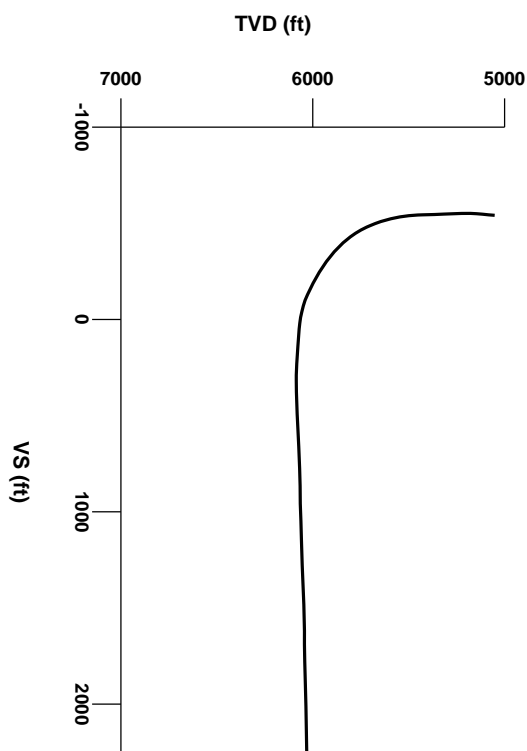


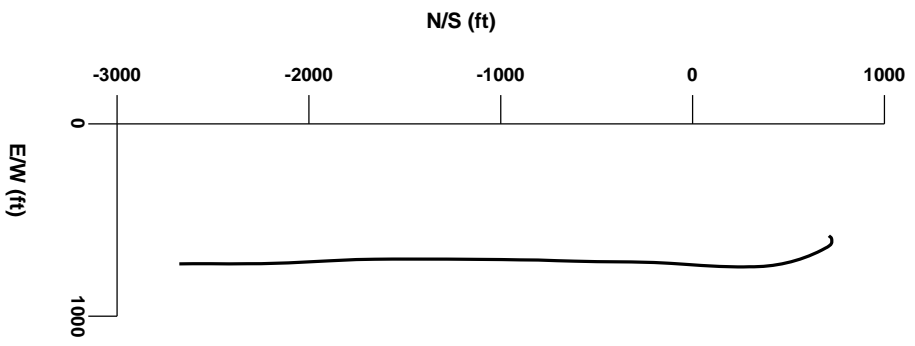
LOG created using LPLOT VH Version 3.0, July 16, 2012, Copyright (C) 1999-2009 Pason Systems Corp.

**OPERATOR:** ENCANA OIL & GAS (USA) INC.  
**WELL:** ALBERTSON DHS1C-15 G15 7101  
**LOCATION:** SEC. 15, T7S, R101W  
**COUNTY:** GARFIELD  
**STATE:** COLORADO  
**SPOT:** 2562' FNL 1383' FEL  
**ELEVATION:** 6377' GL 6410' KB  
**FIELD:** McKAY FORK-MESAGAR  
**SPUD DATE:** APRIL 12, 2012  
**TD DATE:** MAY 1, 2012  
**DATES LOGGED:** 4/26/12 - 5/1/12  
**DEPTHS LOGGED:** 5095' - 9371'  
**LOGGERS:** ELIZABETH RECKS, PETER RECKS  
**DRILLING FLUID:** LSND WATER-BASED MUD  
**DRILLING RIG:** PATTERSON-UTI DRILLING #326  
**API:** 05-045-21395-0000  
**LOG TYPE:** HORIZONTAL  
**SCALE:** 1:60 (20 inches per 100 feet)  
**REMARKS:** RIG SUPERVISORS: CURT CHILDERS, NORMAN McCREARY



Survey Elevation

Survey Plan



3000



Shale



Siltstone

## MODIFIERS

**B** Bentonite

## ENGINEERING SYMBOLS



### Bit Change



## Connection



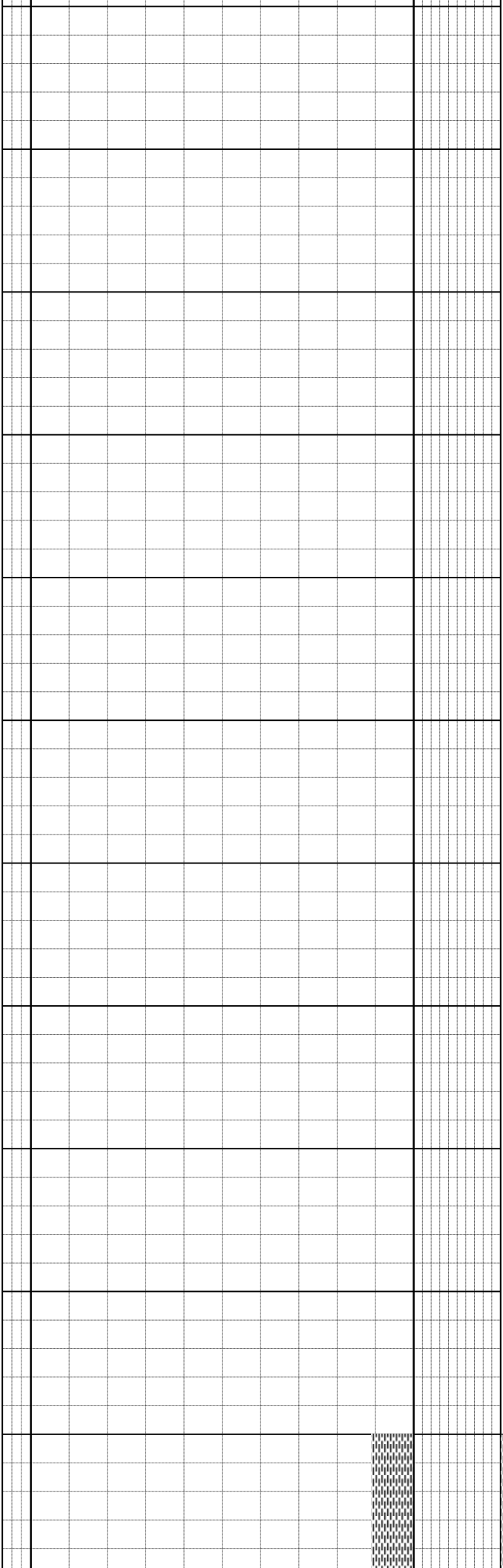
Midnight Depth

[illegible]

NB #3 6.5"  
SMITH SD1513  
(PDC) IN AT 5095'

MUD REPORT AT 5075':  
WT 9.4 VIS 47 YP 13  
WL 4.5 CK 1 pH 8.9  
CI 2200 SOL 6.5%

5045 5050 5055 5060 5065 5070 5075 5080 5085 5090 5095





0

WOB 10  
RPM 45  
PP 1250  
SPM 65

CG

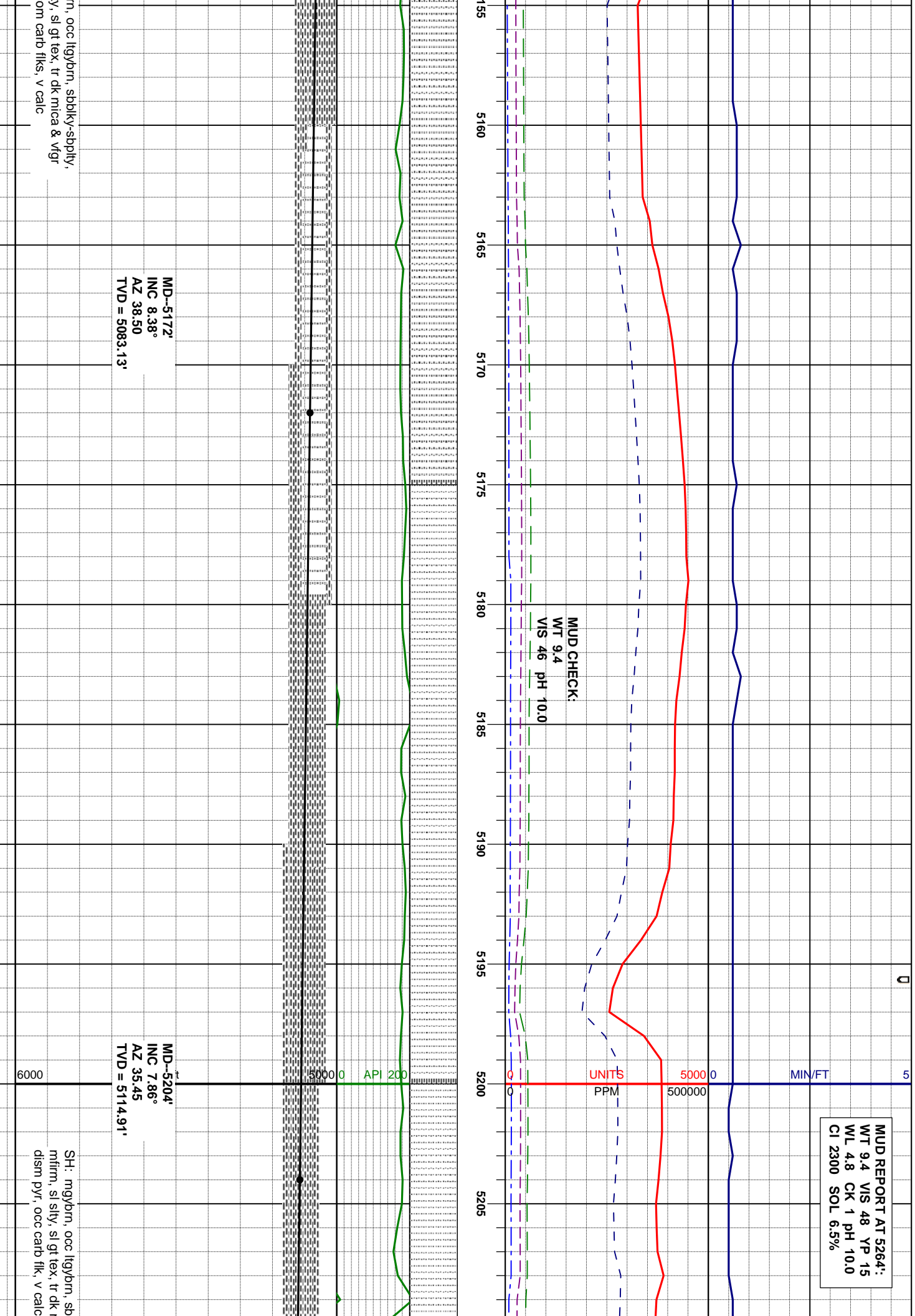
5100 5105 5110 5115 5120 5125 5130 5135 5140 5145 5150

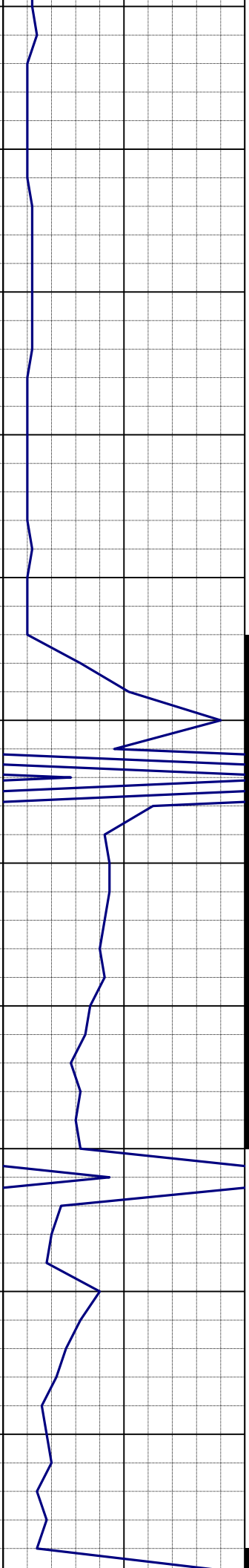
MD--5140'  
INC 9.07°  
AZ 39.29  
TVD = 5051.51'

SH: mgybm, occ ltybmn, sbbiky-spply,  
mfrn, sl sty, sl gt tex, tr dk mica & vigr  
dism pyr, tr BENT frag, m-v calc

SH: mgyb  
mfrn, sl sl  
dism pyr, c

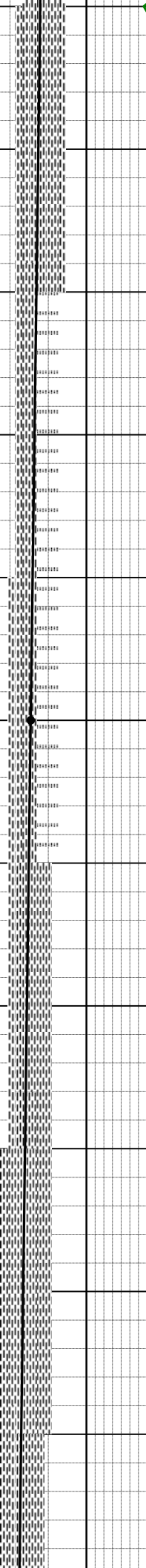
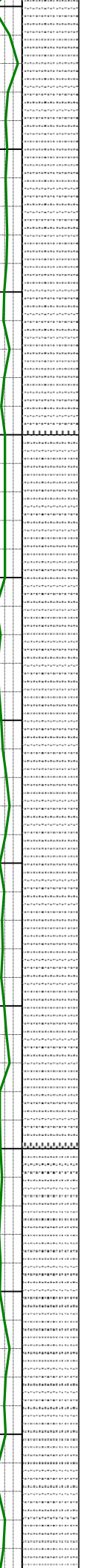
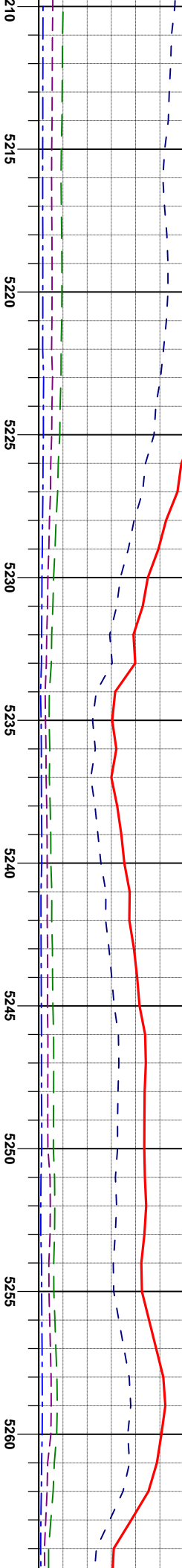
MUD REPORT AT 5264':  
WT 9.4 VIS 48 YP 15  
WL 4.8 CK 1 PH 10.0  
CI 2300 SOL 6.5%





MUD CHECK:  
WT 9.4  
VIS 47 pH 10.1

MUD CHECK:  
WT 9.45  
VIS 49 pH 10.1



MD-5235'  
INC 7.34°  
AZ 41.30  
TVD = 5145.64'

