

OPERATOR: **Extraction Oil & Gas**

WELL NAME: **Varra 11**

FIELD NAME: DJ Basin - Wattenberg

DRILLING RIG: Patterson 341

API #: 05-123-39991

LAT/LONG: 40.512652, -104.923883
SURFACE HOLE: NWSW S5-T6N-R67W, 1485' FSL, 785' FEL
BOTTOM HOLE: S4-T6N-R67W, 490' FSL, 460' FEL

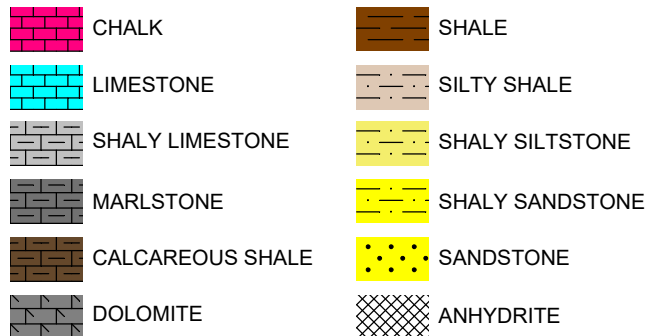


Earth Science Agency, LLC

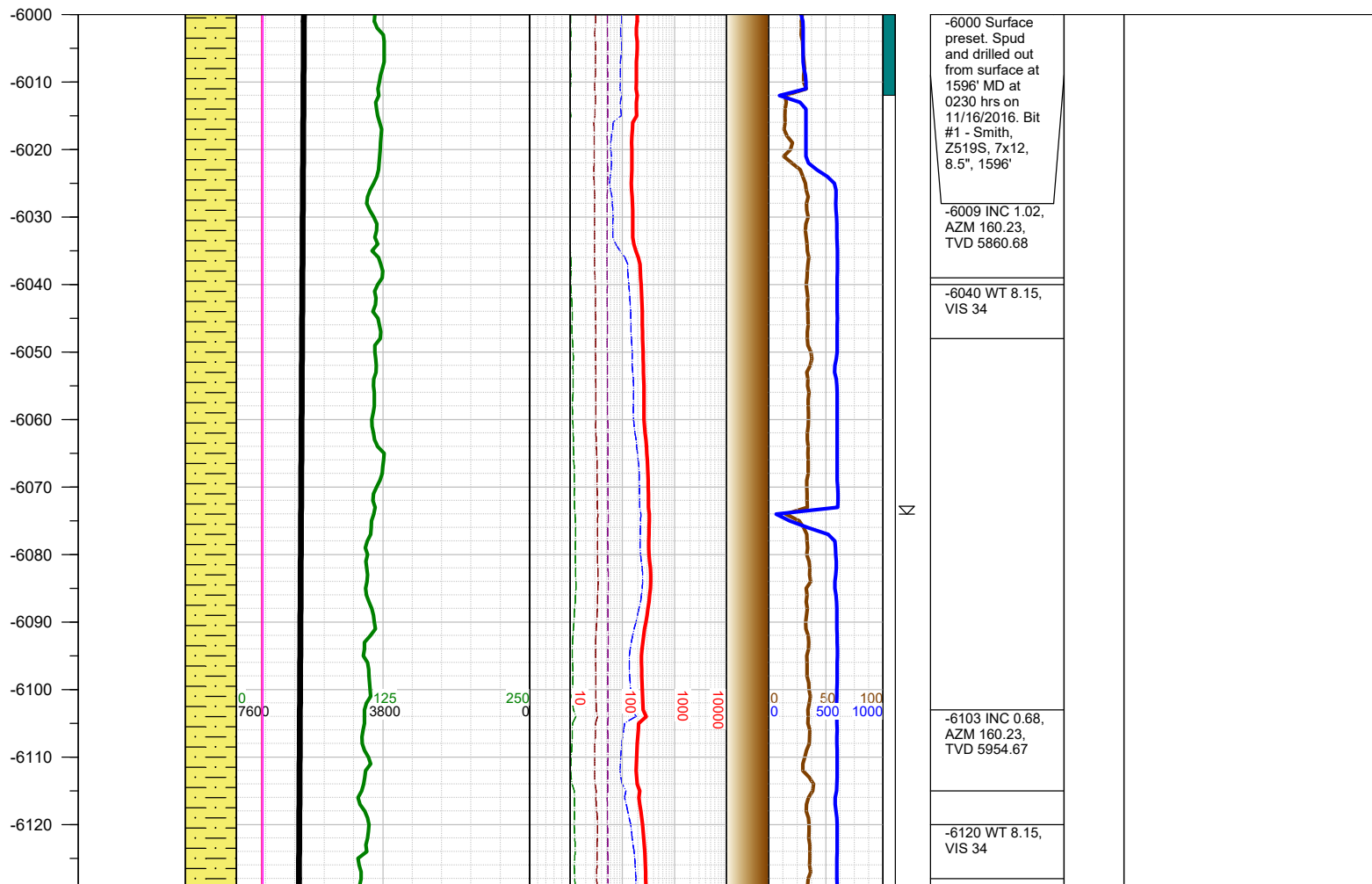
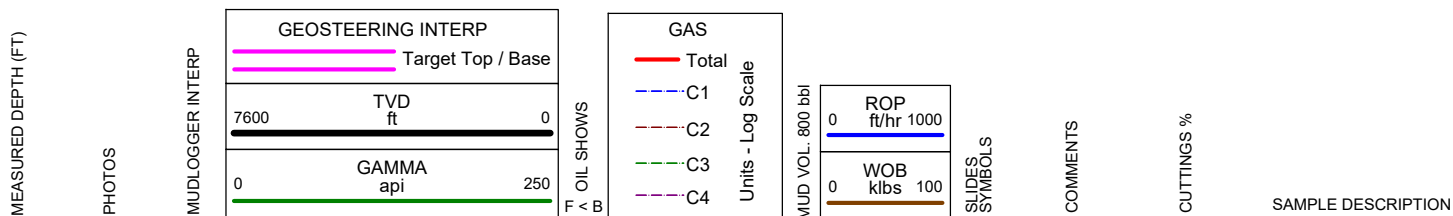
COUNTY: Weld
STATE: Colorado
GROUND ELEVATION: 4872'
KELLY BUSHING: 4897'
DRILLING FLUID: OBM
TVD VS. MD: 7239' / 16920'
SPUD DATE: November 16, 2016
TD DATE: November 19, 2016

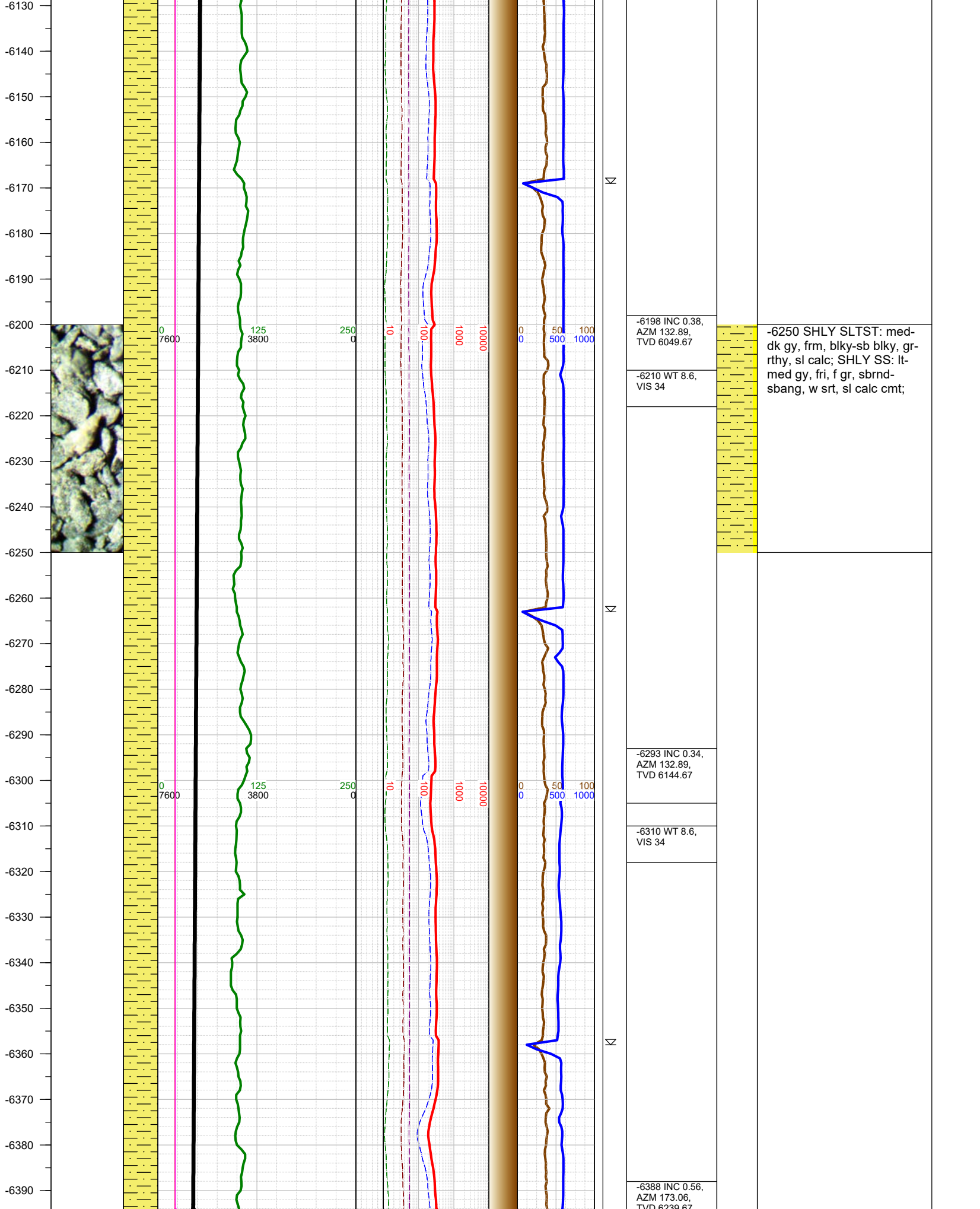
DEPTHS LOGGED: 6000' - 16920'
DATES LOGGED: November 16, 2016 - November 19, 2016
GEOLOGISTS: Blake Eatherton, Jared Gerard
SCALE: 5" = 100'

