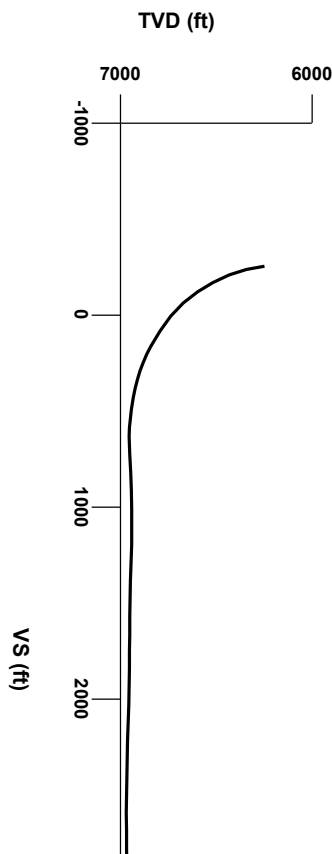




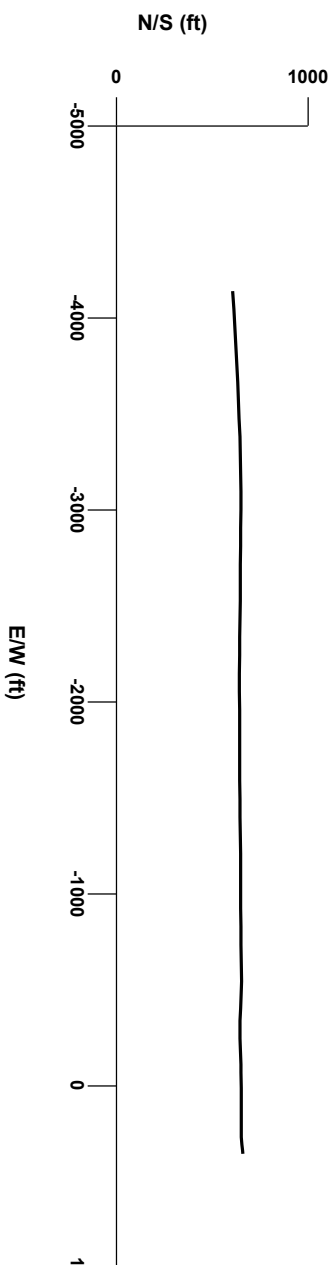
LOG created using LPLOT VH Version 3.0, June 04, 2012, Copyright (C) 1999-2009 Pason Systems Corp.

OPERATOR: NOBLE ENERGY INC
WELL: EIFERT PC E11-65HN
LOCATION: SEC 11, T6N, R65W
COUNTY: WELD
STATE: COLORADO
SPOT: 1896' FSL, 417' FEL
ELEVATION: GL 4749', KB 4762'
FIELD: WATTENBERG
SPUD DATE: MAY 26, 2012
TD DATE: JUNE 3, 2012
DATES LOGGED: MAY 27 - JUNE 4, 2012
DEPTHS LOGGED: 6300 - 11140' MD
LOGGERS: BRITTANY GUZZO, RYAN SHILLING
DRILLING FLUID: FW, LSND
DRILLING RIG: ENSIGN 121
API: 05-123-34526
LOG TYPE: HORIZONTAL
SCALE: 1:240 (5 inches per 100 feet)
REMARKS: LAT, LONG: 40.49874, -104.62233

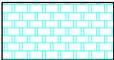


Survey Elevation

Survey Plan



LITHOLOGIES



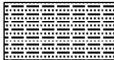
Chalk



Marl



Shaly Sandstone



Silty Shale

ENGINEERING SYMBOLS



Bit Change



Casing



Casing



Connection



Connection Gas



Midnight Depth

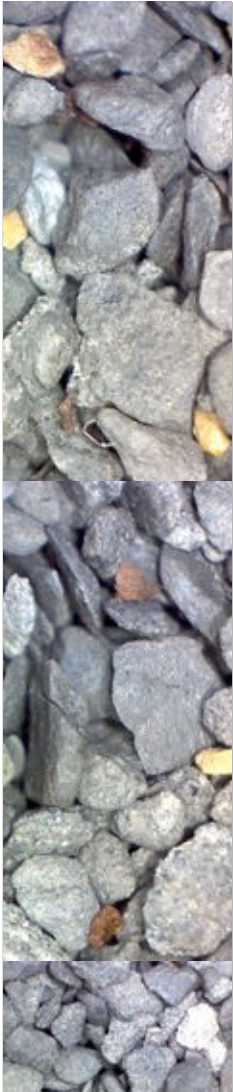


Oil To Surface



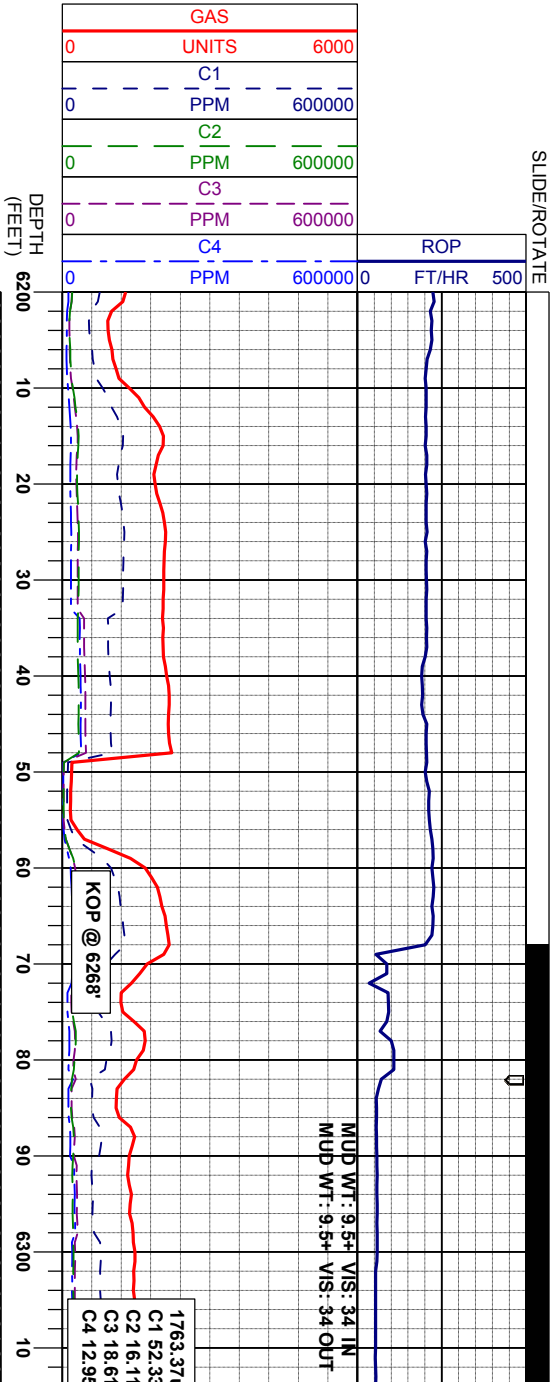
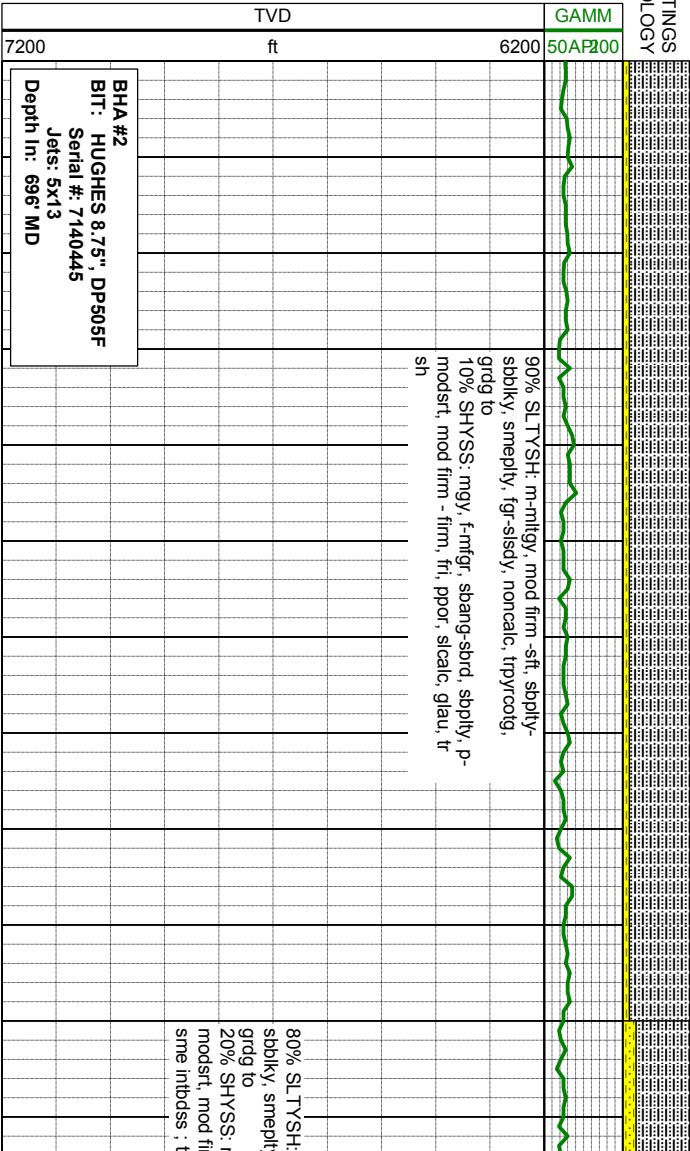
Trip Gas

