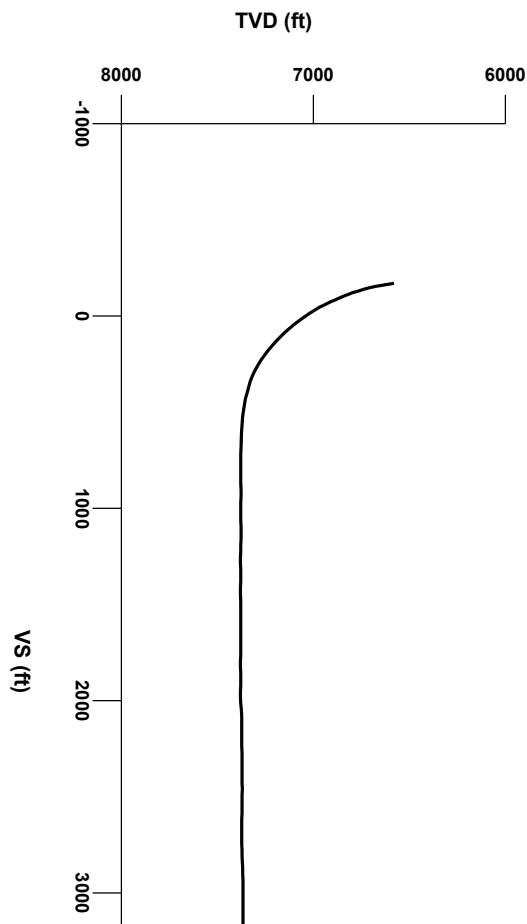


LOG created using Lplot VH Version 3.0, April 09, 2013, Copyright (C) 1999-2009 Pason Systems Corp.

OPERATOR: PDC ENERGY
WELL: DALTON 24L-441
LOCATION: SWSW 24 7N 66W 6 PM
COUNTY: WELD
STATE: COLORADO
SPOT: 250' FSL x 590' FWL
ELEVATION: GL 4,880' / KB 4,895'
FIELD: WATTERBURG
SPUD DATE: 3/22/2013
TD DATE: 4/05/2013
DATES LOGGED: 3/26/2013-4/05/2013
DEPTHS LOGGED: 6,610' MD-11,816'MD
LOGGERS: KEVIN DONAHUE, PASQUALE DEL VECCHIO, CT
DRILLING FLUID: LSND
DRILLING RIG: ENSIGN #14
API: 05-123-35824-0000
LOG TYPE: CURVE/LATERAL
SCALE: 1:240 (5 inches per 100 feet)
REMARKS: WELLSITE GEOLOGICAL SERVICES PROVIDED BY COLUMBINE LOGGING, INC.



Survey Elevation

4000

5000

N/S (ft)

-1000

0

1000

2000

3000

4000

5000

E/W (ft)

0

1000

Survey Plan

Breccia

Marl

Shaly Siltstone

Chalk

Sandstone

Siltstone

Limestone

Shaly Sandstone

Silty Shale

ENGINEERING SYMBOLS

Casing

Arrow

Casing

Midnight Depth

Connection

Normal Fault

Connection Gas

Reverse Fault

DEPTH (FEET)

6600

10

20

30

40

50

60

70

80

90

6700

10

20

SLIDE/Rotate

0

3

ROP

MIN/FT

0

3

WT 9.0/9.0: VIS 65/48

WT 9.1/9.1: VIS 50/45

COLUMBINE LOGGING INC.
RIGGED UP ON 3/26/2013
MANNED 2-PERSON LOGGING
WITH BLOODHOUND GAS
CHROMATOGRAPH UNIT #0583

GAS DATA MISSING
DUE TO FAULTY EER
WORKSTATION

GAS

UNITS

3500

C1

PPM

350000

C2

PPM

350000

C3

PPM

350000

C4

PPM

350000

CUTTINGS LITHOLOGY

93api

TVD

ft

6500

0

AP200

BHA #2 INFORMATION

BIT: 8.75" DF

NOZZLES: 7x16

BIT SERIAL NUMBER: #1686

SHALY SLTST: lt-mgy, com dk gy, v f gr, sme brndd, pty-sbdky, sft-frm, rthy aren tex, tr dsm pyr, sl calc, SHALY SS: lt-m gy, sft-frm, sb ply, sbnd-sbdky, p-mod srt, m consol, vsi calc SS: trnsi clr - wh, sme med gy, occ lt gy- s&p, sft - mod hd, brt, v f f gr, ang-sb rd, w srt, m consol, sl calc cmtl, n vis por,

SHALY SLTST: lt-mgy, com dk gy, v f gr, sme brndd, pty-sbdky, sft-frm, rthy aren tex, tr dsm pyr, sl calc, SHALY SS: lt-m gy, sft-frm, sb ply, sbnd-sbdky, p-mod srt, m consol, vsi calc SS: trnsi clr - wh, sme med gy, occ lt gy- s&p, sft - mod hd, brt, v f f gr, ang-sb rd, w srt, m consol, sl calc cmtl, n vis por,

SHALY SLTST: lt-mgy, com dk gy, v f gr, sme brndd, pty-sbdky, sft-frm, rthy aren tex, tr dsm pyr, sl calc, SHALY SS: lt-m gy, sft-frm, sb ply, sbnd-sbdky, p-mod srt, m consol, vsi calc SLTYSH: dk gy, sme brn blk tr dsm pyr SS: trnsi clr - wh, sme med g hd, brt, v f f gr, ang-sb rd, w

MD 6629'

INC 8.6°

AZM 3.5°

TVD 6611.905'

MD 6660'

INC 10.2°

AZM 10.8°

TVD 6442.489'

MD 6691'

INC 11.3°

AZM 11.7°

TVD 6672.944'

MD 6772'

INC 13.7°

AZM 7.0°

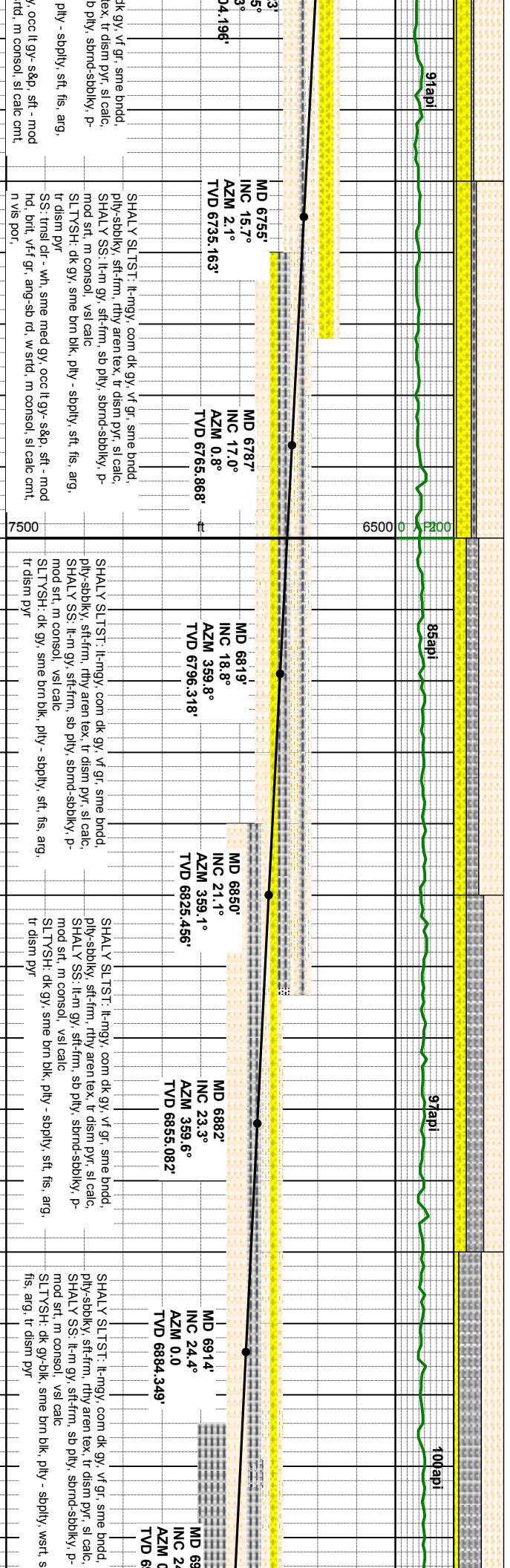
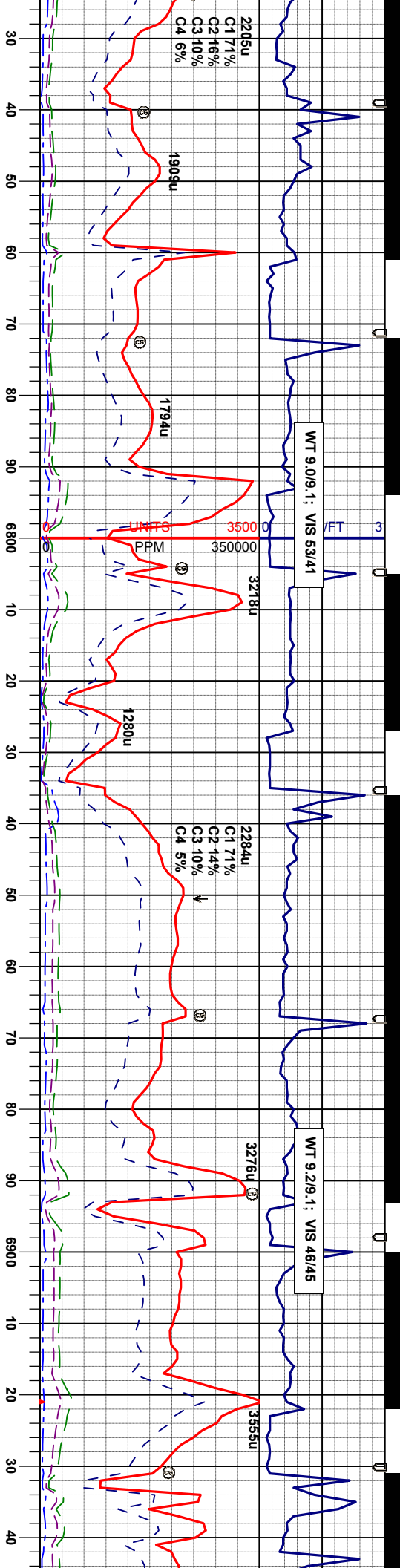
TVD 6700'

