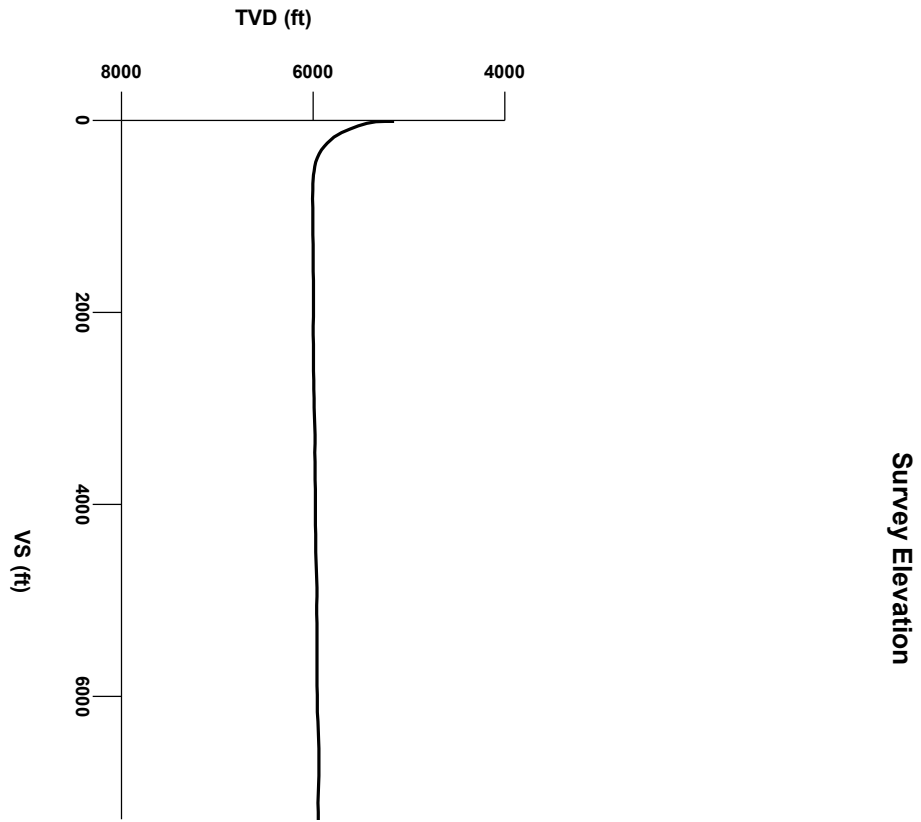
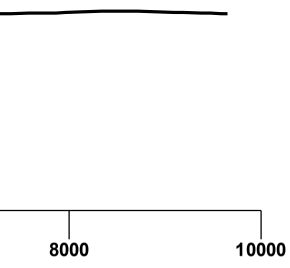
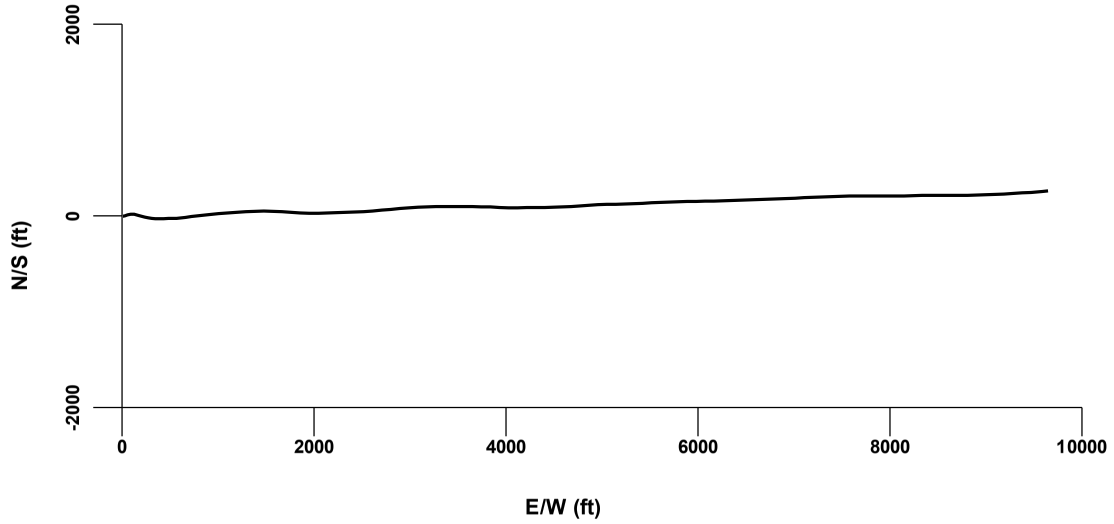
LOG created using LPLOT VH Version 3.0, July 18, 2013, Copyright (C) 1999-2009 Pason Systems Corp.

| | |
|---|---|
| **OPERATOR:** | **NOBLE ENERGY INC.** |
| **WELL:** | **TIMBRO LD06-64HN** |
| **LOCATION:** | **SEC 6, T9N, R58W** |
| **COUNTY:** | **WELD** |
| **STATE:** | **COLORADO** |
| **SPOT:** | **1980' FSL, 255' FWL** |
| **ELEVATION:** | **GR 4900', KB 4930'** |
| **FIELD:** | **WILDCAT** |
| **SPUD DATE:** | **07/06/2013** |
| **TD DATE:** | **07/18/2013** |
| **DATES LOGGED:** | **07/08/2013 - 07/18/2013** |
| **DEPTHS LOGGED:** | **5204' MD - 15376' MD** |
| **LOGGERS:** | **ANDREA ZUIDEMA, MATTHEW HOPKINS** |
| **DRILLING FLUID:** | **LSND** |
| **DRILLING RIG:** | **H&P 326** |
| **API:** | **05-123-37517** |
| **LOG TYPE:** | **HORIZONTAL** |
| **SCALE:** | **1:240 (5 inches per 100 feet)** |
| **REMARKS:** | **WELLSITE GEOLOGICAL SERVICES PROVIDED BY COLUMBINE LOGGING INC.** |






## Survey Plan



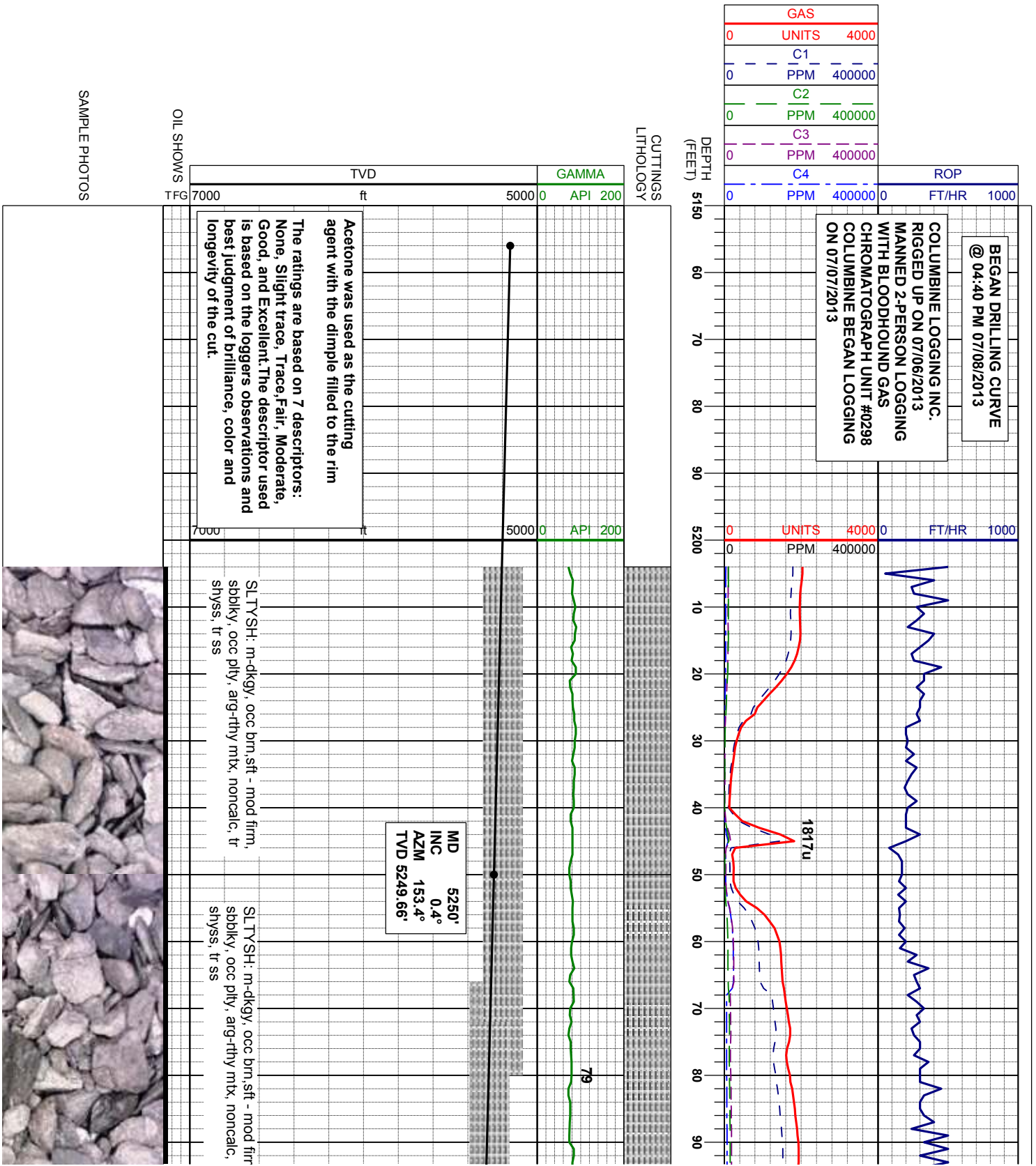

LITHOLOGIES

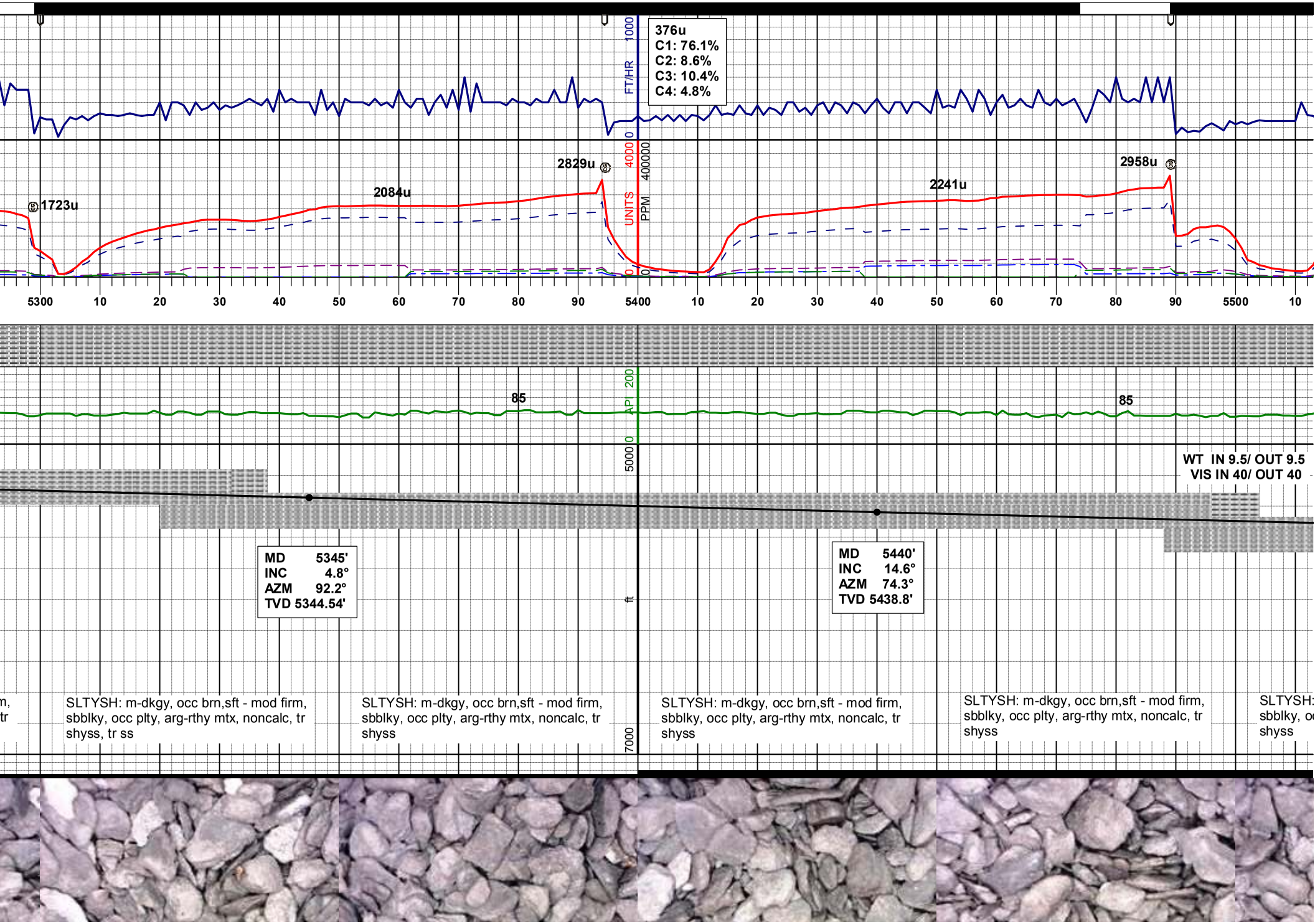
## LITHOLOGIES

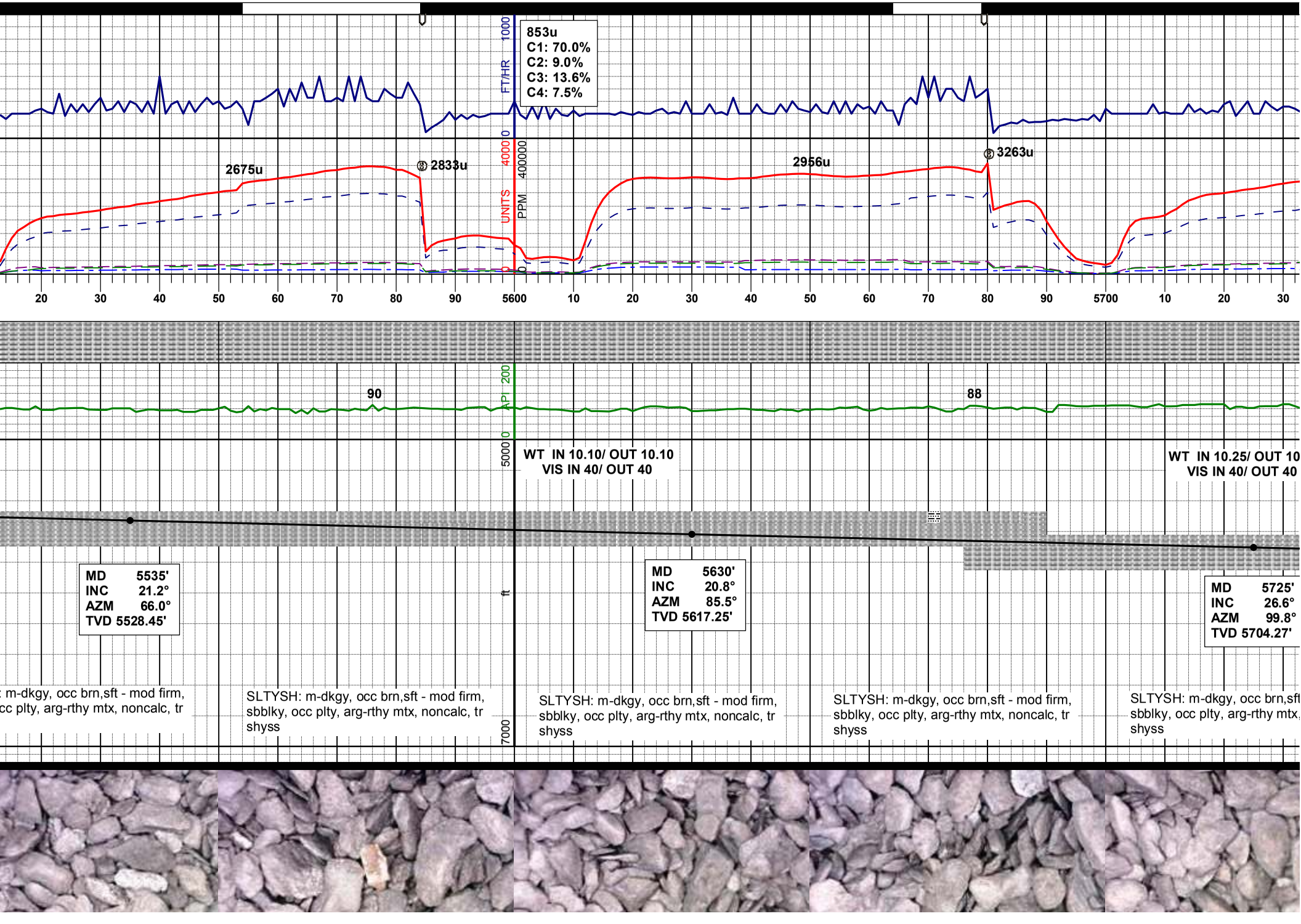
Chalk | Marl | Silty Shale

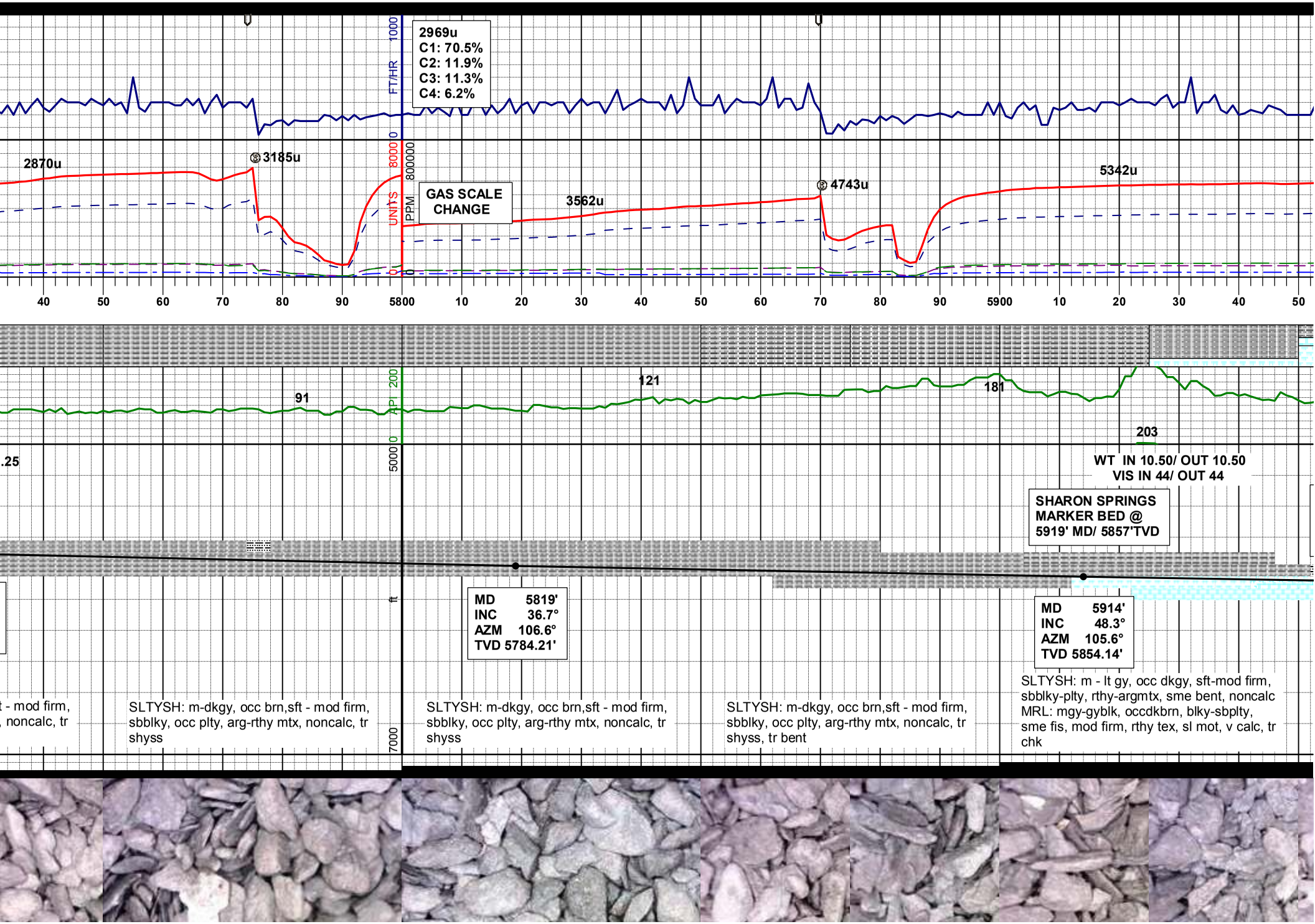
## ENGINEERING SYMBOLS

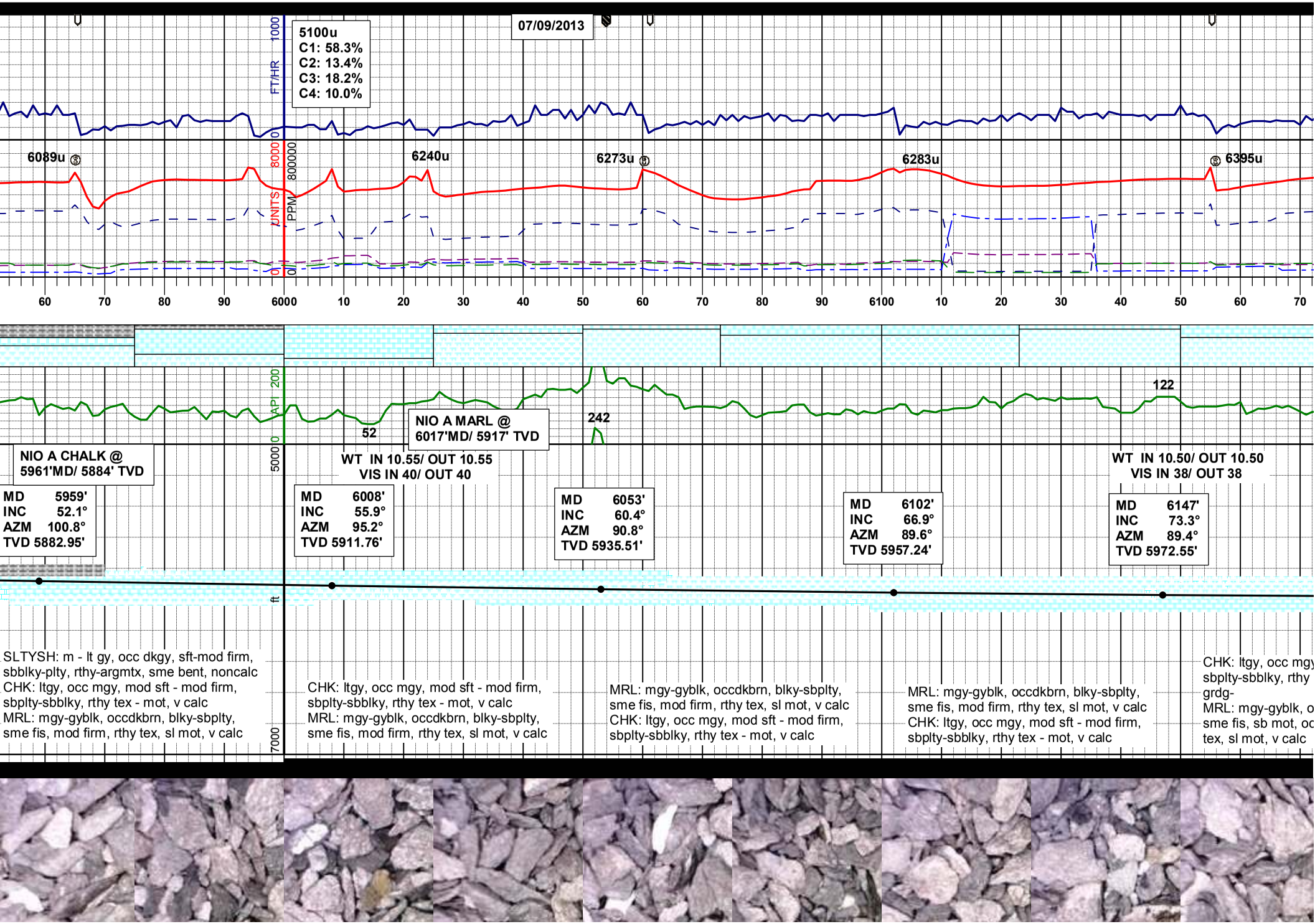
| | | |
|---|---|---|
| Casing | Casing | Connection |
| Connection Gas | Midnight Depth | Midnight Depth |
| Normal Fault | Oil To Surface | Reverse Fault |

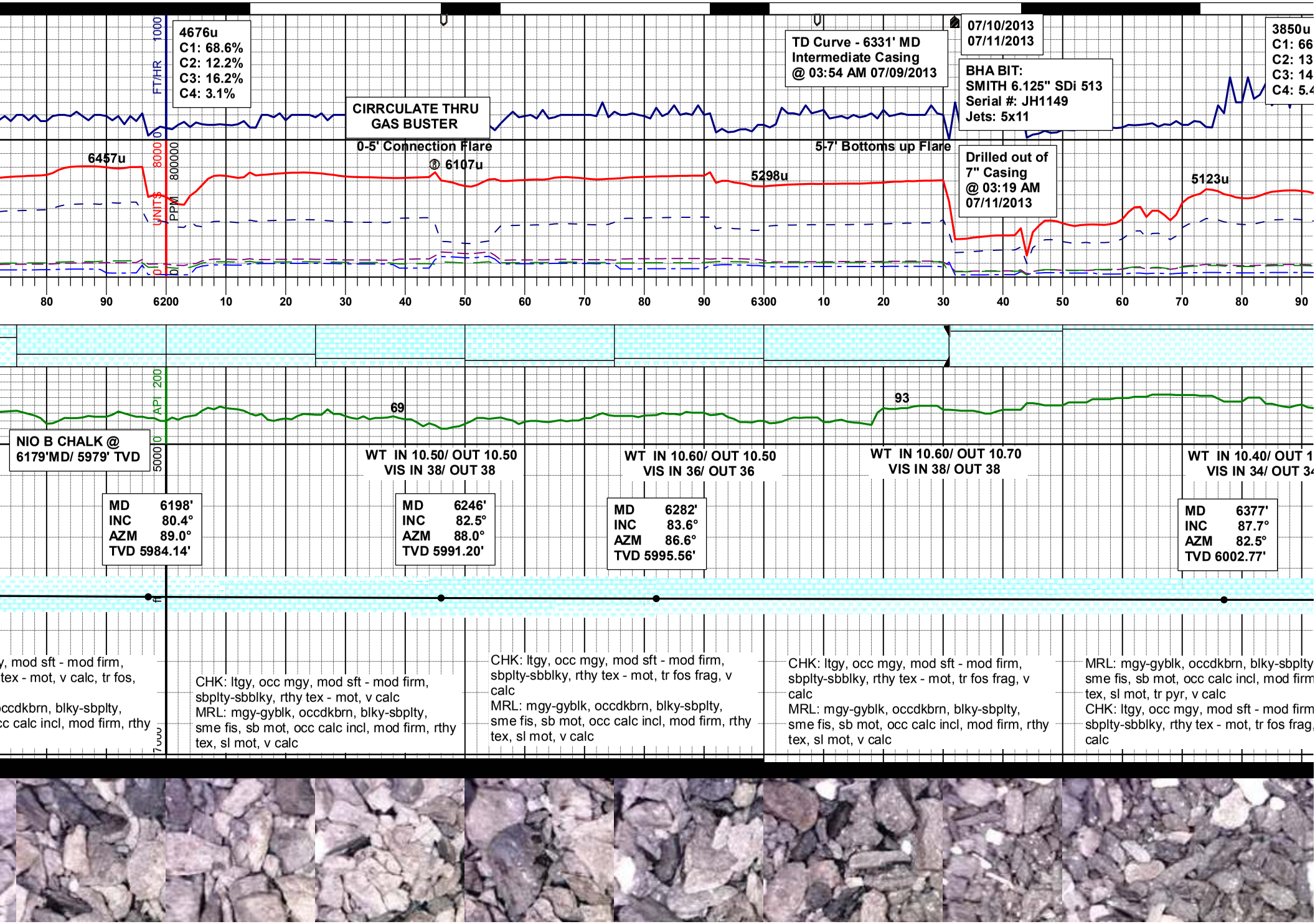


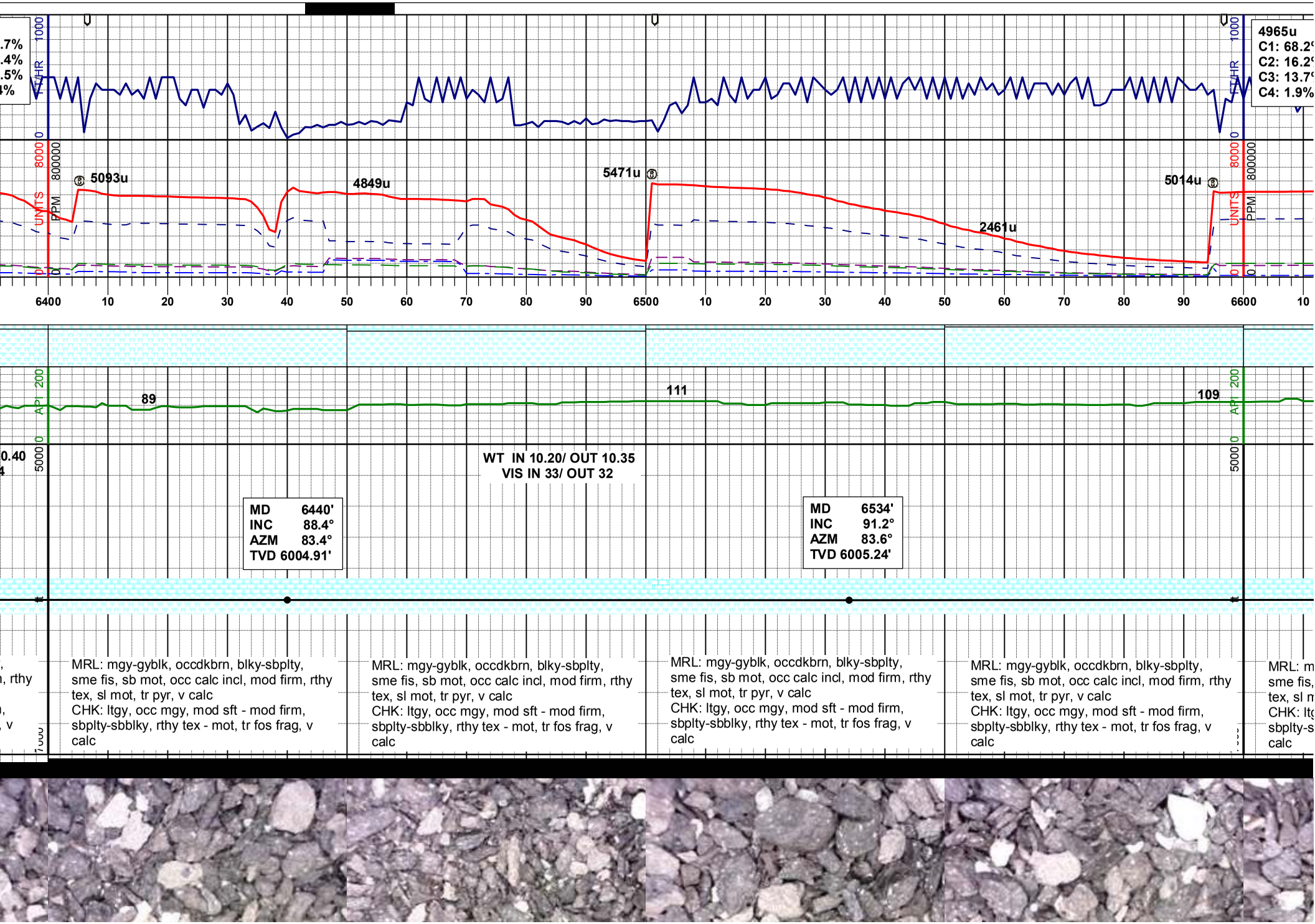

376u
C1: 76.1%
C2: 8.6%
C3: 10.4%
C4: 4.8%
FT/HR
1000
0
UNITS
4000
0
PPM
400000
0
1723u
2084u
2829u
2241u
2958u
5300
10
20
30
40
50
60
70
80
90
5400
10
20
30
40
50
60
70
80
90
5500
10
API
200
0
5000
ft
7000
85
85
WT IN 9.5/ OUT 9.5
VIS IN 40/ OUT 40
MD 5345'
INC 4.8°
AZM 92.2°
TVD 5344.54'
MD 5440'
INC 14.6°
AZM 74.3°
TVD 5438.8'
SLTYSH: m-dkgy, occ brn,sft - mod firm, sbblky, occ plty, arg-rthy mtx, noncalc, tr shyss, tr ss
SLTYSH: m-dkgy, occ brn,sft - mod firm, sbblky, occ plty, arg-rthy mtx, noncalc, tr shyss
SLTYSH: m-dkgy, occ brn,sft - mod firm, sbblky, occ plty, arg-rthy mtx, noncalc, tr shyss
SLTYSH: m-dkgy, occ brn,sft - mod firm, sbblky, occ plty, arg-rthy mtx, noncalc, tr shyss