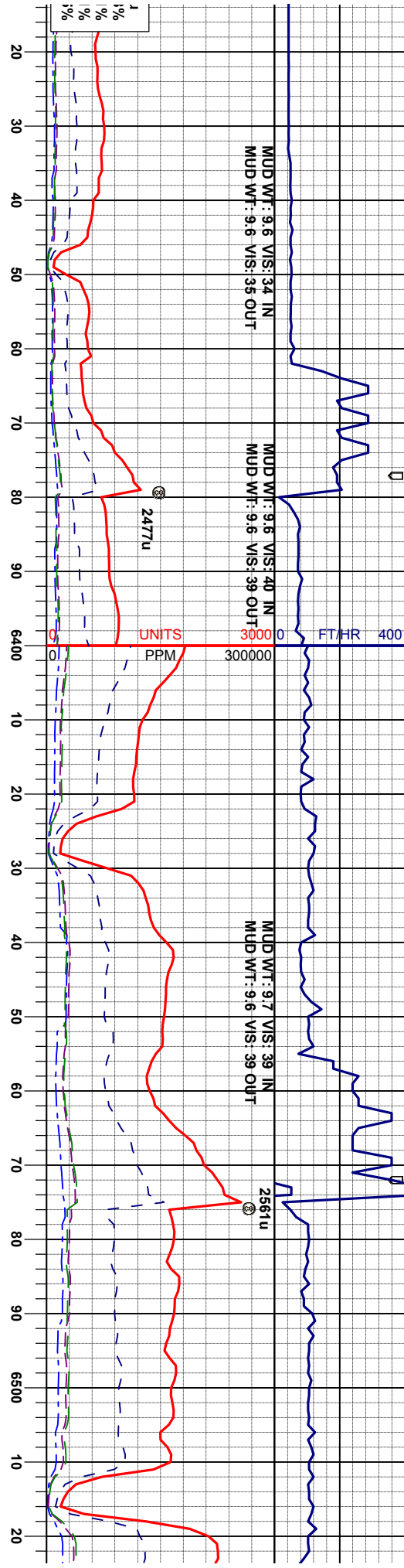
SAMPLE PHOTOS



OIL SHOW
T F G

MODERATE





SURVEY
MD 6326'
TVD 6247.77'
INC 6.2°
AZI 259.8°

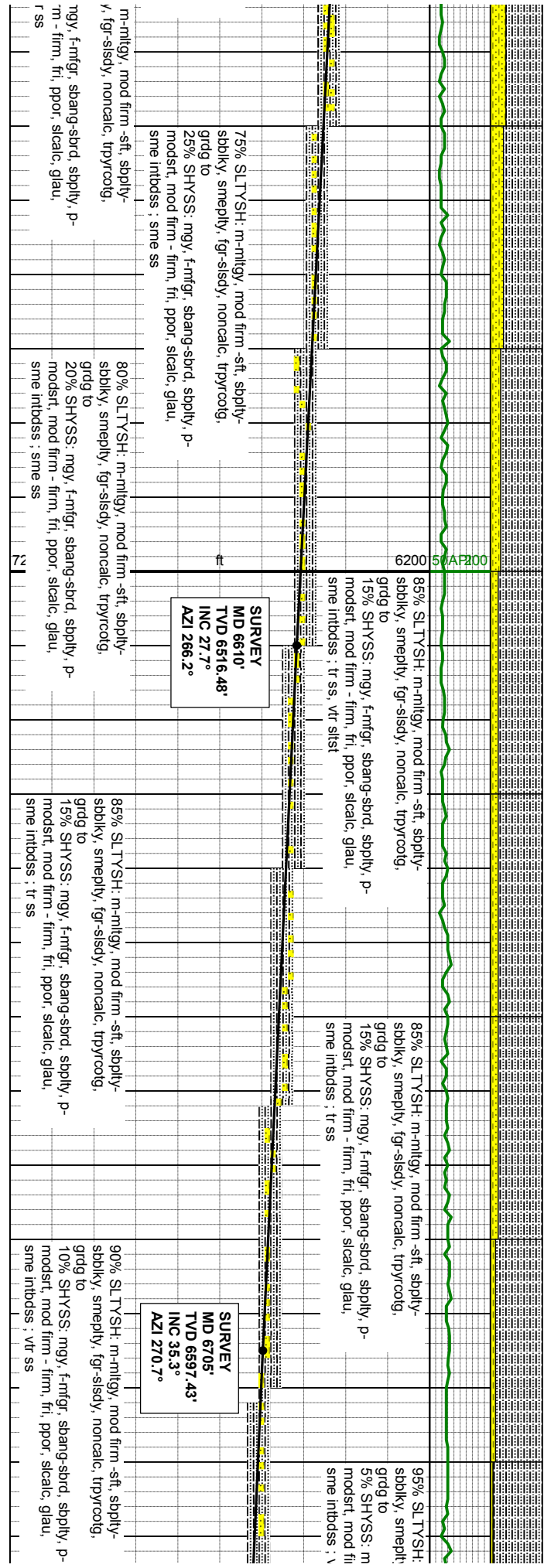
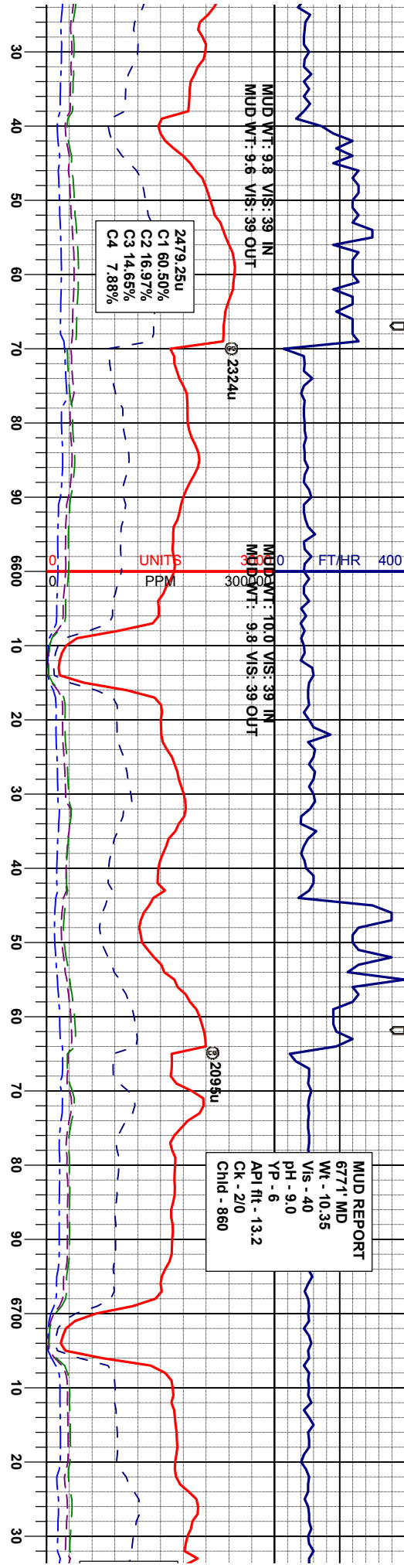
SURVEY
MD 6421'
TVD 6341.11'
INC 14.7°
AZI 263.2°

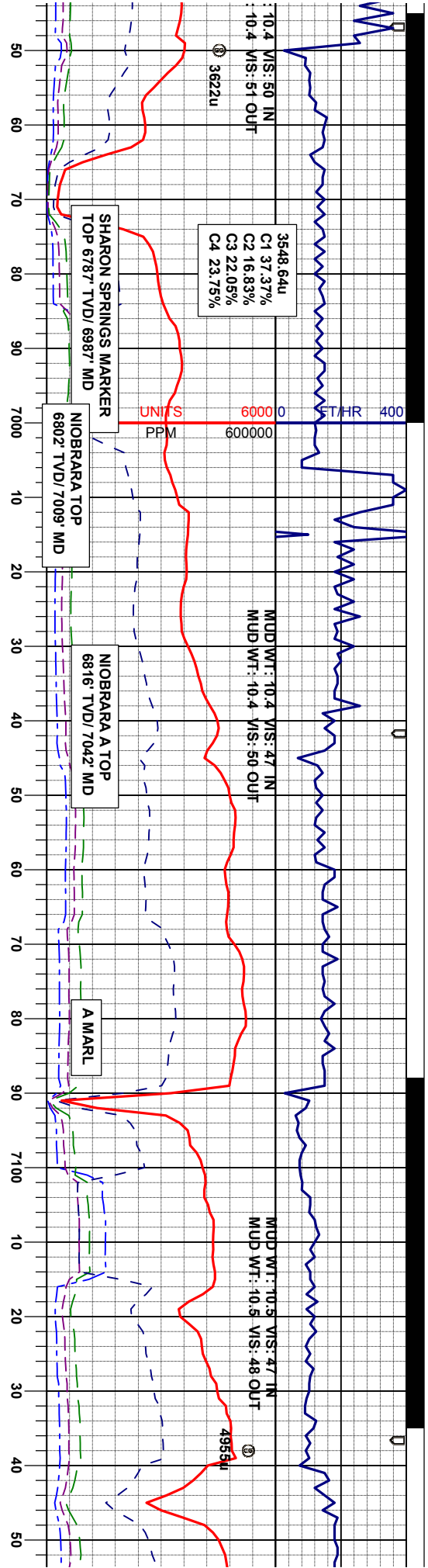
SURVEY
MD 6516'
TVD 6431.22'
INC 22.0°
AZI 264.4°

m-mlty, mod firm -sft, sbply- y, fgr-slsdy, noncalc, trpyrcog,	85% SLTYSH: m-mlty, mod firm -sft, sbply- sbply, smepty, fgr-slsdy, noncalc, trpyrcog, grdg to 15% SHYSS: mgy, f-mfgr, sbang-sbrd, sbply, p- modst, mod firm - firm, fti, ppor, slcalc, glau, sme inbds : tr sh, tr ss	65% SLTYSH: m-mlty, mod firm -sft, sbply- sbply, smepty, fgr-slsdy, noncalc, trpyrcog, grdg to 35% SHYSS: mgy, f-mfgr, sbang-sbrd, sbply, p- modst, mod firm - firm, fti, ppor, slcalc, glau, sme inbds : tr ss	60% SLTYSH: m-mlty, mod firm -sft, sbply- sbply, smepty, fgr-slsdy, noncalc, trpyrcog, grdg to 40% SHYSS: mgy, f-mfgr, sbang-sbrd, sbply, p- modst, mod firm - firm, fti, ppor, slcalc, glau, sme inbds : tr ss
80% SLTYSH: m-mlty, mod firm -sft, sbply- sbply, smepty, fgr-slsdy, noncalc, trpyrcog, grdg to 20% SHYSS: mgy, f-mfgr, sbang-sbrd, sbply, p- modst, mod firm - firm, fti, ppor, slcalc, glau, sme inbds : tr sh, tr ss	80% SLTYSH: m-mlty, mod firm -sft, sbply- sbply, smepty, fgr-slsdy, noncalc, trpyrcog, grdg to 20% SHYSS: mgy, f-mfgr, sbang-sbrd, sbply, p- modst, mod firm - firm, fti, ppor, slcalc, glau, sme inbds : tr sh, tr ss	75% SLTYSH: m-mlty, mod firm -sft, sbply- sbply, smepty, fgr-slsdy, noncalc, trpyrcog, grdg to 25% SHYSS: mgy, f-mfgr, sbang-sbrd, sbply, p- modst, mod firm - firm, fti, ppor, slcalc, glau, sme inbds : tr ss	70% SLTYSH: m-mlty, mod firm -sft, sbply- sbply, smepty, fgr-slsdy, noncalc, trpyrcog, grdg to 30% SHYSS: mgy, f-mfgr, sbang-sbrd, sbply, p- modst, mod firm - firm, fti, ppor, slcalc, glau, sme inbds : tr ss

MODERATE







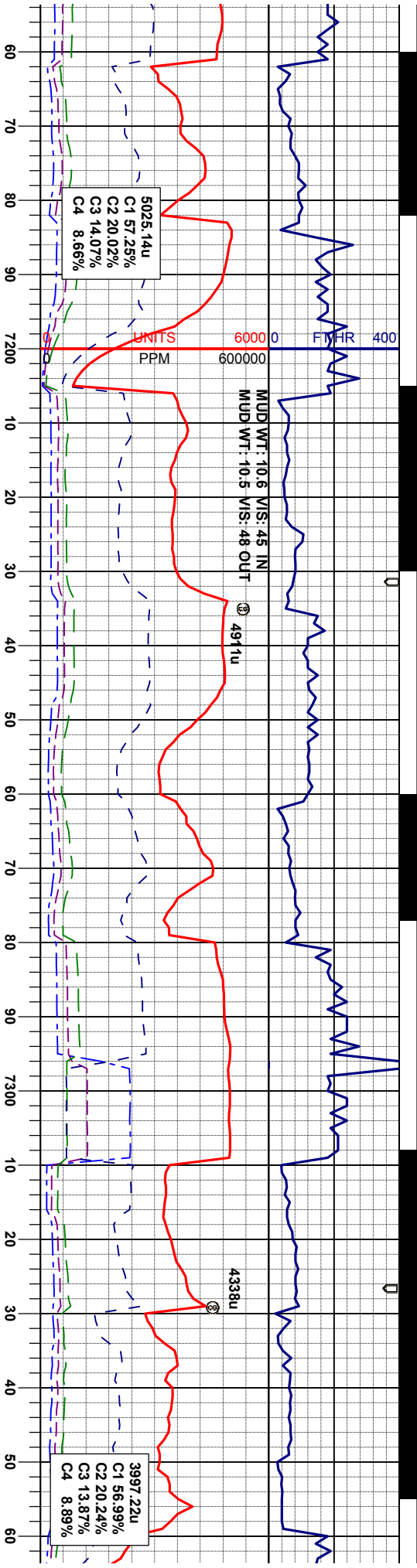
100% SLTYSH: m-milgy, mod firm -sft, sbply-sbdky, smepty, fgr-slsdy, noncalc, trpyrcog; sme bent, trsh, v trshys	CHK: itm-ngybm, smeem, sbdky, fis, vsft-sl firm, mot-rthy, vcalc, grd to MRL: m-mckbrngy, smeckgy- blk, sbdky-sbply, smefts, mod firm -hd, sme sft, slty, simot, calc, SLTYSH: m-milgy, mod firm -sft, sbply-sbdky, smepty, fgr-slsdy, noncalc, trpyrcog	60% CHK: itm-ngybm, smeem, sbdky-sbply, fis, vsft-sl firm, mot-rthy, vcalc, 40% MRL: mckbrngy-dky- blk, sbdky-sbply, smefts, mod firm -hd, sme sft, slty w/smechcoog, simot, calc, trtent, trpyrcog	70% MRL: mckbrngy-dky- blk, smefts, mod firm -hd, sme sft, slty w/smechcoog, simot, calc, 30% CHK: m-mckbrngy, term, s vsft-sl firm, mot-rthy, vcalc, occb	90% MRL: md fis, mod firm -l simot, calc, 10% CHK: m- vsft-sl firm, mc calcite
SLTYSH: m-milgy, mod firm -sft, sbply-sbdky, smepty, fgr-slsdy, noncalc, trpyrcog, grd to MRL: m-mckbrngy, ocockgy, sbdky-sbply, smefts, mod firm -hd, sme sft, slty, simot, calc, trshys	CHK: itm-ngybm, smeem, sbdky, fis, vsft-sl firm, mot-rthy, vcalc, grd to MRL: m-mckbrngy, smeckgy- blk, sbdky-sbply, smefts, mod firm -hd, sme sft, slty, simot, calc, SLTYSH: m-milgy, mod firm -sft, sbply-sbdky, smepty, fgr-slsdy, noncalc, trpyrcog	65% MRL: mckbrngy-dky- blk, sbdky-sbply, smefts, mod firm -hd, sme sft, slty w/smechcoog, simot, calc, 35% CHK: itm-ngybm, smeem, sbdky-sbply, fis, vsft-sl firm, mot-rthy, vcalc, occmbdofos, trtent, trpyrcog		

