

OPERATOR: **Extraction Oil & Gas**

WELL NAME: **HFE 8**

FIELD NAME: DJ Basin - Wattenberg

DRILLING RIG: Cyclone 37

API #: 05-123-44771

LAT/LONG: 40.294724, -104.994906

SURFACE HOLE: SWSW S22-T4N-R68W, 1125' FSL, 1075' FWL

BOTTOM HOLE: S22-T4N-R68W, 1860' FSL, 460' FEL

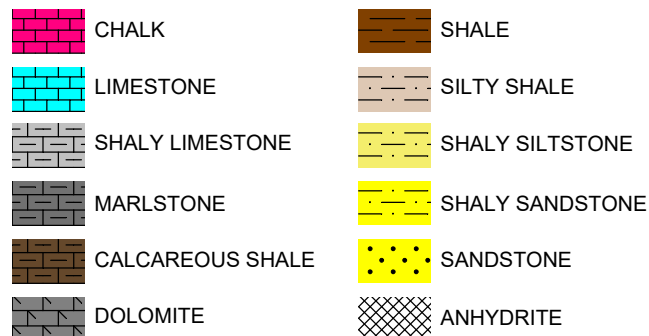


Earth Science Agency, LLC

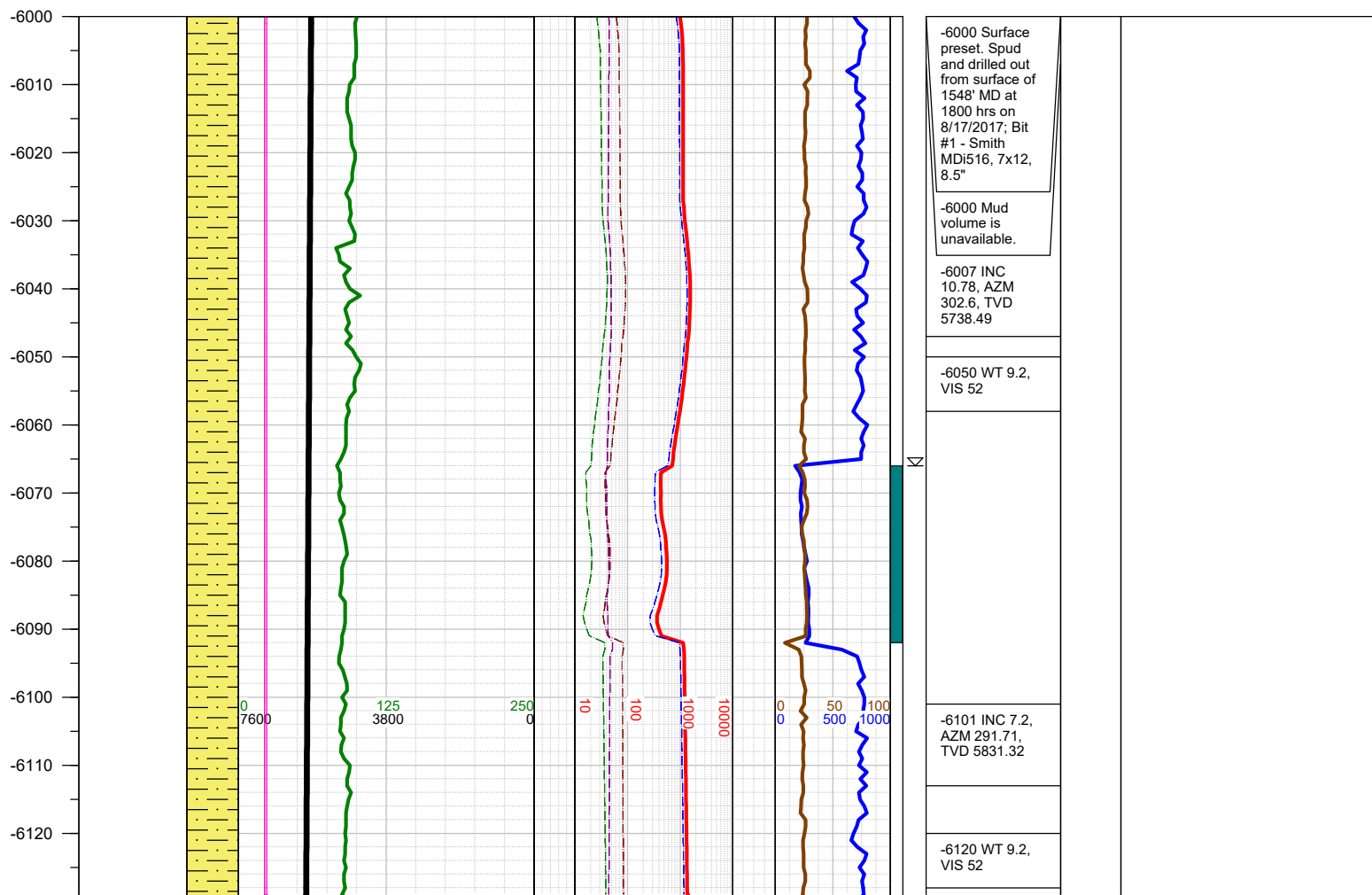
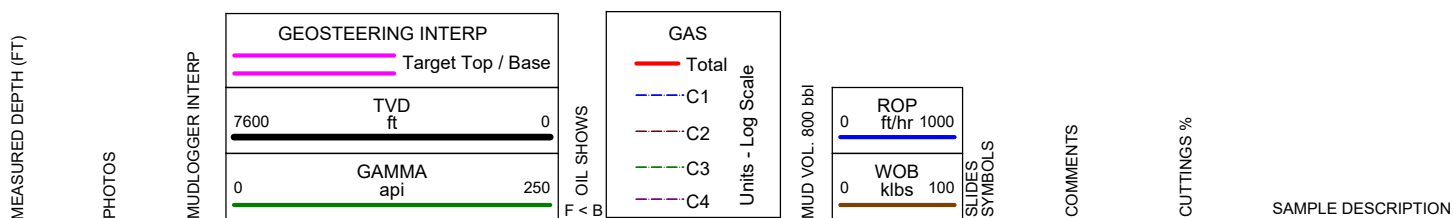
COUNTY: Weld
STATE: Colorado
GROUND ELEVATION: 4918'
KELLY BUSHING: 4946'
DRILLING FLUID: OBM
TVD VS. MD: 7052' / 11775'
SPUD DATE: August 18, 2017
TD DATE: August 20, 2017

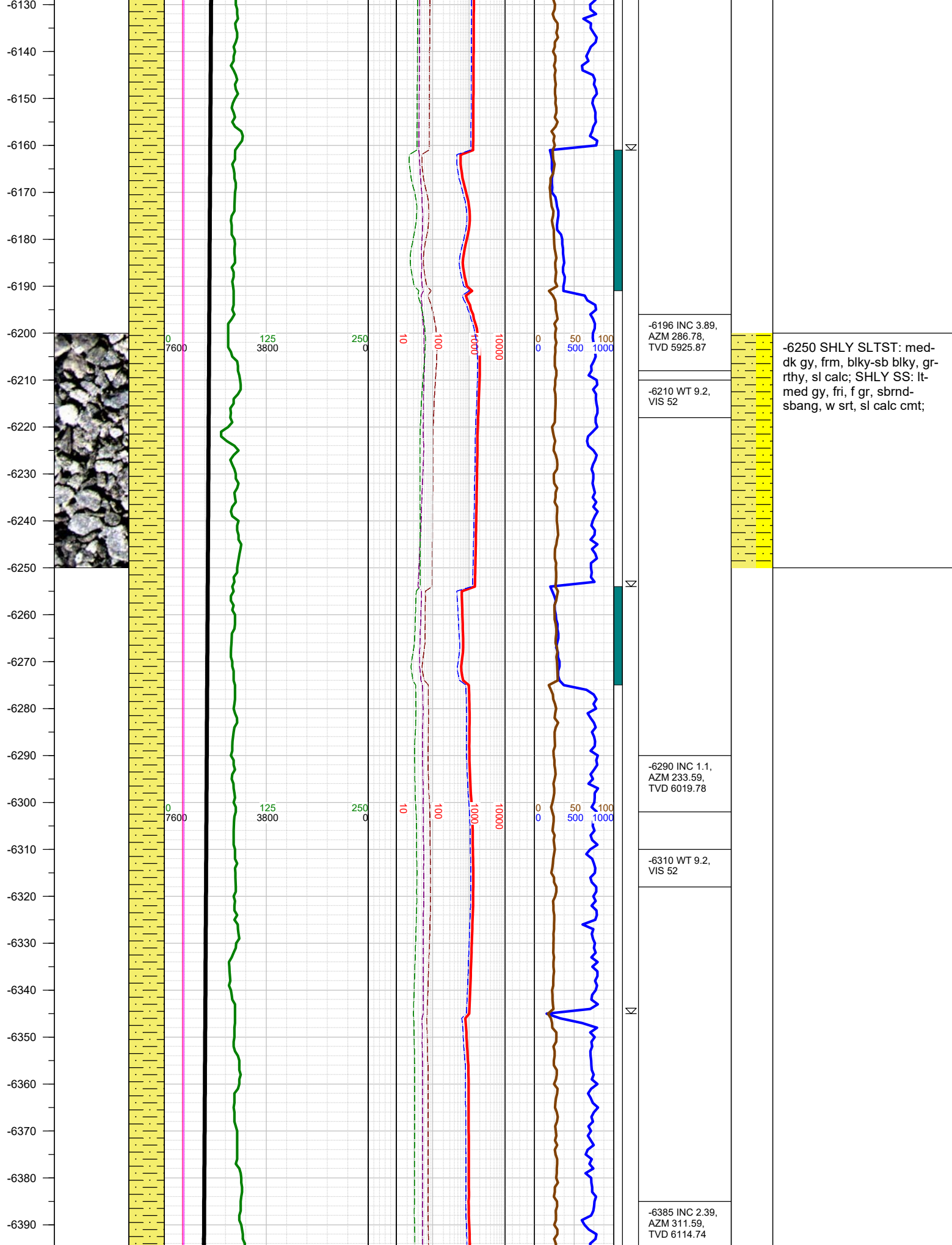
DEPTHS LOGGED: 6000' - 11775'
DATES LOGGED: August 18, 2017 - August 20, 2017
GEOLOGISTS: Levi Heintzelman, Kyle Welty
SCALE: 5" = 100'

