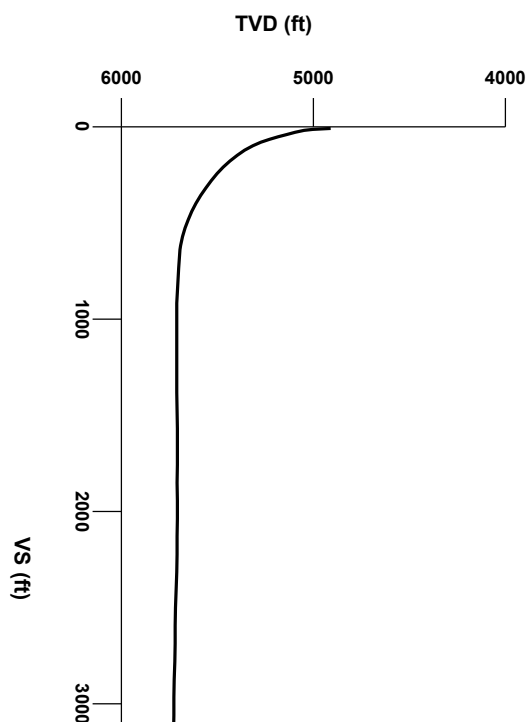


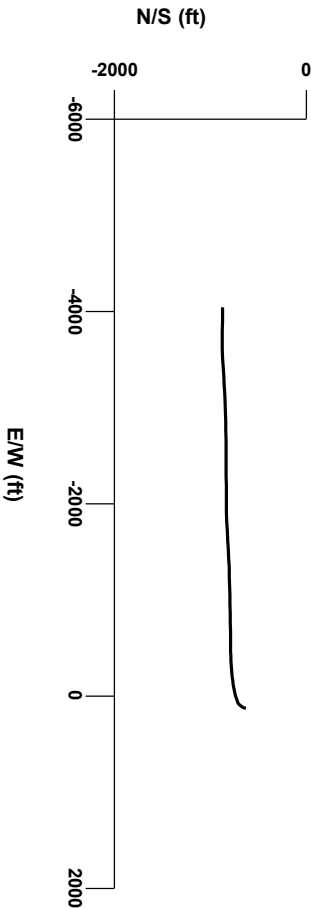
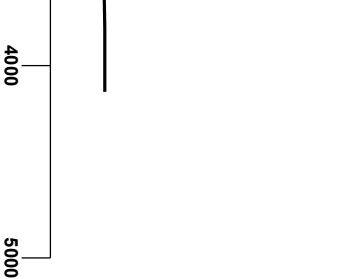
LOG created using Lplot VH Version 3.0, July 29, 2013, Copyright (C) 1999-2009 Pason Systems Corp.

OPERATOR: NOBLE ENERGY INC
WELL: ROHN STATE LD04-65HN
LOCATION: SEC 4 T9N R58W
COUNTY: WELD
STATE: COLORADO
SPOT: 1863' FNL, 480' FEL
ELEVATION: 4703' GL; 4727' KB
FIELD: WILDCAT
SPUD DATE: 07/24/2013
TD DATE: 07/29/2013
DATES LOGGED: 07/25/2013 - 07/29/2013
DEPTHS LOGGED: 4966' - 9648' MD
LOGGERS: LAURA KELLOGG; RYAN NICHOLAS
DRILLING FLUID: LSND
DRILLING RIG: H&P 273
API: 05-123-37445
LOG TYPE: HORIZONTAL
SCALE: 1:240 (5 inches per 100 feet)
REMARKS: WELLSITE GEOLOGICAL SERVICES
 PROVIDED BY COLUMBINE LOGGING INC.

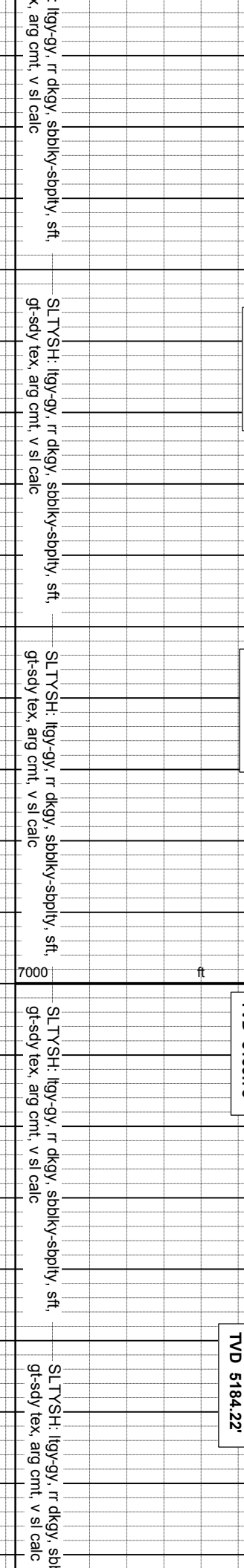
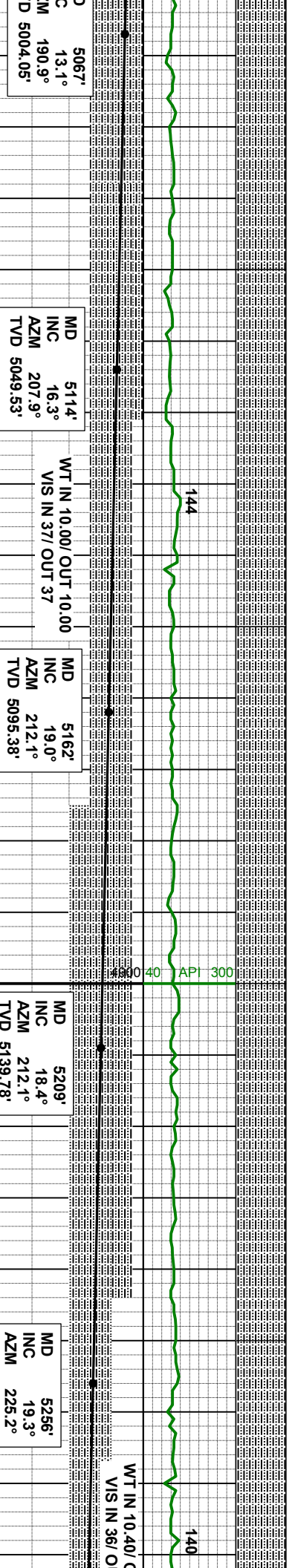
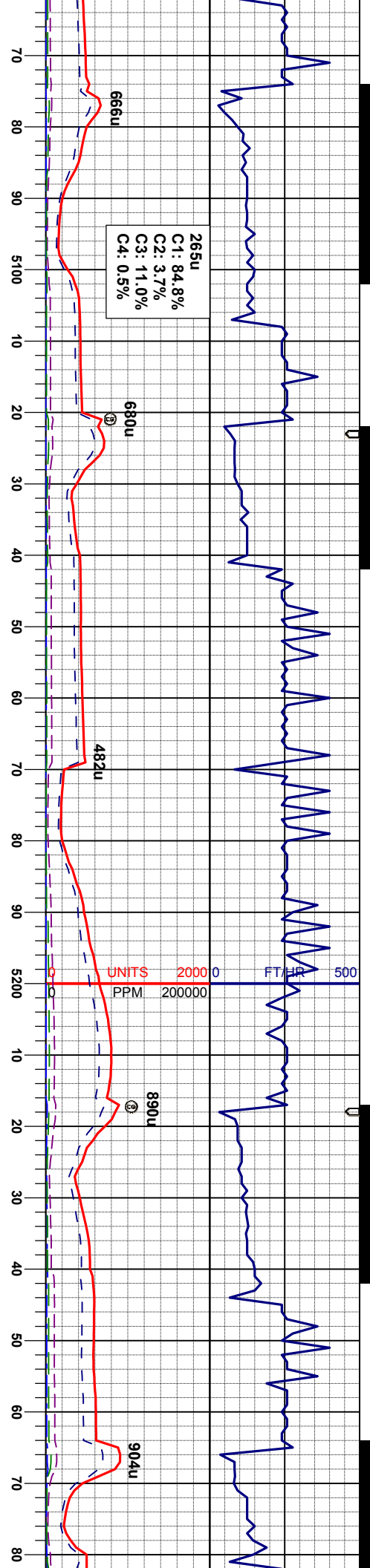


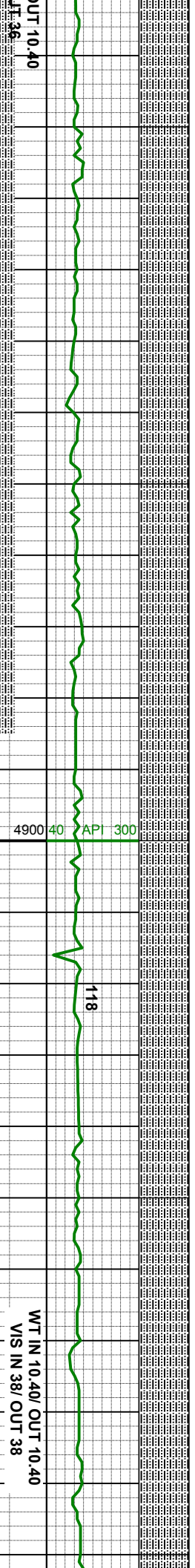
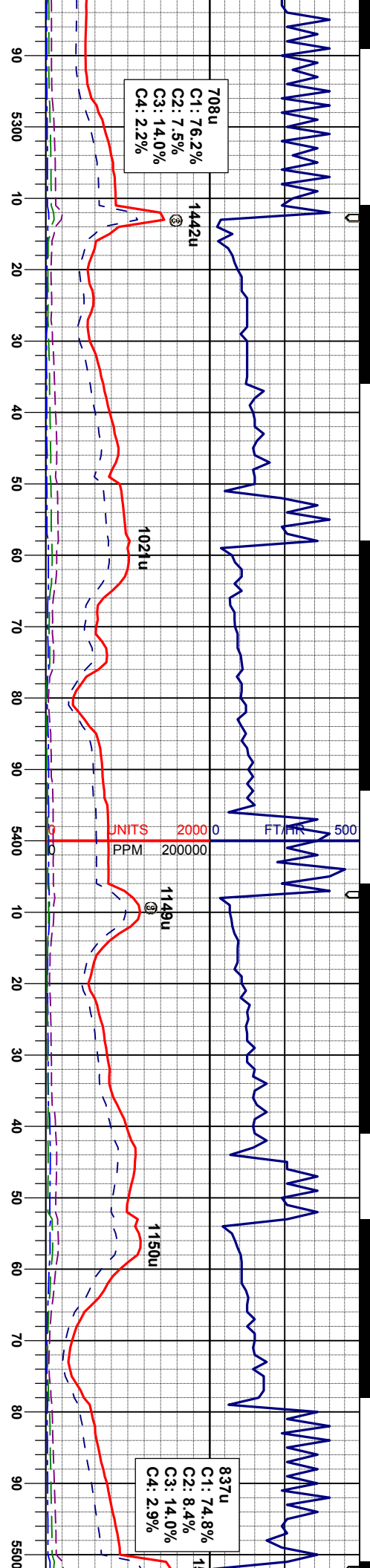
Survey Elevation