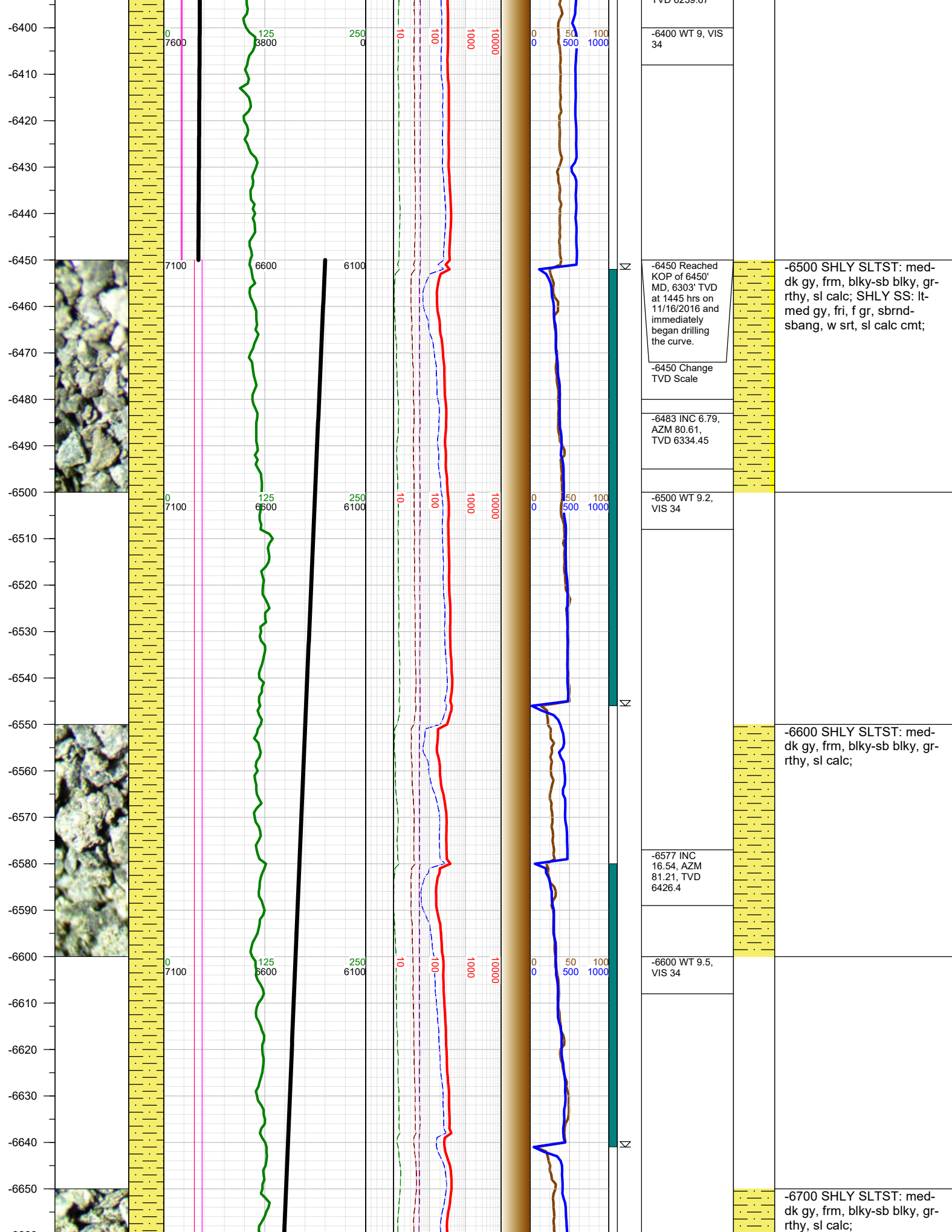
LEGEND

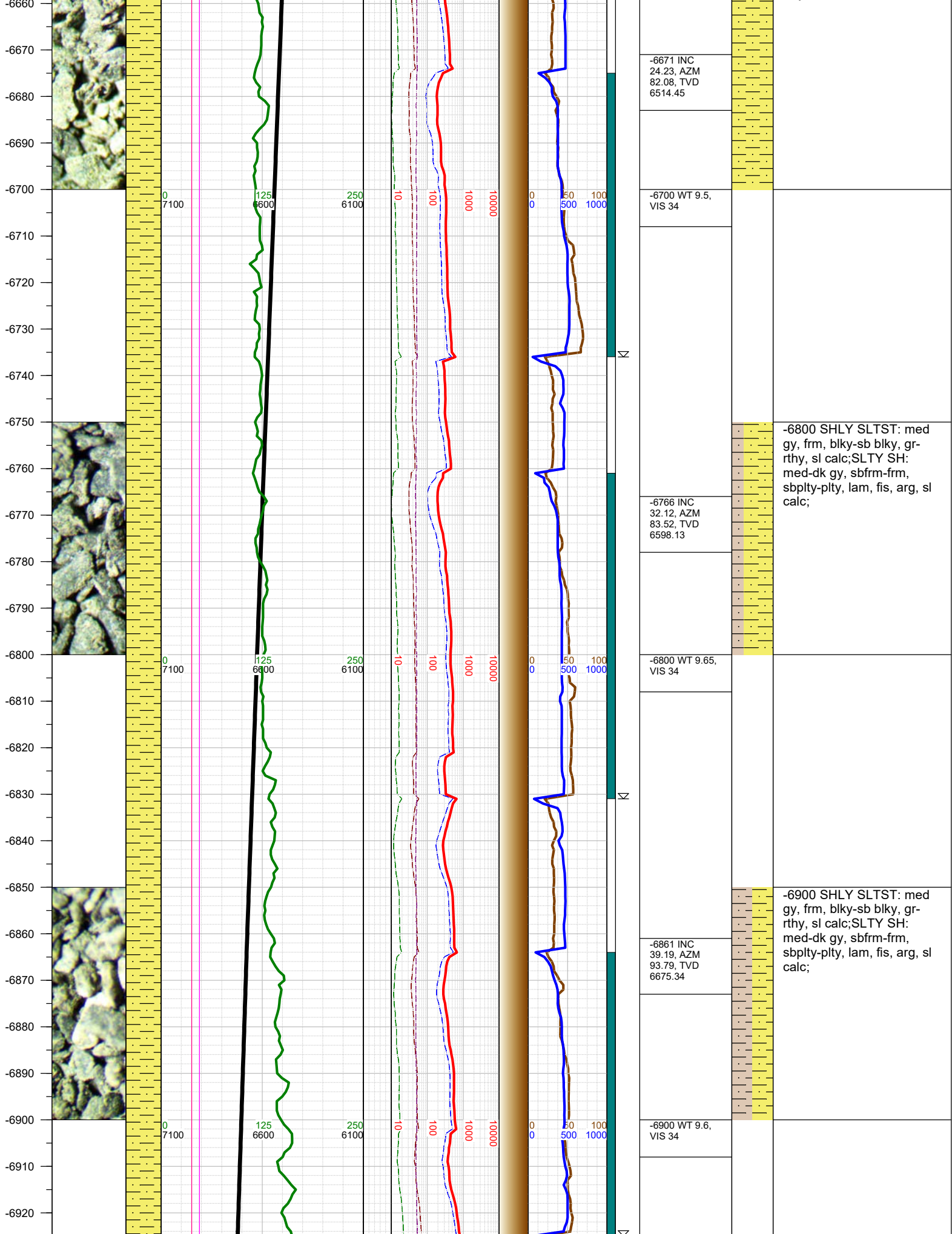


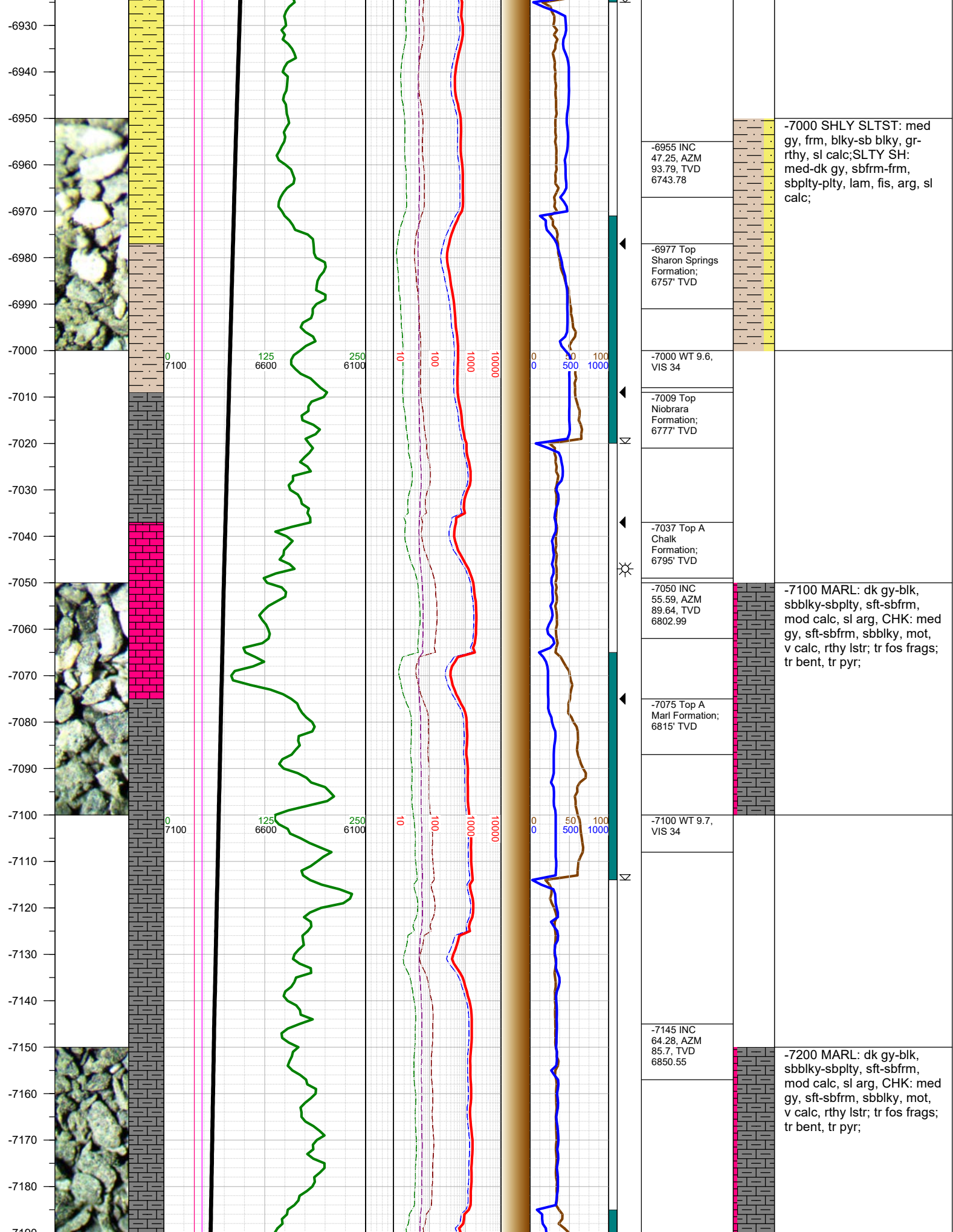
FORMATION \approx CONNECTION Δ MIDNIGHT NEW BIT GAS SHOW ☒ FAULT