SURVEY
MD 6990'
TVD 6792.53'
INC 58.7°
AZI 269.8°

SURVEY
MD 7085'
TVD 6840.34'
INC 60.8°
AZI 269.5°

SURVEY
MD 7132'
TVD 6861.67'
INC 65.2°
AZI 268.8°

EXCELLENT



85% MR.L: mdkbrngy-dkgy- blk, sbblky-sbply, v fis, mod firm -st, thnd, slty w/smechcoig, slmot, calc.	85% MR.L: dkbrngy- blk, sbblky-sbply, occfs, firm -hd, slty, slmot, calc.	65% MR.L: mdkbrngy- blk, sbblky-sbply, smeifs, mod firm -hd, smeift, slty, slmot, calc, grdg to 35% CHK: m-mdkgybrn, smeocrn, sbblky-sbply, fis, vsft-sl firm, rthy-mot, vcalc, trembfos, tr calcite, vtrent w/pyrcog	85% MR.L: dkbrngy- blk, smemdkbrngy, sbblky- sbply, smeifs, mod firm -hd, smeift, slty, slmot, calc, grdg to 20% CHK: m-mdkgybrn, smeocrn, sbblky-sbply, fis, vsft-sl firm, rthy-mot, vcalc, trembfos, tr calcite, tbrent, trpyrcog
15% CHK: m-mdkgybrn, tccrm, sbblky-sbply, fis, vsft-sl firm, rthy-mot, vcalc, tbrent w/pyrcog, tr calcite	15% CHK: m-mdkgybrn, sbblky-sbply, fis, vsft- sl firm, rthy-mot, vcalc, tbrent w/pyrcog, tr calcite	60% MR.L: mdkbrngy- blk, sbblky-sbply, smeifs, mod firm -hd, smeift, slty, slmot, calc, grdg to 40% CHK: m-mdkgybrn, smeocrn, sbblky-sbply, fis, vsft-sl firm, rthy-mot, vcalc, tbrent w/pyrcog, tr calcite	80% MR.L: dkbrngy- blk, smemdkbrngy, sbblky- sbply, smeifs, mod firm -hd, smeift, slty, slmot, calc, grdg to 20% CHK: m-mdkgybrn, smeocrn, sbblky-sbply, fis, vsft-sl firm, rthy-mot, vcalc, trembfos, tr calcite, tbrent, trpyrcog
90% MR.L: mdkbrngy-dkgy- blk, sbblky-sbply, fis, firm -st, thnd, slty w/smechcoig, slmot, calc, grdg to 10% CHK: m-mdkgybrn, sbblky-sbply, fis, vsft- sl firm, rthy-mot, vcalc, tbrent w/pyrcog			

7200

7227'

MD 7180'

TVD 6880.7'

INC 68.1°

AZI 267.7°

7200

7227'

MD 7227'

TVD 6886.92'

INC 71.5°

AZI 267.9°

7200

7227'

MD 7275'

TVD 6911.16'

INC 74.0°

AZI 268.6°

7200

7227'

MD 7322'

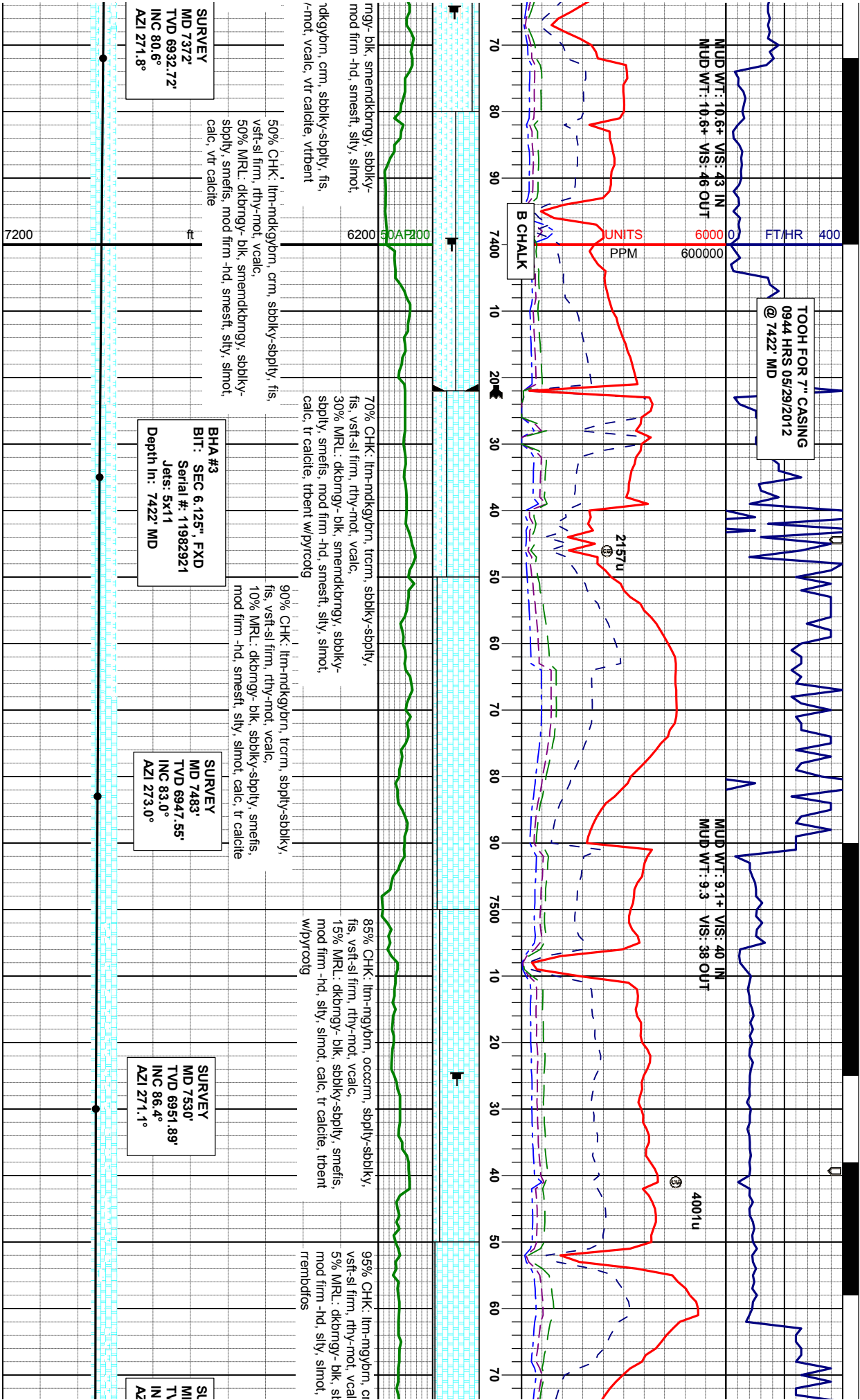
TVD 6922.96'

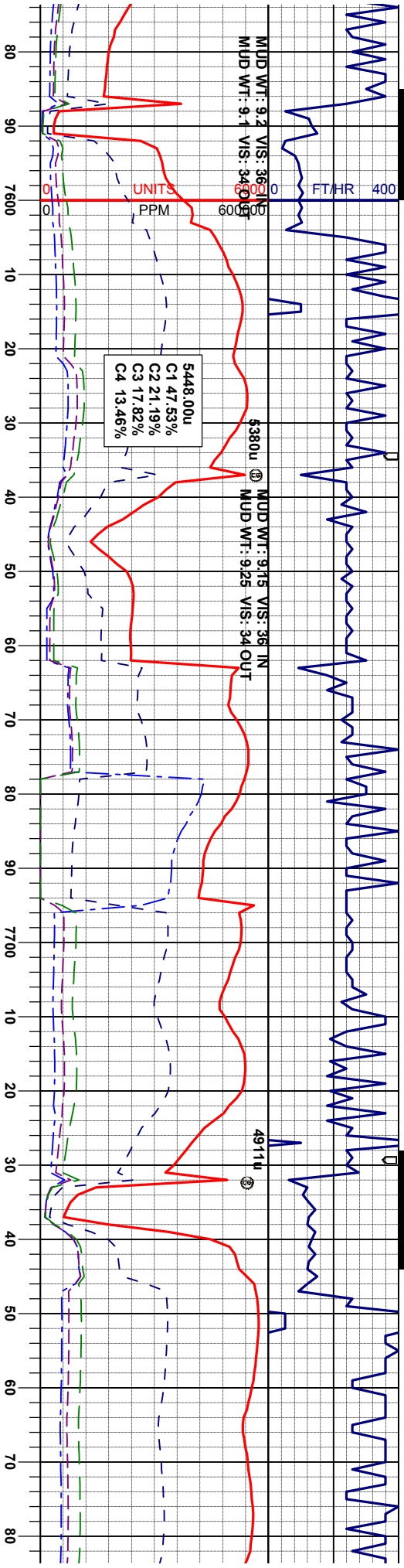
INC 76.9°

AZI 269.8°



EXCELLENT





90% CHK: itm-ngybm, crm, sbply-sbply, fis, vsft-sl firm, rthy-mot, vcalc, 10% MRL: dkbrngy- blk, sbply-sbply, smeifs, mod firm -hd, slty, slmot, calc, occ calcite, trembdots

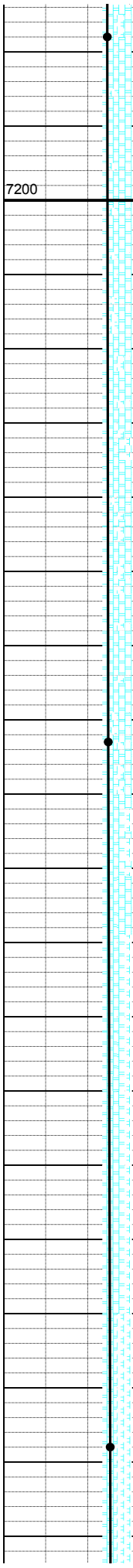
85% CHK: itm-ngybm, crm, sbply-sbply, fis, vsft-sl firm, rthy-mot, vcalc, 15% MRL: dkbrngy- blk, sbply-sbply, smeifs, mod firm -hd, slty, slmot, calc, occ calcite, tbrnt w/pyrcolg, trembdots

75% CHK: itm-ngybm, occrm, sbply-sbply, fis, vsft-sl firm, rthy-mot, vcalc, 25% MRL: dkbrngy- blk, sbply-sbply, smeifs, mod firm -hd, slty, slmot, calc, occ calcite, trembdots