853u
C1: 70.0%
C2: 9.0%
C3: 13.6%
C4: 7.5%
FT/HR
1000
0
UNITS
4000
0
PPM
400000
0
2675u
2833u
2956u
3263u
20
30
40
50
60
70
80
90
5600
10
20
30
40
50
60
70
80
90
5700
10
20
30
90
88
API
200
0
WT IN 10.10/ OUT 10.10
VIS IN 40/ OUT 40
WT IN 10.25/ OUT 10
VIS IN 40/ OUT 40
MD 5535'
INC 21.2°
AZM 66.0°
TVD 5528.45'
MD 5630'
INC 20.8°
AZM 85.5°
TVD 5617.25'
MD 5725'
INC 26.6°
AZM 99.8°
TVD 5704.27'
ft
7000
: m-dkgy, occ brn,sft - mod firm,
cc plty, arg-rthy mtx, noncalc, tr
SLTYSH: m-dkgy, occ brn,sft - mod firm,
sbblky, occ plty, arg-rthy mtx, noncalc, tr
shyss
SLTYSH: m-dkgy, occ brn,sft - mod firm,
sbblky, occ plty, arg-rthy mtx, noncalc, tr
shyss
SLTYSH: m-dkgy, occ brn,sft - mod firm,
sbblky, occ plty, arg-rthy mtx, noncalc, tr
shyss
SLTYSH: m-dkgy, occ brn,sft
sbblky, occ plty, arg-rthy mtx,
shyss

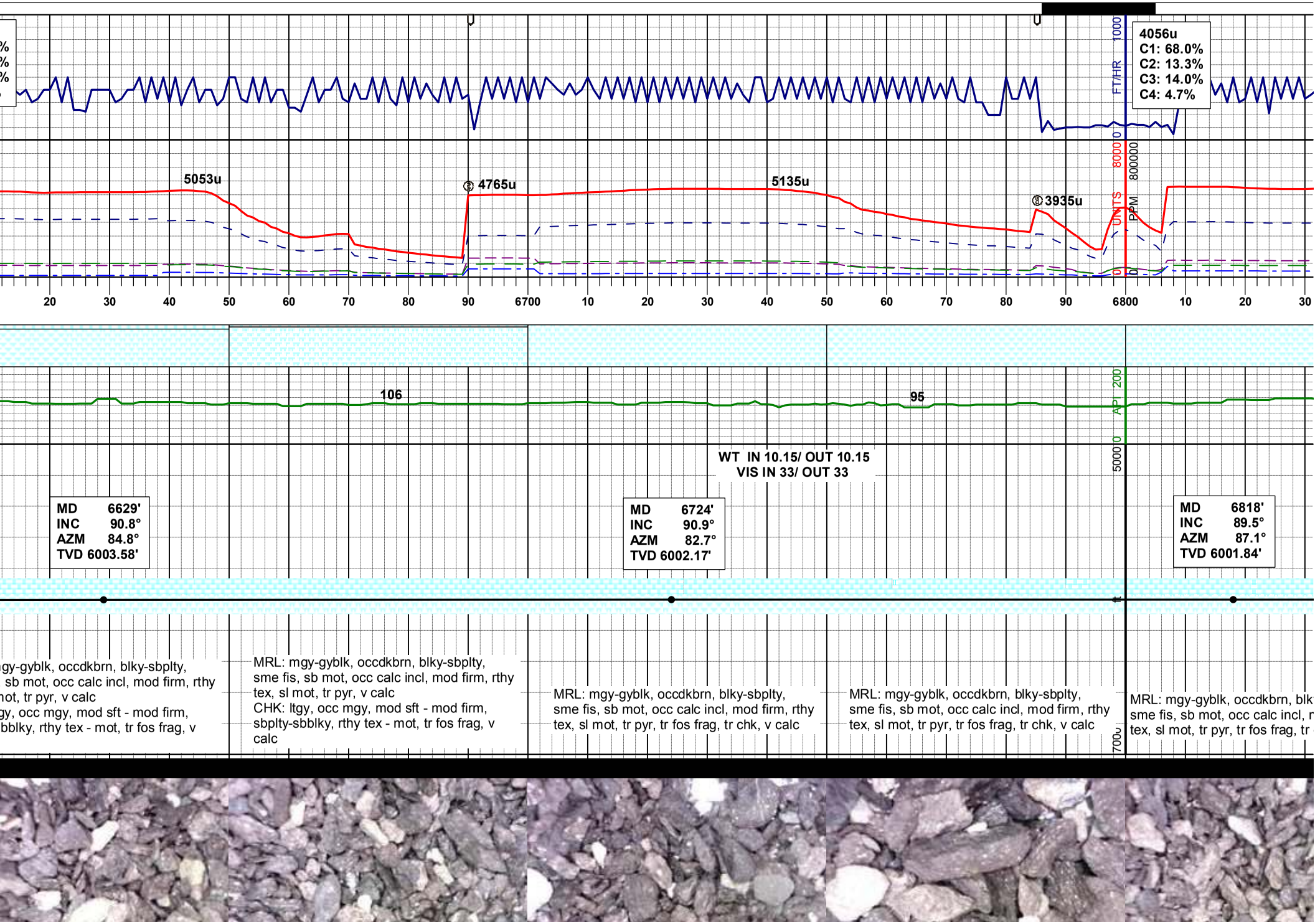

2969u
C1: 70.5%
C2: 11.9%
C3: 11.3%
C4: 6.2%
FT/HR
1000
0
2870u
3185u
3562u
4743u
5342u
GAS SCALE CHANGE
UNITS
8000
0
PPM
800000
0
40
50
60
70
80
90
5800
10
20
30
40
50
60
70
80
90
5900
10
20
30
40
50
91
121
181
203
API
200
0
5000
.25
WT IN 10.50/ OUT 10.50
VIS IN 44/ OUT 44
SHARON SPRINGS
MARKER BED @
5919' MD/ 5857'TVD
ft
MD 5819'
INC 36.7°
AZM 106.6°
TVD 5784.21'
MD 5914'
INC 48.3°
AZM 105.6°
TVD 5854.14'
7000
t - mod firm,
, noncalc, tr
SLTYSH: m-dkgy, occ brn,sft - mod firm, sbblky, occ plty, arg-rthy mtx, noncalc, tr shyss
SLTYSH: m-dkgy, occ brn,sft - mod firm, sbblky, occ plty, arg-rthy mtx, noncalc, tr shyss
SLTYSH: m-dkgy, occ brn,sft - mod firm, sbblky, occ plty, arg-rthy mtx, noncalc, tr shyss, tr bent
SLTYSH: m - lt gy, occ dkgy, sft-mod firm, sbblky-plty, rthy-argmtx, sme bent, noncalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, sme fis, mod firm, rthy tex, sl mot, v calc, tr chk

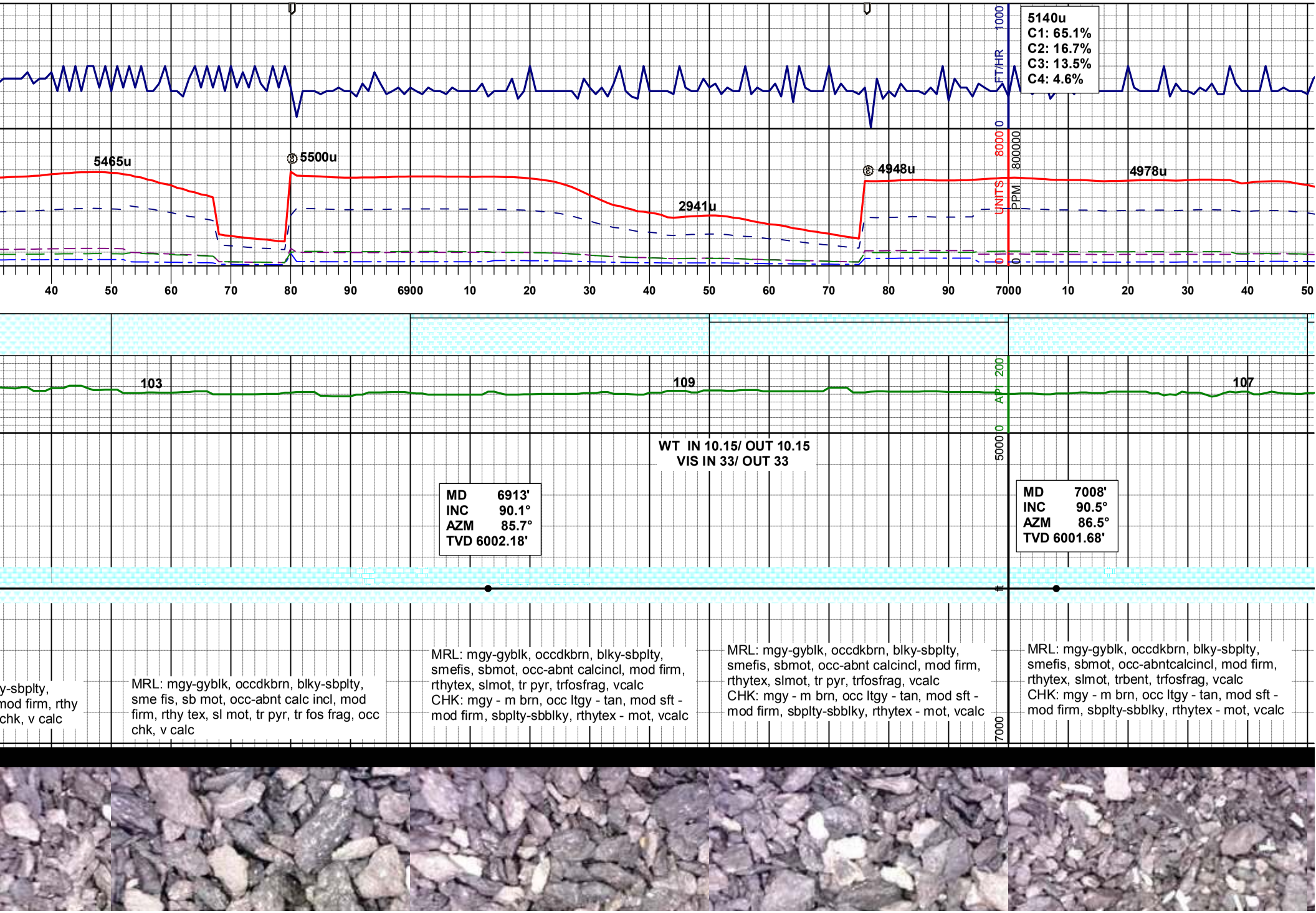

5100u
C1: 58.3%
C2: 13.4%
C3: 18.2%
C4: 10.0%
07/09/2013
FT/HR
1000
0
8000
0
UNITS
800000
PPM
6089u
6240u
6273u
6283u
6395u
60
70
80
90
6000
10
20
30
40
50
60
70
80
90
6100
10
20
30
40
50
60
70
API
200
0
5000
7000
ft
52
242
122
NIO A CHALK @
5961'MD/ 5884' TVD
MD 5959'
INC 52.1°
AZM 100.8°
TVD 5882.95'
NIO A MARL @
6017'MD/ 5917' TVD
WT IN 10.55/ OUT 10.55
VIS IN 40/ OUT 40
MD 6008'
INC 55.9°
AZM 95.2°
TVD 5911.76'
MD 6053'
INC 60.4°
AZM 90.8°
TVD 5935.51'
MD 6102'
INC 66.9°
AZM 89.6°
TVD 5957.24'
WT IN 10.50/ OUT 10.50
VIS IN 38/ OUT 38
MD 6147'
INC 73.3°
AZM 89.4°
TVD 5972.55'
SLTYSH: m - lt gy, occ dkgy, sft-mod firm, sbblky-plty, rthy-argmtx, sme bent, noncalc
CHK: ltgy, occ mgy, mod sft - mod firm, sbplty-sbblky, rthy tex - mot, v calc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, sme fis, mod firm, rthy tex, sl mot, v calc
CHK: ltgy, occ mgy, mod sft - mod firm, sbplty-sbblky, rthy tex - mot, v calc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, sme fis, mod firm, rthy tex, sl mot, v calc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, sme fis, mod firm, rthy tex, sl mot, v calc
CHK: ltgy, occ mgy, mod sft - mod firm, sbplty-sbblky, rthy tex - mot, v calc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, sme fis, mod firm, rthy tex, sl mot, v calc
CHK: ltgy, occ mgy, mod sft - mod firm, sbplty-sbblky, rthy tex - mot, v calc
CHK: ltgy, occ mgy
sbplty-sbblky, rthy
grdg-
MRL: mgy-gyblk, o
sme fis, sb mot, oc
tex, sl mot, v calc

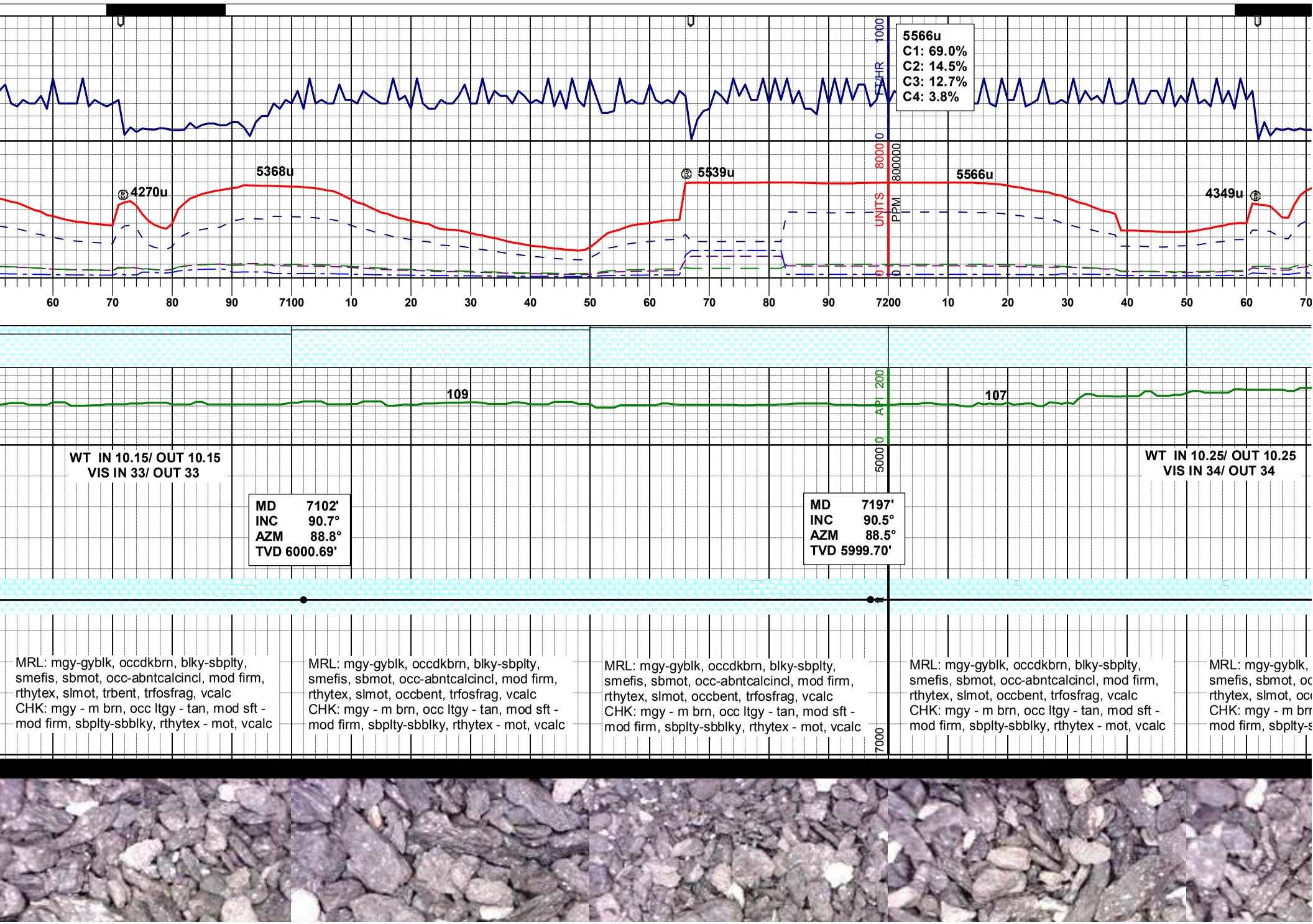

4676u
C1: 68.6%
C2: 12.2%
C3: 16.2%
C4: 3.1%
CIRRCULATE THRU
GAS BUSTER
0-5' Connection Flare
6457u
6107u
5298u
5123u
5-7' Bottoms up Flare
TD Curve - 6331' MD
Intermediate Casing
@ 03:54 AM 07/09/2013
07/10/2013
07/11/2013
BHA BIT:
SMITH 6.125" SDi 513
Serial #: JH1149
Jets: 5x11
Drilled out of
7" Casing
@ 03:19 AM
07/11/2013
3850u
C1: 66
C2: 13
C3: 14
C4: 5.4
FT/HR
UNITS
PPM
80
90
6200
10
20
30
40
50
60
70
80
90
6300
10
20
30
40
50
60
70
80
90
API
69
93
NIO B CHALK @
6179'MD/ 5979' TVD
WT IN 10.50/ OUT 10.50
VIS IN 38/ OUT 38
WT IN 10.60/ OUT 10.50
VIS IN 36/ OUT 36
WT IN 10.60/ OUT 10.70
VIS IN 38/ OUT 38
WT IN 10.40/ OUT 1
VIS IN 34/ OUT 34
MD 6198'
INC 80.4°
AZM 89.0°
TVD 5984.14'
MD 6246'
INC 82.5°
AZM 88.0°
TVD 5991.20'
MD 6282'
INC 83.6°
AZM 86.6°
TVD 5995.56'
MD 6377'
INC 87.7°
AZM 82.5°
TVD 6002.77'
y, mod sft - mod firm,
tex - mot, v calc, tr fos,
ccdkbrn, blky-sbplty,
cc calc incl, mod firm, rthy
CHK: ltgy, occ mgy, mod sft - mod firm, sbplty-sbblky, rthy tex - mot, v calc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, sme fis, sb mot, occ calc incl, mod firm, rthy tex, sl mot, v calc
CHK: ltgy, occ mgy, mod sft - mod firm, sbplty-sbblky, rthy tex - mot, tr fos frag, v calc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, sme fis, sb mot, occ calc incl, mod firm, rthy tex, sl mot, v calc
CHK: ltgy, occ mgy, mod sft - mod firm, sbplty-sbblky, rthy tex - mot, tr fos frag, v calc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, sme fis, sb mot, occ calc incl, mod firm, rthy tex, sl mot, v calc
MRL: mgy-gyblk, occdkbrn, blky-sbplty
sme fis, sb mot, occ calc incl, mod firm
tex, sl mot, tr pyr, v calc
CHK: ltgy, occ mgy, mod sft - mod firm
sbplty-sbblky, rthy tex - mot, tr fos frag,
calc

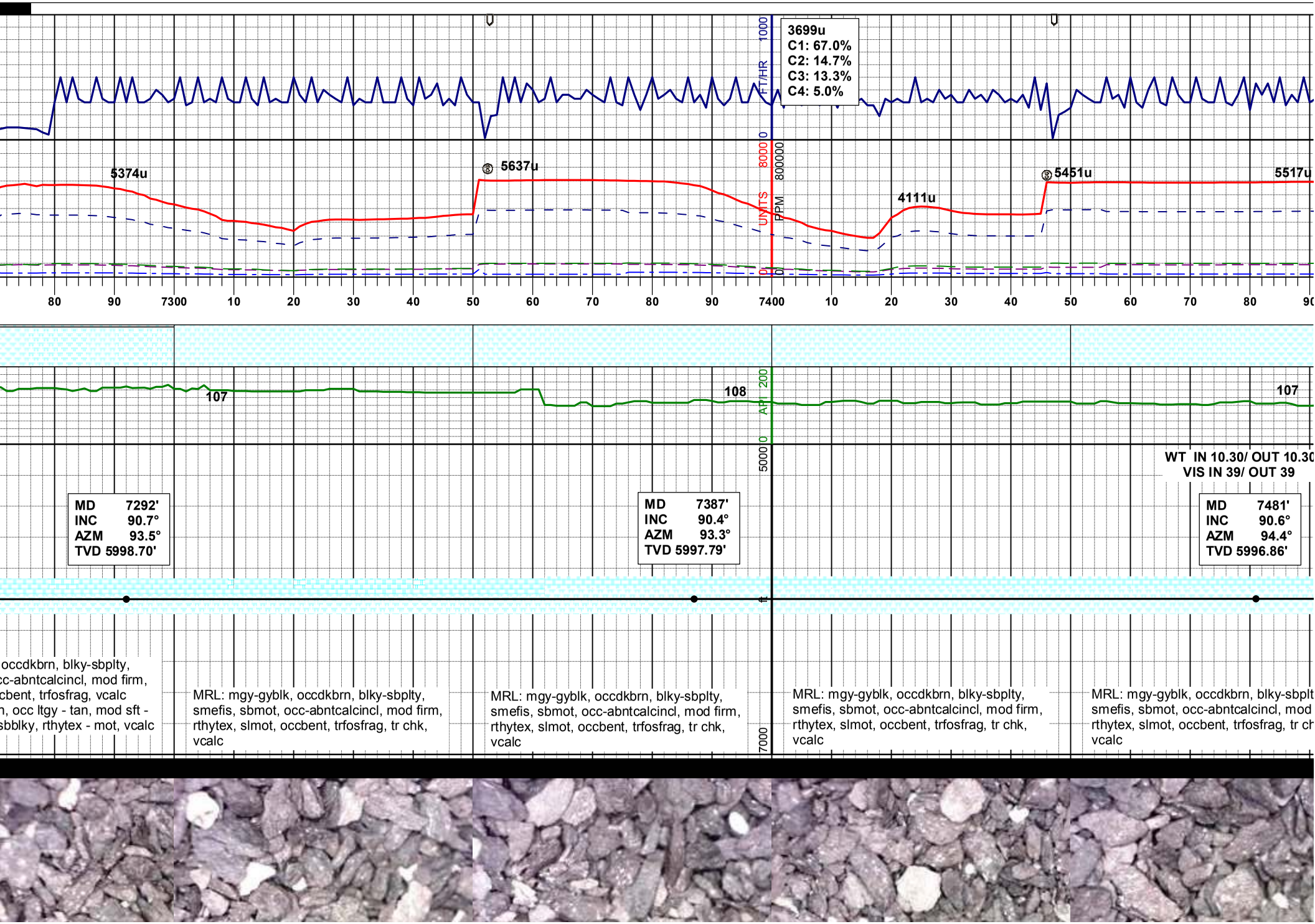


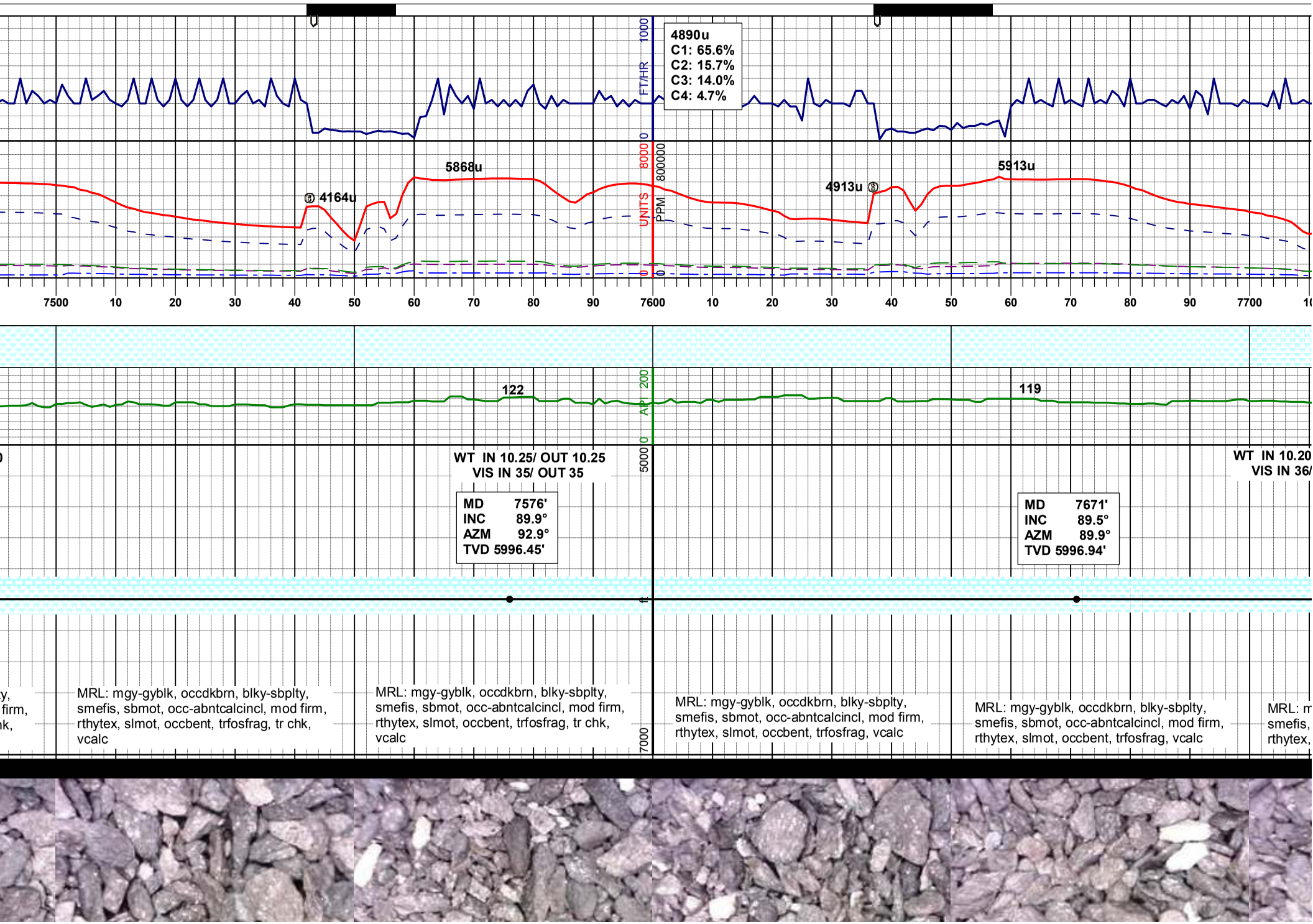
4965u
C1: 68.2
C2: 16.2
C3: 13.7
C4: 1.9%
5093u
4849u
5471u
2461u
5014u
6400
10
20
30
40
50
60
70
80
90
6500
6600
89
111
109
WT IN 10.20/ OUT 10.35
VIS IN 33/ OUT 32
MD 6440'
INC 88.4°
AZM 83.4°
TVD 6004.91'
MD 6534'
INC 91.2°
AZM 83.6°
TVD 6005.24'
MRL: mgy-gyblk, occdkbrn, blky-sbplty, sme fis, sb mot, occ calc incl, mod firm, rthy tex, sl mot, tr pyr, v calc
CHK: ltgy, occ mgy, mod sft - mod firm, sbplty-sbblky, rthy tex - mot, tr fos frag, v calc