Survey Plan



LITHOLOGIES





MD 5303'
INC 19.1°
AZM 231.5°
TVD 5228.67'

MD 5351'
INC 21.7°
AZM 241.0°
TVD 5273.27'

MD 5398'
INC 26.5°
AZM 247.7°
TVD 5316.57'

MD 5446'
INC 32.4°
AZM 250.8°
TVD 5358.35'

MD 5493'
INC 36.3°
AZM 253.1°
TVD 5397.15'

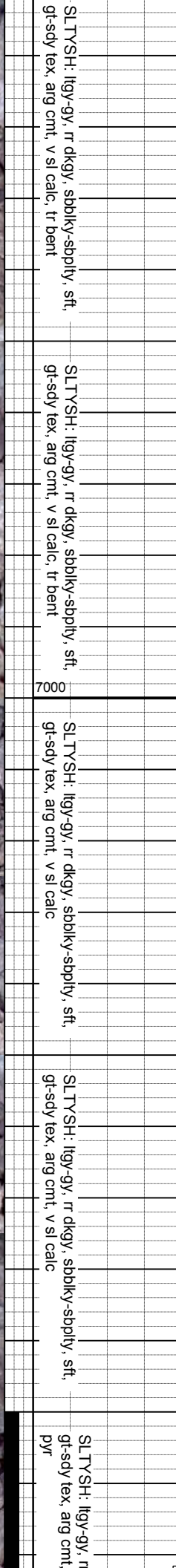
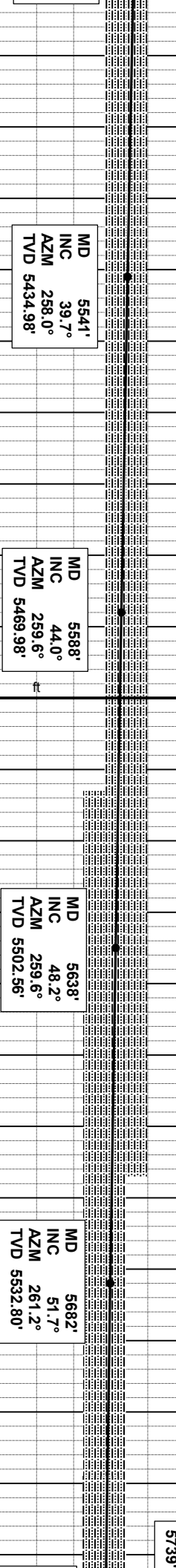
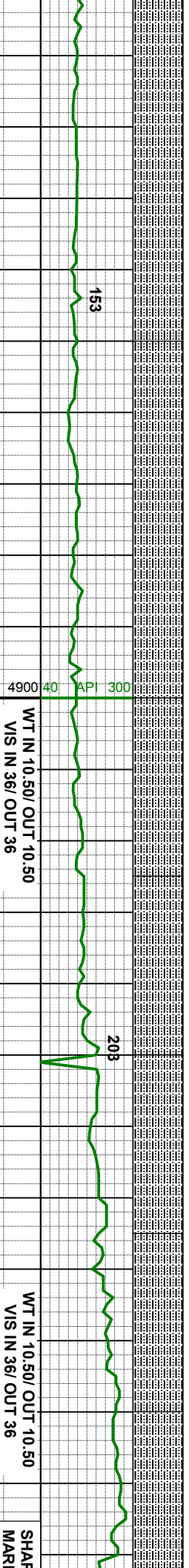
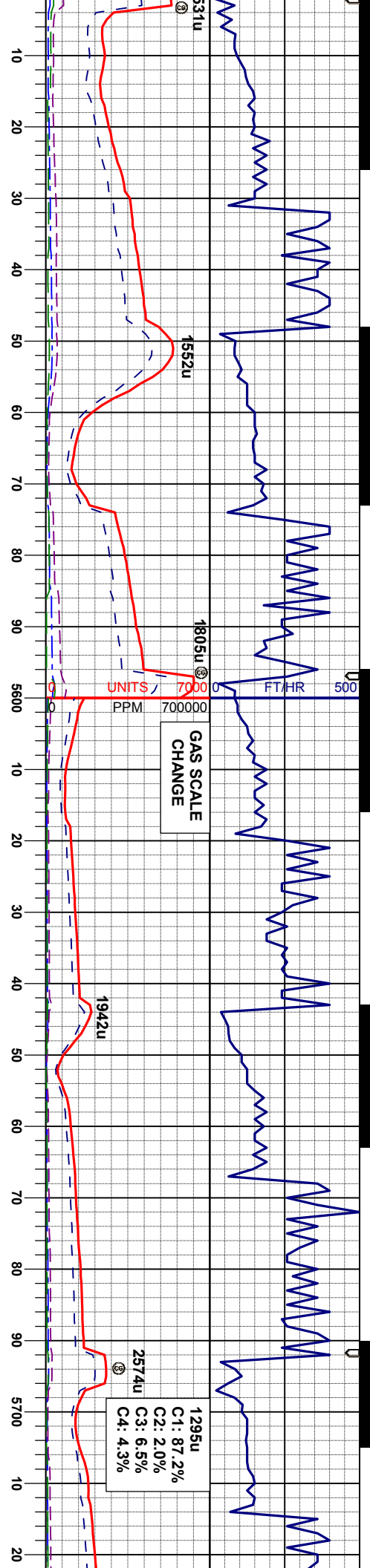
SLTYSH: lgy-gy, rr dkgv, sbblky-sbply, sft,
gt-sdy tex, arg cnt, v sl calc

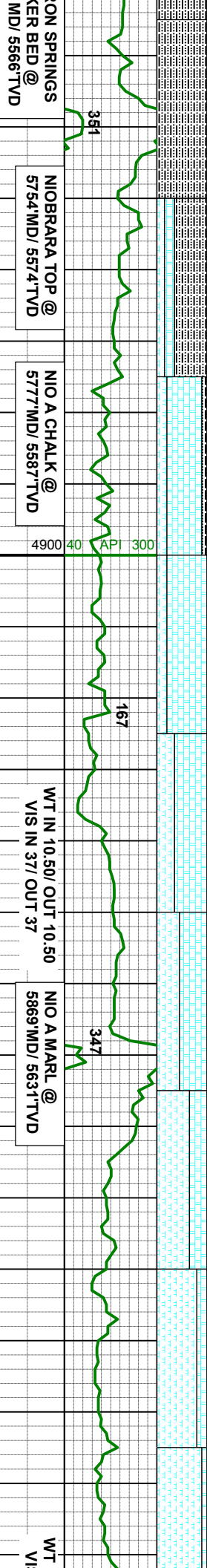
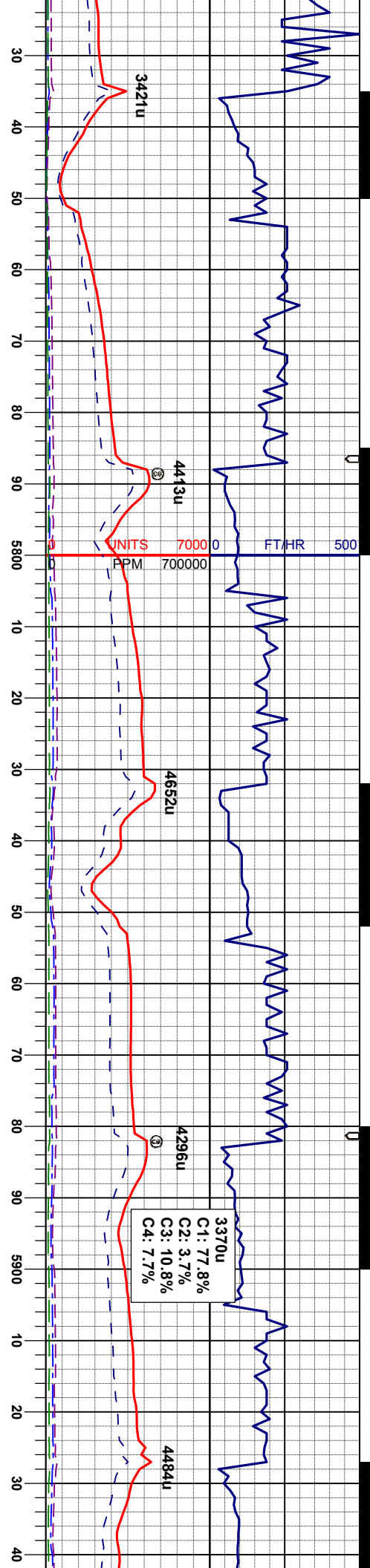
SLTYSH: lgy-gy, rr dkgv, sbblky-sbply, sft,
gt-sdy tex, arg cnt, v sl calc

SLTYSH: lgy-gy, rr dkgv, sbblky-sbply, sft,
gt-sdy tex, arg cnt, v sl calc

SLTYSH: lgy-gy, rr dkgv, sbblky-sbply, sft,
gt-sdy tex, arg cnt, v sl calc

WT IN 10.40/ OUT 10.40
VIS IN 38/ OUT 38





ON SPRINGS
ER BED @
MD/ 5566 TVD

NIOBRARA TOP @
5754 MD/ 5574 TVD

NIO A CHALK @
5777 MD/ 5587 TVD

NIO A MARL @
5869 MD/ 5631 TVD

MD 5730' INC 55.3° AZM 263.1° TVD 5561.35'

MD 5777' INC 57.9° AZM 263.1° TVD 5587.22'

MD 5825' INC 61.0° AZM 263.3° TVD 5611.62'

MD 5872' INC 63.9° AZM 265.4° TVD 5633.35'

MD 5920' INC 67.9° AZM 267.2° TVD 5652.95'

CHK: lly, sbblky, sft, mot-wwy tex, v calc
MRL: dkgy-gybrn, sbblky-sbply, sft, mot-
rthy tex, v calc, abnt bent

