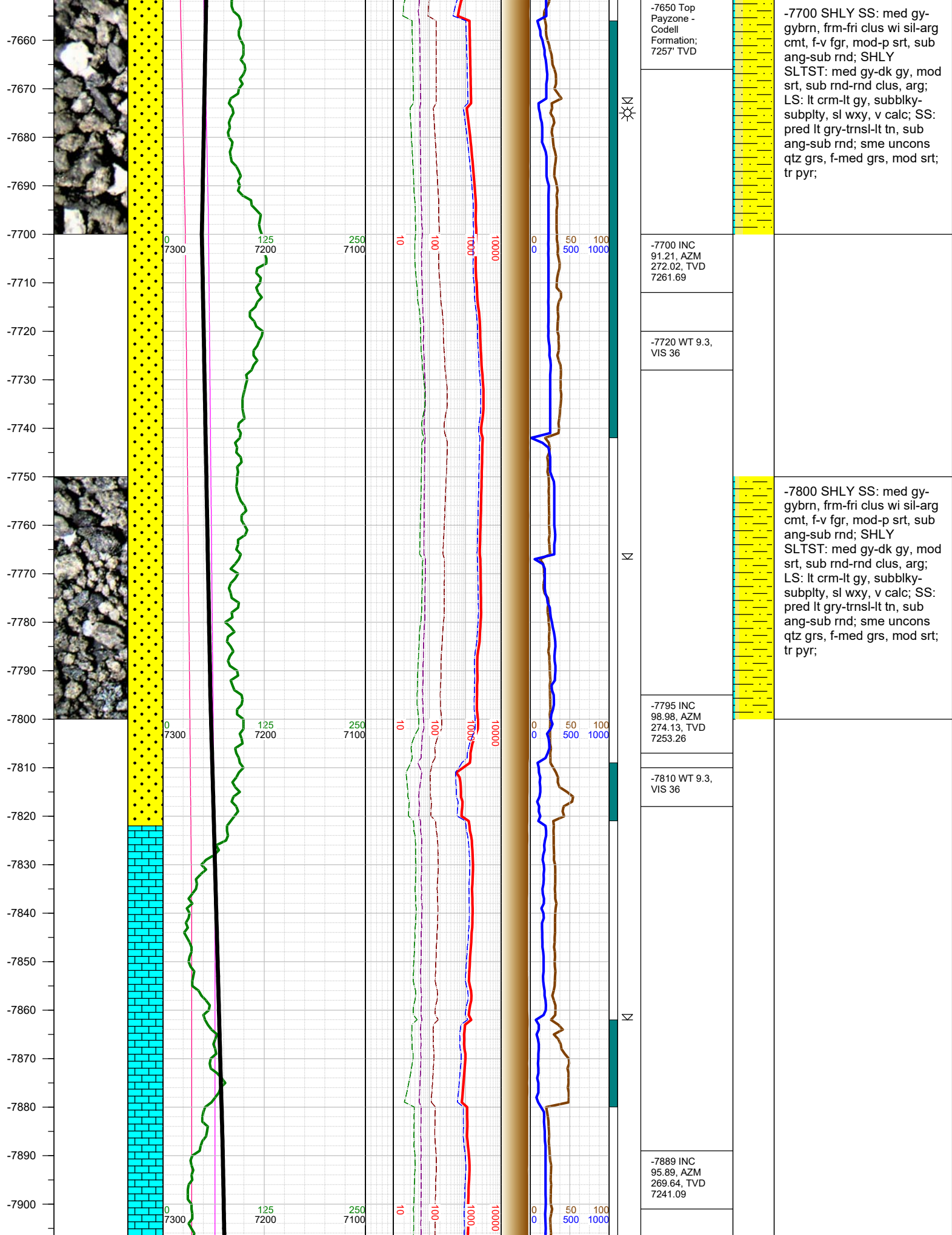






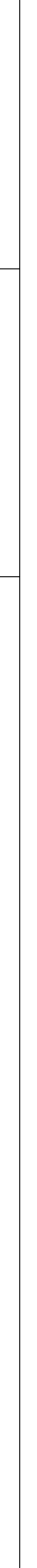
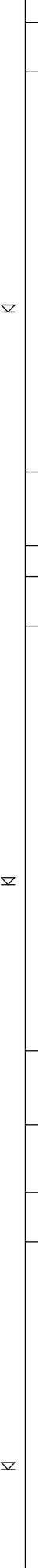
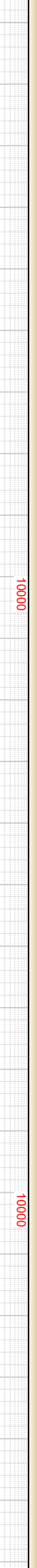
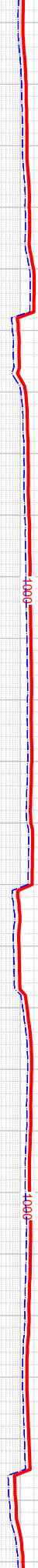
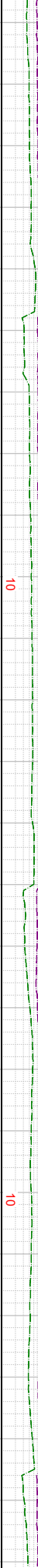
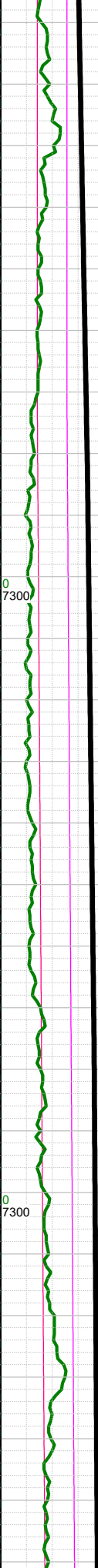
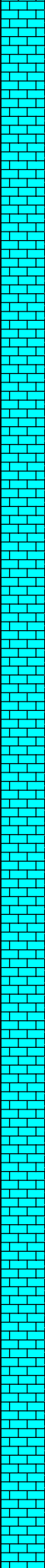
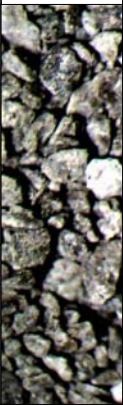








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-8160



-7910 WT 9.35,  
VIS 36

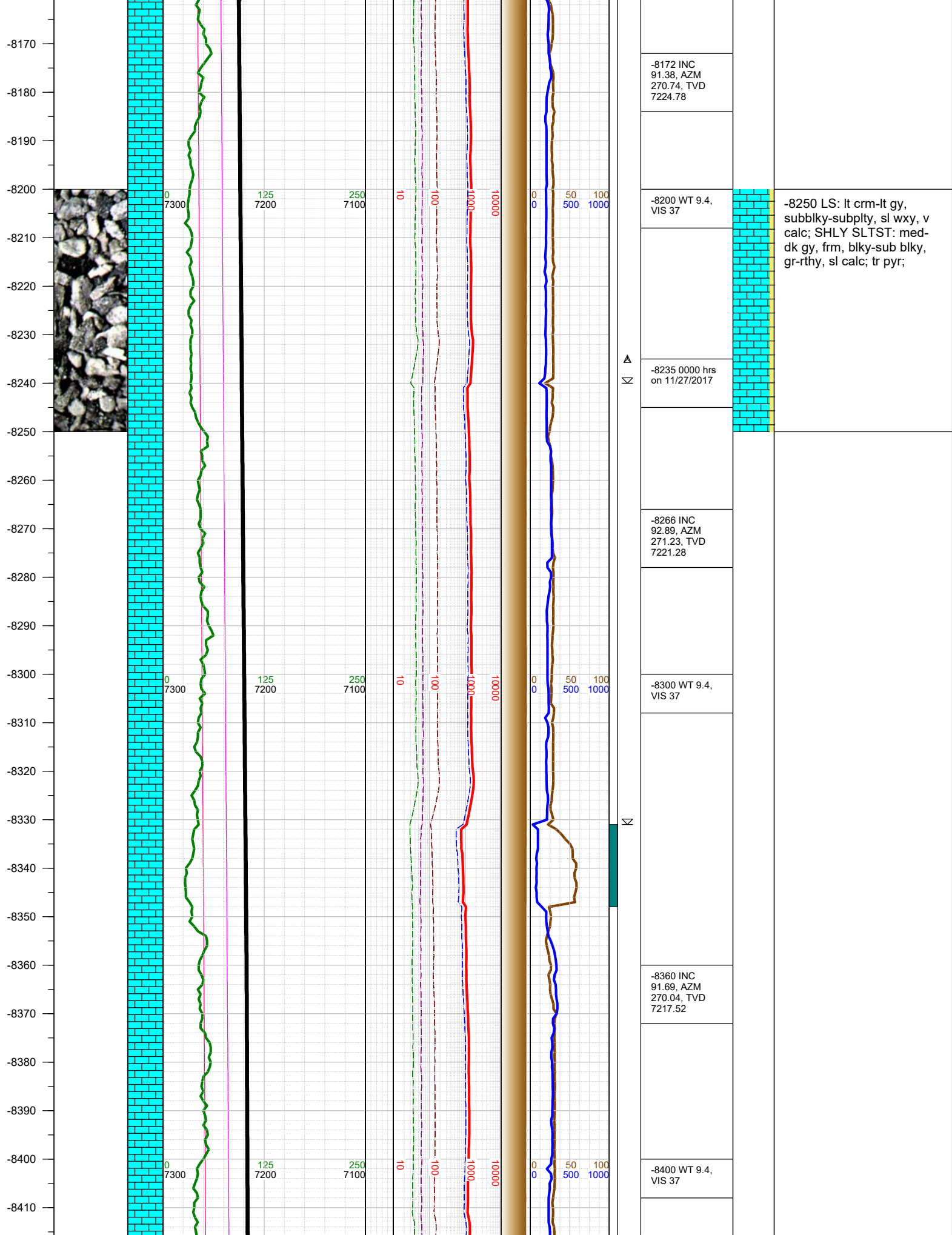
-7983 INC  
94.21, AZM  
269.82, TVD  
7232.82

