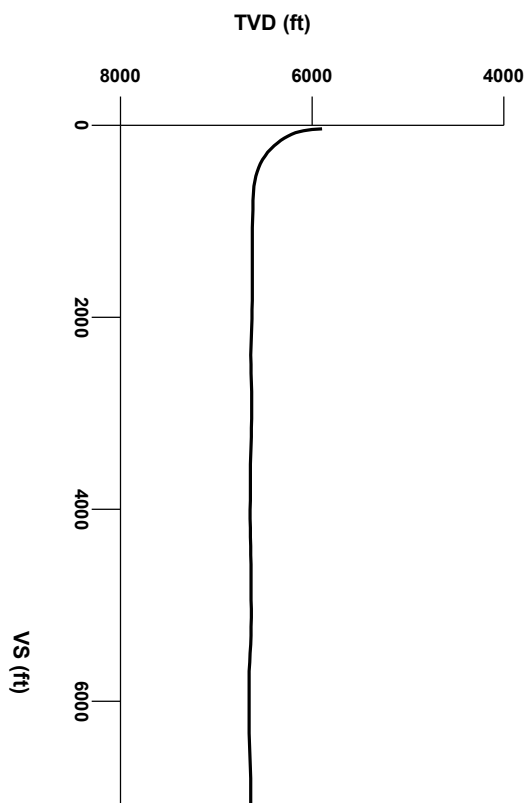


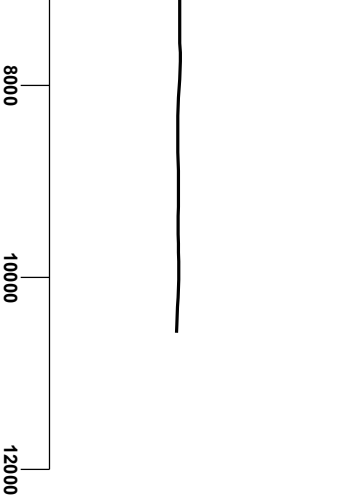
LOG created using LPLOT VH Version 3.0, March 11, 2013, Copyright (C) 1999-2009 Pason Systems Corp.

OPERATOR: NOBLE ENERGY INC.
WELL: LUCCI STATE B03-69HNL
LOCATION: SEC 1 T5N R64W
COUNTY: WELD
STATE: COLORADO
SPOT: 376' FNL; 612' FWL
ELEVATION: 4,617' GL; 4,641' KB
FIELD: WATTENBERG
SPUD DATE: 02/28/2013
TD DATE: 03/09/2013
DATES LOGGED: 03/02/2013 - 03/09/2013 (HORIZONTAL)
DEPTHS LOGGED: 5,891' - 17,000' (HORIZONTAL)
LOGGERS: CHRIS SCAHEL; CHRIS COOK
DRILLING FLUID: LSND
DRILLING RIG: H&P 315
API: 05-123-36534
LOG TYPE: VERTICAL
SCALE: 1:240 (5 inches per 100 feet)
REMARKS: SEE CORRESPONDING VERTICAL LOG: LUCCI STATE B03-69HNL VERT.
 LAT/LON 40.43464/-104.50564
 Wellsite Geological Services Provided by Columbine Logging Inc.



Survey Elevation

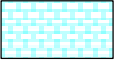
Survey Plan



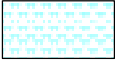
LITHOLOGIES



Bentonite



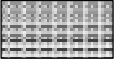
Chalk



Marl



Shaly Sandstone



Silty Shale

ENGINEERING SYMBOLS



Connection



Connection Gas



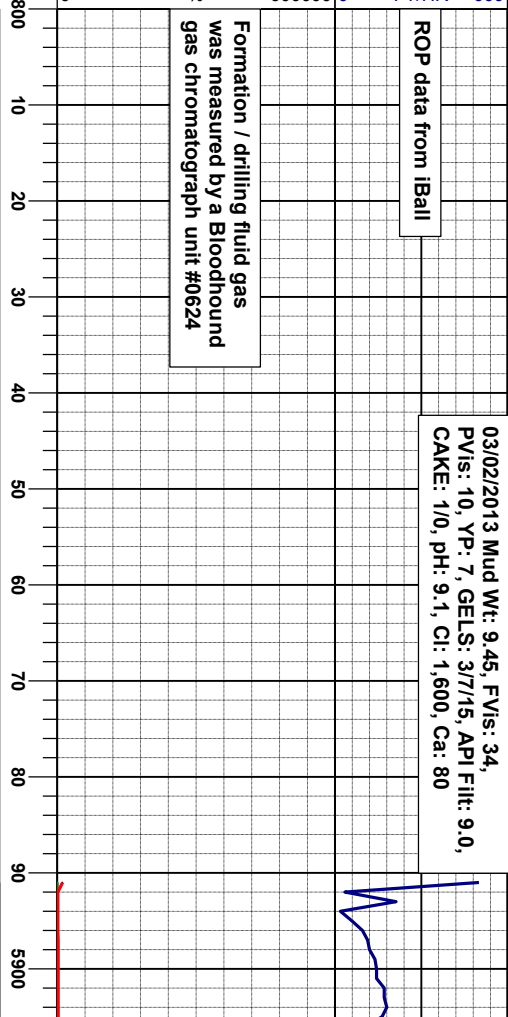
Midnight Depth

SLIDE ROTATE

GAS		
0	UNITS	60000
C1		
0	PPM	600000
C2		
0	PPM	600000
C3		
0	PPM	600000
C4		
0	PPM	600000
CO2		
0	%	600000

ROP		
0	FT/HR	600

DEPTH (FEET)



CUTTINGS LITHOLOGY

GAMMA		
50		200

Gamma data from Sperry - Halliburton

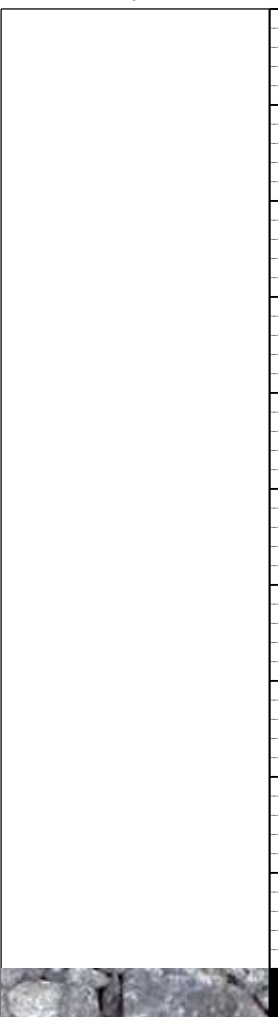
BEGIN LOGGING LATERAL ON 03/2/2013 @ 04:15 hrs MST BY COLUMBINE LOGGING INC.

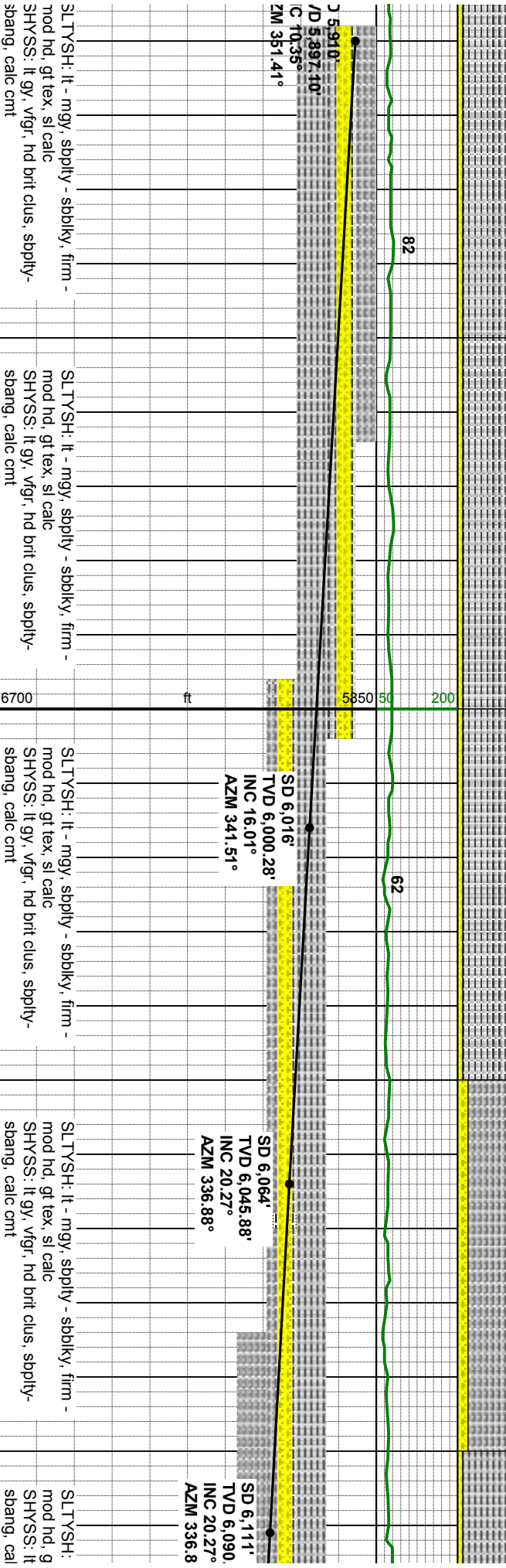
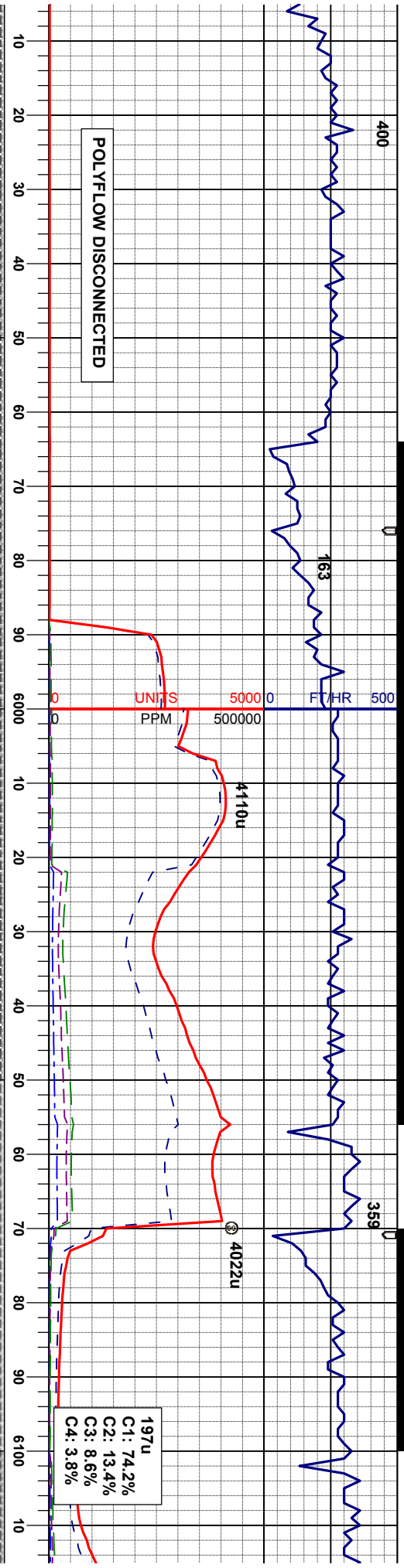
BHA 200 BIT 8.750 in Reed Hycalog A1202 5x14 Jets

SEE CORRESPONDING VERTICAL L.PLOT LOG: Lucif State B03-69HNL VERT.

OIL SHOW

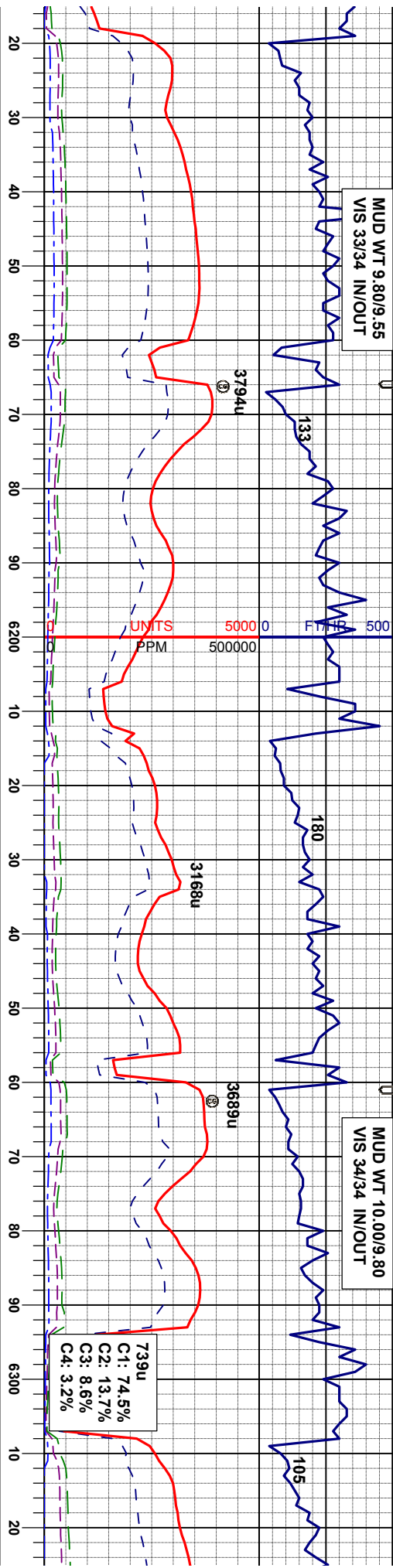
SAMPLE PHOTOS





MUD WT 9.80/9.55
VIS 33/34 IN/OUT

MUD WT 10.00/9.80
VIS 34/34 IN/OUT



C1: 74.5%
C2: 13.7%
C3: 8.6%
C4: 3.2%

It - mgy, sbply - sbdky, firm -
t tex, sl calc
gy, vfgr, hd brit clus, sbply-
c cnt

SLTYSH: It - mgy, sbply - sbdky, firm -
mod hd, gt tex, sl calc
SHYSS: It gy, vfgr, hd brit clus, sbply-
sbang, calc cnt

SLTYSH: It - mgy, sbply - sbdky, firm -
mod hd, gt tex, sl calc
SHYSS: It gy, vfgr, hd brit clus, sbply-
sbang, calc cnt

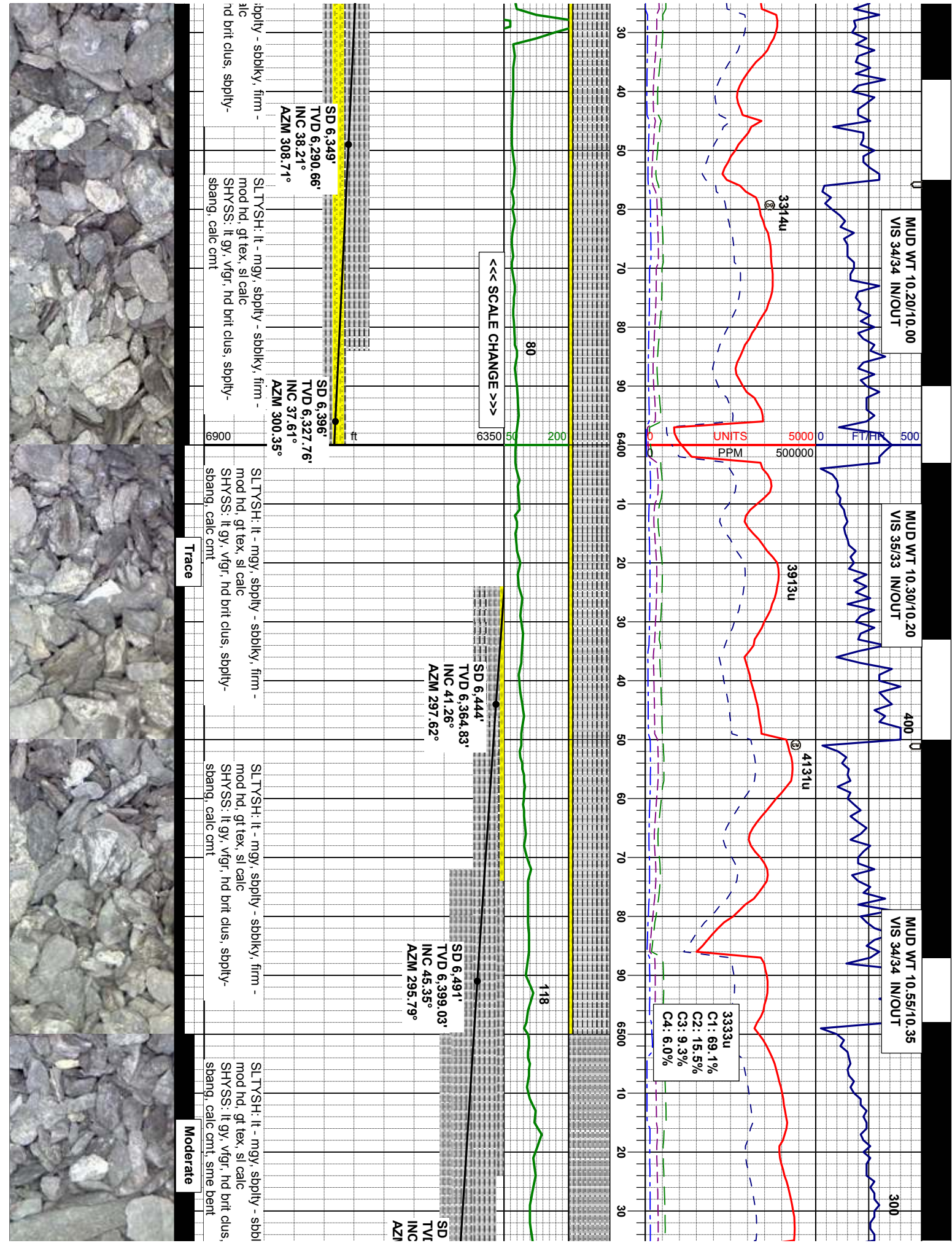
SLTYSH: It - mgy, sbply - sbdky, firm -
mod hd, gt tex, sl calc
SHYSS: It gy, vfgr, hd brit clus, sbply-
sbang, calc cnt

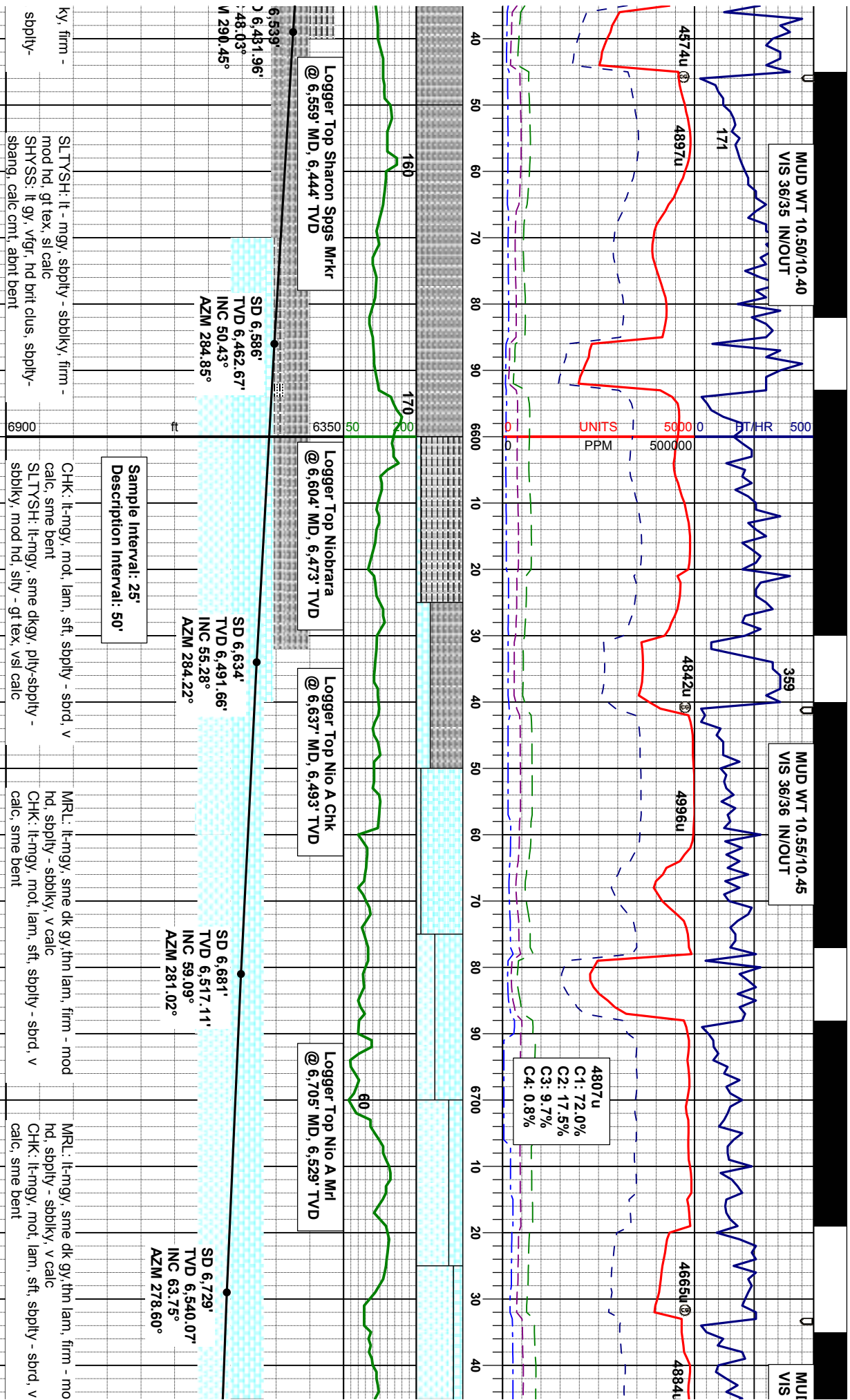
SLTYSH: It - mgy, sbply - sbdky, firm -
mod hd, gt tex, sl calc
SHYSS: It gy, vfgr, hd brit clus, sbply-
sbang, calc cnt

Trace

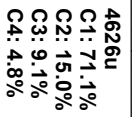
Fair







03/02/2013 Mud Wt: 10.50, FVis: 37,
PVis: 13, YP: 13, GELS: 5/11/29, API Filt: 9.0,
CAKE: 1/0, pH: 9.3, Cl: 1,600, Ca: 80

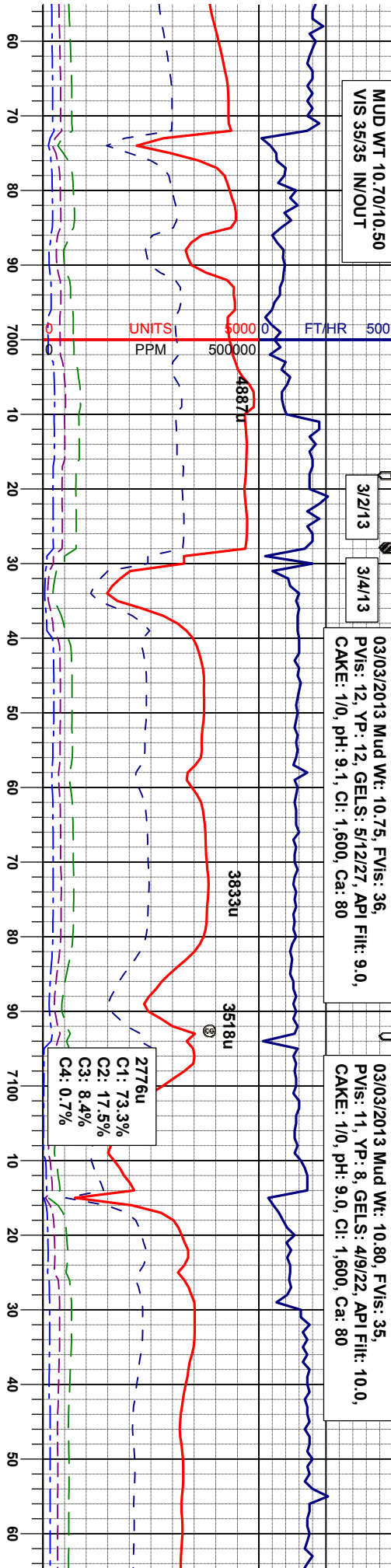


MUD WT 10.70/10.50
VIS 35/35 IN/OUT

3/2/13 3/4/13

03/03/2013 Mud Wt: 10.75, FVis: 36,
PVIS: 12, YP: 12, GELS: 5/12/27, API Filtr: 9.0,
CAKE: 1/0, pH: 9.1, CI: 1.600, Ca: 80