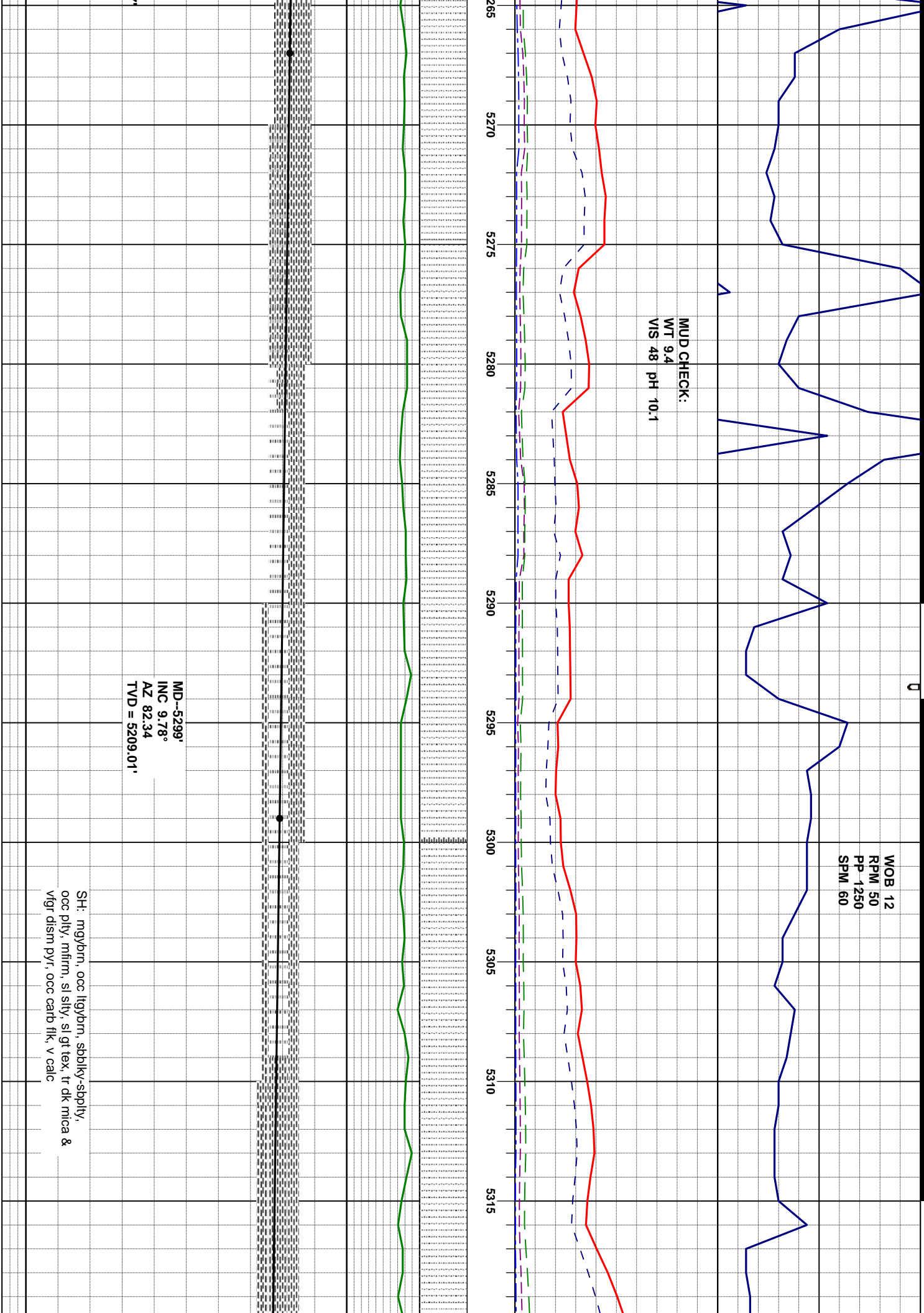
MD-5267'  
INC 7.64°  
AZ 61.52  
TVD = 5177.3'

SH: mgybm, occ ltybm, sbblky-sbply,  
occ ply, mfirm, sl sily, sl gt tex, tr dk mica &  
vfrg dism pyr, occ carb flk, v calc

sbply-sbply,  
mica & vfrg

WOB 12  
RPM 50  
PP-1250  
SPM 60

MUD CHECK:  
WT 9.4  
VIS 48 pH 10.1



MD-5299'  
INC 9.78°  
AZ 82.34  
TVD = 5209.01'

SH: mgybrn, ooc ltybrn, sbblky-sply,  
ooc pfly, mlfm, sl sily, sl gt tex, tr dk mica &  
vfgr dism pyr, ooc carb flk, v calc



MUD CHECK:  
WT 9.4  
VIS 53 pH 10.0

5325

5330

5335

5340

5345

5350

5355

5360

5365

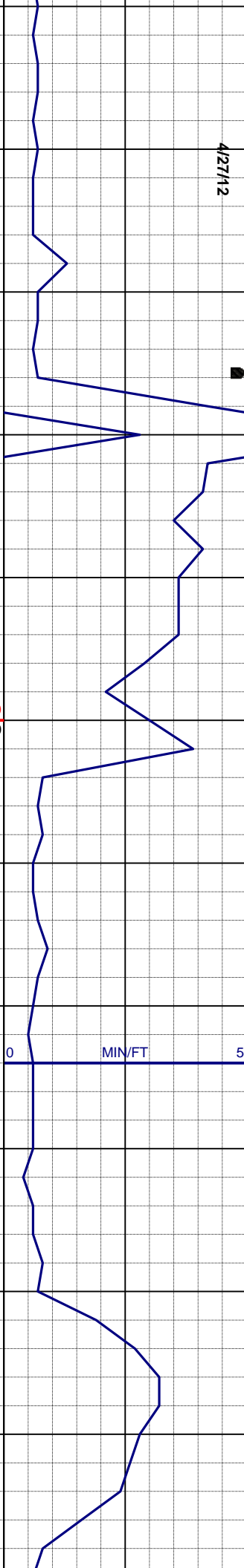
5370

MD--5330'  
INC 10.08°  
AZ 87.44  
TVD = 5239.55'

MD--5362'  
INC 8.63°  
AZ 84.67  
TVD = 5271.12'

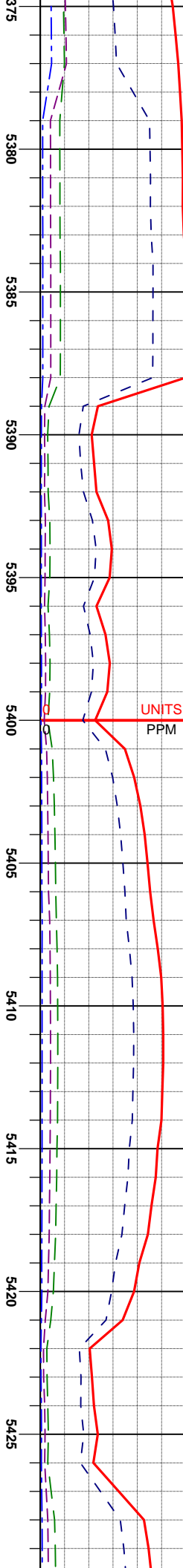
SH: mgybrn, ooc lggybrn, sbblky-sbply,  
ooc plty, mfirm, sl slty, sl gt tex, ooc dk mica  
& vfgt dism pyr, carb frag, v calc

4/27/12



MUD CHECK:  
WT 9.4  
VIS 54 pH 9.9

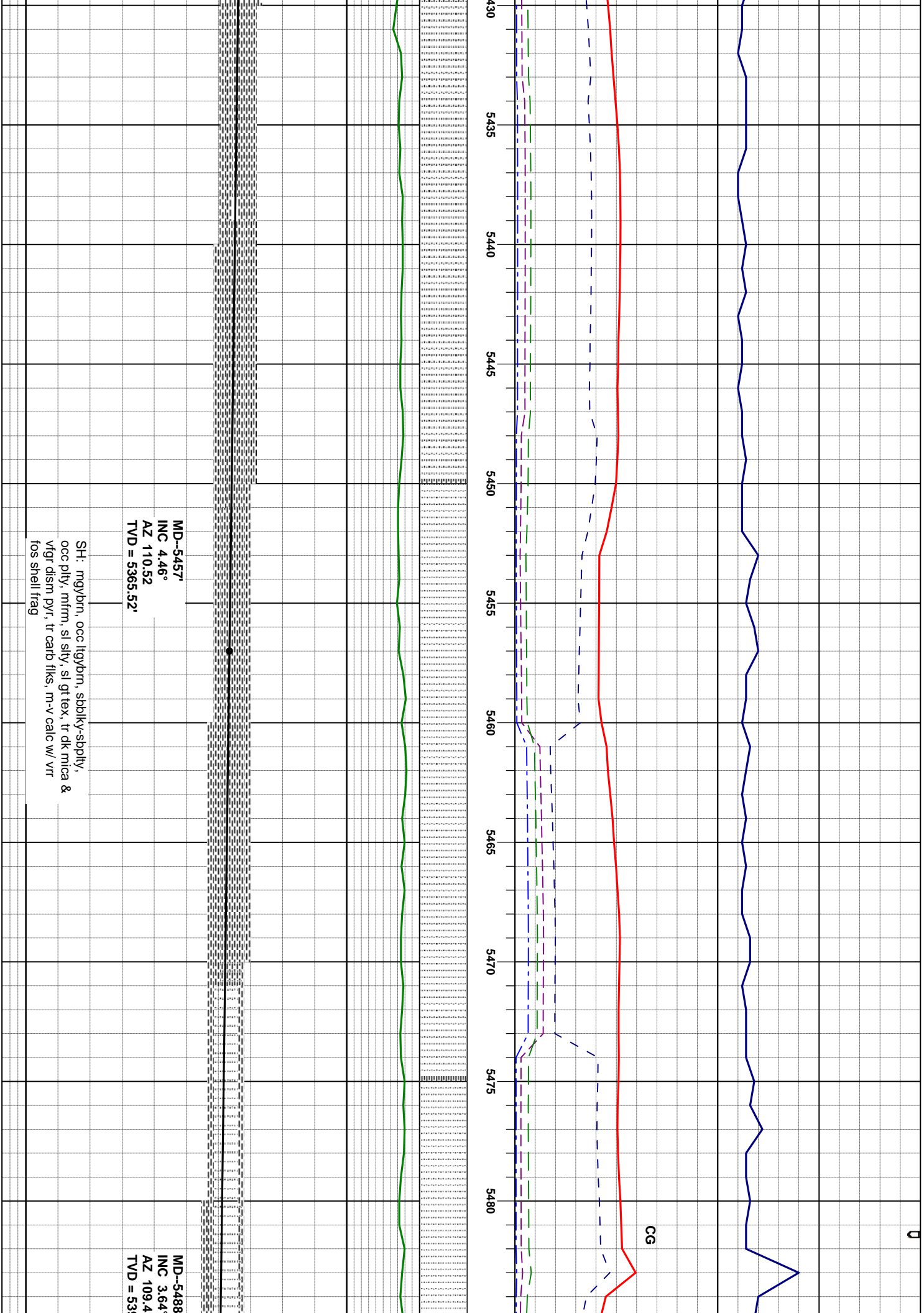
MUD CHECK:  
WT 9.4  
VIS 52 pH 9.9



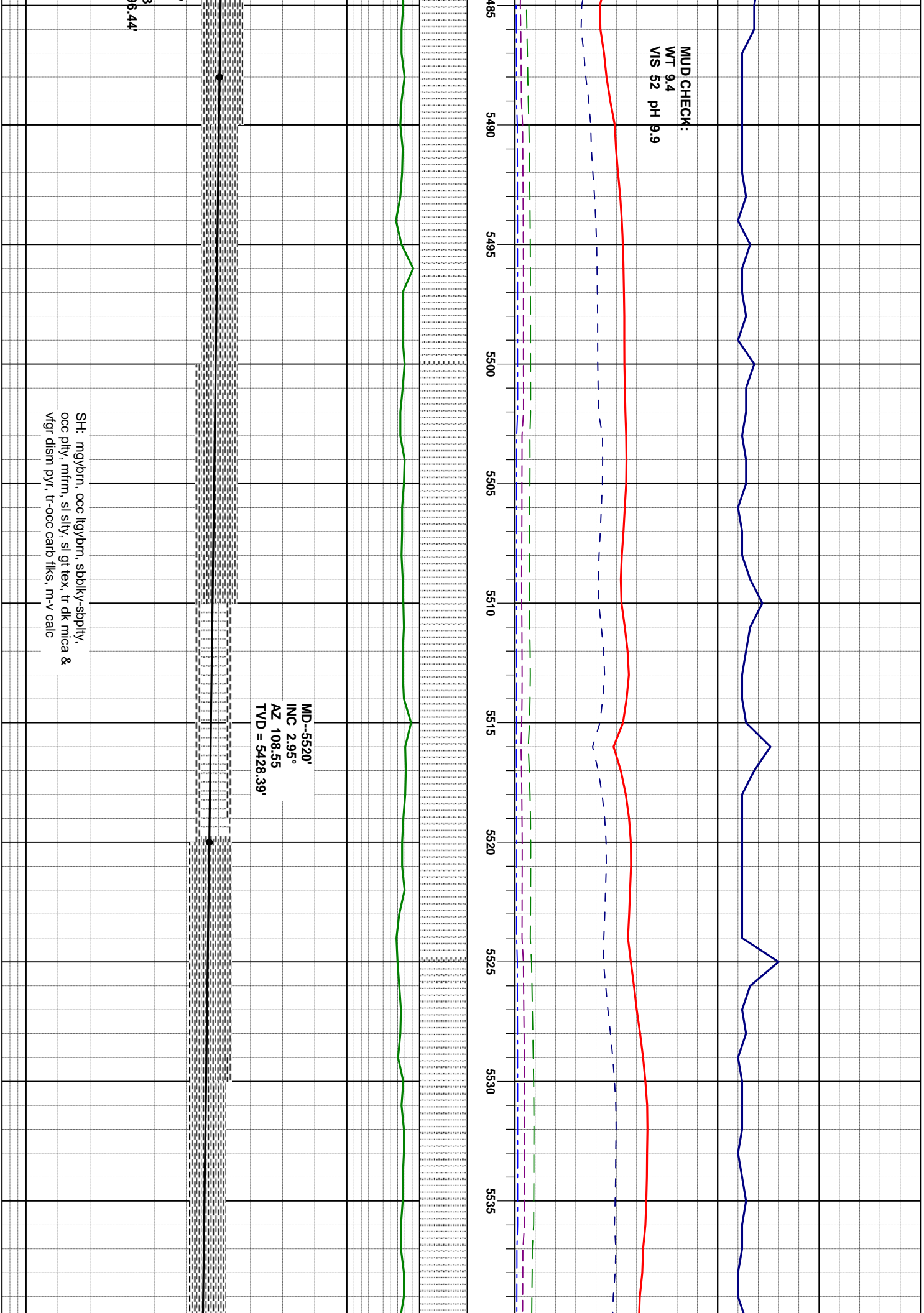
MD--5394'  
INC 7.09°  
AZ 90.58  
TVD = 5302.82'

MD--5425'  
INC 5.33°  
AZ 103.64  
TVD = 5333.64'

SH: mgybm, occ tgybm, sbbkly-sbply,  
occ pily, mfrm, sl sily, sl gt tex, tr dk mica &  
vfgr dism pyr, rr lse intgwn pyr clus, tr carb  
flks, m-v calc