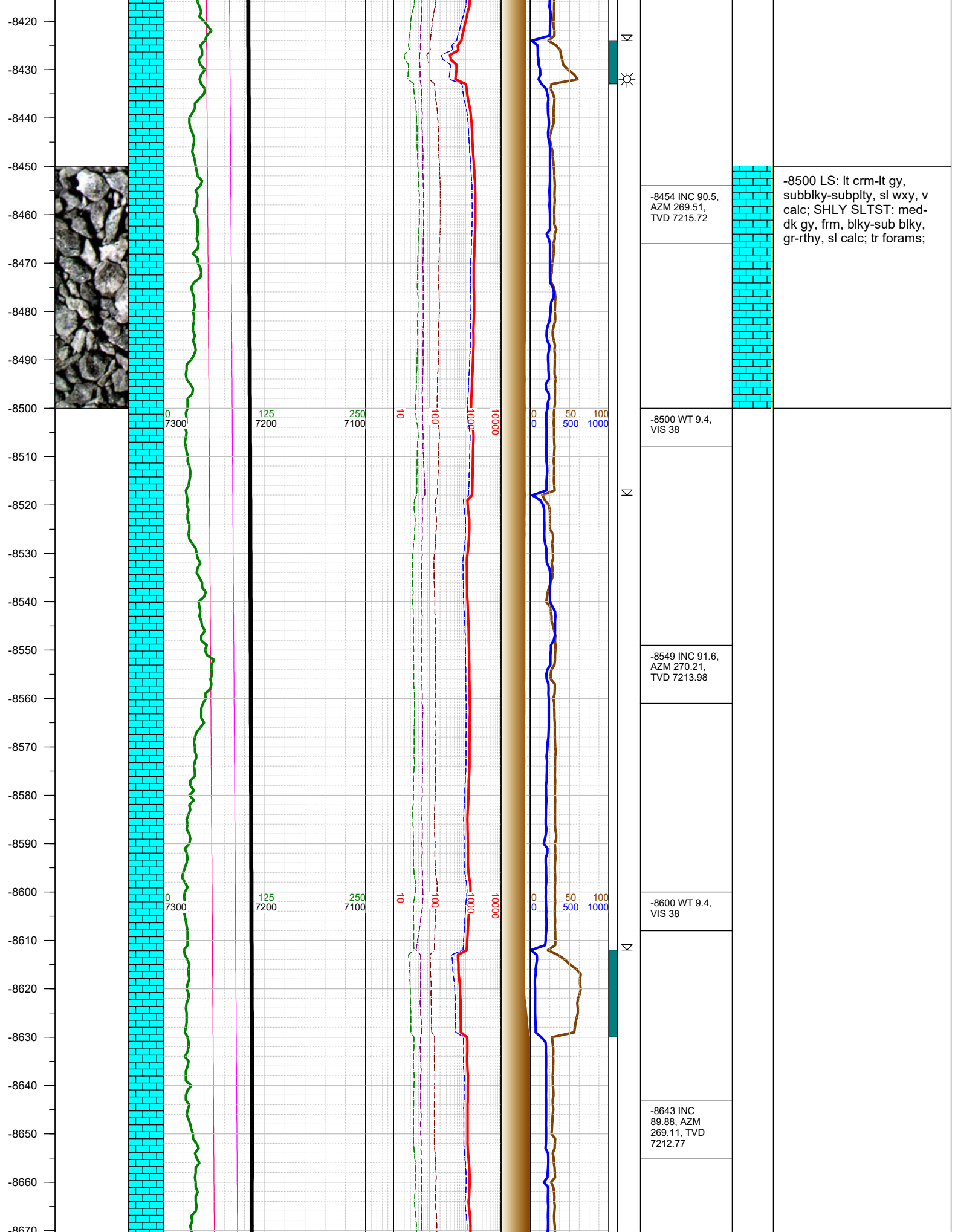
-8000 WT 9.4,  
VIS 37

-8077 INC  
92.09, AZM  
271.14, TVD  
7227.65

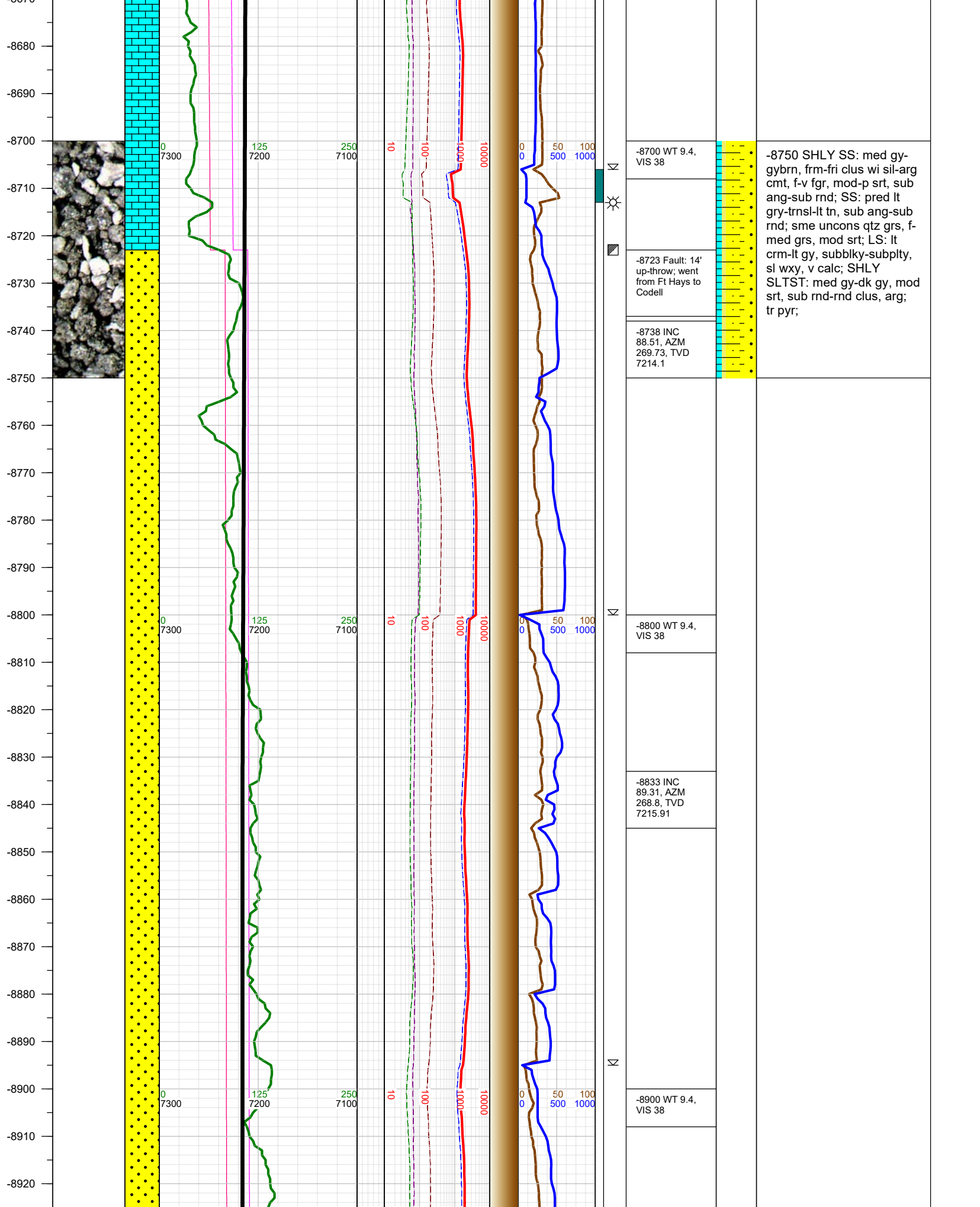
-8100 WT 9.4,  
VIS 37

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

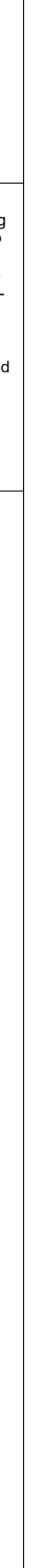
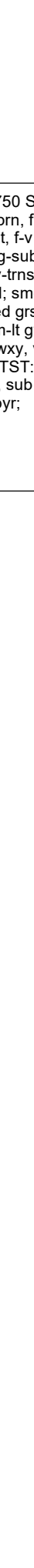
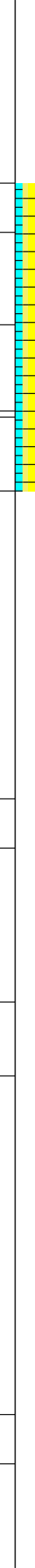
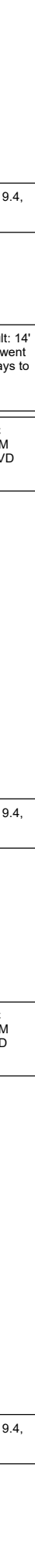
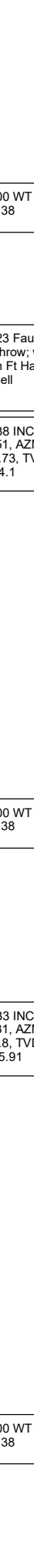
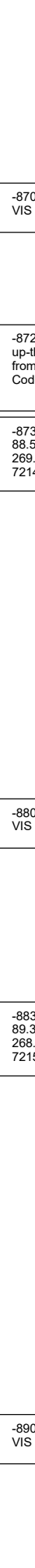
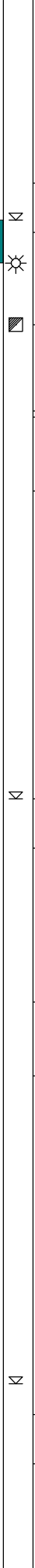
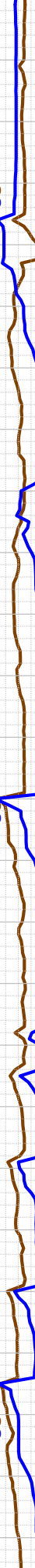
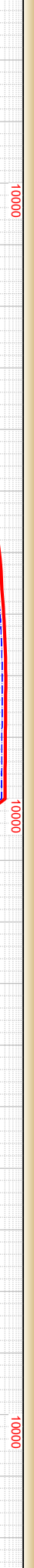
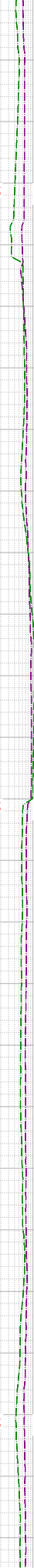
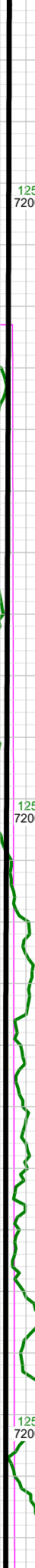
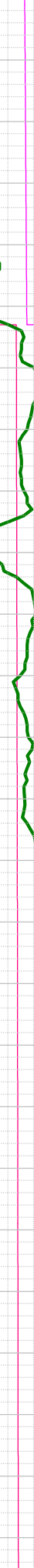
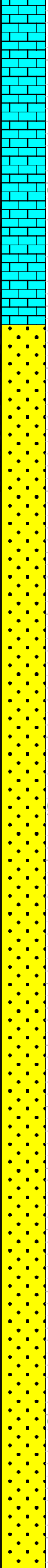








-8680  
-8690  
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-8890  
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-8910  
-8920



