

OPERATOR: **Bill Barrett Corp**

WELL NAME: **AEF 4-62-16-0560BH**

FIELD NAME: Wattenberg

DRILLING RIG: Nabors M37

API #: 05-123-39130

SCALE: 5"=100'

SURFACE HOLE: 250 FNL, 1137 FEL

BOTTOM HOLE: 500 FSL, 2460 FEL

LOCATION: NENE Sec 16, T4N, R62W



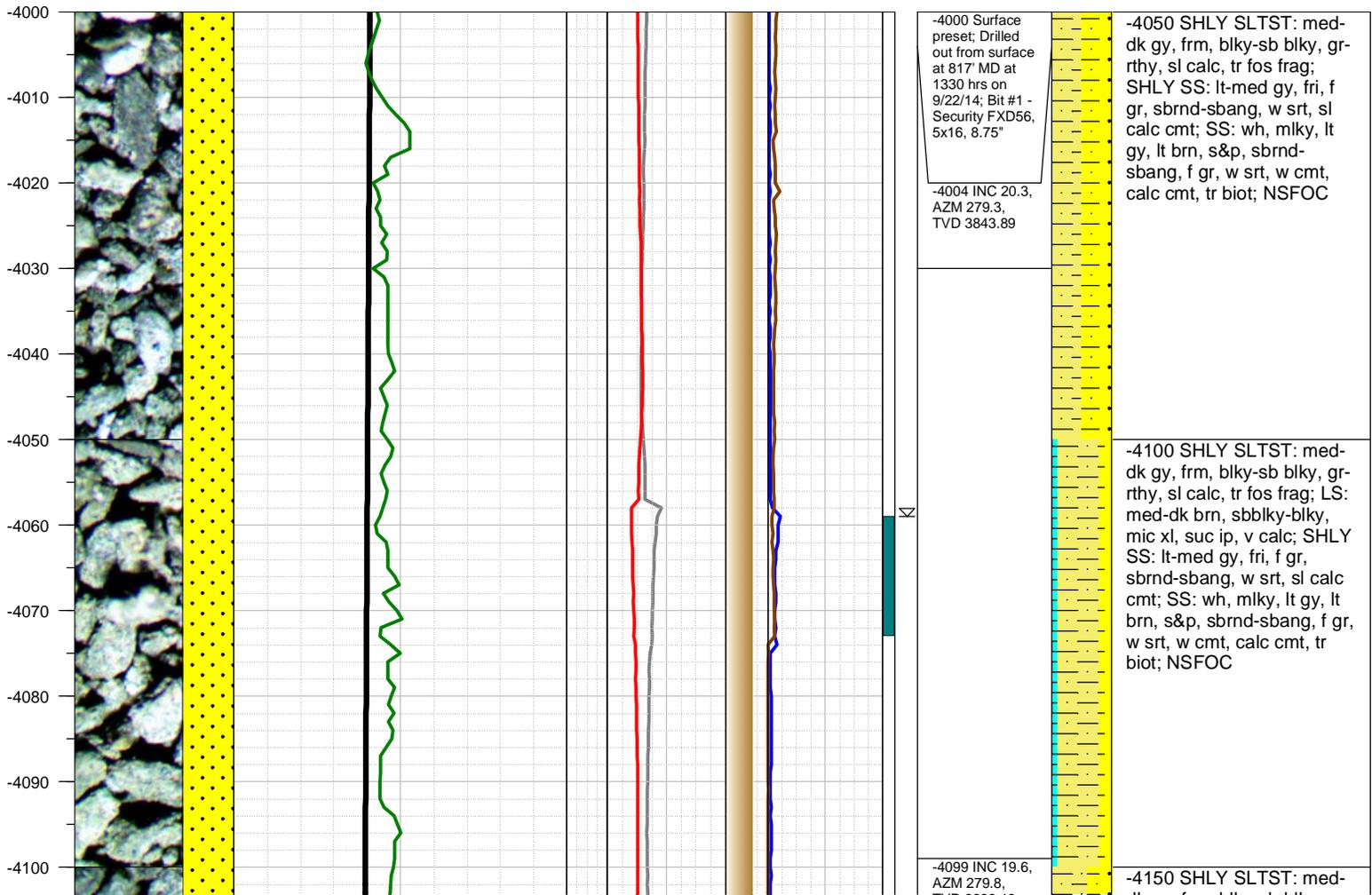
COUNTY: Weld
 STATE: Colorado
 GROUND ELEVATION: 4523'
 KELLY BUSHING: 4546'
 DRILLING FLUID: LSND
 TVD VS. MD: 6152.08/10900'
 SPUD DATE: September 22, 2014
 FGS BEGIN LOGGING: 4000'; September 22, 2014
 TD DATE: September 29, 2014
 DATES LOGGED: September 22, 2014-September 29, 2014
 DEPTHS LOGGED: 4000'-10900'
 LOGGER: Blue Spikes

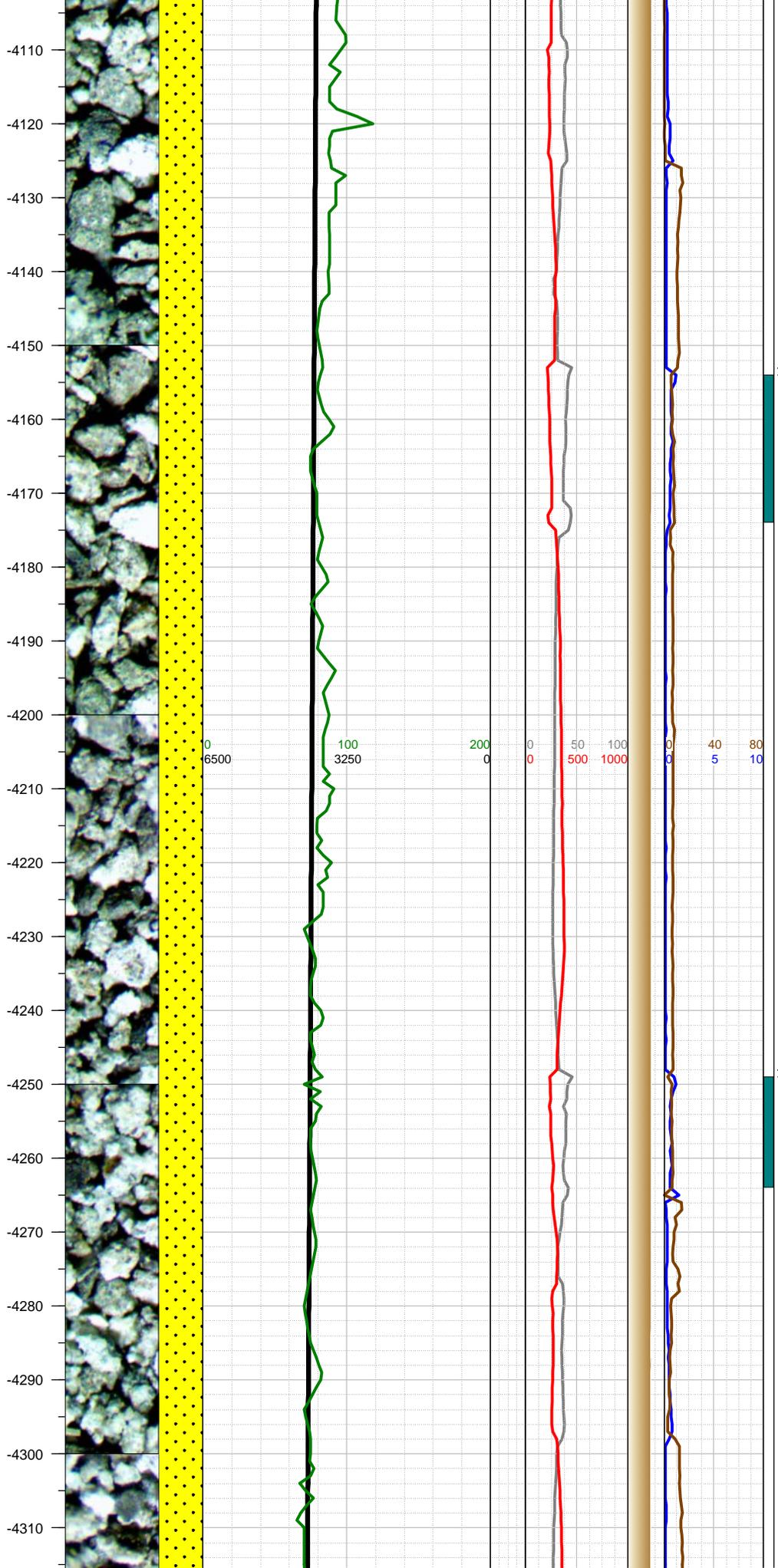
LEGEND

| | | | |
|--|------------------|--|-----------------|
| | CHALK | | SHALE |
| | LIMESTONE | | SILTY SHALE |
| | SHALY LIMESTONE | | SHALY SILTSTONE |
| | MARLSTONE | | SHALY SANDSTONE |
| | CALCAREOUS SHALE | | SANDSTONE |
| | DOLOMITE | | ANHYDRITE |

◀ FORMATION ≈ CONNECTION ▲ MIDNIGHT 🏠 NEW BIT ☀ GAS SHOW

| | | | | | | | | | |
|---------------------|--------------------|-----------|-------|----------------|--------------------|----------------|----------|------------|--------------------|
| MEASURED DEPTH (FT) | GEOSTEERING INTERP | | F < B | OIL SHOWS | MUD VOL. - 800 bbl | SLIDES SYMBOLS | COMMENTS | CUTTINGS % | SAMPLE DESCRIPTION |
| | MUDLOGGER INTERP | | | | | | | | |
| | TARGET TOP & BASE | | | | | | | | |
| | 6500 | TVD ft | 0 | GAS units 1000 | 0 | ROP min/ft | 10 | | |
| | 0 | GAMMA api | 200 | WETNESS % | 100 | WOB klbs | 80 | | |





TVD 3933.19

-4109 WT 9.3,
VIS 32

dk gy, frm, blk-sb blk, gr-rthy, sl calc, tr fos frag; SHLY SS: lt-med gy, fri, f gr, sbrnd-sbang, w srt, sl calc cmt; SS: wh, mlky, lt gy, lt brn, s&p, sbrnd-sbang, f gr, w srt, w cmt, calc cmt, tr biot; NSFOC

-4200 SHLY SLTST: med-dk gy, frm, blk-sb blk, gr-rthy, sl calc, tr fos frag; SS: wh, mlky, lt gy, lt brn, s&p, sbrnd-sbang, f gr, w srt, w cmt, calc cmt; SHLY SS: lt-med gy, fri, f gr, sbrnd-sbang, w srt, sl calc cmt; NSFOC

-4195 INC 20.4,
AZM 281, TVD 4023.4

-4250 SS: wh, mlky, lt gy, lt brn, s&p, sbrnd-sbang, f gr, w srt, w cmt, calc cmt; SHLY SLTST: med-dk gy, frm, blk-sb blk, gr-rthy, sl calc; SHLY SS: lt-med gy, fri, f gr, sbrnd-sbang, w srt, sl calc cmt; NSFOC

-4205 WT 9.5,
VIS 31

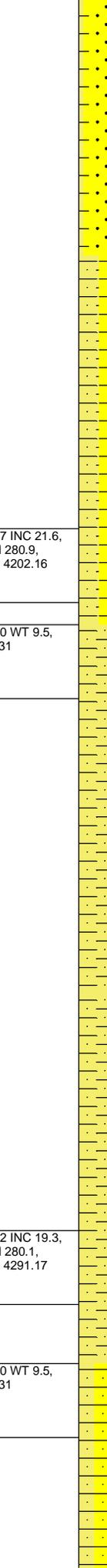
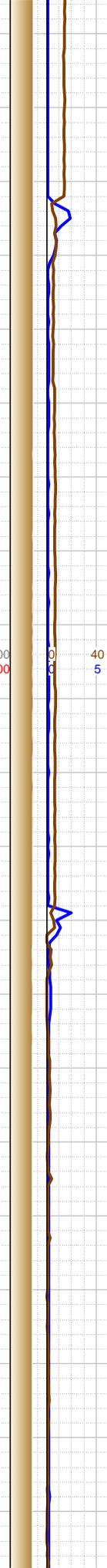
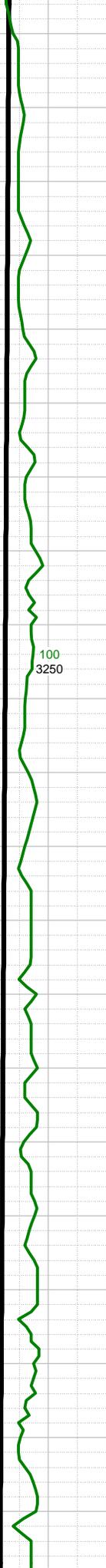
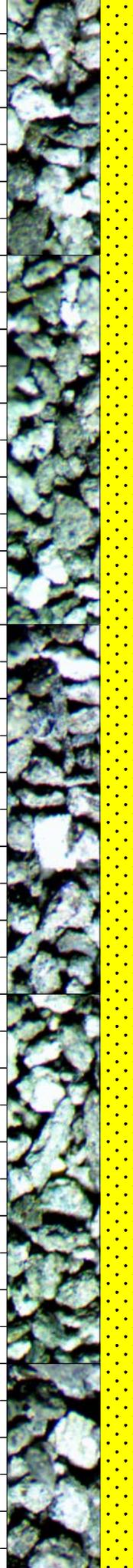
-4300 SS: wh, mlky, lt gy, lt brn, s&p, sbrnd-sbang, f gr, w srt, w cmt, calc cmt; SHLY SLTST: med-dk gy, frm, blk-sb blk, gr-rthy, sl calc; SHLY SS: lt-med gy, fri, f gr, sbrnd-sbang, w srt, sl calc cmt; NSFOC

-4291 INC 21.8,
AZM 280.8,
TVD 4112.96

-4300 WT 9.5,
VIS 31

-4350 SS: wh, mlky, lt gy, lt brn, s&p, sbrnd-sbang, f gr, w srt, w cmt, calc cmt; SHLY SLTST: med-dk gy, frm, blk-sb blk, gr-rthy, sl calc; SHLY SS: lt-med gy,

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-4500
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fri, f gr, sbrnd-sbang, w srt, sl calc cmt; NSFOC

-4400 SS: wh, mlky, lt gy, lt brn, s&p, sbrnd-sbang, f gr, w srt, w cmt, calc cmt; SHLY SLTST: med-dk gy, frm, blk-sb blk, gr-rthy, sl calc; SHLY SS: lt-med gy, fri, f gr, sbrnd-sbang, w srt, sl calc cmt; NSFOC

-4387 INC 21.6, AZM 280.9, TVD 4202.16

-4400 WT 9.5, VIS 31

-4450 SHLY SLTST: med-dk gy, frm, blk-sb blk, gr-rthy, sl calc; SS: wh, mlky, lt gy, lt brn, s&p, sbrnd-sbang, f gr, w srt, w cmt, calc cmt; SHLY SS: lt-med gy, fri, f gr, sbrnd-sbang, w srt, sl calc cmt; NSFOC

-4500 SS: wh, mlky, lt gy, lt brn, s&p, sbrnd-sbang, f gr, w srt, w cmt, calc cmt; SHLY SLTST: med-dk gy, frm, blk-sb blk, gr-rthy, sl calc, tr fos frag; SHLY SS: lt-med gy, fri, f gr, sbrnd-sbang, w srt, sl calc cmt; NSFOC

-4482 INC 19.3, AZM 280.1, TVD 4291.17

-4500 WT 9.5, VIS 31

-4550 SHLY SS: lt-med gy, fri, f gr, sbrnd-sbang, w srt, sl calc cmt; SS: wh, mlky, lt gy, lt brn, s&p, sbrnd-sbang, f gr, w srt, w cmt, calc cmt; SHLY SLTST: med-dk gy, frm, blk-sb blk, gr-rthy, sl calc, tr fos frag; NSFOC

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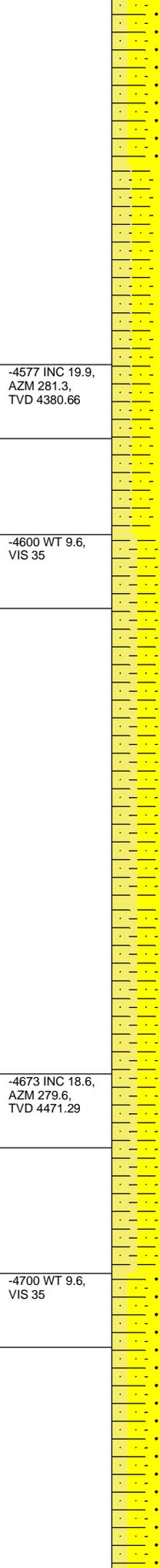
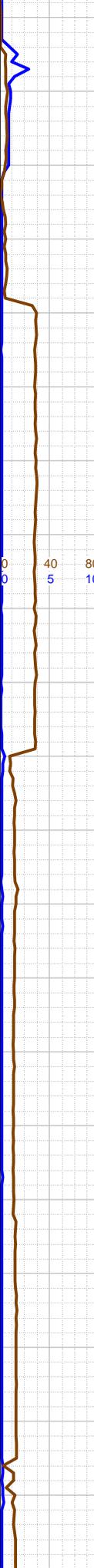
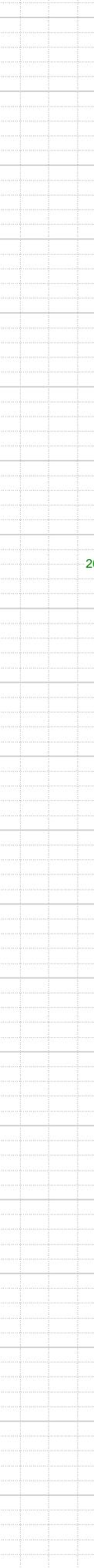
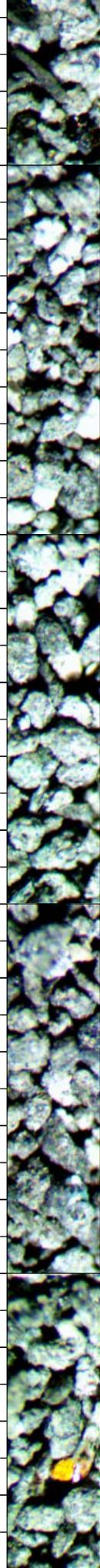
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-4577 INC 19.9,
AZM 281.3,
TVD 4380.66

