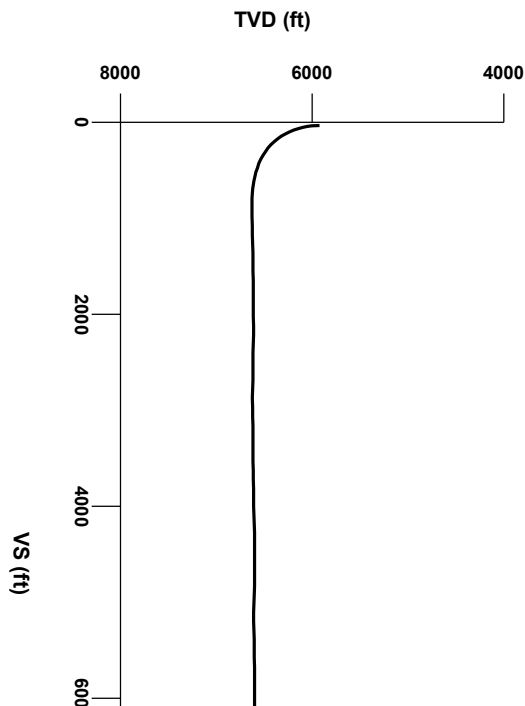


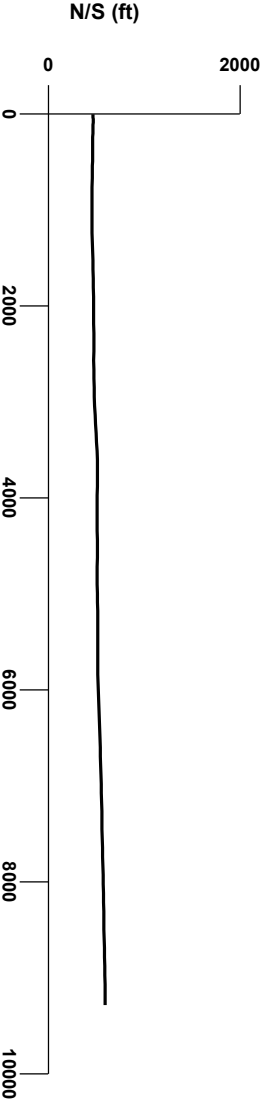
LOG created using LPLOT VH Version 3.0, March 24, 2013, Copyright (C) 1999-2009 Pason Systems Corp.

**OPERATOR:** NOBLE ENERGY INC.  
**WELL:** LUCCI STATE B01-69HNL  
**LOCATION:** SEC. 1 T5N R64W  
**COUNTY:** WELD  
**STATE:** COLORADO  
**SPOT:** 376' FNL 649' FWL  
**ELEVATION:** 4,617' GL 4,641' KB  
**FIELD:** WATTENBERG  
**SPUD DATE:** 3/14/2013  
**TD DATE:** 3/23/2013  
**DATES LOGGED:** 3/18/2013 - 3/23/2013 (HORIZONTAL)  
**DEPTHS LOGGED:** 5,915' - 15,648' (HORIZONTAL)  
**LOGGERS:** CHRIS COOK; MARK COLE  
**DRILLING FLUID:** LSND  
**DRILLING RIG:** H&P 315  
**API:** 05-123-36533  
**LOG TYPE:** HORIZONTAL  
**SCALE:** 1:240 (5 inches per 100 feet)  
**REMARKS:** SEE CORRESPONDING VERTICAL LOG: LUCCI STATE B01-69HNL VERT.  
 LAT/LON 40.43464/-104.50550  
 Wellsite Geological Services Provided by Columbine Logging Inc.

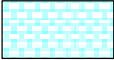


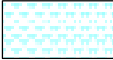
Survey Elevation

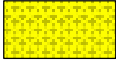
Survey Plan






Chalk

Marl

Shaly Sandstone

Silty Shale

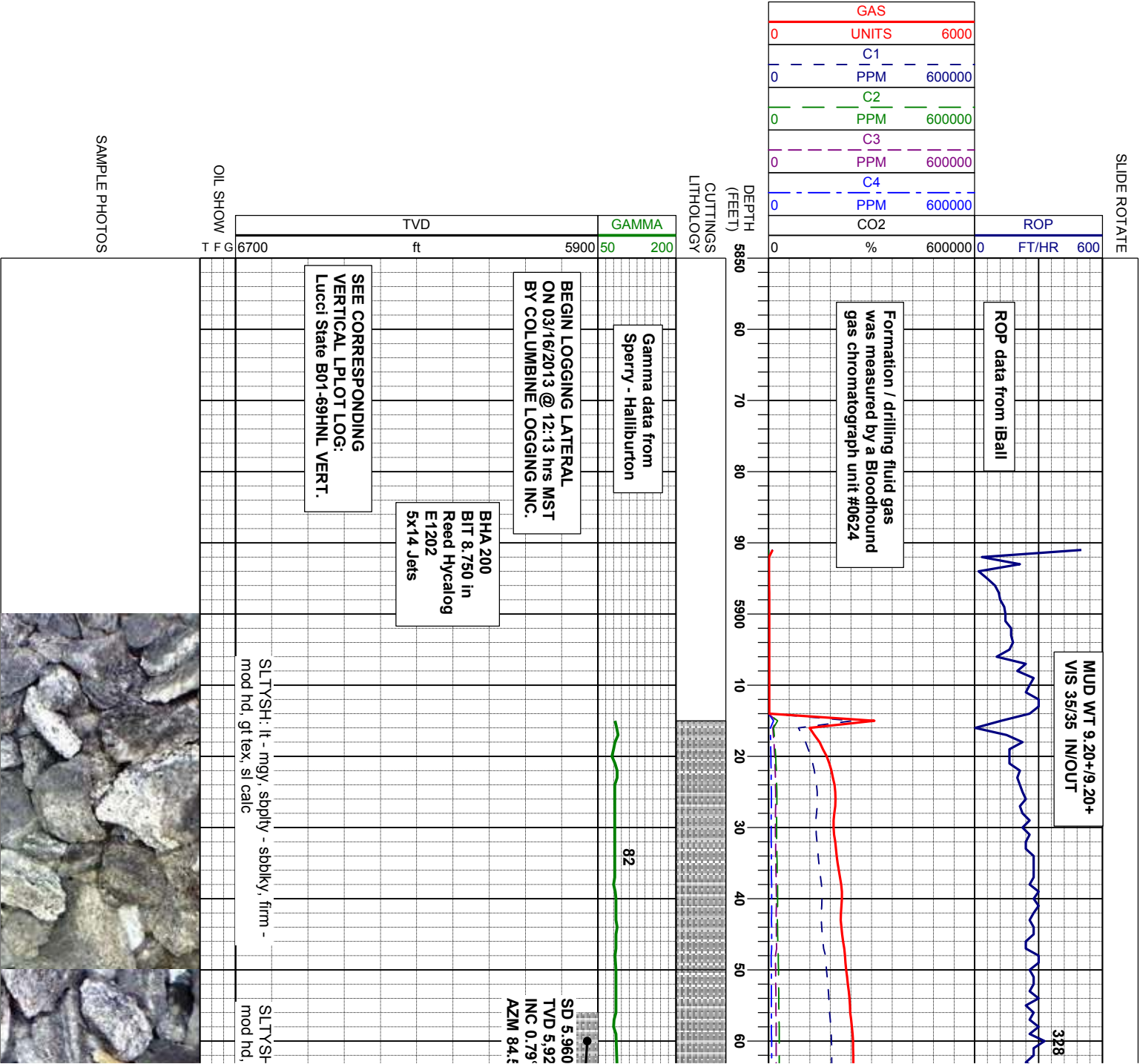
Connection

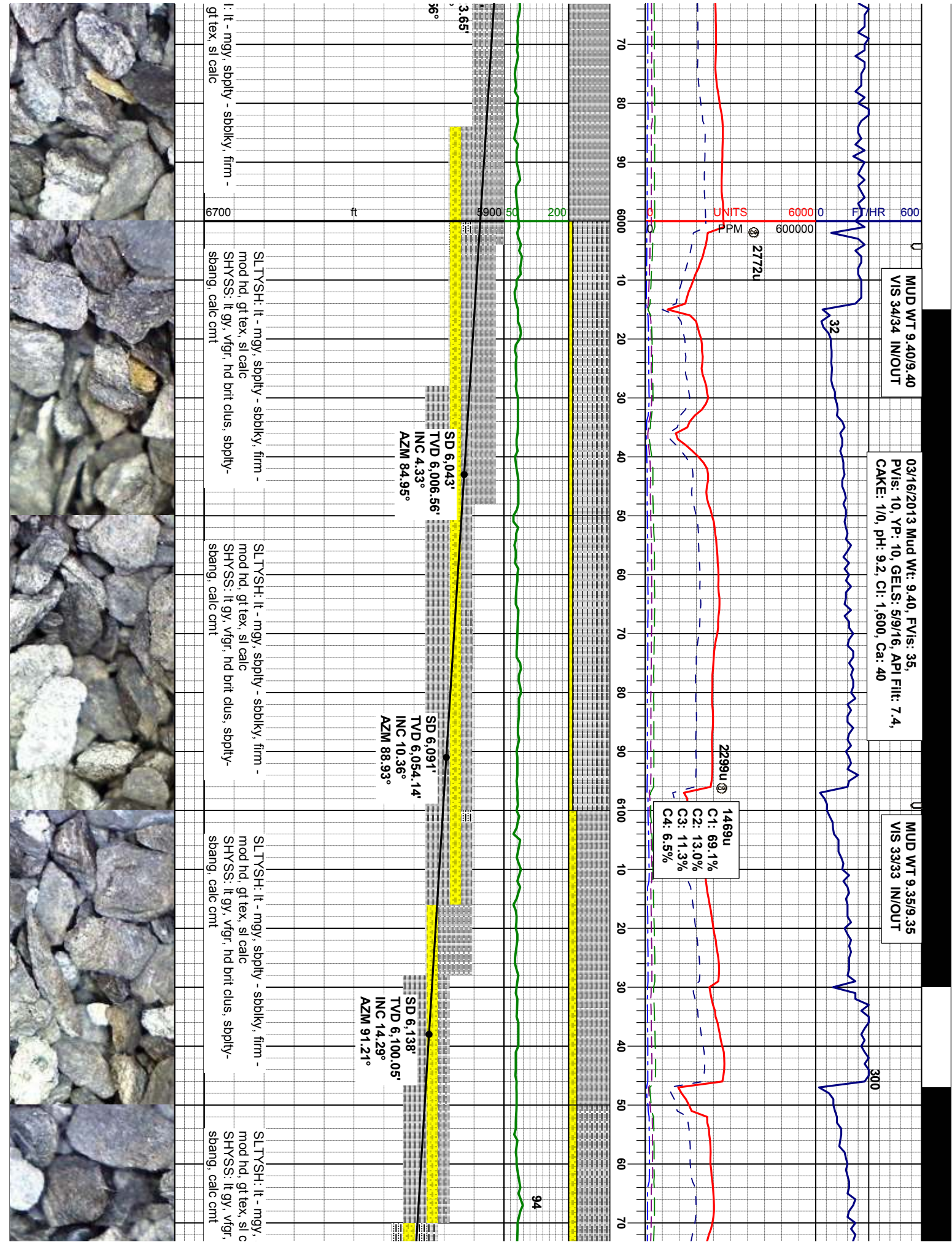
Connection Gas

Midnight Depth

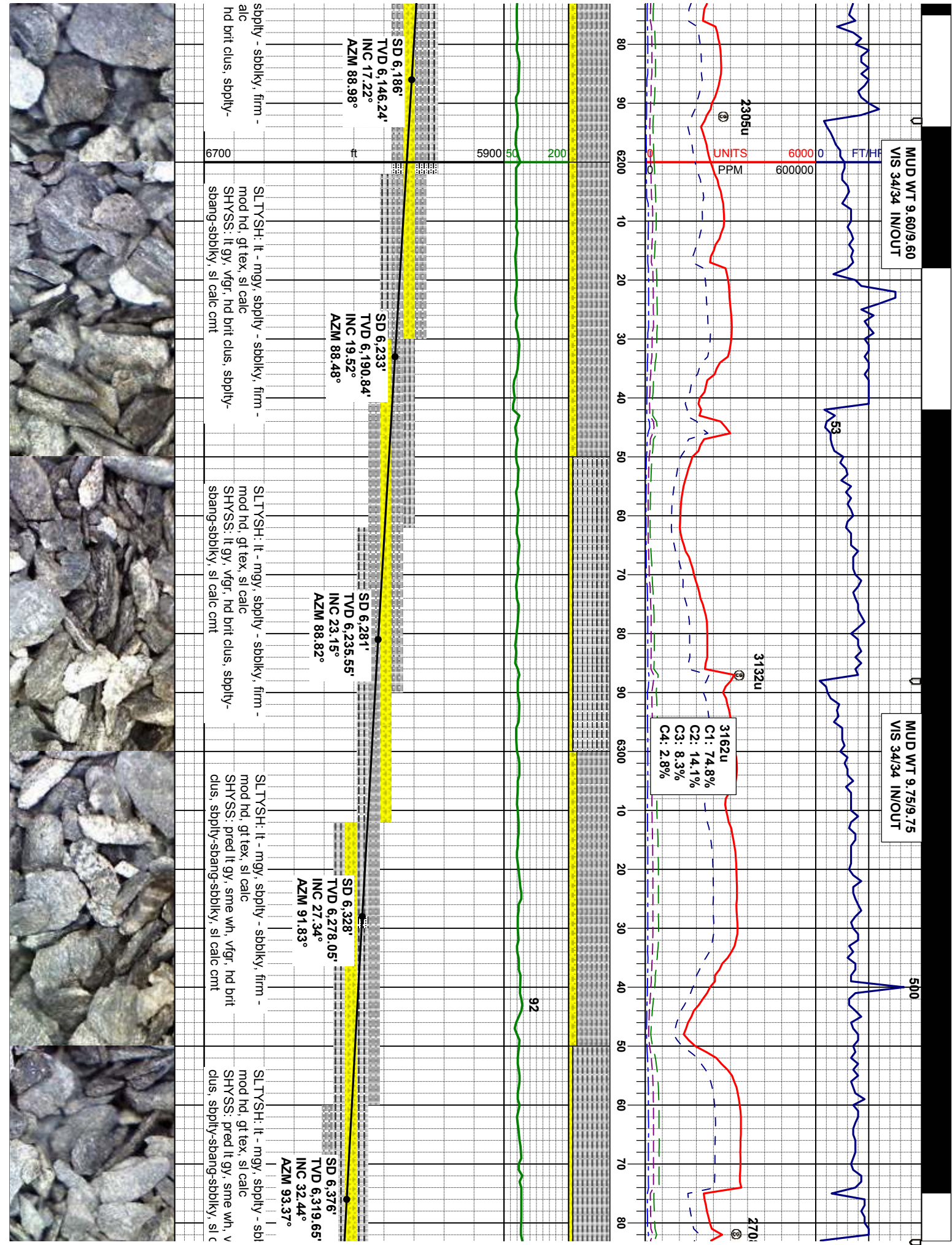
Normal Fault

ENGINEERING SYMBOLS

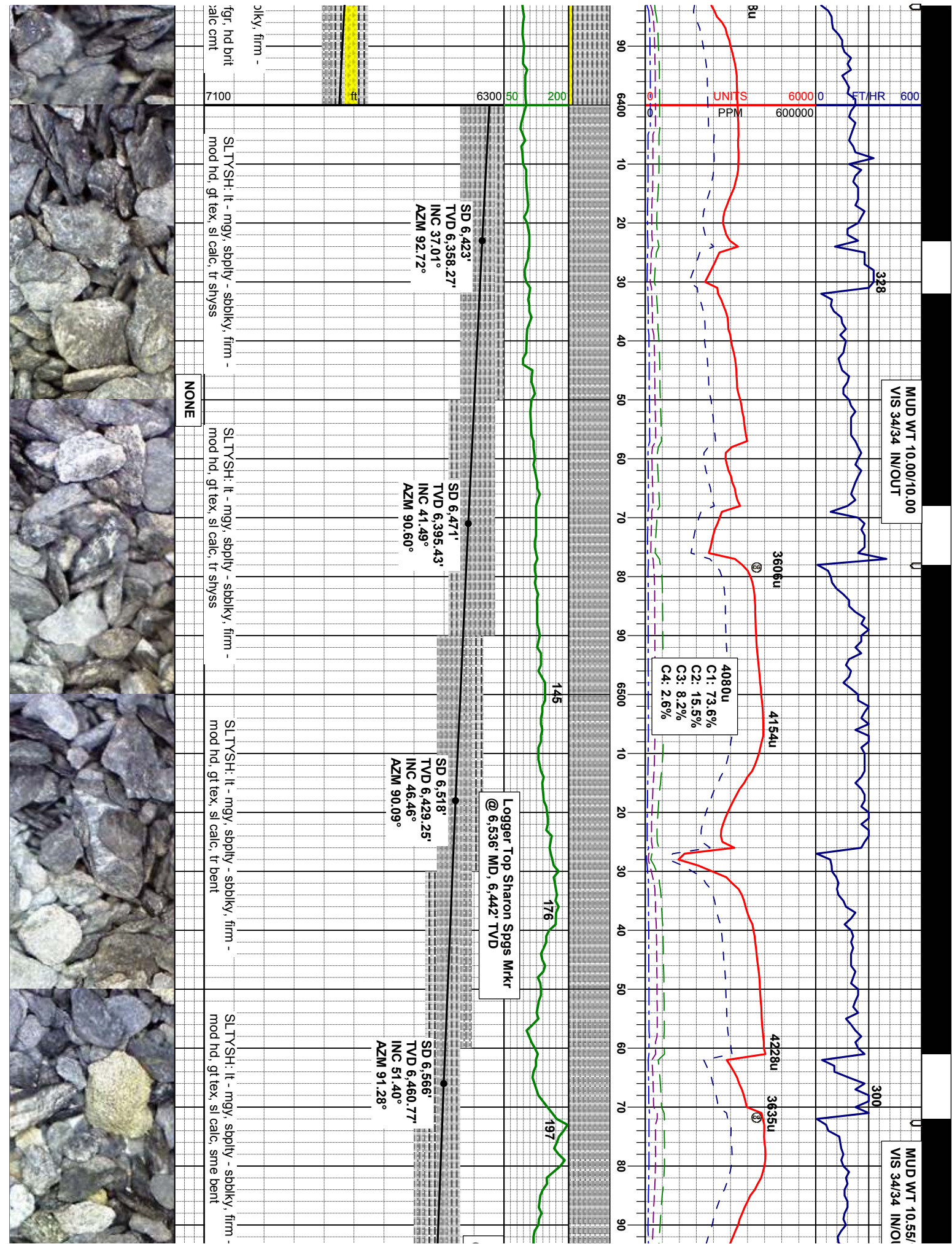




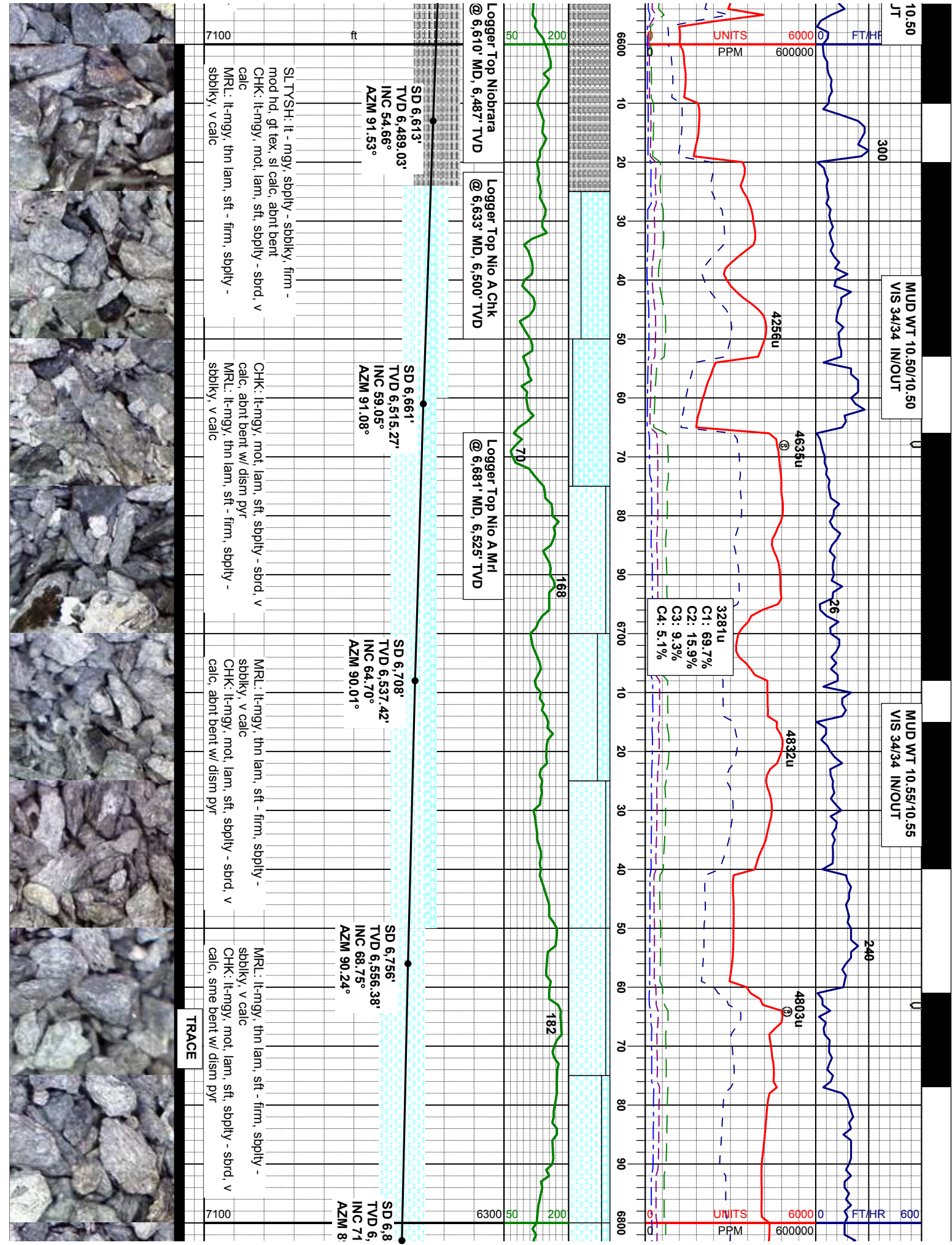










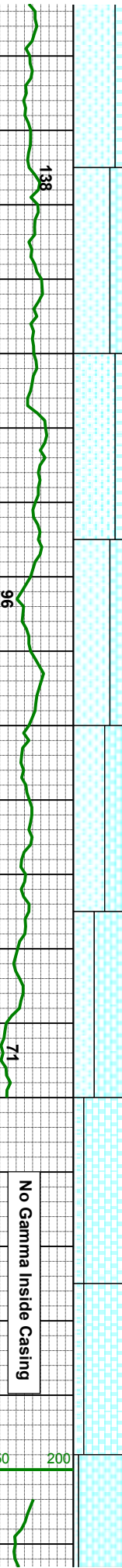
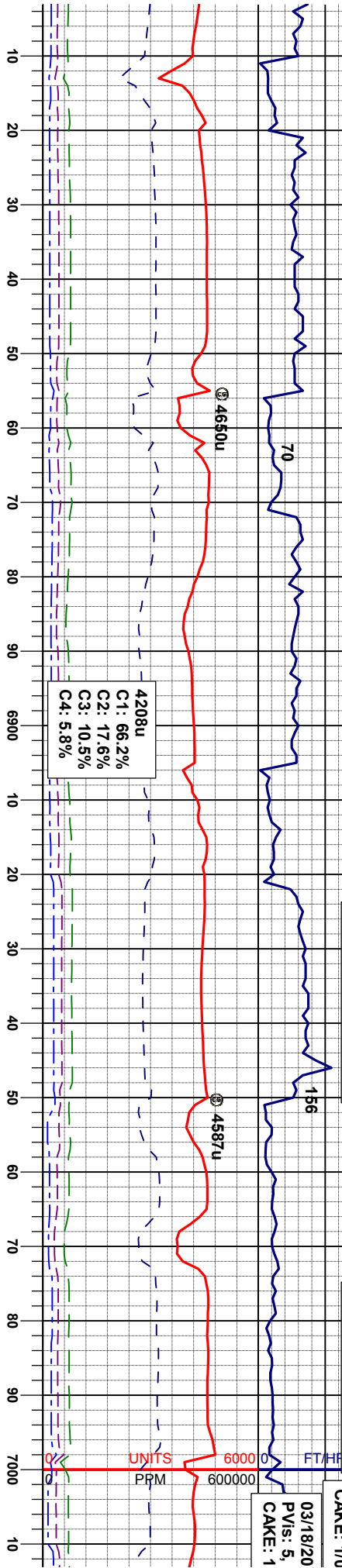