-8700 WT 9.4,  
VIS 38

-8723 Fault: 14'  
up-throw; went  
from Ft Hays to  
Codell

-8738 INC  
88.51, AZM  
269.73, TVD  
7214.1

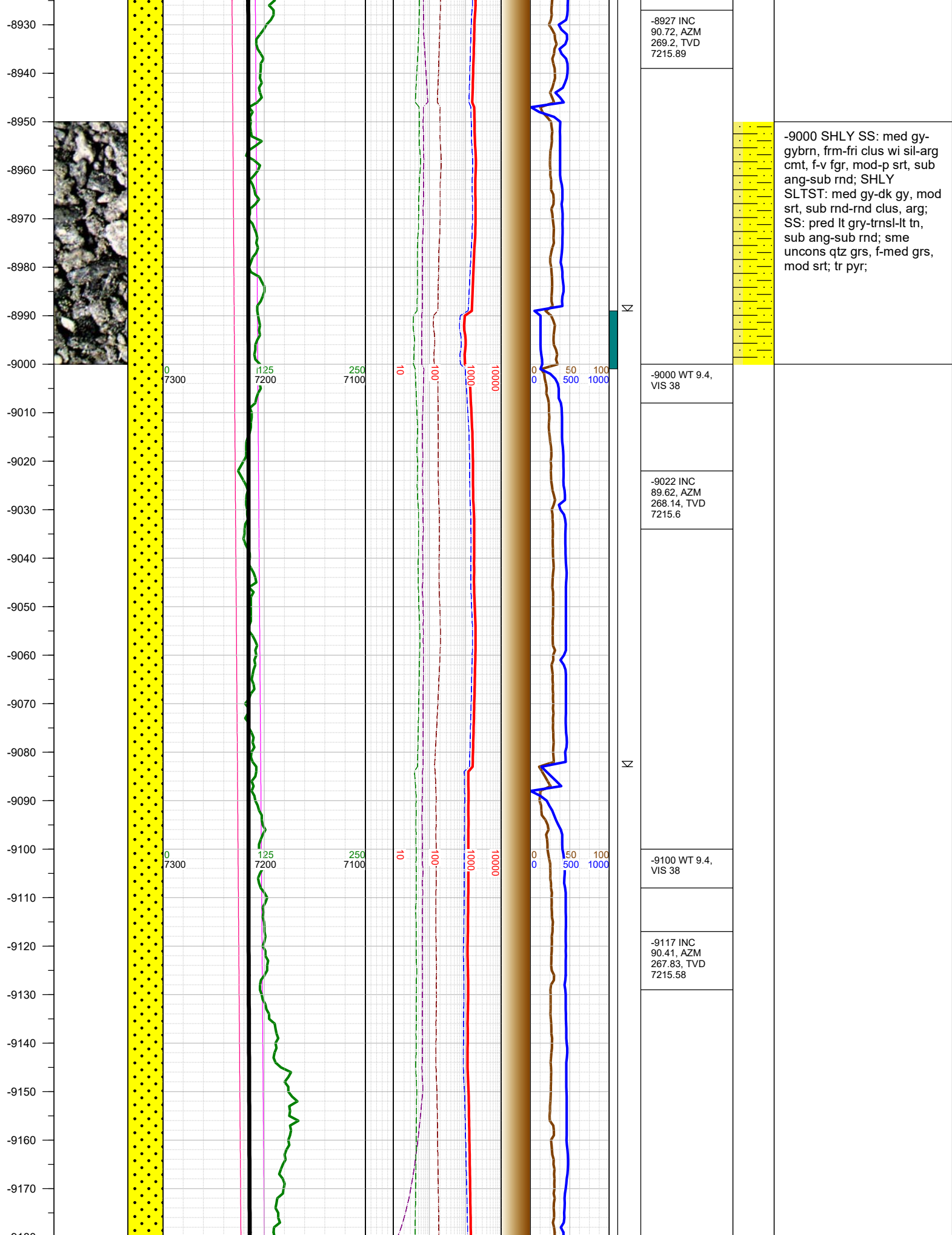
-8800 WT 9.4,  
VIS 38

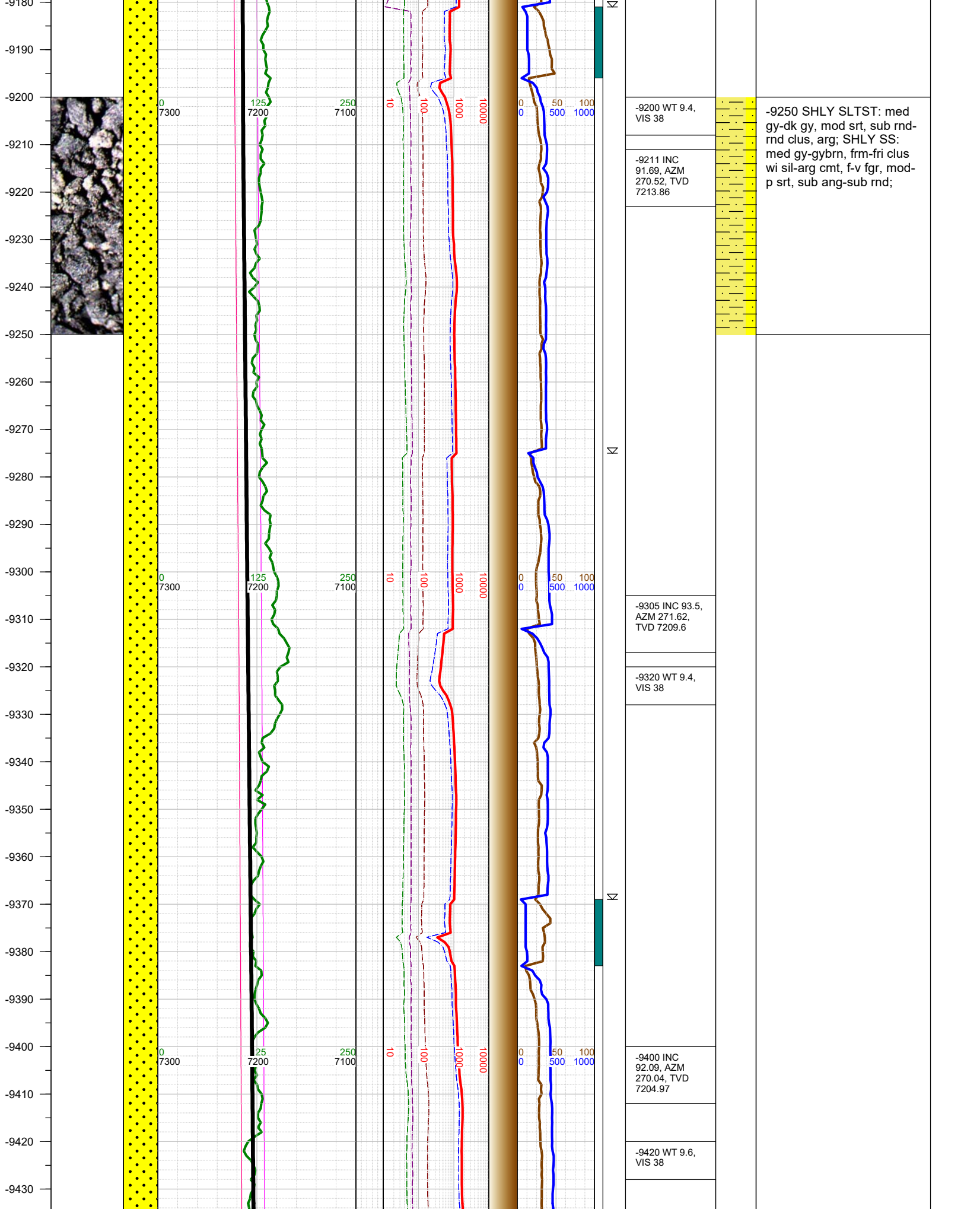
-8833 INC  
89.31, AZM  
268.8, TVD  
7215.91

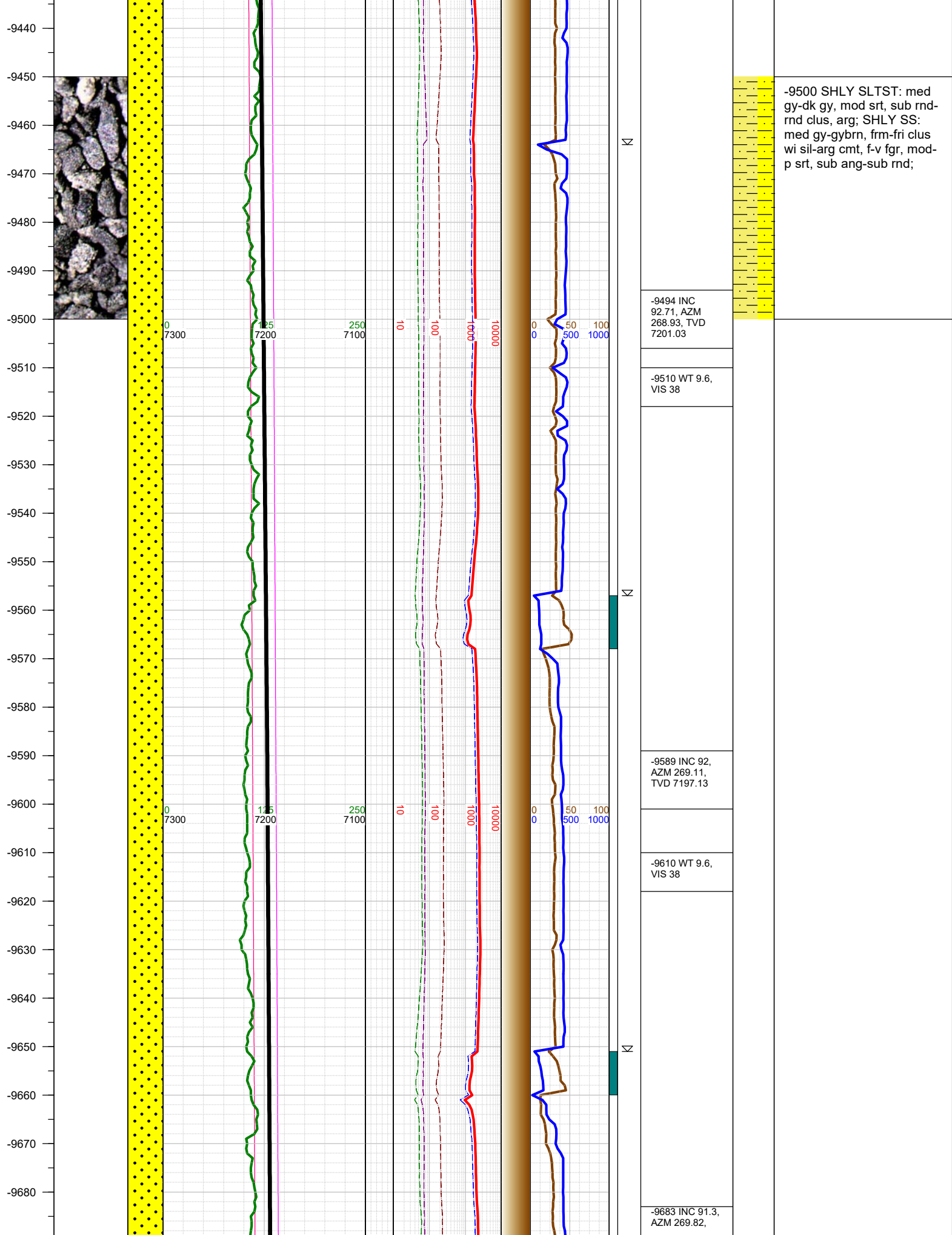
-8900 WT 9.4,  
VIS 38

-8750 SHLY SS: med gy-  
gybrn, frm-fri clus wi sil-arg  
cmt, f-v fgr, mod-p srt, sub  
ang-sub rnd; SS: pred lt  
gry-trnsl-lt tn, sub ang-sub  
rnd; sme unconqz grs, f-  
med grs, mod srt; LS: lt  
crm-lt gy, subblky-subply,  
sl wxy, v calc; SHLY  
SLTST: med gy-dk gy, mod  
srt, sub rnd-rnd clus, arg;  
tr pyr;

