

OPERATOR: **Extraction Oil & Gas**

WELL NAME: **Varra 8**

FIELD NAME: DJ Basin - Wattenberg

DRILLING RIG: Patterson 341

API #: 05-123-39988

LAT/LONG: 40.512867, -104.923881

SURFACE HOLE: NWSW S5-T6N-R67W, 1563' FSL, 787' FWL

BOTTOM HOLE: S4-T6N-R67W, 1140' FSL, 460' FEL



Earth Science Agency, LLC

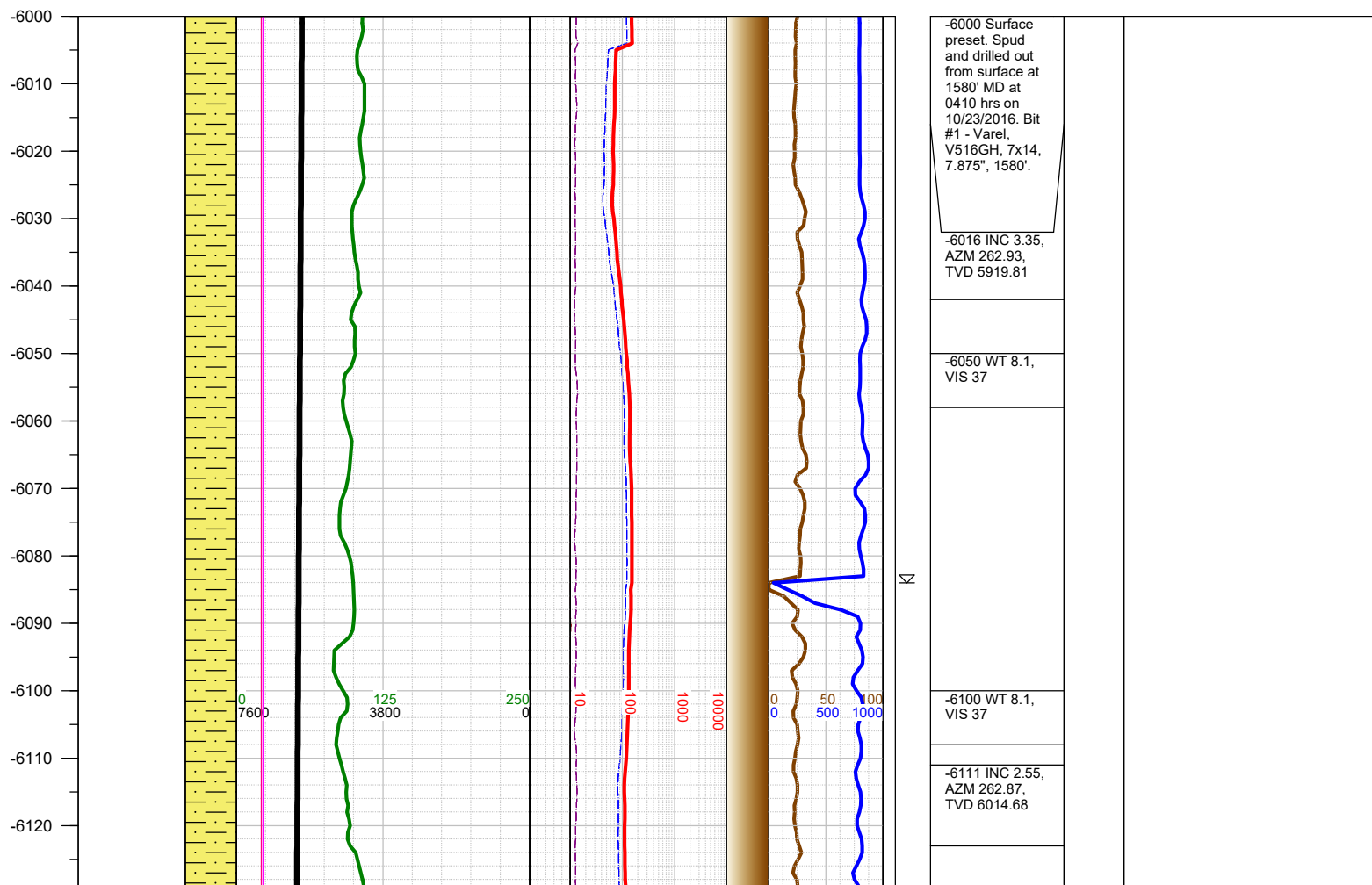
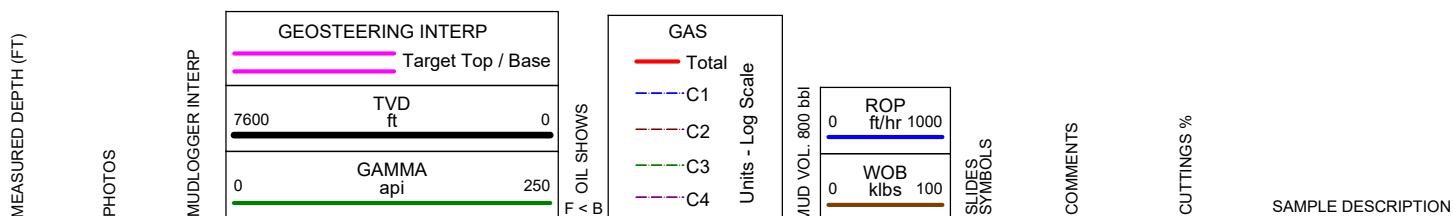
COUNTY: Weld
STATE: Colorado
GROUND ELEVATION: 4873'
KELLY BUSHING: 4898'
DRILLING FLUID: OBM
TVD VS. MD: 7074' / 16848'
SPUD DATE: October 23, 2016
TD DATE: October 26, 2016

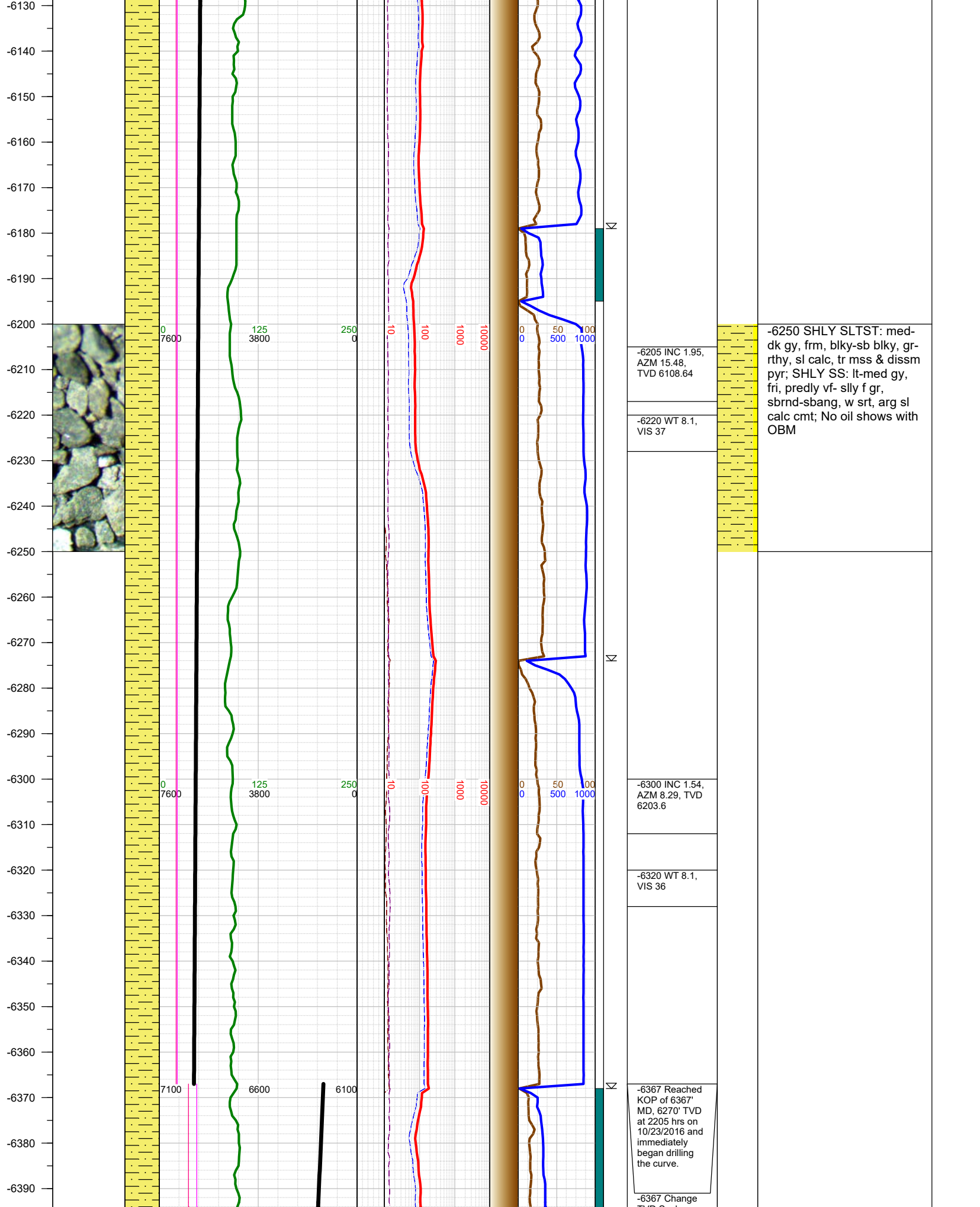
DEPTHS LOGGED: 6000' - 16848'
DATES LOGGED: October 23, 2016 - October 26, 2016
GEOLOGISTS: Ari Berland, Jared Gerard
SCALE: 5" = 100'

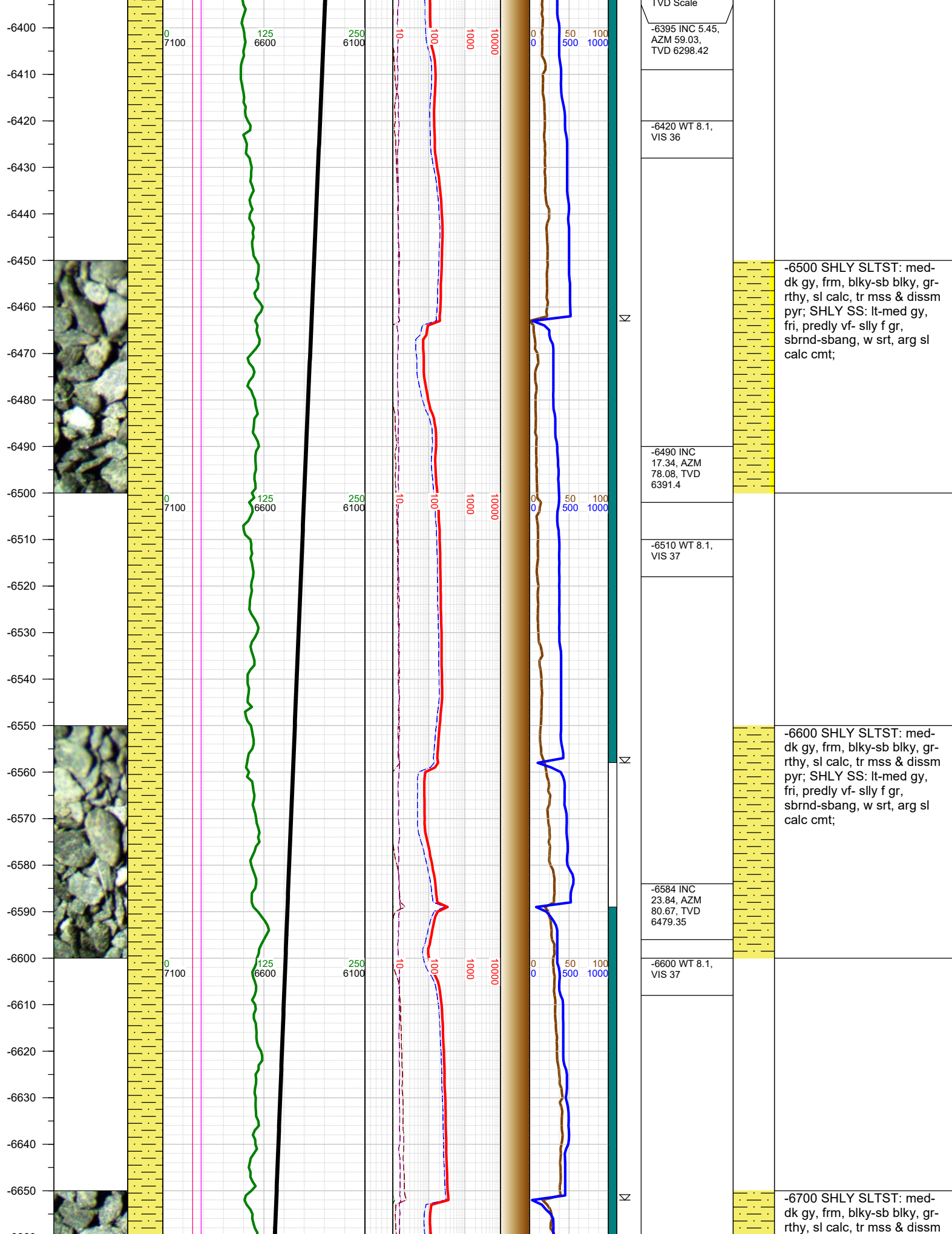
LEGEND

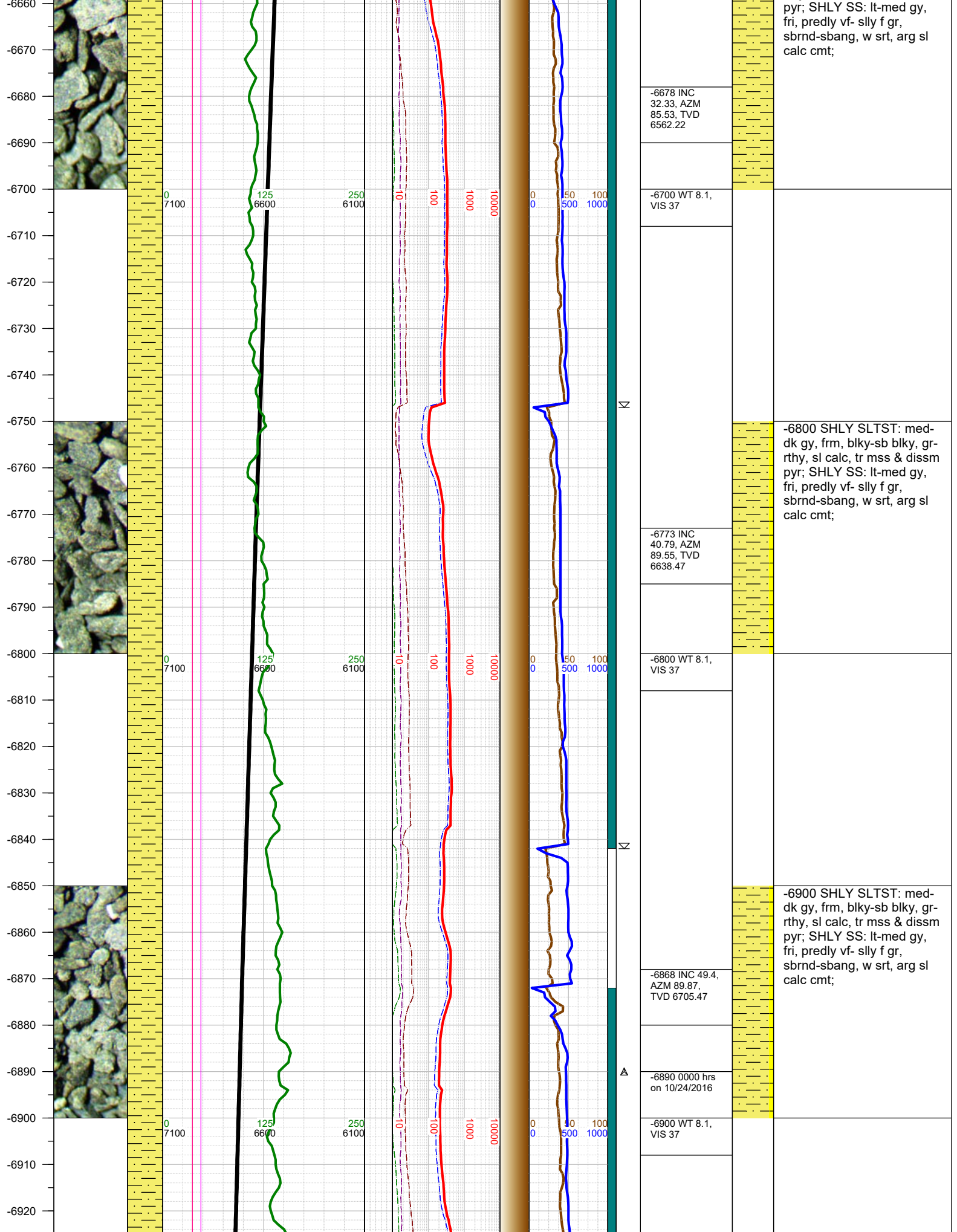


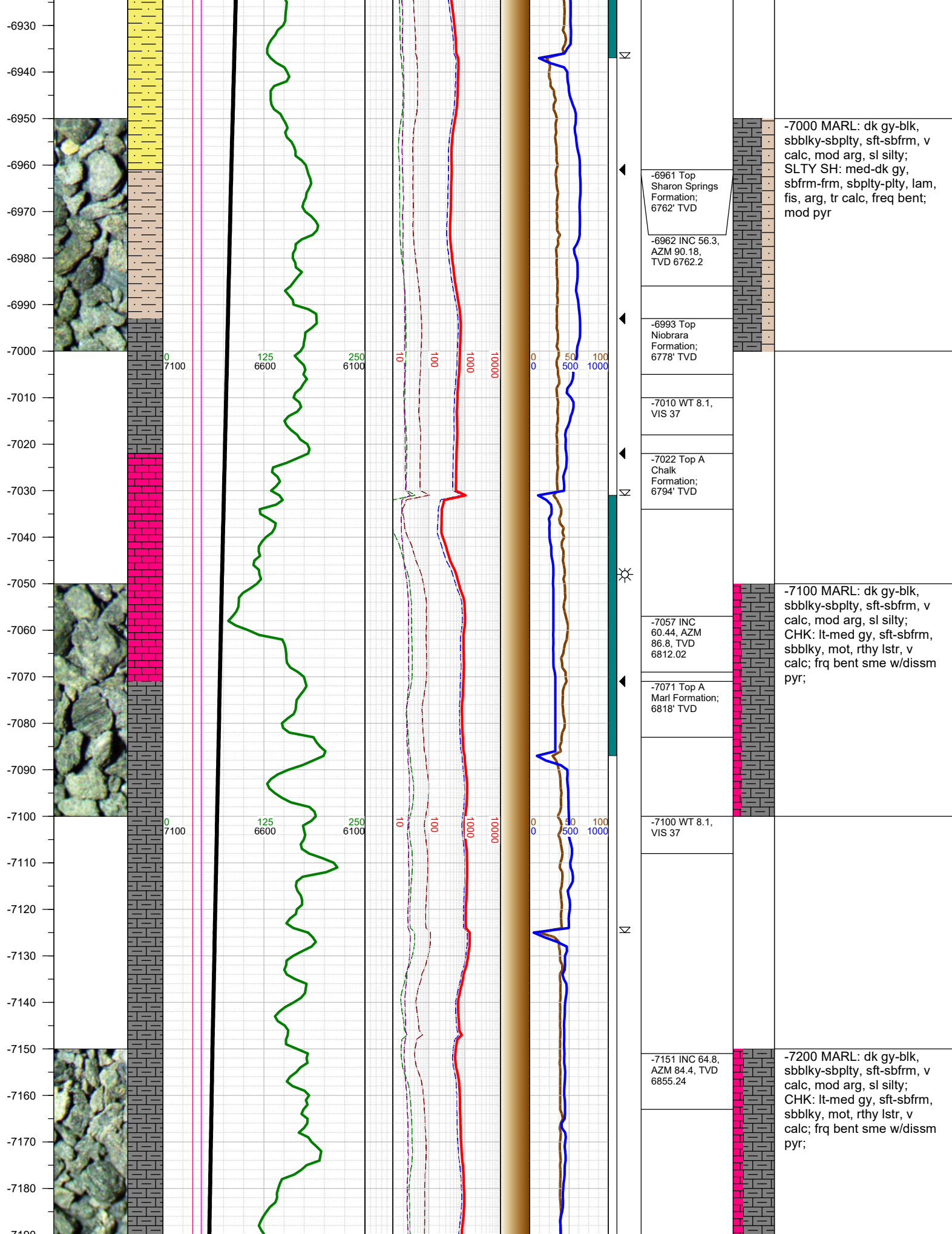
FORMATION \approx CONNECTION Δ MIDNIGHT NEW BIT GAS SHOW FAULT