03/03/2013 Mud Wt: 10.80, FVis: 35,
PVIS: 11, YP: 8, GELS: 4/9/22, API Filtr: 10.0,
CAKE: 1/0, pH: 9.0, CI: 1.600, Ca: 80



No Gamma Inside Casing

Top Nio B Chk
10' MD, 6,606' TVD

BUILD COMPLETED
@ 17:50 hrs MST
03/02/2013

BEGAN DRILLING LATERAL
ON 03/04/2013 @ 01:25 hrs MST

BHA 300
BIT 6.125 in
HDBS / FXD 54
5x15 JETS

SD 7,126'
TVD 6,617.89'
INC 88.98°
AZM 271.09°

SD 6,974'
TVD 6,606.02'
INC 83.04°
AZM 273.16°

TOOH @ 7,028' MD FOR
INTERMEDIATE CASING

L. mgy-dkgy, firm - mod hd, sbply - ply,
a thin lam, v calc
K. lt-mgy, tan, off. wh, mot, sft, sbply -
d, lam, v calc, tr fos frag, tr bent

MRL: mgy-dkgy, sme mot, firm - mod hd,
sbply - ply - lam, v calc
CHK: lt-mgy, tan, off. wh, mot, sft, sbply -
sbrd, lam, v calc, tr fos frag, tr bent

10% CHK: lt-mgy, tan, off. wh, mot, sft, brit,
sbply - thin lam, v calc,
90% MRL: mgy-dkgy, blk, sme mot, firm -
mod hd, sbply - ply - lam, v calc, tr fos frag

10% CHK: lt-mgy, ltgybrn, mot, sft, brit,
sbply - sbply, v calc,
90% MRL: mgy-dkgy, blk, sme mot, firm -
mod hd, sbply - ply - lam, v calc, tr fos frag

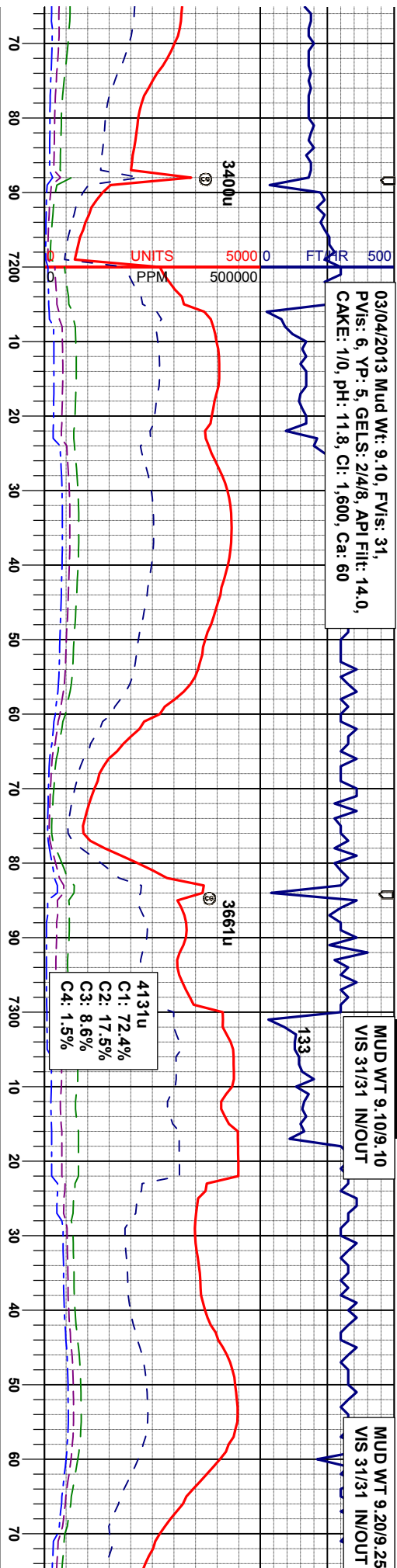
10% CHK: lt-mgy, ltgybrn, mot, sft, brit,
sbply - sbply, v calc,
90% MRL: mgy-dkgy, blk, sme mot, firm -
mod hd, sbply - ply - lam, v calc, tr fos frag



03/04/2013 Mud Wt: 9.10, FVis: 31,
PVIS: 6, YP: 5, GELS: 2/4/8, API Filtr: 14.0,
CAKE: 1/0, pH: 11.8, Cl: 1.600, Ca: 60

MUD WT 9.10/9.10
VIS 31/31 IN/OUT

MUD WT 9.20/9.25
VIS 31/31 IN/OUT



SD 7.221'
TVD 6,619.42'
INC 89.17°
AZM 269.85°

SD 7.316'
TVD 6,621.52'
INC 88.30°
AZM 268.41°

-mgy, ltgybrn, mot, sft, brit,
y, v calc,
lgy-dkgy, blk, sme mot, firm -
lity - plty - lam, v calc, freq scat

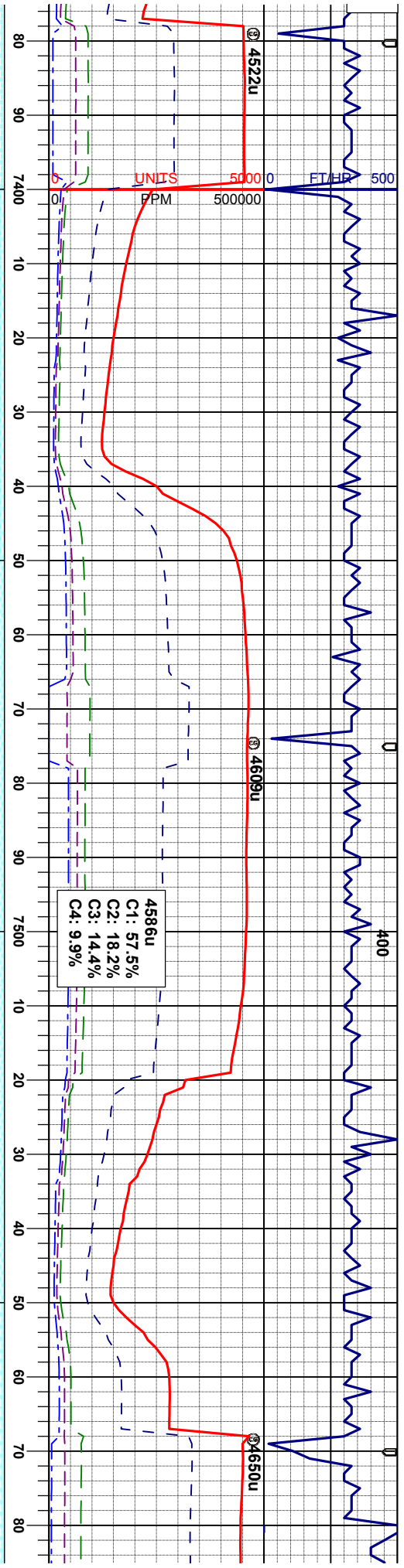
30% CHK: lt-mgy, ltgybrn, mot, sft, brit,
spltly - sbblky, v calc,
70% MRL: mgy-dkgy, blk, sme mot, firm -
mod hd, spltly - plty - lam, v calc, scat fos
frag

30% CHK: lt-mgy, ltgybrn, mot, sft, brit,
spltly - sbblky, v calc,
70% MRL: mgy-dkgy, blk, sme mot, firm -
mod hd, spltly - plty - lam, v calc, scat fos
frag

30% CHK: lt-mgy, ltgybrn, mot, sft, brit,
spltly - sbblky, v calc,
80% MRL: mgy-dkgy, blk, sme mot, firm -
mod hd, spltly - plty - lam, v calc, scat fos
frag

30% CHK: lt-mgy, ltgy
spltly - sbblky, v calc,
70% MRL: mgy-dkgy,
mod hd, spltly - plty -





SD 7,411'
TVD 6,623.59'
INC 89.20°
AZM 267.70°

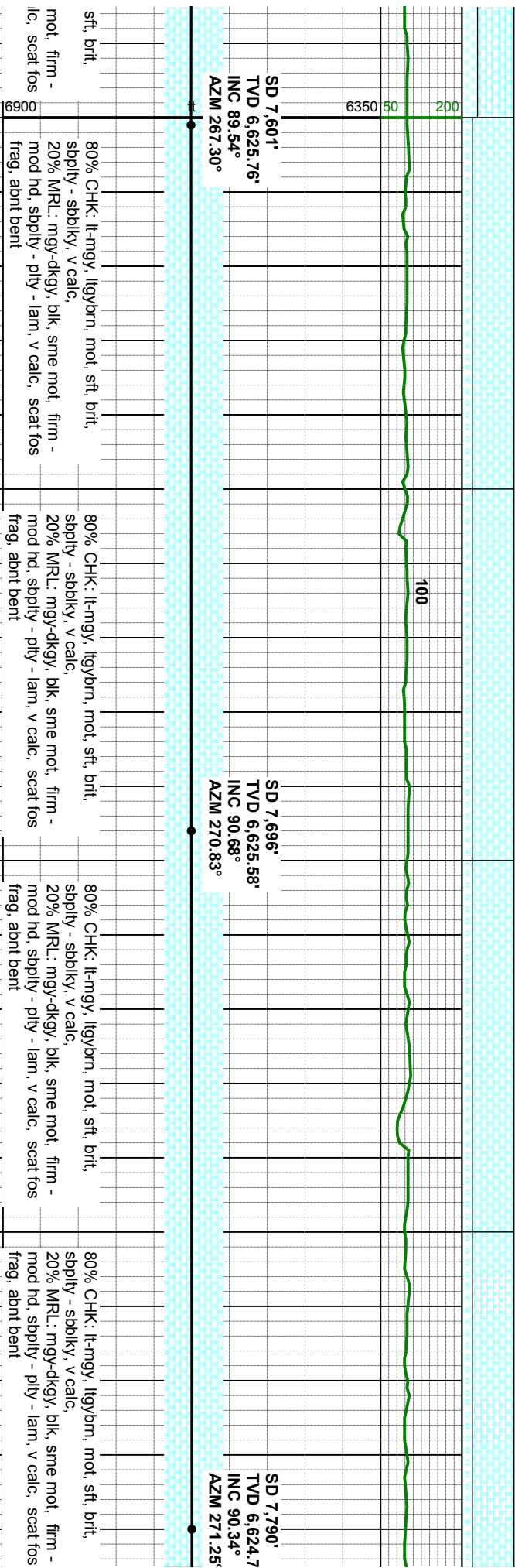
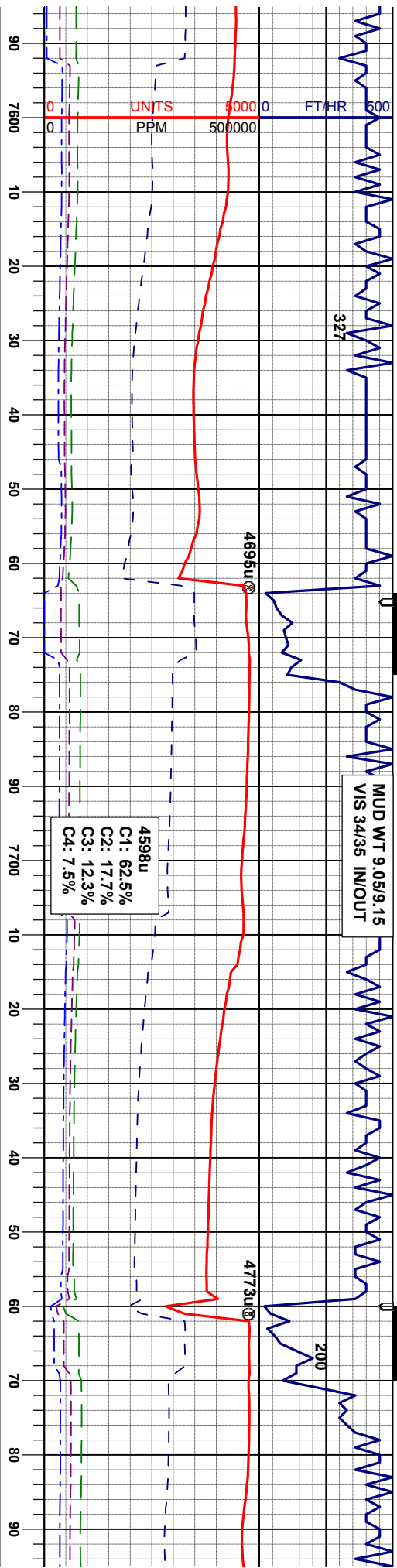
SD 7,506'
TVD 6,624.86'
INC 89.32°
AZM 266.79°

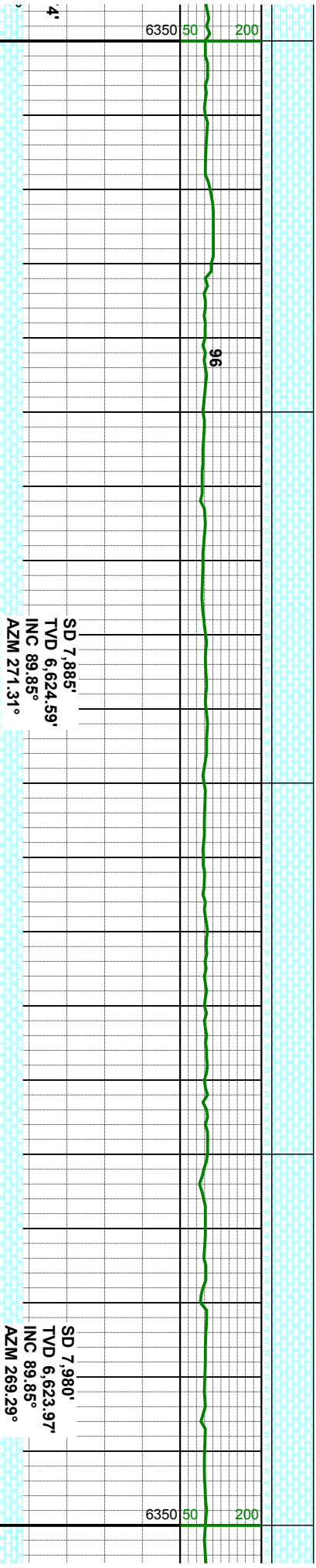
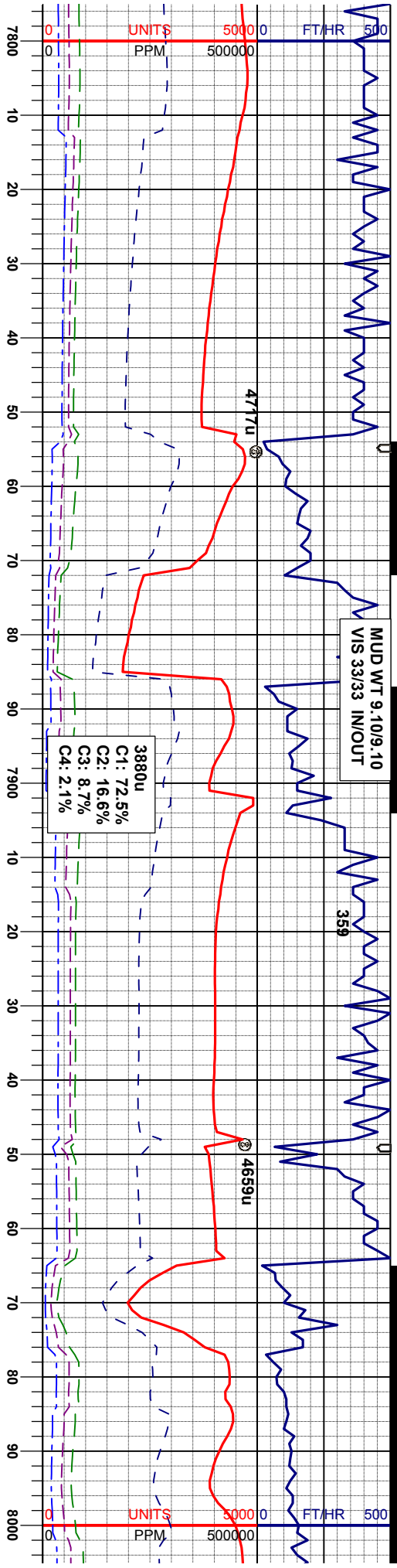
brn. mot. sft. brit,
blk. sme mot. firm - lam, v calc. scat fos
40% CHK: lt-mgy, ltgybrn, mot. sft. brit, spbly - sblky, v calc, 60% MRL: mgy-dkgy, blk, sme mot, firm - mod hd, spbly - ply - lam, v calc, scat fos frag
60% CHK: lt-mgy, ltgybrn, mot. sft. brit, spbly - sblky, v calc, 40% MRL: mgy-dkgy, blk, sme mot, firm - mod hd, spbly - ply - lam, v calc, scat fos frag, abnt bent
60% CHK: lt-mgy, ltgybrn, mot. sft. brit, spbly - sblky, v calc, 40% MRL: mgy-dkgy, blk, sme mot, firm - mod hd, spbly - ply - lam, v calc, scat fos frag, abnt bent
70% CHK: lt-mgy, ltgybrn, mot. spbly - sblky, v calc, 30% MRL: mgy-dkgy, blk, sme mod hd, spbly - ply - lam, v ca frag, abnt bent

Excellent

Good







80% CHK: lt-mgy, ltgybrn, mot, sft, brit,
sbsply - sbbiky, v calc,
20% MRL: mgy-dkgy, blk, sme mot, firm -
mod hd, sbsply - ply - lam, v calc, scat fos
frag, abnt bent

80% CHK: lt-mgy, ltgybrn, mot, sft, brit,
sbsply - sbbiky, v calc,
20% MRL: mgy-dkgy, blk, sme mot, firm -
mod hd, sbsply - ply - lam, v calc, scat fos
frag, abnt bent

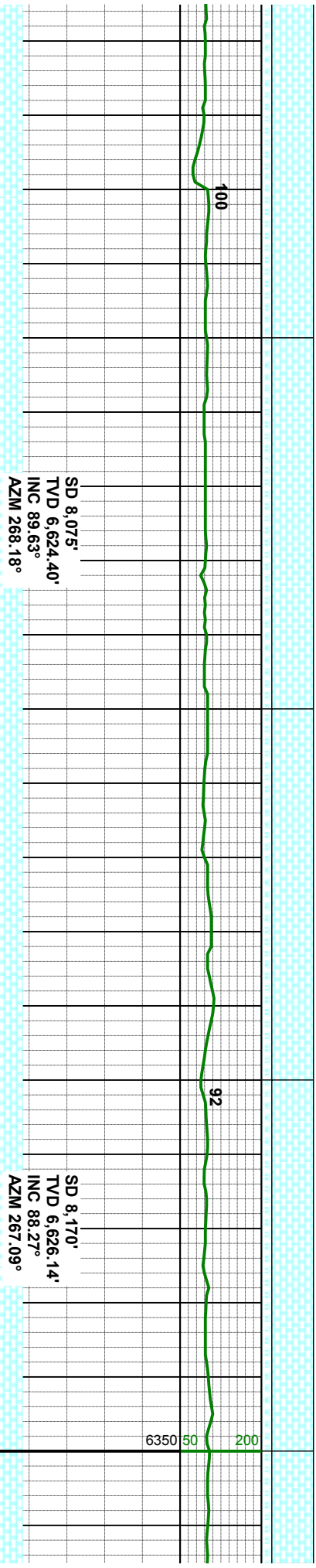
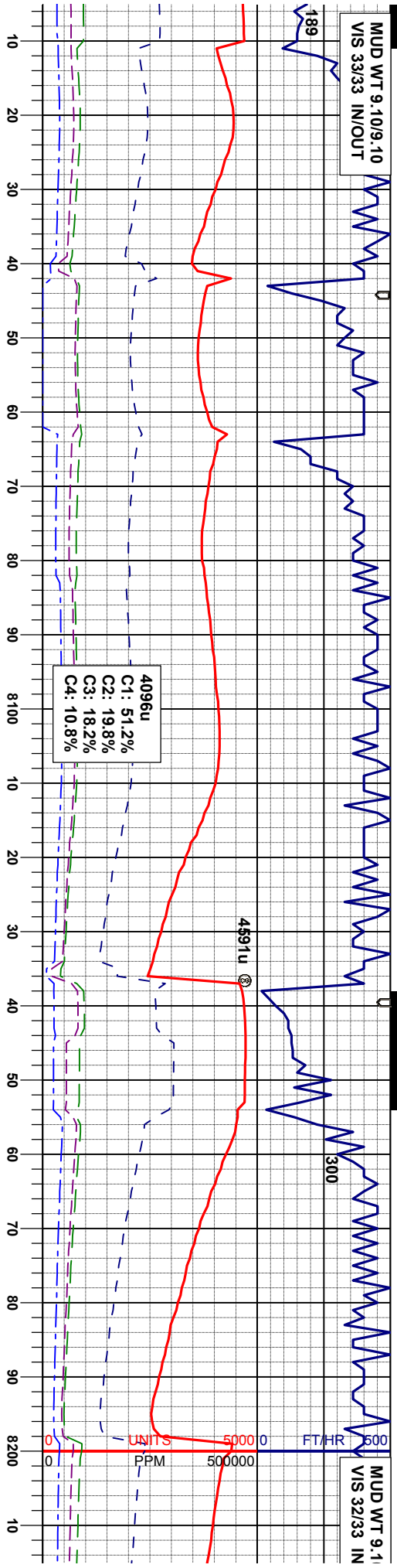
80% CHK: lt-mgy, ltgybrn, mot, sft, brit,
sbsply - sbbiky, v calc,
20% MRL: mgy-dkgy, blk, sme mot, firm -
mod hd, sbsply - ply - lam, v calc, scat fos
frag, abnt bent

80% CHK: lt-mgy, ltgybrn, mot, sft, brit,
sbsply - sbbiky, v calc,
20% MRL: mgy-dkgy, blk, sme mot, firm -
mod hd, sbsply - ply - lam, v calc, scat fos
frag, abnt bent