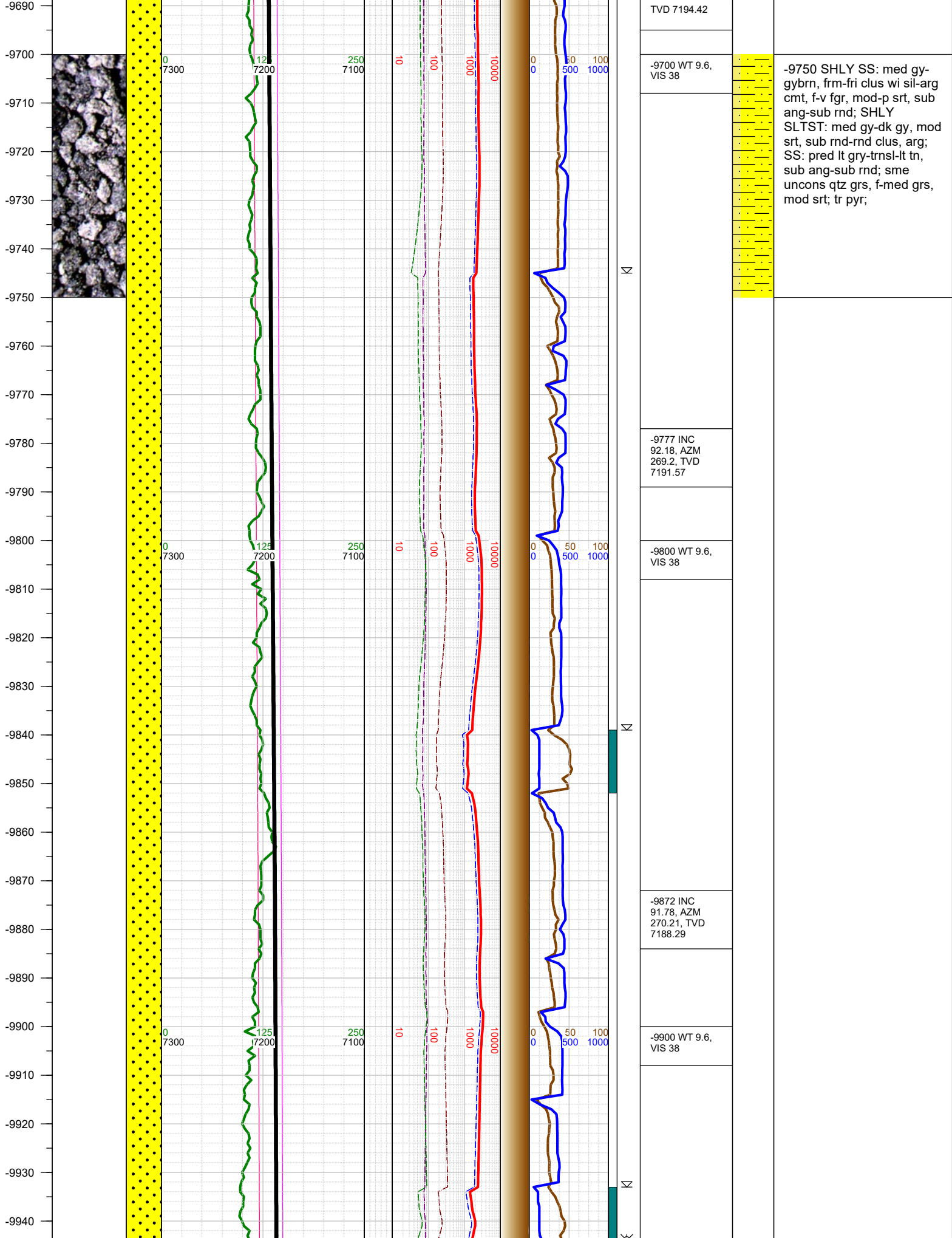




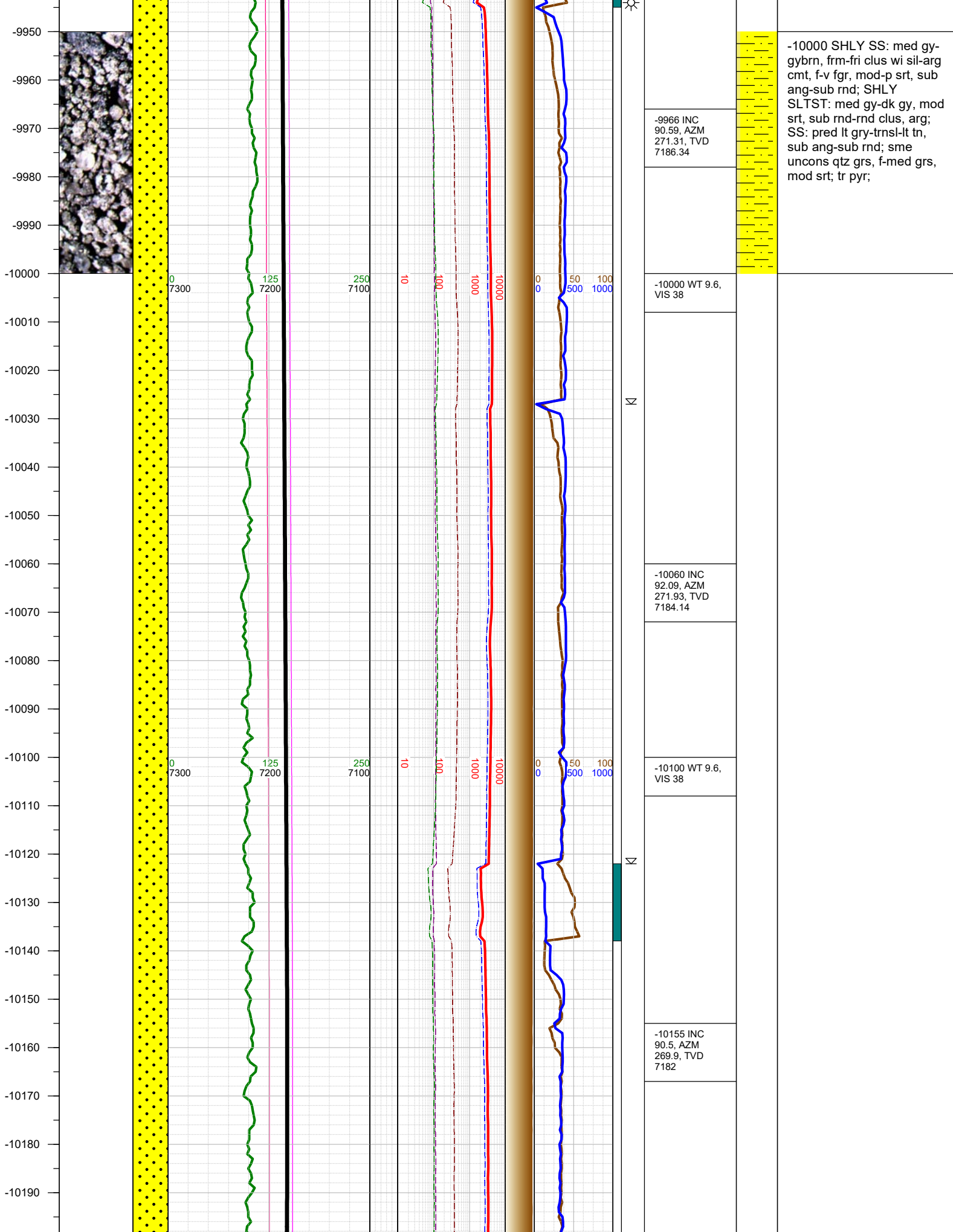


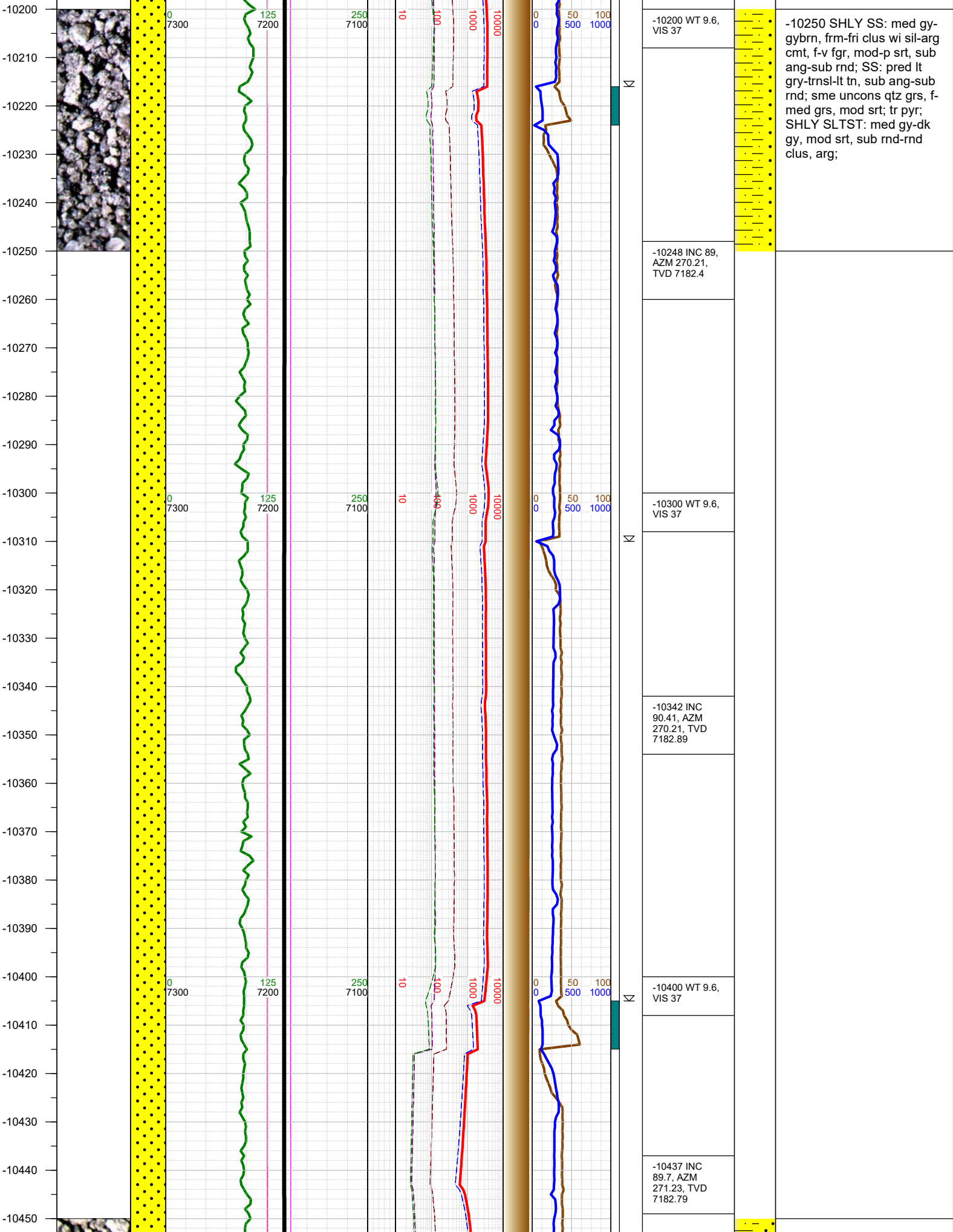


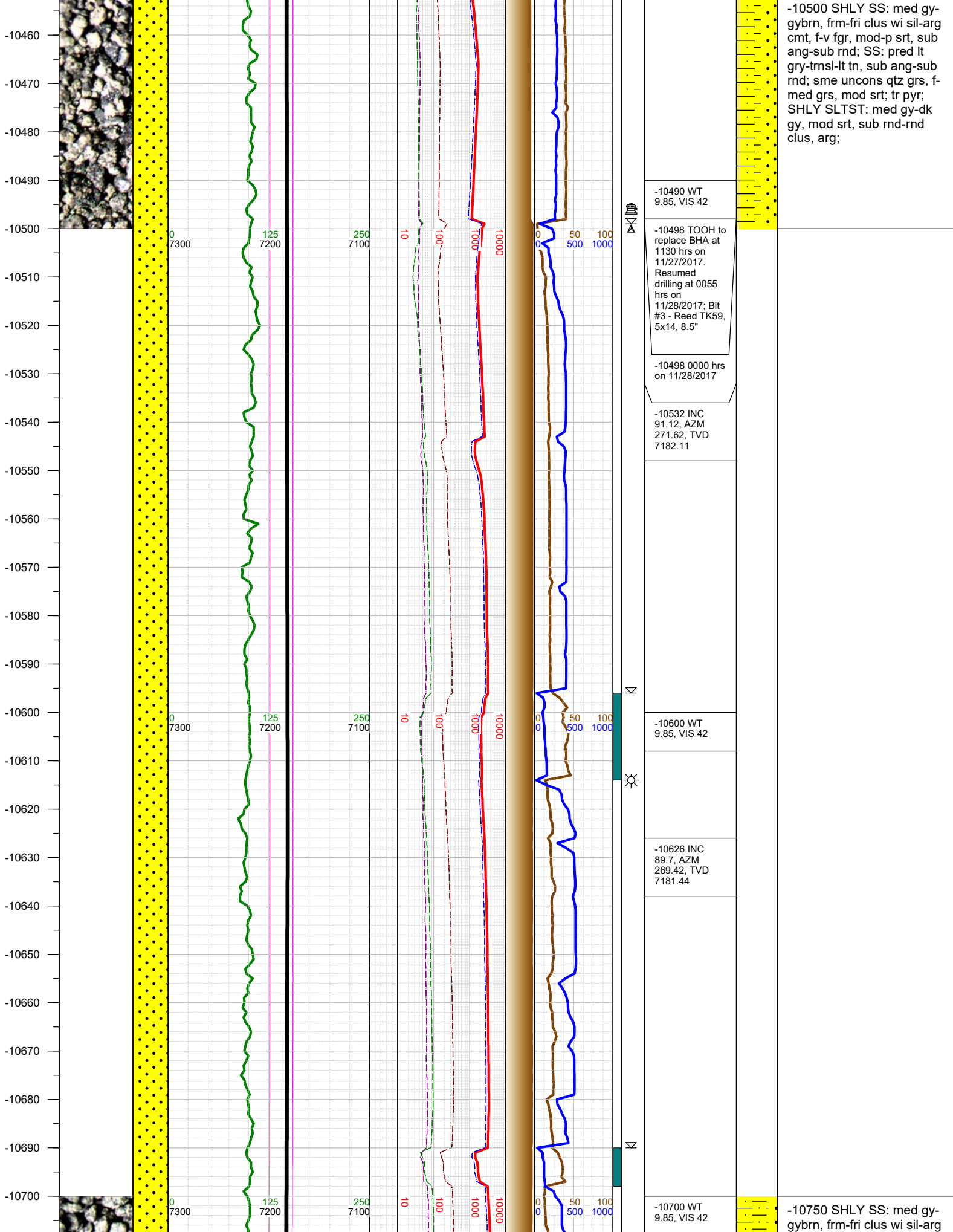




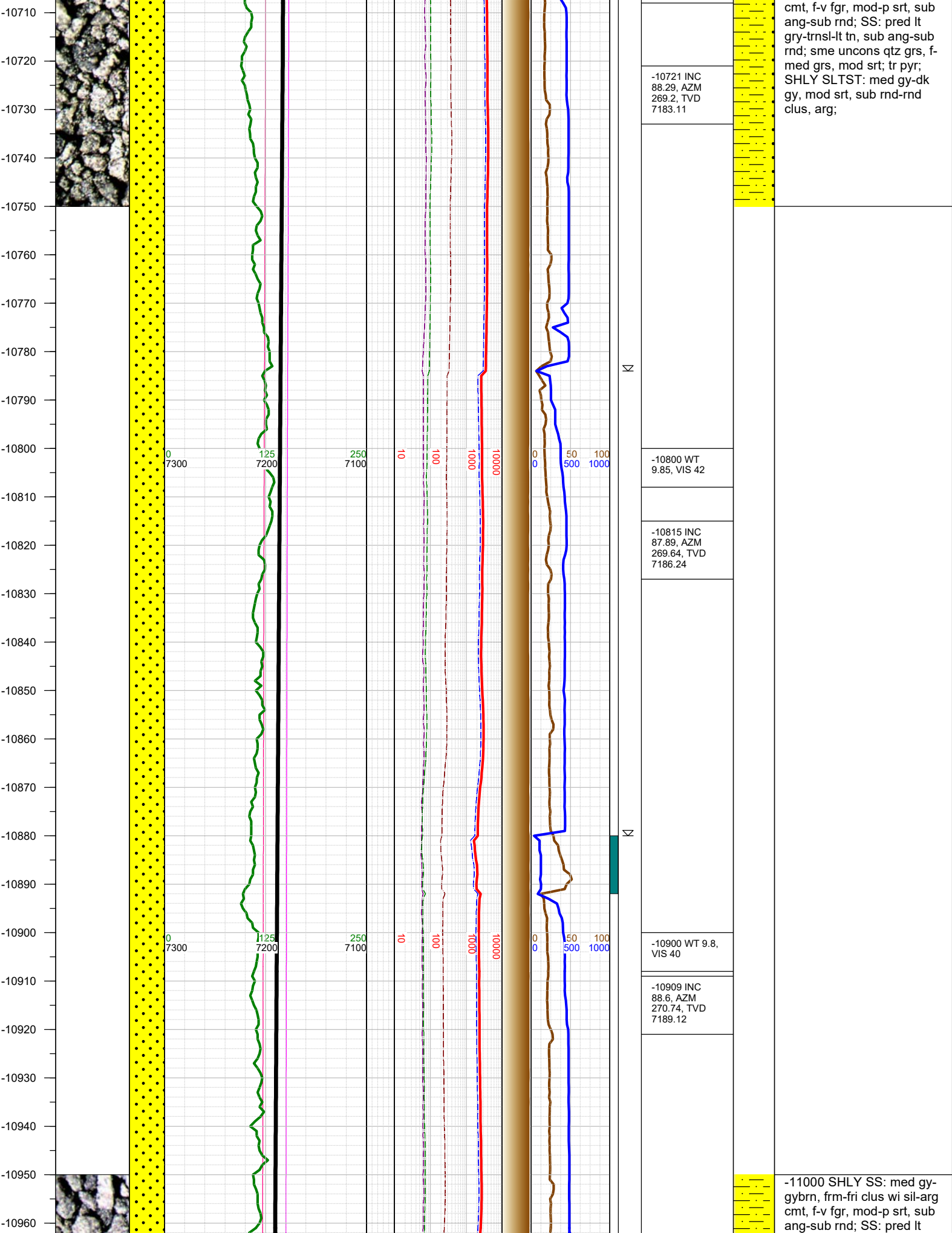








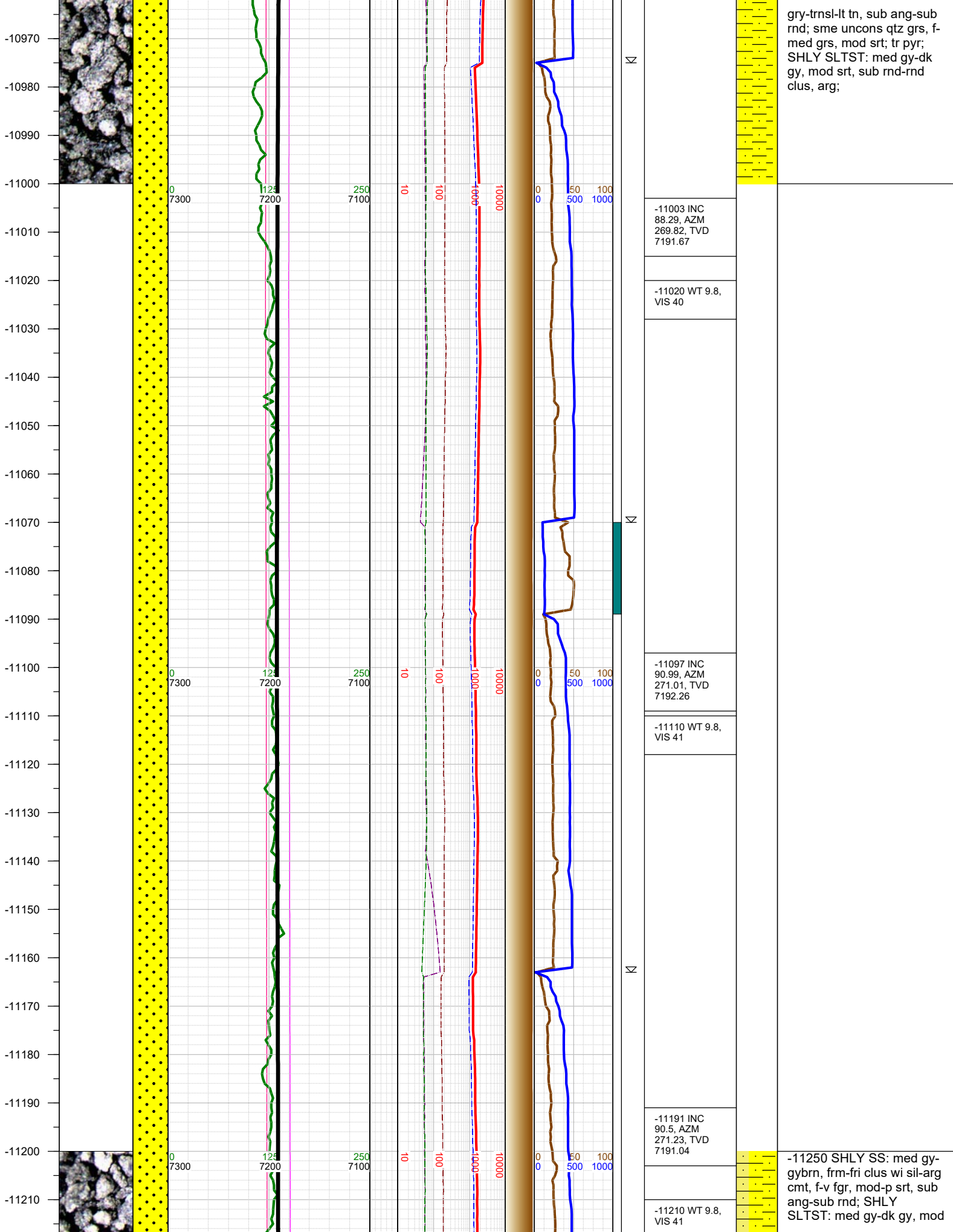




cmt, f-v fgr, mod-p srt, sub ang-sub rnd; SS: pred lt gry-trns-lt tn, sub ang-sub rnd; sme unconsl qtz grs, f-med grs, mod srt; tr pyr; SHLY SLTST: med gy-dk gy, mod srt, sub rnd-rnd clus, arg;