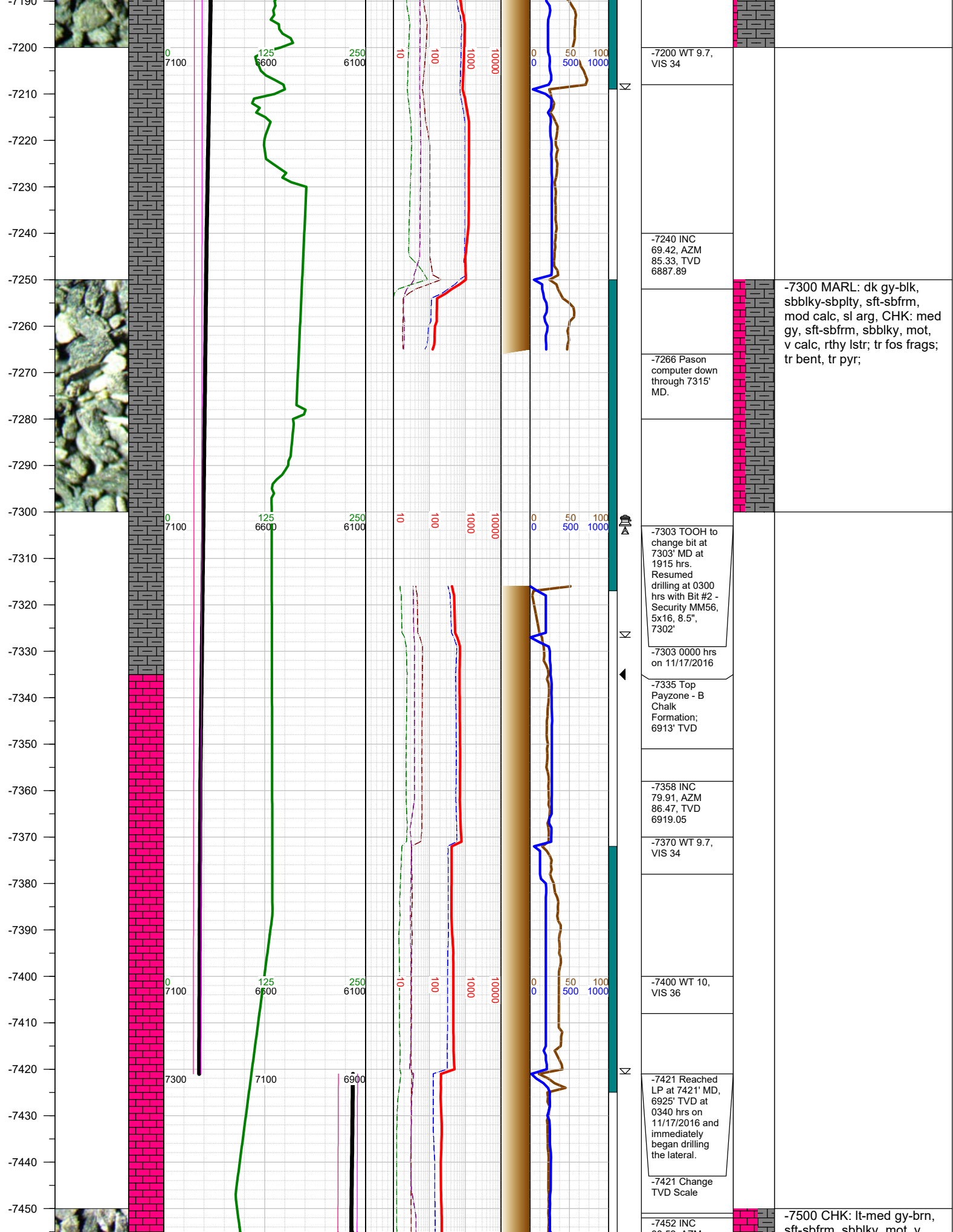


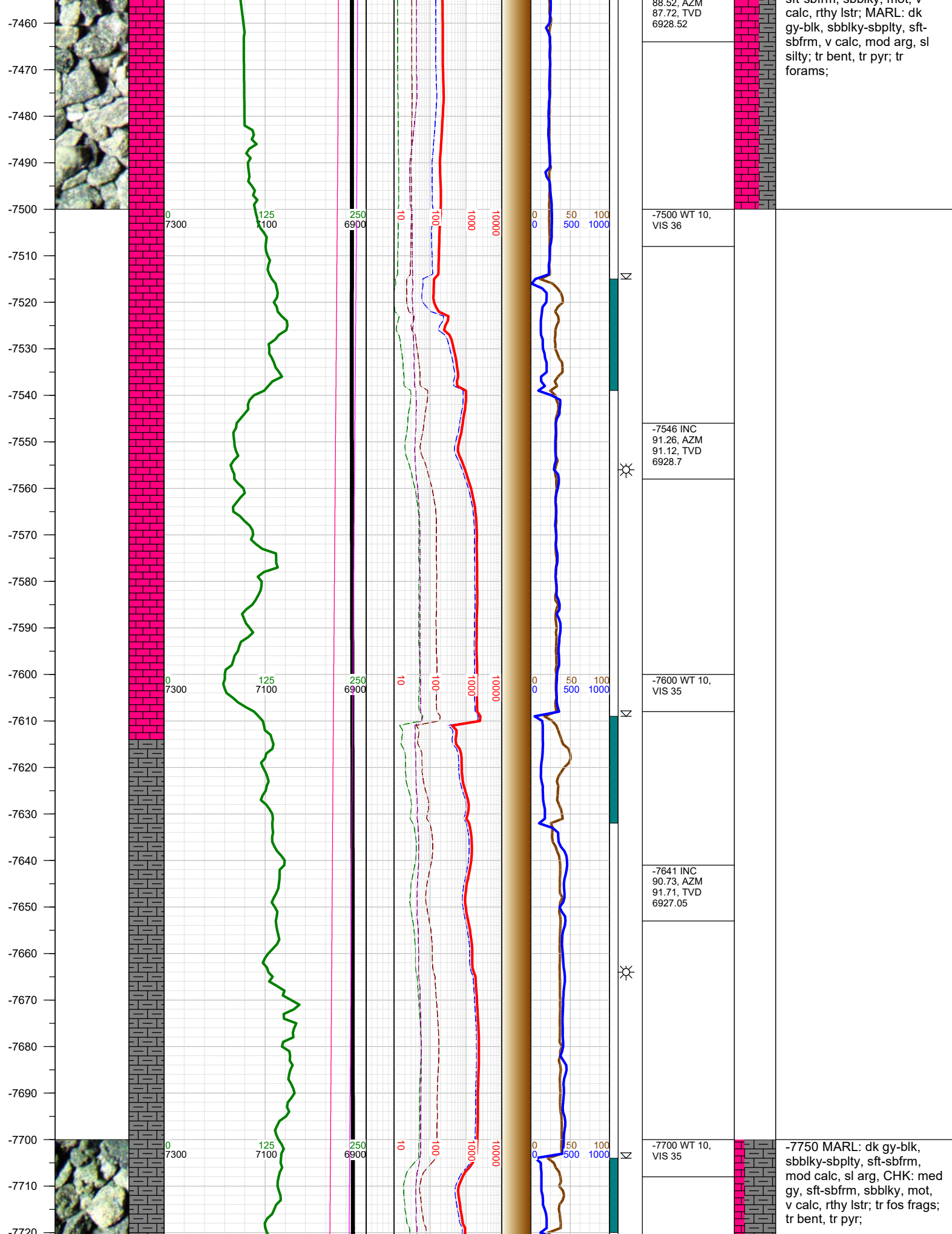


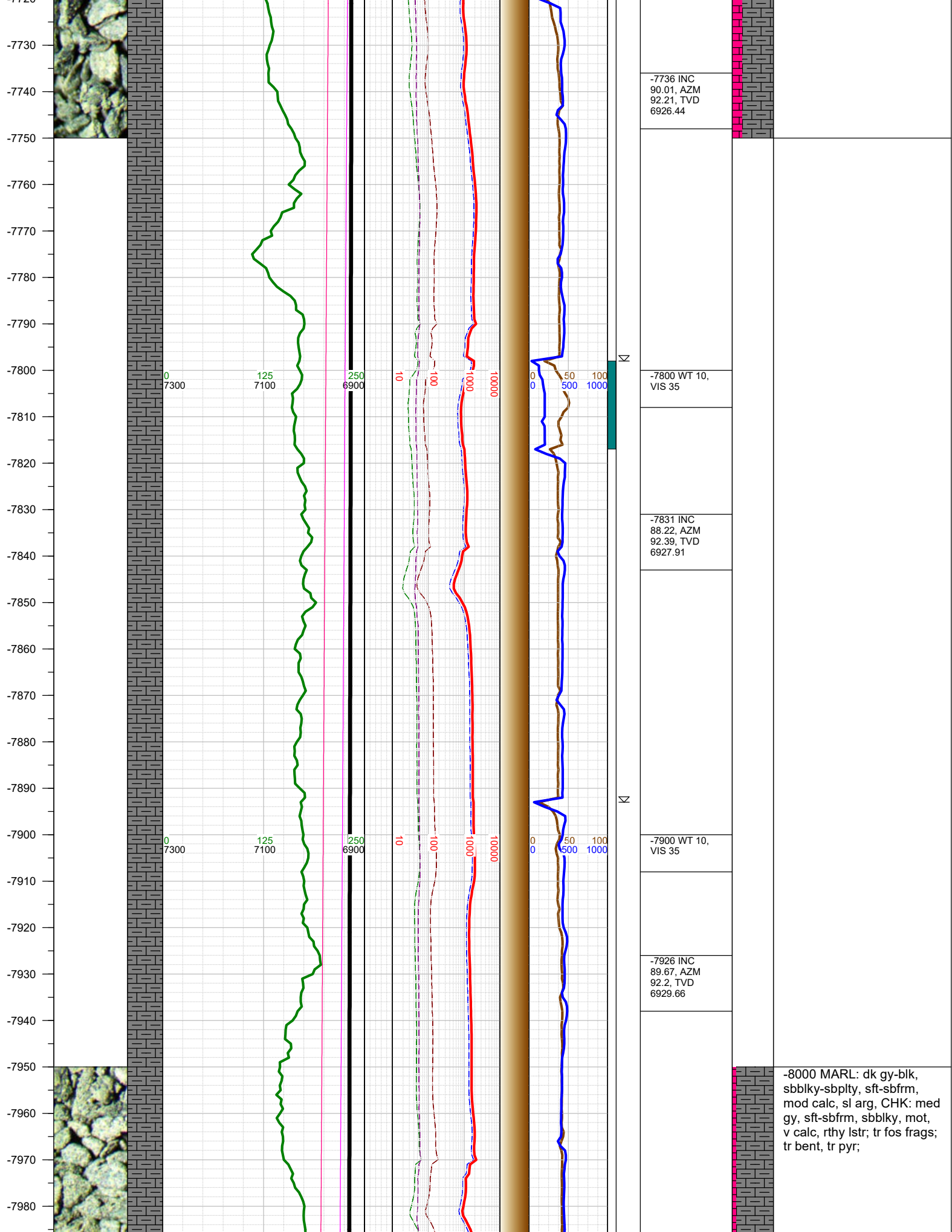


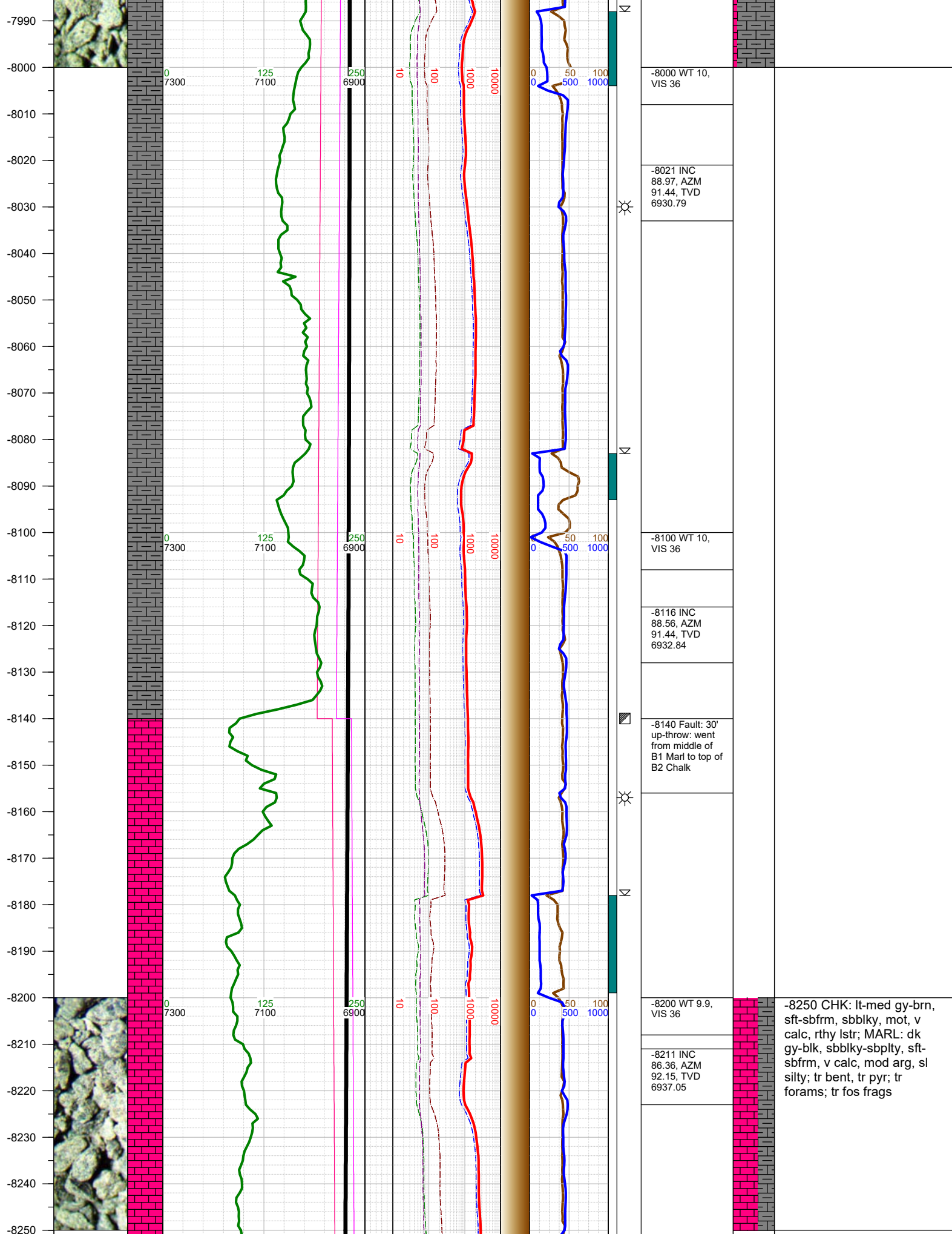


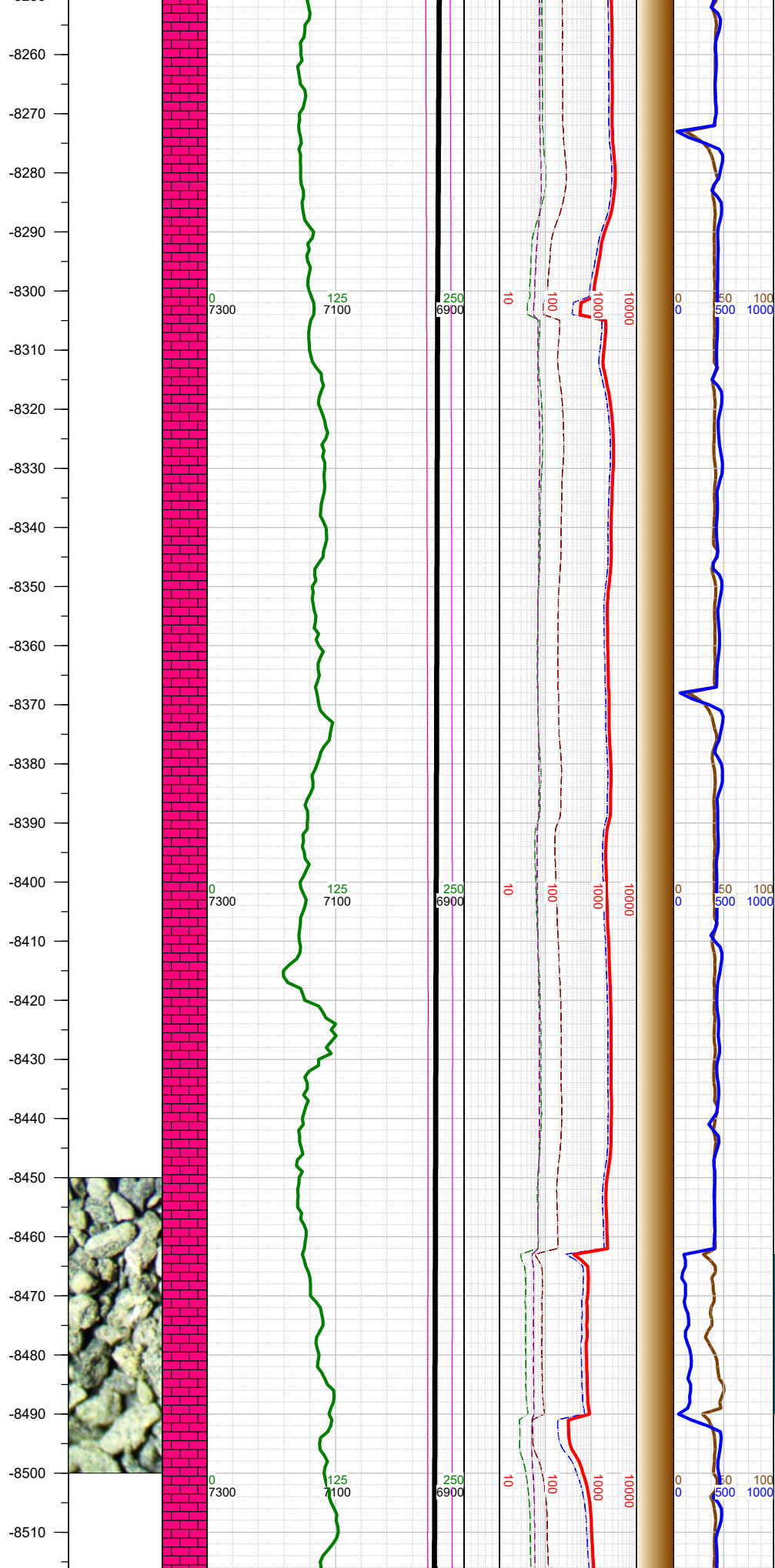






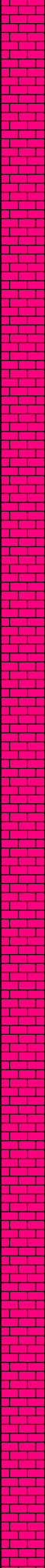






-8306 INC 88.17, AZM 93.17, TVD 6941.58		
-8320 WT 9.9, VIS 36		
-8401 INC 89.36, AZM 93.31, TVD 6943.63		
-8420 WT 9.9, VIS 36		
-8500 CHK: lt-med gy-brn, sft-sbfrm, sbblky, mot, v calc, rthy lstr; MARL: dk gy-blk, sbblky-sbplty, sft- sbfrm, v calc, mod arg, sl silty; tr bent, tr pyr; tr forams; tr fos frags		
-8496 INC 87.97, AZM 89.13, TVD 6945.84		
-8510 WT 9.95, VIS 36		

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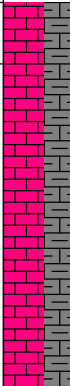
-8591 INC
88.74, AZM
88.48, TVD
6948.57

-8610 WT 9.95,
VIS 36

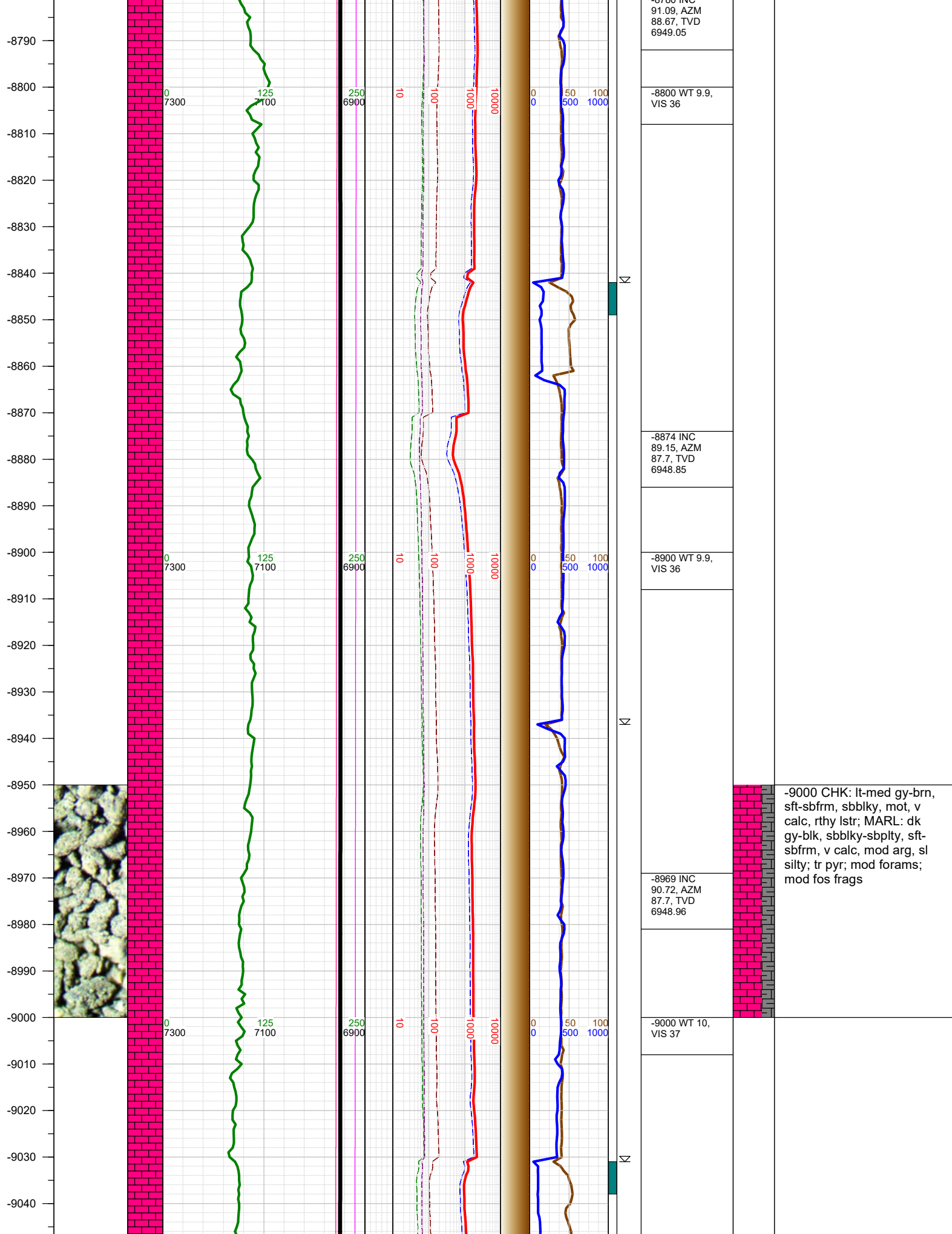
-8685 INC
89.79, AZM
89.12, TVD
6949.78

-8700 WT 9.95,
VIS 36

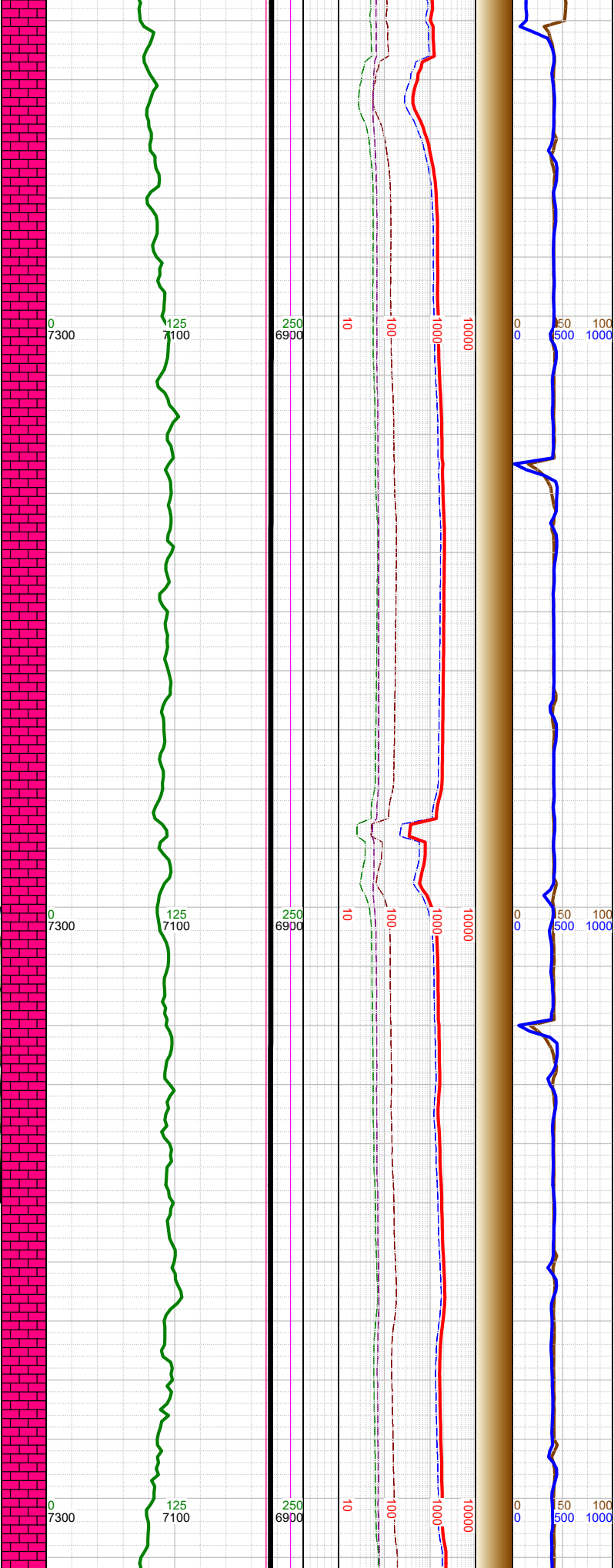
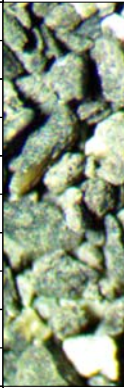
-8780 INC



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



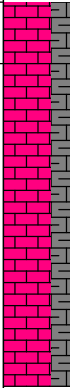
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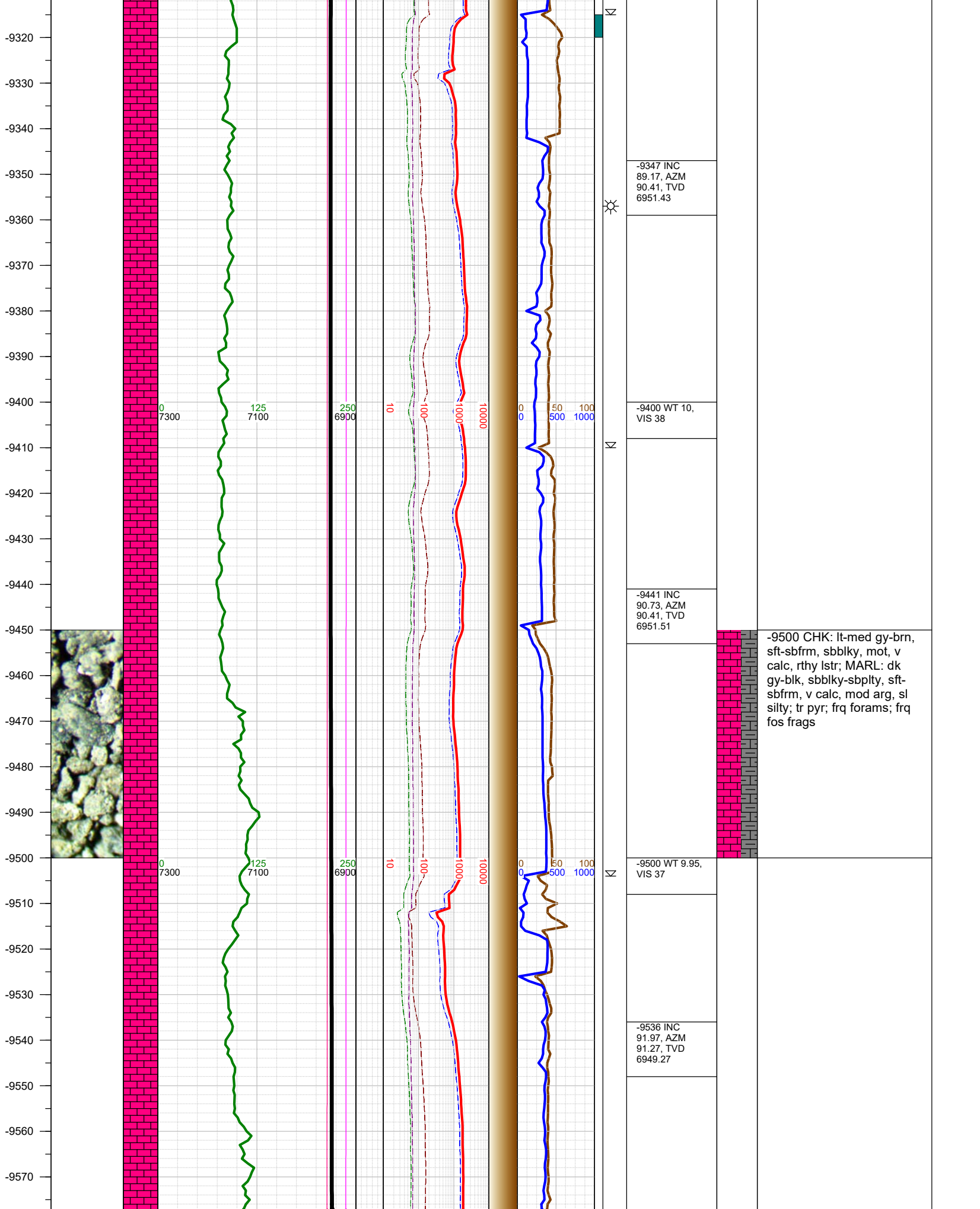
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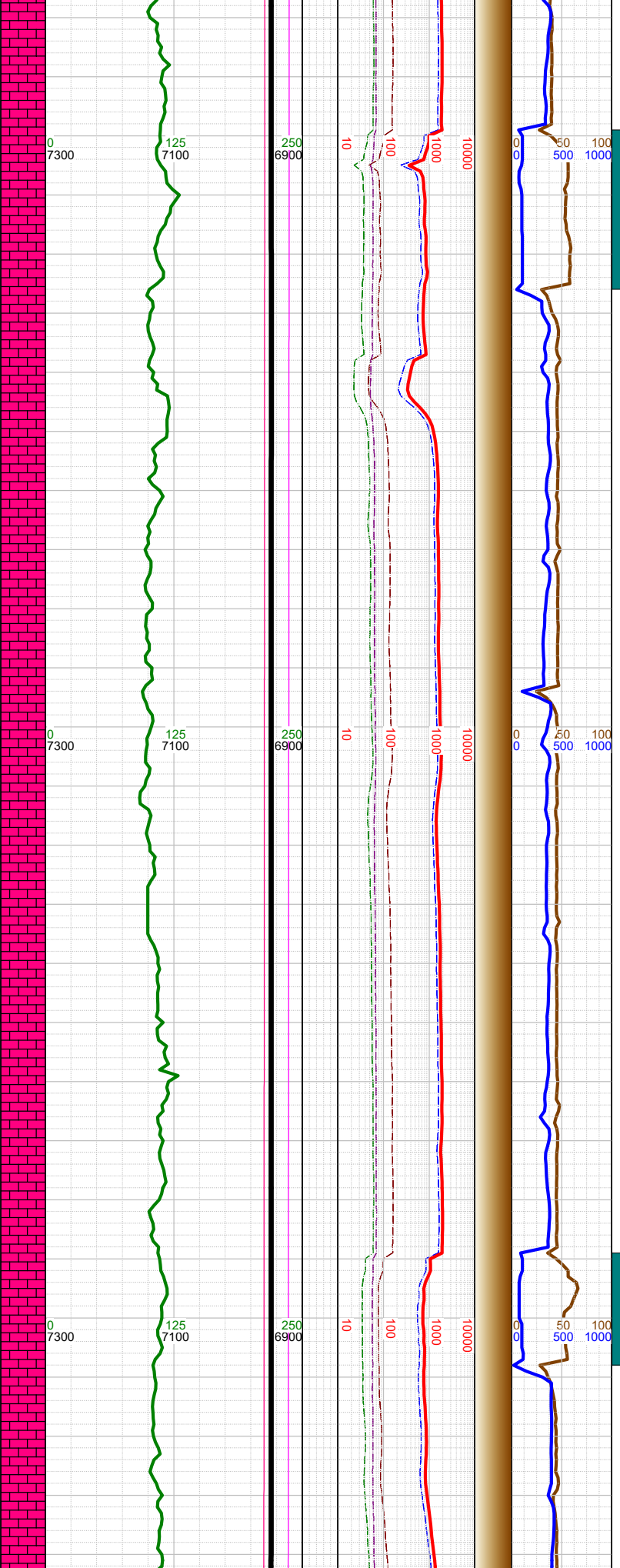
-9063 INC 88.66, AZM 88.94, TVD 6949.47	
-9100 WT 10, VIS 38	
-9158 INC 89.71, AZM 88.94, TVD 6950.82	
-9200 WT 10, VIS 38	
-9253 INC 90.19, AZM 87.07, TVD 6950.9	
-9300 WT 10, VIS 38	