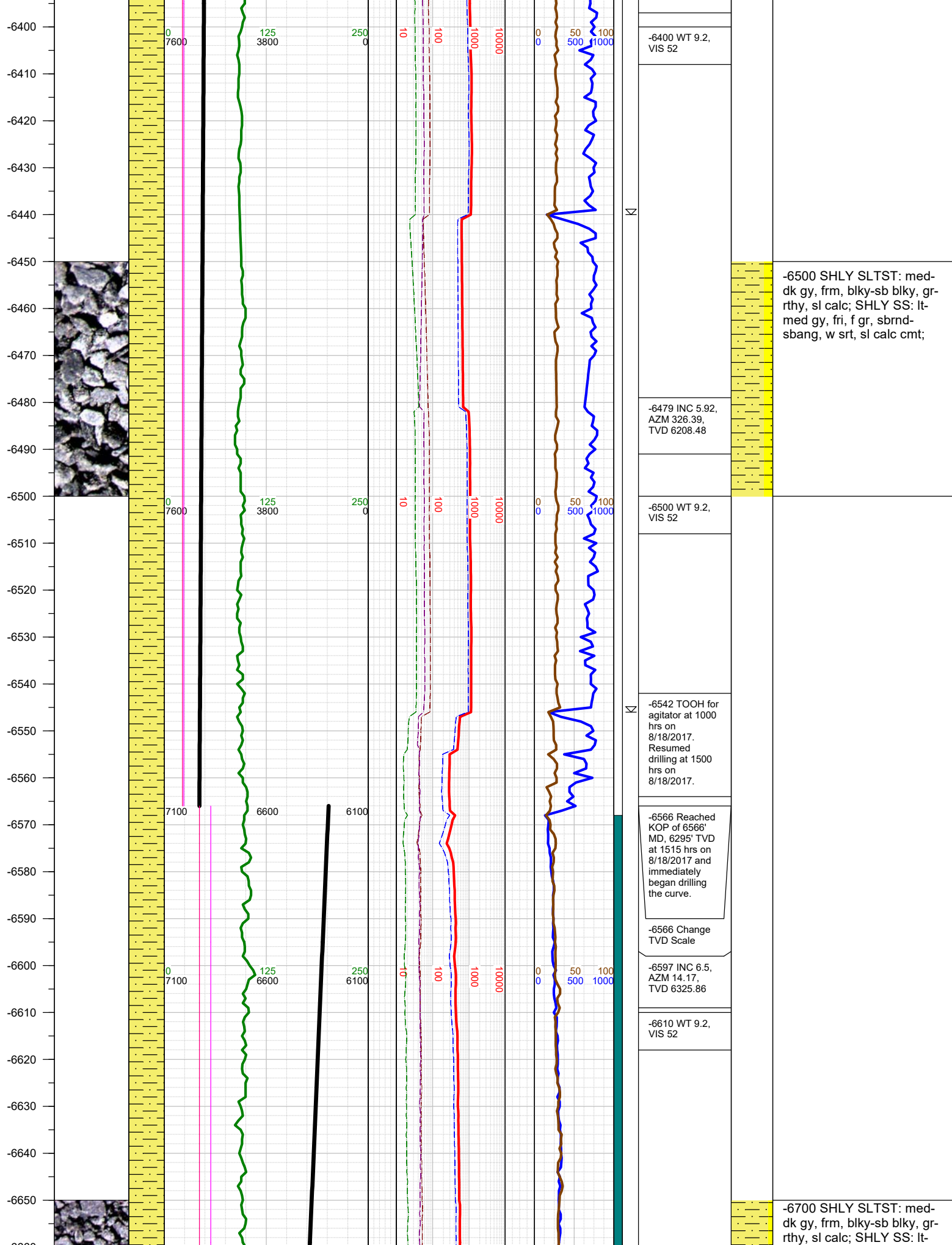
LEGEND

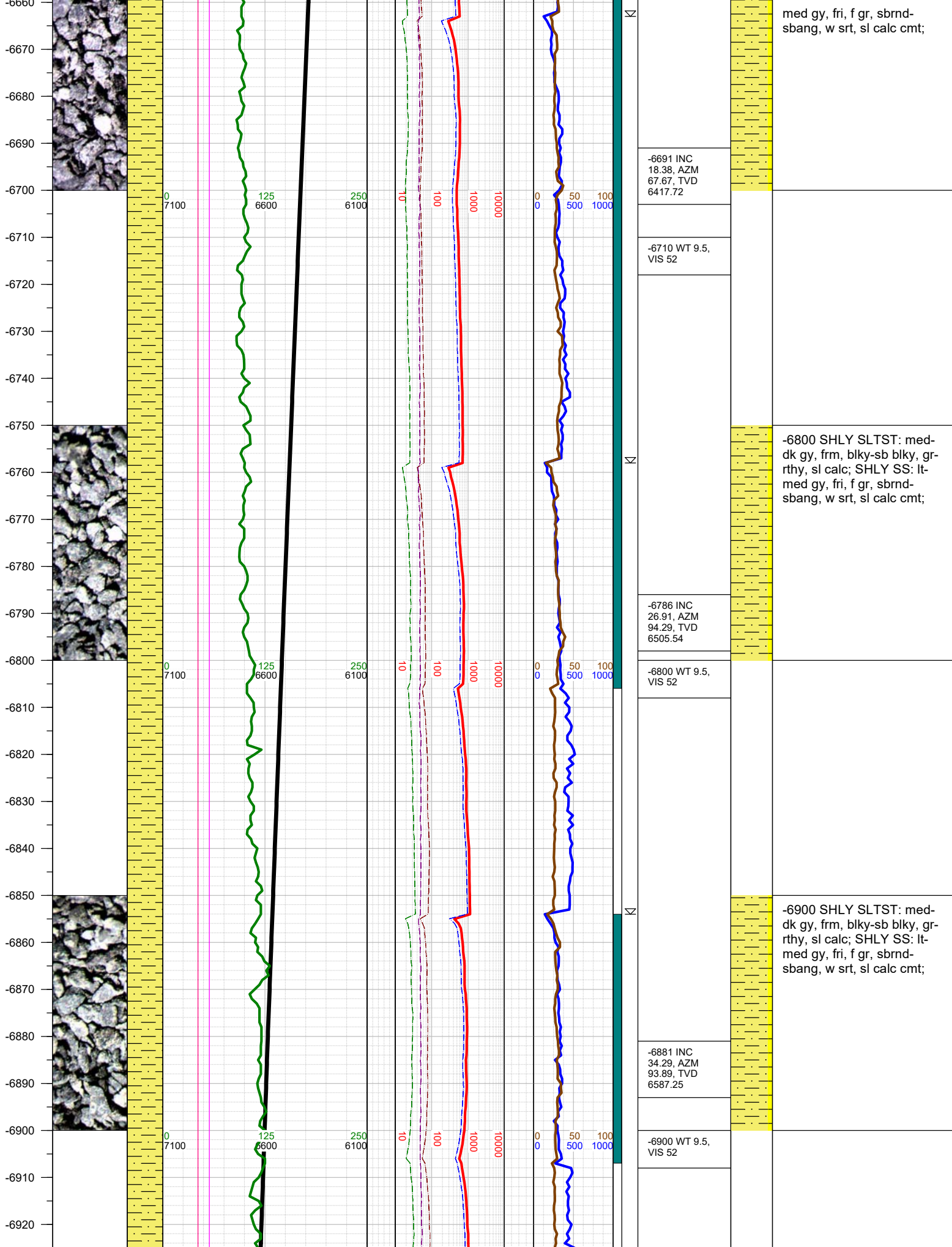


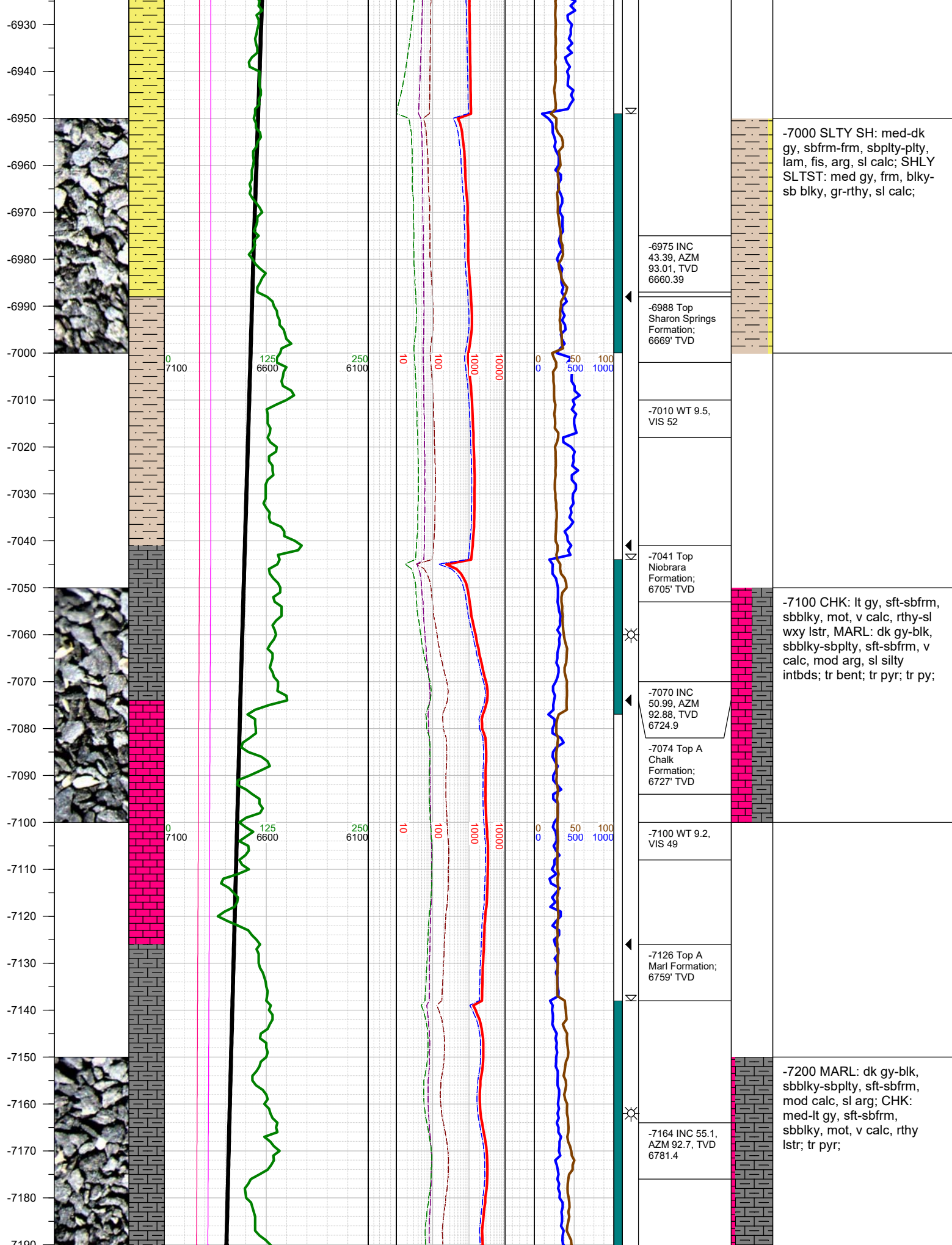
FORMATION \approx CONNECTION Δ MIDNIGHT NEW BIT GAS SHOW FAULT