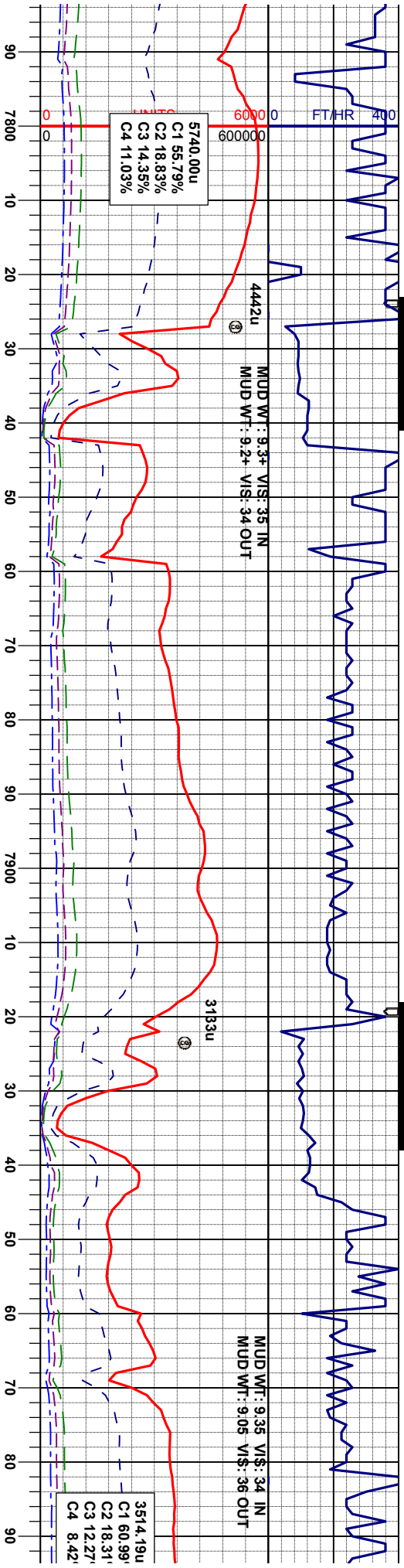
55% MRL: dkbrngy- blk, sbply-sbply, mod firm -hd, slty, slmot, calc, 45% CHK: itm-mdkybm, crm, sbply vsft-sl firm, rthy-mot, vcalc, occ calci w/pyrcolg, trembdots

SURVEY
MD 7673'
TVD 6950.87'
INC 92.9°
AZI 269.1°

SURVEY
MD 7768'
TVD 6946.32'
INC 92.6°
AZI 269.3°



EXCELLENT



65% MRU: dkbrngy- blk, sbblky-sbply, smeifs, mod firm -hd, silty, slmot, calc.
35% CHK: lim-mndkybrn, crn, sbply-sbblky, fis, vsft-si firm, rthy-mot, vcalc, occ calcite, tbrent w/pyrocoig, trembdos

90% MRU: dkbrngy- blk, sbblky-sbply, smeifs, mod firm -hd, silty, slmot, calc, 10% CHK: lim-mndkybrn, sbply-sbblky, fis, vsft-si firm, rthy-mot, vcalc, occ calcite, tbrent w/pyrocoig, trembdos

80% MRU: dkbrngy- blk, sbblky-sbply, smeifs, mod firm -hd, silty, slmot, calc, 20% CHK: m-mndkybrn, sbply-sbblky, fis, si firm -sft, rthy-mot, vcalc, occ calcite, trisetos

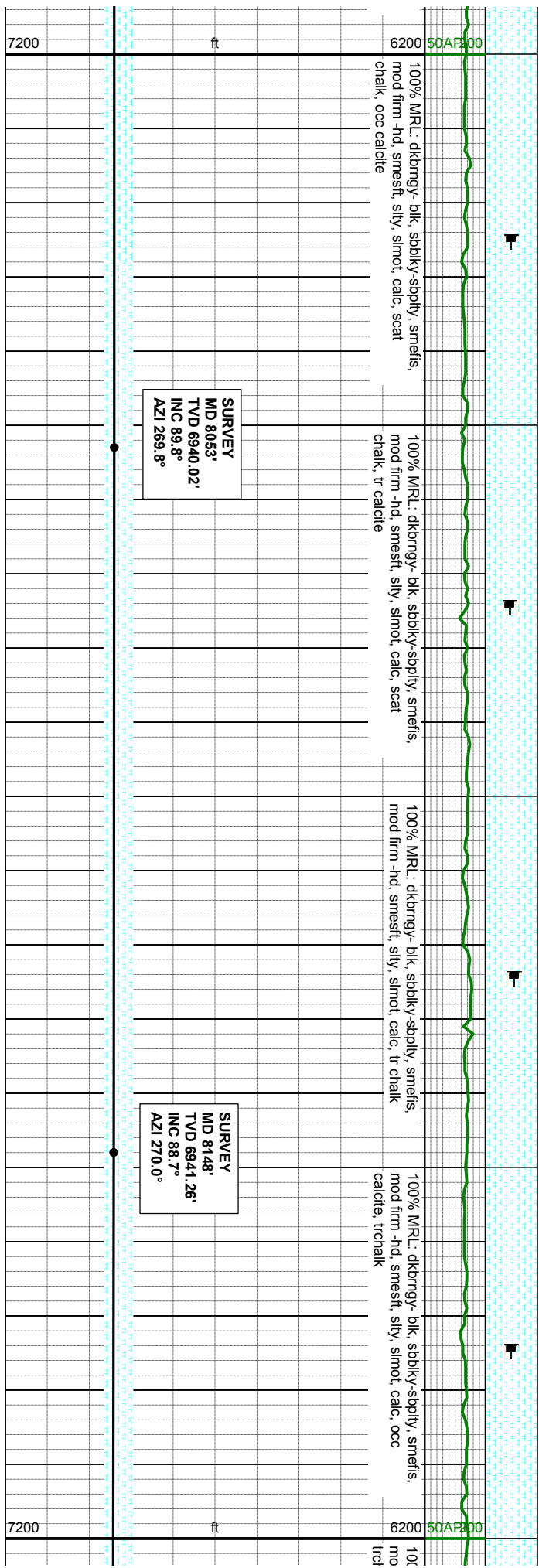
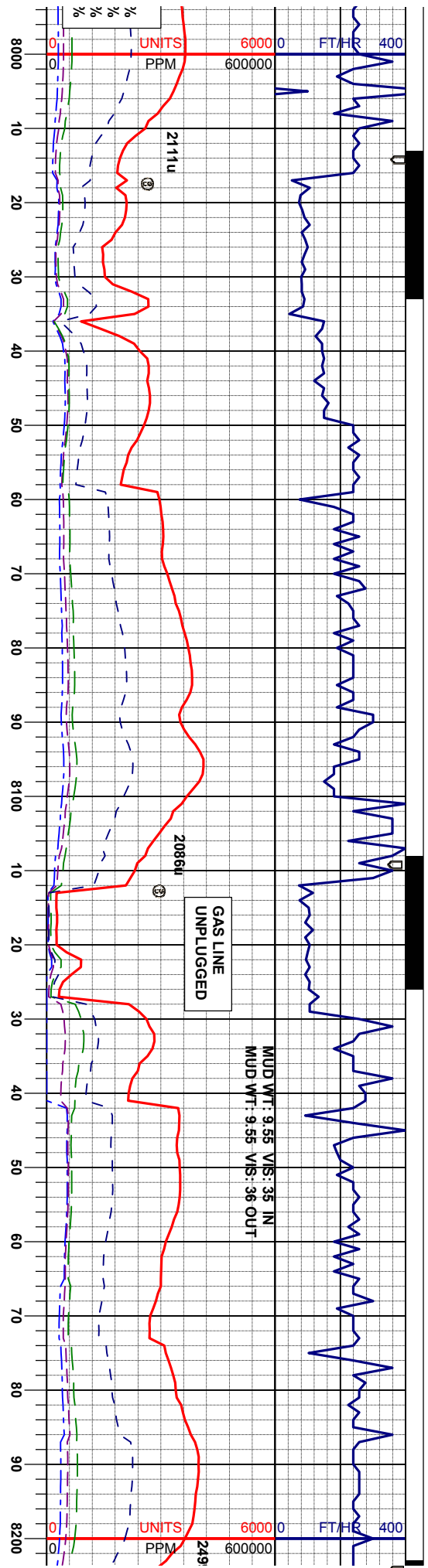
100% MRU: dkbrngy- blk, sbblky-sbply, smeifs, mod firm -hd, smeift, silty, slmot, calc, scat calcite, scat chalk

SURVEY
MD 7863'
TVD 6942.5'
INC 92.0°
AZI 269.8°

SURVEY
MD 7958'
TVD 6940.35'
INC 90.6°
AZI 270.0°

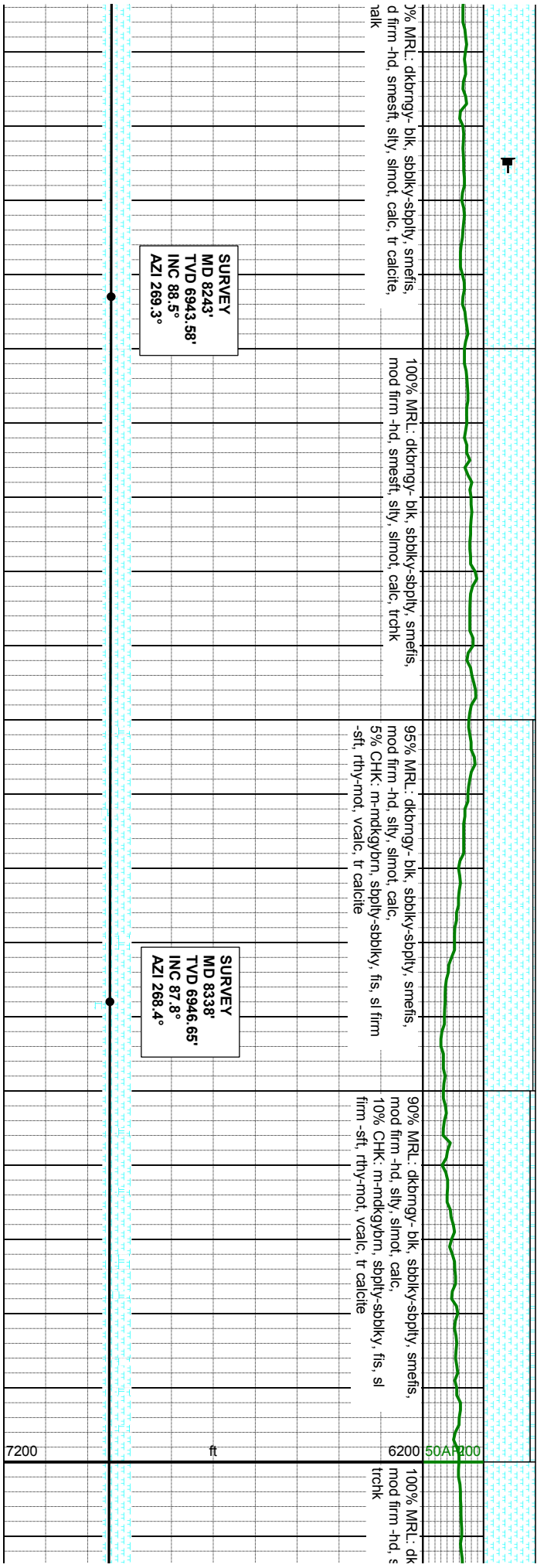
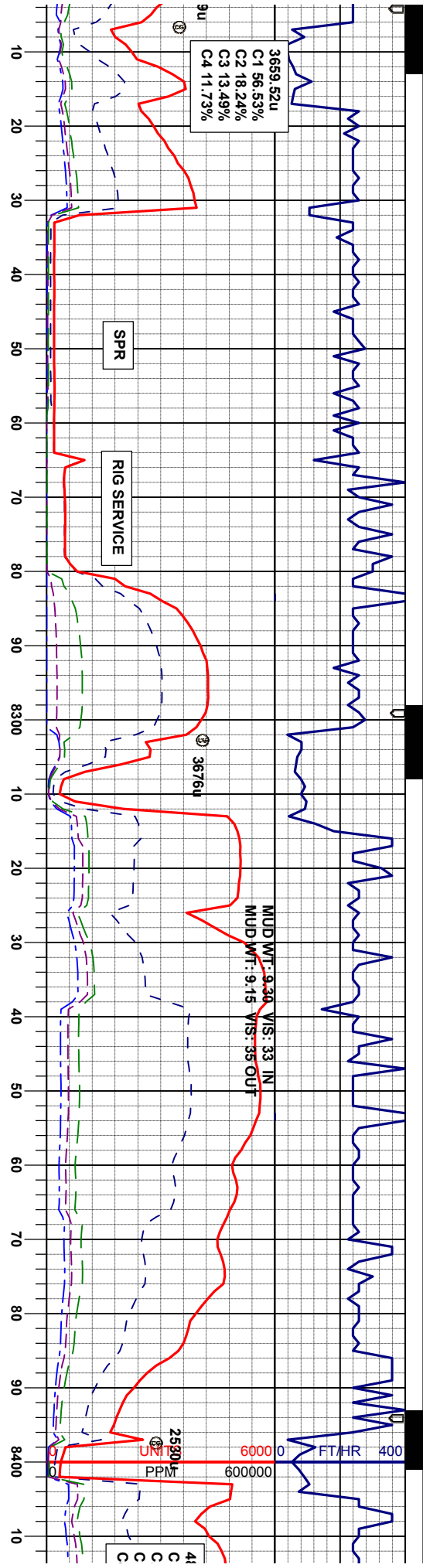
EXCELLENT