-11000 SHLY SS: med gy-gybrn, frm-fri clus wi sil-arg cmt, f-v fgr, mod-p srt, sub ang-sub rnd; SS: pred lt





-11003 INC  
88.29, AZM  
269.82, TVD  
7191.67

-11020 WT 9.8,  
VIS 40

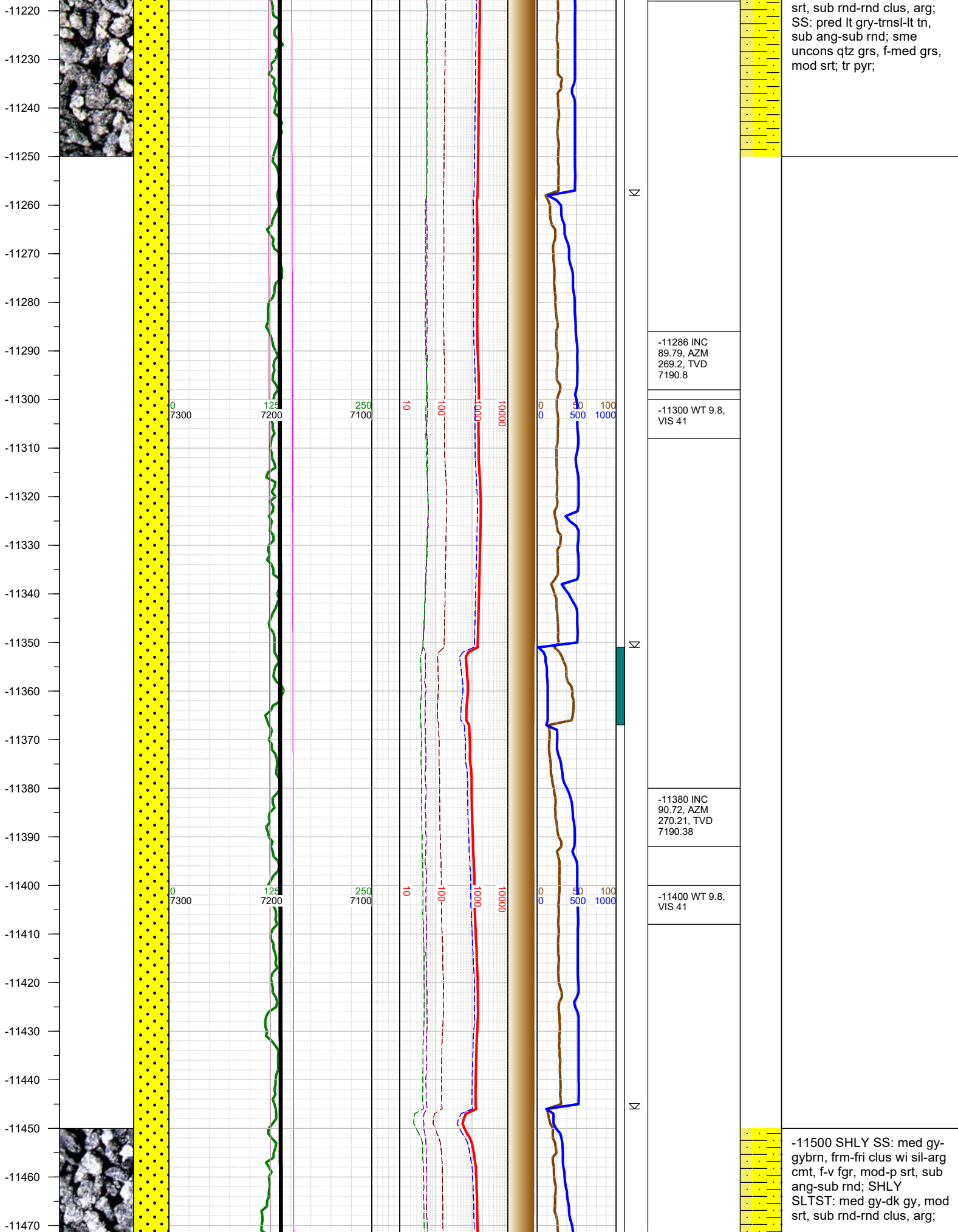
-11097 INC  
90.99, AZM  
271.01, TVD  
7192.26

-11110 WT 9.8,  
VIS 41

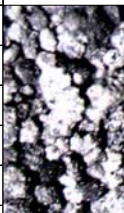
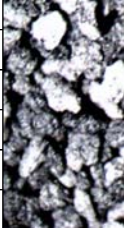
-11191 INC  
90.5, AZM  
271.23, TVD  
7191.04

