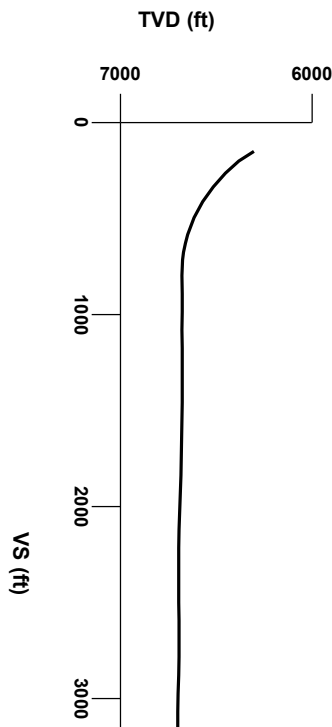




LOG created using LPLOT VH Version 3.0, August 10, 2013, Copyright (C) 1999-2009 Pason Systems Corp.

OPERATOR: NOBLE ENERGY
WELL: WAHLERT AC23-69HN
LOCATION: NENE SEC 23 T7N R63W
COUNTY: WELD
STATE: COLORADO
SPOT: 280' FNL, 280' FEL
ELEVATION: 4,790' GL, 4,803' KB
FIELD: WATTENBERG
SPUD DATE: 8/03/13
TD DATE: 8/09/13
DATES LOGGED: 8/04/13 - 8/10/13
DEPTHS LOGGED: 1,000' - 10841'
LOGGERS: RYAN SULLIVAN, MOHAMMED ALMUBARAK
DRILLING FLUID: H2O, LSND MUD
DRILLING RIG: ENSIGN # 121
API: 05-123-37156
LOG TYPE: Horizontal
SCALE: 1:240 (5 inches per 100 feet)
REMARKS: Wellsite Geological Services Provided By Columbine Logging Inc.
Latitude: N40.565890, Longitude: W-104.3948

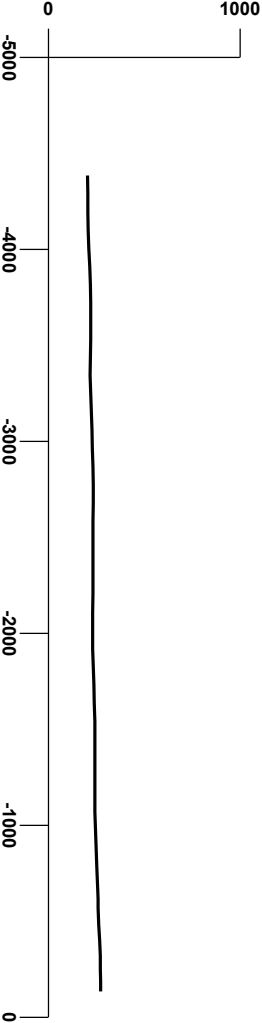


Survey Elevation

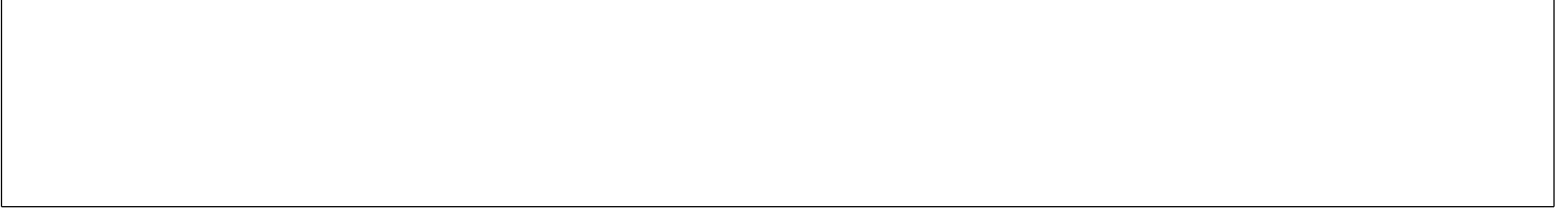
Survey Plan



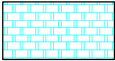
N/S (ft)




E/W (ft)



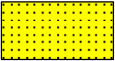
LITHOLOGIES




Chalk




Marl




Sandstone



Shaly Sandstone




Shaly Siltstone




Silty Shale


ENGINEERING SYMBOLS




Bit Change




Casing




Casing



Connection



Connection Gas



Midnight Depth

DEPTH (FEET)

6300

10

20

30

40

50

60

70

80

90

6400

50' Overlap from vertical log

UNITS

0

500000

500000

0

UNITS

0

500000

500000

0

PPM

2242u

2959u

PPM

Refer to WALHERT AC23-69HN Vertical for Inclination < 27.3°

IN 10.7/34 OUT 10.6/34

FT/HR

0

300

300

0

FT/HR

0

300

300

0

120

0

120

0

SLIDEROTATE

0

500

0

ROP

0

FT/HR

500

GAS

0

6000

0

600000

0

600000

0

600000

0

600000

0

600000

UNITS

0

6000

0

600000

0

600000

0

600000

0

600000

0

600000

C1

PPM

C2

PPM

C3

PPM

C4

PPM

TVD

ft

6100

6100

6100

6100

6100

6100

6100

6100

6100

6100

6100

GAMM

0

AP200

50AP200

50AP200

50AP200

50AP200

50AP200

50AP200

50AP200

50AP200

50AP200

50AP200

SURVEY @

MD 6328°

INC 27.3°

AZI 270.3°


TVD 6302.32'

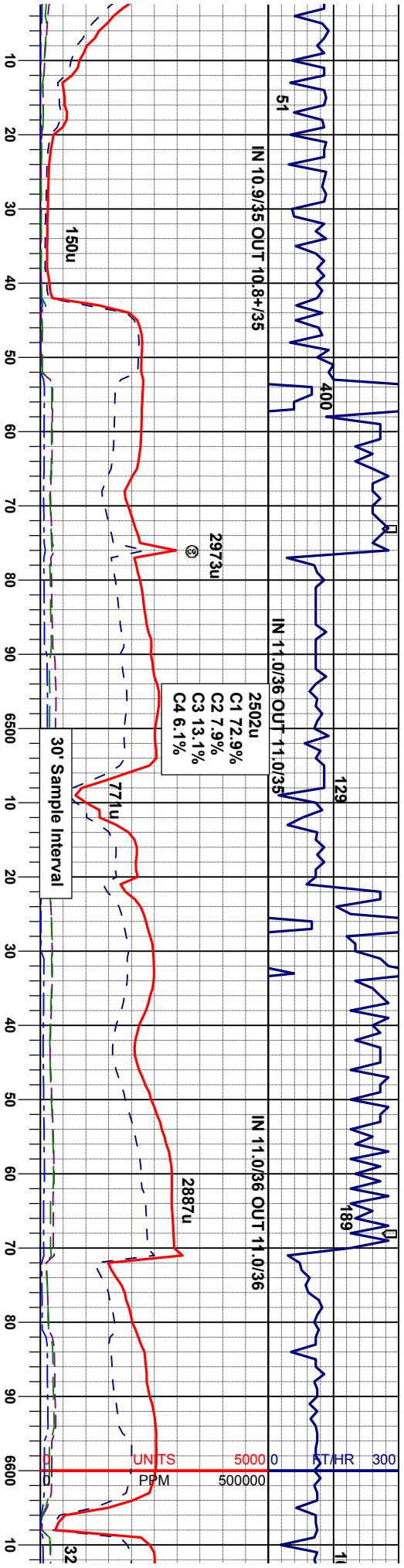
SHVSLTST: It gy - m gy brn. m sft - firm, sbang - sbply, fri - brit, gt tex, sdy ip, vf-f gr. spec w/ mica, v sl calc; SLTYSH: It gy - m gybrn, sme dk gy, firm, brit, sbply - sbblky, sl gt tex, arg-sily mnx, v sl calc; occ shy ss, mod fast diffuse, sl string, mod bri bl wh cut, n flor shn or od

OIL SHOW

T F G

SAMPLE PHOTOS





SURVEY @
MD 6422'
INC 37.5°
AZI 268.9°
TVD 6381.58'

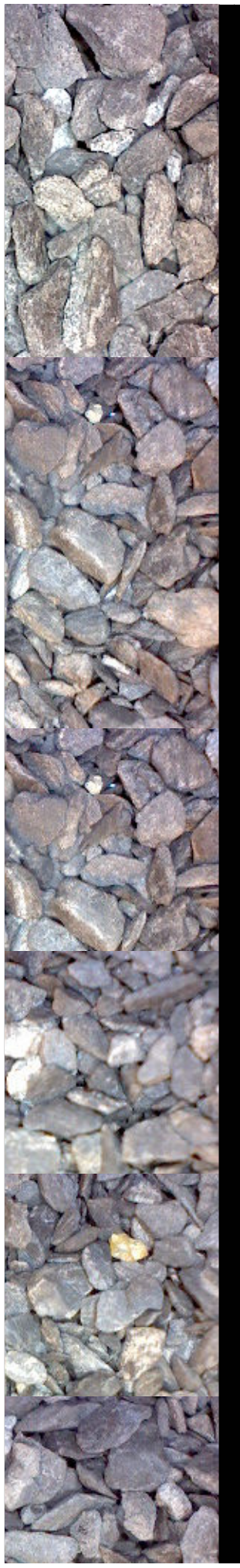
SLTYSH: lt gy - m gybrn, sme dk gy, firm, brit, sbply - sbblky, sl gt tex, arg-sily mtx, v sl calc; SHVSLTST: lt gy - m gy brn, m sft - firm, sbang - sbply, fri - brit, gt tex, sdy ip, vt-f gr, spec w/ mica, v sl calc, occ shy ss, mod fast diffuse, sl stimg, dull bl wh cut, tr du yel gn mnrl flr, n stn or od