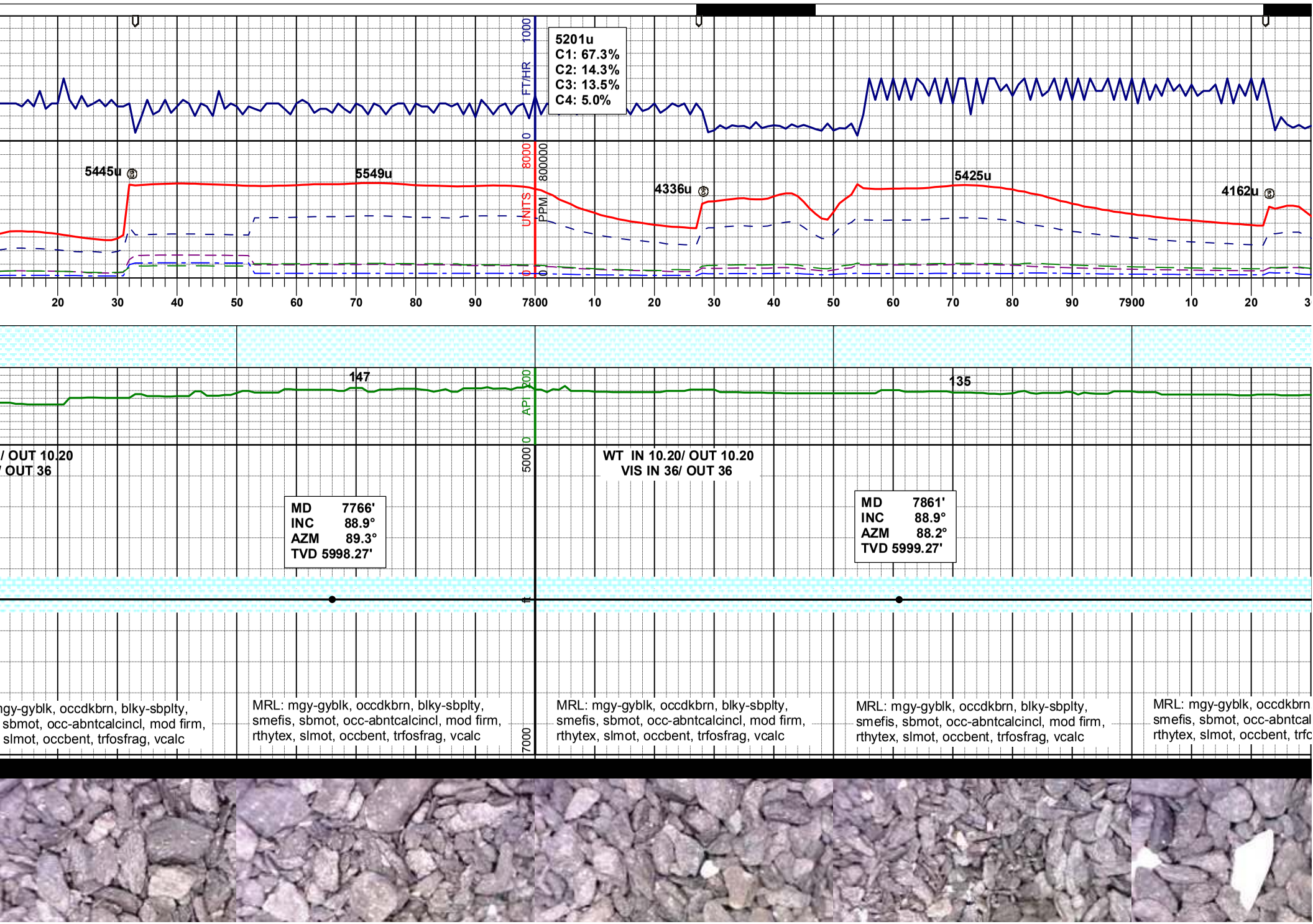

4056u
C1: 68.0%
C2: 13.3%
C3: 14.0%
C4: 4.7%
FT/HR
1000
0
8000
0
800000
UNITS
PPM
5053u
4765u
5135u
3935u
20
30
40
50
60
70
80
90
6700
10
20
30
40
50
60
70
80
90
6800
10
20
30
106
95
API
200
0
5000
0
WT IN 10.15/ OUT 10.15
VIS IN 33/ OUT 33
MD 6629'
INC 90.8°
AZM 84.8°
TVD 6003.58'
MD 6724'
INC 90.9°
AZM 82.7°
TVD 6002.17'
MD 6818'
INC 89.5°
AZM 87.1°
TVD 6001.84'
ft
700u
gy-gyblk, occdkbrn, blky-sbplty,
sb mot, occ calc incl, mod firm, rthy
ot, tr pyr, v calc
gy, occ mgy, mod sft - mod firm,
bblky, rthy tex - mot, tr fos frag, v
MRL: mgy-gyblk, occdkbrn, blky-sbplty,
sme fis, sb mot, occ calc incl, mod firm, rthy
tex, sl mot, tr pyr, v calc
CHK: ltgy, occ mgy, mod sft - mod firm,
sbplty-sbblky, rthy tex - mot, tr fos frag, v
calc
MRL: mgy-gyblk, occdkbrn, blky-sbplty,
sme fis, sb mot, occ calc incl, mod firm, rthy
tex, sl mot, tr pyr, tr fos frag, tr chk, v calc
MRL: mgy-gyblk, occdkbrn, blky-sbplty,
sme fis, sb mot, occ calc incl, mod firm, rthy
tex, sl mot, tr pyr, tr fos frag, tr chk, v calc
MRL: mgy-gyblk, occdkbrn, blk
sme fis, sb mot, occ calc incl, r
tex, sl mot, tr pyr, tr fos frag, tr

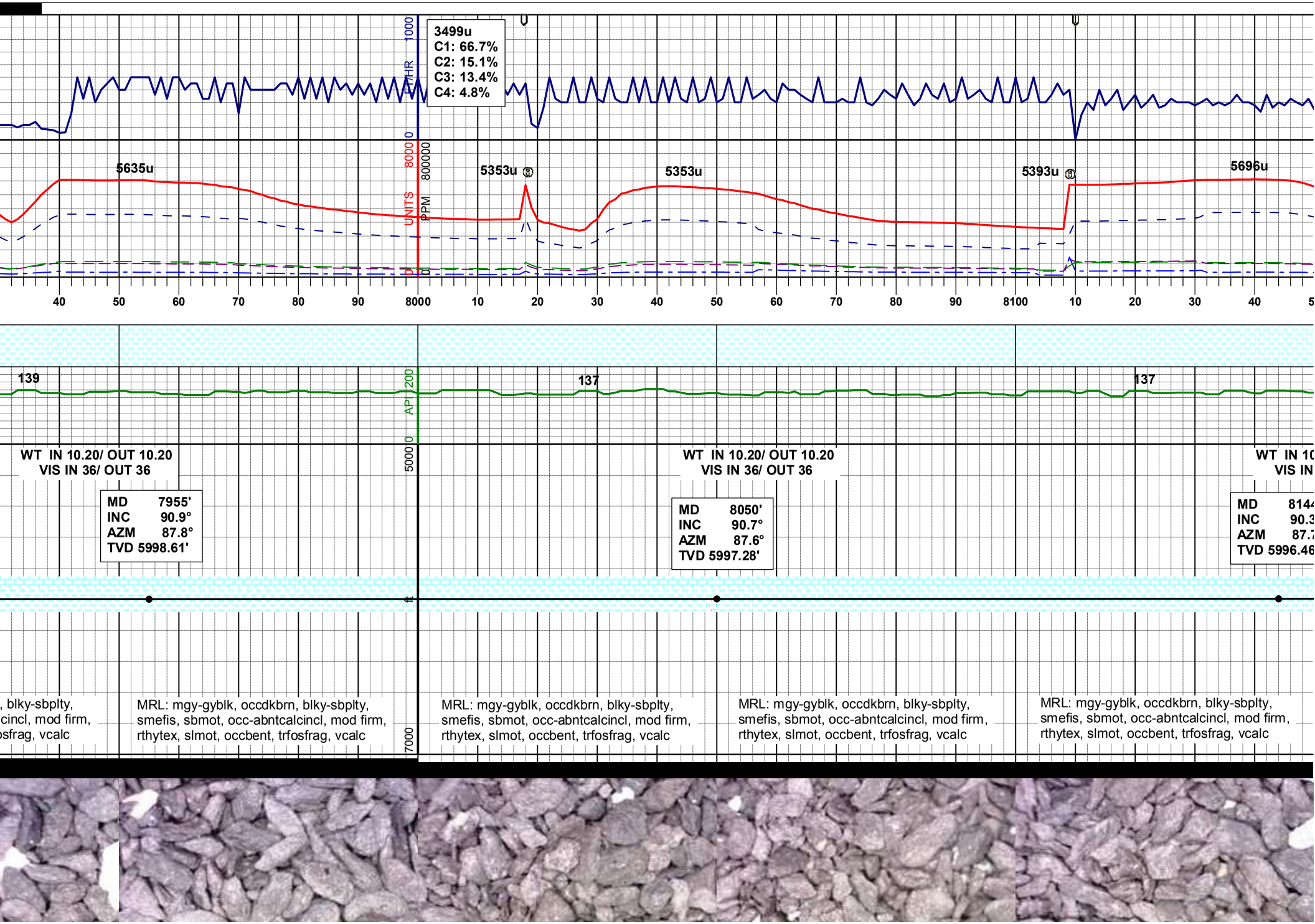

5140u
C1: 65.1%
C2: 16.7%
C3: 13.5%
C4: 4.6%
FT/HR
1000
0
8000
0
800000
UNITS
PPM
0
5465u
5500u
4948u
2941u
4978u
40
50
60
70
80
90
6900
10
20
30
40
50
60
70
80
90
7000
10
20
30
40
50
103
109
107
API
200
0
5000
0
WT IN 10.15/ OUT 10.15
VIS IN 33/ OUT 33
MD 6913'
INC 90.1°
AZM 85.7°
TVD 6002.18'
MD 7008'
INC 90.5°
AZM 86.5°
TVD 6001.68'
ft
7000
y-sbplty,
mod firm, rthy
chk, v calc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, sme fis, sb mot, occ-abnt calc incl, mod firm, rthy tex, sl mot, tr pyr, tr fos frag, occ chk, v calc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, occ-abnt calcincl, mod firm, rthytex, slmot, tr pyr, trfosfrag, vcalc
CHK: mgy - m brn, occ ltgy - tan, mod sft - mod firm, sbplty-sbblky, rthytex - mot, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, occ-abnt calcincl, mod firm, rthytex, slmot, tr pyr, trfosfrag, vcalc
CHK: mgy - m brn, occ ltgy - tan, mod sft - mod firm, sbplty-sbblky, rthytex - mot, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, occ-abntcalcincl, mod firm, rthytex, slmot, trbent, trfosfrag, vcalc
CHK: mgy - m brn, occ ltgy - tan, mod sft - mod firm, sbplty-sbblky, rthytex - mot, vcalc

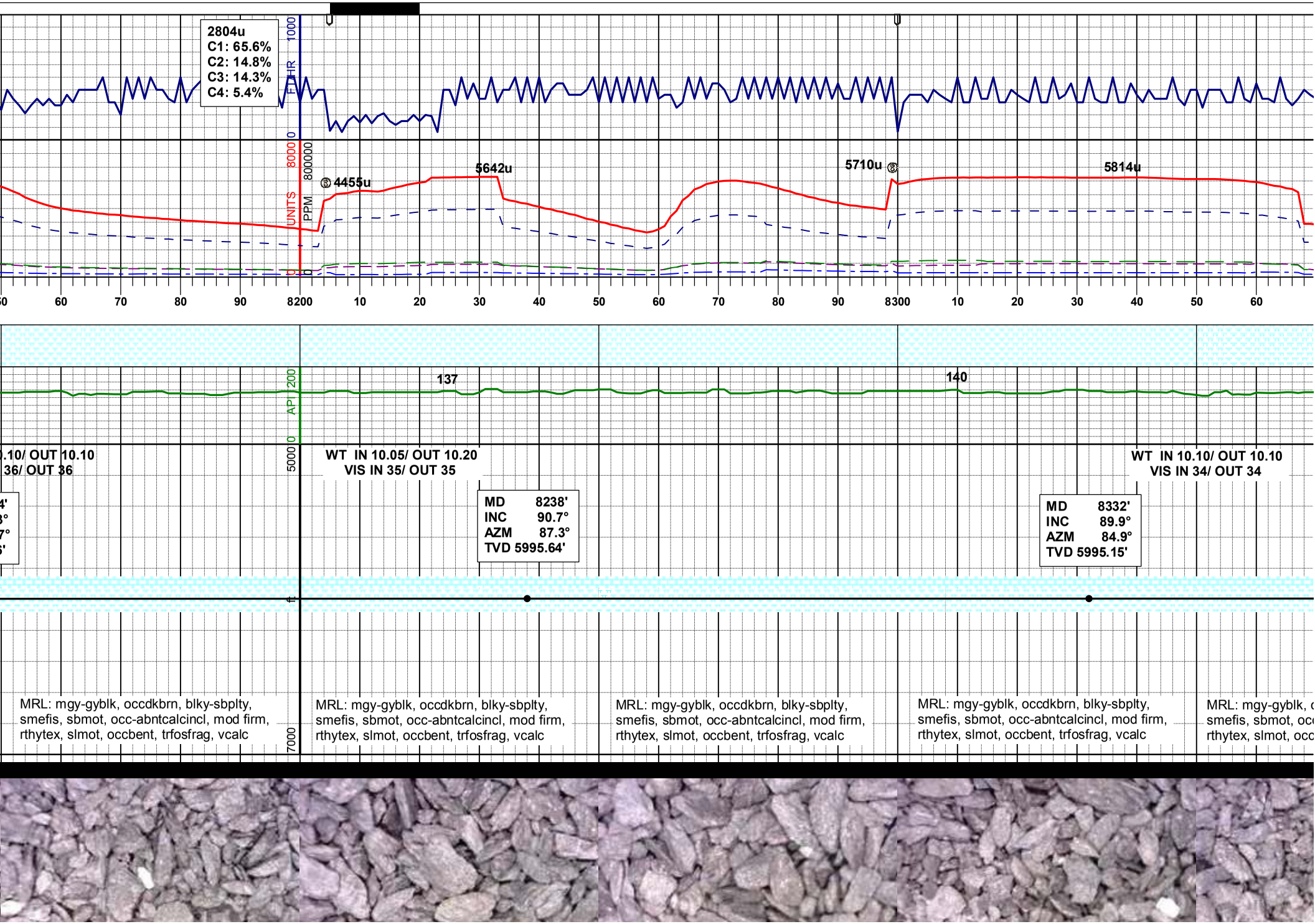

5566u
C1: 69.0%
C2: 14.5%
C3: 12.7%
C4: 3.8%
1000
ETHR
0
8000
800000
UNITS
PPM
0
0
5368u
4270u
5539u
5566u
4349u
60
70
80
90
7100
10
20
30
40
50
60
70
80
90
7200
10
20
30
40
50
60
70
109
107
200
API
0
5000
WT IN 10.15/ OUT 10.15
VIS IN 33/ OUT 33
MD 7102'
INC 90.7°
AZM 88.8°
TVD 6000.69'
MD 7197'
INC 90.5°
AZM 88.5°
TVD 5999.70'
WT IN 10.25/ OUT 10.25
VIS IN 34/ OUT 34
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, occ-abntcalcincl, mod firm, rthytex, slmot, trbent, trfosfrag, vcalc
CHK: mgy - m brn, occ ltgy - tan, mod sft - mod firm, sbplty-sbblky, rthytex - mot, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, occ-abntcalcincl, mod firm, rthytex, slmot, occbent, trfosfrag, vcalc
CHK: mgy - m brn, occ ltgy - tan, mod sft - mod firm, sbplty-sbblky, rthytex - mot, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, occ-abntcalcincl, mod firm, rthytex, slmot, occbent, trfosfrag, vcalc
CHK: mgy - m brn, occ ltgy - tan, mod sft - mod firm, sbplty-sbblky, rthytex - mot, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, occ-abntcalcincl, mod firm, rthytex, slmot, occbent, trfosfrag, vcalc
CHK: mgy - m brn, occ ltgy - tan, mod sft - mod firm, sbplty-sbblky, rthytex - mot, vcalc
MRL: mgy-gyblk, smefis, sbmot, oc
rthytex, slmot, oc
CHK: mgy - m br
mod firm, sbplty-s
7000

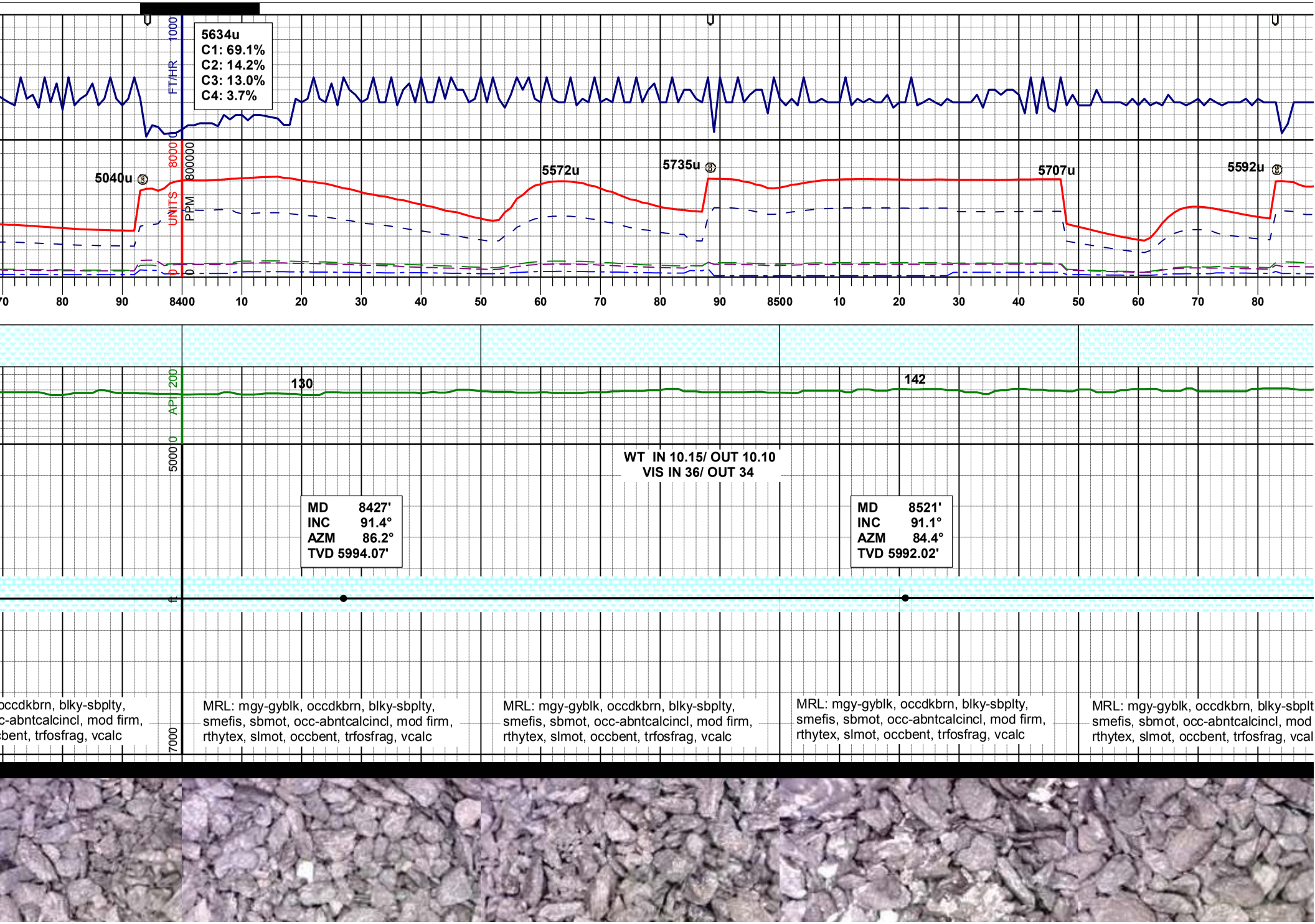

3699u
C1: 67.0%
C2: 14.7%
C3: 13.3%
C4: 5.0%
5374u
5637u
4111u
5451u
5517u
FT/HR
UNITS
PPM
API
80
90
7300
10
20
30
40
50
60
70
80
90
7400
10
20
30
40
50
60
70
80
90
107
108
107
MD 7292'
INC 90.7°
AZM 93.5°
TVD 5998.70'
MD 7387'
INC 90.4°
AZM 93.3°
TVD 5997.79'
WT IN 10.30/ OUT 10.30
VIS IN 39/ OUT 39
MD 7481'
INC 90.6°
AZM 94.4°
TVD 5996.86'
occdkbrn, blky-sbplty,
cc-abntcalcincl, mod firm,
cbent, trfosfrag, vcalc
n, occ ltgy - tan, mod sft -
sbblky, rthytex - mot, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, occ-abntcalcincl, mod firm, rthytex, slmot, occbent, trfosfrag, tr chk, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, occ-abntcalcincl, mod firm, rthytex, slmot, occbent, trfosfrag, tr chk, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, occ-abntcalcincl, mod firm, rthytex, slmot, occbent, trfosfrag, tr chk, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplt
smefis, sbmot, occ-abntcalcincl, mod
rthytex, slmot, occbent, trfosfrag, tr ch
vcalc

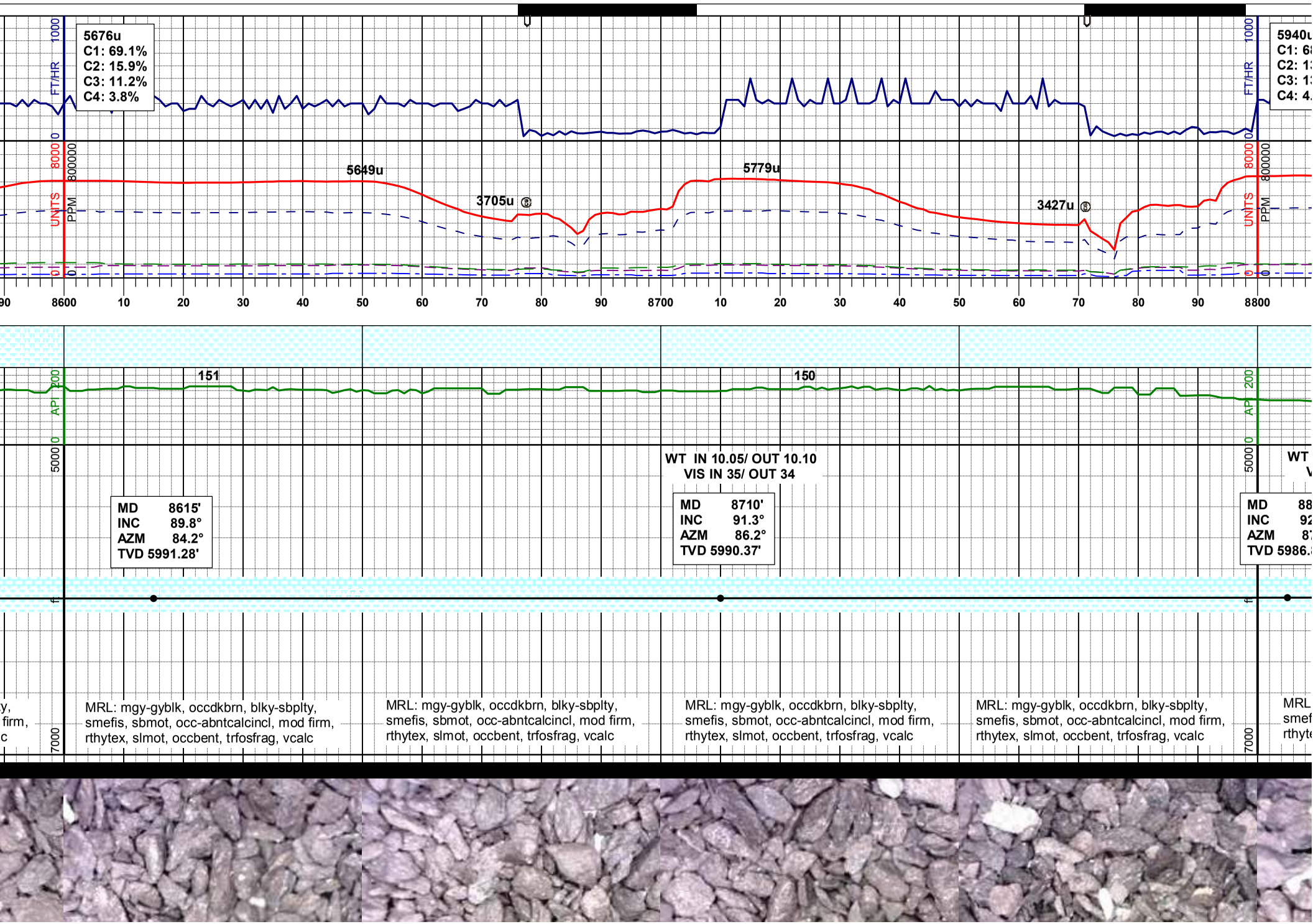

4890u
C1: 65.6%
C2: 15.7%
C3: 14.0%
C4: 4.7%
FT/HR
1000
0
UNITS
8000
0
PPM
800000
0
4164u
5868u
4913u
5913u
7500
10
20
30
40
50
60
70
80
90
7600
10
20
30
40
50
60
70
80
90
7700
API
200
0
122
119
5000
WT IN 10.25/ OUT 10.25
VIS IN 35/ OUT 35
MD 7576'
INC 89.9°
AZM 92.9°
TVD 5996.45'
MD 7671'
INC 89.5°
AZM 89.9°
TVD 5996.94'
WT IN 10.20
VIS IN 36/
ft
7000
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, occ-abntcalcincl, mod firm, rthytex, slmot, occbent, trfosfrag, tr chk, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, occ-abntcalcincl, mod firm, rthytex, slmot, occbent, trfosfrag, tr chk, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, occ-abntcalcincl, mod firm, rthytex, slmot, occbent, trfosfrag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, occ-abntcalcincl, mod firm, rthytex, slmot, occbent, trfosfrag, vcalc

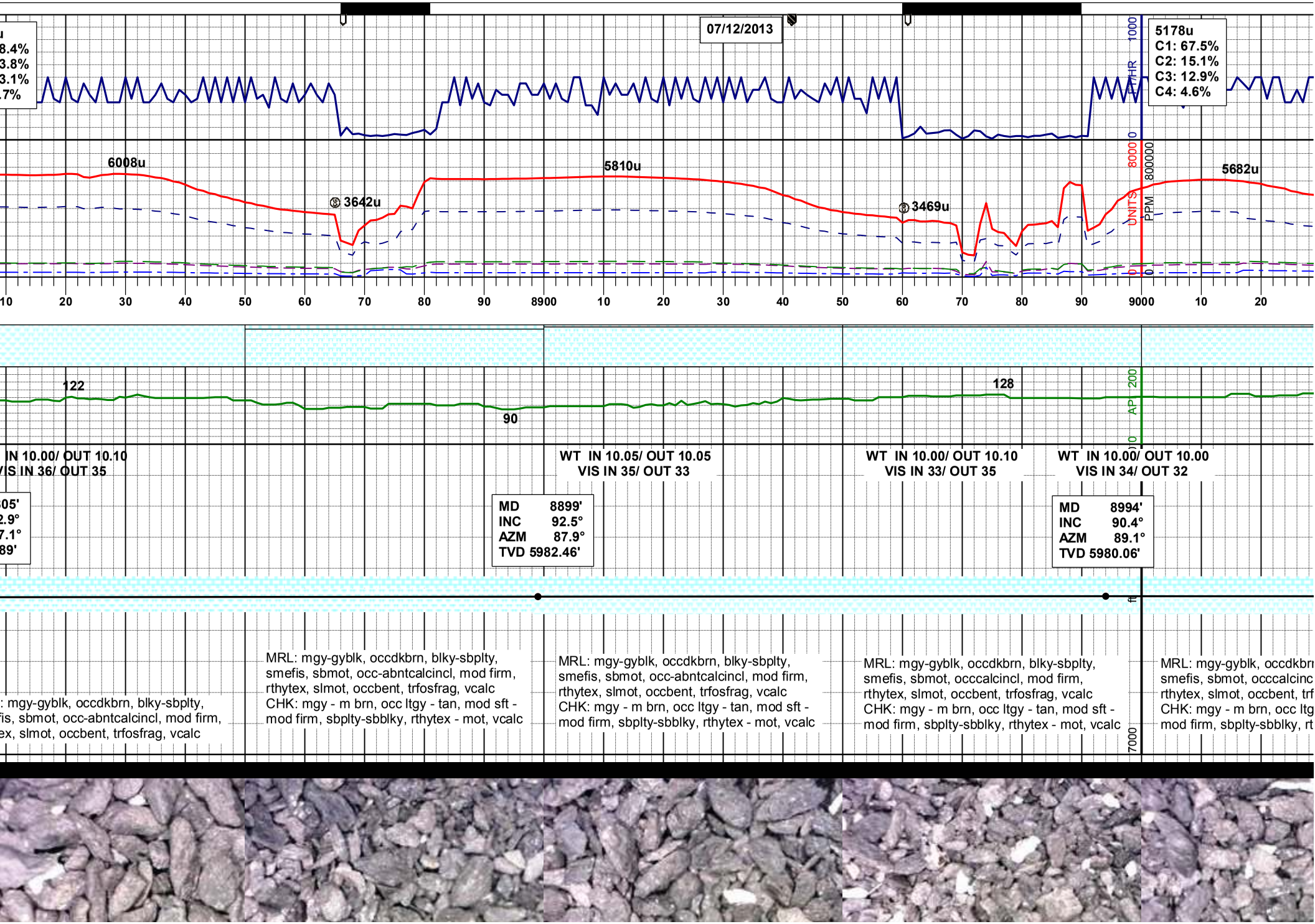

5201u
C1: 67.3%
C2: 14.3%
C3: 13.5%
C4: 5.0%
FT/HR
1000
0
8000
0
UNITS
PPM
800000
0
5445u
5549u
4336u
5425u
4162u
20
30
40
50
60
70
80
90
7800
10
20
30
40
50
60
70
80
90
7900
10
20
147
135
API
200
0
5000
0
/ OUT 10.20
/ OUT 36
WT IN 10.20/ OUT 10.20
VIS IN 36/ OUT 36
MD 7766'
INC 88.9°
AZM 89.3°
TVD 5998.27'
MD 7861'
INC 88.9°
AZM 88.2°
TVD 5999.27'
ft
7000
ngy-gyblk, occdkbrn, blky-sbplty,
sbmot, occ-abntcalcincl, mod firm,
slmot, occbent, trfosfrag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty,
smefis, sbmot, occ-abntcalcincl, mod firm,
rthytex, slmot, occbent, trfosfrag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty,
smefis, sbmot, occ-abntcalcincl, mod firm,
rthytex, slmot, occbent, trfosfrag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty,
smefis, sbmot, occ-abntcalcincl, mod firm,
rthytex, slmot, occbent, trfosfrag, vcalc
MRL: mgy-gyblk, occdkbrn
smefis, sbmot, occ-abntcal
rthytex, slmot, occbent, trfo