MUD WT 10.60+/10.60+  
VIS 35/35 IN/OUT

MUD WT 10.60+/10.60  
VIS 35/35 IN/OUT

03/17/2013  
PV's: 11,  
CAKE: 1/0

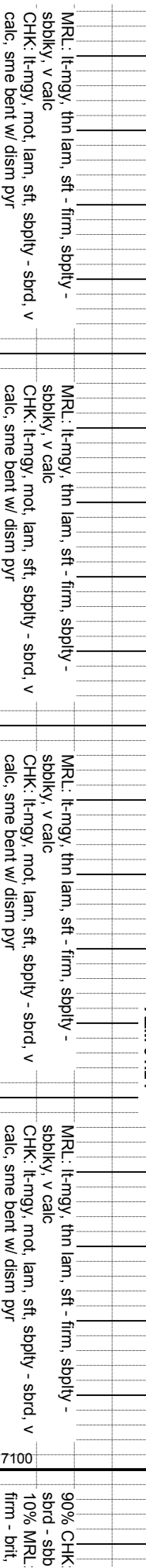
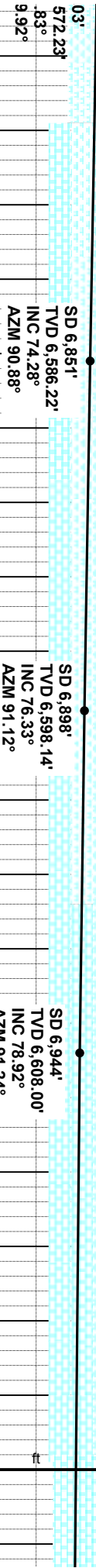
03/18/20  
PV's: 5,  
CAKE: 1



Logger Top Nio B CHK  
@ 6,930' MD, 6,605' TVD

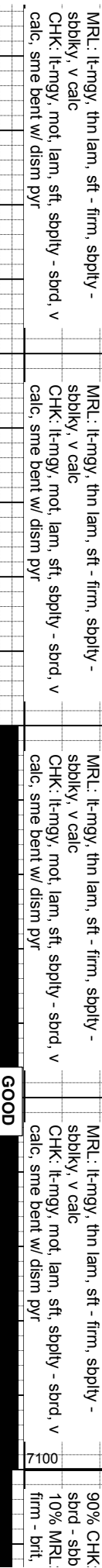
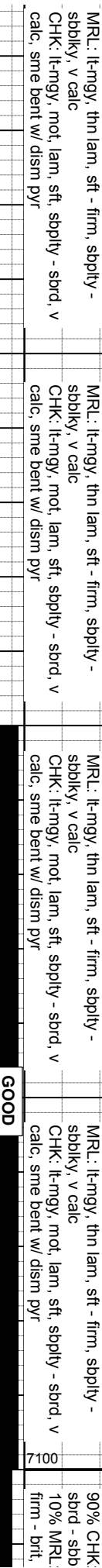
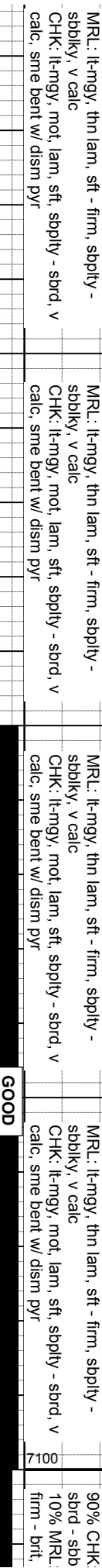
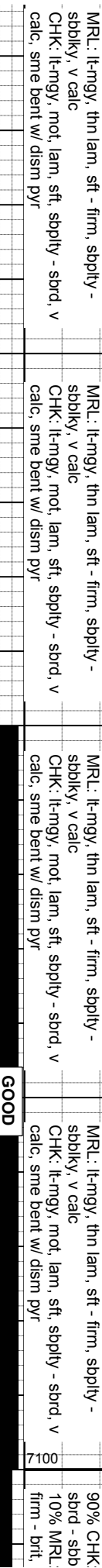
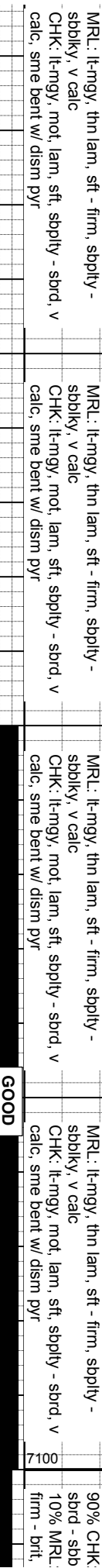
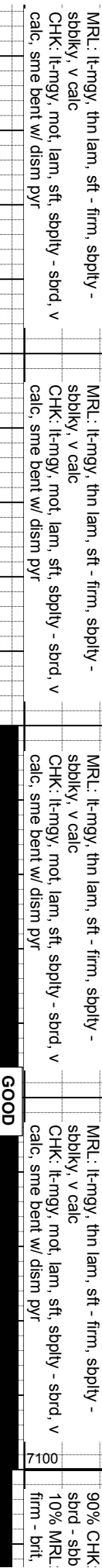
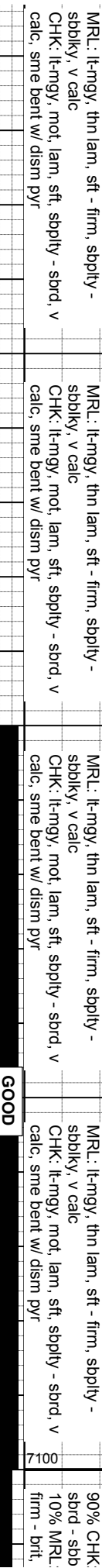
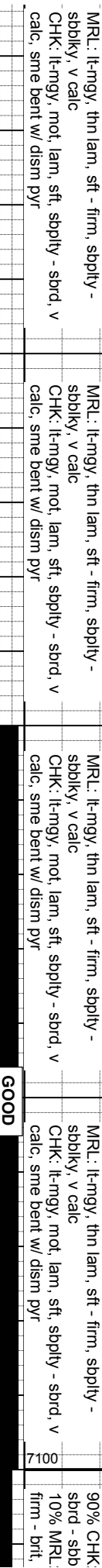
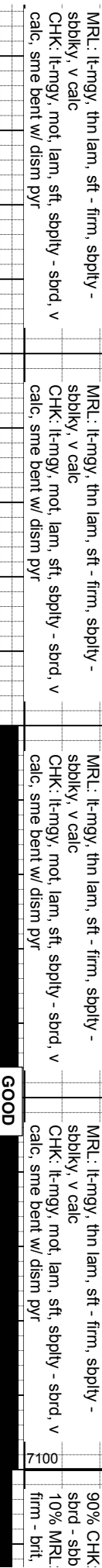
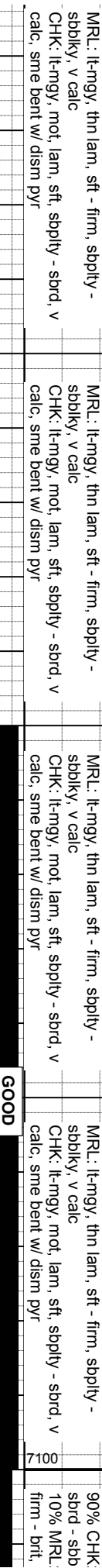
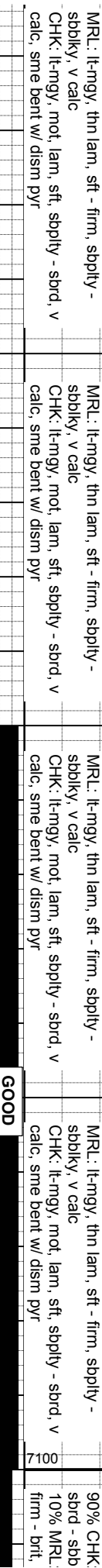
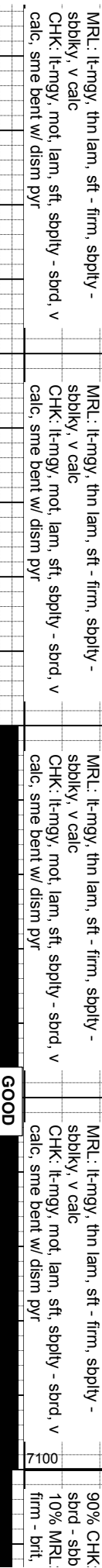
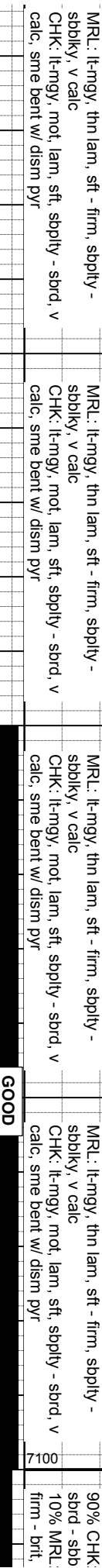
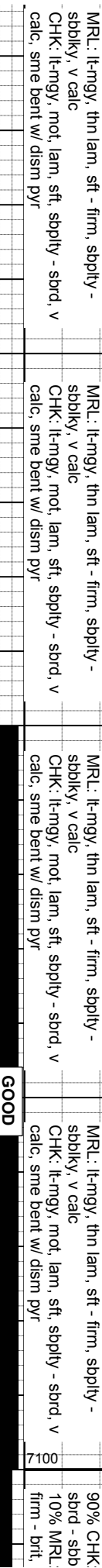
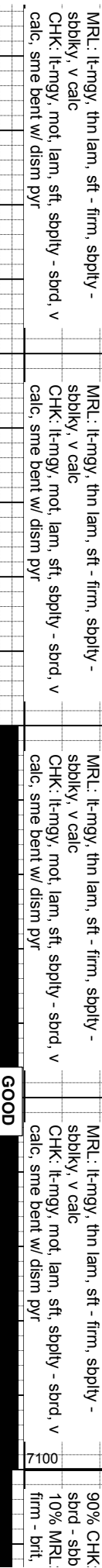
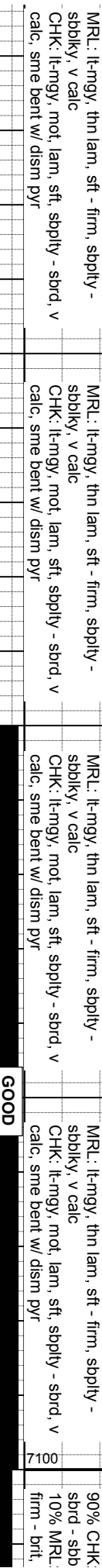
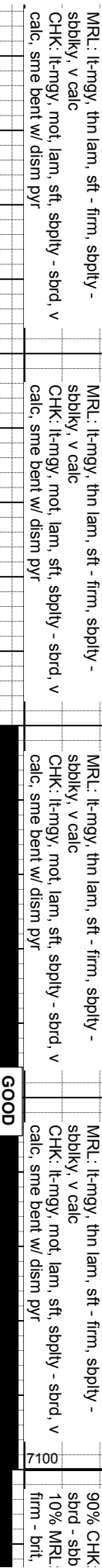
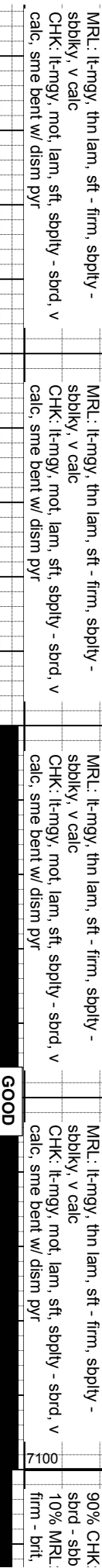
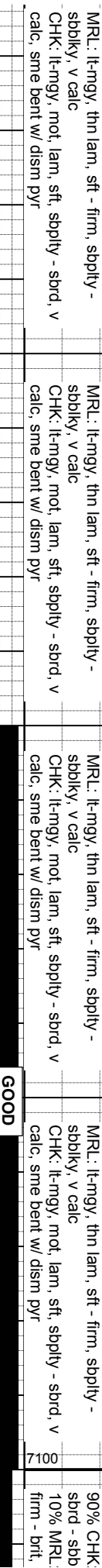
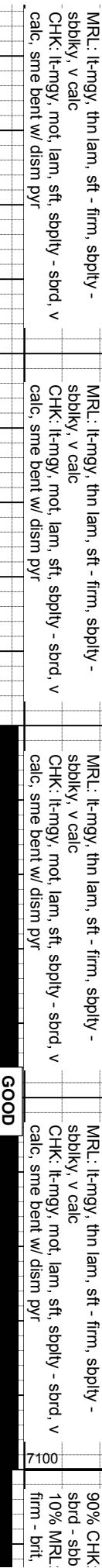
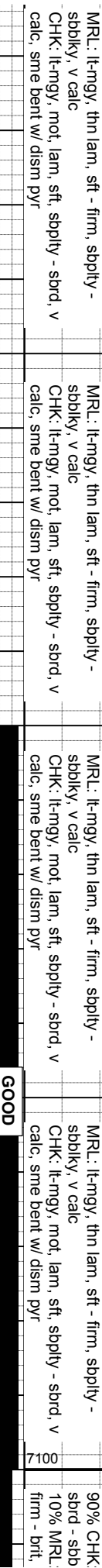
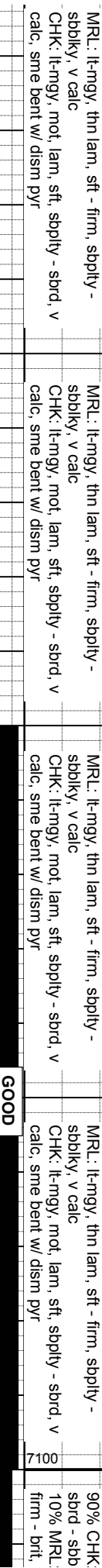
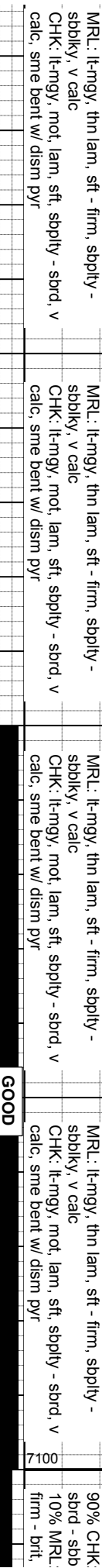
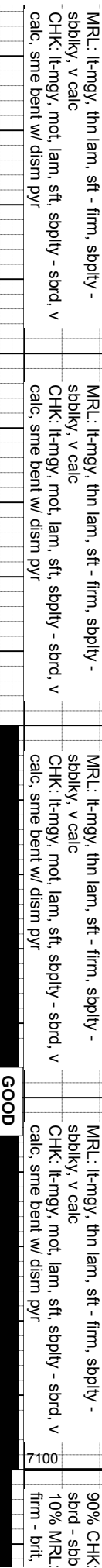
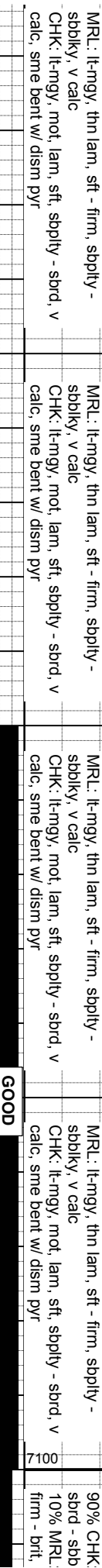
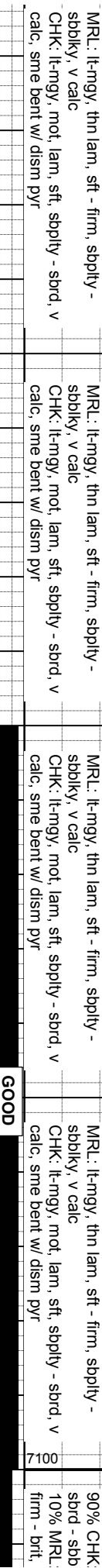
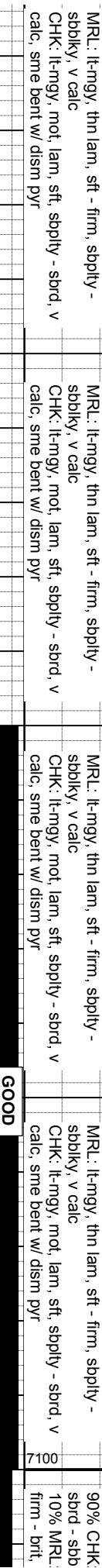
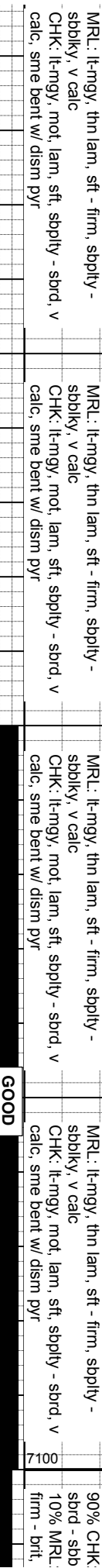
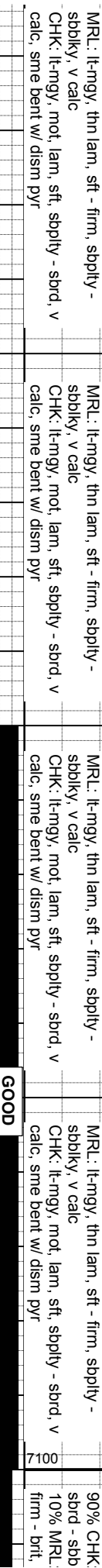
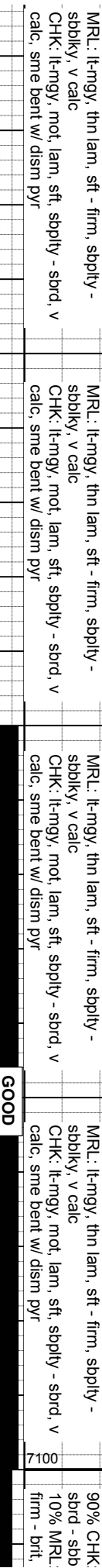
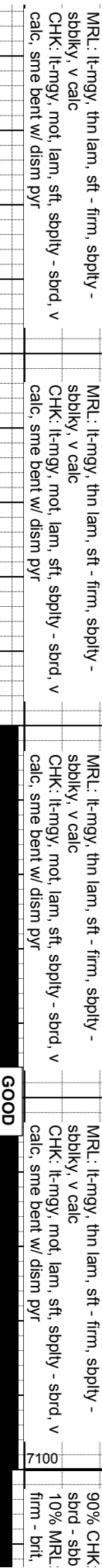
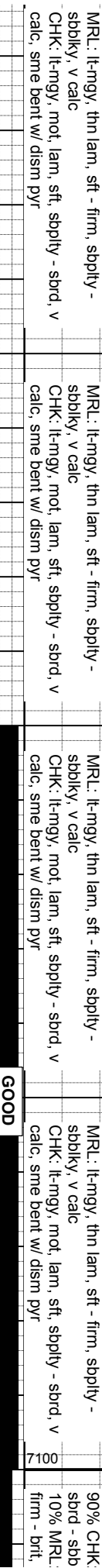
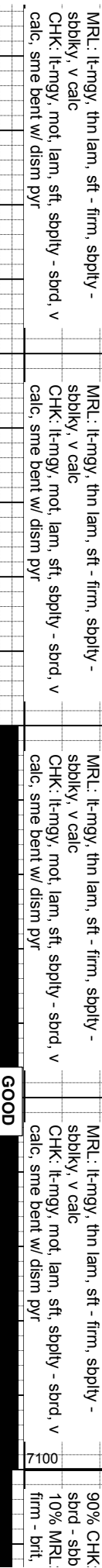
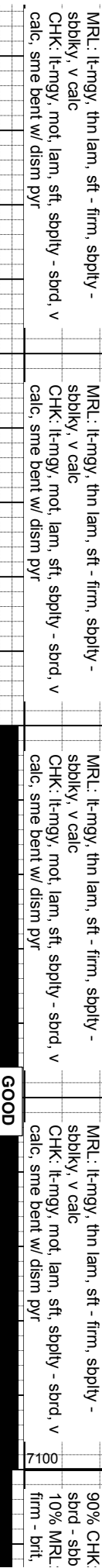
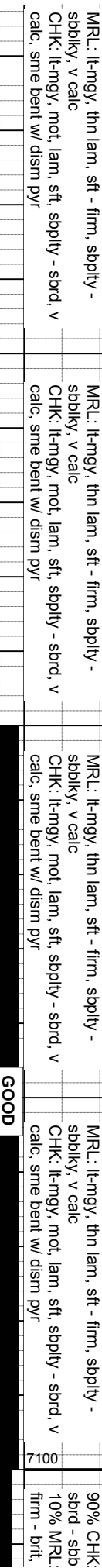
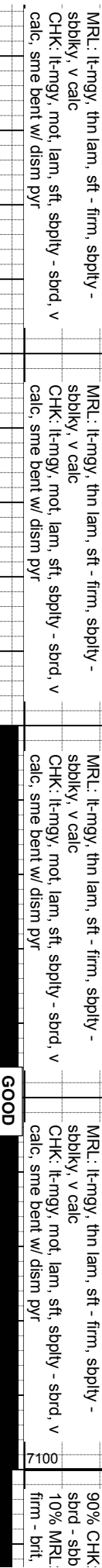
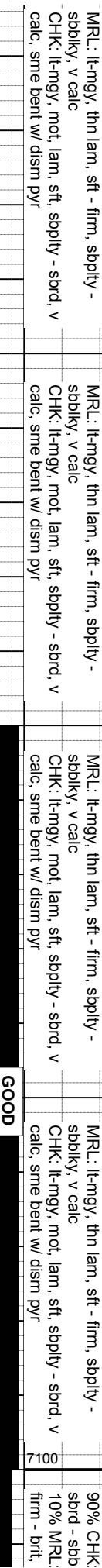
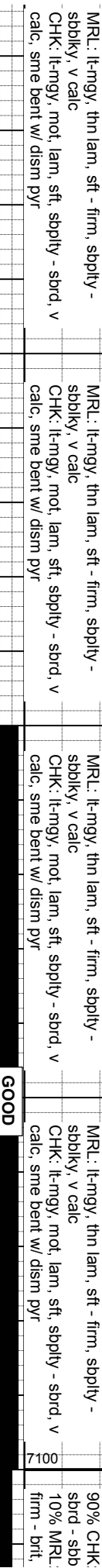
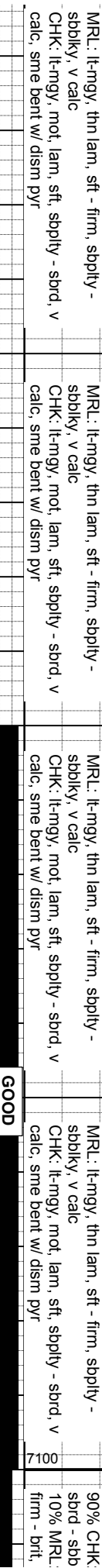
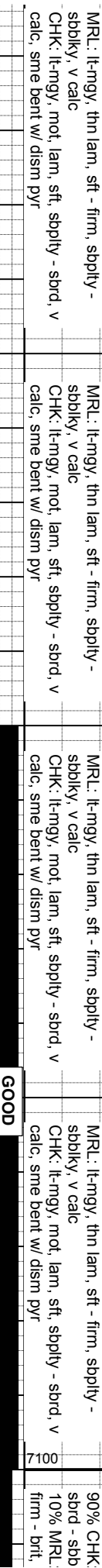
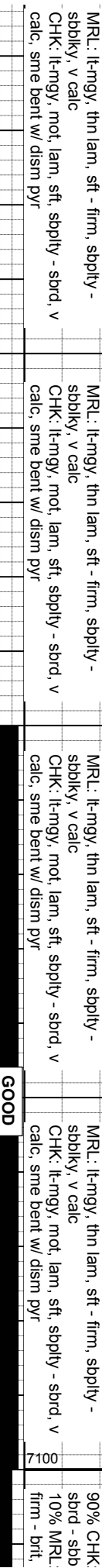
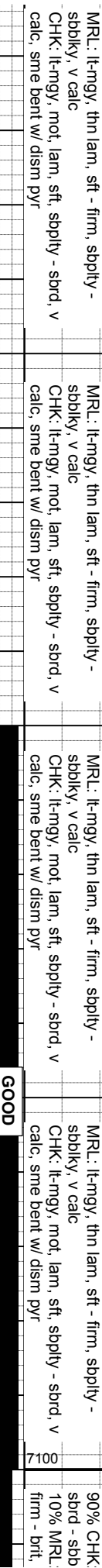
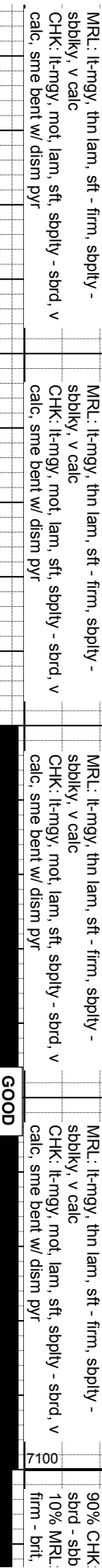
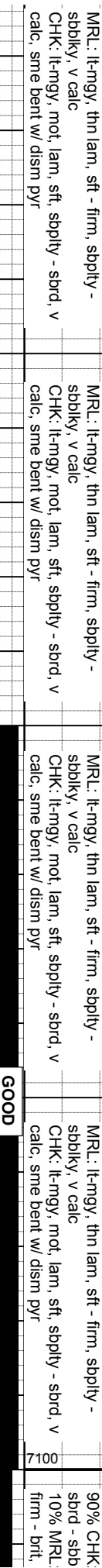
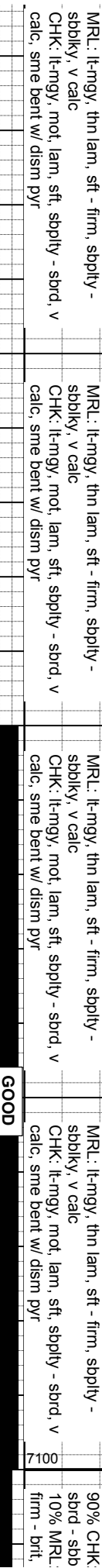
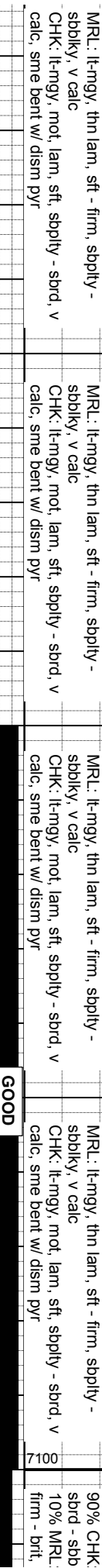
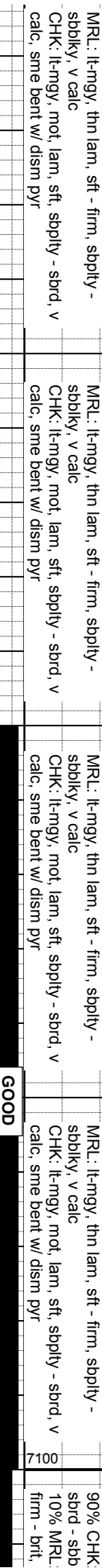
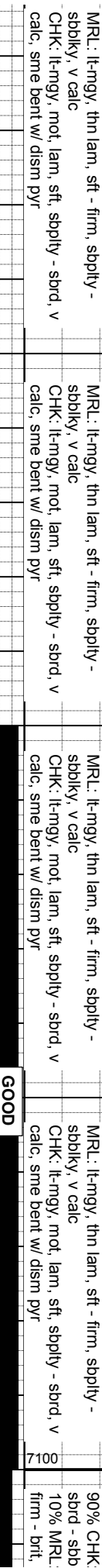
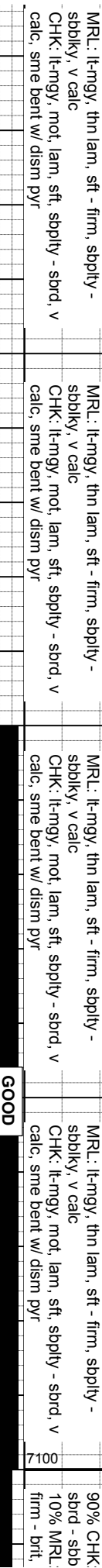
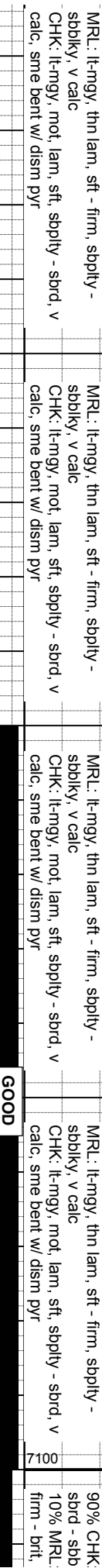
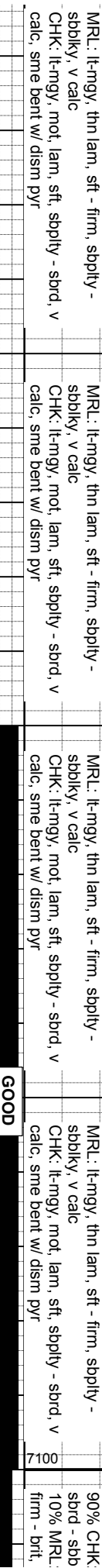
TOOH @ 6,998' MD FOR  
INTERMEDIATE CASING