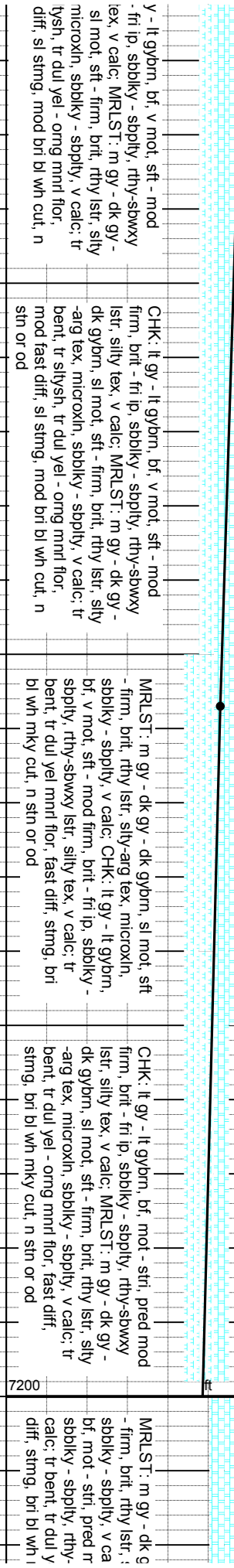
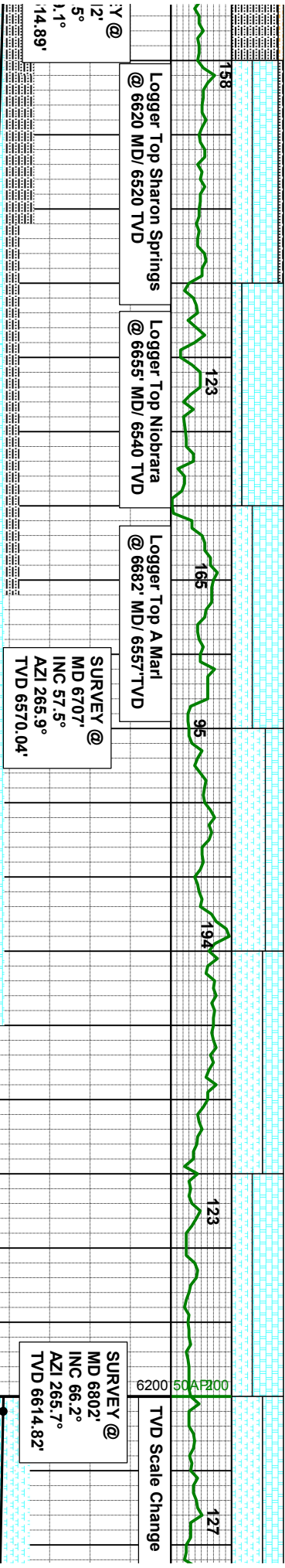
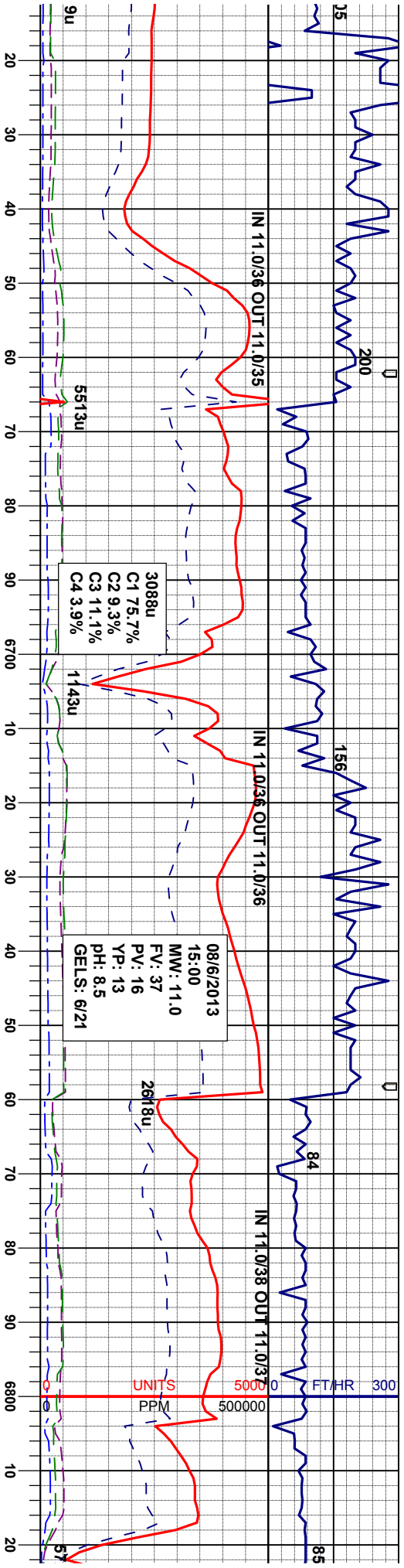
SURVEY @
MD 6517'
INC 46.1°
AZI 270.3°
TVD 6452.34'

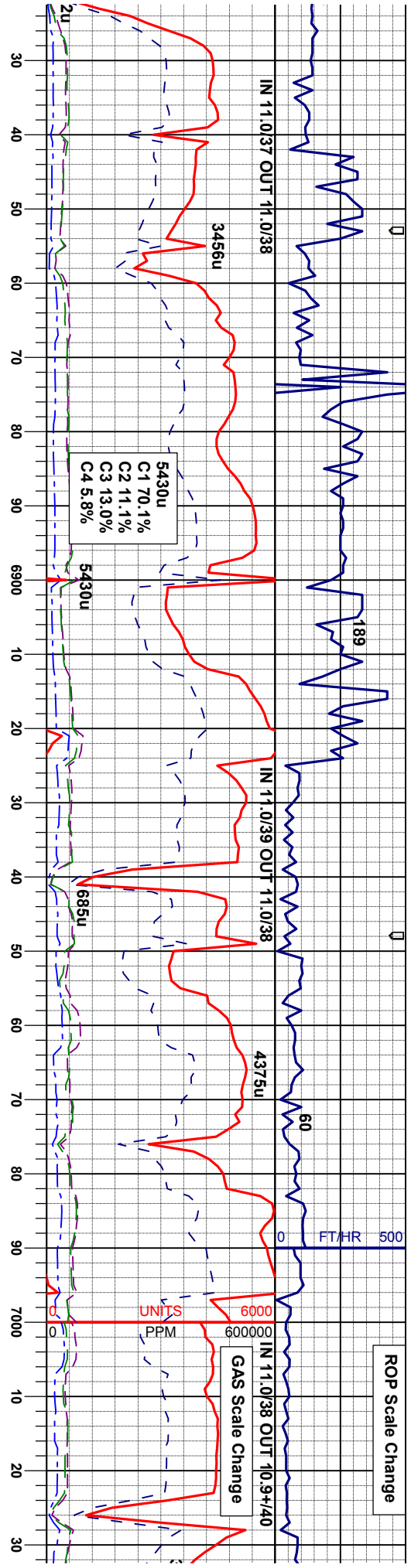
SLTYSH: lt gy - m gybrn, sme dk gy, firm, brit, sbply - sbblky, sl gt tex, arg-sily mtx, v sl calc; SHVSLTST: lt gy - m gy brn, m sft - firm, sbang - sbply, fri - brit, gt tex, sdy ip, vt-f gr, spec w/ mica, v sl calc, occ shy ss, mod fast diffuse, sl stimg, mod bri bl wh cut, tr du yel gn mnrl flr, n stn or od

SLTYSH: lt gy - m gybrn, sme dk gy, mod arg-sily mtx, v sl calc, spec w/ mica & dism pyr, occ shy slst, tr bent, mod fast diffuse, sl stimg, mod bri bl wh cut, tr gold - ornng mnrl flr, n stn or od

CHK: lt g firm, brit - lstr, sily l dk gybrn, -arg tex, l bent, tr sl mod fast stn or od







SURVEY @
MD 6897'
INC 72.9°
AZI 271.0°
TVD 6648.02'

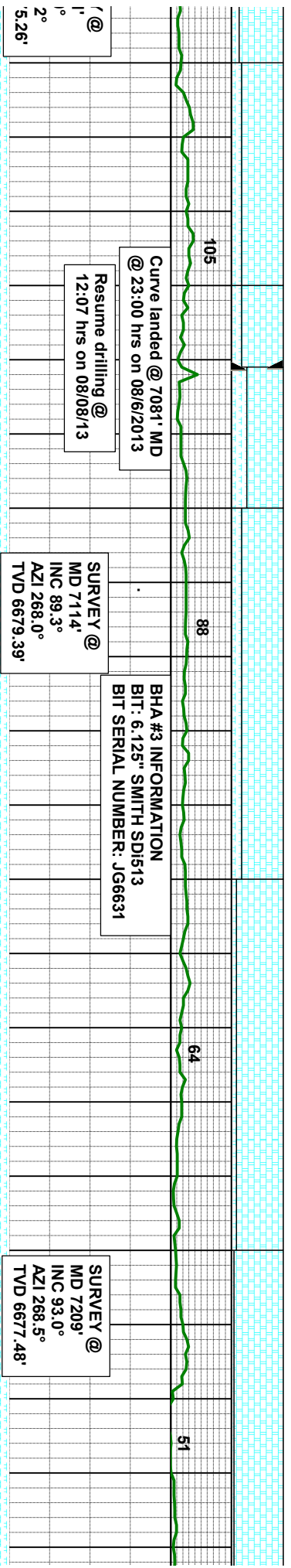
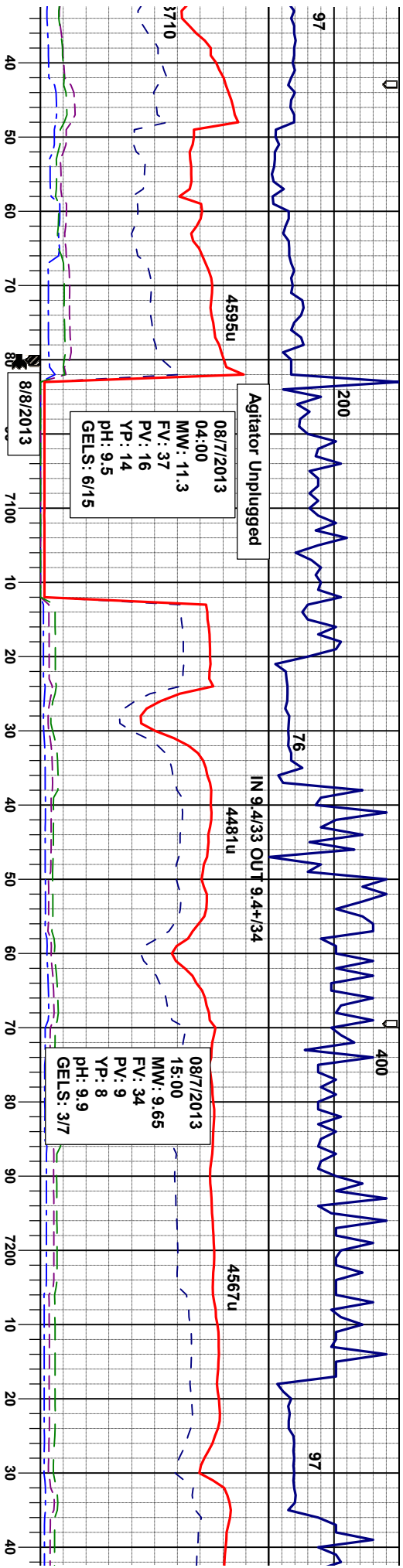
SURVEY @
MD 6944'
INC 75.5°
AZI 268.0°
TVD 6660.81'