-9250 CHK: lt-med gy-brn,
sft-sbfrm, sbblky, mot, v
calc, rthy lstr; MARL: dk
gy-blk, sbblky-sbplty, sft-
sbfrm, v calc, mod arg, sl
silty; tr pyr; frq forams; mod
fos frags

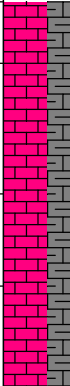


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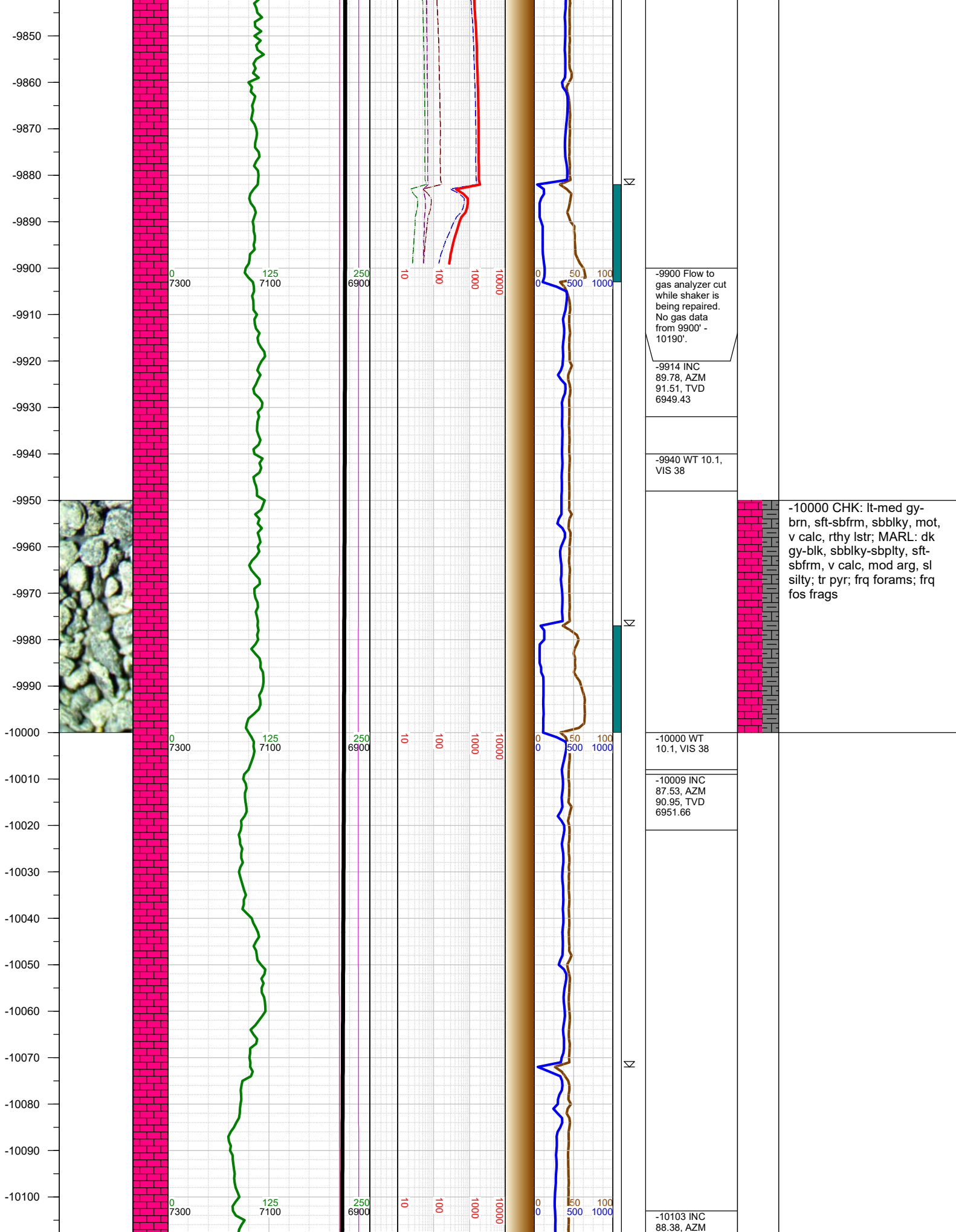


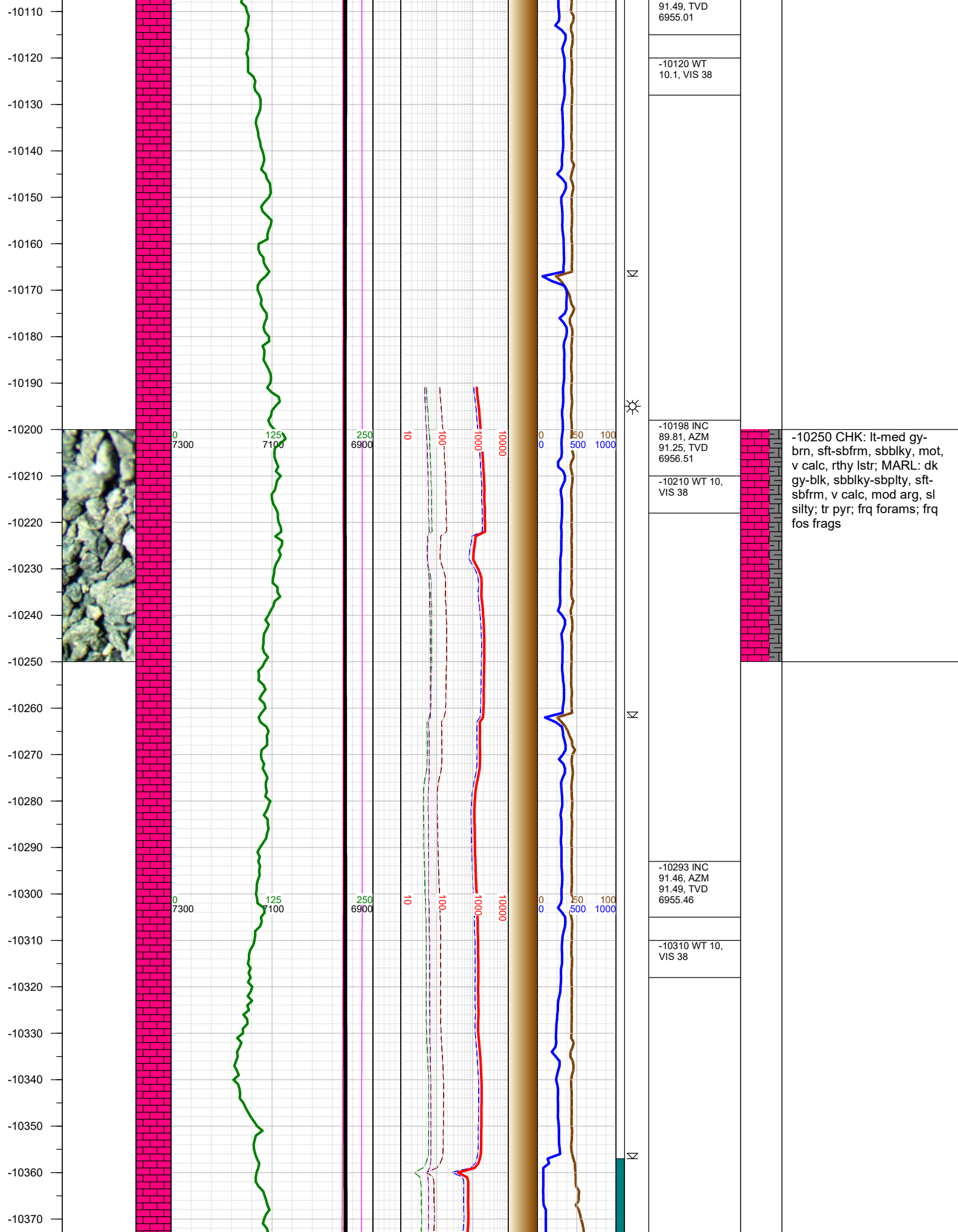
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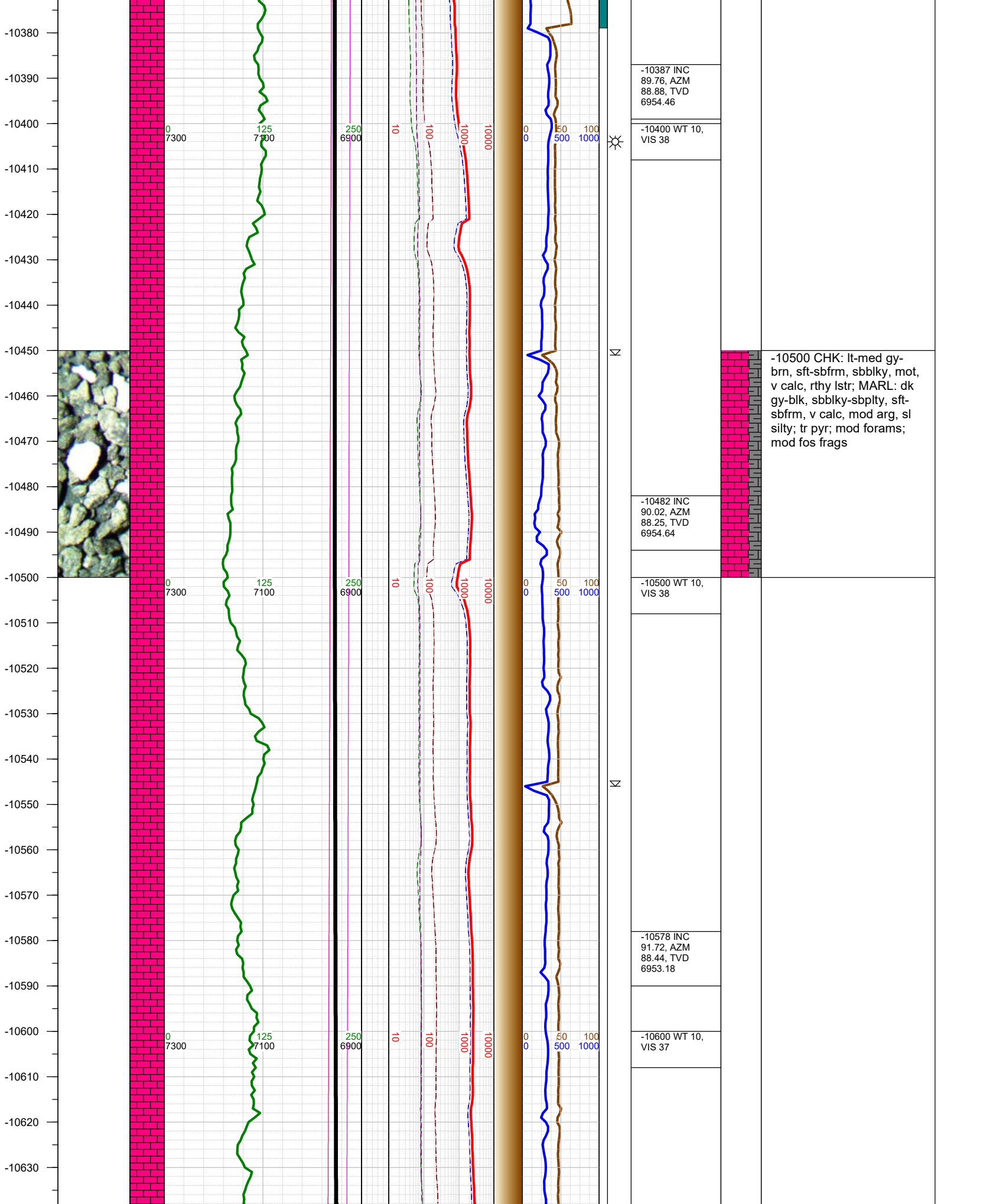
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-9631 INC 88.98, AZM 92, TVD 6948.48
-9700 WT 9.95, VIS 38
-9725 INC 90.56, AZM 92.08, TVD 6948.86
-9800 WT 10.1, VIS 38
-9819 INC 89.49, AZM 92.51, TVD 6948.82

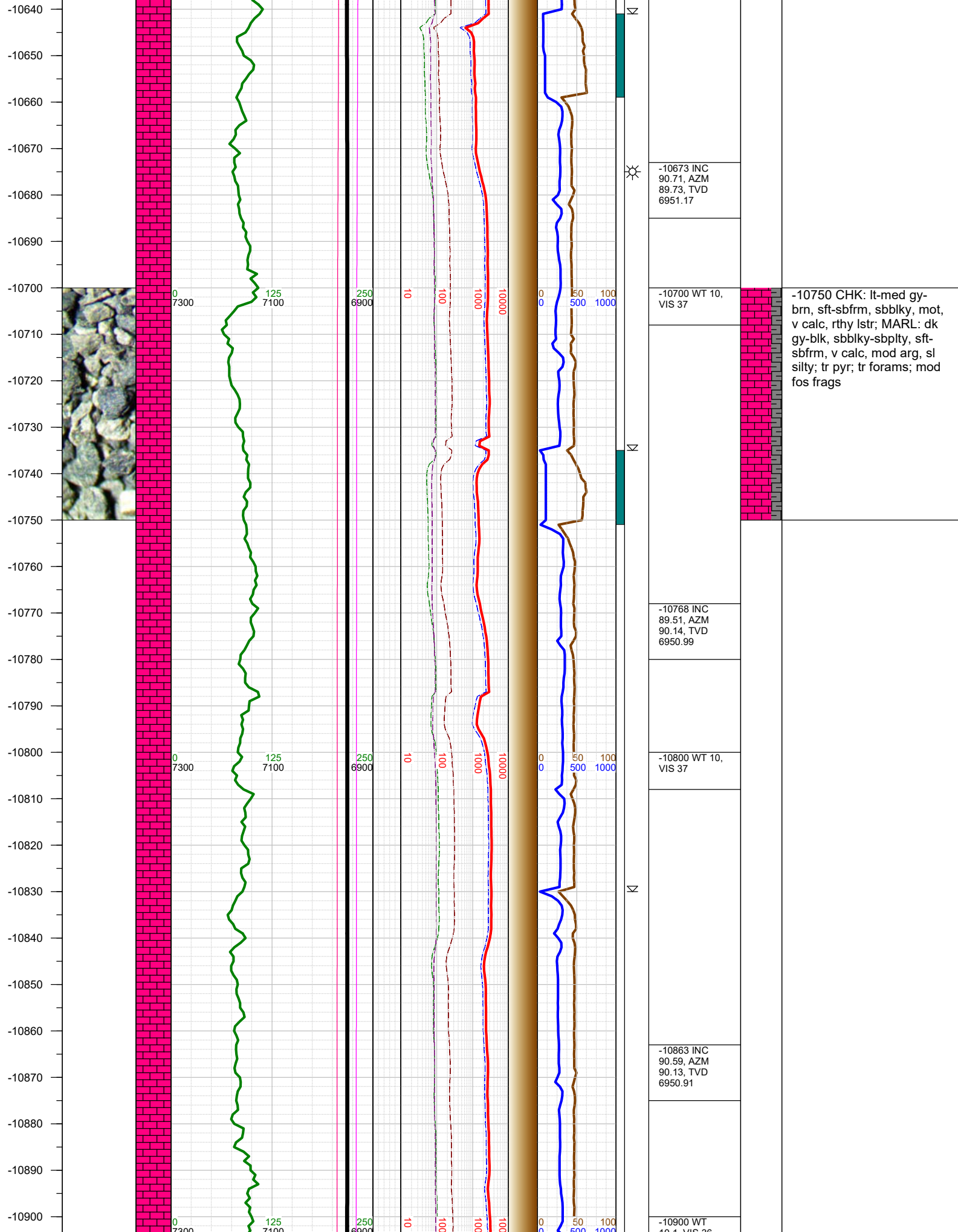


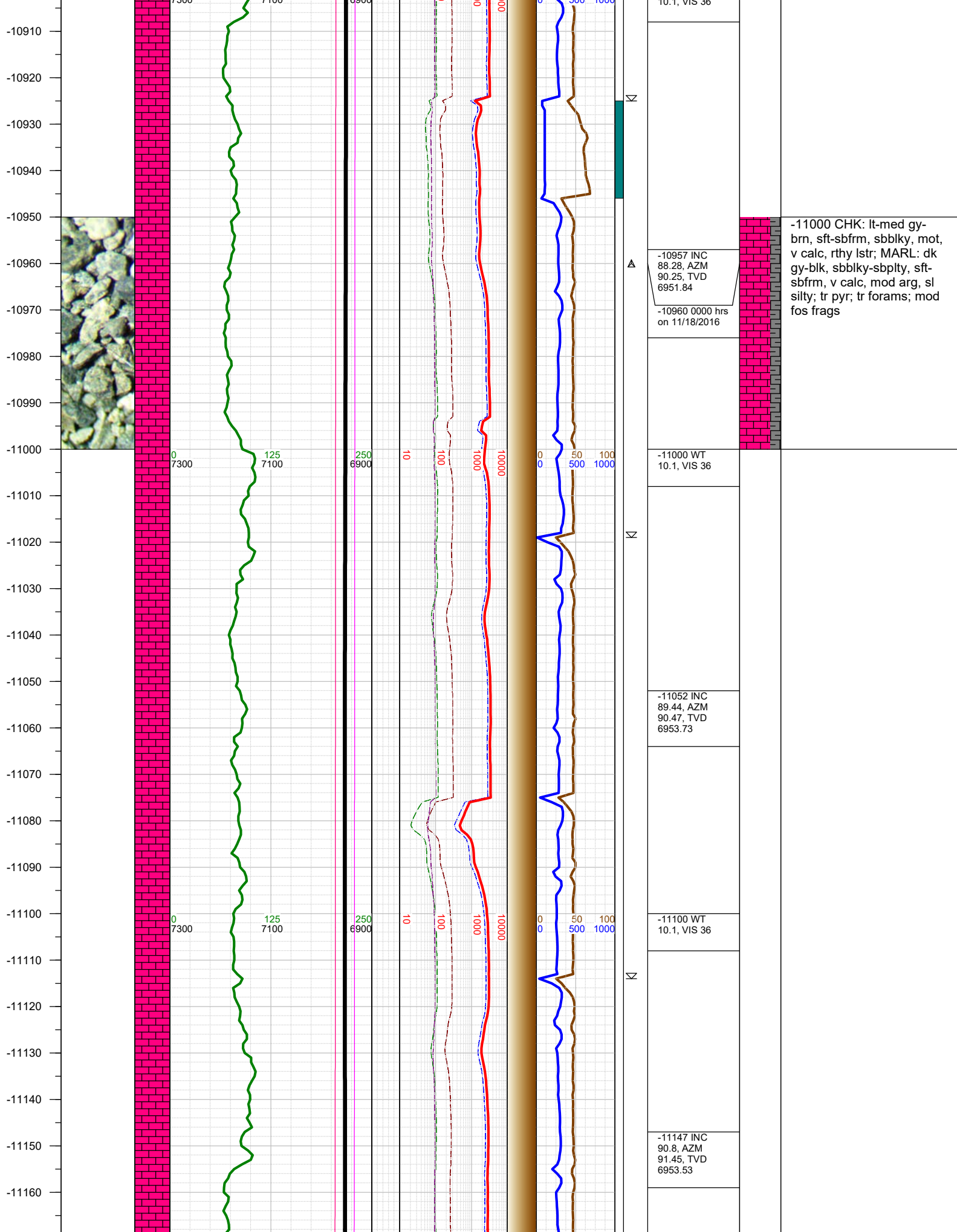
-9750 CHK: lt-med gy-brn,
sft-sbfrm, sbblky, mot, v
calc, rthy lstr; MARL: dk
gy-blk, sbblky-sbplty, sft-
sbfrm, v calc, mod arg, sl
silty; tr pyr; frq forams; frq
fos frags