3499u
C1: 66.7%
C2: 15.1%
C3: 13.4%
C4: 4.8%
1000
0
800000
0
UNITS
PPM
5635u
5353u
5353u
5393u
5696u
40
50
60
70
80
90
8000
10
20
30
40
50
60
70
80
90
8100
10
20
30
40
139
137
137
200
0
API
5000
0
WT IN 10.20/ OUT 10.20
VIS IN 36/ OUT 36
MD 7955'
INC 90.9°
AZM 87.8°
TVD 5998.61'
WT IN 10.20/ OUT 10.20
VIS IN 36/ OUT 36
MD 8050'
INC 90.7°
AZM 87.6°
TVD 5997.28'
WT IN 10
VIS IN
MD 8144
INC 90.3
AZM 87.7
TVD 5996.46
ft
7000
, blky-sbplty,
cincl, mod firm,
sfrag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty,
smefis, sbmot, occ-abntcalcincl, mod firm,
rthytex, slmot, occbent, trfosfrag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty,
smefis, sbmot, occ-abntcalcincl, mod firm,
rthytex, slmot, occbent, trfosfrag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty,
smefis, sbmot, occ-abntcalcincl, mod firm,
rthytex, slmot, occbent, trfosfrag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty,
smefis, sbmot, occ-abntcalcincl, mod firm,
rthytex, slmot, occbent, trfosfrag, vcalc

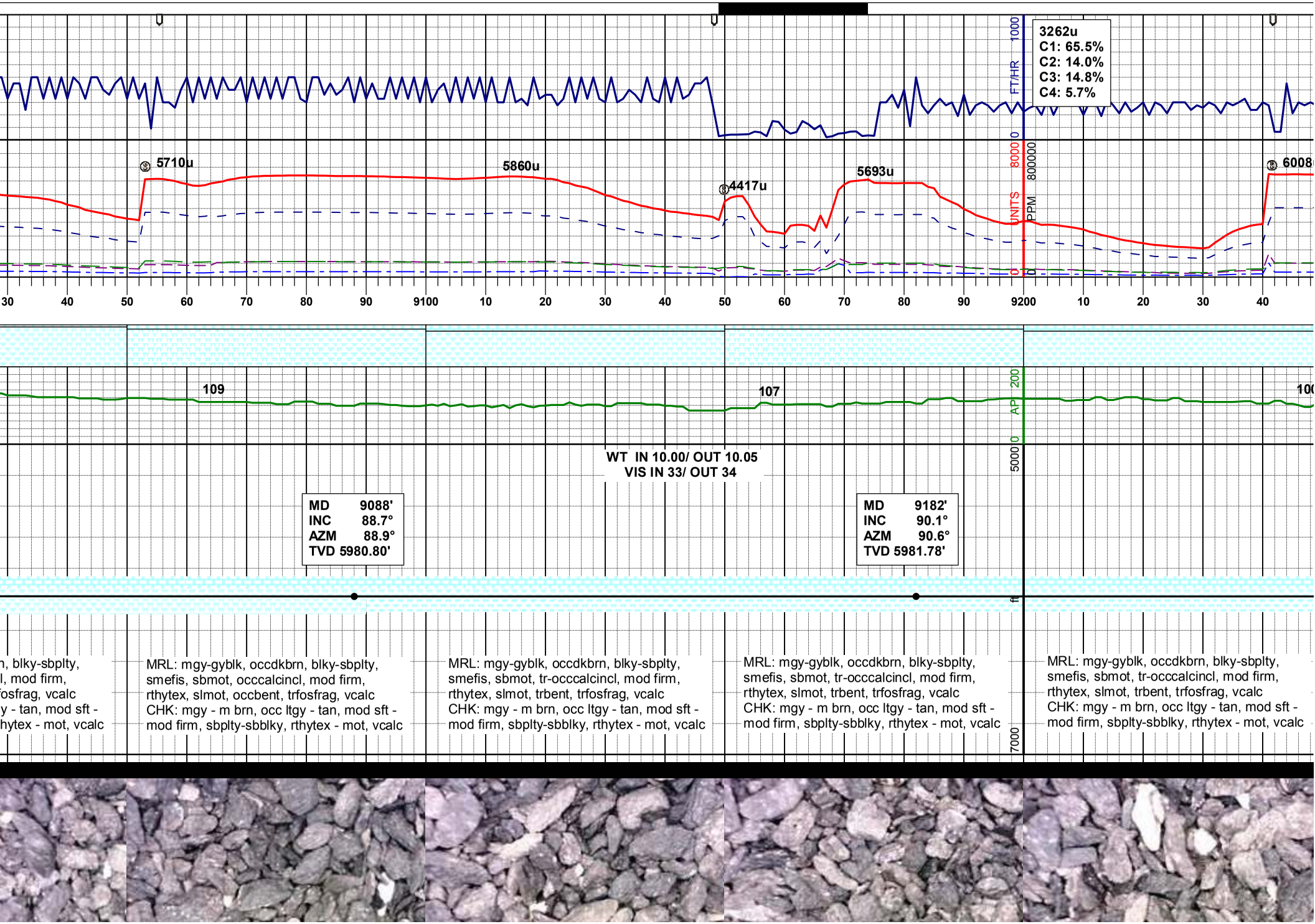

2804u
C1: 65.6%
C2: 14.8%
C3: 14.3%
C4: 5.4%
1000
FHR
800000
UNITS
PPM
0
4455u
5642u
5710u
5814u
8200
8300
137
140
200
API
5000
WT IN 10.05/ OUT 10.20
VIS IN 35/ OUT 35
MD 8238'
INC 90.7°
AZM 87.3°
TVD 5995.64'
WT IN 10.10/ OUT 10.10
VIS IN 34/ OUT 34
MD 8332'
INC 89.9°
AZM 84.9°
TVD 5995.15'
ft
7000
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, occ-abntcalcincl, mod firm, rthytex, slmot, occbent, trfosfrag, vcalc

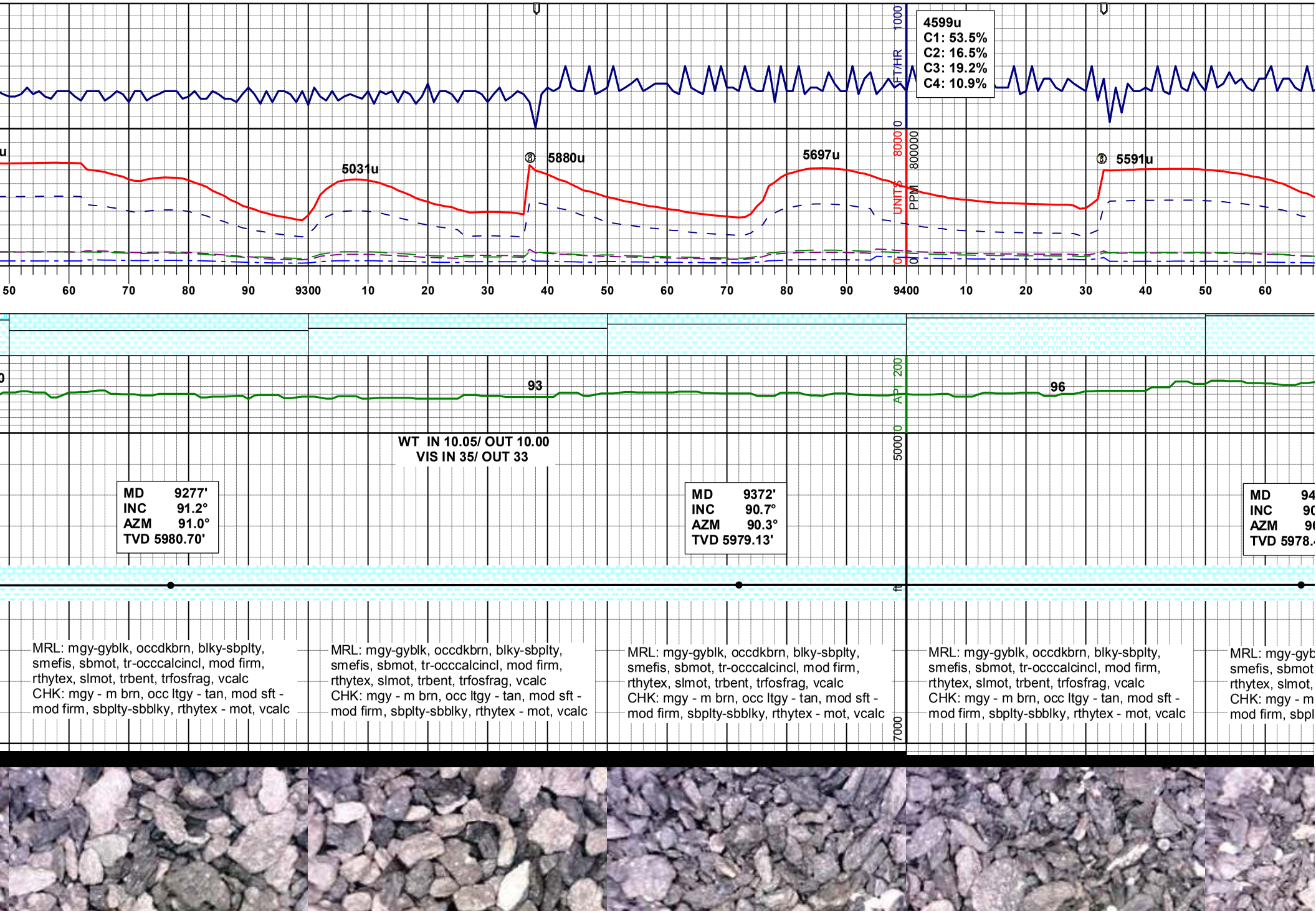

5634u
C1: 69.1%
C2: 14.2%
C3: 13.0%
C4: 3.7%
FT/HR
1000
0
8000
0
UNITS
800000
0
PPM
5040u
5572u
5735u
5707u
5592u
70
80
90
8400
10
20
30
40
50
60
70
80
90
8500
10
20
30
40
50
60
70
80
200
API
0
5000
7000
ft
130
142
WT IN 10.15/ OUT 10.10
VIS IN 36/ OUT 34
MD 8427'
INC 91.4°
AZM 86.2°
TVD 5994.07'
MD 8521'
INC 91.1°
AZM 84.4°
TVD 5992.02'
occdkbrn, blky-sbplty,
c-abntcalcincl, mod firm,
cbent, trfosfrag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty,
smefis, sbmot, occ-abntcalcincl, mod firm,
rthytex, slmot, occbent, trfosfrag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty,
smefis, sbmot, occ-abntcalcincl, mod firm,
rthytex, slmot, occbent, trfosfrag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty,
smefis, sbmot, occ-abntcalcincl, mod firm,
rthytex, slmot, occbent, trfosfrag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplt
smefis, sbmot, occ-abntcalcincl, mod
rthytex, slmot, occbent, trfosfrag, vcal

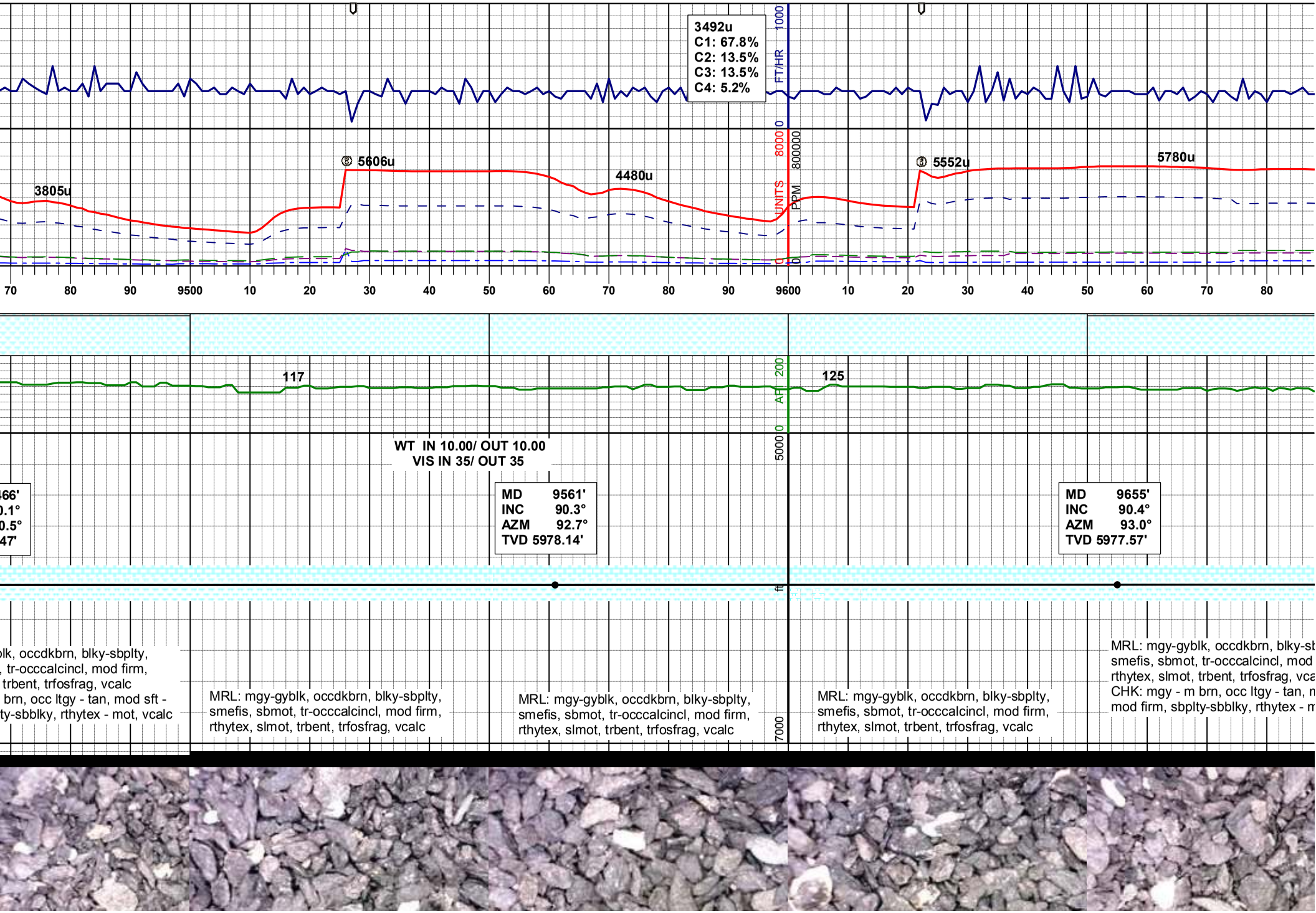

5676u
C1: 69.1%
C2: 15.9%
C3: 11.2%
C4: 3.8%
FT/HR
1000
0
UNITS
8000
0
PPM
800000
0
5649u
3705u
5779u
3427u
8600
10
20
30
40
50
60
70
80
90
8700
10
20
30
40
50
60
70
80
90
8800
API
200
0
5000
151
150
WT IN 10.05/ OUT 10.10
VIS IN 35/ OUT 34
MD 8615'
INC 89.8°
AZM 84.2°
TVD 5991.28'
MD 8710'
INC 91.3°
AZM 86.2°
TVD 5990.37'
7000
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, occ-abntcalcincl, mod firm, rthytex, slmot, occbent, trfosfrag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, occ-abntcalcincl, mod firm, rthytex, slmot, occbent, trfosfrag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, occ-abntcalcincl, mod firm, rthytex, slmot, occbent, trfosfrag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, occ-abntcalcincl, mod firm, rthytex, slmot, occbent, trfosfrag, vcalc

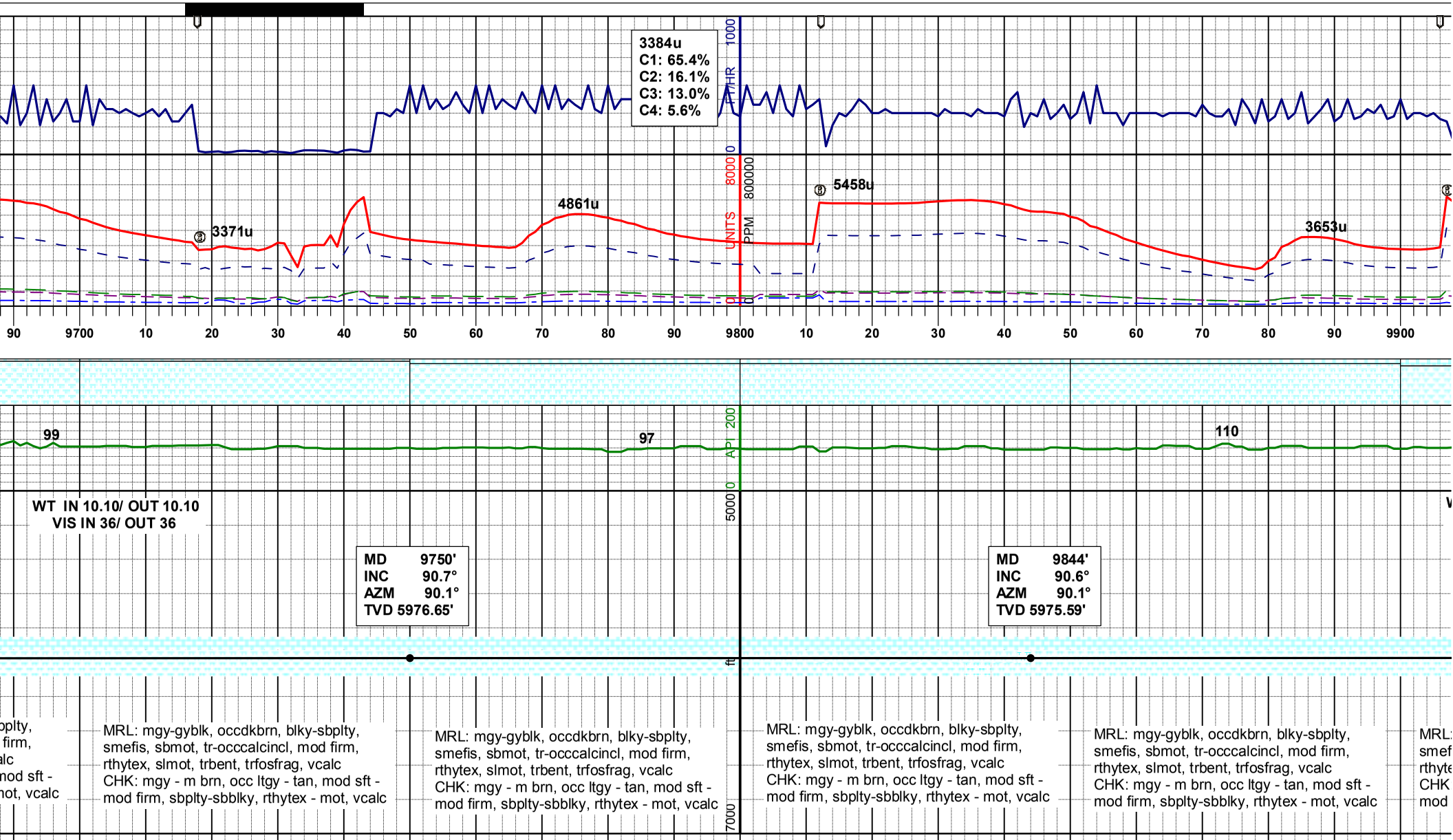


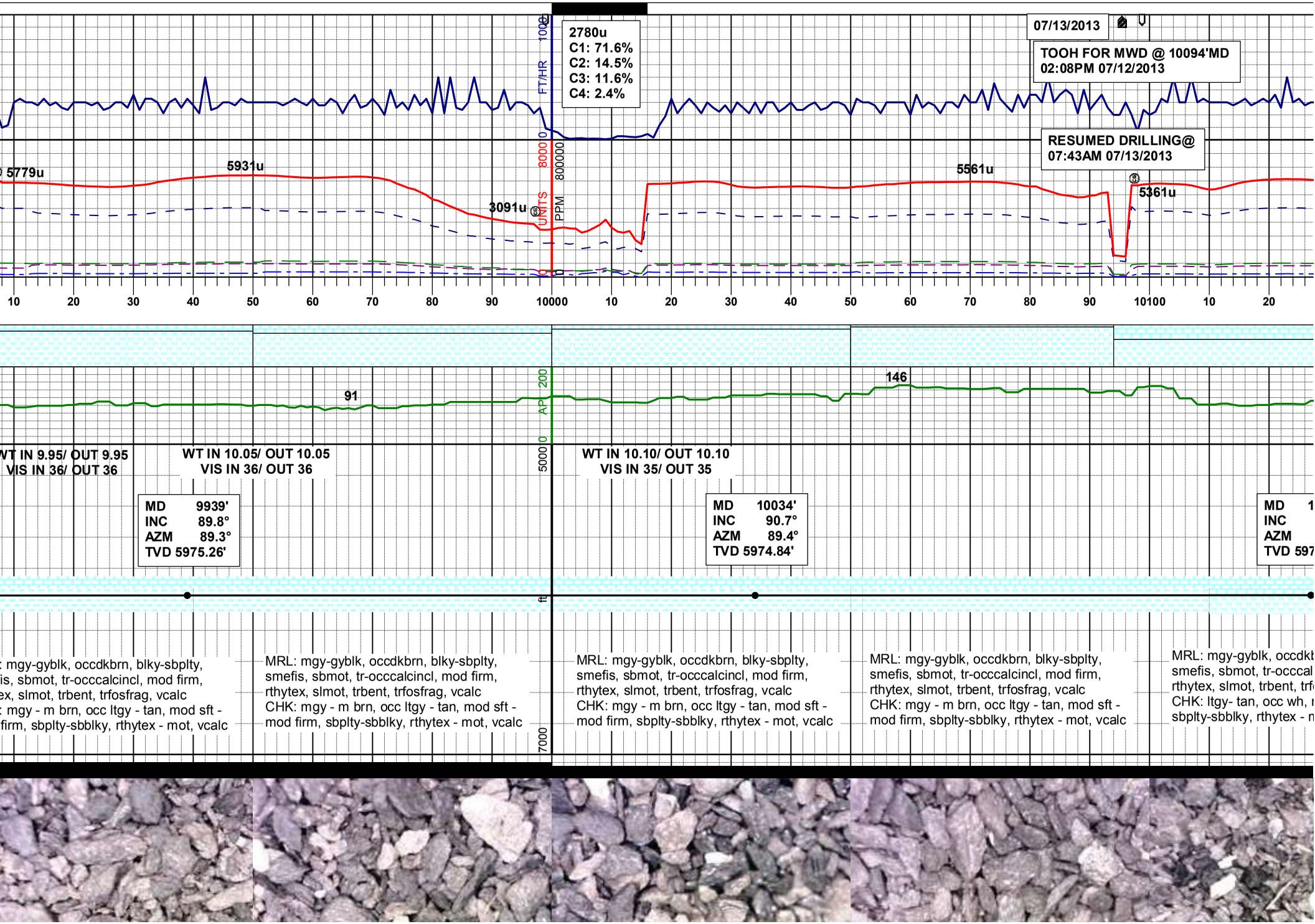
07/12/2013
5178u
C1: 67.5%
C2: 15.1%
C3: 12.9%
C4: 4.6%
6008u
3642u
5810u
3469u
5682u
122
90
128
IN 10.00/ OUT 10.10
VIS IN 36/ OUT 35
WT IN 10.05/ OUT 10.05
VIS IN 35/ OUT 33
WT IN 10.00/ OUT 10.10
VIS IN 33/ OUT 35
WT IN 10.00/ OUT 10.00
VIS IN 34/ OUT 32
MD 8899'
INC 92.5°
AZM 87.9°
TVD 5982.46'
MD 8994'
INC 90.4°
AZM 89.1°
TVD 5980.06'
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, occ-abntcalcincl, mod firm, rthytex, slmot, occbent, trfosfrag, vcalc
CHK: mgy - m brn, occ ltgy - tan, mod sft - mod firm, sbplty-sbblky, rthytex - mot, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, occ-abntcalcincl, mod firm, rthytex, slmot, occbent, trfosfrag, vcalc
CHK: mgy - m brn, occ ltgy - tan, mod sft - mod firm, sbplty-sbblky, rthytex - mot, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, occcalcincl, mod firm, rthytex, slmot, occbent, trfosfrag, vcalc
CHK: mgy - m brn, occ ltgy - tan, mod sft - mod firm, sbplty-sbblky, rthytex - mot, vcalc

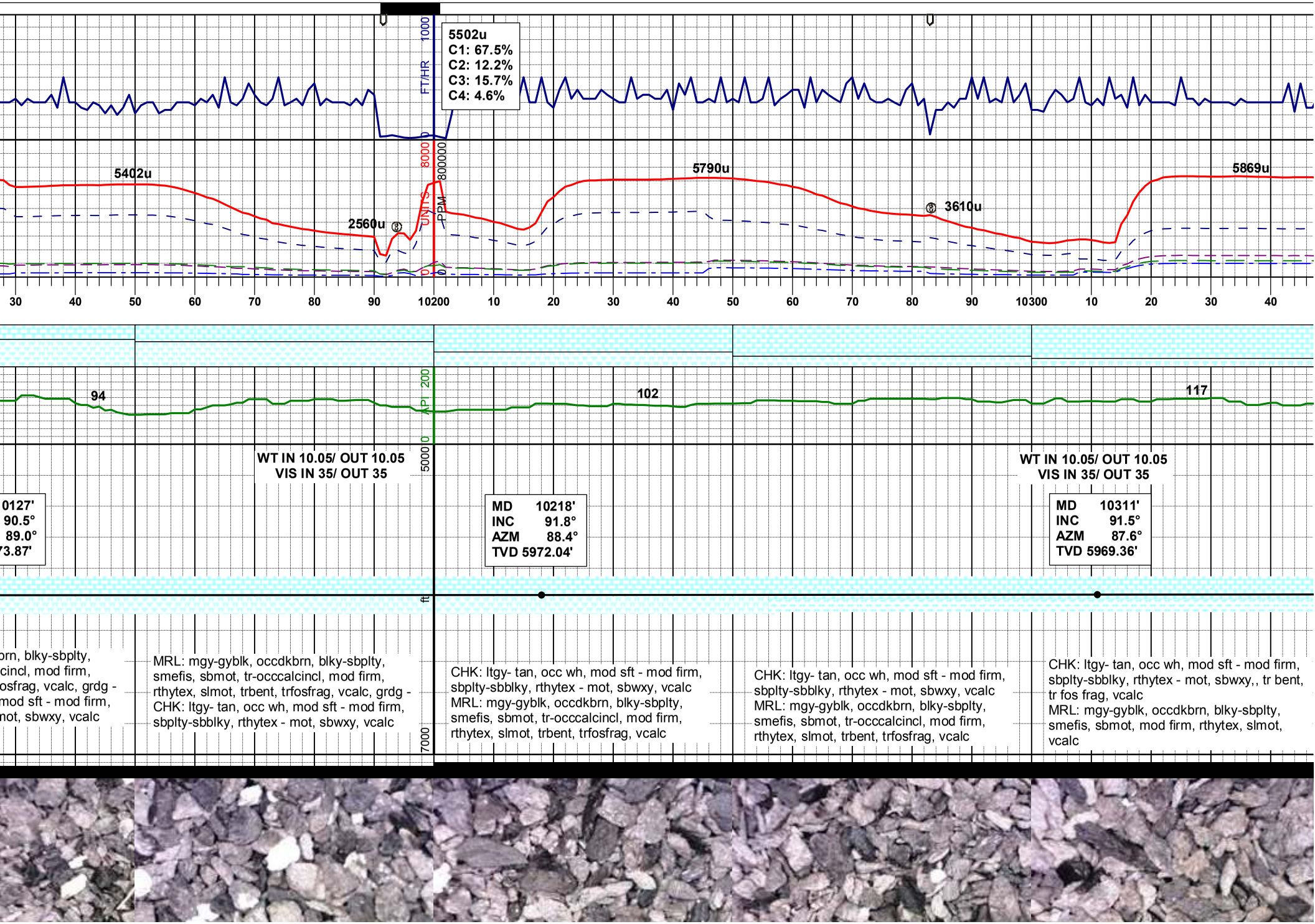

3262u
C1: 65.5%
C2: 14.0%
C3: 14.8%
C4: 5.7%
FT/HR
1000
0
UNITS
8000
0
PPM
800000
0
5710u
5860u
4417u
5693u
6008
30
40
50
60
70
80
90
9100
10
20
30
40
50
60
70
80
90
9200
10
20
30
40
109
107
100
AP
200
0
5000
0
WT IN 10.00/ OUT 10.05
VIS IN 33/ OUT 34
MD 9088'
INC 88.7°
AZM 88.9°
TVD 5980.80'
MD 9182'
INC 90.1°
AZM 90.6°
TVD 5981.78'
ft
7000
n, blky-sbplty,
l, mod firm,
fosfrag, vcalc
y - tan, mod sft -
hytex - mot, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty,
smefis, sbmot, occcalcincl, mod firm,
rthytex, slmot, occbent, trfosfrag, vcalc
CHK: mgy - m brn, occ ltgy - tan, mod sft -
mod firm, sbplty-sbblky, rthytex - mot, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty,
smefis, sbmot, tr-occcalcincl, mod firm,
rthytex, slmot, trbent, trfosfrag, vcalc
CHK: mgy - m brn, occ ltgy - tan, mod sft -
mod firm, sbplty-sbblky, rthytex - mot, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty,
smefis, sbmot, tr-occcalcincl, mod firm,
rthytex, slmot, trbent, trfosfrag, vcalc
CHK: mgy - m brn, occ ltgy - tan, mod sft -
mod firm, sbplty-sbblky, rthytex - mot, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty,
smefis, sbmot, tr-occcalcincl, mod firm,
rthytex, slmot, trbent, trfosfrag, vcalc
CHK: mgy - m brn, occ ltgy - tan, mod sft -
mod firm, sbplty-sbblky, rthytex - mot, vcalc