SURVEY @
MD 6992'
INC 81.1°
AZI 267.0°
TVD 6670.54'

SURVEY @
MD 7031'
INC 85.0°
AZI 268°
TVD 6670'

ly - dk gybrn, sl mot, sft sily-arg tex, microxln, lc; CHK: lt gy - lt gybrn, nod firm, brit - fri ip, sbwxy lstr, sily tex, v el - orng mnrl flr, fast mky cut, n stn or od	MRLST: m gy - dk gy - dk gybrn, sl mot, sft - firm, brit, rthy lstr, sily-arg tex, microxln, sbblky - sbply, v calc; CHK: lt gy - lt gybrn, bf, mot - str, pred mod firm, brit - fri ip, sbblky - sbply, rthy-sbwxy lstr, sily tex, v calc; tr bent, tr dul yel - orng mnrl flr, fast diff, sting, bri bl wh mky cut, n stn or od	MRLST: m gy - dk gy - dk gybrn, sl mot, sft - firm, brit, rthy lstr, sily-arg tex, microxln, sbblky - sbply, v calc; CHK: lt gy - lt gybrn, bf, mot - str, pred mod firm, brit - fri ip, sbblky - sbply, rthy-sbwxy lstr, sily tex, v calc; tr bent, tr dul yel - orng mnrl flr, fast diff, sting, bri bl wh mky cut, n stn or od	CHK: lt gy - lt gybrn, bf, mot - str, pred mod firm, brit - fri ip, sbblky - sbply, rthy-sbwxy lstr, sily tex, v calc; MRLST: m gy - dk gy - dk gybrn, sl mot, sft - firm, brit, rthy lstr, sily -arg tex, microxln, sbblky - sbply, v calc; tr bent, tr dul yel - orng mnrl flr, fast diff, sting, bri bl wh mky cut, n sin or od	CHK: lt gy - lt gybrn, bf, mot - firm, brit - fri ip, sbblky - sbply lstr, sily tex, v calc; MRLST: r dk gybrn, sl mot, sft - firm, brit -arg tex, microxln, sbblky - sb bent, tr dul yel - orng mnrl flr sting, bri bl wh mky cut, n sin
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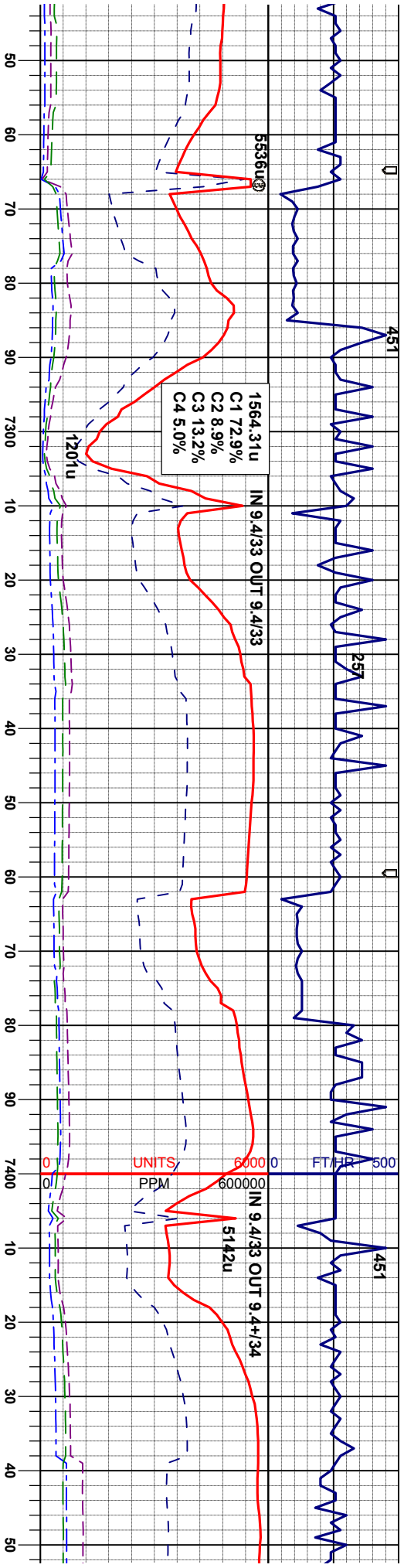
CHK: It gy - lt gybrn, bf, mot - stri, pred mod
firm, brt - fri ip, sbblky - sbply, rthy-sbwy
lstr, silty tex, v calc: MRLST: m gy - dk gy -
dk gybrn, sl mot, sft - firm, brt, rthy lstr, silty
-arg tex, microxin, sbblky - sbply, v calc: tr
bent, tr dul yel - orng mnrl flr, fast diff,
stng, bri bl wh mky cut, n sin or od

CHK: It gy - lt gybrn, bf, mot - stri, pred mod
firm, brt - fri ip, sbblky - sbply, rthy-sbwy
lstr, silty tex, v calc: MRLST: m gy - dk gy -
dk gybrn, sl mot, sft - firm, brt, rthy lstr, silty
-arg tex, microxin, sbblky - sbply, v calc:
fast diff, stng, bri bl wh mky cut, n flr sin or od

CHK: It gy - lt gybrn, bf, mot - stri, pred mod
firm, brt - fri ip, sbblky - sbply, rthy-sbwy
lstr, silty tex, v calc: occ mrlst, fast diff,
stng, bri bl wh mky cut, n flr sin or od

CHK: It gy - lt gybrn, bf, mot - stri, pred r
firm, brt - fri ip, sbblky - sbply, rthy-sbw
lstr, silty tex, v calc: occ mrlst, fast diff,
stng, bri bl wh mky cut, n flr sin or od



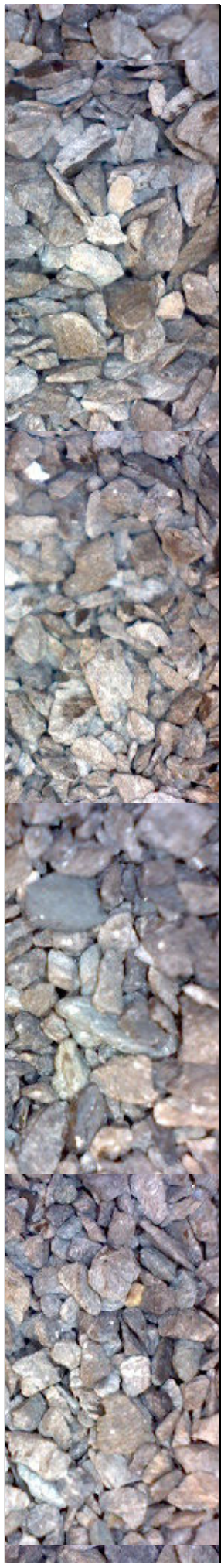


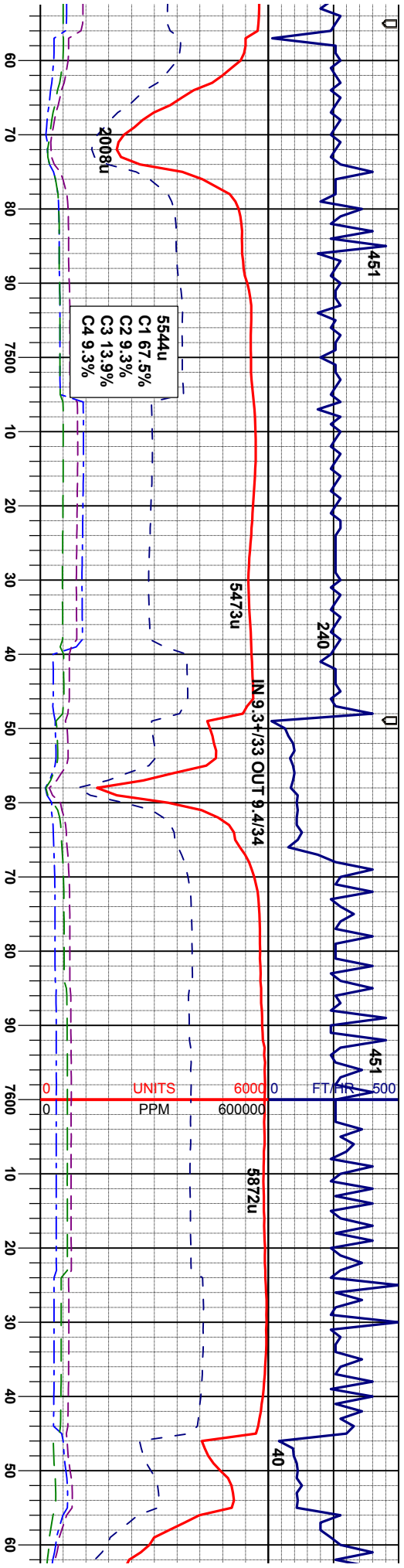
1564.31u
C1 72.9%
C2 8.9%
C3 13.2%
C4 5.0%

SURVEY @
MD 7304'
INC 88.1°
AZI 266.4°
TVD 6676.57'

SURVEY @
MD 7399'
INC 89.7°
AZI 270.3°
TVD 6678.39'

<p>nod xy</p> <p>CHK: lt gy - lt gybrn, bf, mot - str, pred mod firm, brt - fri ip, sbblky - sbply, rthy-sbwny lstr, silty tex, v calc; occ mntst, sme bent, sme yel gn mnt flr, fast diff, string, bri bl wh mky cut, n sin or od</p>	<p>CHK: lt gy - lt gybrn, bf, mot - str, pred mod firm, brt - fri ip, sbblky - sbply, rthy-sbwny lstr, silty tex, v calc; occ mntst, occ fos frag lnoc, abnt bent, abnt yel gn mnt flr, fast diff, string, bri bl wh mky cut, n sin or od</p>	<p>CHK: lt gy - lt gybrn, bf, mot - str, pred firm, brt - fri ip, sbblky - sbply, rthy-sbwny lstr, silty tex, v calc; occ mntst, occ fos frag lnoc, abnt bent, abnt yel gn mnt flr, fast diff, string, bri bl wh mky cut, n sin or od</p>	<p>CHK: lt gy - lt gybrn, bf, mot - str, pred firm, brt - fri ip, sbblky - sbply, rthy-sbwny lstr, silty tex, v calc; occ mntst, occ fos frag lnoc, abnt bent, abnt yel gn mnt flr, fast diff, string, bri bl wh mky cut, n sin or od</p>
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5544u
C1 67.5%
C2 9.3%
C3 13.9%
C4 9.3%