CHK: lly-gy, r dkgy, sbblky-sbply, sft, mot-
gt-sdy tex, arg cmt, non calc

CHK: lly-crm, sbblky, sft, mot-wwy tex, v calc
MRL: dkgy-gybrn, sbblky-sbply, sft, mot-
rthy tex, v calc, tr bent

CHK: lly-crm, sbblky, sft, mot-wwy tex, m
rthy tex, v calc, tr bent

CHK: lly-crm, sbblky, sft, mot-wwy tex, m
rthy tex, v calc, tr bent



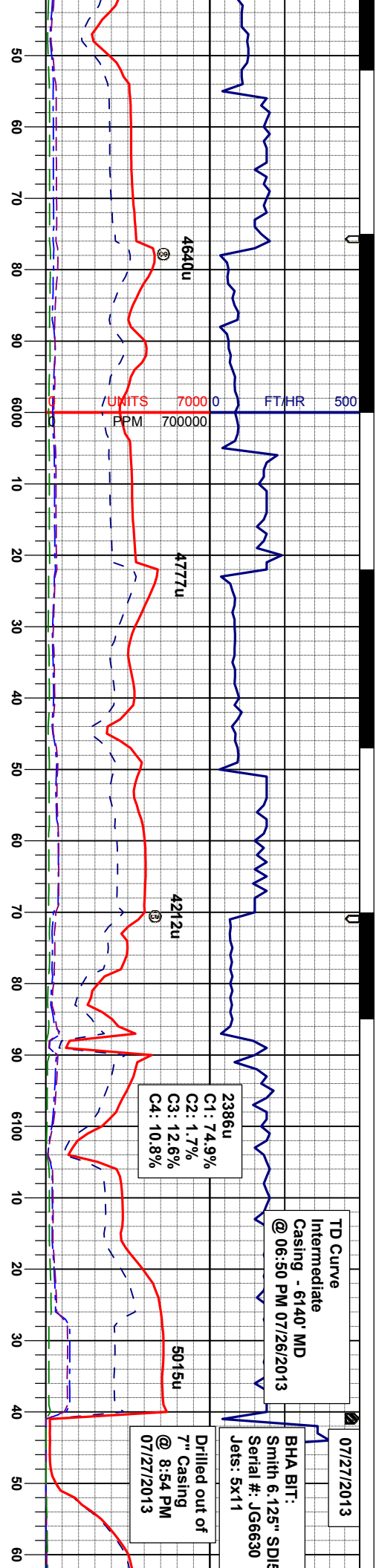
07/27/2013

TD Curve
Intermediate
Casing - 6140' MD
@ 06:50 PM 07/26/2013

BHA BIT:
Smith 6.125" SD19
Serial #: JG6630
Jets: 5x11

Drilled out of
7" Casing
@ 8:54 PM
07/27/2013

2386u
C1: 74.9%
C2: 1.7%
C3: 12.6%
C4: 10.8%



NIO B Chalk @
5971MD/ 5670'TVD

WT IN 10.60/ OUT 10.60
VIS IN 36/ OUT 36

WT IN 10.50/ OUT 10.50
VIS IN 36/ OUT 36

MD 5967'
INC 72.1°
AZM 268.0°
TVD 5669.02'

MD 6015'
INC 77.2°
AZM 267.9°
TVD 5681.72'

MD 6062'
INC 77.2°
AZM 267.9°
TVD 5692.14'

MD 6085'
INC 84.0°
AZM 270.0°
TVD 5695.89'

MRL: dkgy-gy/brn, sbblky-sbply, sft, mot-
rthy tex, v calc, tr bent
CHK: lgy-crm, sbblky, sft, mot-wxy tex, v
calc

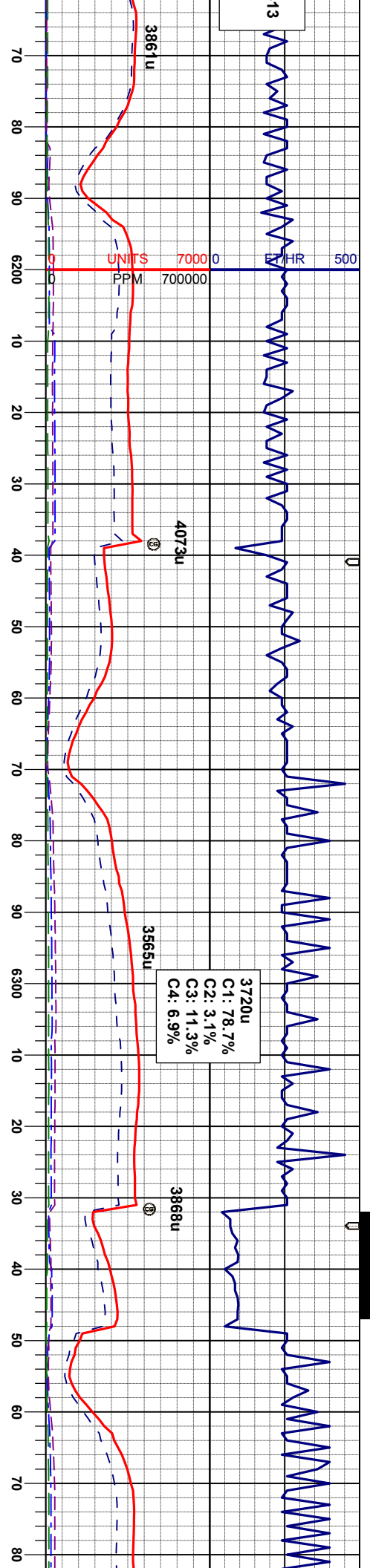
CHK: lgy-crm, sbblky, sft, mot-wxy tex, v
calc
MRL: dkgy-gy/brn, sbblky-sbply, sft, mot-
rthy tex, v calc, tr bent

CHK: lgy-crm, sbblky, sft, mot-wxy tex, v
calc
MRL: dkgy-gy/brn, sbblky-sbply, sft, mot-
rthy tex, v calc, tr bent

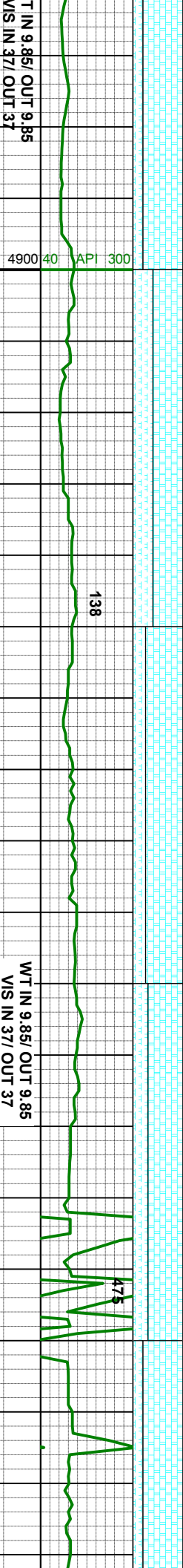
CHK: lgy-crm, sbblky, sft, mot-wxy tex, v
calc
MRL: dkgy-gy/brn, sbblky-sbply, sft, mot-
rthy tex, v calc, tr bent

CHK: lgy-crm, sbblky, sft, mot-wxy tex, v
calc
MRL: dkgy-gy/brn, sbblky-sbply, sft, mot-
rthy tex, v calc, tr bent





3720u
C1: 78.7%
C2: 3.1%
C3: 11.3%
C4: 6.9%



MD 6184'
INC 85.7°
AZM 269.6°
TVD 5701.71'

MD 6277'
INC 86.4°
AZM 268.7°
TVD 5708.12'

MD 6370'
INC 88.2°
AZM 268.9°
TVD 5712.50'

CHK: lgy-crm, sbbiky, sft, mot-wxy tex, v calc
MRL: dkgy-gybrn, sbbiky-sbpity, sft, mot-rthy tex, v calc, tr bent

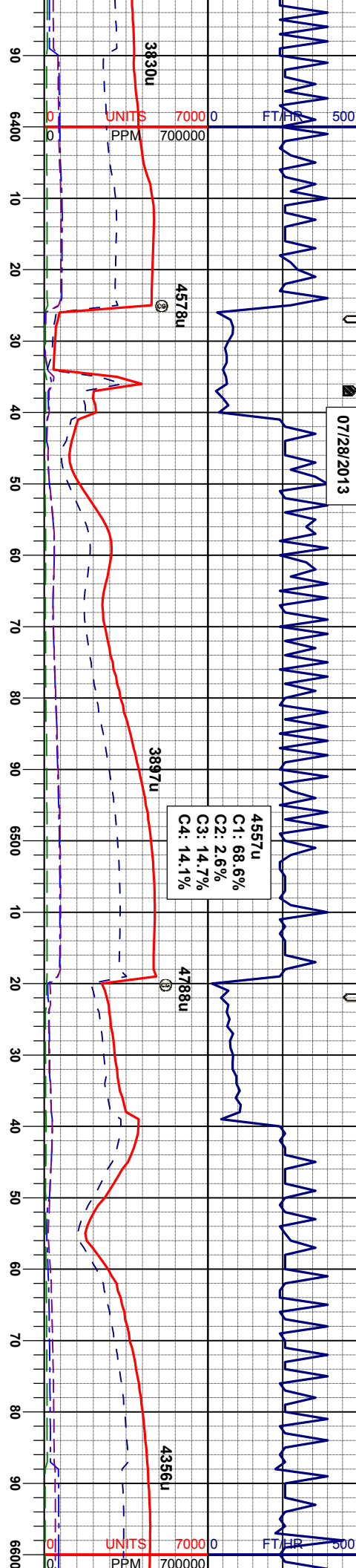
CHK: lgy-crm, sbbiky, sft, mot-wxy tex, v calc
MRL: dkgy-gybrn, sbbiky-sbpity, sft, mot-rthy tex, v calc, tr bent

CHK: lgy-crm, sbbiky, sft, mot-wxy tex, v calc
MRL: dkgy-gybrn, sbbiky-sbpity, sft, mot-rthy tex, v calc, tr bent

CHK: lgy-crm, sbbiky, sft, mot-wxy tex, v calc
MRL: dkgy-gybrn, sbbiky-sbpity, sft, mot-rthy tex, v calc, tr bent



07/28/2013



WT IN 10.20/ OUT 10.20
VIS IN 37/ OUT 37

MD 6465'
INC 91.2°
AZM 269.6°
TVD 5712.99'