-4600 WT 9.6,
VIS 35

-4673 INC 18.6,
AZM 279.6,
TVD 4471.29

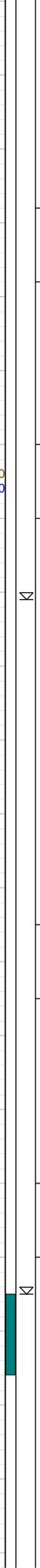
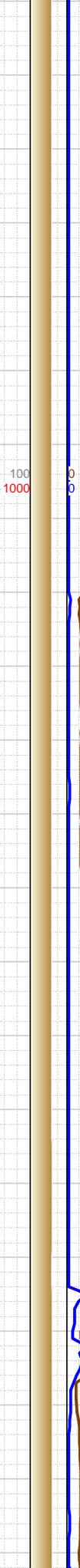
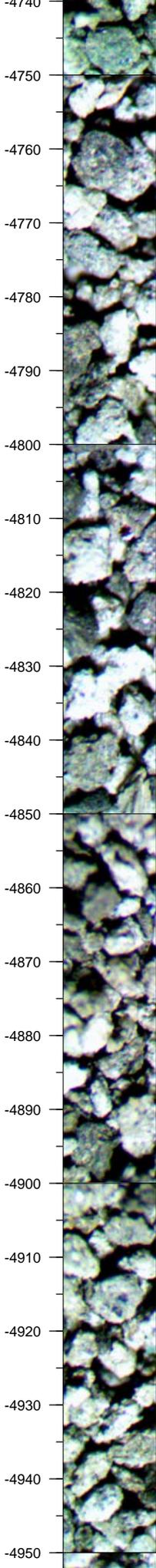
-4700 WT 9.6,
VIS 35

-4600 SHLY SLTST: med-
dk gy, frm, blkly-sb blkly, gr-
rthy, sl calc, tr fos frag;
SHLY SS: lt-med gy, fri, f
gr, sbrnd-sbang, w srt, sl
calc cmt; SS: wh, mlky, lt
gy, lt brn, s&p, sbrnd-
sbang, f gr, w srt, w cmt,
calc cmt; NSFOC

-4650 SHLY SLTST: med-
dk gy, frm, blkly-sb blkly, gr-
rthy, sl calc, tr fos frag;
SHLY SS: lt-med gy, fri, f
gr, sbrnd-sbang, w srt, sl
calc cmt; SS: wh, mlky, lt
gy, lt brn, s&p, sbrnd-
sbang, f gr, w srt, w cmt,
calc cmt; NSFOC

-4700 SHLY SLTST: med-
dk gy, frm, blkly-sb blkly, gr-
rthy, sl calc, tr fos frag;
SHLY SS: lt-med gy, fri, f
gr, sbrnd-sbang, w srt, sl
calc cmt; SS: wh, mlky, lt
gy, lt brn, s&p, sbrnd-
sbang, f gr, w srt, w cmt,
calc cmt; NSFOC

-4750 SHLY SLTST: med-
dk gy, frm, blkly-sb blkly, gr-
rthy, sl calc, tr fos frag;
SHLY SS: lt-med gy, fri, f
gr, sbrnd-sbang, w srt, sl
calc cmt; SS: wh, mlky, lt
gy, lt brn, s&p, sbrnd-
sbang, f gr, w srt, w cmt,
calc cmt; NSFOC



-4768 INC 17.4,
AZM 278, TVD
4561.64

-4800 WT 9.6,
VIS 35

-4865 INC 17.4,
AZM 277.2,
TVD 4654.2

-4900 WT 9.6,
VIS 35

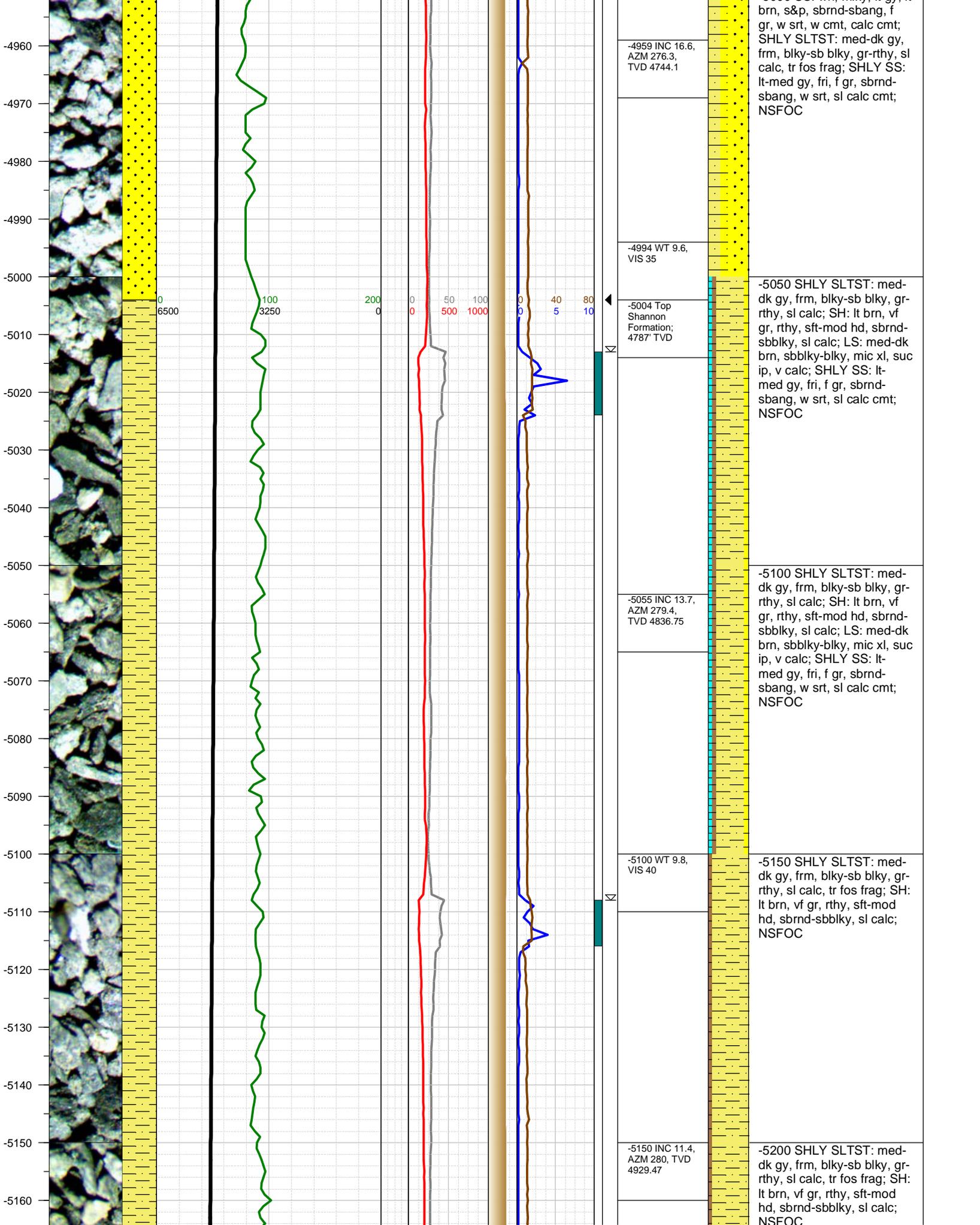
-4800 SS: wh, mlky, lt gy, lt
brn, s&p, sbrnd-sbang, f
gr, w srt, w cmt, calc cmt;
SHLY SS: lt-med gy, fri, f
gr, sbrnd-sbang, w srt, sl
calc cmt; SHLY SLTST:
med-dk gy, frm, blk-y-sb
blk-y, gr-rthy, sl calc, tr fos
frag; NSFOC

-4850 SS: wh, mlky, lt gy, lt
brn, s&p, sbrnd-sbang, f
gr, w srt, w cmt, calc cmt;
SHLY SS: lt-med gy, fri, f
gr, sbrnd-sbang, w srt, sl
calc cmt; SHLY SLTST:
med-dk gy, frm, blk-y-sb
blk-y, gr-rthy, sl calc, tr fos
frag; NSFOC

-4900 SS: wh, mlky, lt gy, lt
brn, s&p, sbrnd-sbang, f
gr, w srt, w cmt, calc cmt;
SHLY SS: lt-med gy, fri, f
gr, sbrnd-sbang, w srt, sl
calc cmt; SHLY SLTST:
med-dk gy, frm, blk-y-sb
blk-y, gr-rthy, sl calc, tr fos
frag; NSFOC

-4950 SS: wh, mlky, lt gy, lt
brn, s&p, sbrnd-sbang, f
gr, w srt, w cmt, calc cmt;
SHLY SS: lt-med gy, fri, f
gr, sbrnd-sbang, w srt, sl
calc cmt; SHLY SLTST:
med-dk gy, frm, blk-y-sb
blk-y, gr-rthy, sl calc, tr fos
frag; NSFOC

-5000 SS: wh, mlky, lt av, lt



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-5160

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6500 3250 0 0 500 1000 0 5 10

-4959 INC 16.6,
AZM 276.3,
TVD 4744.1

-4994 WT 9.6,
VIS 35

-5004 Top
Shannon
Formation;
4787' TVD

-5055 INC 13.7,
AZM 279.4,
TVD 4836.75

-5100 WT 9.8,
VIS 40

-5150 INC 11.4,
AZM 280, TVD
4929.47

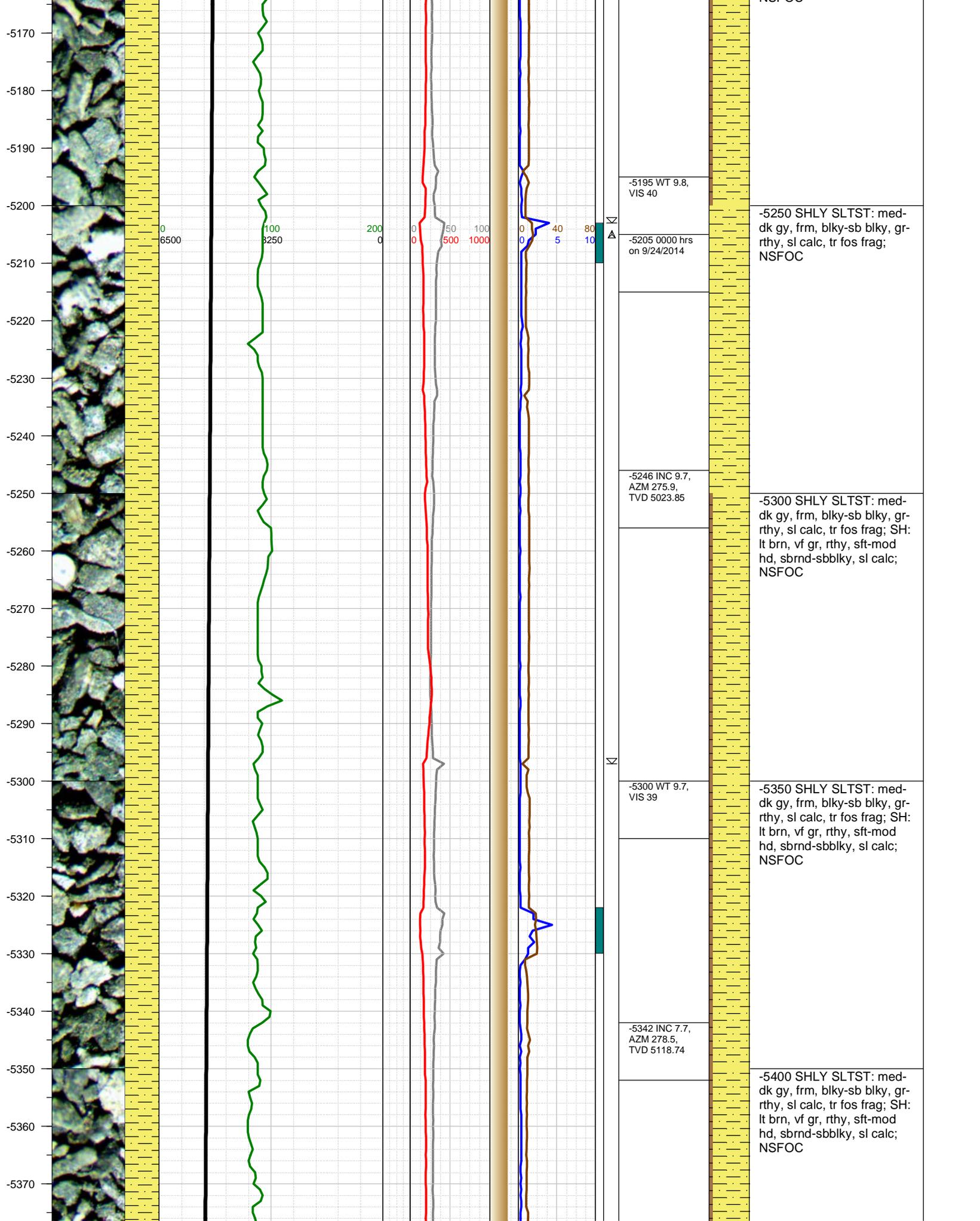
brn, s&p, sbrnd-sbang, f gr, w srt, w cmt, calc cmt; SHLY SLTST: med-dk gy, frm, blkly-sb blkly, gr-rthy, sl calc, tr fos frag; SHLY SS: lt-med gy, fri, f gr, sbrnd-sbang, w srt, sl calc cmt; NSFOC

-5050 SHLY SLTST: med-dk gy, frm, blkly-sb blkly, gr-rthy, sl calc; SH: lt brn, vf gr, rthy, sft-mod hd, sbrnd-sbbkly, sl calc; LS: med-dk brn, sbbkly-blky, mic xl, suc ip, v calc; SHLY SS: lt-med gy, fri, f gr, sbrnd-sbang, w srt, sl calc cmt; NSFOC

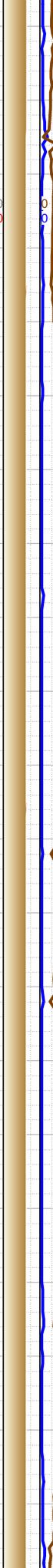
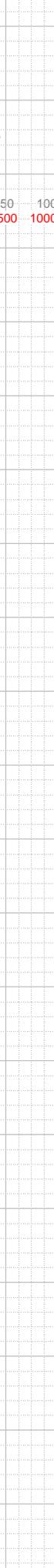
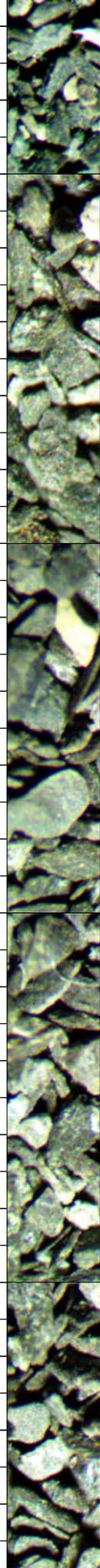
-5100 SHLY SLTST: med-dk gy, frm, blkly-sb blkly, gr-rthy, sl calc; SH: lt brn, vf gr, rthy, sft-mod hd, sbrnd-sbbkly, sl calc; LS: med-dk brn, sbbkly-blky, mic xl, suc ip, v calc; SHLY SS: lt-med gy, fri, f gr, sbrnd-sbang, w srt, sl calc cmt; NSFOC

-5150 SHLY SLTST: med-dk gy, frm, blkly-sb blkly, gr-rthy, sl calc, tr fos frag; SH: lt brn, vf gr, rthy, sft-mod hd, sbrnd-sbbkly, sl calc; NSFOC

-5200 SHLY SLTST: med-dk gy, frm, blkly-sb blkly, gr-rthy, sl calc, tr fos frag; SH: lt brn, vf gr, rthy, sft-mod hd, sbrnd-sbbkly, sl calc; NSFOC



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-5400 WT 9.8,
VIS 39

-5450 SHLY SLTST: med-
dk gy, frm, blk-sb blk, gr-
rthy, sl calc, tr fos frag; SH:
lt brn, vf gr, rthy, sft-mod
hd, sbrnd-sbblk, sl calc;
NSFOC

-5437 INC 6.5,
AZM 279.4,
TVD 5213.01

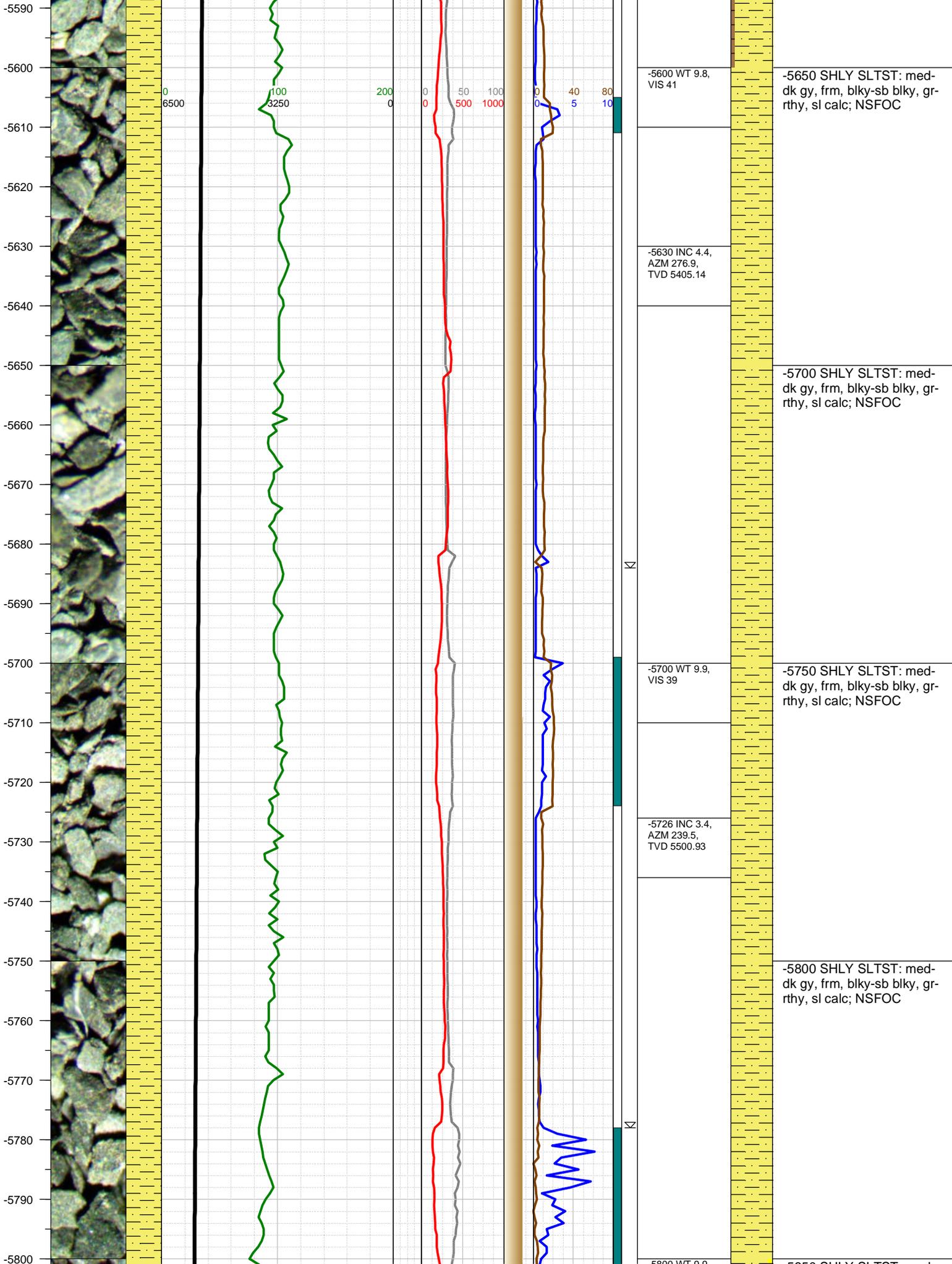
-5500 SHLY SLTST: med-
dk gy, frm, blk-sb blk, gr-
rthy, sl calc, tr fos frag; SH:
lt brn, vf gr, rthy, sft-mod
hd, sbrnd-sbblk, sl calc;
NSFOC