SURVEY @
MD 7493
INC 91.1°
AZI 270.1°
TVD 6677.74'

SURVEY @
MD 7588
INC 90.2°
AZI 269.4°
TVD 6676.66'

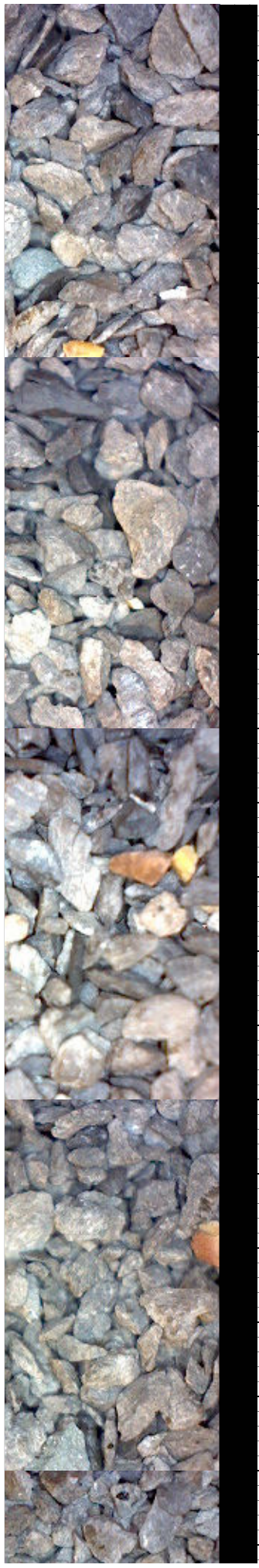
CHK: It gy - It gybrn, bf, mot - str, pred firm,
brit - fri ip, sbblky - sbply, rthy-sbwy lstr,
silly tex, v calc, occ mrlst, abnt bent, abnt
yel gn mnrl flr, fast diff, sting, bri bl wh
mky cut, n stn or od

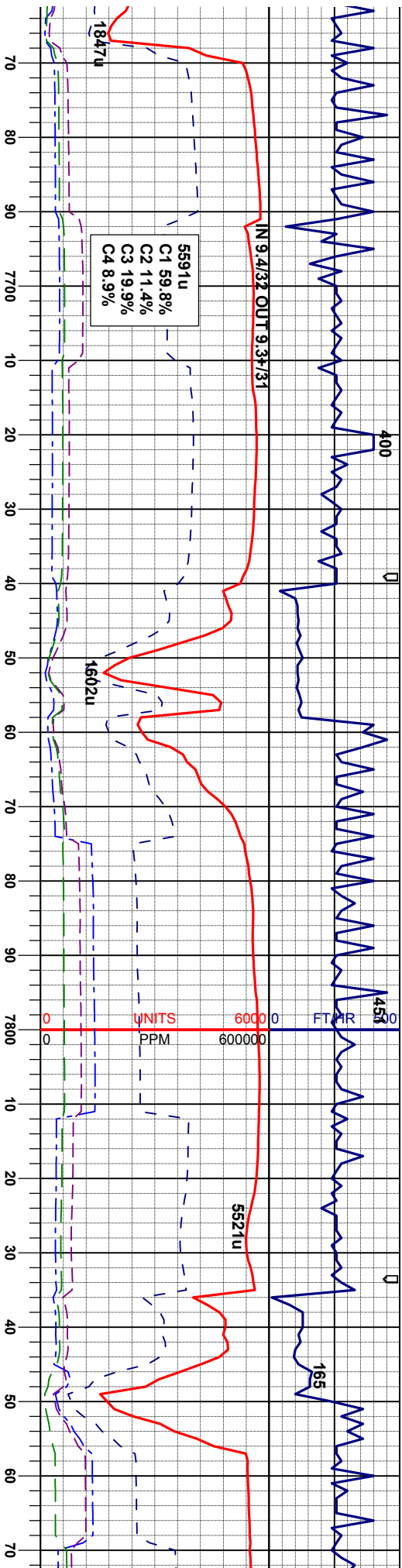
CHK: It gy - It gybrn, bf, mot - str, pred firm,
brit - fri ip, sbblky - sbply, rthy-sbwy lstr,
silly tex, v calc, occ mrlst, abnt bent, abnt
yel gn mnrl flr, fast diff, sting, bri bl wh
mky cut, n stn or od

CHK: It gy - It gybrn, bf, mot - str, pred firm,
brit - fri ip, sbblky - sbply, rthy-sbwy lstr,
silly tex, v calc, occ mrlst, abnt bent, abnt
yel gn mnrl flr, fast diff, sting, bri bl wh
mky cut, n stn or od

CHK: It gy - It gybrn, bf, mot - str, pred firm,
brit - fri ip, sbblky - sbply, rthy-sbwy lstr,
silly tex, v calc, occ mrlst, abnt bent, abnt
yel gn mnrl flr, fast diff, sting, bri bl wh
mky cut, n stn or od

CHK: It gy
firm, brit -
lstr, silly t
dk gybrn,
-arg tex, r
fast diff, s
or od





IN 9.432 OUT 9.3131
C1 59.8%
C2 11.4%
C3 19.9%
C4 8.9%

SURVEY @
MD 7683'
INC 90.1°
AZI 269.9°
TVD 6676.41'

SURVEY @
MD 7777'
INC 89.3°
AZI 270.8°
TVD 6676.90'

SURVEY @
MD 787
INC 88.1°
AZI 268
TVD 6676.90'

CHK: It gy - lt gybrn, bf, mot - stri, pred mod
fri ip, sbblky - sbply, rthy-sbwwy
ex, v calc: MRLST: m gy - dk gy -
sl mot, sft - firm, brit, rthy lst, silty
microxin, sbblky - sbply, v calc:
tng, bri bl wh mky cut, n flor stn
or od

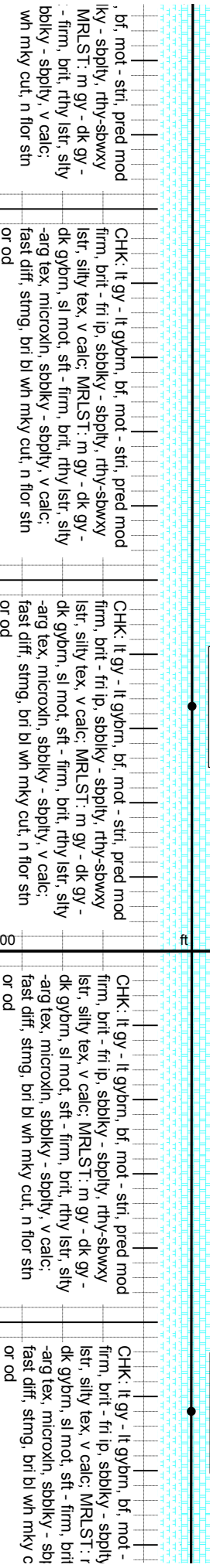
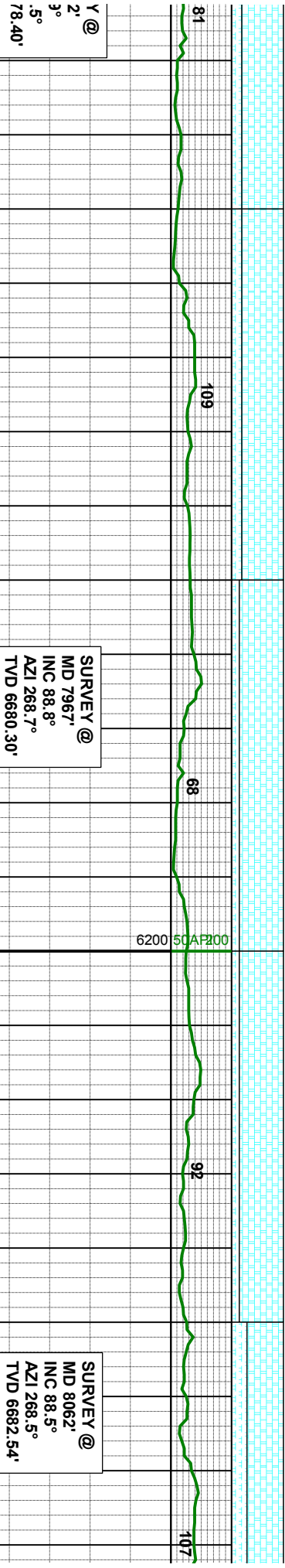
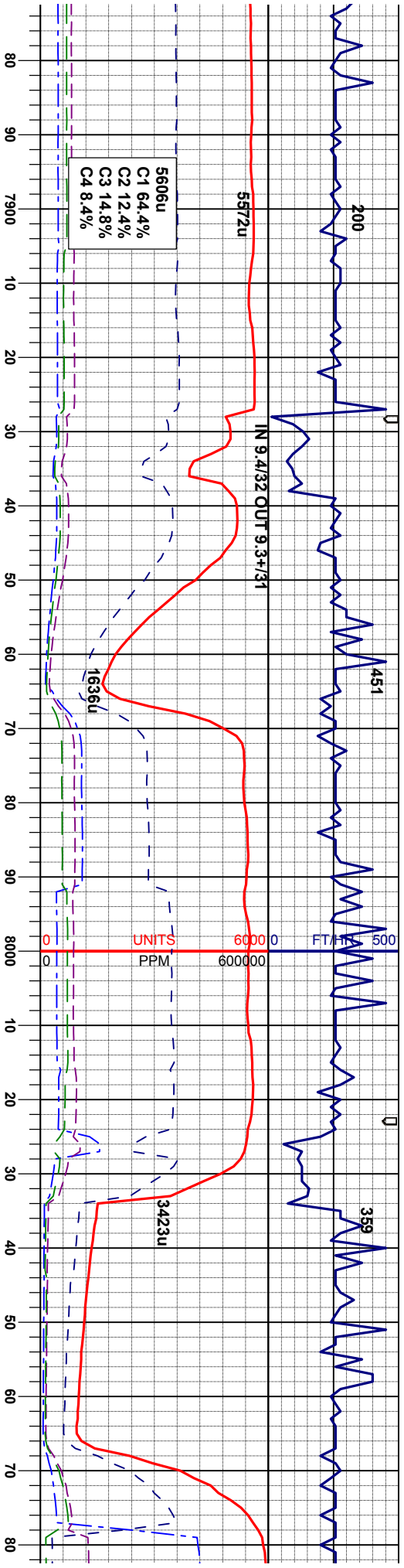
CHK: It gy - lt gybrn, bf, mot - stri, pred mod
firm, brit - fri ip, sbblky - sbply, rthy-sbwwy
lstr, silty tex, v calc: MRLST: m gy - dk gy -
dk gybrn, sl mot, sft - firm, brit, rthy lst, silty
-arg tex, microxin, sbblky - sbply, v calc:
fast diff, stng, bri bl wh mky cut, n flor stn
or od