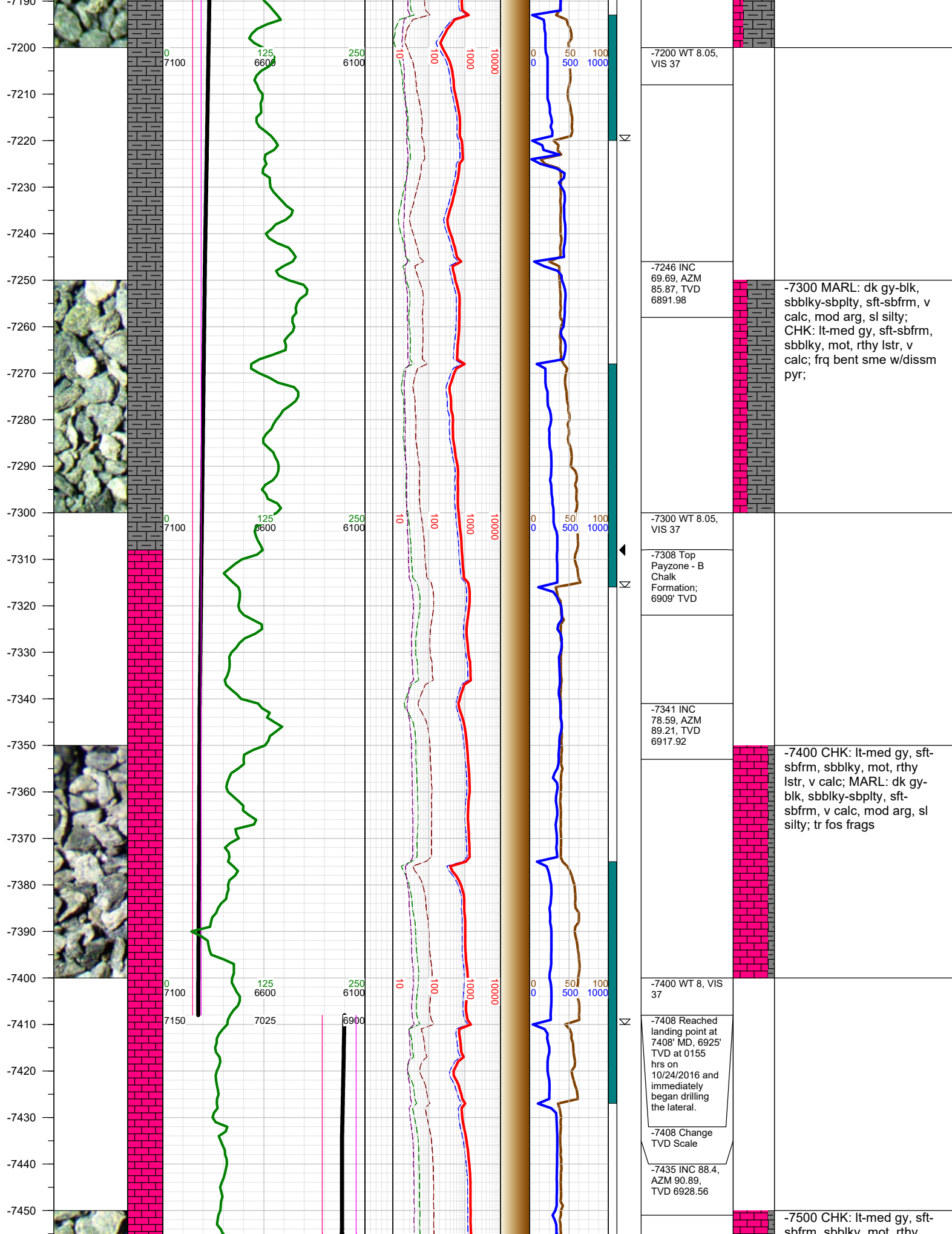


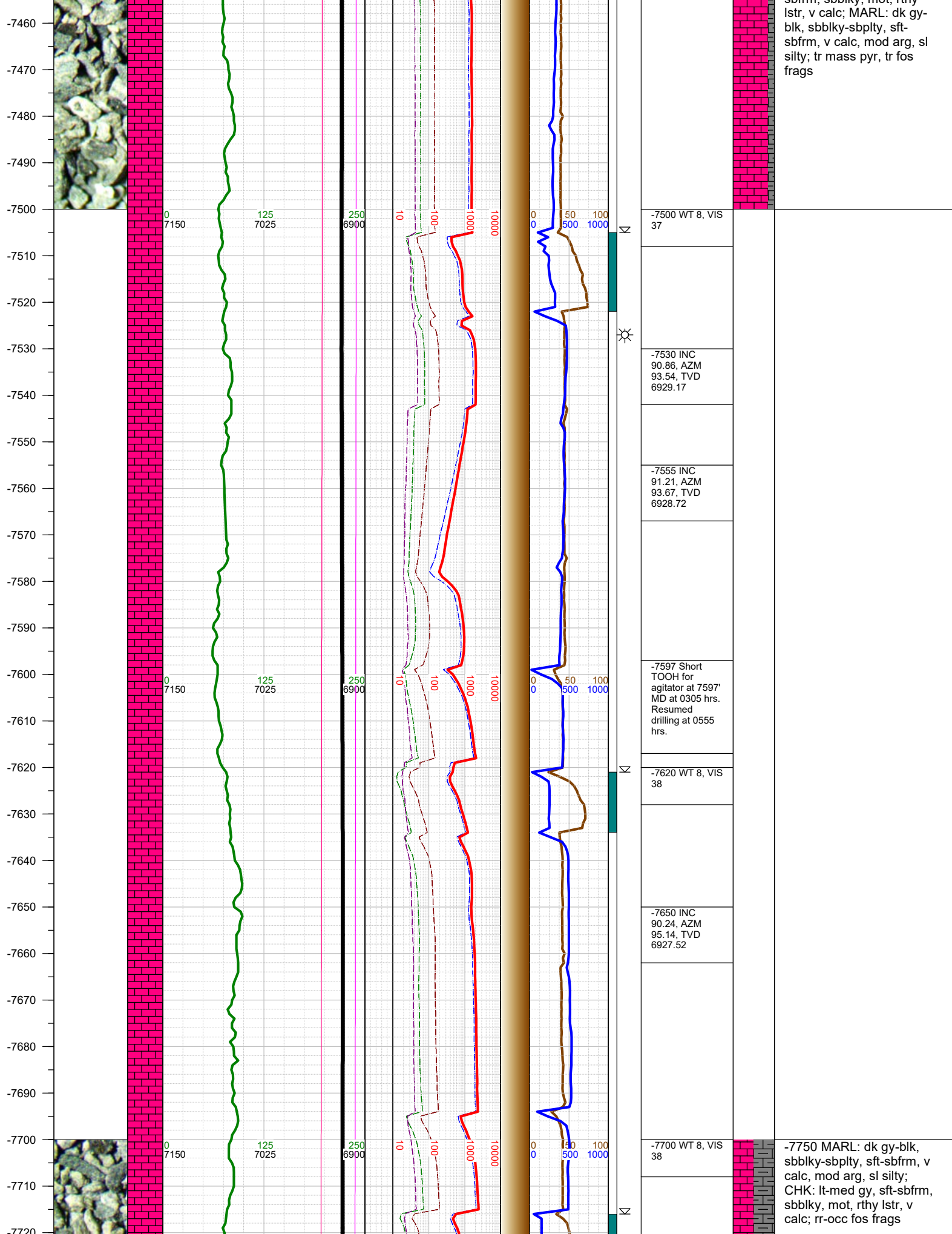


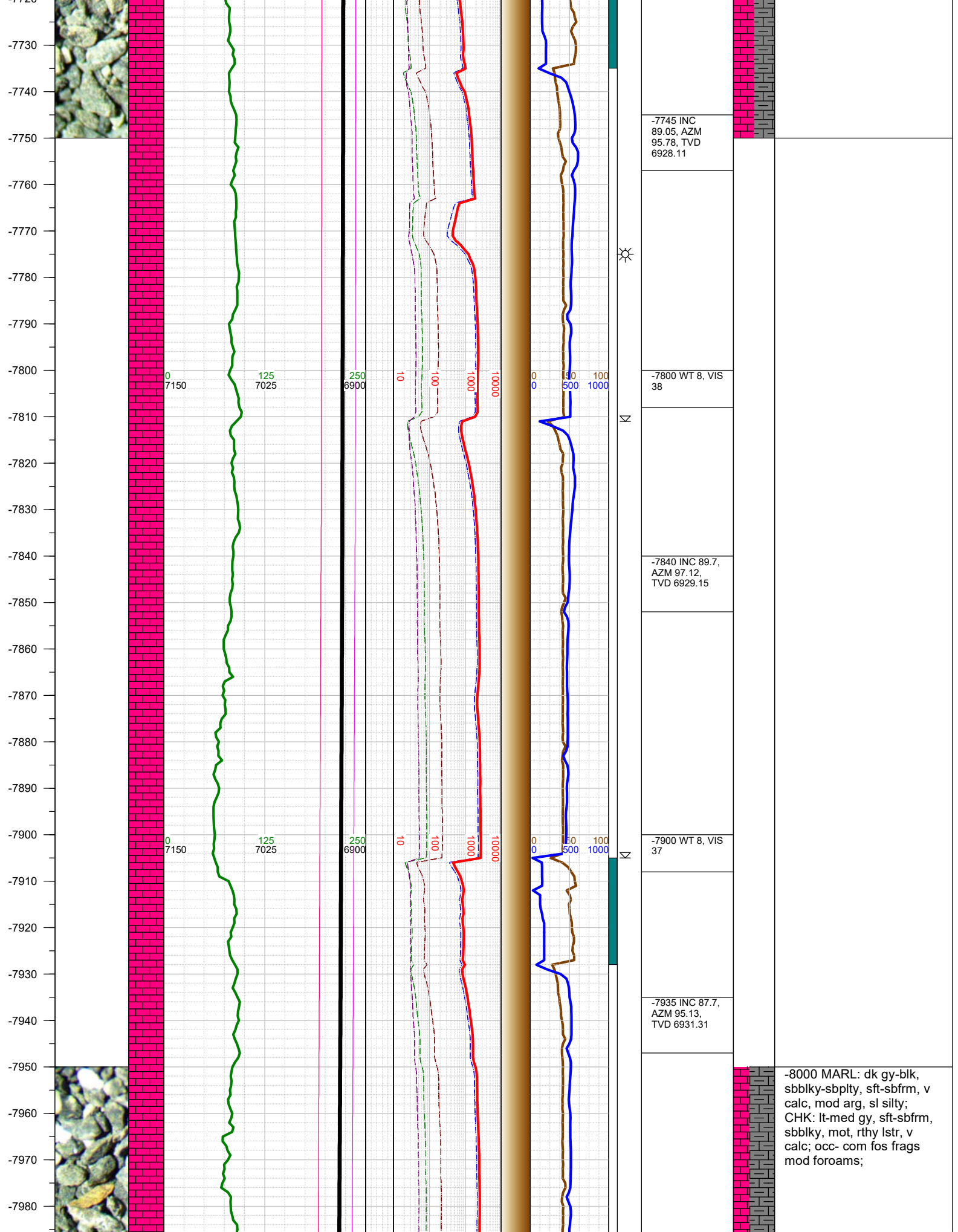


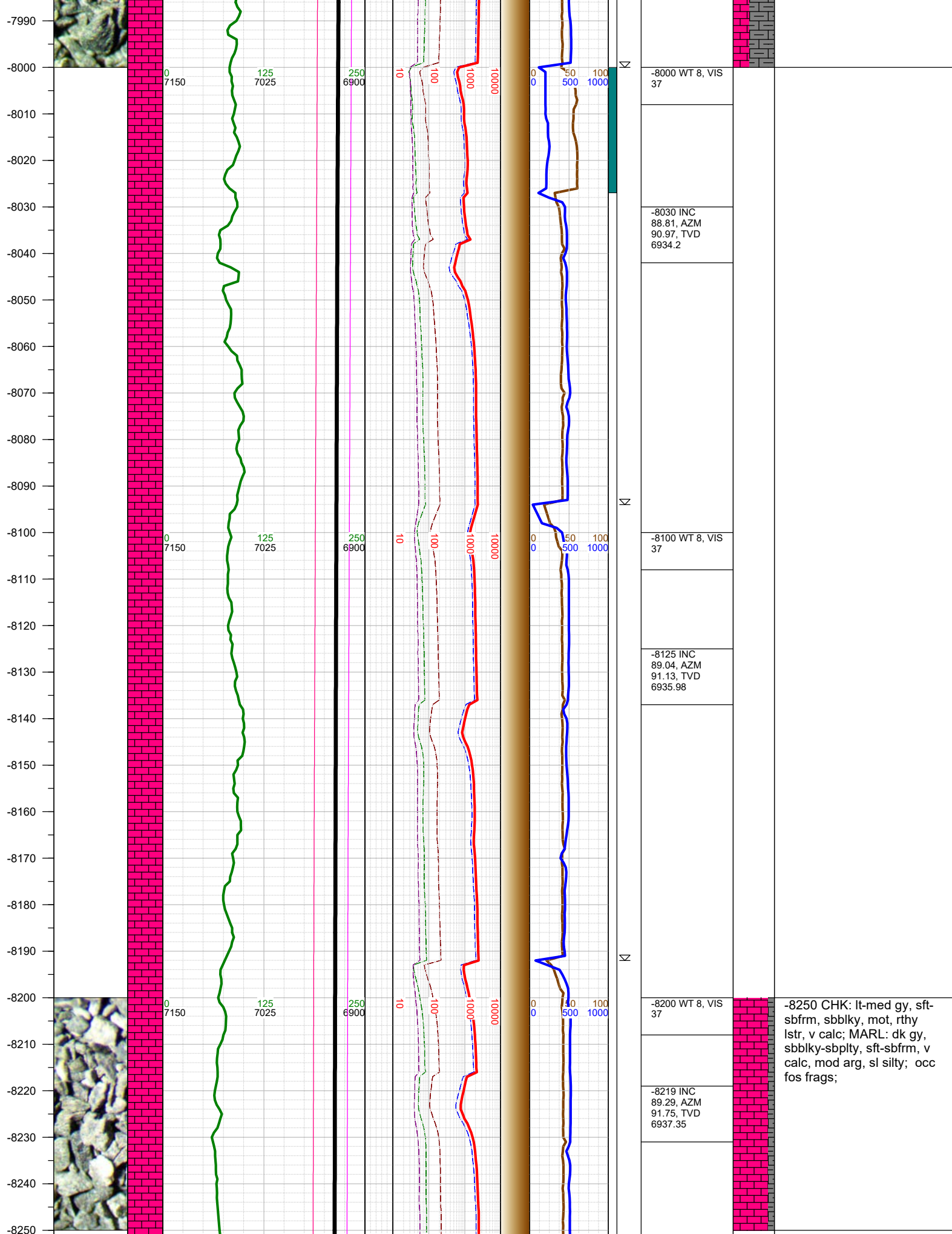




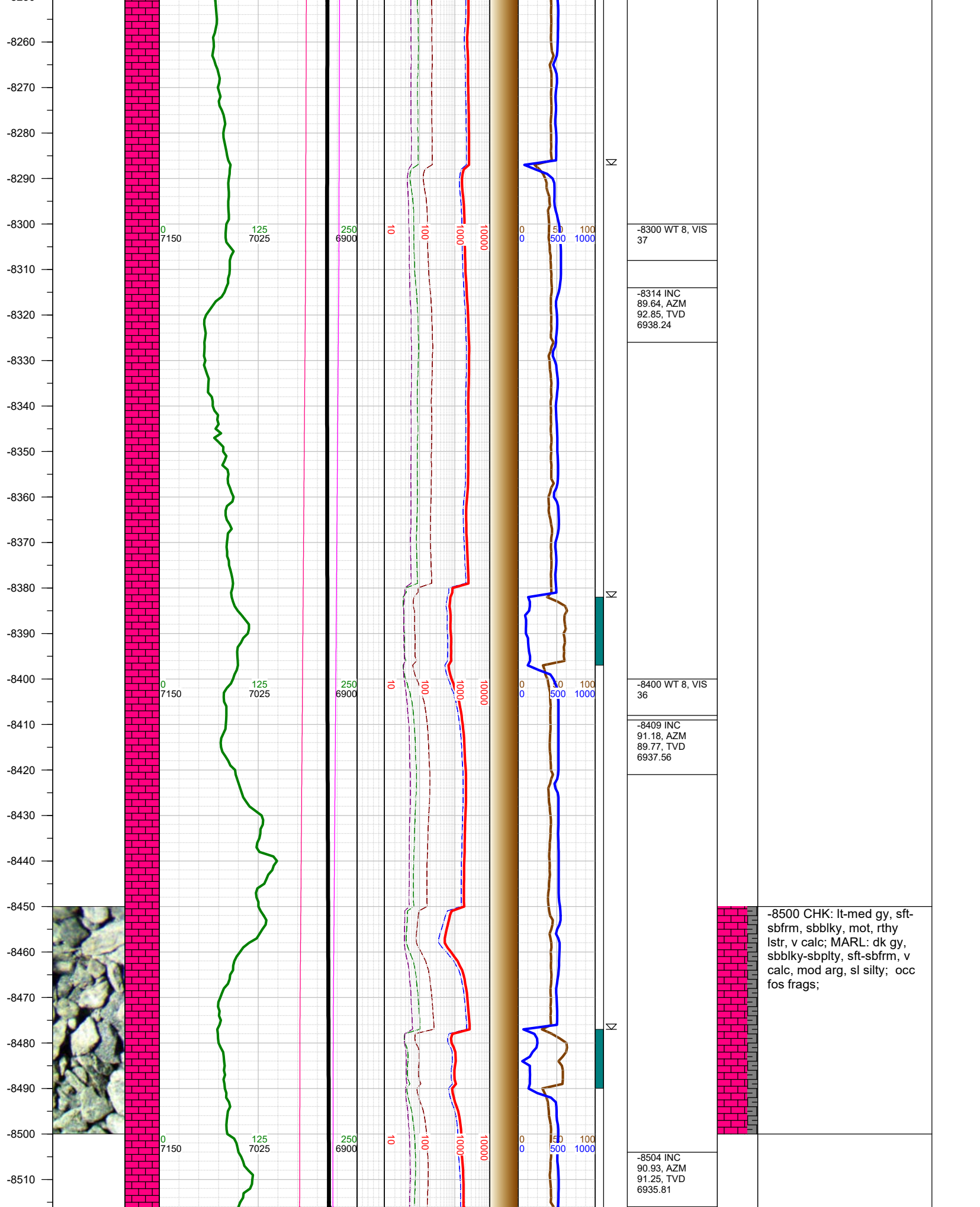




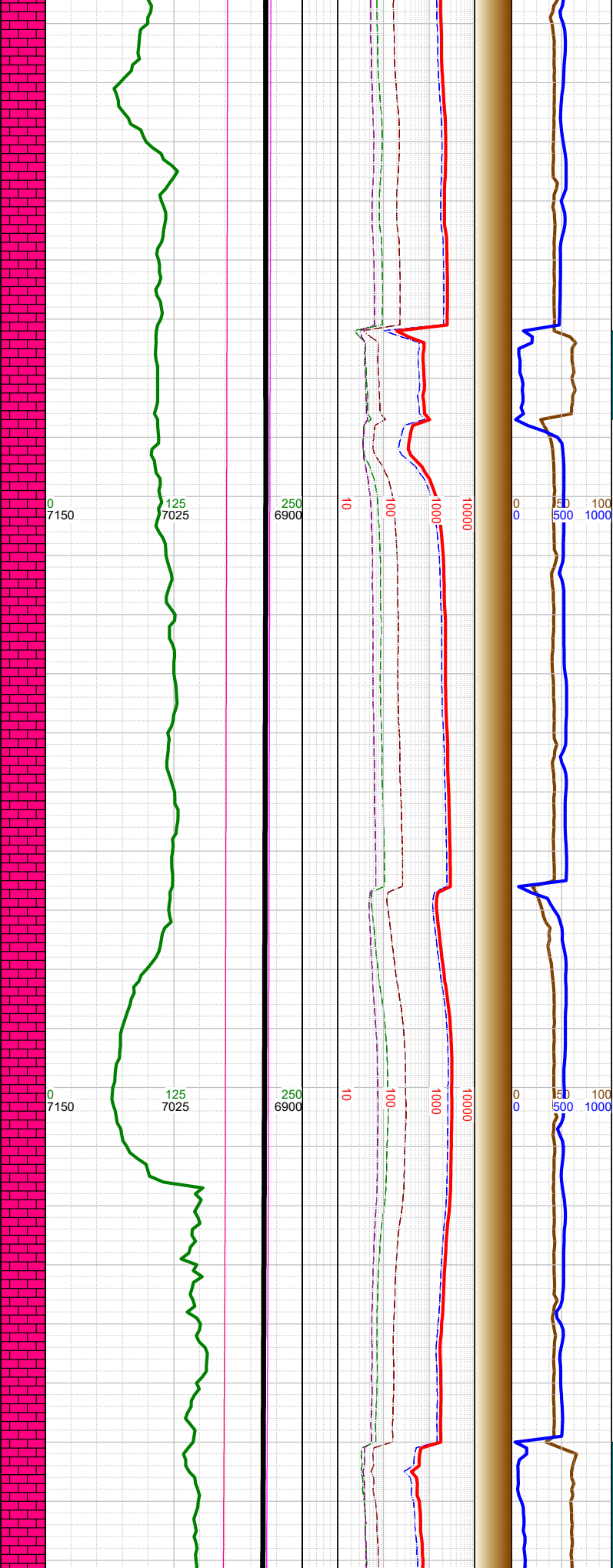
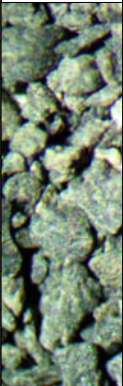




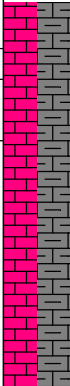