148

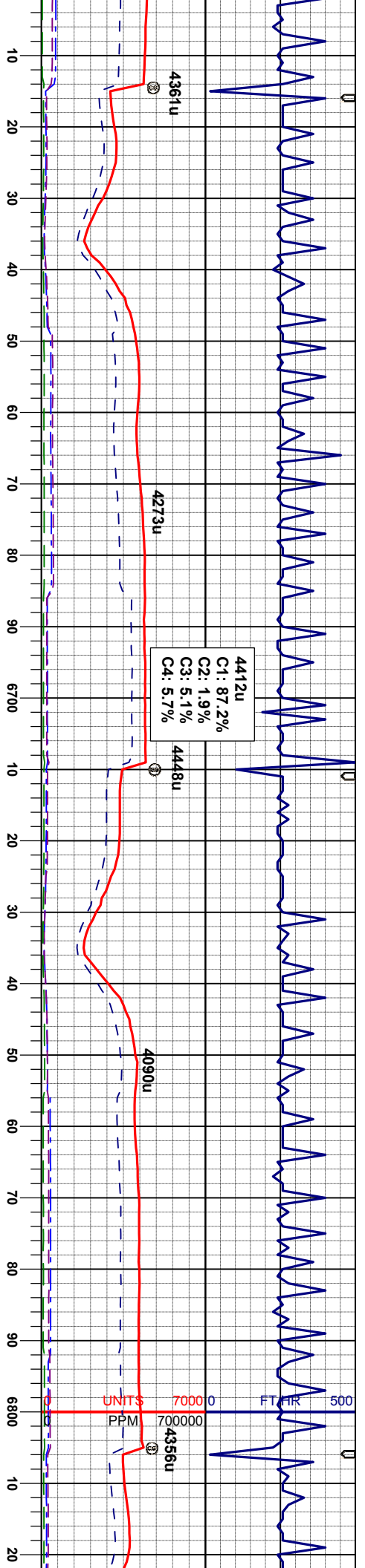
MD 6560'
INC 90.0°
AZM 268.6°
TVD 5712.00'

CHK: lly-crm, sbblky, sft, mot-wxy tex, v
calc
MRL: dkgy-gybrn, sbblky-sbply, sft, mot-
rthy tex, v calc, tr bent

CHK: lly-crm, sbblky, sft, mot-wxy tex, v
calc, abnt inoc
MRL: dkgy-gybrn, sbblky-sbply, sft, mot-
rthy tex, v calc, tr bent

CHK: lly-crm, sbblky, sft, mot-wxy tex, v
calc
MRL: dkgy-gybrn, sbblky-sbply, sft, mot-
rthy tex, v calc, tr bent

CHK: lly-crm, sbblky, sft, mot-wxy tex, v
calc, abnt inoc
MRL: dkgy-gybrn, sbblky-sbply, sft, mot-
rthy tex, v calc, tr bent



WT IN 10.20/ OUT 10.20
VIS IN 38/ OUT 38

MD 6655'
INC 90.2°
AZM 270.0°
TVD 5711.83'

MRL: dkgy-gybrn, sbbiky-sbply, sft, mot-
rthy tex, v calc, tr bent
CHK: llyg-crm, sbbiky, sft, mot-wxy tex, v
calc

MRL: dkgy-gybrn, sbbiky-sbply, sft, mot-
rthy tex, v calc, tr bent
CHK: llyg-crm, sbbiky, sft, mot-wxy tex, v
calc

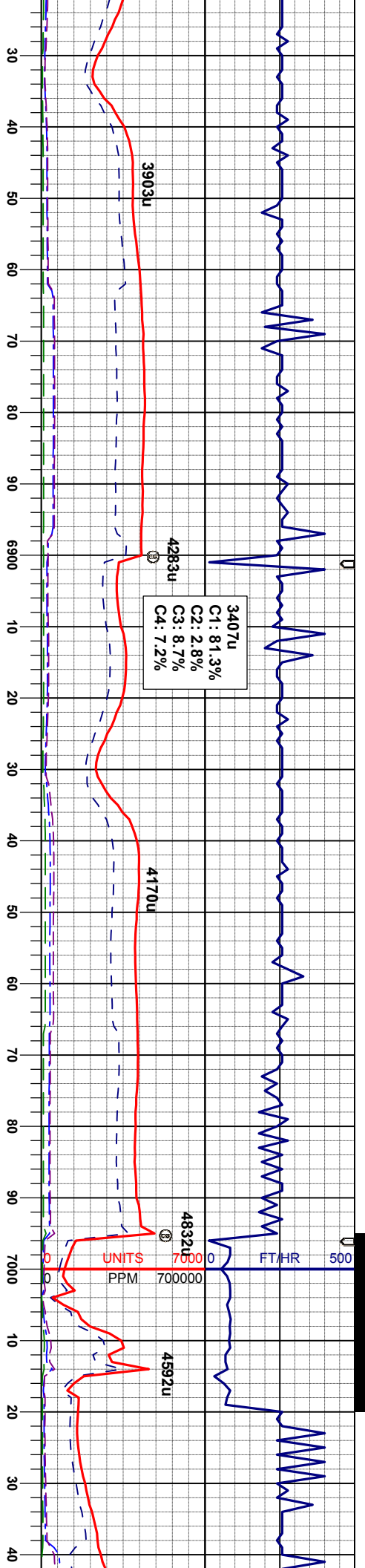
MD 6750'
INC 89.6°
AZM 267.9°
TVD 5712.00'

MRL: dkgy-gybrn, sbbiky-sbply, sft, mot-
rthy tex, v calc, tr bent
CHK: llyg-crm, sbbiky, sft, mot-wxy tex, v
calc

MRL: dkgy-gybrn, sbbiky-sbply, sft, mot-
rthy tex, v calc, tr bent
CHK: llyg-crm, sbbiky, sft, mot-wxy tex, v
calc

MRL: dkgy-gybrn, sbbiky-sbply, sft, mot-
rthy tex, v calc, tr bent
CHK: llyg-crm, sbbiky, sft, mot-wxy tex, v
calc





WT IN 10.20/ OUT 10.20
VIS IN 37/ OUT 37

MD 6845'
INC 89.9°
AZM 268.2°
TVD 5712.41'

ssbdkly-sbply, sft, mot-
ent
CHK: lty-crm, sbdkly, sft, mot-wxy tex, v
calc

MRL: dky-gybrn, sbdkly-sbply, sft, mot-
rthy tex, v calc, tr bent
CHK: lty-crm, sbdkly, sft, mot-wxy tex, v
calc

138

MD 6940'
INC 91.4°
AZM 268.2°
TVD 5711.34'

MRL: dky-gybrn, sbdkly-sbply, sft, mot-
rthy tex, v calc, tr bent
CHK: lty-crm, sbdkly, sft, mot-wxy tex, v
calc

MRL: dky-gybrn, sbdkly-sbply, sft, mot-
rthy tex, v calc, tr bent
CHK: lty-crm, sbdkly, sft, mot-wxy tex, v
calc

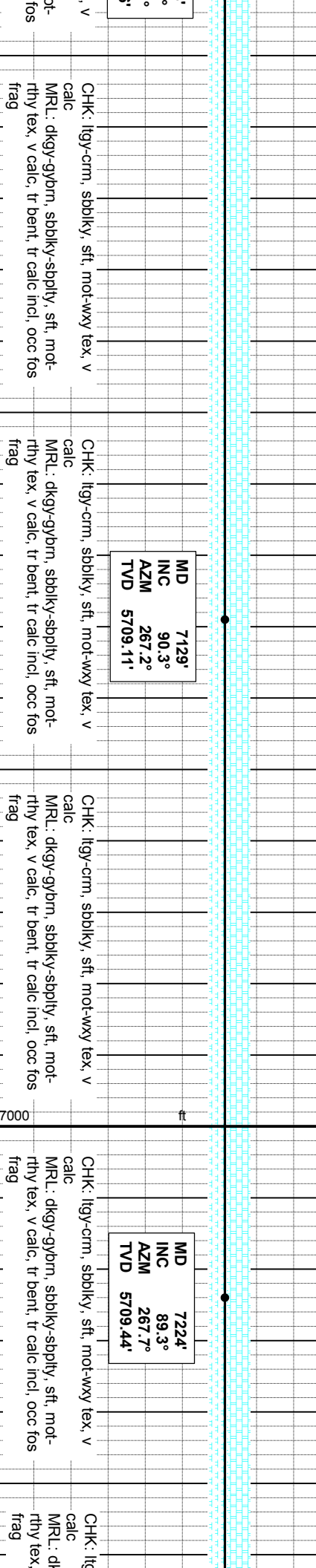
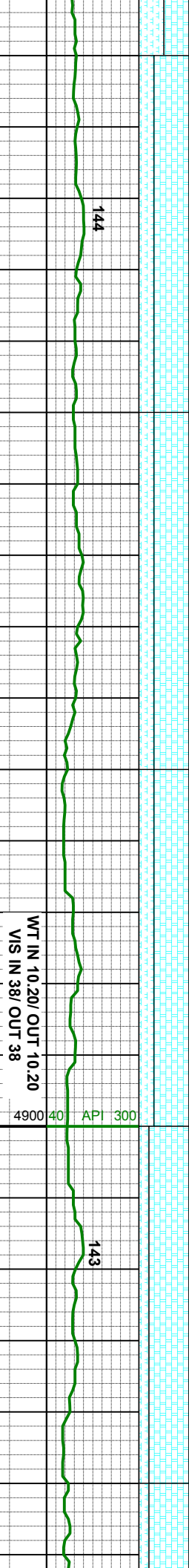
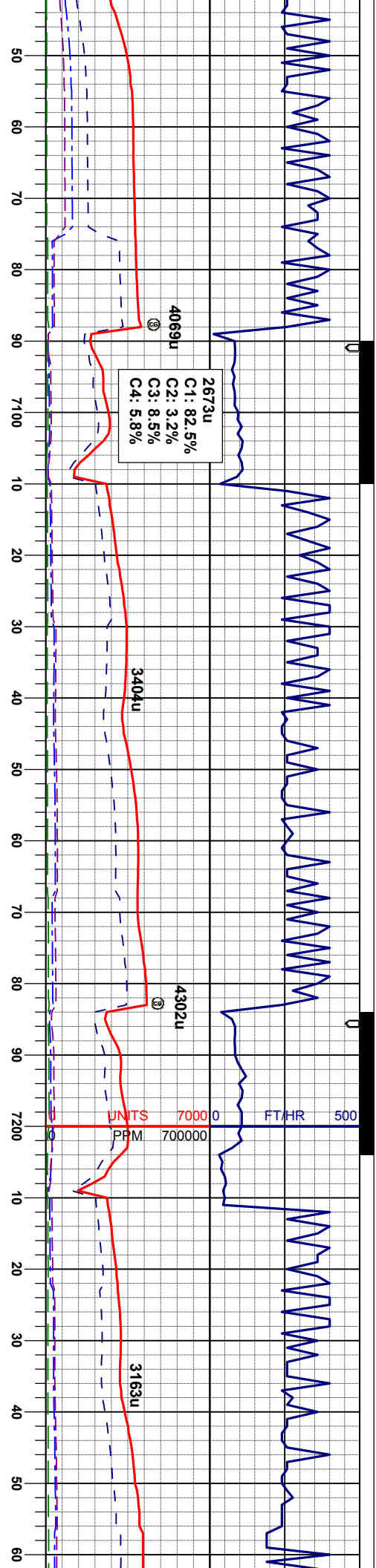
WT IN 10.25/ OUT 10.25
VIS IN 36/ OUT 36