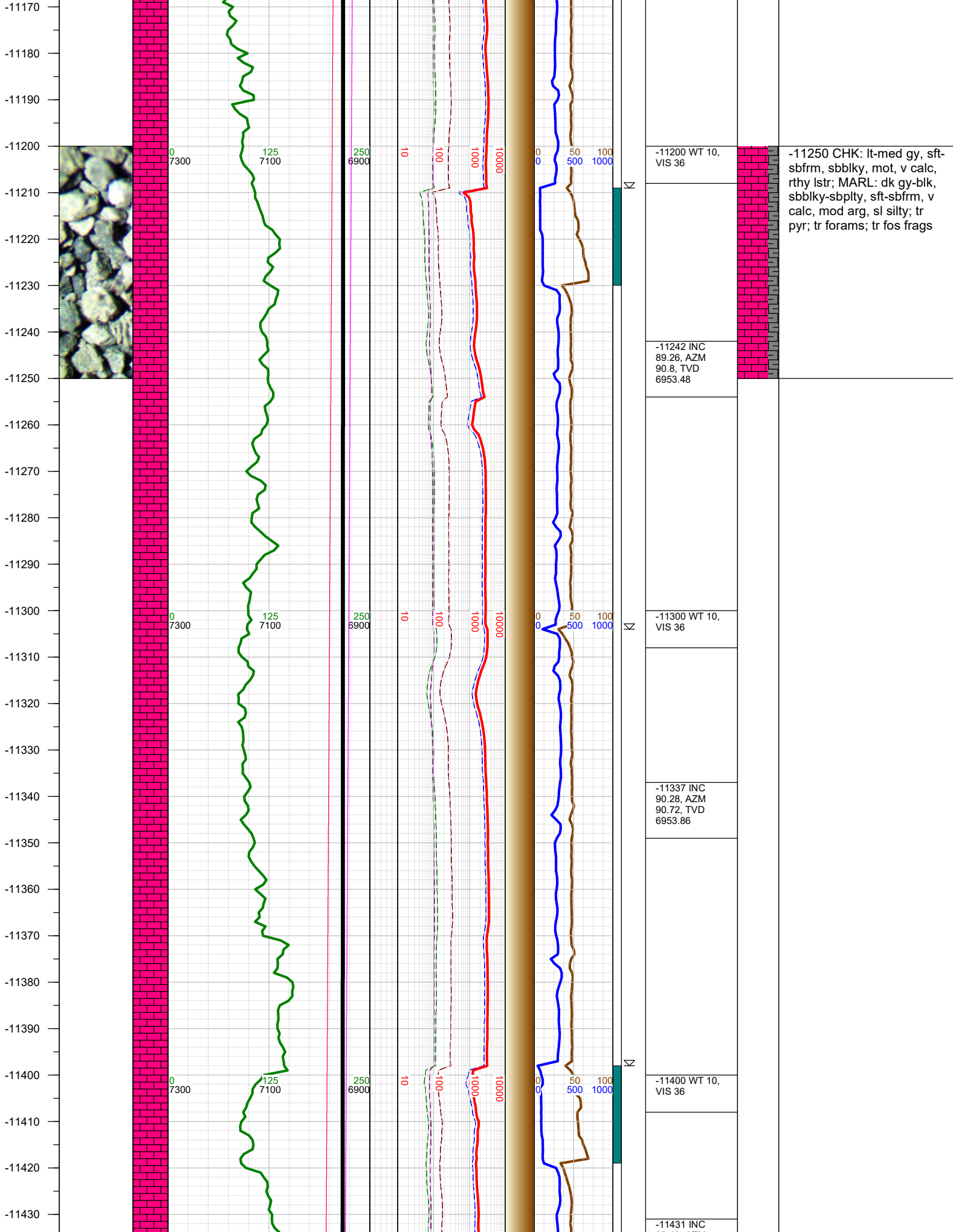












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VIS 36

-11242 INC
89.26, AZM
90.8, TVD
6953.48

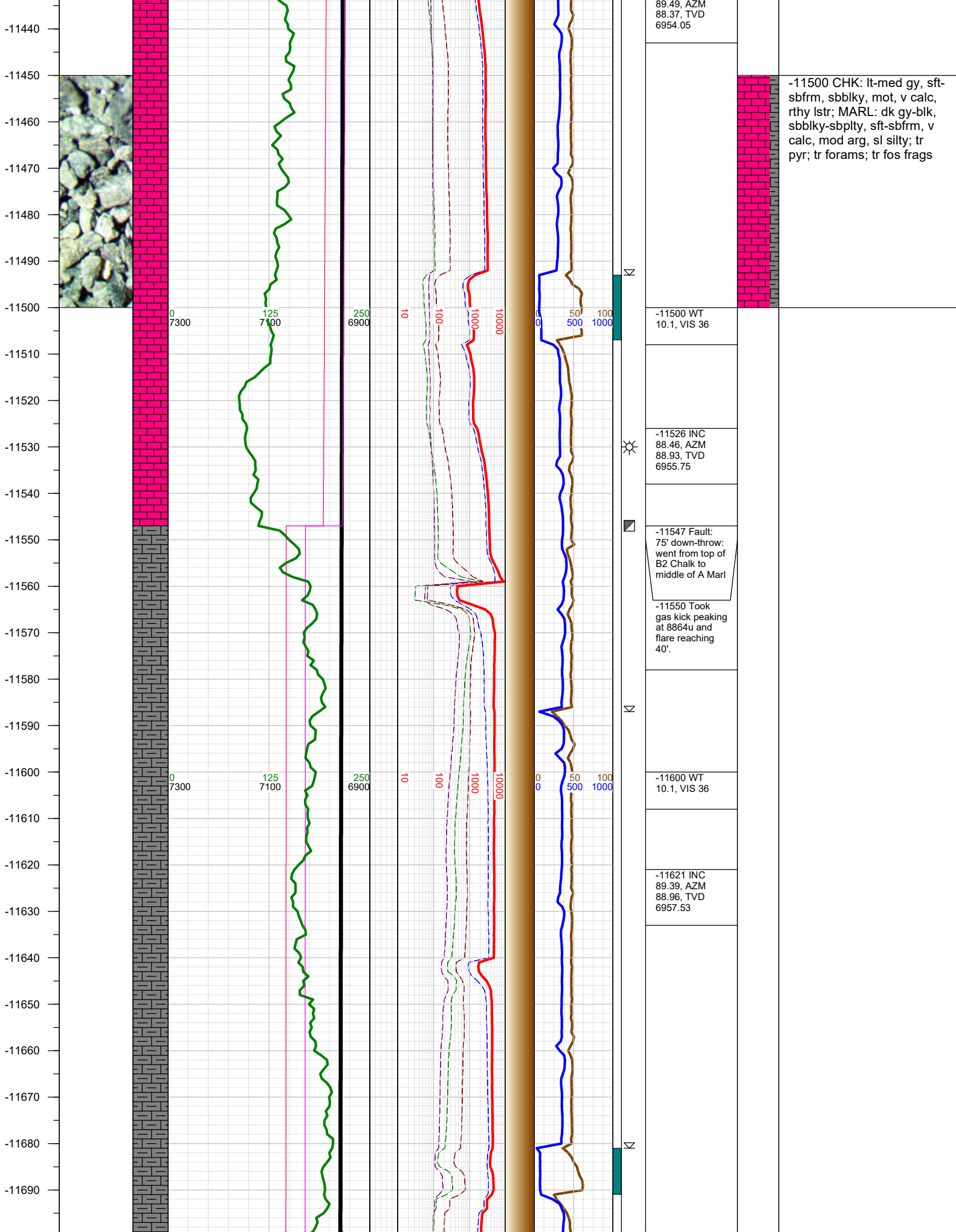
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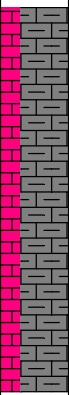
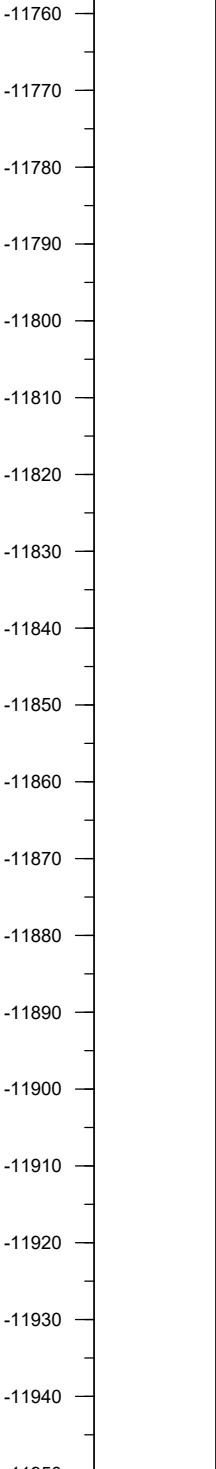
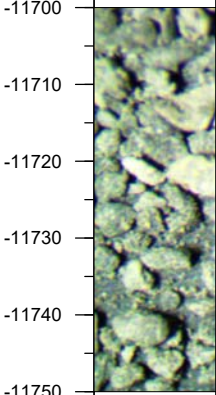
-11337 INC
90.28, AZM
90.72, TVD
6953.86

-11400 WT 10,
VIS 36

-11431 INC

-11250 CHK: lt-med gy, sft-
sbfrm, sbbkly, mot, v calc,
rthy lstr; MARL: dk gy-blk,
sbbkly-sbply, sft-sbfrm, v
calc, mod arg, sl silty; tr
pyr; tr forams; tr fos frags





-11750 MARL: dk gy-blk, sbblky-sbplty, sft-sbfrm, mod calc, sl arg, CHK: med gy, sft-sbfrm, sbblky, mot, v calc, rthy lstr; tr fos frags; tr bent, tr pyr;



-12000 MARL: dk gy-blk, sbblky-sbplty, sft-sbfrm, mod calc, sl arg, CHK: med gy, sft-sbfrm, sbblky, mot, v calc, rthy lstr; tr fos frags;

-11700 WT 10, VIS 36

-11715 INC 89.04, AZM 90.04, TVD 6958.82

-11800 WT 10, VIS 36

-11809 INC 89.31, AZM 89.03, TVD 6960.17

-11904 INC 89.74, AZM 89.51, TVD 6960.96

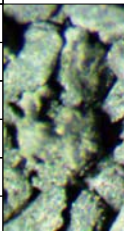
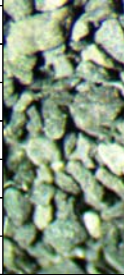
-11920 WT 10, VIS 38

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-11997 INC
88.22, AZM
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-12010 WT 10,
VIS 38

-12092 INC
88.7, AZM
90.12, TVD
6965.17

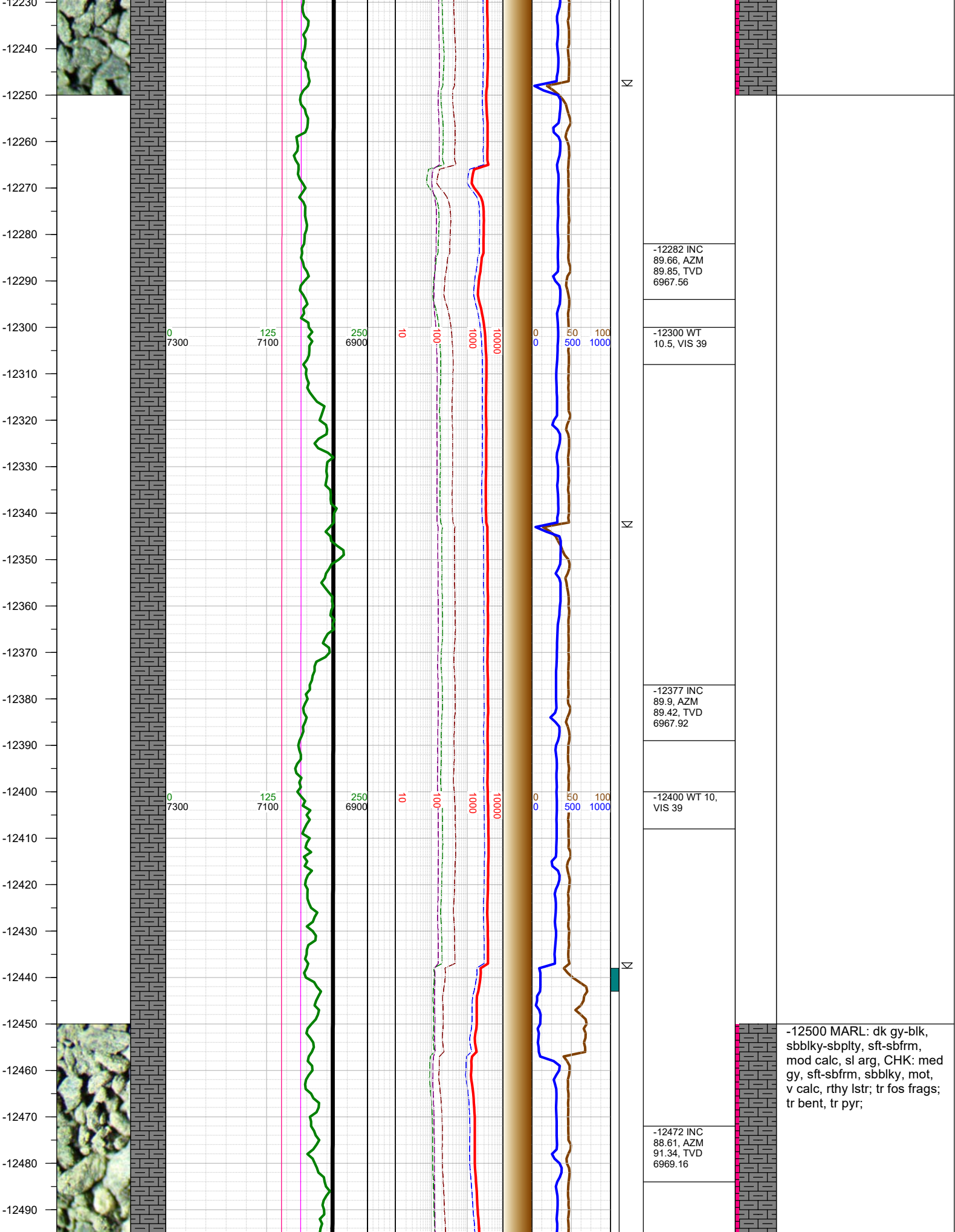
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10.5, VIS 39

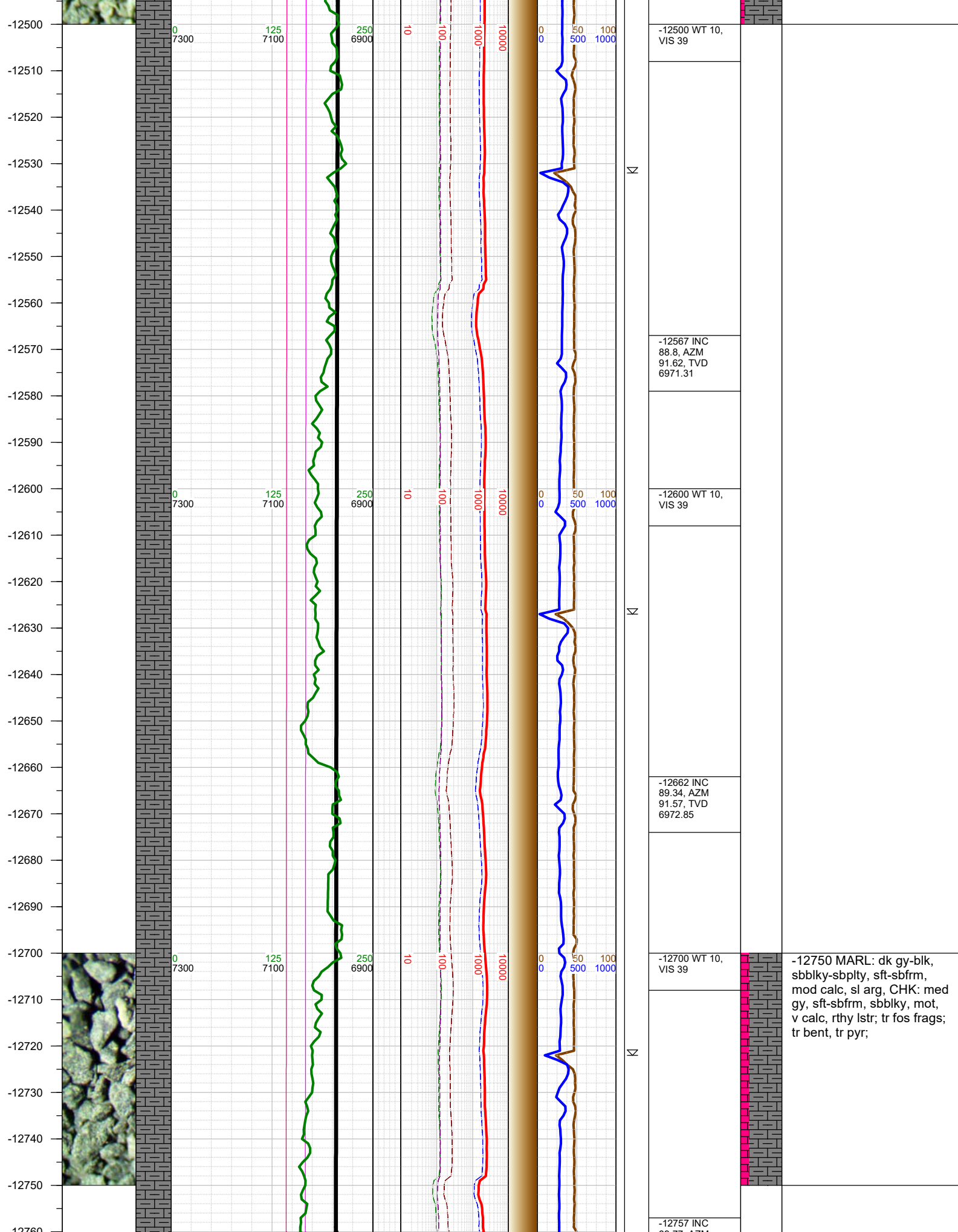
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89.38, AZM
89.93, TVD
6966.76