MUD CHECK:  
WT 9.4  
VIS 52 pH 9.9



MD--5520'  
INC 2.95°  
AZ 108.55  
TVD = 5428.39'

3  
6.44'



MOB 8  
RPM 60  
PP 1250  
SPM 60

MUD RE  
WT 9.4  
WL 3.8  
CI 2200

MUD CHECK:  
WT 9.4  
VIS 52 pH 9.8

MD-5552'  
INC 3.52°  
AZ 119.65  
TVD = 5460.34'

MD-5583'  
INC 7.08°  
AZ 128.61  
TVD = 5491.20'

SH: mgybrn, occ lgybrn, sbbkly-sbply,  
occ ply, mfrm, sl stly, sl gt tex, tr dk mica &  
vlgv dism pyr, tr carb flks, m-v calc

PORT AT 5648':  
VIS 49 YP 15  
CK 1 pH 9.8  
SOL 6.75%

5000  
UNITS  
PPM

MUD CHECK:  
WT 9.3  
VIS 50 pH 9.8

MUD CHECK:  
WT 9.3+  
VIS 50 pH 9.8

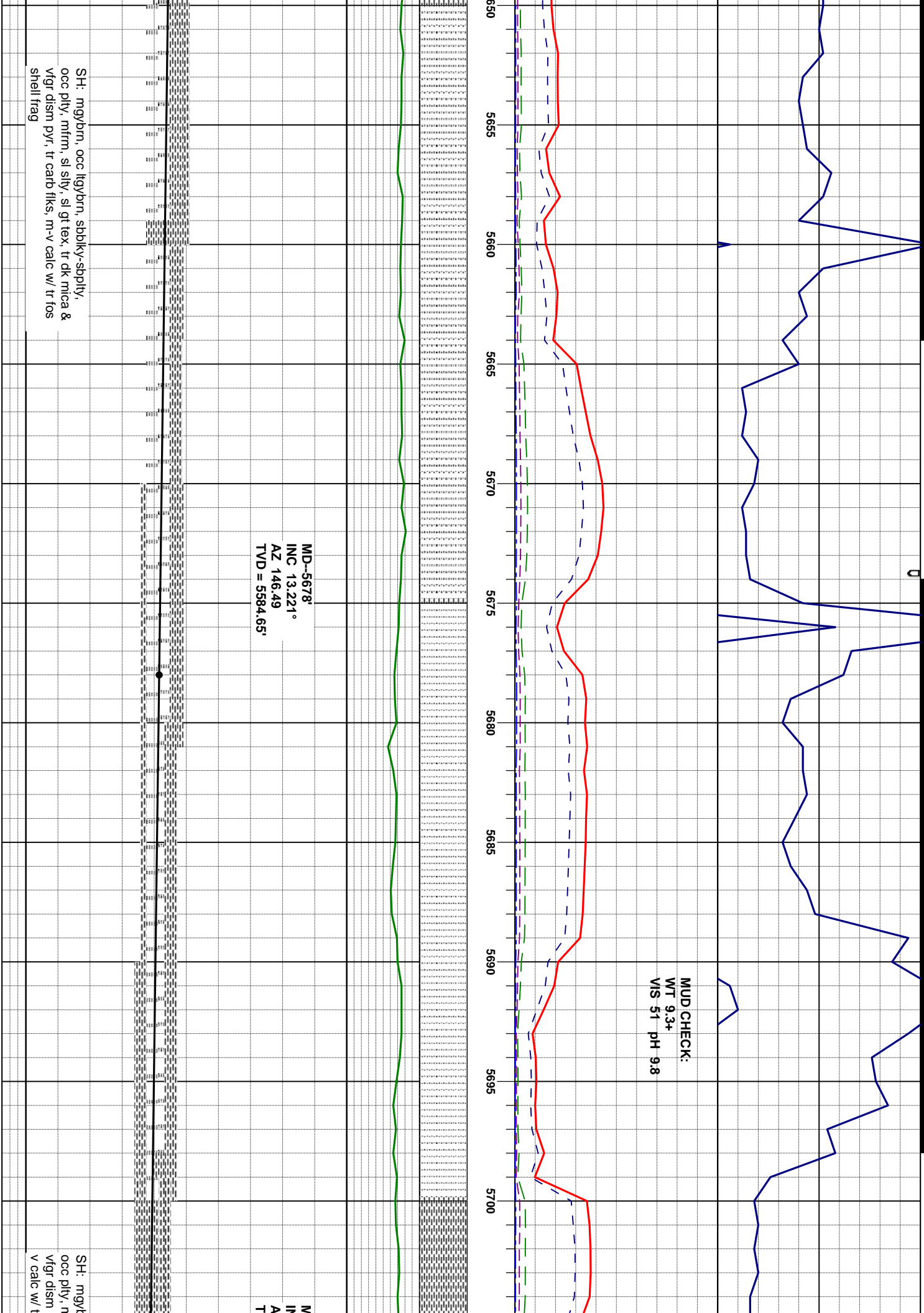
MD--5615'  
INC 9.24°  
AZ 138.00  
TVD = 5522.88'

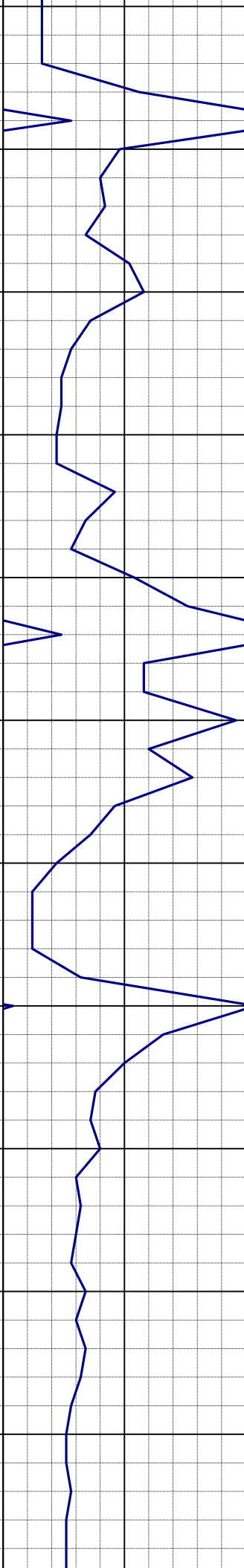
MD--5646'  
INC 11.27°  
AZ 143.68  
TVD = 5553.38'

5000 0 API 200

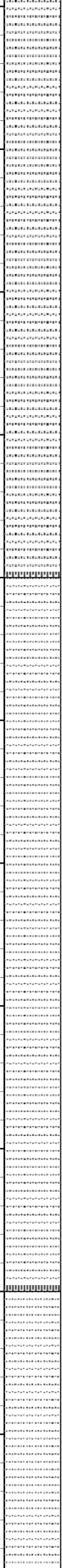
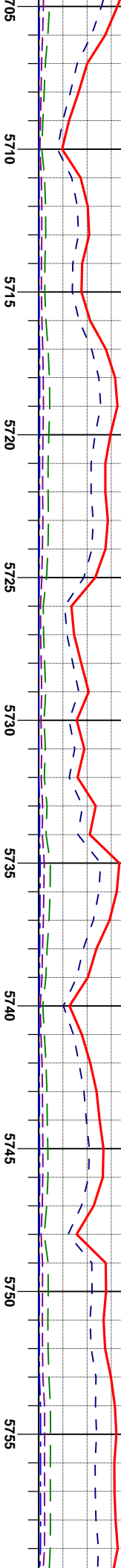
6000

SH: mgybrn, ooc ltybrn, sbblky-sply,  
ooc ply, mtrm, sl slty, rr m-v slty stks, sl gt  
tex, tr dk mica & vfgv dism pyr, rr carb flks,  
m-v calc



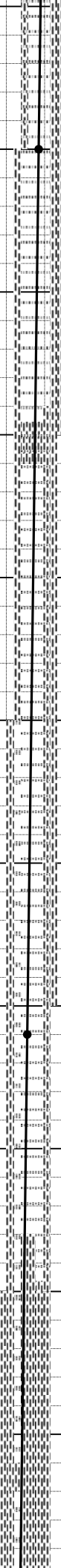


MUD CHECK:  
WT 9.4  
VIS 47 PH 9.6



D-5710'  
C 15.18°  
Z 148.95  
MD = 5615.57'

MD-5741'  
INC 18.27°  
AZ 151.68  
TVD = 5645.36'



rn, occ ltybrn, sbblky-sbply,  
itrm, sl sily, tr dk mica &  
pyr, vtr pyric strks, tr carb flks, m-  
fos shell frag

SH: mgybrn, occ ltybrn, sbbl  
occ ply, mtrm, sl sily, tr m-v s  
tex, tr dk mica & vgr dsm pyr  
m-v calc w/ com fos shell frag



0

5

MUD CHECK:  
WT 9.4  
VIS 47 pH 9.5

SCALE  
CHANGE

SCALE  
CHANGE

MD-5773'  
INC 21.61°  
AZ 151.62  
TVD = 5675.44'

MD-5804'  
INC 24.98°  
AZ 151.70  
TVD = 5703.91'

SH: mgylbm, occ lgybm, sbblky-sbply,  
occ ply, mfrm, sl-m slty, tr v slty strks, sl-m  
gt tex, tr dk mica & vtgr dism pyr, vrr pyric  
strks, tr carb flks, m-v calc w/ tr fos shell  
frag