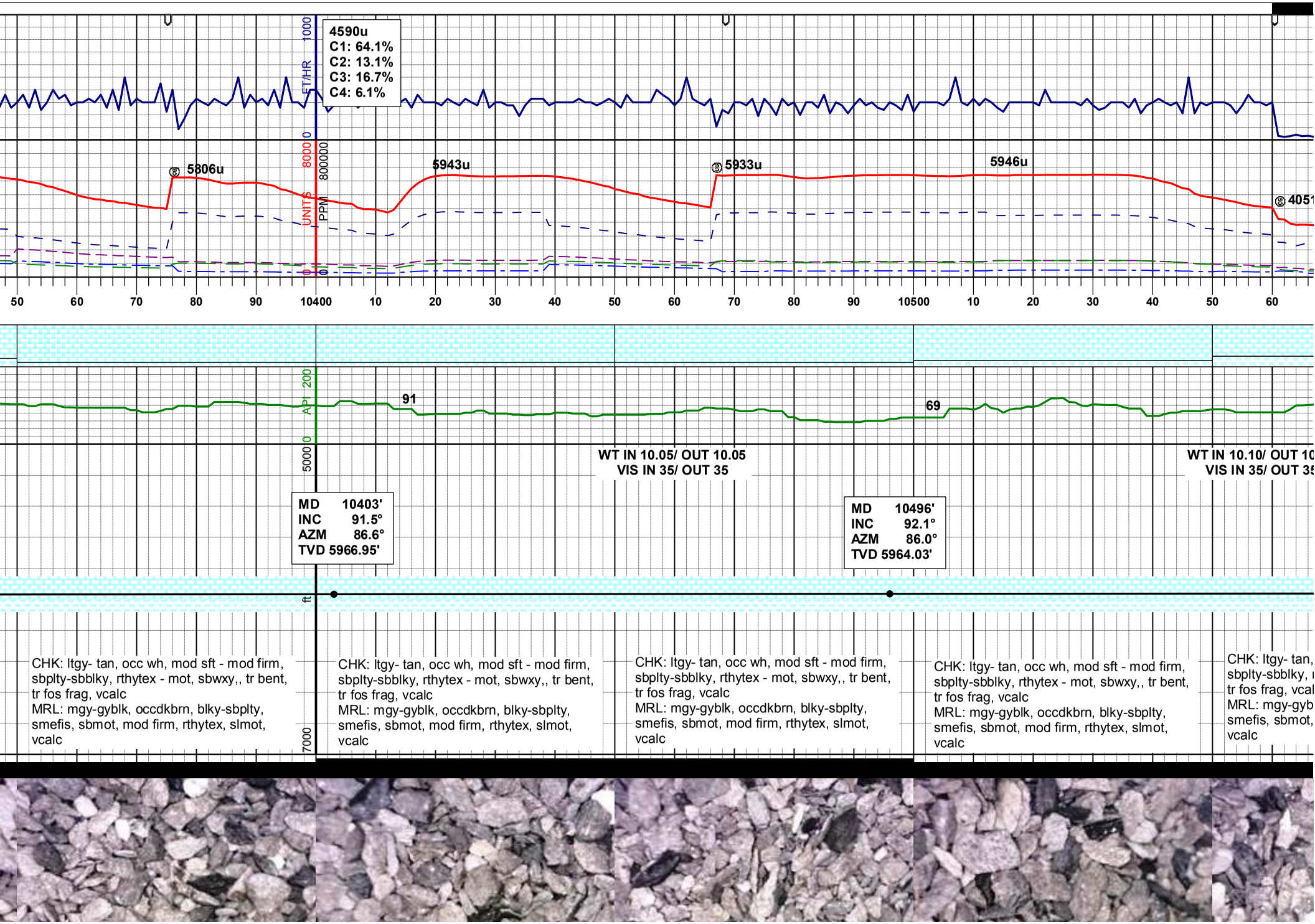

4599u
C1: 53.5%
C2: 16.5%
C3: 19.2%
C4: 10.9%
5031u
5880u
5697u
5591u
FT/HR
UNITS
PPM
93
96
API
WT IN 10.05/ OUT 10.00
VIS IN 35/ OUT 33
MD 9277'
INC 91.2°
AZM 91.0°
TVD 5980.70'
MD 9372'
INC 90.7°
AZM 90.3°
TVD 5979.13'
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, tr-occcalcincl, mod firm, rthytex, slmot, trbent, trfosfrag, vcalc
CHK: mgy - m brn, occ ltgy - tan, mod sft - mod firm, sbplty-sbblky, rthytex - mot, vcalc

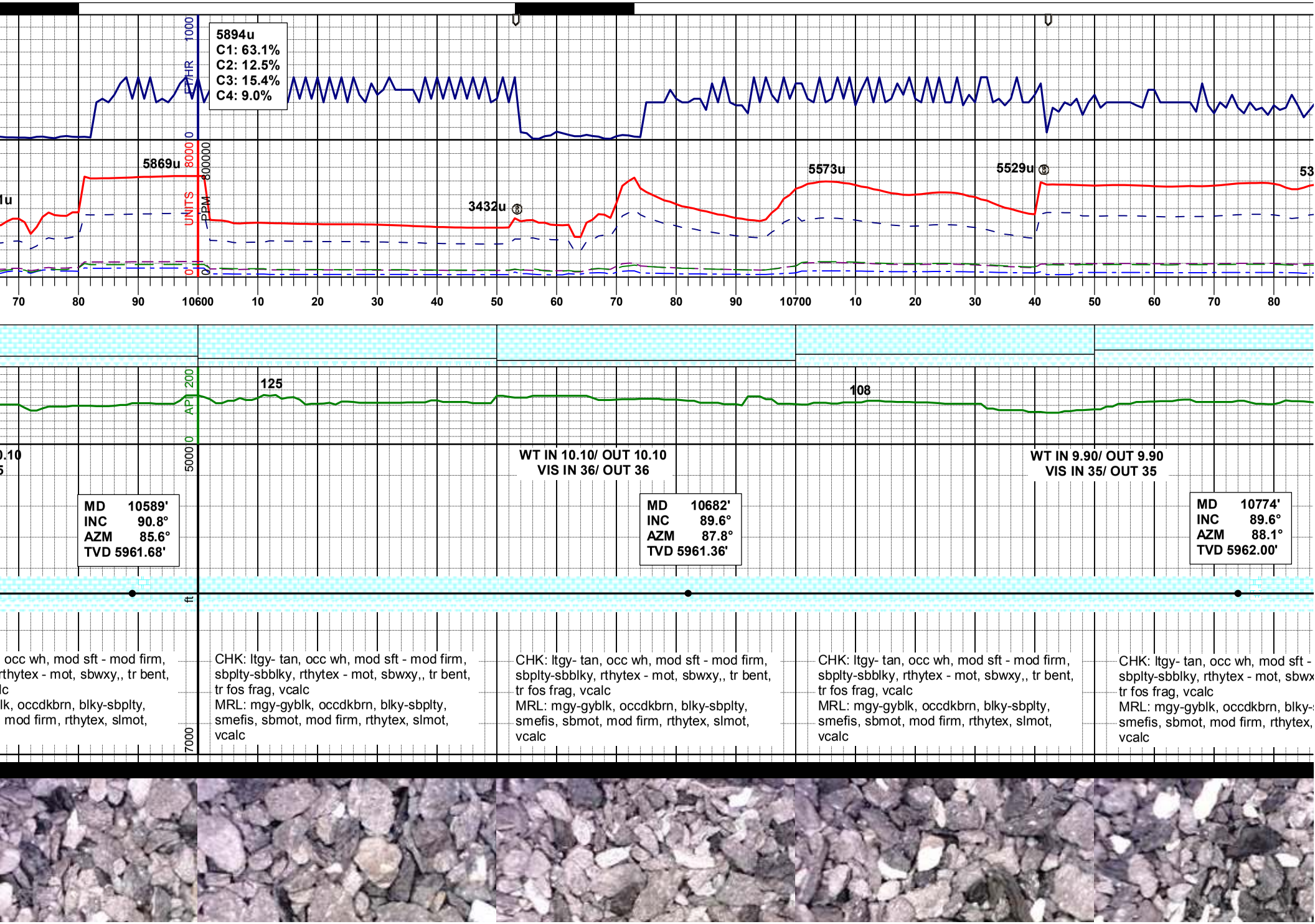

3492u
C1: 67.8%
C2: 13.5%
C3: 13.5%
C4: 5.2%
FT/HR
1000
0
UNITS
8000
0
PPM
800000
0
3805u
5606u
4480u
5552u
5780u
70
80
90
9500
10
20
30
40
50
60
70
80
90
9600
10
20
30
40
50
60
70
80
AR
200
0
117
125
5000
0
WT IN 10.00/ OUT 10.00
VIS IN 35/ OUT 35
MD 9561'
INC 90.3°
AZM 92.7°
TVD 5978.14'
MD 9655'
INC 90.4°
AZM 93.0°
TVD 5977.57'
ft
7000
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, tr-occcalcincl, mod firm, rthytex, slmot, trbent, trfosfrag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, tr-occcalcincl, mod firm, rthytex, slmot, trbent, trfosfrag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, tr-occcalcincl, mod firm, rthytex, slmot, trbent, trfosfrag, vcalc


3384u
C1: 65.4%
C2: 16.1%
C3: 13.0%
C4: 5.6%
3371u
4861u
5458u
3653u
UNITS
PPM
800000
8000 0
1000
0
90
9700
10
20
30
40
50
60
70
80
90
9800
10
20
30
40
50
60
70
80
90
9900
99
97
110
API
200
0
5000 0
WT IN 10.10/ OUT 10.10
VIS IN 36/ OUT 36
MD 9750'
INC 90.7°
AZM 90.1°
TVD 5976.65'
MD 9844'
INC 90.6°
AZM 90.1°
TVD 5975.59'
ft
7000
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, tr-occcalcincl, mod firm, rthytex, slmot, trbent, trfosfrag, vcalc
CHK: mgy - m brn, occ ltgy - tan, mod sft - mod firm, sbplty-sbblky, rthytex - mot, vcalc


07/13/2013
TOOH FOR MWD @ 10094'MD
02:08PM 07/12/2013
RESUMED DRILLING@
07:43AM 07/13/2013
2780u
C1: 71.6%
C2: 14.5%
C3: 11.6%
C4: 2.4%
5779u
5931u
3091u
5561u
5361u
FT/HR
UNITS
PPM
91
146
API
WT IN 9.95/ OUT 9.95
VIS IN 36/ OUT 36
WT IN 10.05/ OUT 10.05
VIS IN 36/ OUT 36
WT IN 10.10/ OUT 10.10
VIS IN 35/ OUT 35
MD 9939'
INC 89.8°
AZM 89.3°
TVD 5975.26'
MD 10034'
INC 90.7°
AZM 89.4°
TVD 5974.84'
ft
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, tr-occcalcincl, mod firm, rthytex, slmot, trbent, trfosfrag, vcalc
CHK: mgy - m brn, occ ltgy - tan, mod sft - mod firm, sbplty-sbblky, rthytex - mot, vcalc


5502u
C1: 67.5%
C2: 12.2%
C3: 15.7%
C4: 4.6%
FT/HR
1000
0
UNITS
8000
0
PPM
800000
0
5402u
2560u
5790u
3610u
5869u
30
40
50
60
70
80
90
10200
10
20
30
40
50
60
70
80
90
10300
10
20
30
40
API
200
0
94
102
117
WT IN 10.05/ OUT 10.05
VIS IN 35/ OUT 35
MD 10218'
INC 91.8°
AZM 88.4°
TVD 5972.04'
WT IN 10.05/ OUT 10.05
VIS IN 35/ OUT 35
MD 10311'
INC 91.5°
AZM 87.6°
TVD 5969.36'
0127'
90.5°
89.0°
73.87'
5000
ft
7000
brn, blky-sbplty,
cincl, mod firm,
osfrag, vcalc, grdg -
mod sft - mod firm,
not, sbwxy, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty,
smefis, sbmot, tr-occcalcincl, mod firm,
rthytex, slmot, trbent, trfosfrag, vcalc, grdg -
CHK: ltgy- tan, occ wh, mod sft - mod firm,
sbplty-sbblky, rthytex - mot, sbwxy, vcalc
CHK: ltgy- tan, occ wh, mod sft - mod firm,
sbplty-sbblky, rthytex - mot, sbwxy, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty,
smefis, sbmot, tr-occcalcincl, mod firm,
rthytex, slmot, trbent, trfosfrag, vcalc
CHK: ltgy- tan, occ wh, mod sft - mod firm,
sbplty-sbblky, rthytex - mot, sbwxy, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty,
smefis, sbmot, mod firm, rthytex, slmot,
vcalc
CHK: ltgy- tan, occ wh, mod sft - mod firm,
sbplty-sbblky, rthytex - mot, sbwxy,, tr bent,
tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty,
smefis, sbmot, mod firm, rthytex, slmot,
vcalc


4590u
C1: 64.1%
C2: 13.1%
C3: 16.7%
C4: 6.1%
FT/HR
1000
0
800000
UNITS
PPM
0
5806u
5943u
5933u
5946u
4051
50
60
70
80
90
10400
10
20
30
40
50
60
70
80
90
10500
10
20
30
40
50
60
API
200
0
5000
91
69
WT IN 10.05/ OUT 10.05
VIS IN 35/ OUT 35
WT IN 10.10/ OUT 10
VIS IN 35/ OUT 35
MD 10403'
INC 91.5°
AZM 86.6°
TVD 5966.95'
MD 10496'
INC 92.1°
AZM 86.0°
TVD 5964.03'
ft
7000
CHK: ltgy- tan, occ wh, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy,, tr bent, tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, vcalc
CHK: ltgy- tan, occ wh, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy,, tr bent, tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, vcalc
CHK: ltgy- tan, occ wh, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy,, tr bent, tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, vcalc
CHK: ltgy- tan, occ wh, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy,, tr bent, tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, vcalc
CHK: ltgy- tan, sbplty-sbblky, tr fos frag, vcal
MRL: mgy-gyb smefis, sbmot, vcalc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C1: 63.1%
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C3: 15.4%
C4: 9.0%
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PPHR
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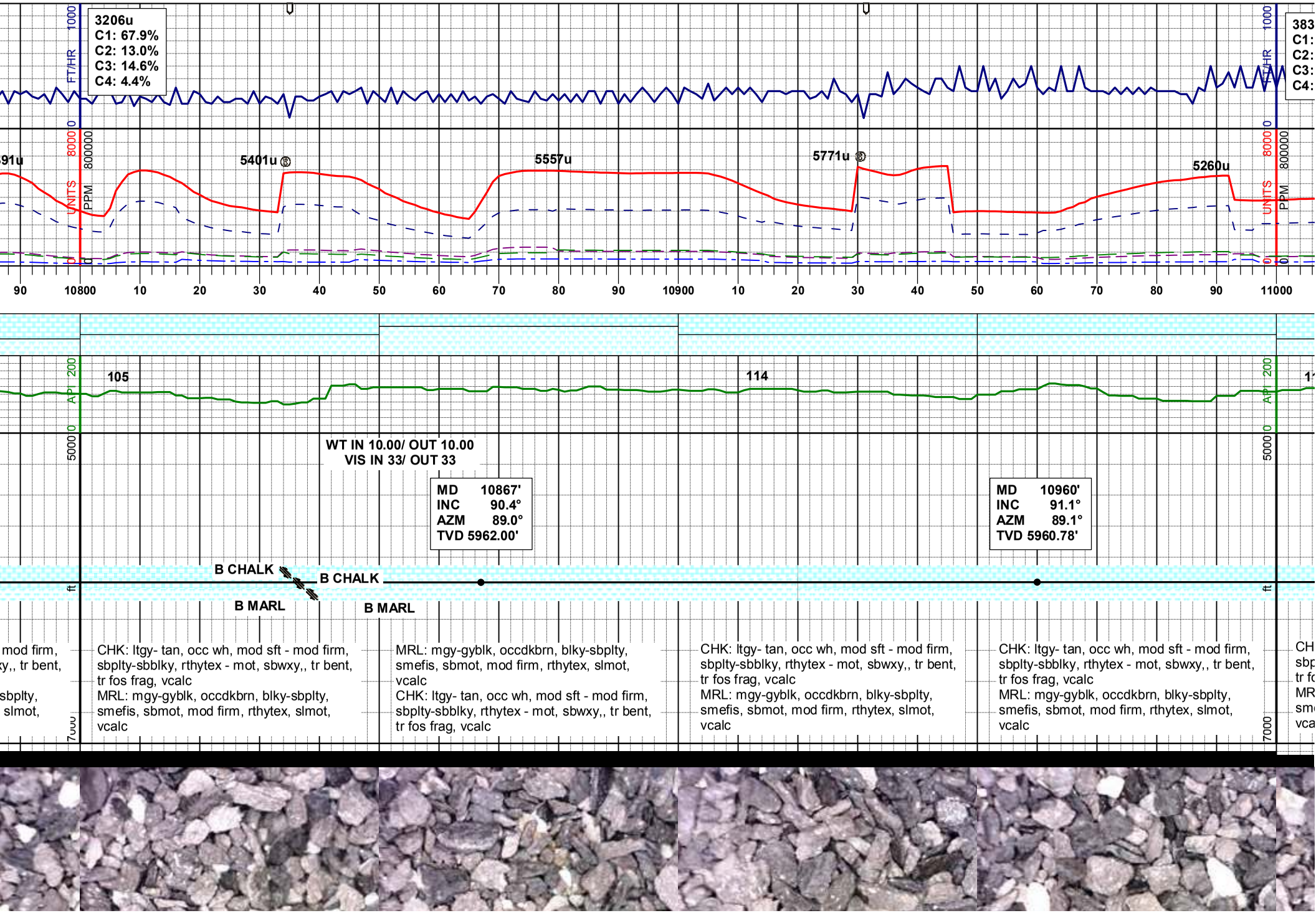
5869u
8000
UNITS
0
800000
PPM
0
3432u
5573u
5529u
53
70
80
90
10600
10
20
30
40
50
60
70
80
90
10700
10
20
30
40
50
60
70
80
200
APL
0
125
108
5000
ft
7000
MD 10589'
INC 90.8°
AZM 85.6°
TVD 5961.68'
WT IN 10.10/ OUT 10.10
VIS IN 36/ OUT 36
MD 10682'
INC 89.6°
AZM 87.8°
TVD 5961.36'
WT IN 9.90/ OUT 9.90
VIS IN 35/ OUT 35
MD 10774'
INC 89.6°
AZM 88.1°
TVD 5962.00'
occ wh, mod sft - mod firm,
rthytex - mot, sbwxy,, tr bent,
lk, occdkbrn, blky-sbplty,
mod firm, rthytex, slmot,
CHK: ltgy- tan, occ wh, mod sft - mod firm,
sbplty-sbblky, rthytex - mot, sbwxy,, tr bent,
tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty,
smefis, sbmot, mod firm, rthytex, slmot,
vcalc
CHK: ltgy- tan, occ wh, mod sft - mod firm,
sbplty-sbblky, rthytex - mot, sbwxy,, tr bent,
tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty,
smefis, sbmot, mod firm, rthytex, slmot,
vcalc
CHK: ltgy- tan, occ wh, mod sft - mod firm,
sbplty-sbblky, rthytex - mot, sbwxy,, tr bent,
tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty,
smefis, sbmot, mod firm, rthytex, slmot,
vcalc
CHK: ltgy- tan, occ wh, mod sft -
sbplty-sbblky, rthytex - mot, sbwx
tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-
smefis, sbmot, mod firm, rthytex,
vcalc


3206u
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C2: 13.0%
C3: 14.6%
C4: 4.4%
FT/HR
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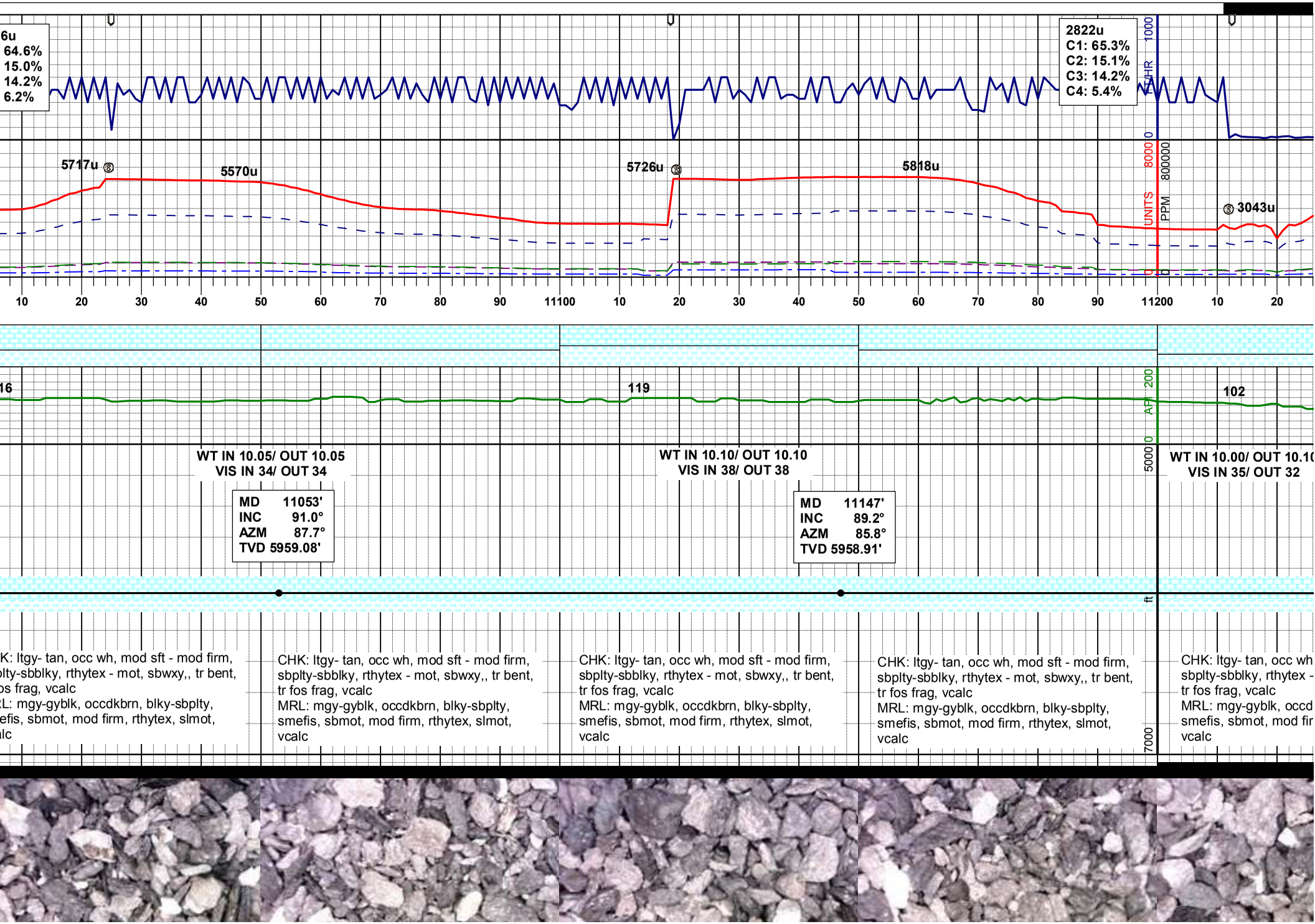
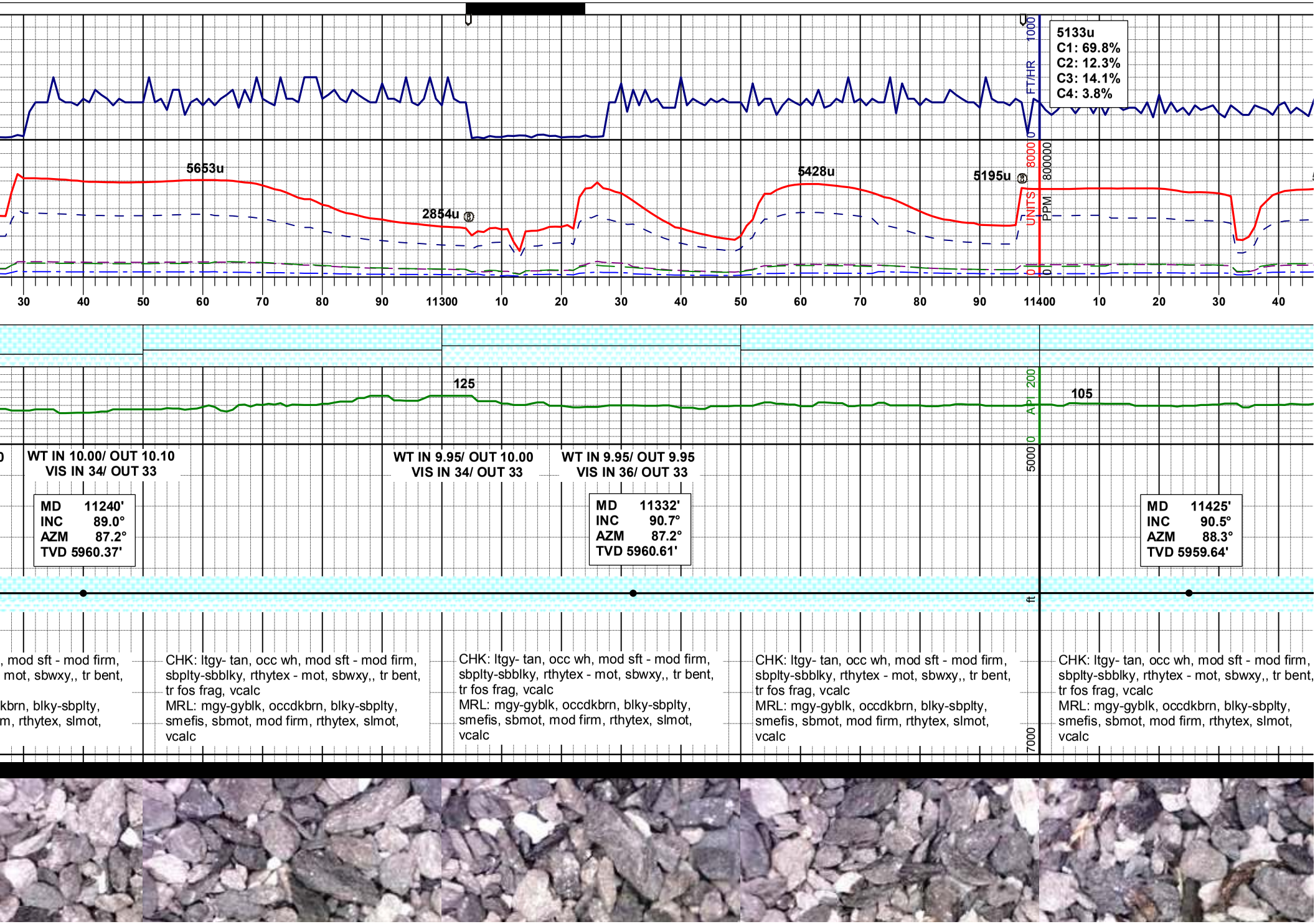
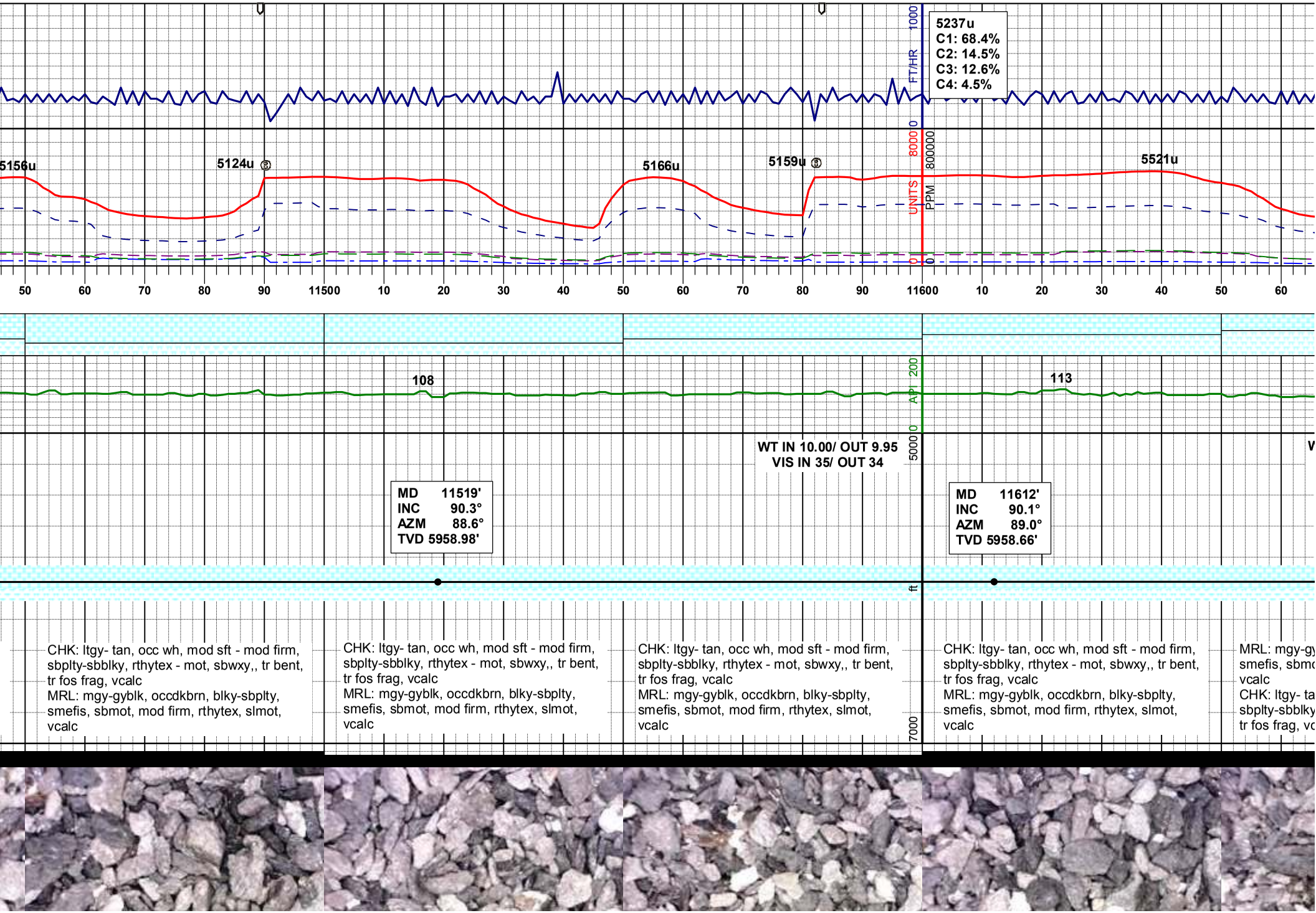
0
UNITS
800000
0
PPM
5401u
5557u
5771u
5260u
10800
10900
11000
API
200
0
5000
WT IN 10.00/ OUT 10.00
VIS IN 33/ OUT 33
MD 10867'
INC 90.4°
AZM 89.0°
TVD 5962.00'
MD 10960'
INC 91.1°
AZM 89.1°
TVD 5960.78'
B CHALK
B CHALK
B MARL
B MARL
ft
7000
CHK: ltgy- tan, occ wh, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy,, tr bent, tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, vcalc
CHK: ltgy- tan, occ wh, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy,, tr bent, tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, vcalc
CHK: ltgy- tan, occ wh, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy,, tr bent, tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, vcalc