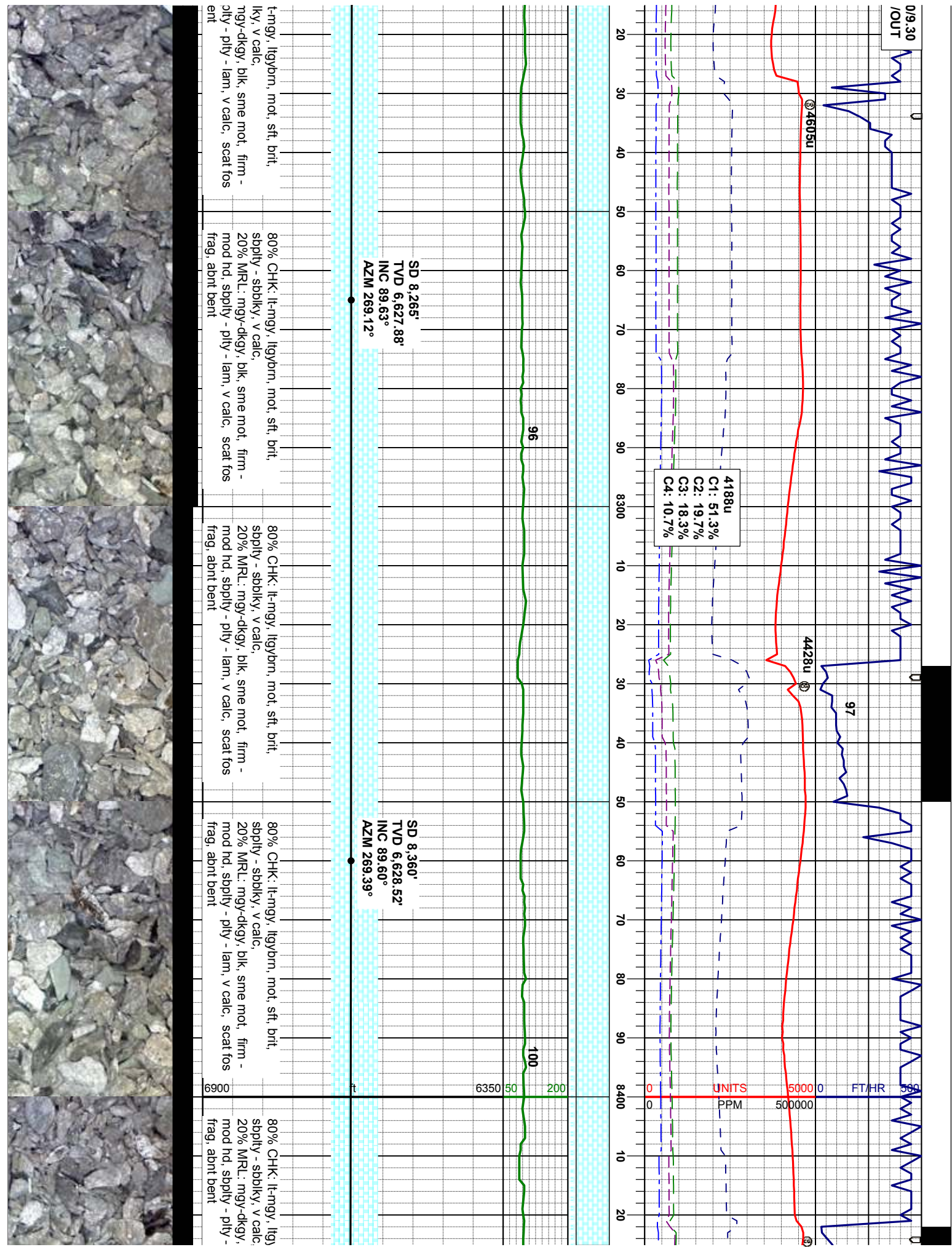
MUD WT 9.10/9.10
VIS 33/33 IN/OUT

MUD WT 9.1
VIS 32/33 IN



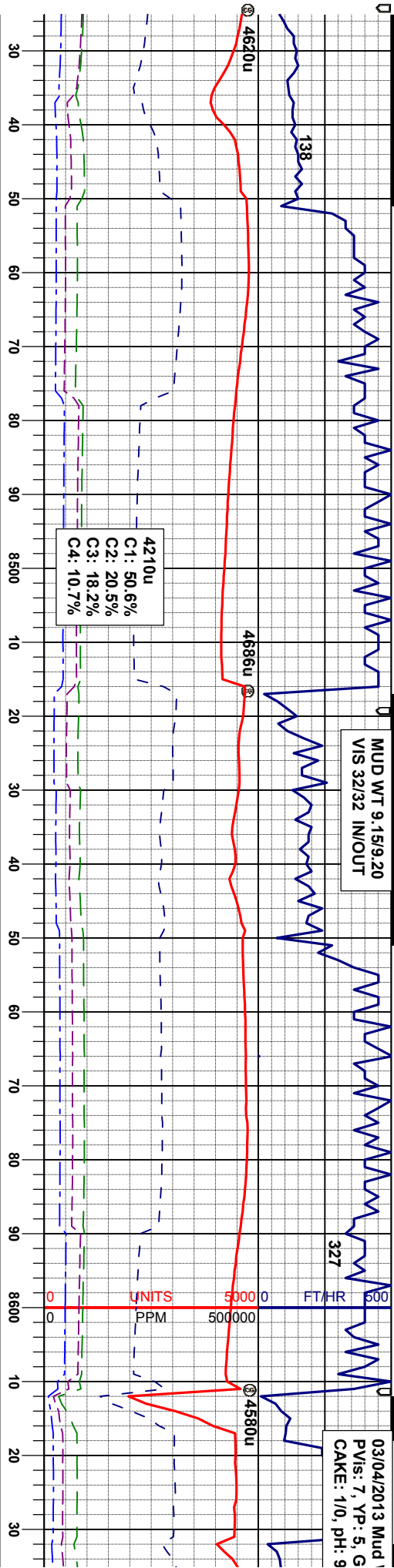
Depth (ft)	Core Data	Notes
0	80% CHK: lt-mgy, ltgybrn, mot, sft, brt, spbly - sbbiky, v calc, 20% MRL: mgy-dkgy, blk, sme mot, firm - mod hd, spbly - ply - lam, v calc, scat fos frag, abnt bent	
100	80% CHK: lt-mgy, ltgybrn, mot, sft, brt, spbly - sbbiky, v calc, 20% MRL: mgy-dkgy, blk, sme mot, firm - mod hd, spbly - ply - lam, v calc, scat fos frag, abnt bent	
189	80% CHK: lt-mgy, ltgybrn, mot, sft, brt, spbly - sbbiky, v calc, 20% MRL: mgy-dkgy, blk, sme mot, firm - mod hd, spbly - ply - lam, v calc, scat fos frag, abnt bent	
268.18	80% CHK: lt-mgy, ltgybrn, mot, sft, brt, spbly - sbbiky, v calc, 20% MRL: mgy-dkgy, blk, sme mot, firm - mod hd, spbly - ply - lam, v calc, scat fos frag, abnt bent	
267.09	80% CHK: lt-mgy, ltgybrn, mot, sft, brt, spbly - sbbiky, v calc, 20% MRL: mgy-dkgy, blk, sme mot, firm - mod hd, spbly - ply - lam, v calc, scat fos frag, abnt bent	
267.09	80% CHK: lt-mgy, ltgybrn, mot, sft, brt, spbly - sbbiky, v calc, 20% MRL: mgy-dkgy, blk, sme mot, firm - mod hd, spbly - ply - lam, v calc, scat fos frag, abnt bent	





MUD WT 9.15/9.20
VIS 32/32 IN/OUT

03/04/2013 Mud
P/Is: 7, YP: 5, G
CAKE: 1/0, pH: 9



SD 8,455'
TVD 6,629.65'
INC 89.04°
AZM 268.79°

SD 8,549'
TVD 6,632.92'
INC 86.98°
AZM 266.63°

brn, mot, sft, brit,
blk, sme mot, firm -
lam, v calc, scat fos

80% CHK: lt-mgy, lgybrn, mot, sft, brit,
spty - sblky, v calc,
20% MRL: mgy-dkgy, blk, sme mot, firm -
mod hd, spty - pty - lam, v calc, scat fos
frag, abnt bent

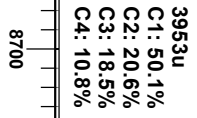
80% CHK: lt-mgy, lgybrn, mot, sft, brit,
spty - sblky, v calc,
20% MRL: mgy-dkgy, blk, sme mot, firm -
mod hd, spty - pty - lam, v calc, scat fos
frag, abnt bent

80% CHK: lt-mgy, lgybrn, mot, sft, brit,
spty - sblky, v calc,
20% MRL: mgy-dkgy, blk, sme mot, firm -
mod hd, spty - pty - lam, v calc, scat fos
frag, abnt bent

70% CHK: lt-mgy, lgybrn, mot, s
spty - sblky, v calc,
30% MRL: mgy-dkgy, blk, sme n
mod hd, spty - pty - lam, v calc
frag, abnt bent



MUD WT 9.00/9.10
VIS 33/33 IN/OUT



SD 8,739'
TVD 6,639.55"
INC 88.95°
AZM 267.53°

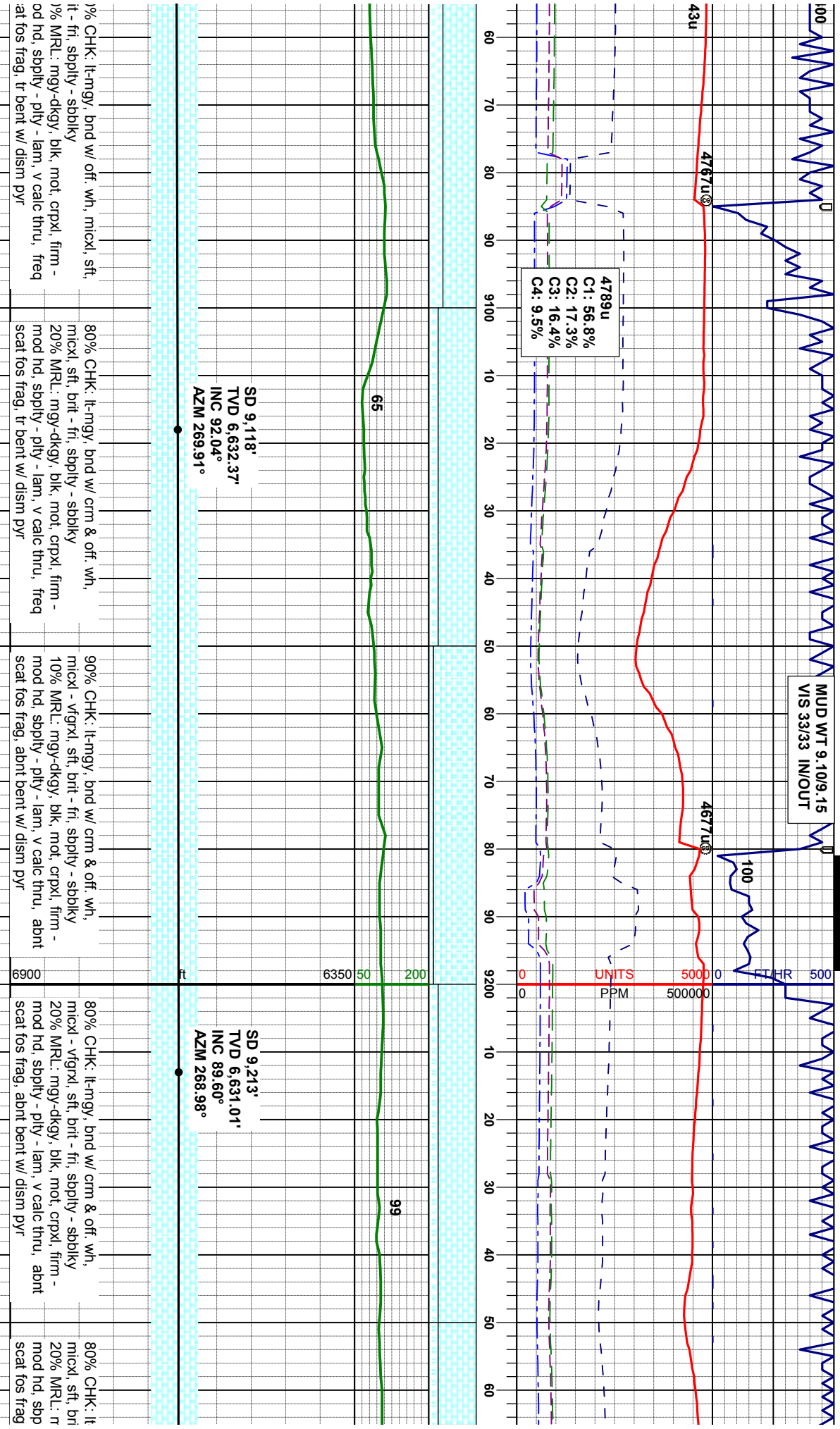
SD 8,834'
TVD 6,639.35'
INC 91.29°
AZM 268.37°

60% CHK: lt-mgy, ltgydm, sft, brit, sbply - sbbky, v calc, 40% MRL: mgy-dkgy, blk, mot, firm - mod hd, sbply - ply - lam, v calc, scat fos frag, sme bent

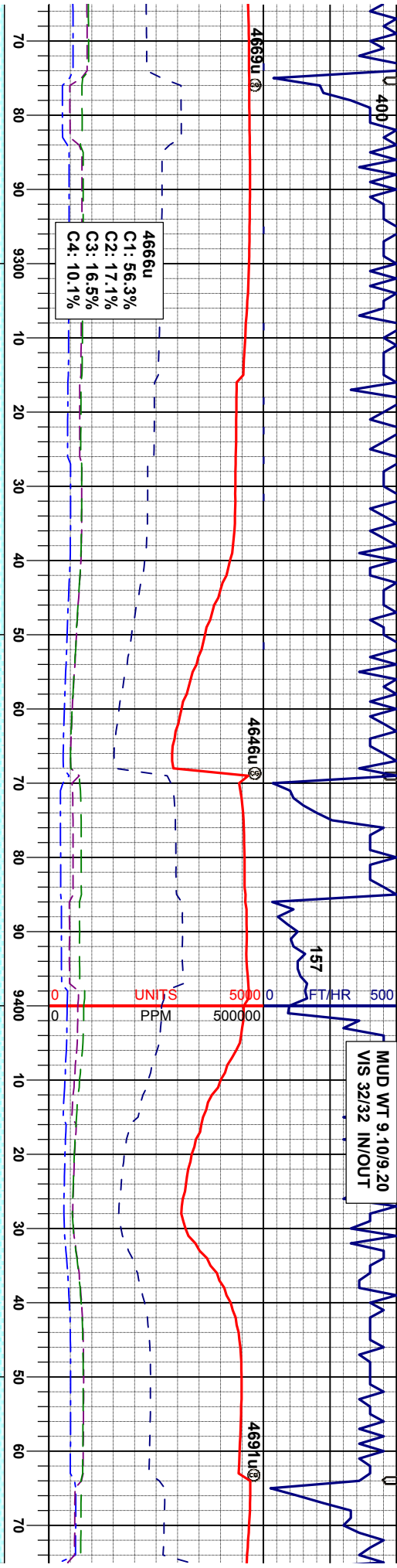
60% CHK: l-t-mgy, bnd w/ off. wh, sft, bnt,
sbply - sbblky, v calc,
40% MRL: mgy-dkgy, blk, mot, flm - mod
hd, sbply - ply - lam, v calc, scat fos frag
sme bent

50% CHK: lt-mgy, bnd w/ off, wh, micxl, sft
brt, sbply - sbblky, v calc,
50% MRL: mgy-dkgy, blk, mot, cripxl, firm -
mod hd, sbply - pty - lam, v calc, scat fos
frag, tr bent





MUD WT 9.10/9.20
VIS 32/32 IN/OUT

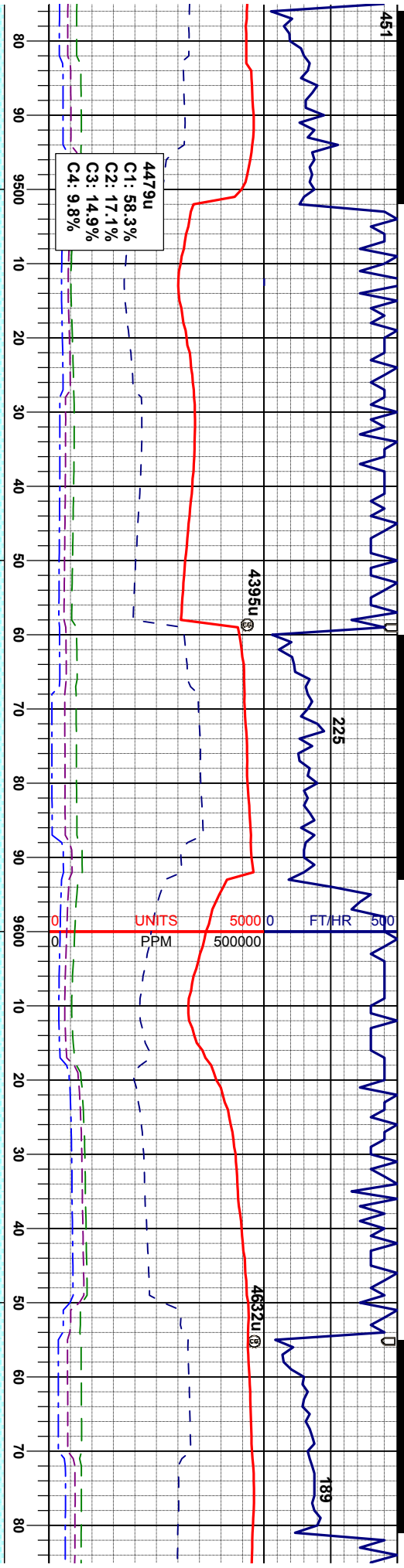


SD 9,308'
TVD 6631.60'
INC 89.69°
AZM 270.73°

SD 9,403'
TVD 6,632.35'
INC 89.41°
AZM 271.82°

-mgy, bnd w/ crm & off. wh, t - fri, sbply - sbblky mgy-dkgy, blk, mot, crpxl, firm - lty - ply - lam, v calc thru, abnt , abnt bent w/ dism pyr	80% CHK: lt-mgy, bnd w/ crm & off. wh, micxl, sft, brit - fri, sbply - sbblky 20% MRL: mgy-dkgy, blk, mot, crpxl, firm - mod hd, sbply - ply - lam, v calc thru, abnt scat fos frag, abnt bent w/ dism pyr	90% CHK: lt-mgy, bnd w/ crm & off. wh, micxl - vfgxrl sft, brit - fri, sbply - sbblky 10% MRL: mgy-dkgy, blk, mot, crpxl, firm - mod hd, sbply - ply - lam, v calc thru, abnt scat fos frag, abnt bent w/ dism pyr	90% CHK: lt-mgy, bnd w/ crm & off. wh, micxl - vfgxrl sft, brit - fri, sbply - blk 10% MRL: mgy-dkgy, blk, mot, crpxl, mod hd, sbply - ply - lam, v calc thru, abnt scat fos frag, abnt bent w/ dism pyr	90% CHK: lgy, bnd w/ -vfgxrl sft, brit - fri, sbp 10% MRL: mgy-dkgy, b hd, sbply - ply - lam, v fos frag, abnt bent w/ di
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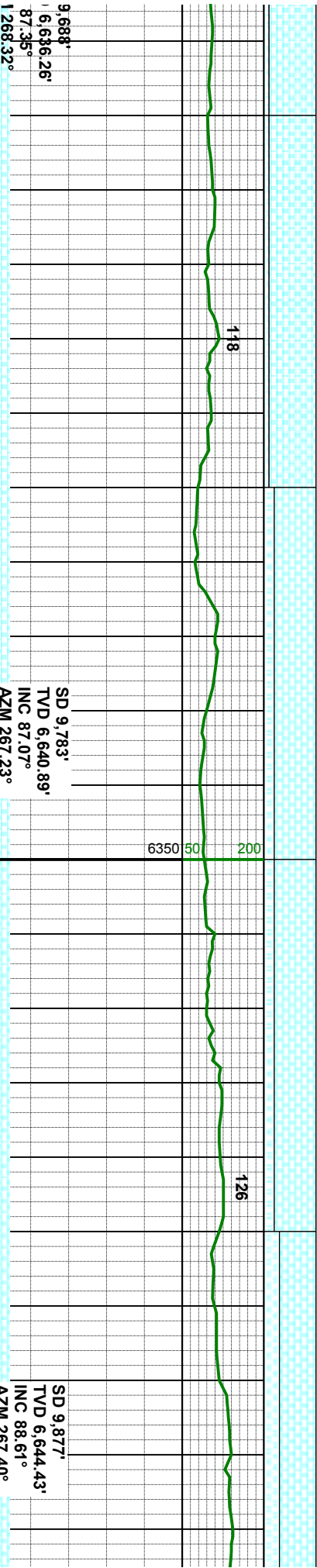
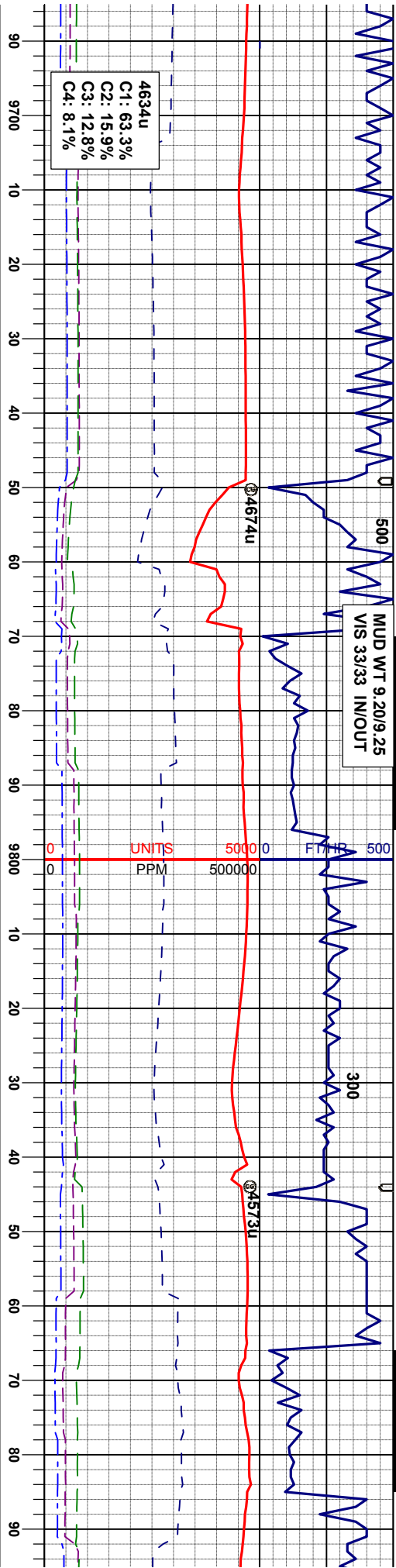
SD 9,498'
TVD 6,633.14'
INC 89.63°
AZM 271.71°