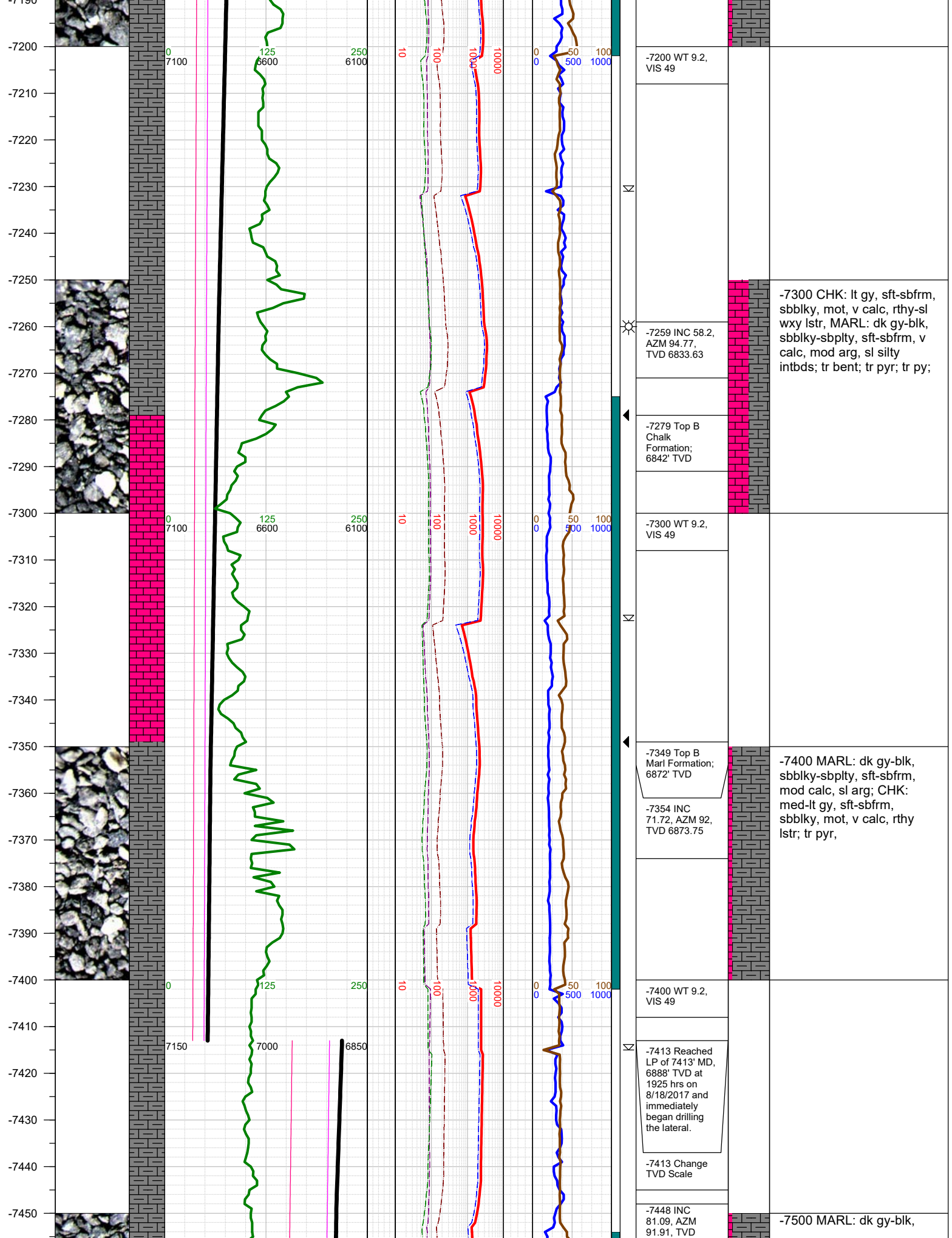


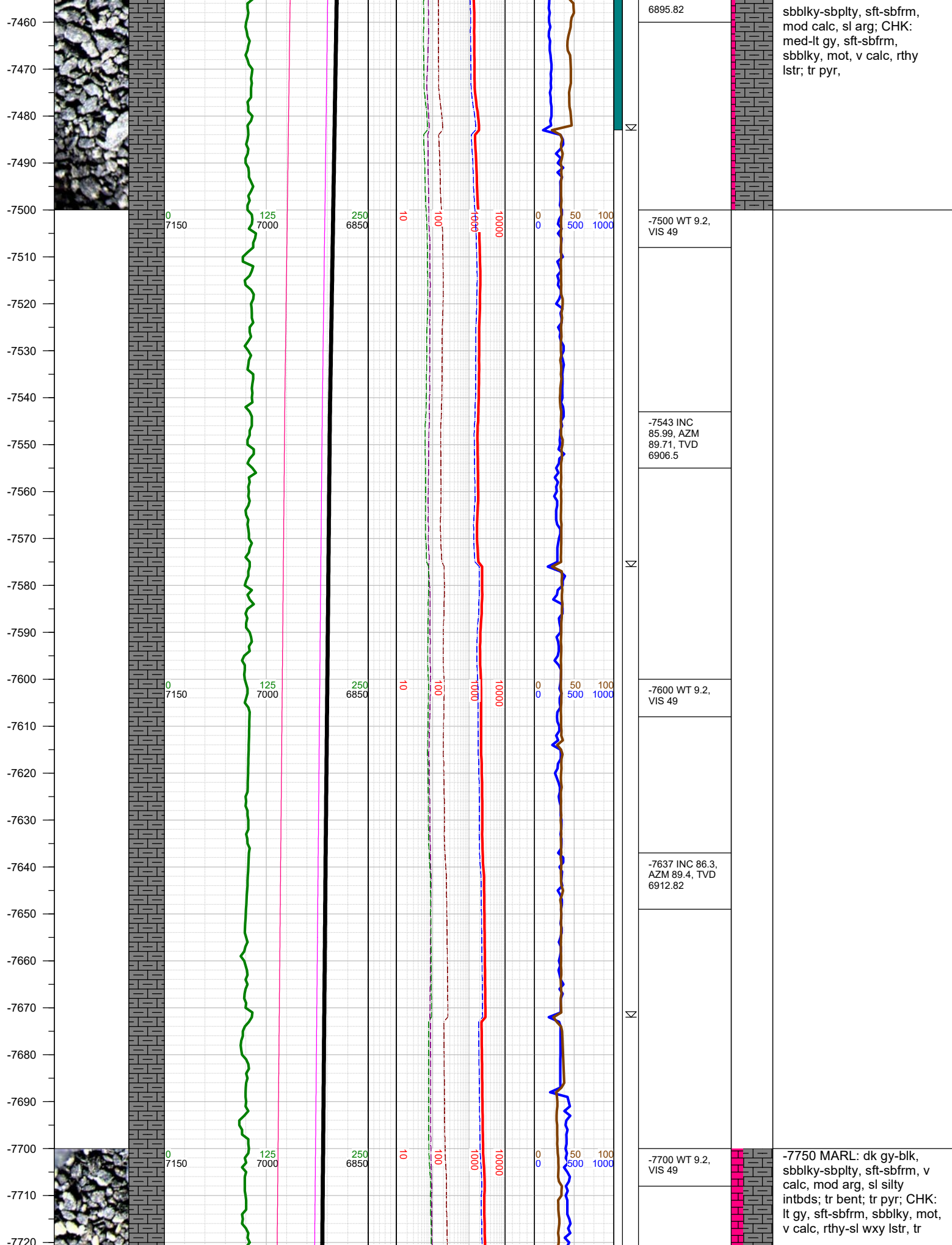


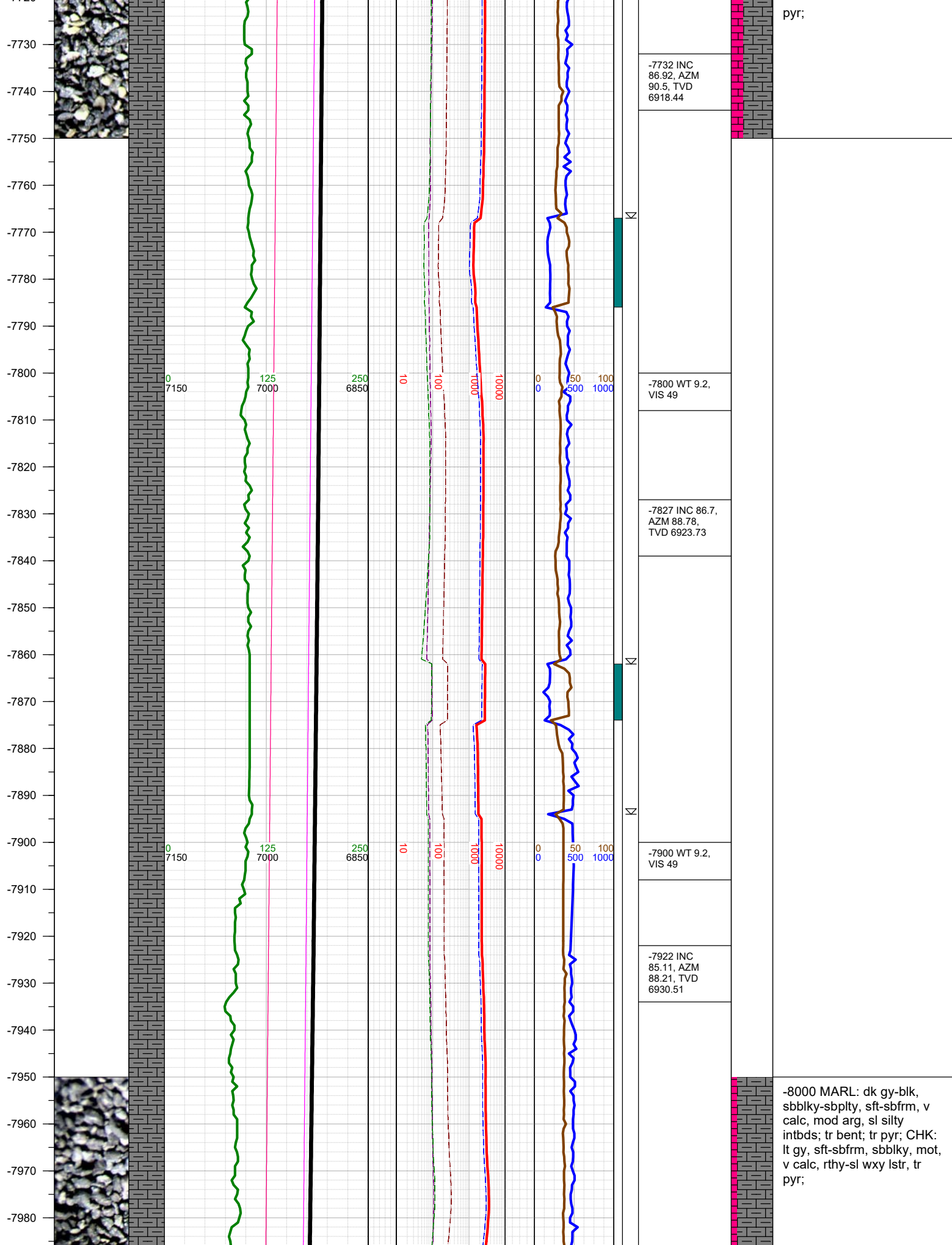


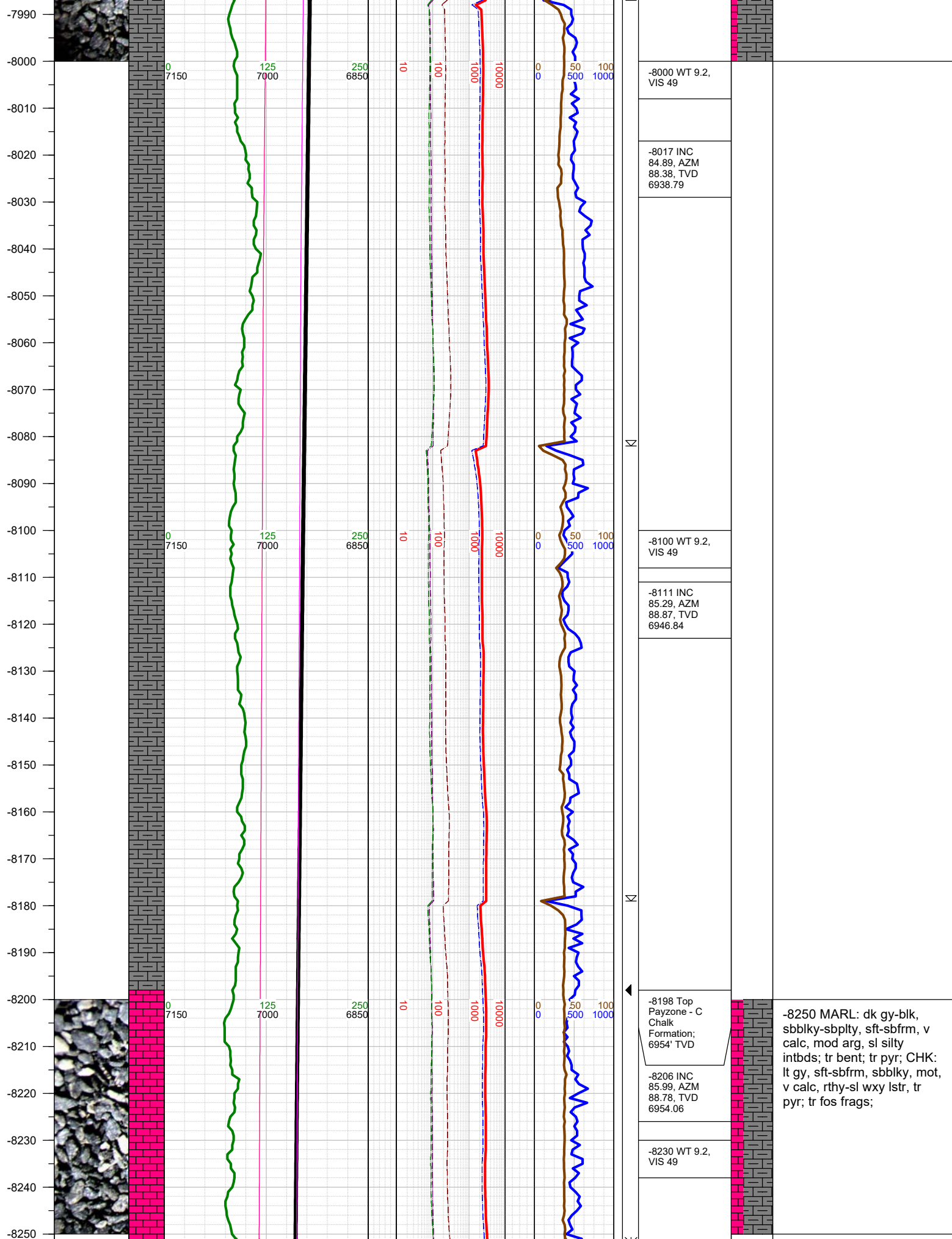