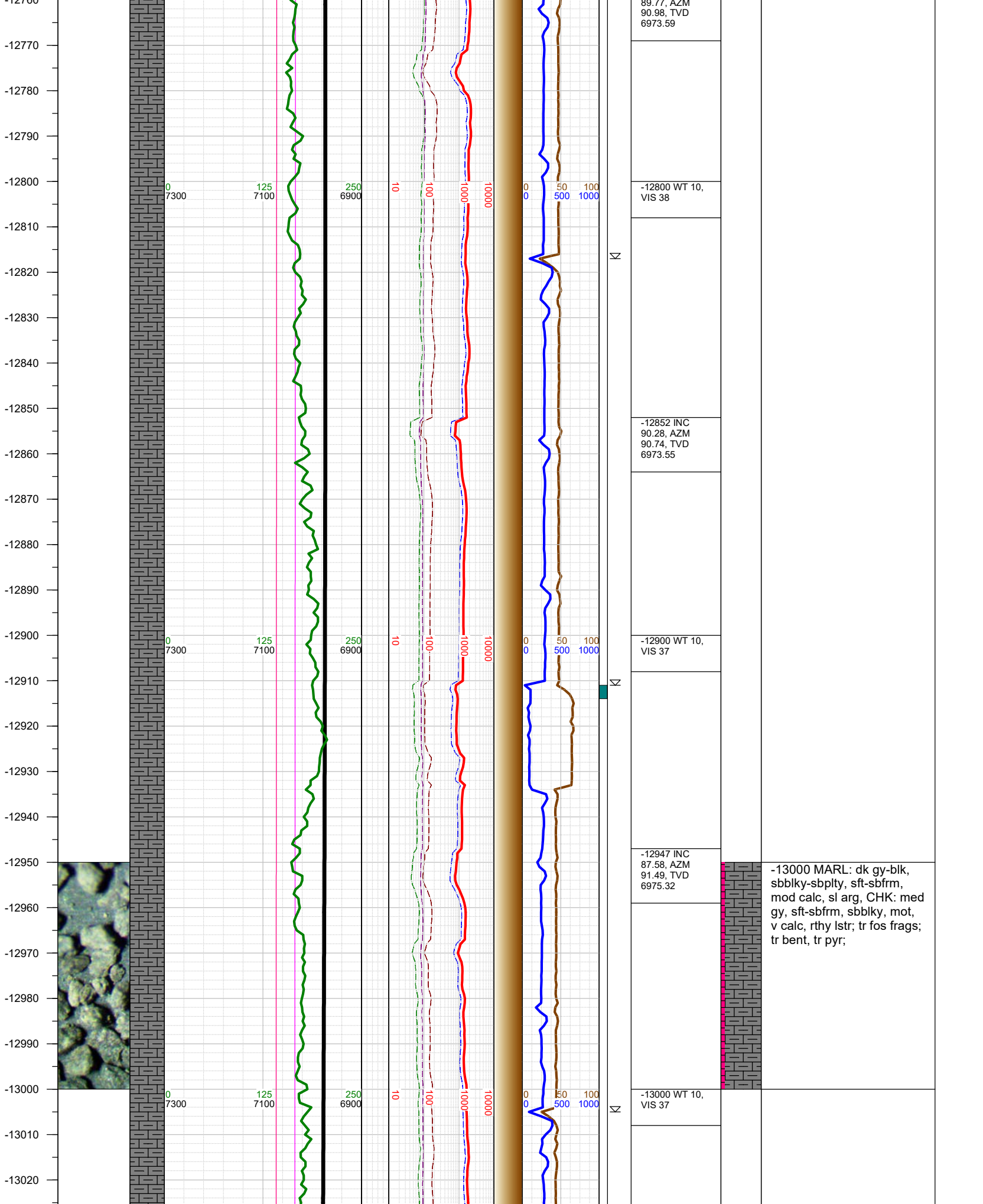
-12200 WT
10.5, VIS 39

v calc, rthy lstr, tr fos frags,
tr bent, tr pyr;

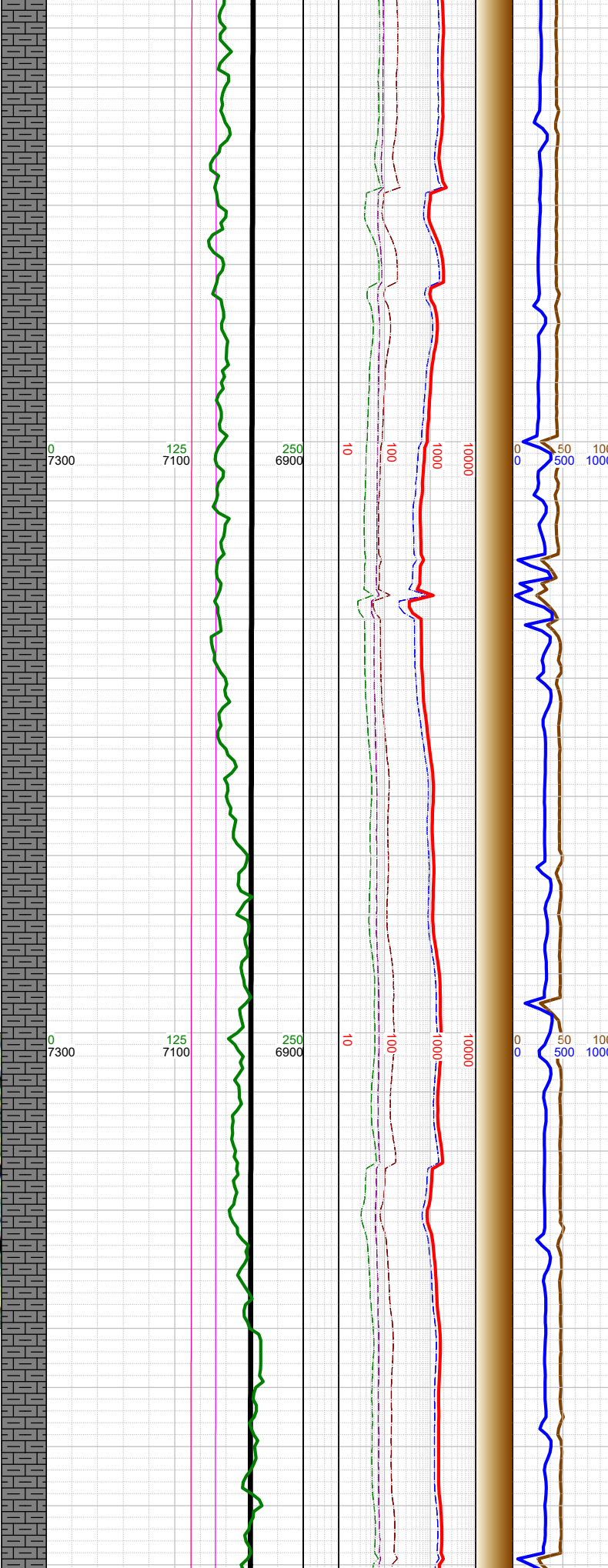
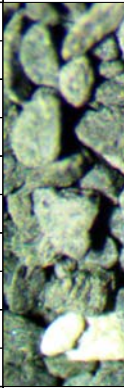
-12250 MARL: dk gy-blk,
sbbly-sbply, sft-sbfrm,
mod calc, sl arg, CHK: med
gy, sft-sbfrm, sbbly, mot,
v calc, rthy lstr; tr fos frags;
tr bent, tr pyr;







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-13042 INC
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90.81, TVD
6978.74

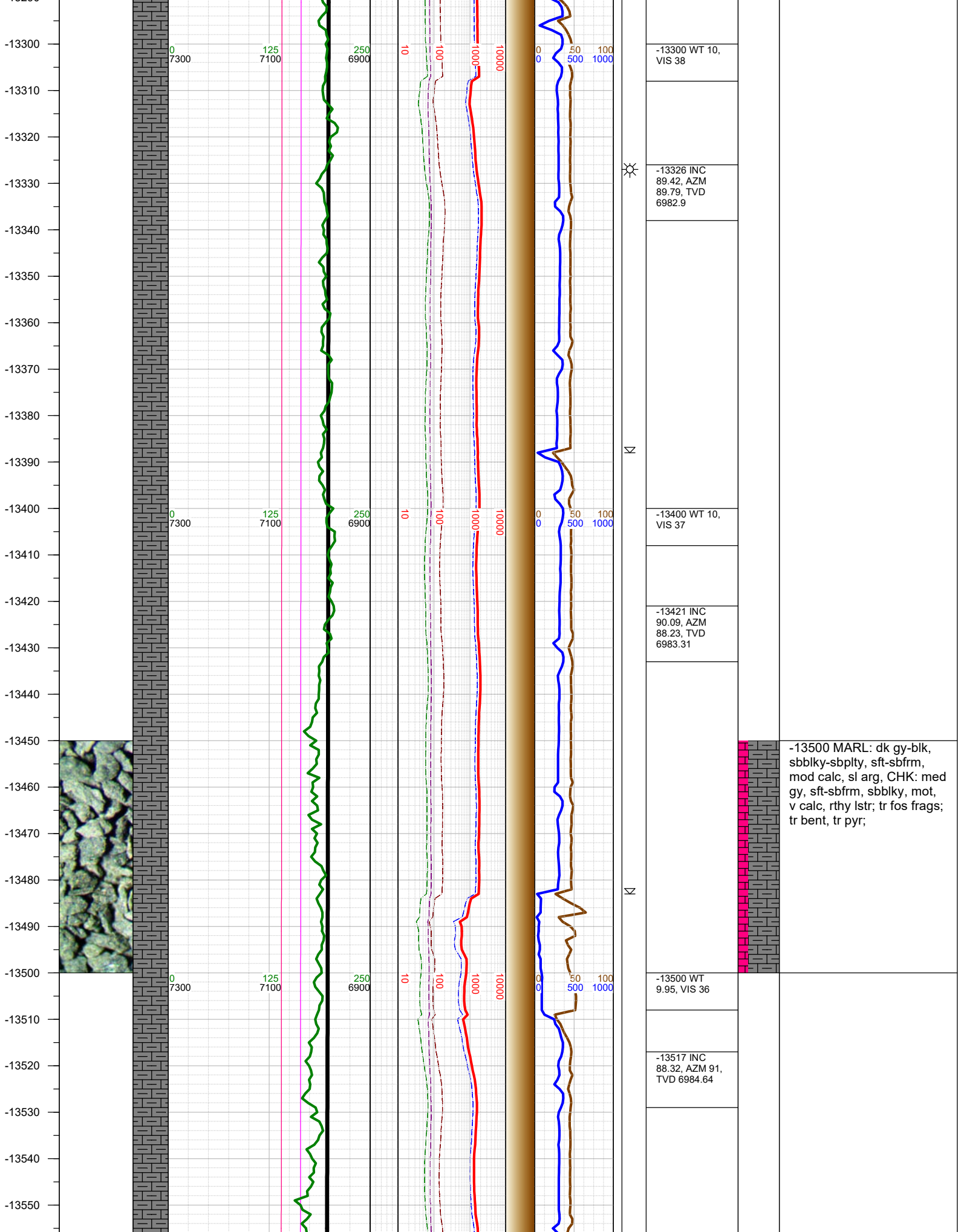
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VIS 38

-13137 INC
89.12, AZM
90.97, TVD
6980.89

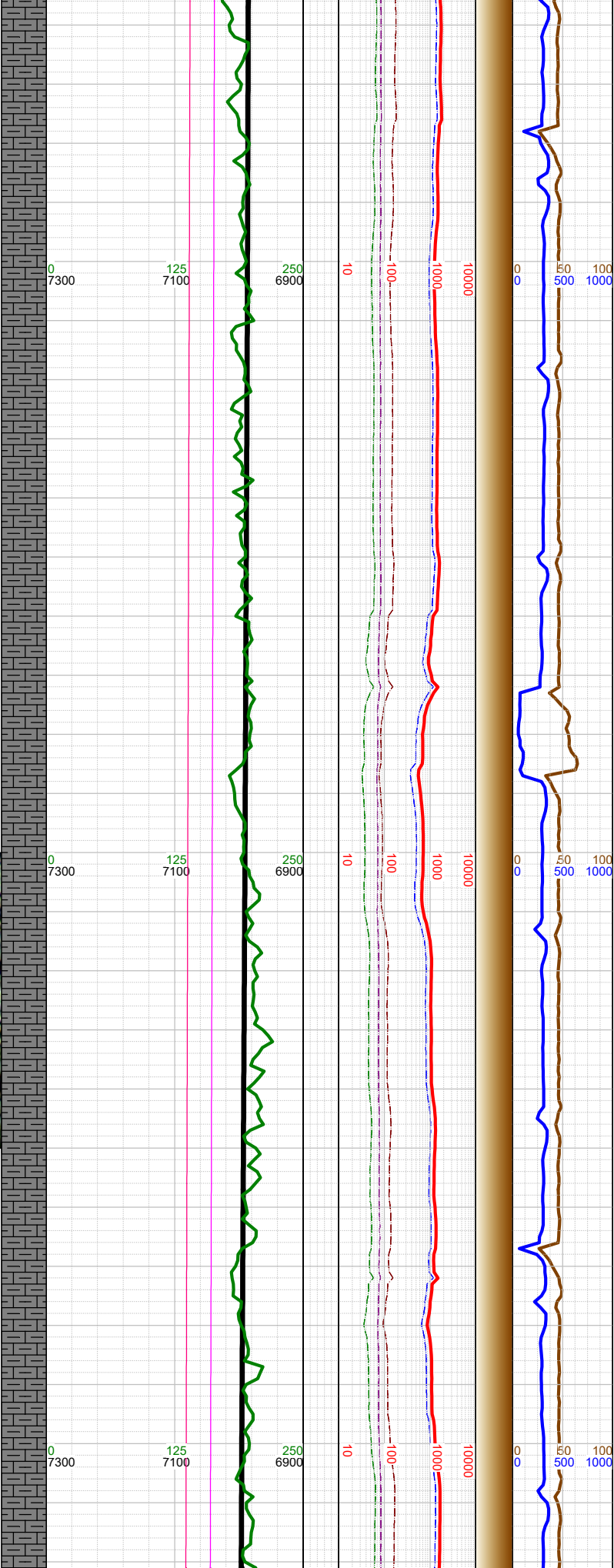
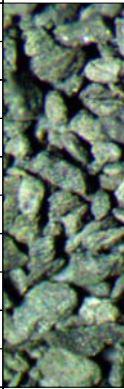
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-13231 INC
89.51, AZM
90.07, TVD
6982.01

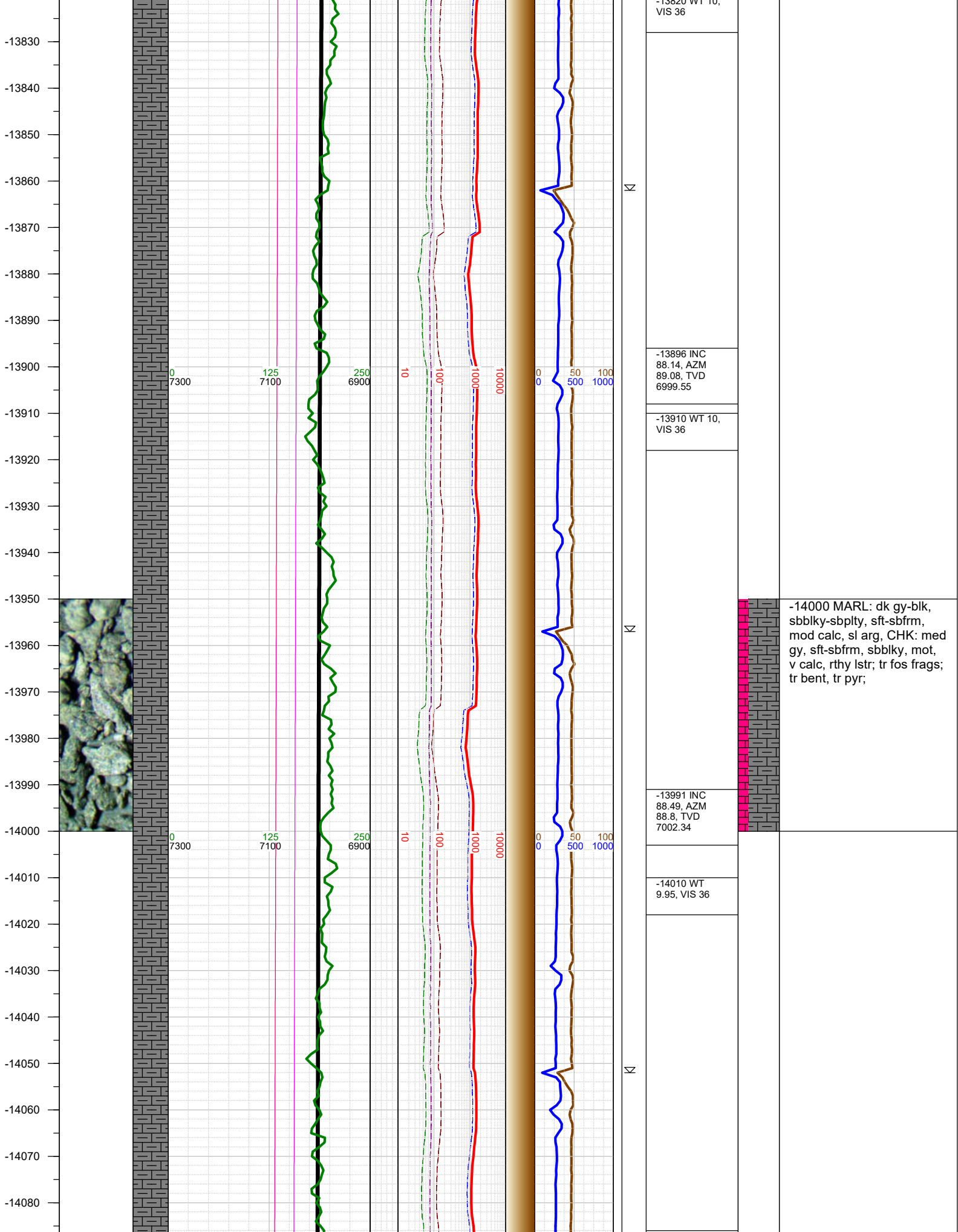
-13250 MARL: dk gy-blk,
sbbiky-sbplty, sft-sbfrm,
mod calc, sl arg, CHK: med
gy, sft-sbfrm, sbbiky, mot,
v calc, rthy lstr; tr fos frags;
tr bent, tr pyr;