SD 9,593'
TVD 6,633.76'
INC 89.63°
AZM 270.09°

SD
TVD
INC
AZM

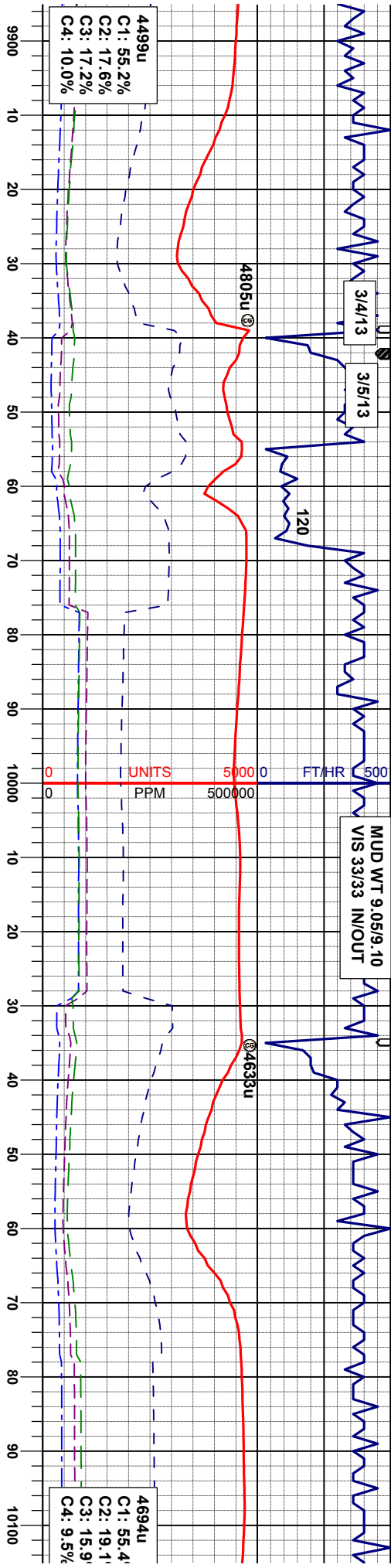
crm & off. wh, micxl	90% CHK: lly, bnd w/ crm & off. wh, micxl	90% CHK: lly, bnd w/ crm & off. wh, micxl	90% CHK: lly, bnd w/ crm & off. wh, micxl
ply - blkly	- vfgpxl, sft, brit - fri, spply - blkly	sft, brit - fri, spply - blkly	sft - mod hd, brit - fri, spply - blkly
blk, mot, crpxl, mod	10% MRL: mgy-dkgy, blk, mot, crpxl, mod	10% MRL: mgy-dkgy, blk, mot, crpxl, mod	10% MRL: mgy-dkgy, blk, mot, crpxl, mod
calc thru, abnt scat	hd, spply - ply - lam, v calc thru, abnt scat	hd, spply - ply - lam, v calc thru, abnt scat	hd, spply - ply - lam, v calc thru, abnt scat
sm pyr	fos frag, abnt bent w/ dism pyr	fos frag, abnt bent w/ dism pyr	abnt bent w/ dism pyr





f. wh, micxl, cpy, mod fos frag,	90% CHK: ltgy, bnd w/ crm & off. wh, micxl, sft - mod hd, brit - fri, sbply - blk 10% MRL: mgy-dkgy, blk, mot, crpxl, mod hd, sbply - ply - lam, abnt scat fos frag, abnt bent w/ dism pyr	80% CHK: ltgy, bnd w/ crm & off. wh, micxl, sft - mod hd, brit - fri, sbply - blk 20% MRL: mgy-dkgy, blk, mot, crpxl, mod hd, sbply - ply - lam, v abnt bent w/ dism pyr, abnt scat fos frag	80% CHK: ltgy, bnd w/ off. wh, micxl, sft - mod hd, brit - fri, sbply - blk 20% MRL: mgy-dkgy, blk, mot, crpxl, mod hd, sbply - ply - lam, v abnt bent w/ dism pyr, abnt scat fos frag	70% CHK: ltgy-ngy, bnd w/ off. wh, micxl, sft - mod hd, brit - fri, sbply - blk 30% MRL: mgy-dkgy, blk, mot, crpxl, mod hd, sbply - ply - lam, v abnt bent w/ dism pyr, freq scat fos frag
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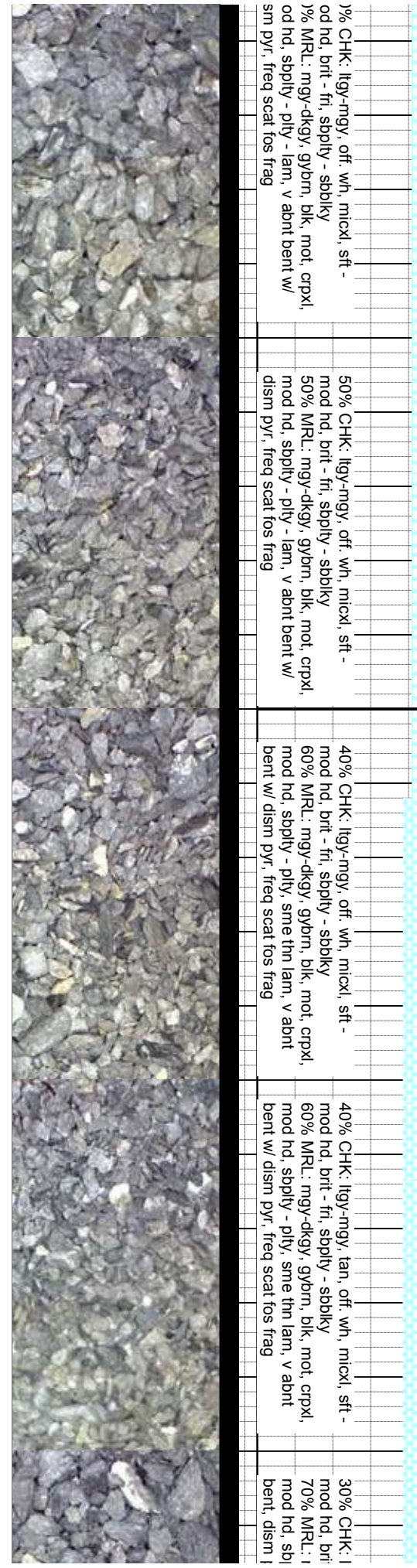
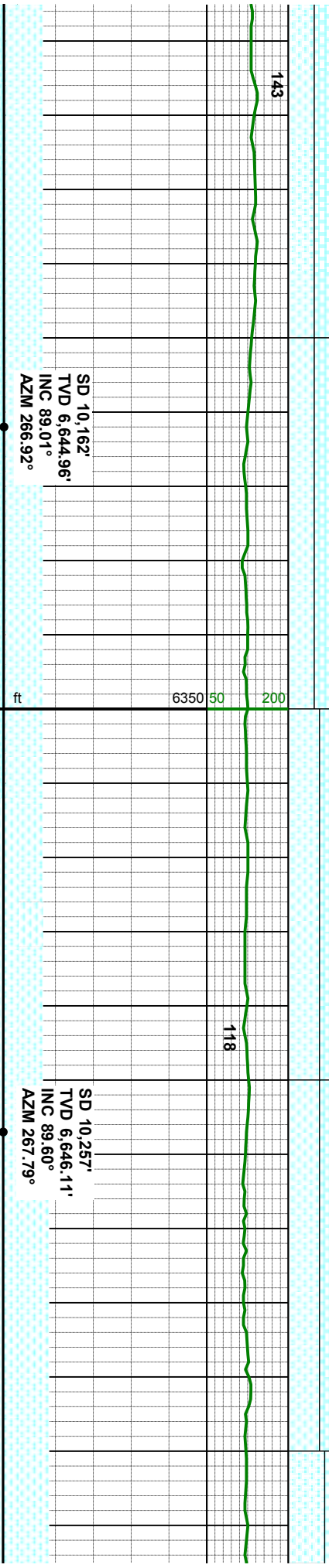
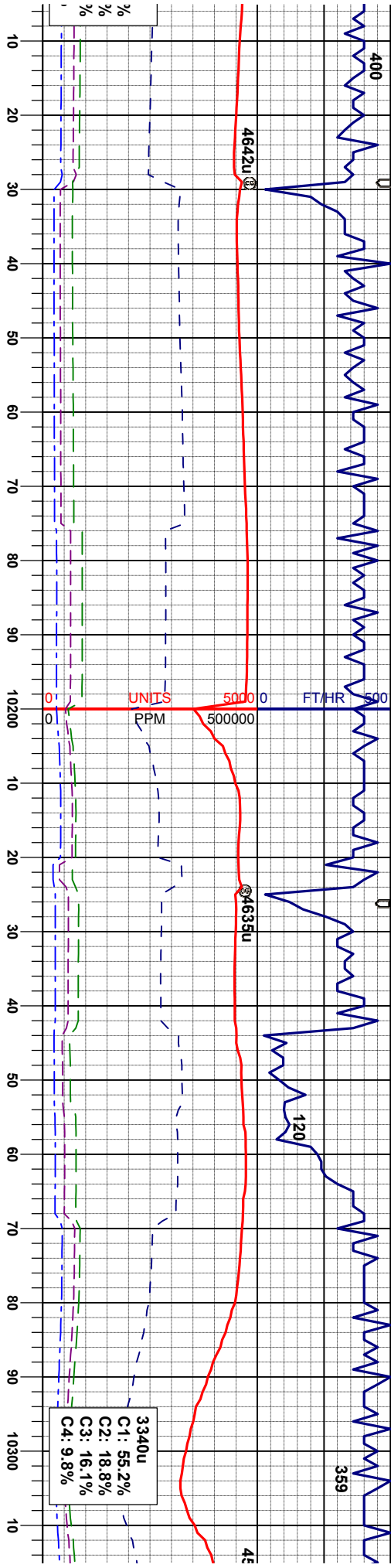


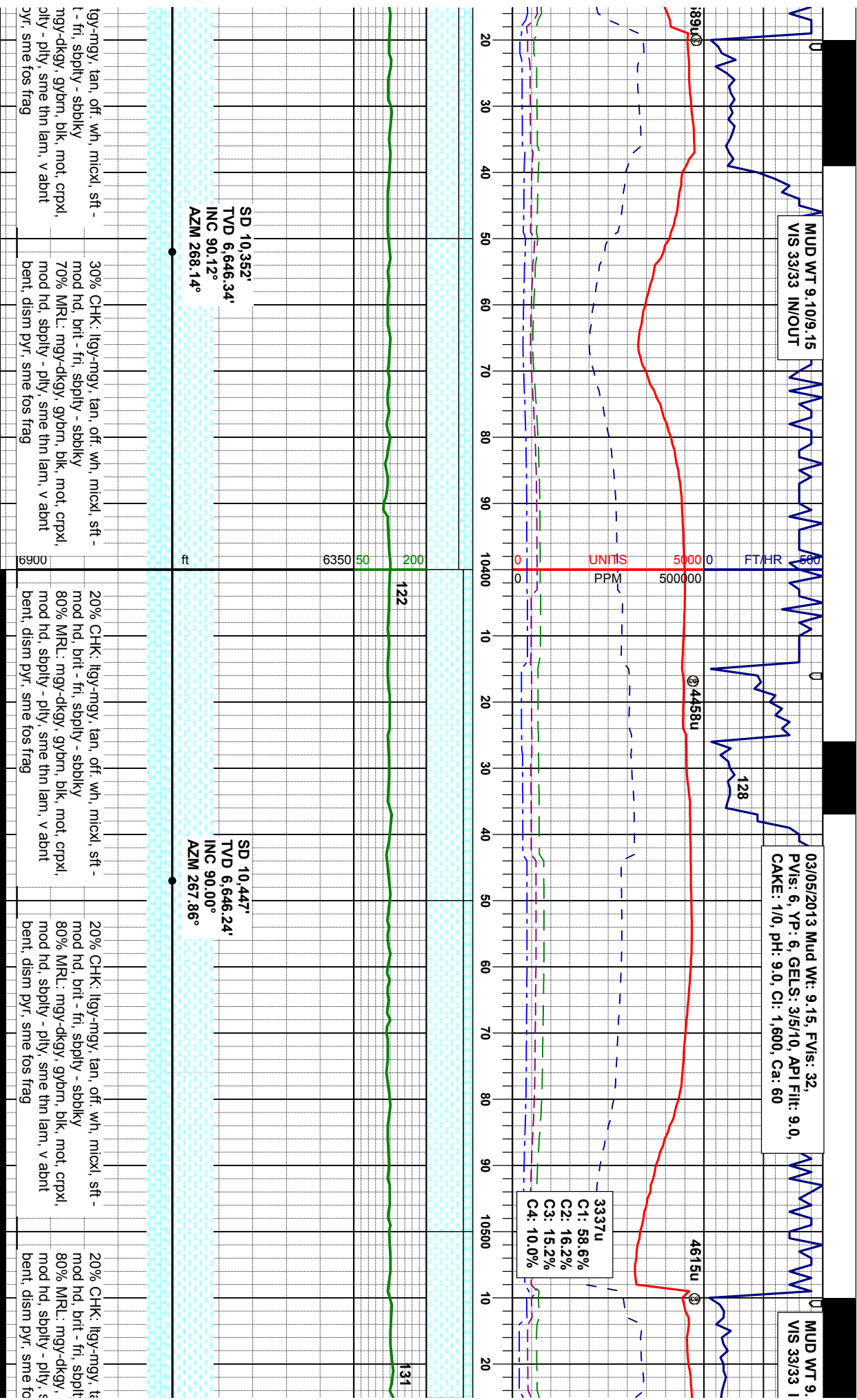
SD 9,972'
TVD 6,645.66'
INC 89.91°
AZM 267.22°

SD 10,067'
TVD 6,644.93'
INC 90.96°
AZM 268.46°

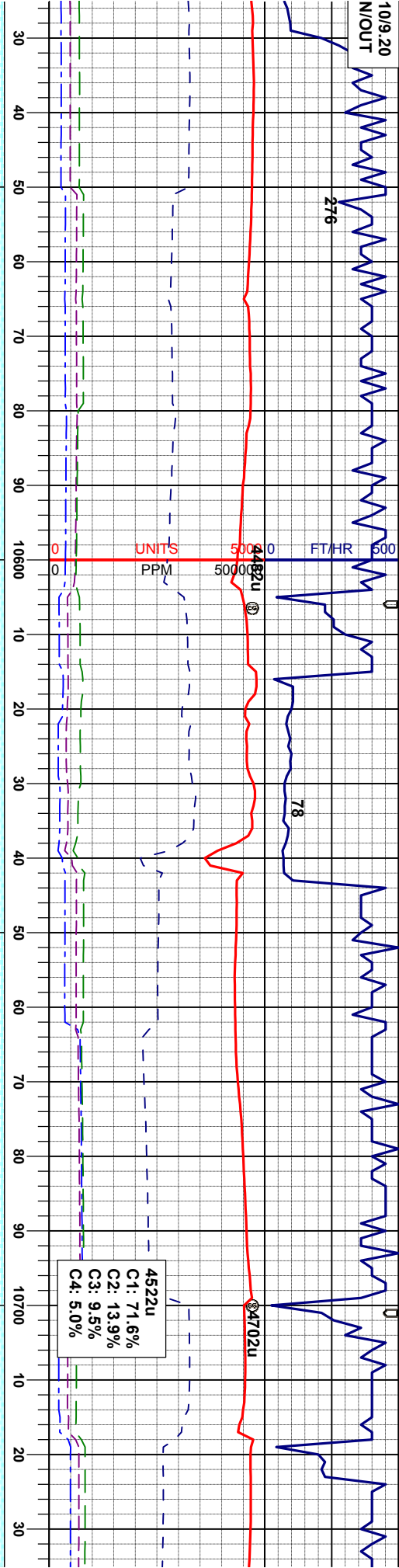
70% CHK: lly-mgy, bnd w/ off. wh, micxl, sft - mod hd, brt - fri, sbply - blk	60% CHK: lly-mgy, bnd w/ off. wh, micxl, sft - mod hd, brt - fri, sbply - blk	60% CHK: lly-mgy, bnd w/ off. wh, micxl, sft - mod hd, brt - fri, sbply - blk	50% CHK: lly-mgy, off. wh, micxl, sft - mod hd, brt - fri, sbply - blk
30% MRL: mgy-dkgy, blk, mot, crpxl, mod hd, sbply - ply - lam, v abnt bent w/ dism pyr, freq scat fos frag	40% MRL: mgy-dkgy, gybrn, blk, mot, crpxl, mod hd, sbply - ply - lam, v abnt bent w/ dism pyr, freq scat fos frag	40% MRL: mgy-dkgy, gybrn, blk, mot, crpxl, mod hd, sbply - ply - lam, v abnt bent w/ dism pyr, freq scat fos frag	50% MRL: mgy-dkgy, gybrn, blk, mot, crpxl, mod hd, sbply - ply - lam, v abnt bent w/ dism pyr, freq scat fos frag







10/9,20
NOUT



SD 10,542'
TVD 6,646.09'
INC 90.18°
AZM 267.09°

ft 6350 50 200

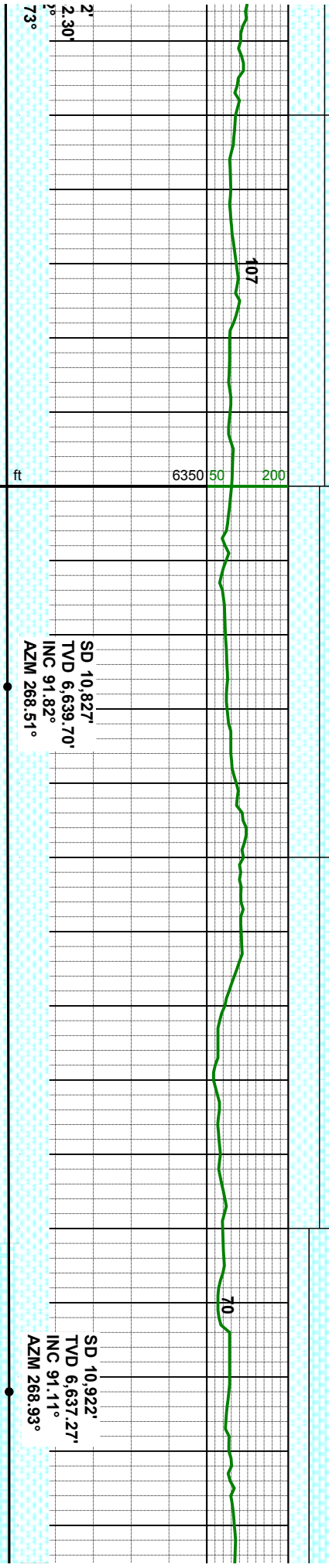
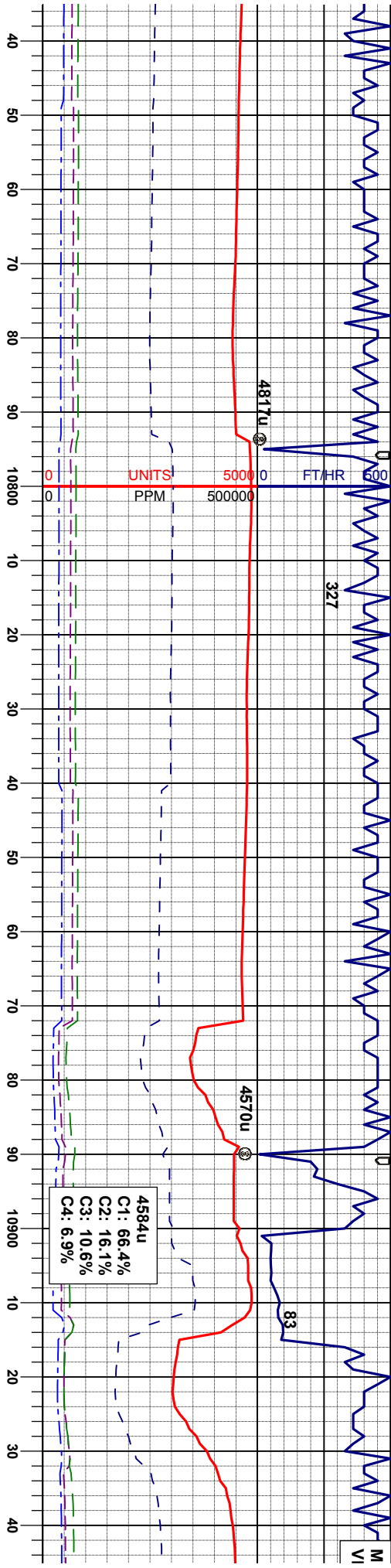
SD 10,637'
TVD 6,644.67'
INC 91.54°
AZM 268.45°

146

SD 10,73
TVD 6,64
INC 91.3,
AZM 268.

an, off. wh. micxl, sft - v - sbbiky gybrn, blk, mot, crpxl, sme thn lam, v abnt s frag	30% CHK: ltgy-mgy, tan, off. wh. micxl, sft - mod hd, brt - fr, sppty - sbbiky 70% MRL: mgy-dkgy, gybrn, blk, mot, crpxl, mod hd, sppty - ply, sme thn lam, v abnt bent, dism pyr, sme tos frag	30% CHK: ltgy-mgy, tan, off. wh. micxl, sft - mod hd, brt - fr, sppty - sbbiky 70% MRL: mgy-dkgy, gybrn, blk, mot, crpxl, mod hd, sppty - ply, sme thn lam, v abnt bent, dism pyr, sme tos frag	20% CHK: ltgy-mgy, tan, off. wh. micxl, sft - mod hd, brt - fr, sppty - sbbiky 80% MRL: mgy-dkgy, gybrn, blk, mot, crpxl, mod hd, sppty - ply, sme thn lam, v abnt bent, dism pyr, sme tos frag	30% CHK: ltgy-mgy, tan, off. wh. micxl, sft - mod hd, brt - fr, sppty - sbbiky 70% MRL: mgy-dkgy, gybrn, blk, mot, crpxl, mod hd, sppty - ply, sme thn lam, v abnt bent, dism pyr, sme tos frag
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micxl, sft - 30% CHK: ltgy-mgy, tan, off. wh, micxl, sft - mod hd, brit - fri, spply - sbblky 70% MRL: mgy-dkgy, gybrn, blk, mot, crpxl, mod hd, spply - ply, sme thn lam, v abnt bent, dism pyr, sme fos frag

6900

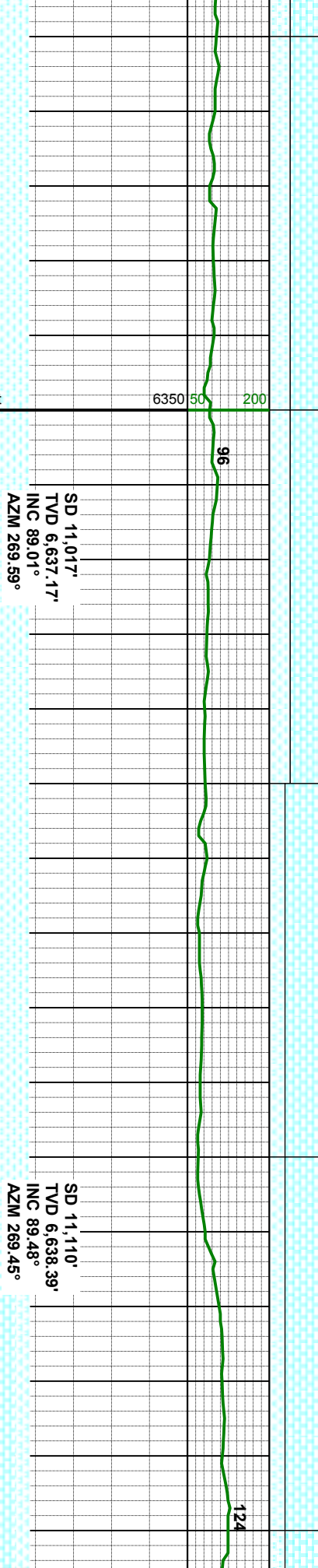
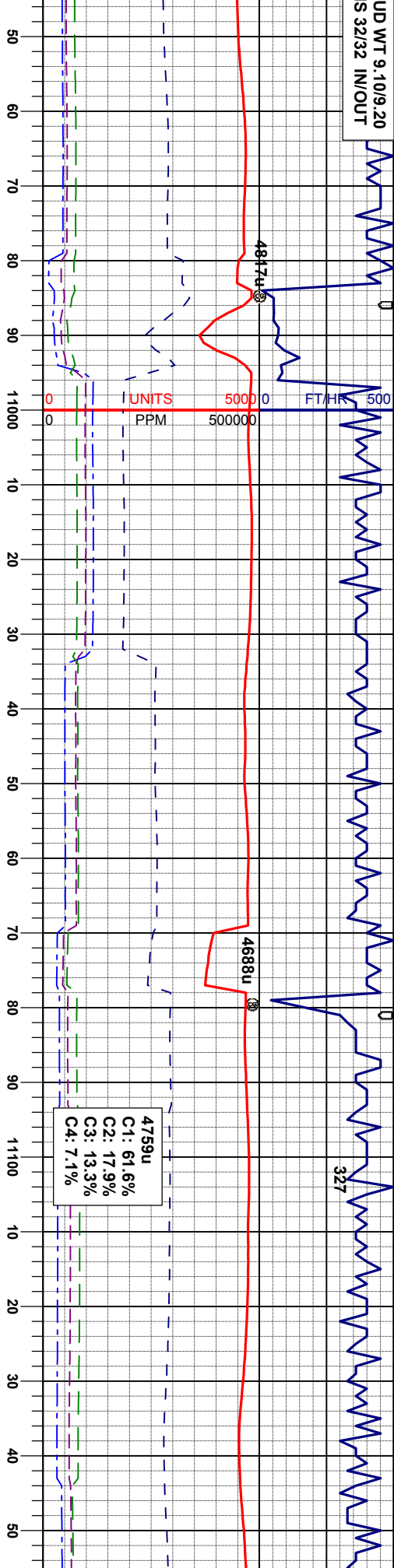
SD 10,827' TVD 6,639.70' INC 91.82° AZM 268.51°

SD 10,922' TVD 6,637.27' INC 91.11° AZM 268.93°

60% CHK: ltgy-mgy, tan, off. wh, micxl, sft - mod hd, brit - fri, spply - sbblky 40% MRL: mgy-dkgy, gybrn, blk, mot, crpxl, mod hd, spply - ply, sme thn lam, v abnt bent, dism pyr, sme fos frag