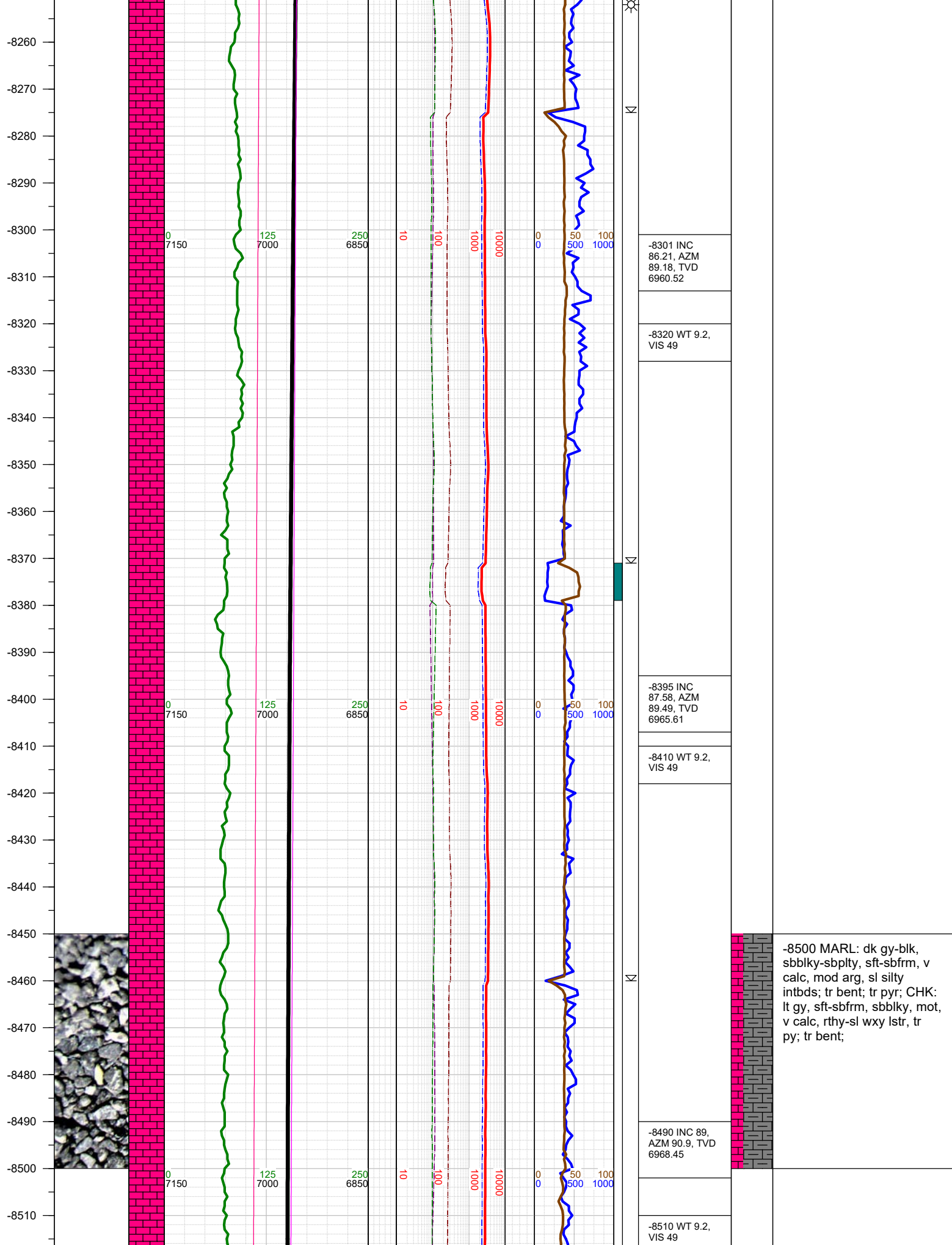


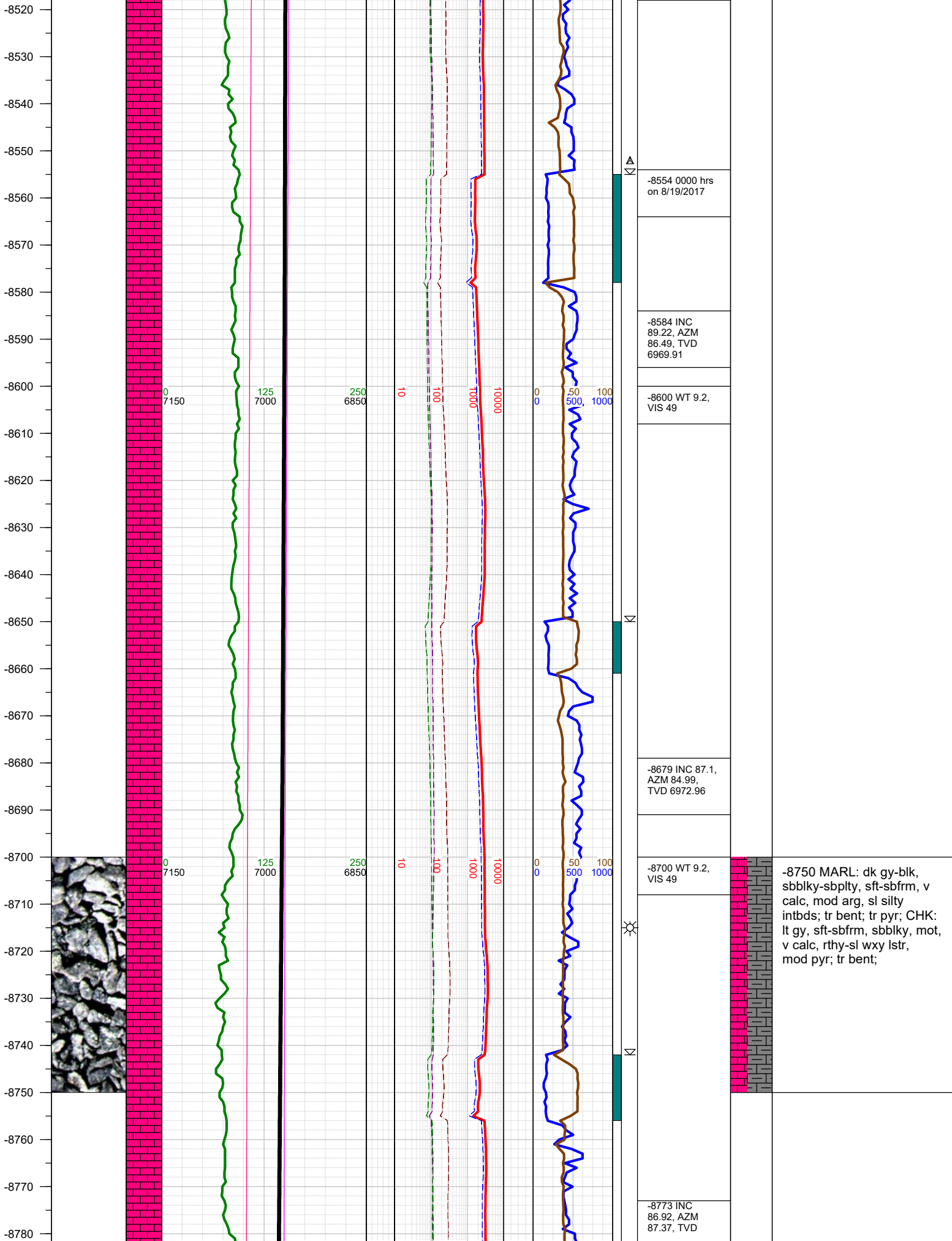


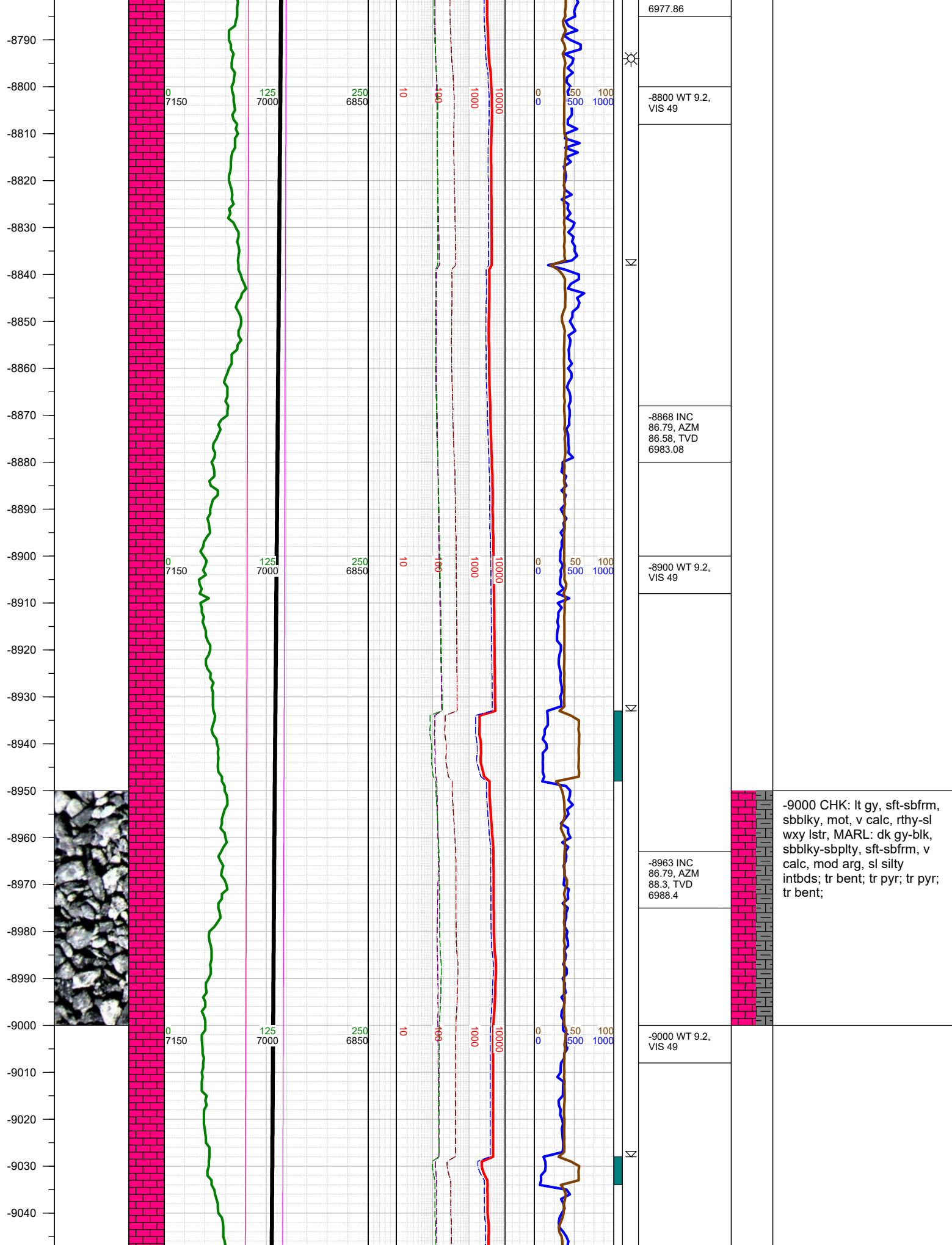




-8250 MARL: dk gy-blk, sbblky-sbplty, sft-sbfrm, v calc, mod arg, sl silty intbds; tr bent; tr pyr; CHK: lt gy, sft-sbfrm, sbblky, mot, v calc, rthy-sl wxy lstr, tr pyr; tr fos frags;