-8250 CHK: lt-med gy, sft-sbfrm, sbblky, mot, rthy lstr, v calc; MARL: dk gy, sbblky-sbplty, sft-sbfrm, v calc, mod arg, sl silty; occ fos frags;



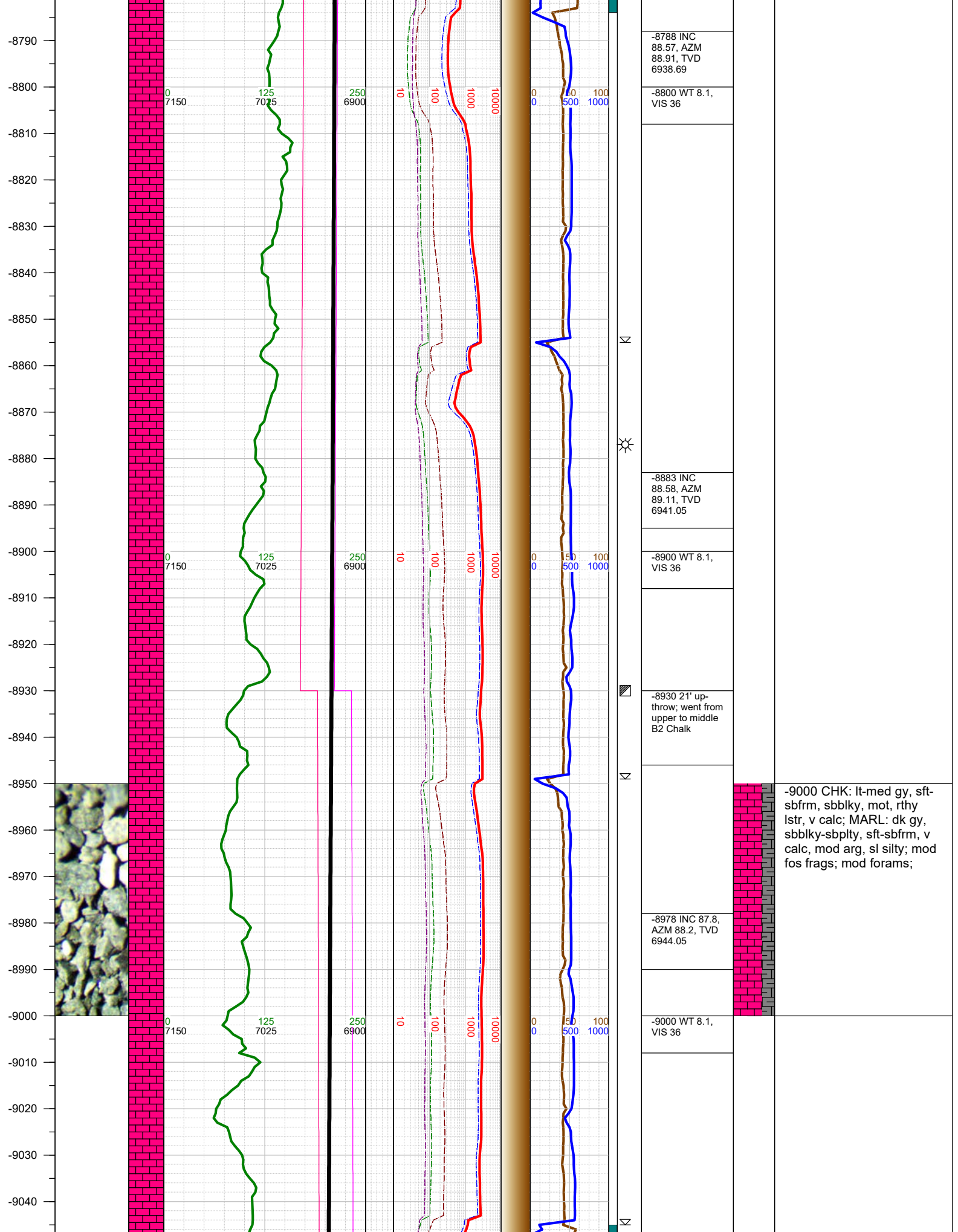
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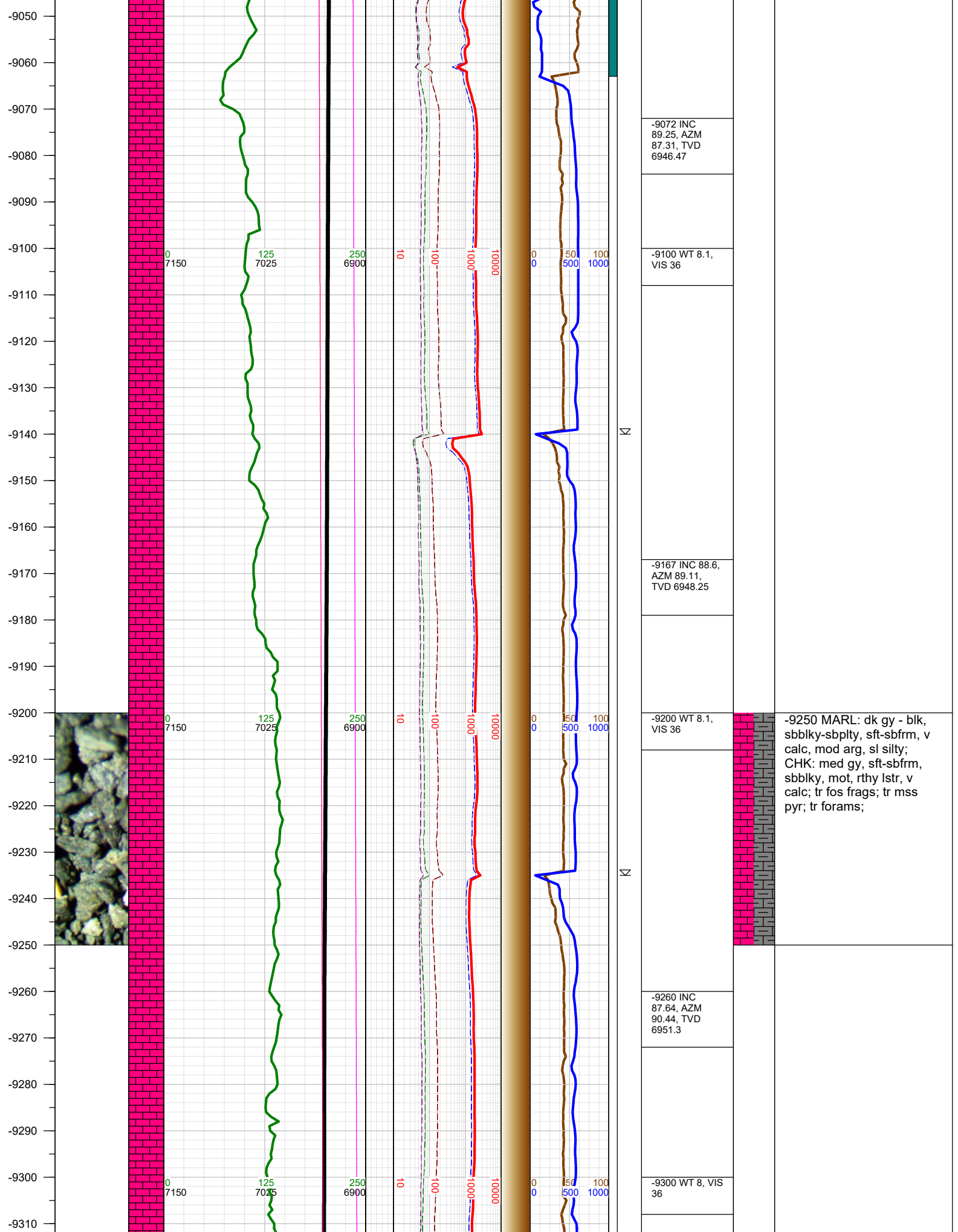


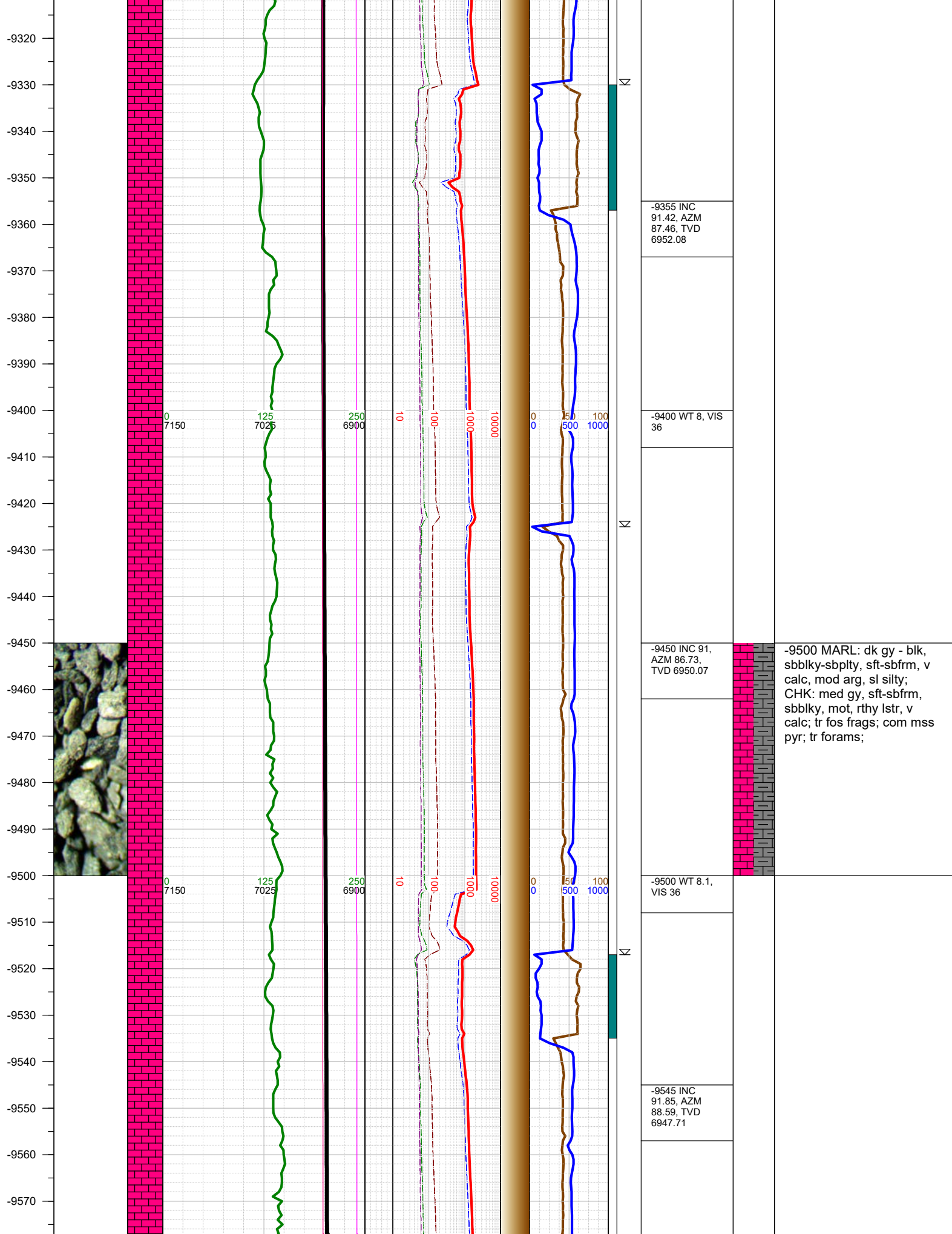
-8520 WT 8, VIS 36
-8599 INC 89.34, AZM 91.94, TVD 6935.59
-8620 WT 8, VIS 36
-8694 INC 89.16, AZM 92.35, TVD 6936.83
-8710 WT 8.1, VIS 36