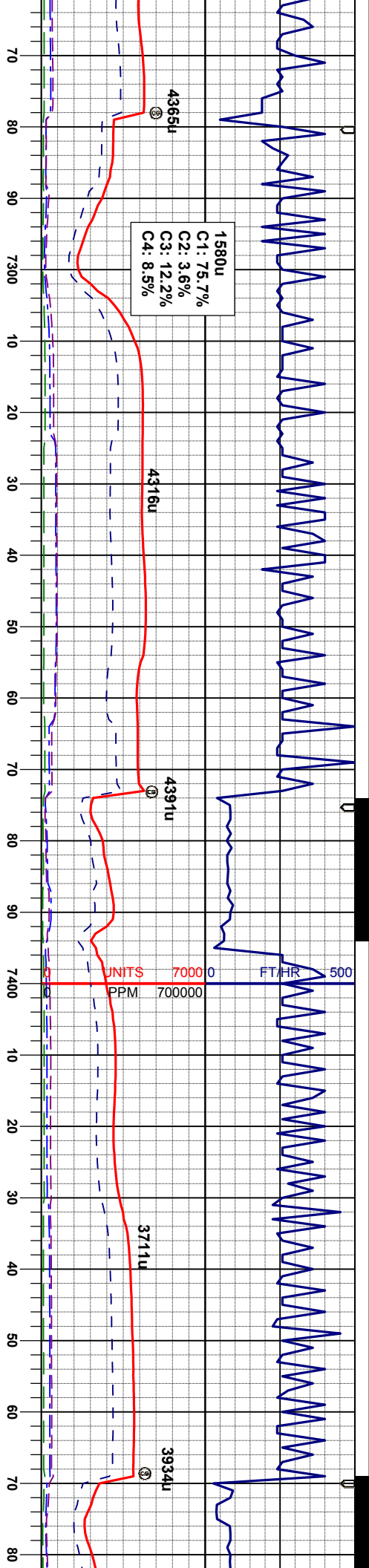
WT IN 10.30/ OUT 10.30
VIS IN 39/ OUT 39

MD 7035'
INC 90.5°
AZM 266.1°
TVD 5709.71'

CHK: lty-crm, sbdkly, sft, mot-wxy tex
calc
MRL: dky-gybrn, sbdkly-sbply, sft, m
rthy tex, v calc, tr bent, tr calc incl, occ
frag







WT IN 10.20/ OUT 10.20
VIS IN 37/ OUT 37

MD	7319'
INC	89.8°
AZM	266.5°
TVD	5710.18'

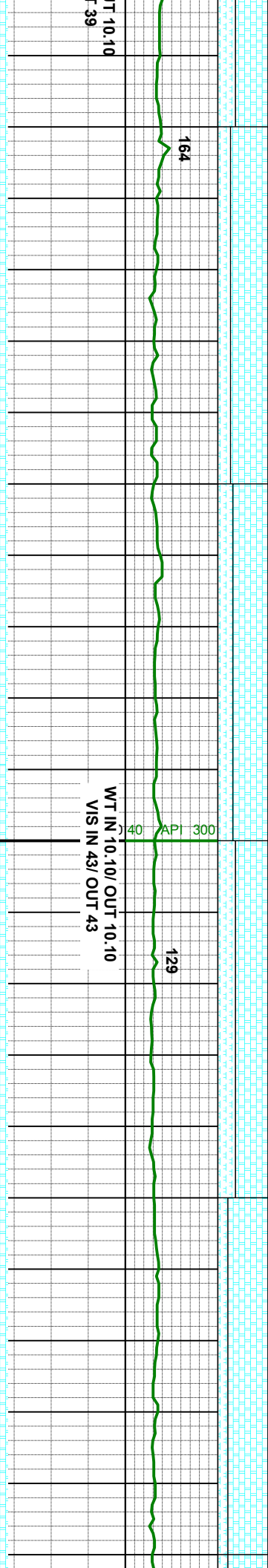
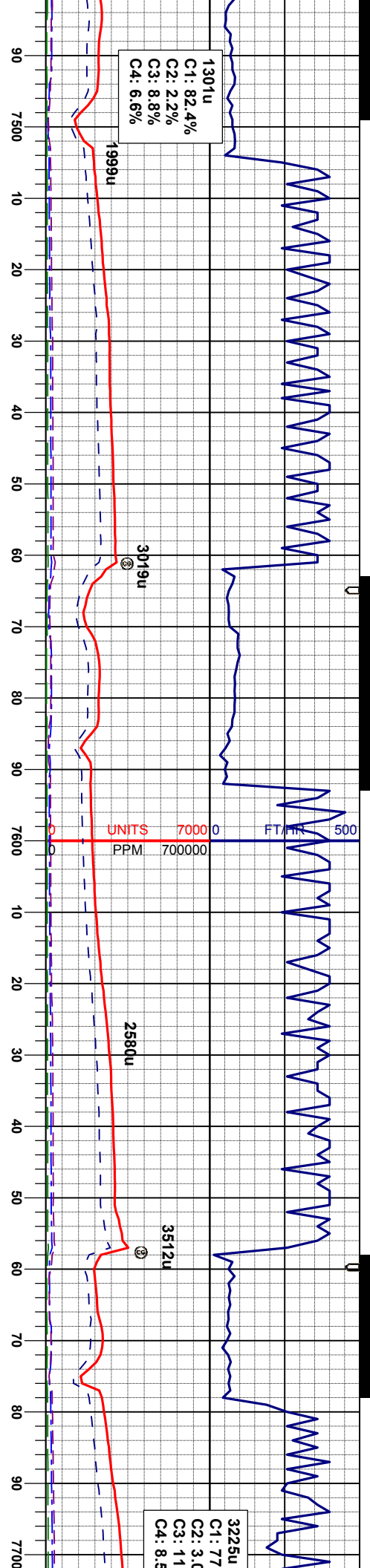
CHK: lgy-crm, sbblky, sft, mot-wxy tex, v
calc
MRL: dkgy-gybrn, sbblky-sbply, sft, mot-
rthy tex, v calc, tr bent, tr calc incl, occ fos
frag

WT IN 10.10/ OU
VIS IN 39/ OU

MD	7414'
INC	90.6°
AZM	267.9°
TVD	5709.85'

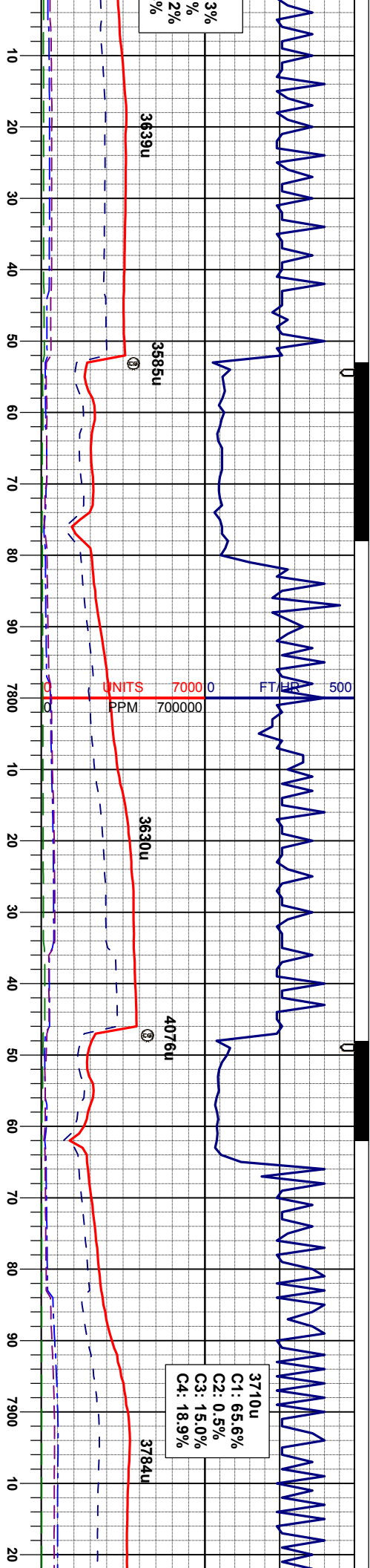
CHK: lgy-crm, sbblky, sft, mot-wxy tex, v
calc
MRL: dkgy-gybrn, sbblky-sbply, sft, mot-
rthy tex, v calc, tr bent, tr calc incl, abnt fos
frag





MD	7509'	MD	7603'	MD	76
INC	89.7°	INC	89.2°	INC	89
AZM	267.7°	AZM	269.4°	AZM	270
TVD	5709.60'	TVD	5710.50'	TVD	5711
CHK: llyg-crm, sbblky, sft, mot-wxy tex, v		CHK: llyg-crm, sbblky, sft, mot-wxy tex, v		CHK: llyg-crm, sbblky, sft, mot-wxy tex, v	
calc		calc		calc	
MR.L: dkgy-gybm, sbblky-sbply, sft, mot-rthy tex, v calc, tr bent, tr calc incl, abnt fos frag		MR.L: dkgy-gybm, sbblky-sbply, sft, mot-rthy tex, v calc, tr bent, tr calc incl, abnt fos frag		MR.L: dkgy-gybm, sbblky-sbply, sft, mot-rthy tex, v calc, tr bent, tr calc incl, abnt fos frag	





WT IN 10.10/ OUT 10.10
VIS IN 42/ OUT 42

WT IN 10.10/ OUT 10.10
VIS IN 43/ OUT 43

88°
5°
1°
158'