BEGAN DI  
ON 03/18/2013



GOOD

90% CHK:  
sbrd - sdb  
10% MRL:  
firm - brt.

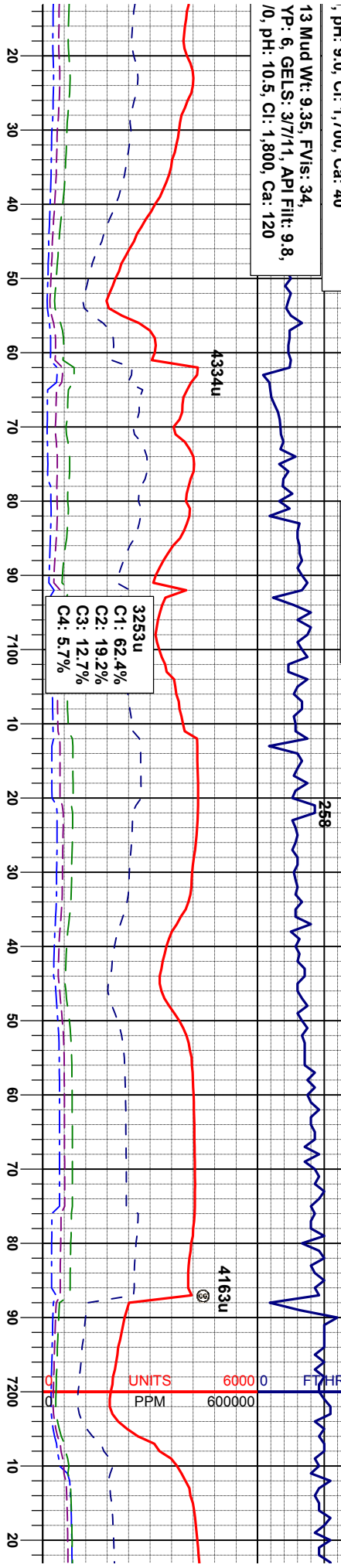




3 Mud Wt: 10.95, FVis: 36,  
YP: 11, GELS: 7/19/28, API Filtr: 7.4,  
pH: 9.0, CI: 1,700, Ca: 40

13 Mud Wt: 9.35, FVis: 34,  
YP: 6, GELS: 3/7/11, API Filtr: 9.8,  
pH: 10.5, CI: 1,800, Ca: 120

MUD WT 9.00/9.00  
VIS 35/35 IN/OUT



RILLING LATERAL  
2013 @ 14:27 hrs MST

BHA 300  
BIT 6.125 in  
HDBS  
MMD54  
5X15 JETS

SD 7,031'  
TVD 6,620.77'  
INC 84.19°  
AZM 90.41°

SD 7,126'  
TVD 6,627.22'  
INC 88.03°  
AZM 90.89°

SD 7,22  
TVD 6,6  
INC 90.1  
AZM 90

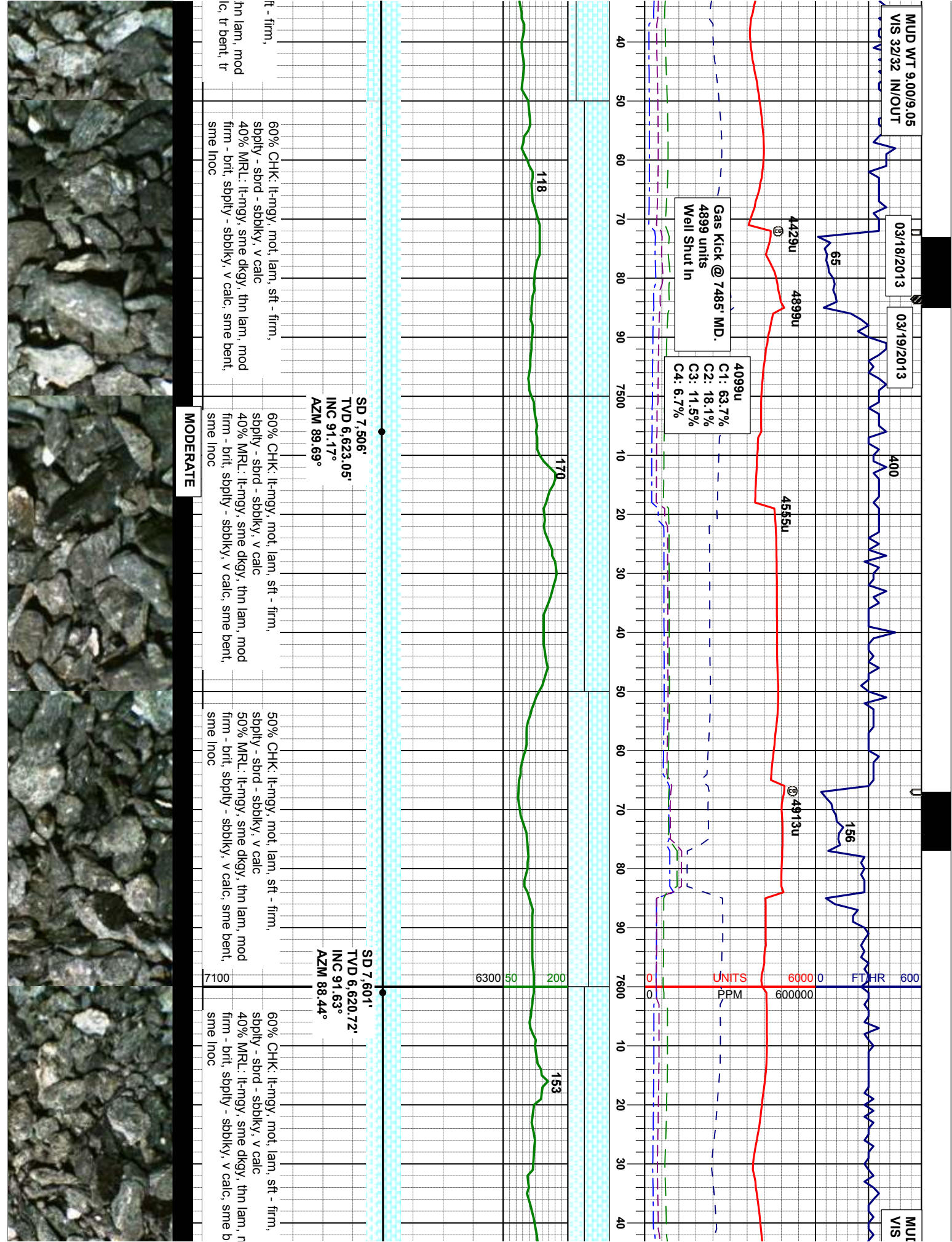
lt-mgy, mot, lam, sft, sbply - 80% CHK: lt-mgy, mot, lam, sft, sbply -  
lk, v calc sbd - sbply, v calc  
lt-mgy, sme dkg, thn lam, mod 20% MRL: lt-mgy, sme dkg, thn lam, mod  
sbply - sbply, v calc, tr bent firm - brt, sbply - sbply, v calc, tr bent

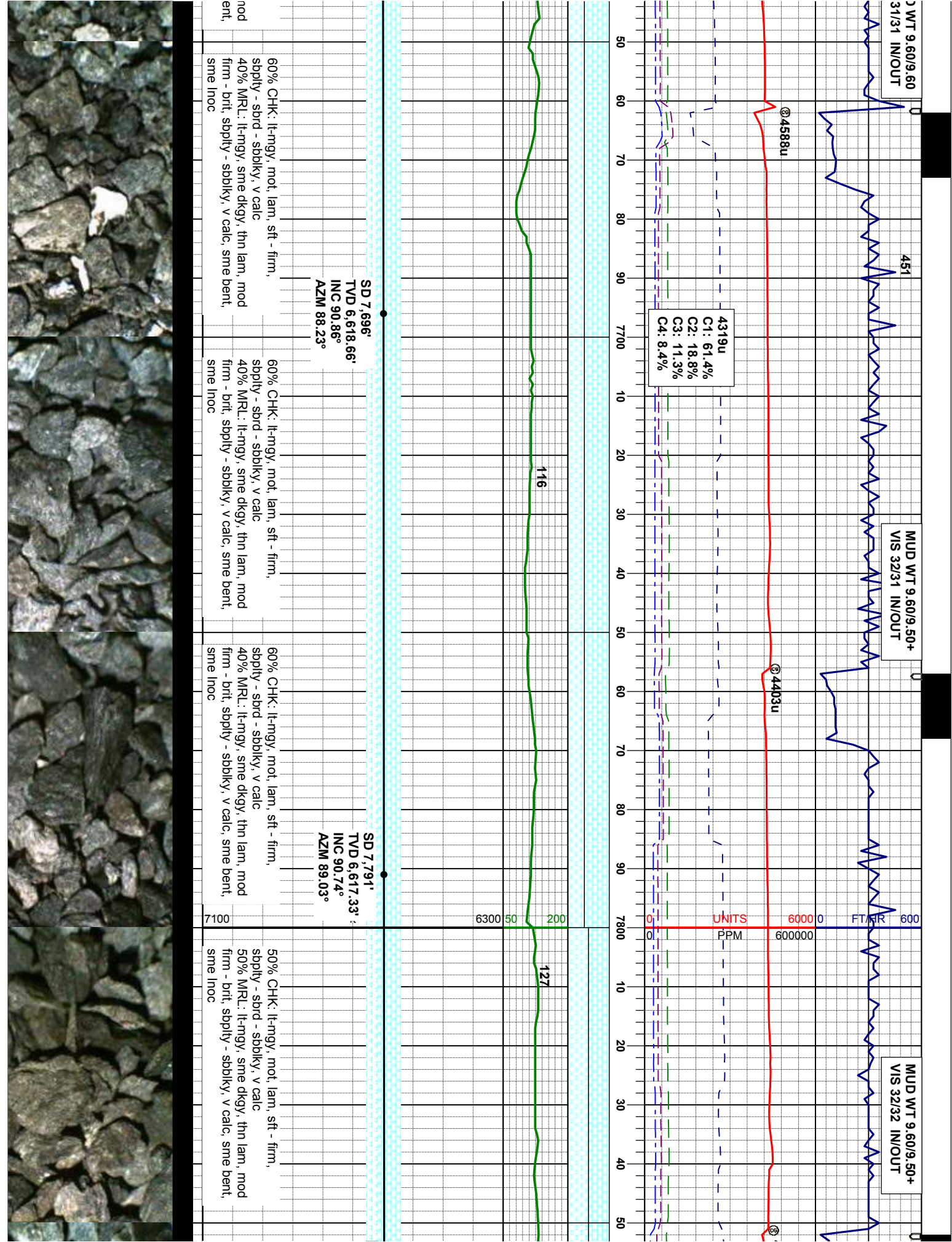
MODERATE













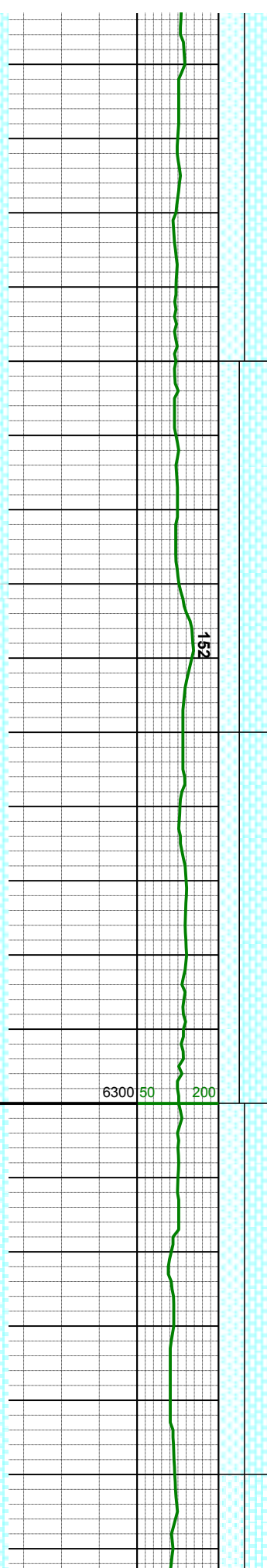
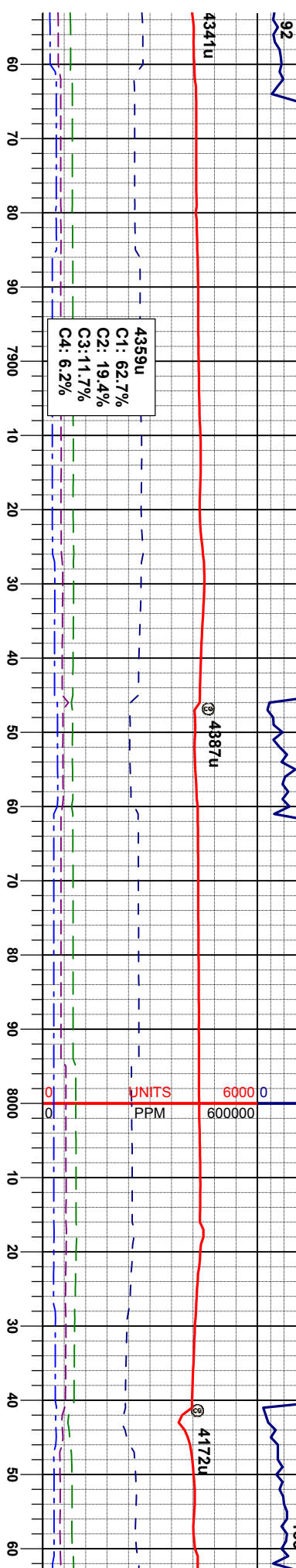
0

MUD WT 9.70/9.70  
VIS 33/33 IN/OUT

359

FT/HZ

133



SD 7.885'  
TVD 6,616.47'  
INC 90.31°  
AZM 87.81°

SD 7.981'  
TVD 6,615.46'  
INC 90.90°  
AZM 89.21°

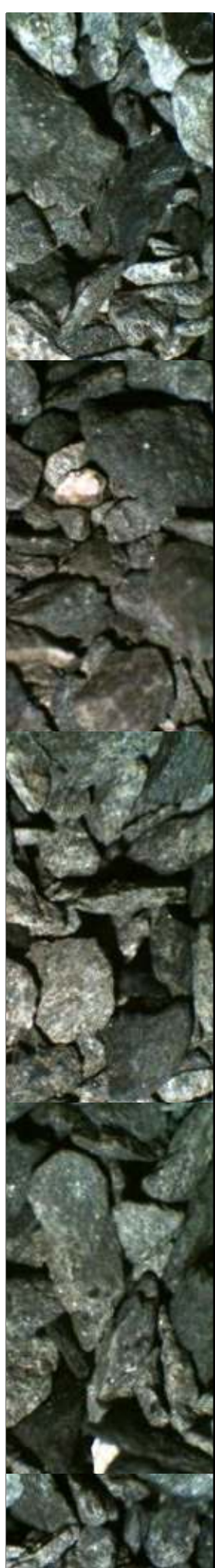
50% CHK: lt-mgy, mot, lam, sft - firm,  
sbsply - sprd - sbspky, v calc  
50% MRL: lt-mgy, sme dkgy, thn lam, mod  
firm - brit, sbsply - sbspky, v calc, sme bent,  
sme inoc

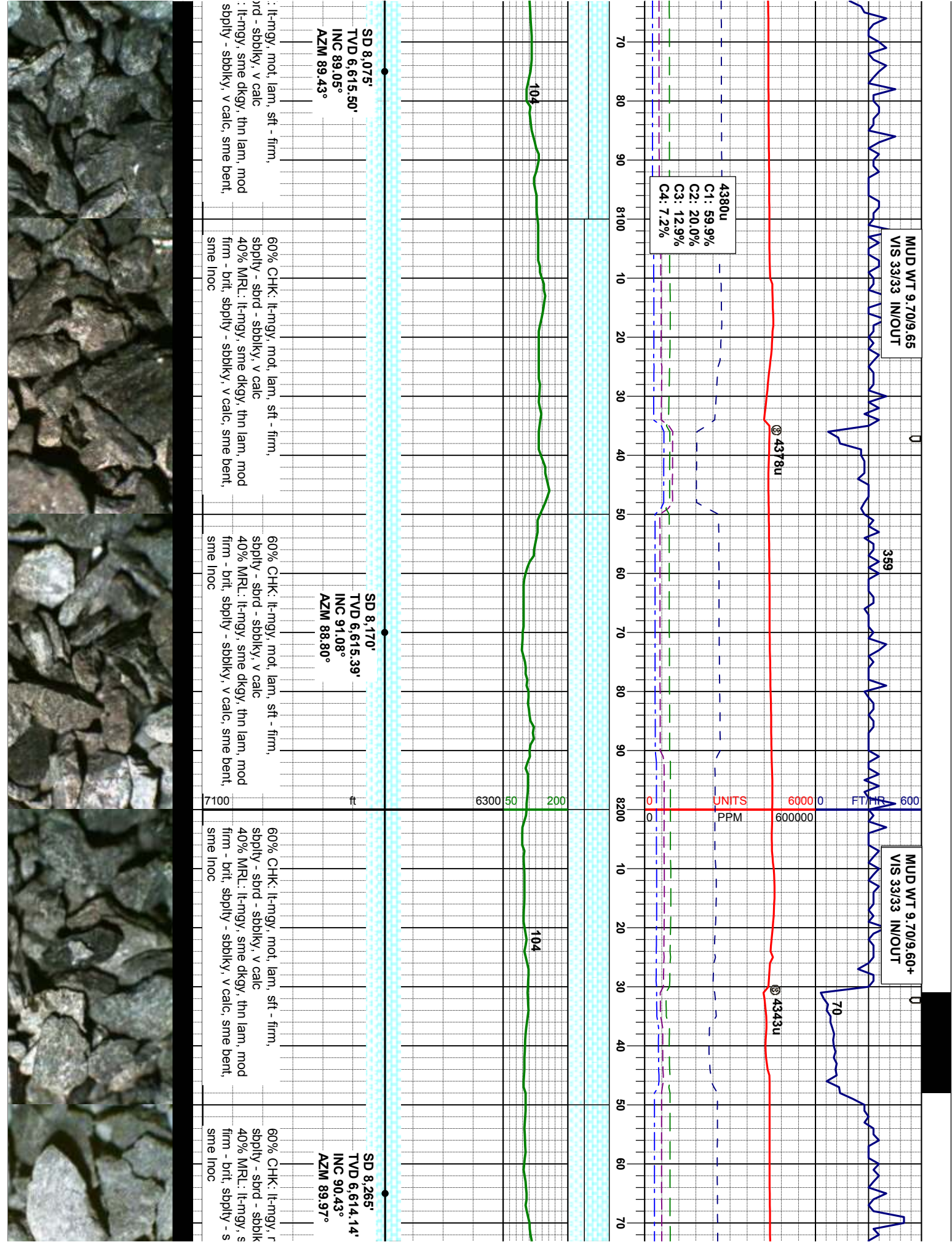
60% CHK: lt-mgy, mot, lam, sft - firm,  
sbsply - sprd - sbspky, v calc  
40% MRL: lt-mgy, sme dkgy, thn lam, mod  
firm - brit, sbsply - sbspky, v calc, sme bent,  
sme inoc