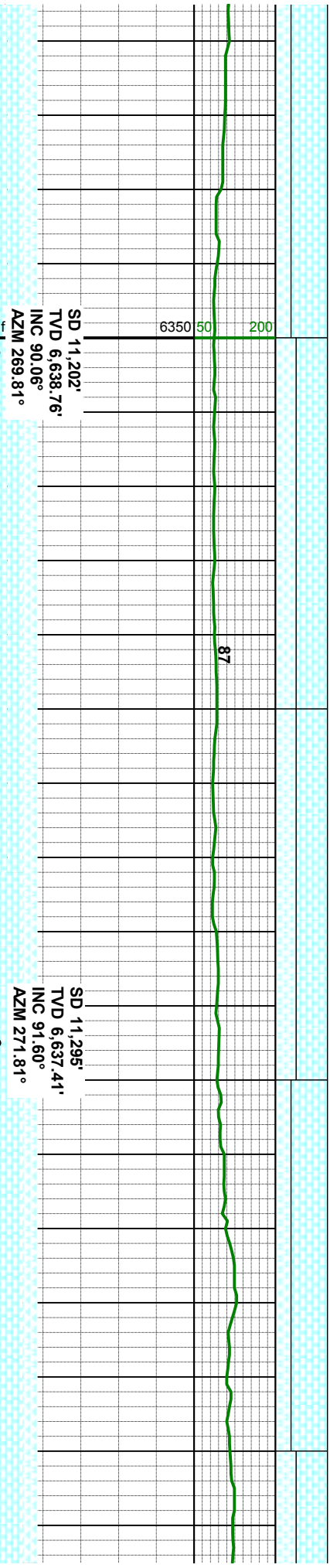
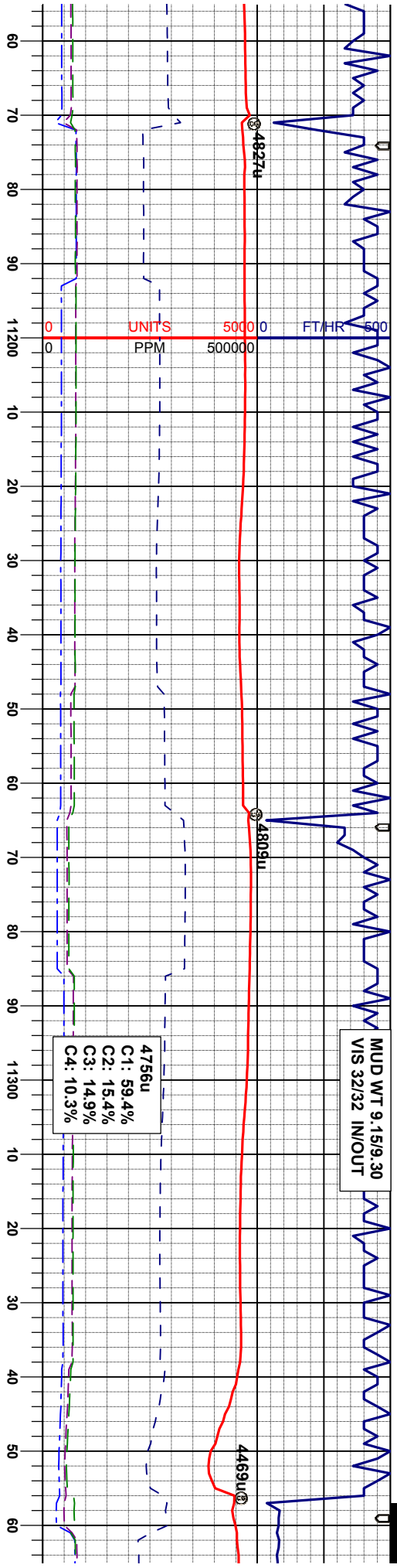


UD WT 9.10/9.20
S 32/32 IN/OUT



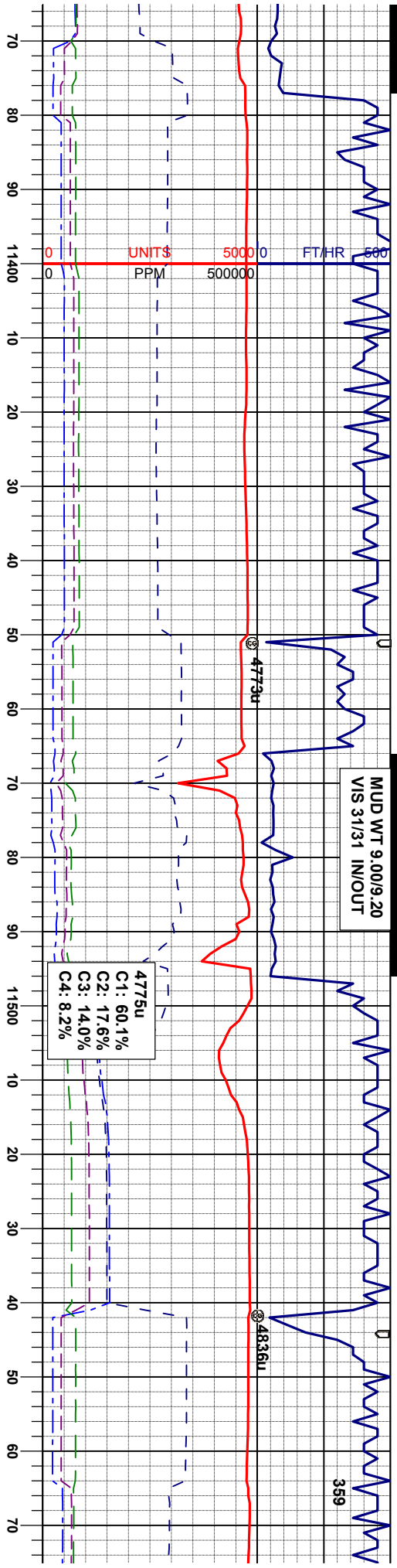
Depth (ft)	Log Description
50	60% CHK: lly-mgy, tan, off. wh, micxl, sft - mod hd, brt - fri, spply - sbbkly
100	40% MRL: mgy-dkgy, gybrn, blk, mot, crpxl, mod hd, spply - ply, sme thn lam, abnt bent, dism pyr, sme fos frag
150	60% CHK: lly-mgy, tan, off. wh, micxl, sft - mod hd, brt - fri, spply - sbbkly
200	40% MRL: mgy-dkgy, gybrn, blk, mot, crpxl, mod hd, spply - ply, sme thn lam, abnt bent, dism pyr, sme fos frag
250	70% CHK: lly-mgy, tan, off. wh, micxl, sft - mod hd, brt - fri, spply - sbbkly
300	30% MRL: mgy-dkgy, gybrn, blk, mot, crpxl, mod hd, spply - ply, sme thn lam, abnt bent, dism pyr, sme fos frag
350	70% CHK: lly-mgy, tan, off. wh, micxl, sft - mod hd, brt - fri, spply - sbbkly
400	30% MRL: mgy-dkgy, gybrn, blk, mot, crpxl, mod hd, spply - ply, sme thn lam, abnt bent, dism pyr, sme fos frag
450	70% CHK: lly-mgy, tan, off. wh, micxl, sft - mod hd, brt - fri, spply - sbbkly
500	30% MRL: mgy-dkgy, gybrn, blk, mot, crpxl, mod hd, spply - ply, sme thn lam, abnt bent, dism pyr, sme fos frag
550	70% CHK: lly-mgy, tan, off. wh, micxl, sft - mod hd, brt - fri, spply - sbbkly
600	30% MRL: mgy-dkgy, gybrn, blk, mot, crpxl, mod hd, spply - ply, sme thn lam, abnt bent, dism pyr, sme fos frag
650	70% CHK: lly-mgy, tan, off. wh, micxl, sft - mod hd, brt - fri, spply - sbbkly
700	30% MRL: mgy-dkgy, gybrn, blk, mot, crpxl, mod hd, spply - ply, sme thn lam, abnt bent, dism pyr, sme fos frag
750	70% CHK: lly-mgy, tan, off. wh, micxl, sft - mod hd, brt - fri, spply - sbbkly
800	30% MRL: mgy-dkgy, gybrn, blk, mot, crpxl, mod hd, spply - ply, sme thn lam, abnt bent, dism pyr, sme fos frag
850	70% CHK: lly-mgy, tan, off. wh, micxl, sft - mod hd, brt - fri, spply - sbbkly
900	30% MRL: mgy-dkgy, gybrn, blk, mot, crpxl, mod hd, spply - ply, sme thn lam, abnt bent, dism pyr, sme fos frag
950	70% CHK: lly-mgy, tan, off. wh, micxl, sft - mod hd, brt - fri, spply - sbbkly
1000	30% MRL: mgy-dkgy, gybrn, blk, mot, crpxl, mod hd, spply - ply, sme thn lam, abnt bent, dism pyr, sme fos frag
1050	70% CHK: lly-mgy, tan, off. wh, micxl, sft - mod hd, brt - fri, spply - sbbkly
1100	30% MRL: mgy-dkgy, gybrn, blk, mot, crpxl, mod hd, spply - ply, sme thn lam, abnt bent, dism pyr, sme fos frag

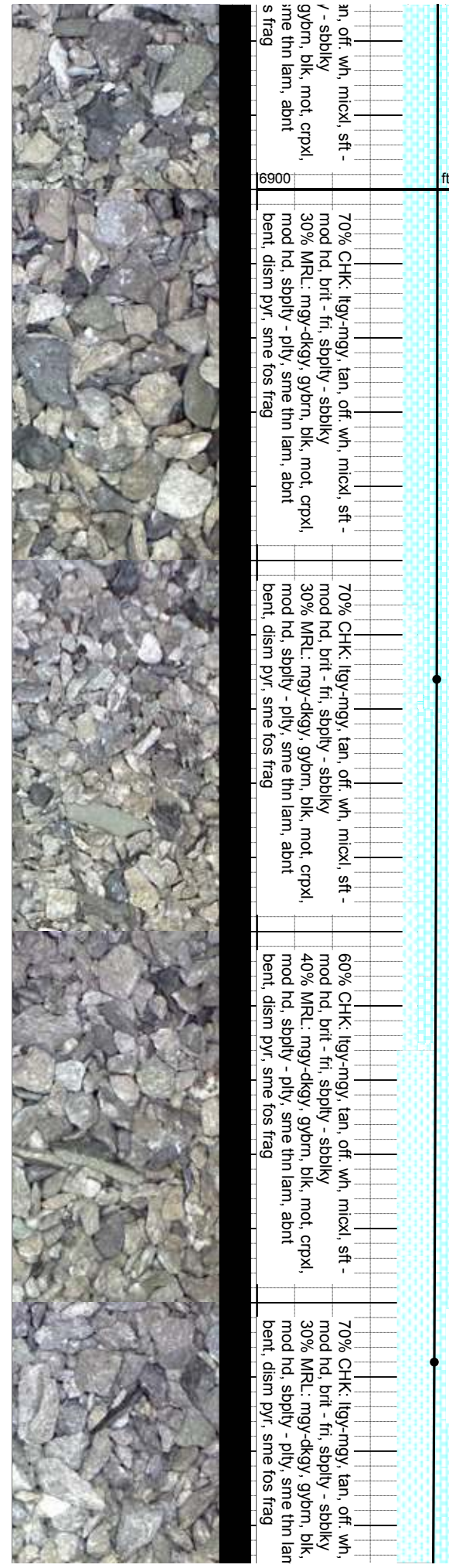
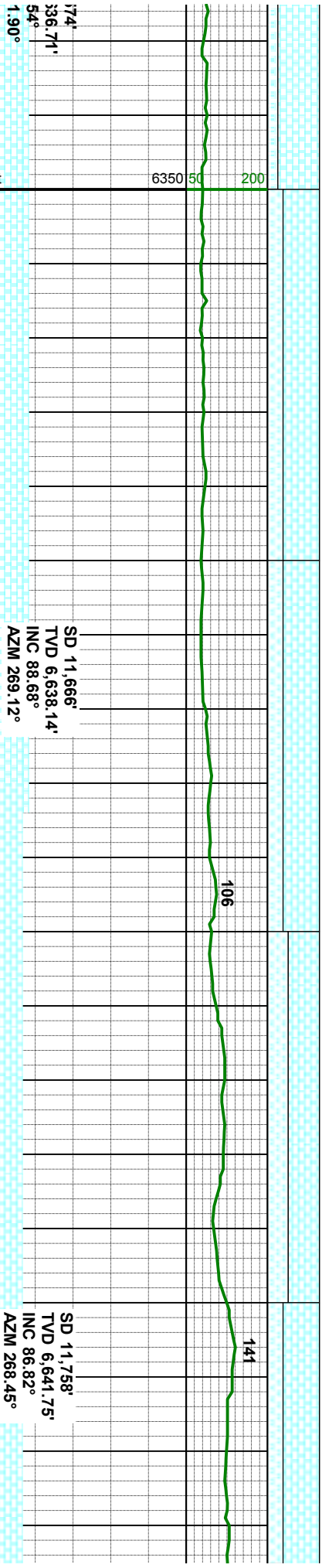
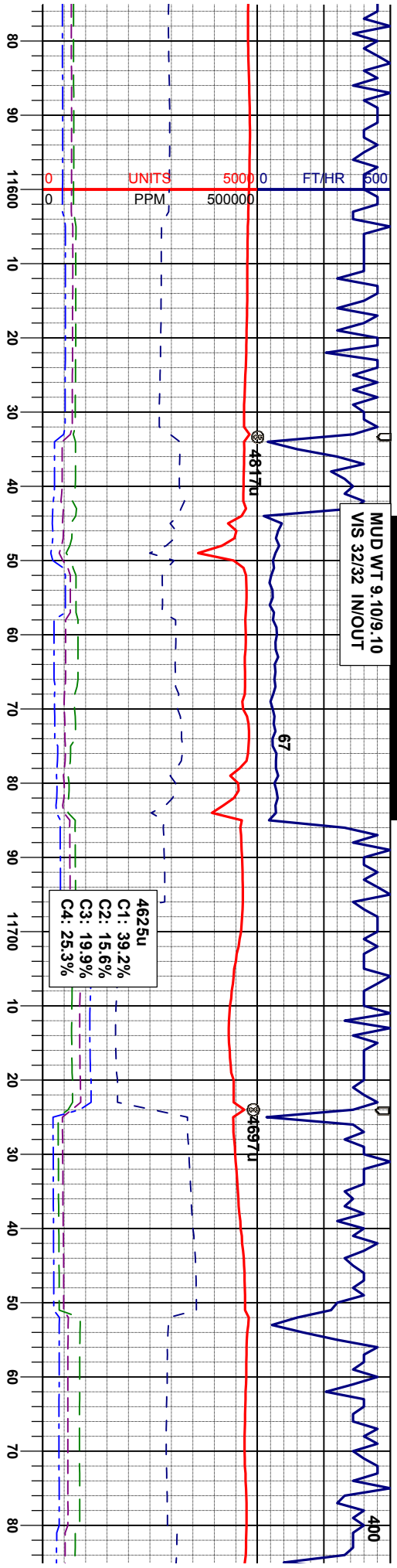


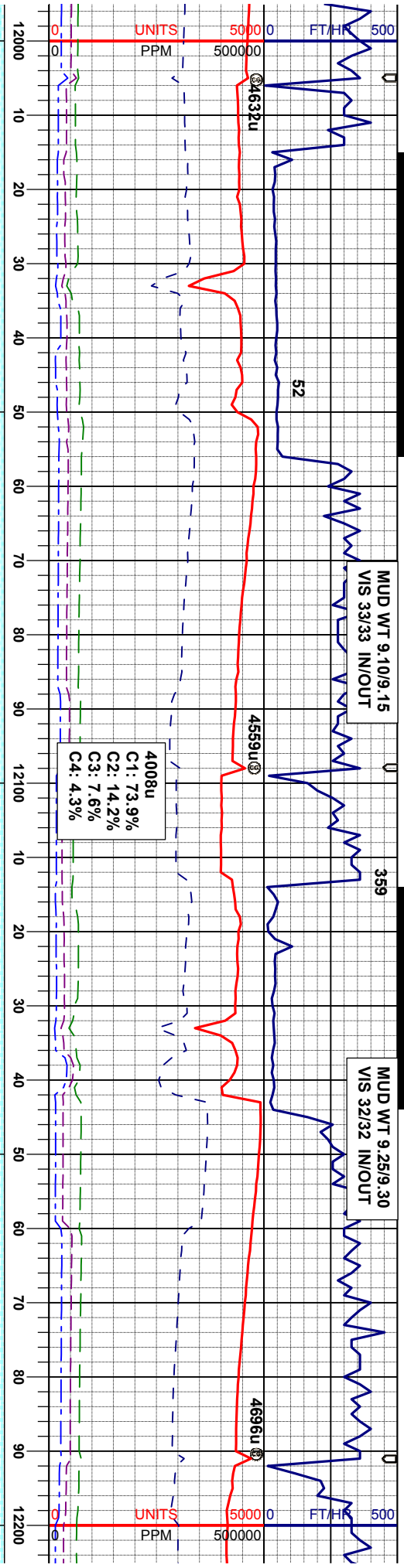


60% CHK: lgy-mgy, tan, off. wh, micxl, sft - mod hd, brt - fri, sppty - sbblky 40% MRL: mgy-dkgy, gybrn, blk, mot, crpxl, mod hd, sppty - ply, sme thn lam, sme bent, dism pyr, sme fos frag	60% CHK: lgy-mgy, tan, off. wh, micxl, sft - mod hd, brt - fri, sppty - sbblky 40% MRL: mgy-dkgy, gybrn, blk, mot, crpxl, mod hd, sppty - ply, sme thn lam, sme bent, dism pyr, sme fos frag	70% CHK: lgy-mgy, tan, off. wh, micxl, sft - mod hd, brt - fri, sppty - sbblky 30% MRL: mgy-dkgy, gybrn, blk, mot, crpxl, mod hd, sppty - ply, sme thn lam, sme bent, dism pyr, sme fos frag	60% CHK: lgy-mgy, tan, off. wh, micxl, sft - mod hd, brt - fri, sppty - sbblky 40% MRL: mgy-dkgy, gybrn, blk, mot, crpxl, mod hd, sppty - ply, sme thn lam, sme bent, dism pyr, sme fos frag
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SD 12.037'
TVD 6,656.62'
INC 88.15°
AZM 268.27°

SD 12.129'
TVD 6,658.06'
INC 90.06°
AZM 267.94°

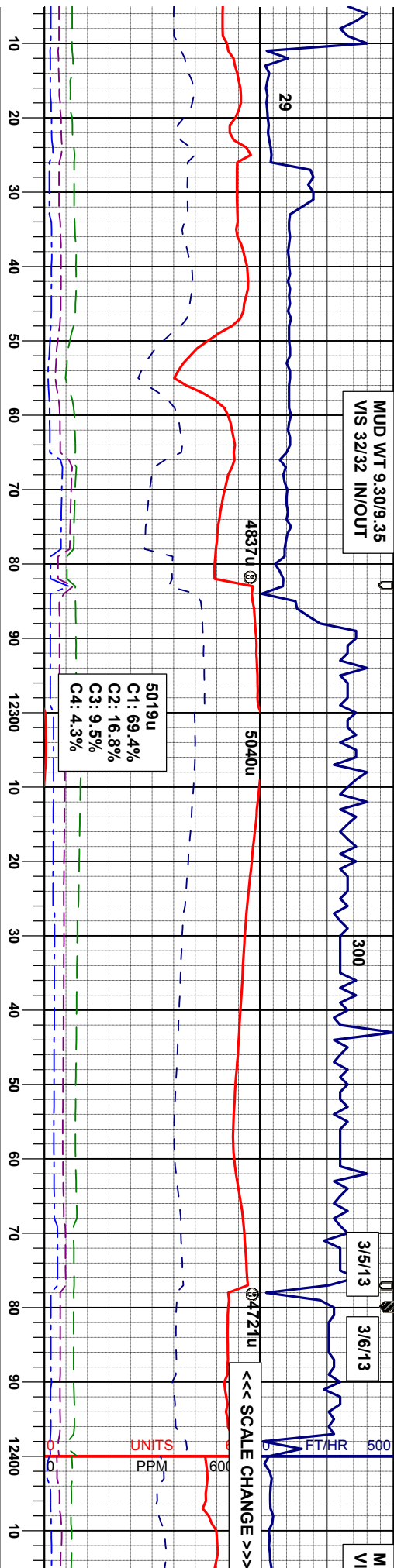
30% CHK: lgy-mgy, gybrn, micxl, sft - mod hd, brt - fri, sbply - sbblky 50% MRL: mgy-dkgy, blk, mot, crpxl, mod hd, sbply - ply 20% BENT: yelgy, olv gn, hd, v brt, ply - sply w/ disn pyr & yel-oring mnrl flr, sme fos frag	30% CHK: lgy-mgy, gybrn, micxl, sft - mod hd, brt - fri, sbply - sbblky 50% MRL: mgy-dkgy, blk, mot, crpxl, mod hd, sbply - ply 20% BENT: yelgy, olv gn, hd, v brt, ply - sply w/ disn pyr & yel-oring mnrl flr, sme fos frag	20% CHK: lgy-mgy, gybrn, micxl, sft - mod hd, brt - fri, sbply - sbblky 60% MRL: mgy-dkgy, brn, blk, mot, crpxl, mod hd, sbply - ply 20% BENT: yelgy, olv gn, hd, v brt, ply - sply w/ disn pyr & yel-oring mnrl flr, sme fos frag	20% CHK: lgy-mgy, tan, gybrn, micxl, sft - mod hd, brt - fri, sbply - sbblky 60% MRL: mgy-dkgy, brn, blk, mot, crpxl, mod hd, sbply - ply 20% BENT: yelgy, olv gn, hd, v brt, ply - sply w/ disn pyr & yel-oring mnrl flr, sme fos frag
6900	6900	6900	6900
ft	ft	ft	ft



MUD WT 9.30/9.35
VIS 3232 IN/OUT

3/5/13 3/6/13

M
VI



SD 12,222'
TVD 6,657.38'
INC 90.77°
AZM 267.71°

SD 12,315'
TVD 6,656.53'
INC 90.28°
AZM 267.31°

SD 12,408'
TVD 6,656.28'
INC 90.03°
AZM 267.38°

0% CHK: lly-mgy, tan, gybrn, mickl, sft -
tod hd, brt - fri, sbply - sbblky
0% MRL: mgy-dkgy, brn, blk, mot, crpxl,
tod hd, sbply - pily
0% BENT: yelgy, olv gn, hd, v brt, pily -
pily w/ dism pyr & yel-ormg mnrl flor, sme
s frag

20% CHK: lly-mgy, tan, gybrn, mickl, sft -
mod hd, brt - fri, sbply - sbblky
70% MRL: mgy-dkgy, brn, blk, mot, crpxl,
mod hd, sbply - pily
10% BENT: yelgy, olv gn, hd, v brt, pily -
sply w/ dism pyr & yel-ormg mnrl flor, scat
fos frag

30% CHK: lly-mgy, tan, gybrn, mickl, sft -
mod hd, brt - fri, sbply - sbblky
60% MRL: mgy-dkgy, brn, blk, mot, crpxl,
mod hd, sbply - pily
10% BENT: yelgy, olv gn, hd, v brt, pily -
sply w/ dism pyr & yel-ormg mnrl flor, scat
fos frag

30% CHK: lly-mgy, tan, off, wh, mickl, sft -
mod hd, brt - fri, sbply - sbblky
60% MRL: mgy-dkgy, brn, blk, mot, crpxl,
mod hd, sbply - pily
10% BENT: yelgy, olv gn, hd, v brt, pily -
sply w/ dism pyr & yel-ormg mnrl flor, scat
fos frag

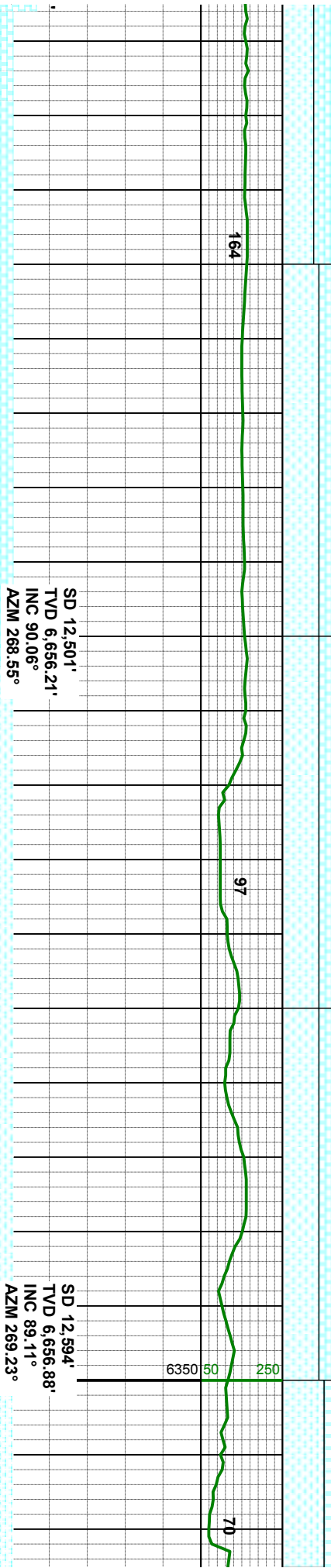
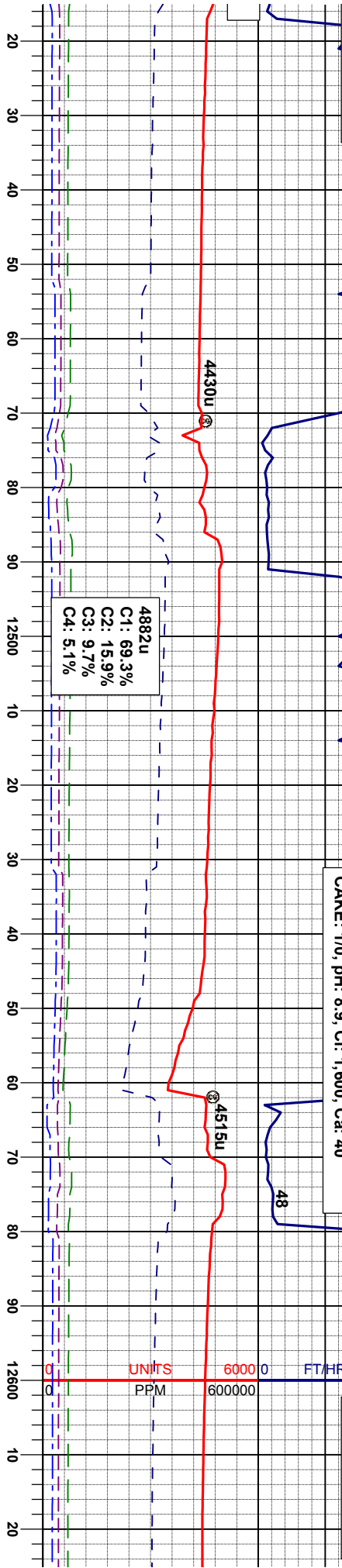
40% CHK:
mod hd, br
60% MRL:
mod hd, sb
pyr & yel-o