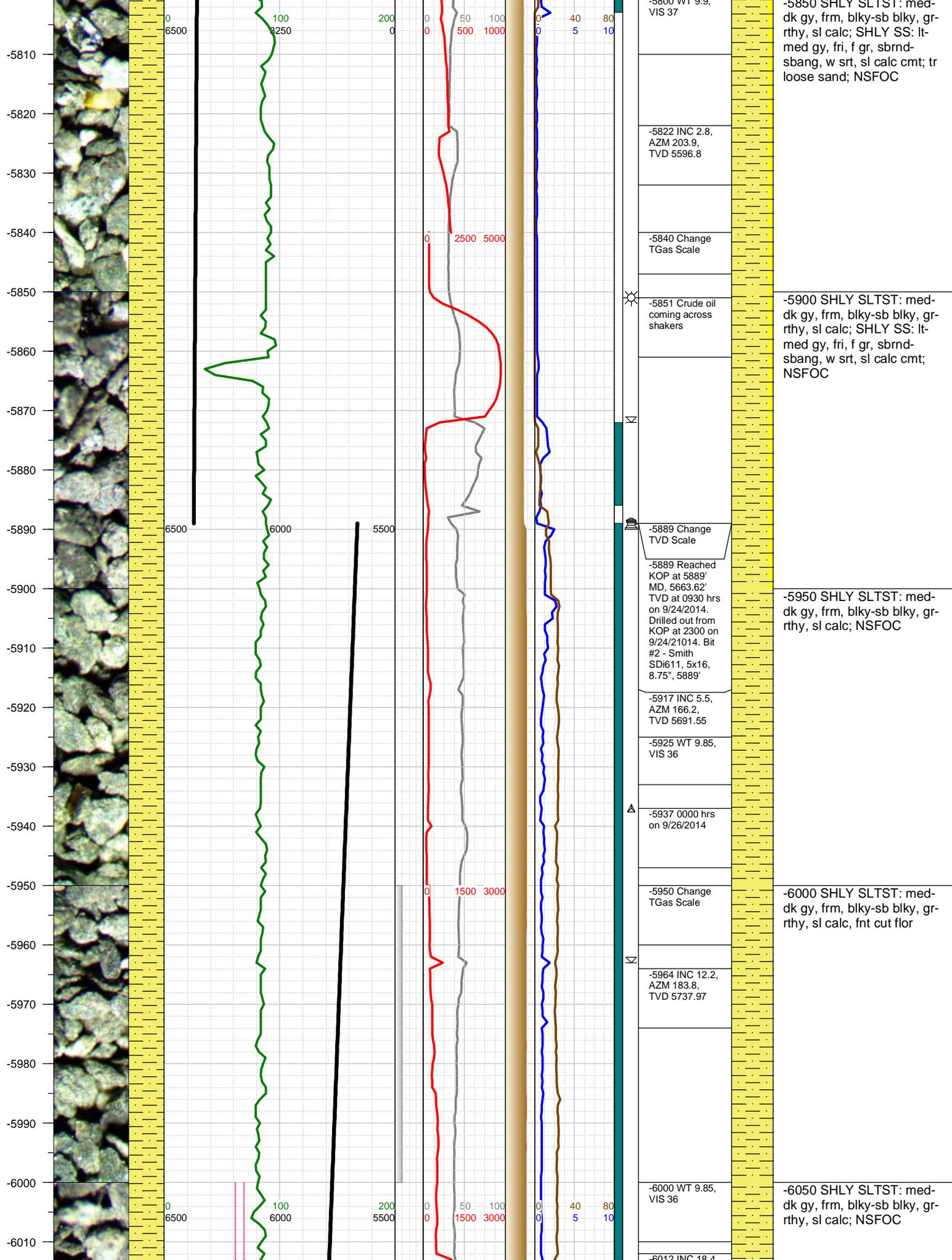
-5500 WT 9.8,
VIS 39

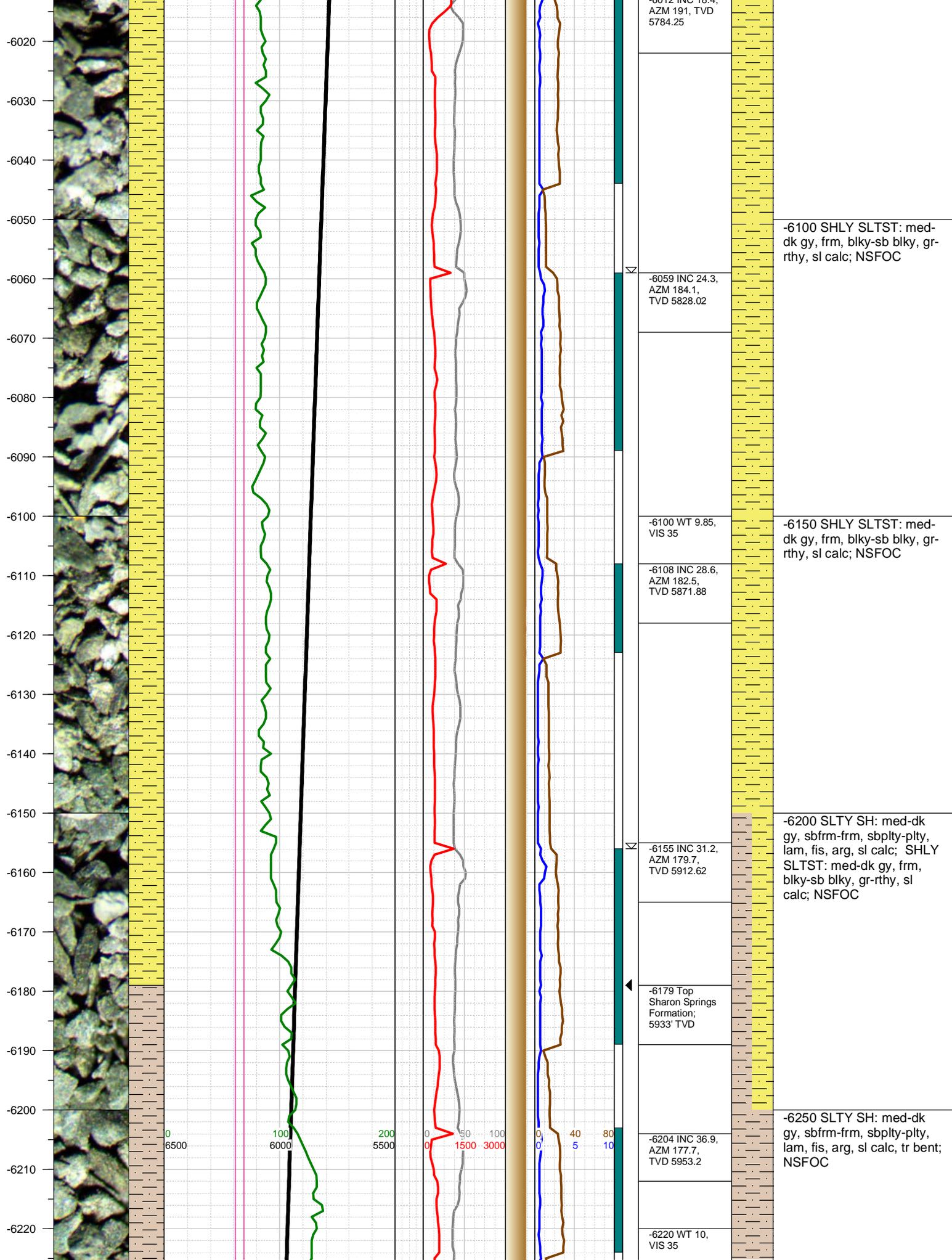
-5550 SHLY SLTST: med-
dk gy, frm, blk-sb blk, gr-
rthy, sl calc, SH: lt brn, vf
gr, rthy, sft-mod hd, sbrnd-
sbbk, sl calc; NSFOC

-5533 INC 5.4,
AZM 282.2,
TVD 5308.49

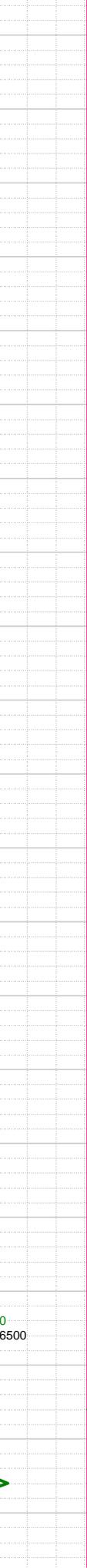
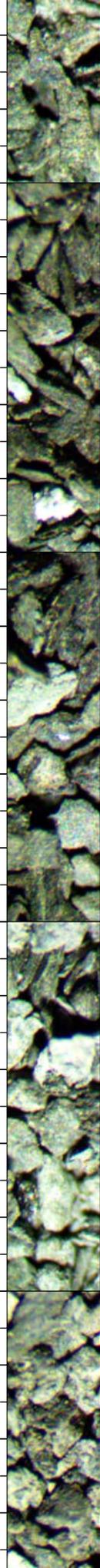
-5600 SHLY SLTST: med-
dk gy, frm, blk-sb blk, gr-
rthy, sl calc, tr fos frag; SH:
lt brn, vf gr, rthy, sft-mod
hd, sbrnd-sbblk, sl calc;
NSFOC







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-6430



▽
-6251 INC 41.3,
AZM 177.6,
TVD 5989.67

-6300 SLTY SH: med-dk
gy, sbfrm-frm, sbply-pty,
lam, fis, arg, sl calc, tr bent
w/dissm pyr; NSFOC

-6299 INC 45.4,
AZM 177.8,
TVD 6024.57

-6350 MARL: dk gy-blk,
sbbly-sbply, sft-sbfrm,
mod calc, sl arg; SLTY SH:
med-dk gy, sbfrm-frm,
sbply-pty, lam, fis, arg, sl
calc, frq bent w/dissm pyr;
fnt cut flor

-6310 WT 10,
VIS 39

◀
-6321 Top
Niobrara
Formation;
6040' TVD

▽
-6346 INC 50.4,
AZM 178, TVD
6056.07

-6400 CHK: lt-med gy, sft-
sbfrm, sbbly, mot, v calc,
rthy lstr; MARL: dk gy-blk,
sbbly-sbply, sft-sbfrm, v
calc, sl arg, tr bent; bri cut
flor w/streaming, fair lt blu
res cut

◀
-6388 Top A
Chalk
Formation;
6081' TVD

-6394 INC 54.5,
AZM 177.2,
TVD 6085.31

-6450 MARL: dk gy-blk,
sbbly-sbply, sft-sbfrm, v
calc, sl arg; CHK: lt-med
gy, sft-sbfrm, sbbly, mot, v
calc, rthy lstr; bri cut flor
w/streaming, fair lt blu res
cut

-6410 WT 9.9,
VIS 35

◀
-6422 Top A
Marl Formation;
6101' TVD

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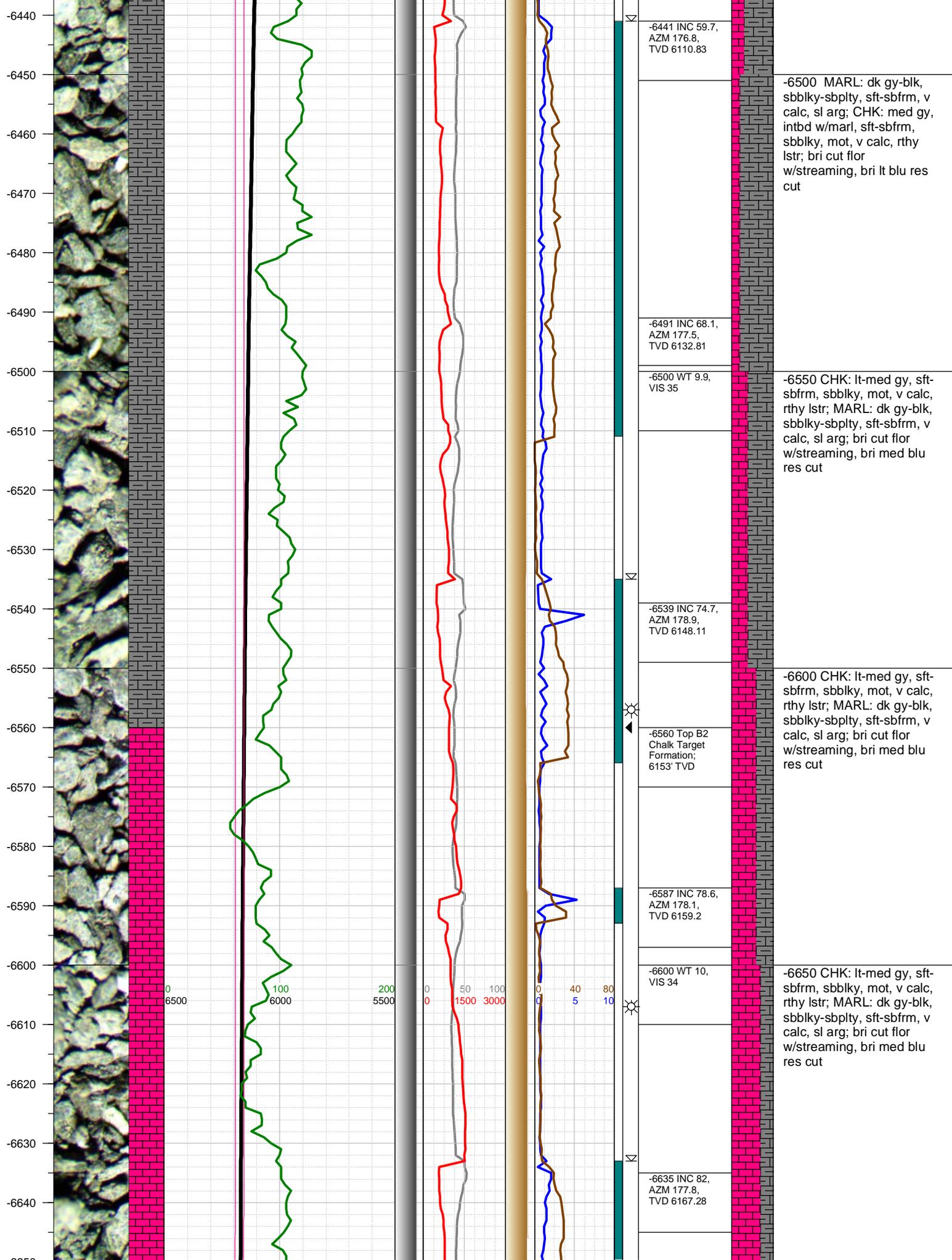
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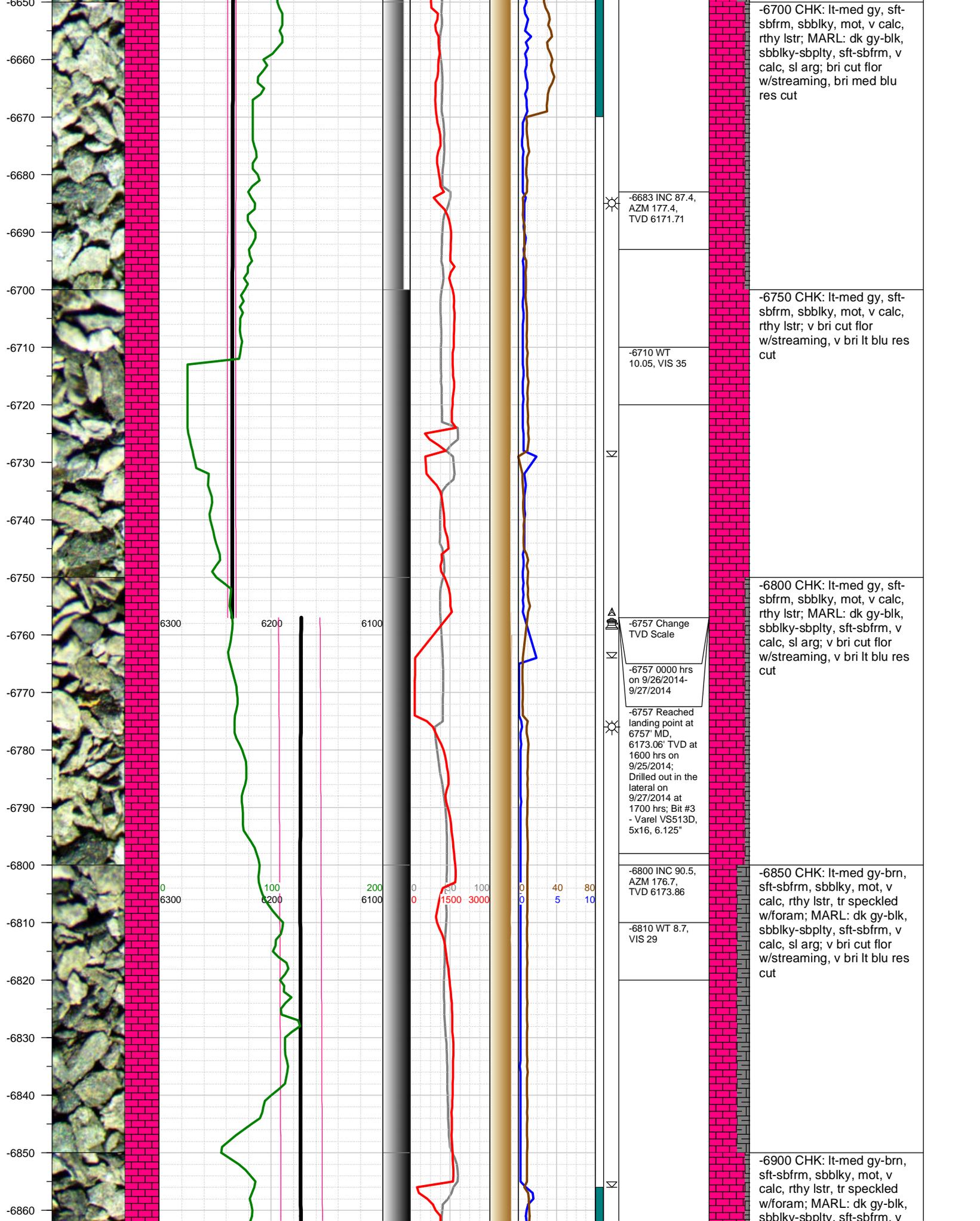
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-6700 CHK: lt-med gy, sft-sbfrm, sbbkly, mot, v calc, rthy lstr; MARL: dk gy-blk, sbbkly-sbplty, sft-sbfrm, v calc, sl arg; bri cut flor w/streaming, bri med blu res cut