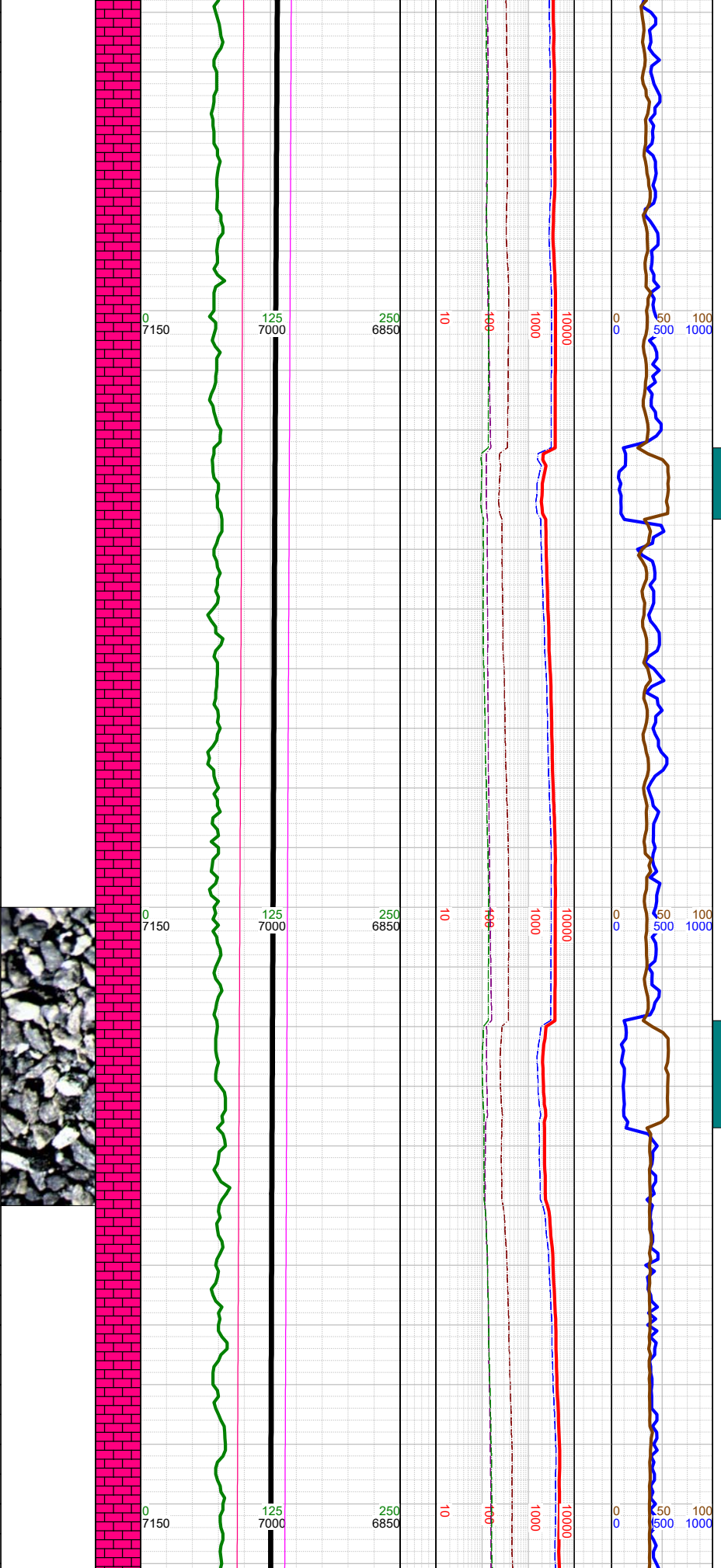






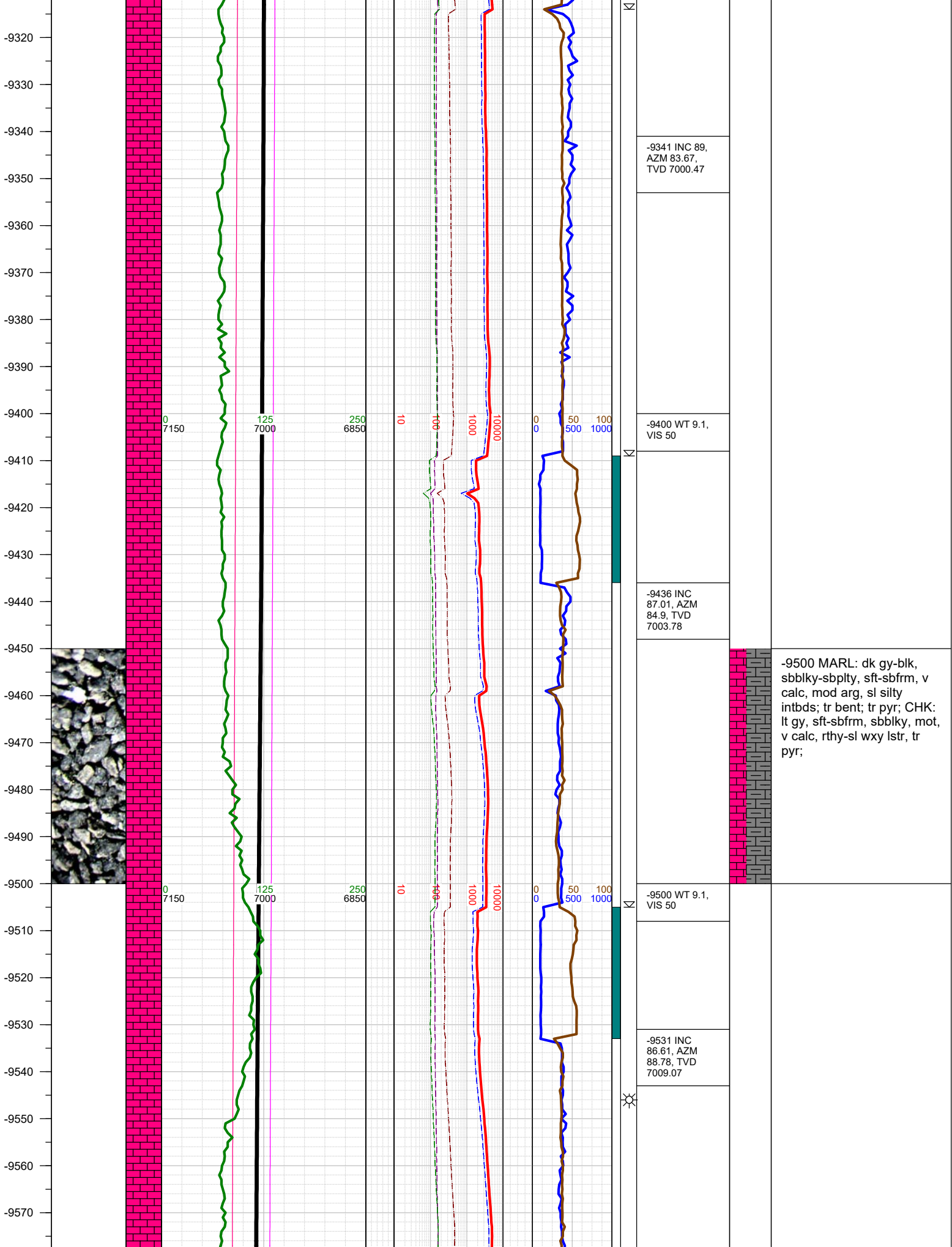
-9000 CHK: lt gy, sft-sbfrm, sbblky, mot, v calc, rthy-sl wxy lstr, MARL: dk gy-blk, sbblky-sbplty, sft-sbfrm, v calc, mod arg, sl silty intbds; tr bent; tr pyr; tr pyr; tr bent;

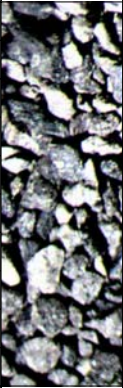
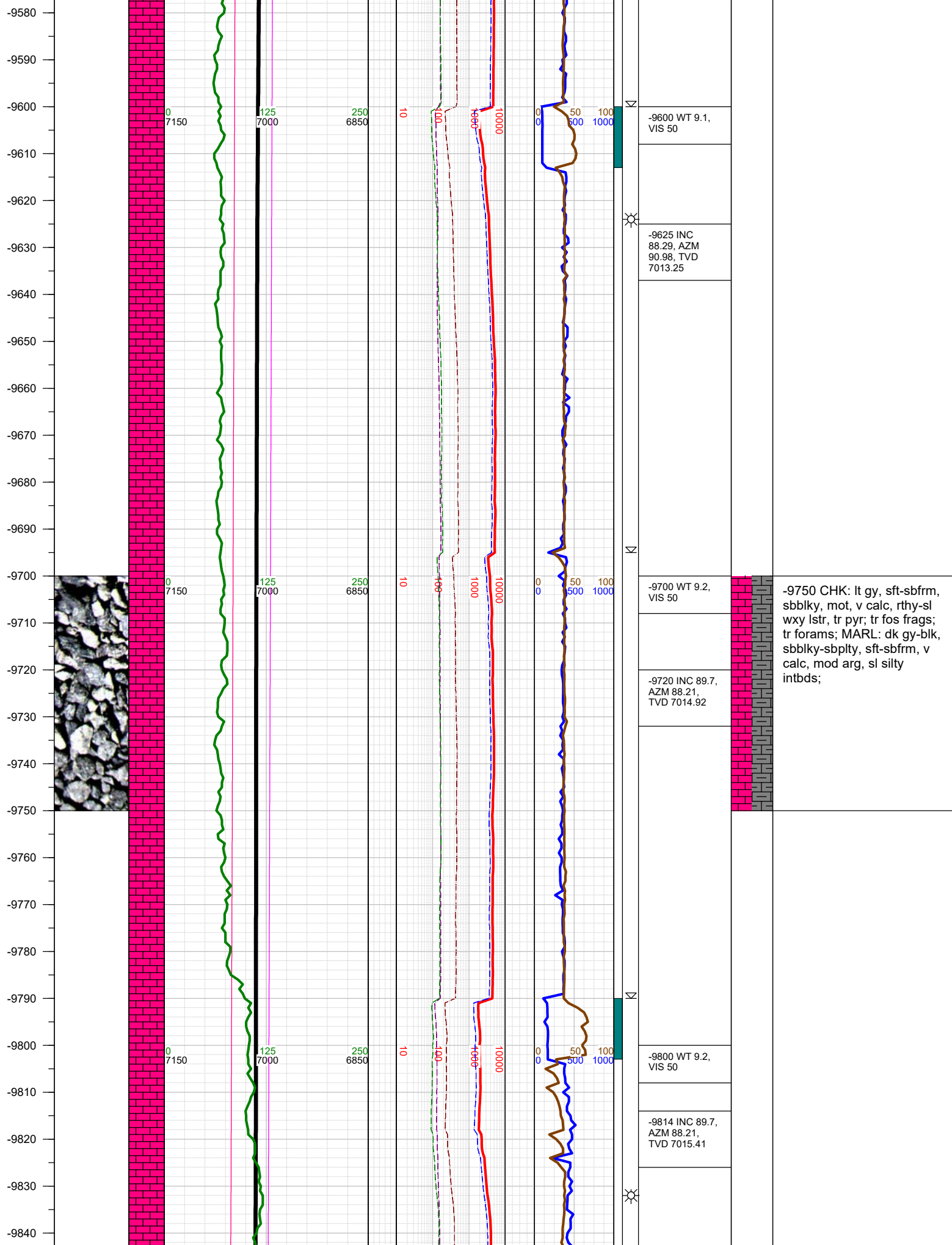
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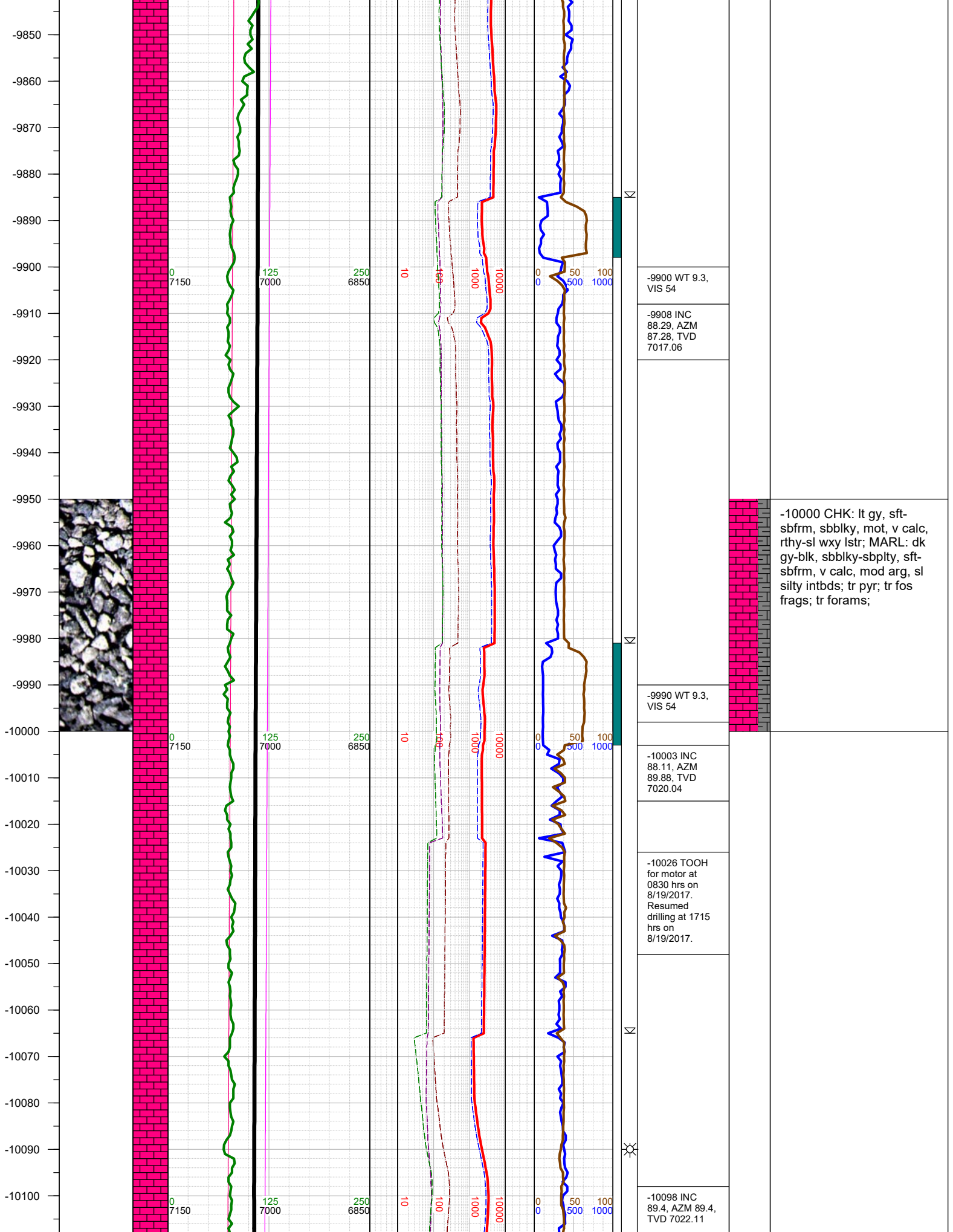
-9057 INC 88.2, AZM 86.8, TVD 6992.5
-9100 WT 9.2, VIS 49
-9152 INC 87.98, AZM 86.71, TVD 6995.67
-9200 WT 9.1, VIS 50
-9247 INC 88.6, AZM 87.99, TVD 6998.51
-9300 WT 9.1, VIS 50

