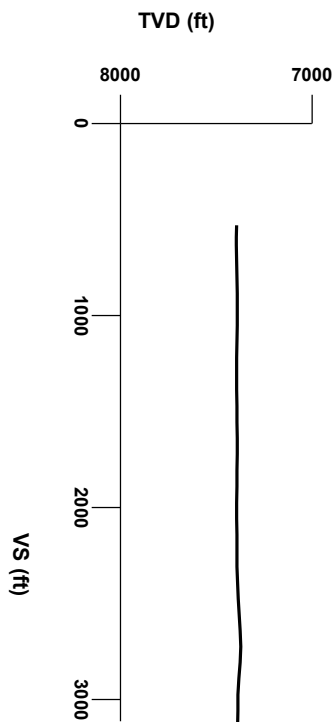


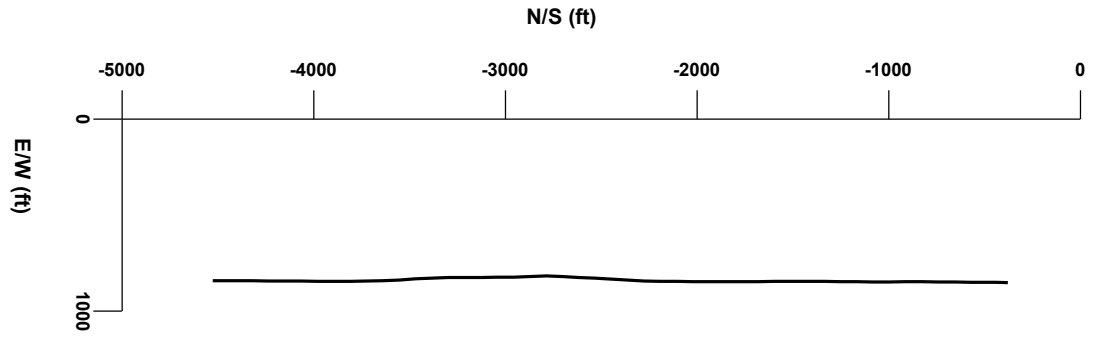
LOG created using Lplot VH Version 3.0, December 19, 2012, Copyright (C) 1999-2009 Pason Systems Corp.

**OPERATOR:** ANADARKO PETROLEUM INC.  
**WELL:** RAYMOND 38C-29HZ  
**LOCATION:** NENE SEC 29, T3N, R66W, 6TH PM  
**COUNTY:** WELD  
**STATE:** COLORADO  
**SPOT:** 253' FNL, 1266' FEL  
**ELEVATION:** GL 4925' / KB 4942'  
**FIELD:** WATTENBERG - 90750  
**SPUD DATE:** 10/11/2012  
**TD DATE:** 12/19/2012  
**DATES LOGGED:** 12/15/2012 - 12-19-2012  
**DEPTHS LOGGED:** 7837' - 11,944'  
**LOGGERS:** RIKKI WITHERSPOON, ISAAC SMITH  
**DRILLING FLUID:** FW LSND  
**DRILLING RIG:** XTREME 8  
**API:** 05-123-35848  
**LOG TYPE:** HORIZONTAL  
**SCALE:** 1:240 (5 inches per 100 feet)  
**REMARKS:** WELLSITE GEOLOGICAL SERVICES PROVIDED BY COLUMBINE LOGGING INC.  
  
 LOGGING BEGAN AT INTERMEDIATE CASING  
 NO VERTICAL LOG



Survey Elevation

Survey Plan



4000

5000

LITHOLOGIES

Bentonite

Shale

Chalk

Shaly Sandstone

Limestone

Silty Shale

ENGINEERING SYMBOLS

Connection

Midnight Depth

Trip Gas

0

5000

GAS

UNITS

0

500000

C1

PPM

0

500000

C2

PPM

0

500000

C3

PPM

0

500000

C4

PPM

0

500000

CO2

PPM

0

5

ROP

MIN/FT

0

10

20

30

40

50

60

70

80

90

10

DEPTH  
(FEET)

4306u

C1: 83.7%

C2: 12.1%

C3: 3.9%

C4: 0.3%

12/16-17/2012

4896u

2073u

0

7000

GAMMA RAY

API

0

7600

TVD

ft

Survey

MD 7794'

INC 86.89°

AZM 180.71°

TVD 7392.57'

Begin in Sussex Formation

Survey

MD 7858'

INC 89.24°

AZM 181.21°

TVD 7394.73'

Survey

MD 7900'

INC 90.55°

AZM 180.93°

TVD 7394.81'

Drilling commences

1042 hrs 12/17/2012

from 7837' MD

Columbine Logging Two Man

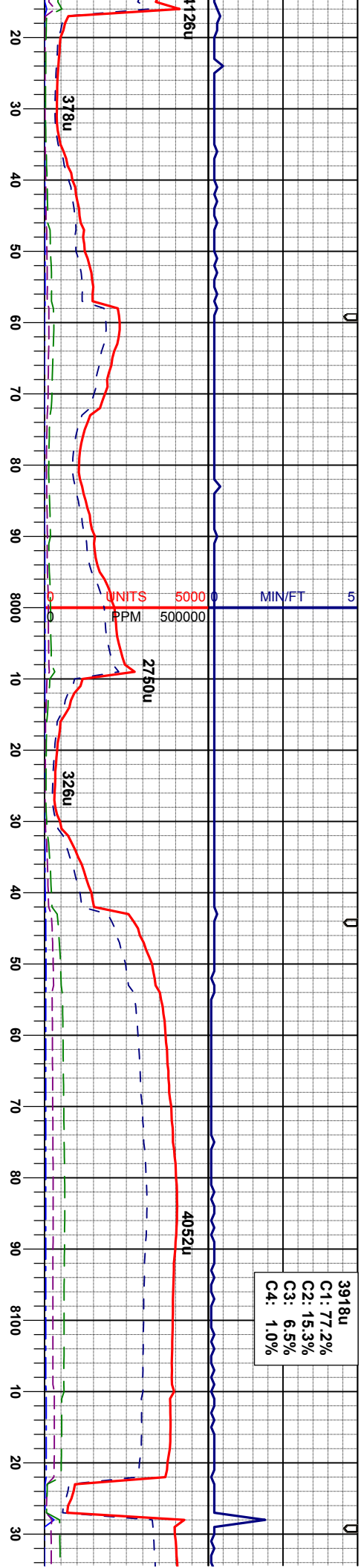
Rigged Up 1400hrs 12/15/2012

With Bloodhound Unit # 0787

Oil Shows

Acetone was used as the cutting agent with the dimple filled to the rim

Sample Photos



WT 9.4/ VIS 36

Survey  
MD 7986'  
INC 91.17°  
AZM 180.76°  
TVD 7393.52'

LS: wh-lbmn, fr-firm, crpxl, wxy tex, v calc,  
tr MRL: brmbk-dkgybrn, sbblky-splty, sft -  
firm, m arg - silty, mod clin fiz