-6683 INC 87.4, AZM 177.4, TVD 6171.71

-6750 CHK: lt-med gy, sft-sbfrm, sbbkly, mot, v calc, rthy lstr; v bri cut flor w/streaming, v bri lt blu res cut

-6710 WT 10.05, VIS 35

-6800 CHK: lt-med gy, sft-sbfrm, sbbkly, mot, v calc, rthy lstr; MARL: dk gy-blk, sbbkly-sbplty, sft-sbfrm, v calc, sl arg; v bri cut flor w/streaming, v bri lt blu res cut

-6757 Change TVD Scale
-6757 0000 hrs on 9/26/2014-9/27/2014

-6757 Reached landing point at 6757' MD, 6173.06' TVD at 1600 hrs on 9/25/2014; Drilled out in the lateral on 9/27/2014 at 1700 hrs; Bit #3 - Varel VS513D, 5x16, 6.125"

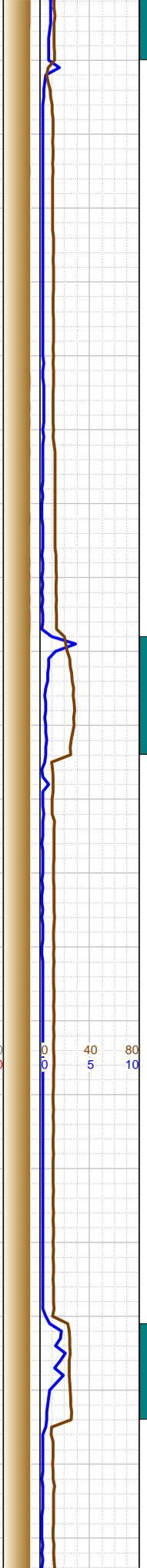
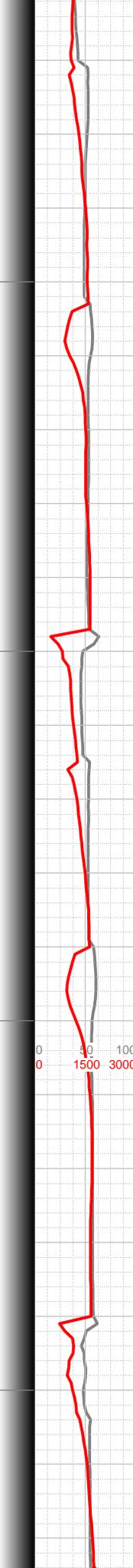
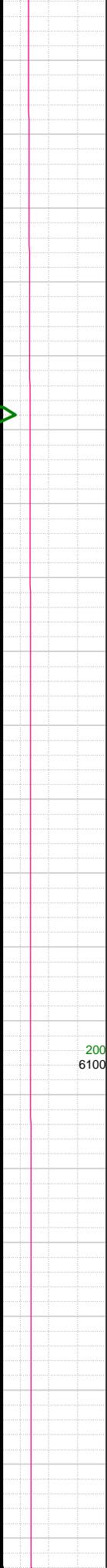
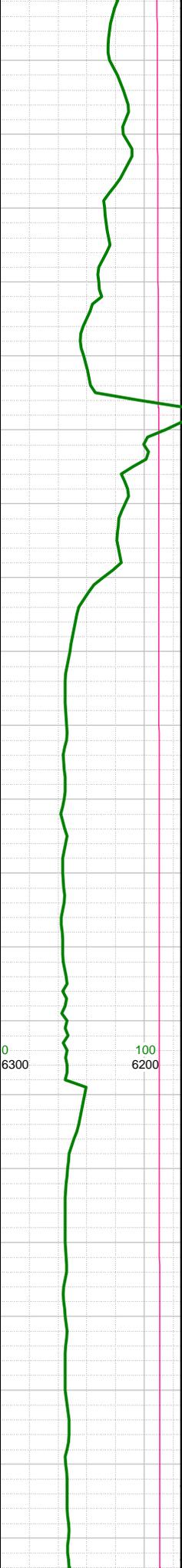
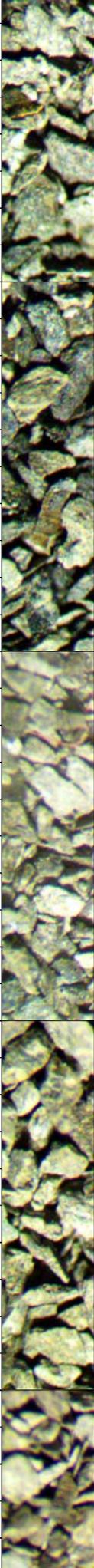
-6800 INC 90.5, AZM 176.7, TVD 6173.86

-6850 CHK: lt-med gy-brn, sft-sbfrm, sbbkly, mot, v calc, rthy lstr, tr speckled w/foram; MARL: dk gy-blk, sbbkly-sbplty, sft-sbfrm, v calc, sl arg; v bri cut flor w/streaming, v bri lt blu res cut

-6810 WT 8.7, VIS 29

-6900 CHK: lt-med gy-brn, sft-sbfrm, sbbkly, mot, v calc, rthy lstr, tr speckled w/foram; MARL: dk gy-blk, sbbkly-sbplty, sft-sbfrm, v

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-6893 INC 90.3,
AZM 177.8,
TVD 6173.21

-6910 WT 8.6,
VIS 29

-6987 INC 89.6,
AZM 179, TVD
6173.29

-7000 WT 8.6,
VIS 29

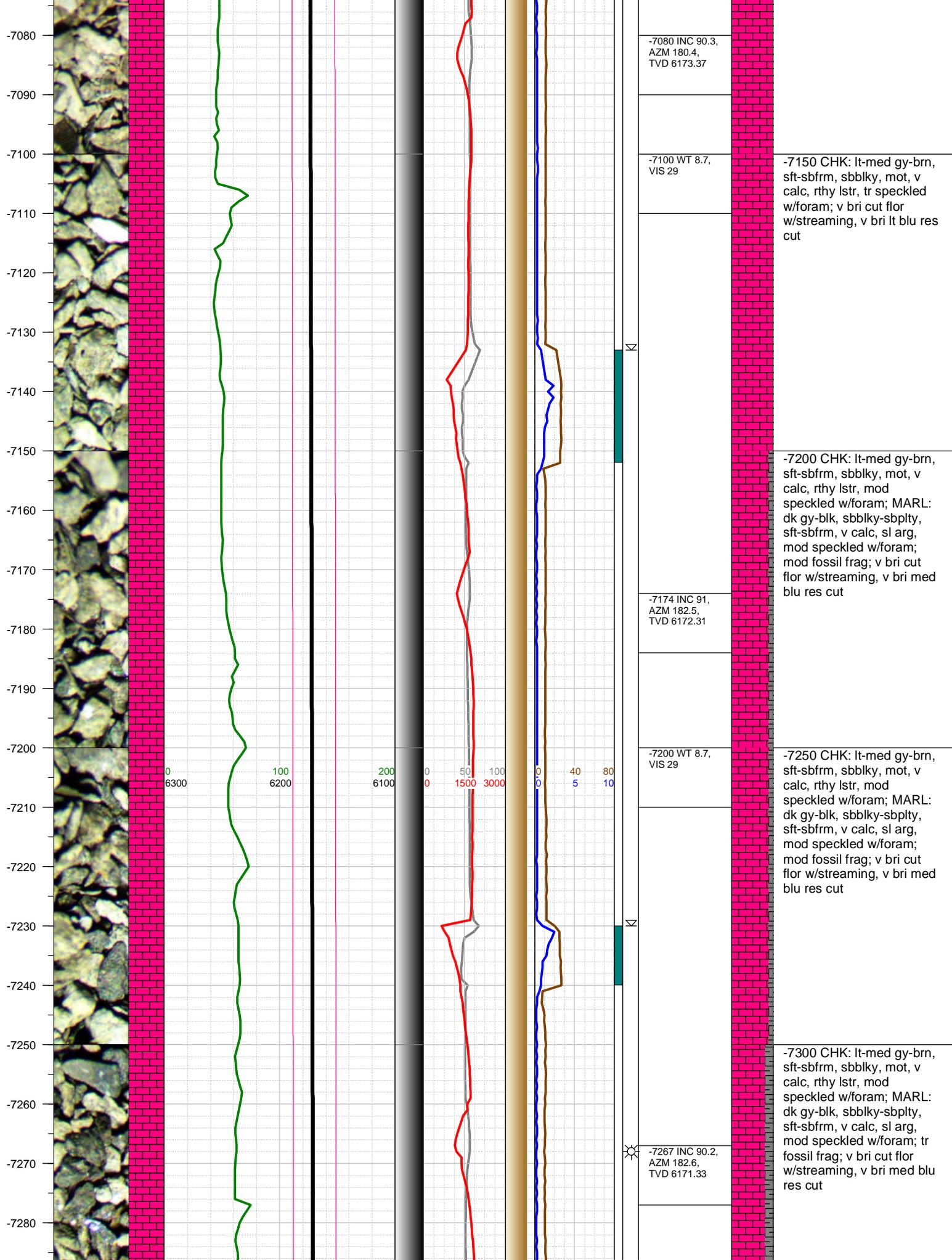
calc, sl arg; v bri cut flor
w/streaming, v bri lt blu res
cut

-6950 CHK: lt-med gy-brn,
sft-sbfrm, sbbkly, mot, v
calc, rthy lstr, mod
speckled w/foram; MARL:
dk gy-blk, sbbkly-sbplty,
sft-sbfrm, v calc, sl arg; v
bri cut flor w/streaming, v
bri lt blu res cut

-7000 CHK: lt-med gy-brn,
sft-sbfrm, sbbkly, mot, v
calc, rthy lstr, frq speckled
w/foram; v bri cut flor
w/streaming, v bri lt blu res
cut

-7050 CHK: lt-med gy-brn,
sft-sbfrm, sbbkly, mot, v
calc, rthy lstr, tr speckled
w/foram; v bri cut flor
w/streaming, v bri lt blu res
cut

-7100 CHK: lt-med gy-brn,
sft-sbfrm, sbbkly, mot, v
calc, rthy lstr, tr speckled
w/foram; v bri cut flor
w/streaming, v bri lt blu res
cut



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-7080 INC 90.3,
AZM 180.4,
TVD 6173.37

-7100 WT 8.7,
VIS 29

-7174 INC 91,
AZM 182.5,
TVD 6172.31

-7200 WT 8.7,
VIS 29

☀ -7267 INC 90.2,
AZM 182.6,
TVD 6171.33

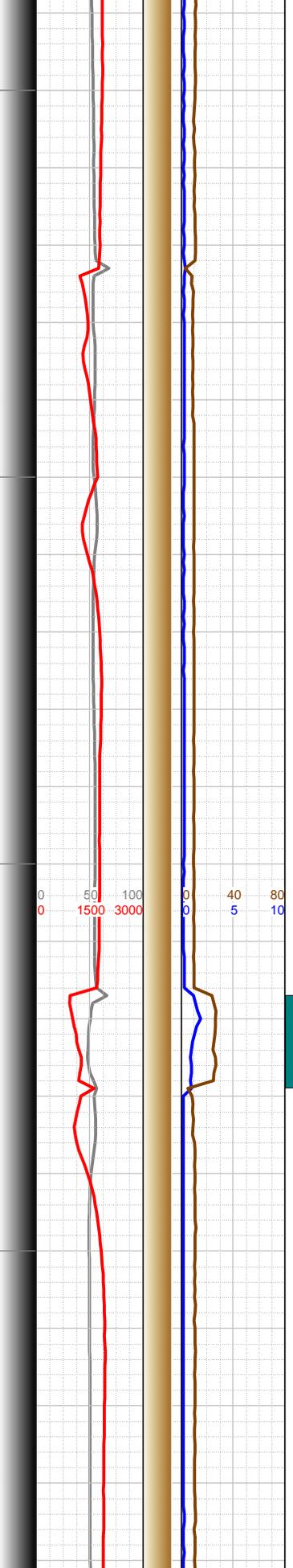
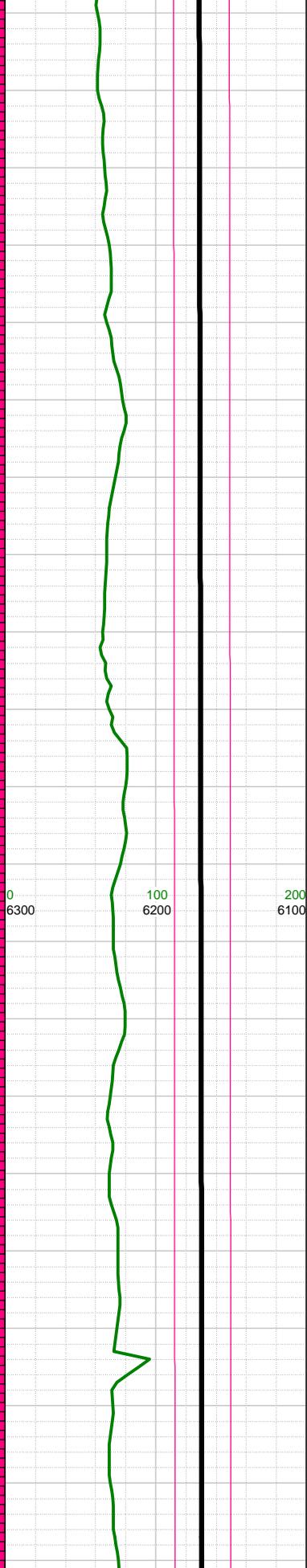
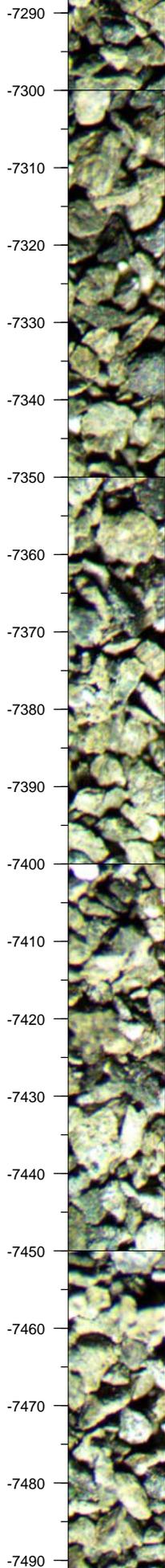
-7150 CHK: lt-med gy-brn,
sft-sbfrm, sbbkly, mot, v
calc, rthy lstr, tr speckled
w/foram; v bri cut flor
w/streaming, v bri lt blu res
cut

-7200 CHK: lt-med gy-brn,
sft-sbfrm, sbbkly, mot, v
calc, rthy lstr, mod
speckled w/foram; MARL:
dk gy-blk, sbbkly-sbplty,
sft-sbfrm, v calc, sl arg,
mod speckled w/foram;
mod fossil frag; v bri cut
flor w/streaming, v bri med
blu res cut

-7250 CHK: lt-med gy-brn,
sft-sbfrm, sbbkly, mot, v
calc, rthy lstr, mod
speckled w/foram; MARL:
dk gy-blk, sbbkly-sbplty,
sft-sbfrm, v calc, sl arg,
mod speckled w/foram;
mod fossil frag; v bri cut
flor w/streaming, v bri med
blu res cut

-7300 CHK: lt-med gy-brn,
sft-sbfrm, sbbkly, mot, v
calc, rthy lstr, mod
speckled w/foram; MARL:
dk gy-blk, sbbkly-sbplty,
sft-sbfrm, v calc, sl arg,
mod speckled w/foram; tr
fossil frag; v bri cut flor
w/streaming, v bri med blu
res cut

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6300 6200 6100 0 1500 3000 0 5 10



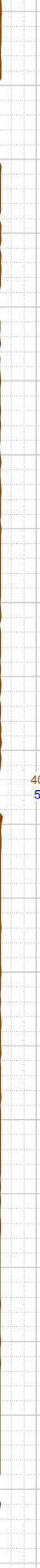
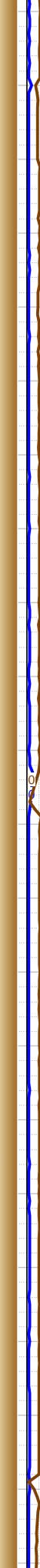
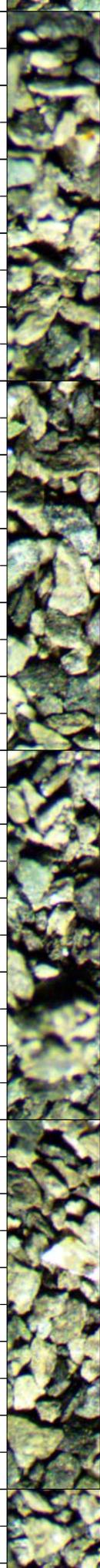
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| -7300 WT 8.7, VIS 29 |
| -7361 INC 90.9, AZM 182.3, TVD 6170.43 |
| -7400 WT 8.7, VIS 29 |
| -7420 0000 hrs on 9/28/2014 |
| -7455 INC 90.1, AZM 182.6, TVD 6169.61 |

-7350 CHK: lt-med gy-brn, sft-sbfrm, sbbkly, mot, v calc, rthy lstr, mod speckled w/foram; MARL: dk gy-blk, sbbkly-sbplty, sft-sbfrm, v calc, sl arg, mod speckled w/foram; tr fossil frag; v bri cut flr w/streaming, v bri med blu res cut

-7400 CHK: lt-med gy-brn, sft-sbfrm, sbbkly, mot, v calc, rthy lstr, mod speckled w/foram; MARL: dk gy-blk, sbbkly-sbplty, sft-sbfrm, v calc, sl arg, mod speckled w/foram; tr fossil frag; v bri cut flr w/streaming, v bri lt blu res cut

-7450 CHK: lt-med gy-brn, sft-sbfrm, sbbkly, mot, v calc, rthy lstr, mod speckled w/foram; MARL: dk gy-blk, sbbkly-sbplty, sft-sbfrm, v calc, sl arg, mod speckled w/foram; tr fossil frag; v bri cut flr w/streaming, v bri lt blu res cut

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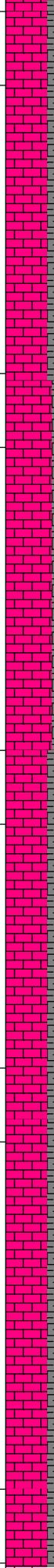
-7500 WT 8.7,
VIS 29