-9250 CHK: lt gy, sft-sbfrm, sbblky, mot, v calc, rthy-sl wxy lstr, MARL: dk gy-blk, sbblky-sbplty, sft-sbfrm, v calc, mod arg, sl silty intbds; tr bent; tr pyr; tr pyr;

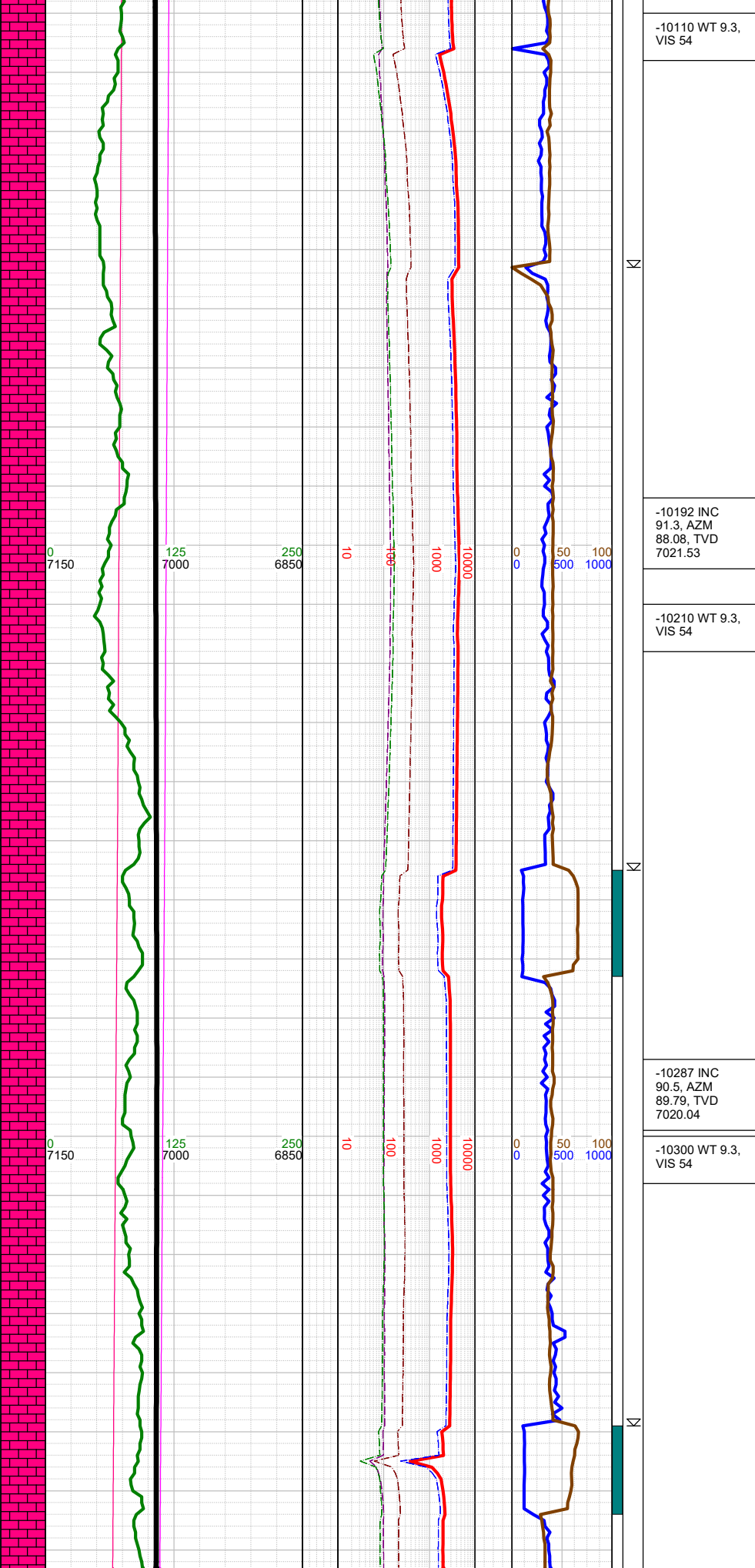
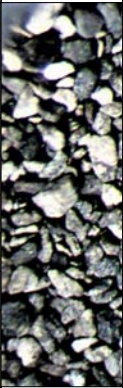




-9750 CHK: lt gy, sft-sbfrm, sbblky, mot, v calc, rthy-sl wxy lstr, tr pyr; tr fos frags; tr forams; MARL: dk gy-blk, sbblky-sbplty, sft-sbfrm, v calc, mod arg, sl silty intbds;



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-10110 WT 9.3,
VIS 54

-10192 INC
91.3, AZM
88.08, TVD
7021.53

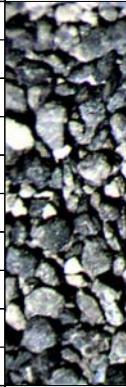
-10210 WT 9.3,
VIS 54

-10287 INC
90.5, AZM
89.79, TVD
7020.04

-10300 WT 9.3,
VIS 54

-10250 CHK: lt gy, sft-
sbfrm, sbblky, mot, v calc,
rthy-sl wxy lstr; MARL: dk
gy-blk, sbblky-sbplty, sft-
sbfrm, v calc, mod arg, sl
silty intbds; tr pyr; tr bent; tr
forams;

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-10382 INC
88.29, AZM
90.68, TVD
7021.05

-10400 WT 9.4,
VIS 50

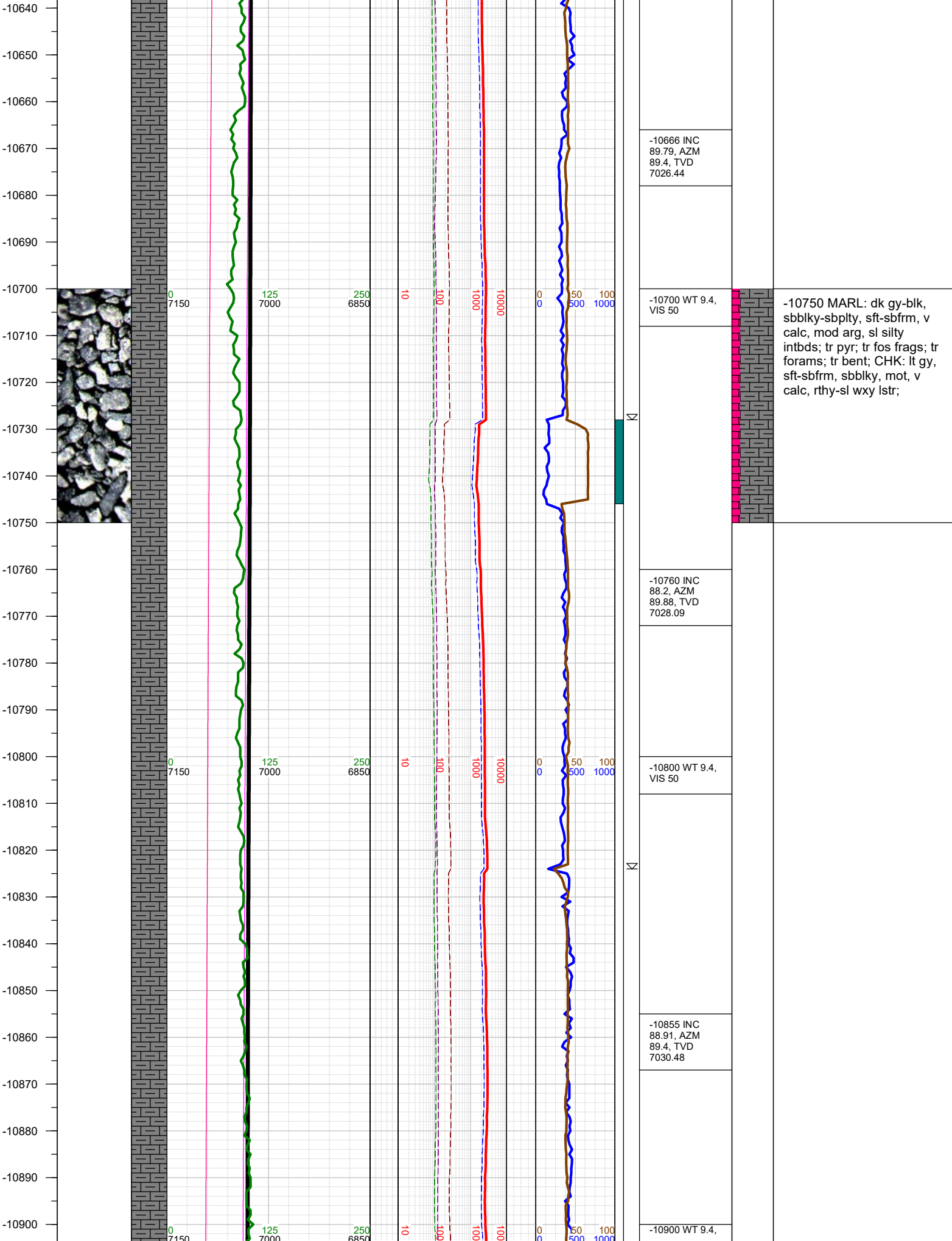
-10476 INC
88.69, AZM
90.19, TVD
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-10500 WT 9.4,
VIS 50