ky-sbply,  
ly strks, sl gt  
tr carb flks,

6600 ft 5600 0 API 200

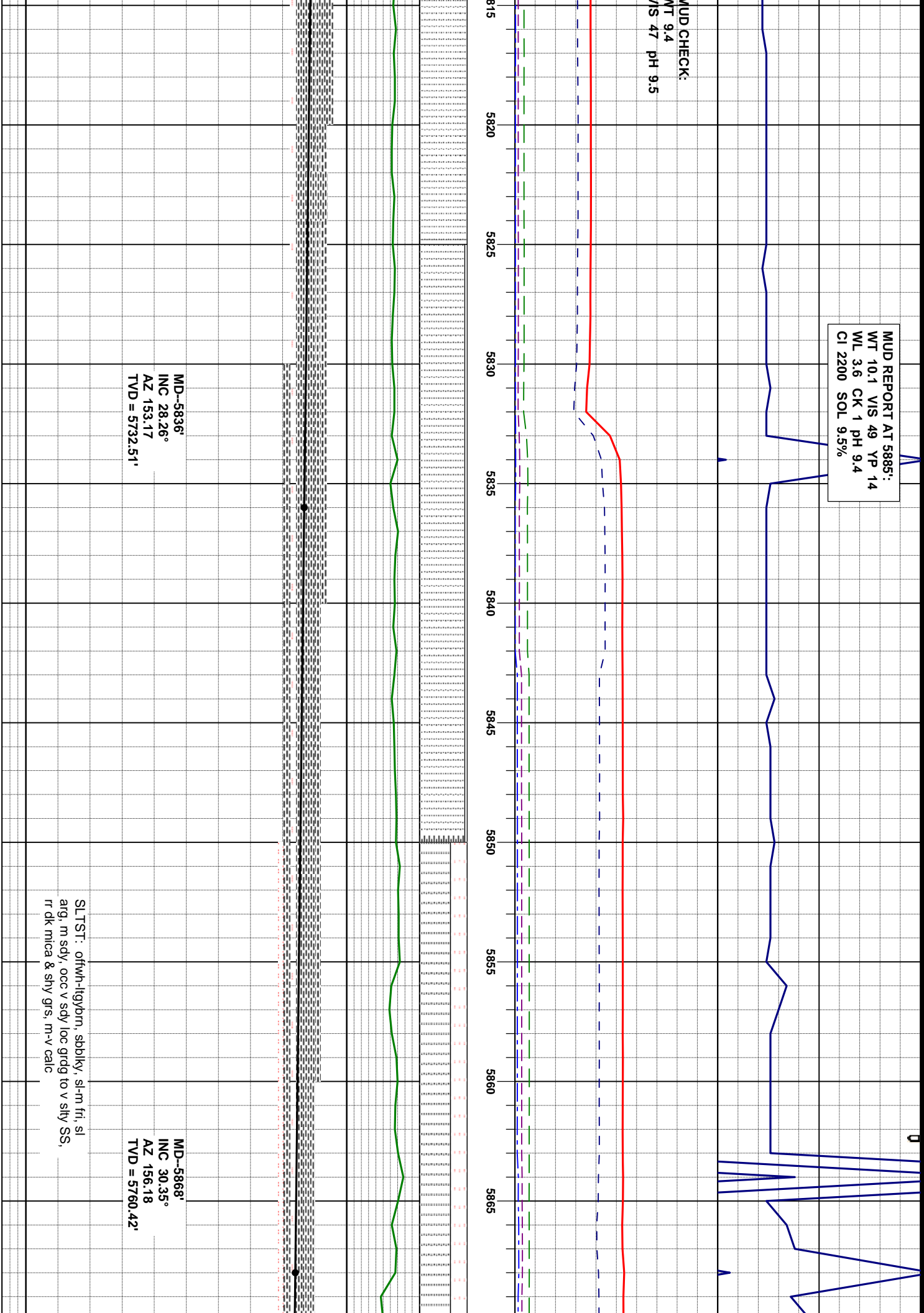
UNITS 10000 0 1000000  
PPM

MIN/FT

5760 5765 5770 5775 5780 5785 5790 5795 5800 5805 5810

MUD REPORT AT 5885':  
WT 10.1 VIS 49 YP 14  
WL 3.6 CK 1 PH 9.4  
CI 2200 SOL 9.5%

MUD CHECK:  
WT 9.4  
VIS 47 PH 9.5



WOB 8  
RPM 60  
PP 1300  
SPM 60

MUD CHECK:  
WT 9.9  
VIS 48 pH 9.5

MUD CHECK:  
WT 10.1  
VIS 48 pH 9.5

5875

5880

5885

5890

5895

5900

5905

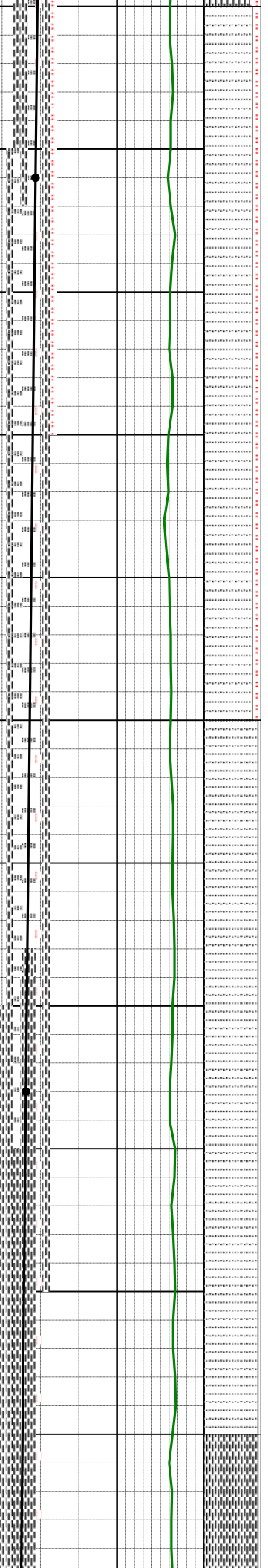
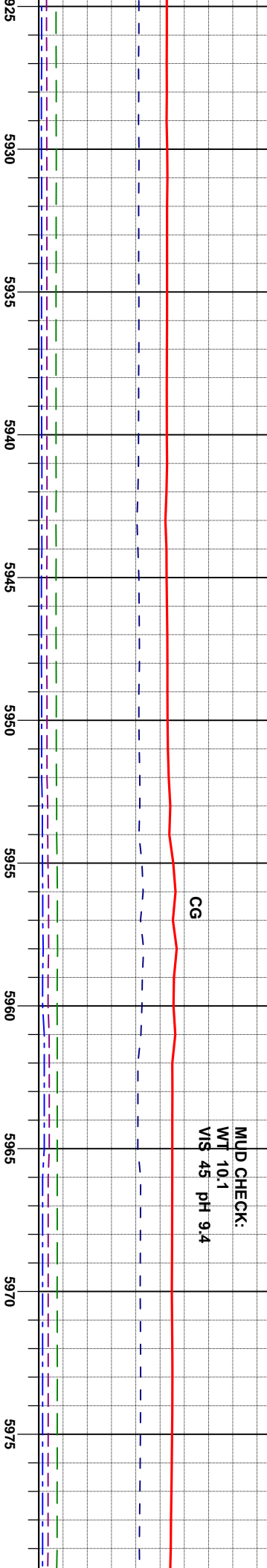
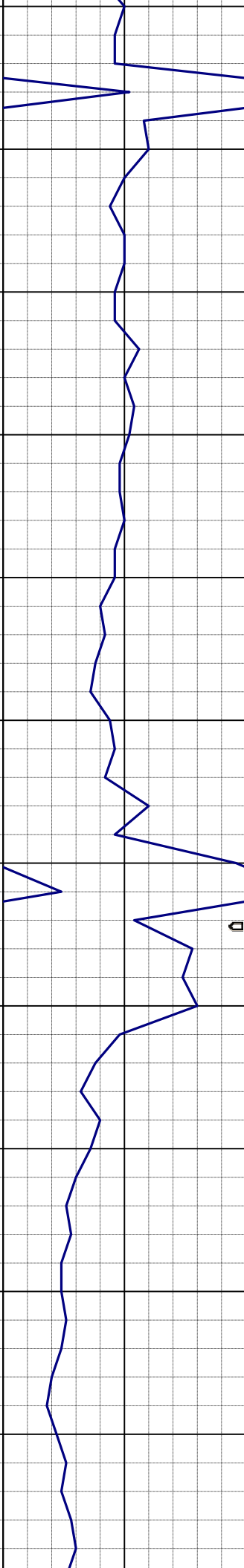
5910

5915

5920

MD-5899'  
INC 33.19°  
AZ 157.12  
TVD = 5786.77'

SLTST: offwh-tybrn, sbbkly, sl-m fr, sl  
arg, sl sdy, occ v sdy loc grdg to v silty SS,  
rr dk mica & shy gr, m-v calc



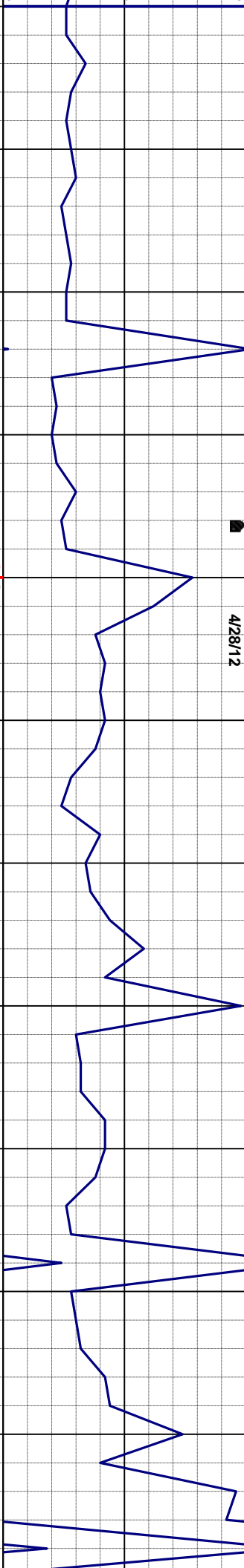
MD--5931'  
INC 37.28°  
AZ 158.72  
TVD = 5812.90'

MD--5963'  
INC 40.86°  
AZ 160.21  
TVD = 5837.74'

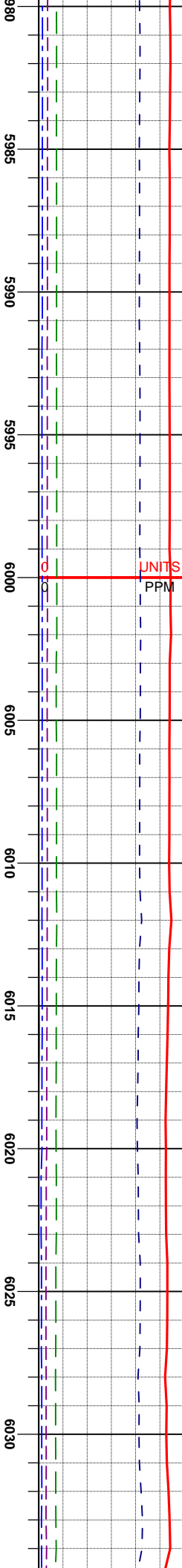
SH: mgybrn, occ lgybrn, sbkly-sbply,  
mfirm, sl-m slty, tr v slty stks, sl-m gt tex, tr  
dk mica & vfgr dism pyr, tr carb flk, occ  
ofwhite BENT w/ mica frag, m-v calc



4/28/12



MUD CHECK:  
WT 10.1  
VIS 47 pH 9.3



5980 5985 5990 5995 6000 6005 6010 6015 6020 6025 6030

API 200 5600 0



MD--5994'  
INC 44.34°  
AZ 159.92  
TVD = 5860.56'

MD--6023'  
INC 48.03°  
AZ 160.84  
TVD = 5880.63'

6600 ft

SH: mybm, occ ltybm, sbblky-sbply,  
mfrm, sl-m slty, tr v slty stfks, sl-m gt tex, tr  
dk mica & vfgt dism pyr, tr carb flk, tr oftrwh  
BENT, m-v calc

MUD REPORT  
AT 6082:  
WT 10.1 VIS 46  
YP 13 WL 3.5  
CK 1 PH 9.0  
CI 2200 SOL 9.5%

AT 6082: TOO  
H TO 2500' TO PICK  
UP AGITATOR

CG

TG

MD--6048'  
INC 51.23°  
AZ 162.95  
TVD = 5896.82'

MD--6080'  
INC 52.99°  
AZ 165.13  
TVD = 5916.47'

SH: mgybrn, occ ltybrn, sbblky-sbply,  
mfrm, sl sily, rr m-v sily strks, sl gt tex, tr dk  
mica & vfgv dism pyr, rr carb flk, vrr oftrwh  
BENT, m-v calc

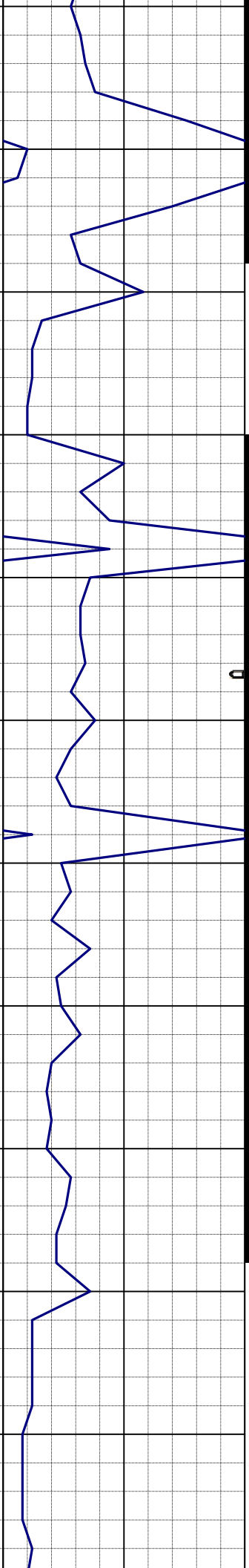
WOB 10  
RPM 45  
PP- 1750  
SPM 60

MUD CHECK:  
WT 10.0  
VIS 47 pH 8.9

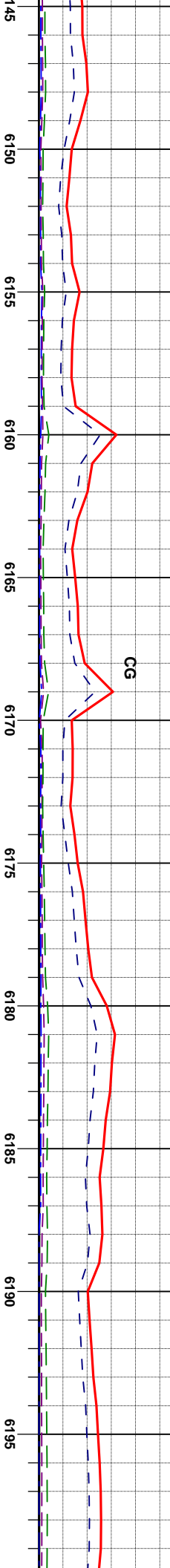
MD-6111'  
INC 55.33°  
AZ 167.09  
TVD = 5934.62'

MD-6143'  
INC 57.14°  
AZ 169.19  
TVD = 5952.41'

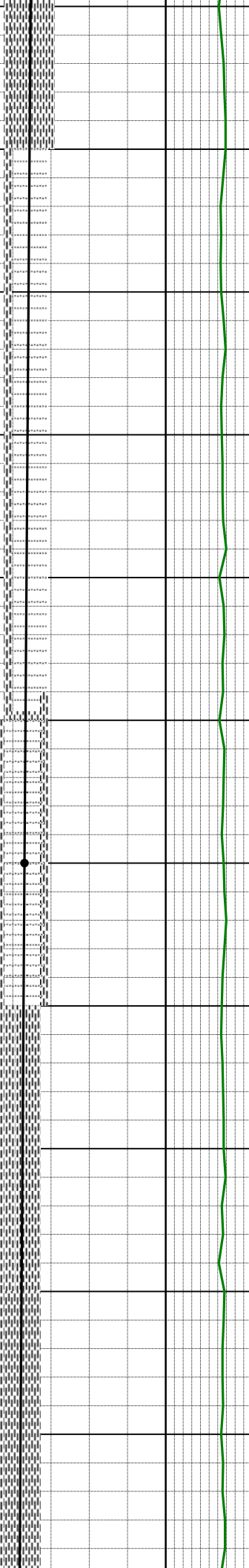
SH: mgy/brn, occ ltybrn, sbbkly-sbply,  
mfm, sltly, rr m-v slty strks, sl gt tex, tr dk  
mica & vfgt dism pyr, vrr carb flk, tr fos  
shell frag, m-v calc



MUD CHECK:  
WT 10.0  
VIS 45 pH 8.7



CG



MD-6175'  
INC 58.88°  
AZ 171.64  
TVD = 5969.36'

SH: mgylbrn, occ llybrn, sbblky-sbply,  
mfrm, slsily, rr m-v slty strks, sl gt tex, tr dk  
mica & vfgt dism pyr, vrr carb flk, rr fos  
shell frag, m-v calc



MUD REPORT AT 6200':  
WT 10.0 VIS 45 YP 12  
WL 3.5 CK 1 pH 8.7  
CI 2100 SOL 9.0%

MUD CHECK:  
WT 10.0  
VIS 47 pH 8.8

PPM 1000000

6205

6210

6215

6220

6225

6230

6235

6240

6245

6250

MD-6206'  
INC 59.87°  
AZ 173.55  
TVD = 5985.16'

MD-6238'  
INC 61.54°  
AZ 175.83  
TVD = 6000.82'

SH: mybmn, ooc ltybmn, sbbkly-sbply,  
mfrn, sl sily, rr m-v sily stfks, sl gt tex, tr dk  
mica & vfr dism pyr, vrr carb flk, tr wh calc  
fl frac, m-v calc

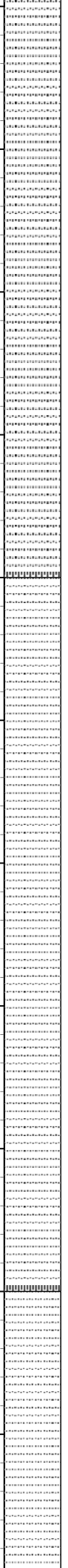
SH: mgy  
mfrn, sl s  
mica & v  
calc fl fra

OB 10  
PM 45  
2380  
M 65

0

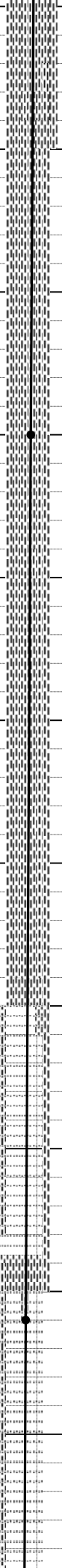
MUD CHECK:  
WT 10.0  
VIS 45 pH 8.9

6255 6260 6265 6270 6275 6280 6285 6290 6295 6300 6305



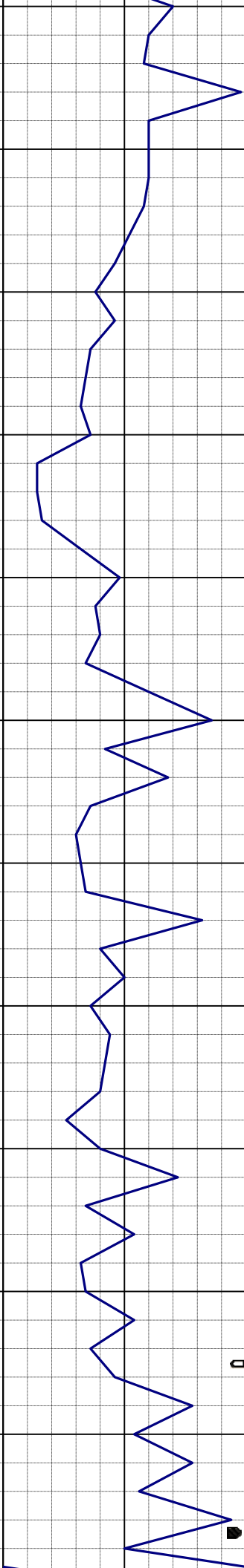
MD-6301'  
INC 66.56°  
AZ 177.84  
TVD = 6028.65'

MD-6270'  
INC 63.54°  
AZ 176.97  
TVD = 6015.57'