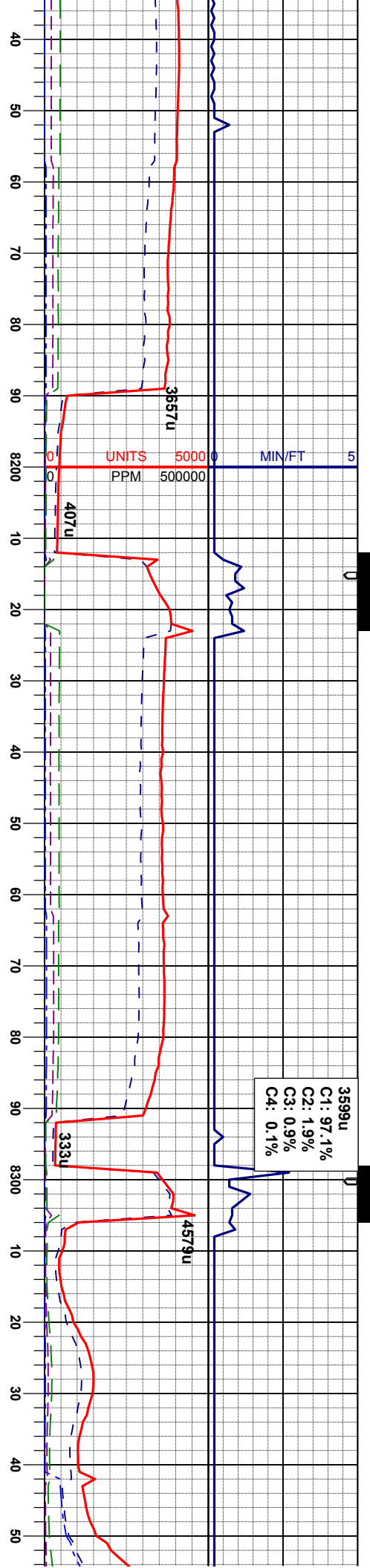
WT 9.5/ VIS 38

Survey  
MD 8071'  
INC 91.05°  
AZM 180.11°  
TVD 7391.87'

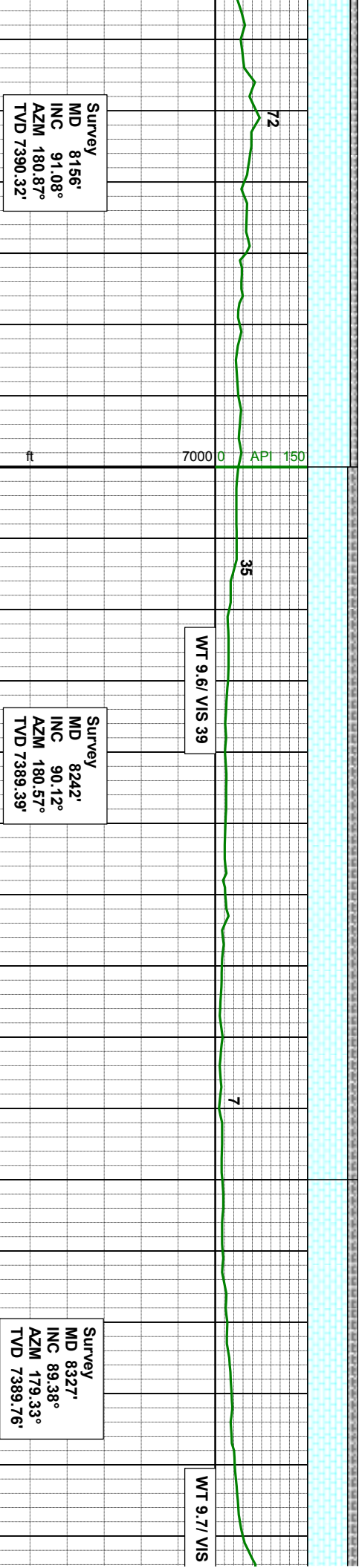
LS: wh-lbmn, fr-firm, crpxl, wxy tex, v calc,  
tr MRL: brmbk-dkgybrn, sbblky-splty, sft -  
firm, m arg - silty, mod clin fiz

LS: w  
v calc  
splty  
rthy-a





C1: 97.1%  
C2: 1.9%  
C3: 0.9%  
C4: 0.1%



Survey  
MD 8156'  
INC 91.08°  
AZM 180.87°  
TVD 7390.32'

WT 9.6l VIS 39

Survey  
MD 8242'  
INC 90.12°  
AZM 180.57°  
TVD 7389.39'

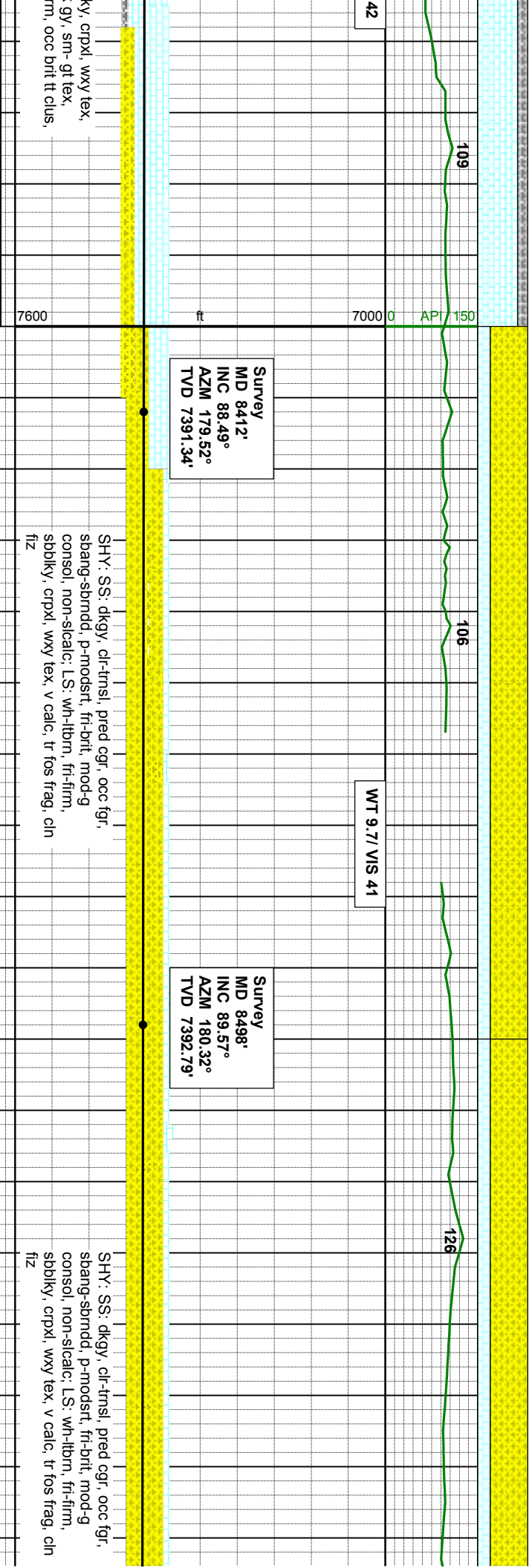
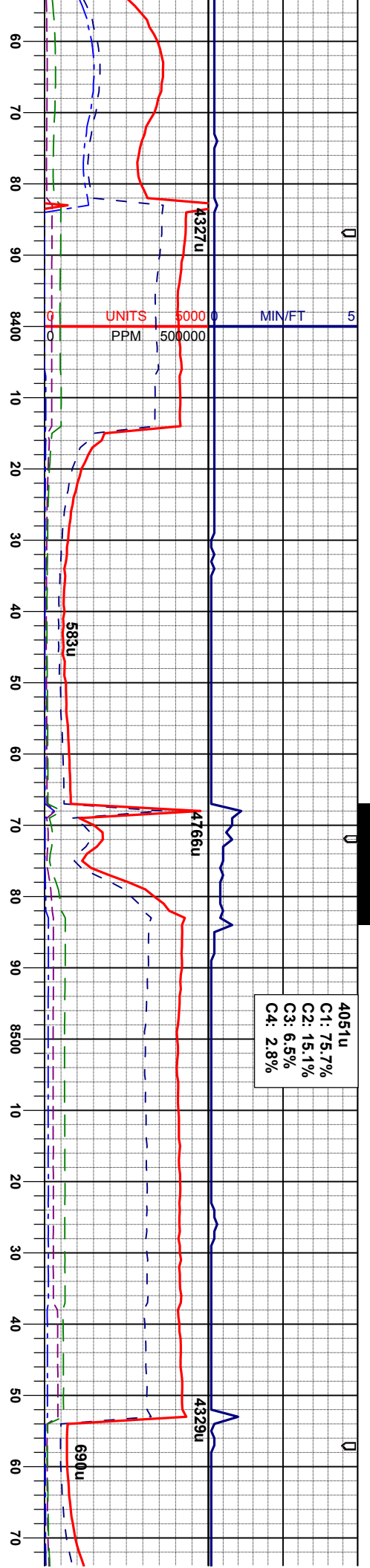
WT 9.7l VIS