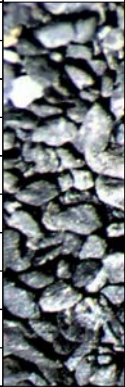
-10571 INC 89,
AZM 89.71,
TVD 7025.44

-10600 WT 9.4,
VIS 50

-10500 MARL: dk gy-blk,
sbbly-sbply, sft-sbfrm, v
calc, mod arg, sl silty
intbds; tr pyr; tr bent; CHK:
lt gy, sft-sbfrm, sbbly, mot,
v calc, rthy-sl wxy lstr;



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-10949 INC
90.01, AZM
89.97, TVD
7031.37

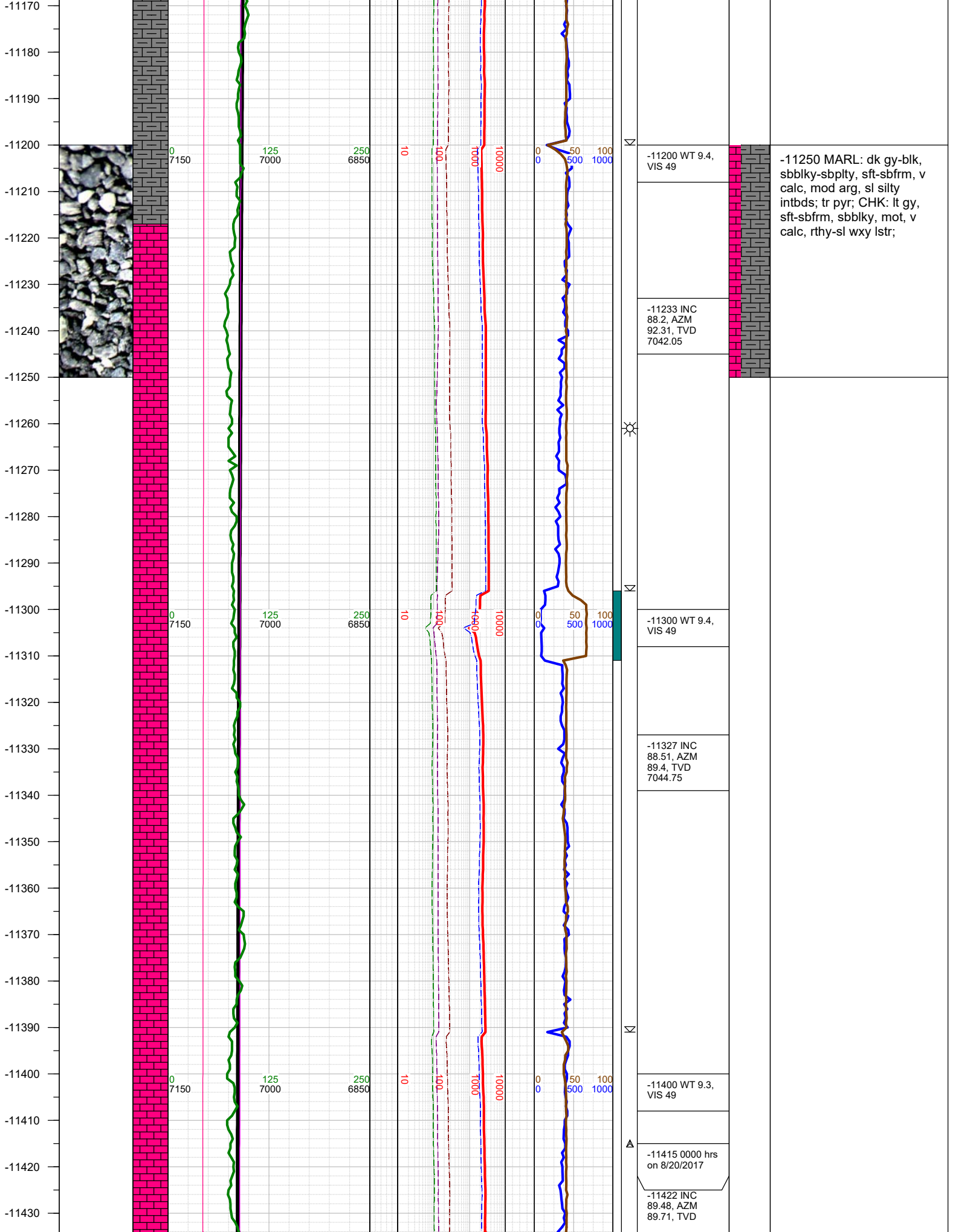
-11000 MARL: dk gy-blk,
sbbly-sbply, sft-sbfrm, v
calc, mod arg, sl silty
intbds; tr pyr; CHK: lt gy,
sft-sbfrm, sbbly, mot, v
calc, rthy-sl wxy lstr;

-11000 WT 9.4,
VIS 49

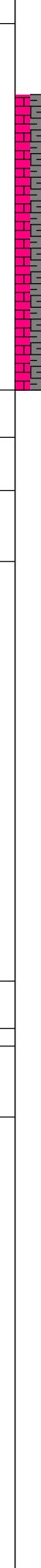
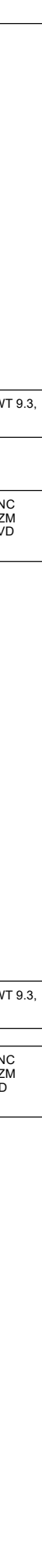
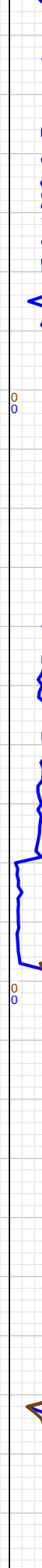
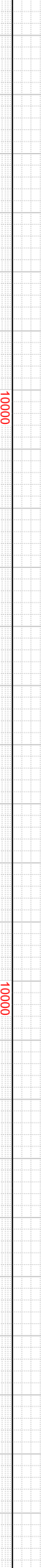
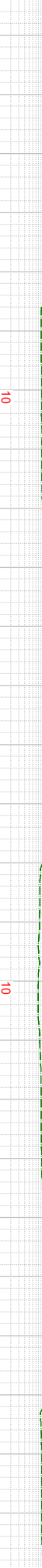
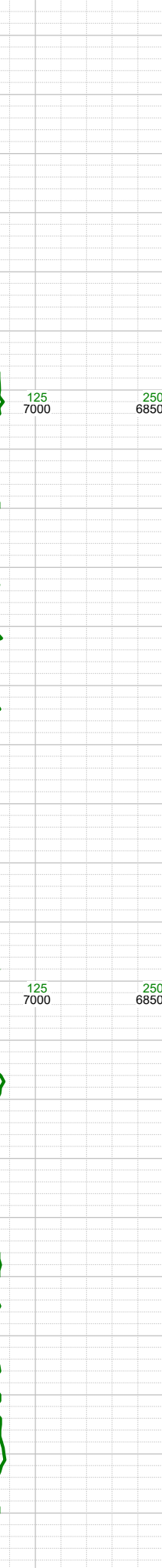
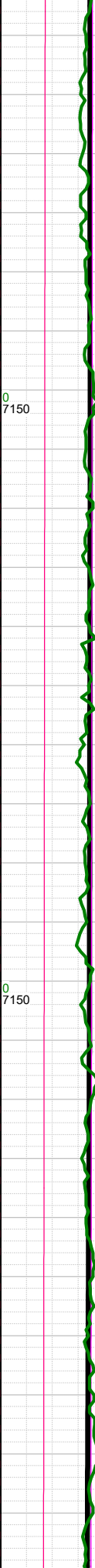
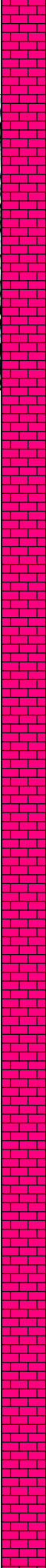
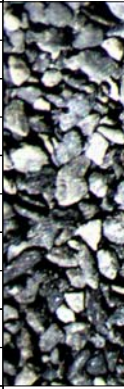
-11044 INC
87.01, AZM
91.2, TVD
7033.84

-11100 WT 9.4,
VIS 49

-11138 INC
87.41, AZM
91.69, TVD
7038.42



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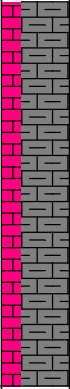
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-11500 WT 9.3,
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-11517 INC
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90.41, TVD
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-11600 WT 9.3,
VIS 49

-11611 INC
88.11, AZM
86.4, TVD
7047.07



-11500 MARL: dk gy-blk,
sbbly-sbply, sft-sbfrm, v
calc, mod arg, sl silty
intbds; tr pyr; CHK: lt gy,
sft-sbfrm, sbbly, mot, v
calc, rthy-sl wxy lstr;