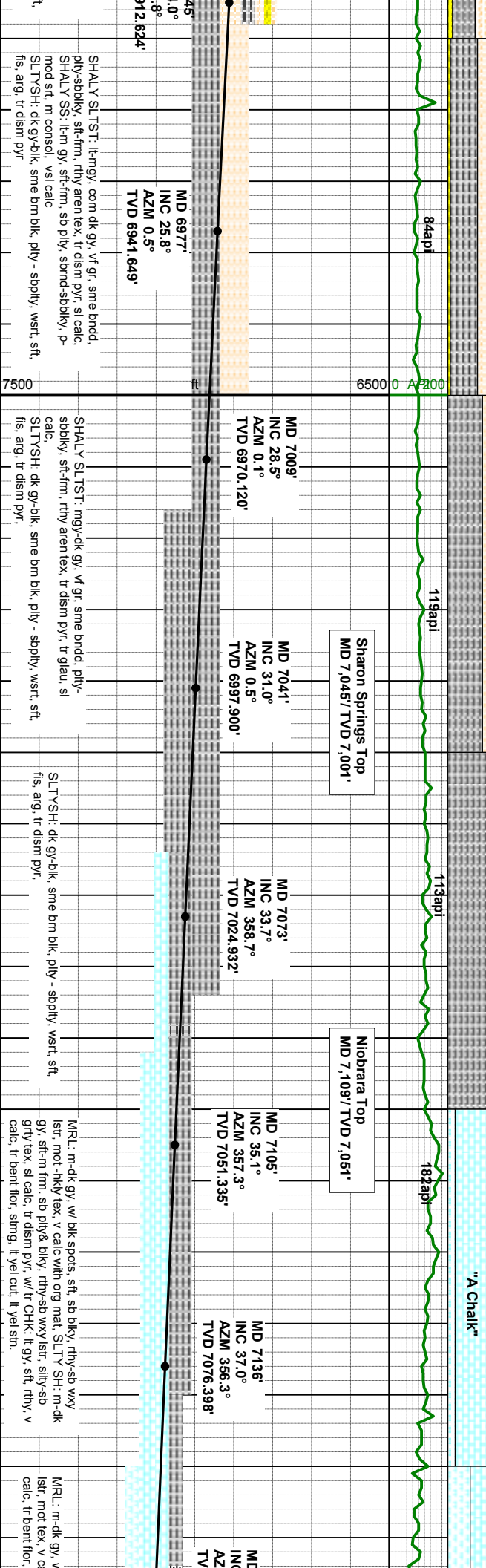
OIL SHOW

T F G

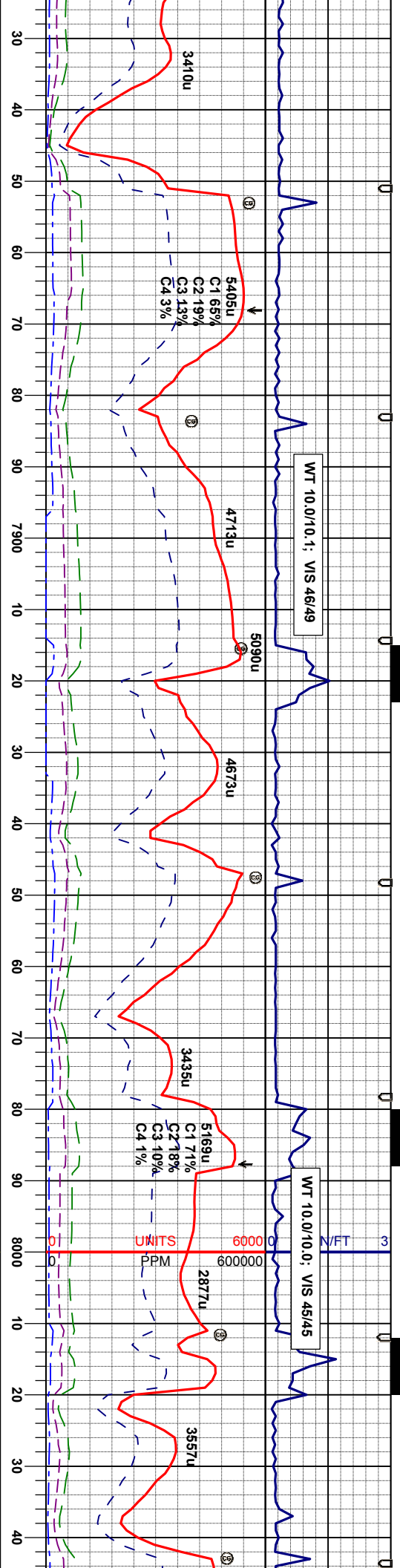
7500

SAMPLE PHOTOS





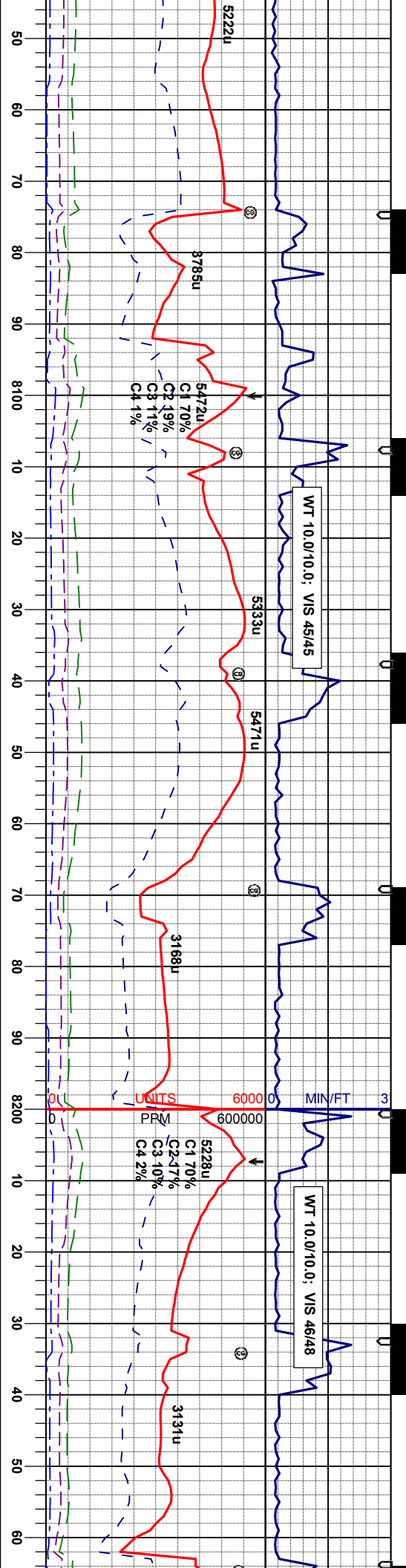
MRL: m-dk gy, w
lstr, mot tex, v c
calc, tr bent flr,



brt, occ sft, sbdky-pty, extr calc, v sl ang sl strm	SS: m gy, .clr, tmsl, m brn, m brn gr clusters, f-um gr, ang-sb rd, m strd, fr-p consol, sl-n calc, tr vis por, dark brn intragranular matrix, tr glau, occ pyr, scat lt gn flor	SS: m gy, .clr, tmsl, m brn, m brn gr clusters, f-um gr, ang-sb rd, m strd, fr-p consol, sl-n calc, tr vis por, dark brn intragranular matrix, tr glau, occ pyr, scat lt gn flor	SS: m gy, .clr, tmsl, m brn, m brn gr clusters, f-um gr, ang-sb rd, m strd, fr-p consol, sl-n calc, tr vis por, dark brn intragranular matrix, tr glau, occ pyr, scat lt gn flor	SS: m gy, .clr, tmsl, m brn, m brn gr clusters, f-um gr, ang-sb rd, m strd, fr-p consol, sl-n calc, tr vis por, dark brn intragranular matrix, tr glau, occ pyr, scat lt gn flor	SS: m gy, .clr, tmsl, m brn, m brn gr clusters, f-um gr, ang-sb rd, m strd, fr-p consol, sl-n calc, tr vis por, dark brn intragranular matrix, tr glau, occ pyr, scat lt gn flor
m brn gr clusters, f-um gr, sol, sl-n calc, tr vis por, tr glau, occ pyr, scat lt gn	LS: wh-lgy, occ crm, firm, brt, occ sft, sbdky-pty, micr, rthy-sl sug tex, n flor, extr calc, v sl ang sl strm frt yel cut, lt yel brn sin	LS: wh-lgy, occ crm, firm, brt, occ sft, sbdky-pty, micr, rthy-sl sug tex, n flor, extr calc, v sl ang sl strm frt yel cut, lt yel brn sin	LS: wh-lgy, occ crm, firm, brt, occ sft, sbdky-pty, micr, rthy-sl sug tex, n flor, extr calc, v sl ang sl strm frt yel cut, lt yel brn sin	LS: wh-lgy, occ crm, firm, brt, occ sft, sbdky-pty, micr, rthy-sl sug tex, n flor, extr calc, v sl ang sl strm frt yel cut, lt yel brn sin	LS: wh-lgy, occ crm, firm, brt, occ sft, sbdky-pty, micr, rthy-sl sug tex, n flor, extr calc, v sl ang sl strm frt yel cut, lt yel brn sin

MD 7830' INC 88.4° AZM 358.9° TVD 7375.6'	MD 7893' INC 87.9° AZM 358.0° TVD 7377.8'	MD 7925' INC 88.9° AZM 357.8° TVD 7378.7'	MD 7957' INC 90.1° AZM 358.2° TVD 7378.9'	MD 7989' INC 90.5° AZM 358.2° TVD 7378.8'	MD 8020' INC 90.5° AZM 359.1° TVD 7378.5'
--	--	--	--	--	--





SS: m gy, clr, tmsl, m brn, m brn gr clusters, f-um gr, ang-sb rd, m srd, fr-p consol, sl-n calc, tr vis por, dark brn intragranular matrix, tr glau, occ pyr, scat lt gn flr, strn fnt yel cut, lt yel brn sin

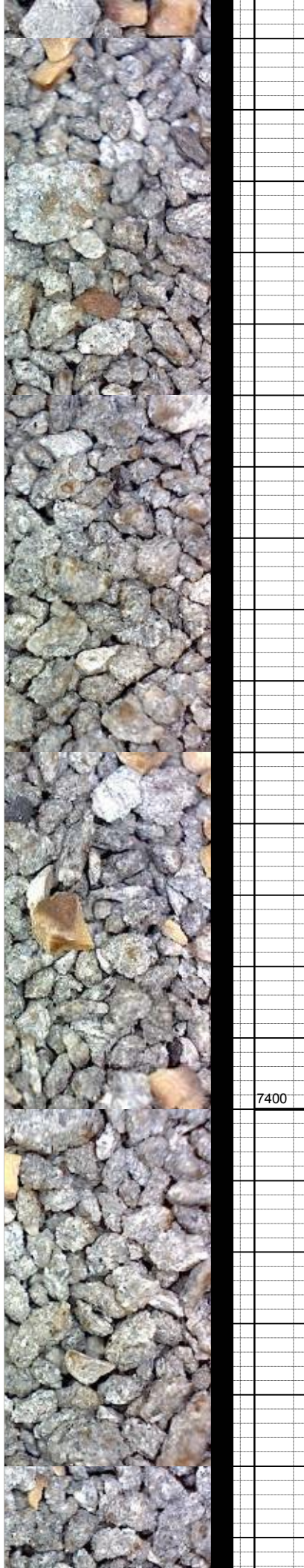
SS: m gy, clr, tmsl, m brn, m brn gr clusters, f-um gr, ang-sb rd, m srd, fr-p consol, sl-n calc, tr vis por, dark brn intragranular matrix, tr glau, occ pyr, scat lt gn flr, strn fnt yel cut, lt yel brn sin

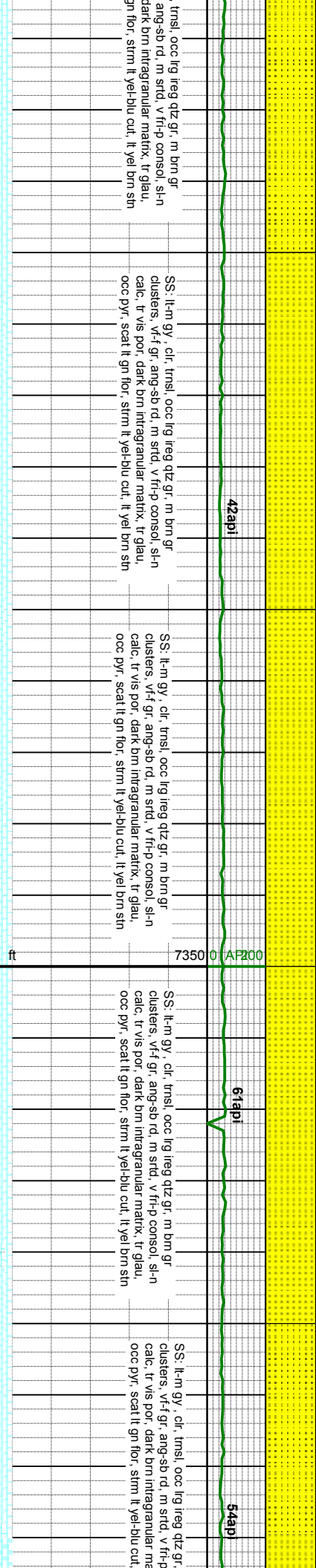
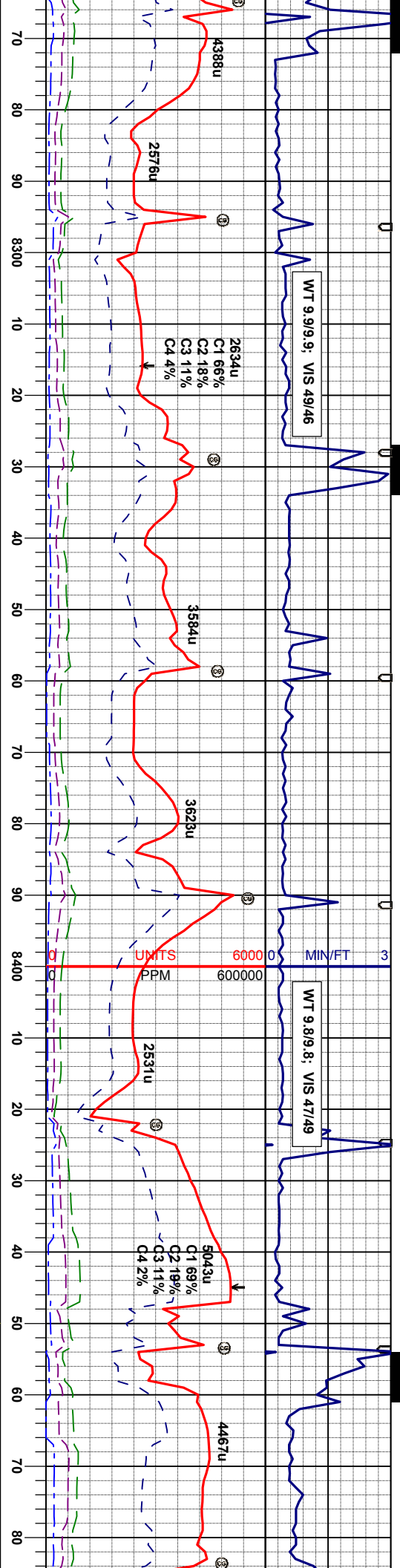
SS: m gy, clr, tmsl, m brn, m brn gr clusters, f-um gr, ang-sb rd, m srd, fr-p consol, sl-n calc, tr vis por, dark brn intragranular matrix, tr glau, occ pyr, scat lt gn flr, strn fnt yel cut, lt yel brn sin