-7549 INC 90,
AZM 181.7,
TVD 6169.53

-7600 WT 8.7,
VIS 29

-7643 INC 90.2,
AZM 183, TVD
6169.36

-7700 WT 8.7,
VIS 29

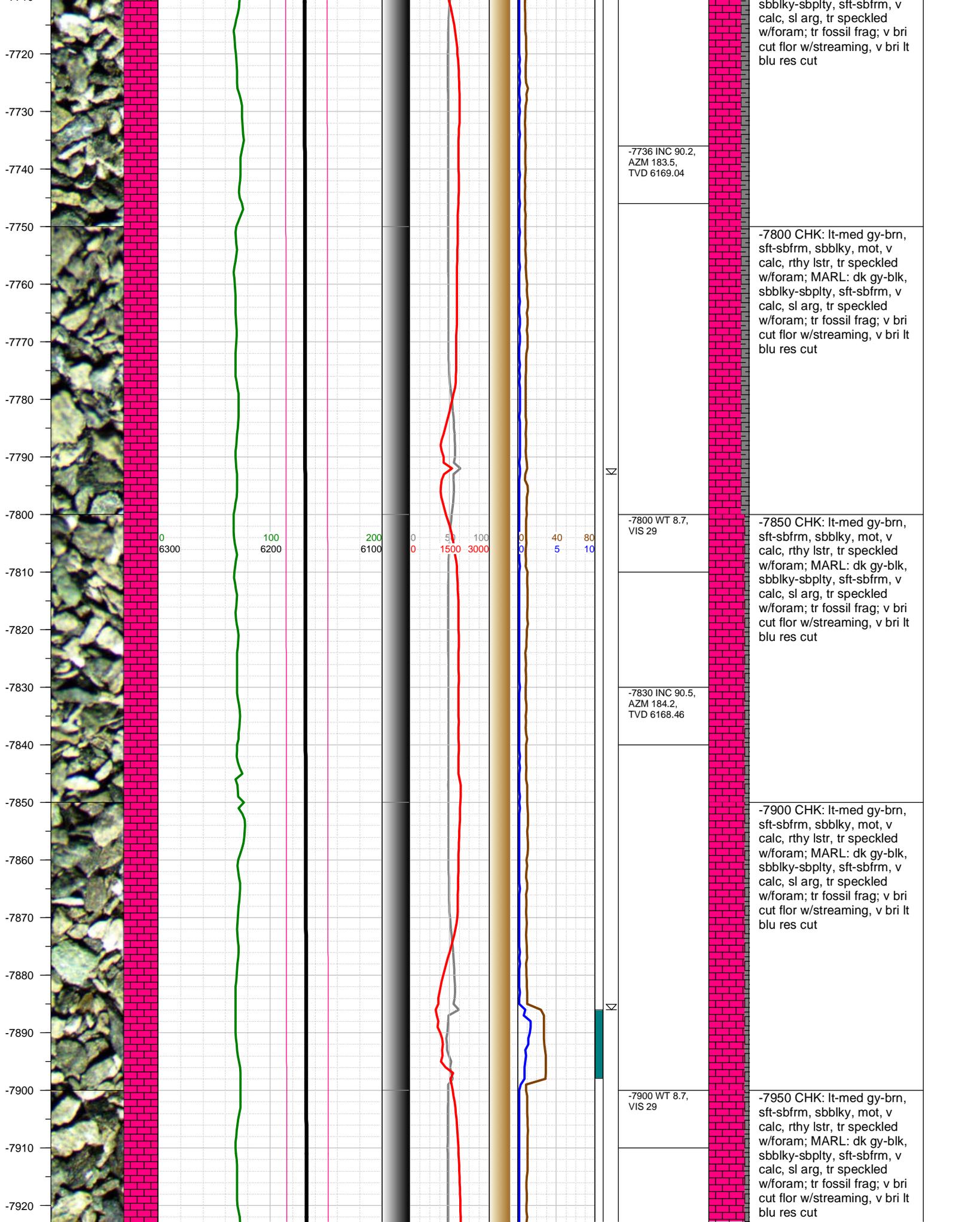


-7550 CHK: lt-med gy-brn,
sft-sbfrm, sbbiky, mot, v
calc, rthy lstr, mod
speckled w/foram; MARL:
dk gy-blk, sbbiky-sbply,
sft-sbfrm, v calc, sl arg,
mod speckled w/foram; tr
fossil frag; tr bent; v bri cut
flor w/streaming, v bri med
blu res cut

-7600 CHK: lt-med gy-brn,
sft-sbfrm, sbbiky, mot, v
calc, rthy lstr, mod
speckled w/foram; MARL:
dk gy-blk, sbbiky-sbply,
sft-sbfrm, v calc, sl arg,
mod speckled w/foram; tr
fossil frag; tr bent; v bri cut
flor w/streaming, v bri lt blu
res cut

-7650 CHK: lt-med gy-brn,
sft-sbfrm, sbbiky, mot, v
calc, rthy lstr, mod
speckled w/foram; MARL:
dk gy-blk, sbbiky-sbply,
sft-sbfrm, v calc, sl arg,
mod speckled w/foram; tr
fossil frag, tr bent; v bri cut
flor w/streaming, v bri lt blu
res cut

-7700 CHK: lt-med gy-brn,
sft-sbfrm, sbbiky, mot, v
calc, rthy lstr, tr speckled
w/foram; MARL: dk gy-blk,



sbbkly-sbply, sft-sbfrm, v calc, sl arg, tr speckled w/foram; tr fossil frag; v bri cut flor w/streaming, v bri It blu res cut

-7736 INC 90.2, AZM 183.5, TVD 6169.04

-7800 CHK: lt-med gy-brn, sft-sbfrm, sbbkly, mot, v calc, rthy lstr, tr speckled w/foram; MARL: dk gy-blk, sbbkly-sbply, sft-sbfrm, v calc, sl arg, tr speckled w/foram; tr fossil frag; v bri cut flor w/streaming, v bri It blu res cut

-7800 WT 8.7, VIS 29

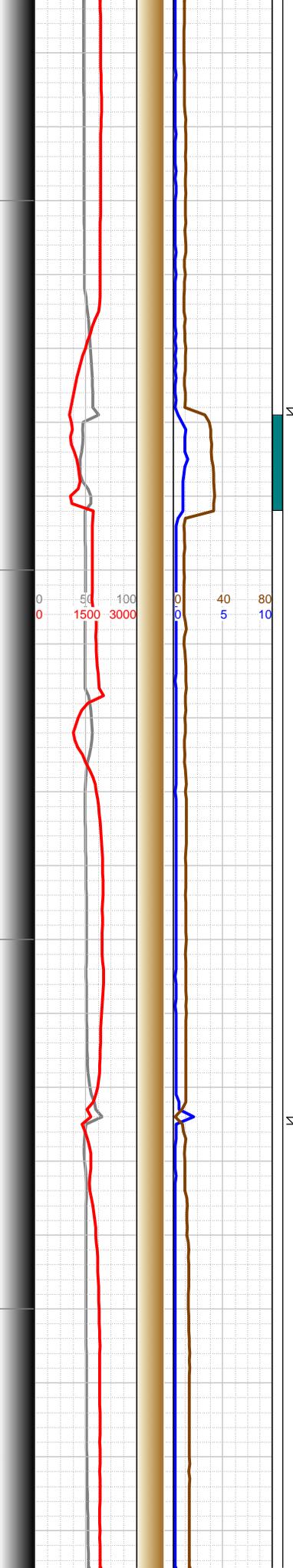
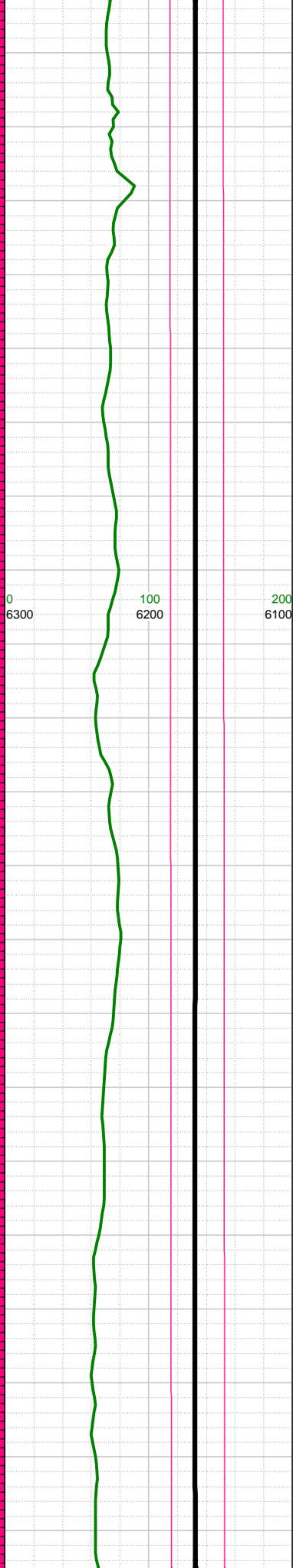
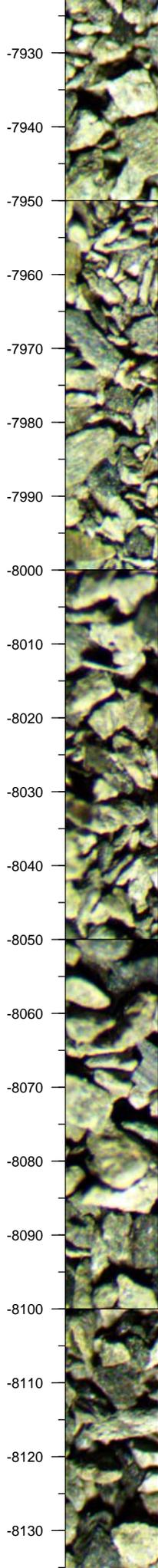
-7850 CHK: lt-med gy-brn, sft-sbfrm, sbbkly, mot, v calc, rthy lstr, tr speckled w/foram; MARL: dk gy-blk, sbbkly-sbply, sft-sbfrm, v calc, sl arg, tr speckled w/foram; tr fossil frag; v bri cut flor w/streaming, v bri It blu res cut

-7830 INC 90.5, AZM 184.2, TVD 6168.46

-7900 CHK: lt-med gy-brn, sft-sbfrm, sbbkly, mot, v calc, rthy lstr, tr speckled w/foram; MARL: dk gy-blk, sbbkly-sbply, sft-sbfrm, v calc, sl arg, tr speckled w/foram; tr fossil frag; v bri cut flor w/streaming, v bri It blu res cut

-7900 WT 8.7, VIS 29

-7950 CHK: lt-med gy-brn, sft-sbfrm, sbbkly, mot, v calc, rthy lstr, tr speckled w/foram; MARL: dk gy-blk, sbbkly-sbply, sft-sbfrm, v calc, sl arg, tr speckled w/foram; tr fossil frag; v bri cut flor w/streaming, v bri It blu res cut



-7923 INC 90.7,
AZM 182.9,
TVD 6167.49

-8000 WT 8.8,
VIS 29

-8016 INC 89.3,
AZM 179.6,
TVD 6167.49

-8100 WT 8.8,
VIS 29

-8108 INC 90.2,
AZM 179.3,
TVD 6167.89



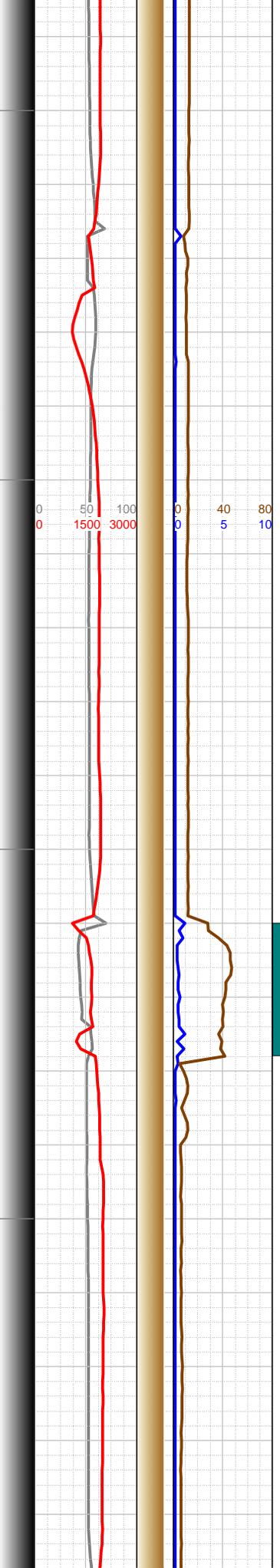
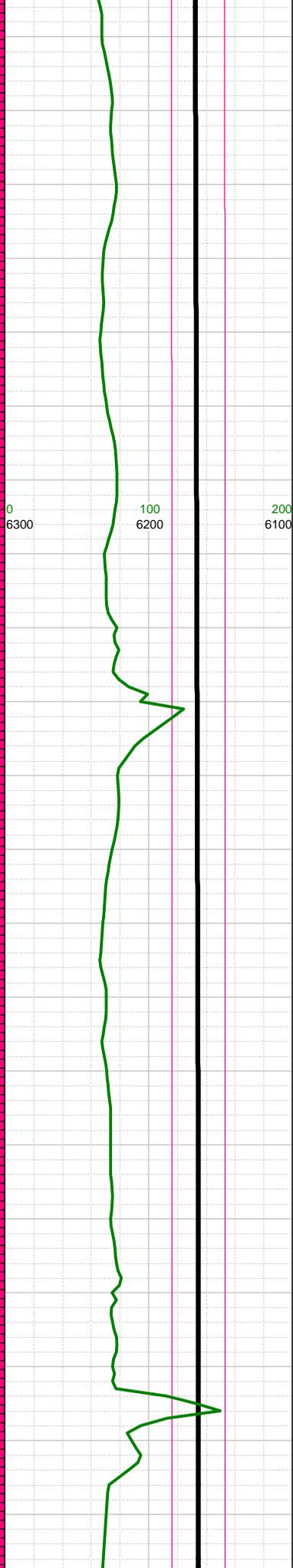
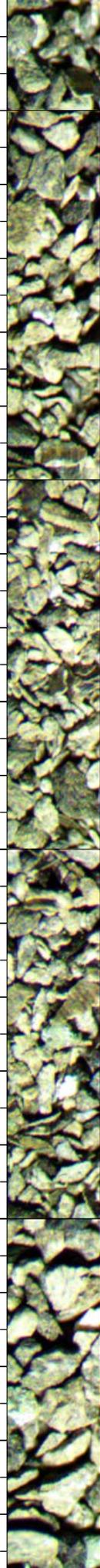
-8000 CHK: lt-med gy-brn, sft-sbfrm, sbbkly, mot, v calc, rthy lstr, tr speckled w/foram; MARL: dk gy-blk, sbbkly-sbply, sft-sbfrm, v calc, sl arg, tr speckled w/foram; tr fossil frag; v bri cut flr w/streaming, v bri lt blu res cut

-8050 CHK: lt-med gy-brn, sft-sbfrm, sbbkly, mot, v calc, rthy lstr, tr speckled w/foram; MARL: dk gy-blk, sbbkly-sbply, sft-sbfrm, v calc, sl arg, tr speckled w/foram; tr fossil frag; v bri cut flr w/streaming, v bri lt blu res cut

-8100 CHK: lt-med gy-brn, sft-sbfrm, sbbkly, mot, v calc, rthy lstr, tr speckled w/foram; MARL: dk gy-blk, sbbkly-sbply, sft-sbfrm, v calc, sl arg, tr speckled w/foram; tr fossil frag; v bri cut flr w/streaming, v bri lt blu res cut

-8150 CHK: lt-med gy-brn, sft-sbfrm, sbbkly, mot, v calc, rthy lstr, tr speckled w/foram; tr fossil frag; v bri cut flr w/streaming, bri lt blu res cut

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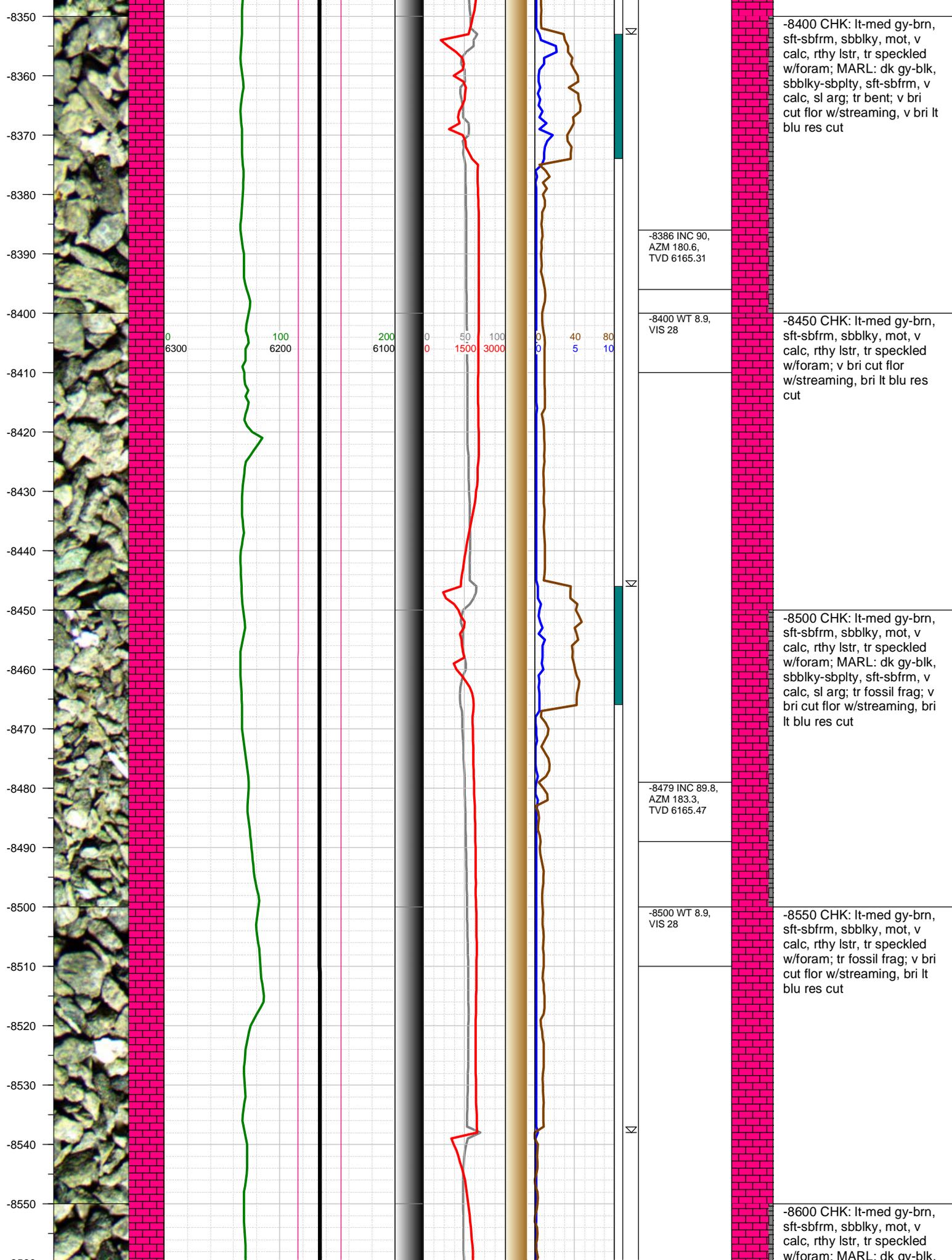
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| -8201 INC 91.3, AZM 179.1, TVD 6166.67 |
| -8210 WT 8.9, VIS 28 |
| -8293 INC 90.2, AZM 178.7, TVD 6165.47 |
| -8310 WT 8.9, VIS 28 |