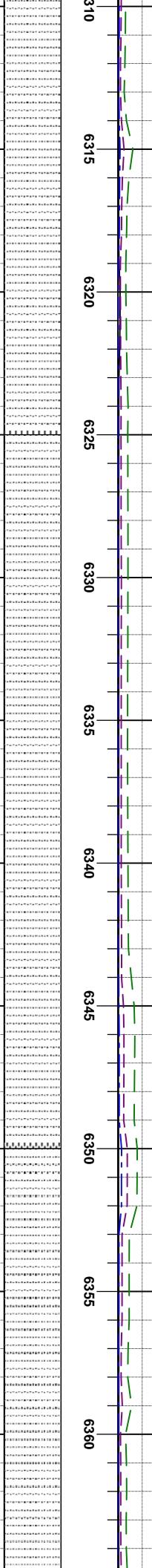
brn, occ ltybrn, sbbkly-sply,  
sily, rt m-v sily strks, sl gt tex, tr dk  
gr dism pyr, vtr carb flk, occ wh  
s, m-v calc

SH: mgybrn, occ ltybrn, sbk  
mfrm, sl sily, occ m-v sily strh  
dk mica & vtr dism pyr, tr py  
flk, occ wh calc frag, m-v cal



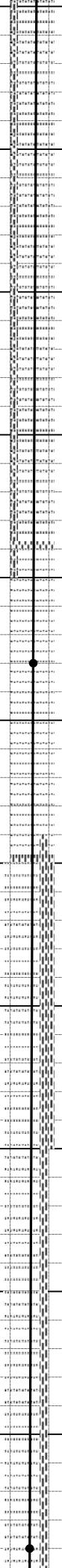
MUD CHECK  
WT 10.0  
VIS 45 pH 9.7

CG



MD--6333'  
INC 71.16°  
AZ 178.69  
TVD = 6040.19'

MD--6364'  
INC 74.27°  
AZ 179.72  
TVD = 6049.40'



SH: mgybm, occ itgybm, sbbky-spply,  
mtrm, sl stly, occ m-v slty strks, sl gt tex, tr  
dk mica & vfgn dism pyr, vrr carb filk, tr fos  
frag, occ wh calc frag, m-v calc

ky-spply,  
s, sl gt tex, tr  
clus, vrr carb

4/29/12

MUD CHECK:  
WT 10.1  
VIS 46 PH 9.0

5 MIN/FT

1000000 0

UNITS PPM

6400

6405

6410

6415

6370

6375

6380

6385

6390

6395

MD-6396'  
INC 77.93°  
AZ 180.30  
TVD = 6057.09'

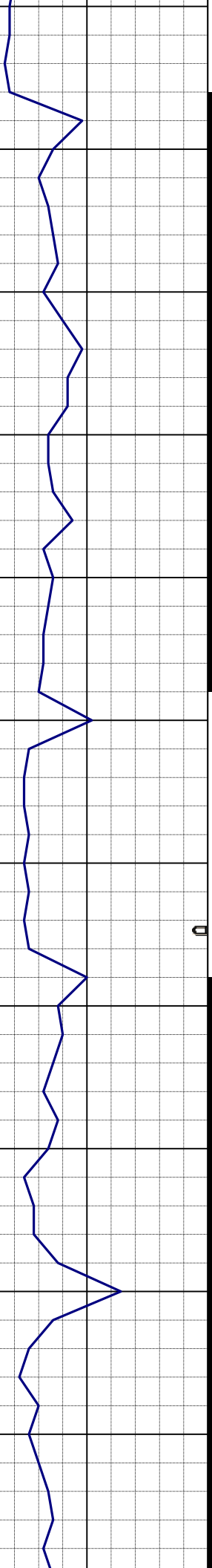
API 200

5600 0

6600

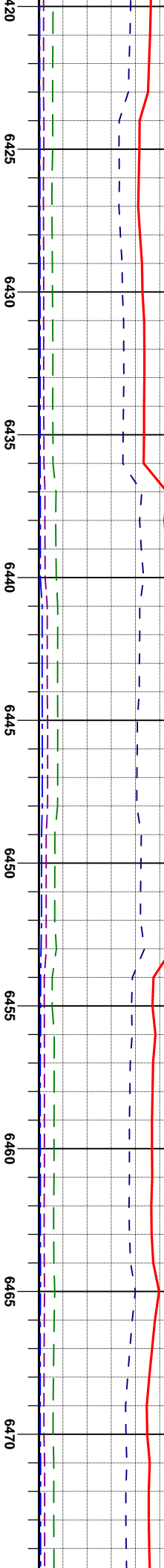
SH: mgybrn, occ lgybrn, sbblky-sbply,  
mfrm, sl slty, tr m-v slty strks, sl qt tex, tr dk  
mica & vfgr dism pyr, vrr carb flk, rr fos  
shell frag, m-v calc





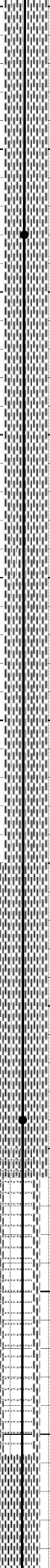
MUD CHECK:  
WT 10.1  
VIS 46 pH 9.0

CG

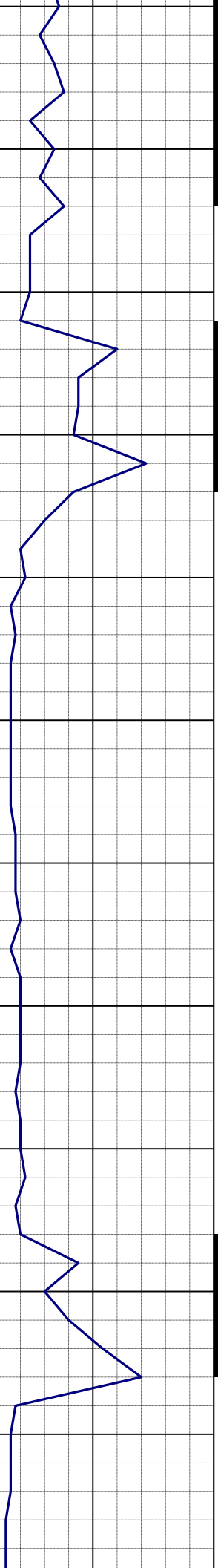


MD--6428'  
INC 80.28°  
AZ 181.31  
TVD = 6063.13'

MD--6459'  
INC 83.04°  
AZ 182.01  
TVD = 6067.63'



SH: mybvm, ooc itgybm, sbbkly-sbply,  
mfrm, sl sly, tr m-v sly strks, sl gt tex, tr dk  
mica & vfgt dism pyr, vrr carb flk, rr fos  
shell frag, m-v calc



MUD CHECK:  
WT 10.1  
VIS 45 pH 9.0

5-10' FLARE  
VENTING



MD-6491'  
INC 85.46°  
AZ 182.58  
TVD = 6070.84'

MD-6522'  
INC 86.17°  
AZ 183.00  
TVD = 6073.10'

SH: mgybrn, occ lgybrn, sbbkly-sbply,  
mfrm, sl sly, occ m-v sly stks, sl-m gt tex,  
t dk mica & vfgt dism pyr, vrr carb flk, rr fos  
shell frag, m-v calc

0  
MOB 10  
RPM 45  
PP 2000  
SPM 65

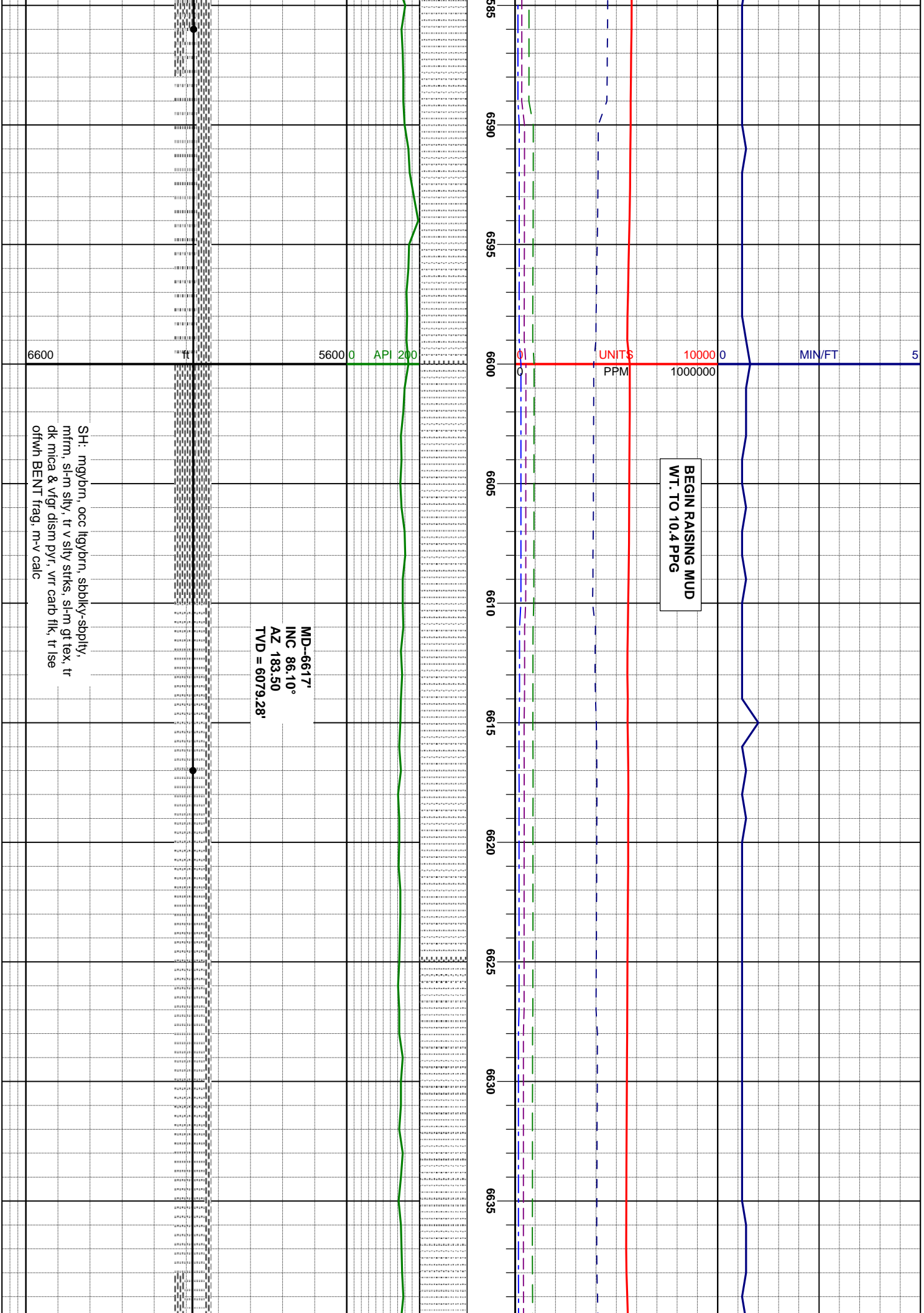
MUD CHECK:  
WT 10.15  
VIS 46 pH 8.7

INTERMITTENT  
1-3" FLARE

MD-6554'  
INC 86.27°  
AZ 183.42  
TVD = 6075.21'

MD-6586'  
INC 86.40°  
AZ 183.23  
TVD = 6077.25'

SH: mgybrn, occ ltgybrn, sbblky-sbply,  
mfrn, sl sily, tr m-v-sily strks, sl gt tex, tr dk  
mica & vgr disn pyrl, vrr carb flk, r r los  
shell frag, vrr lse ofwh BENT frag, m-v  
calc





0

MUD REPORT AT 6667':  
WT 10.4 VIS 47 YP 15  
WL 3.6 CK 1 pH 8.7  
CI 2100 SOL 10.5%

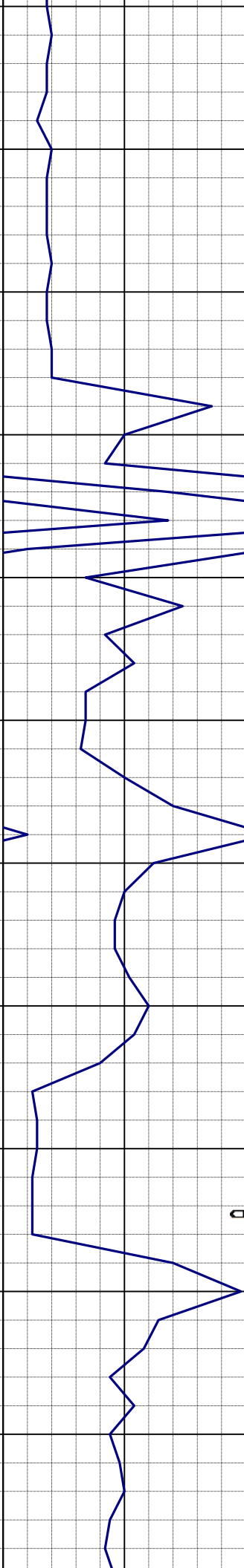
CG

MUD CHECK:  
WT 10.4  
VIS 47 pH 8.7

MD--6649'  
INC 85.93°  
AZ 183.68  
TVD = 6081.50'

MD--6681'  
INC 85.93°  
AZ 183.87  
TVD = 6083.77'

SH: mybrn, occ lgybrn, sbblky-sbply,  
mfrm, sl-m slty, tr v slty strks, sl-m gt lex, tr  
dk mica & vlgv dism pyr, vtr carb flk, r r los  
shell frag, r r lse ofwh BENT frag, m-v calc



MUD CHECK:  
WT 10.45  
VIS 47 pH 8.7

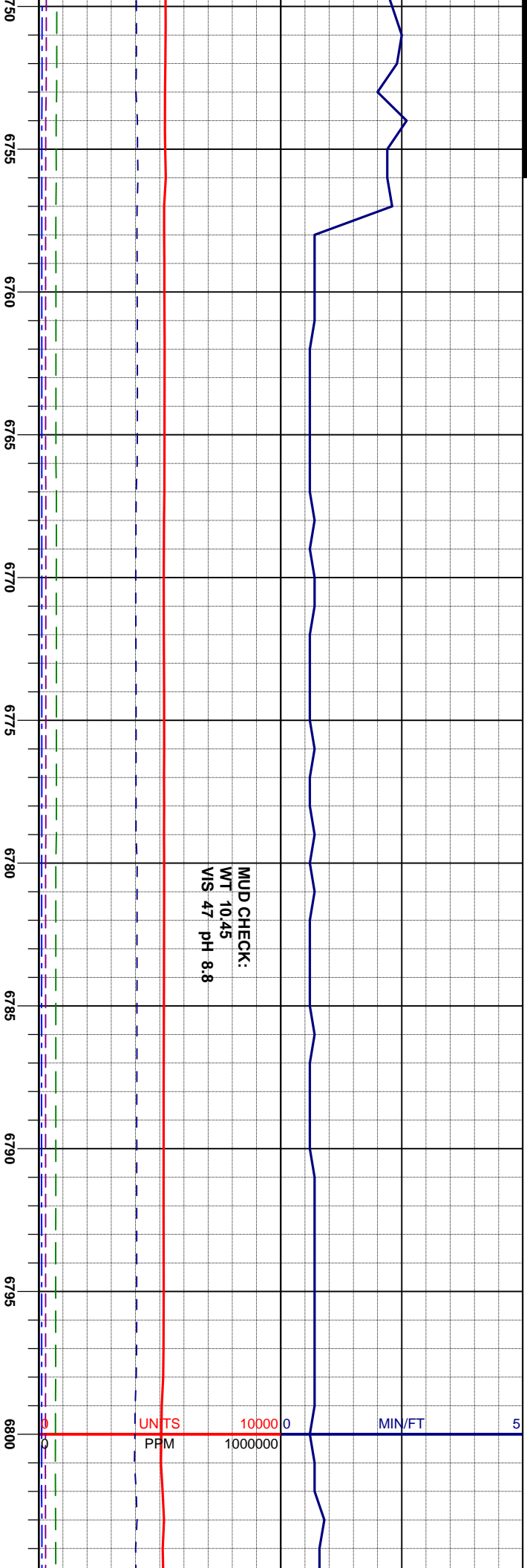
MUD CHECK:  
WT 10.5  
VIS 46 pH 8.7  
CG