6u
64.6%
15.0%
14.2%
6.2%
2822u
C1: 65.3%
C2: 15.1%
C3: 14.2%
C4: 5.4%
5717u
5570u
5726u
5818u
3043u
10
20
30
40
50
60
70
80
90
11100
11200
UNITS
PPM
800000
8000
0
1000
FT/HR
16
119
102
200
API
5000
7000
ft
WT IN 10.05/ OUT 10.05
VIS IN 34/ OUT 34
MD 11053'
INC 91.0°
AZM 87.7°
TVD 5959.08'
WT IN 10.10/ OUT 10.10
VIS IN 38/ OUT 38
MD 11147'
INC 89.2°
AZM 85.8°
TVD 5958.91'
WT IN 10.00/ OUT 10.10
VIS IN 35/ OUT 32
K: ltgy- tan, occ wh, mod sft - mod firm,
lty-sbblky, rthytex - mot, sbwxy,, tr bent,
os frag, vcalc
L: mgy-gyblk, occdkbrn, blky-sbplty,
efis, sbmot, mod firm, rthytex, slmot,
lc
CHK: ltgy- tan, occ wh, mod sft - mod firm,
sbplty-sbblky, rthytex - mot, sbwxy,, tr bent,
tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty,
smefis, sbmot, mod firm, rthytex, slmot,
vcalc
CHK: ltgy- tan, occ wh, mod sft - mod firm,
sbplty-sbblky, rthytex - mot, sbwxy,, tr bent,
tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty,
smefis, sbmot, mod firm, rthytex, slmot,
vcalc
CHK: ltgy- tan, occ wh, mod sft - mod firm,
sbplty-sbblky, rthytex - mot, sbwxy,, tr bent,
tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty,
smefis, sbmot, mod firm, rthytex, slmot,
vcalc
CHK: ltgy- tan, occ wh
sbplty-sbblky, rthytex -
tr fos frag, vcalc
MRL: mgy-gyblk, occd
smefis, sbmot, mod fir
vcalc


5133u
C1: 69.8%
C2: 12.3%
C3: 14.1%
C4: 3.8%
FT/HR
1000
0
5653u
2854u
5428u
5195u
UNITS
PPM
8000
0
800000
0
30
40
50
60
70
80
90
11300
10
20
30
40
50
60
70
80
90
11400
10
20
30
40
125
105
API
200
0
5000
WT IN 10.00/ OUT 10.10
VIS IN 34/ OUT 33
MD 11240'
INC 89.0°
AZM 87.2°
TVD 5960.37'
WT IN 9.95/ OUT 10.00
VIS IN 34/ OUT 33
WT IN 9.95/ OUT 9.95
VIS IN 36/ OUT 33
MD 11332'
INC 90.7°
AZM 87.2°
TVD 5960.61'
MD 11425'
INC 90.5°
AZM 88.3°
TVD 5959.64'
ft
, mod sft - mod firm,
mot, sbwxy,, tr bent,
kbrn, blky-sbplty,
m, rthytex, slmot,
CHK: ltgy- tan, occ wh, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy,, tr bent, tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, vcalc
CHK: ltgy- tan, occ wh, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy,, tr bent, tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, vcalc
CHK: ltgy- tan, occ wh, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy,, tr bent, tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, vcalc
CHK: ltgy- tan, occ wh, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy,, tr bent, tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, vcalc
7000


5237u
C1: 68.4%
C2: 14.5%
C3: 12.6%
C4: 4.5%
5156u
5124u
5166u
5159u
5521u
FT/HR
UNITS
PPM
108
113
API
WT IN 10.00/ OUT 9.95
VIS IN 35/ OUT 34
MD 11519'
INC 90.3°
AZM 88.6°
TVD 5958.98'
MD 11612'
INC 90.1°
AZM 89.0°
TVD 5958.66'
ft
CHK: ltgy- tan, occ wh, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy,, tr bent, tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, vcalc
CHK: ltgy- tan, occ wh, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy,, tr bent, tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, vcalc
CHK: ltgy- tan, occ wh, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy,, tr bent, tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, vcalc
CHK: ltgy- tan, occ wh, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy,, tr bent, tr fos frag, vcalc
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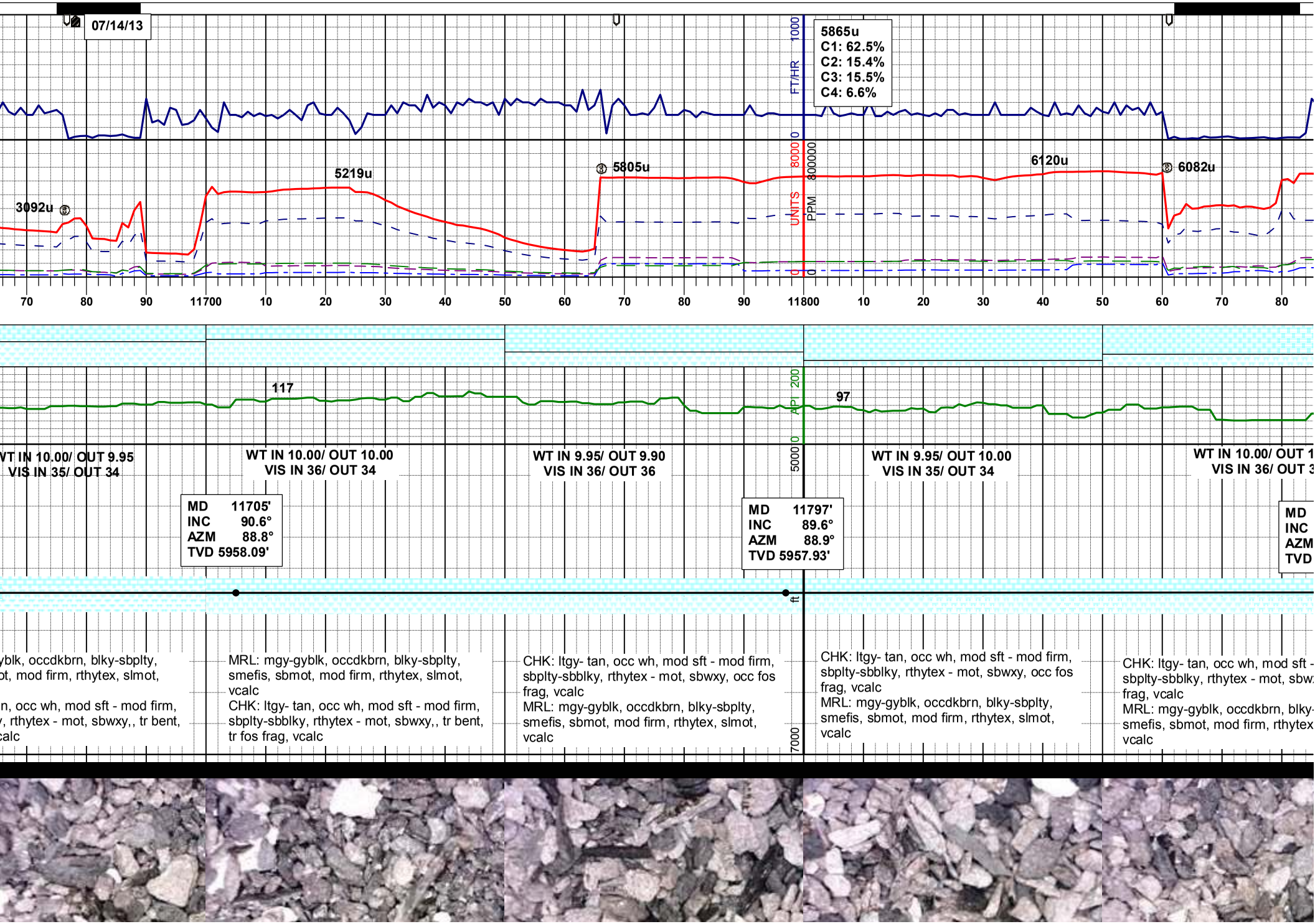
07/14/13
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C3: 15.5%
C4: 6.6%
FT/HR
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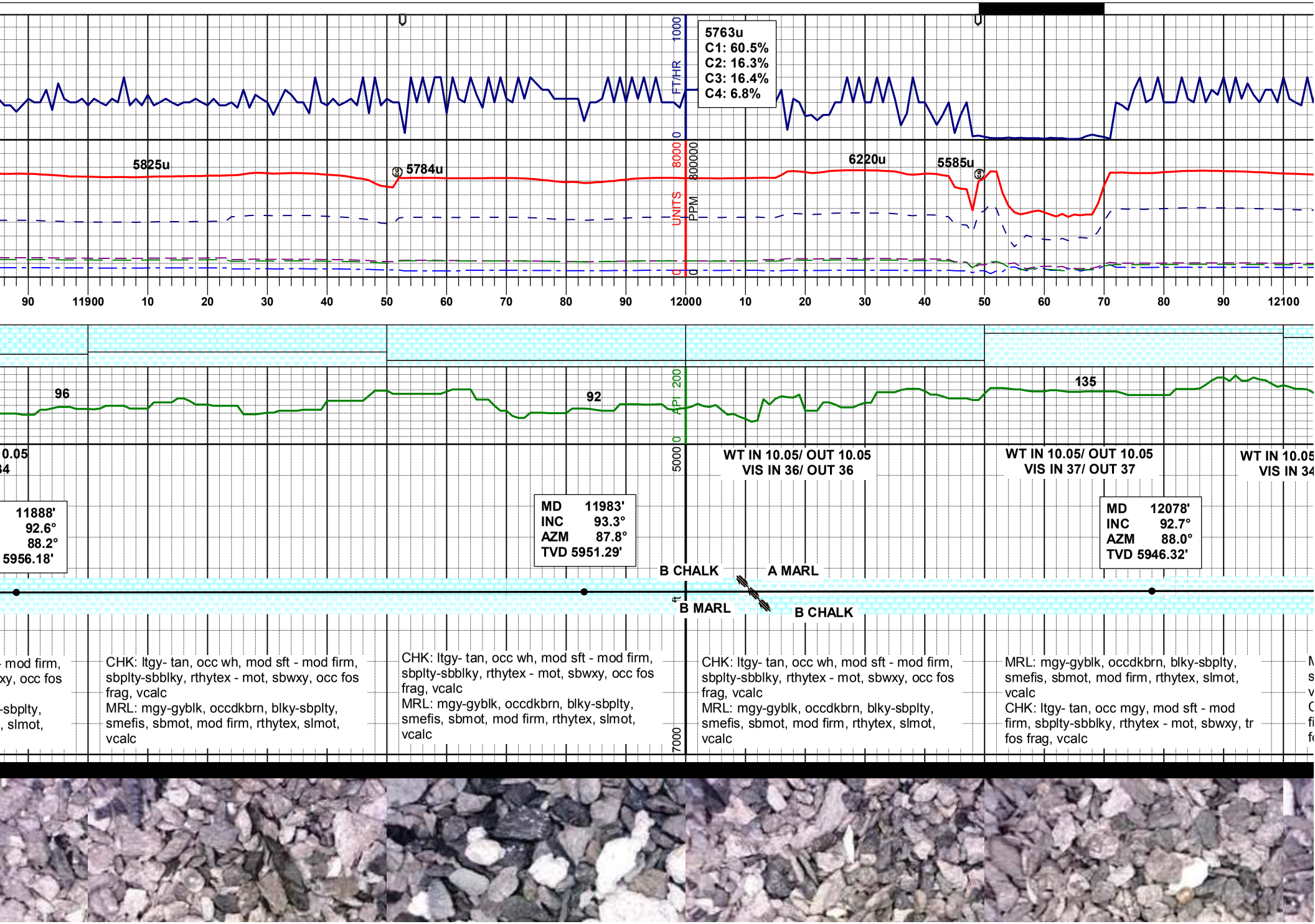
UNITS
PPM
800000
0
3092u
5219u
5805u
6120u
6082u
70
80
90
11700
10
20
30
40
50
60
70
80
90
11800
10
20
30
40
50
60
70
80
117
97
API
200
0
5000
7000
ft
WT IN 10.00/ OUT 9.95
VIS IN 35/ OUT 34
WT IN 10.00/ OUT 10.00
VIS IN 36/ OUT 34
WT IN 9.95/ OUT 9.90
VIS IN 36/ OUT 36
WT IN 9.95/ OUT 10.00
VIS IN 35/ OUT 34
WT IN 10.00/ OUT 1
VIS IN 36/ OUT 3
MD 11705'
INC 90.6°
AZM 88.8°
TVD 5958.09'
MD 11797'
INC 89.6°
AZM 88.9°
TVD 5957.93'
MD
INC
AZM
TVD
yblk, occdkbrn, blky-sbplty,
ot, mod firm, rthytex, slmot,
n, occ wh, mod sft - mod firm,
, rthytex - mot, sbwxy,, tr bent,
calc
MRL: mgy-gyblk, occdkbrn, blky-sbplty,
smefis, sbmot, mod firm, rthytex, slmot,
vcalc
CHK: ltgy- tan, occ wh, mod sft - mod firm,
sbplty-sbblky, rthytex - mot, sbwxy,, tr bent,
tr fos frag, vcalc
CHK: ltgy- tan, occ wh, mod sft - mod firm,
sbplty-sbblky, rthytex - mot, sbwxy, occ fos
frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty,
smefis, sbmot, mod firm, rthytex, slmot,
vcalc
CHK: ltgy- tan, occ wh, mod sft - mod firm,
sbplty-sbblky, rthytex - mot, sbwxy, occ fos
frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty,
smefis, sbmot, mod firm, rthytex, slmot,
vcalc
CHK: ltgy- tan, occ wh, mod sft -
sbplty-sbblky, rthytex - mot, sbw
frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-
smefis, sbmot, mod firm, rthytex
vcalc


5763u
C1: 60.5%
C2: 16.3%
C3: 16.4%
C4: 6.8%
FT/HR
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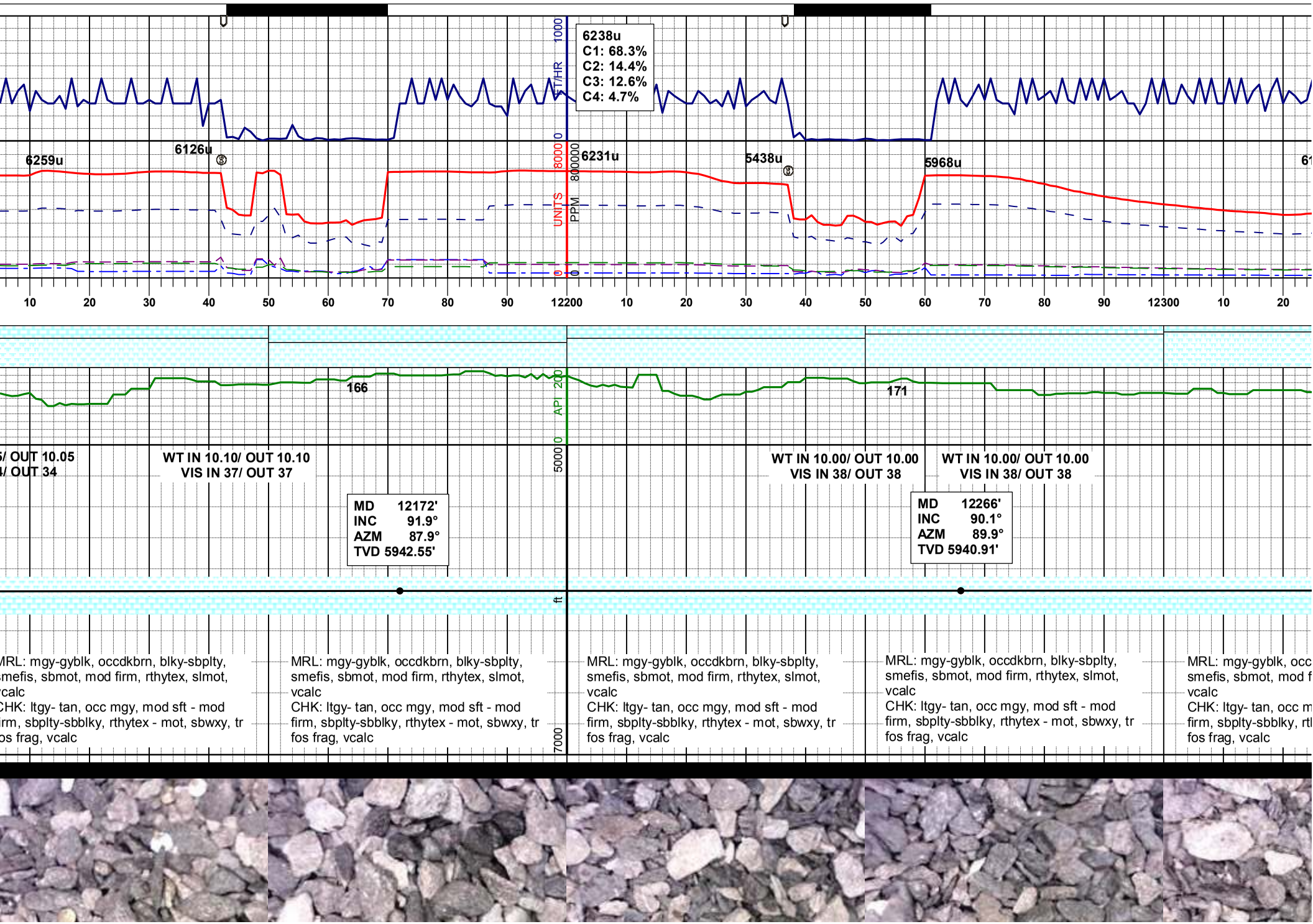
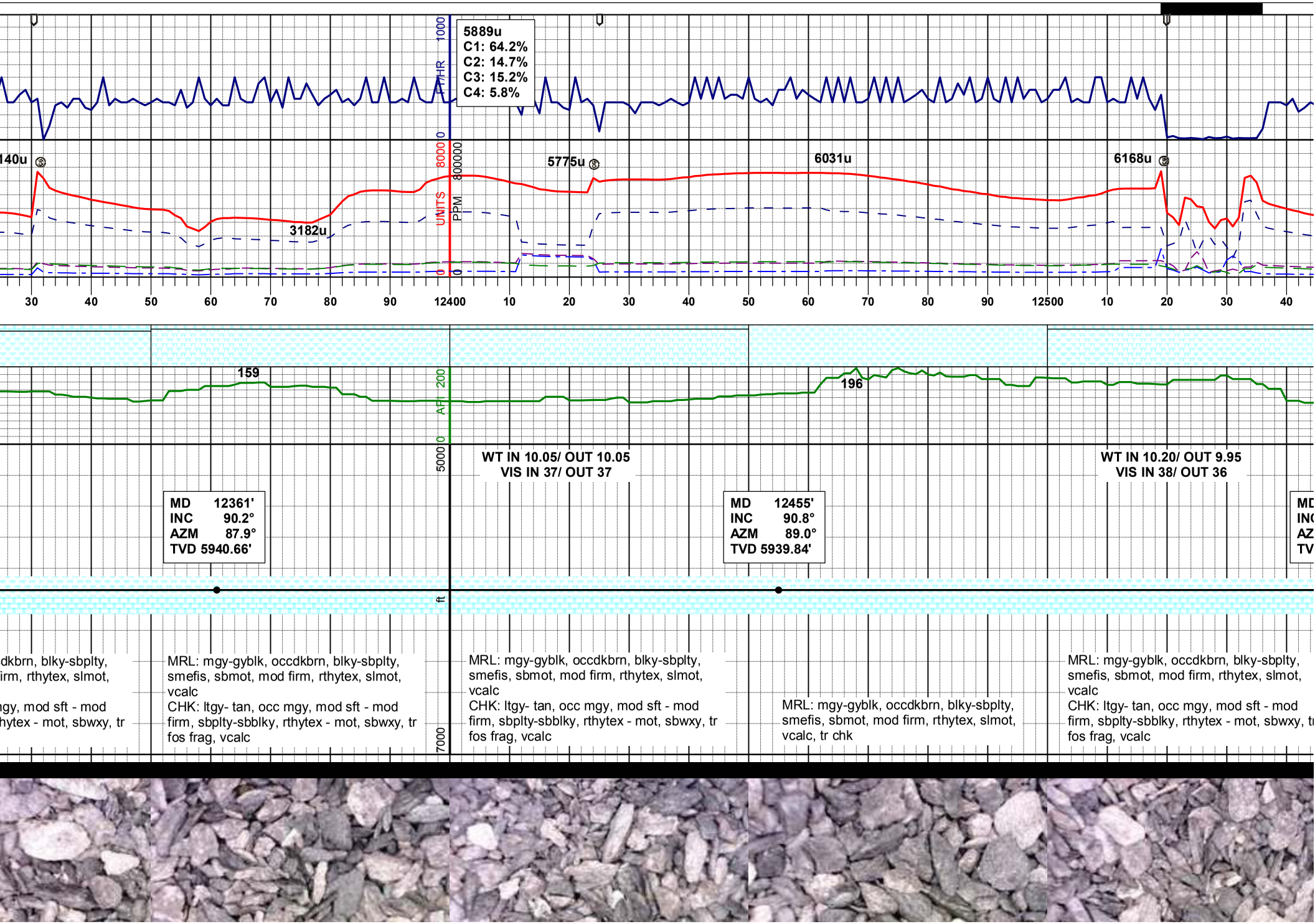
UNITS
800000
0
PPM
800000
0
5825u
5784u
6220u
5585u
90
11900
10
20
30
40
50
60
70
80
90
12000
10
20
30
40
50
60
70
80
90
12100
96
92
135
API
200
0
50000
0.05
11888'
92.6°
88.2°
5956.18'
MD 11983'
INC 93.3°
AZM 87.8°
TVD 5951.29'
WT IN 10.05/ OUT 10.05
VIS IN 36/ OUT 36
WT IN 10.05/ OUT 10.05
VIS IN 37/ OUT 37
MD 12078'
INC 92.7°
AZM 88.0°
TVD 5946.32'
B CHALK
A MARL
B MARL
B CHALK
ft
7000
- mod firm,
xy, occ fos
-sbplty,
, slmot,
CHK: ltgy- tan, occ wh, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy, occ fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, vcalc
CHK: ltgy- tan, occ wh, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy, occ fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, vcalc
CHK: ltgy- tan, occ wh, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy, occ fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, vcalc
CHK: ltgy- tan, occ mgy, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy, tr fos frag, vcalc