Survey  
MD 8327'  
INC 89.38°  
AZM 179.33°  
TVD 7389.76'

h-lbmn, fri-firm, sbbkly, crpxl, wxy tex,  
SLTY: SH: lt gy-dk gy, sm- gt tex,  
-sbrd, sme fis, sft-firm, occ brlt tt clus,  
rg, sily-aren

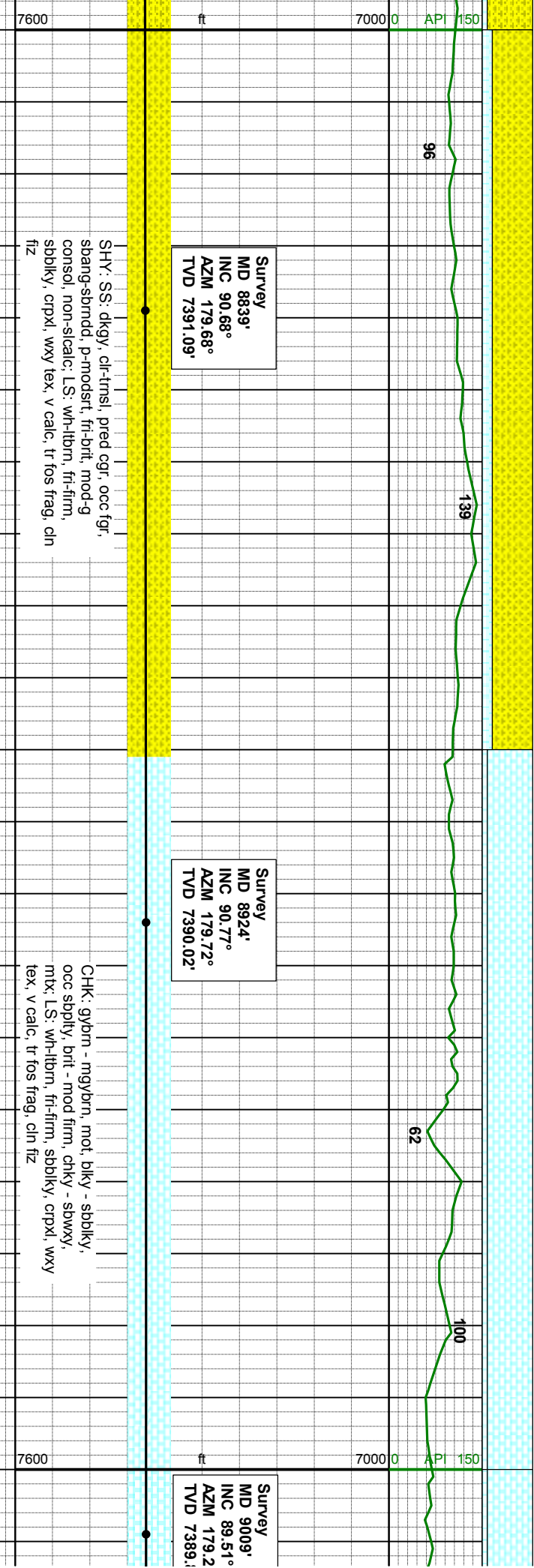
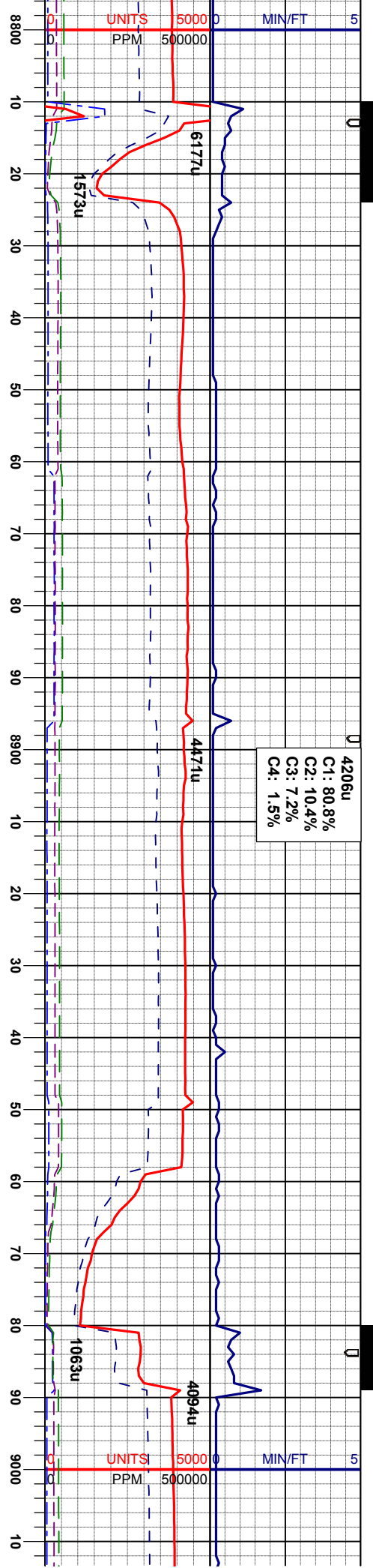
LS: wh-lbmn, fri-firm, sbbkly, crpxl, wxy tex,  
v calc, SLTY: SH: lt gy-dk gy, sm- gt tex,  
sbbly-sbrd, sme fis, sft-firm, occ brlt tt clus,  
rthy-arg, sily-aren