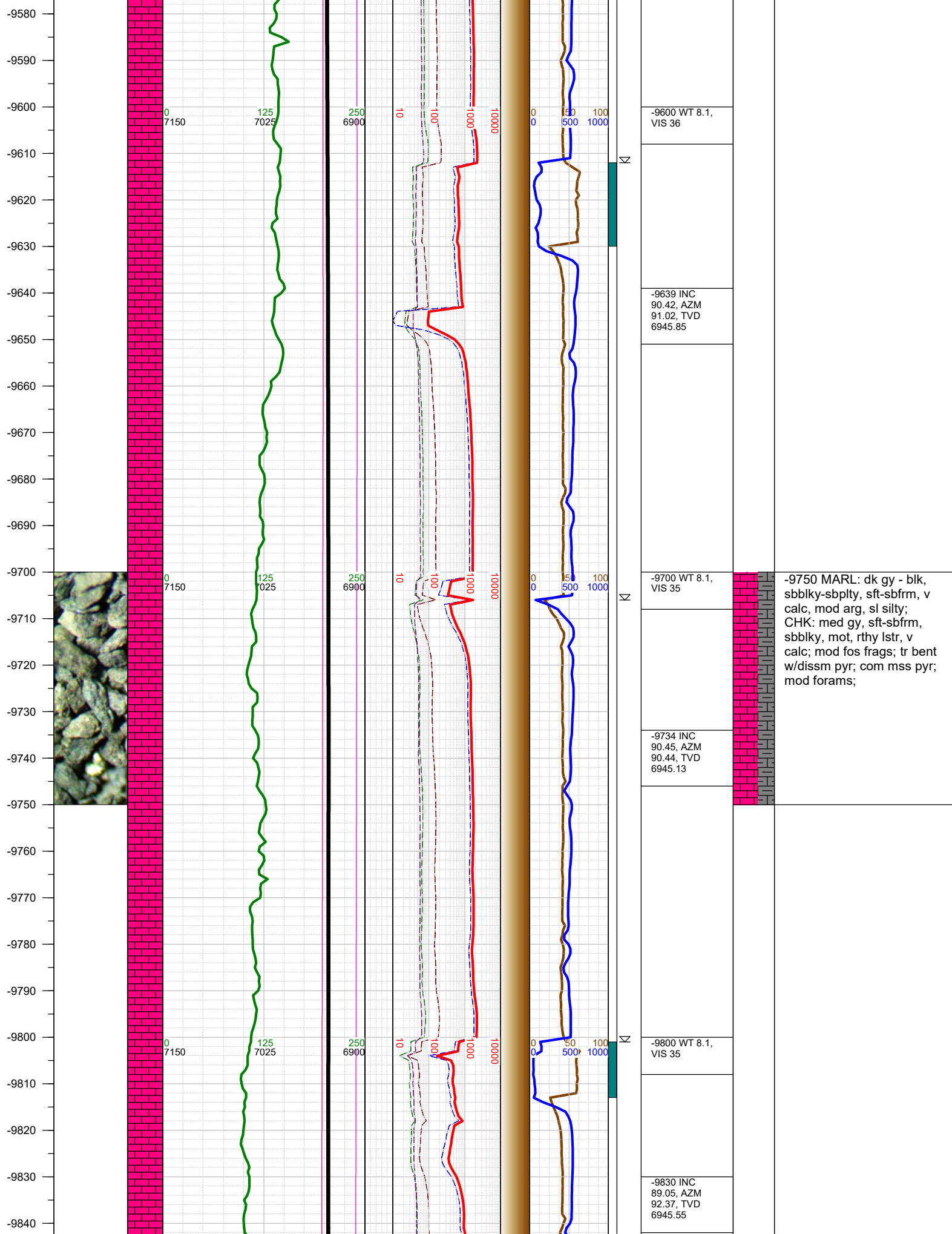


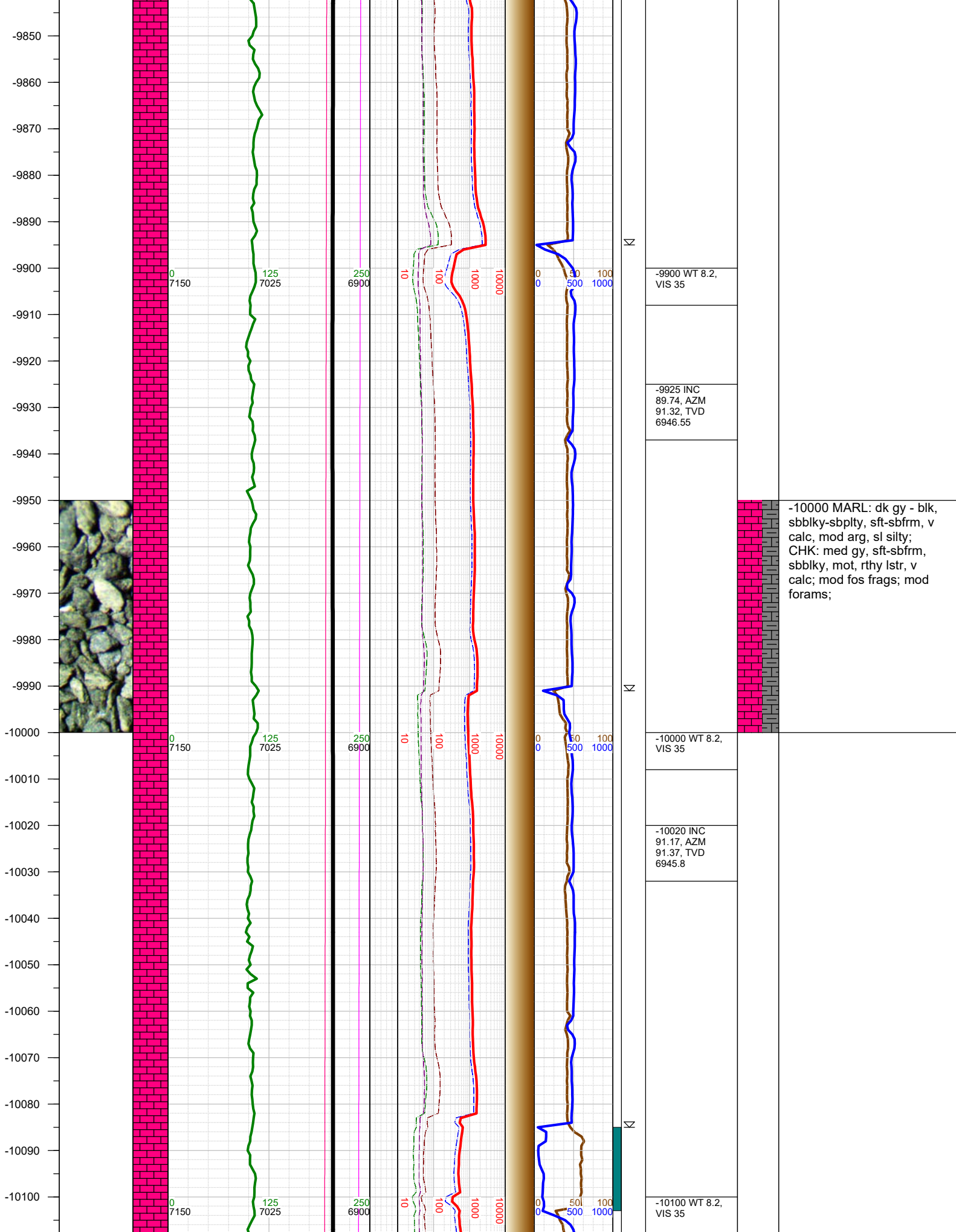
-8750 MARL: dk gy - blk, sbblky-sbplty, sft-sbfrm, v calc, mod arg, sl silty; CHK: lt-med gy, sft-sbfrm, sbblky, mot, rthy lstr, v calc; occ fos frags;



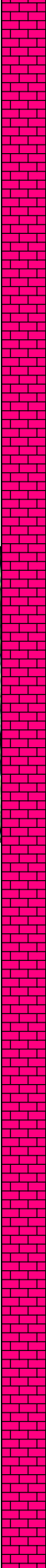
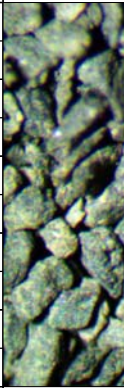








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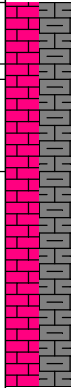
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-10250 MARL: dk gy - blk, sbbkly-sbplty, sft-sbfrm, v calc, mod arg, sl silty; CHK: med gy, sft-sbfrm, sbbkly, mot, rthy lstr, v calc; mod fos frags; tr bent w/dissm pyr; com mss pyr; mod forams;

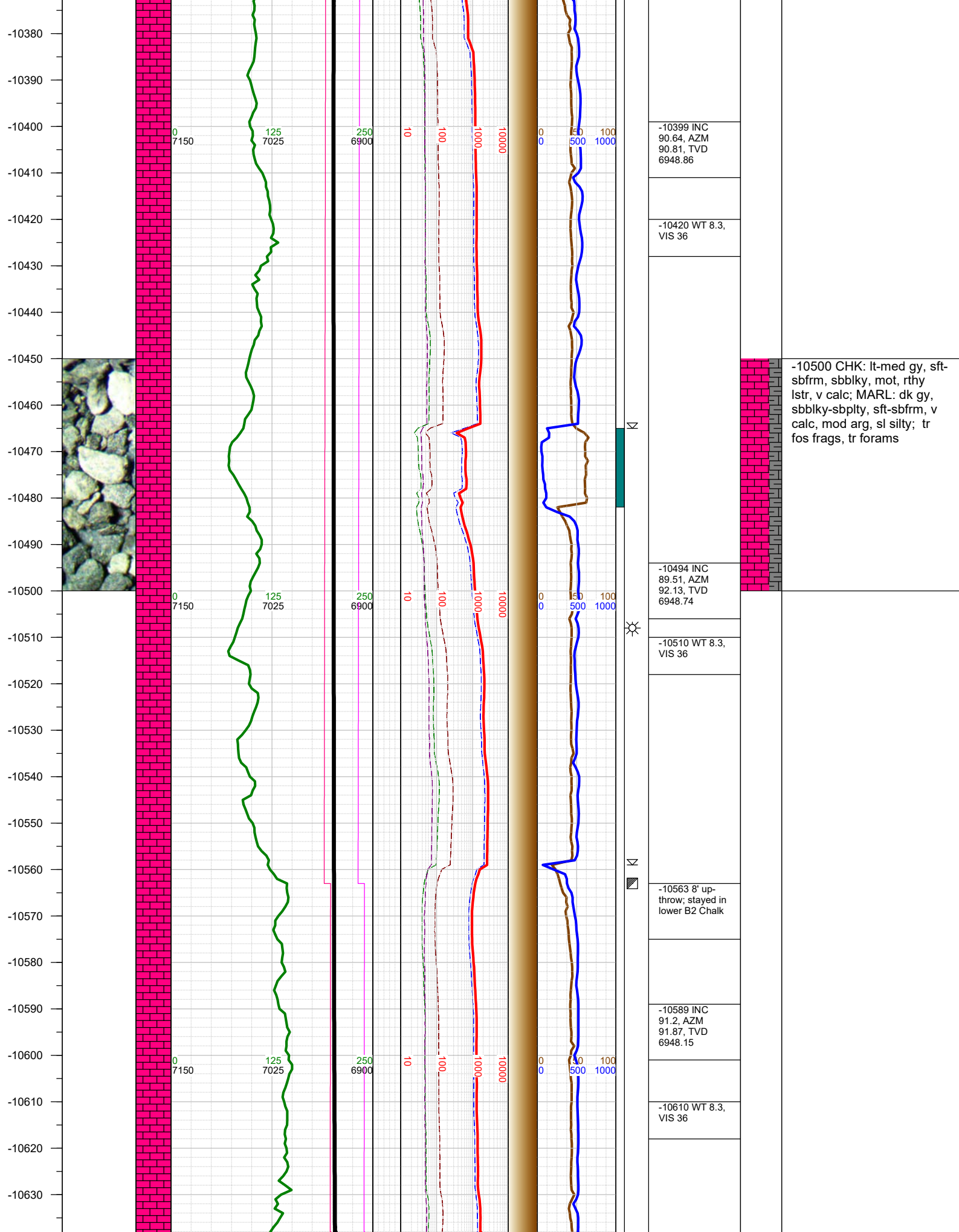
-10114 INC
88.75, AZM
92.45, TVD
6945.87

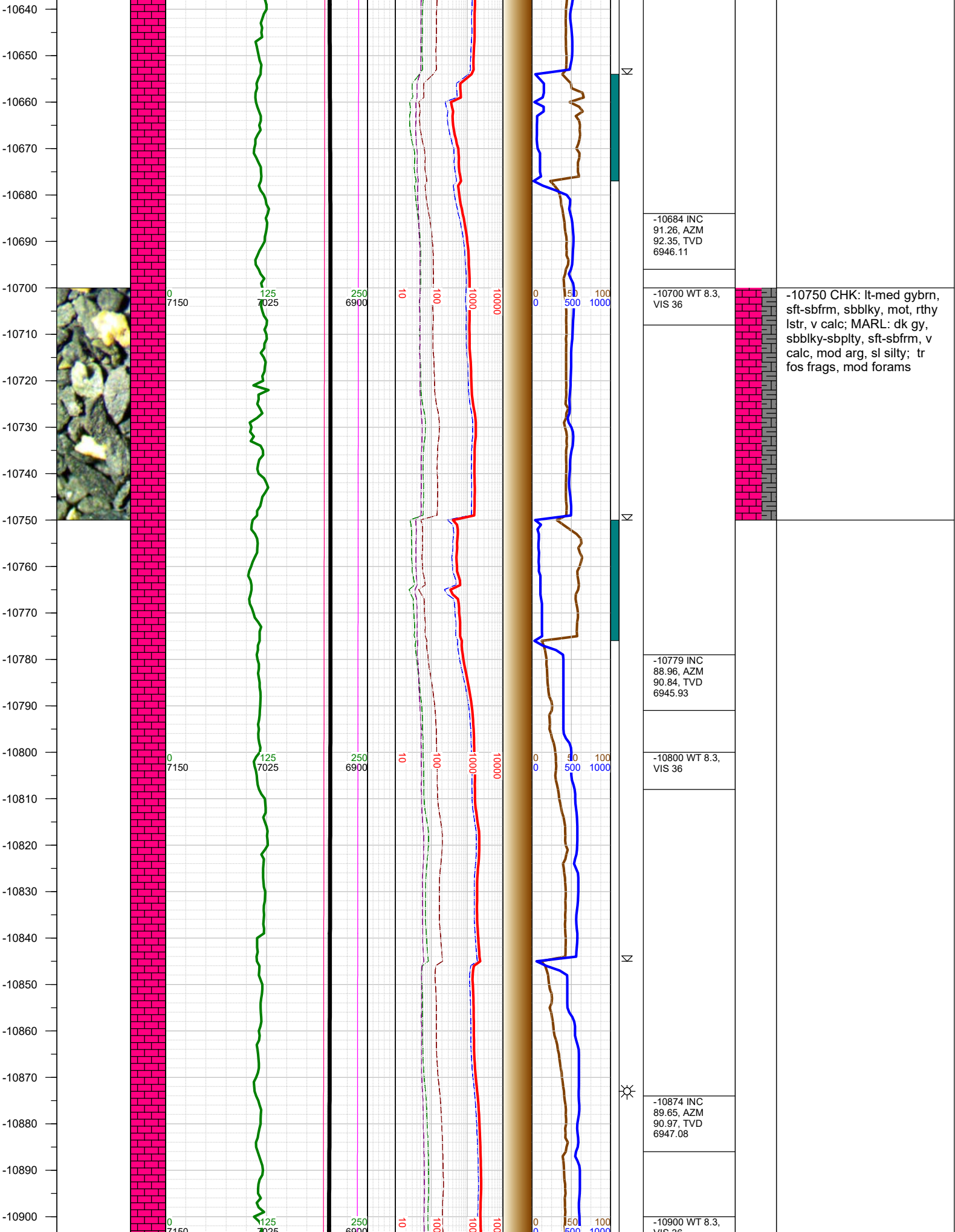
-10200 WT 8.2,
VIS 35

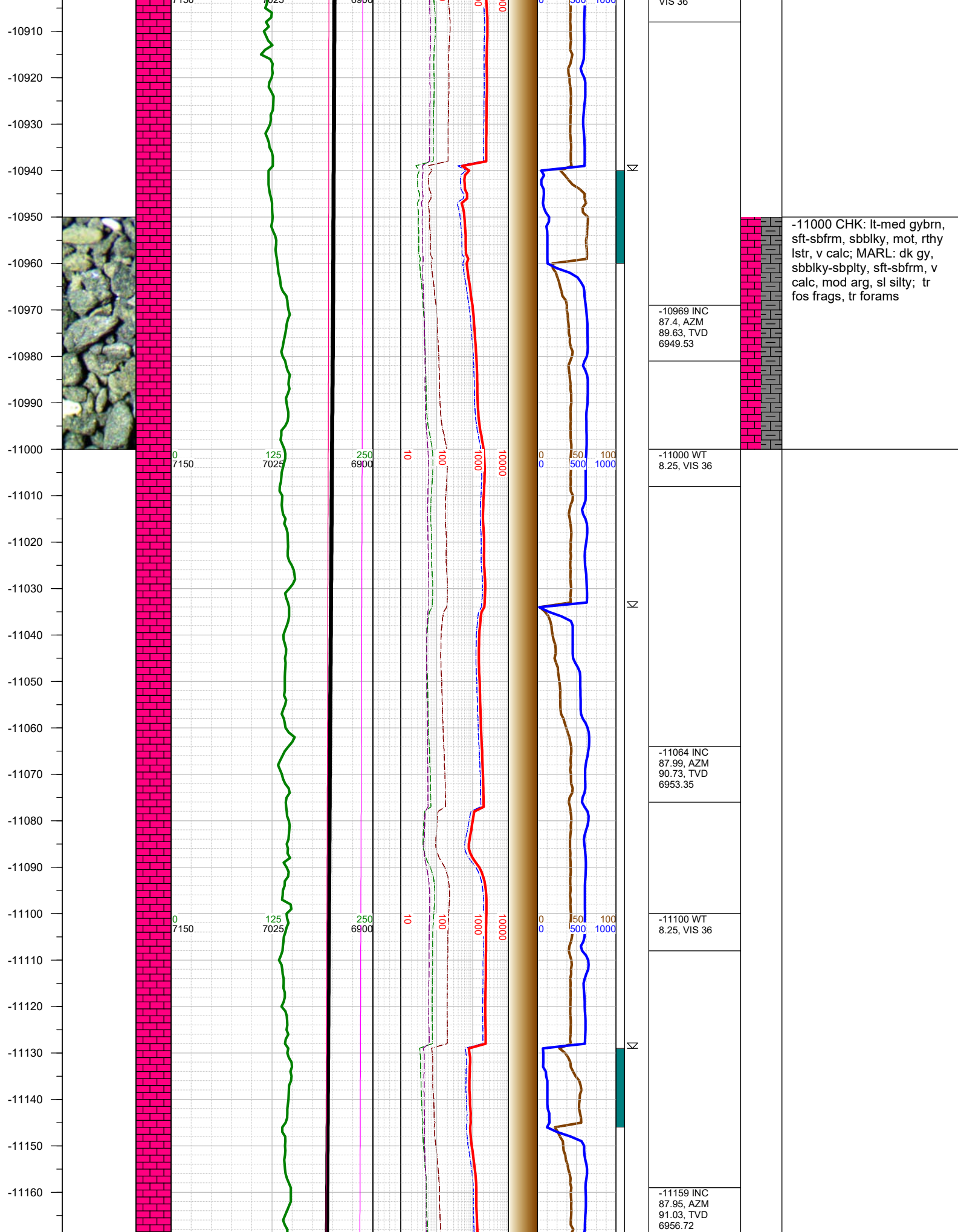
-10210 INC
89.76, AZM
92.12, TVD
6947.12