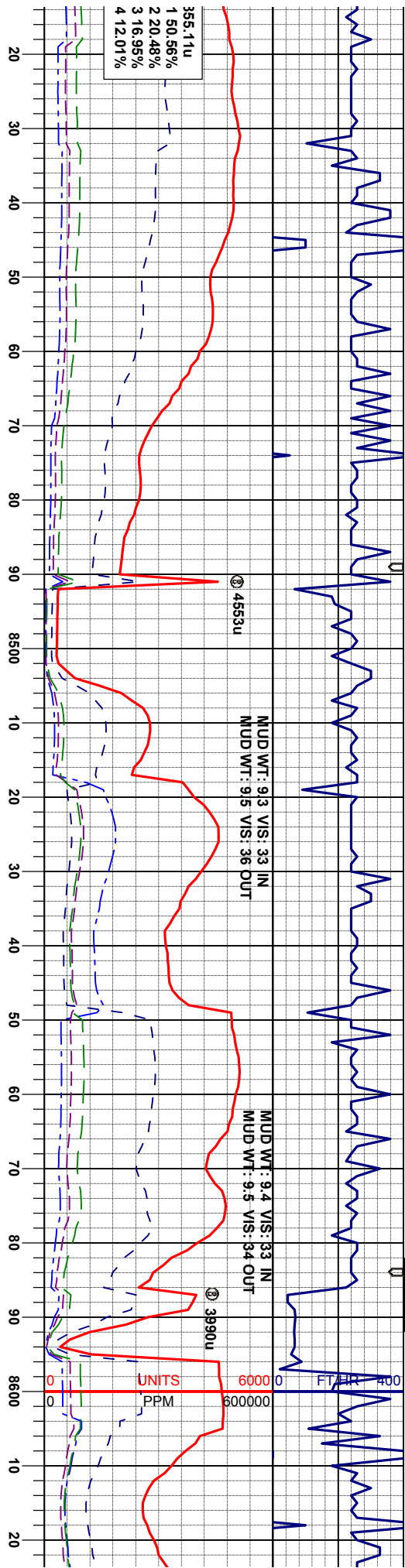




EXCELLENT







brngy-blk, sbblky-sbply, smefis, smestf, silty, slmot, calc, tr calcite,

100% MRL.: dkbrngy- blk, sbblky-sbply, smefis,
mod firm-hd, smestf, slty, slmot, calc, tr calcite
trchk, vtrent

100% MRL: dkbrngy-blk, sbblky-sbply, smefis
mod firm-hd, smestf, slty, slmot, calc, tr calcite
trchck

100% MRL: dkbrngy-blk, sbblky-sbply, smefis
mod firm-hd, smestf, sly, slmot, calc, trch

100% MRL: dkbrngy-blk,
mod firm-hd, smestf, silty

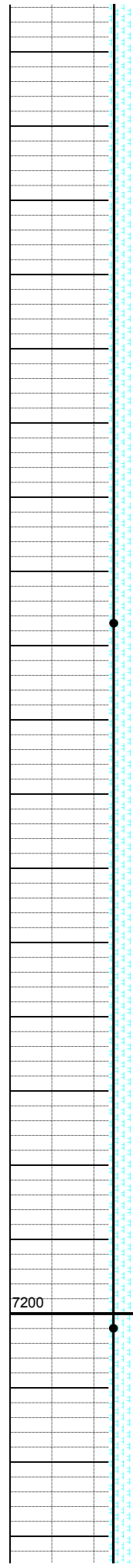
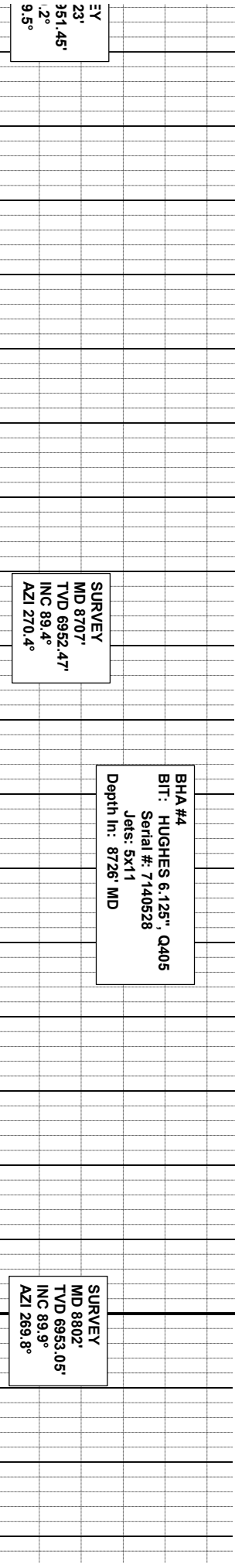
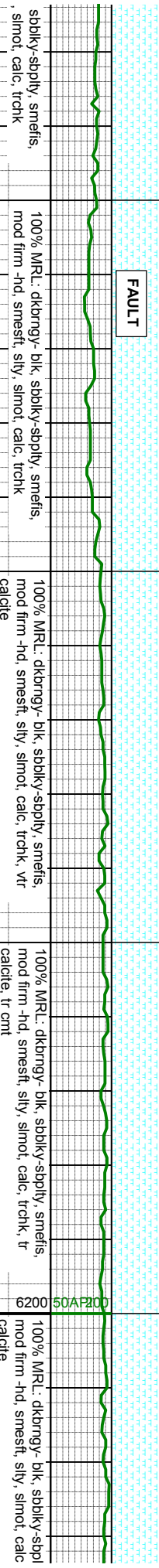
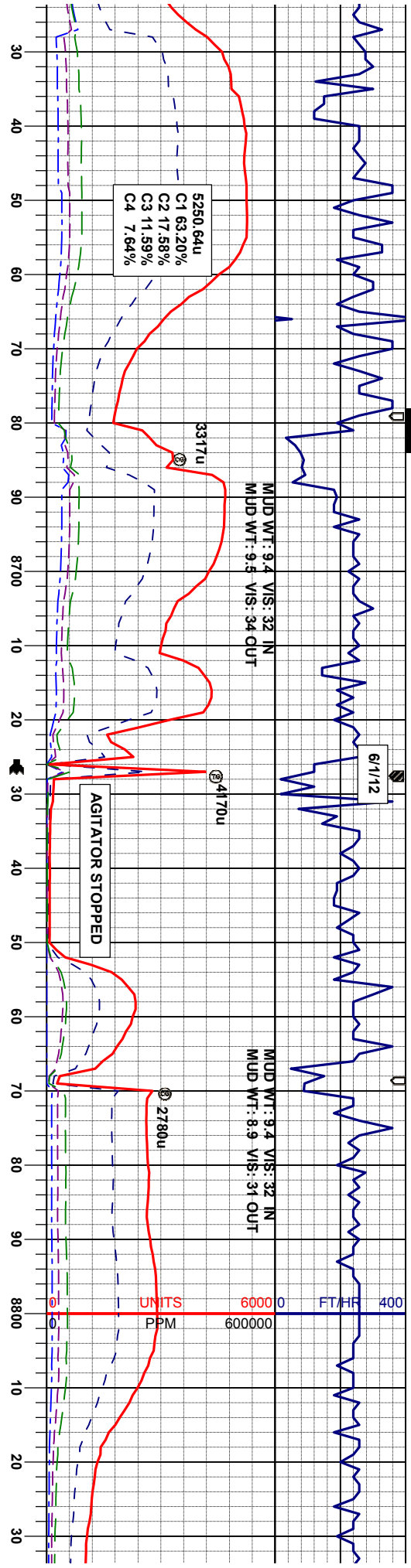
SURVEY
MD 8433'
TVD 6949.80'
INC 88.4°
AZI 269.7°

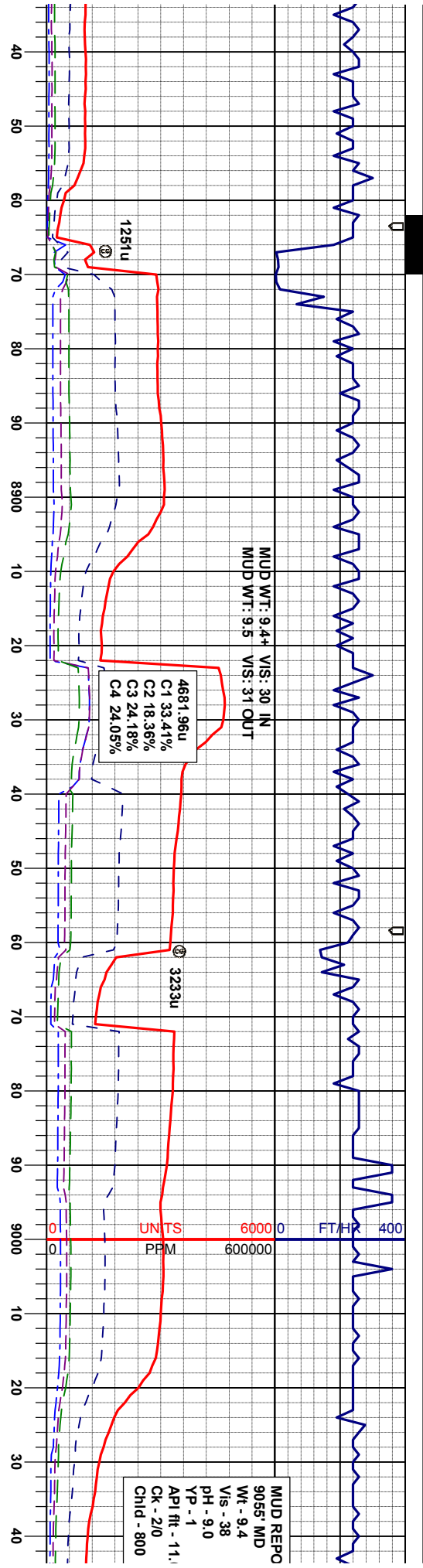
SURVEY
MD 8527'
TVD 6950.95'
INC 90.2°
AZI 270.0°

SURVIV
MD 86
TV D 6
INC 89
AZI 26

7200 ft

GOOD





ty, smeis, 100% MRL: dkbrngy- blk, sbblky-sbply, smeis, mod firm -hd, smeist, silty, simot, calc, trchk, vir calcite