60% CHK: lt-mgy, mot, lam, sft - firm,  
sbsply - sprd - sbspky, v calc  
40% MRL: lt-mgy, sme dkgy, thn lam, mod  
firm - brit, sbsply - sbspky, v calc, sme bent,  
sme inoc

50% CHK: lt-mgy, mot, lam, sft - firm,  
sbsply - sprd - sbspky, v calc  
50% MRL: lt-mgy, sme dkgy, thn lam, mod  
firm - brit,  
sme inoc

MODERATE







MUD WT 9.70/9.70  
VIS 33/33 IN/OUT

03/19/2013 Mud Wt: 9.70, FVis: 33,  
PVIS: 8, YP: 8, GELS: 5/9/14, API Filtr: 8.4,  
CAKE: 1/0, pH: 8.8, Cl: 1,700, Ca: 40

4436u  
C1: 54.3%  
C2: 20.3%  
C3: 15.7%  
C4: 9.7%

4340u

4278u

UNITS  
PPM

80 90 8300 10 20 30 40 50 60 70 80 90 8400 10 20 30 40 50 60 70 80

124

200

6300

147

SD 8,360'  
TVD 6,613.50'  
INC 90.34°  
AZM 89.62°

SD 8,455'  
TVD 6,612.32'  
INC 91.08°  
AZM 89.30°

not, lam, sft - firm,  
y, v calc  
sme dkgy, thn lam, mod  
bbiky, v calc, sme bent,

70% CHK: lt-mgy, mot, lam, sft - firm,  
spbly - sbd - sbbiky, v calc  
30% MRL: lt-mgy, sme dkgy, thn lam, mod  
firm - brit, spbly - sbbiky, v calc, sme bent,  
sme inoc

70% CHK: lt-mgy, mot, lam, sft - firm,  
spbly - sbd - sbbiky, v calc  
30% MRL: lt-mgy, sme dkgy, thn lam, mod  
firm - brit, spbly - sbbiky, v calc, sme bent,  
sme inoc

70% CHK: lt-mgy, mot, lam, sft - firm,  
spbly - sbd - sbbiky, v calc  
30% MRL: lt-mgy, sme dkgy, thn lam, mod  
firm - brit, spbly - sbbiky, v calc, sme bent,  
sme inoc

70% CHK: lt-mgy, mot, lam, sft  
spbly - sbd - sbbiky, v calc  
30% MRL: lt-mgy, sme dkgy, thn  
firm - brit, spbly - sbbiky, v cal  
sme inoc

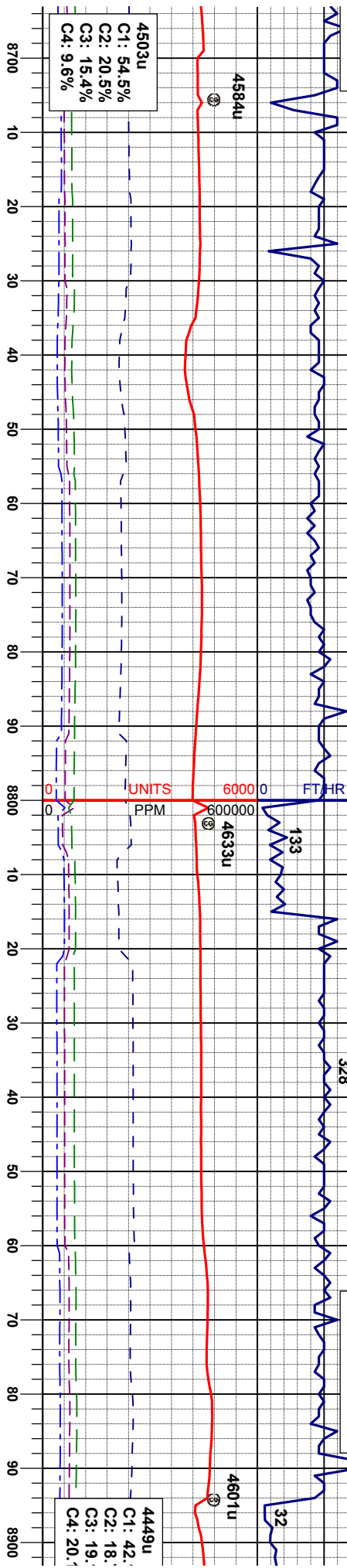






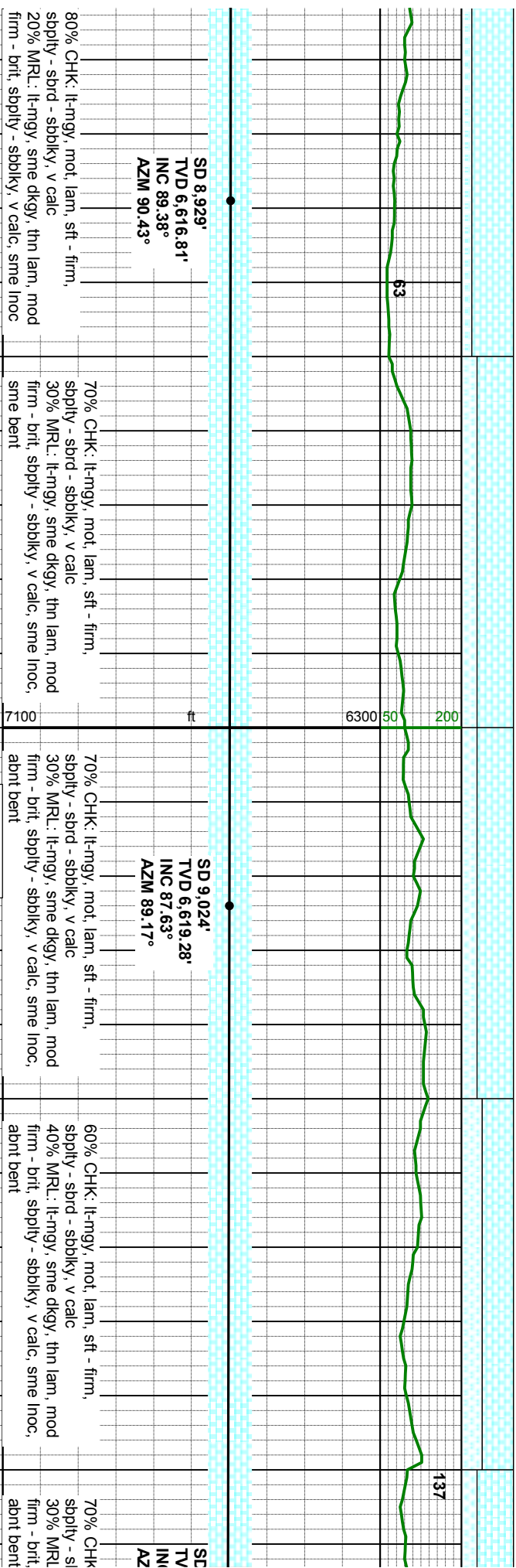
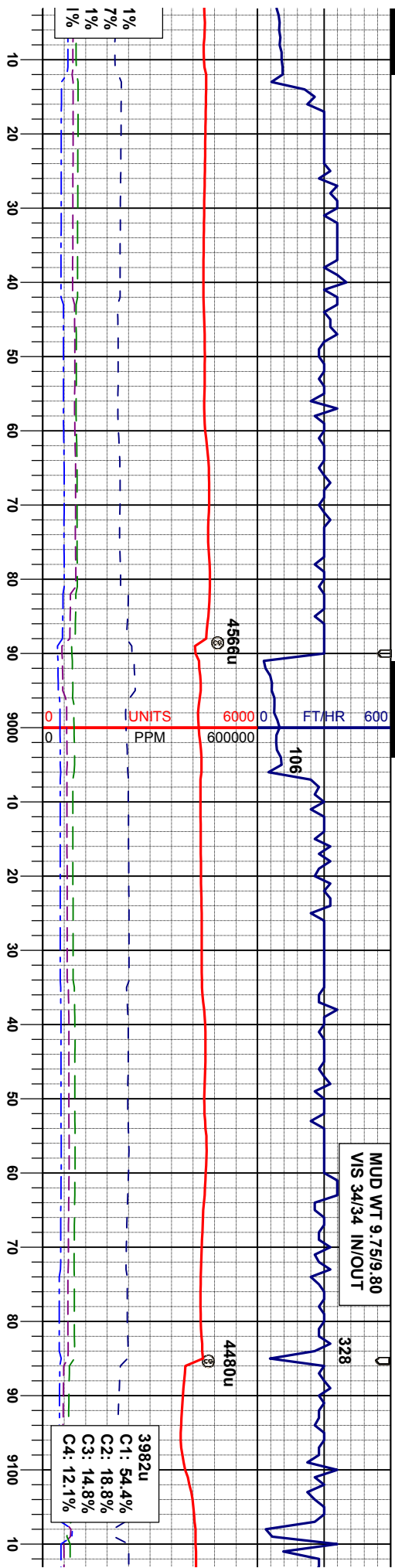
70+9.70+  
N/OUT

MUD WT 9.80/9.75  
VIS 35/35 IN/OUT

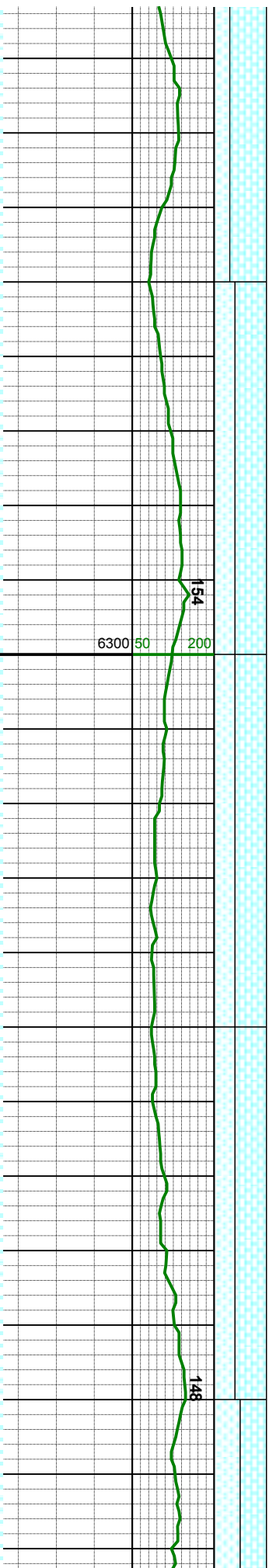
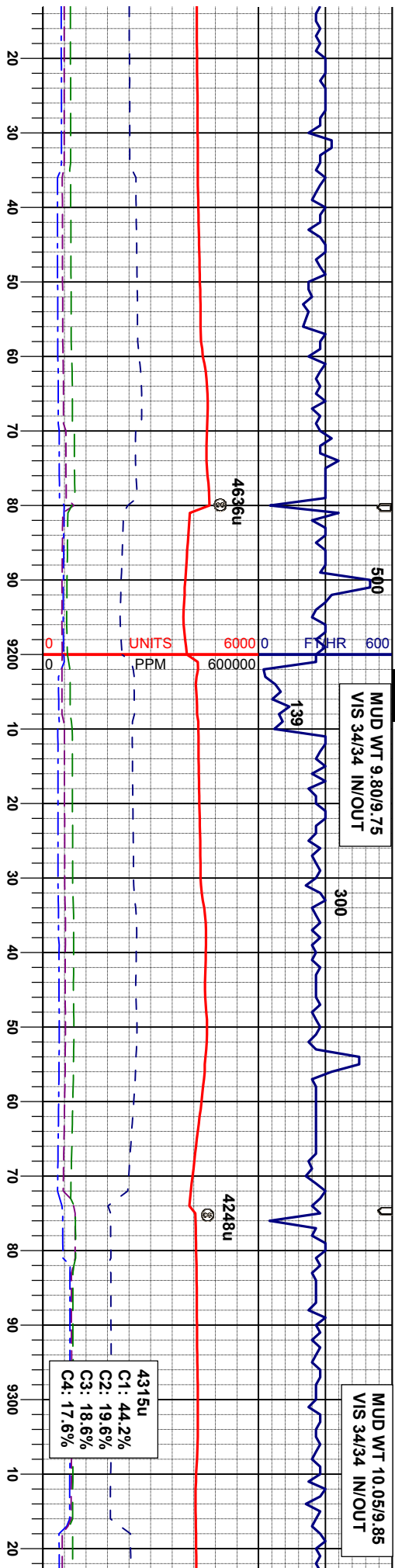


70% CHK: lt-mgy, mot, lam, sft - firm, sbply - sbd - sbdky, v calc 30% MRL: lt-mgy, sme dky, thn lam, mod firm - brt, sbply - sbdky, v calc, sme inoc	80% CHK: lt-mgy, mot, lam, sft - firm, sbply - sbd - sbdky, v calc 20% MRL: lt-mgy, sme dky, thn lam, mod firm - brt, sbply - sbdky, v calc, sme inoc	70% CHK: lt-mgy, mot, lam, sft - firm, sbply - sbd - sbdky, v calc 30% MRL: lt-mgy, sme dky, thn lam, mod firm - brt, sbply - sbdky, v calc, sme inoc	80% CHK: lt-mgy, mot, lam, sft - firm, sbply - sbd - sbdky, v calc 20% MRL: lt-mgy, sme dky, thn lam, mod firm - brt, sbply - sbdky, v calc, sme inoc
---	---	---	---









9,118'  
D 6,622.74'  
C 88.15°  
M 88.97°

SD 9,213'  
TVD 6,624.30'  
INC 89.97°  
AZM 88.86°

SD 9,308'  
TVD 6,622.16'  
INC 92.62°  
AZM 88.47°

3: It-mgy, mot, lam, sft - firm,  
 ord - sbolkly, v calc  
 ∴ It-mgy, sme dky, thn lam, mod  
 sbply - sbolkly, v calc, abnt Inoc,

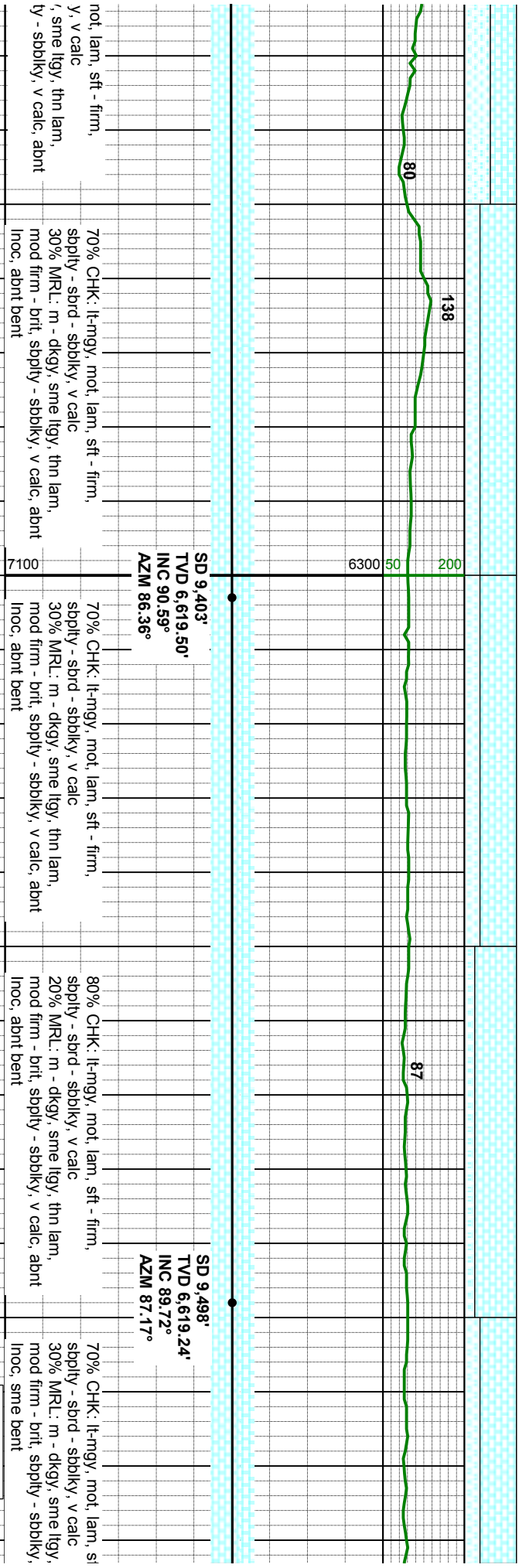
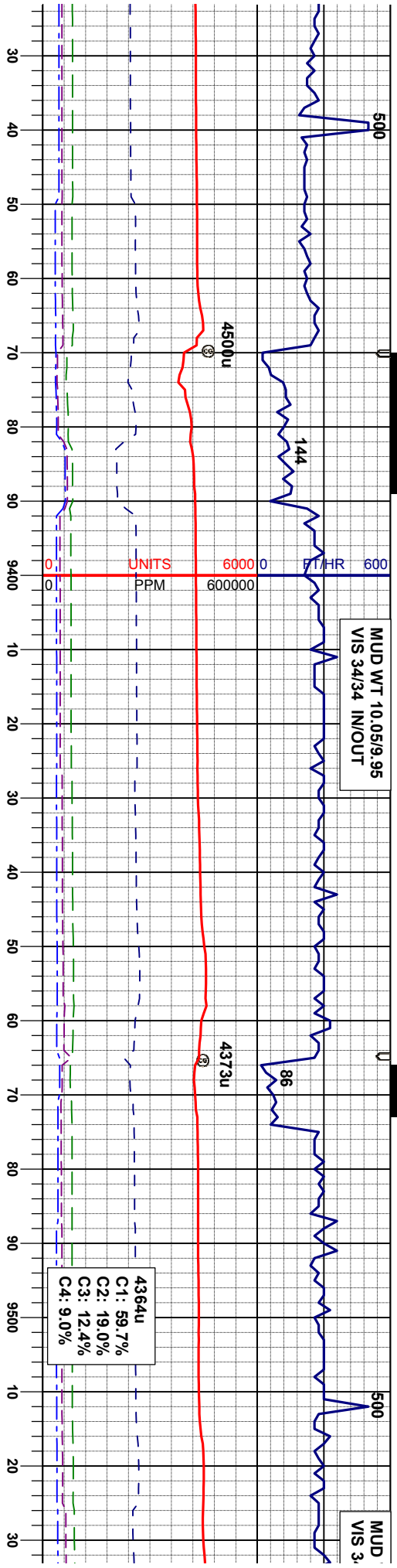
60% CHK: lt-mgy, mot, lam, sft - firm,  
sblply - sbrd - sbbkly, v calc  
40% MRL: lt-mgy, sme dky, thn lam,  
firm - brit, sblply - sbbkly, v calc, abnt  
abnt bent

60% CHK: lt-mgy, mot, lam, sft - firm,  
sptly - sbdr - sbblky, v calc  
40% MRL: lt-mgy, sme dky, thn lam, mod  
firm - bit, sptly - sbblky, v calc; abnt inoc,  
abnt bent

60% CHK: lt-mgy, mot, lam, sft - firm,  
sbdly - sbdr - sbbkly, v calc  
40% MRL: lt-mgy, sme dky, thin lam, mod  
firm - brit, sbply - sbbkly, v calc, abnt inoc,  
abnt bent

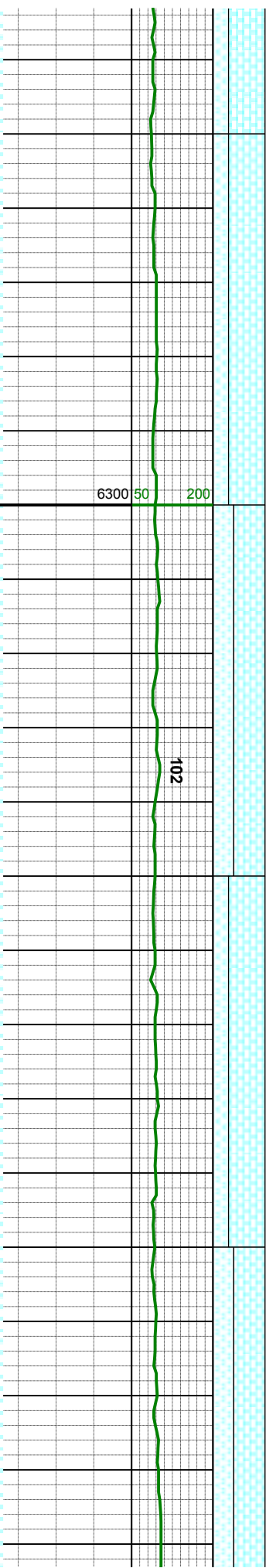
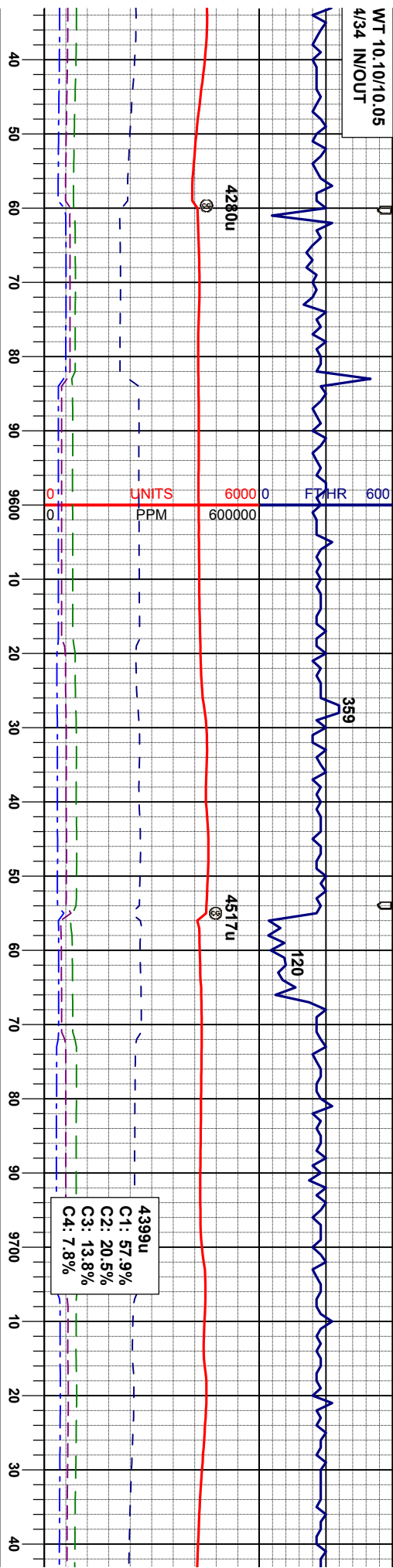
50% CHK: It-mgy, 1  
sbply - sbrd - sbbl  
50% MRL: m - dkgr  
mod firm - brit, sbp  
Inoc, abnt bent