6238u
C1: 68.3%
C2: 14.4%
C3: 12.6%
C4: 4.7%
6259u
6126u
6231u
5438u
5968u
FT/HR
UNITS
PPM
166
171
API
WT IN 10.10/ OUT 10.10
VIS IN 37/ OUT 37
WT IN 10.00/ OUT 10.00
VIS IN 38/ OUT 38
WT IN 10.00/ OUT 10.00
VIS IN 38/ OUT 38
MD 12172'
INC 91.9°
AZM 87.9°
TVD 5942.55'
MD 12266'
INC 90.1°
AZM 89.9°
TVD 5940.91'
ft
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, vcalc
CHK: ltgy- tan, occ mgy, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy, tr fos frag, vcalc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C1: 64.2%
C2: 14.7%
C3: 15.2%
C4: 5.8%
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0
ETHR
8000
0
UNITS
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PPM
140u
3182u
5775u
6031u
6168u
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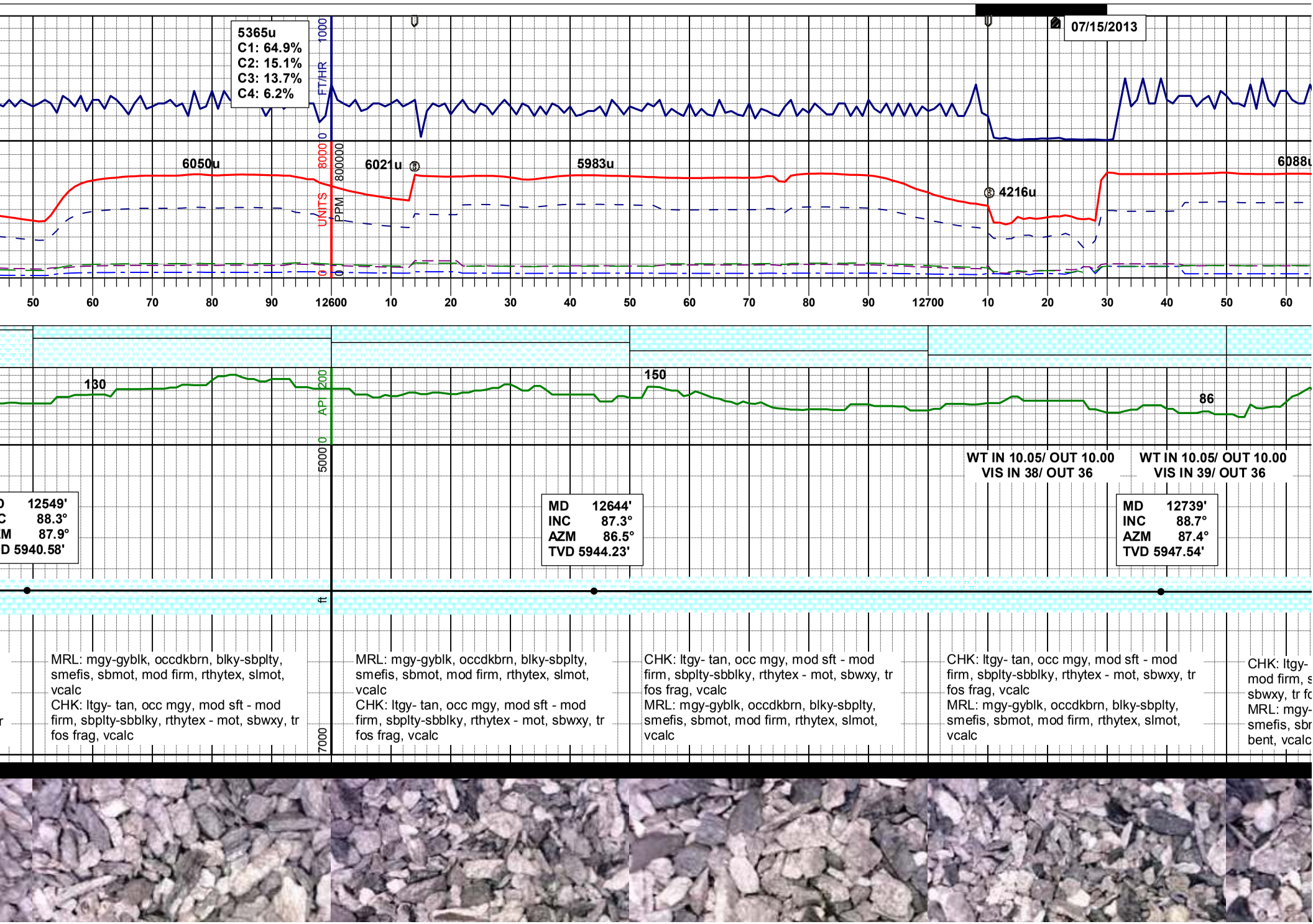
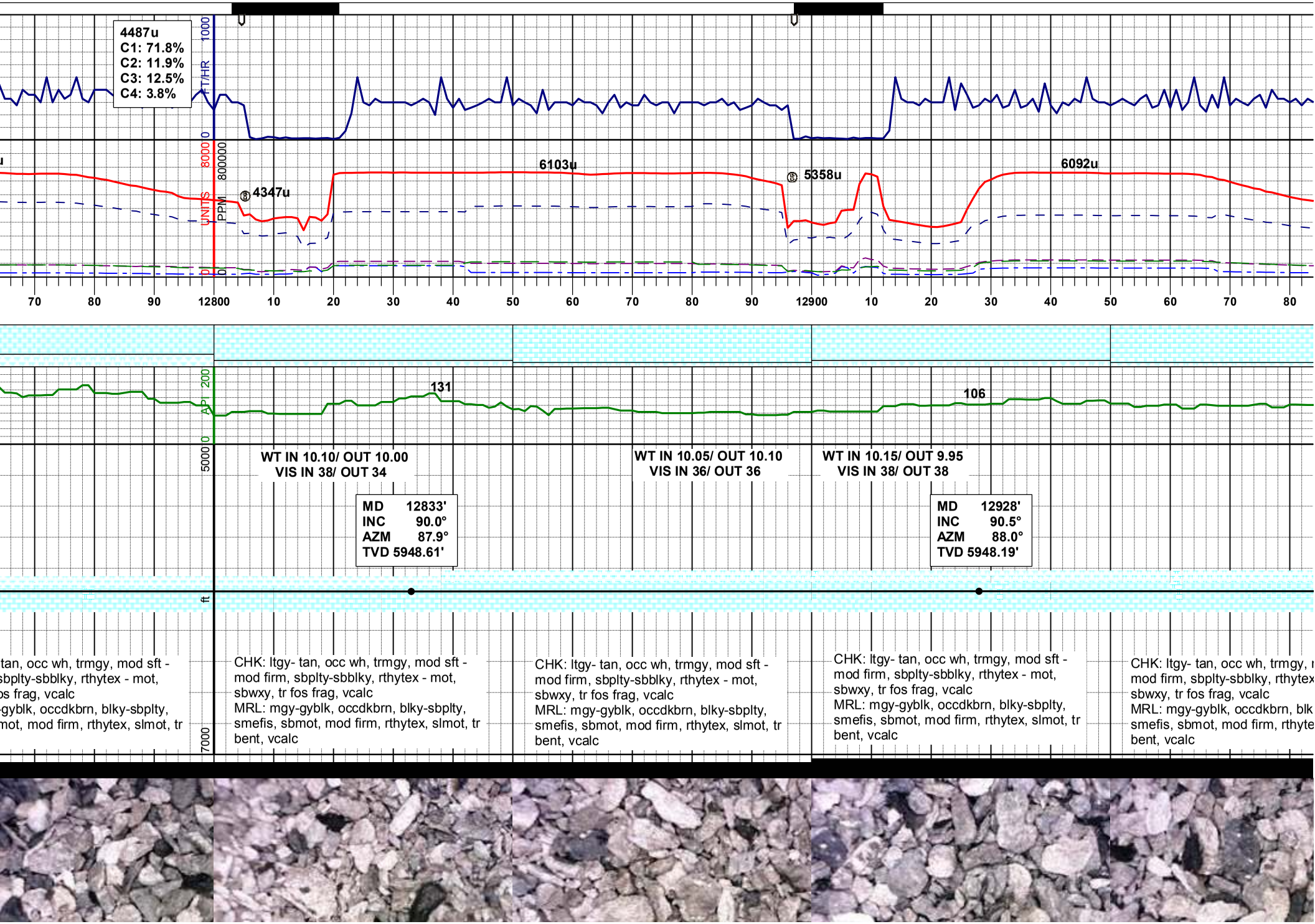
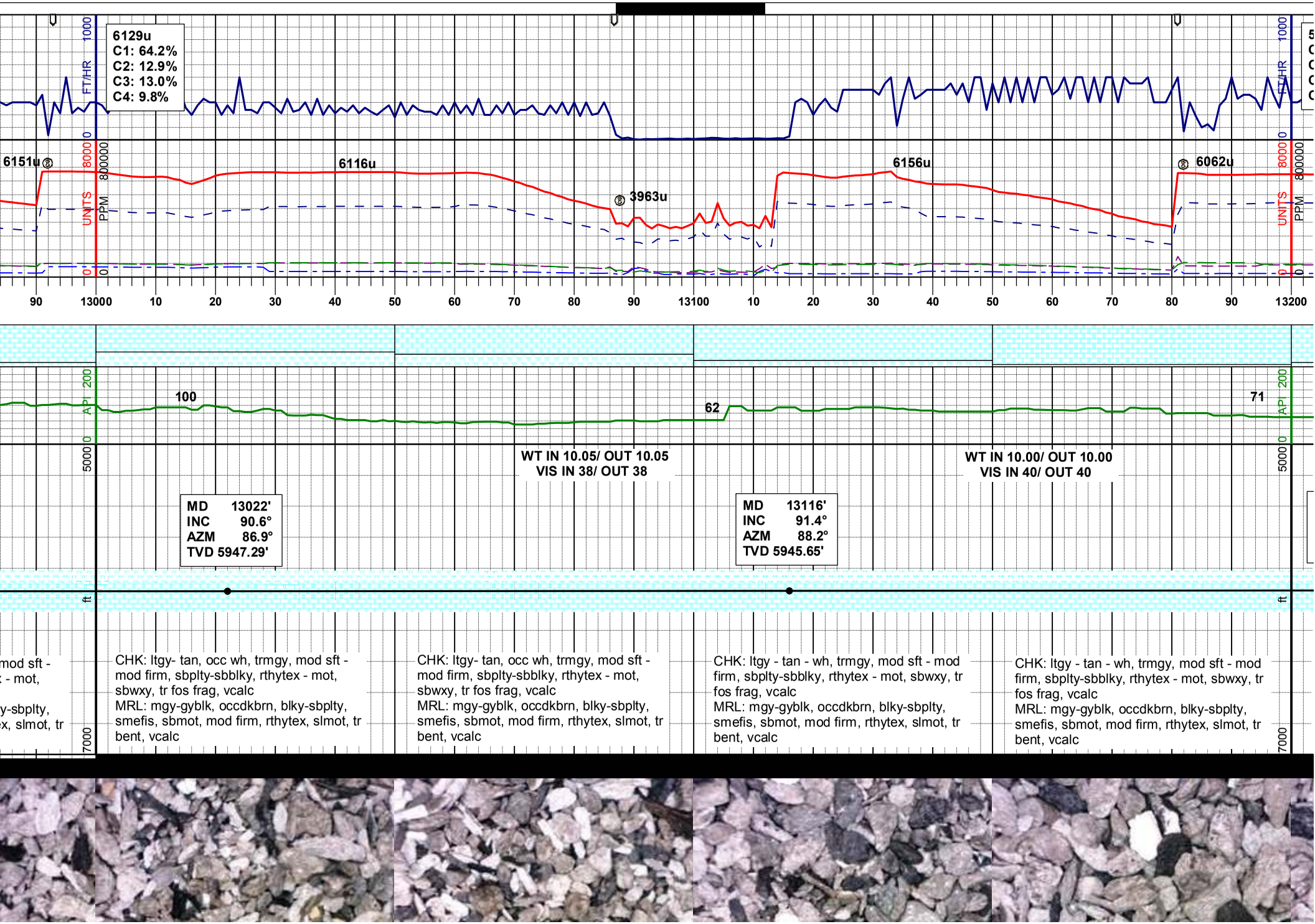
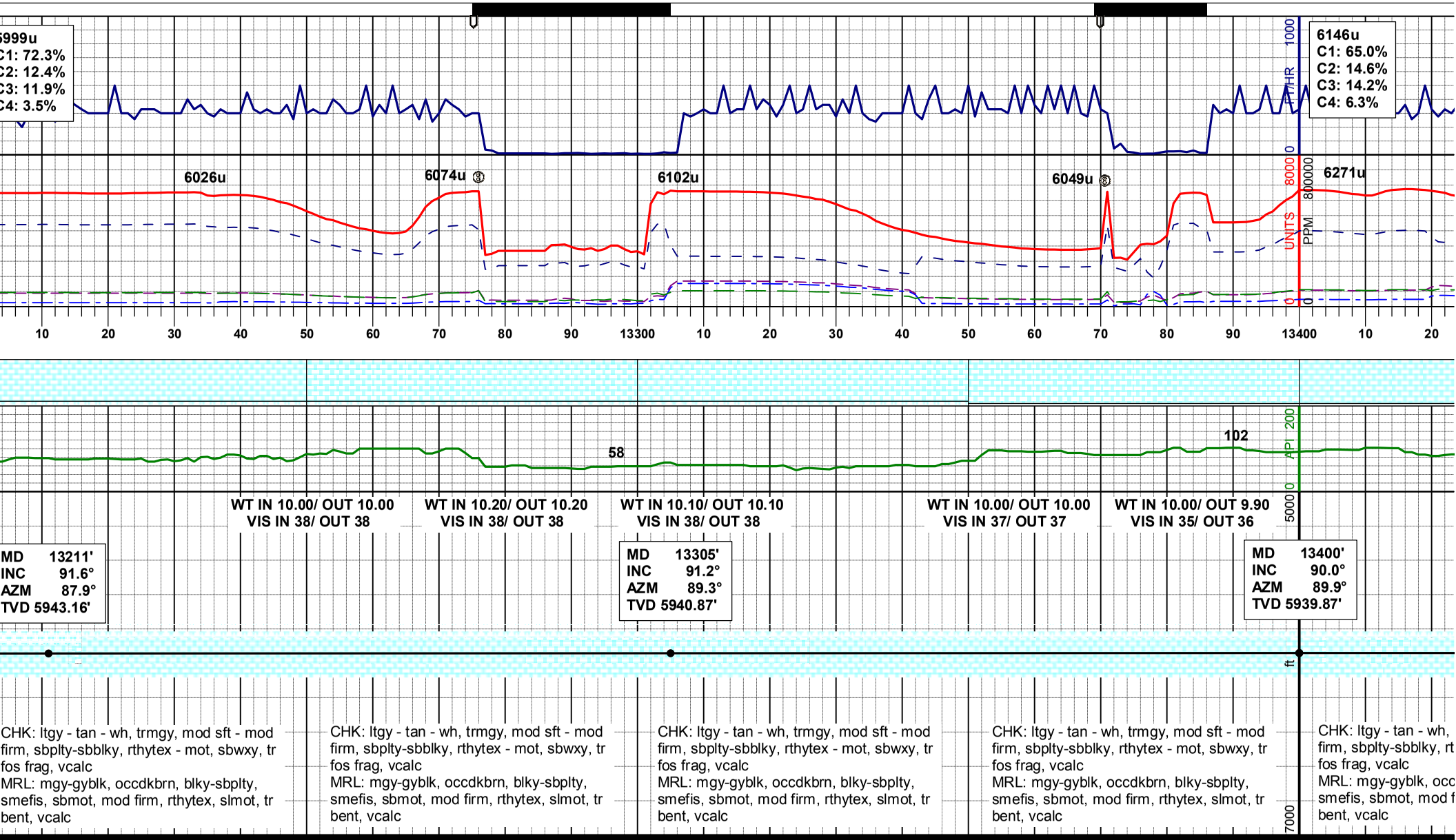
50
60
70
80
90
12400
10
20
30
40
50
60
70
80
90
12500
10
20
30
40
200
0
API
159
196
5000
7000
ft
WT IN 10.05/ OUT 10.05
VIS IN 37/ OUT 37
WT IN 10.20/ OUT 9.95
VIS IN 38/ OUT 36
MD 12361'
INC 90.2°
AZM 87.9°
TVD 5940.66'
MD 12455'
INC 90.8°
AZM 89.0°
TVD 5939.84'
dkbrn, blky-sbplty,
irm, rthytex, slmot,
gy, mod sft - mod
hytex - mot, sbwxy, tr
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, vcalc
CHK: ltgy- tan, occ mgy, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy, tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, vcalc
CHK: ltgy- tan, occ mgy, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy, tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, vcalc, tr chk
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, vcalc
CHK: ltgy- tan, occ mgy, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy, tr fos frag, vcalc


5365u
C1: 64.9%
C2: 15.1%
C3: 13.7%
C4: 6.2%
07/15/2013
FT/HR
1000
0
UNITS
8000
0
PPM
800000
0
6050u
6021u
5983u
4216u
6088u
50
60
70
80
90
12600
10
20
30
40
50
60
70
80
90
12700
10
20
30
40
50
60
API
200
0
5000
0
130
150
86
WT IN 10.05/ OUT 10.00
VIS IN 38/ OUT 36
WT IN 10.05/ OUT 10.00
VIS IN 39/ OUT 36
D 12549'
C 88.3°
M 87.9°
D 5940.58'
MD 12644'
INC 87.3°
AZM 86.5°
TVD 5944.23'
MD 12739'
INC 88.7°
AZM 87.4°
TVD 5947.54'
ft
7000
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, vcalc
CHK: ltgy- tan, occ mgy, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy, tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, vcalc
CHK: ltgy- tan, occ mgy, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy, tr fos frag, vcalc
CHK: ltgy- tan, occ mgy, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy, tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, vcalc
CHK: ltgy- tan, occ mgy, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy, tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, vcalc
CHK: ltgy-
mod firm, s
sbwxy, tr fo
MRL: mgy-
smefis, sbr
bent, vcalc


4487u
C1: 71.8%
C2: 11.9%
C3: 12.5%
C4: 3.8%
1000
FT/HR
0
8000
UNITS
PPM
800000
0
6103u
4347u
5358u
6092u
70
80
90
12800
10
20
30
40
50
60
70
80
90
12900
10
20
30
40
50
60
70
80
200
API
0
5000
131
106
WT IN 10.10/ OUT 10.00
VIS IN 38/ OUT 34
MD 12833'
INC 90.0°
AZM 87.9°
TVD 5948.61'
WT IN 10.05/ OUT 10.10
VIS IN 36/ OUT 36
WT IN 10.15/ OUT 9.95
VIS IN 38/ OUT 38
MD 12928'
INC 90.5°
AZM 88.0°
TVD 5948.19'
ft
7000
tan, occ wh, trmgy, mod sft -
sbplty-sbblky, rthytex - mot,
os frag, vcalc
-gyblk, occdkbrn, blky-sbplty,
mot, mod firm, rthytex, slmot, tr
CHK: ltgy- tan, occ wh, trmgy, mod sft -
mod firm, sbplty-sbblky, rthytex - mot,
sbwxy, tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty,
smefis, sbmot, mod firm, rthytex, slmot, tr
bent, vcalc
CHK: ltgy- tan, occ wh, trmgy, mod sft -
mod firm, sbplty-sbblky, rthytex - mot,
sbwxy, tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty,
smefis, sbmot, mod firm, rthytex, slmot, tr
bent, vcalc
CHK: ltgy- tan, occ wh, trmgy, mod sft -
mod firm, sbplty-sbblky, rthytex - mot,
sbwxy, tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty,
smefis, sbmot, mod firm, rthytex, slmot, tr
bent, vcalc
CHK: ltgy- tan, occ wh, trmgy,
mod firm, sbplty-sbblky, rthytex
sbwxy, tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blk
smefis, sbmot, mod firm, rthyte
bent, vcalc


6129u
C1: 64.2%
C2: 12.9%
C3: 13.0%
C4: 9.8%
FT/HR
1000
0
6151u
6116u
3963u
6156u
6062u
UNITS
PPM
8000
800000
0
90
13000
10
20
30
40
50
60
70
80
90
13100
10
20
30
40
50
60
70
80
90
13200
API
200
0
100
62
71
5000
WT IN 10.05/ OUT 10.05
VIS IN 38/ OUT 38
WT IN 10.00/ OUT 10.00
VIS IN 40/ OUT 40
MD 13022'
INC 90.6°
AZM 86.9°
TVD 5947.29'
MD 13116'
INC 91.4°
AZM 88.2°
TVD 5945.65'
ft
7000
CHK: ltgy- tan, occ wh, trmgy, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy, tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, tr bent, vcalc
CHK: ltgy- tan, occ wh, trmgy, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy, tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, tr bent, vcalc
CHK: ltgy - tan - wh, trmgy, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy, tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, tr bent, vcalc
CHK: ltgy - tan - wh, trmgy, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy, tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, tr bent, vcalc



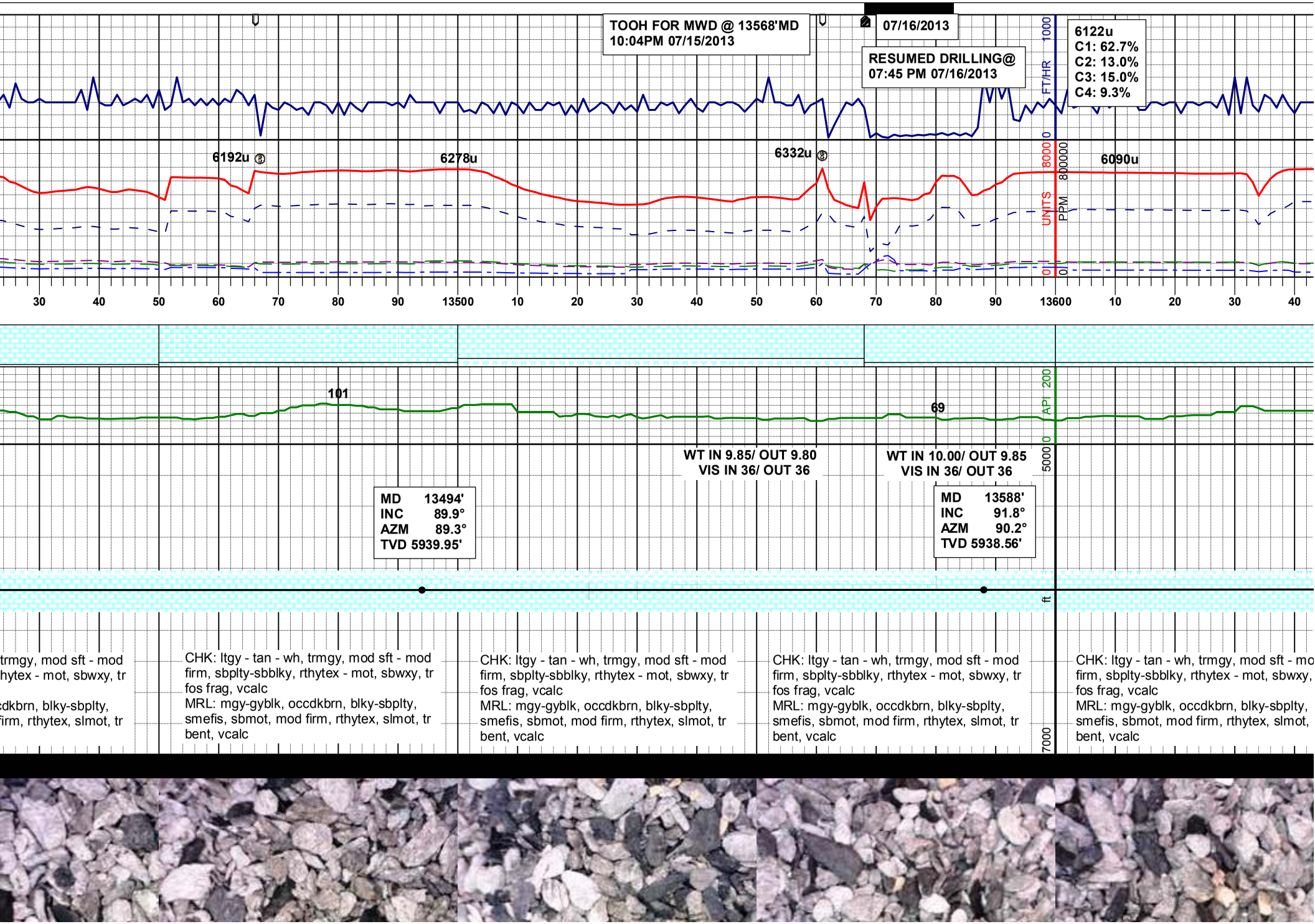

CHK: ltgy - tan - wh, trmgy, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy, tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, tr bent, vcalc

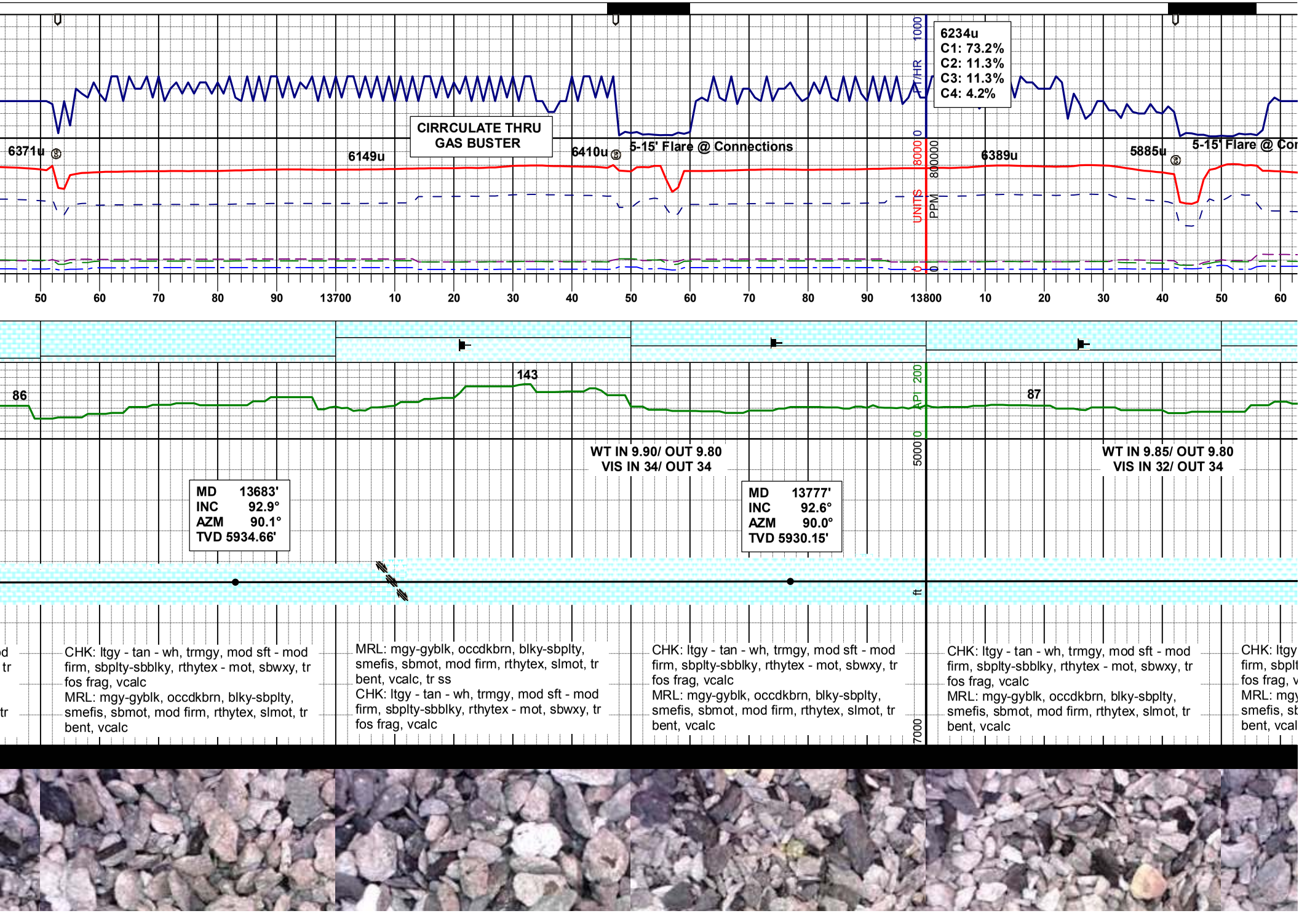
CHK: ltgy - tan - wh, trmgy, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy, tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, tr bent, vcalc

CHK: ltgy - tan - wh, trmgy, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy, tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, tr bent, vcalc

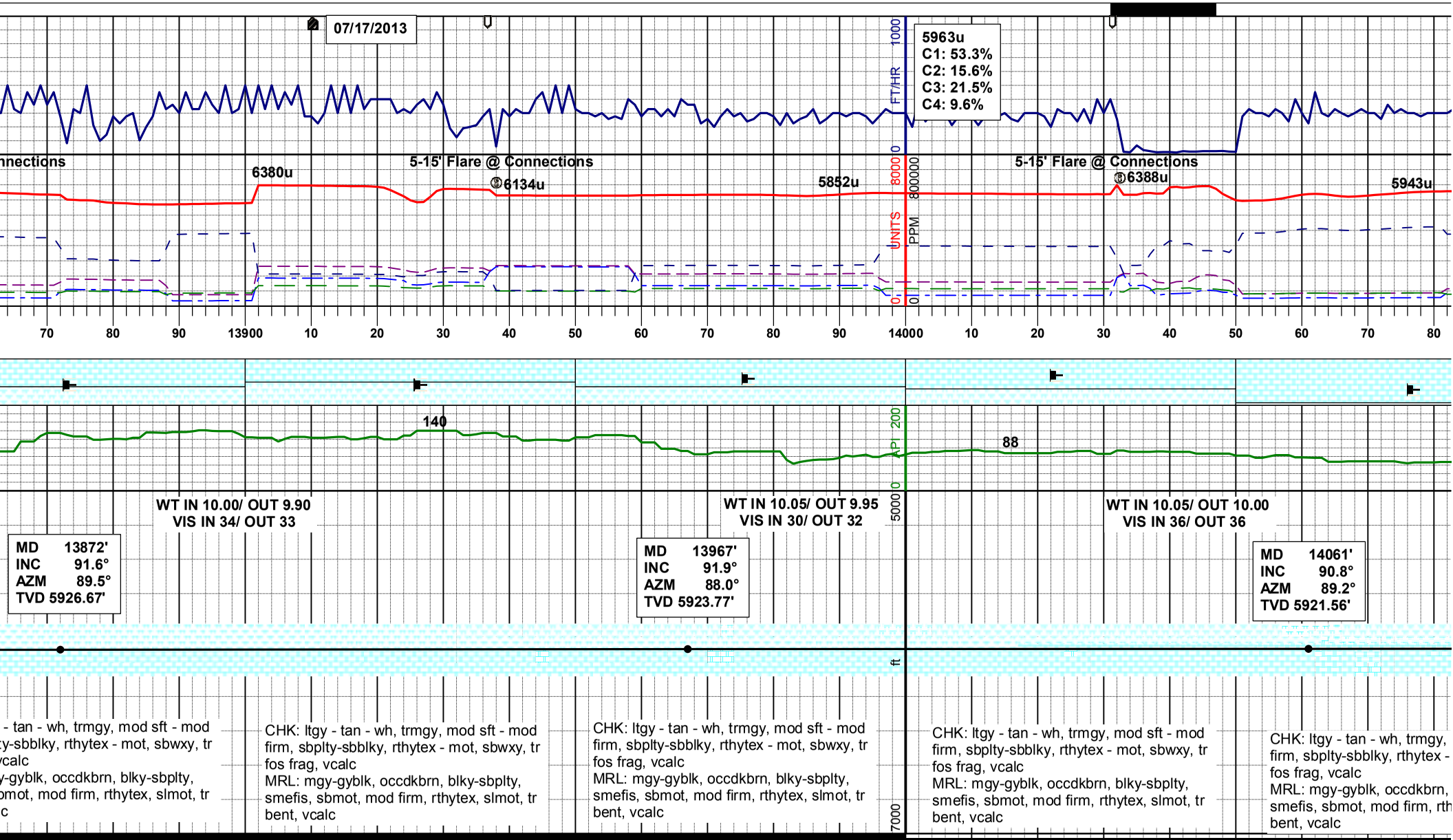
CHK: ltgy - tan - wh, trmgy, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy, tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, tr bent, vcalc

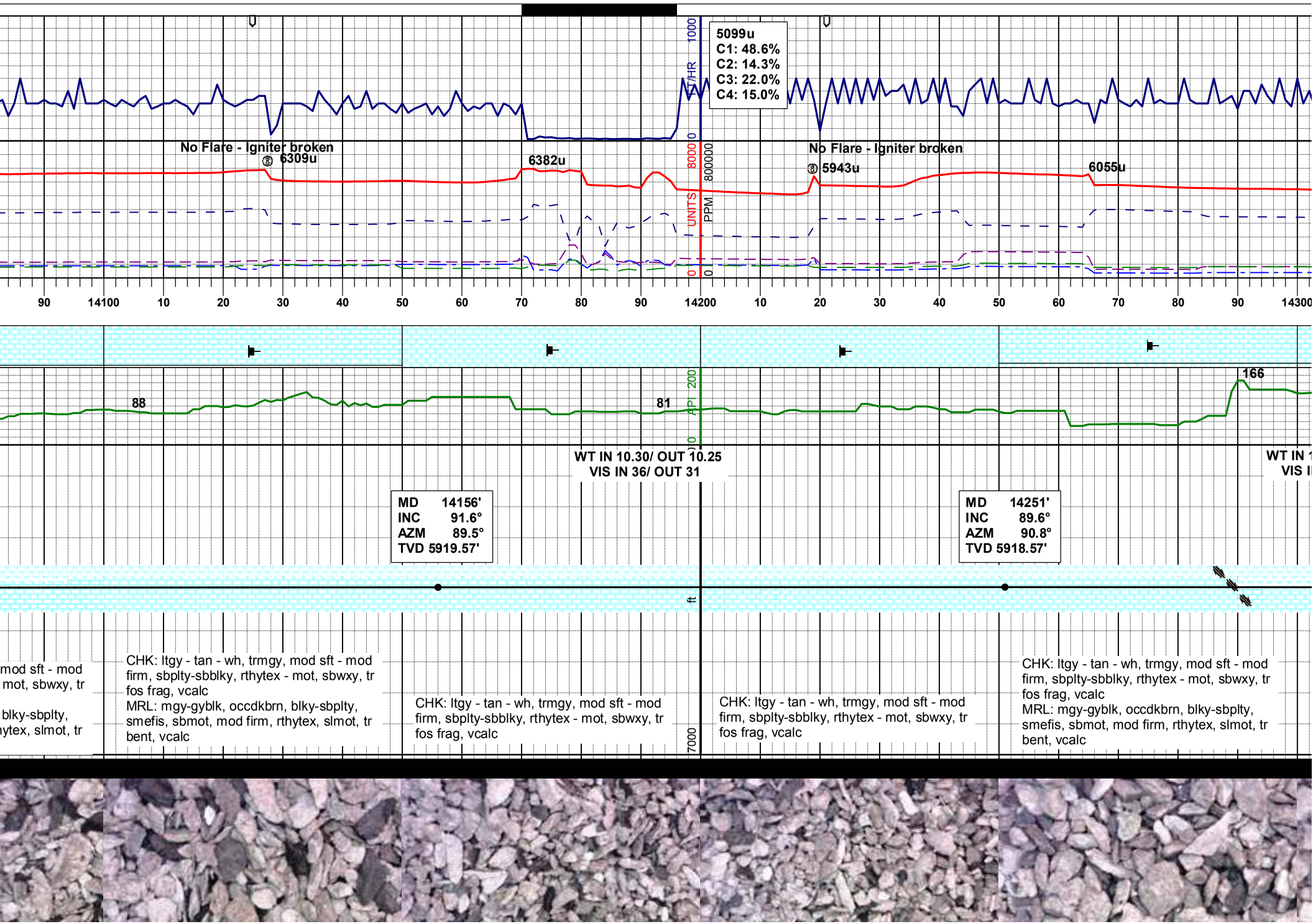
CHK: ltgy - tan - wh,
firm, sbplty-sbblky, rt
fos frag, vcalc
MRL: mgy-gyblk, occ
smefis, sbmot, mod f
bent, vcalc