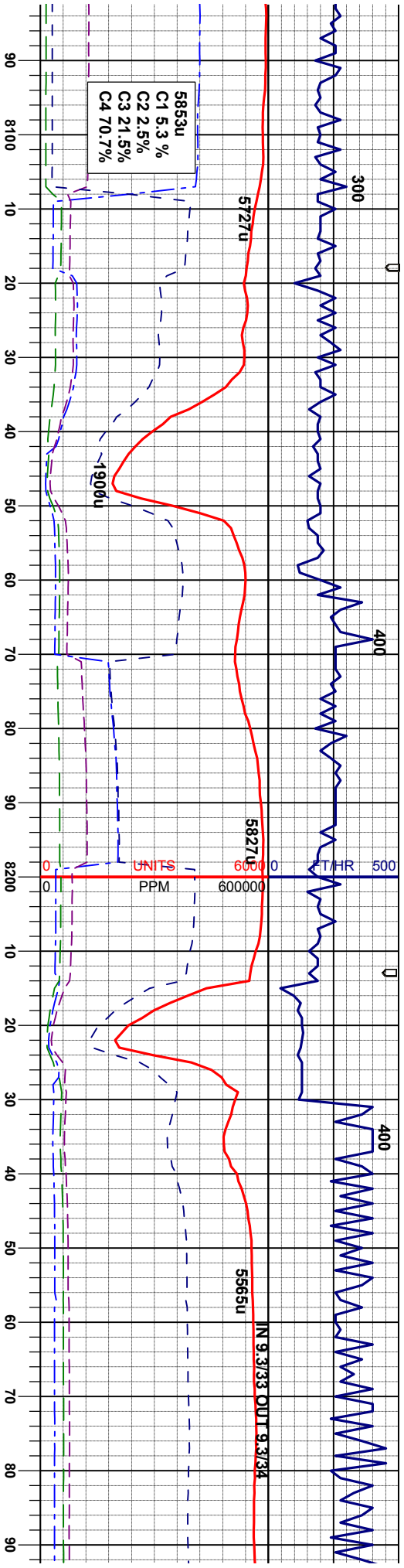
CHK: It gy - lt gybrn, bf, mot - stri, pred firm,
brit - fri ip, sbblky - sbply, rthy-sbwwy lstr,
silty tex, v calc: occ mrlst, abnt bent, abnt
yel gn mnt flor, fast diff, stng, bri bl wh
mky cut, n stn or od

CHK: It gy - lt gybrn, bf, mot - stri, pred firm,
brit - fri ip, sbblky - sbply, rthy-sbwwy lstr,
silty tex, v calc: occ mrlst, abnt bent, abnt
yel gn mnt flor, fast diff, stng, bri bl wh
mky cut, n stn or od

CHK: It gy - lt gybrn, bf, mot - stri, pred firm,
brit - fri ip, sbblky - sbply, rthy-sbwwy lstr,
silty tex, v calc: occ mrlst, abnt bent, abnt
yel gn mnt flor, fast diff, stng, bri bl wh
mky cut, n stn or od







SURVEY @
MD 8157°
INC 89.6°
AZI 267.8°
TVD 6684.12'

SURVEY @
MD 8251°
INC 87.8°
AZI 268.7°
TVD 6686.25'

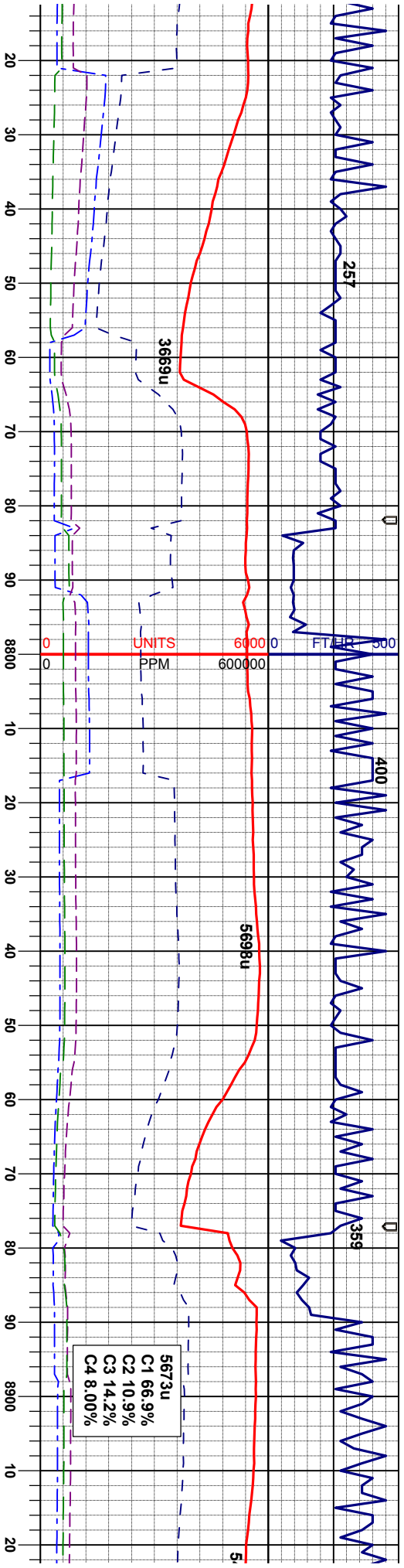
stri, pred mod
, rthy-sbwny
n gy - dk gy -
, rthy lstr, silty
city, v calc;
ut, n flor stn

CHK: It gy - lt gybrn, bf, mot - stri, pred mod
firm, brt - fri ip, sbolky - sbply, rthy-sbwny
lstr, silty tex, v calc; MRLST: m gy - dk gy -
dk gybrn, sl mot, sft - firm, brt, rthy lstr, silty
-arg tex, microxin, sbolky - sbply, v calc;
fast diff, sting, bri bi wh mky cut, n flor stn
or od

CHK: It gy - lt gybrn, bf, mot - stri, pred mod
firm, brt - fri ip, sbolky - sbply, rthy-sbwny
lstr, silty tex, v calc; MRLST: m gy - dk gy -
dk gybrn, sl mot, sft - firm, brt, rthy lstr, silty
-arg tex, microxin, sbolky - sbply, v calc;
fast diff, sting, bri bi wh mky cut, n flor stn
or od

CHK: It gy - lt gybrn, bf, mot - stri, pred r
firm, brt - fri ip, sbolky - sbply, rthy-sbw
lstr, silty tex, v calc; MRLST: m gy - dk g
dk gybrn, sl mot, sft - firm, brt, rthy lstr,
-arg tex, microxin, sbolky - sbply, v calc
fast diff, sting, bri bi wh mky cut, n flor s





SURVEY @
MD 8726'
INC 90.9°
AZI 270.6
TVD 6695.62'

SURVEY @
MD 8821'
INC 90.1°
AZI 268.9
TVD 6694.79'

SURVEY @
MD 8915'
INC 90.7°
AZI 271.2
TVD 6694.13'

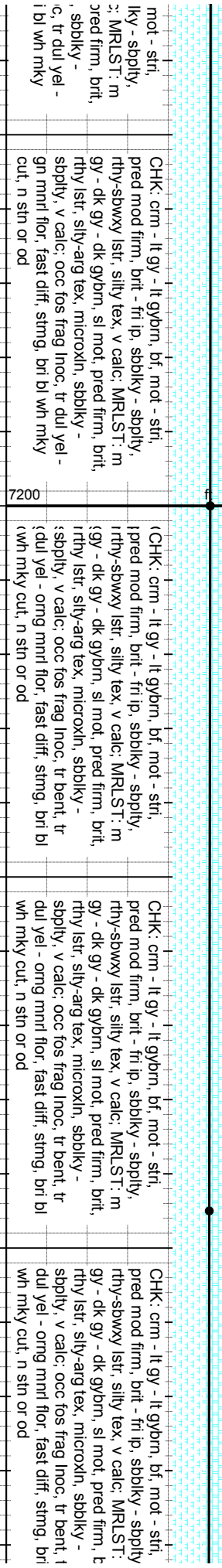
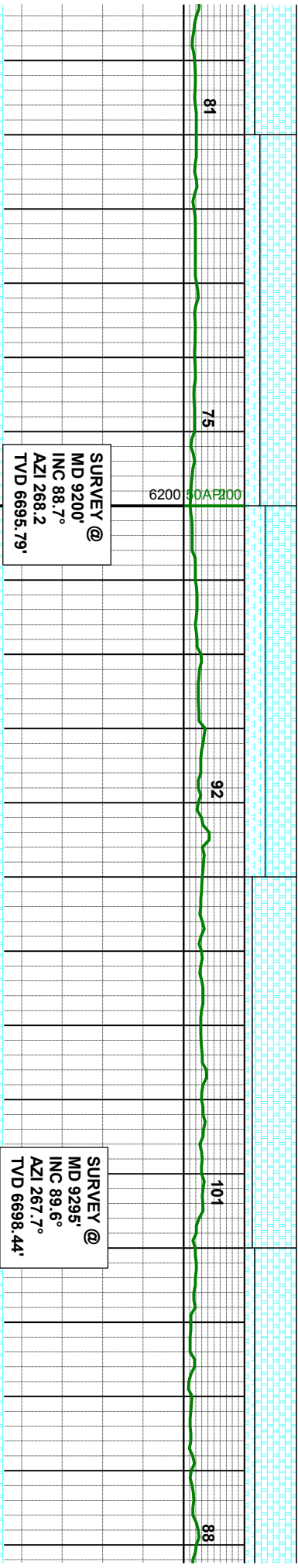
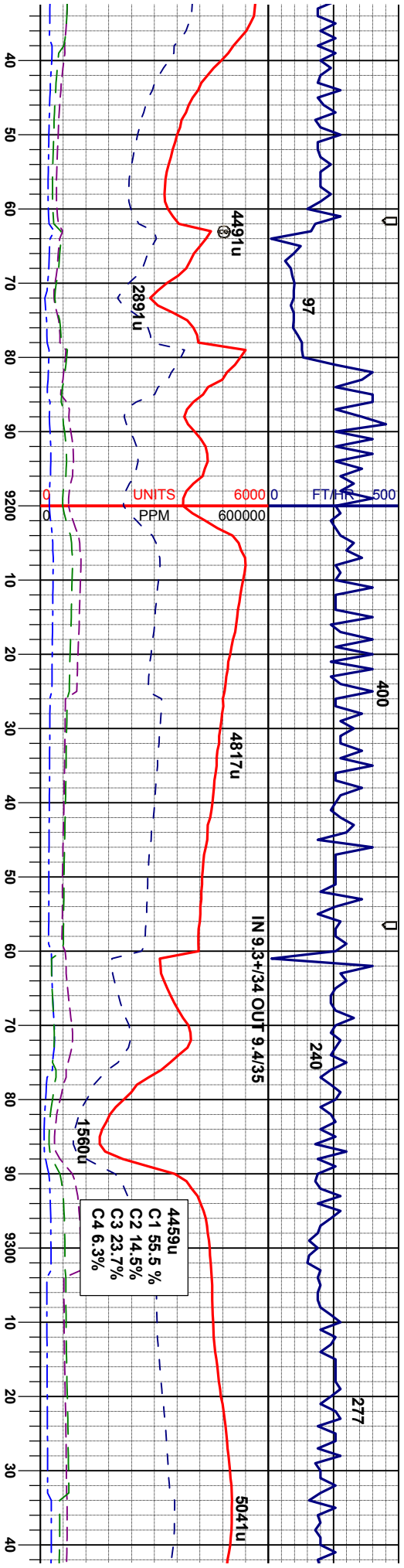
CHK: It gy - lt gybrn, bf, mot - stri, pred mod
firm, brt - fri ip, sbblky - sbply, rthy-sbwny
lstr, silty tex, v calc: MRLST: m gy - dk gy -
dk gybrn, sl mot, sft - firm, brt, rthy lstr, silty
-arg tex, microxin, sbblky - sbply, v calc:
fast diff, string, bri bl wh mky cut, n flor stn
or od