MD 7793'
INC 88.8°
AZM 270.1°
TVD 5712.99'

MD 7888'
INC 87.6°
AZM 268.9°
TVD 5715.98'

CHK: lgy-crm, sbblky, sft, mot-wxy tex, v
calc
MRL: dkgy-gybrn, sbblky-sbply, sft, mot-
rthy tex, v calc, tr bent, tr calc incl, abnt fos
frag

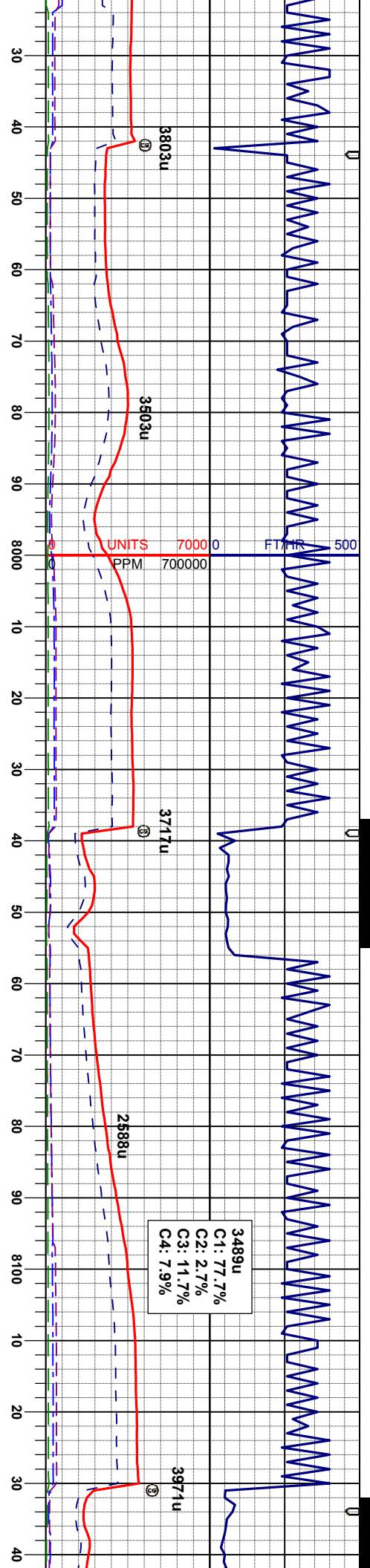
CHK: lgy-crm, sbblky, sft, mot-wxy tex, v
calc
MRL: dkgy-gybrn, sbblky-sbply, sft, mot-
rthy tex, v calc, tr bent, tr calc incl, abnt fos
frag

CHK: lgy-crm, sbblky, sft, mot-wxy tex, v
calc
MRL: dkgy-gybrn, sbblky-sbply, sft, mot-
rthy tex, v calc, tr bent, tr calc incl, abnt fos
frag

CHK: lgy-crm, sbblky, sft, mot-wxy tex, v
calc
MRL: dkgy-gybrn, sbblky-sbply, sft, mot-
rthy tex, v calc, tr bent, tr calc incl, abnt fos
frag

MRL: dkgy-gybrn,
rthy tex, v calc, tr
frag
CHK: lgy-crm, sbblky,
sft, mot-wxy tex, v
calc





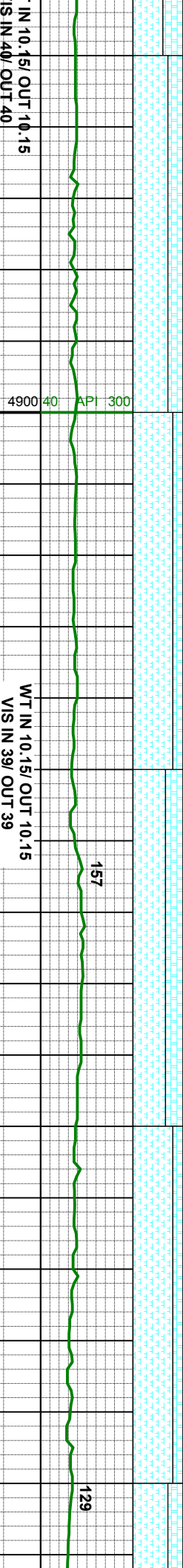
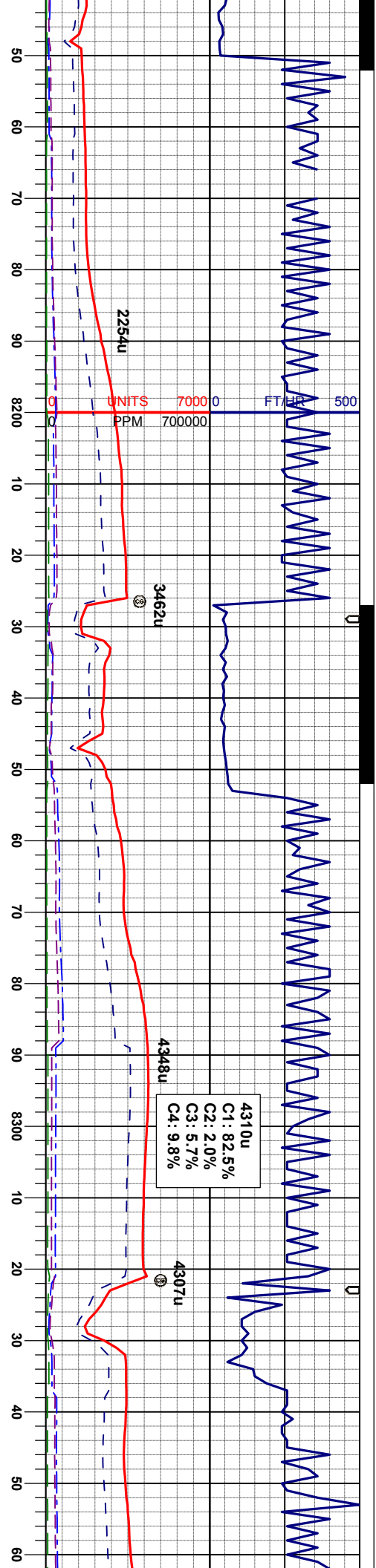
MD 7982'
INC 89.0°
AZM 269.3°
TVD 5718.76'

MR.L: dkgy-gybrn, sbbiky-sbply, sft, mot-rthy tex, v calc, tr bent, tr calc incl, abnt fos frag
CHK: lly-crm, sbbiky, sft, mot-wxy tex, v calc

MD 8077'
INC 89.2°
AZM 269.6°
TVD 5720.26'

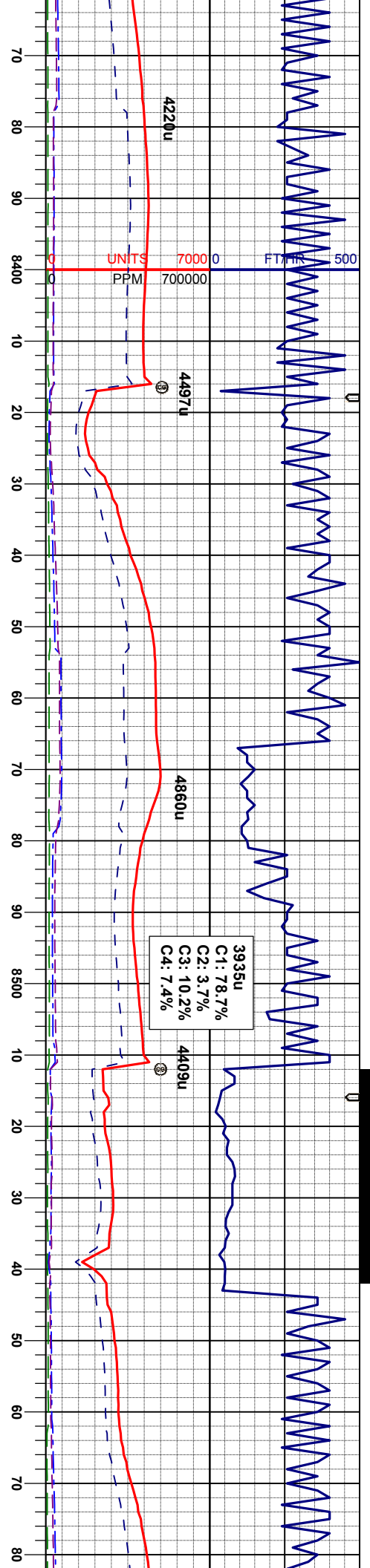
MR.L: dkgy-gybrn, sbbiky-sbply, sft, mot-rthy tex, v calc, tr bent, tr calc incl, abnt fos frag
CHK: lly-crm, sbbiky, sft, mot-wxy tex, v calc





IN 10.15/ OUT 10.15 S IN 40/ OUT 40		WT IN 10.15/ OUT 10.15 VIS IN 39/ OUT 39	
MD 8172'		MD 8267'	
INC 89.9°		INC 87.9°	
AZM 271.4°		AZM 269.4°	
TVD 5721.00'		TVD 5722.83'	
MRL: dkgy-gybrn, sbbiky-sbply, sft, mot-rthy tex, v calc, tr bent, tr calc incl, abnt fos frag		MRL: dkgy-gybrn, sbbiky-sbply, sft, mot-rthy tex, v calc, tr bent, tr calc incl, abnt fos frag	
CHK: llyg-crm, sbbiky, sft, mot-wxy tex, v calc		CHK: llyg-crm, sbbiky, sft, mot-wxy tex, v calc	





4900 40 API 300

WT IN 10.15/ OUT 10.15
VIS IN 39/ OUT 39

WT IN 10.20/ OUT 10.20
VIS IN 40/ OUT 40

8362'
88.5°
268.4°
5725.81'

MD 8457'
INC 90.4°
AZM 269.3°
TVD 5726.72'