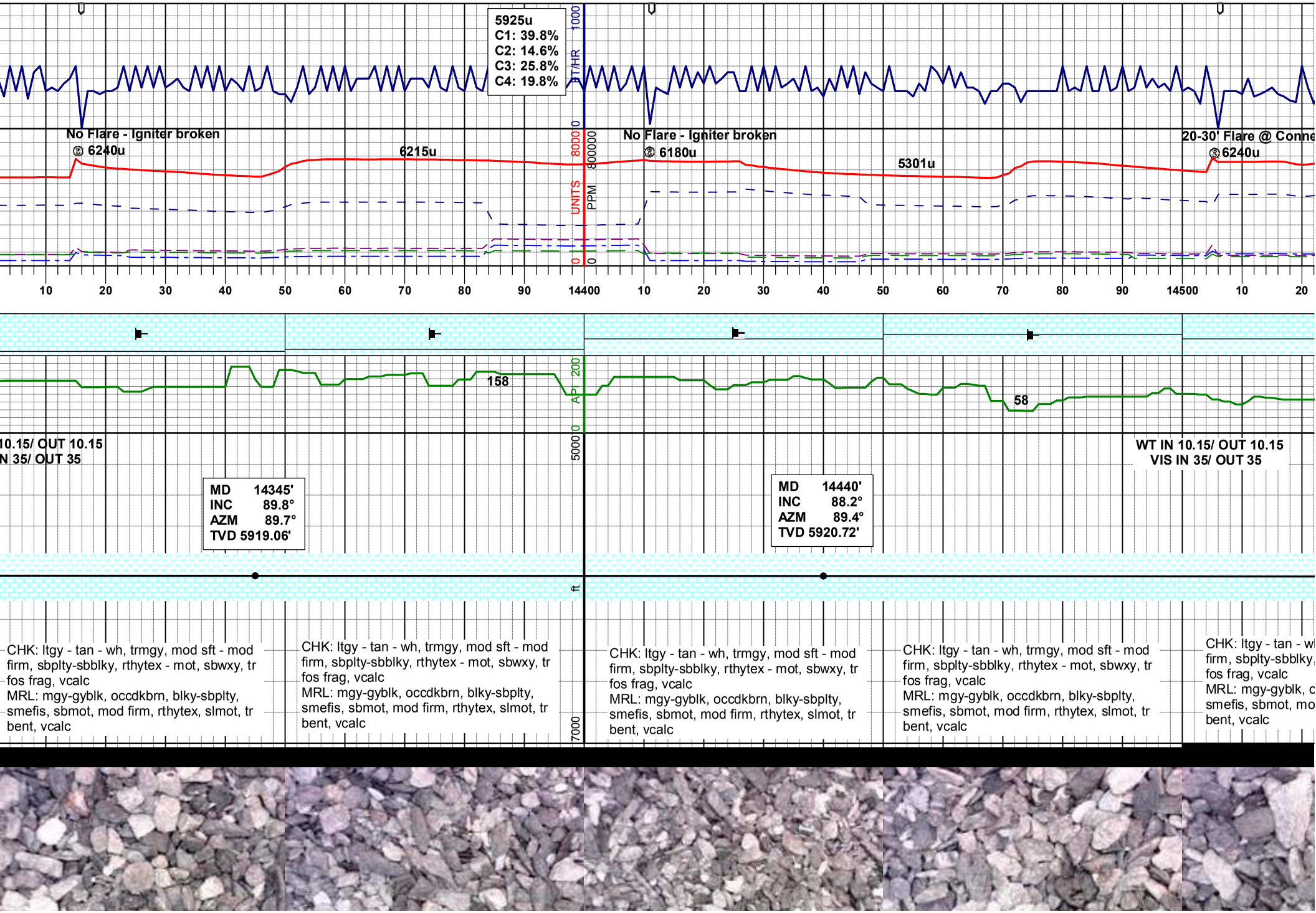

TOOH FOR MWD @ 13568'MD
10:04PM 07/15/2013
07/16/2013
RESUMED DRILLING@
07:45 PM 07/16/2013
6122u
C1: 62.7%
C2: 13.0%
C3: 15.0%
C4: 9.3%
FT/HR
1000
0
6192u
6278u
6332u
6090u
UNITS
PPM
800000
0
30
40
50
60
70
80
90
13500
10
20
30
40
50
60
70
80
90
13600
10
20
30
40
101
69
API
200
0
WT IN 9.85/ OUT 9.80
VIS IN 36/ OUT 36
WT IN 10.00/ OUT 9.85
VIS IN 36/ OUT 36
MD 13494'
INC 89.9°
AZM 89.3°
TVD 5939.95'
MD 13588'
INC 91.8°
AZM 90.2°
TVD 5938.56'
5000
ft
7000
trmgy, mod sft - mod
hytex - mot, sbwxy, tr
dkbrn, blky-sbplty,
firm, rthytex, slmot, tr
CHK: ltgy - tan - wh, trmgy, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy, tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, tr bent, vcalc
CHK: ltgy - tan - wh, trmgy, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy, tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, tr bent, vcalc
CHK: ltgy - tan - wh, trmgy, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy, tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, tr bent, vcalc
CHK: ltgy - tan - wh, trmgy, mod sft - mo
firm, sbplty-sbblky, rthytex - mot, sbwxy,
fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty,
smefis, sbmot, mod firm, rthytex, slmot,
bent, vcalc

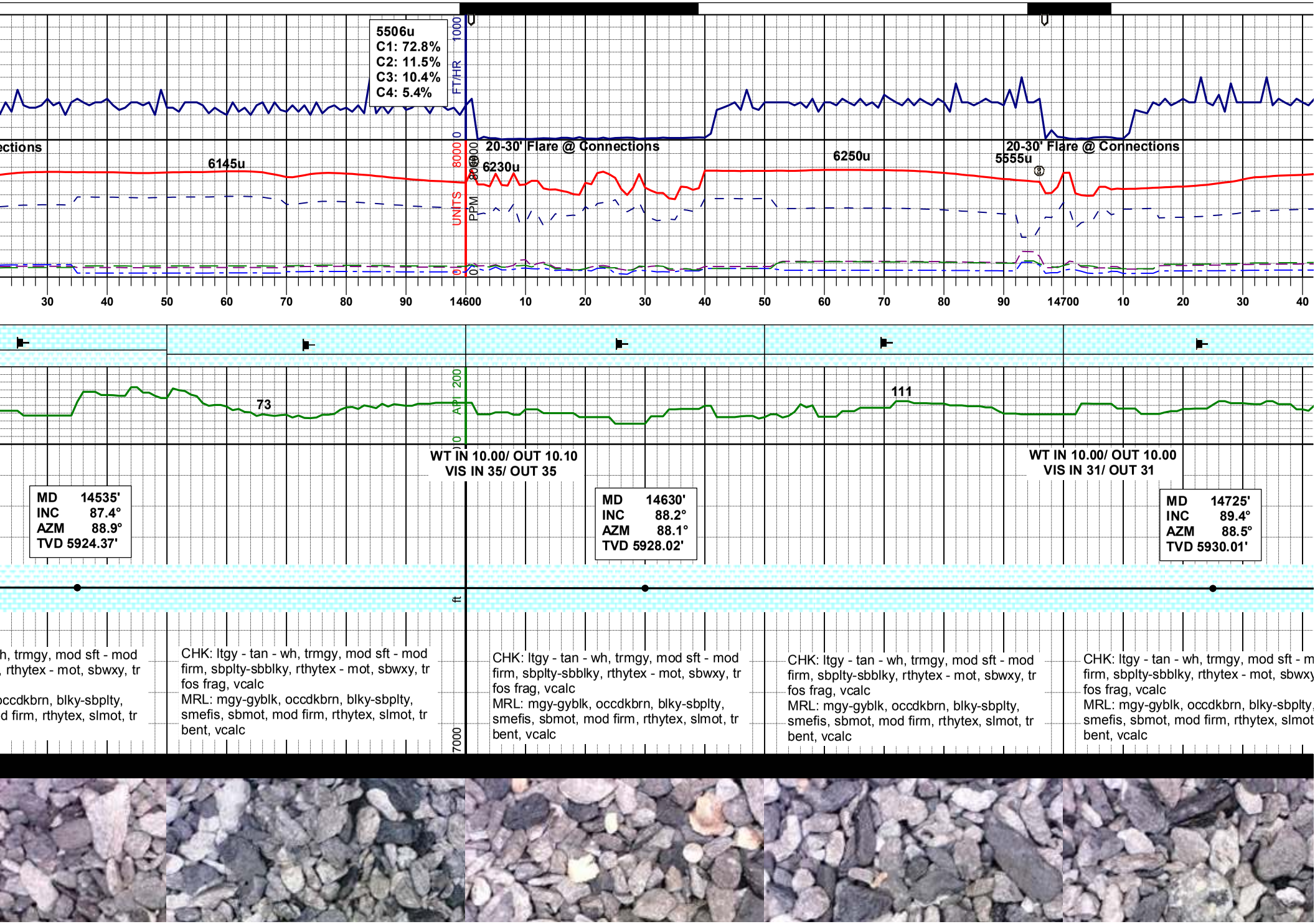


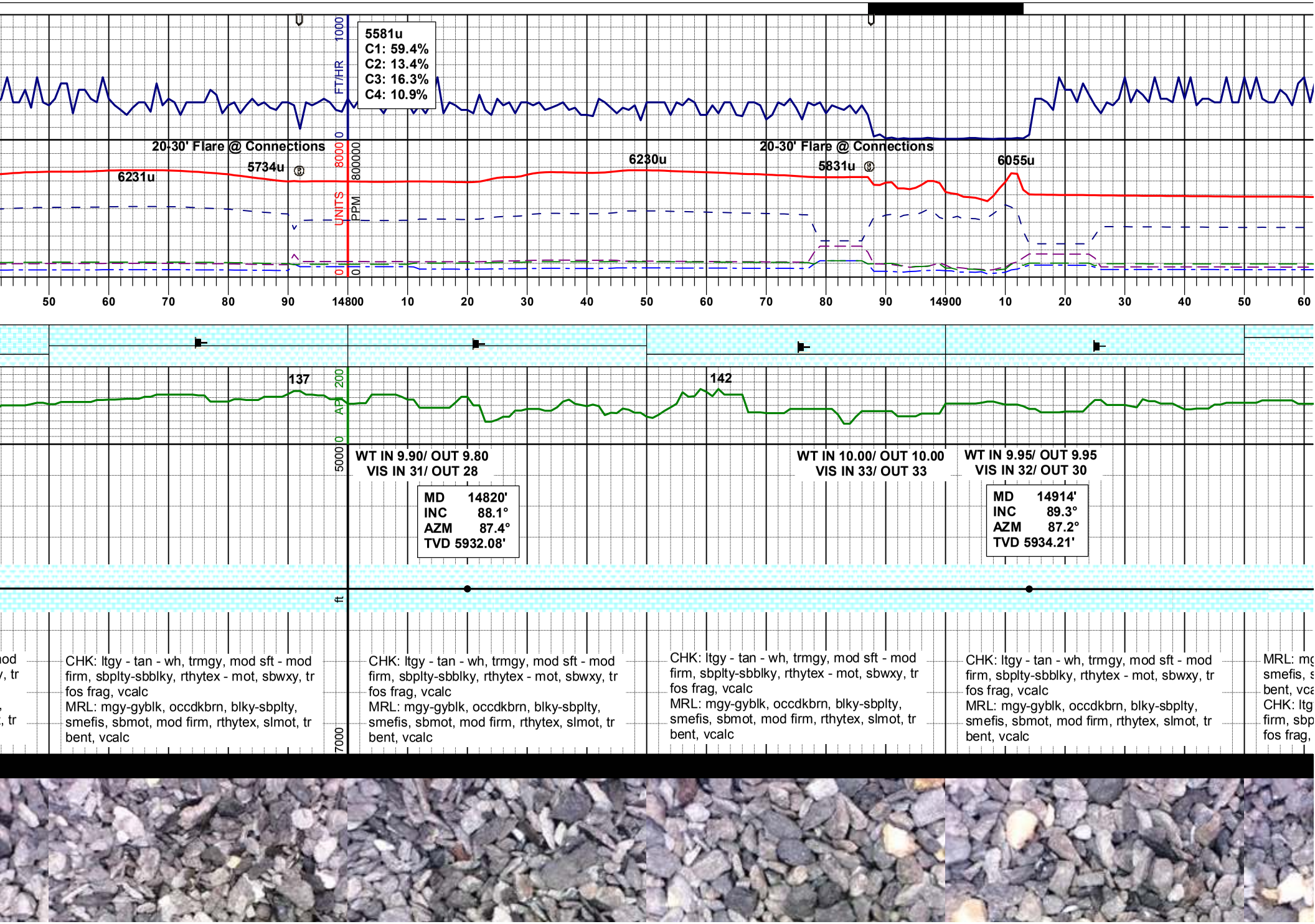
6234u
C1: 73.2%
C2: 11.3%
C3: 11.3%
C4: 4.2%
CIRRCULATE THRU
GAS BUSTER
6371u
6149u
6410u
5-15' Flare @ Connections
6389u
5885u
5-15' Flare @ Con
FT/HR
UNITS
PPM
1000
0
8000
800000
50
60
70
80
90
13700
10
20
30
40
50
60
70
80
90
13800
10
20
30
40
50
60
86
143
87
API
200
0
5000
WT IN 9.90/ OUT 9.80
VIS IN 34/ OUT 34
WT IN 9.85/ OUT 9.80
VIS IN 32/ OUT 34
MD 13683'
INC 92.9°
AZM 90.1°
TVD 5934.66'
MD 13777'
INC 92.6°
AZM 90.0°
TVD 5930.15'
ft
7000
CHK: ltgy - tan - wh, trmgy, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy, tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, tr bent, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, tr bent, vcalc, tr ss
CHK: ltgy - tan - wh, trmgy, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy, tr fos frag, vcalc
CHK: ltgy - tan - wh, trmgy, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy, tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, tr bent, vcalc
CHK: ltgy - tan - wh, trmgy, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy, tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, tr bent, vcalc

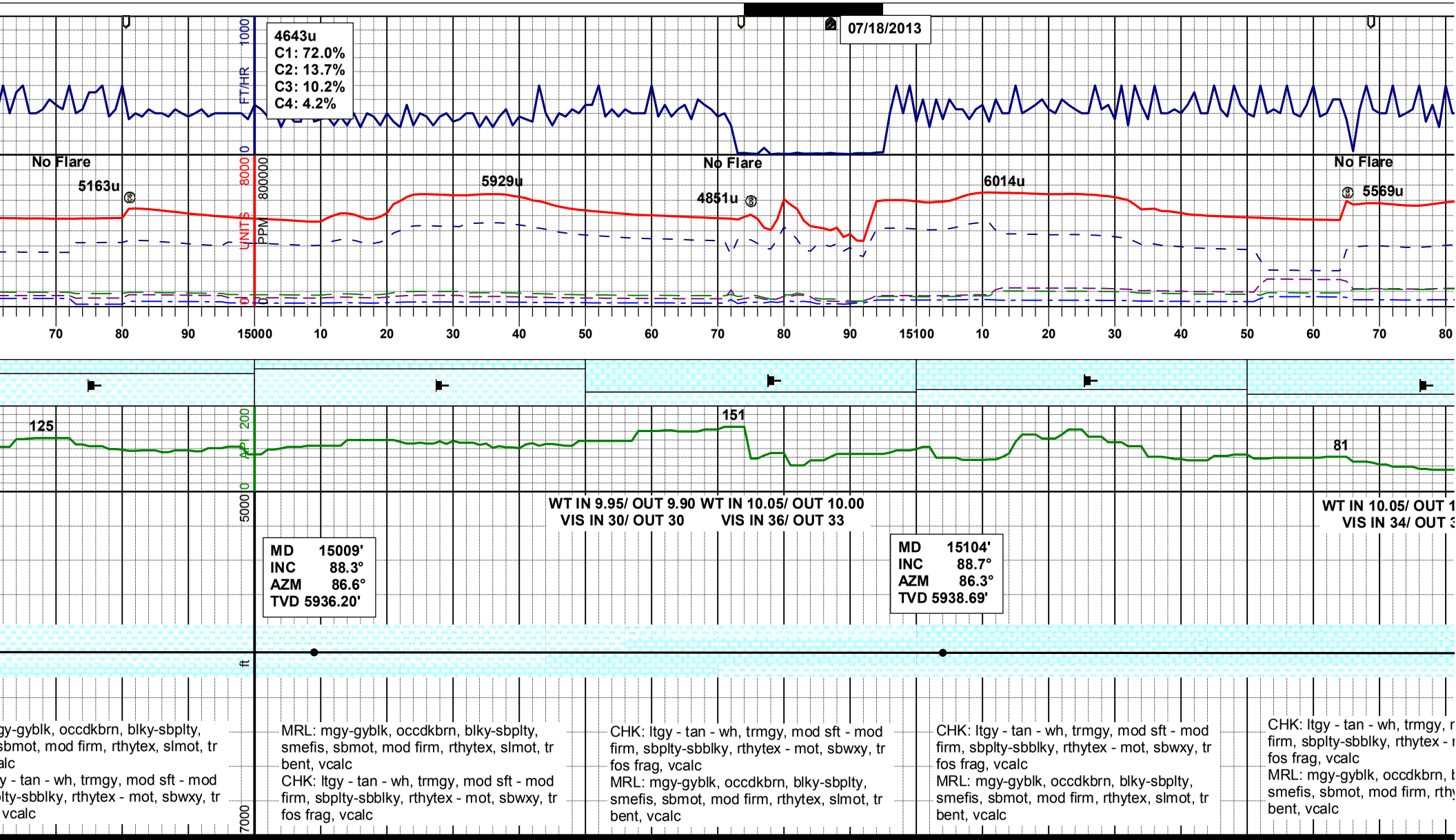

07/17/2013
5963u
C1: 53.3%
C2: 15.6%
C3: 21.5%
C4: 9.6%
FT/HR
1000
0
UNITS
8000
0
PPM
800000
0
nnections
6380u
5-15' Flare @ Connections
6134u
5852u
5-15' Flare @ Connections
6388u
5943u
70
80
90
13900
10
20
30
40
50
60
70
80
90
14000
10
20
30
40
50
60
70
80
140
API
200
0
88
5000
0
WT IN 10.00/ OUT 9.90
VIS IN 34/ OUT 33
MD 13872'
INC 91.6°
AZM 89.5°
TVD 5926.67'
WT IN 10.05/ OUT 9.95
VIS IN 30/ OUT 32
MD 13967'
INC 91.9°
AZM 88.0°
TVD 5923.77'
WT IN 10.05/ OUT 10.00
VIS IN 36/ OUT 36
MD 14061'
INC 90.8°
AZM 89.2°
TVD 5921.56'
ft
7000
- tan - wh, trmgy, mod sft - mod
y-sbblky, rthytex - mot, sbwxy, tr
vcalc
y-gyblk, occdkbrn, blky-sbplty,
bmot, mod firm, rthytex, slmot, tr
c
CHK: ltgy - tan - wh, trmgy, mod sft - mod
firm, sbplty-sbblky, rthytex - mot, sbwxy, tr
fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty,
smefis, sbmot, mod firm, rthytex, slmot, tr
bent, vcalc
CHK: ltgy - tan - wh, trmgy, mod sft - mod
firm, sbplty-sbblky, rthytex - mot, sbwxy, tr
fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty,
smefis, sbmot, mod firm, rthytex, slmot, tr
bent, vcalc
CHK: ltgy - tan - wh, trmgy, mod sft - mod
firm, sbplty-sbblky, rthytex - mot, sbwxy, tr
fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty,
smefis, sbmot, mod firm, rthytex, slmot, tr
bent, vcalc
CHK: ltgy - tan - wh, trmgy,
firm, sbplty-sbblky, rthytex -
fos frag, vcalc
MRL: mgy-gyblk, occdkbrn,
smefis, sbmot, mod firm, rth
bent, vcalc

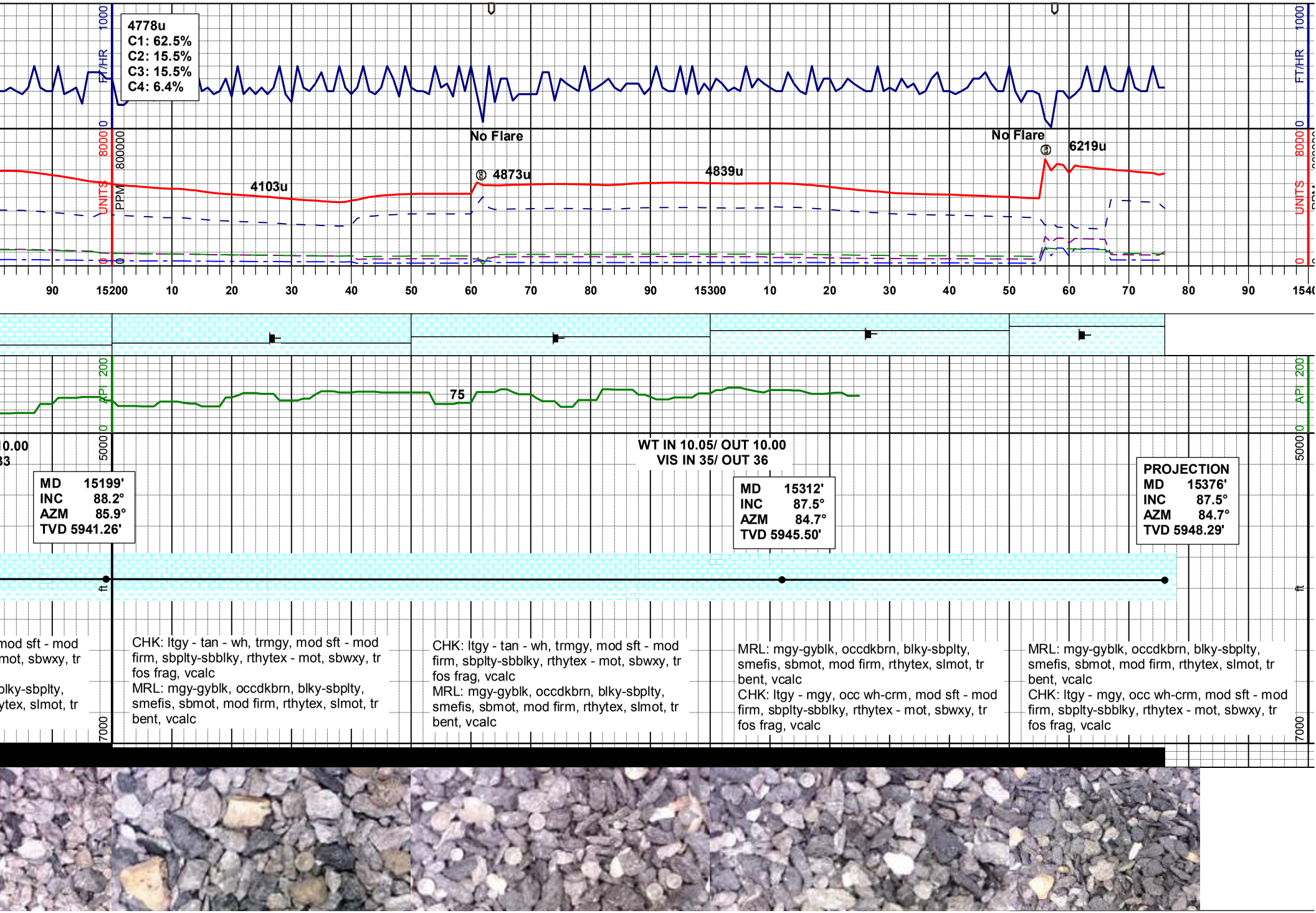

5099u
C1: 48.6%
C2: 14.3%
C3: 22.0%
C4: 15.0%
No Flare - Igniter broken
6309u
6382u
No Flare - Igniter broken
5943u
6055u
U/HR
UNITS
PPM
14100
14200
14300
88
81
166
API
WT IN 10.30/ OUT 10.25
VIS IN 36/ OUT 31
MD 14156'
INC 91.6°
AZM 89.5°
TVD 5919.57'
MD 14251'
INC 89.6°
AZM 90.8°
TVD 5918.57'
ft
mod sft - mod
mot, sbwxy, tr
blky-sbplty,
ytex, slmot, tr
CHK: ltgy - tan - wh, trmgy, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy, tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, tr bent, vcalc
CHK: ltgy - tan - wh, trmgy, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy, tr fos frag, vcalc
CHK: ltgy - tan - wh, trmgy, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy, tr fos frag, vcalc
CHK: ltgy - tan - wh, trmgy, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy, tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, tr bent, vcalc

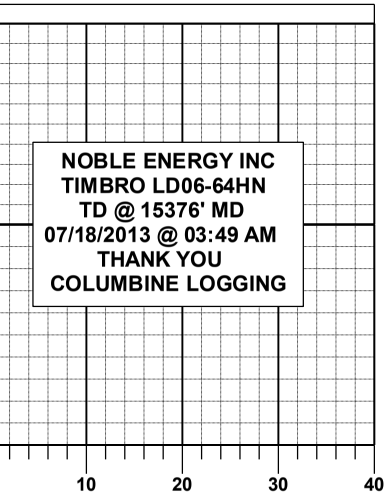

5925u
C1: 39.8%
C2: 14.6%
C3: 25.8%
C4: 19.8%
No Flare - Igniter broken
@ 6240u
6215u
No Flare - Igniter broken
@ 6180u
5301u
20-30' Flare @ Conne
@ 6240u
UNITS
PPM
158
58
MD 14345'
INC 89.8°
AZM 89.7°
TVD 5919.06'
MD 14440'
INC 88.2°
AZM 89.4°
TVD 5920.72'
WT IN 10.15/ OUT 10.15
VIS IN 35/ OUT 35
CHK: ltgy - tan - wh, trmgy, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy, tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, tr bent, vcalc

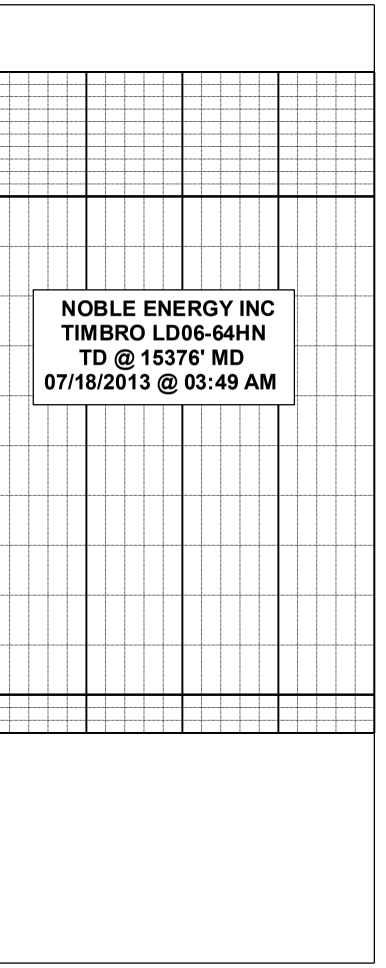

5506u
C1: 72.8%
C2: 11.5%
C3: 10.4%
C4: 5.4%
FT/HR
1000
0
ections
6145u
20-30' Flare @ Connections
6230u
6250u
20-30' Flare @ Connections
5555u
UNITS
PPM
8000
0
30
40
50
60
70
80
90
14600
10
20
30
40
50
60
70
80
90
14700
10
20
30
40
73
111
API
200
0
WT IN 10.00/ OUT 10.10
VIS IN 35/ OUT 35
WT IN 10.00/ OUT 10.00
VIS IN 31/ OUT 31
MD 14535'
INC 87.4°
AZM 88.9°
TVD 5924.37'
MD 14630'
INC 88.2°
AZM 88.1°
TVD 5928.02'
MD 14725'
INC 89.4°
AZM 88.5°
TVD 5930.01'
ft
7000
h, trmgy, mod sft - mod
, rthytex - mot, sbwxy, tr
ccdkbrn, blky-sbplty,
d firm, rthytex, slmot, tr
CHK: ltgy - tan - wh, trmgy, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy, tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, tr bent, vcalc
CHK: ltgy - tan - wh, trmgy, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy, tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, tr bent, vcalc
CHK: ltgy - tan - wh, trmgy, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy, tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, tr bent, vcalc
CHK: ltgy - tan - wh, trmgy, mod sft - m
firm, sbplty-sbblky, rthytex - mot, sbwx
fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty,
smefis, sbmot, mod firm, rthytex, slmot
bent, vcalc


5581u
C1: 59.4%
C2: 13.4%
C3: 16.3%
C4: 10.9%
FT/HR
1000
0
20-30' Flare @ Connections
6231u
5734u
6230u
20-30' Flare @ Connections
5831u
6055u
UNITS
8000
0
PPM
800000
0
50
60
70
80
90
14800
10
20
30
40
50
60
70
80
90
14900
10
20
30
40
50
60
137
142
AP
200
0
5000
WT IN 9.90/ OUT 9.80
VIS IN 31/ OUT 28
MD 14820'
INC 88.1°
AZM 87.4°
TVD 5932.08'
WT IN 10.00/ OUT 10.00
VIS IN 33/ OUT 33
WT IN 9.95/ OUT 9.95
VIS IN 32/ OUT 30
MD 14914'
INC 89.3°
AZM 87.2°
TVD 5934.21'
ft
7000
CHK: ltgy - tan - wh, trmgy, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy, tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, tr bent, vcalc
CHK: ltgy - tan - wh, trmgy, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy, tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, tr bent, vcalc
CHK: ltgy - tan - wh, trmgy, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy, tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, tr bent, vcalc
CHK: ltgy - tan - wh, trmgy, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy, tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, tr bent, vcalc


4643u
C1: 72.0%
C2: 13.7%
C3: 10.2%
C4: 4.2%
07/18/2013
FT/HR
1000
0
UNITS
8000
0
PPM
800000
0
No Flare
5163u
5929u
No Flare
4851u
6014u
No Flare
5569u
70
80
90
15000
10
20
30
40
50
60
70
80
90
15100
10
20
30
40
50
60
70
80
API
200
0
5000
0
125
151
81
WT IN 9.95/ OUT 9.90 WT IN 10.05/ OUT 10.00
VIS IN 30/ OUT 30 VIS IN 36/ OUT 33
WT IN 10.05/ OUT 1
VIS IN 34/ OUT 3
MD 15009'
INC 88.3°
AZM 86.6°
TVD 5936.20'
MD 15104'
INC 88.7°
AZM 86.3°
TVD 5938.69'
ft
7000
gy-gyblk, occdkbrn, blky-sbplty,
sbmot, mod firm, rthytex, slmot, tr
alc
y - tan - wh, trmgy, mod sft - mod
lty-sbblky, rthytex - mot, sbwxy, tr
vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, tr bent, vcalc
CHK: ltgy - tan - wh, trmgy, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy, tr fos frag, vcalc
CHK: ltgy - tan - wh, trmgy, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy, tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, tr bent, vcalc
CHK: ltgy - tan - wh, trmgy, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy, tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, tr bent, vcalc
CHK: ltgy - tan - wh, trmgy, r
firm, sbplty-sbblky, rthytex -
fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, b
smefis, sbmot, mod firm, rthy
bent, vcalc


4778u
C1: 62.5%
C2: 15.5%
C3: 15.5%
C4: 6.4%
FT/HR
UNITS
PPM
No Flare
4103u
4873u
4839u
No Flare
6219u
90
15200
10
20
30
40
50
60
70
80
90
15300
10
20
30
40
50
60
70
80
90
API
75
WT IN 10.05/ OUT 10.00
VIS IN 35/ OUT 36
MD 15199'
INC 88.2°
AZM 85.9°
TVD 5941.26'
MD 15312'
INC 87.5°
AZM 84.7°
TVD 5945.50'
PROJECTION
MD 15376'
INC 87.5°
AZM 84.7°
TVD 5948.29'
ft
CHK: ltgy - tan - wh, trmgy, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy, tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, tr bent, vcalc
CHK: ltgy - tan - wh, trmgy, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy, tr fos frag, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, tr bent, vcalc
MRL: mgy-gyblk, occdkbrn, blky-sbplty, smefis, sbmot, mod firm, rthytex, slmot, tr bent, vcalc
CHK: ltgy - mgy, occ wh-crm, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy, tr fos frag, vcalc
CHK: ltgy - mgy, occ wh-crm, mod sft - mod firm, sbplty-sbblky, rthytex - mot, sbwxy, tr fos frag, vcalc


NOBLE ENERGY INC
TIMBRO LD06-64HN
TD @ 15376' MD
07/18/2013 @ 03:49 AM
THANK YOU
COLUMBINE LOGGING
10
20
30
40


NOBLE ENERGY INC
TIMBRO LD06-64HN
TD @ 15376' MD
07/18/2013 @ 03:49 AM