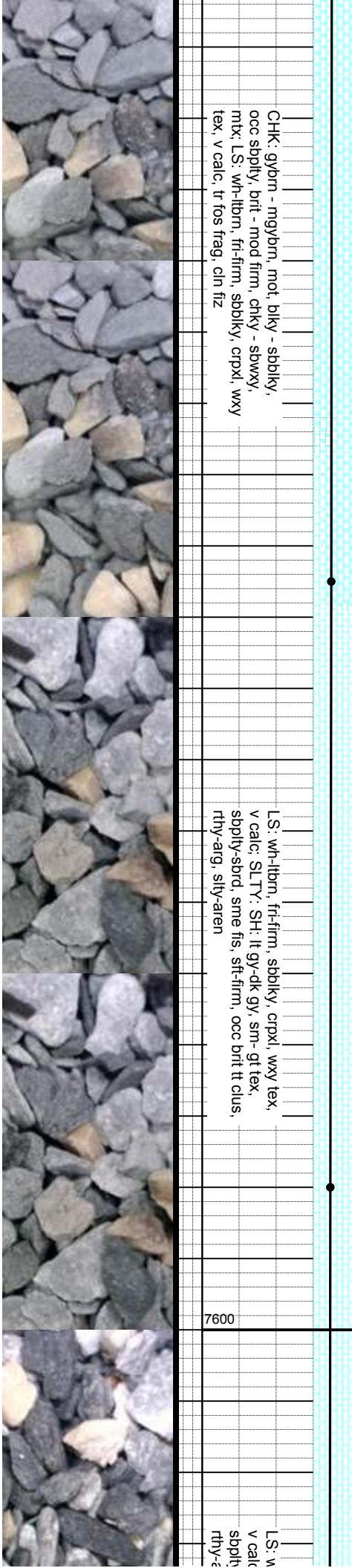
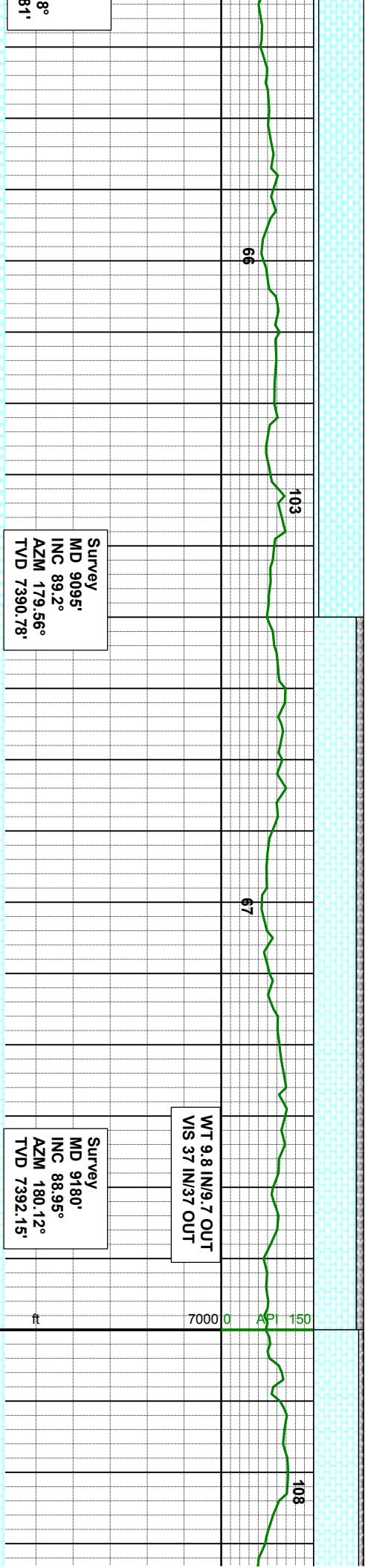
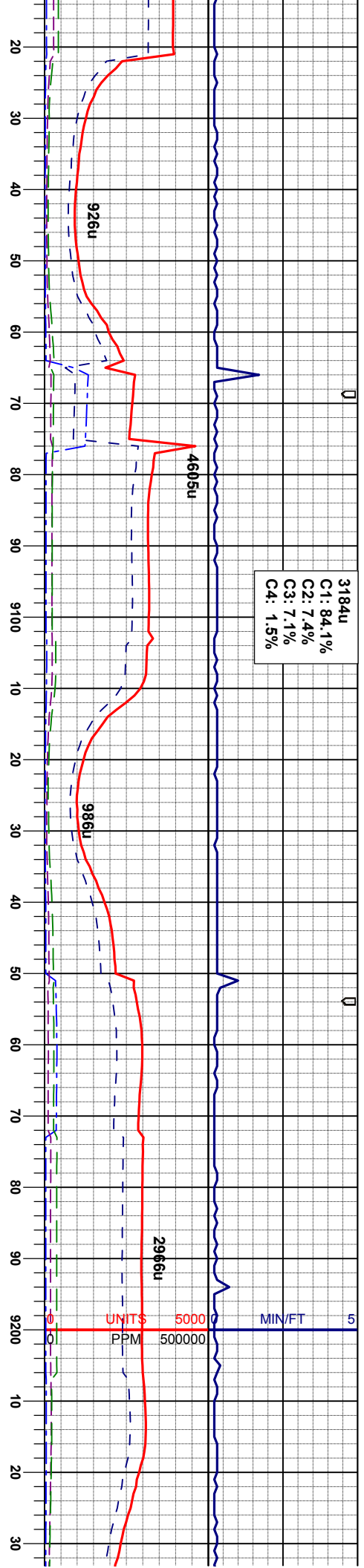


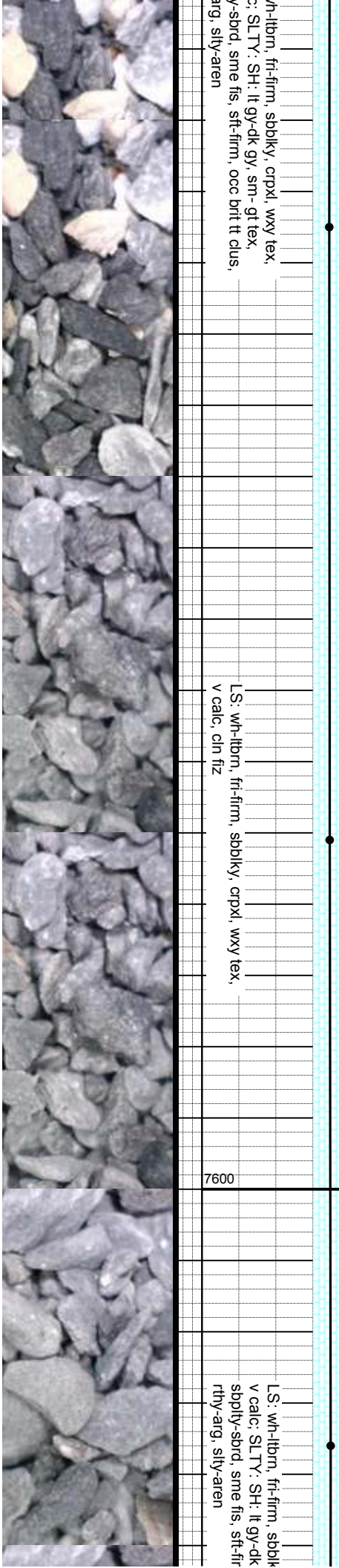
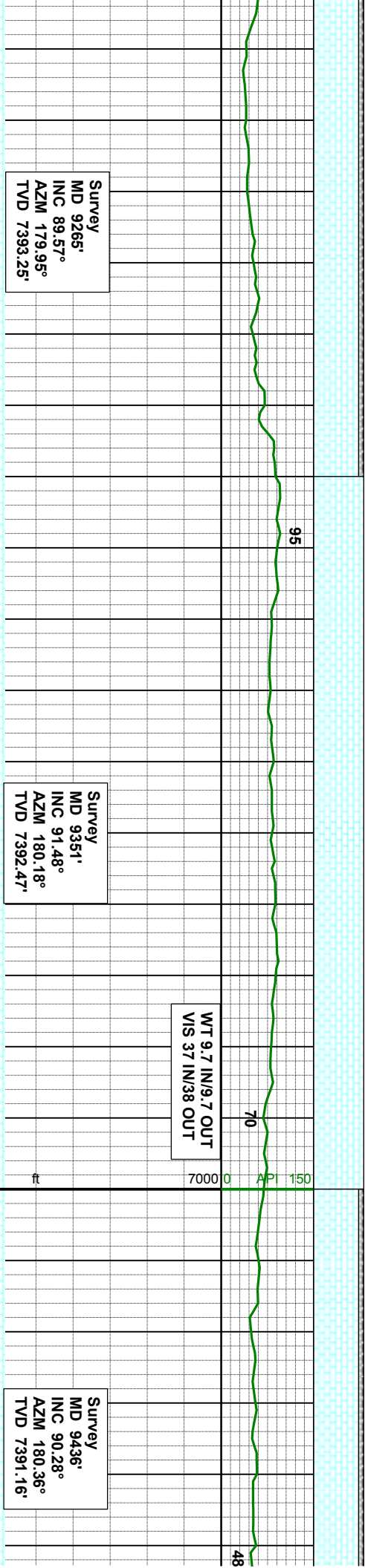
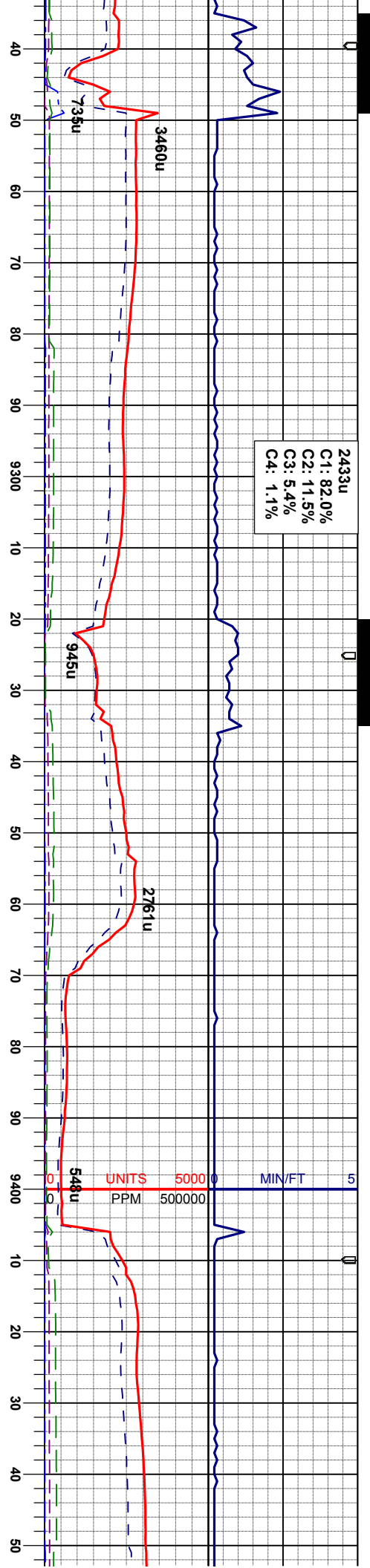