UD WT 9.25/9.30
S 31/31 IN/OUT

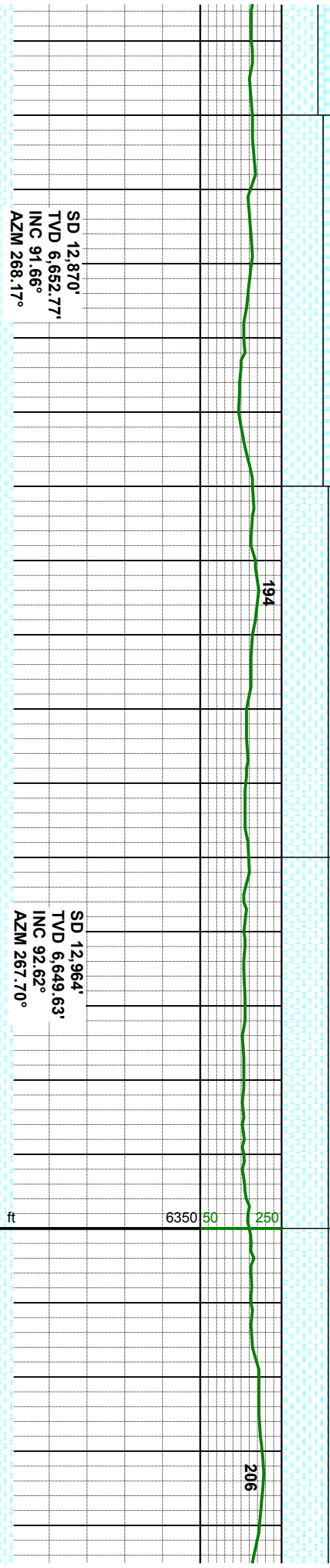
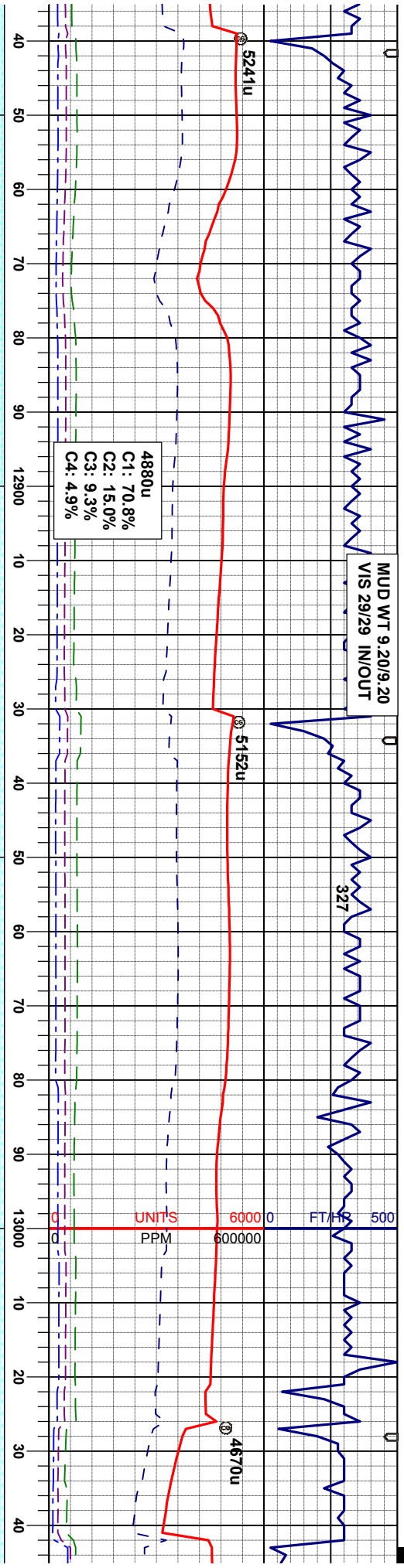
03/06/2013 Mud Wt: 9.15, FVis: 31,
PVs: 7, YP: 3, GELS: 2/48, API Filt: 11.0,
CAKE: 1/0, pH: 8.9, CI: 1,600, Ca: 40

MUD WT 9.20/9.25
VIS 31/31 IN/OUT



lgy-mgy, lan, off. wh, micxl, sft - it - fri, sbply - sbply	30% CHK: lgy-mgy, lan, off. wh, micxl, sft - mod hd, brt - fri, sbply - sbply	30% CHK: lgy-mgy, lan, off. wh, micxl, sft - mod hd, brt - fri, sbply - sbply	30% CHK: lgy-mgy, lan, off. wh, micxl, sft - mod hd, brt - fri, sbply - sbply	20% CHK: lgy-mgy, t mod hd, brt - fri, sbply
mgy-dkgy, brn, blk, mot, crpxl, ply - ply, v abnt bent w/ dism	70% MRL: mgy-dkgy, brn, blk, mot, crpxl, mod hd, sbply - ply, sme thn lam, v abnt	70% MRL: mgy-dkgy, brn, blk, mot, crpxl, mod hd, sbply - ply, sme thn lam, abnt	70% MRL: mgy-dkgy, brn, blk, mot, crpxl, mod hd, sbply - ply, sme thn lam, v abnt	80% MRL: mgy-dkgy, mod hd, sbply - ply, s
mgnr fltr, freq scat fos frag	bent w/ dism pyr, freq scat fos frag	bent, sme pyr, sme fos frag	bent w/ dism pyr, freq scat fos frag	bent, sme pyr, sme fo



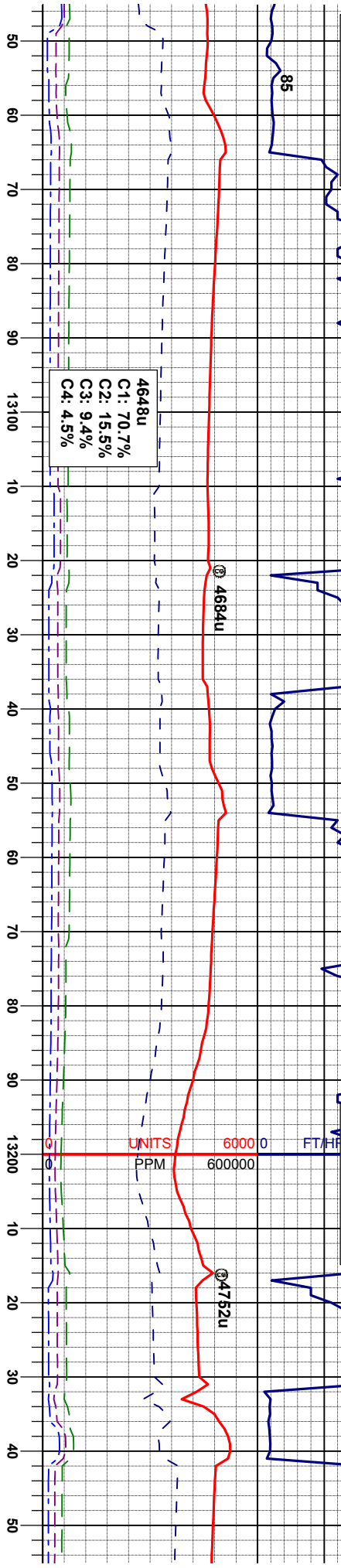


micxl, sft - mod hd, brit - fri, spbly - sbblky 80% MRL: mgy-dkgy, brn, blk, mot, crpxl, mod hd, spbly - ply, sme thn lam, abnt bent, sme pyf, sme fos frag	10% CHK: lgy-mgy, tan, off, wh, micxl, sft - mod hd, brit - fri, spbly - sbblky 90% MRL: mgy-dkgy, brn, blk, mot, crpxl, mod hd, spbly - ply, sme thn lam, abnt bent, sme pyf, sme fos frag	10% CHK: lgy-mgy, tan, off, wh, micxl, sft - mod hd, brit - fri, spbly - sbblky 90% MRL: mgy-dkgy, brn, blk, mot, crpxl, mod hd, spbly - ply, sme thn lam, abnt bent, sme pyf, sme fos frag	10% CHK: lgy-mgy, tan, off, wh, micxl, sft - mod hd, brit - fri, spbly - sbblky 90% MRL: mgy-dkgy, brn, blk, mot, crpxl, mod hd, spbly - ply, sme thn lam, abnt bent, sme pyf, sme fos frag
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MUD WT 9.40/9.20+
VIS 30/30 IN/OUT

MUD WT 9.40/9.40
VIS 30/30 IN/OUT



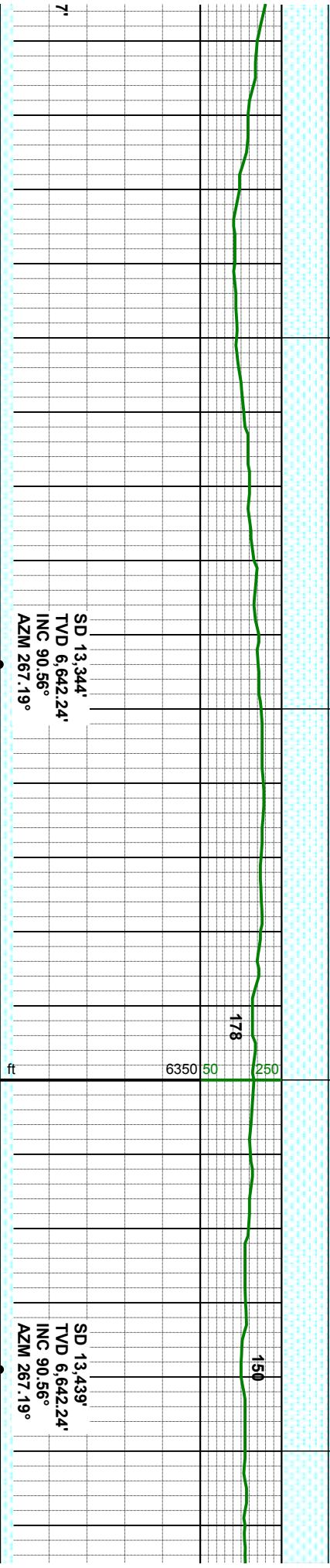
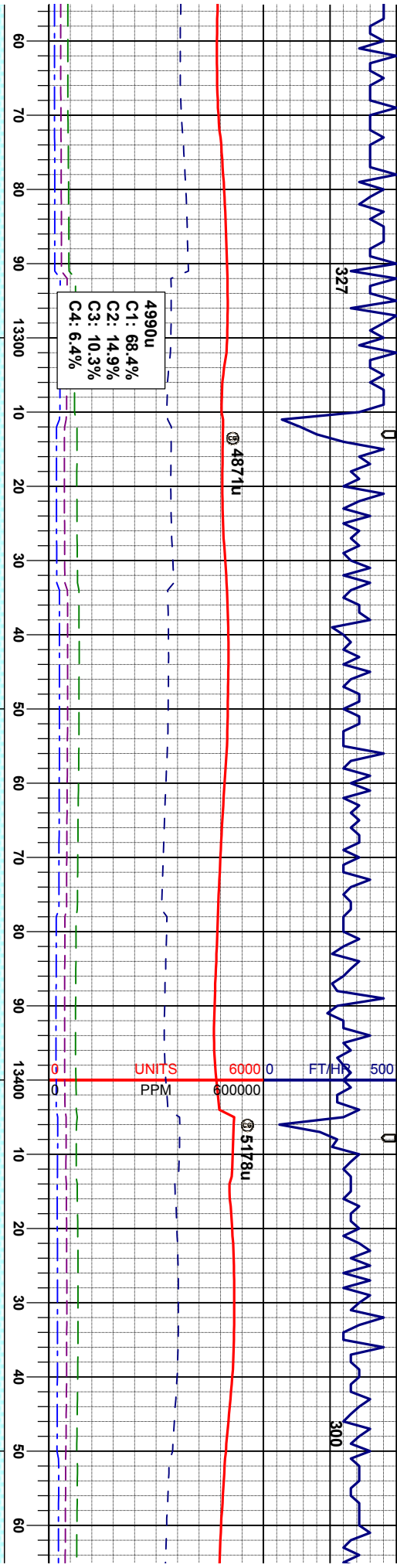
SD 13.059'
TVD 6,645.33'
INC 92.13°
AZM 268.01°

SD 13.154'
TVD 6,642.82'
INC 90.89°
AZM 267.99°

SD 13.249'
TVD 6,642.3'
INC 89.66°
AZM 267.71°

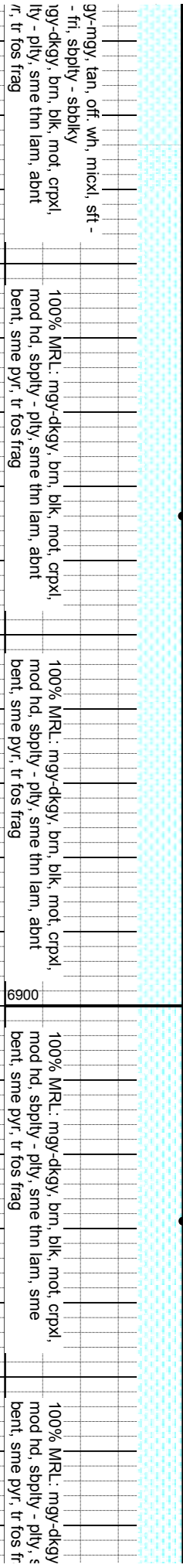
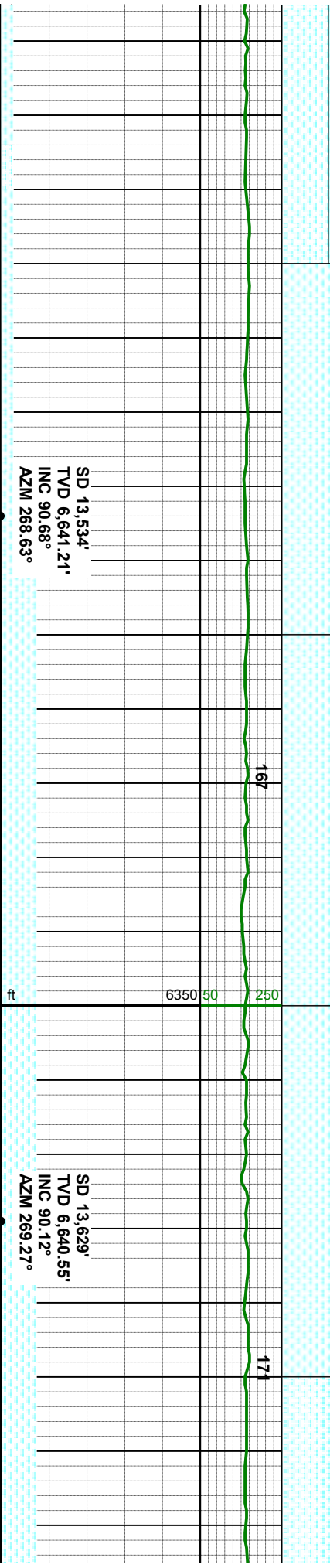
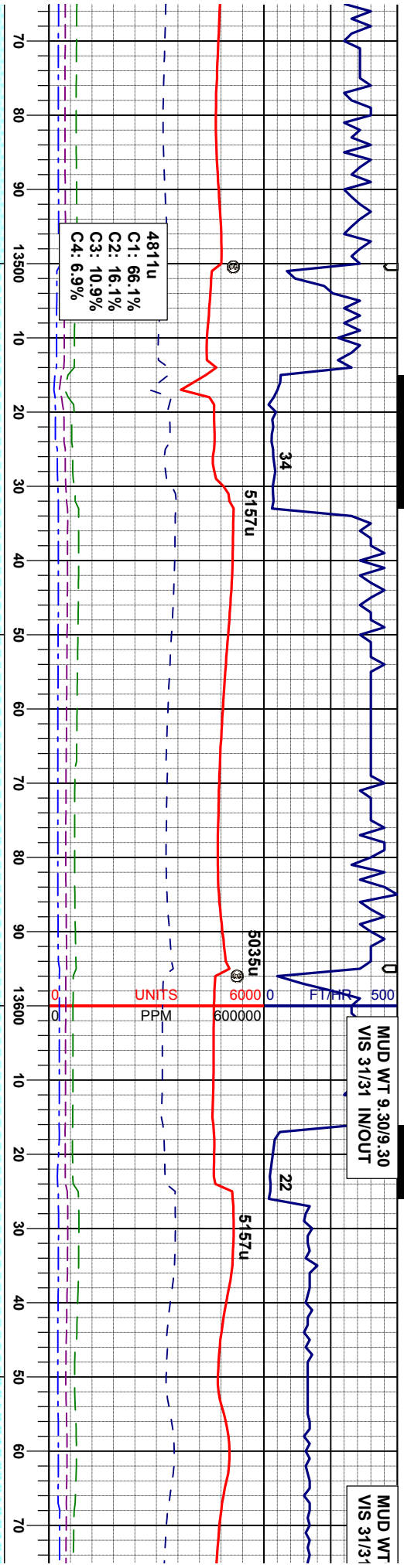
10% CHK: lly-mgy, tan, off. wh, micxl, sft - mod hd, brt - fri, spply - sbblky 90% MRL: mgy-dkgy, brn, blk, mot, crpxl, mod hd, spply - ply, sme thn lam, abnt bent, sme pyr, tr fos frag	10% CHK: lly-mgy, tan, off. wh, micxl, sft - mod hd, brt - fri, spply - sbblky 90% MRL: mgy-dkgy, brn, blk, mot, crpxl, mod hd, spply - ply, sme thn lam, abnt bent, sme pyr, tr fos frag	10% CHK: lly-mgy, tan, off. wh, micxl, sft - mod hd, brt - fri, spply - sbblky 90% MRL: mgy-dkgy, brn, blk, mot, crpxl, mod hd, spply - ply, sme thn lam, abnt bent, sme pyr, tr fos frag	10% CHK: lly-mgy, tan, off. wh, micxl, sft - mod hd, brt - fri, spply - sbblky 90% MRL: mgy-dkgy, brn, blk, mot, crpxl, mod hd, spply - ply, sme thn lam, abnt bent, sme pyr, tr fos frag
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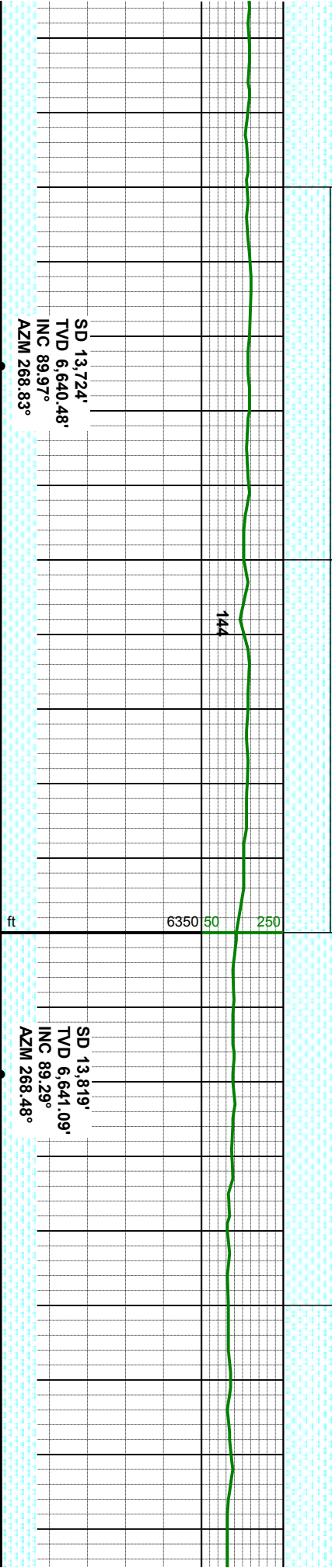
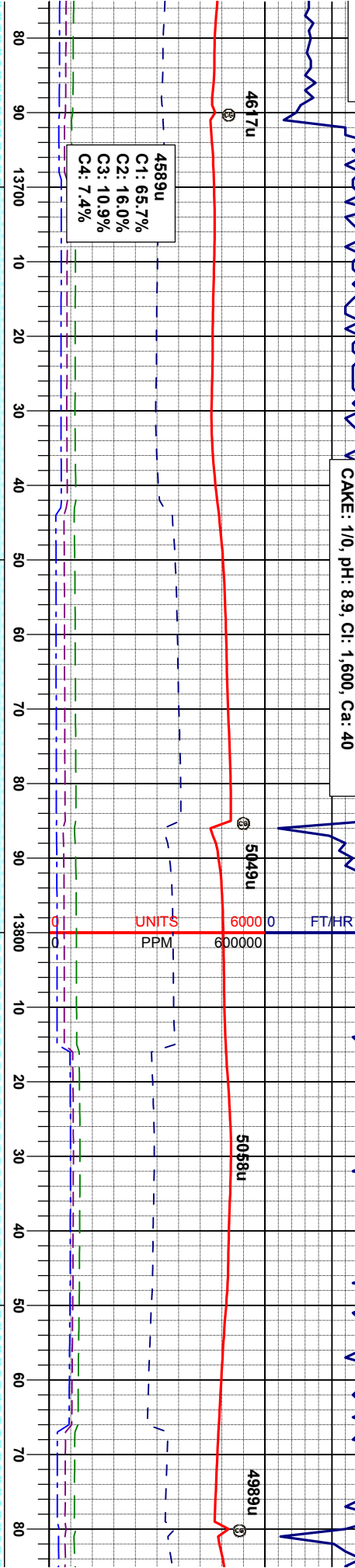
10% CHK: ltgy-mgy, tan, off. wh, micxl, sft - mod hd, brt - fri, sbply - sbblky	10% CHK: ltgy-mgy, tan, off. wh, micxl, sft - mod hd, brt - fri, sbply - sbblky	10% CHK: ltgy-mgy, tan, off. wh, micxl, sft - mod hd, brt - fri, sbply - sbblky
90% MRL: mgy-dkgy, brn, blk, mot, crpxl, mod hd, sbply - ply, sme thn lam, abnt bent, sme pyr, tr fos frag	90% MRL: mgy-dkgy, brn, blk, mot, crpxl, mod hd, sbply - ply, sme thn lam, abnt bent, sme pyr, tr fos frag	90% MRL: mgy-dkgy, brn, blk, mot, crpxl, mod hd, sbply - ply, sme thn lam, abnt bent, sme pyr, tr fos frag