-11210 WT 9.8,  
VIS 41

-11250 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



-11480  
-11490  
-11500  
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-11474 INC  
90.1, AZM  
268.93, TVD  
7189.71

-11500 WT 9.8,  
VIS 41

-11568 INC  
91.52, AZM  
269.33, TVD  
7188.38

-11600 WT 9.8,  
VIS 41

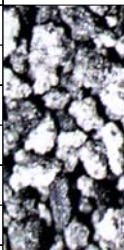
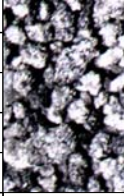
-11663 INC  
91.52, AZM  
269.02, TVD  
7185.86

-11700 WT 9.8,  
VIS 41

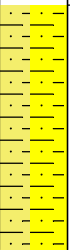
-11750 SHLY SS: med gy-  
gybrn, frm-fri clus wi sil-arg  
cmt, f-v fgr, mod-p srt, sub  
ang-sub rnd; SHLY  
SLTST: med gy-dk gy, mod  
srt, sub rnd-rnd clus, arg;



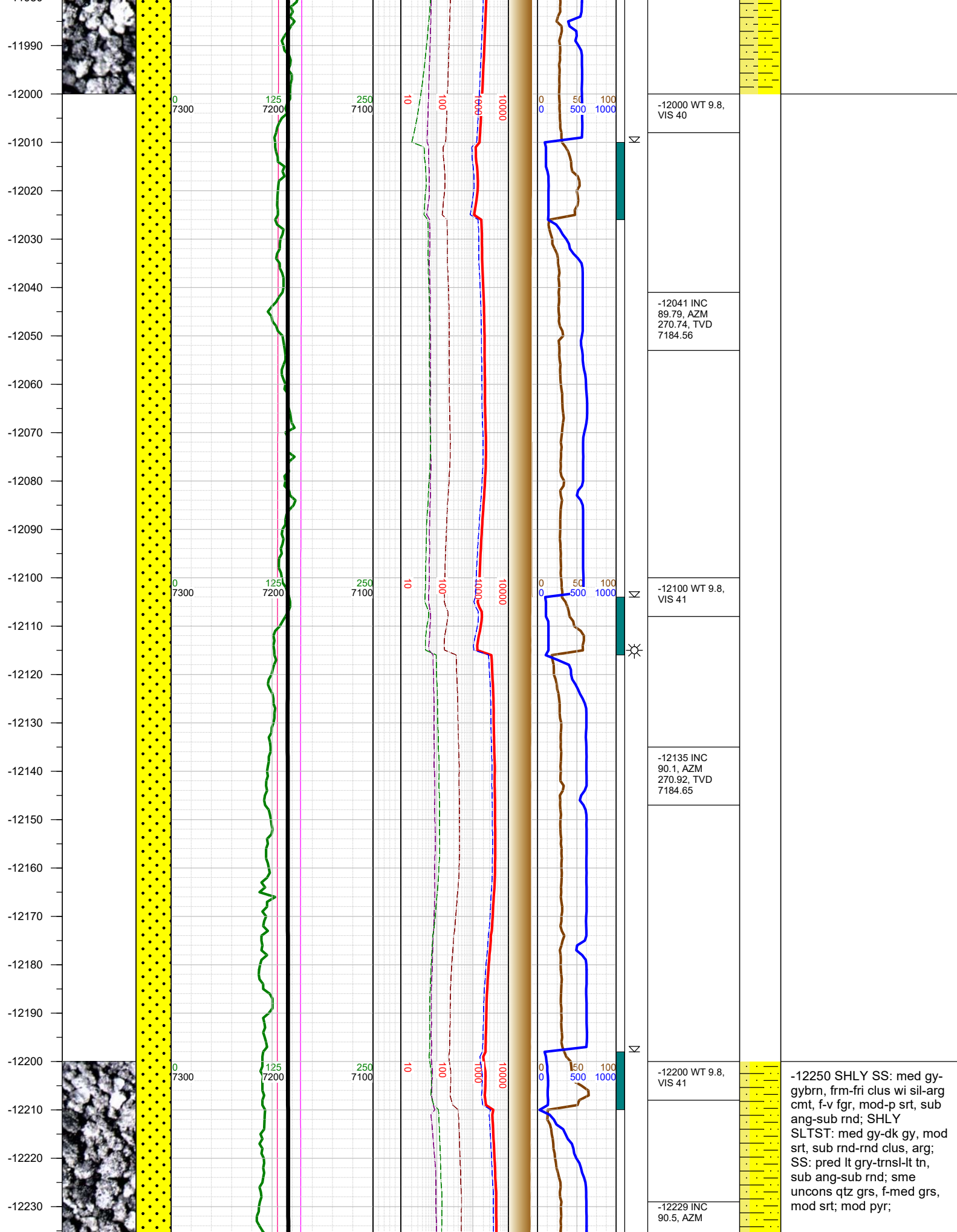
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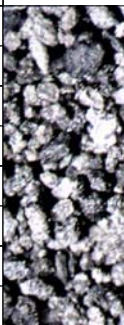
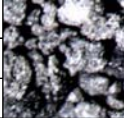
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	-11800 WT 9.8, VIS 40
	-11851 INC 89.22, AZM 270.3, TVD 7183.39
	-11900 WT 9.8, VIS 40
	-11946 INC 89.79, AZM 269.42, TVD 7184.22



-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; SS: pred lt gry-trnsl-lt tn, sub ang-sub rnd; sme uncons qtz grs, f-med grs, mod srt; mod pyr;



-12240  
-12250  
-12260  
-12270  
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-12300  
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7200

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7100

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272.64, TVD  
7184.16

-12300 WT 9.8,  
VIS 41

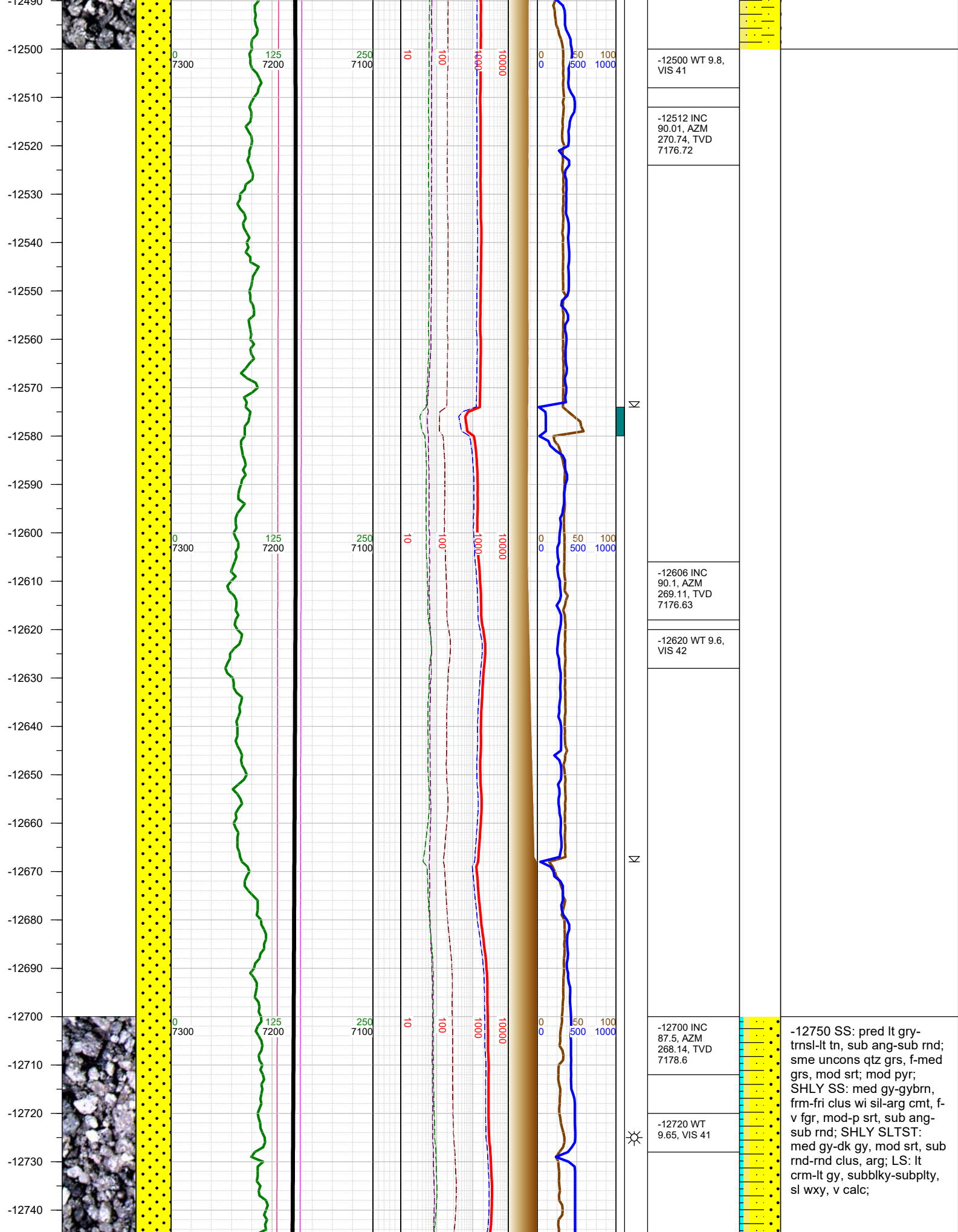
-12323 INC  
92.18, AZM  
273.12, TVD  
7181.96

-12400 WT 9.8,  
VIS 41

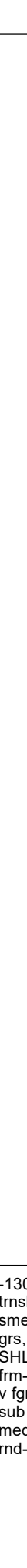
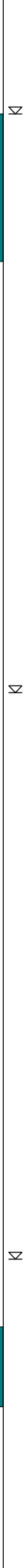
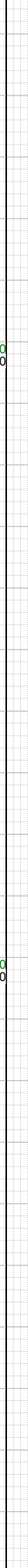
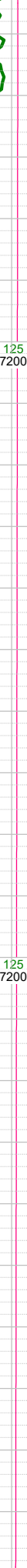
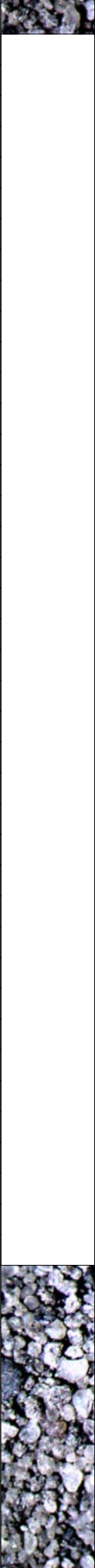
-12417 INC  
92.09, AZM  
271.53, TVD  
7178.46

-12500 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; mod pyr;





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-12795 INC  
89.62, AZM  
269.42, TVD  
7180.99