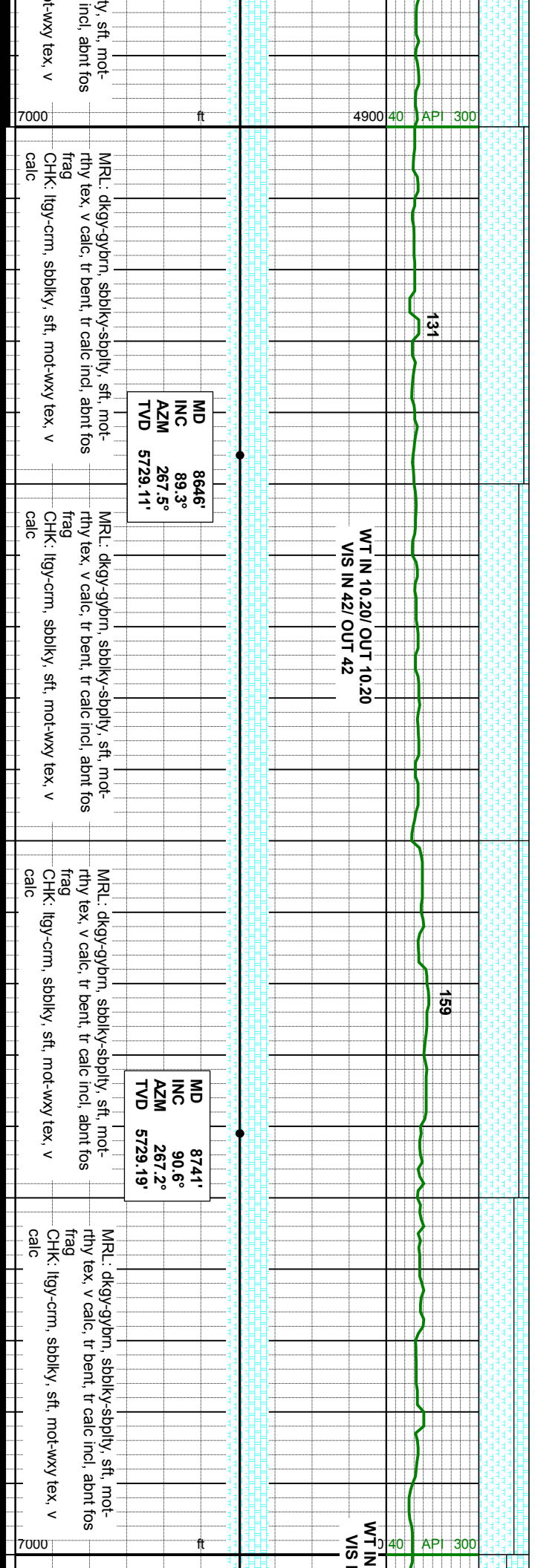
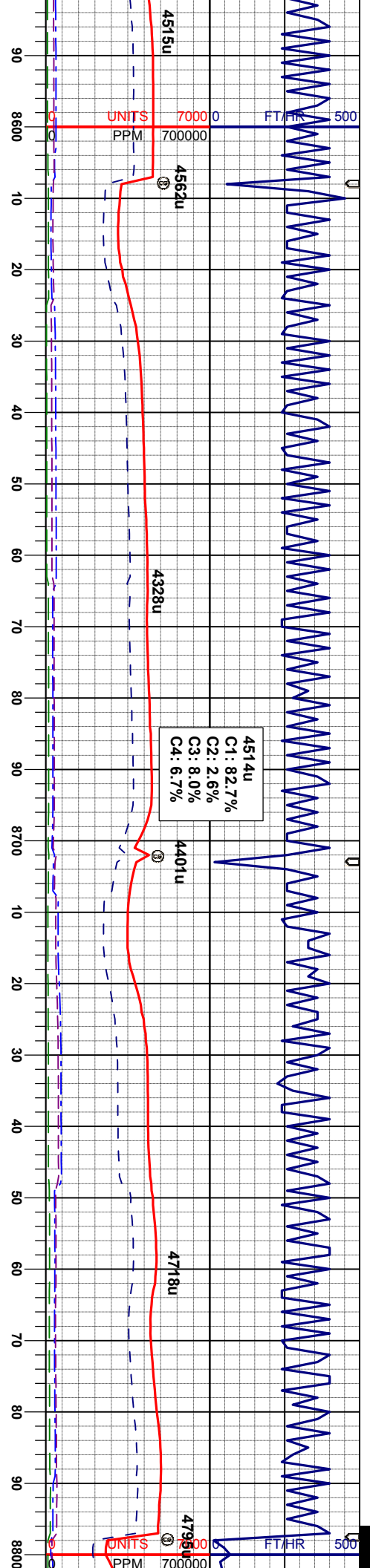
MD 8552'
INC 88.7°
AZM 268.4°
TVD 5727.47'

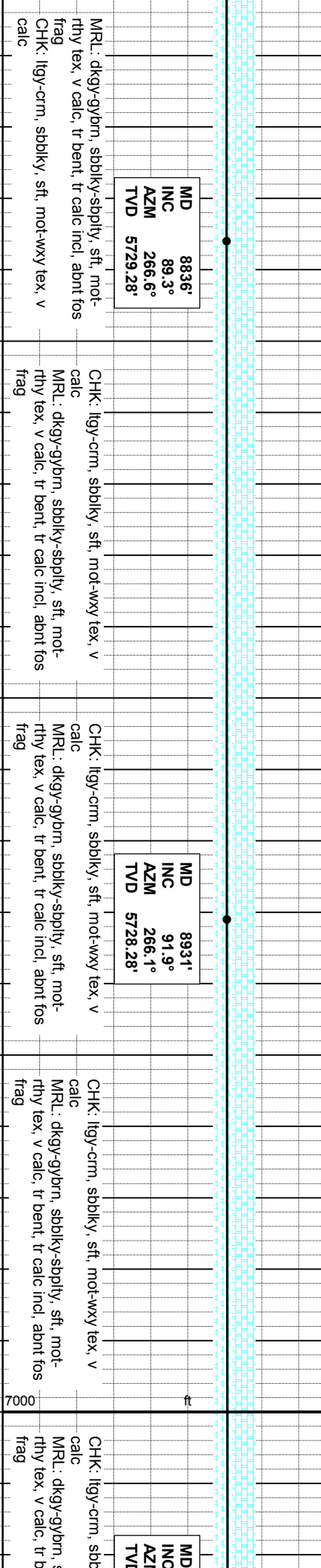
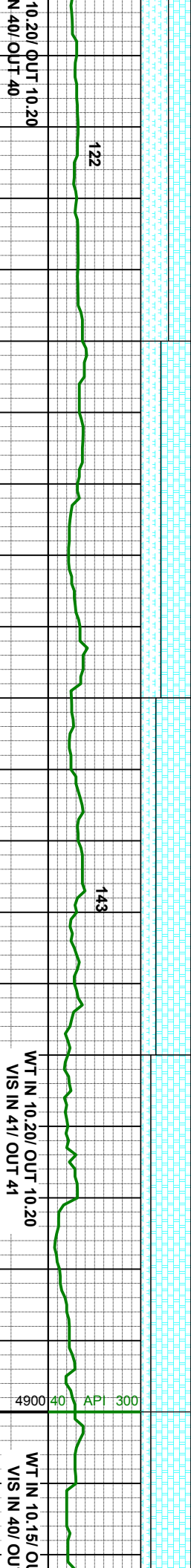
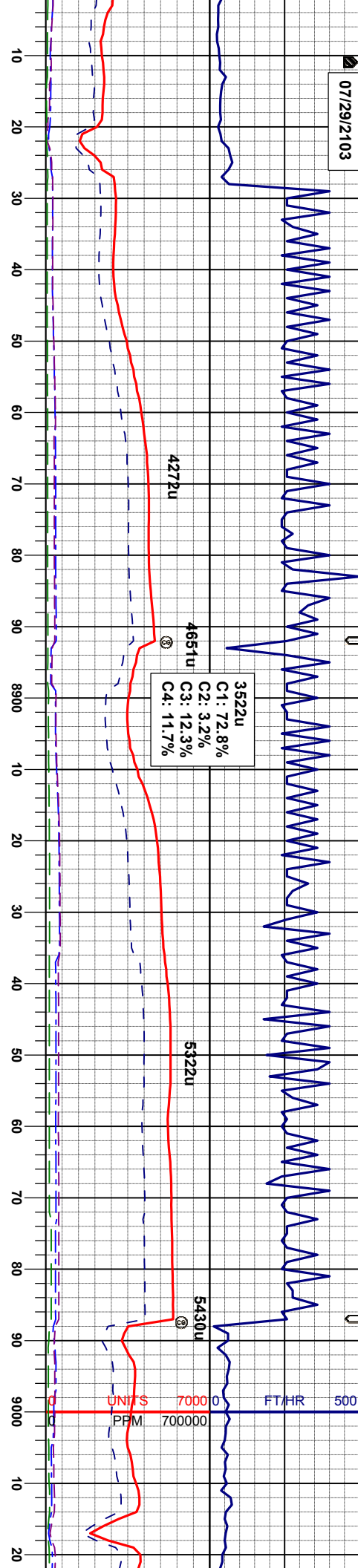
MRL: dkgy-gybrn, sbbiky-sbply, sft, mot-rthy tex, v calc, tr bent, tr calc incl, abnt fos frag
CHK: ltgy-crm, sbbiky, sft, mot-wxy tex, v calc