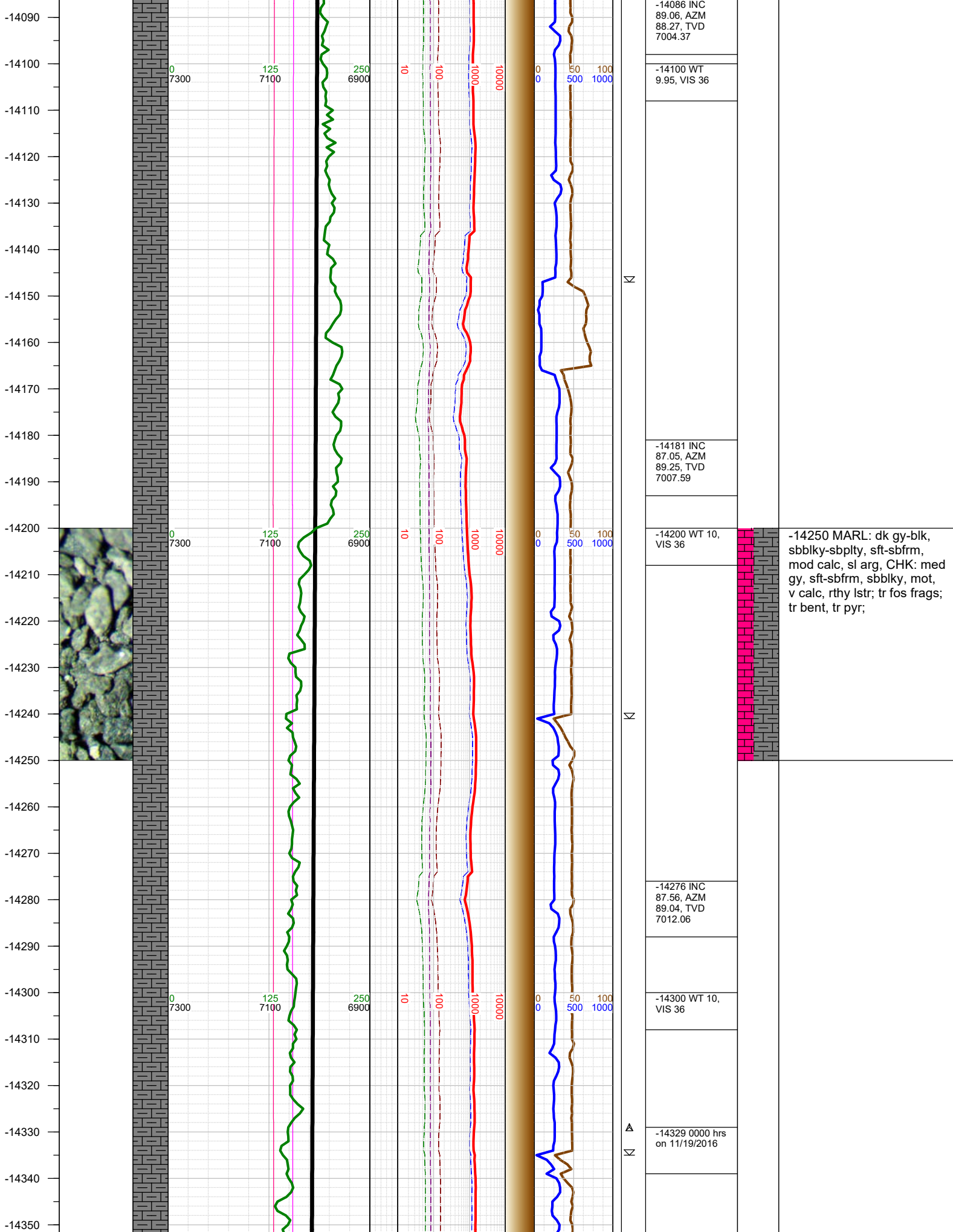


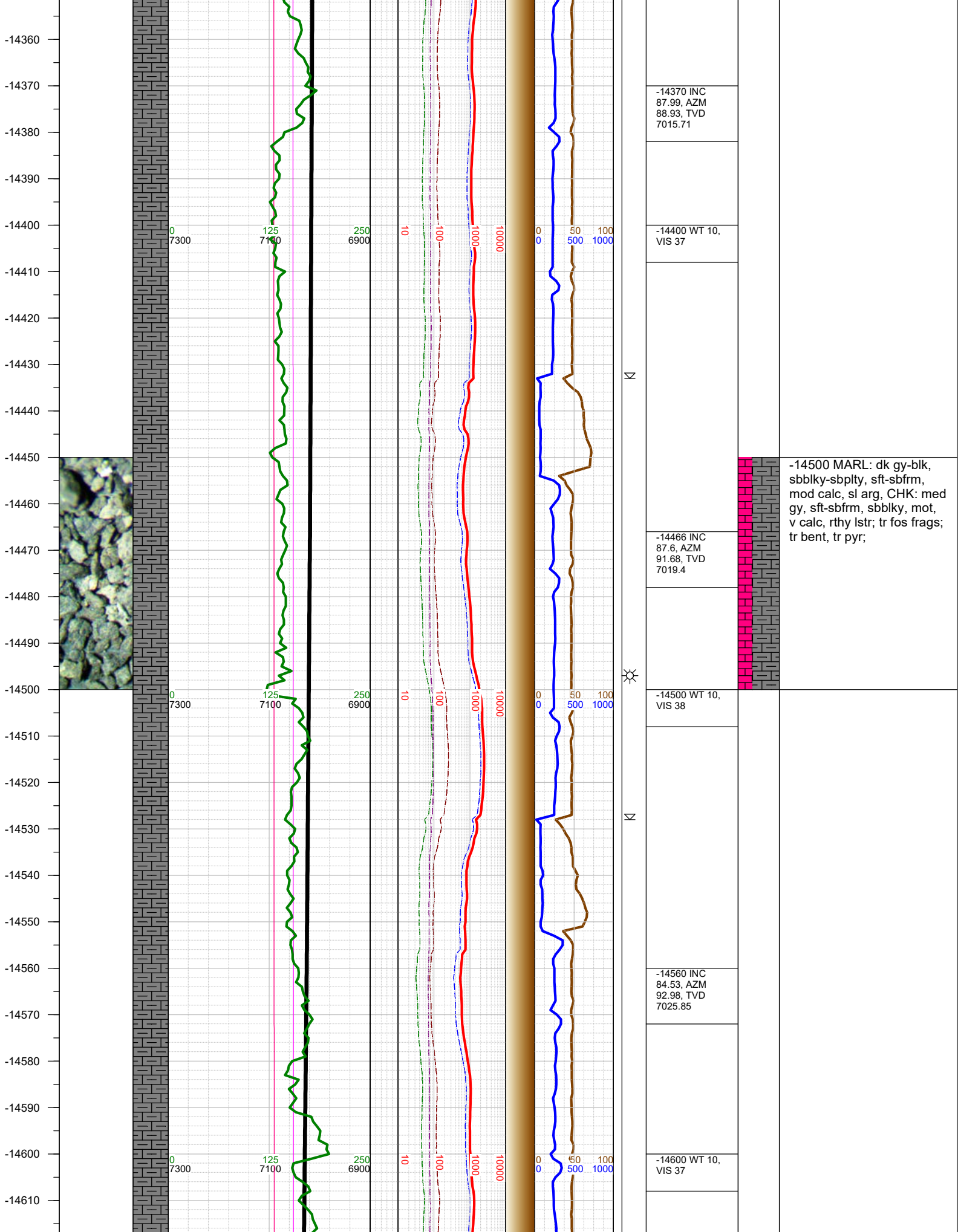
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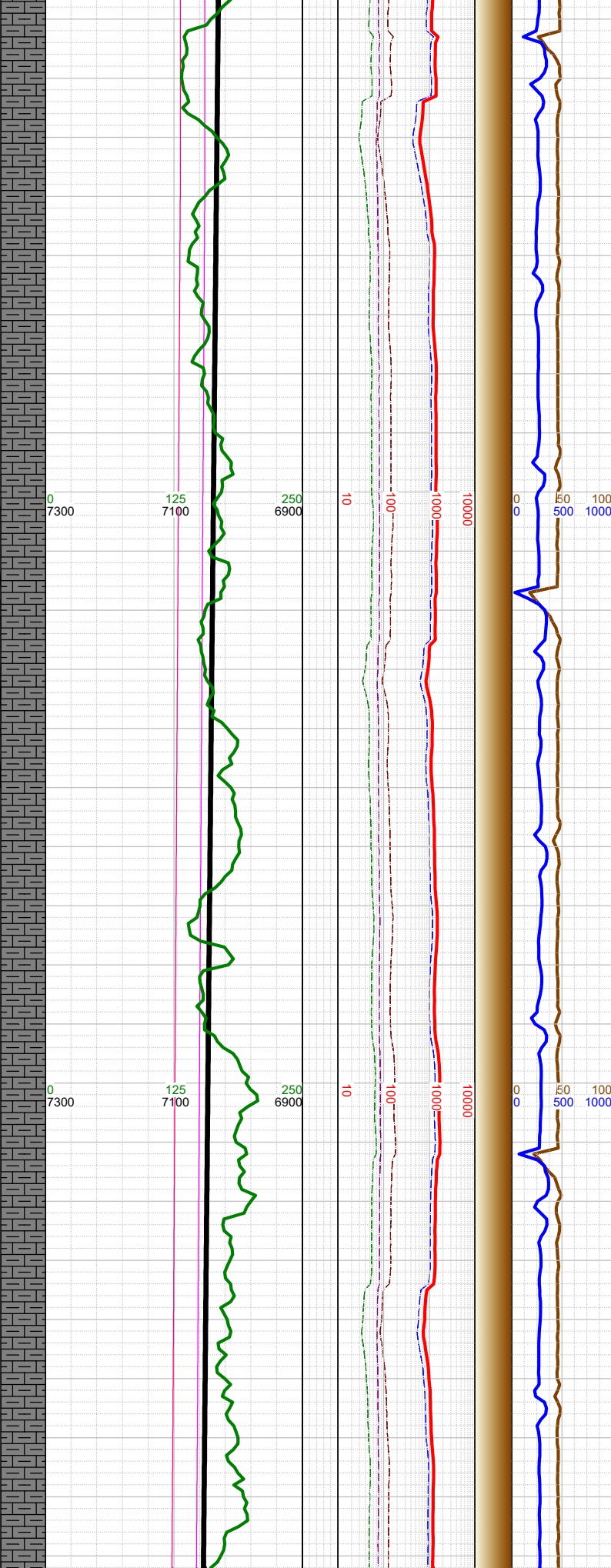
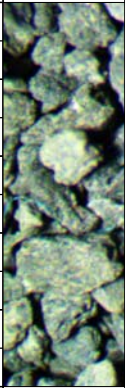
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	-13612 INC 88.51, AZM 90.42, TVD 6987.27	
N	-13706 INC 86.88, AZM 90.18, TVD 6991.05	-13750 MARL: dk gy-blk, sbblky-sbplty, sft-sbfrm, mod calc, sl arg, CHK: med gy, sft-sbfrm, sbblky, mot, v calc, rthy lstr; tr fos frags; tr bent, tr pyr;
	-13720 WT 10.1, VIS 36	
	-13801 INC 87.36, AZM 88.96, TVD 6995.82	
N	-13820 WT 10	







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-14655 INC
84.85, AZM
92.38, TVD
7034.64

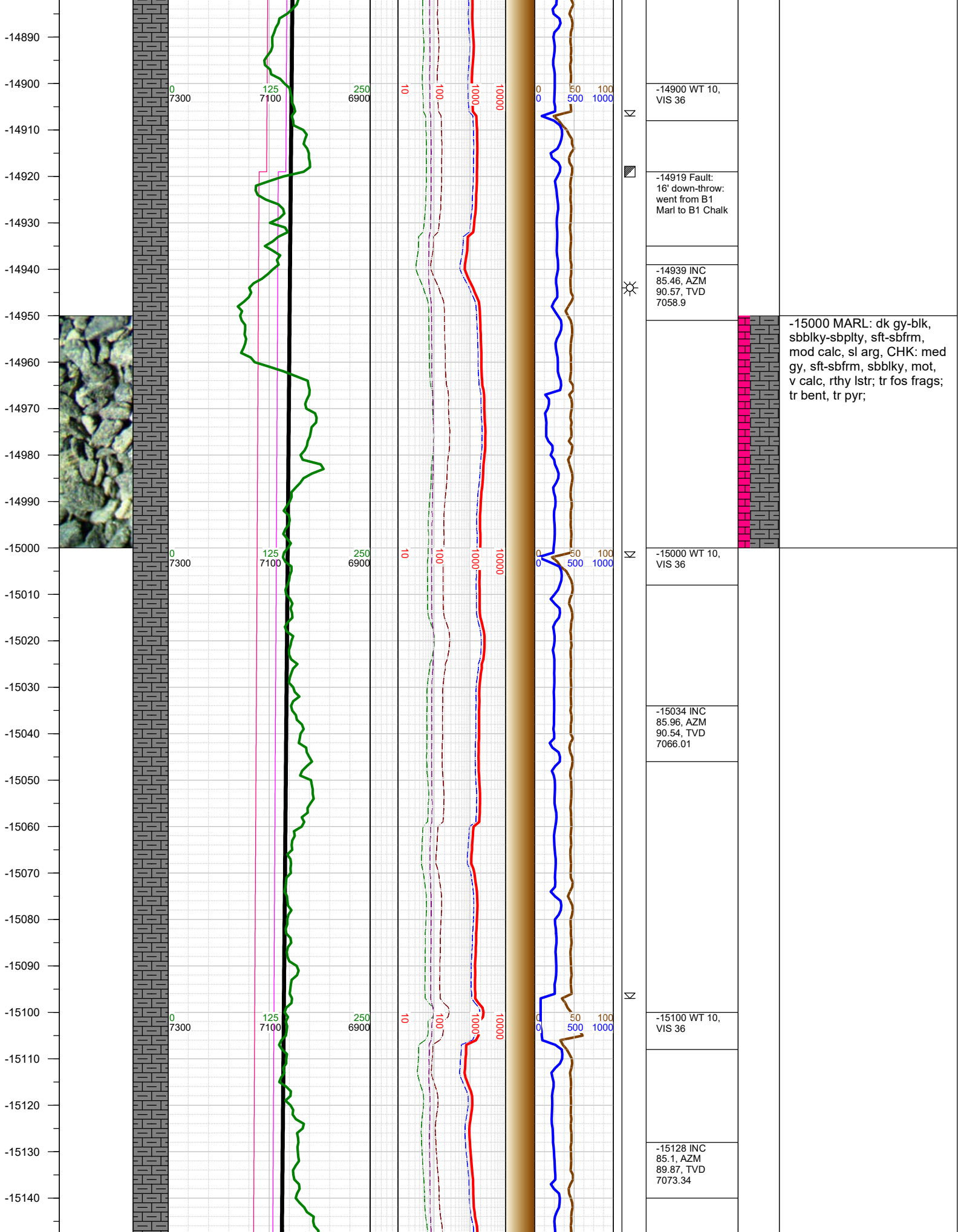
-14700 WT 10,
VIS 37

-14749 INC
84.93, AZM
91.69, TVD
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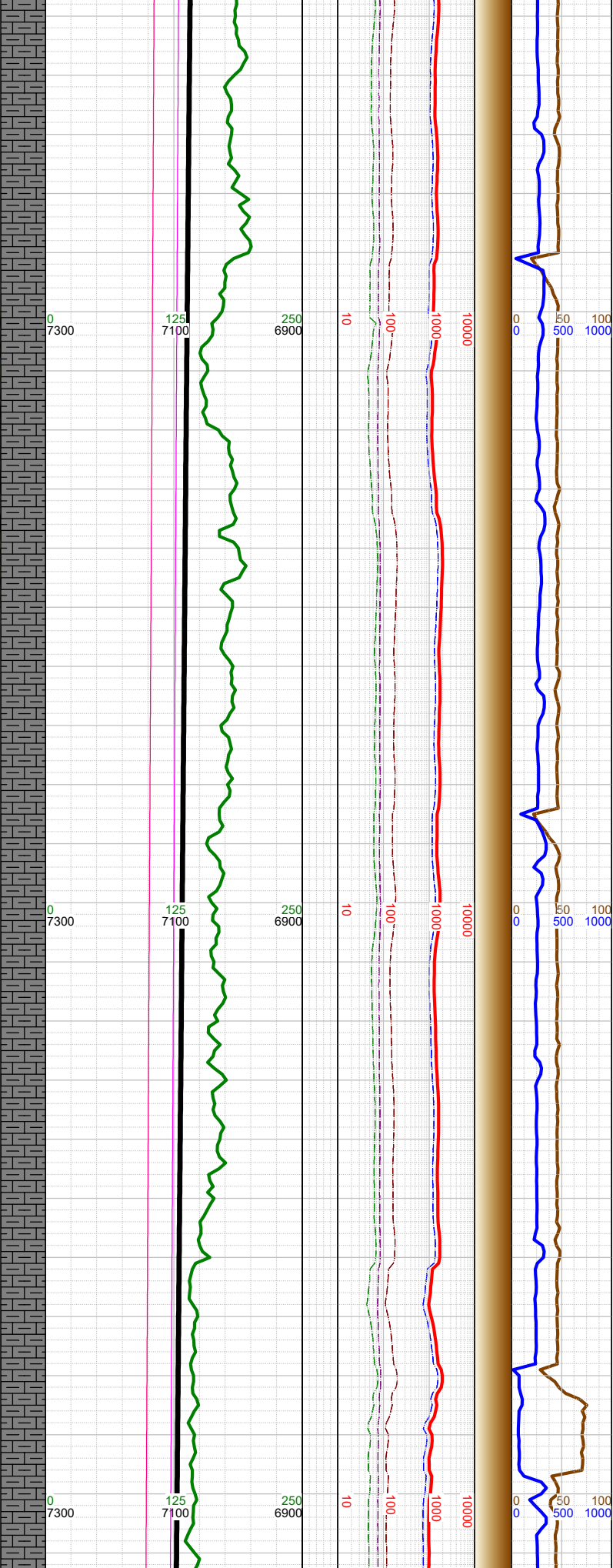
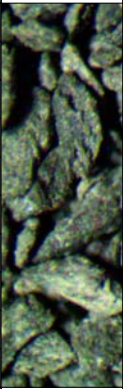
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VIS 37