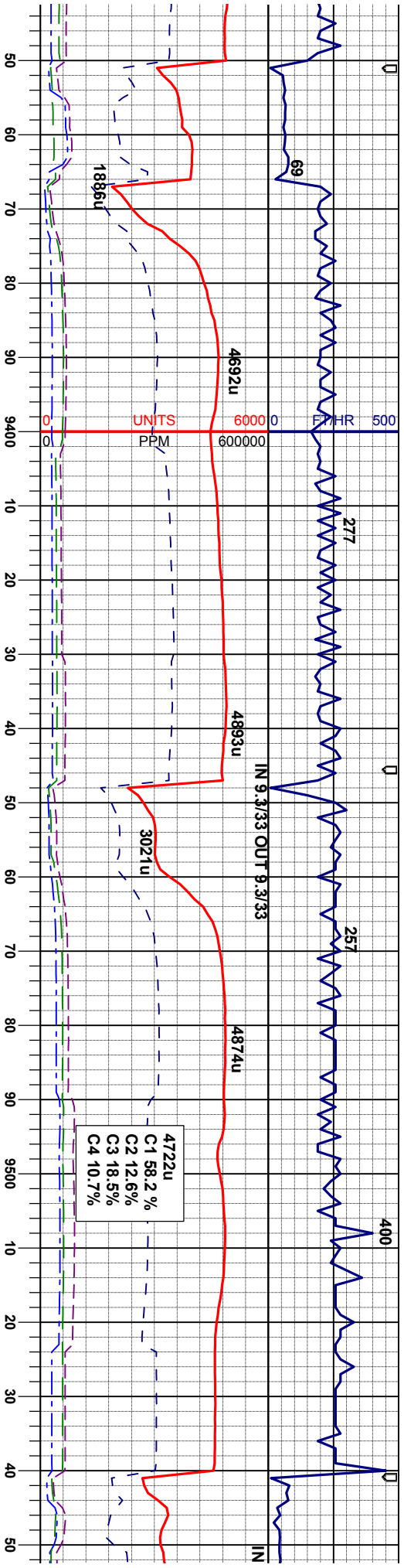
CHK: It gy - lt gybrn, bf, mot - stri, pred mod
firm, brt - fri ip, sbblky - sbply, rthy-sbwny
lstr, silty tex, v calc: MRLST: m gy - dk gy -
dk gybrn, sl mot, sft - firm, brt, rthy lstr, silty
-arg tex, microxin, sbblky - sbply, v calc:
fast diff, string, bri bl wh mky cut, n flor stn
or od

MRLST: m gy - dk gy - dk gybrn, sl mot, sft
- firm, brt, rthy lstr, silty-arg tex, microxin,
sbblky - sbply, v calc: CHK: It gy - lt gybrn,
brt - stri, pred mod firm, brt - fri ip,
sbblky - sbply, rthy-sbwny lstr, silty tex, v
calc: tr bent, tr dul yel - ong mnt flor, fast
diff, string, bri bl wh mky cut, n stn or od

MRLST: m gy - dk gy -
firm, brt, rthy lstr,
sbblky - sbply, v ca
bf, mot - stri, pred
sbblky - sbply, rthy
calc: tr bent, tr dul y





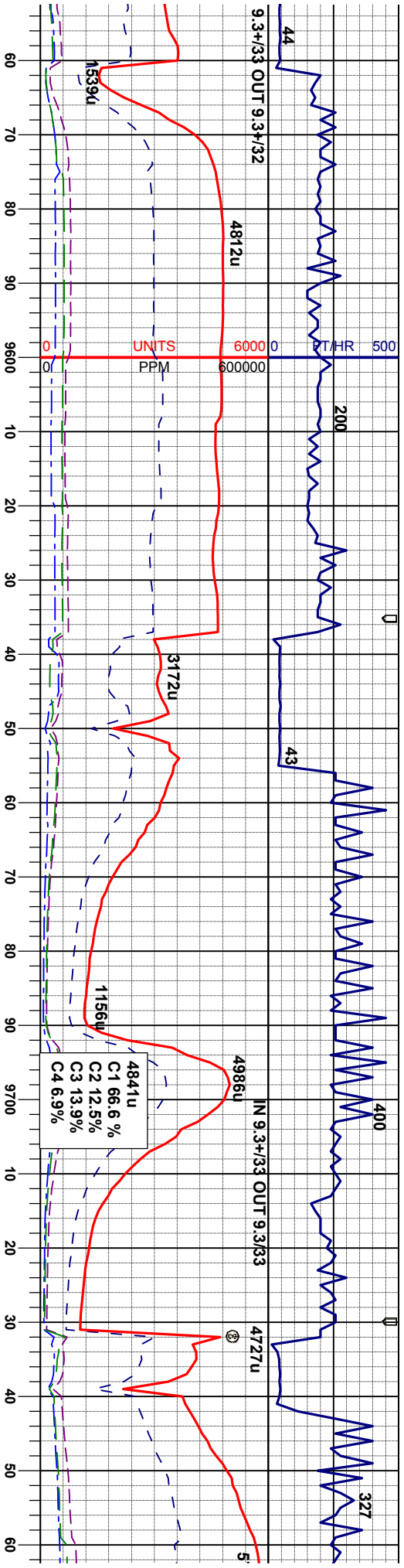


SURVEY @
MD 9390'
INC 89.6°
AZI 268.9°
TVD 6700.35'

SURVEY @
MD 9485'
INC 90.2°
AZI 268.4°
TVD 6700.51'

CHK: cm - lt gy - lt gybm, bf, mot - str, pred mod firm, brit - fri ip, sbblky - sbply, rthy-slowxy istr, silty tex, v calc; MRLST: m gy - dk gy - dk gybm, sl mot, pred firm, brit, rthy istr, silty-aig tex, microxin, sbblky - sbply, v calc; occ fos frag inoc, tr dul yel - gn mnrl flr, fast diff, stimg, brt bl wh mky cut, n sin or od	7200
CHK: cm - lt gy - lt gybm, bf, mot - str, pred mod firm, brit - fri ip, sbblky - sbply, rthy-slowxy istr, silty tex, v calc; MRLST: m gy - dk gy - dk gybm, sl mot, pred firm, brit, rthy istr, silty-aig tex, microxin, sbblky - sbply, v calc; occ fos frag inoc, tr dul yel - gn mnrl flr, fast diff, stimg, brt bl wh mky cut, n sin or od	
CHK: cm - lt gy - lt gybm, bf, mot - str, pred mod firm, brit - fri ip, sbblky - sbply, rthy-slowxy istr, silty tex, v calc; MRLST: m gy - dk gy - dk gybm, sl mot, pred firm, brit, rthy istr, silty-aig tex, microxin, sbblky - sbply, v calc; occ fos frag inoc, tr dul yel - gn mnrl flr, fast diff, stimg, brt bl wh mky cut, n sin or od	



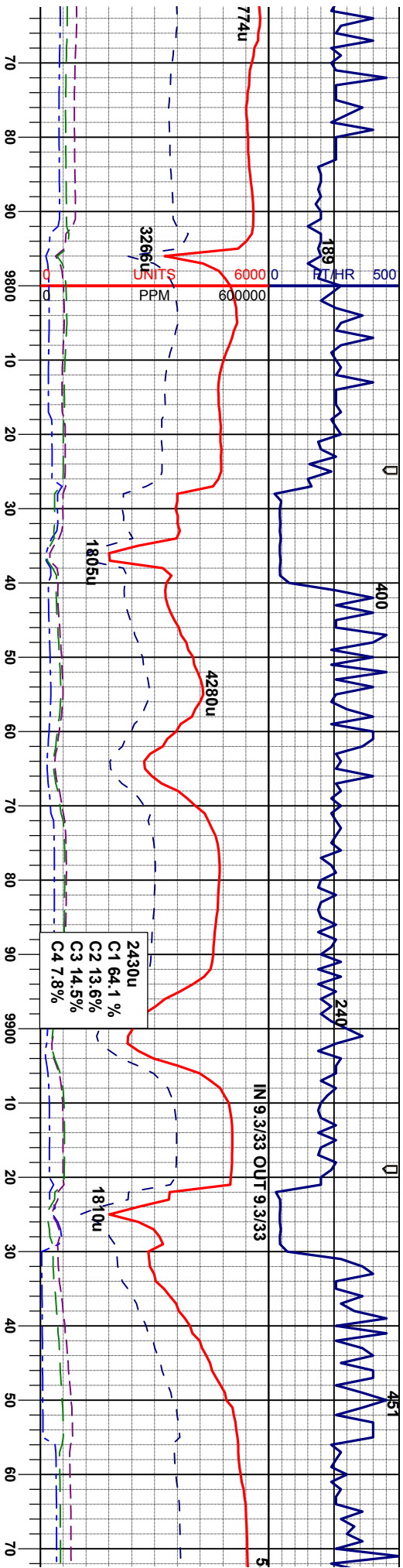


SURVEY @
MD 9579'
INC 88.7°
AZI 267.0°
TVD 6701.42'