WT 10.10/10.05  
4/34 IN/OUT



SD 9,593'  
TVD 6,618.48'  
INC 91.20°  
AZM 87.67°

SD 9,688'  
TV D 6,617.95'  
INC 89.44°  
AZM 86.61°

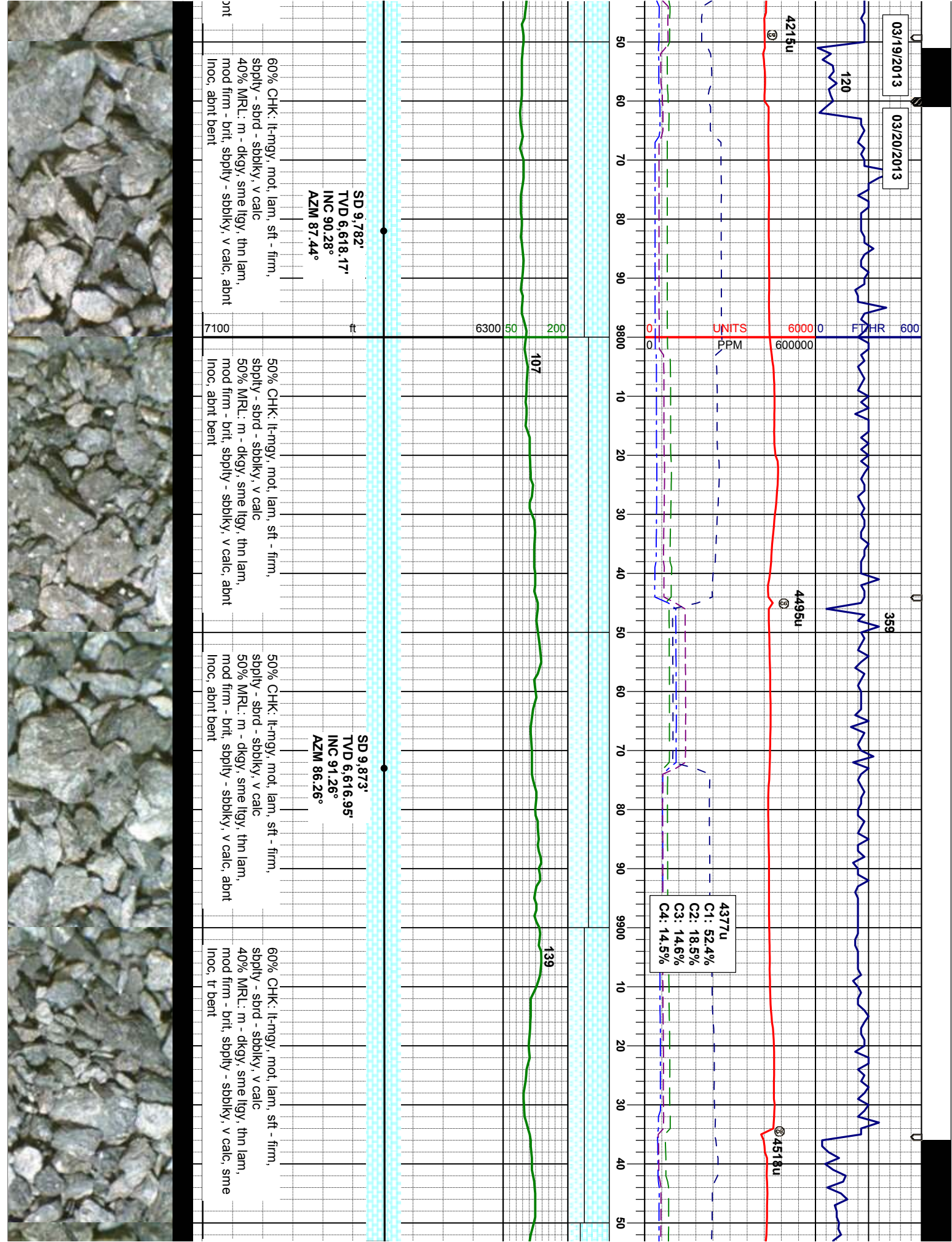
fit - firm,	70% CHK: lt-mgy, mod, lam, sft - firm,
thin lam,	sbply - sbd - sbdkly, v calc
v calc, abnt	30% MRI: m - dkey, sme lgy, thn lam,
	mod firm - brft, sbply - sbdkly, v calc, abnt
	lnoc, sme bent
	7100

60% CHK: lt-mgy, mot, lam, sft - firm,  
supply - sbpd - sbblky, v calc  
40% MRL: m - dkgy, sme ltgy, thn lam,  
mod firm - brt, sbply - sbblky, v calc, abnt  
Inoc, sme bent

70% CHK: ll-rngy, mot, lam, sft - firm, sbply - sbrd - sbkly, v calc  
30% MRL: m - dkgy, sme lty, thn lam, mod firm - brt, sbply - sbkly, v calc, abnt lnc, sme bent

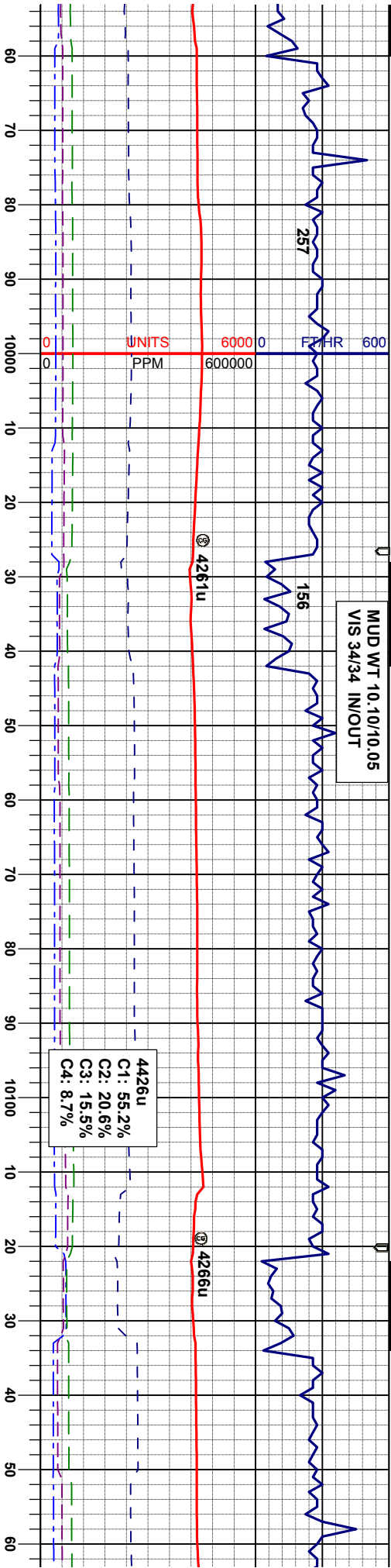
60% CHK: ll-mgy, mot, lam, sft - firm,  
sbdly - sbpd - sbdkly, v calc  
40% MRL: m - dky, sme lgy, thin lam,  
mod firm - brtt, sbply - sbdkly, v calc, at  
lnc, abnt bent







MUD WT 10.10/10.05  
VIS 34/34 IN/OUT



4426u  
C1: 55.2%  
C2: 20.6%  
C3: 15.5%  
C4: 8.7%

SD 9,966'  
TVD 6,615.30'  
INC 90.77°  
AZM 88.78°

SD 10,058'  
TVD 6,613.47'  
INC 91.51°  
AZM 89.98°

SD 10,152'  
TVD 6,611.88'  
INC 90.43°  
AZM 90.49°

70% CHK: lt-mgy, mot, lam, sft - firm,  
spbly - sbrd - sbbky, v calc  
30% MRL: m - dkgy, sme lgy, tln lam,  
mod firm - brit, spbly - sbbky, v calc, sme  
Inoc, tr bent

70% CHK: lt-mgy, mot, lam, sft - firm,  
spbly - sbrd - sbbky, v calc  
30% MRL: m - dkgy, sme lgy, tln lam,  
mod firm - brit, spbly - sbbky, v calc, abnt  
Inoc, tr bent

70% CHK: lt-mgy, mot, lam, sft - firm,  
spbly - sbrd - sbbky, v calc  
30% MRL: m - dkgy, sme lgy, tln lam,  
mod firm - brit, spbly - sbbky, v calc, abnt  
Inoc, tr bent

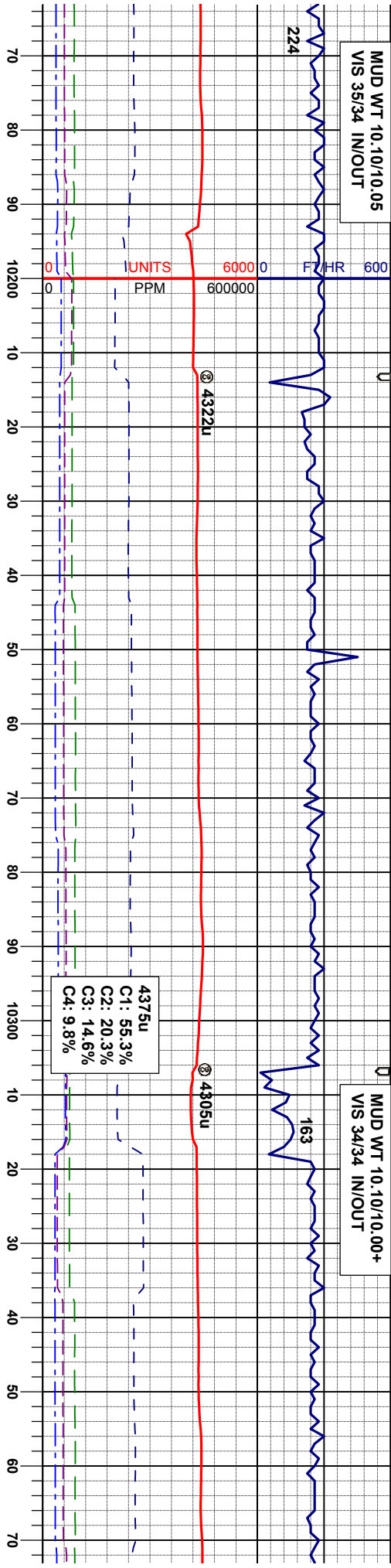
80% CHK: lt-mgy, mot, lam, sft - firm,  
spbly - sbrd - sbbky, v calc  
20% MRL: m - dkgy, sme lgy, tln lam,  
mod firm - brit, spbly - sbbky, v calc, abnt  
Inoc, tr bent

70% CHK  
spbly - sb  
30% MRL  
mod firm -  
Inoc, tr be

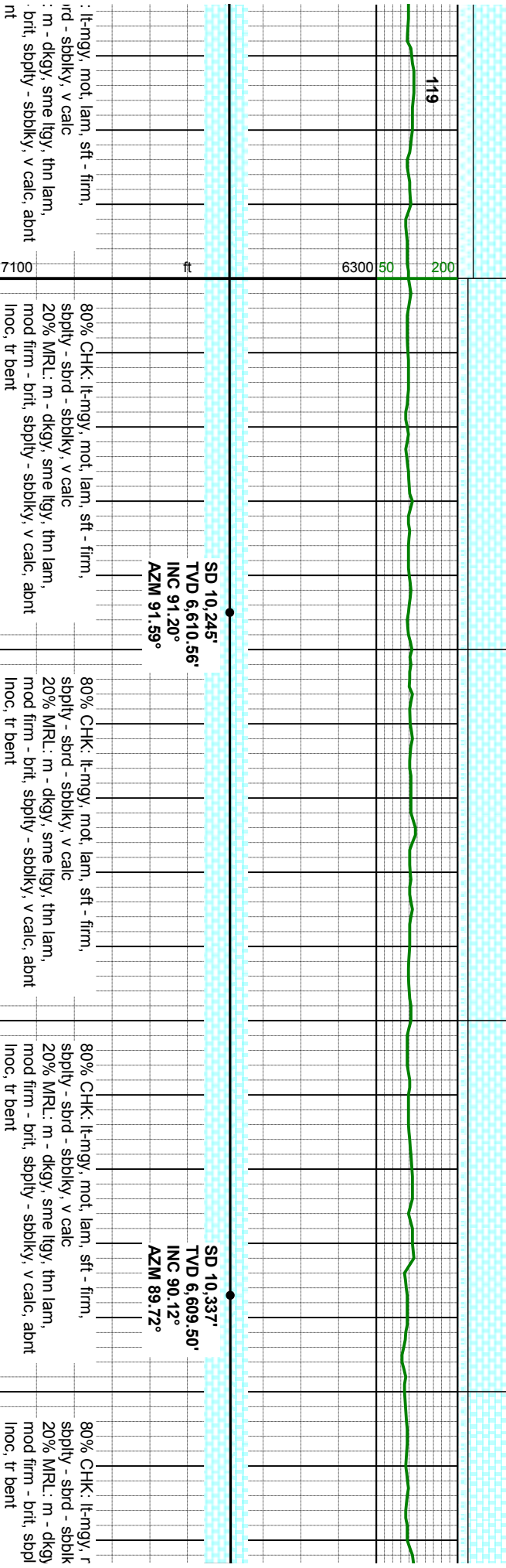
GOOD



MUD WT 10.10/10.05  
VIS 35/34 IN/OUT



MUD WT 10.10/10.00+  
VIS 34/34 IN/OUT

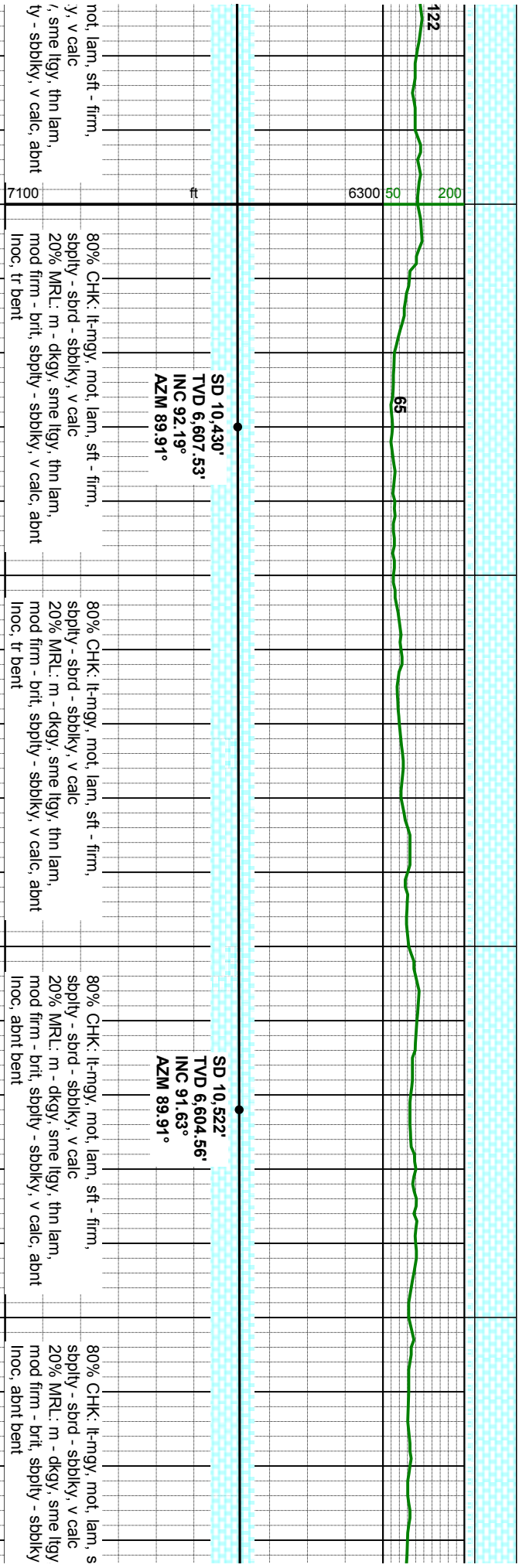
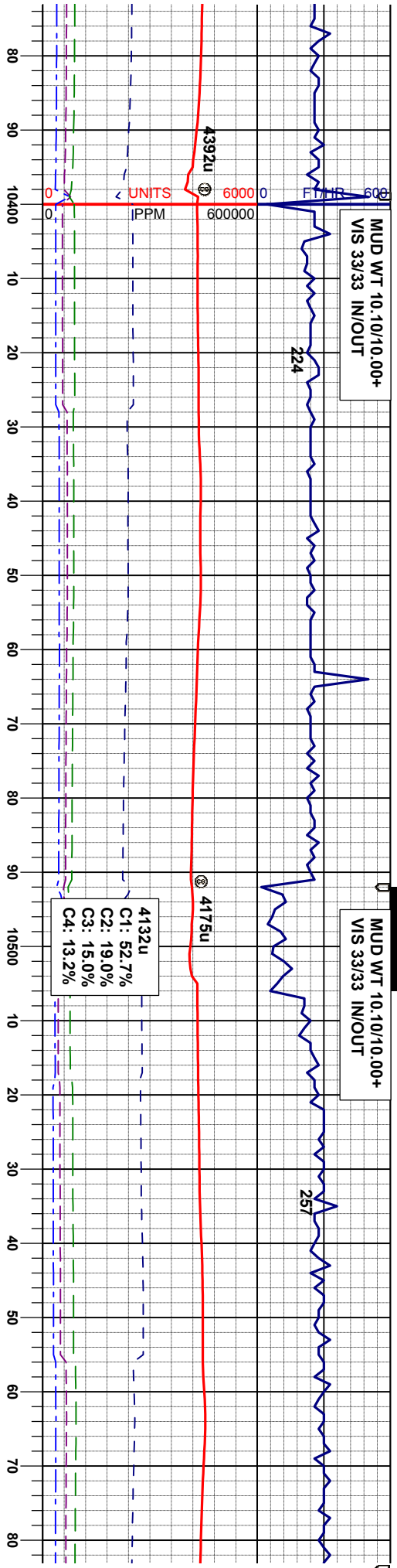


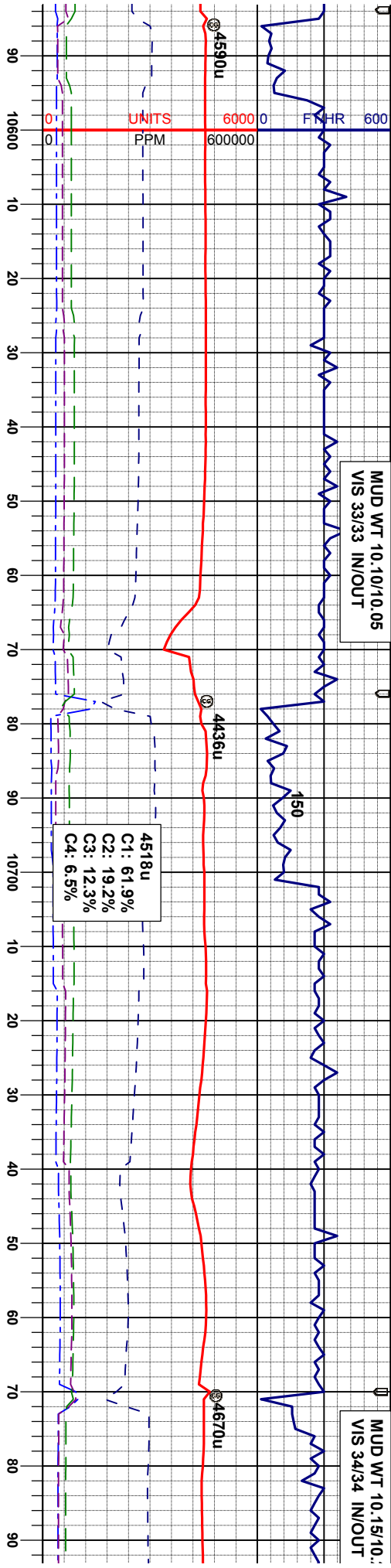
MODERATE

GOOD







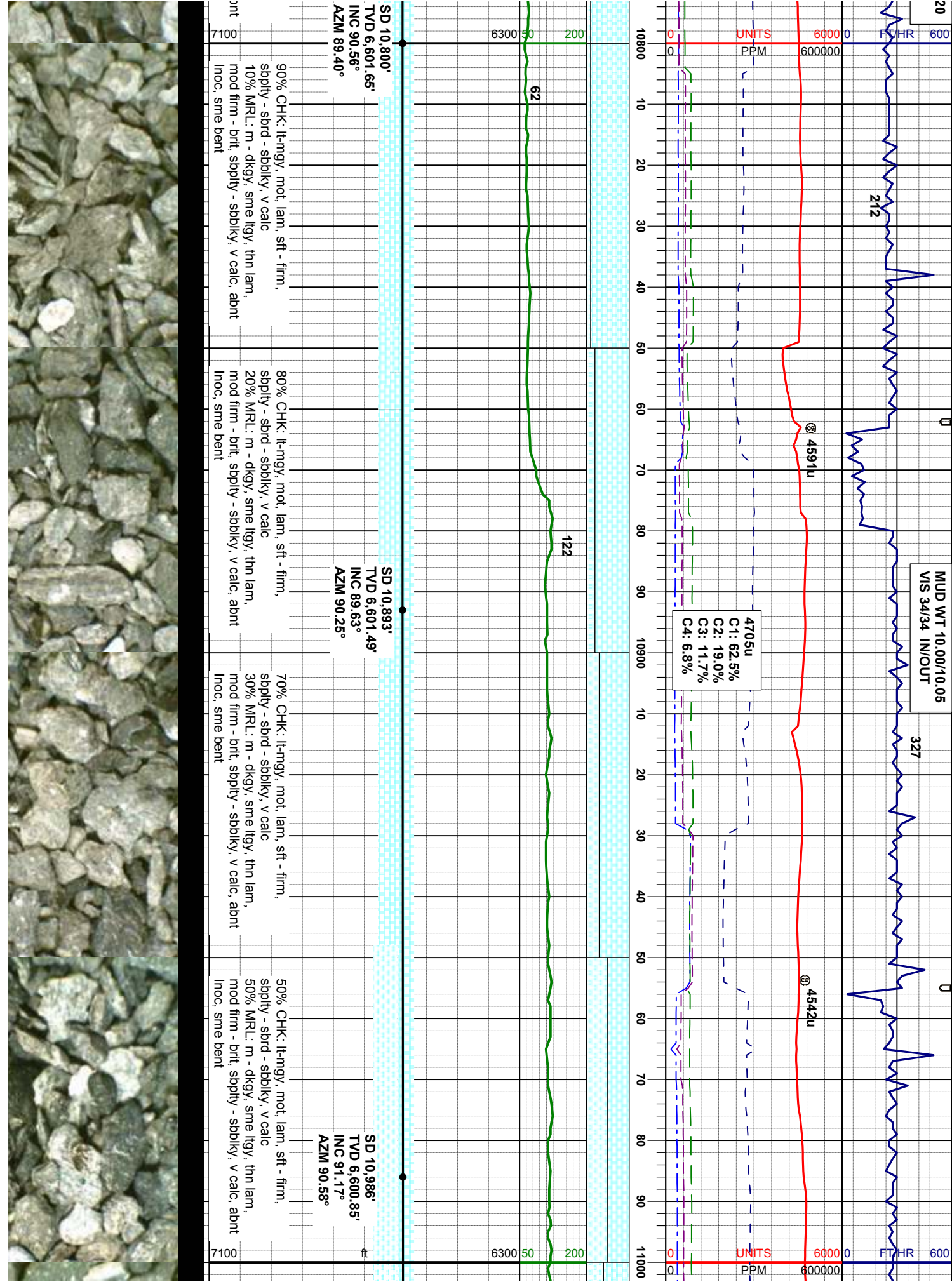


SD 10,614'		SD 10,708'	
TVD 6,602.26'		TVD 6,601.68'	
INC 91.23°		INC 89.48°	
AZM 90.51°		AZM 89.33°	
80% CHK: lt-mgy, mot, lam, sft - firm, spbly - sbd - sbbly, v calc		90% CHK: lt-mgy, mot, lam, sft - firm, spbly - sbd - sbbly, v calc	
20% MRL: m - dkg, sme lgy, thn lam, mod firm - brt, spbly - sbbly, v calc, abnt		10% MRL: m - dkg, sme lgy, thn lam, mod firm - brt, spbly - sbbly, v calc, abnt	
Inoc, abnt bent		Inoc, sme bent	