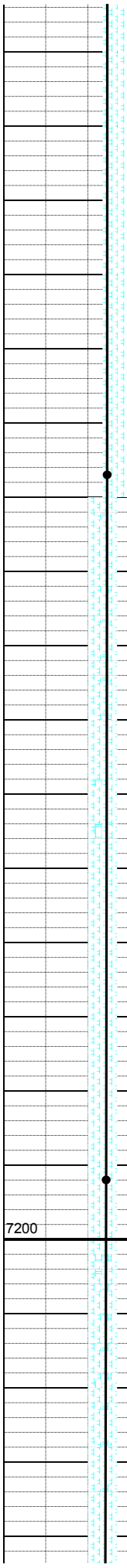
95% MRL: dkbrngy- blk, sbblky-sbply, smeis, mod firm -hd, silty, simot, calc, 5% CHK: m-mdkybrn, sbply-sbblky, fis, sl firm -sft, rthy-mot, vcalic, tr calcite

100% MRL: dkbrngy- blk, sbblky-sbply, smeis, mod firm -hd, smeist, silty, simot, calc, trchk, tr ss, vir calcite

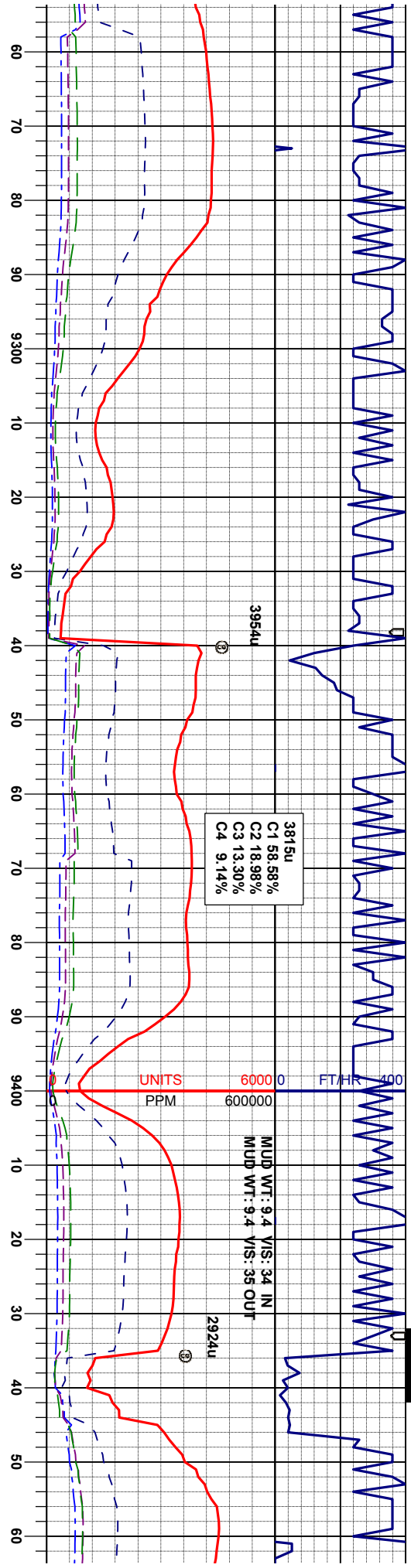
95% MRL: dkbrngy- blk, sbblky-sbply, smeis, mod firm -hd, silty, simot, calc, 5% CHK: m-mdkybrn, sbply-sbblky, fis, sl firm -sft, rthy-mot, vcalic, tr calcite

SURVEY
MD 8897
TVD 6953.97'
INC 89.0°
AZI 269.3°

SURVEY
MD 8992
TVD 6956.37'
INC 88.1°
AZI 269.8°



EXCELLENT



100% MRL: dkbrngy- blk, sbdky-sbply, smeifs, mod firm -nd, smeif, sily, simot, calc, trchk, tr intbd calcite

95% MRL: dkbrngy- blk, sbdky-sbply, smeifs, mod firm -nd, sily, simot, calc, 5% CHK: m-mdkgy/bn, sbply-sbdky, fis, si firm -sft, mot-rthy, vcalc, tr calcite

95% MRL: dkbrngy- blk, sbdky-sbply, smeifs, mod firm -nd, sily, simot, calc, 5% CHK: m-mdkgy/bn, sbply-sbdky, fis, si firm -sft, mot-rthy, vcalc, tr calcite

75% CHK: itm-sft-si firm, mot-25% MRL: dkbrngy- blk, sbdky-sbply, smeifs, mod firm -nd, sily, simot, calc, 5% CHK: m-mdkgy/bn, sbply-sbdky, fis, si firm -sft, mot-rthy, vcalc, tr calcite

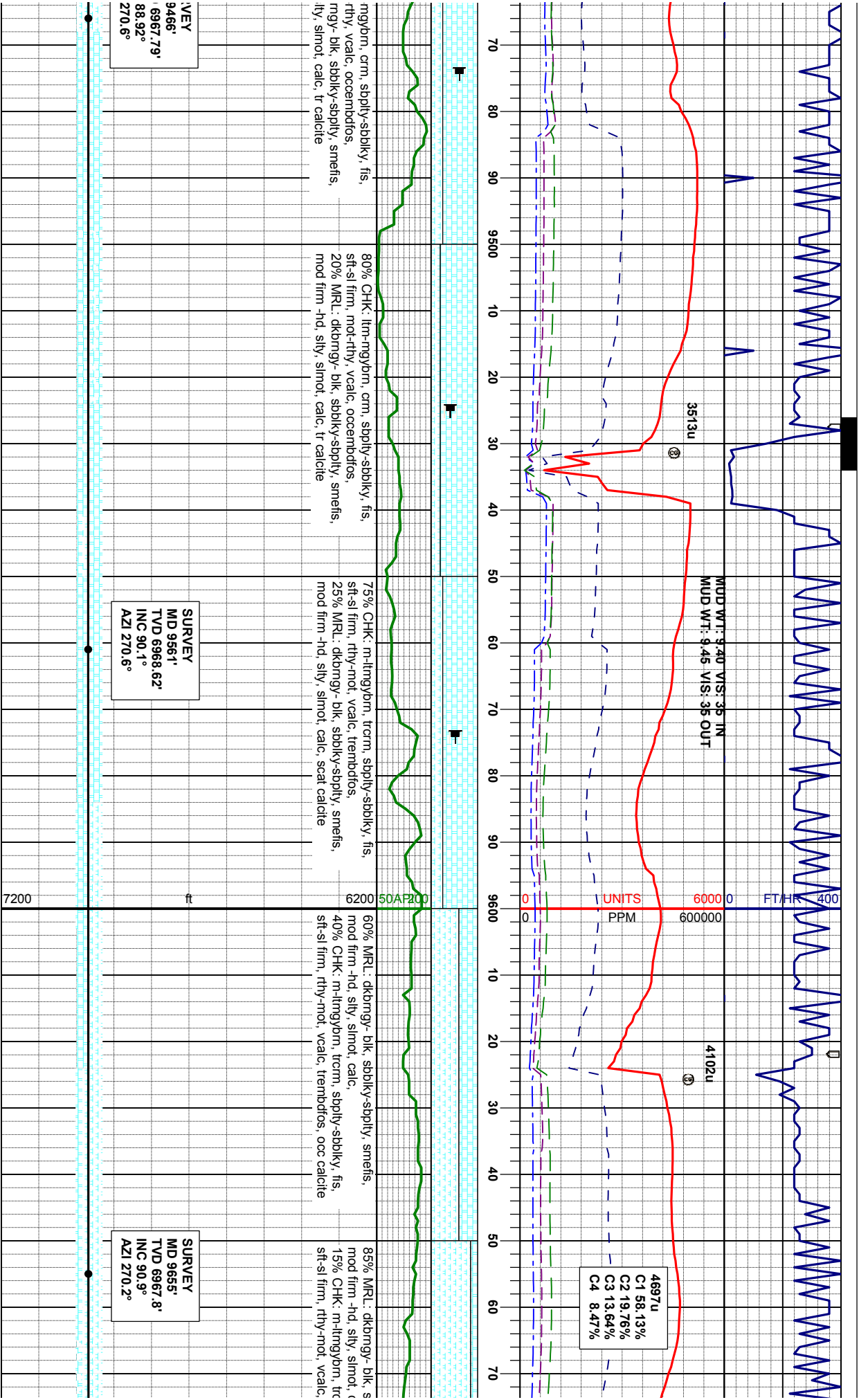
SURVEY
MD 9277
TVD 6964.99'
INC 89.3°
AZI 270.4°

SURVEY
MD 9372
TVD 6966.23'
INC 89.2°
AZI 270.7°

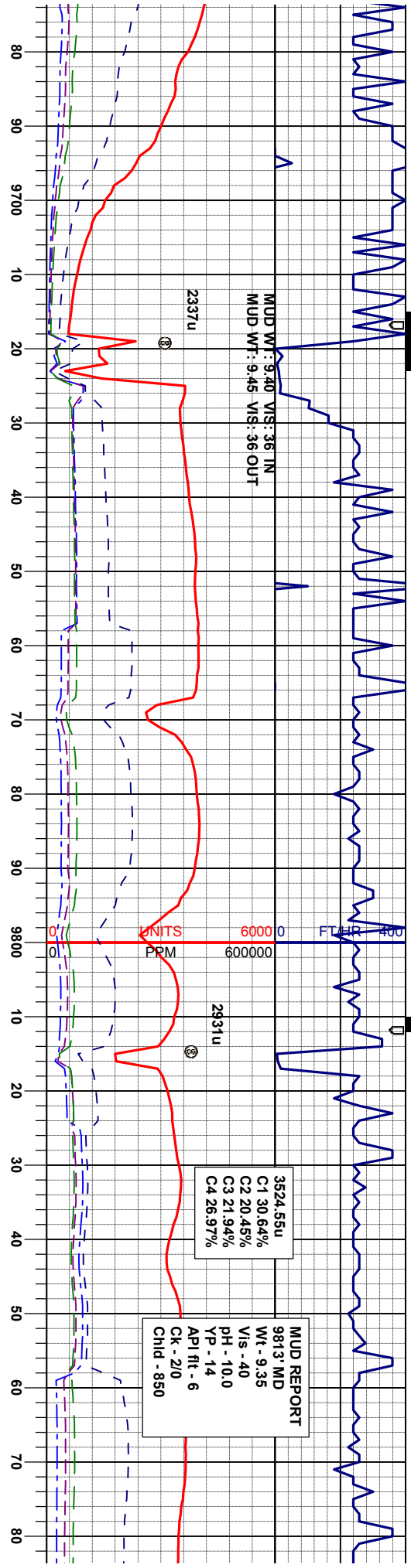
SUR
MD:
TVD
INC
AZI

GOOD





EXCELLENT



80% MRL: dkbrngy- blk, sbblky-sbply, smeifs, mod firm -hd, silty, simot, calc, 20% CHK: m-mdkgybrn, tccm, sbply-sbblky, fis, sl firm -sft, mol-rthy, vcalc, trembdos, scat calcite

100% MRL: dkbrngy- blk, sbblky-sbply, smeifs, mod firm -hd, silty, simot, calc, scat calcite

100% MRL: dkbrngy- blk, sbblky-sbply, smeifs, mod firm -hd, silty, simot, calc, scat calcite