SS: lt-m gy, clr, tmsl, occ lng irreg qtz gr, m brn gr clusters, vt-f gr, ang-sb rd, m srd, v fr-p consol, sl-n calc, tr vis por, dark brn intragranular matrix, tr glau, occ pyr, scat lt gn flr, strn lt yel blu cut, lt yel brn sin

SS: lt-m gy, clr, tmsl, occ lng irreg qtz gr, m brn gr clusters, vt-f gr, ang-sb rd, m srd, v fr-p consol, sl-n calc, tr vis por, dark brn intragranular matrix, tr glau, occ pyr, scat lt

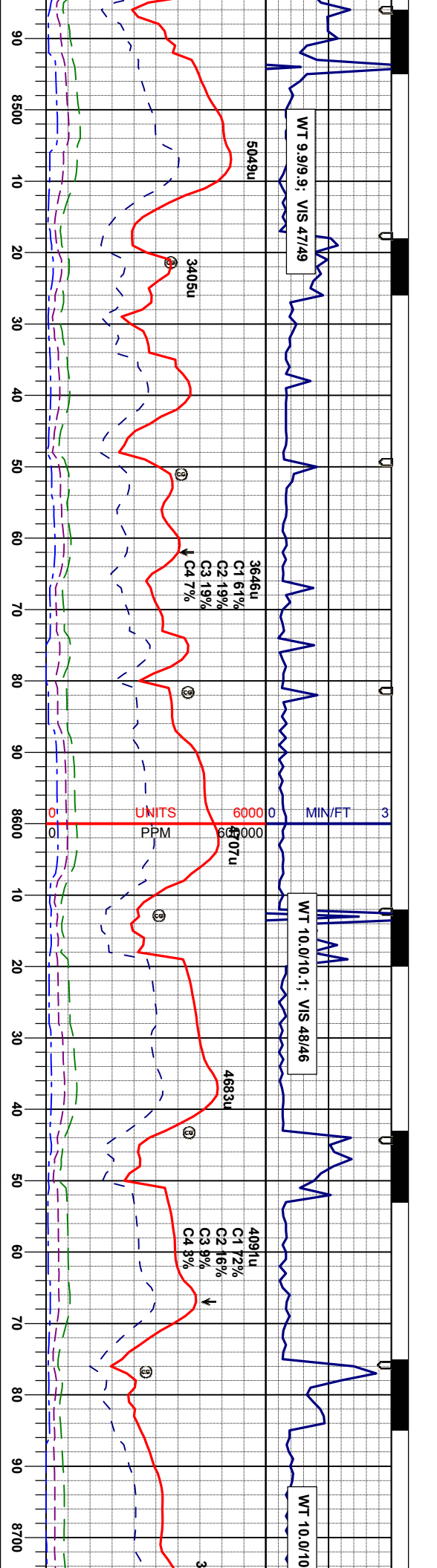
MD 8052' INC 89.8° AZM 358.2° TVD 7378.4'	MD 8084' INC 90.3° AZM 358.9° TVD 7378.4'	MD 8116' INC 91.0° AZM 359.1° TVD 7378.0'	MD 8148' INC 89.4° AZM 358.9° TVD 7378.4'	MD 8179' INC 89.2° AZM 359.4° TVD 7378.3'	MD 8211' INC 88.8° AZM 0.7° TVD 7378.9'	MD 8243' INC 90.6° AZM 1.5° TVD 7379.0'
--	--	--	--	--	--	--





MD 8275' INC 91.3° AZM 1.9° TVD 7378.5'	MD 8306' INC 90.9° AZM 1.2° TVD 7377.9'	MD 8338' INC 89.4° AZM 0.8° TVD 7377.8'	MD 8370' INC 89.1° AZM 0.3° TVD 7378.3'	MD 8402' INC 88.9° AZM 359.8° TVD 7378.8'	MD 8433' INC 88.6° AZM 359.4° TVD 7379.5'	MD 8465' INC 88.9° AZM 0.1° TVD 7380.2'
--	--	--	--	--	--	--





SS: lt-m gy, cl, trns, occ lig irreg qtz gr, m brn gr clusters, v-f gr, ang-sb rd, m strd, v fr-p consol, sh-calc, tr vis por, dark brn intragranular matrix, tr glau, occ pyr, scat lt gn flor, strn lt ye-blu cut, lt ye brn sh

SS: lt-m gy, cl, trns, occ lig irreg qtz gr, m brn gr clusters, v-f gr, ang-sb rd, m strd, v fr-p consol, sh-calc, tr vis por, dark brn intragranular matrix, tr glau, occ pyr, scat lt gn flor, strn lt ye-blu cut, lt ye brn sh

SS: lt-m gy, cl, trns, occ lig irreg qtz gr, m brn gr clusters, v-f gr, ang-sb rd, m strd, v fr-p consol, sh-calc, tr vis por, dark brn intragranular matrix, tr glau, occ pyr, scat lt gn flor, strn lt ye-blu cut, lt ye brn sh

MD 8499' INC 90.5° AZM 0.3° TVD 7380.4'	MD 8529' INC 91.3° AZM 0.7° TVD 7379.9'	MD 8560' INC 90.0° AZM 0.1° TVD 7379.5'	MD 8592' INC 89.3° AZM 359.6° TVD 7379.7'	MD 8623' INC 89.5° AZM 359.8° TVD 7380.5'	MD 8655' INC 90.2° AZM 0.0° TVD 7380.1'	MD 8697' INC 90.7° AZM 360.0° TVD 7379.8'
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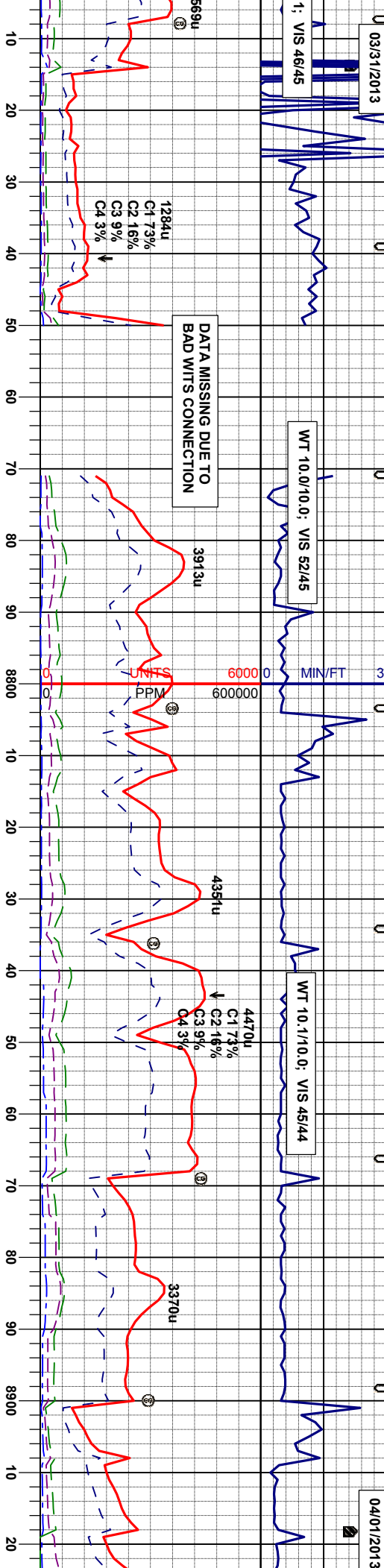
03/31/2013

04/01/2013

1: VIS 46/45

WT 10.0/10.0: VIS 52/45

WT 10.1/10.0: VIS 45/44



DATA MISSING DUE TO
BAD WITS CONNECTION

1284u

3913u

4351u

4470u

3370u

6699u

C1 73%

C2 16%

C3 9%

C4 3%

PPM

C1 73%

C2 16%

C3 9%

C4 3%

LS: lt-bn gy, cfr, trnsf, occ lng lng qtz gr, m brn gr
mior, rthy-si sug tex, n flr, extr calc, v sl arg SS: m
gy, cfr, trnsf, m brn, m brn gr clusters, f-um gr, ang-sb
rd, m strd, fr-p consol, sl-n calc, tr vis por, dark brn
intragranular matrix, tr glau, occ pyr, scat lt gn flr, sl
strm cut int yel cut, lt yel brn sin, lt yel string cut, n sin

LS: wh-lgy, occ cm, firm, brt, occ sft, sbblky-ply,
mior, rthy-si sug tex, n flr, extr calc, v sl arg SS: m
gy, cfr, trnsf, m brn, m brn gr clusters, f-um gr, ang-sb
rd, m strd, fr-p consol, sl-n calc, tr vis por, dark brn
intragranular matrix, tr glau, occ pyr, scat lt gn flr, sl
strm cut int yel cut, lt yel brn sin, lt yel string cut, n sin

LS: wh-lgy, occ cm, firm, brt, occ sft, sbblky-ply,
mior, rthy-si sug tex, n flr, extr calc, v sl arg SS: m
gy, cfr, trnsf, m brn, m brn gr clusters, f-um gr, ang-sb
rd, m strd, fr-p consol, sl-n calc, tr vis por, dark brn
intragranular matrix, tr glau, occ pyr, scat lt gn flr, sl
strm cut int yel cut, lt yel brn sin, lt yel string cut, n sin

LS: wh-lgy, occ cm, firm, brt, occ sft, sbblky-ply,
mior, rthy-si sug tex, n flr, extr calc, v sl arg SS: m
gy, cfr, trnsf, m brn, m brn gr clusters, f-um gr, ang-sb
rd, m strd, fr-p consol, sl-n calc, tr vis por, dark brn
intragranular matrix, tr glau, occ pyr, scat lt gn flr, sl
strm cut int yel cut, lt yel brn sin, lt yel string cut, n sin

LS: wh-lgy, occ cm, firm, b
mior, rthy-si sug tex, n flr, e
gy, cfr, trnsf, m brn, m brn gr
rd, m strd, fr-p consol, sl-n
intragranular matrix, tr glau,
strm cut int yel cut, lt yel brn