NO FLARE



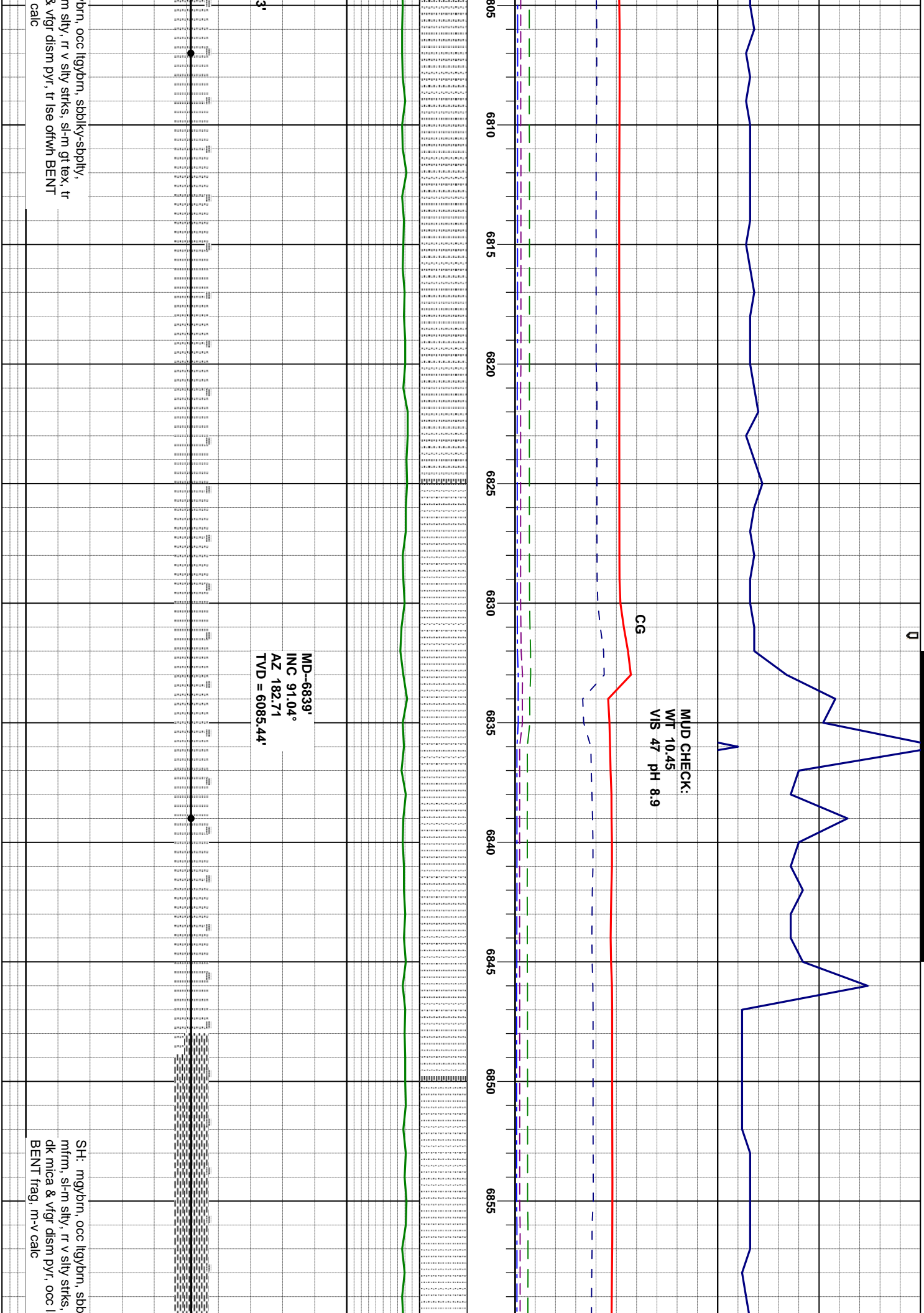
MD-6744'  
INC 89.70°  
AZ 183.64  
TVD = 6086.17'

SH: mgybmn, occ lgybmn, sbbkly-sbply,  
mfm, sl-m slty, rr v slty strks, sl-m gt tex, tr  
dk mica & vfgr dism pyr, m-v calc



SH: mybmn, occ ltybmn, sbblky-sbply,  
mfrm, sl-m slty, rr v slty strks, sl-m gt tex, tr  
dk mica & vgr dism pyr, tr lse offwh BENT  
frag, m-v calc

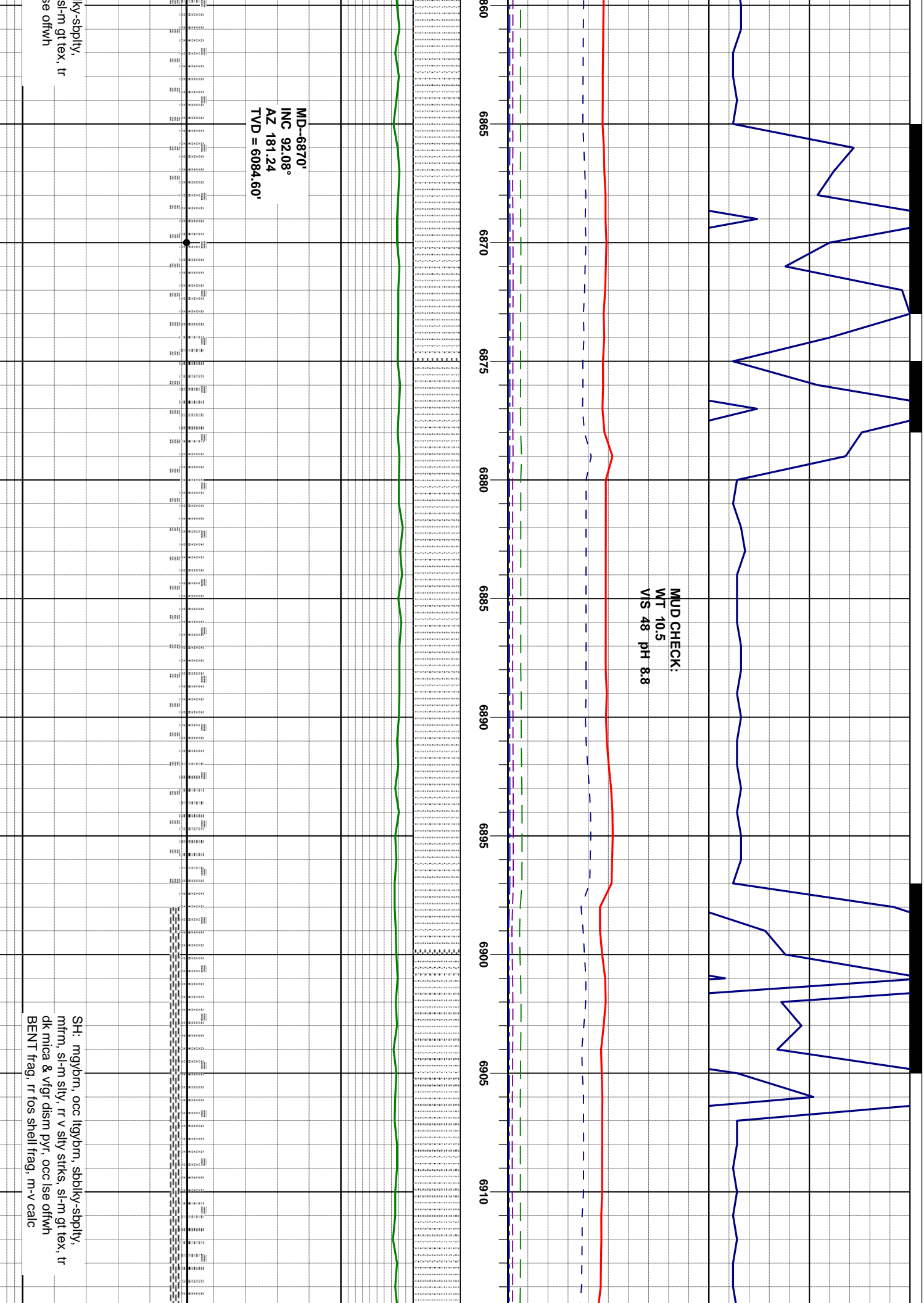
SH: my  
mfrm, sl-  
dk mica  
frag, m-v



MD-6839'  
INC 91.04°  
AZ 182.71  
TVD = 6085.44'

SH: mgybm, occ ltyb, sbkly-sbply, m sily, rr v sily stks, sl-m gt tex, tr & vgr dism pyr, tr lse ofwh BENT calc





0

MUD REPORT AT 6940':  
WT 10.5 VIS 48 YP 15  
WL 3.5 CK 1 pH 8.7  
CI 2100 SOL 10.75%

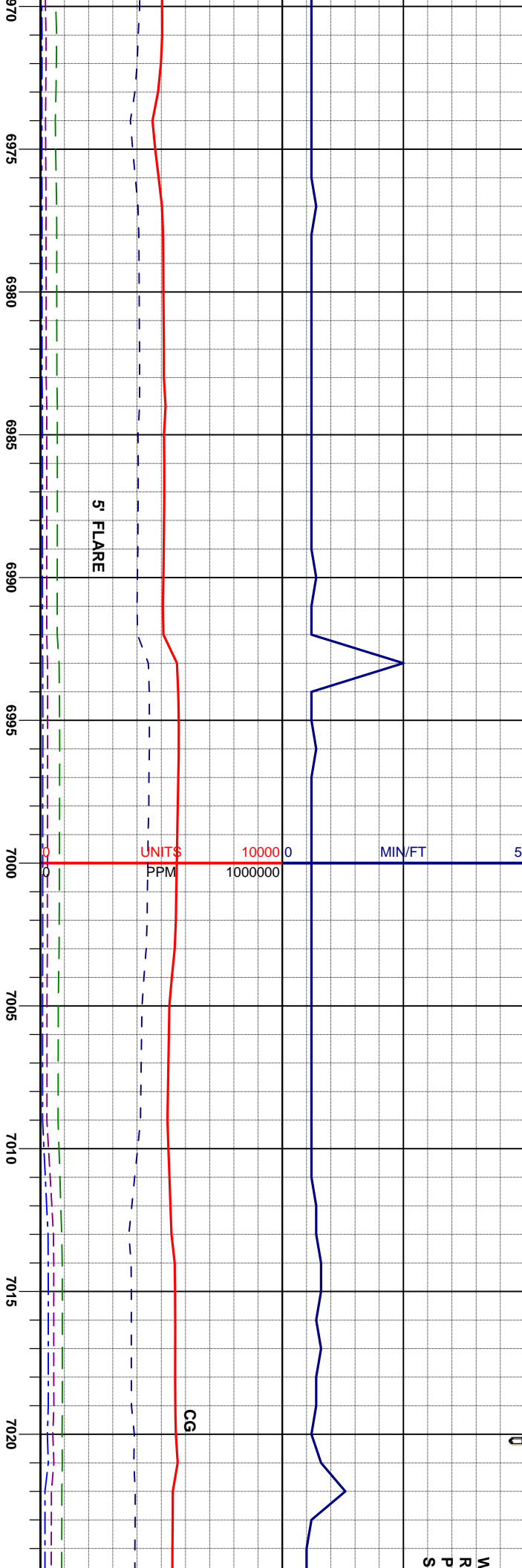
MUD CHECK:  
WT 10.6  
VIS 48 pH 8.7  
CG

MD--6965'  
INC 92.85°  
AZ 180.59  
TVD = 6080.51'

SH: mgybm, occ ltybm, sbkly-sply,  
mfrm, sl-m silty, rr v silty stks, sl-m gt tex, tr  
dk mica & vfgt dism pyr, tr-occ lse ofrwh  
BENT frag, m-v calc

W  
R  
P  
S

0



5 FLARE

UNITS  
PPM

CG

API 200

5600 0

6600

SH: mgybm, occ lgybm, sbiky-sbply,  
mfrn, sl-m sily, rr v sily stk, sl-m gt tex, tr  
dk mica & vgr dism pyr, tr fos shell frag, rr  
lse ofwh BENT frag, m-v calc

OB 10  
PM 45  
P 2400  
PM 65

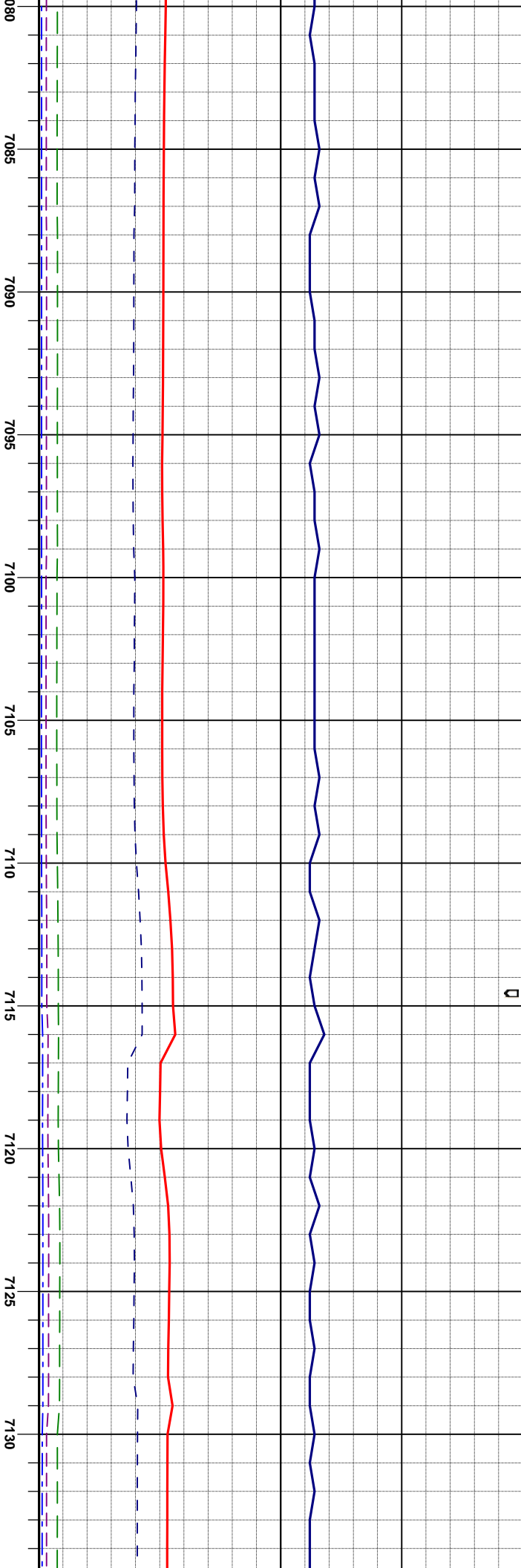
MUD CHECK:  
WT 10.7  
VIS 48 pH 8.7

MD--7060'  
INC 92.22°  
AZ 180.56  
TVD = 6076.30'