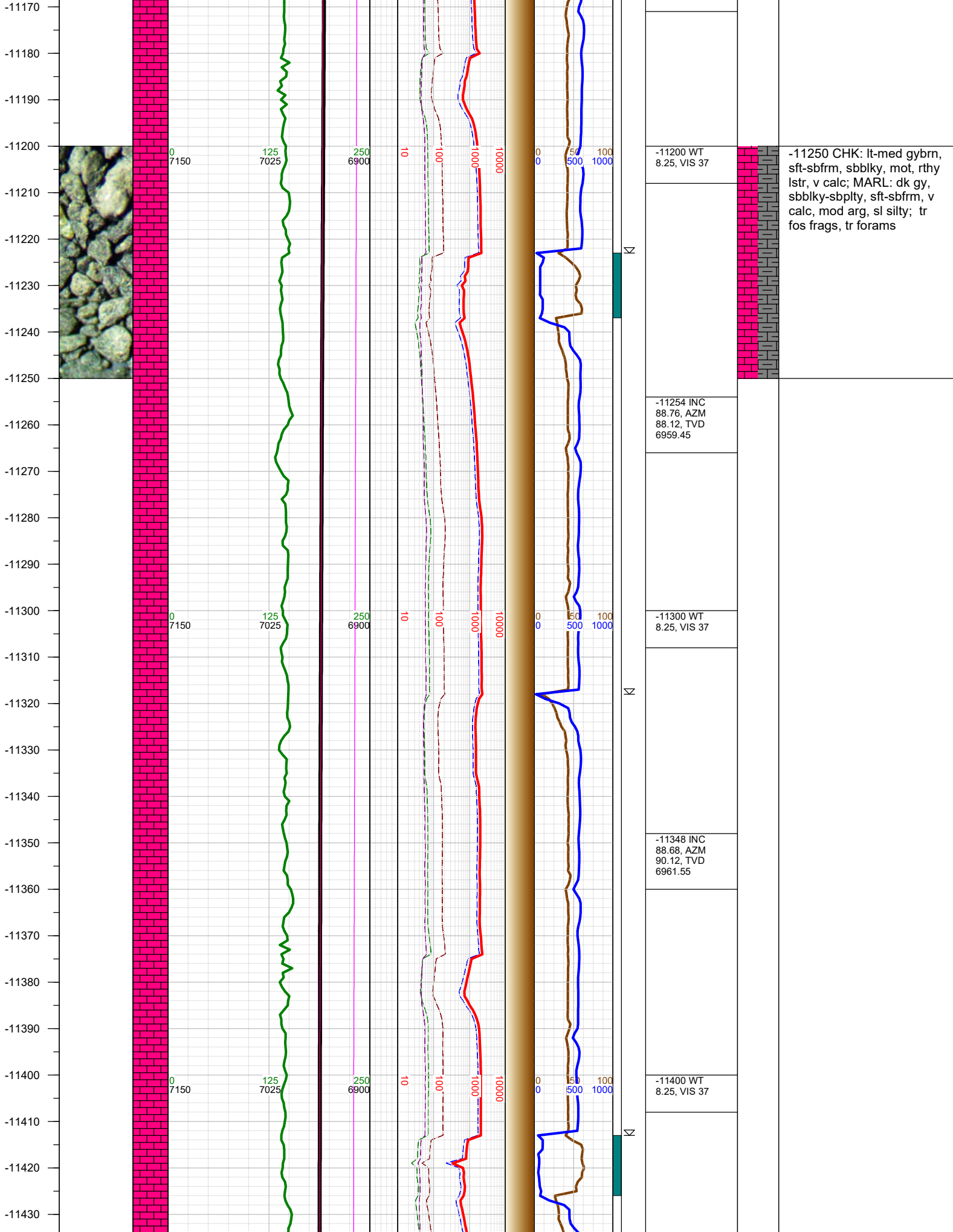
-10304 INC
88.74, AZM
90.96, TVD
6948.35

-10320 WT 8.2,
VIS 35



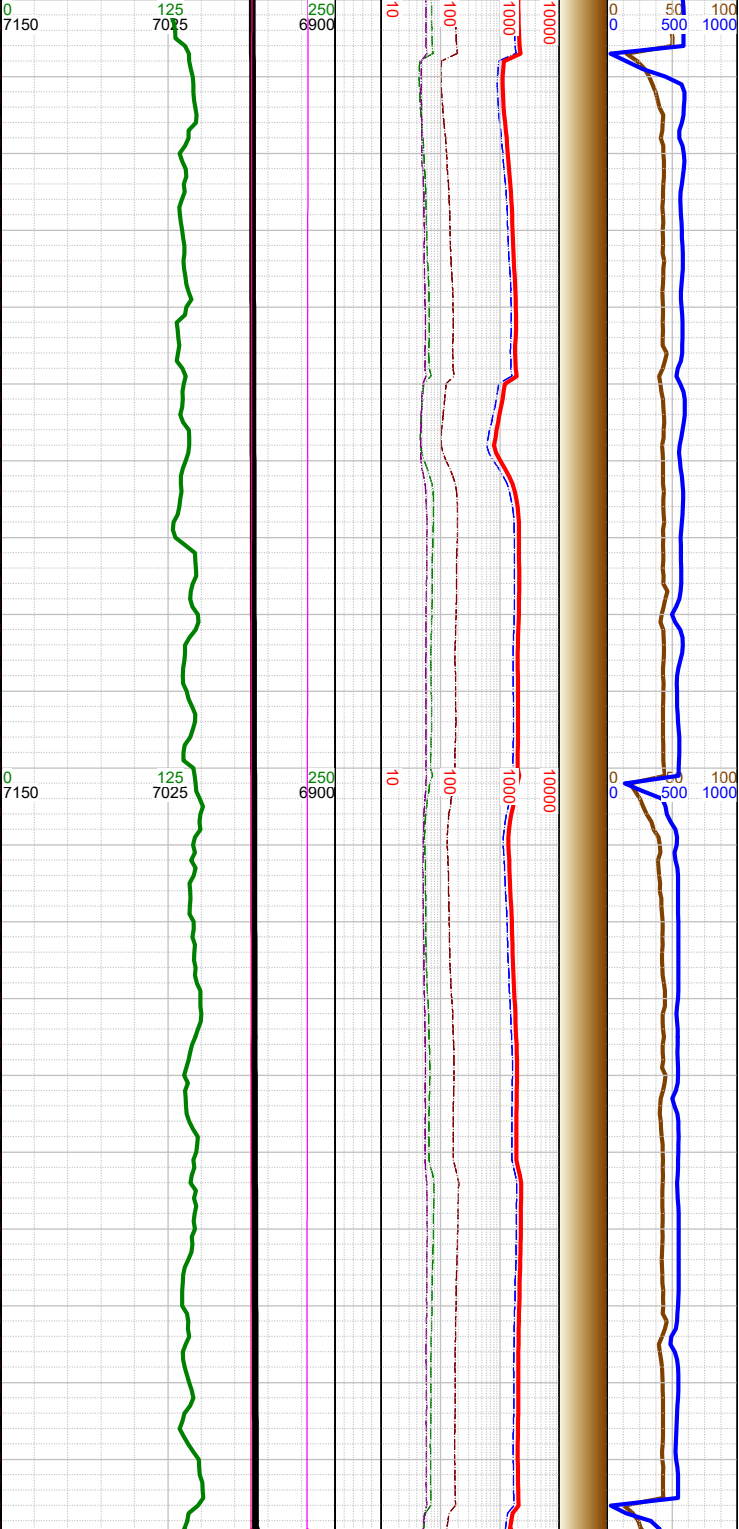
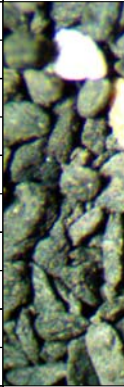






-11250 CHK: lt-med gybrn, sft-sbfrm, sbblky, mot, rthy lstr, v calc; MARL: dk gy, sbblky-sbplty, sft-sbfrm, v calc, mod arg, sl silty; tr fos frags, tr forams

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-11444 INC
90.24, AZM
88.25, TVD
6962.45

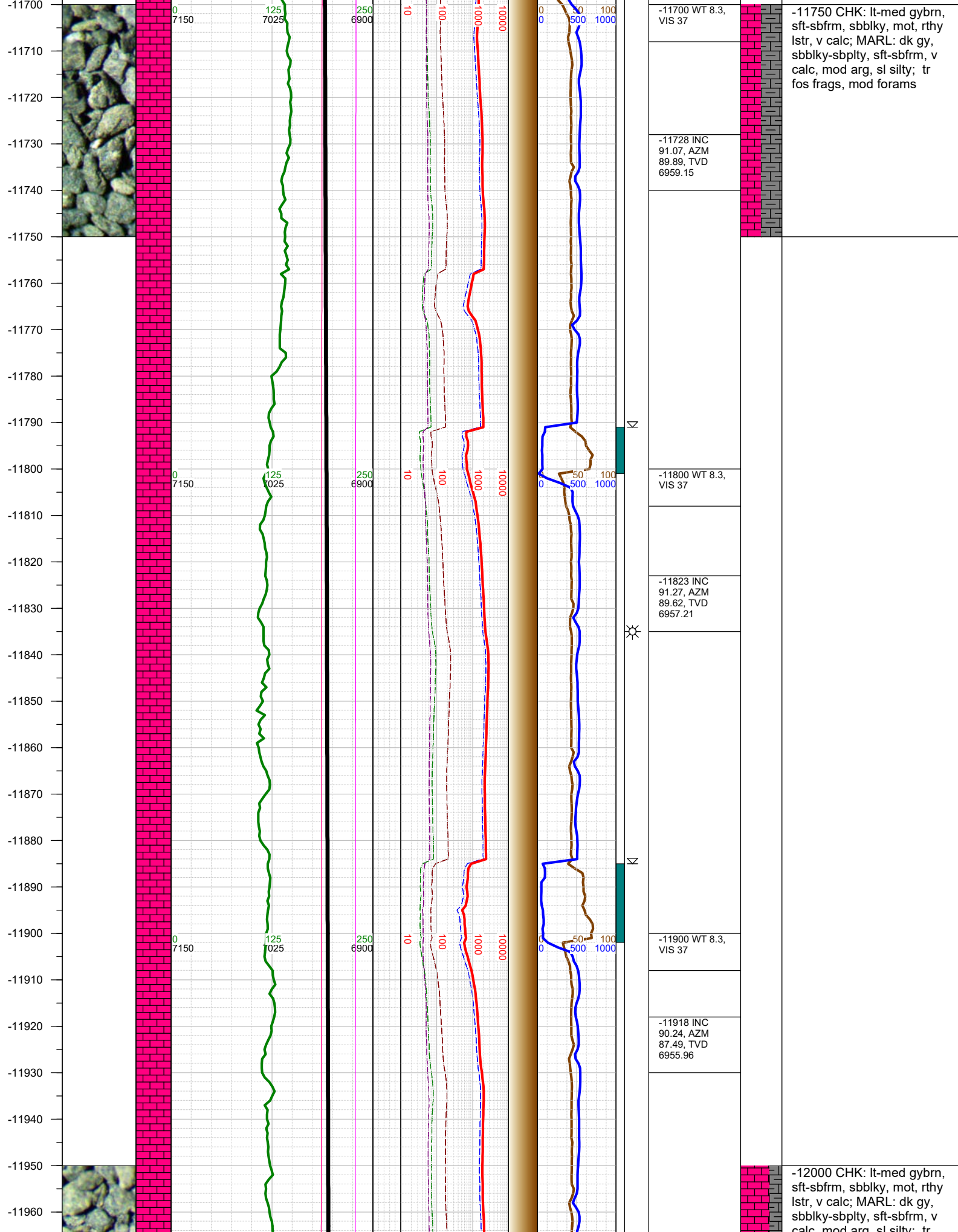
-11500 WT
8.25, VIS 37

-11538 INC
90.61, AZM
88.95, TVD
6961.75

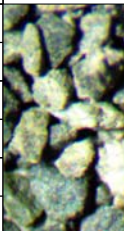
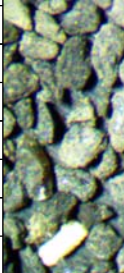
-11600 WT 8.3,
VIS 37

-11633 INC
90.73, AZM
89.78, TVD
6960.64

-11500 CHK: lt-med gybrn,
sft-sbfrm, sbbkly, mot, rthy
lstr, v calc; MARL: dk gy,
sbbkly-sbply, sft-sbfrm, v
calc, mod arg, sl silty; tr
fos frags, mod forams



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-12000 WT 8.3,
VIS 37

-12012 INC
91.18, AZM
87.68, TVD
6954.8

-12087 0000 hrs
on 10/25/2016

-12107 INC
88.98, AZM
88.84, TVD
6954.67

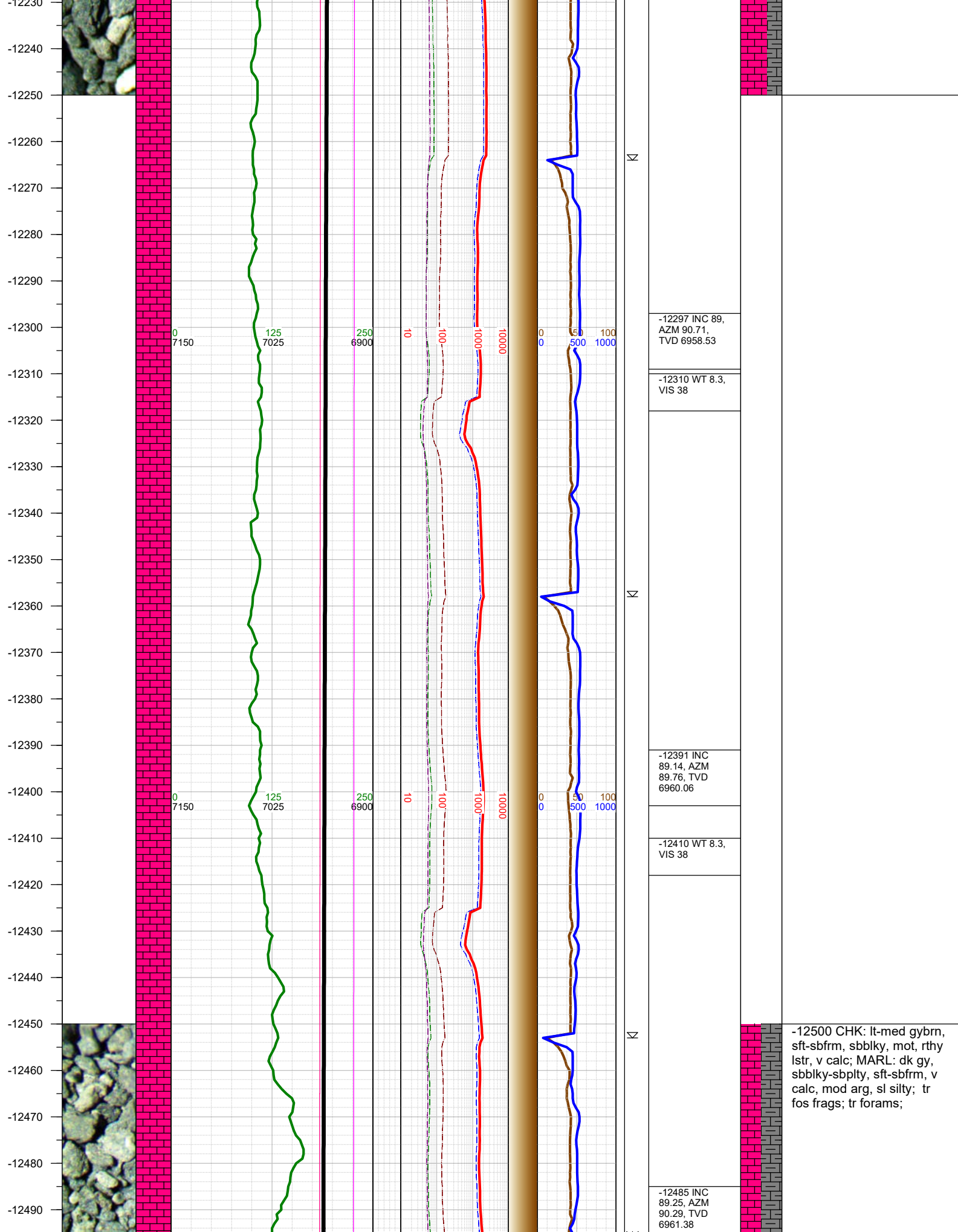
-12120 WT 8.3,
VIS 38

-12202 INC
88.68, AZM
90.69, TVD
6956.61

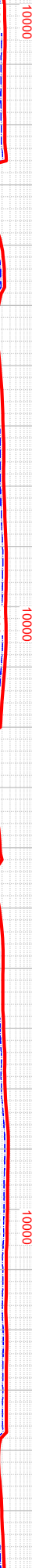
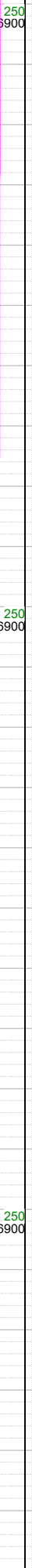
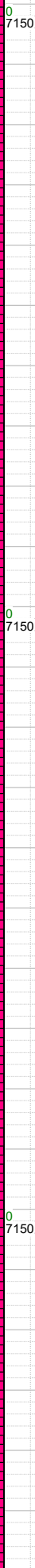
-12220 WT 8.3,
VIS 38

calc, mod arg, sl silty, a
fos frags

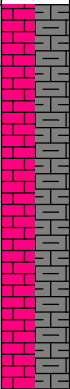
-12250 CHK: lt-med gybrn,
sft-sbfrm, sbblky, mot, rthy
lstr, v calc; MARL: dk gy,
sbblky-sbplty, sft-sbfrm, v
calc, mod arg, sl silty; tr
fos frags