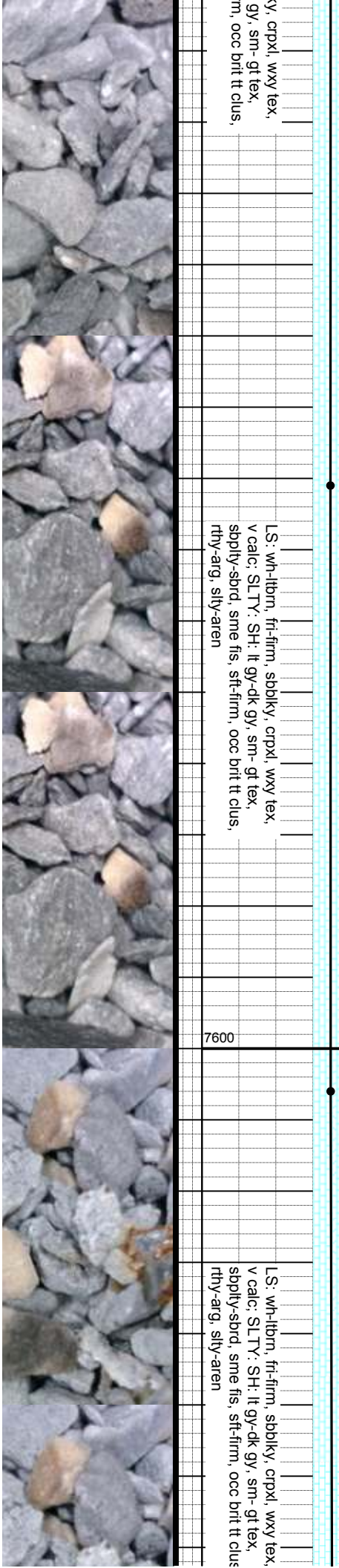
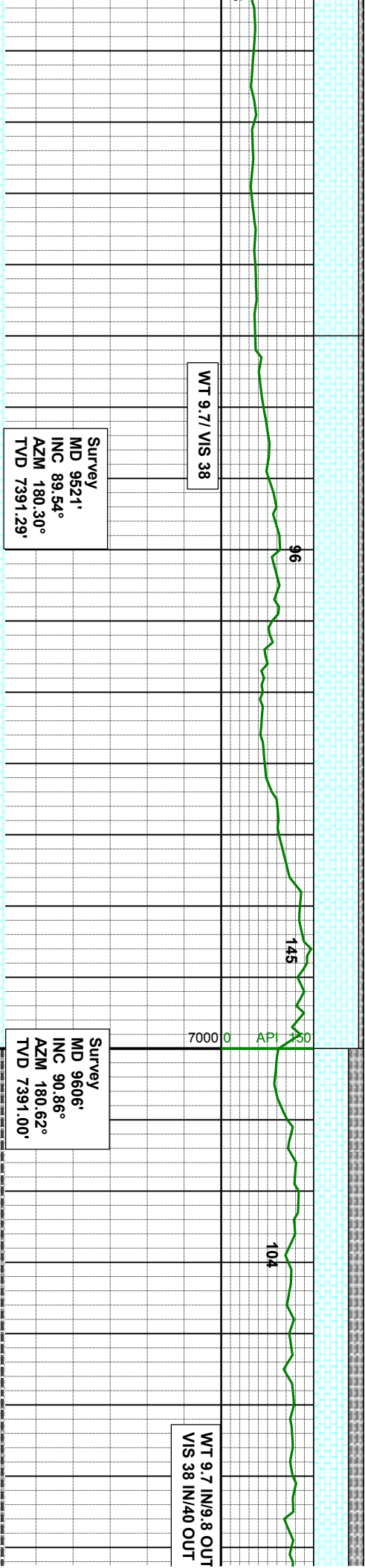
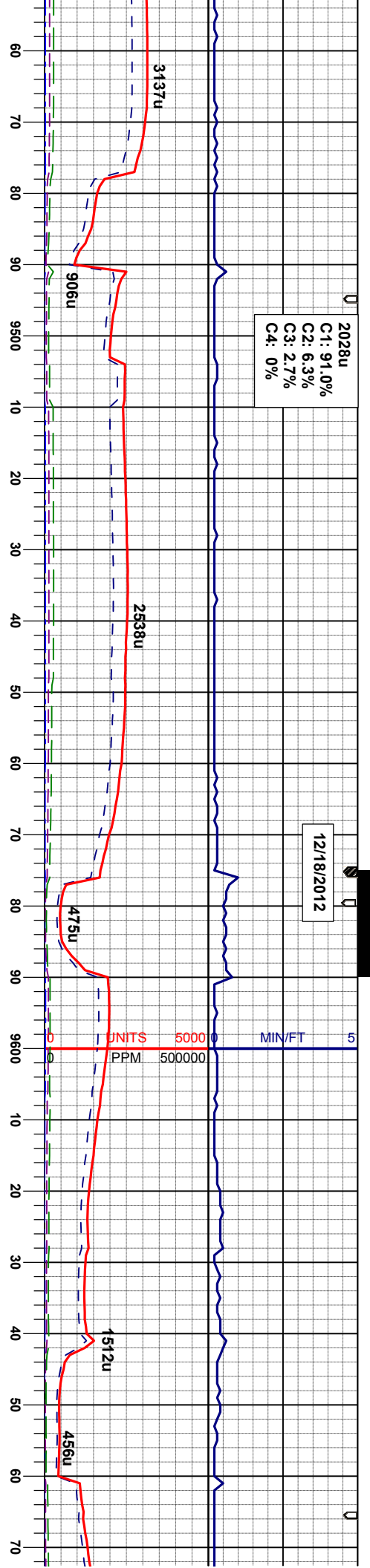