SH: mglybm, occ lgybm, sbblly-sbply,  
mfim, sl-m slty, rr v slty stlk, sl-m gt tex, tr  
dk mica & vfgt dism pyr, m-v calc



0



7080

7085

7090

7095

7100

7105

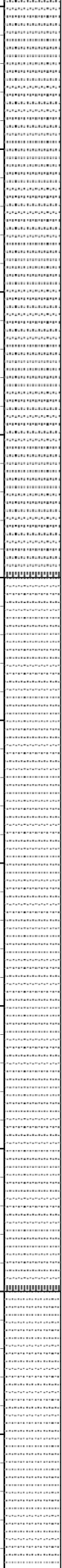
7110

7115

7120

7125

7130



7080

7085

7090

7095

7100

7105

7110

7115

7120

7125

7130



7080

7085

7090

7095

7100

7105

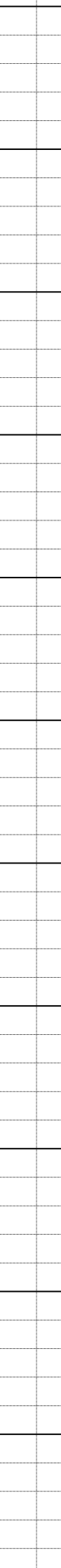
7110

7115

7120

7125

7130



7080

7085

7090

7095

7100

7105

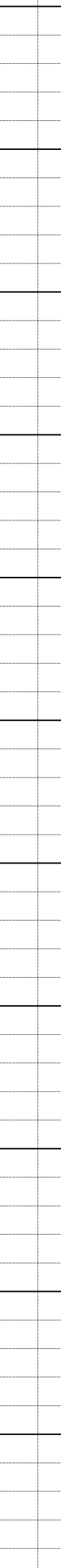
7110

7115

7120

7125

7130



7080

7085

7090

7095

7100

7105

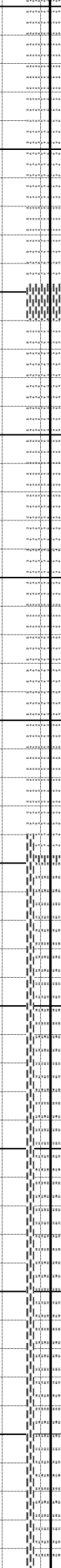
7110

7115

7120

7125

7130



7080

7085

7090

7095

7100

7105

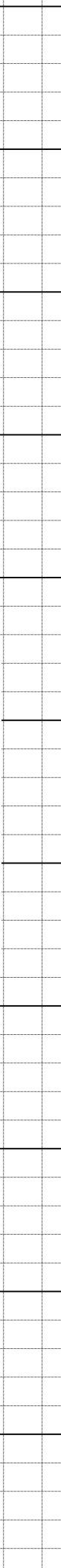
7110

7115

7120

7125

7130



7080

7085

7090

7095

7100

7105

7110

7115

7120

7125

7130

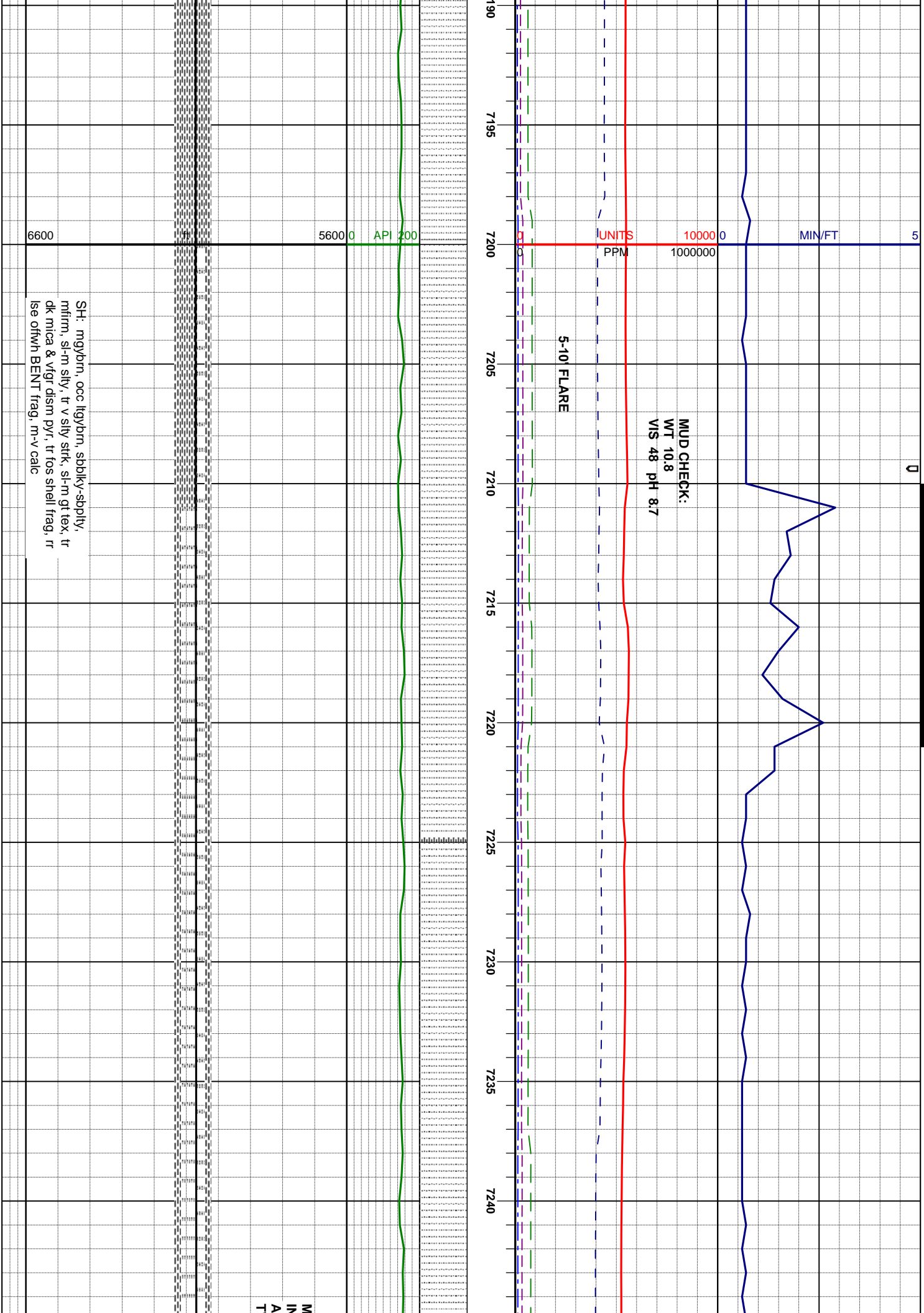
SH: mgybrn, occ ltybrn, sbbkly-spply,  
mfrim, sl-m slty, tr v slty stlk, sl-m gt tex, tr  
dk mica & vfgt dism pyr, tr fos shell frag, m  
-v calc

MUD CHECK:  
WT 10.8  
VIS 48 pH 8.7

7140 7145 7150 7155 7160 7165 7170 7175 7180 7185

MD--7155'  
INC 91.98°  
AZ 180.87  
TVD = 6072.82'

SH: mgybrn, ooc ltybrn, sbbkly-splyt,  
mfrn, sl-m slty, tr v slty stfk, sl-m gt tex, tr  
dk mica & vfgr dsm pyr, tr fos shell frag, tr  
lse ofwh BENT frag, m-v calc



MUD CHECK:  
WT 10.8  
VIS 48 pH 8.7

D--7250'  
C 92.99°  
Z 181.56  
MD = 6068.70'

SH: mgybrn, ooc lgybrn, sbbkly-sply,  
mflrm, sl-m slty, tr v slty strk, sl-m gt tex, tr  
dk mica & vfgr dism pyr, rr fos shell frag, m  
-v calc



MUD CHECK:  
WT 10.8  
VIS 49 pH 8.8

MUD CHECK:  
WT 10.8  
VIS 49 pH 8.8

7305 7310 7315 7320 7325 7330 7335 7340 7345 7350

MD-7344'  
INC 90.37°  
AZ 181.93  
TVD = 6065.95'

SH: myb, ooc ltyb, sbkly-sbply,  
mlrm, sl-m sty, tr v sty strk, sl-m gt tex, tr  
dk mica & vgr dism pyr, rr fos shell frag, m  
-v calc

SH: mg  
mlrm, s  
dk mica  
lse ofwl

4/30/12

0

MIN/FT

5

1000000

UNITS  
PPM

01  
0

7400

7405

7355

7360

7365

7370

7375

7380

7385

7390

7395

API 200

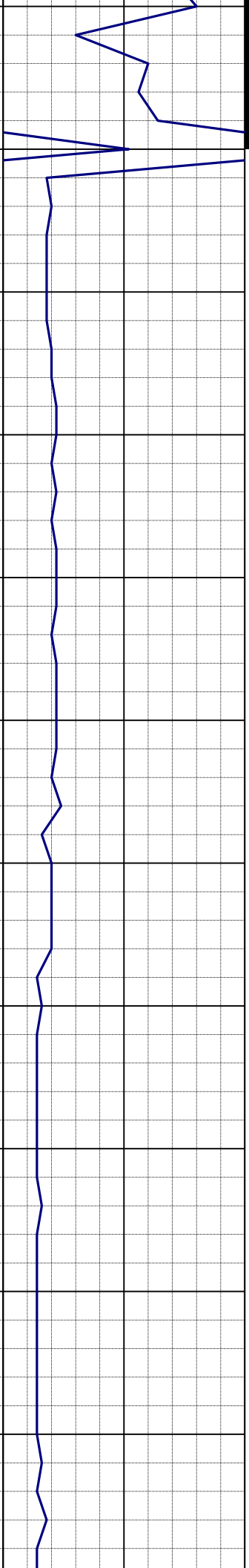
5600 0

ft

6600

SH: mgybrn, occ lgybrn, sbbl  
mfrn, sl-m sily, tr v sily stfk, s  
dk mica & vgr dism pyr, vtr lsc  
frag, m-v calc

brn, occ lgybrn, sbblly-sbply,  
-m sily, tr v sily stfk, sl-m gt tex, tr  
& vgr dism pyr, tr fos shell frag, r  
BENT frag, m-v calc



MUD CHECK:  
WT 11.0  
VIS 50 pH 8.7

ON GAS  
BUSTER

NO FLARE

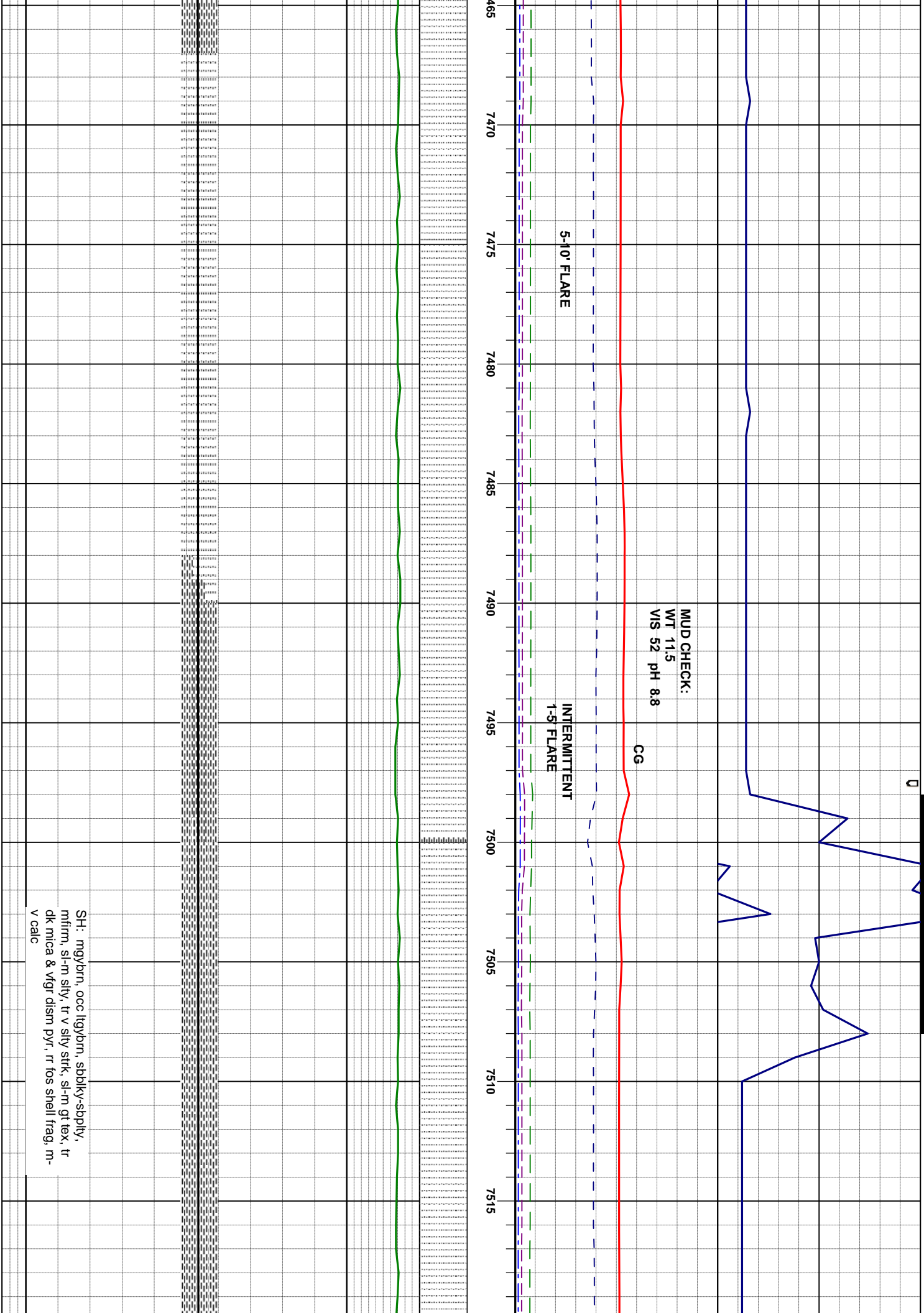
7410 7415 7420 7425 7430 7435 7440 7445 7450 7455 7460

MD-7439'  
INC 91.11°  
AZ 181.19  
TVD = 6064.73'



ky-sbply,  
-m gt tex, tr  
a offwh BENT

SH: mgybrn, occ ltybrn, sbply-sbply,  
mftm, sl-m slty, tr v slty strk, sl-m gt tex, tr  
dk mica & vfgt dism pyr, m-v calc