SURVEY
MD 9750'
TVD 6967.06'
INC 90.0°
AZI 270.4°

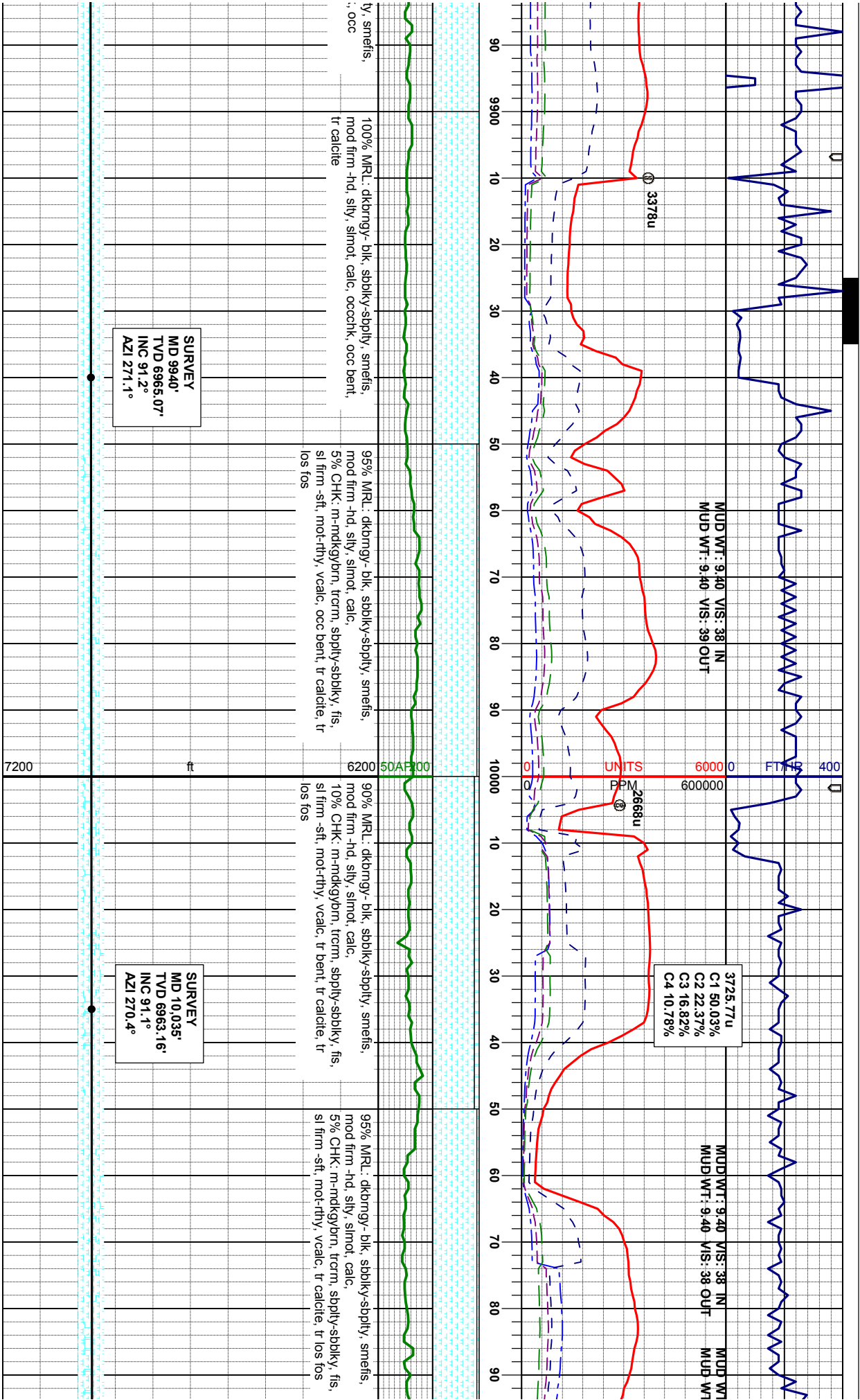
SURVEY
MD 9845'
TVD 6966.56'
INC 90.6°
AZI 270.4°

EXCELLENT

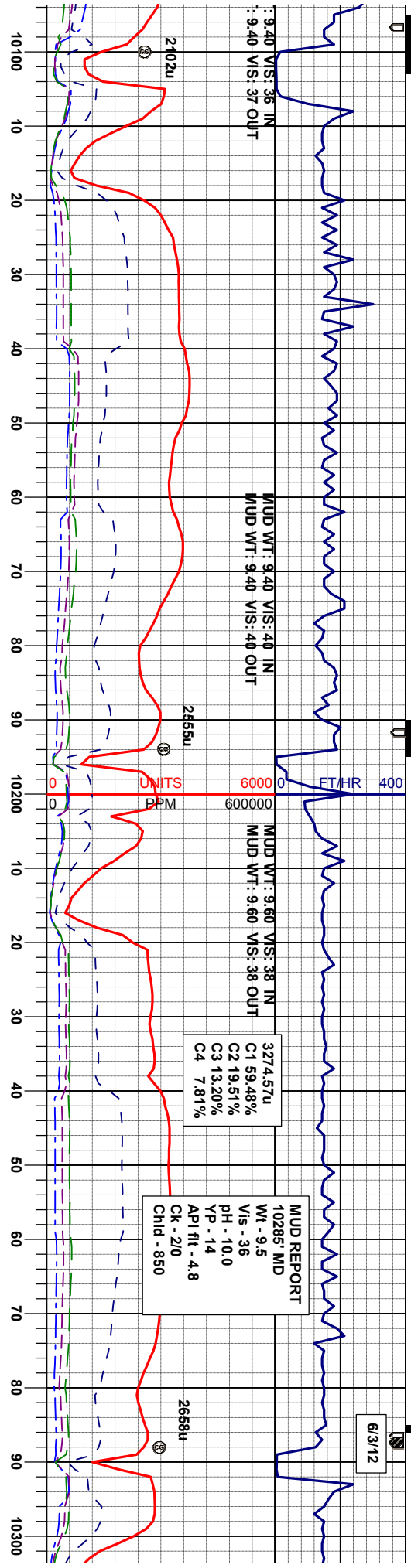




GOOD



6/3/12



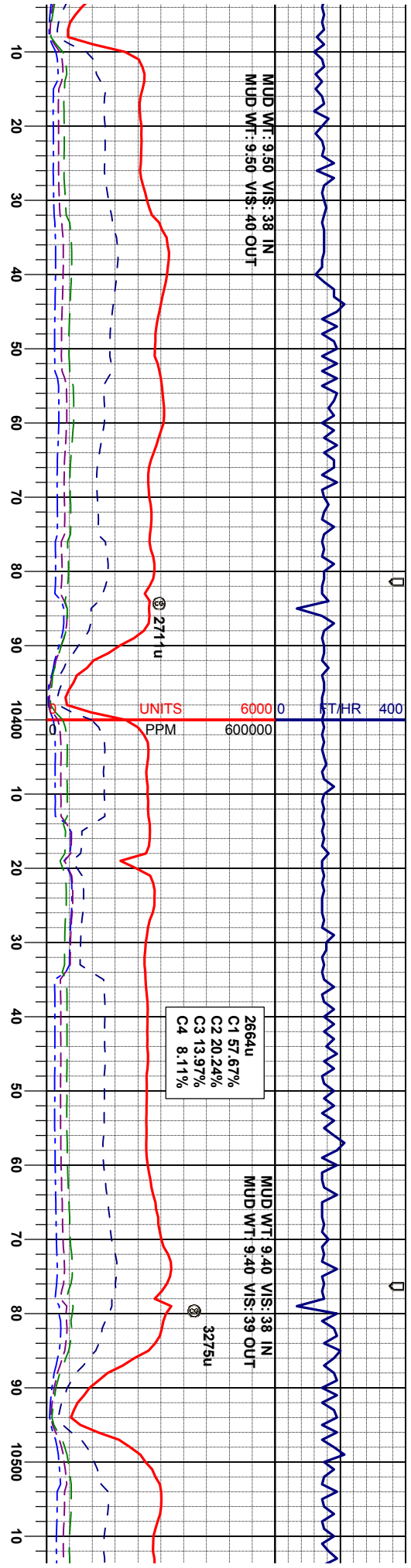
95% MRU: dkbrng- blk, sbbkly-sbply, smeifs, mod firm -hd, silty, simot, calc, 5% CHK: m-mckgybrn, trcm, sbply-sbbkly, fis, sl firm -sft, mot-rthy, vcalc, tr calcite, tr los fos, tr bent	85% MRU: dkbrng- blk, sbbkly-sbply, smeifs, mod firm -hd, silty, simot, calc, 15% CHK: m-mckgybrn, trcm, sbply-sbbkly, fis, sl firm -sft, mot-rthy, vcalc, tr calcite, tr bent	80% MRU: dkbrng- blk, sbbkly-sbply, smeifs, mod firm -hd, silty, simot, calc, 20% CHK: m-mckgybrn, trcm, sbply-sbbkly, fis, sl firm -sft, mot-rthy, vcalc, tr calcite, tr bent	90% MRU: dkbrng- blk, sbbkly-sbply, smeifs, mod firm -hd, silty, simot, calc, 10% CHK: m-mckgybrn, trcm, sbply-sbbkly, fis, sl firm -sft, mot-rthy, vcalc, tr calcite, tr bent
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SURVEY
MD 10.130'
TVD 6961.75'
INC 90.6°
AZI 269.5°

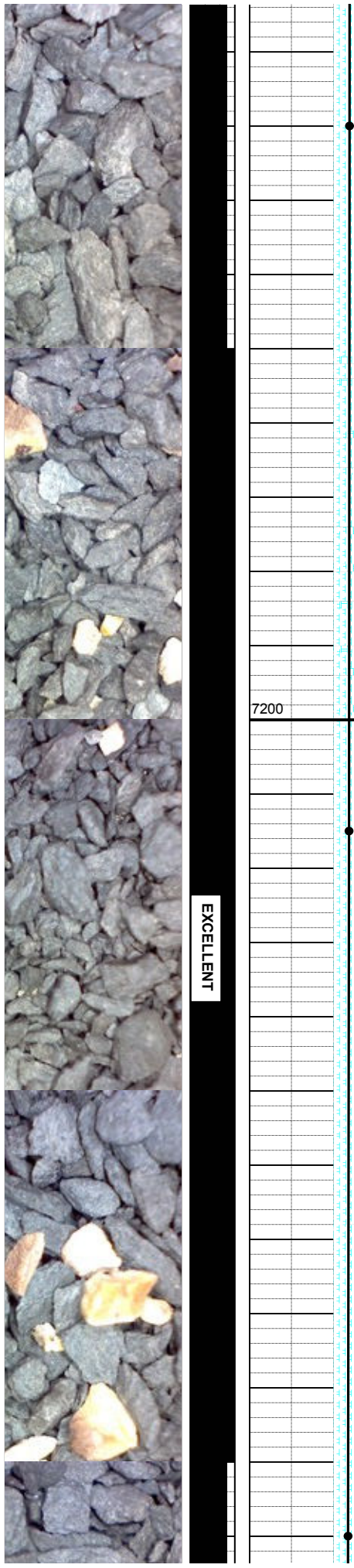
SURVEY
MD 10.225'
TVD 6961.00'
INC 90.3°
AZI 268.8°