BHA #5 INFORMATION
BIT: 6.125" VAREL
NOZZLES: OPEN
BIT SERIAL NUMBER: #CM24RMS

BHA #6 INFORMATION
BIT: 6.125" SMITH
NOZZLES: 5X16
BIT SERIAL NUMBER: #JG1365

<<<Top of Target Zone>>>

<<<Top of Target Zone>>>

MD 8751'
INC 90.2°
AZM 0.1°
TVD 7379.4'

MD 8782'
INC 89.9°
AZM 0.0°
TVD 7379.4'

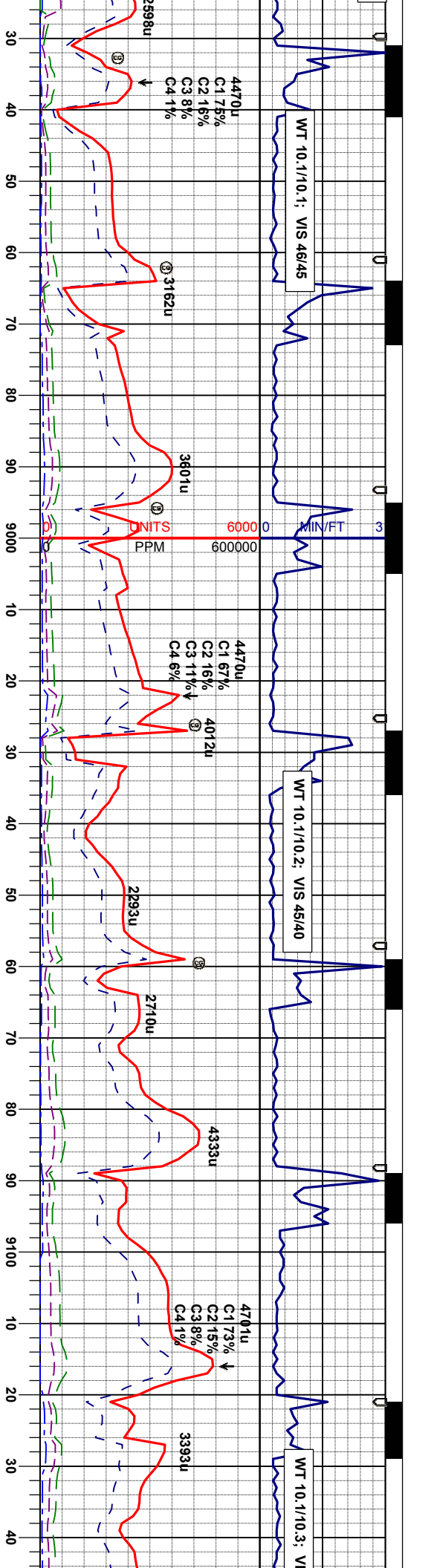
MD 8814'
INC 90.2°
AZM 359.6°
TVD 7379.3'

MD 8846'
INC 90.2°
AZM 359.2°
TVD 7379.2'

MD 8878'
INC 90.0°
AZM 358.7°
TVD 7379.2'

MD 8909'
INC 90.0°
AZM 359.1°
TVD 7379.2'





③ 3162u
③ 3601u
③ 3598u
③ 4012u
③ 2293u
③ 2710u
③ 4338u
③ 4701u
③ 3393u
③ 3740u

SS: lt-m gy, clr, trnsi, occ lig irreg qtz gr, m bn gr clusters, v-f gr, ang-sb rd, m srt, v fr-p consol, sh-n calc, tr vis por, dark bn intragranular matrix, tr glau, occ pyr, LS: wh-lyg, occ cm, firm, brt, occ sft, sbdky-ply, micr, rthy-si sug tex, n flor, ext calc, v si arg; scat lt gn flor, strim lt yel-blu cut, lt yel bn sin

SS: lt-m gy, clr, trnsi, occ lig irreg qtz gr, m bn gr clusters, v-f gr, ang-sb rd, m srt, v fr-p consol, sh-n calc, tr vis por, dark bn intragranular matrix, tr glau, occ pyr, LS: wh-lyg, occ cm, firm, brt, occ sft, sbdky-ply, micr, rthy-si sug tex, n flor, ext calc, v si arg; scat lt gn flor, strim lt yel-blu cut, lt yel bn sin

SS: lt-m gy, clr, trnsi, occ lig irreg qtz gr, m bn gr clusters, v-f gr, ang-sb rd, m srt, v fr-p consol, sh-n calc, tr vis por, dark bn intragranular matrix, tr glau, occ pyr, LS: wh-lyg, occ cm, firm, brt, occ sft, sbdky-ply, micr, rthy-si sug tex, n flor, ext calc, v si arg; scat lt gn flor, strim lt yel-blu cut, lt yel bn sin

MD 8941' INC 89.6° AZM 359.6° TVD 7379.3'

MD 8973' INC 89.1° AZM 359.8° TVD 7379.6'

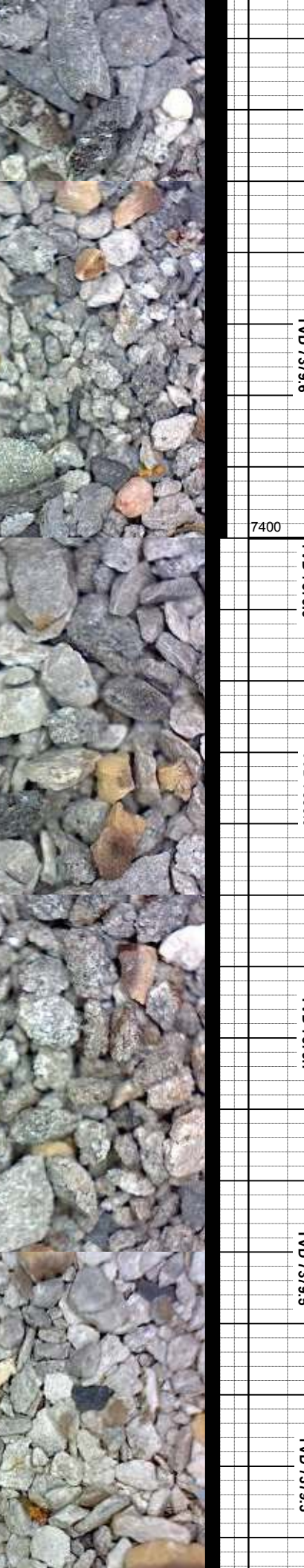
MD 9005' INC 89.6° AZM 0.1° TVD 7379.9'

MD 9036' INC 90.3° AZM 359.8° TVD 7380.0'

MD 9068' INC 90.7° AZM 360.0° TVD 7379.7'

MD 9100' INC 90.3° AZM 360.0° TVD 7379.5'

MD 9132' INC 89.3° AZM 0.5° TVD 7379.5'

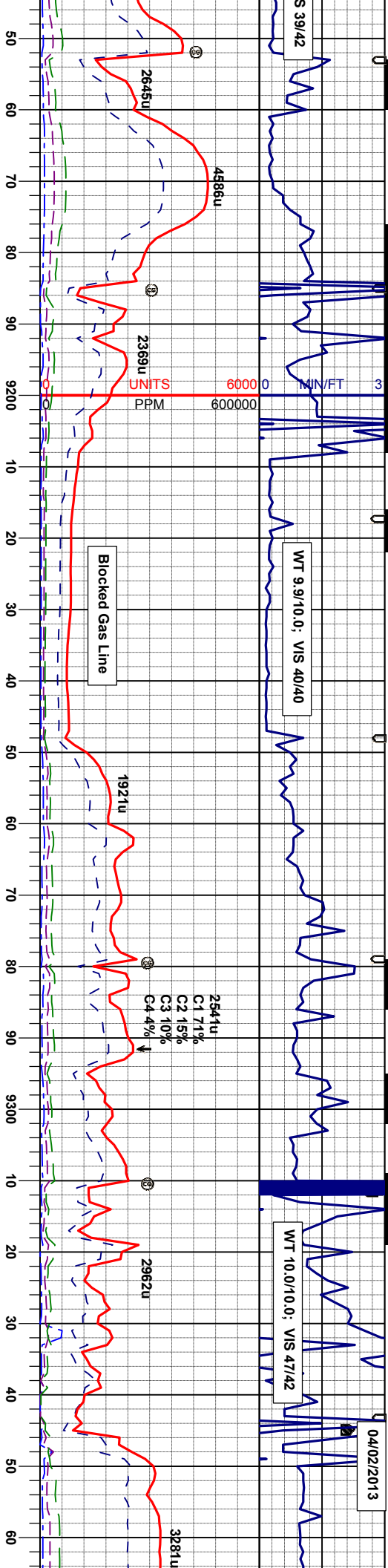


04/02/2013

S 39/42

WT 9.9/10.0; VIS 40/40

WT 10.0/10.0; VIS 47/42



SS: lt-m gy, clr, trns, occ lg irreg qtz gr, m brn gr clusters, v-f gr, ang-sb rd, m strd, v fr-p consol, sh-n calc, tr vis por, dark brn intragranular matrix, tr glau, occ pyr, LS: wh-lgy, occ crm, firm, brlt, occ sft, sbdky-ply, micr, rthy-si sug tex, n flor, ext calc, v si arg, scat it gn flor, SLTVSH: m-dk gy & blk, sft, sb pily, rthy, lam, bioturb in part, tr pyr, si calc, n flor, si strm it yel-blu cut, it yel brn sin

SS: lt-m gy, clr, trns, occ lg irreg qtz gr, m brn gr clusters, v-f gr, ang-sb rd, m strd, v fr-p consol, sh-n calc, tr vis por, dark brn intragranular matrix, tr glau, occ pyr, LS: wh-lgy, occ crm, firm, brlt, occ sft, sbdky-ply, micr, rthy-si sug tex, n flor, ext calc, v si arg, scat it gn flor, SLTVSH: m-dk gy & blk, sft, sb pily, rthy, lam, bioturb in part, tr pyr, si calc, n flor, si strm it yel-blu cut, it yel brn sin

LS: wh-lgy, occ crm, firm, brlt, occ sft, sbdky-ply, micr, rthy-si sug tex, n flor, ext calc, v si arg, scat it gn flor, SS: lt-m gy, clr, trns, occ lg irreg qtz gr, m brn gr clusters, v-f gr, ang-sb rd, m strd, v fr-p consol, sh-n calc, tr vis por, dark brn intragranular matrix, tr glau, occ pyr, LS: wh-lgy, occ crm, firm, brlt, occ sft, sbdky-ply, micr, rthy-si sug tex, n flor, ext calc, v si arg, scat it gn flor, SLTVSH: m-dk gy & blk, sft, sb pily, rthy, lam, bioturb in part, tr pyr, si calc, n flor, si strm it yel-blu cut, it yel brn sin

LS: wh-lgy, occ crm, firm, brlt, occ sft, sbdky-ply, micr, rthy-si sug tex, n flor, ext calc, v si arg, scat it gn flor, SS: lt-m gy, clr, trns, occ lg irreg qtz gr, m brn gr clusters, v-f gr, ang-sb rd, m strd, v fr-p consol, sh-n calc, tr vis por, dark brn intragranular matrix, tr glau, occ pyr, LS: wh-lgy, occ crm, firm, brlt, occ sft, sbdky-ply, micr, rthy-si sug tex, n flor, ext calc, v si arg, scat it gn flor, SLTVSH: m-dk gy & blk, sft, sb pily, rthy, lam, bioturb in part, tr pyr, si calc, n flor, si strm it yel-blu cut, it yel brn sin

MD 9164' INC 88.6° AZM 0.1° TVD 7380.2'

MD 9195' INC 91.3° AZM 1.5° TVD 7380.2'

MD 9227' INC 94.0° AZM 3.3° TVD 7378.7'