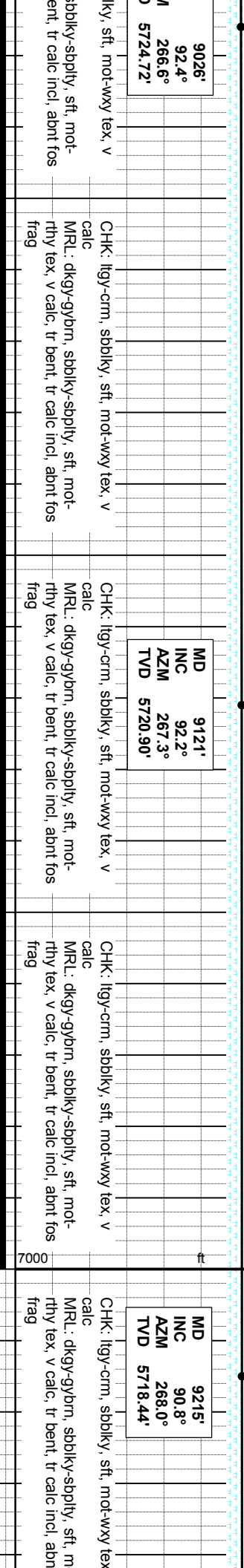
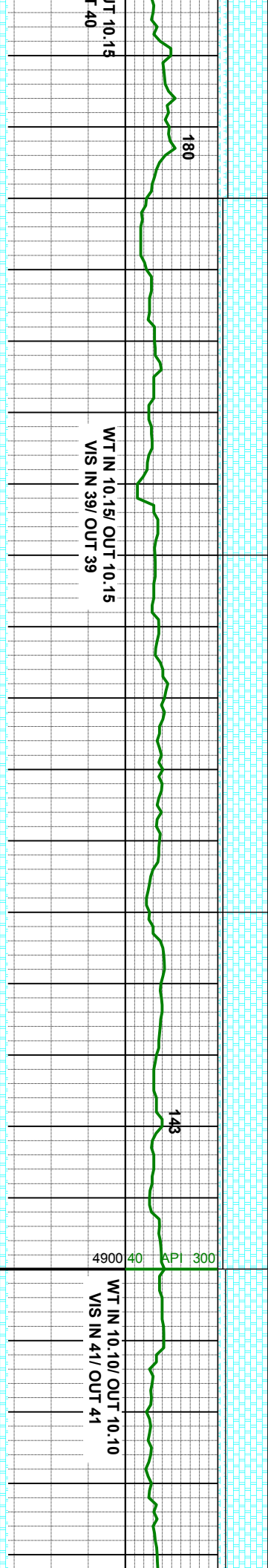
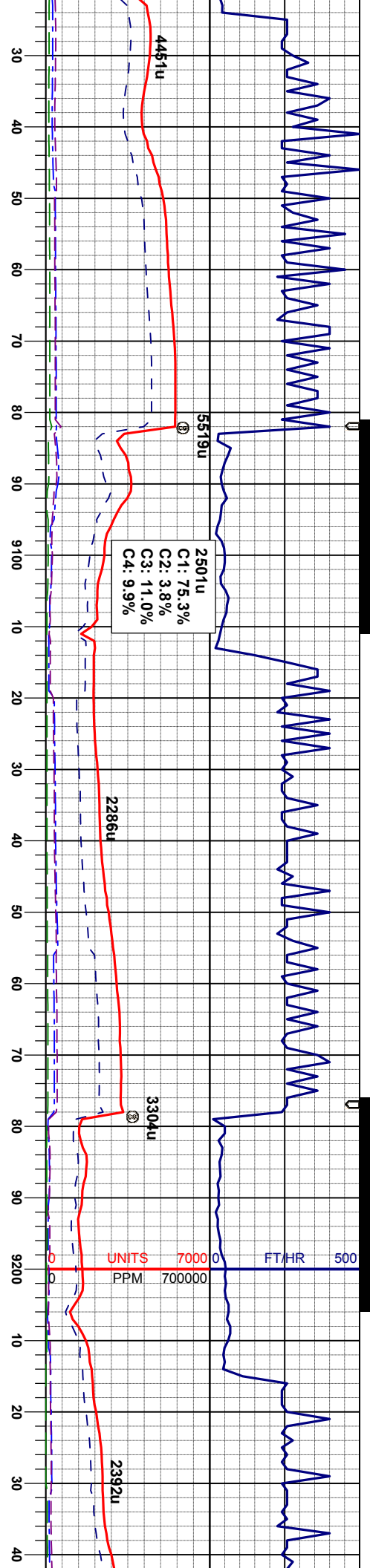
MRL: dkgy-gybrn, sbbiky-sbply, sft, mot-rthy tex, v calc, tr bent, tr calc incl, abnt fos frag
CHK: ltgy-crm, sbbiky, sft, mot-wxy tex, v calc

MRL: dkgy-gybrn, sbbiky-sbply, sft, mot-rthy tex, v calc, tr bent, tr calc incl, abnt fos frag
CHK: ltgy-crm, sbbiky, sft, mot-wxy tex, v calc









9026'
92.4°
266.6°
5724.72'

CHK: lly-crm, sbbiky, sft, mot-wxy tex, v
calc
MRL: dkgy-gybm, sbbiky-sbply, sft, mot-
rthy tex, v calc, tr bent, tr calc incl, abnt fos
frag

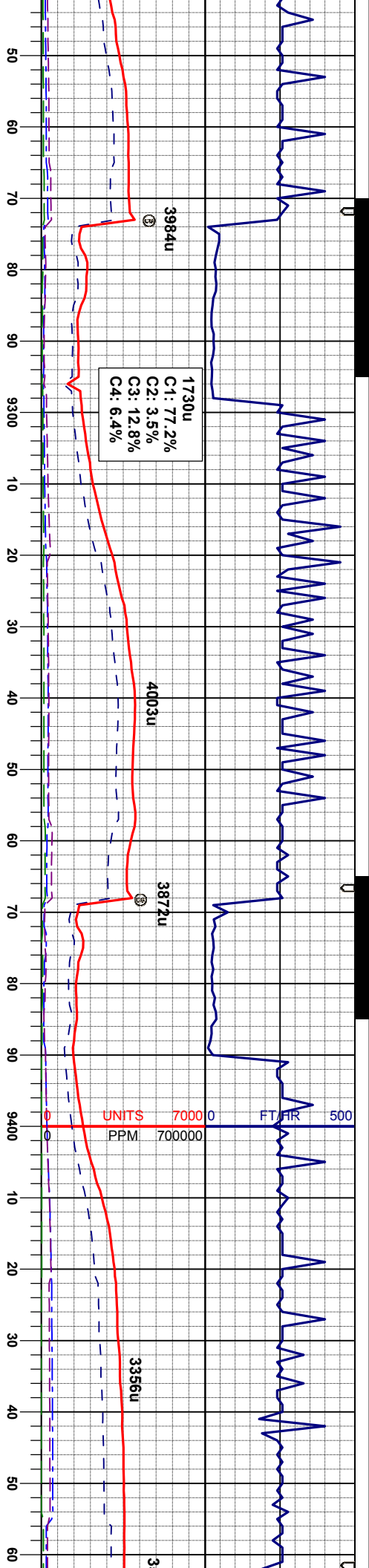
MD 9121'
INC 92.2°
AZM 267.3°
TVD 5720.90'

CHK: lly-crm, sbbiky, sft, mot-wxy tex, v
calc
MRL: dkgy-gybm, sbbiky-sbply, sft, mot-
rthy tex, v calc, tr bent, tr calc incl, abnt fos
frag

MD 9215'
INC 90.8°
AZM 268.0°
TVD 5718.44'

CHK: lly-crm, sbbiky, sft, mot-wxy tex, v
calc
MRL: dkgy-gybm, sbbiky-sbply, sft, m-
rthy tex, v calc, tr bent, tr calc incl, abn





WT IN 10.10/ OUT 10.10
VIS IN 48/ OUT 48

MD 9310'
INC 90.4°
AZM 270.1°
TVD 5717.45'

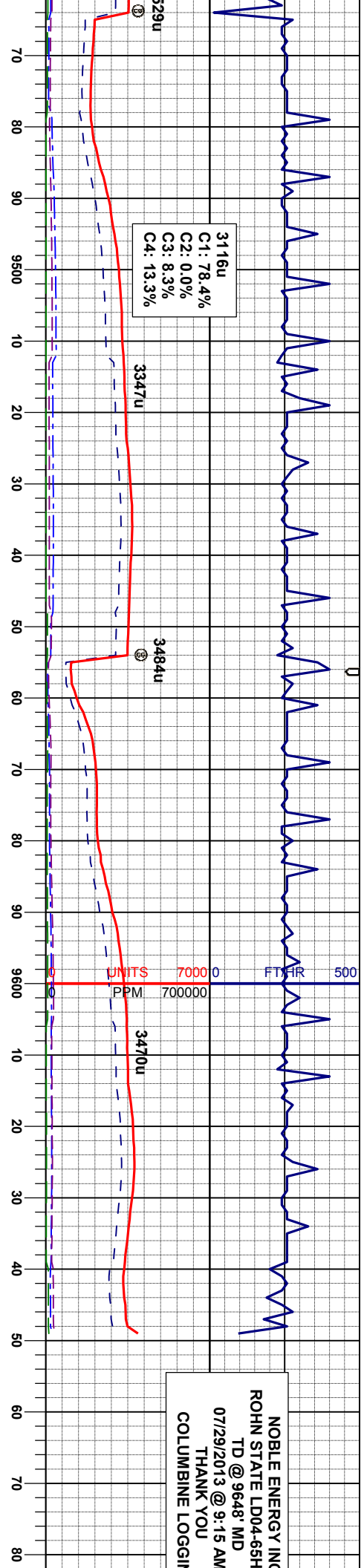
CHK: lly-crm, sbbiky, sft, mot-wxy tex, v
calc
MRL: dkgy-gybrn, sbbiky-sbply, sft, mot-
rthy tex, v calc, tr bent, tr calc incl, occ fos
frag

MD 9405'
INC 89.7°
AZM 271.4°
TVD 5717.37'

CHK: lly-crm, sbbiky, sft, mot-wxy tex, v
calc
MRL: dkgy-gybrn, sbbiky-sbply, sft, mot-
rthy tex, v calc, tr bent, tr calc incl, occ fos
frag

CHK: lly-crm, sbbiky, sft, mot-wxy tex, v
calc
MRL: dkgy-gybrn, sbbiky-sbply, sft, mot-
rthy tex, v calc, tr bent, tr calc incl, occ fos
frag





NOBLE ENERGY INC
ROHN STATE LD04-65H
TD @ 9648' MD
07/29/2013 @ 9:15 AM
THANK YOU
COLUMBINE LOGGIN

WT IN 10.10/ OUT 10.10
VIS IN 41/ OUT 41

MD 9500'
INC 89.6°
AZM 271.2°
TVD 5718.01'

v-crm, sbblky, sft, mot-wxy tex, v
gy-brn, sbblky-sbply, sft, mot-
v calc, tr calc incl, occ fos frag

CHK: lgy-crm, sbblky, sft, mot-wxy tex, v
calc
MRL: dky-gy-brn, sbblky-sbply, sft, mot-
rthy tex, v calc, tr calc incl, occ fos frag

MRL: dky-gy-brn, sbblky-sbply, sft, mot-
rthy tex, v calc, tr calc incl, occ fos frag
CHK: lgy-crm, sbblky, sft, mot-wxy tex, v
calc

MD 9593'
INC 90.7°
AZM 270.0°
TVD 5717.76'

WT IN 10.10/ OUT 10.10
VIS IN 39/ OUT 39

PROJECTED
MD 9648'
INC 90.7°
AZM 270.0°
TVD 5717.09'

MRL: dky-gy-brn, sbblky-sbply, sft, mot-
rthy tex, v calc, tr calc incl, occ fos frag
CHK: lgy-crm, sbblky, sft, mot-wxy tex, v
calc

NOBLE ENERGY
ROHN STATE LD04-
TD @ 9648' MD
07/29/2013 @ 9:15 AM