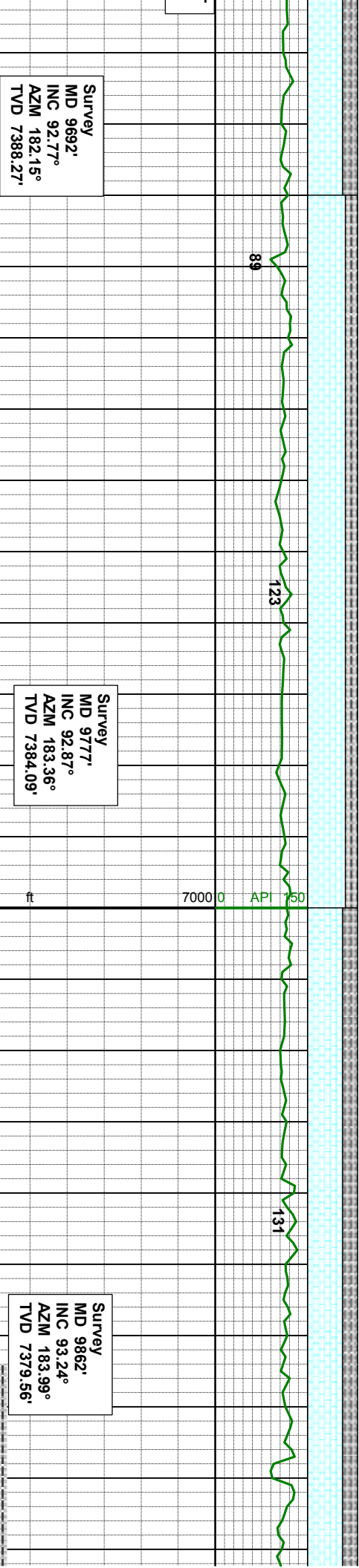
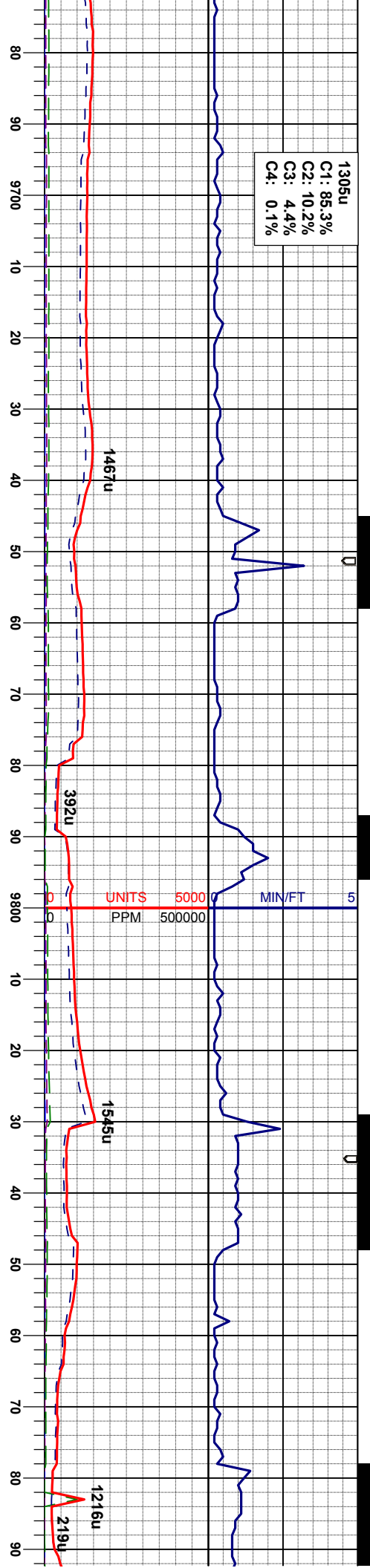








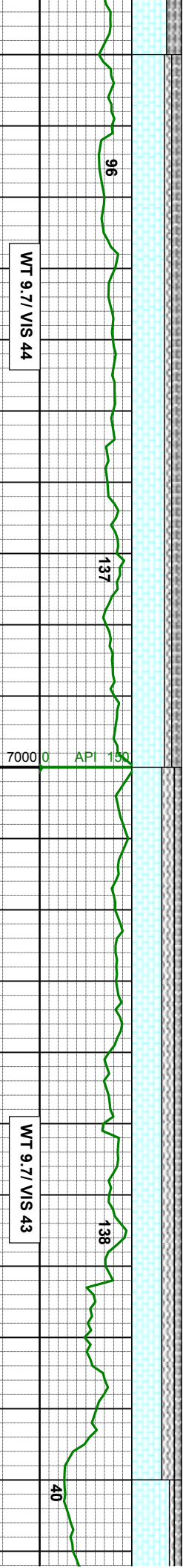
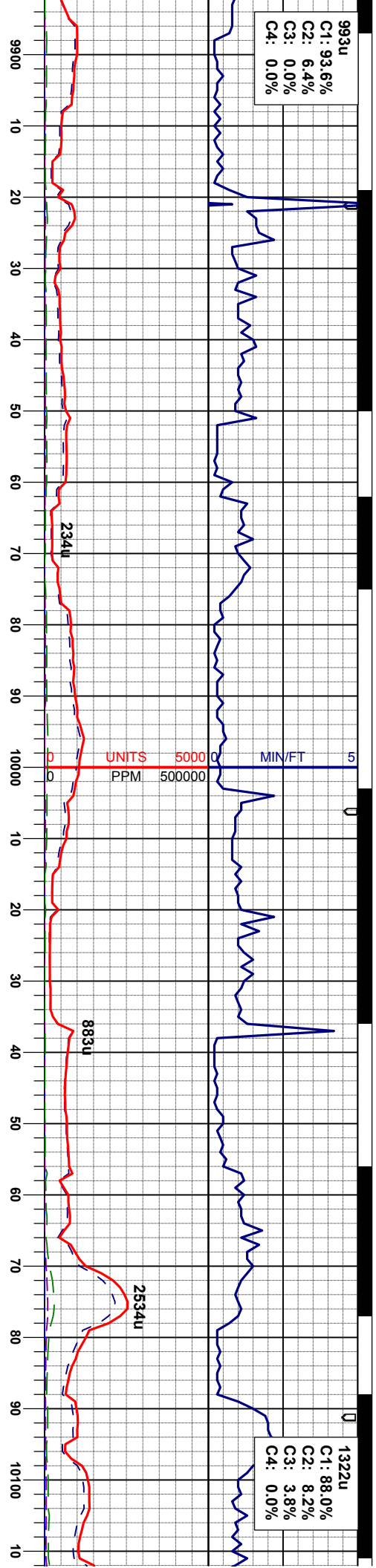