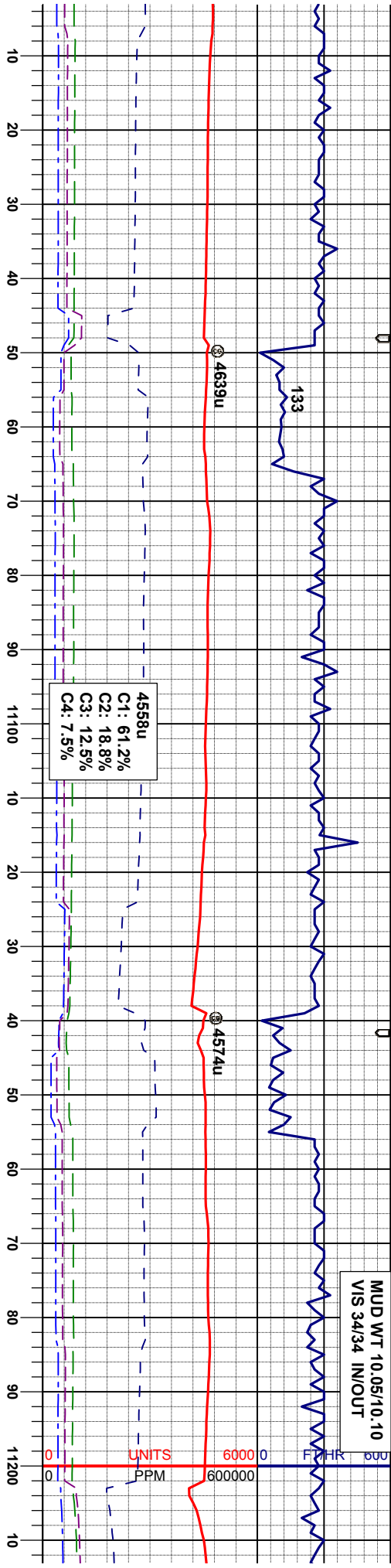


GOOD





MUD WT 10.05/10.10  
VIS 34/34 IN/OUT



SD 11,080'  
TVD 6,600.14'  
INC 89.69°  
AZM 89.97°

SD 11,172'  
TVD 6,601.99'  
INC 88.00°  
AZM 90.25°

60% CHK: lt-mgy, mot, lam, sft - firm,  
spbly - sbpd - sbblky, v calc  
40% MRL: m - dkgy, sme lgy, thn lam,  
mod firm - brt, spbly - sbblky, v calc, abnt  
Inoc, sme bent

70% CHK: lt-mgy, mot, lam, sft - firm,  
spbly - sbpd - sbblky, v calc  
30% MRL: m - dkgy, sme lgy, thn lam,  
mod firm - brt, spbly - sbblky, v calc, abnt  
Inoc, sme bent

60% CHK: lt-mgy, mot, lam, sft - firm,  
spbly - sbpd - sbblky, v calc  
40% MRL: m - dkgy, sme lgy, thn lam,  
mod firm - brt, spbly - sbblky, v calc, abnt  
Inoc, sme bent

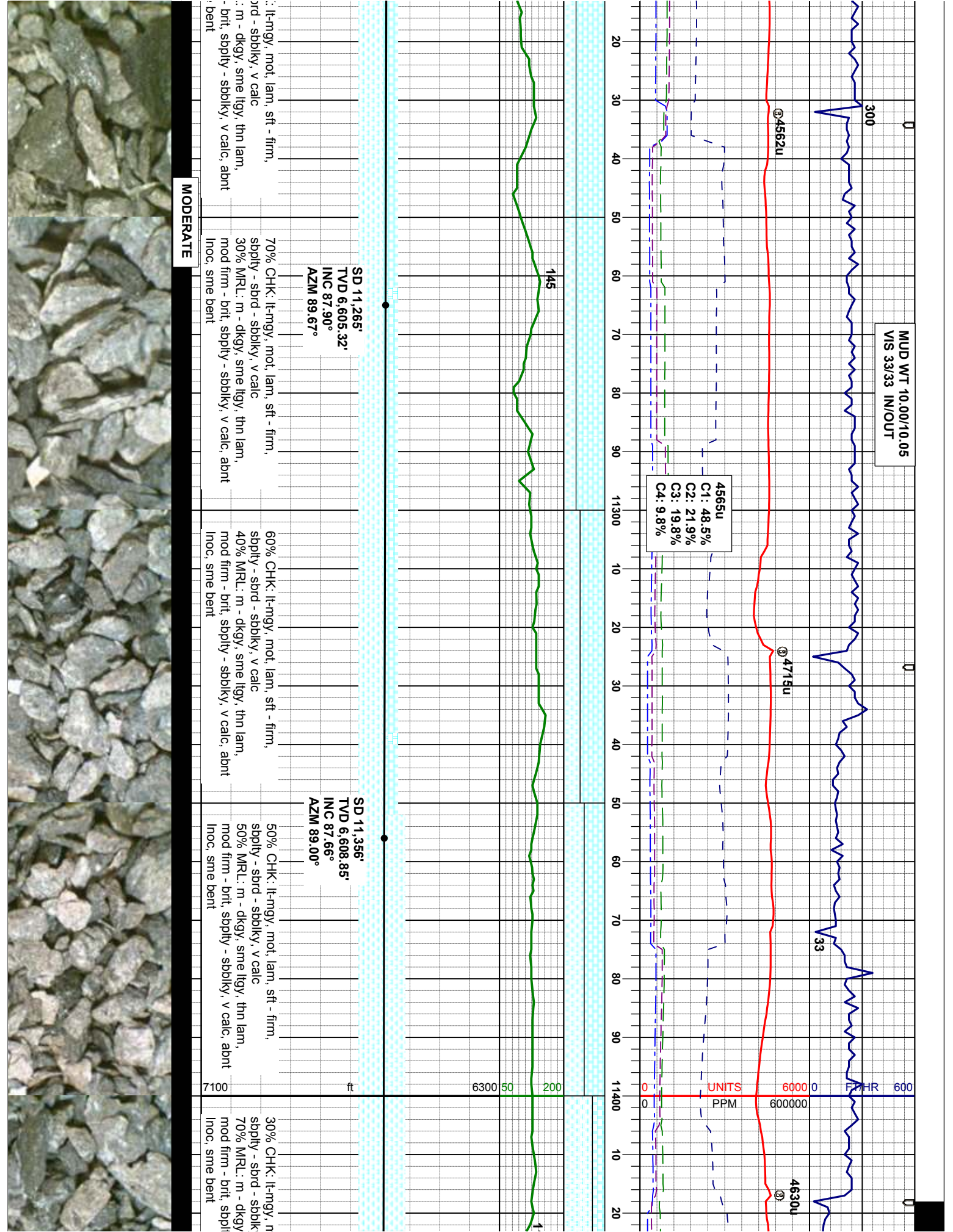
70% CHK: lt-mgy, mot, lam, sft - firm,  
spbly - sbpd - sbblky, v calc  
30% MRL: m - dkgy, sme lgy, thn lam,  
mod firm - brt, spbly - sbblky, v calc, abnt  
Inoc, sme bent

70% CHK  
spbly - st  
30% MRL  
mod firm -  
Inoc, sme

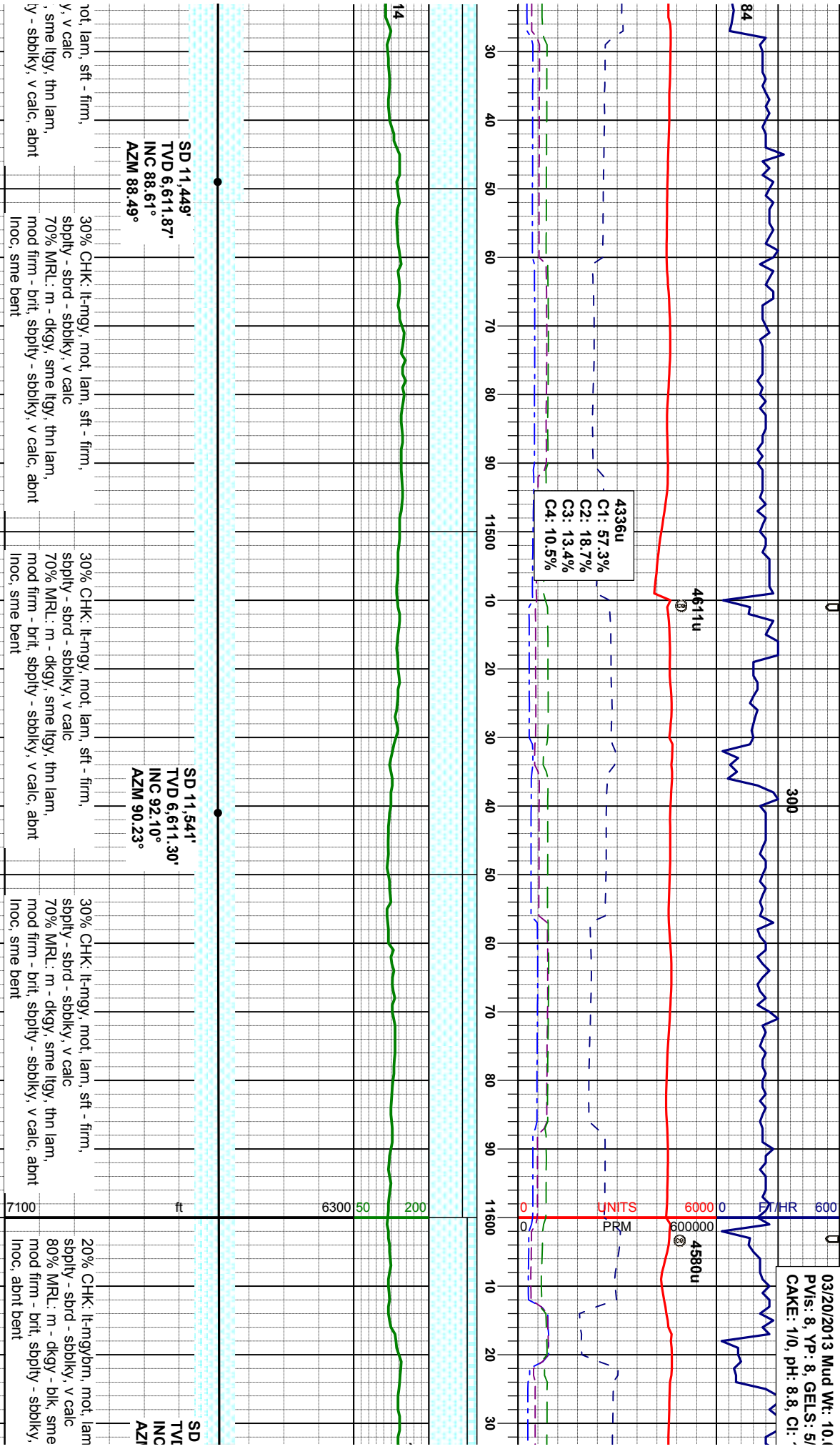
GOOD







03/20/2013 Mud Wt: 10.1  
PVIS: 8, YP: 8, GELS: 5/  
CAKE: 1/0, pH: 8.8, CI: -



SD 11,449'  
TVD 6,611.87'  
INC 88.61°  
AZM 88.49°

SD 11,541'  
TVD 6,611.30'  
INC 92.10°  
AZM 90.23°

not lam, sft - firm,  
y, v calc  
sme lgy, thn lam,  
y - sbbkly, v calc, abnt

30% CHK: lt-mgy, mot, lam, sft - firm,  
sbbly - sbd - sbbkly, v calc  
70% MRL: m - dky, sme lgy, thn lam,  
mod firm - brit, sbbly - sbbkly, v calc, abnt  
Inoc, sme bent

30% CHK: lt-mgy, mot, lam, sft - firm,  
sbbly - sbd - sbbkly, v calc  
70% MRL: m - dky, sme lgy, thn lam,  
mod firm - brit, sbbly - sbbkly, v calc, abnt  
Inoc, sme bent

30% CHK: lt-mgybm, mot, lam  
sbbly - sbd - sbbkly, v calc  
80% MRL: m - dky - blk, sme  
mod firm - brit, sbbly - sbbkly,  
Inoc, abnt bent





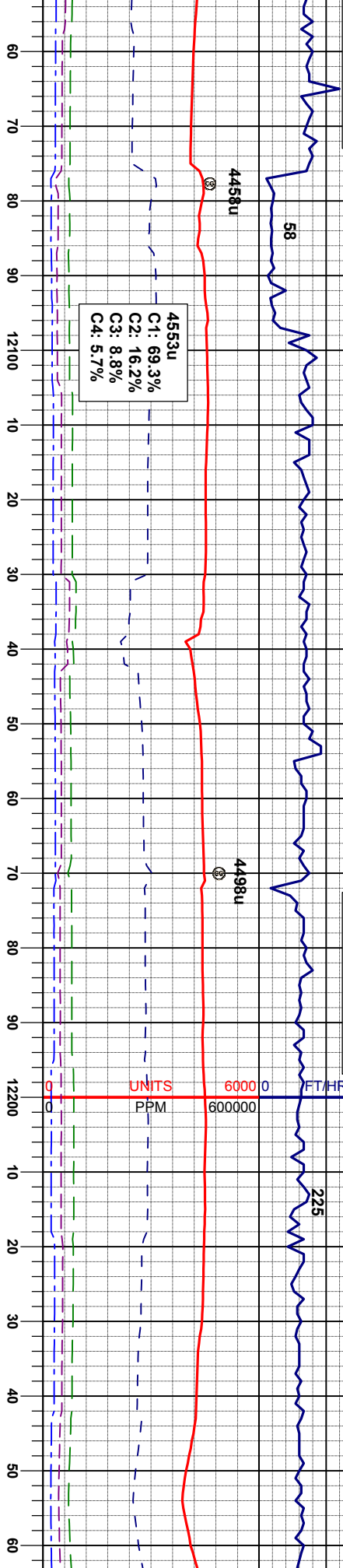






D WT 10.20/10.10  
33/33 IN/OUT

MUD WT 10.25/10.20  
VIS 33/33 IN/OUT



Fault @ 12,130' MD  
76' Downthrow  
B Marl/B Chalk contact  
to A Marl

SD 12,110'  
TVD 6,601.71'  
INC 89.51°  
AZM 89.31°

SD 12,205'  
TVD 6,602.47'  
INC 89.57°  
AZM 89.24°

60% CHK: lt-mgybrn, mot, lam, sft - firm,  
spbly - sbdr - sbbky, v calc  
40% MRL: m - dkgy - blk, sme lgy, thn lam,  
mod firm - brit, spbly - sbbky, v calc, abnt  
Inoc, sme bent

20% CHK: lt-mgybrn, mot, lam, sft - firm,  
spbly - sbdr - sbbky, v calc  
80% MRL: m - dkgybrn, sme blk, thn lam,  
firm - brit, spbly - sbbky, v calc, abnt Inoc,  
abt bent

10% CHK: lt-mgybrn, mot, lam, sft - firm,  
spbly - sbdr - sbbky, v calc  
90% MRL: m - dkgybrn, sme blk, thn lam,  
firm - brit, spbly - sbbky, v calc, sme Inoc,  
sme bent w/ dism pyr

100% MR  
firm - brit,  
abt bent

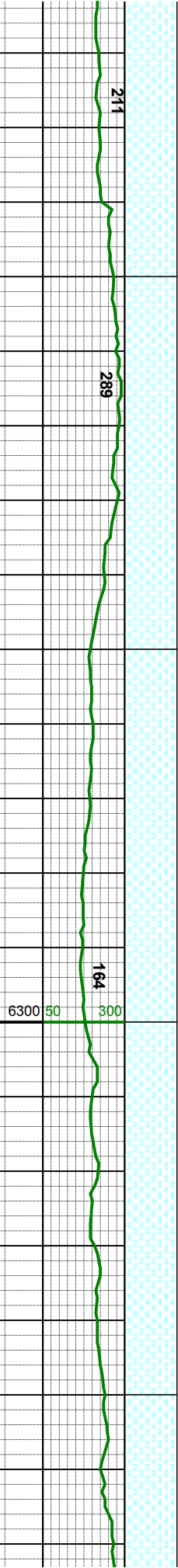
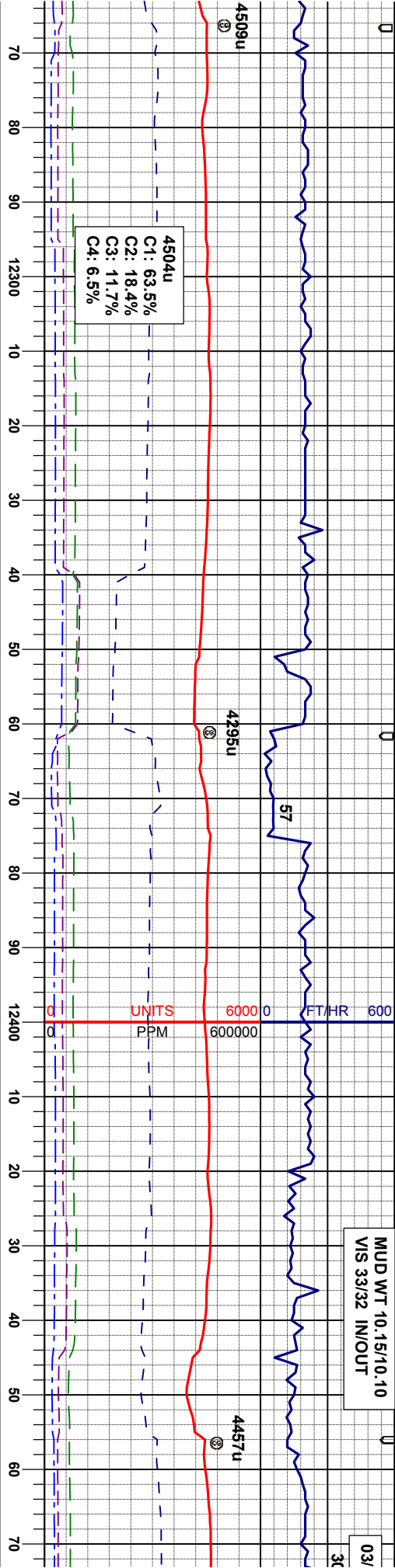
MODERATE



MUD WT 10.15/10.10  
VIS 33/32 IN/OUT

03/

3K



SD 12.300°  
TVD 6,602.19°  
INC 90.77°  
AZM 88.85°

SD 12.395°  
TVD 6,601.93°  
INC 89.54°  
AZM 87.90°

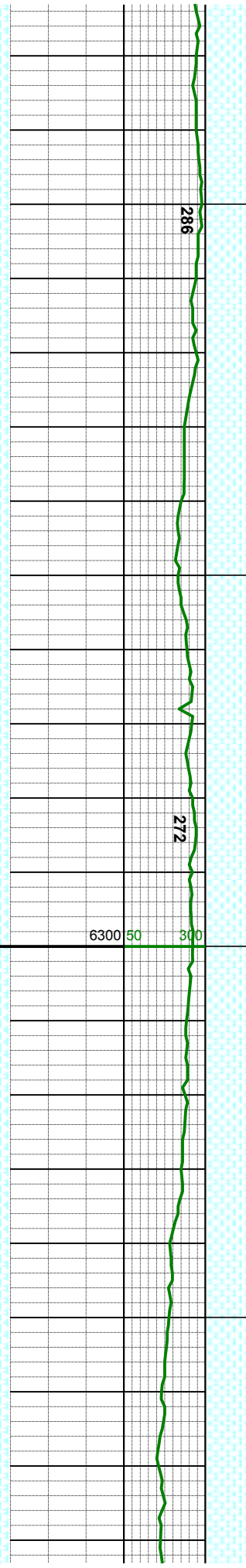
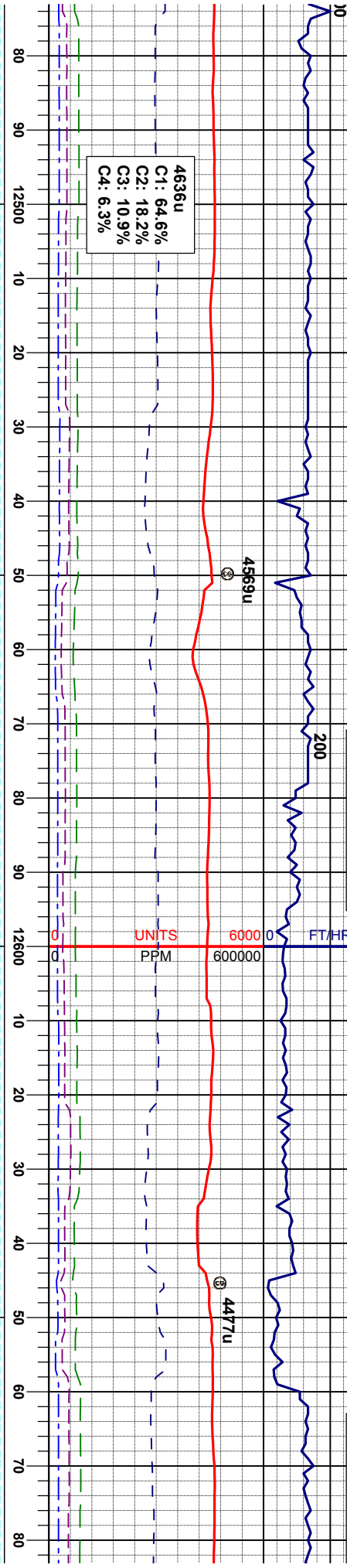
100% MRL: m - dkgybrn, sme blk, thn lam, firm - brt, sbply - sbply, v calc, tr inoc, abnt bent w/ dism pyr

100% MRL: m - dkgybrn, sme blk, thn lam, firm - brt, sbply - sbply, v calc, tr inoc, abnt bent w/ dism pyr

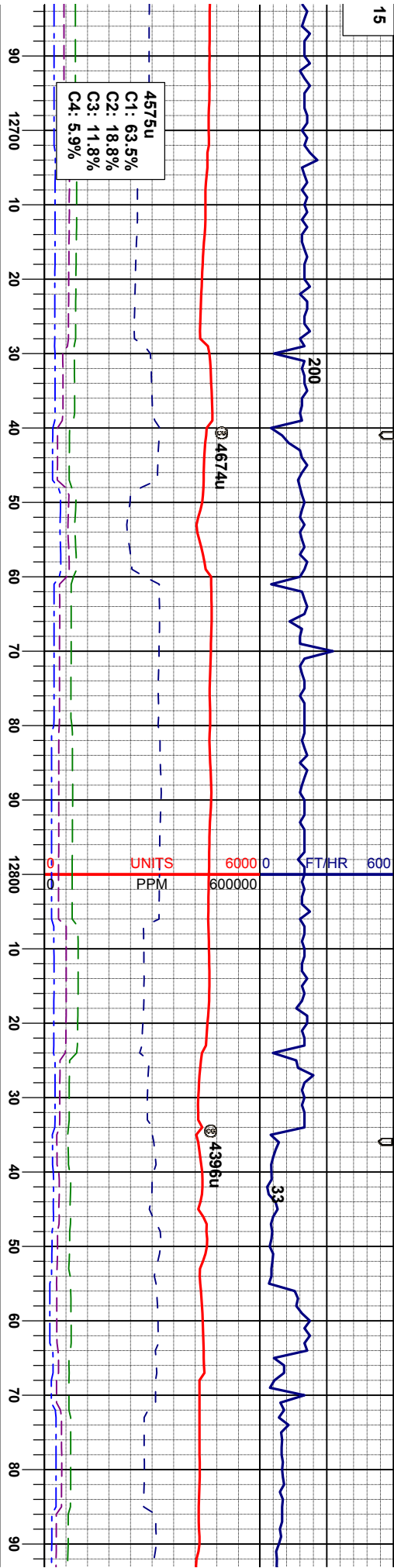
100% MRL: m - dkgybrn, sme blk, thn lam, firm - brt, sbply - sbply, v calc, tr inoc, abnt bent w/ dism pyr