SURVEY @
MD 9674'
INC 88.2°
AZI 269.4°
TVD 6703.99'

CHK: cm - lt gy - lt gybm, bf, mot - str, pred mod firm, brit - fri ip, sbbky - sbply, rthy-sbwy lstr, silty tex, v calc: MRLST: m gy - dk gy - dk gybm, sl mot, pred firm, brit, rthy lstr, silty-aig tex, microxin, sbbky - sbply, v calc: occ fos frag inoc, tr du yel - gn mnrl flr, fast diff, stmg, bri bl wh mky cut, n str or od	7200
CHK: cm - lt gy - lt gybm, bf, mot - str, pred mod firm, brit - fri ip, sbbky - sbply, rthy-sbwy lstr, silty tex, v calc: MRLST: m gy - dk gy - dk gybm, sl mot, pred firm, brit, rthy lstr, silty-aig tex, microxin, sbbky - sbply, v calc: occ fos frag inoc, tr du yel - gn mnrl flr, fast diff, stmg, bri bl wh mky cut, n str or od	6200
CHK: cm - lt gy - lt gybm, bf, mot - str, pred mod firm, brit - fri ip, sbbky - sbply, rthy-sbwy lstr, silty tex, v calc: MRLST: m gy - dk gy - dk gybm, sl mot, pred firm, brit, rthy lstr, silty-aig tex, microxin, sbbky - sbply, v calc: occ fos frag inoc, tr du yel - gn mnrl flr, fast diff, stmg, bri bl wh mky cut, n str or od	5000
CHK: cm - lt gy - lt gybm, bf, mot - str, pred mod firm, brit - fri ip, sbbky - sbply, rthy-sbwy lstr, silty tex, v calc: MRLST: m gy - dk gy - dk gybm, sl mot, pred firm, brit, rthy lstr, silty-aig tex, microxin, sbbky - sbply, v calc: occ fos frag inoc, tr du yel - gn mnrl flr, fast diff, stmg, bri bl wh mky cut, n str or od	49
CHK: cm - lt gy - lt gybm, bf, mot - str, pred mod firm, brit - fri ip, sbbky - sbply, rthy-sbwy lstr, silty tex, v calc: MRLST: m gy - dk gy - dk gybm, sl mot, pred firm, brit, rthy lstr, silty-aig tex, microxin, sbbky - sbply, v calc: occ fos frag inoc, tr du yel - gn mnrl flr, fast diff, stmg, bri bl wh mky cut, n str or od	74
CHK: cm - lt gy - lt gybm, bf, mot - str, pred mod firm, brit - fri ip, sbbky - sbply, rthy-sbwy lstr, silty tex, v calc: MRLST: m gy - dk gy - dk gybm, sl mot, pred firm, brit, rthy lstr, silty-aig tex, microxin, sbbky - sbply, v calc: occ fos frag inoc, tr du yel - gn mnrl flr, fast diff, stmg, bri bl wh mky cut, n str or od	96
CHK: cm - lt gy - lt gybm, bf, mot - str, pred mod firm, brit - fri ip, sbbky - sbply, rthy-sbwy lstr, silty tex, v calc: MRLST: m gy - dk gy - dk gybm, sl mot, pred firm, brit, rthy lstr, silty-aig tex, microxin, sbbky - sbply, v calc: occ fos frag inoc, tr du yel - gn mnrl flr, fast diff, stmg, bri bl wh mky cut, n str or od	90
CHK: cm - lt gy - lt gybm, bf, mot - str, pred mod firm, brit - fri ip, sbbky - sbply, rthy-sbwy lstr, silty tex, v calc: MRLST: m gy - dk gy - dk gybm, sl mot, pred firm, brit, rthy lstr, silty-aig tex, microxin, sbbky - sbply, v calc: occ fos frag inoc, tr du yel - gn mnrl flr, fast diff, stmg, bri bl wh mky cut, n str or od	





SURVEY @
MD 9769
NC 87.6°
AZI 271.7°
VD 6707.47'

SURVEY @
MD 9863
INC 88.6°
AZI 270.5°
TVD 6710.58'

SURVEY @
MD 9958
INC 89.7°
AZI 270.3°
TVD 6711.99'

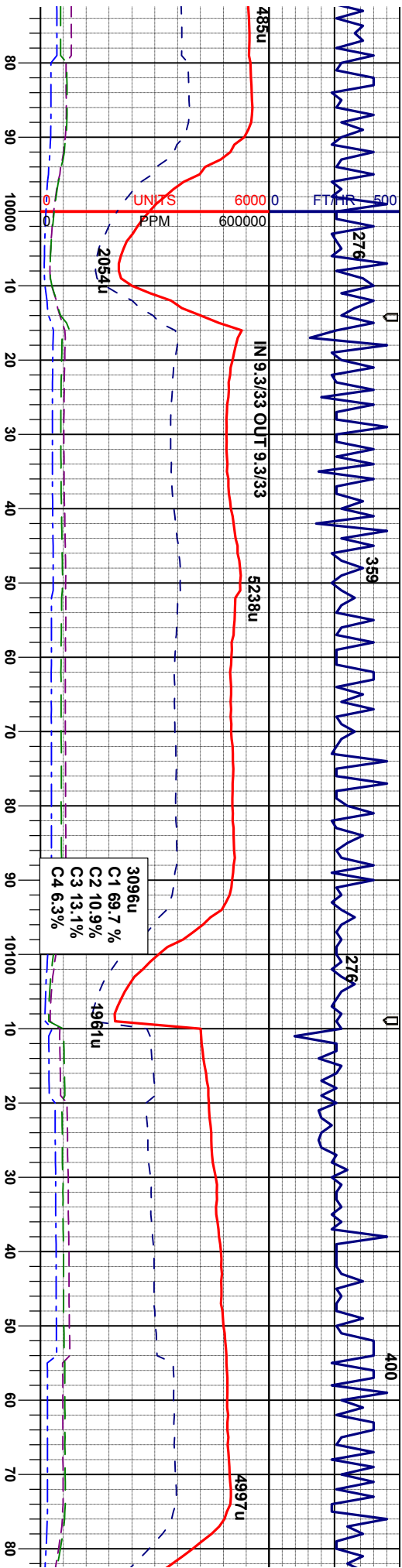
n gybm, sme crm - bf, mot - str,
firm, brit - fri ip, sbblky - sbply,
y lstr, silty tex, v calc; MRLST: m
- dk gybm, sl mot, pred firm, brit,
silty-aug tex, microxin, sbblky -
calc, calcite incl; occ fos frag lnoc,
gn mnrl flor, fast diff, string, bri bl
ut, n sin or od

MRLST: m gy - dk gy - dk gybm, sl mot,
pred firm, brit, rthy lstr, silty-aug tex,
microxin, sbblky - sbply, v calc, calcite
incl; CHK: lt - m gybm, sme crm - bf, mot -
str, pred mod firm, brit - fri ip, sbblky -
sbply, rthy-sbwy lstr, silty tex, v calc; occ
fos frag lnoc, tr bent, tr dul yel - orng mnrl
flor, fast diff, string, bri bl wh mky cut, n sin
or od

MRLST: m gy - dk gy - dk gybm, sl mot,
pred firm, brit, rthy lstr, silty-aug tex,
microxin, sbblky - sbply, v calc, calcite
incl; CHK: lt - m gybm, sme crm - bf, mot -
str, pred mod firm, brit - fri ip, sbblky -
sbply, rthy-sbwy lstr, silty tex, v calc; occ
fos frag lnoc, tr bent, tr dul yel - orng mnrl
flor, fast diff, string, bri bl wh mky cut, n sin
or od

MRLST: m gy - dk g
pred firm, brit, rthy l
microxin, sbblky - st
incl; CHK: lt - m gy
str, pred mod firm, l
sbply, rthy-sbwy is
fos frag lnoc, tr bent
flor, fast diff, string, l
or od



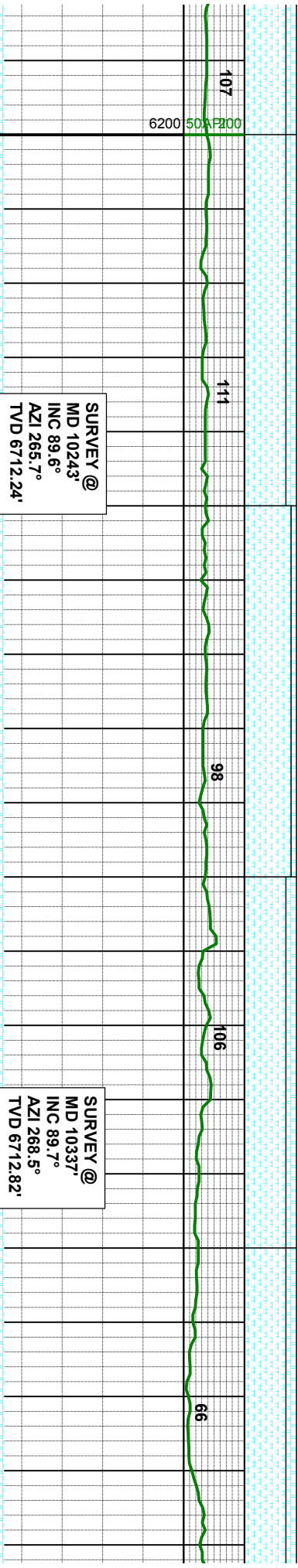
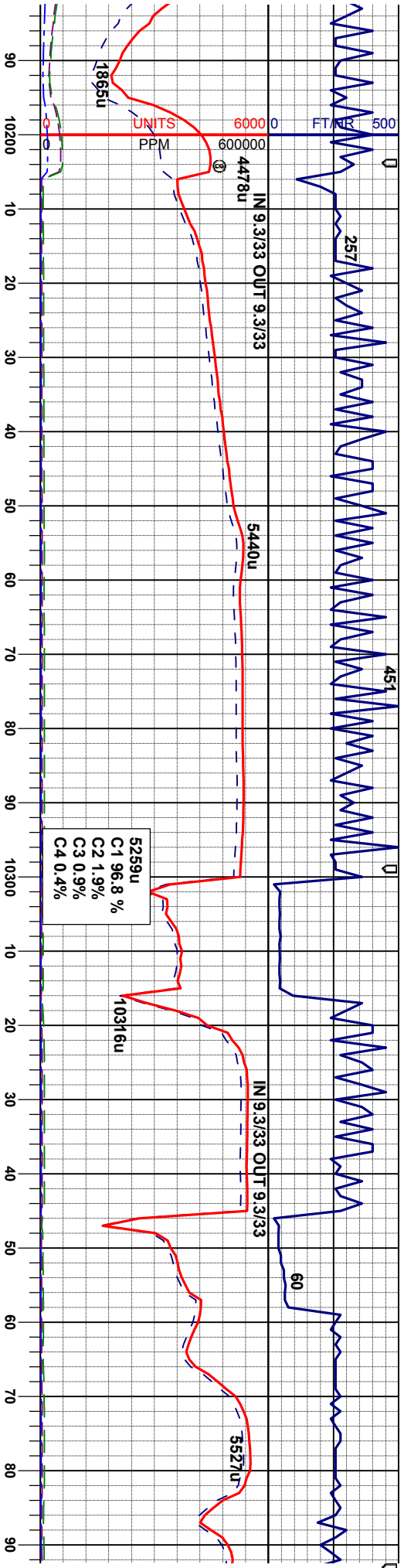