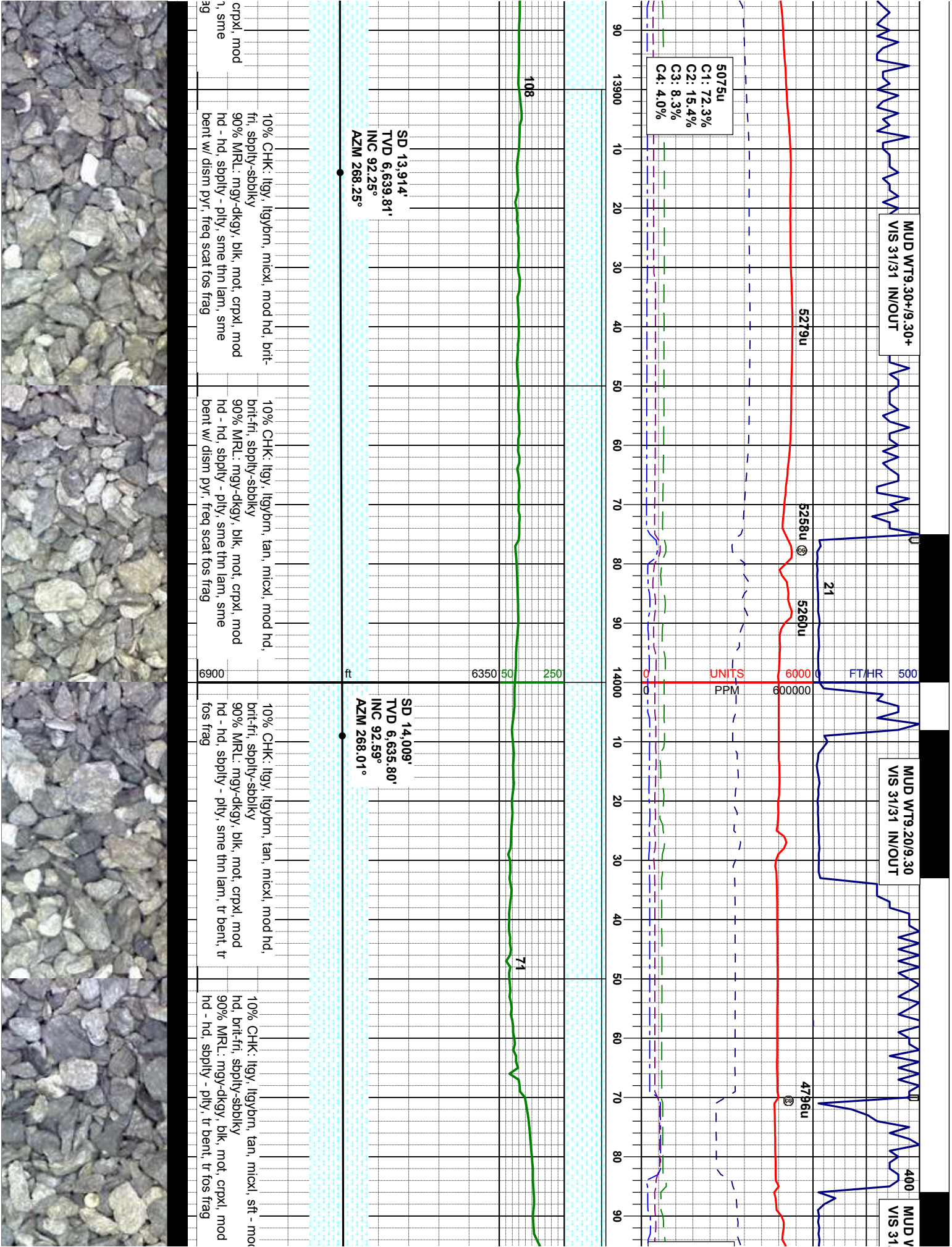
9.30+/-9.30+
IN/OUT

03/06/2013 Mud Wt: 9.25, FVis: 32,
PVIS: 7, YP: 6, GELS: 3.5/8, API Filt: 8.0,
CAKE: 1/0, pH: 8.9, Cl: 1.600, Ca: 40



10% CHK: lgy-mgy, tan, off, wh, micxl, sft - mod hd, brit - fri, sbply - sbblky 90% MRL: mgy-dkgy, brn, blk, mot, crpxl, mod hd, sbply - ply, sme thn lam, sme bent, sme pyr, tr fos frag	10% CHK: lgy-mgy, tan, off, wh, micxl, sft - mod hd, brit - fri, sbply - sbblky 90% MRL: mgy-dkgy, brn, blk, mot, crpxl, mod hd, sbply - ply, sme thn lam, sme bent, sme pyr, tr fos frag	100% MRL: mgy-dkgy, blk, mot, crpxl, mod hd - hd, sbply - ply, sme thn lam, sme bent w/ dism pyr, tr fos frag	100% MRL: mgy-dkgy, blk, mot, hd - hd, sbply - ply, sme thn lan bent w/ dism pyr, freq scat fos fr
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VT9.2+9.2+
/31 IN/OUT

MUD WT9.30/9.30
VIS 31/31 IN/OUT

MUD WT9.3+9.3+
VIS 30/30 IN/OUT

4846u
C1: 64.0%
C2: 15.5%
C3: 11.5%
C4: 8.9%

4757u
C1: 69.8%
C2: 15.9%
C3: 9.2%
C4: 5.1%



SD 14,104'
TVD 6,634.11'
INC 89.45°
AZM 267.51°

SD 14,198'
TVD 6,636.54'
INC 87.59°
AZM 267.26°

SD 14,293'
TVD 6,641.29'
INC 86.67°
AZM 268.09°

20% CHK: ltgy, ltgybrn, tan, off, wh, micxl,
sft - mod hd, brt-fr, sbply-sbdky
80% MRL: mgy-dkgy, blk, mot, cpxl, mod
hd - hd, sbply - ply, tr bent, tr fos frag

20% CHK: ltgy, ltgybrn, tan, off, wh, micxl,
sft - mod hd, brt-fr, sbply-sbdky, rthy-
sbwxy
80% MRL: mgy-dkgy, blk, mot, cpxl, mod
hd - hd, sbply - ply, tr bent, tr fos frag

20% CHK: ltgy, ltgybrn, off, wh, micxl, sft -
mod hd, brt-fr, sbply-sbdky, rthy-sbwxy
90% MRL: mgy-dkgy, blk, mot, cpxl, mod
hd - hd, sbply - ply, gt tex, tr bent



MUD WT9.3+/9.40
VIS 30/30 IN/OUT

3/6/13

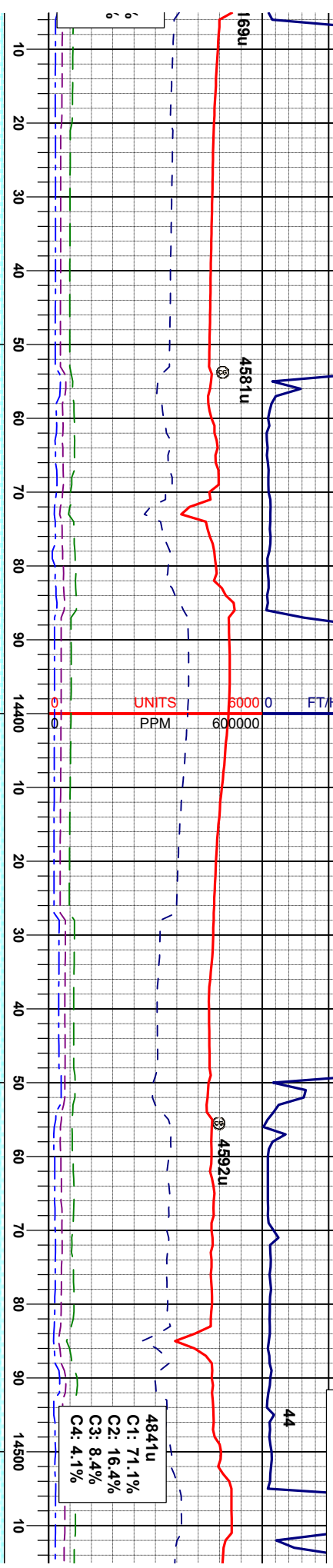
3/7/13

MUD WT9.3+/9.40
VIS 30/30 IN/OUT

MUD WT9.3+/9.3+
VIS 30/30 IN/OUT

MUD WT 9.30+/9.30+
VIS 30/30 IN/OUT

03/07/2013 Mud Wt: 9
PVIS: 6, YP: 6, GELS:
CAKE: 1/0, pH: 8.9, C



SD 14,388'
TVD 6,647.3'
INC 86.08°
AZM 268.69°

SD 14,483'
TVD 6,653.74'
INC 86.14°
AZM 270.18°

0% CHK: llyg, llybrn, off. wh, micxl, sft -
mod hd, brt-ft, sbply-sbdky, rthy-sbwy
0% MRL: mgy-dkgy, blk, mot, crpxl, mod
d - hd, sbply - ply, gt tex, tr bent, tr fos
frag

20% CHK: llyg, llybrn, off. wh, micxl, sft -
mod hd, brt-ft, sbply-sbdky, rthy-sbwy
80% MRL: mgy-dkgy, mot, crpxl, mod hd -
hd, sbply - ply, gt tex, tr bent, tr fos frag

30% CHK: llyg, llybrn, off. wh, micxl, sft -
mod hd, brt-ft, sbply-sbdky, rthy-sbwy
70% MRL: mgy-dkgy, mot, crpxl, mod hd -
hd, sbply - ply, gt tex, tr bent, tr fos frag

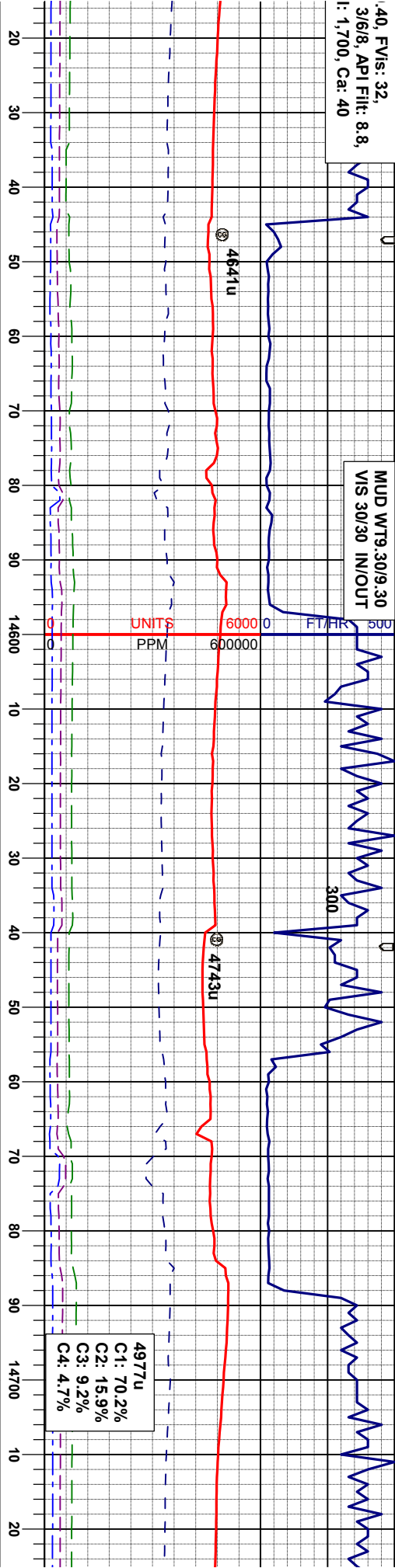
40% CHK: llyg, llybrn, off. wh, micxl, sft -
mod hd, brt-ft, sbply-sbdky, rthy-sbwy
60% MRL: mgy-dkgy, mot, crpxl, mod hd -
hd, sbply - ply, gt tex, tr bent, tr fos frag

30% CHK: llyg, llybrn, off. wh, micxl, sft -
mod hd, brt-ft, sbply-sbdky, rthy-sbwy
70% MRL: mgy-dkgy, mot, crpxl, mod hd -
hd, sbply - ply, gt tex, tr bent, tr fos frag



40, FVis: 32,
3/6/8, API Filt: 8.8,
I: 1,700, Ca: 40

MUD WT9.30/9.30
VIS 30/30 IN/OUT



SD 14,578'
TVD 6,658.30'
INC 88.63°
AZM 271.88°

SD 14,673'
TVD 6,660.07'
INC 89.51°
AZM 271.01°

gy, ltgybrn, off, wh, micxl, sft -
fri, sbply-sbdkly, rthy-sbwwy
1gy-dkgy, mot, crpxl, mod hd -
city, gt tex, sme bent, sme fos

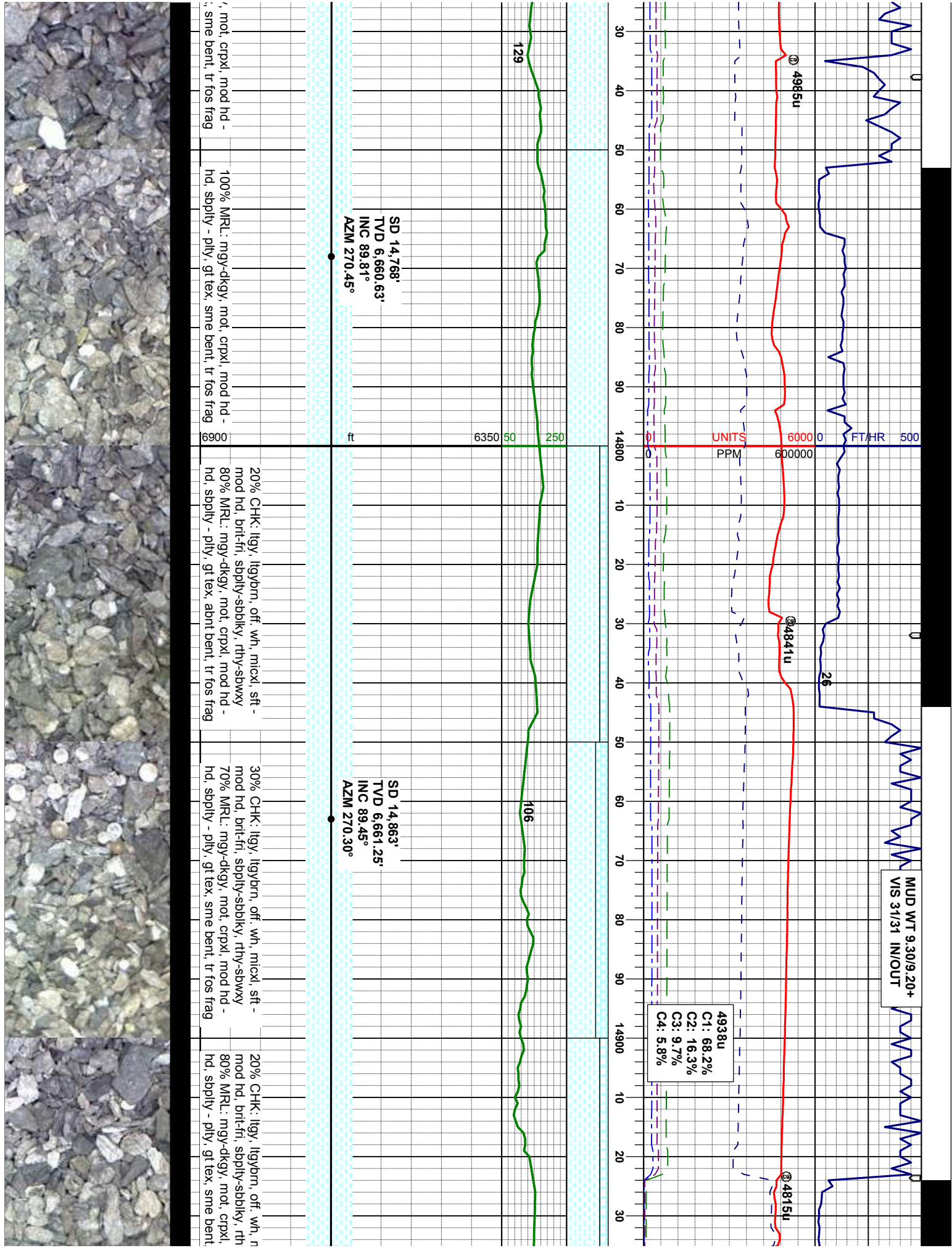
30% CHK: ltgy, ltgybrn, off, wh, micxl, sft -
mod hd, brt-fri, sbply-sbdkly, rthy-sbwwy
70% MRL: mgy-dkgy, mot, crpxl, mod hd -
hd, sbply - ply, gt tex, sme bent, sme fos frag

10% CHK: ltgy, ltgybrn, off, wh, micxl, sft -
mod hd, brt-fri, sbply-sbdkly, rthy-sbwwy
90% MRL: mgy-dkgy, mot, crpxl, mod hd -
hd, sbply - ply, gt tex, tr bent, tr fos frag

10% CHK: ltgy, ltgybrn, off, wh, micxl, sft -
mod hd, brt-fri, sbply-sbdkly, rthy-sbwwy
90% MRL: mgy-dkgy, mot, crpxl, mod hd -
hd, sbply - ply, gt tex, tr bent, tr fos frag

100% MRL: mgy-dkgy
hd, sbply - ply, gt tex





03/07/2013 Mud Wt: 9.25, FVIs: 31,
PVIs: 6, YP: 7, GELS: 3/5/8, API Filtr: 8.0,
CAKE: 1/0, pH: 8.9, Cl: 1,700, Ca: 40

MUD WT 9.20/9.20
VIS 31/31 IN/OUT

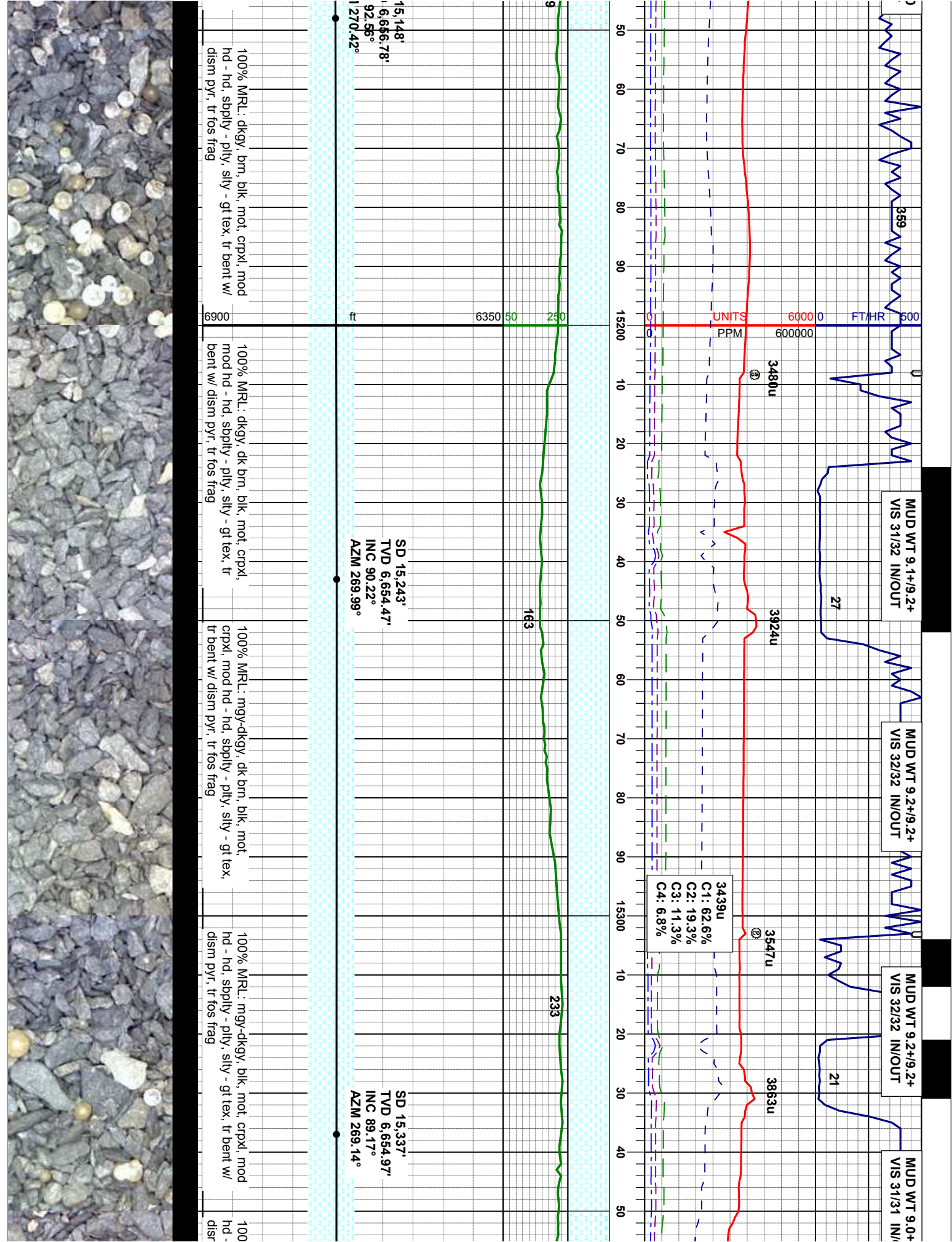
MUD WT 9.10/9.3+
VIS 31/31 IN/OUT

MUD WT 9.1+/9.3
VIS 31/31 IN/OUT



SD 14,958'	SD 15,053'
TVD 6,661.65'	TVD 6,660.25'
INC 90.06°	INC 91.63°
AZM 270.03°	AZM 269.99°
ft	
6350	
50	
250	
116	
22	
160	
10% CHK: lty, ltybrn, off. wh, mictl, sft - mod hd, brit-fr, sbply-sbdky, rthy-sbwy 90% MRL: mgy-dkgy, mot, crpxl, mod hd - hd, sbply - ply, silty - gt tex, sme bent, tr fos frag	
100% MRL: mgy-dkgy, brn, mot, crpxl, mod hd - hd, sbply - ply, silty - gt tex, tr bent, tr fos frag	
100% MRL: mgy-dkgy, brn, blk, mot, crpxl, mod hd - hd, sbply - ply, silty - gt tex, tr bent, tr fos frag	
100% MRL: dkgy, brn, blk, mot, crpxl, mod hd - hd, sbply - ply, silty - gt tex, tr bent, tr fos frag	
SD TVD INC AZM	

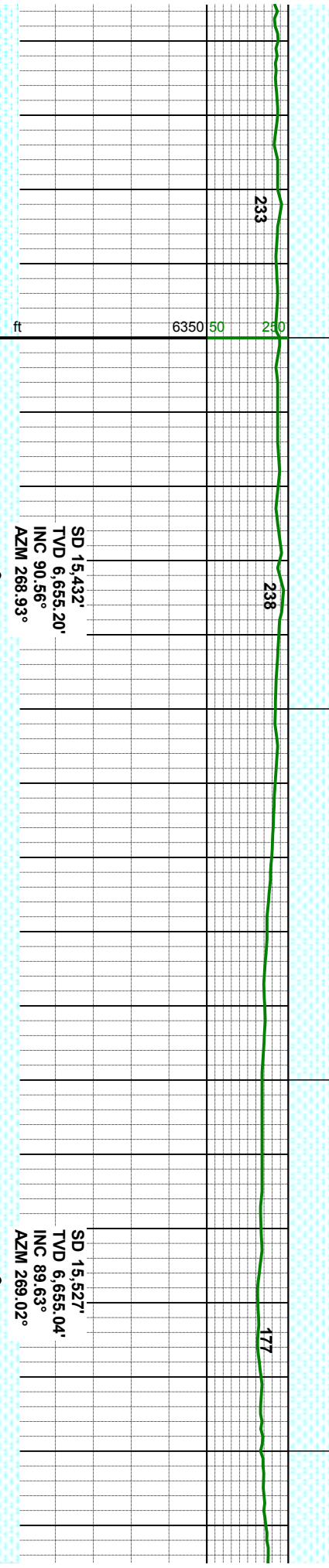
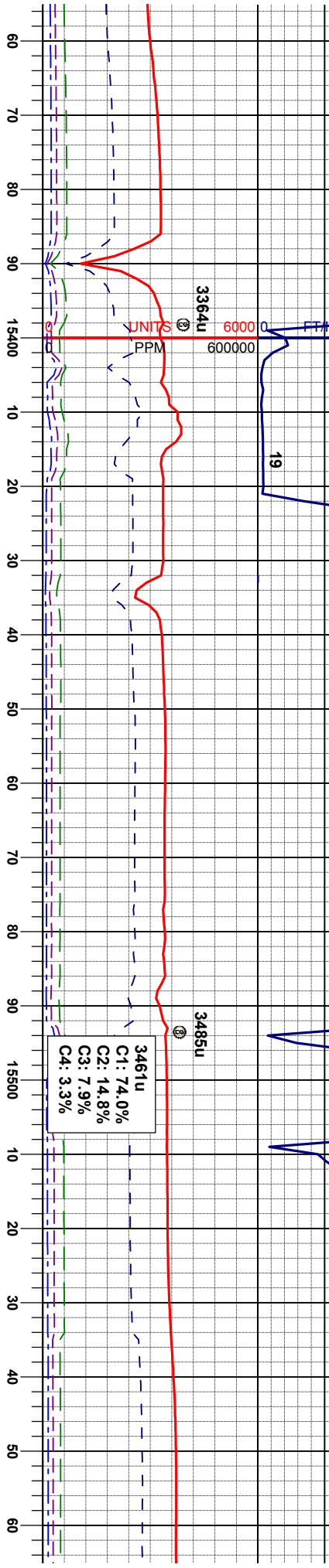