SD 12.490' TVD 6,602.54' INC 89.72° AZM 87.87°	SD 12.585' TVD 6,602.47' INC 90.37° AZM 87.29°	SD 12.680' TVD 6,601 INC 90.52° AZM 88.63°
gy/brn, sme blk, thn lam, sbbkly, v calc, tr inoc, 2yr	100% MRL: m - dkgybrn, sme blk, thn lam, firm - brt, spply - sbbkly, v calc, tr inoc, abt bent w/ dism pyr	100% MRL: m - dkgybrn, sme blk, thn lam, firm - brt, spply - sbbkly, v ca abt bent w/ dism pyr
MODERATE		



73'

SD 12,774'  
TVD 6,600.57'  
INC 90.89°  
AZM 88.28°

SD 12,869'  
TVD 6,600.52'  
INC 90.17°  
AZM 88.04°

blk, thn lam, firm - brit, spdly - sbdkly, v calc, sme inoc, abnt bent w/ dism pyr

100% MRL: m - dkgybrn, sme blk, thn lam, firm - brit, spdly - sbdkly, v calc, sme inoc, abnt bent w/ dism pyr

100% MRL: m - dkgybrn, sme blk, thn lam, firm - brit, spdly - sbdkly, v calc, sme inoc, abnt bent w/ dism pyr

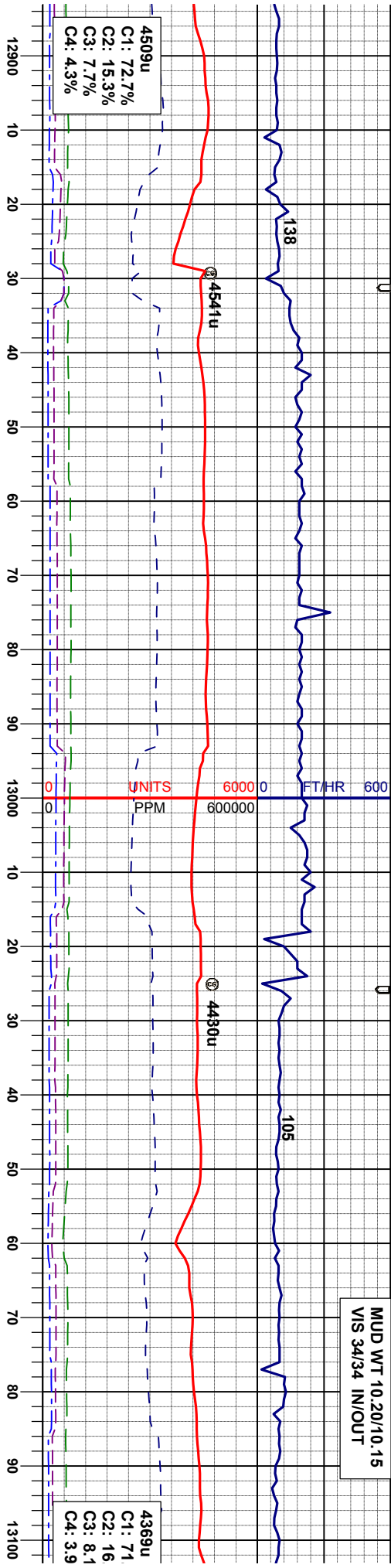
100% MRL: m - dkgybrn, sme blk, thn lam, firm - brit, spdly - sbdkly, v calc, sme inoc, abnt bent w/ dism pyr

GOOD





MUD WT 10.20/10.15  
VIS 34/34 IN/OUT



SD 12,964'  
TVD 6,600.82'  
INC 90.46°  
AZM 88.18°

SD 13,059'  
TVD 6,599.47'  
INC 91.17°  
AZM 88.06°

m, 100% MRL: m - dkgybrn, sme blk, thn lam,  
c, firm - brit, spbly - sbblky, v calc, sme inoc,  
abt bent w/ dism pyr

100% MRL: m - dkgybrn, sme blk, thn lam,  
firm - brit, spbly - sbblky, v calc, sme inoc,  
abt bent w/ dism pyr

100% MRL: m - dkgybrn, sme blk, thn lam,  
firm - brit, spbly - sbblky, v calc, sme inoc,  
abt bent w/ dism pyr

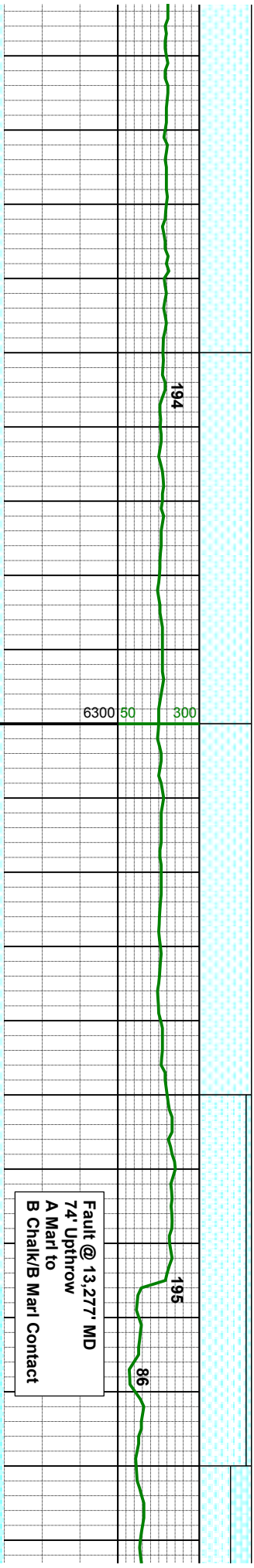
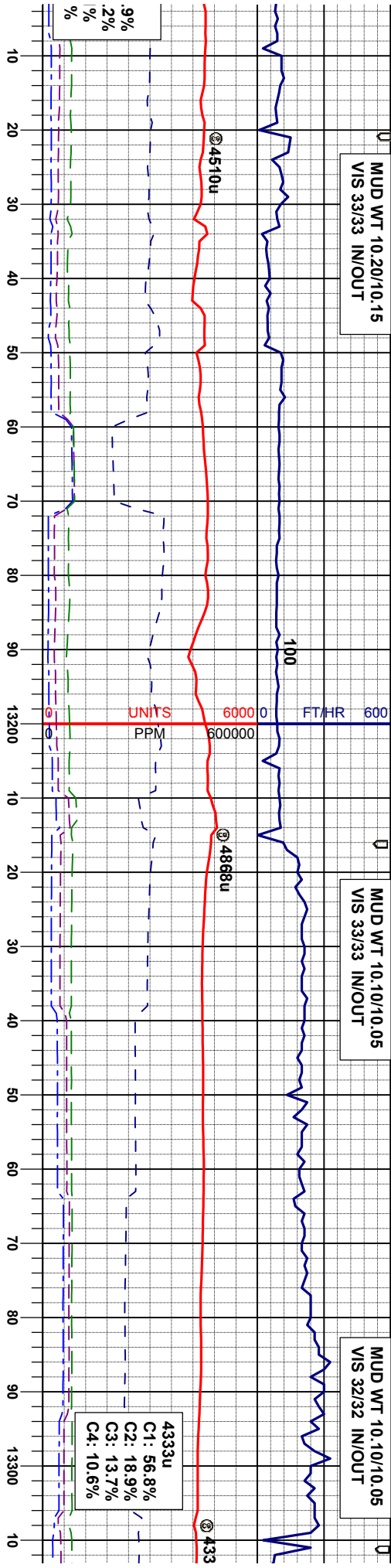
100% MRL: m - dkgybrn, sme blk, thn lam,  
firm - brit, spbly - sbblky, v calc, sme inoc,  
abt bent w/ dism pyr



MUD WT 10.20/10.15  
VIS 33/33 IN/OUT

MUD WT 10.10/10.05  
VIS 33/33 IN/OUT

MUD WT 10.10/10.05  
VIS 32/32 IN/OUT



Fault @ 13,277' MD  
74' Uplthrow  
A Marl to  
B Chalk/B Marl Contact

SD 13,154'  
TVD 6,598.66'  
INC 89.82°  
AZM 88.48°

SD 13,249'  
TVD 6,598.35'  
INC 90.55°  
AZM 88.64°

100% MRL: m - dkgybrn, sme blk, thn lam, firm - brit, spbly - sbblky, v calc, sme inoc, abnt bent w/ dism pyr

100% MRL: m - dkgybrn, sme blk, thn lam, firm - brit, spbly - sbblky, v calc, sme inoc, abnt bent w/ dism pyr

100% MRL: m - dkgybrn, sme blk, thn lam, firm - brit, spbly - sbblky, v calc, sme inoc, abnt bent w/ dism pyr

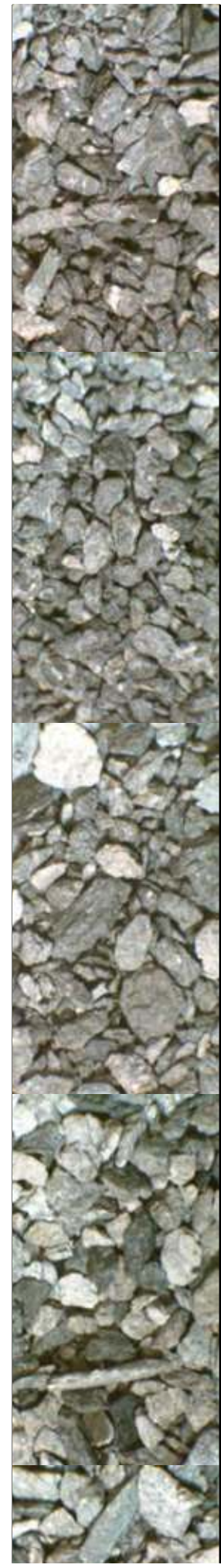
10% CHK: lt-ngy, mot, lam, sft - firm, spbly - sbld - sbblky, v calc

90% MRL: m - dkgybrn, sme blk, thn lam, firm - brit, spbly - sbblky, v calc, sme inoc, abnt bent w/ dism pyr

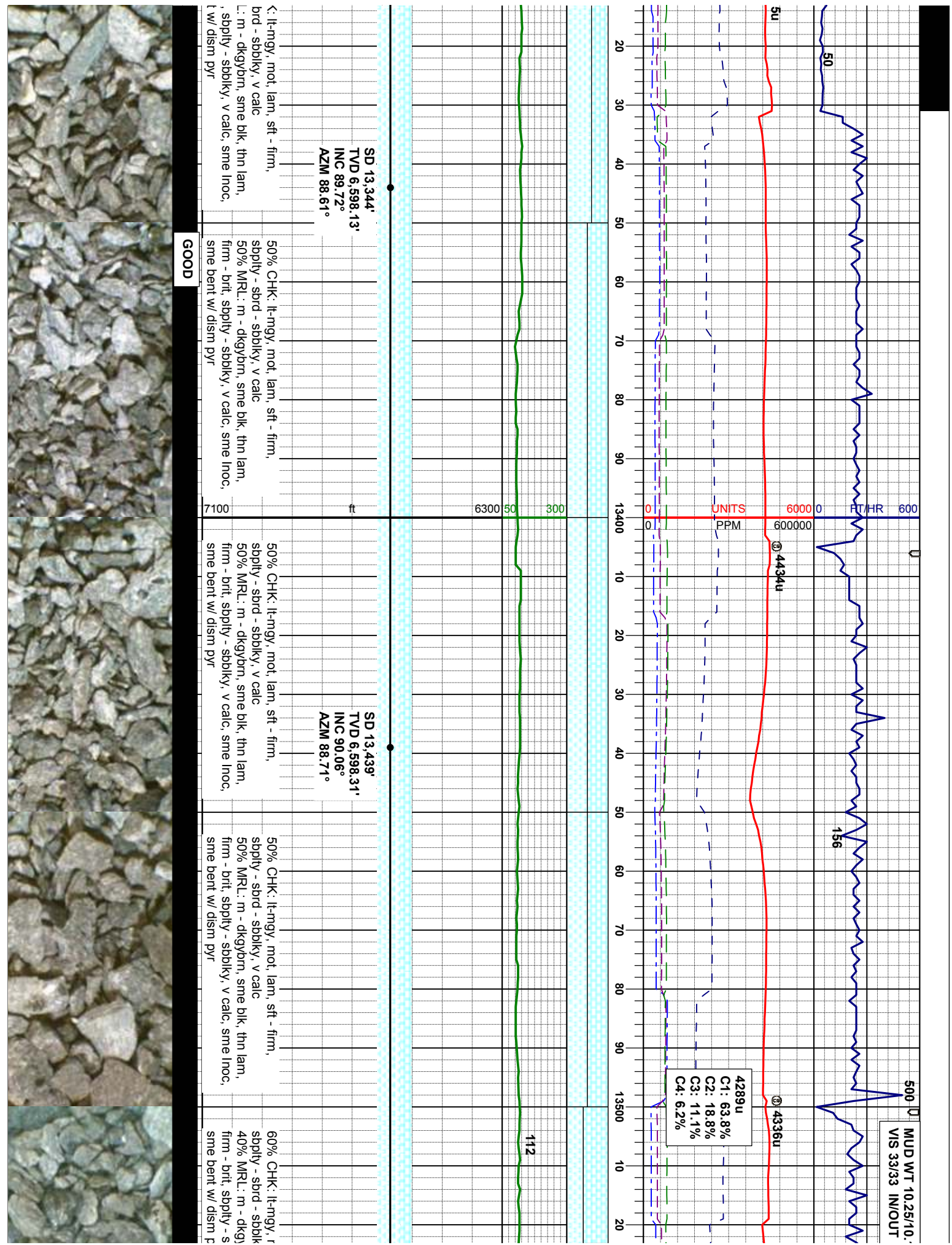
40% CHI  
spbly - s  
60% MRL  
firm - brit  
abnt ben

GOOD

MODERATE





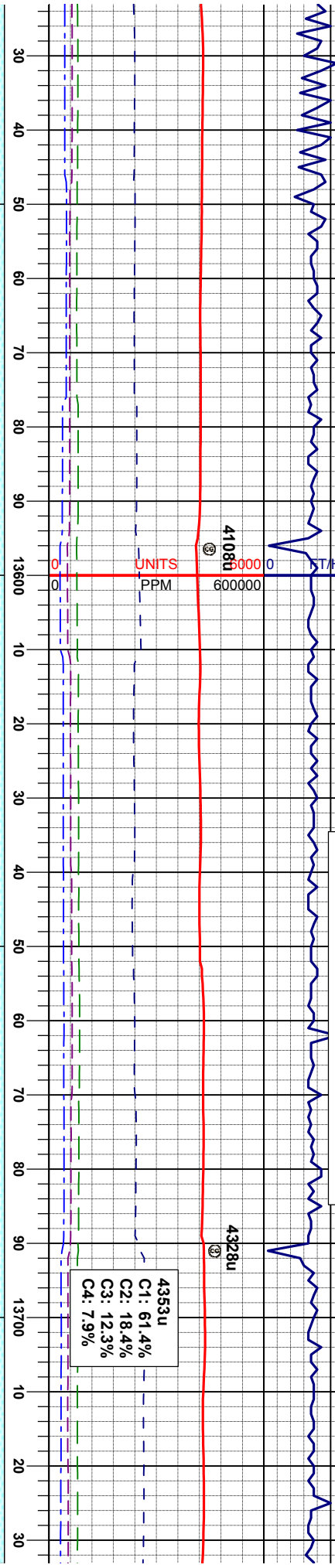


10

328

03/21/2013 Mud Wt: 10.20, FVIs: 33,  
PVIs: 11, YP: 11, GELS: 6/15/27, API Filtr: 8.2,  
CAKE: 1/0, pH: 8.8, Cl: 1,700, Ca: 40

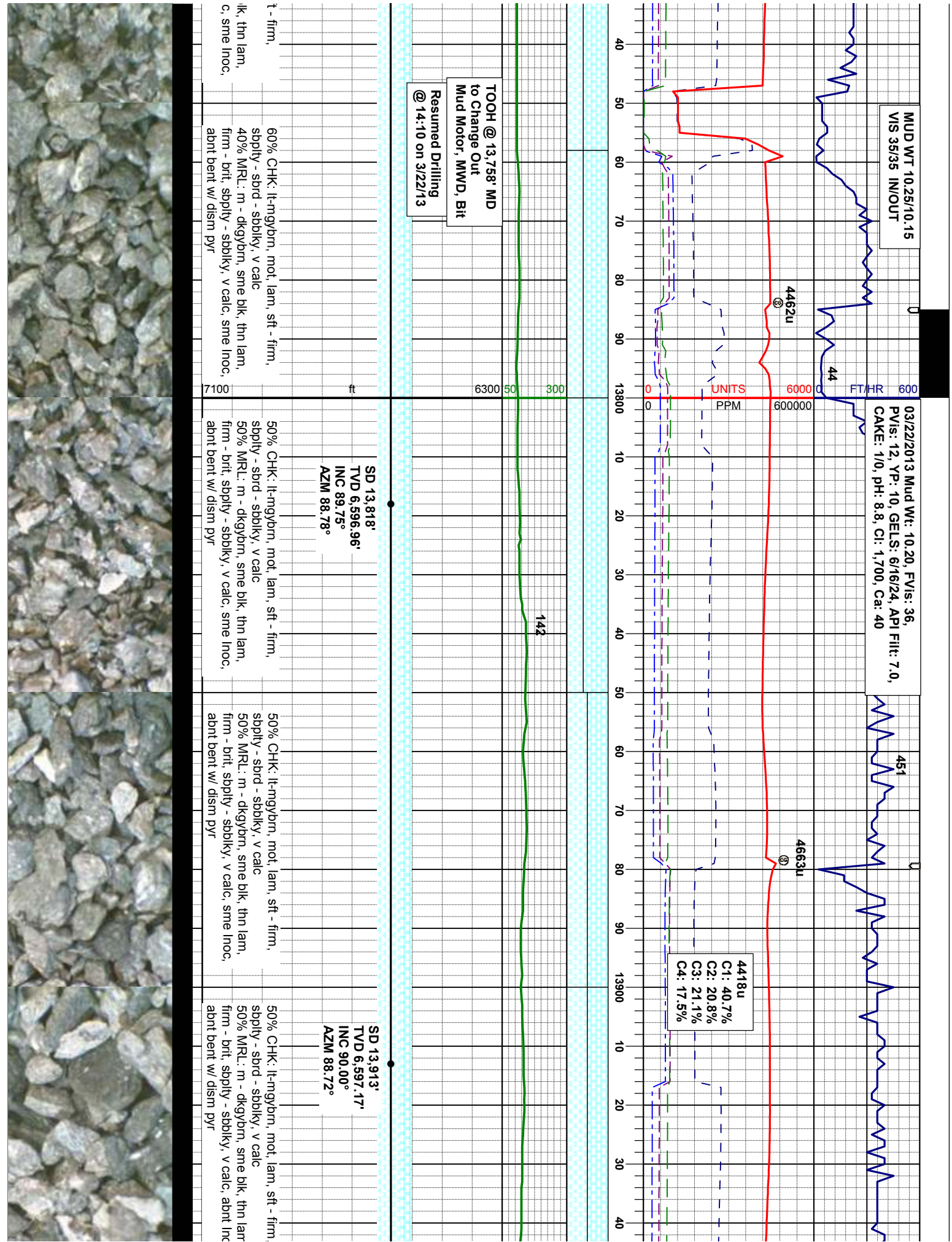
300

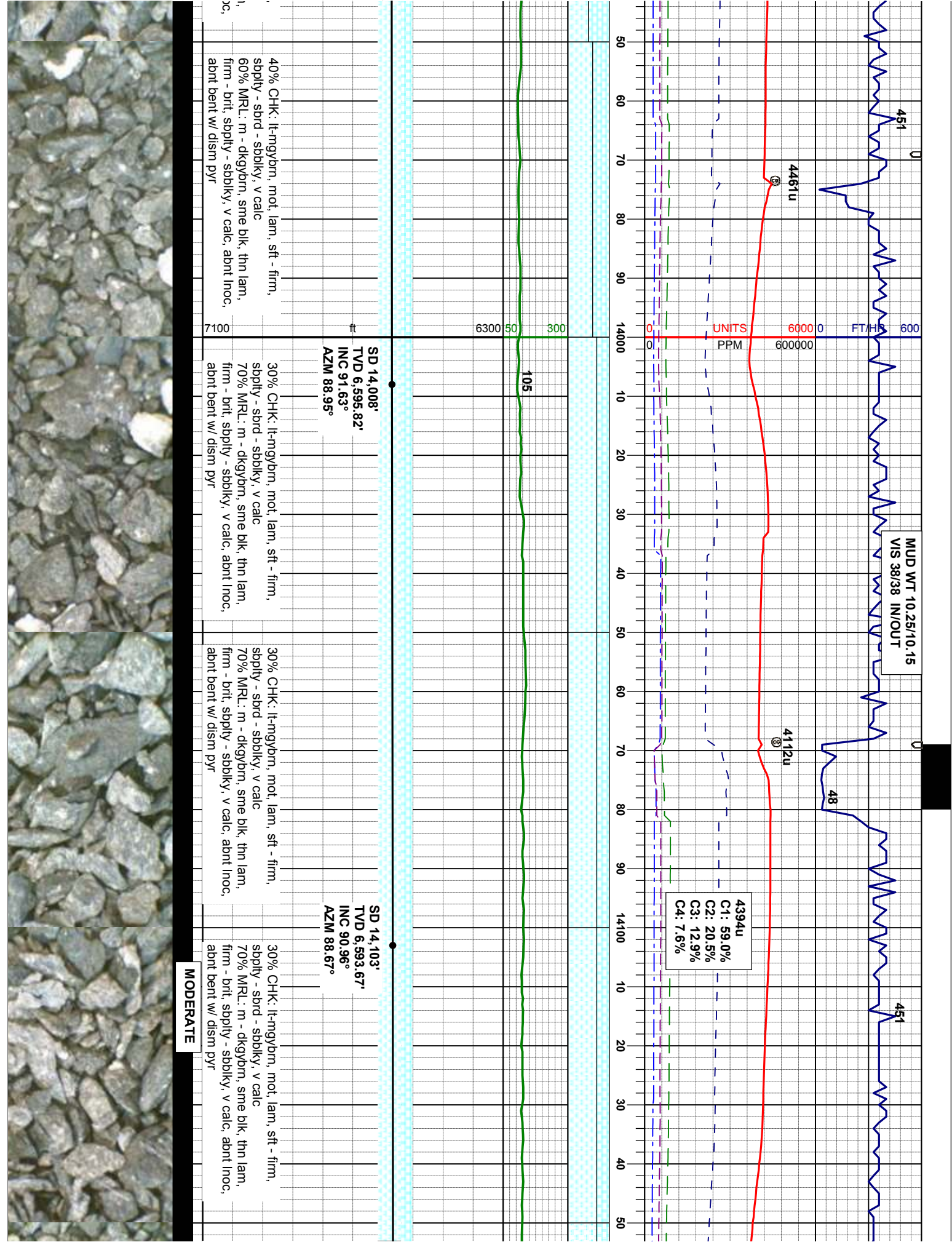


SD 13,534'		SD 13,629'		SD 13,723'	
TVD 6,598.70'		TVD 6,598.70'		TVD 6,597.52'	
INC 89.48°		INC 90.52°		INC 90.92°	
AZM 88.74°		AZM 89.21°		AZM 89.37°	
not lam, sft - firm,		50% CHK: lt-mgy, mot, lam, sft - firm,		50% CHK: lt-mgy, mot, lam, sft - firm,	
y, v calc		sploty - sbnd - sbdky, v calc		sploty - sbnd - sbdky, v calc	
/dm, sme blk, thn lam,		50% MRL: m - dkydm, sme blk, thn lam,		50% MRL: m - dkydm, sme blk, thn lam,	
bbiky, v calc, sme inoc,		firm - brit, sploty - sbdky, v calc, sme inoc,		firm - brit, sploty - sbdky, v calc, sme inoc,	
yr		abt bent w/ dism pyr		abt bent w/ dism pyr	