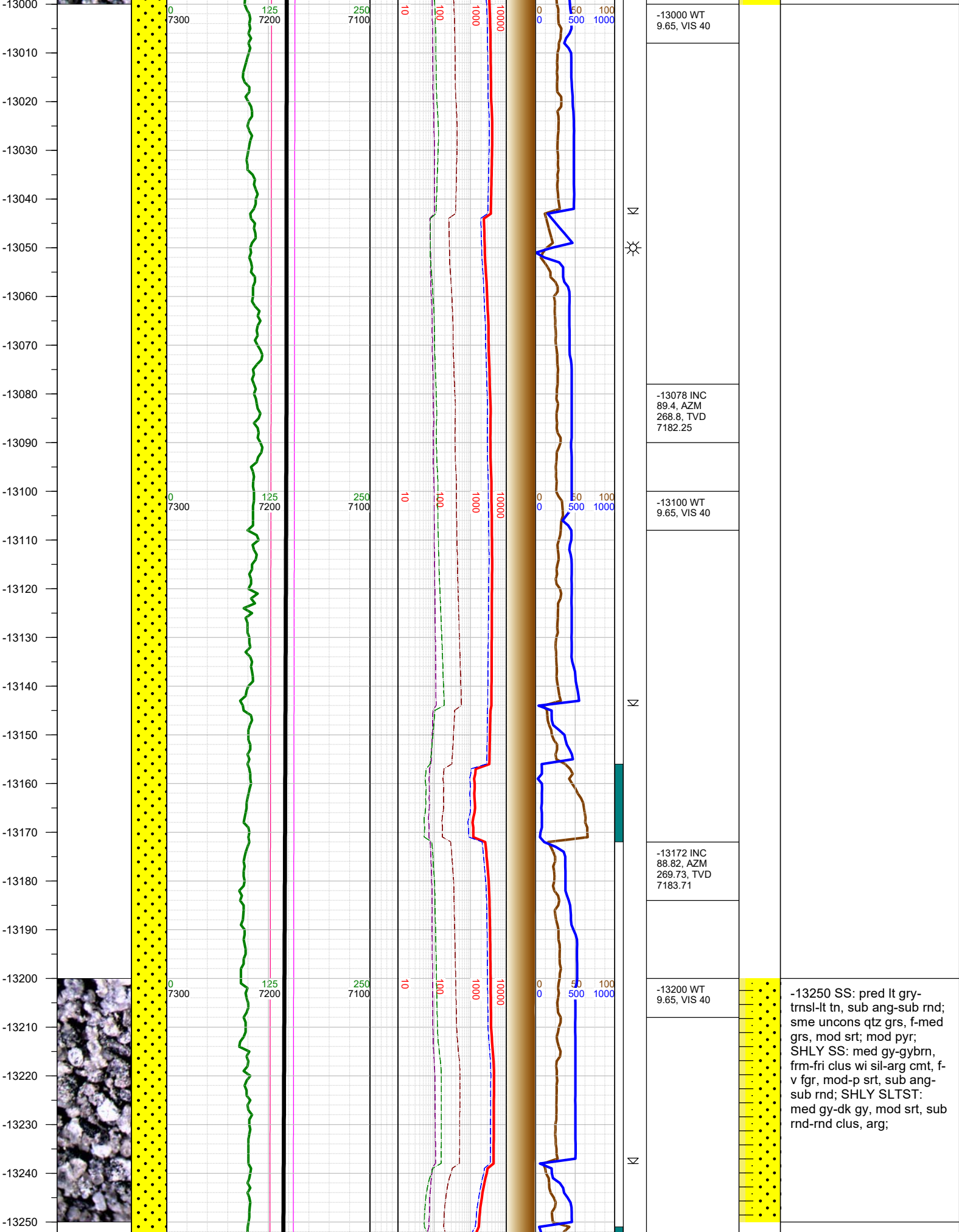
-12810 WT  
9.65, VIS 41

-12889 INC  
89.31, AZM  
269.2, TVD  
7181.86

-12910 WT  
9.65, VIS 40

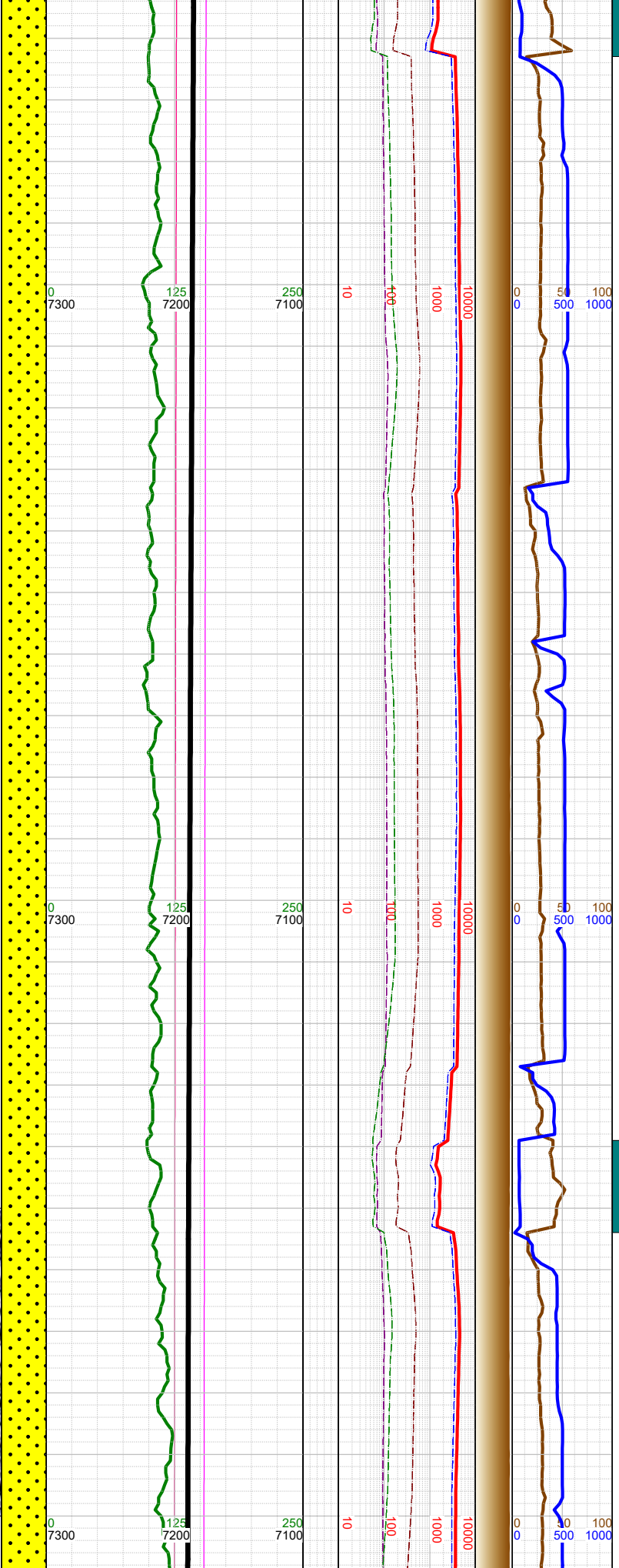
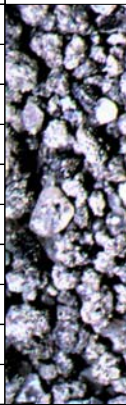
-12983 INC  
90.41, AZM  
270.21, TVD  
7182.09

-13000 SS: pred lt gry-  
trnsl-lt tn, sub ang-sub rnd;  
sme unconqz grs, f-med  
grs, mod srt; mod pyr;  
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;

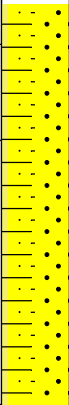




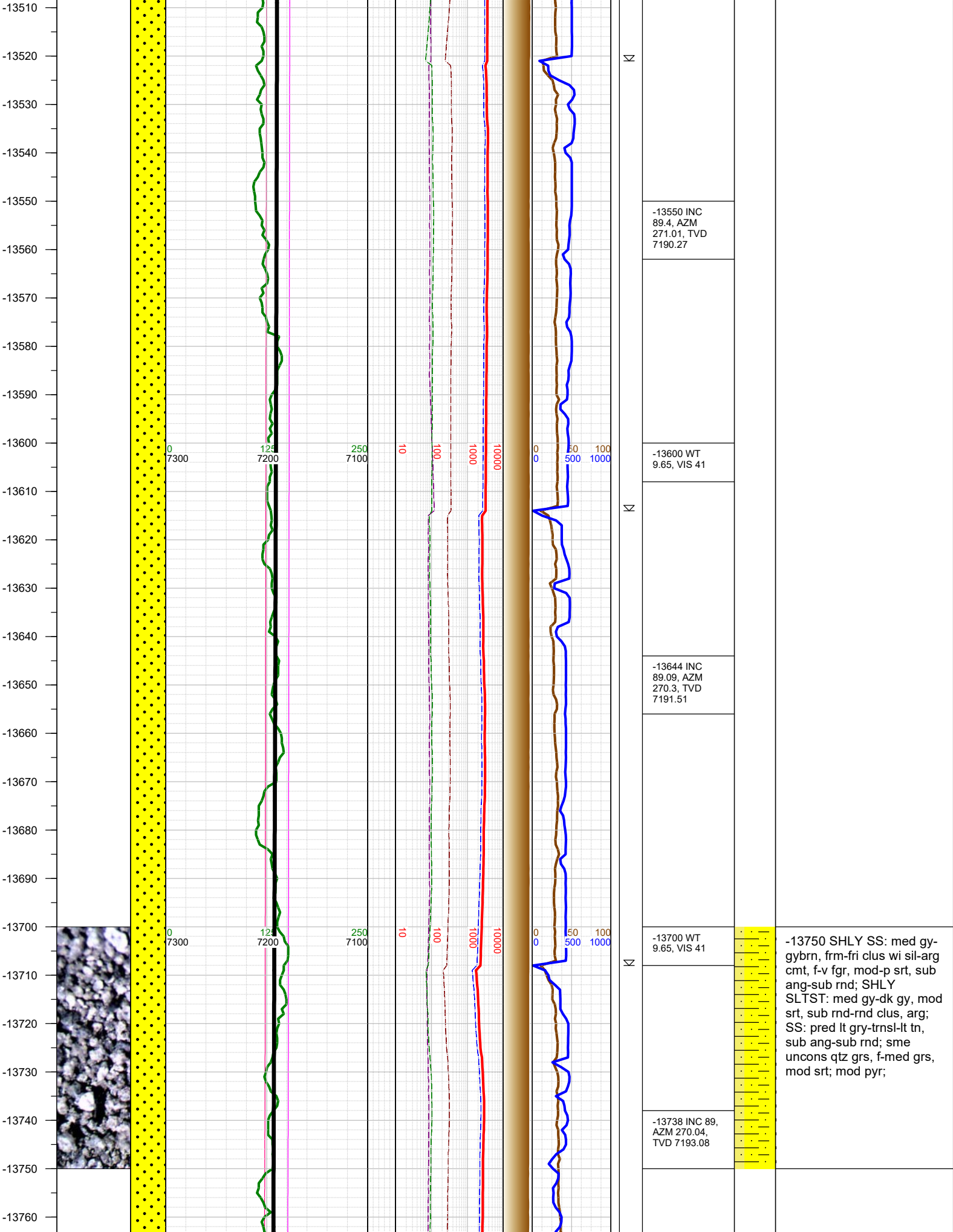
-13260  
-13270  
-13280  
-13290  
-13300  
-13310  
-13320  
-13330  
-13340  
-13350  
-13360  
-13370  
-13380  
-13390  
-13400  
-13410  
-13420  
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-13440  
-13450  
-13460  
-13470  
-13480  
-13490  
-13500