-8200 CHK: lt-med gy-brn, sft-sbfrm, sbbly, mot, v calc, rthy lstr, tr speckled w/foram; MARL: dk gy-blk, sbbly-sbply, sft-sbfrm, v calc, sl arg, tr speckled w/foram; tr fossil frag; bri cut flr w/streaming, v bri lt blu res cut

-8250 CHK: lt-med gy-brn, sft-sbfrm, sbbly, mot, v calc, rthy lstr, tr speckled w/foram; MARL: dk gy-blk, sbbly-sbply, sft-sbfrm, v calc, sl arg, tr speckled w/foram; tr fossil frag; v bri cut flr w/streaming, v bri lt blu res cut

-8300 CHK: lt-med gy-brn, sft-sbfrm, sbbly, mot, v calc, rthy lstr, tr speckled w/foram; MARL: dk gy-blk, sbbly-sbply, sft-sbfrm, v calc, sl arg, tr speckled w/foram; tr fossil frag; v bri cut flr w/streaming, v bri lt blu res cut

-8350 CHK: lt-med gy-brn, sft-sbfrm, sbbly, mot, v calc, rthy lstr, tr speckled w/foram; tr fossil frag, tr bent; v bri cut flr w/streaming, v bri lt blu res cut



-8400 CHK: lt-med gy-brn, sft-sbfrm, sbbkly, mot, v calc, rthy lstr, tr speckled w/foram; MARL: dk gy-blk, sbbkly-sbply, sft-sbfrm, v calc, sl arg; tr bent; v bri cut flr w/streaming, v bri lt blu res cut

-8386 INC 90,
AZM 180.6,
TVD 6165.31

-8400 WT 8.9,
VIS 28

-8450 CHK: lt-med gy-brn, sft-sbfrm, sbbkly, mot, v calc, rthy lstr, tr speckled w/foram; v bri cut flr w/streaming, bri lt blu res cut

-8500 CHK: lt-med gy-brn, sft-sbfrm, sbbkly, mot, v calc, rthy lstr, tr speckled w/foram; MARL: dk gy-blk, sbbkly-sbply, sft-sbfrm, v calc, sl arg; tr fossil frag; v bri cut flr w/streaming, bri lt blu res cut

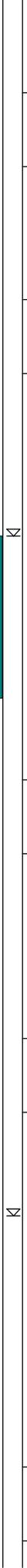
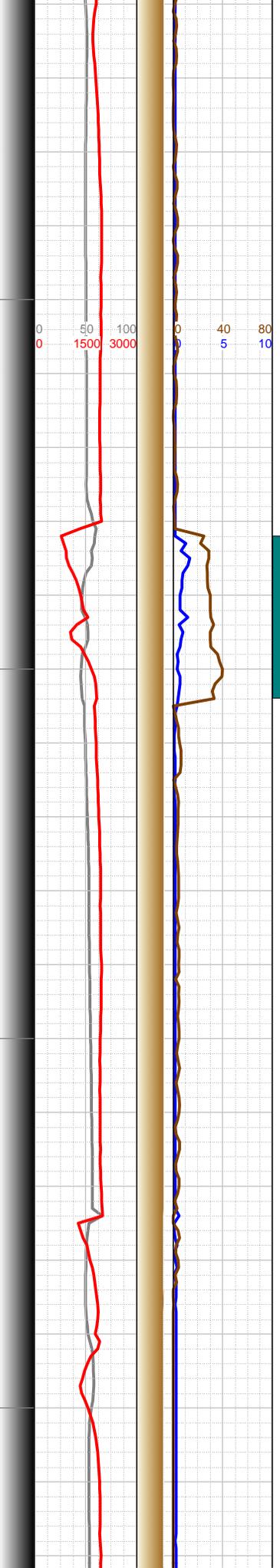
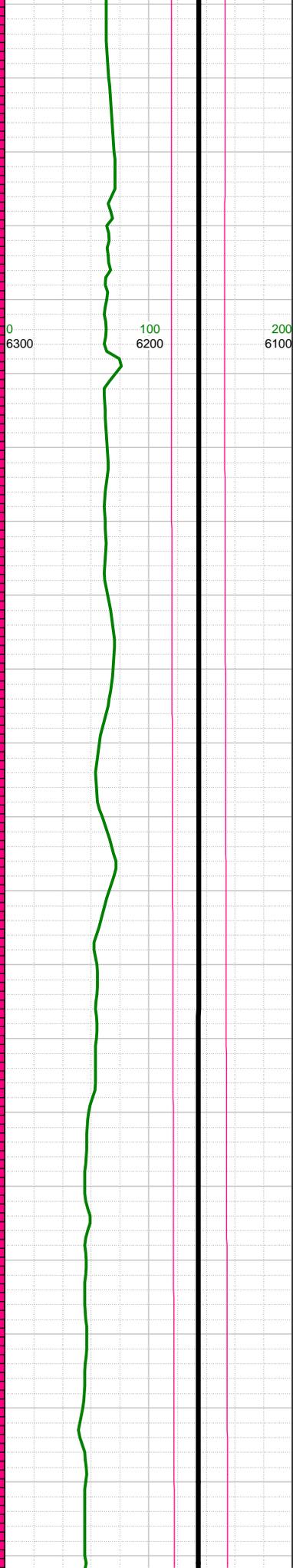
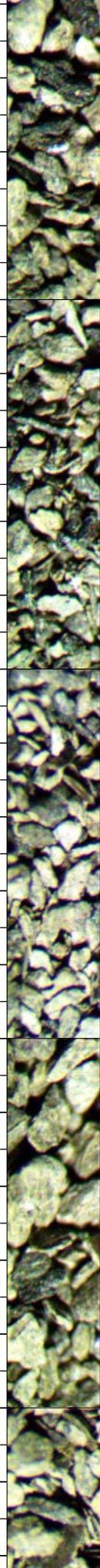
-8479 INC 89.8,
AZM 183.3,
TVD 6165.47

-8500 WT 8.9,
VIS 28

-8550 CHK: lt-med gy-brn, sft-sbfrm, sbbkly, mot, v calc, rthy lstr, tr speckled w/foram; tr fossil frag; v bri cut flr w/streaming, bri lt blu res cut

-8600 CHK: lt-med gy-brn, sft-sbfrm, sbbkly, mot, v calc, rthy lstr, tr speckled w/foram; MARL: dk gy-blk,

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| -8572 INC 90.8, AZM 183.8, TVD 6164.98 |
| -8600 WT 8.8, VIS 28 |
| -8665 INC 89, AZM 181.7, TVD 6165.15 |
| -8700 WT 8.8, VIS 28 |
| -8758 INC 90.4, AZM 181.3, TVD 6165.63 |

sbbly-sbply, sft-sbfrm, v calc, sl arg; tr bent; v bri cut flor w/streaming, v bri lt blu res cut

-8650 CHK: lt-med gy-brn, sft-sbfrm, sbbly, mot, v calc, rthy lstr, tr speckled w/foram; MARL: dk gy-blk, sbbly-sbply, sft-sbfrm, v calc, sl arg; v bri cut flor w/streaming, v bri lt blu res cut

-8700 CHK: lt-med gy-brn, sft-sbfrm, sbbly, mot, v calc, rthy lstr, tr speckled w/foram; MARL: dk gy-blk, sbbly-sbply, sft-sbfrm, v calc, sl arg; v bri cut flor w/streaming, v bri lt blu res cut

-8750 CHK: lt-med gy-brn, sft-sbfrm, sbbly, mot, v calc, rthy lstr, tr speckled w/foram; MARL: dk gy-blk, sbbly-sbply, sft-sbfrm, v calc, sl arg; tr bent; v bri cut flor w/streaming, v bri lt blu res cut

-8800 CHK: lt-med gy-brn, sft-sbfrm, sbbly, mot, v calc, rthy lstr, tr speckled w/foram; MARL: dk gy-blk, sbbly-sbply, sft-sbfrm, v calc, sl arg; tr bent; v bri cut flor w/streaming, v bri lt blu res cut

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6300

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6200

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-8800 WT 8.8,
VIS 27

-8850 CHK: lt-med gy-brn,
sft-sbfrm, sbbkly, mot, v
calc, rthy lstr, tr speckled
w/foram; MARL: dk gy-blk,
sbbkly-sbplty, sft-sbfrm, v
calc, sl arg; tr bent; v bri
cut flr w/streaming, v bri lt
grn res cut

-8850 INC 90,
AZM 181.1,
TVD 6165.31

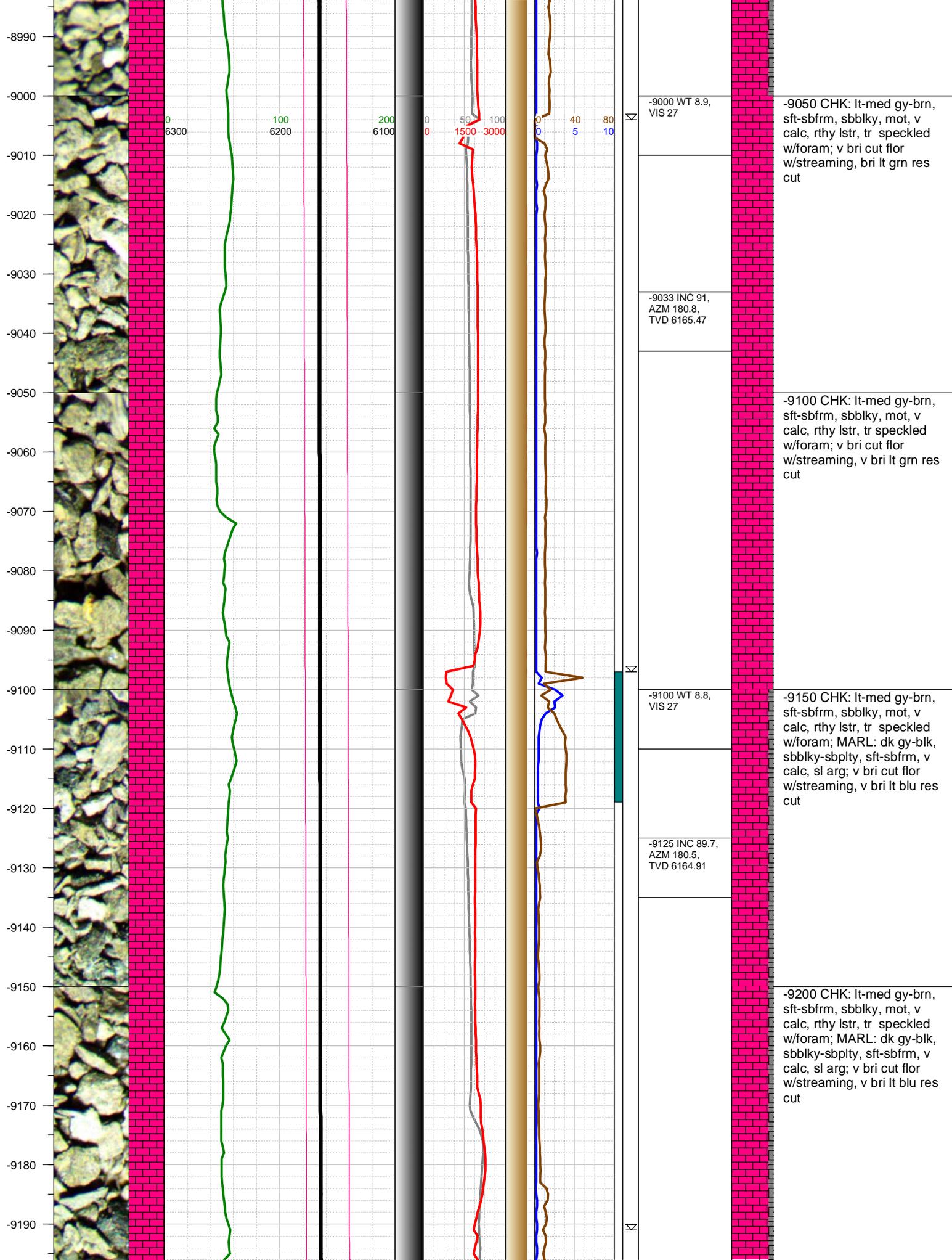
-8900 CHK: lt-med gy-brn,
sft-sbfrm, sbbkly, mot, v
calc, rthy lstr, tr speckled
w/foram; MARL: dk gy-blk,
sbbkly-sbplty, sft-sbfrm, v
calc, sl arg; tr bent; v bri
cut flr w/streaming, v bri lt
blu res cut

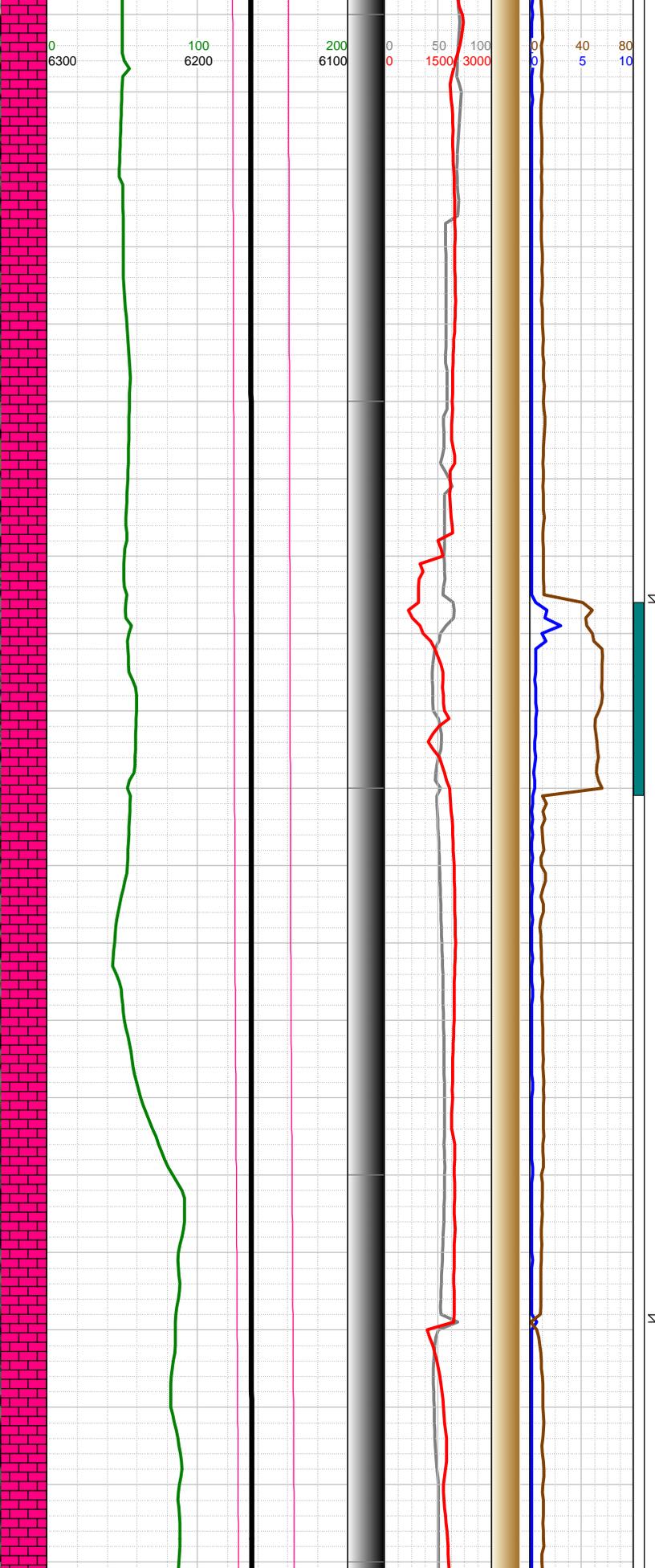
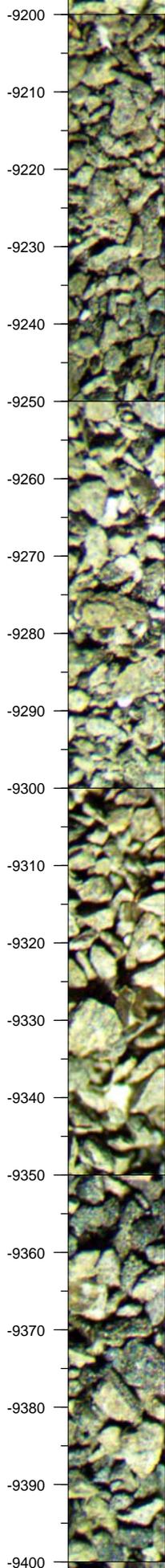
-8900 WT 8.8,
VIS 27

-8950 CHK: lt-med gy-brn,
sft-sbfrm, sbbkly, mot, v
calc, rthy lstr, tr speckled
w/foram; MARL: dk gy-blk,
sbbkly-sbplty, sft-sbfrm, v
calc, sl arg; tr bent; v bri
cut flr w/streaming, bri lt
blu res cut

-8942 INC 89.4,
AZM 181.1,
TVD 6165.79

-9000 CHK: lt-med gy-brn,
sft-sbfrm, sbbkly, mot, v
calc, rthy lstr, tr speckled
w/foram; MARL: dk gy-blk,
sbbkly-sbplty, sft-sbfrm, v
calc, sl arg; tr bent; v bri
cut flr w/streaming, bri lt
blu res cut





-9200 WT 8.8, VIS 27

-9218 INC 91, AZM 180.1, TVD 6164.34

-9300 WT 8.8, VIS 27

-9311 INC 89.2, AZM 181, TVD 6164.18

-9390 WT 9, VIS 28

-9403 INC 91.2, AZM 180.8, TVD 6163.86

-9250 CHK: lt-med gy-brn, sft-sbfrm, sbbkly, mot, v calc, rthy lstr, tr speckled w/foram; MARL: dk gy-blk, sbbkly-sbply, sft-sbfrm, v calc, sl arg; v bri cut flr w/streaming, v bri lt blu res cut