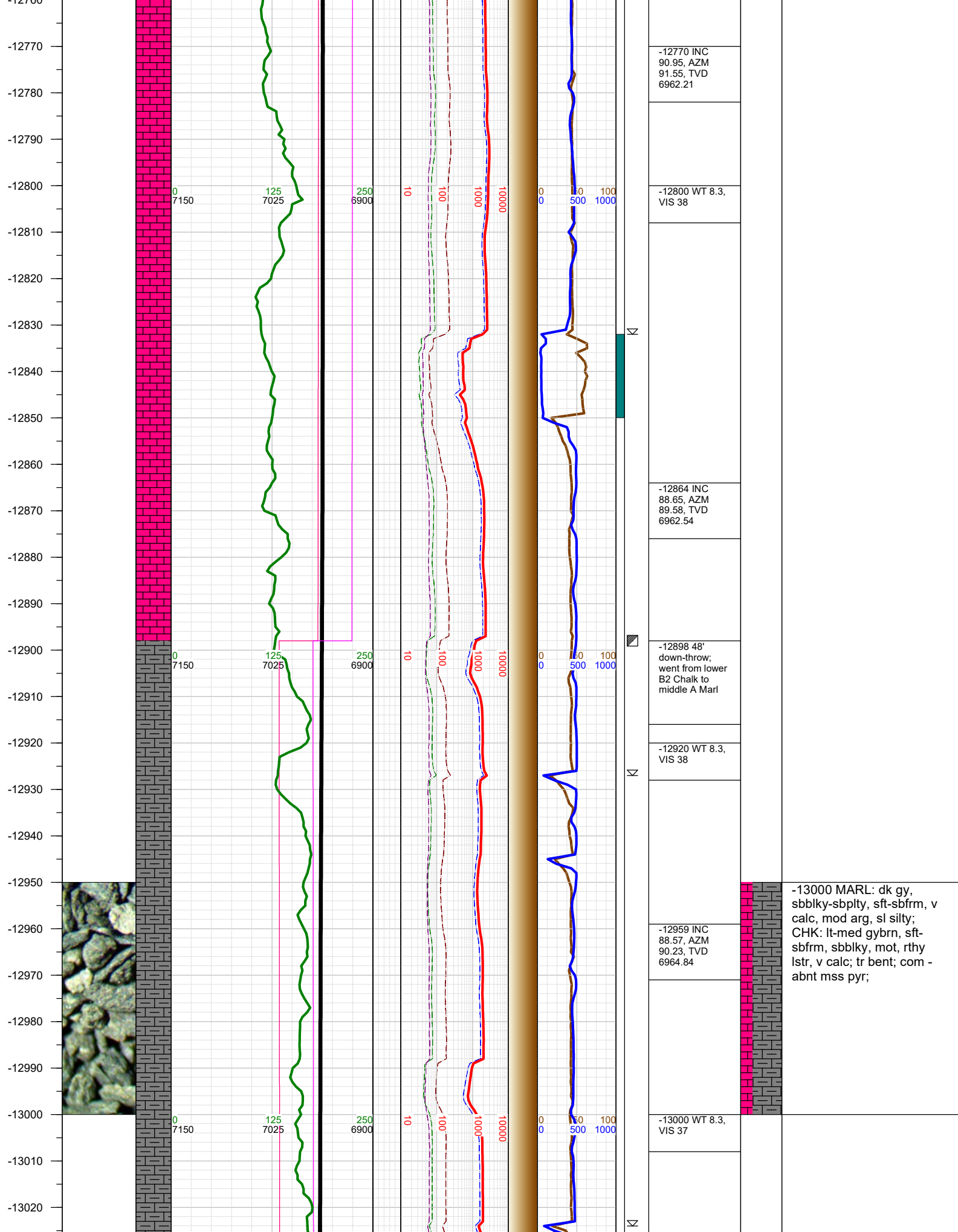
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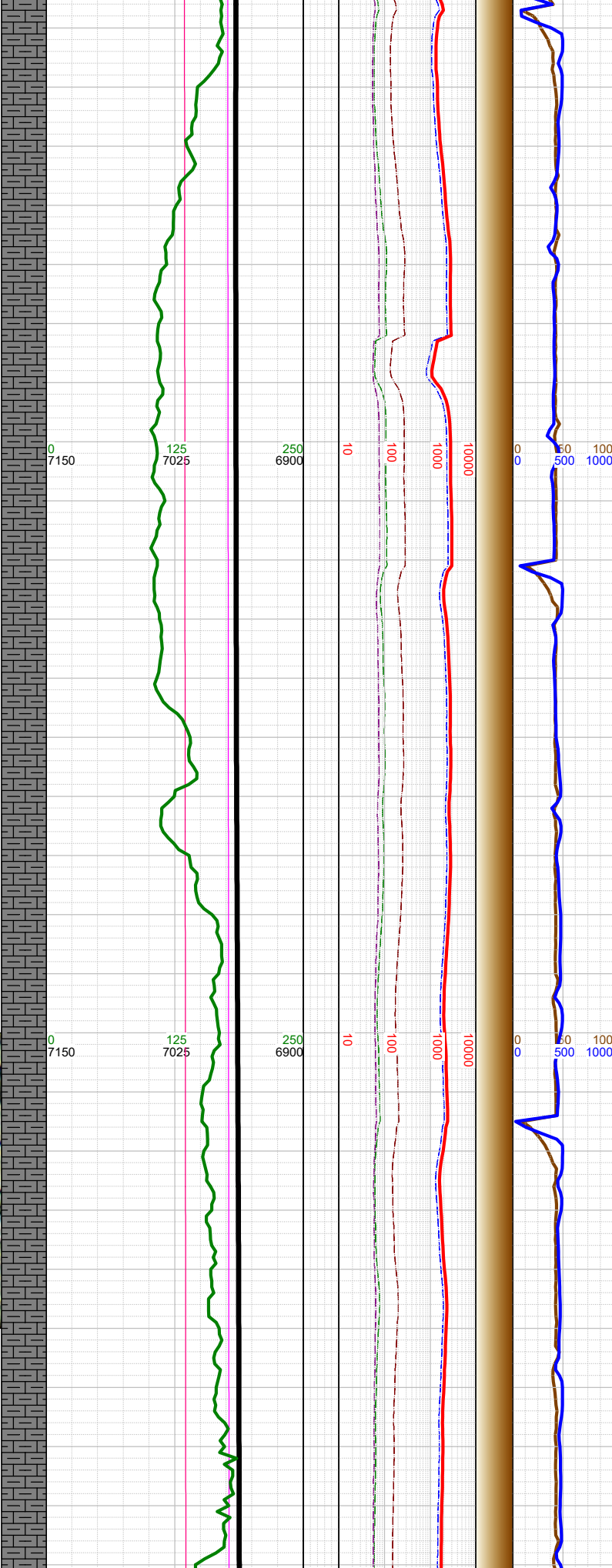
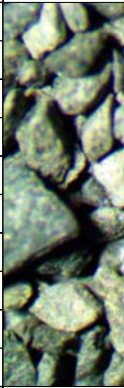
-12500 WT 8.3, VIS 37	
-12580 INC 89.43, AZM 90.14, TVD 6962.47	
-12600 WT 8.3, VIS 37	
-12675 INC 89.97, AZM 91.26, TVD 6962.97	
-12700 WT 8.3, VIS 37	



-12750 CHK: lt-med gybrn,
sft-sbfrm, sbblky, mot, rthy
lstr, v calc; MARL: dk gy,
sbblky-sbplty, sft-sbfrm, v
calc, mod arg, sl silty; tr
fos frags, rr bent;



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-13054 INC
90.07, AZM
90.4, TVD
6965.97

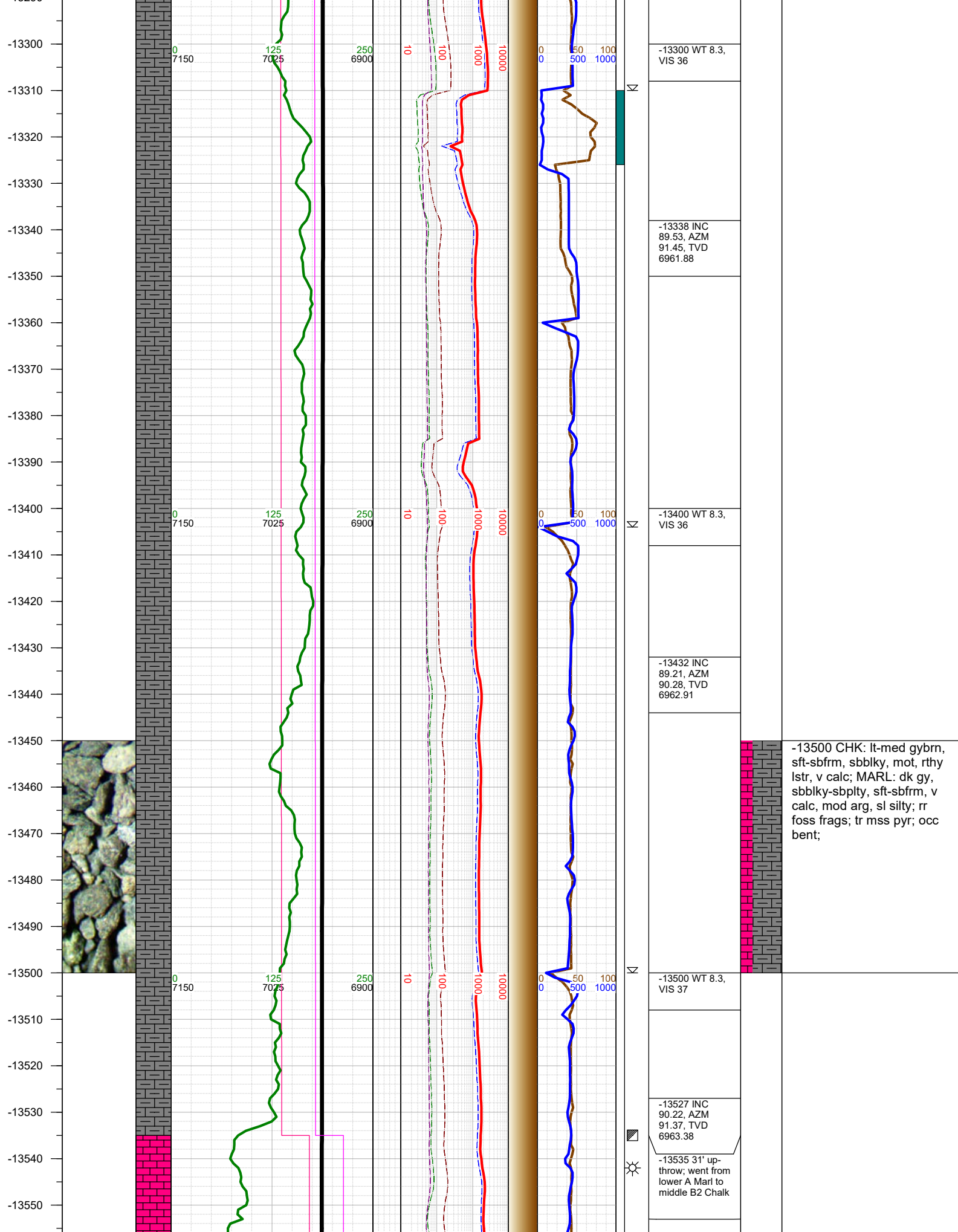
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VIS 37

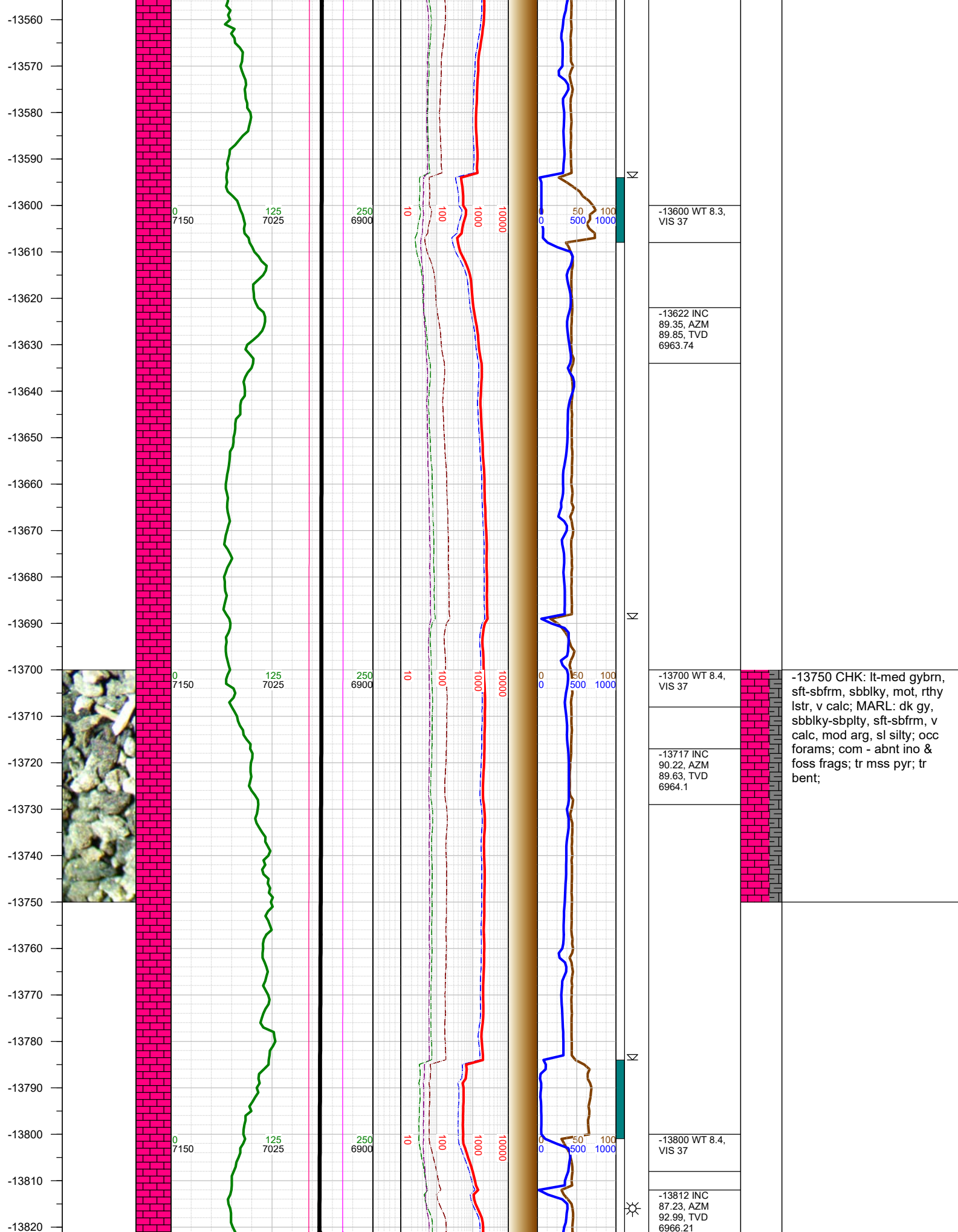
-13149 INC
90.85, AZM
90.51, TVD
6965.21

-13200 WT 8.3,
VIS 37

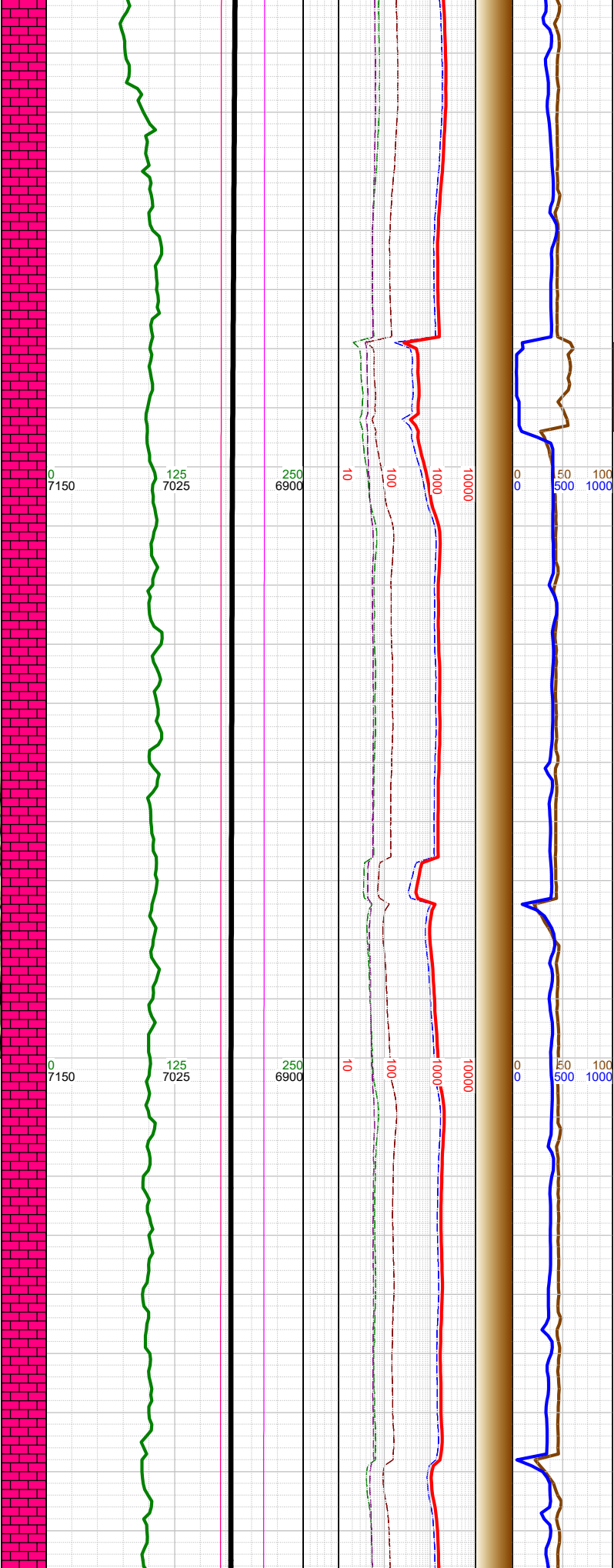
-13243 INC
91.83, AZM
89.84, TVD
6963.01

-13250 MARL: dk gy,
sbbkly-sbplty, sft-sbfrm, v
calc, mod arg, sl silty;
CHK: lt-med gybrn, sft-
sbfrm, sbbkly, mot, rthy
lstr, v calc;





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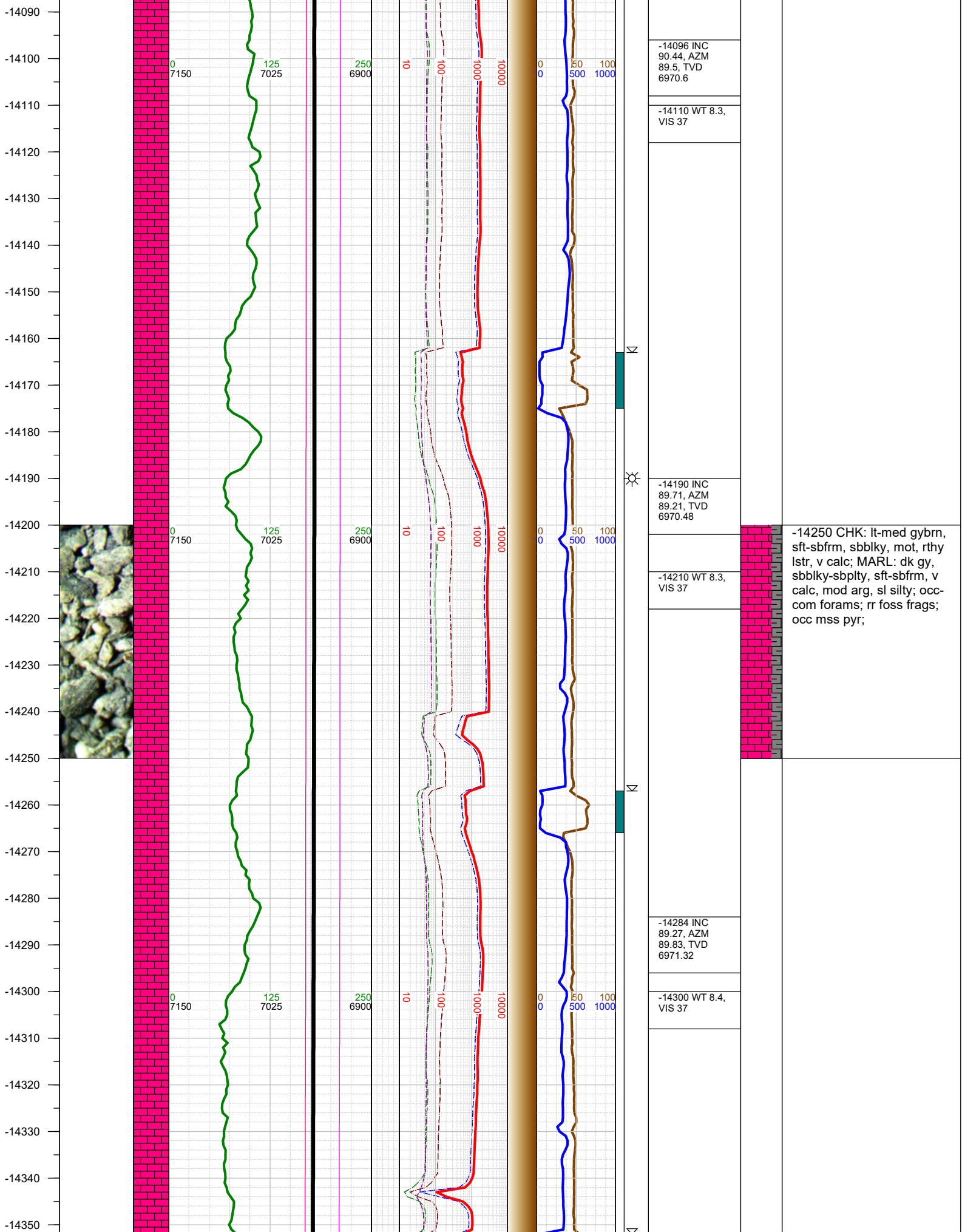
-13906 INC
89.19, AZM
88.75, TVD
6969.15