-14844 INC
85.21, AZM
91.01, TVD
7051.17

-14750 MARL: dk gy-blk,
sbbiky-sbplty, sft-sbfrm,
mod calc, sl arg, CHK: med
gy, sft-sbfrm, sbbiky, mot,
v calc, rthy lstr; tr fos frags;
tr bent, tr pyr;



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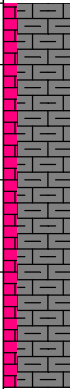
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-15223 INC
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89.28, TVD
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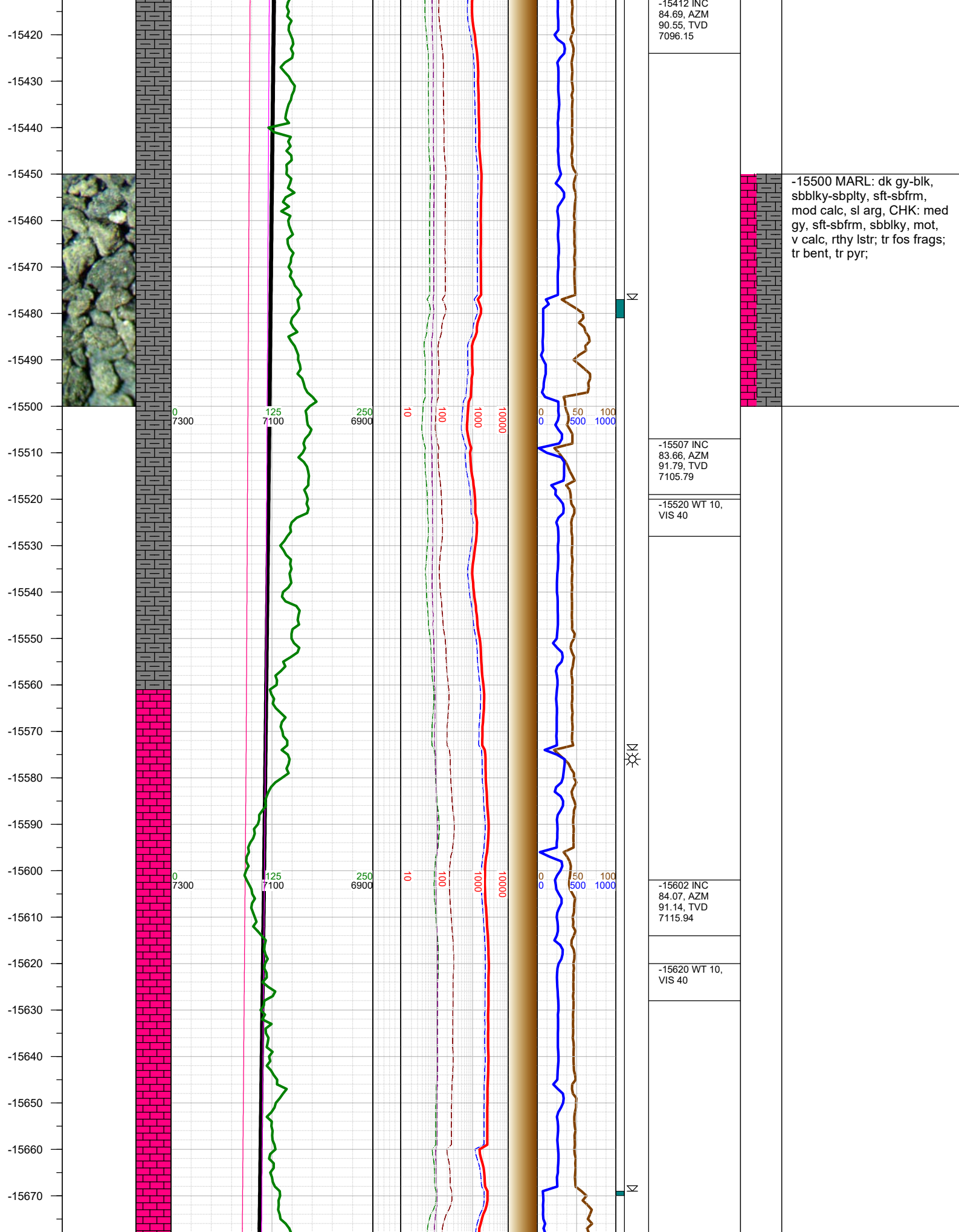
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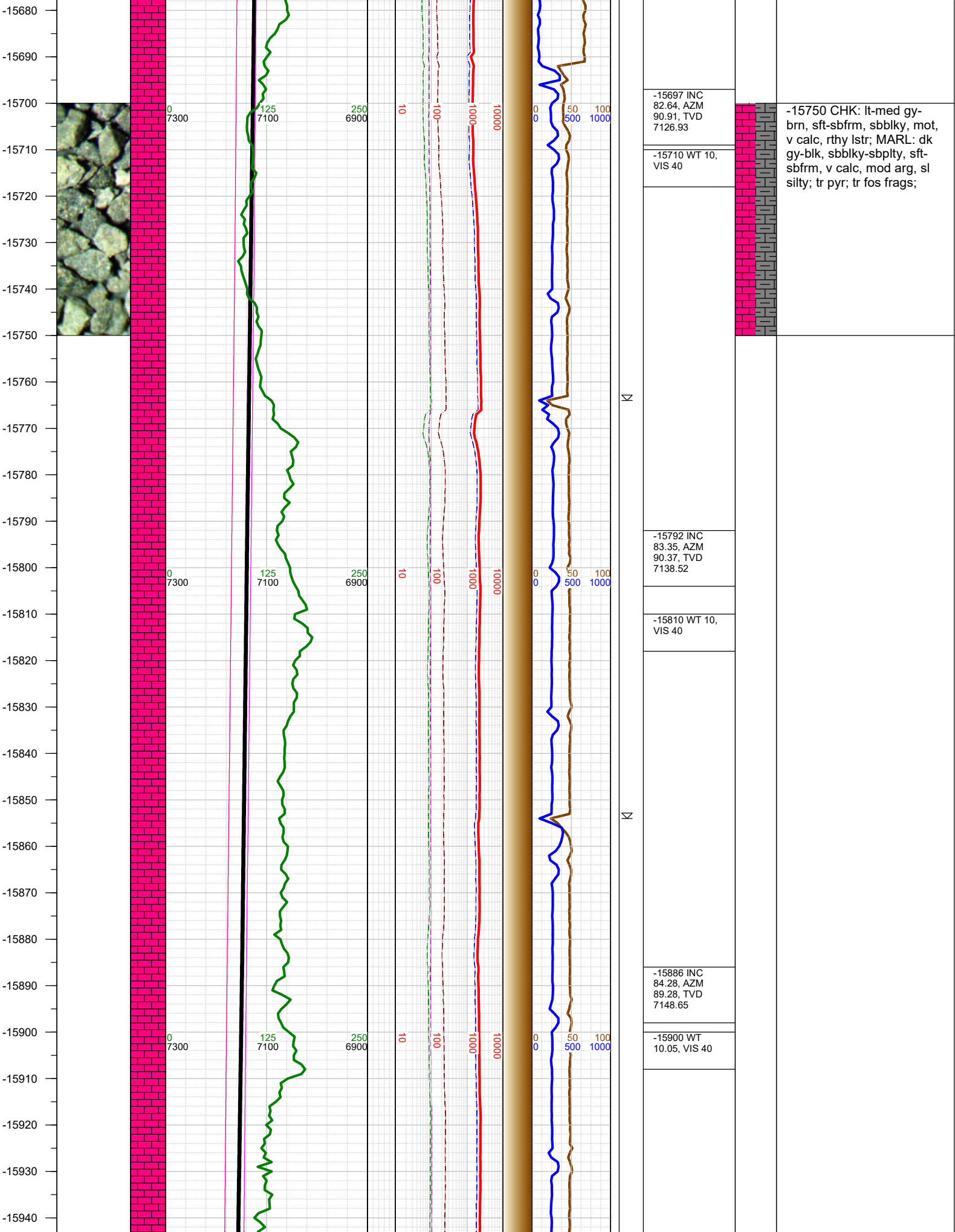
-15318 INC
86.03, AZM
89.63, TVD
7088.55

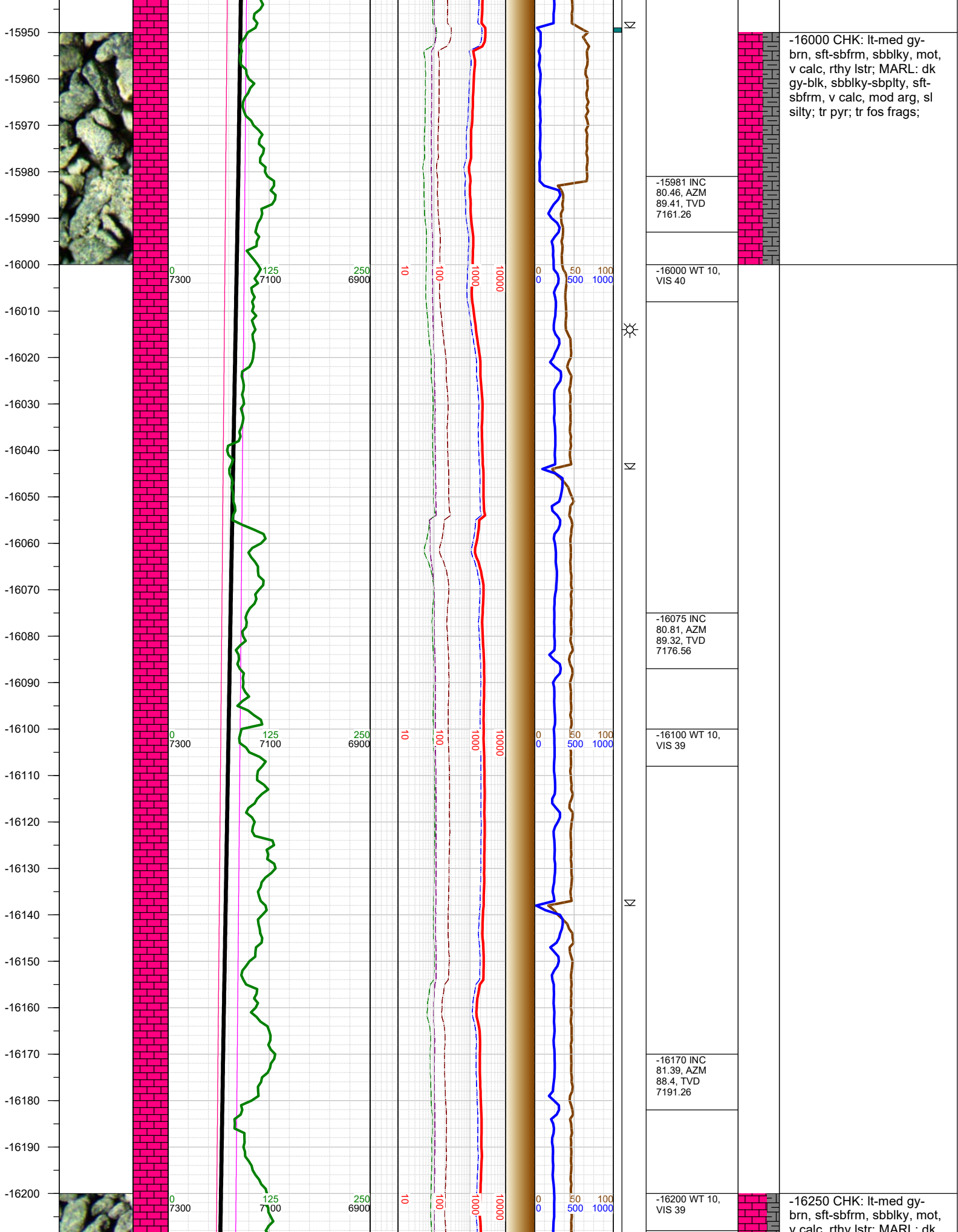
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VIS 40

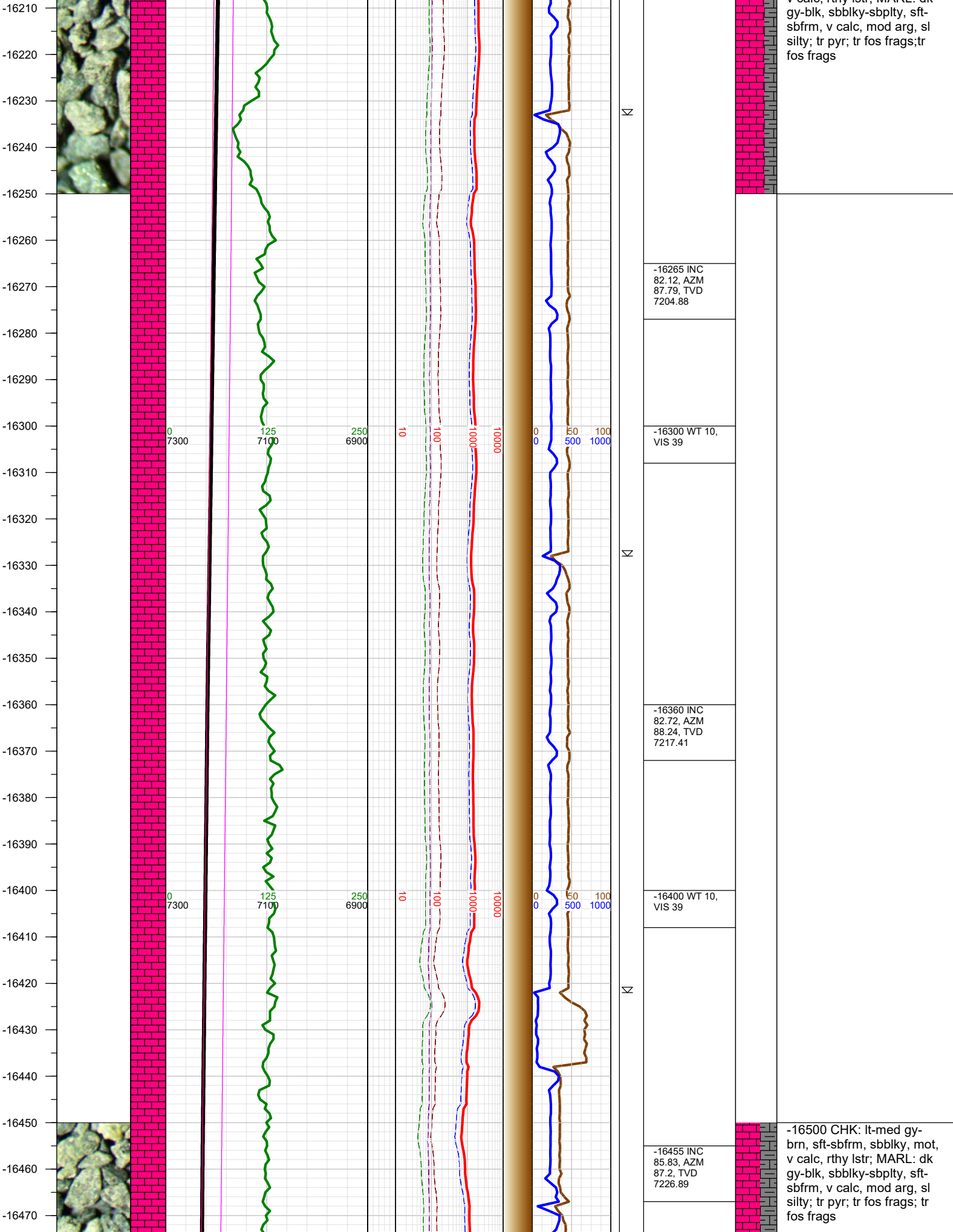


-15250 MARL: dk gy-blk,
sbbkly-sbplty, sft-sbfrm,
mod calc, sl arg, CHK: med
gy, sft-sbfrm, sbbkly, mot,
v calc, rthy lstr; tr fos frags;
tr bent, tr pyr;

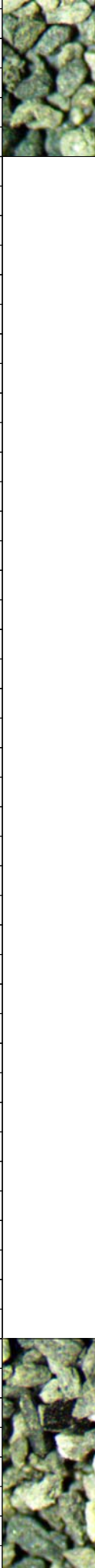








-16480
-16490
-16500
-16510
-16520
-16530
-16540
-16550
-16560
-16570
-16580
-16590
-16600
-16610
-16620
-16630
-16640
-16650
-16660
-16670
-16680
-16690
-16700
-16710
-16720
-16730



0
7300

125
7100

250
6900

10

100

1000

10000

0
0

50
500

100
1000

-16500 WT 10,
VIS 38

-16549 INC
86.41, AZM
87.43, TVD
7233.25

-16600 WT 10,
VIS 38

-16644 INC
87.7, AZM
87.04, TVD
7238.13

-16700 WT 10,
VIS 38

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