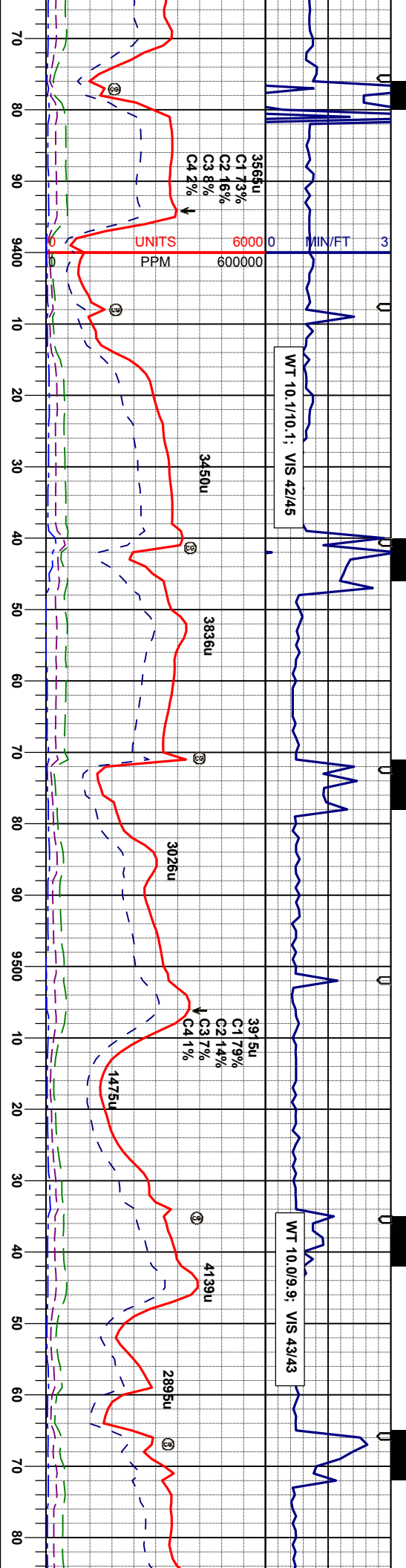
MD 9259' INC 94.7° AZM 3.8° TVD 7376.3'

MD 9291' INC 91.3° AZM 3.6° TVD 7374.6'

MD 9323' INC 89.1° AZM 3.3° TVD 7374.5'

MD 9354' INC 89.5° AZM 2.9° TVD 7374.9'





16api AP200 53api 37api 45api

LS: wh-lgy, occ crm, firm, brlt, occ sft, sbblky-pily, micr, rthy-si sug tex, n flor, extr calc, v si arg, scat lt gn flor, SLTYSH: m-dk gy & blk, sft, sb pily, rthy, lam, bioturb in part, tr pyr, si calc, n flor, occ pyr, si strm lt yel-blu cut, lt yel brn stn

LS: wh-lgy, occ crm, firm, brlt, occ sft, sbblky-pily, micr, rthy-si sug tex, n flor, extr calc, v si arg, scat lt gn flor, SLTYSH: m-dk gy & blk, sft, sb pily, rthy, lam, bioturb in part, tr pyr, si calc, n flor, occ pyr, si strm lt yel-blu cut, lt yel brn stn

LS: wh-lgy, occ crm, firm, brlt, occ sft, sbblky-pily, micr, rthy-si sug tex, n flor, extr calc, v si arg, scat lt gn flor, SLTYSH: m-dk gy & blk, sft, sb pily, rthy, lam, bioturb in part, tr pyr, si calc, n flor, occ pyr, si strm lt yel-blu cut, lt yel brn stn

7 INFORMATION
LES: 5X16
SERIAL NUMBER: #JG2278

MD 9386'
INC 90.6°
AZM 2.8°
TVD 7374.8'

MD 9418'
INC 91.5°
AZM 2.8°
TVD 7374.3'

MD 9449'
INC 91.4°
AZM 2.6°
TVD 7373.5'

MD 9481'
INC 90.3°
AZM 2.4°
TVD 7373.0'

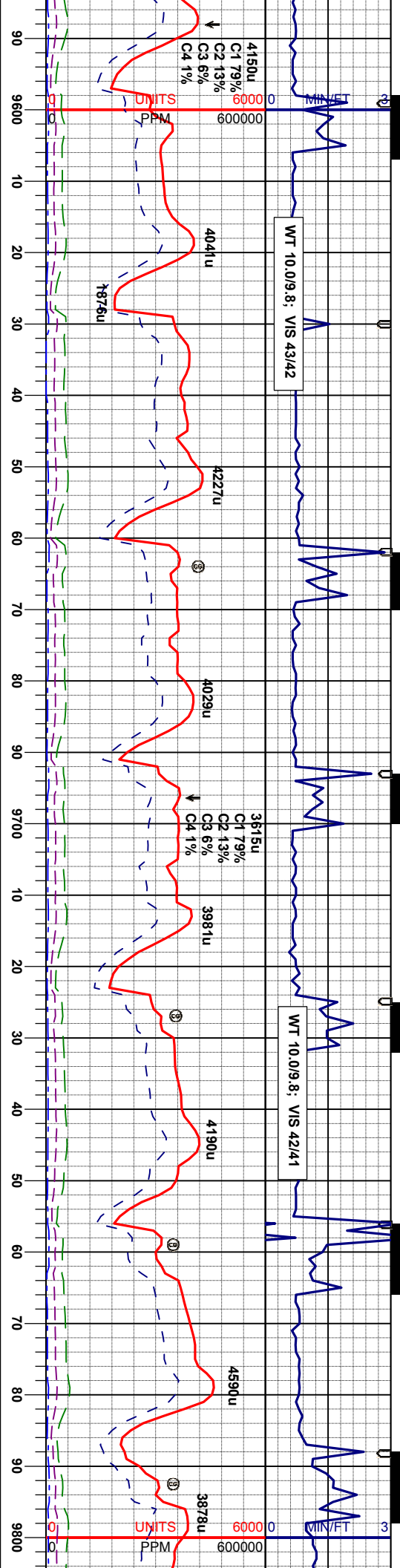
MD 9513'
INC 90.4°
AZM 0.5°
TVD 7372.8'

MD 9545'
INC 89.9°
AZM 359.8°
TVD 7372.4'

MD 9576'
INC 89.9°
AZM 358.7°
TVD 7372.2'

<<<Top of Target Zone>>>





obblky-pily, argi, scat lt gn rthy, lam, yr: si strim lt

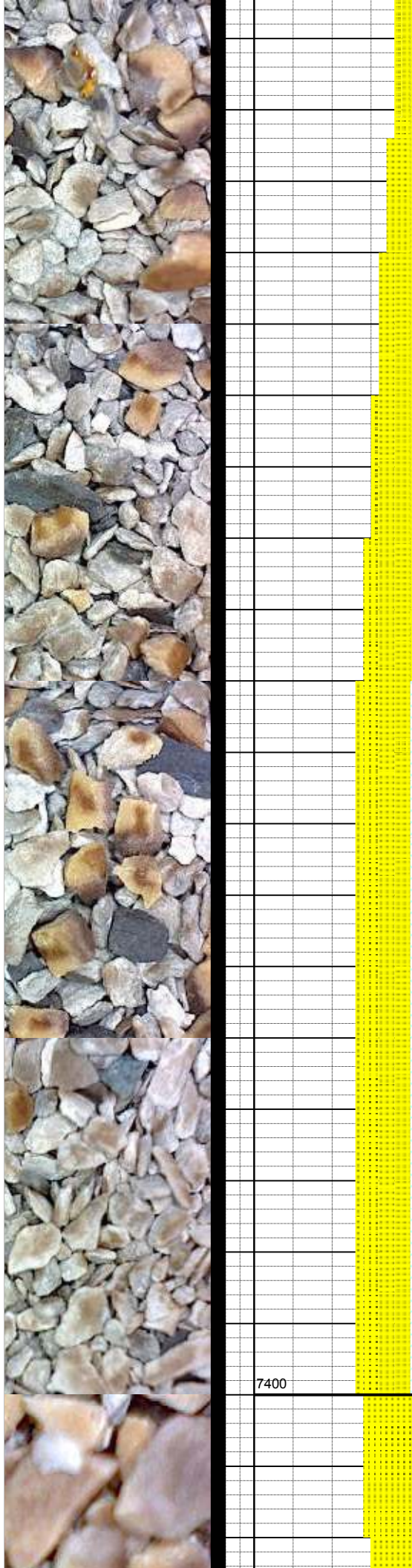
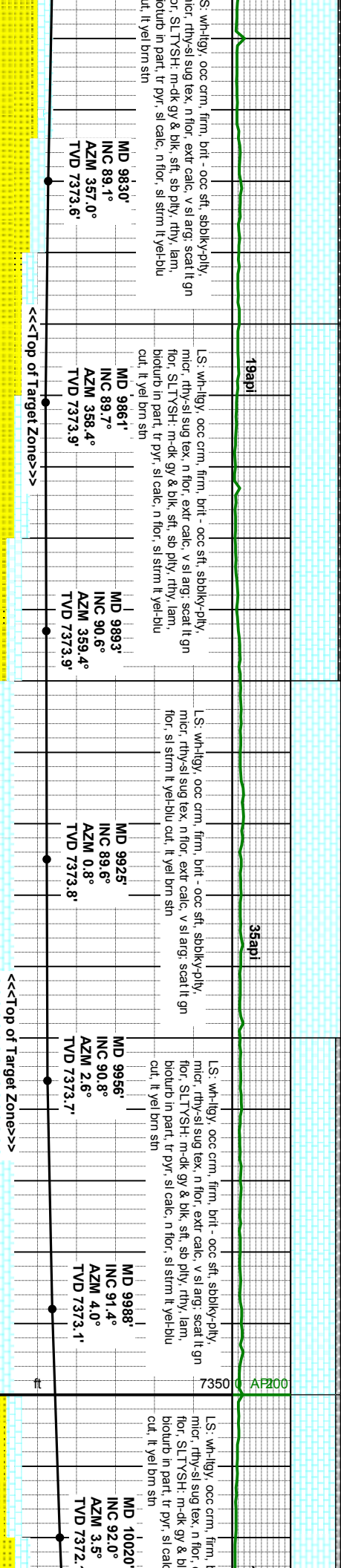
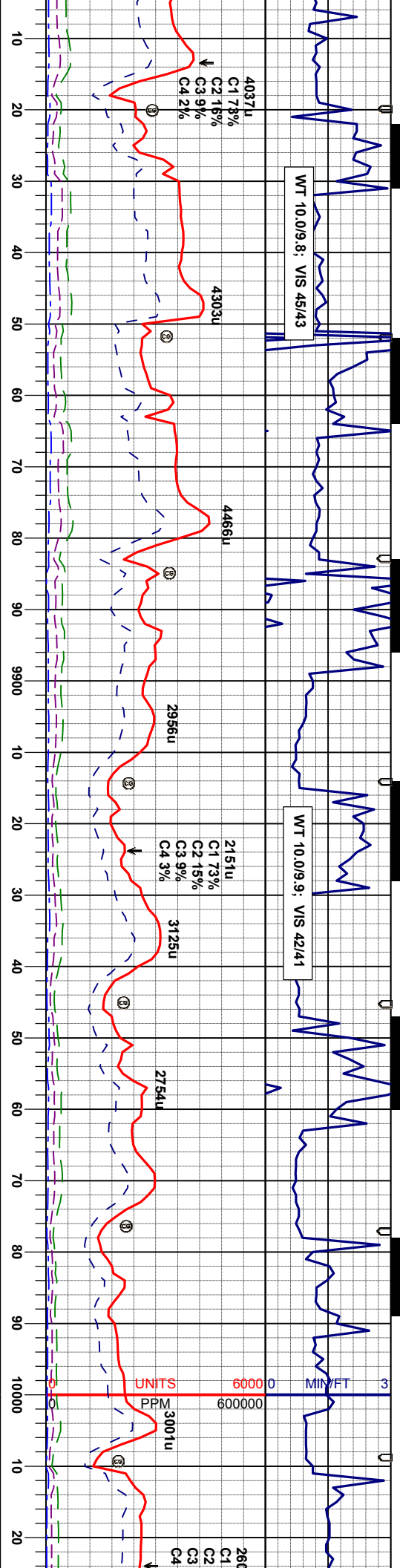
LS: wh-llgy, occ crm, firm, brit - occ sft, sbblky-pily, micr, rthy-si sug tex, n flor, extr calc, v si arg, scat lt gn flor, SLTYSH: m-dk gy & blk, sft, sb pily, rthy, lam, bioturb in part, tr pyr, si calc, n flor, si strim lt ye-blu cut, lt yei brn sin