-13920 WT 8.4,
VIS 37

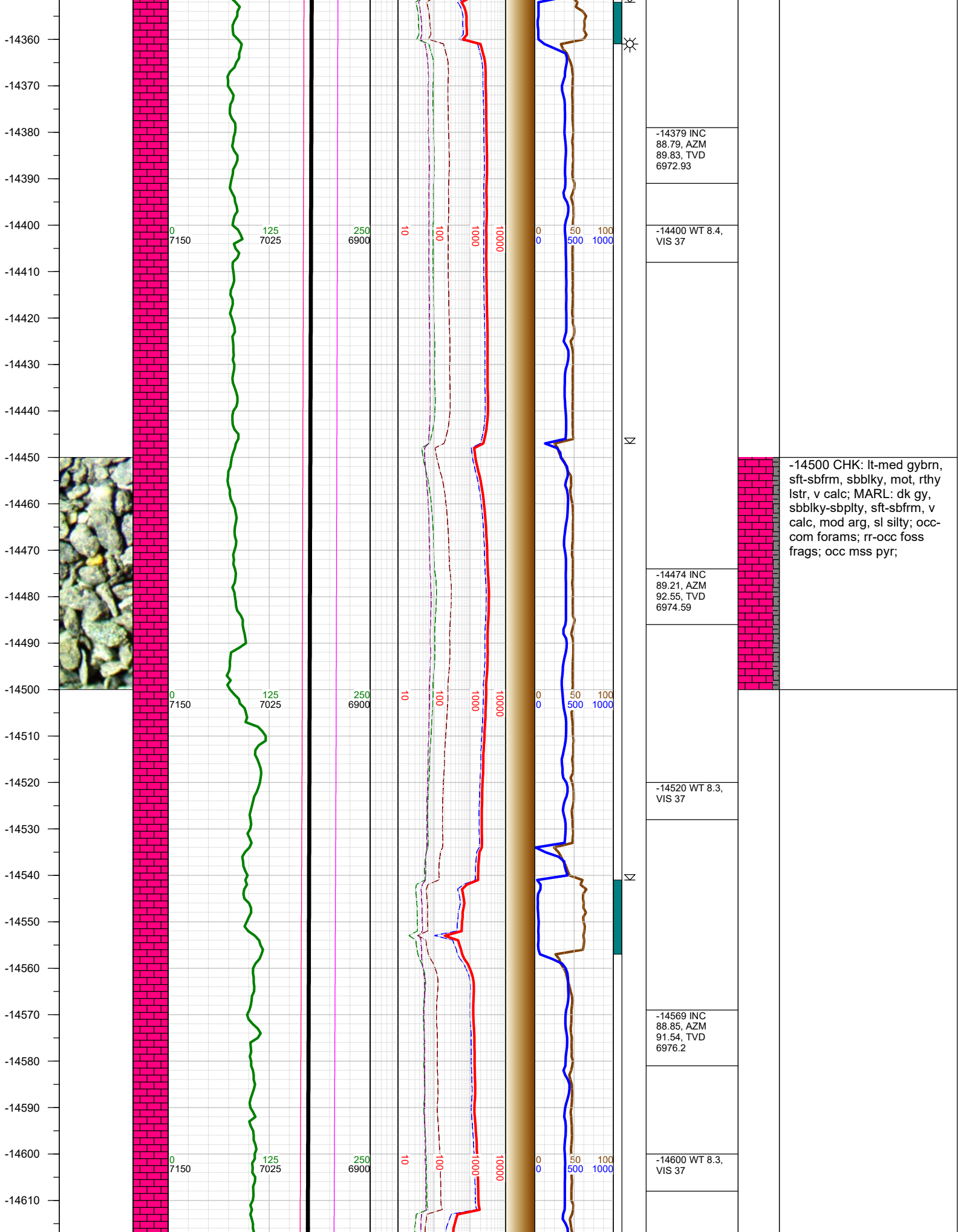
-14000 CHK: lt-med gybrn,
sft-sbfrm, sbblky, mot, rthy
lstr, v calc; MARL: dk gy,
sbblky-sbplty, sft-sbfrm, v
calc, mod arg, sl silty; com
- freq forams; com foss
frags; rr mss pyr;

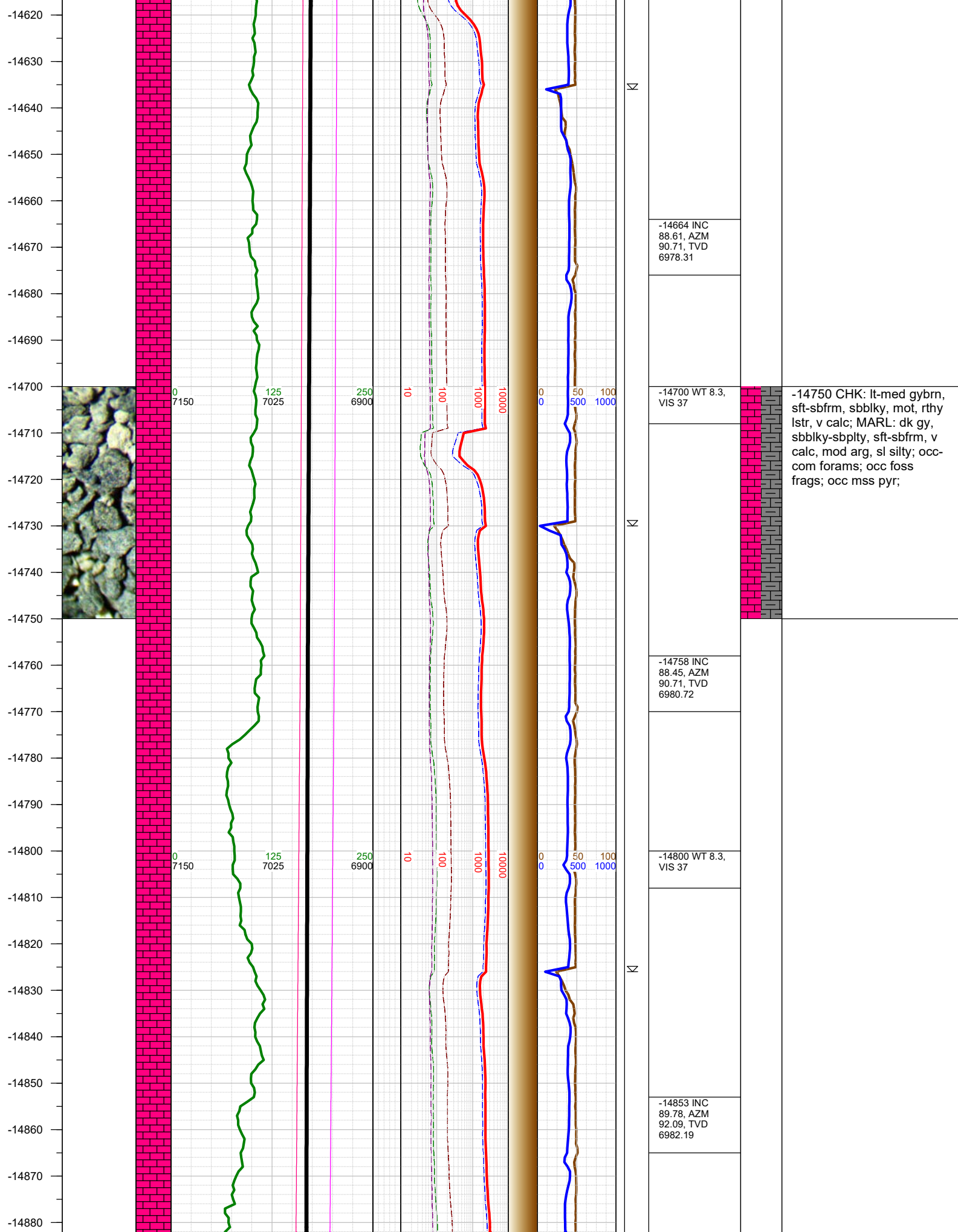
-14001 INC
89.31, AZM
89.08, TVD
6970.39

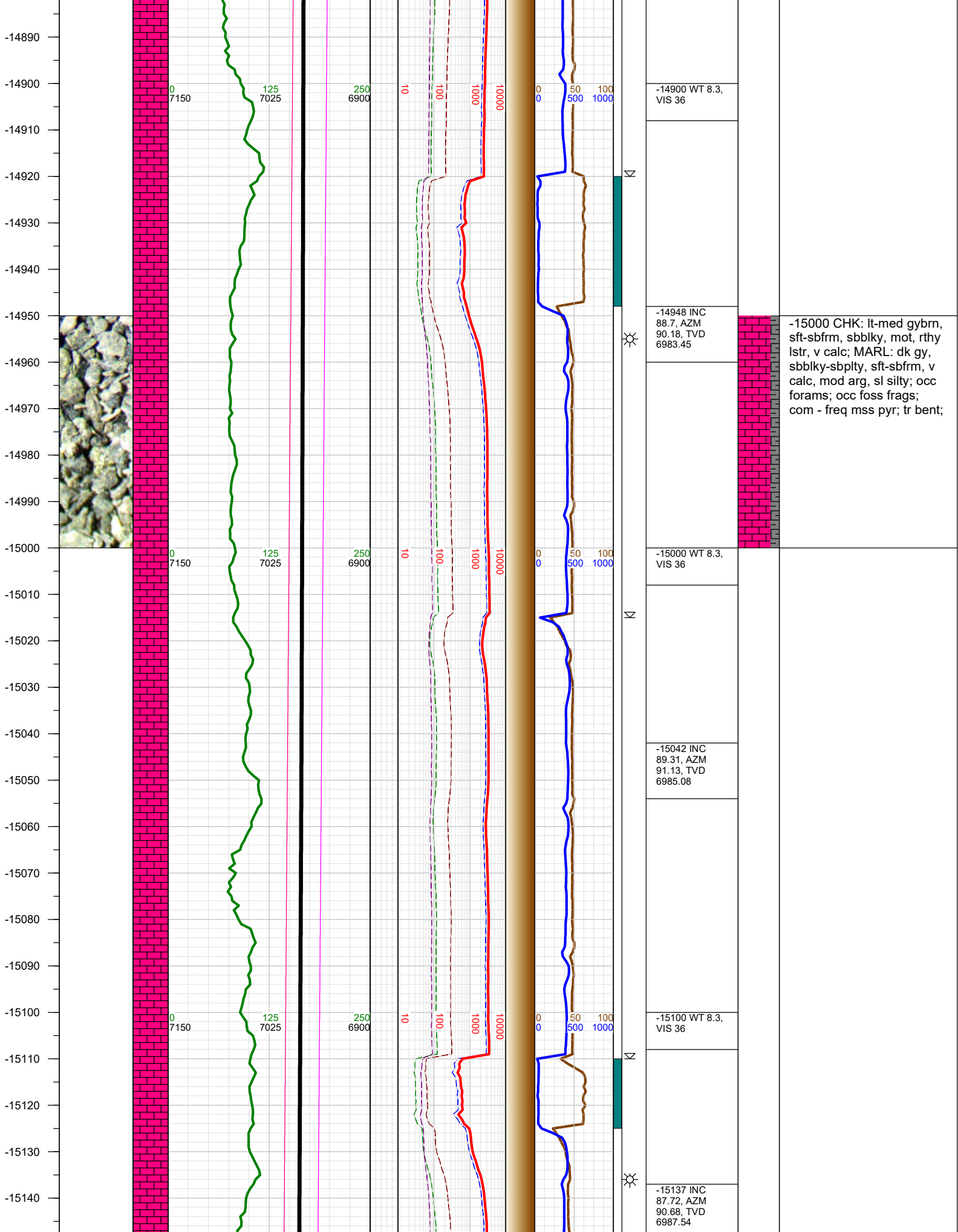
-14020 WT 8.4,
VIS 37

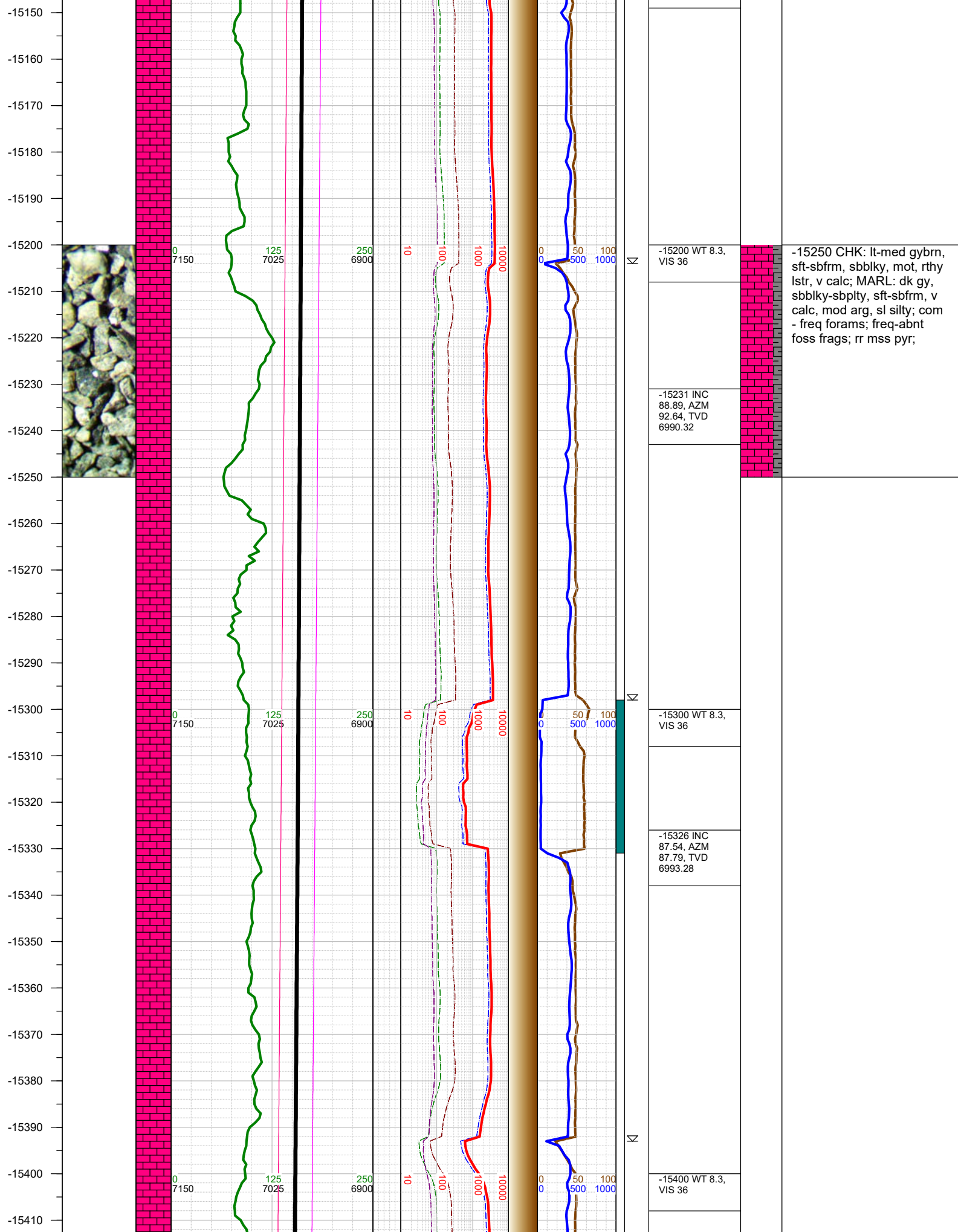


-14250 CHK: lt-med gybrn, sft-sbfrm, sbblky, mot, rthy lstr, v calc; MARL: dk gy, sbblky-sbplty, sft-sbfrm, v calc, mod arg, sl silty; occ-com forams; rr foss frags; occ mss pyr;









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7150

125
7025

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6900

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1000

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0

50

100

500

1000

-15422 INC
87.93, AZM
88.1, TVD
6997.07

-15500 CHK: lt-med gybrn,
sft-sbfrm, sbblky, mot, rthy
lstr, v calc; MARL: dk gy,
sbblky-sbplty, sft-sbfrm, v
calc, mod arg, sl silty; mod
forams; mod foss frags; tr
pyr;