9.1+ OUT

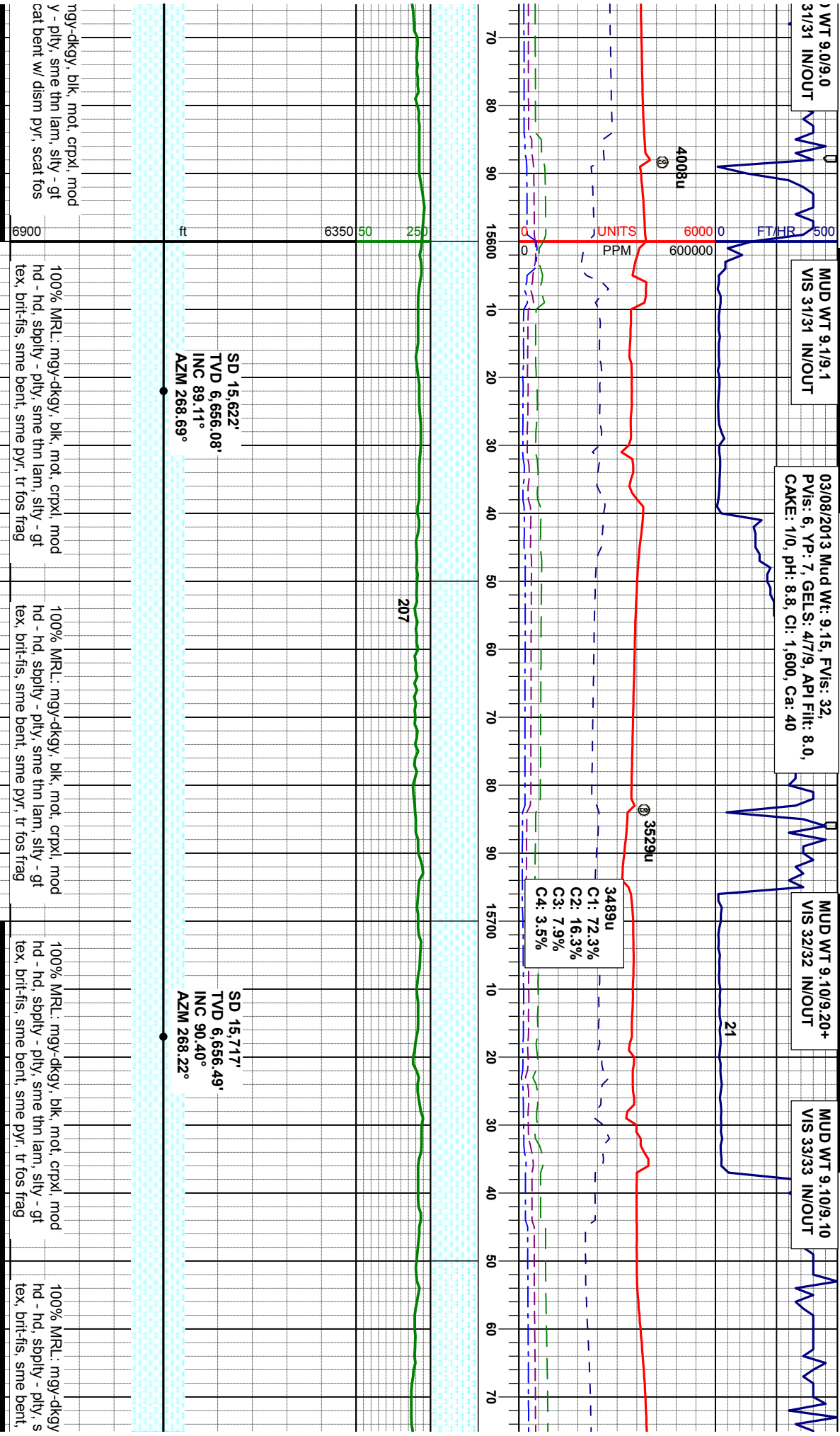
MUD WT 9.0/9.0+ VIS 31/31 IN/OUT

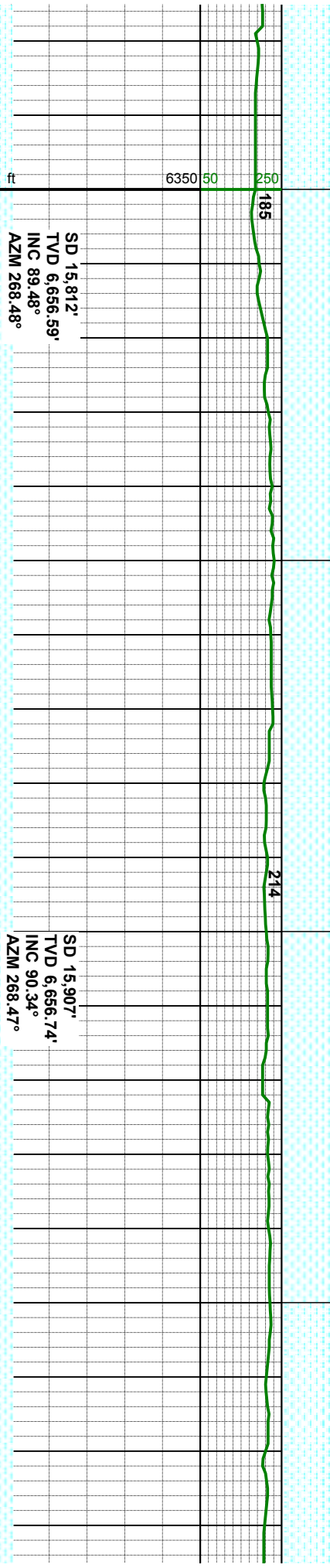
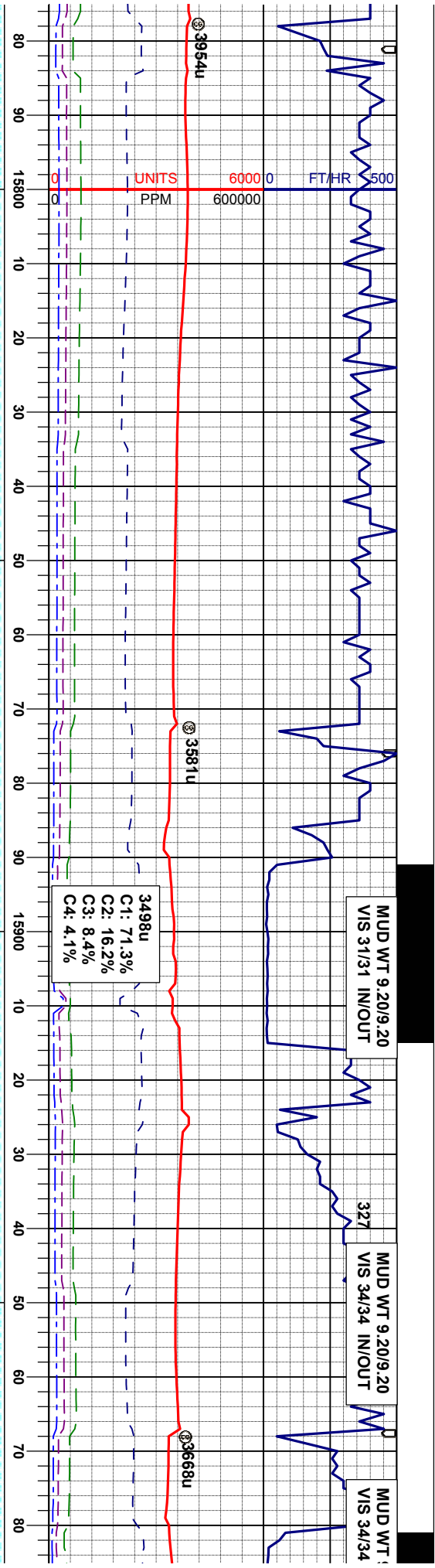
MUC VIS



% MRL: mgy-dkgy, blk, mot, crpxl, mod hd, sbply - pily, silty - gt tex, tr bent w/ n pyr, freq scat fos frag	100% MRL: mgy-dkgy, blk, mot, crpxl, mod hd - hd, sbply - pily, sme thn lam, silty - gt tex, tr bent w/ dism pyr, freq scat fos frag	100% MRL: mgy-dkgy, brn, blk, mot, crpxl, mod hd - hd, sbply - pily, sme thn lam, silty - gt tex, tr bent w/ dism pyr, freq scat fos frag	100% MRL: mgy-dkgy, brn, blk, mot, crpxl, mod hd - hd, sbply - pily, sme thn lam, silty - gt tex, brt-fis, tr bent w/ dism pyr, freq scat fos frag	100% MRL: mgy-dkgy, brn, blk, mot, crpxl, mod hd - hd, sbply - pily, sme thn lam, silty - gt tex, brt-fis, tr bent w/ dism pyr, freq scat fos frag
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blk, mot, crpxl, mod me thn lam, silty - gt sme pyr, tr fos frag	100% MRL: mgy-dkgy, blk, mot, crpxl, mod hd - hd, sbply - plty, sme thn lam, silty - gt tex, brlt-fls, sme bent, sme pyr, tr fos frag	100% MRL: mgy-dkgy, blk, mot, crpxl, mod hd - hd, sbply - plty, sme thn lam, silty - gt tex, brlt-fls, sme bent, sme pyr, tr fos frag	100% MRL: mgy-dkgy, blk, mot, crpxl, mod hd - hd, sbply - plty, sme thn lam, silty - gt tex, brlt-fls, sme bent, sme pyr, tr fos frag
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9.10/9.10
IN/OUT

500

FT/HR

16

6000

600000

UNITS

PPM

3992u

3939u

4024u

3932u

3625u

C1: 61.7%

C2: 21.1%

C3: 11.4%

C4: 5.8%

90 16000 10 20 30 40 50 60 70 80 90 10 20 30 40 50 60 70 80 90

6350

50

250

SD 16,002'
TVD 6,655.82'
INC 90.77°
AZM 267.48°

219

238

167

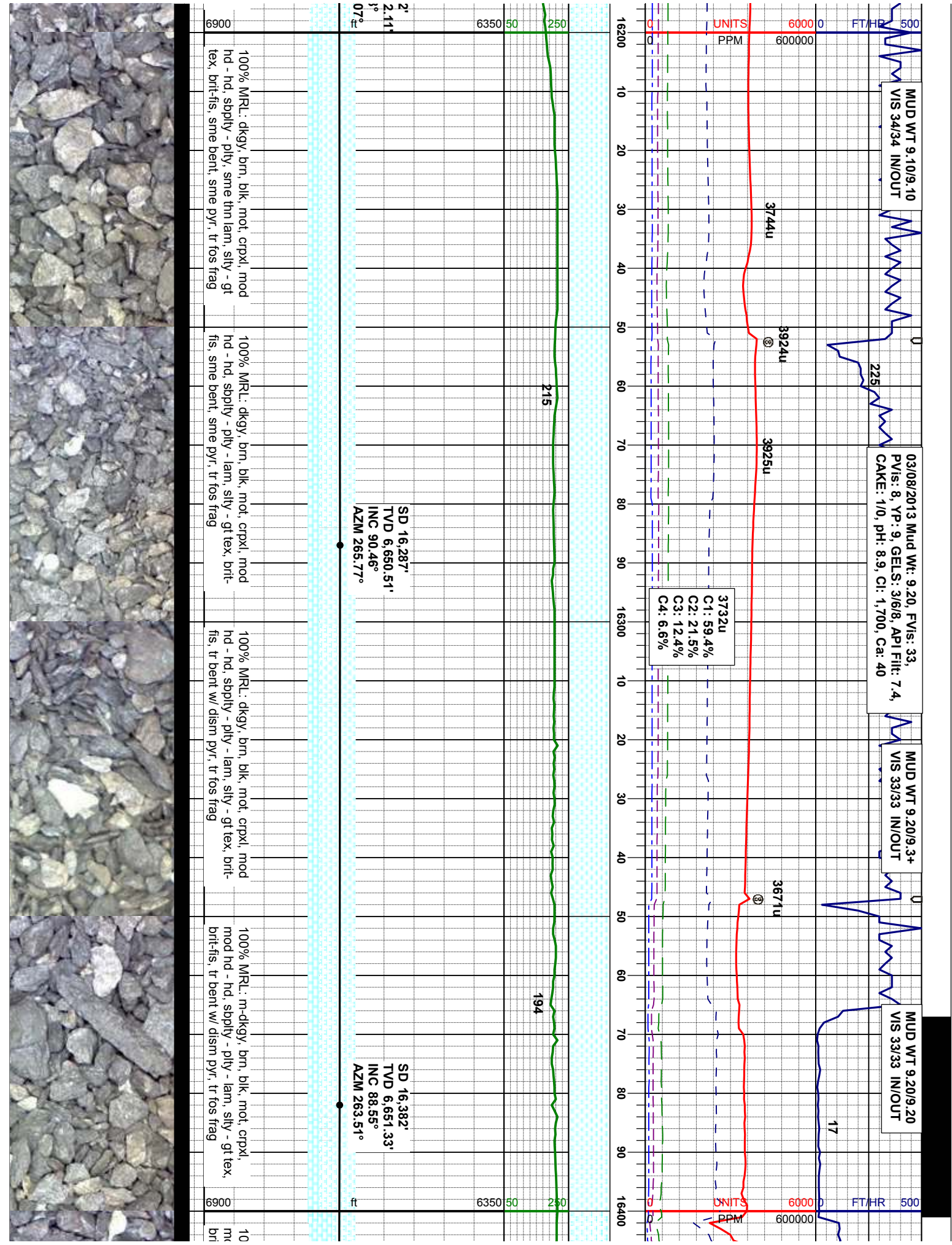
SD 16,097'
TVD 6,654.26'
INC 91.11°
AZM 267.12°

SD 16,19'
TVD 6,65'
INC 91.46°
AZM 267.

crpxl, mod n, silty - gt tr fos frag	100% MRL: mgy-dkgy, blk, mot, crpxl, mod hd - hd, sbply - plty, sme thn lam, silty - gt tex, brlt-fis, sme bent, sme pyr, tr fos frag	100% MRL: mgy-dkgy, blk, mot, crpxl, mod hd - hd, sbply - plty, sme thn lam, silty - gt tex, brlt-fis, sme bent, sme pyr, tr fos frag	100% MRL: mgy-dkgy, blk, mot, crpxl, mod hd - hd, sbply - plty, sme thn lam, silty - gt tex, brlt-fis, sme bent, sme pyr, tr fos frag	100% MRL: mgy-dkgy, blk, mot, crpxl, mod hd - hd, sbply - plty, sme thn lam, silty - gt tex, brlt-fis, sme bent, sme pyr, tr fos frag
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6900





MUD WT 9.10/9.10
VIS 34/34 IN/OUT

03/08/2013 Mud Wt: 9.20, FVis: 33,
PVIS: 8, YP: 9, GELS: 3/6/8, API Filtr: 7.4,
CAKE: 1/0, pH: 8.9, Cl: 1,700, Ca: 40

MUD WT 9.20/9.3+
VIS 33/33 IN/OUT

MUD WT 9.20/9.20
VIS 33/33 IN/OUT

3732u
C1: 59.4%
C2: 21.5%
C3: 12.4%
C4: 6.6%

SD 16,287'
TVD 6,650.51'
INC 90.46°
AZM 265.77°

SD 16,382'
TVD 6,651.33'
INC 88.55°
AZM 263.51°

100% MRL: dkgy, brn, blk, mot, crpxl, mod
hd - hd, sbply - plty, sme thn lam, silty - gt
tex, brt-fis, sme bent, sme pyr, tr fos frag

100% MRL: dkgy, brn, blk, mot, crpxl, mod
hd - hd, sbply - plty - lam, silty - gt tex, brt-
fis, sme bent, sme pyr, tr fos frag

100% MRL: dkgy, brn, blk, mot, crpxl, mod
hd - hd, sbply - plty - lam, silty - gt tex, brt-
fis, tr bent w/ dism pyr, tr fos frag

100% MRL: m-dkgy, brn, blk, mot, crpxl,
mod hd - hd, sbply - plty - lam, silty - gt tex,
brt-fis, tr bent w/ dism pyr, tr fos frag



MUD WT 9.1+9.20
VIS 33/33 IN/OUT

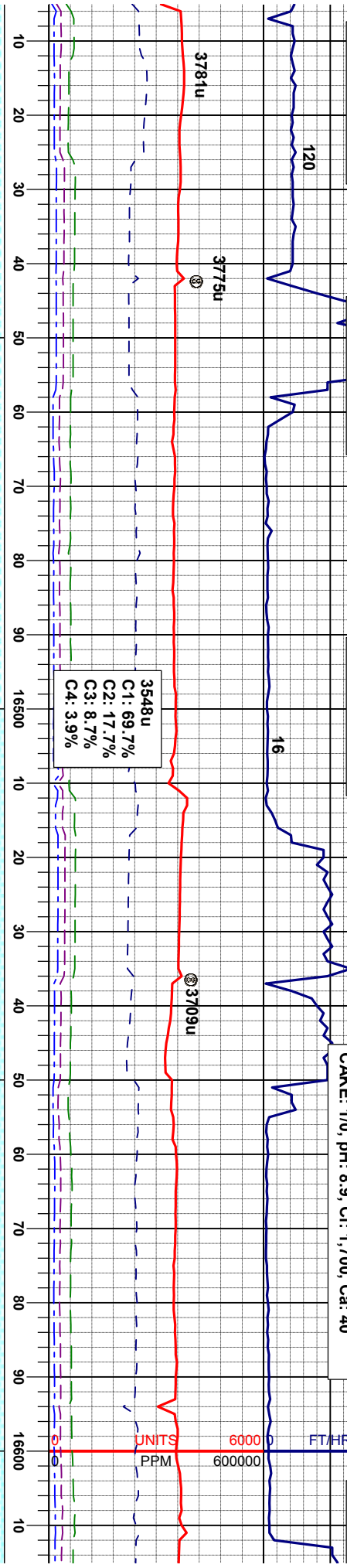
MUD WT 9.0/9.0+
VIS 31/31 IN/OUT

3/8/133/9/13

MUD WT 9.0/9.0
VIS 31/31 IN/OUT

03/09/2013 Mud Wt: 9.10, FVis: 34,
PVIS: 8, YP: 7, GELS: 3/6/8, API Filtr: 8.0,
CAKE: 1/0, pH: 8.9, Cl: 1.700, Ca: 40

MUD WT
VIS 33/33



SD 16,477'
TVD 6,654.34'
INC 87.81°
AZM 264.27°

SD 16,571'
TVD 6,658.26'
INC 87.41°
AZM 266.96°

0% MRL: m-dkgy, brn, blk, mot, crpxl, mod hd - hd, sbply - ply - lam, silty - gt tex, brit-fts, freq bent w/ dism pyr, tr fos frag	100% MRL: mgy-dkgy, brn, blk, mot, crpxl, mod hd - hd, sbply - ply - lam, silty - gt tex, brit-fts, freq bent w/ dism pyr, tr fos frag	10% CHK: ltgy, ltgybrn, off, wh, micxl, sft - mod hd, brit-fts, sbply-sbdkly, rthy-sbwwy 90% MRL: mgy-dkgy, mot, crpxl, mod hd - hd, sbply - ply, silty - gt tex, sme bent, tr fos frag	10% CHK: ltgy, ltgybrn, off, wh, micxl, sft - mod hd, brit-fts, sbply-sbdkly, rthy-sbwwy 90% MRL: mgy-dkgy, mot, crpxl, mod hd - hd, sbply - ply, silty - gt tex, sme bent, tr fos frag	30% CHK: l mod hd, brit 70% MRL: r hd, sbply - fos frag
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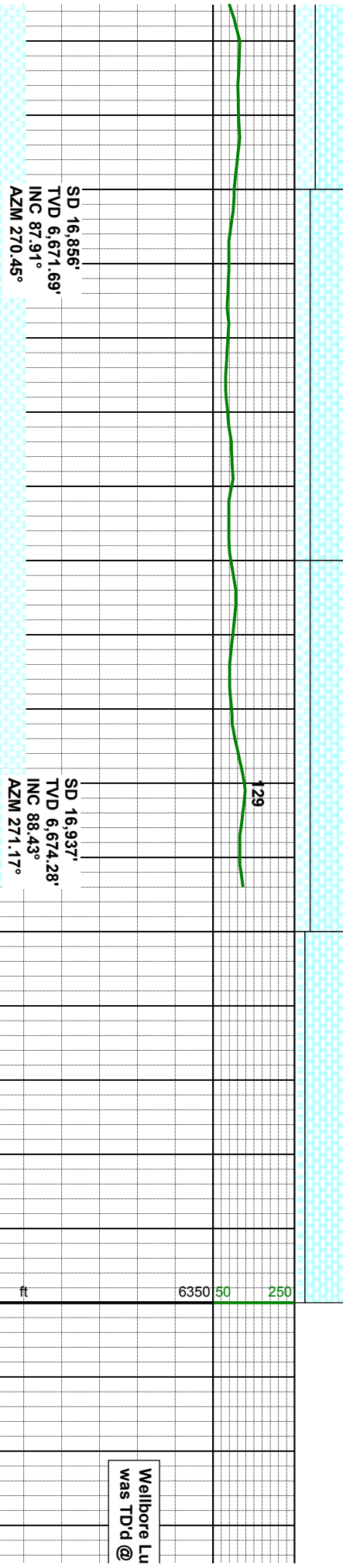
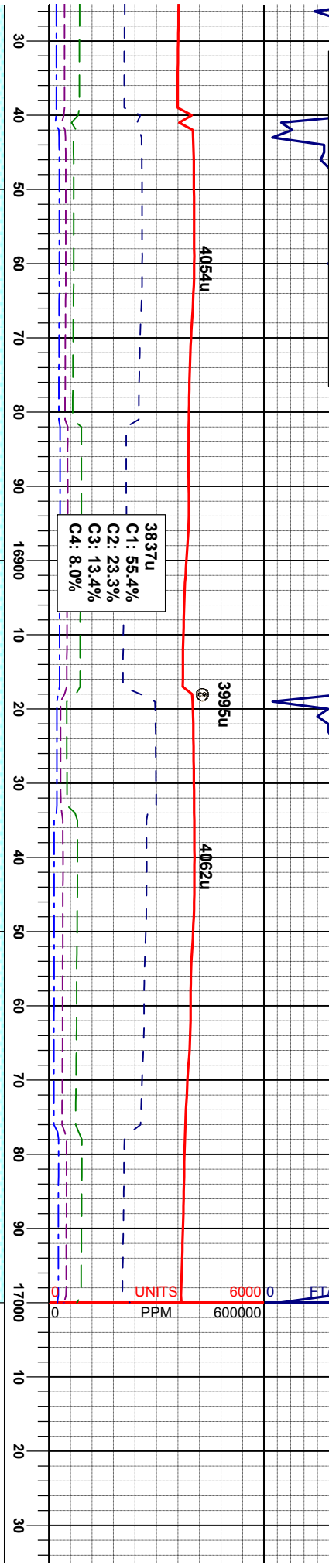


03/09/2013 Mud Wt: 9.15, FVis: 33,
PVIs: 8, YP: 7, GELS: 47/9, API Filt: 7.8,
CAKE: 1/0, pH: 8.9, Cl: 1.600, Ca: 40

MUD WT 9.20/9.20
VIS 33/33 IN/OUT

300
328

ETMR 500



70% CHK: lly - llybrn, bnd w/ off, wh,
mictl, sft - mod hd, brit-fr, sbply-sbdky,
rthy-wxy
30% MRL: mgy-dkgy, mot, crpxl, mod hd -
hd, sbply - pily, sily - gt tex, scat bent w/
dism pyr, abnt fos frag

70% CHK: lly - llybrn, bnd w/ off, wh,
mictl, sft - mod hd, brit-fr, sbply-sbdky,
sbwy-wxy
30% MRL: mgy-dkgy, mot, crpxl, mod hd -
hd, sbply - pily, sily - gt tex, scat bent w/
dism pyr, abnt fos frag

80% CHK: lly - llybrn, bnd w/ off, wh,
mictl, sft - mod hd, brit-fr, sbply-sbdky,
sbwy-wxy
20% MRL: mgy-dkgy, mot, crpxl, mod hd -
hd, sbply - pily, gt - sbwy, scat bent w/
dism pyr, abnt fos frag



Wellbore Lu
was TD'd @

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