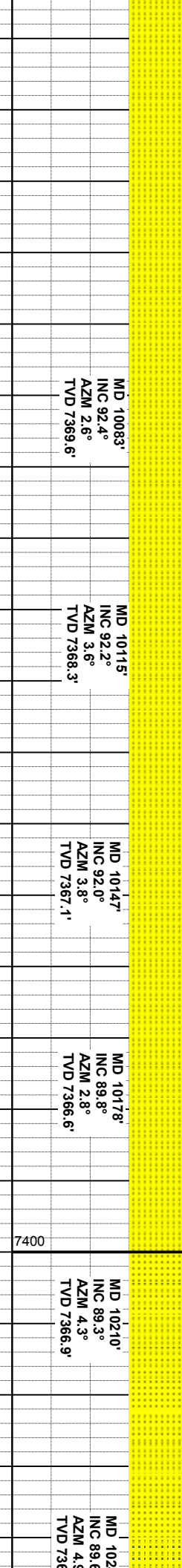
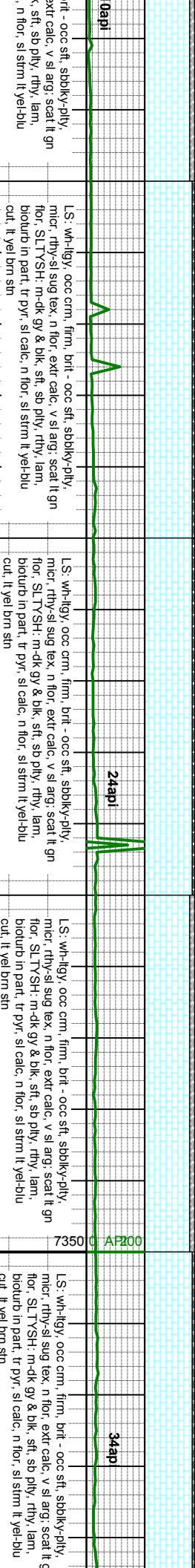
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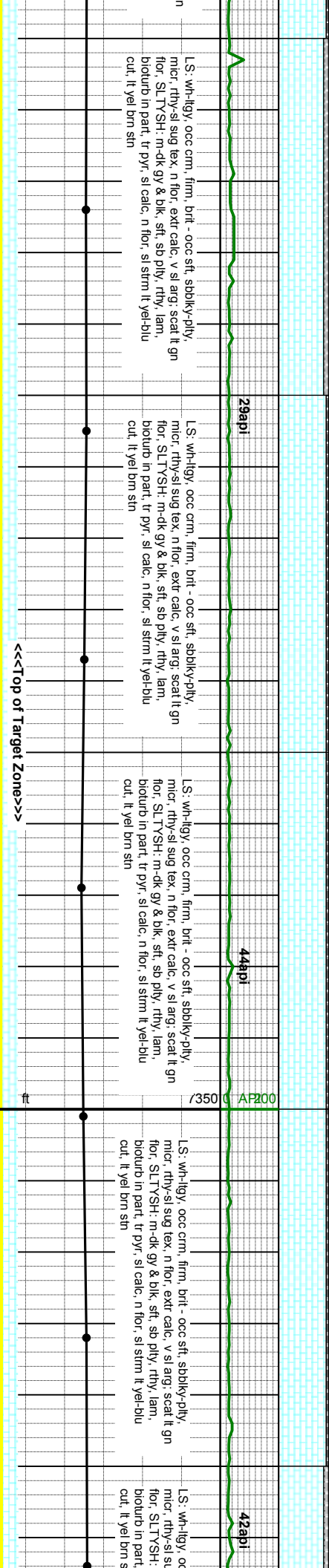
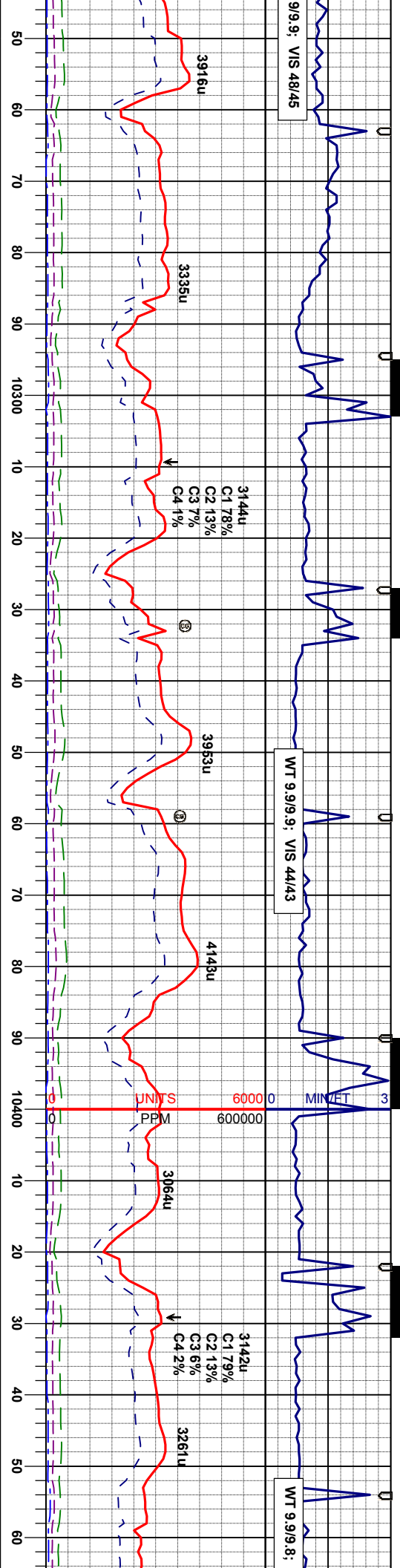
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7400	MD 9608' INC 90.2° AZM 358.0° TVD 7372.2'	MD 9640' INC 90.7° AZM 357.0° TVD 7371.9'	MD 9671' INC 90.7° AZM 357.5° TVD 7371.6'	MD 9703' INC 89.0° AZM 355.6° TVD 7371.7'	MD 9735' INC 89.3° AZM 355.9° TVD 7372.1'	MD 9766' INC 89.3° AZM 355.9° TVD 7372.5'	MD 9798' INC 88.8° AZM 356.1° TVD 7373.0'
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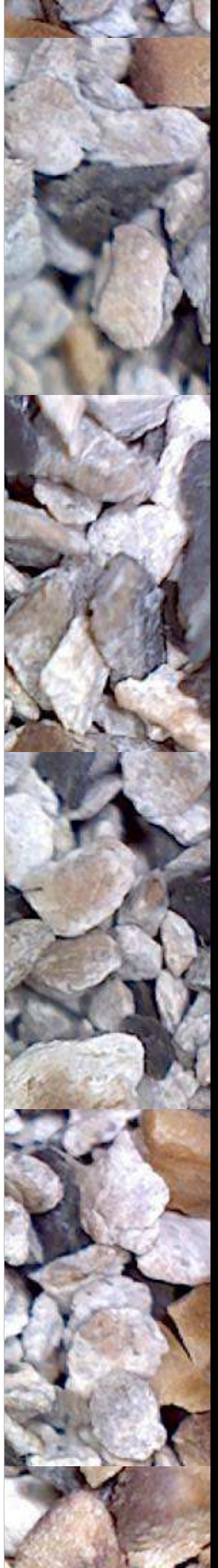


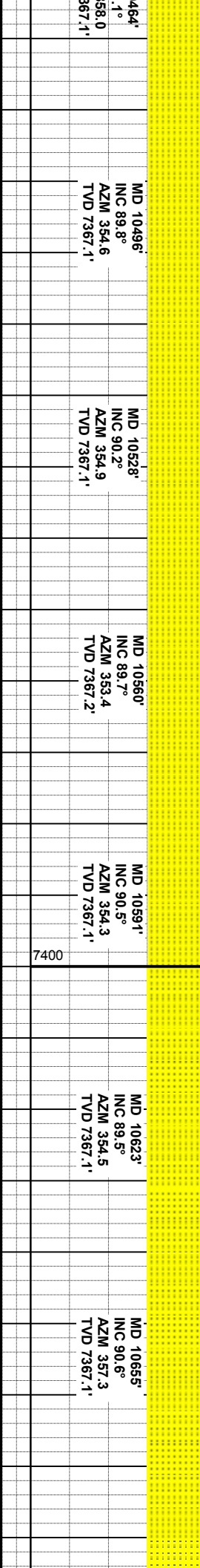
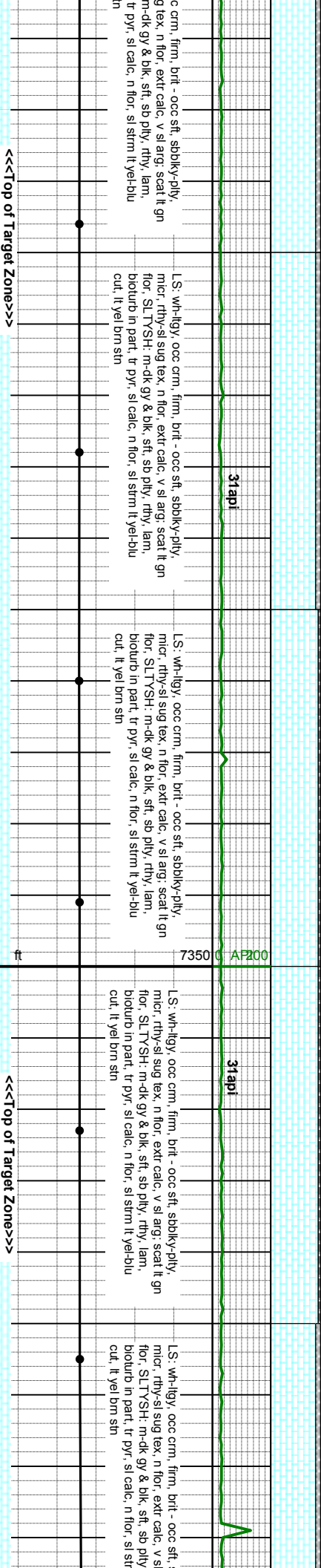
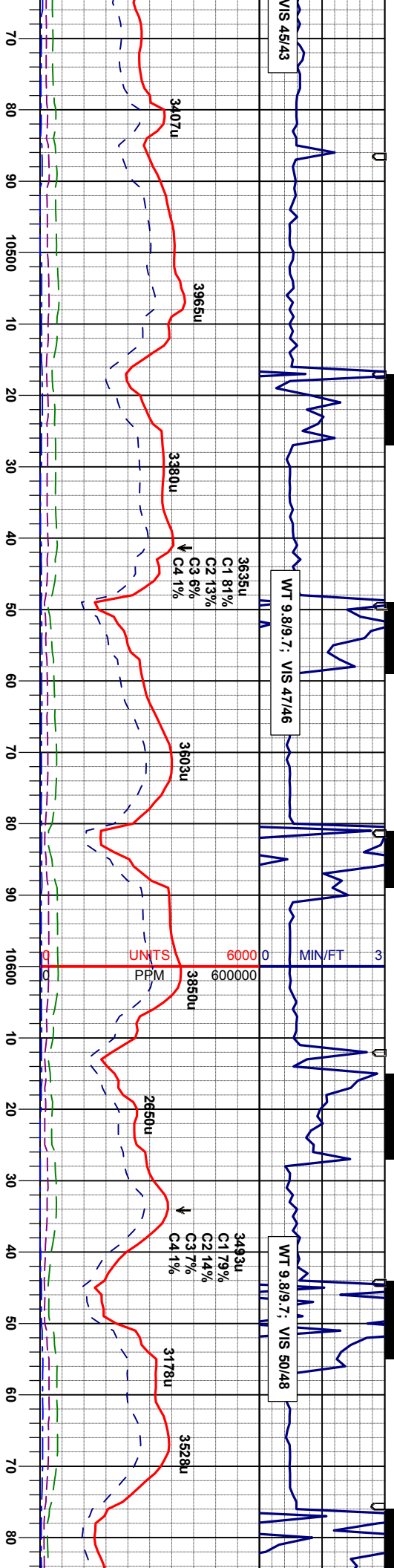