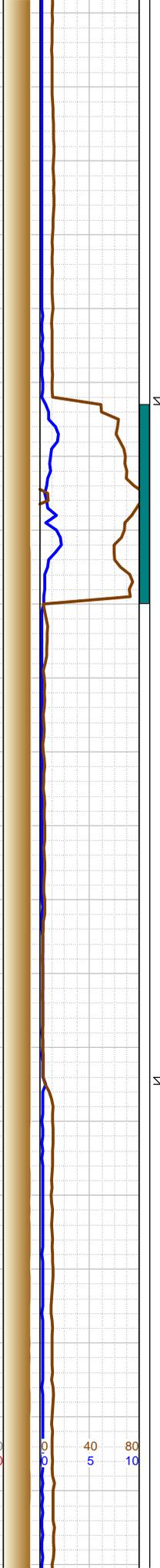
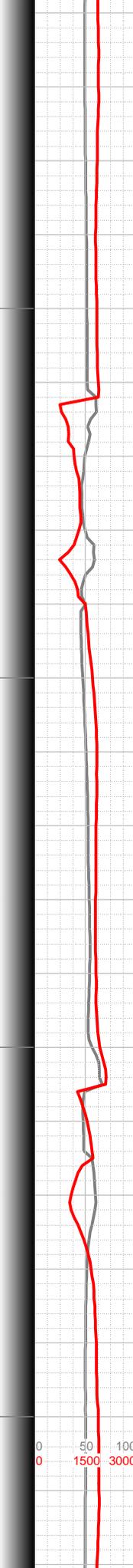
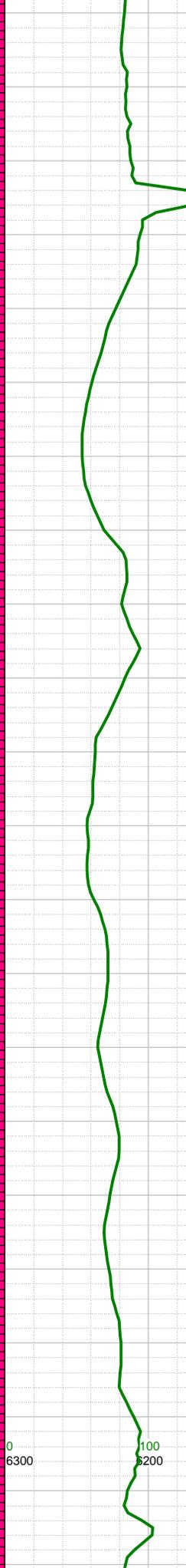
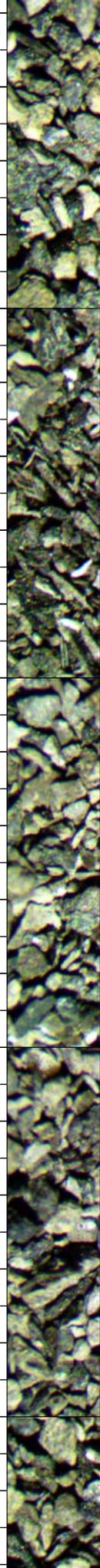
-9300 CHK: lt-med gy-brn, sft-sbfrm, sbbkly, mot, v calc, rthy lstr, tr speckled w/foram; MARL: dk gy-blk, sbbkly-sbply, sft-sbfrm, v calc, sl arg; v bri cut flr w/streaming, v bri lt blu res cut

-9350 CHK: lt-med gy-brn, sft-sbfrm, sbbkly, mot, v calc, rthy lstr, tr speckled w/foram; MARL: dk gy-blk, sbbkly-sbply, sft-sbfrm, v calc, sl arg, tr fos frags; v bri cut flr w/streaming, v bri lt blu res cut

-9400 CHK: lt-med gy-brn, sft-sbfrm, sbbkly, mot, v calc, rthy lstr, tr speckled w/foram; MARL: dk gy-blk, sbbkly-sbply, sft-sbfrm, v calc, sl arg; tr speckled w/foram, mod fos frags; v bri cut flr w/streaming, v bri lt blu res cut

-9450 CHK: lt-med gy-brn, sft-sbfrm, sbbkly, mot, v calc, rthy lstr, mod

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| -9495 INC 87.9, AZM 179.3, TVD 6164.58 | |
| -9510 WT 8.85, VIS 29 | |
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| -9587 INC 89.2, AZM 179.1, TVD 6166.91 | |
| -9600 WT 8.85, VIS 29 | |

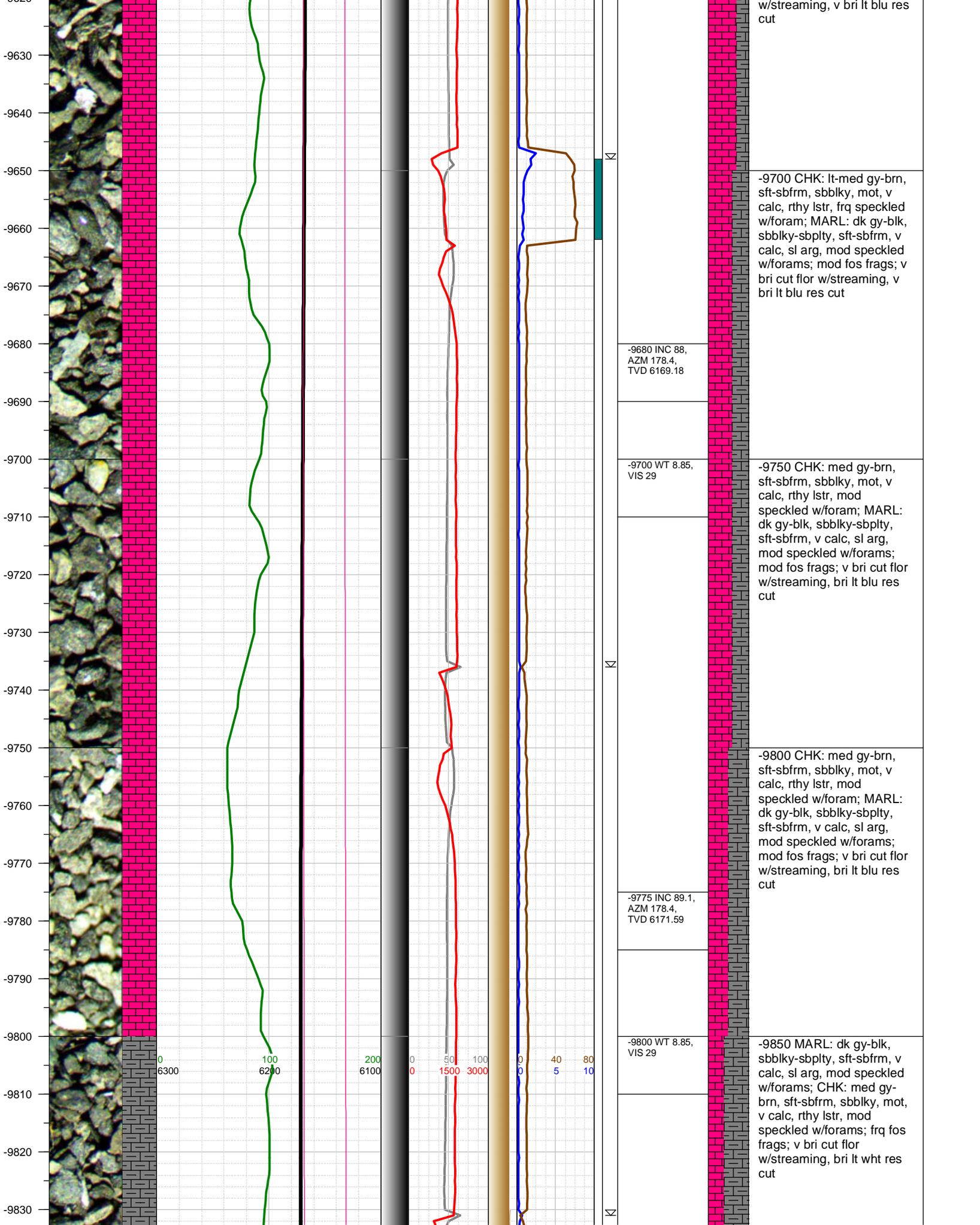
speckled w/foram; MARL: dk gy-blk, sbbly-sbply, sft-sbfrm, v calc, sl arg; tr speckled w/foram, mod fos frags; v bri cut flor w/streaming, bri lt blu res cut

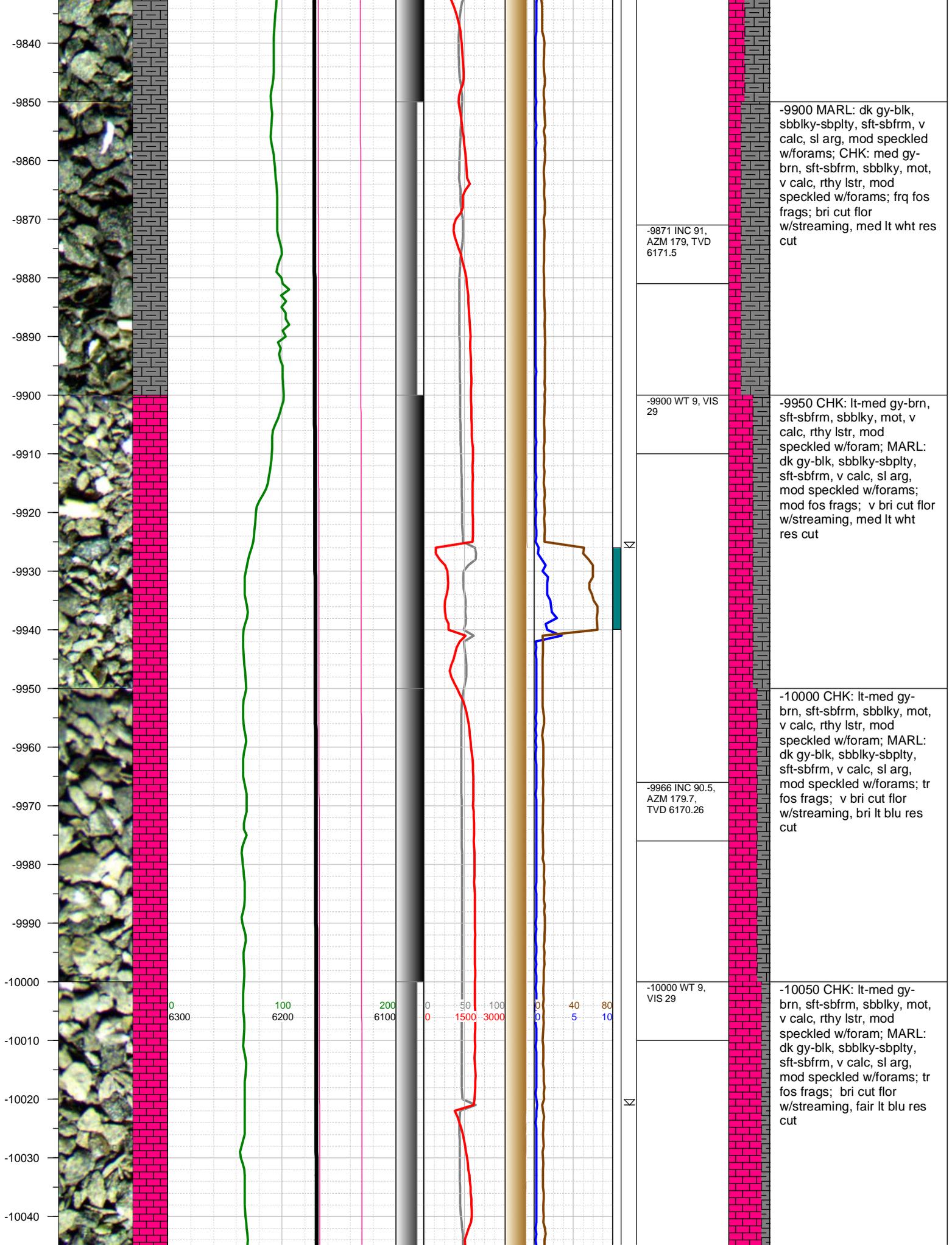
-9500 CHK: lt-med gy-brn, sft-sbfrm, sbbly, mot, v calc, rthy lstr, frq speckled w/foram; MARL: dk gy-blk, sbbly-sbply, sft-sbfrm, v calc, sl arg, mod speckled w/forams; mod fos frags; v bri cut flor w/streaming, bri med blu res cut

-9550 CHK: lt-med gy-brn, sft-sbfrm, sbbly, mot, v calc, rthy lstr, frq speckled w/foram; MARL: dk gy-blk, sbbly-sbply, sft-sbfrm, v calc, sl arg, mod speckled w/forams; mod fos frags; v bri cut flor w/streaming, bri med blu res cut

-9600 CHK: lt-med gy-brn, sft-sbfrm, sbbly, mot, v calc, rthy lstr, frq speckled w/foram; MARL: dk gy-blk, sbbly-sbply, sft-sbfrm, v calc, sl arg, mod speckled w/forams; mod fos frags; v bri cut flor w/streaming, bri lt blu res cut

-9650 CHK: lt-med gy-brn, sft-sbfrm, sbbly, mot, v calc, rthy lstr, mod speckled w/foram; MARL: dk gy-blk, sbbly-sbply, sft-sbfrm, v calc, sl arg, mod speckled w/forams; mod fos frags; v bri cut flor





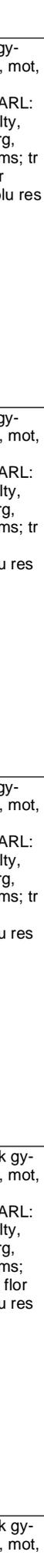
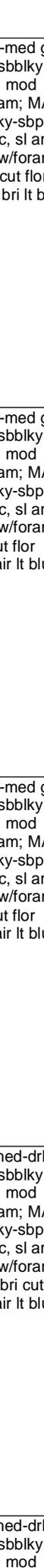
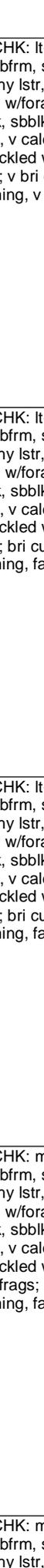
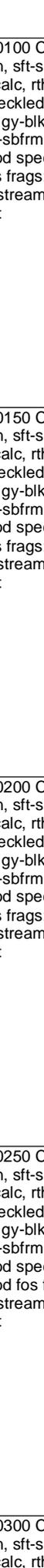
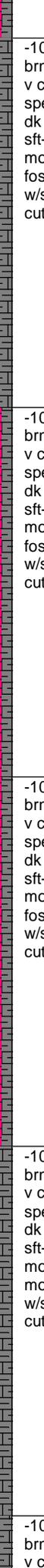
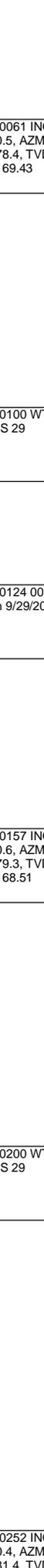
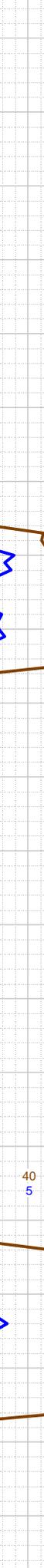
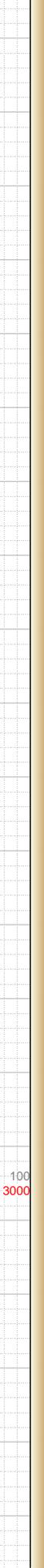
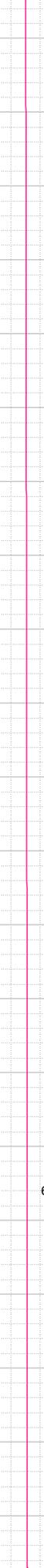
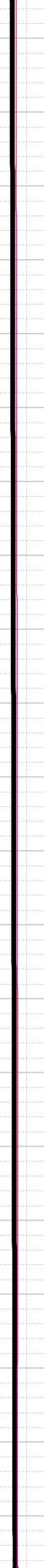
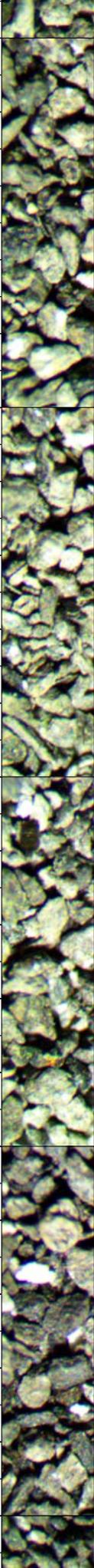
-9900 MARL: dk gy-blk, sbbly-sbply, sft-sbfrm, v calc, sl arg, mod speckled w/forams; CHK: med gy-brn, sft-sbfrm, sbbly, mot, v calc, rthy lstr, mod speckled w/forams; frq fos frags; bri cut flor w/streaming, med lt wht res cut

-9950 CHK: lt-med gy-brn, sft-sbfrm, sbbly, mot, v calc, rthy lstr, mod speckled w/foram; MARL: dk gy-blk, sbbly-sbply, sft-sbfrm, v calc, sl arg, mod speckled w/forams; mod fos frags; v bri cut flor w/streaming, med lt wht res cut

-10000 CHK: lt-med gy-brn, sft-sbfrm, sbbly, mot, v calc, rthy lstr, mod speckled w/foram; MARL: dk gy-blk, sbbly-sbply, sft-sbfrm, v calc, sl arg, mod speckled w/forams; tr fos frags; v bri cut flor w/streaming, bri lt blu res cut

-10050 CHK: lt-med gy-brn, sft-sbfrm, sbbly, mot, v calc, rthy lstr, mod speckled w/foram; MARL: dk gy-blk, sbbly-sbply, sft-sbfrm, v calc, sl arg, mod speckled w/forams; tr fos frags; bri cut flor w/streaming, fair lt blu res cut

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-10061 INC
90.5, AZM
178.4, TVD
6169.43

-10100 WT 9,
VIS 29

-10124 0000 hrs
on 9/29/2014

-10157 INC
90.6, AZM
179.3, TVD
6168.51

-10200 WT 9,
VIS 29

-10252 INC
90.4, AZM
181.4, TVD

-10100 CHK: lt-med gy-brn, sft-sbfrm, sbbly, mot, v calc, rthy lstr, mod speckled w/foram; MARL: dk gy-blk, sbbly-sbply, sft-sbfrm, v calc, sl arg, mod speckled w/forams; tr fos frags; v bri cut flor w/streaming, v bri lt blu res cut