LS: wh-ltbrn, fri-firm, sdbkly, crpxl, wxy tex,  
v calc; SLTYSH: lt gy-dk gy, sm-gt tex,  
sdbly-sbrd, sme fis, sft-firm, occ brt lt clus,  
rthy-arg, slty-aren

LS: wh-ltbrn, fri-firm, sdbkly, crpxl, wxy tex,  
v calc; SLTYSH: lt gy-dk gy, sm-gt tex,  
sdbly-sbrd, sme fis, sft-firm, occ brt lt clus,  
rthy-arg, slty-aren





Survey  
MD 9948'  
INC 92.62°  
AZM 182.09°  
TVD 7374.91'

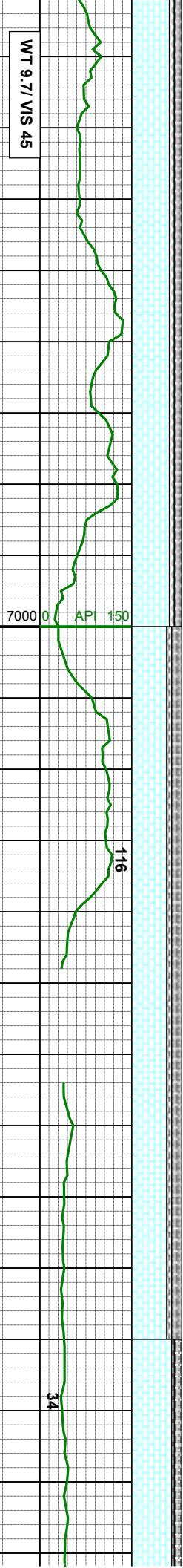
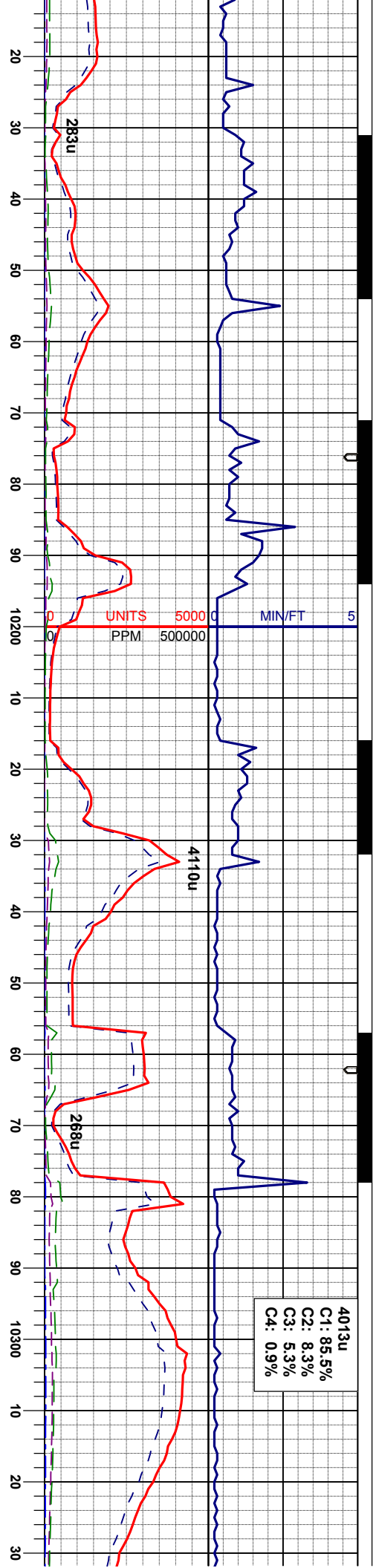
Survey  
MD 10033'  
INC 90.76°  
AZM 182.65°  
TVD 7372.15'

LS: wh-lbmn, fri-firm, sbblky, crpxl, wxy tex,  
v calic; SLTYSH: lt gy-dk gy, sm- gt tex,  
sbply-sbrd, sme fis, sft-firm, occ brit tt clus,  
rthy-arg, silty-aren; BENT: wh-lbmn, occ brn,  
ply-sbply

LS: wh-lbmn, fri-firm, sbblky, crpxl, wxy tex,  
v calic; BENT: wh-lbmn, occ brn, ply-sbply;  
SLTYSH: lt gy-dk gy, sm- gt tex, sbply-  
sbrd, sme fis, sft-firm, occ brit tt clus, rthy-  
arg, silty-aren







Survey  
D 10118°  
IC 86.11°  
ZM 184.26°  
VD 7374.47°

Survey  
MD 10203°  
INC 85.39°  
AZM 179.32°  
TVD 7380.77°

Survey  
MD 10289°  
INC 87.93°  
AZM 176.18°  
TVD 7385.78°

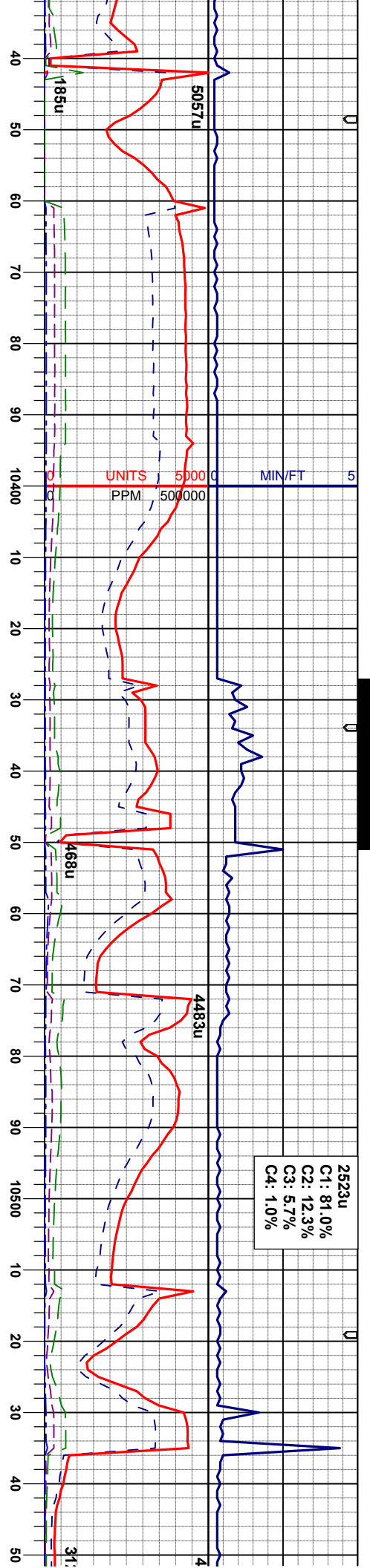
LS: wh-lbmn, fri-firm, sbolky, cpxl, wxy tex,  
v calc; BENT: wh-lbmn, occ brn, ply-sbply;  
SLTYSH: lt gy-dk gy, sm-gt tex, sbply-  
sbrd, sme fis, sft-firm, occ brt tt clus, rthy-  
arg, stly-aren

LS: wh-lbmn, fri-firm, sbolky, cpxl, wxy tex,  
v calc; BENT: wh-lbmn, occ brn, ply-sbply;  
SLTYSH: lt gy-dk gy, sm-gt tex, sbply-  
sbrd, sme fis, sft-firm, occ brt tt clus, rthy-  
arg, stly-aren

LS: v ca  
SLT  
sbrd  
arg,







WT 9.7 / VIS 42

Survey  
MD 10374'  
INC 90.55°  
AZM 180.1°  
TVD 7386.91'