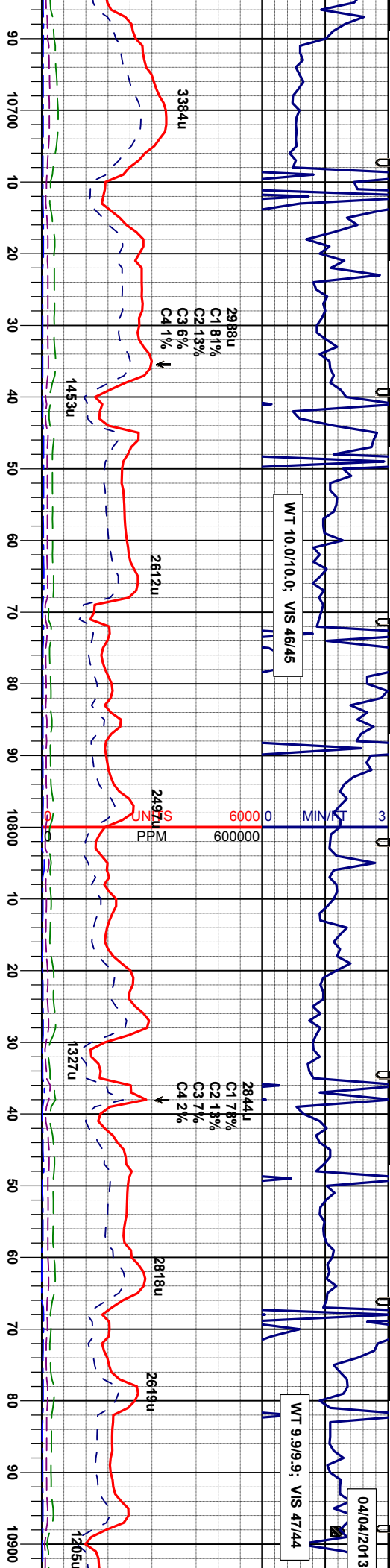


MD 10274'	INC 90.1°	AZM 4.5°	TVD 7367.3'
MD 10305'	INC 90.1°	AZM 3.3°	TVD 7367.2'
MD 10337'	INC 88.9°	AZM 359.8°	TVD 7367.5'
MD 10369'	INC 89.8°	AZM 0.8°	TVD 7367.8'
MD 10401'	INC 91.1°	AZM 2.8°	TVD 7367.6'
MD 10432'	INC 90.3°	AZM 0.7°	TVD 7367.2'
MD 10463'	INC 90.3°	AZM 0.7°	TVD 7367.2'





WT 9.9/9.9; VIS 47/44



34api

L.S: wh-lgy, occ crm, firm, brit - occ sft, sbblky-pty, micr, rthy-si sug tex, n flor, extr calc, v si arg; scat lt gn flor, SLTYSH: m-dk gy & blk, sft, sb ply, rthy, lam, bioturb in part, tr pyr, si calc, n flor, si strim lt yel-blu cut, lt yel brn sin

32api

L.S: wh-lgy, occ crm, firm, brit - occ sft, sbblky-pty, micr, rthy-si sug tex, n flor, extr calc, v si arg; scat lt gn flor, SLTYSH: m-dk gy & blk, sft, sb ply, rthy, lam, bioturb in part, tr pyr, si calc, n flor, si strim lt yel-blu cut, lt yel brn sin

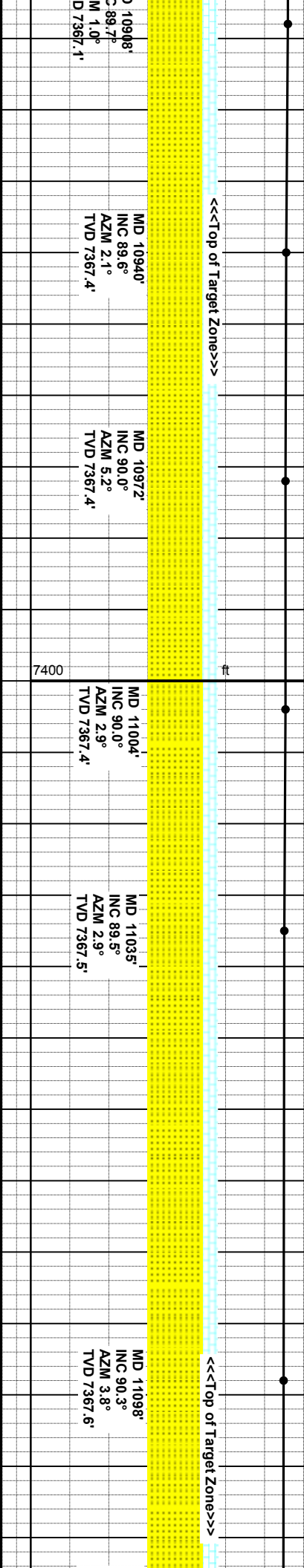
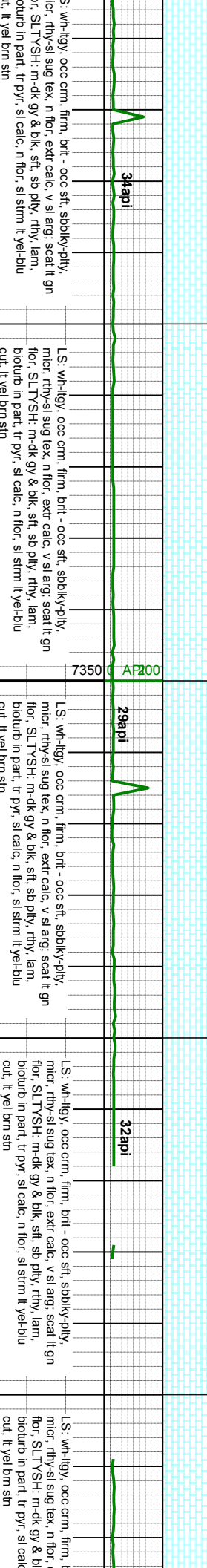
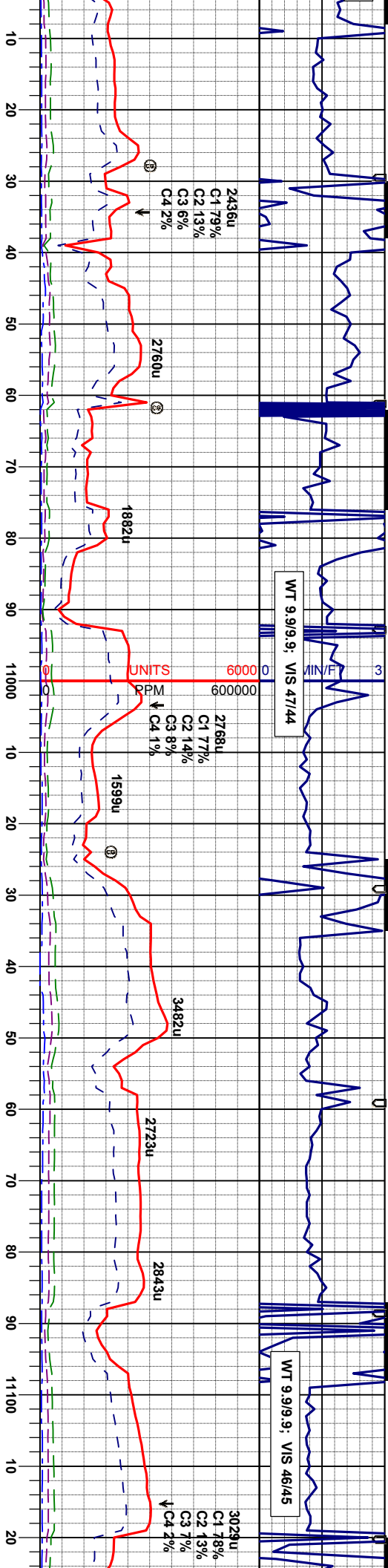
42api

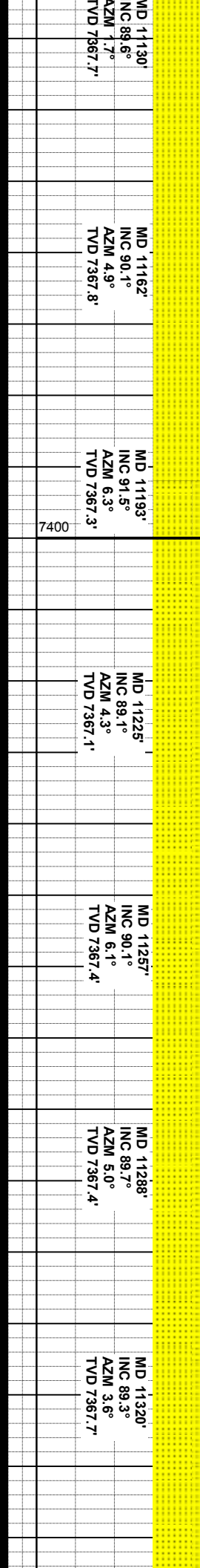
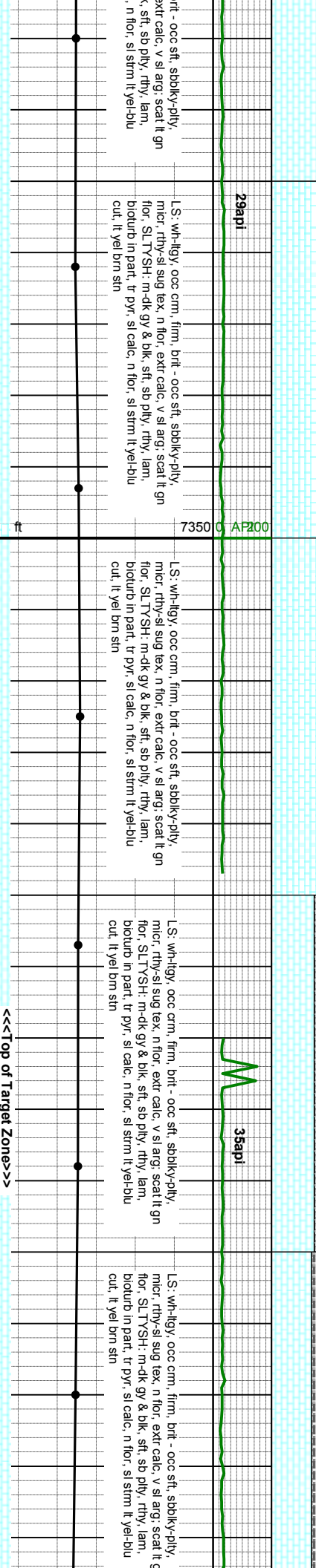
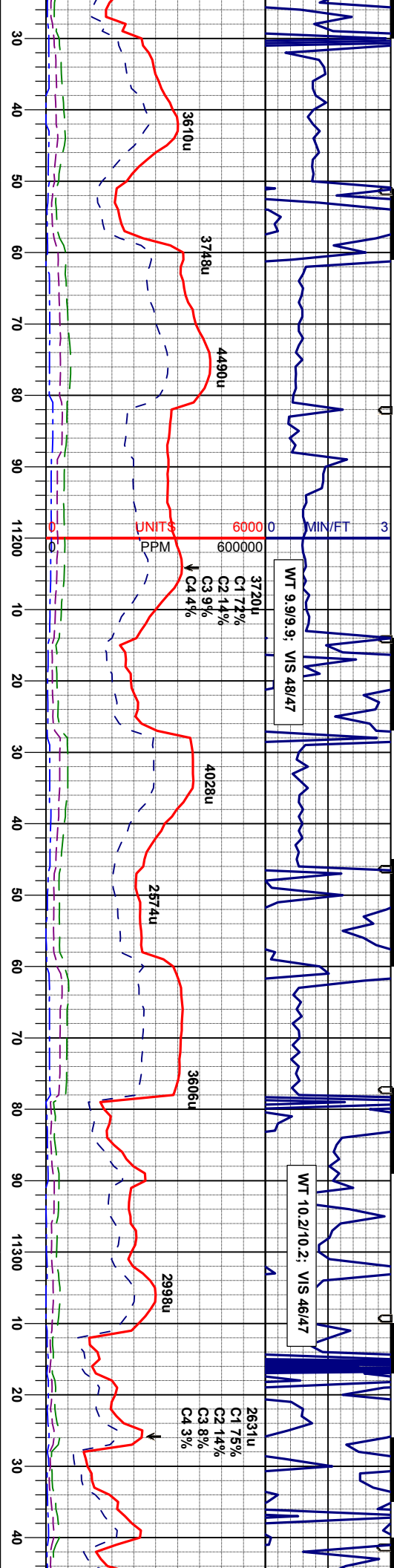
L.S: wh-lgy, occ crm, firm, brit - occ sft, sbblky-pty, micr, rthy-si sug tex, n flor, extr calc, v si arg; scat lt gn flor, SLTYSH: m-dk gy & blk, sft, sb ply, rthy, lam, bioturb in part, tr pyr, si calc, n flor, si strim lt yel-blu cut, lt yel brn sin