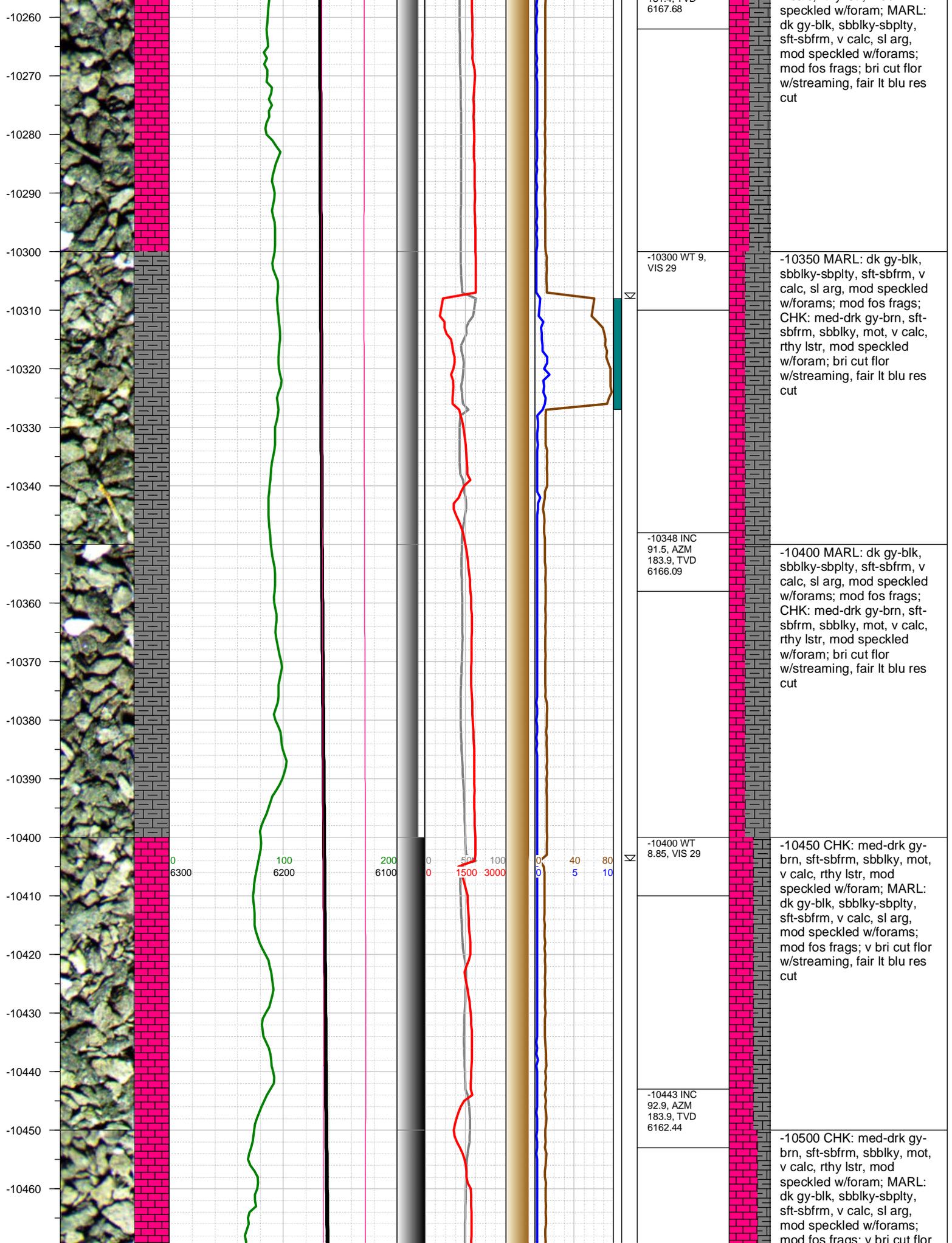
-10150 CHK: lt-med gy-brn, sft-sbfrm, sbbly, mot, v calc, rthy lstr, mod speckled w/foram; MARL: dk gy-blk, sbbly-sbply, sft-sbfrm, v calc, sl arg, mod speckled w/forams; tr fos frags; bri cut flor w/streaming, fair lt blu res cut

-10200 CHK: lt-med gy-brn, sft-sbfrm, sbbly, mot, v calc, rthy lstr, mod speckled w/foram; MARL: dk gy-blk, sbbly-sbply, sft-sbfrm, v calc, sl arg, mod speckled w/forams; tr fos frags; bri cut flor w/streaming, fair lt blu res cut

-10250 CHK: med-drk gy-brn, sft-sbfrm, sbbly, mot, v calc, rthy lstr, mod speckled w/foram; MARL: dk gy-blk, sbbly-sbply, sft-sbfrm, v calc, sl arg, mod speckled w/forams; mod fos frags; bri cut flor w/streaming, fair lt blu res cut

-10300 CHK: med-drk gy-brn, sft-sbfrm, sbbly, mot, v calc, rthy lstr, mod

0 100 200 0 50 100 0 40 80
6300 6200 6100 0 1500 3000 0 5 10



6167.68

-10300 WT 9,
VIS 29

-10348 INC
91.5, AZM
183.9, TVD
6166.09

-10400 WT
8.85, VIS 29

-10443 INC
92.9, AZM
183.9, TVD
6162.44

speckled w/foram; MARL:
dk gy-blk, sbblky-sbplty,
sft-sbfrm, v calc, sl arg,
mod speckled w/forams;
mod fos frags; bri cut flr
w/streaming, fair lt blu res
cut

-10350 MARL: dk gy-blk,
sbblky-sbplty, sft-sbfrm, v
calc, sl arg, mod speckled
w/forams; mod fos frags;
CHK: med-drk gy-brn, sft-
sbfrm, sbblky, mot, v calc,
rthy lstr, mod speckled
w/foram; bri cut flr
w/streaming, fair lt blu res
cut

-10400 MARL: dk gy-blk,
sbblky-sbplty, sft-sbfrm, v
calc, sl arg, mod speckled
w/forams; mod fos frags;
CHK: med-drk gy-brn, sft-
sbfrm, sbblky, mot, v calc,
rthy lstr, mod speckled
w/foram; bri cut flr
w/streaming, fair lt blu res
cut

-10450 CHK: med-drk gy-
brn, sft-sbfrm, sbblky, mot,
v calc, rthy lstr, mod
speckled w/foram; MARL:
dk gy-blk, sbblky-sbplty,
sft-sbfrm, v calc, sl arg,
mod speckled w/forams;
mod fos frags; v bri cut flr
w/streaming, fair lt blu res
cut

-10500 CHK: med-drk gy-
brn, sft-sbfrm, sbblky, mot,
v calc, rthy lstr, mod
speckled w/foram; MARL:
dk gy-blk, sbblky-sbplty,
sft-sbfrm, v calc, sl arg,
mod speckled w/forams;
mod fos frags; v bri cut flr

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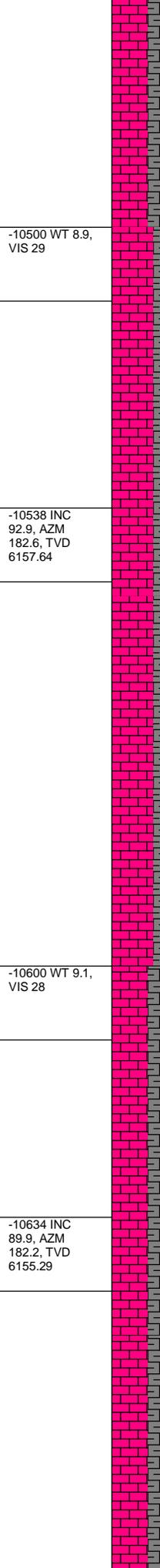
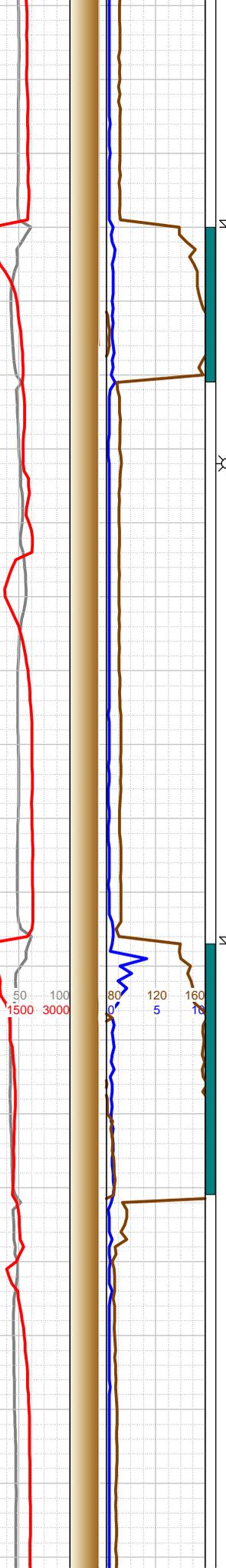
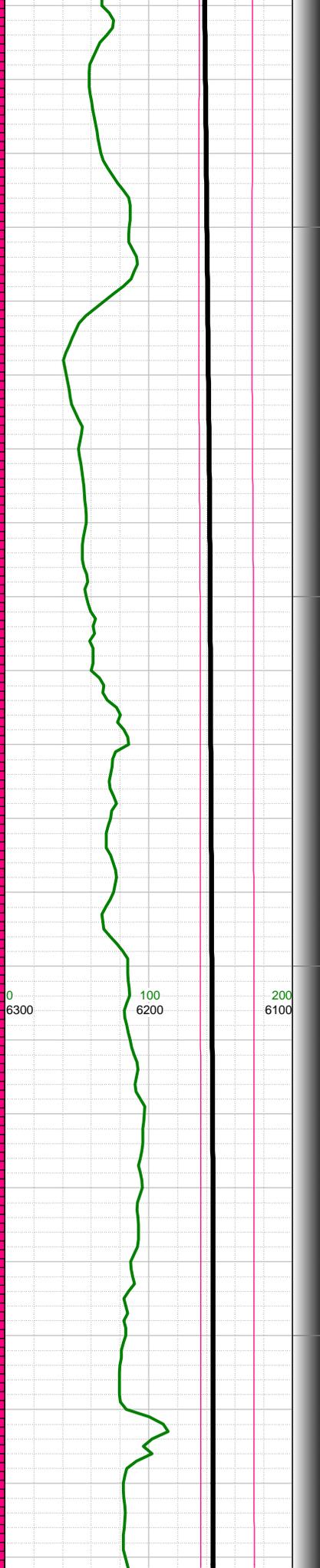
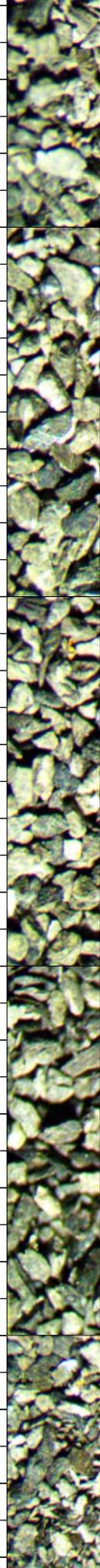
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w/streaming, bri lt blu res cut

-10500 WT 8.9, VIS 29

-10550 CHK: med-drk gy-brn, sft-sbfrm, sbblky, mot, v calc, rthy lstr, tr speckled w/foram; MARL: dk gy-blk, sbblky-sbplty, sft-sbfrm, v calc, sl arg, mod speckled w/forams; tr fos frags; v bri cut flr w/streaming, bri lt blu res cut

-10538 INC 92.9, AZM 182.6, TVD 6157.64

-10600 CHK: lt-med gy-brn, sft-sbfrm, sbblky, mot, v calc, rthy lstr, tr speckled w/foram; MARL: dk gy-blk, sbblky-sbplty, sft-sbfrm, v calc, sl arg, mod speckled w/forams; tr fos frags; v bri cut flr w/streaming, bri lt grn res cut

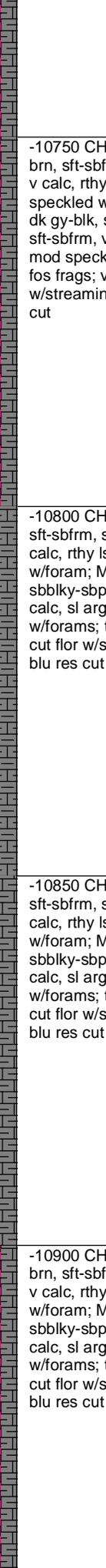
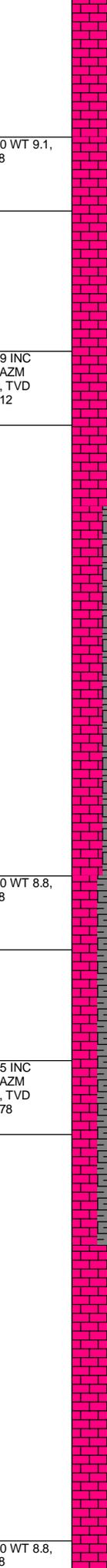
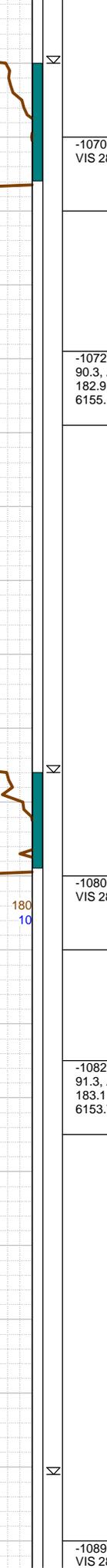
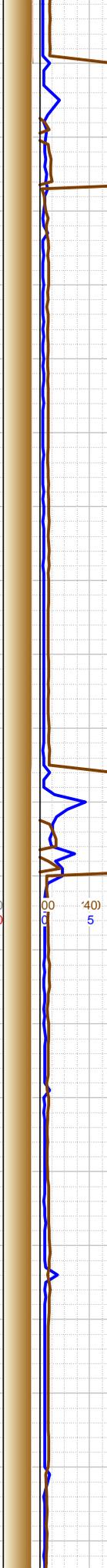
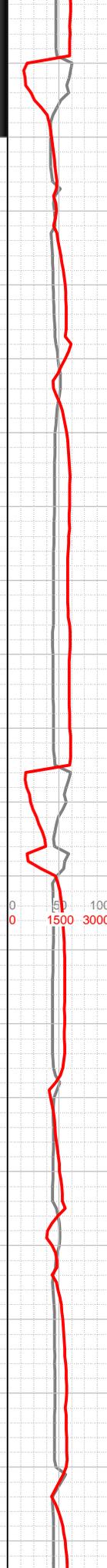
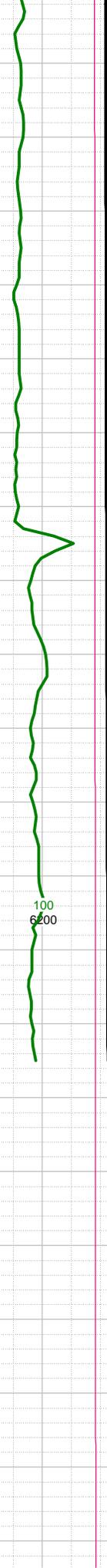
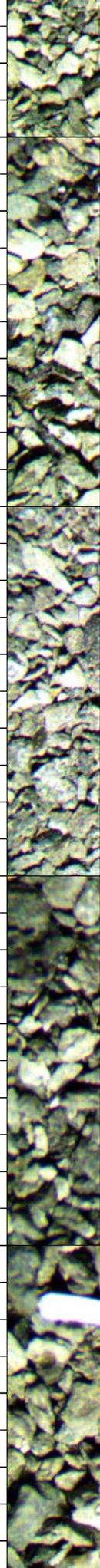
-10600 WT 9.1, VIS 28

-10650 CHK: lt-med gy-brn, sft-sbfrm, sbblky, mot, v calc, rthy lstr, mod speckled w/foram; MARL: dk gy-blk, sbblky-sbplty, sft-sbfrm, v calc, sl arg, mod speckled w/forams; tr fos frags; v bri cut flr w/streaming, bri lt blu res cut

-10634 INC 89.9, AZM 182.2, TVD 6155.29

-10700 CHK: lt-med gy-brn, sft-sbfrm, sbblky, mot, v calc, rthy lstr, tr speckled w/foram; MARL: dk gy-blk, sbblky-sbplty, sft-sbfrm, v calc, sl arg, tr speckled w/forams; tr fos frags; v bri cut flr w/streaming, fair lt blue res cut

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-10700 WT 9.1, VIS 28
-10750 CHK: lt-med gy-brn, sft-sbfrm, sbbly, mot, v calc, rthy lstr, mod speckled w/foram; MARL: dk gy-blk, sbbly-sbply, sft-sbfrm, v calc, sl arg, mod speckled w/forams; tr fos frags; v bri cut flor w/streaming, bri lt blu res cut
-10729 INC 90.3, AZM 182.9, TVD 6155.12
-10800 CHK: med gy-brn, sft-sbfrm, sbbly, mot, v calc, rthy lstr, tr speckled w/foram; MARL: dk gy-blk, sbbly-sbply, sft-sbfrm, v calc, sl arg, tr speckled w/forams; tr fos frags; bri cut flor w/streaming, bri lt blu res cut
-10800 WT 8.8, VIS 28
-10850 CHK: med gy-brn, sft-sbfrm, sbbly, mot, v calc, rthy lstr, tr speckled w/foram; MARL: dk gy-blk, sbbly-sbply, sft-sbfrm, v calc, sl arg, tr speckled w/forams; tr fos frags; bri cut flor w/streaming, bri lt blu res cut
-10825 INC 91.3, AZM 183.1, TVD 6153.78
-10900 CHK: lt-med gy-brn, sft-sbfrm, sbbly, mot, v calc, rthy lstr, tr speckled w/foram; MARL: dk gy-blk, sbbly-sbply, sft-sbfrm, v calc, sl arg, tr speckled w/forams; tr fos frags; bri cut flor w/streaming, bri lt blu res cut
-10890 WT 8.8, VIS 28

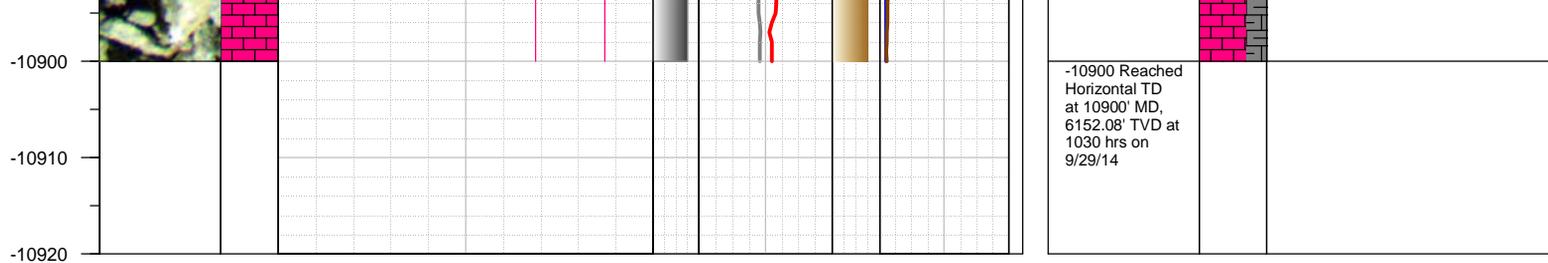
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TOTAL DEPTH = 10900'

Thank you for using Earth Science Agency