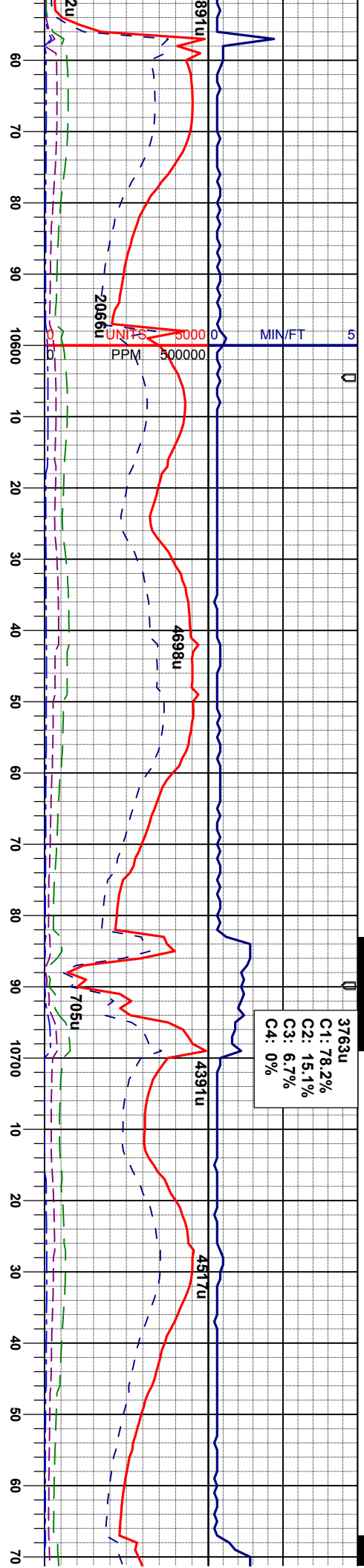
wh-ltbrn, fr-firm, sbblky, crpxl, wxy tex,  
ic, BENT: wh-ltbrn, occ brn, pily-sbply;  
YSH: lt gy-dk gy, sm-qt tex, sbply-  
sme fis, sft-firm, occ brit tt clus, rthy-  
sily-aren

LS: wh-ltbrn, fr-firm, sbblky, crpxl, wxy tex,  
v calc: BENT: wh-ltbrn, occ brn, pily-sbply;  
SLTYSH: lt gy-dk gy, sm-qt tex, sbply-  
sbrd, sme fis, sft-firm, occ brit tt clus, rthy-  
arg, sily-aren

Survey  
MD 10459'  
INC 88.4°  
AZM 179.24°  
TVD 7387.69'

Survey  
MD 10545'  
INC 88.58°  
AZM 180.15°  
TVD 7389.95'

LS: wh-ltbrn, fr-firm, sbblky, crpxl, wxy tex,  
v calc: BENT: wh-ltbrn, occ brn, pily-sbply;  
SLTYSH: lt gy-dk gy, sm-qt tex, sbply-  
sbrd, sme fis, sft-firm, occ brit tt clus, rthy-  
arg, sily-aren



WT 9.7 IN/9.7 OUT  
VIS 44 IN/41 OUT

Survey  
MD 10630'  
INC 89.03°  
AZM 180.02°  
TVD 7391.73'

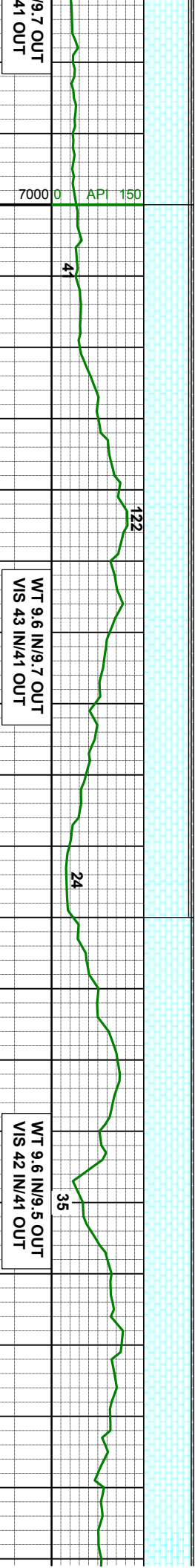
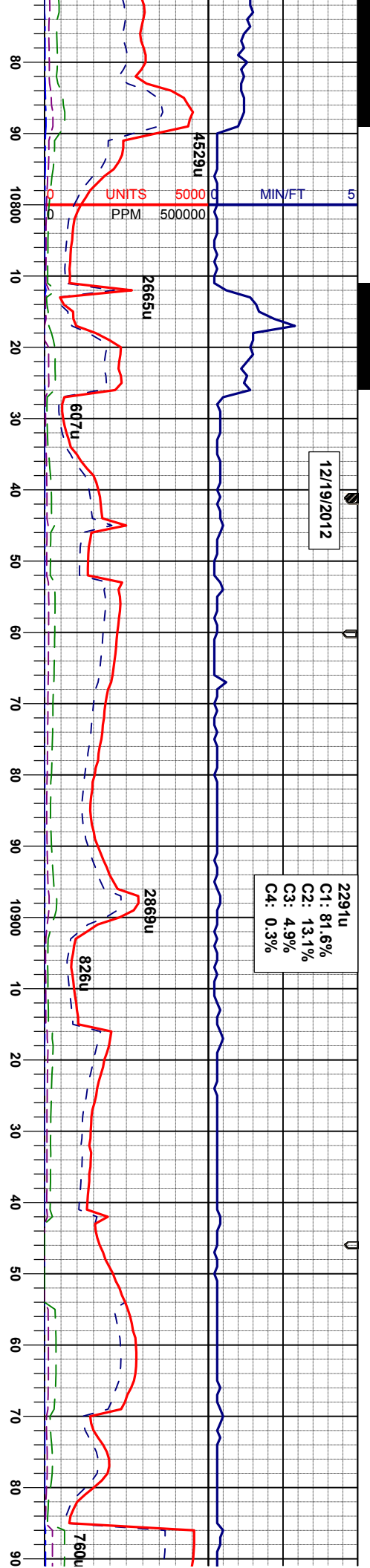
WT 9.6 IN/  
VIS 43 IN/

Survey  
MD 10715'  
INC 86.51°  
AZM 178.75°  
TVD 7395.03'

alky, crpxl, wxy tex, occ brn, ply-sbply; -gt tex, sbply-occ brt tt clus, rthy-arg, sily-aren

L.S: wh-lbmn, fri-firm, sbblky, crpxl, wxy tex, v calc; BENT: wh-lbmn, occ brn, ply-sbply; SLTYSH: lt gy-dk gy, sm-gt tex, sbply-sbrd, sme fis, sft-firm, occ brt tt clus, rthy-arg, sily-aren





Survey  
MD 10801'  
INC 89.17°  
AZM 178.12°  
TVD 7398.28'

Survey  
MD 10886'  
INC 89.23°  
AZM 175.65°  
TVD 7399.46'

Survey  
MD 10971'  
INC 89.78°  
AZM 176.73°  
TVD 7400.20'

LS: wh-ldbrn, fri-firm, sbbkly, crpxl, wxy tex,  
v calc: BENT: wh-ldbrn, occ brn, plty-sbply;  
SLTYSH: lt gy-dk gy, sm-gt tex, sbply-  
sbrd, sme fis, sft-firm, occ brit tt clus, rthy-  
arg, silty-aren

LS: wh-ldbrn, fri-firm, sbbkly, crpxl, wxy tex,  
v calc: SLTYSH: lt gy-dk gy, sm-gt tex,  
sbply-sbrd, sme fis, sft-firm, occ brit tt clus,  
rthy-arg, silty-aren, tr bent