SURVEY @
MD 10053°
INC 89.8°
AZI 269.6°
TVD 6712.41'

SURVEY @
MD 10148°
INC 90.4°
AZI 268.7°
TVD 6712.24'

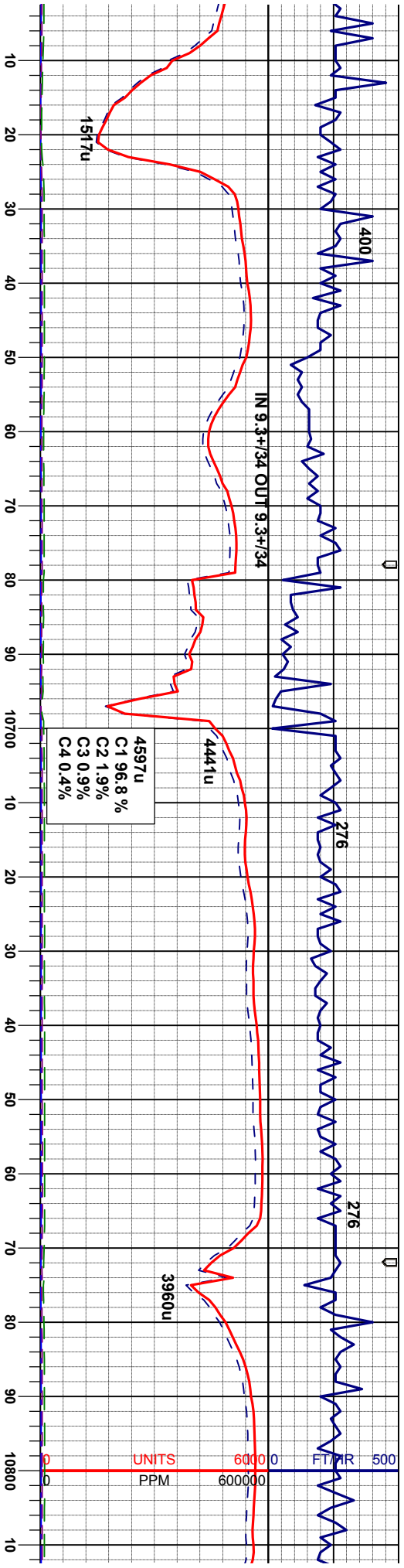
y - dk gybrn, sl mot, str, silty-arg tex, pply, v calc, calcite crn, sme crn - bf, mot - str, rthy-sbdky - tr, silty tex, v calc; occ - tr dul yel - orng mntl flr, fast diff, string, bri bl wh mky cut, n str or od	MR.LST: m gy - dk gy - dk gybrn, sl mot, pred firm, brit, rthy lstr, silty-arg tex, microxin, sbdky - sbply, v calc, calcite incl ; CHK: lt - m gybrn, sme crn - bf, mot - str, pred mod firm, brit - fr ip, sbdky - sbply, rthy-sbwx lstr, silty tex, v calc; occ fos frag lnoc, tr bent, tr dul yel - orng mntl flr, fast diff, string, bri bl wh mky cut, n str or od	MR.LST: m gy - dk gy - dk gybrn, sl mot, pred firm, brit, rthy lstr, silty-arg tex, microxin, sbdky - sbply, v calc, calcite incl ; CHK: lt - m gybrn, sme crn - bf, mot - str, pred mod firm, brit - fr ip, sbdky - sbply, rthy-sbwx lstr, silty tex, v calc; occ fos frag lnoc, tr bent, tr dul yel - orng mntl flr, fast diff, string, bri bl wh mky cut, n str or od	MR.LST: m gy - dk gy - dk gybrn, sl mot, pred firm, brit, rthy lstr, silty-arg tex, microxin, sbdky - sbply, v calc, calcite incl ; CHK: lt - m gybrn, sme crn - bf, mot - str, pred mod firm, brit - fr ip, sbdky - sbply, rthy-sbwx lstr, silty tex, v calc; occ fos frag lnoc, tr bent, tr dul yel - orng mntl flr, fast diff, string, bri bl wh mky cut, n str or od
7200			





rn, sl mot, g tex, lc, calcite	MR.LST: m gy - dk gy - dk gyblk, sl mot, pred firm, brt, rthy lstr, slty-arg tex, microxn, sbblky - sbply, v calc, calcite incl ; CHK: lt - m gybm, sme crm - bf, mot - stri, pred mod firm, brt - fri ip, sbblky - sbply, rthy-sbwxy lstr, slty tex, v calc; occ fos frag lnoc, tr bent, tr dul yel - org mml flor, fast diff, stmg, bri bl wh mky cut, n sin or od	MR.LST: m gy - dk gy - dk gyblk, sl mot, pred firm, brt, rthy lstr, slty-arg tex, microxn, sbblky - sbply, v calc, calcite incl ; CHK: lt - m gybm, sme crm - bf, mot - stri, pred mod firm, brt - fri ip, sbblky - sbply, rthy-sbwxy lstr, slty tex, v calc; occ fos frag lnoc, tr bent, tr dul yel - org mml flor, fast diff, stmg, bri bl wh mky cut, n sin or od	MR.LST: m gy - dk gy - dk gyblk, sl mot, pred firm, brt, rthy lstr, slty-arg tex, microxn, sbblky - sbply, v calc, calcite incl ; CHK: lt - m gybm, sme crm - bf, mot - stri, pred mod firm, brt - fri ip, sbblky - sbply, rthy-sbwxy lstr, slty tex, v calc; occ fos frag lnoc, tr bent, tr dul yel - org mml flor, fast diff, stmg, bri bl wh mky cut, n sin or od
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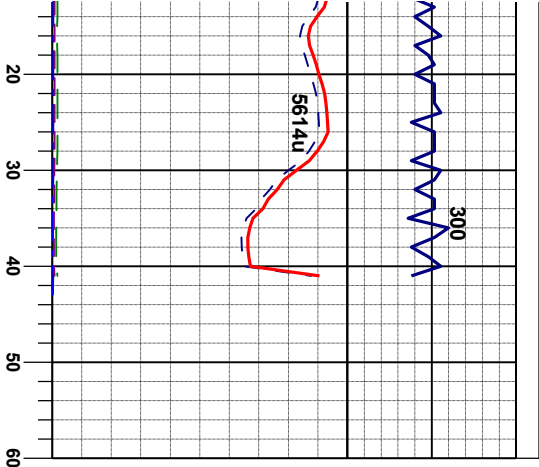


SURVEY @
MD 10622
INC 89.3°
AZI 269.6°
TVD 6715.63'

SURVEY @
MD 10786
INC 90.2°
AZI 269.2°
TVD 6716.05'

MRLST: m gy - dk gy - dk gyblk, sl mot, pred firm, brt, rthy lstr, silty-arg tex, microxln, sbblky - sbply, v calc, calcite incl : CHK: lt - m gybrn, sme crm - bf, mot - stri, pred mod firm, brt - fri ip, sbblky - sbply, rthy-sbwy lstr, silty tex, v calc: occ fos frag inoc, tr bent, tr dul yel - orng mnrl flr, fast diff, string, bri bl wh cut, n sin or od	MRLST: m gy - dk gy - dk gyblk, sl mot, pred firm, brt, rthy lstr, silty-arg tex, microxln, sbblky - sbply, v calc, calcite incl : CHK: lt - m gybrn, sme crm - bf, mot - stri, pred mod firm, brt - fri ip, sbblky - sbply, rthy-sbwy lstr, silty tex, v calc: occ fos frag inoc, tr bent, tr dul yel - orng mnrl flr, fast diff, string, bri bl wh cut, n sin or od	MRLST: m gy - dk gy - dk gyblk, sl mot, pred firm, brt, rthy lstr, silty-arg tex, microxln, sbblky - sbply, v calc, calcite incl : CHK: lt - m gybrn, sme crm - bf, mot - stri, pred mod firm, brt - fri ip, sbblky - sbply, rthy-sbwy lstr, silty tex, v calc: occ fos frag inoc, tr bent, tr dul yel - orng mnrl flr, fast diff, string, bri bl wh cut, n sin or od	MRLST: m gy - dk gy - dk gyblk, sl mot, pred firm, brt, rthy lstr, silty-arg tex, microxln, sbblky - sbply, v calc, calcite incl : CHK: lt - m gybrn, sme crm - bf, mot - stri, pred mod firm, brt - fri ip, sbblky - sbply, rthy-sbwy lstr, silty tex, v calc: occ fos frag inoc, tr bent, tr dul yel - orng mnrl flr, fast diff, string, bri bl wh cut, n sin or od
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Thank You for Using
Mudbine Logging, Inc.

23-69HN Wellbore TD @
@ 21:27 hrs on 08/09/13

m gy - dk gy - dk gyblk, sl mot,
brlt, rthy lstr, silty-arg tex,
sbbkly - sbply, v calc, calcite
<: lt - m gybm, sme crm - bf, mot -
mod firm, brlt - fri ip, sbbkly -
ty-sbwwy lstr, silty tex, v calc: occ
noc, tr bent, tr dul yel - orng mmrl
jiff, sting, bri bl wh cut, n stn or od