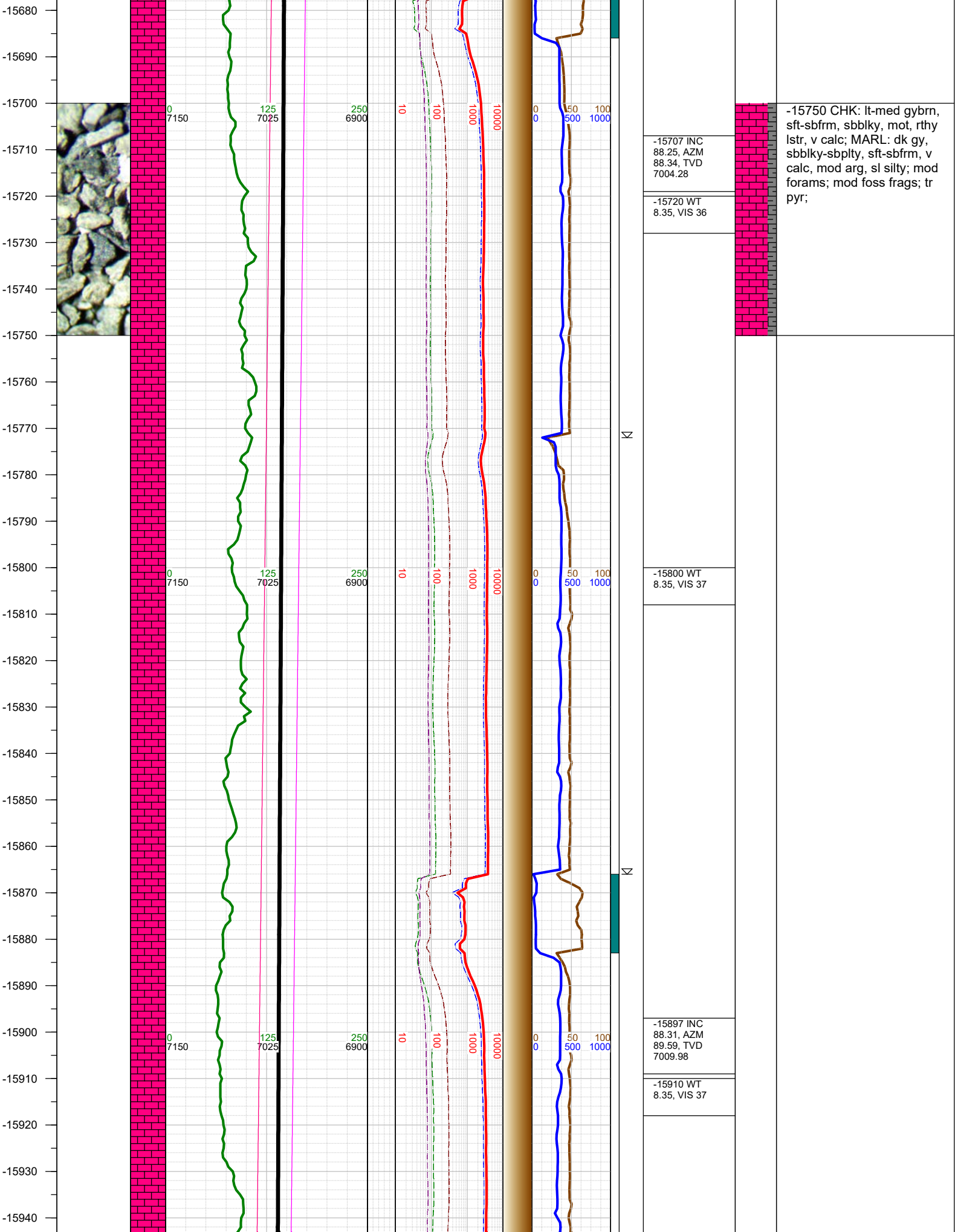
-15500 WT 8.3,
VIS 36

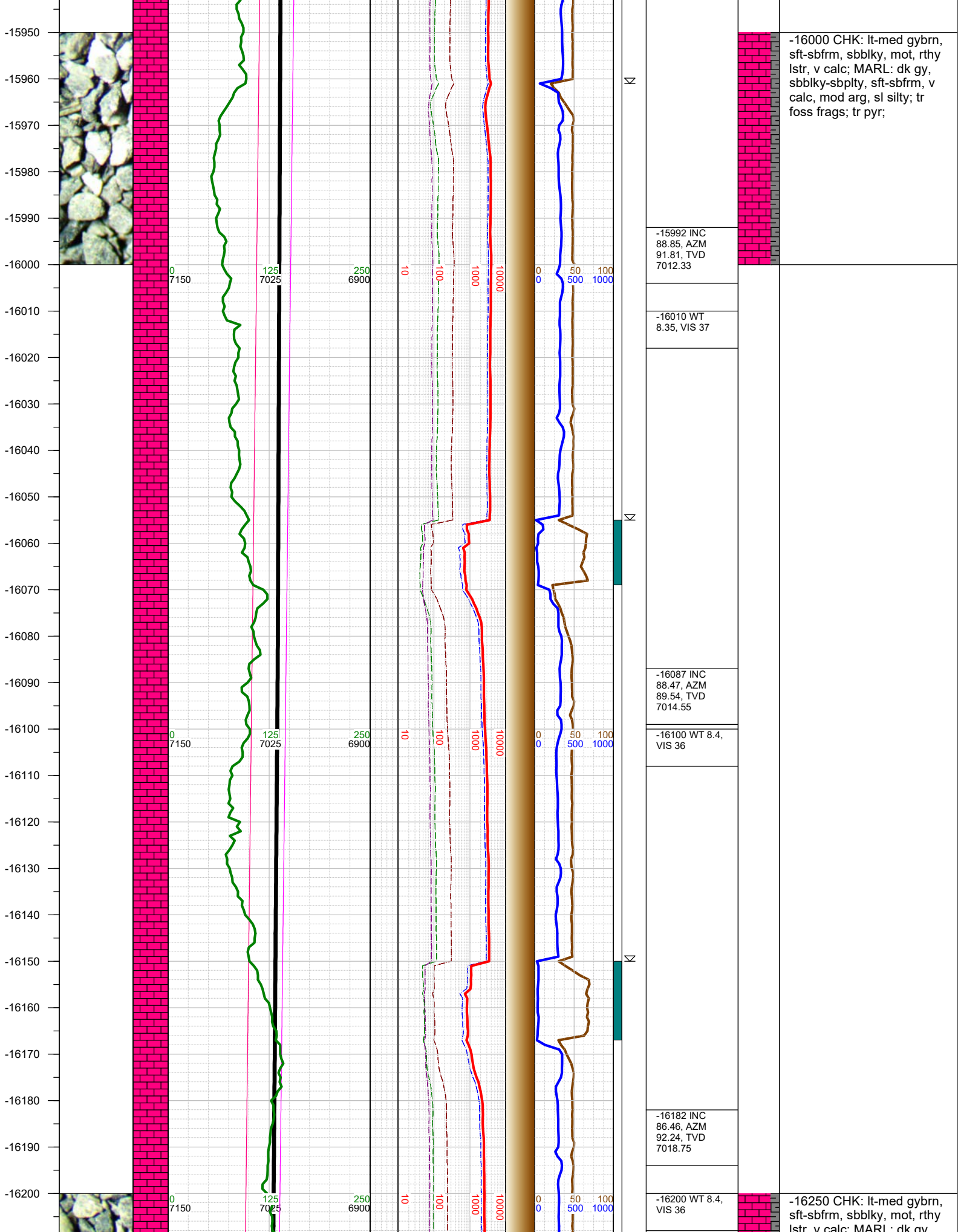
-15517 INC
88.47, AZM
87.62, TVD
7000.05

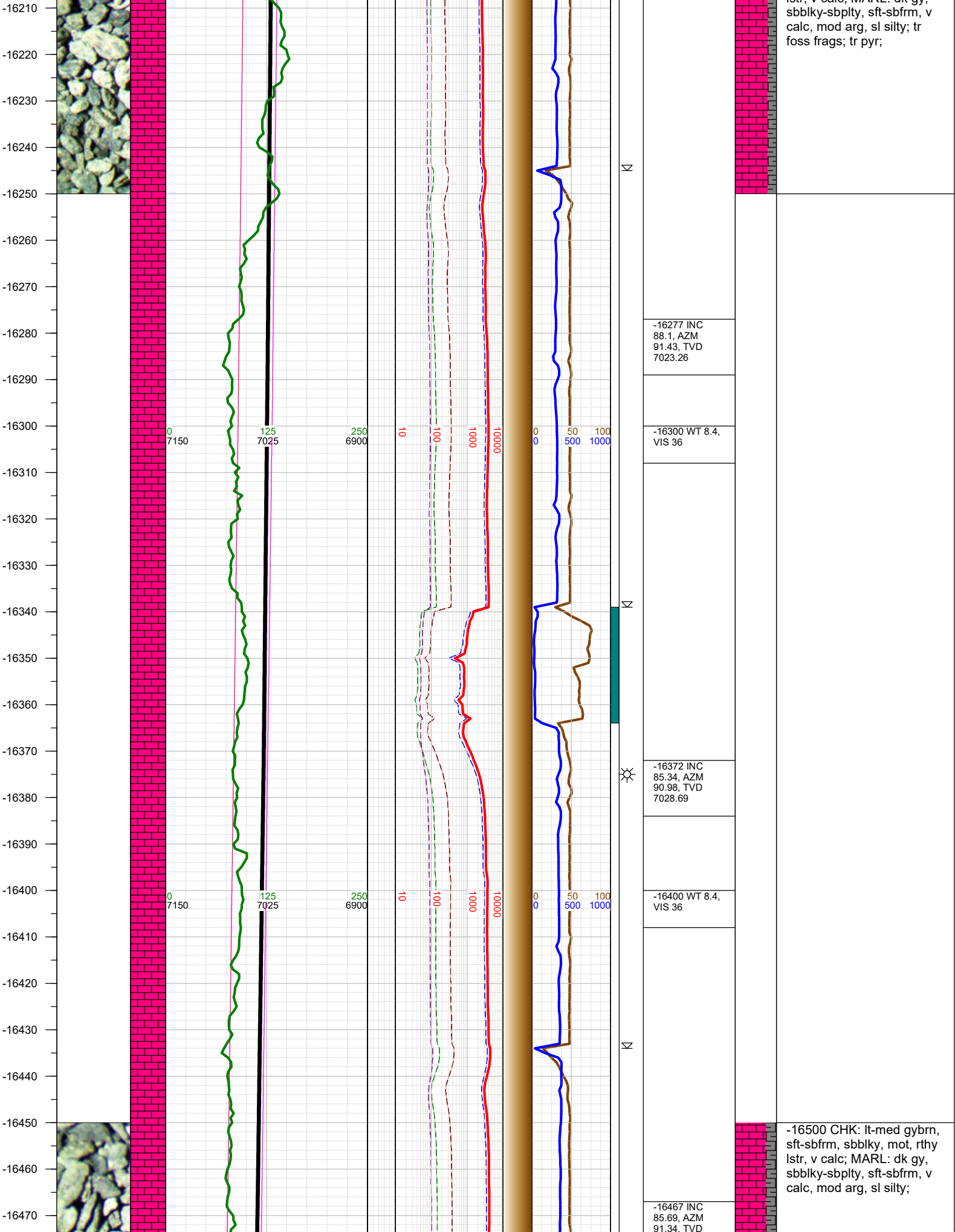
-15523 13' up-
throw; went from
middle to lower
B2 Chalk

-15600 WT
8.35, VIS 36

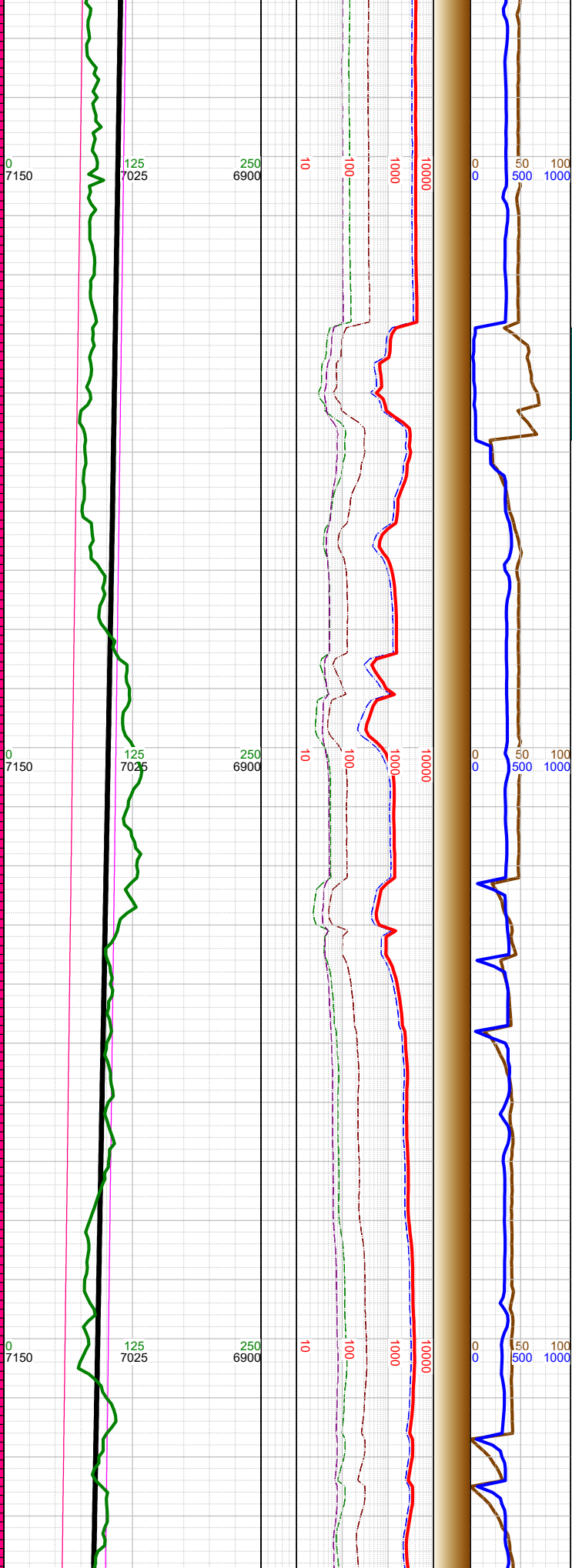
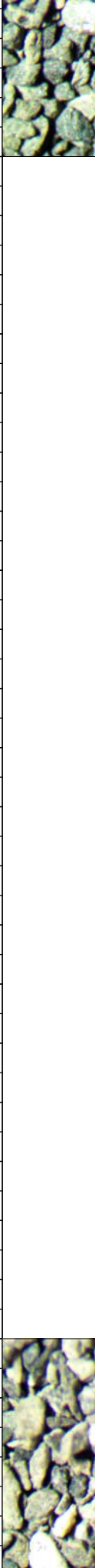
-15612 INC
89.09, AZM
86.5, TVD
7002.07



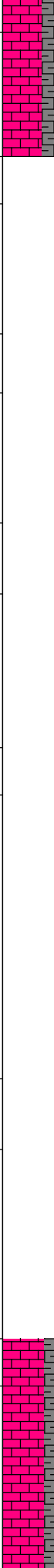




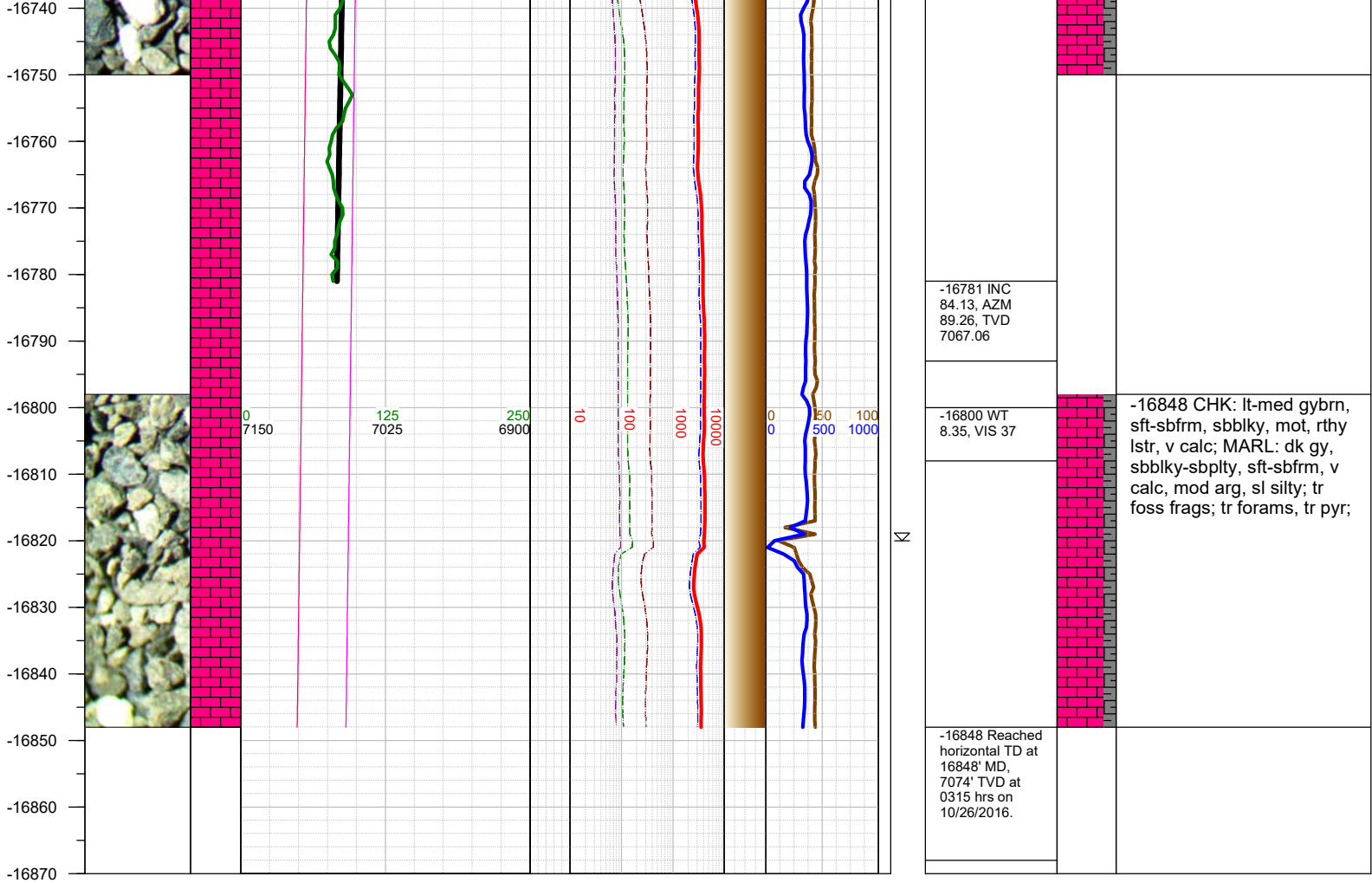
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-16700
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-16730



7036.12
-16500 WT 8.35, VIS 37
-16530 0000 hrs on 10/26/2016
-16562 INC 83.97, AZM 89.38, TVD 7044.68
-16600 WT 8.35, VIS 37
-16656 INC 84.21, AZM 88.99, TVD 7054.36
-16700 WT 8.35, VIS 37



-16750 CHK: lt-med gybrn,
sft-sbfrm, sbblky, mot, rthy
lstr, v calc; MARL: dk gy,
sbblky-sbplty, sft-sbfrm, v
calc, mod arg, sl silty; tr
foss frags; tr pyr;



TOTAL DEPTH = 16848'

Thank you for using Earth Science Agency