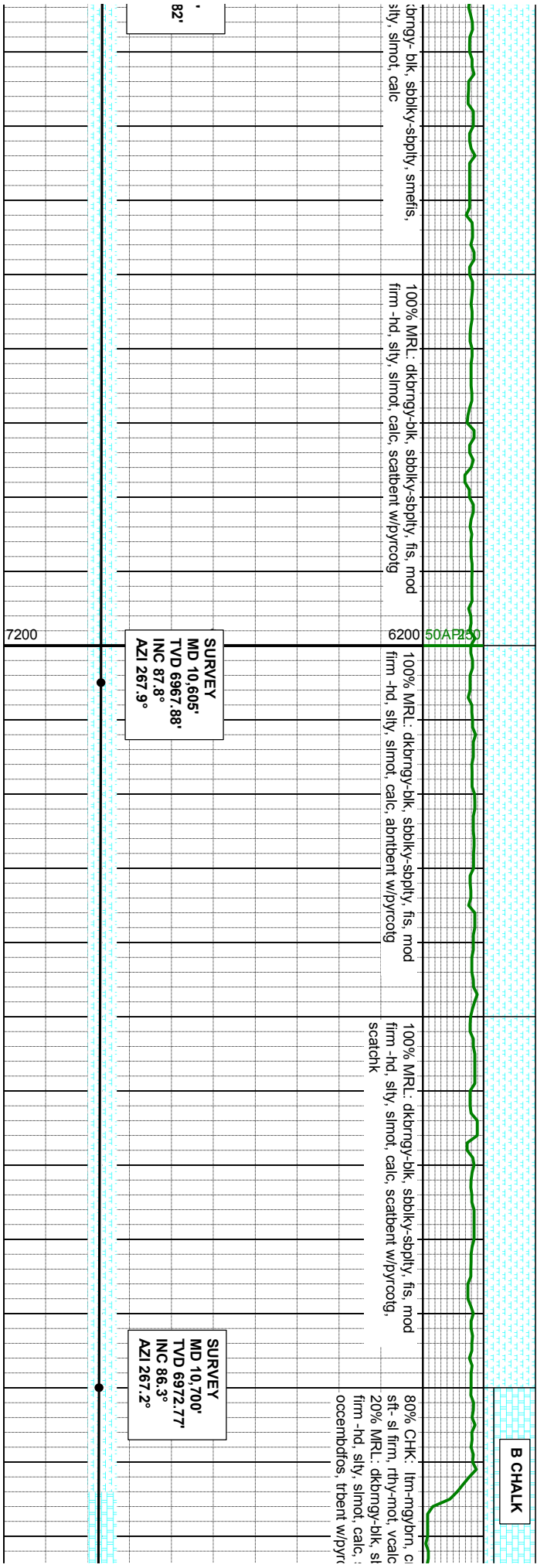
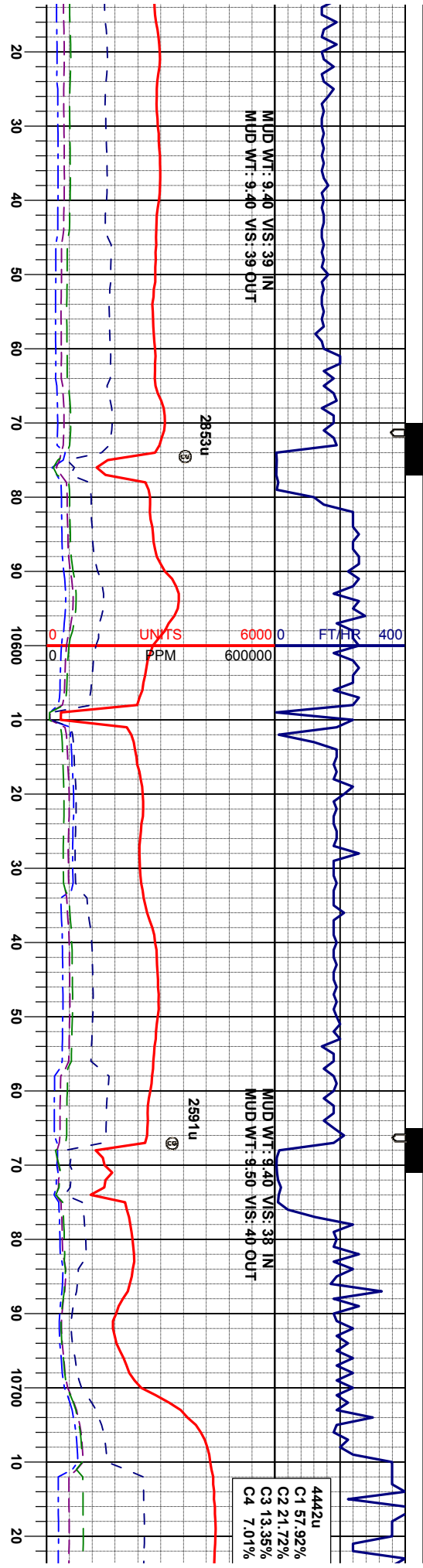
GOOD

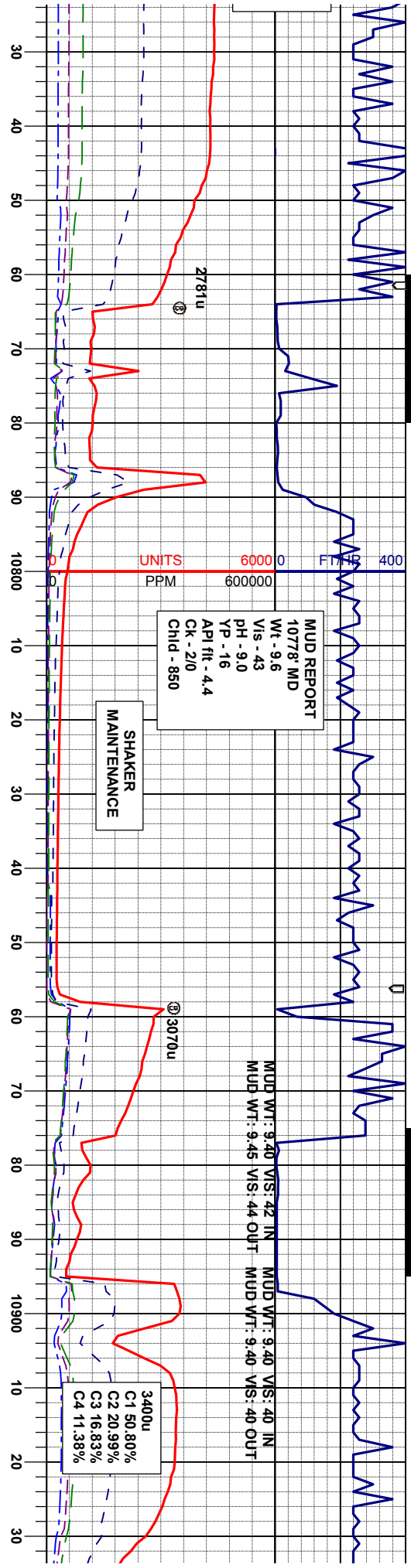




95% MRU: dkbrngy- blk, sbblky-sbply, smeifs, mod firm -hd, silty, simot, calc, 5% CHK- m-mckgybrn, trorm, sbply-sbblky, fis, sl firm -sft, mot-rthy, vcalc, tr bent	100% MRU: dkbrngy- blk, sbblky-sbply, smeifs, mod firm -hd, silty, simot, calc, tr chk, tr bent	100% MRU: dkbrngy- blk, sbblky-sbply, smeifs, mod firm -hd, silty, simot, calc, tr chk, vtr bent	100% MRU: dkbrngy- blk, sbblky-sbply, smeifs, mod firm -hd, silty, simot, calc, tr chk, vtr bent
SURVEY MD 10.320° TVD 6961.42° INC 89.2° AZI 269.0°	SURVEY MD 10.415° TVD 6962.83° INC 89.1° AZI 267.9°	SURVEY MD 10.510° TVD 6964° INC 88.5° AZI 267.4°	







cm, ssply-sbopky, fis, 85% CHK: ilm-mgybrn, crm, ssply-sbopky, fis, sft-si firm, mot-rthy, vcalc, 90% CHK: ilm-mgybrn, crm, ssply-sbopky, fis, sft-si firm, mot-rthy, vcalc, 10% MRL: dkrmgy-blk, sbopky-spply, fis, mod firm-hd, sily, simot, calc, scat calcite, occembdfos, trisetos, tbent w/plyrcotg

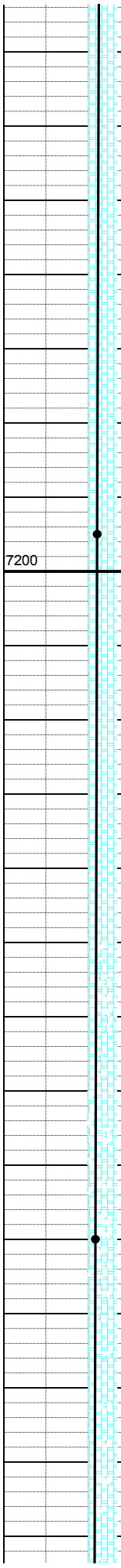
sbopky-spply, fis, mod 15% MRL: dkrmgy-blk, sbopky-spply, fis, mod firm-hd, sily, simot, calc, scat calcite, occembdfos, trisetos, tbent w/plyrcotg

calcite, 80% CHK: ilm-mgybrn, smecrm, ssply-sbopky, fis, sft-si firm, mot-rthy, vcalc, 20% MRL: dkrmgy-blk, sbopky-spply, fis, mod firm-hd, sily, simot, calc, scat calcite, occembdfos, trisetos, tbent w/plyrcotg

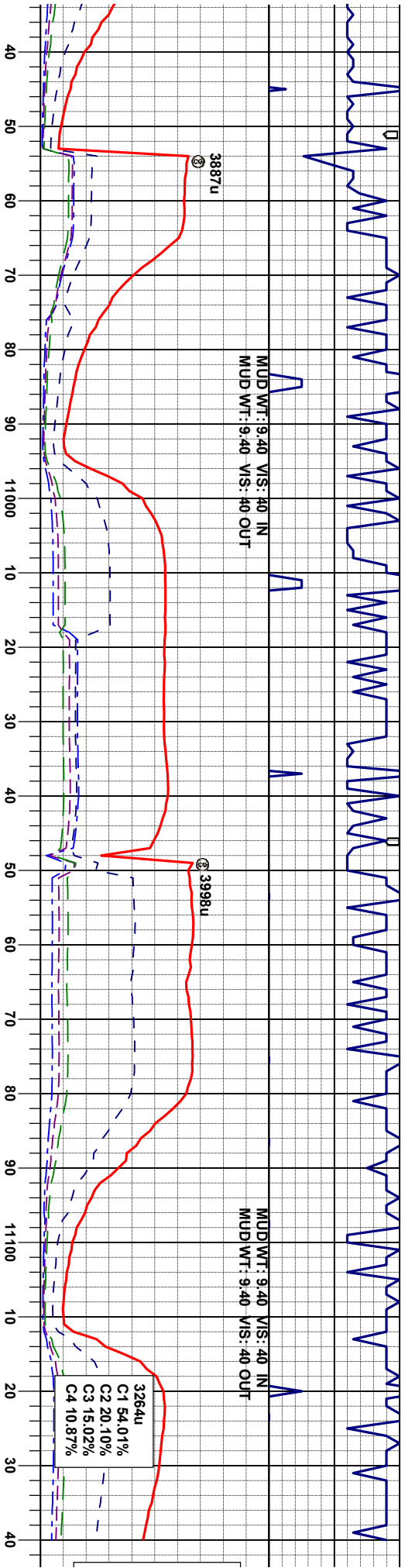
90% CHK: ilm-mgybrn, crm, ssply-sbopky, sft-si firm, mot-rthy, vcalc, 10% MRL: dkrmgy-blk, sbopky-spply, fis, mod firm-hd, sily, simot, calc, scat calcite, occembdfos, trisetos

SURVEY
MD 10,795'
TVD 6978.24'
INC 87.1°
AZI 267.0°

SURVEY
MD 10,890'
TVD 6982.39'
INC 87.9°
AZI 267.4°



EXCELLENT



90% CHK: ilm-ngybrn, crm, sbply-sbply, fis, sft-si firm, mot-rthy, vcalc, 10% MRL: dkbrgy-blk, sbply-sply, fis, mod firm-hd, silty, simot, calc, smeembdts, trisetos, tr calcite

80% CHK: ilm-ngybrn, smeern, sbply-sbply, fis, sft-si firm, mot-rthy, vcalc, 20% MRL: dkbrgy-blk, sbply-sply, fis, mod firm-hd, silty, simot, calc, sme embdts, trisetos, tr calcite

85% CHK: ilm-ngybrn, crm, sbply-sbply, fis, sft-si firm, mot-rthy, vcalc, 15% MRL: dkbrgy-blk, sbply-sply, fis, mod firm-hd, silty, simot, calc, smeembdts, trisetos, tr calcite

95% CHK: ilm-ngybrn, crm, sbply-sbply, fis, sft-si firm, mot-rthy, vcalc, 5% MRL: dkbrgy-blk, sbply-sply, fis, mod firm-hd, silty, simot, calc, abnt lse fos, smeembdts, tr calcite

SURVEY
MD 10,985'
TVD 6986.45'
INC 87.2°
AZI 266.9°

SURVEY
MD 11,080'
TVD 6991.09'
INC 87.2°
AZI 266.9°

EXCELLENT



MUD REPORT
11140' MD
Wt - 9.4
Vis - 43
pH - 9.0
YP - 14
API flt - 4.4
Ck - 2/0
Chid - 900

50 60 70 80 90 11200 10 20 30 40 50 60 70 80 90 11300 10 20 30 40 50

TD @ 11140' MD
06/3/2012 @ 22:20 MST

THANK YOU FOR USING
COLUMBINE LOGGING INC.

SURVEY
MD 11,175'
TVD 6998.21'
INC 84.2°
AZI 265.6°