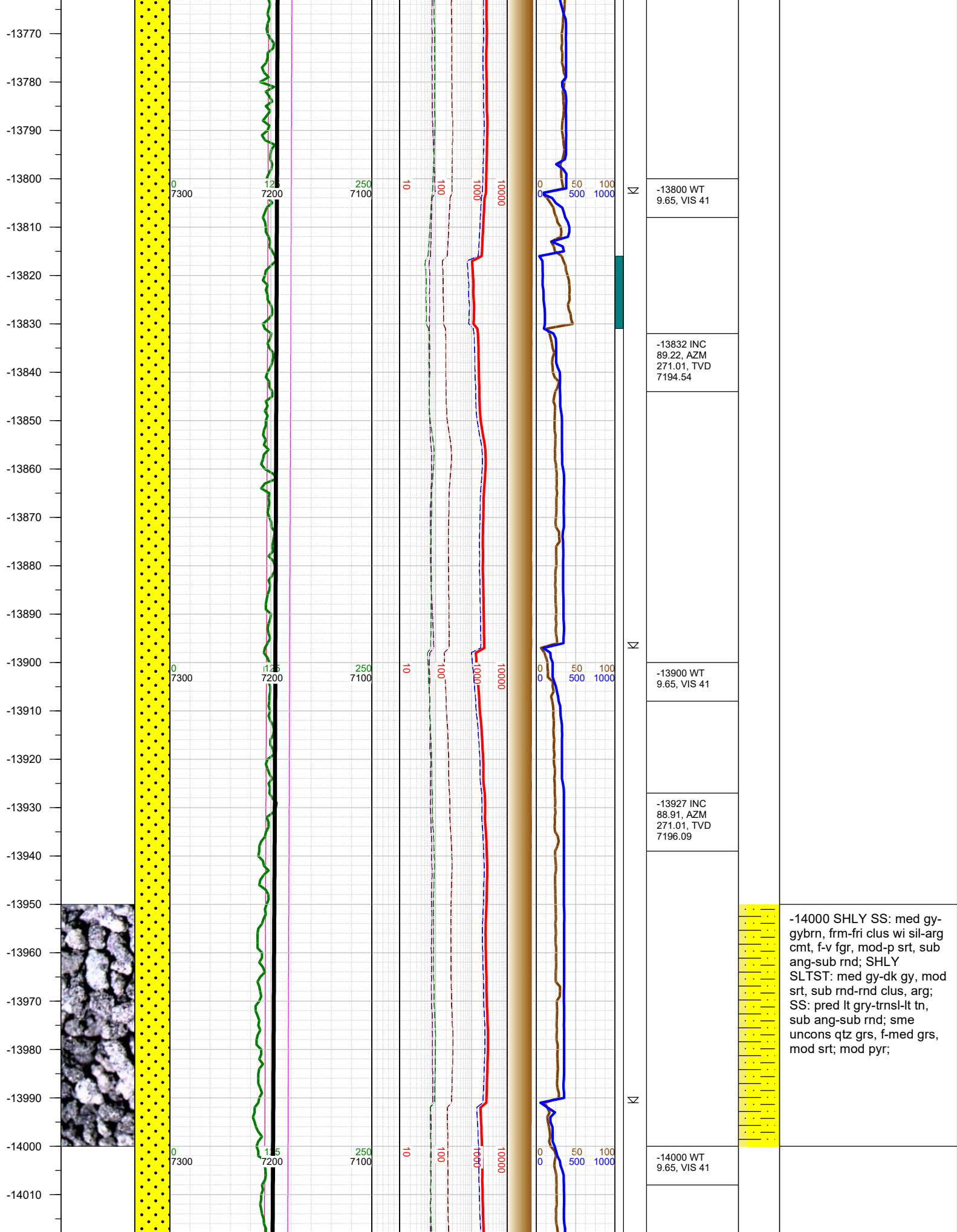


-13267 INC 88.91, AZM 270.61, TVD 7185.59	
-13300 WT 9.65, VIS 40	
-13361 INC 88.6, AZM 269.82, TVD 7187.64	
-13400 WT 9.65, VIS 41	
-13455 INC 89.4, AZM 271.62, TVD 7189.28	
-13500 WT 9.65, VIS 41	

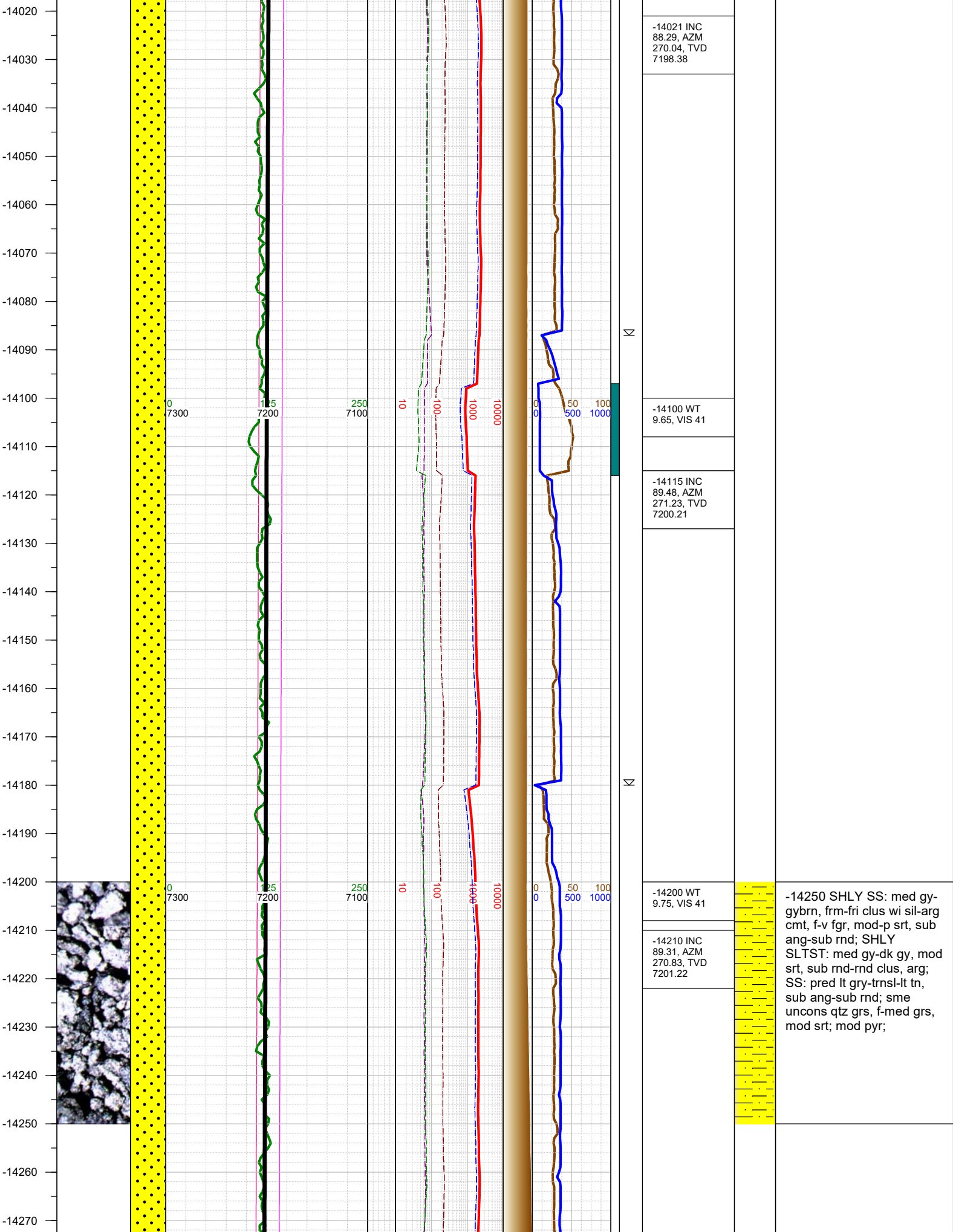


-13500 SS: pred lt gry-  
trns-lt tn, sub ang-sub rnd;  
sme uncons qtz grs, f-med  
grs, mod srt; mod pyr;  
SHLY SS: med gy-gybrn,  
frm-fri clus wi sil-arg cmt, f-  
v fgr, mod-p srt, sub ang-  
sub rnd; SHLY SLTST:  
med gy-dk gy, mod srt, sub  
rnd-rnd clus, arg;

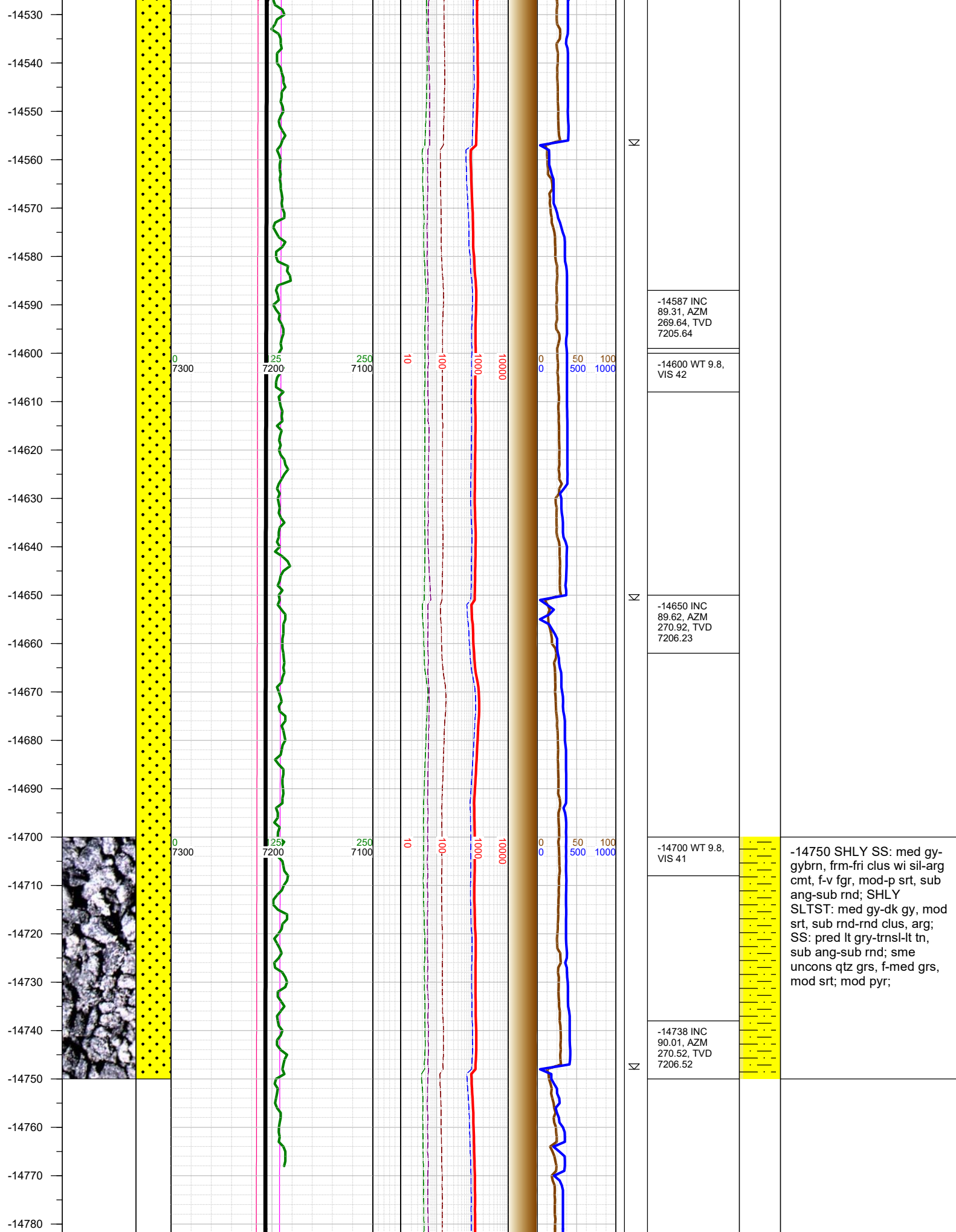




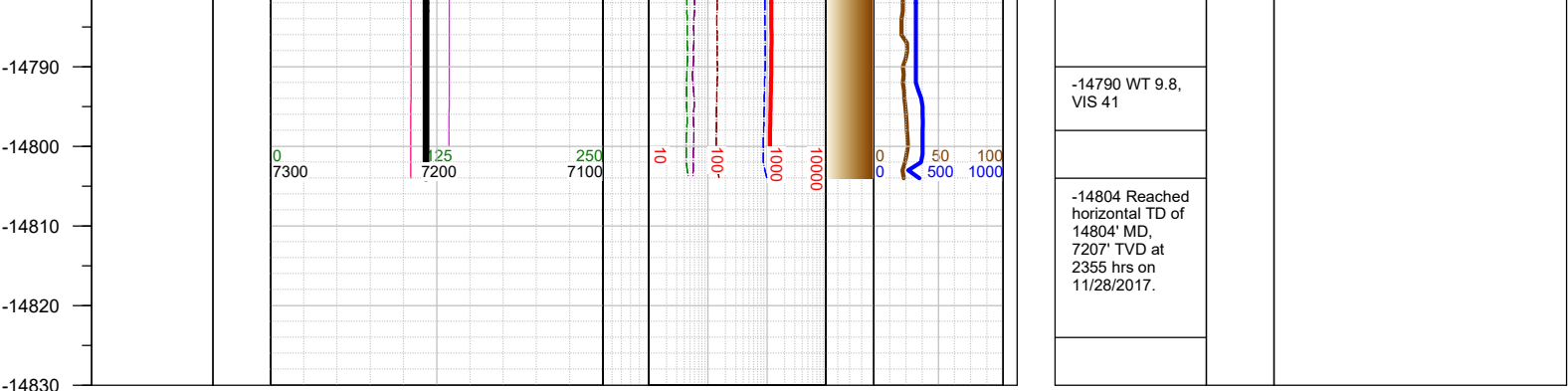












TOTAL DEPTH = 14804'

Thank you for using Earth Science Agency