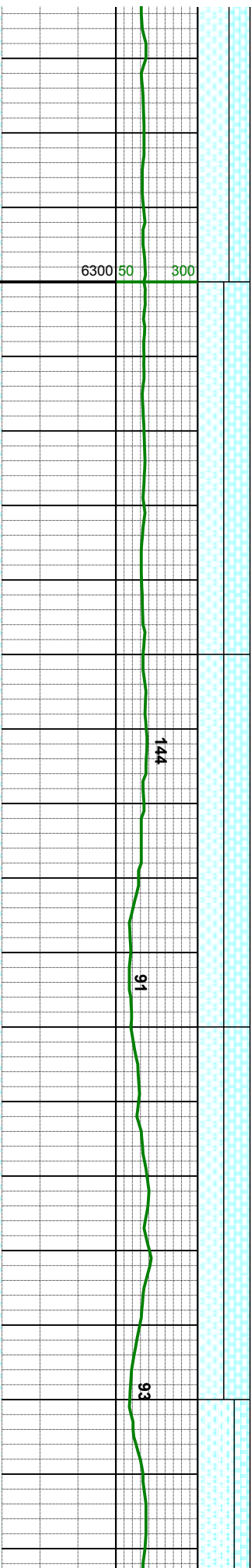
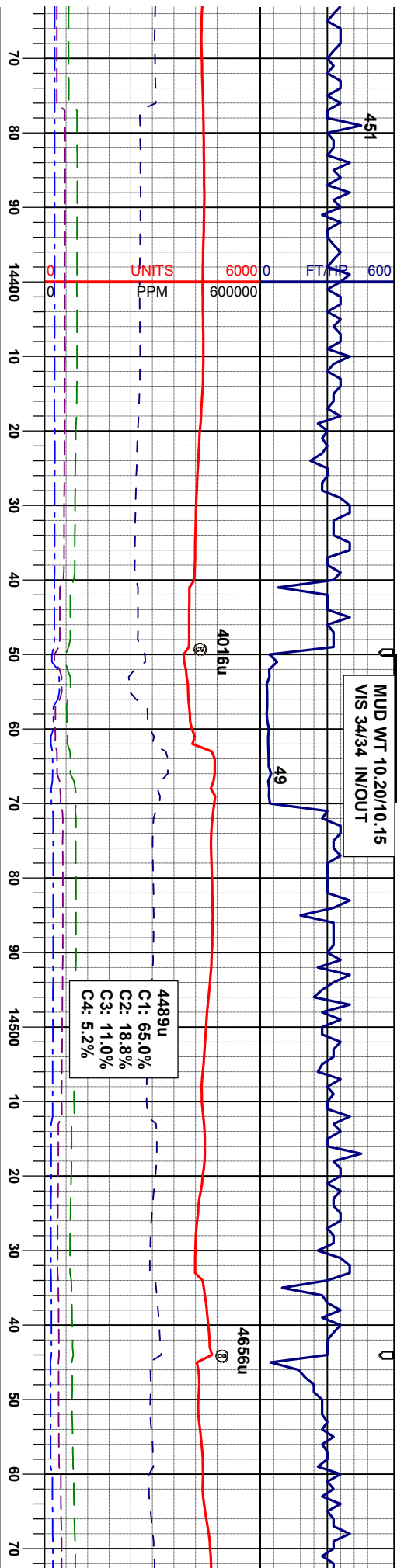












SD 14,387'  
TVD 6,592.46'  
INC 90.25°  
AZM 88.69°

lt-mgybrn, mot, lam, sft - firm,  
rd - sbblky, v calc  
m - dkybrn, sme blk, thn lam,  
sbply - sbblky, v calc, abnt Inoc,  
w/ dism pyr

rd - sbblky, v calc

m - dkybrn, sme blk, thn lam,

sbpity - sbolkly, v calc, abnt lnoc,

N/ diss pyr

50% CHK: lt-mgybrn, mot, lam, sft - firm,  
sply - sbrd - sbbkly, v calc  
50% MRL: m - dkygrn, sme blk, thn lam,  
firm - brit, sbply - sbbkly, v calc, abnt inoc,  
abnt bent w/ dism pyr

sbply - sbrd - sbblky, v calc

50% MRL: m - dkgybrn, sme blk, thn lam.

firm - brit, sbpity - sbblky, v calc, abnt Inoc,

abt bent w/ dism pyr

SD 14,482'  
TVD 6,592.70'  
INC 89.47°  
AZM 89.58°

50% CHK: lɛ-mʏŋɔɹn, mɔt, lam, sft - firm,  
sɔpɔy - spɹd - sbɔbɔy, v calc  
50% MRL: m - dkyɹɔɹn, smɛ blɔ, tɪn lam,  
firm - brɪt, sɔpɔy - sbɔbɔy, v calc, abɔt ɪnoc,  
abɔt bɛnt w/ dɪsm pɹɹ

sbpity - sbird - sbblky, v calc

50% MRL: m - dkgybrn, sme blk, thn larn,

firm - brit, sbpity - sbpiky, v calc, abnt Inoc,

about bent w/ dism pyr

50% CHK: lt-mgylbrn, mot, lam, sft - firm, supply - sbird - sbblky, v calc  
50% MRL: m - dkgybrn, sme blk, thn lam, firm - brt, sbply - sbblky, v calc, abnt inoc, abnt bent w/ dism pyr

sbptý - sbrd - sbblky, v calc

50% MRL: m - dkgybrn, sme blk, thn lam,

firm - brt, sbpity - sbolkky, v calc, abnt lnoc,

about bent w/ dism pyr

30% CHK: It-mgybr  
sbply - sbrd - sbbkly  
70% MRL: m - dkgy  
firm - brit, sbply - st  
abt bent w/ dism p)

sbply - sbpd - sbply

10% MRL: M - akgyi

firm - bill, simply - st

adil bell w/ alison p

SE	TV	IN	AZ
----	----	----	----

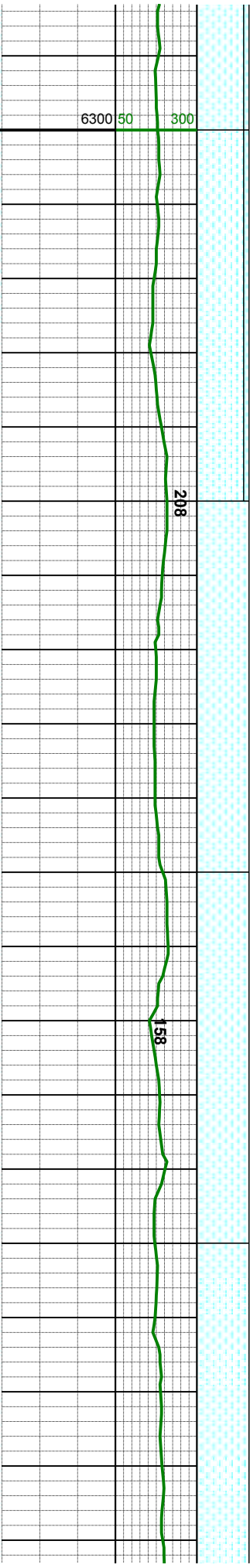
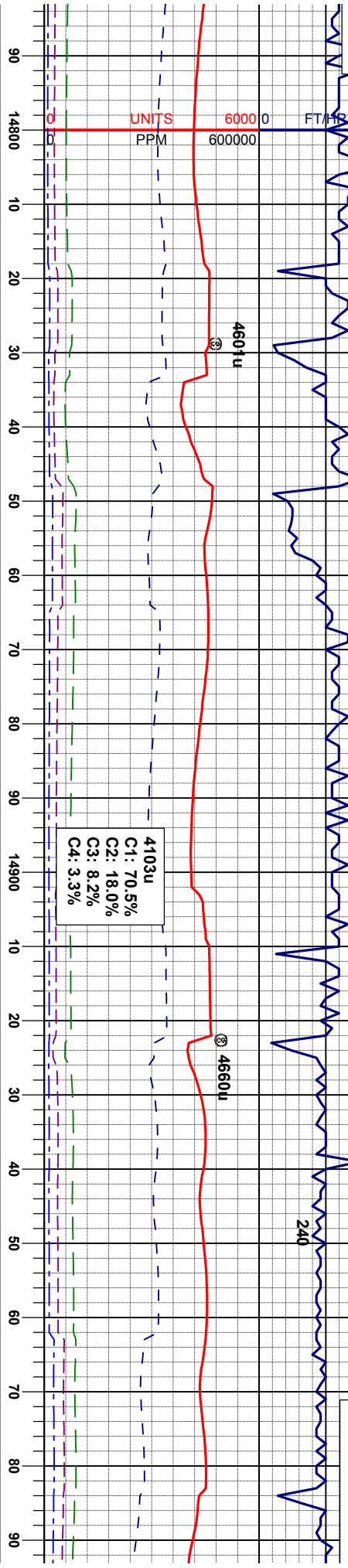
양

三

**AZ**







10% CHK: lt-mgybrn, mot, lam, sft - firm, sbply - sbrd - sbblky, v calc	100% MRL: m - dkgybrn, sme blk, thn lam, firm - brit, sbply - sbblky, v calc, abnt inoc, abnt bent w/ dism pyr
10% CHK: lt-mgybrn, mot, lam, sft - firm, sbply - sbrd - sbblky, v calc	100% MRL: m - dkgybrn, sme blk, thn lam, firm - brit, sbply - sbblky, v calc, abnt inoc, abnt bent w/ dism pyr

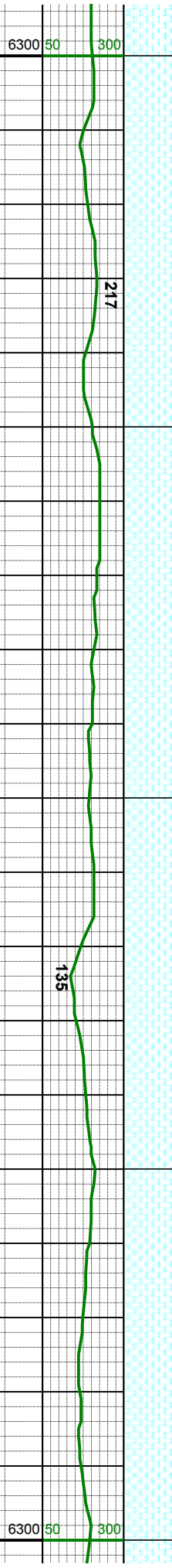
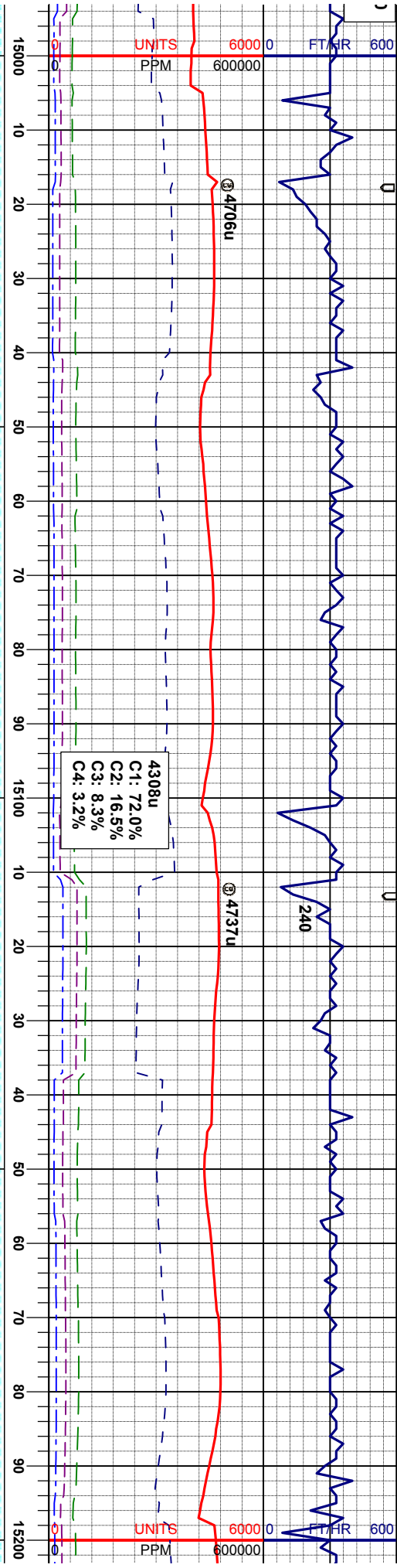
SD 14.862'  
TVD 6,597.89'  
INC 89.01°  
AZM 89.40°

SD 14.957'  
TVD 6,598.81'  
INC 89.88°  
AZM 88.71°

FAIR







SD 15,052'  
TVD 6,598.70'  
INC 90.25°  
AZM 89.90°

SD 15,147'  
TVD 6,597.88'  
INC 90.74°  
AZM 89.11°

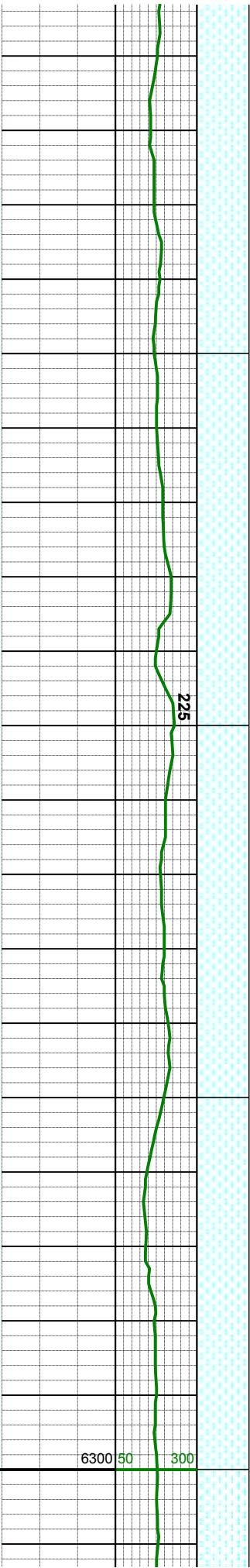
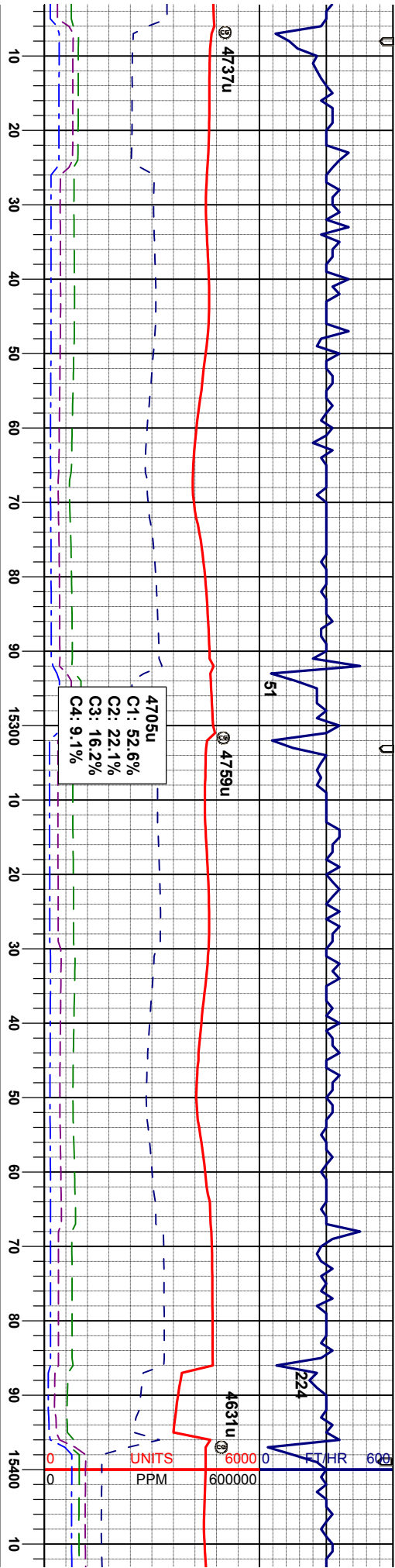
100% MRL: m - dkgybrn, sme blk, thn lam, firm - brt, spily - sbblky, v calc, abnt inoc, abnt bent w/ dism pyr

100% MRL: m - dkgybrn, sme blk, thn lam, firm - brt, spily - sbblky, v calc, abnt inoc, abnt bent w/ dism pyr

100% MRL: m - dkgybrn, sme blk, thn lam, firm - brt, spily - sbblky, v calc, tr inoc, abnt bent w/ dism pyr

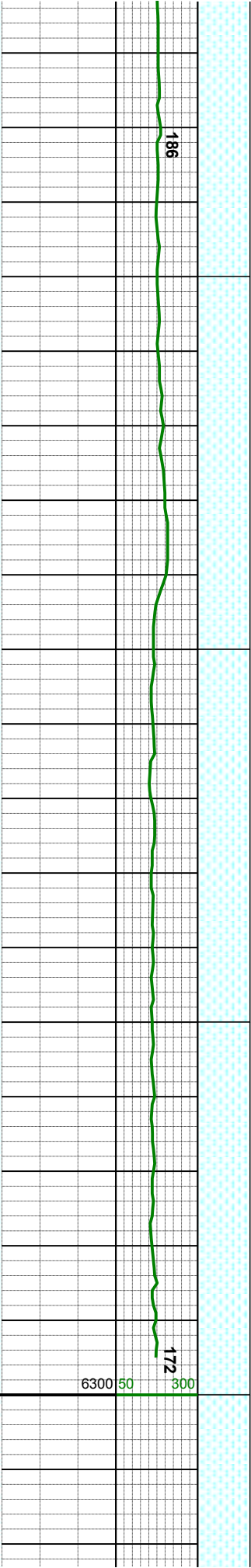
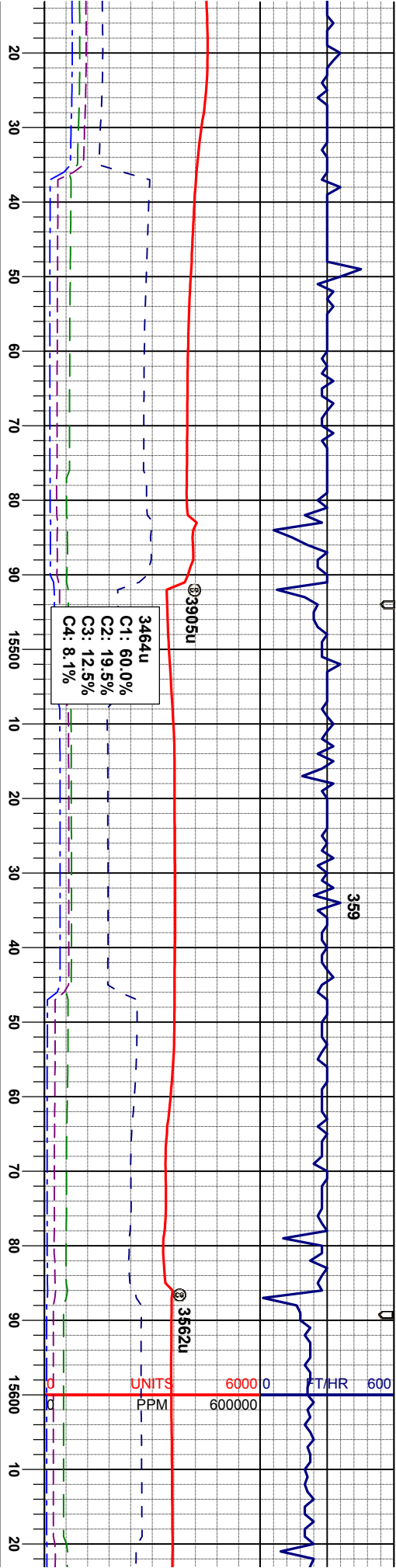
MODERATE





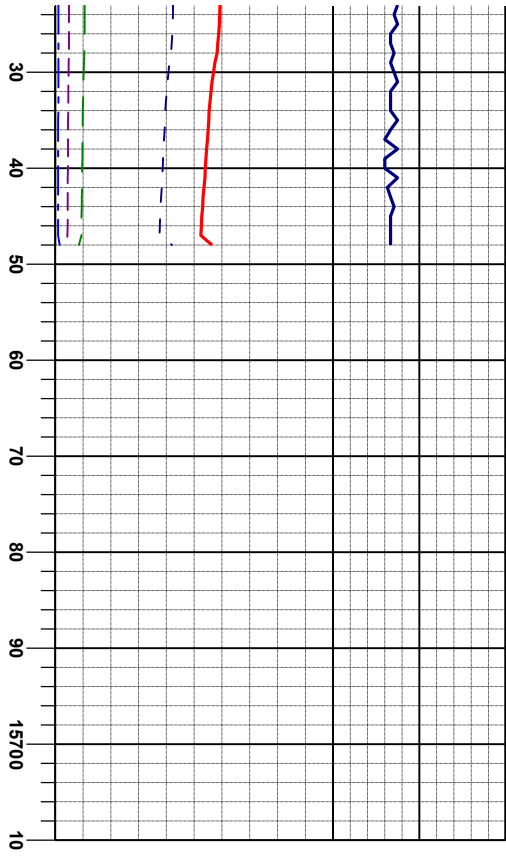
SD 15,242'				SD 15,337'				SD 15,337'			
TVD 6,596.68'				TVD 6,594.93'				TVD 6,594.93'			
INC 90.71°				INC 91.39°				INC 91.39°			
AZM 88.76°				AZM 88.84°				AZM 88.84°			
100% MRL: m - dkgybrn, sme blk, thn lam, firm - brlt, sbply - sbblky, v calc, tr inoc, abnt bent w/ dism pyr				100% MRL: m - dkgybrn, sme blk, thn lam, firm - brlt, sbply - sbblky, v calc, tr inoc, abnt bent w/ dism pyr				100% MRL: m - dkgybrn, sme blk, thn lam, firm - brlt, sbply - sbblky, v calc, tr inoc, abnt bent w/ dism pyr			





SD 15,432'		SD 15,587'
TVD 6,594.93'		TVD 6,583.40'
INC 91.39°		INC 93.24°
AZM 88.84°		AZM 89.66°
RL: m - dkybrn, sme blk, thn lam, sbsply - sbbky, v calc, tr inoc, t w/ dism pyr		RL: m - dkybrn, sme blk, thn lam, sbsply - sbbky, v calc, tr inoc, t w/ dism pyr
100% MRL: m - dkybrn, sme blk, thn lam, firm - brit, sbsply - sbbky, v calc, tr inoc, abnt bent w/ dism pyr		100% MRL: m - dkybrn, sme blk, thn lam, firm - brit, sbsply - sbbky, v calc, tr inoc, abnt bent w/ dism pyr
MODERATE		MODERATE





Wellbore Lucci State B01-69HNL  
was TD'd @ 15,648' MD @ 06:48 on 03/23/2013

PROJECTION @ TD  
SD 15,648'  
TVD 6,579.95'  
INC 93.24°  
AZM 89.66°

/brn, sme blk, thn lam,  
blk, v calc, tr inoc,  
r



Wellsite Geological Services  
Provided by Columbine Logging