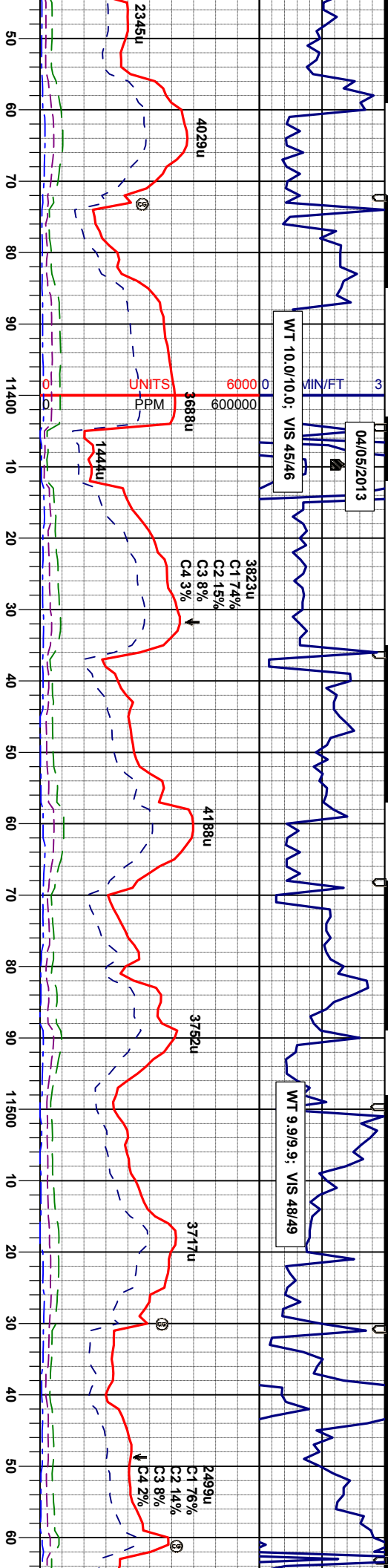
<<<Top of Target Zone>>>

MD 10696'	INC 90.0°	AZM 357.3°	TVD 7366.8'
MD 10718'	INC 89.7°	AZM 357.8°	TVD 7366.9'
MD 10750'	INC 90.2°	AZM 0.5°	TVD 7367.0'
MD 10782'	INC 90.3°	AZM 1.4°	TVD 7366.9'
MD 10813'	INC 89.7°	AZM 359.8°	TVD 7366.9'
MD 10845'	INC 89.8°	AZM 0.1°	TVD 7367.0'
MD 10877'	INC 90.1°	AZM 1.2°	TVD 7367.0'









L.S.: wh-lgy, occ crm, firm, brit - occ sft, sbdky-ply, micr, rthy-si sug tex, n flor, extr calc, v si arg, scat lt gn flor, SLTYSH: m-dk gy & blk, sft, sb ply, rthy, lam, bioturb in part, tr pyr, si calc, n flor, si strim lt yel-blu cut, lt yel brn sin

31api

7350 C AP200

L.S.: wh-lgy, occ crm, firm, brit - occ sft, sbdky-ply, micr, rthy-si sug tex, n flor, extr calc, v si arg, scat lt gn flor, SLTYSH: m-dk gy & blk, sft, sb ply, rthy, lam, bioturb in part, tr pyr, si calc, n flor, si strim lt yel-blu cut, lt yel brn sin

31api

L.S.: wh-lgy, occ crm, firm, brit - occ sft, sbdky-ply, micr, rthy-si sug tex, n flor, extr calc, v si arg, scat lt gn flor, SLTYSH: m-dk gy & blk, sft, sb ply, rthy, lam, bioturb in part, tr pyr, si calc, n flor, si strim lt yel-blu cut, lt yel brn sin

32api

L.S.: wh-lgy, occ crm, firm, brit - occ sft, sbdky-ply, micr, rthy-si sug tex, n flor, extr calc, v si arg, scat lt gn flor, SLTYSH: m-dk gy & blk, sft, sb ply, rthy, lam, bioturb in part, tr pyr, si calc, n flor, si strim lt yel-blu cut, lt yel brn sin

L.S.: wh-lgy, occ crm, firm, brit - occ sft, sbdky-ply, micr, rthy-si sug tex, n flor, extr calc, v si arg, scat lt gn flor, SLTYSH: m-dk gy & blk, sft, sb ply, rthy, lam, bioturb in part, tr pyr, si calc, n flor, si strim lt yel-blu cut, lt yel brn sin

<<<Top of Target Zone>>>

MD 11352'
INC 89.3°
AZM 5.4°
TVD 7368.1'

MD 11383'
INC 90.0°
AZM 9.1°
TVD 7368.3'

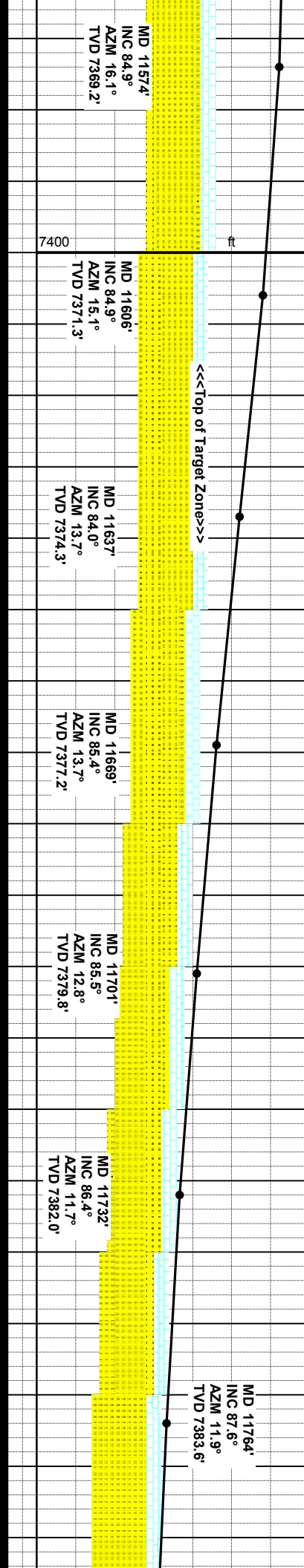
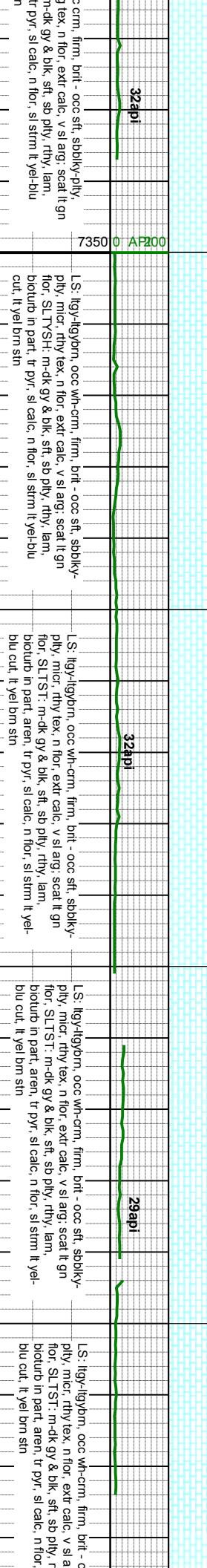
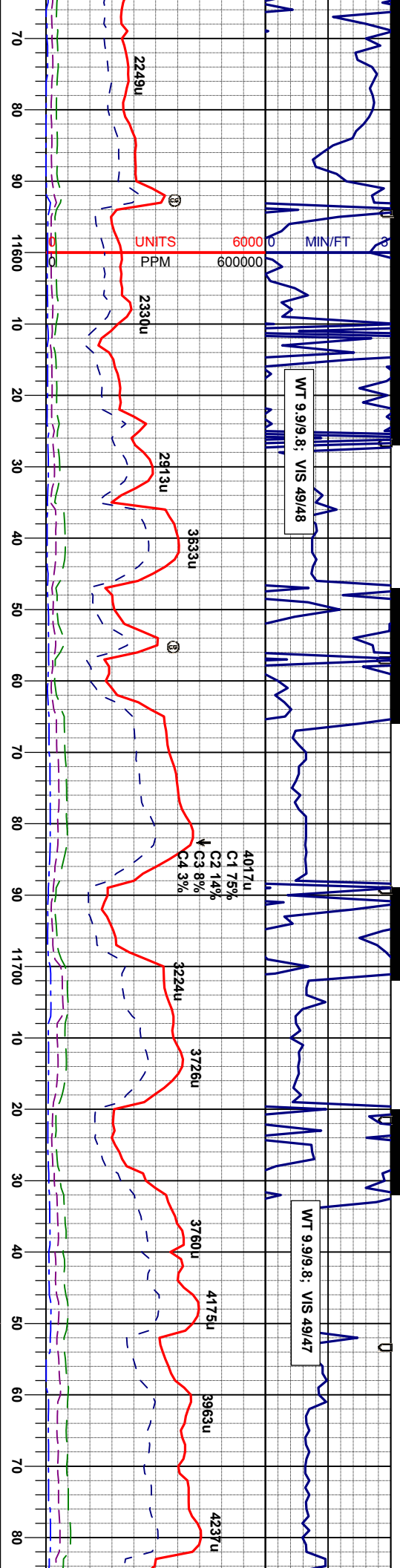
MD 11415'
INC 90.0°
AZM 11.2°
TVD 7368.3'

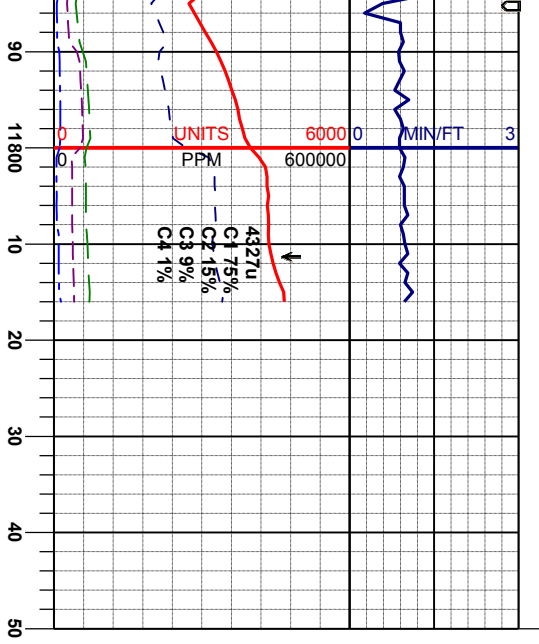
MD 11479'
INC 90.2°
AZM 16.3°
TVD 7368.2'

MD 11510'
INC 90.0°
AZM 17.7°
TVD 7368.1'

MD 11542'
INC 89.8°
AZM 13.8°
TVD 7368.2'







cc sft, sbblky-
g: scat lt gn
ly, lam.
st strn lt yel-

7350 0 AP200

TD 11.816'
@5:30pm 4/05/2013

PROJECTED
MD 11816'
INC 87.6°
AZM 11.9°
TVD 7385.8'

Thank You For Using
Columbine Logging Inc.

7400 ft