MUD CHECK:  
WT 11.1  
VIS 50 pH 8.7

7525

7530

7535

7540

7545

7550

7555

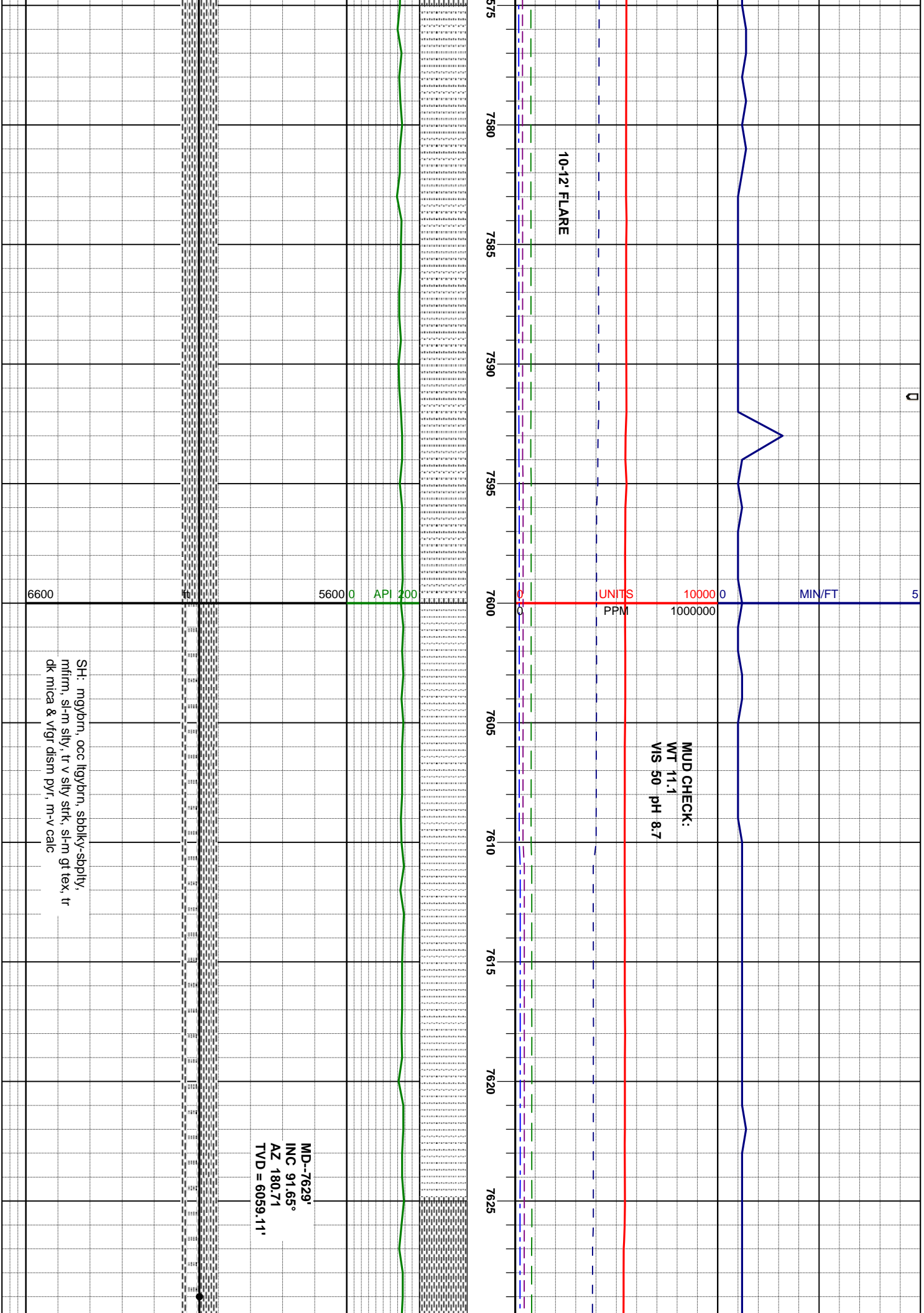
7560

7565

7570

MD--7534'  
INC 92.02°  
AZ 180.72  
TVD = 6062.14'

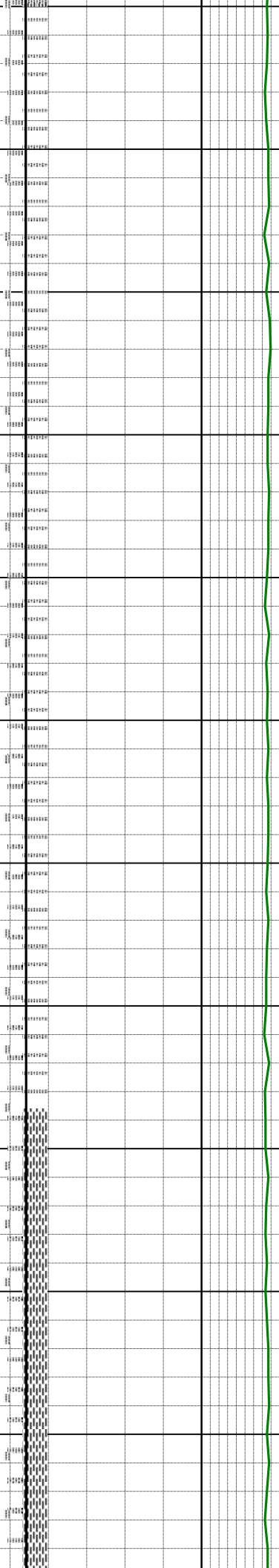
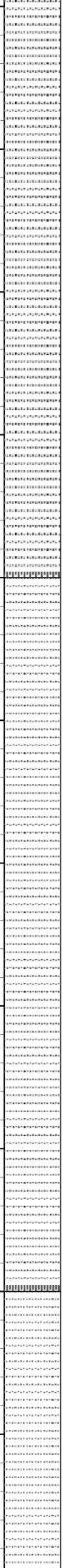
SH: mgybrn, ooc ltybrn, sbbkly-splyt,  
mlrm, sl-m slty, tr v slty stfk, sl-m gt tex, tr  
dk mica & vfgr dism pyr, rr fos shell frag, m-  
v calc



MUD CHECK:  
WT 11.15  
VIS 51 pH 8.7

5-12" FLARE

7630 7635 7640 7645 7650 7655 7660 7665 7670 7675 7680



SH: mg/brn, occ lty/brn, sbblky-sbply,  
mfirm, sl-m slty, tr v slty strk, sl-m gt tex, tr  
dk mica & vfgt dism pyr, m-v calc

WOB 12  
RPM 40  
PP 2200  
SPM 60

MUD CHECK:  
WT 11.2  
VIS 52 pH 8.7

CG

MD-7724'  
INC 91.44°  
AZ 180.47  
TVD = 6056.55'

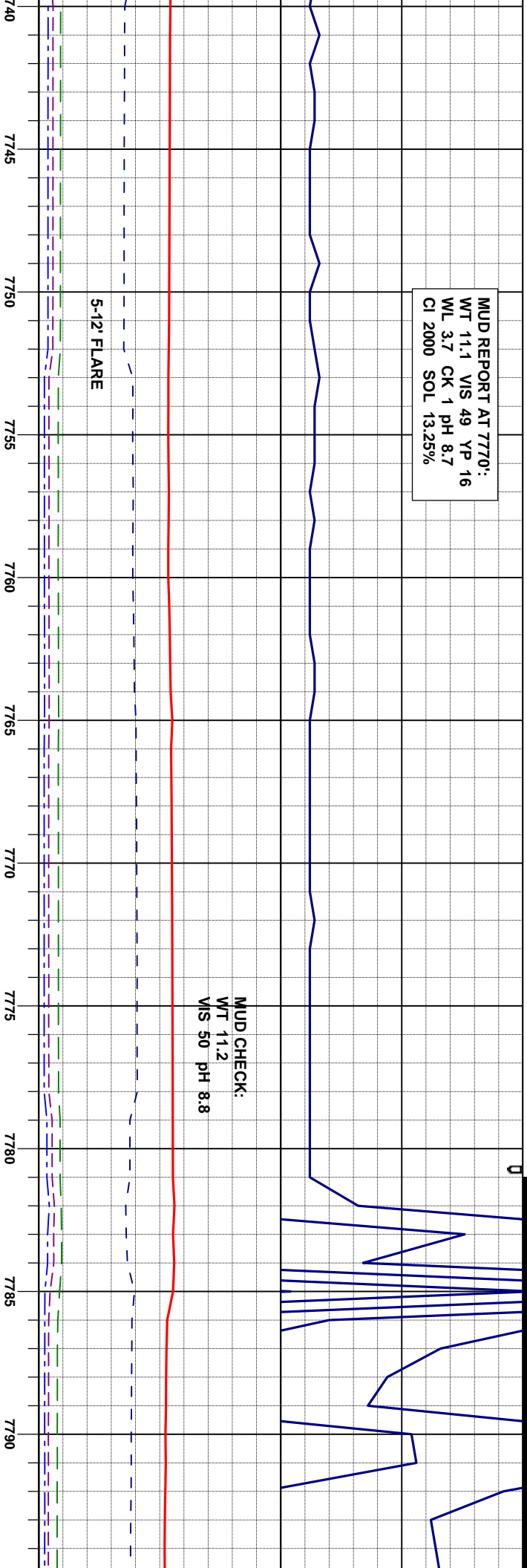
SH: mgybmn, ooc lgybmn, sbblky-sbply,  
mflm, sl-m slty, tr v slty strk, sl-m gt tex, tr  
dk mica & vfgr dism pyr, m-v calc



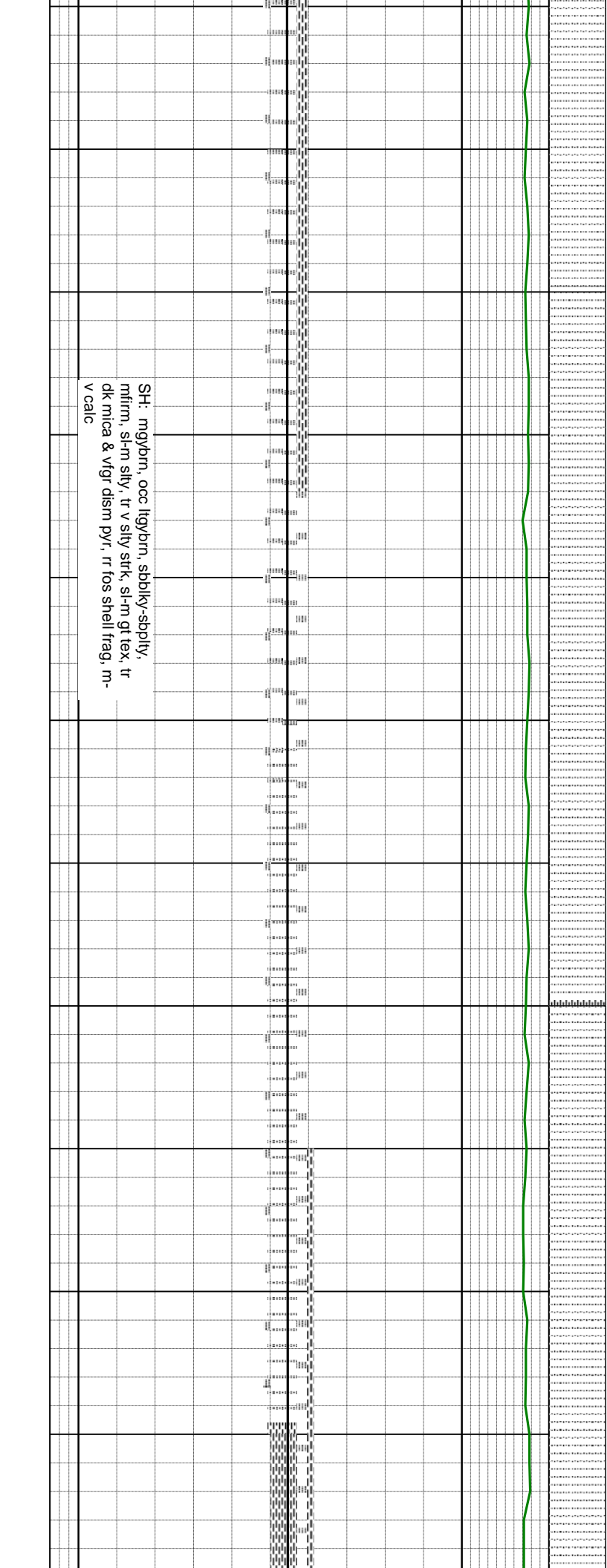
MUD REPORT AT 7770':  
WT 11.1 VIS 49 YP 16  
WL 3.7 CK 1 pH 8.7  
CI 2000 SOL 13.25%

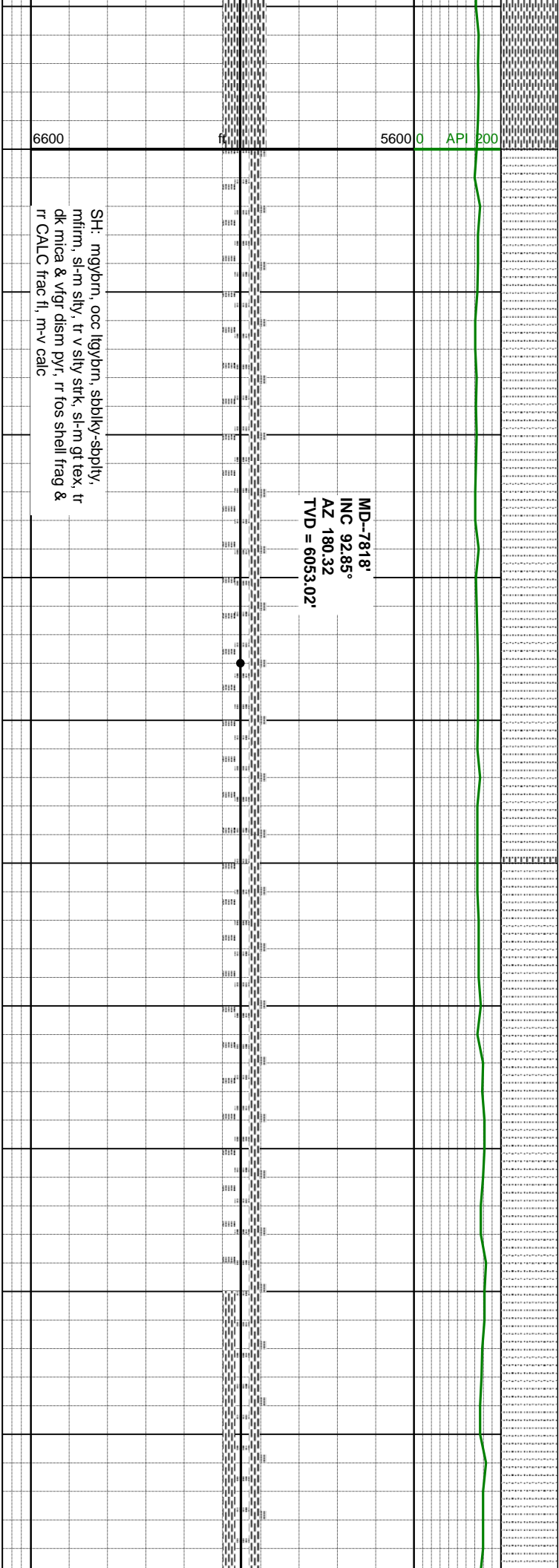
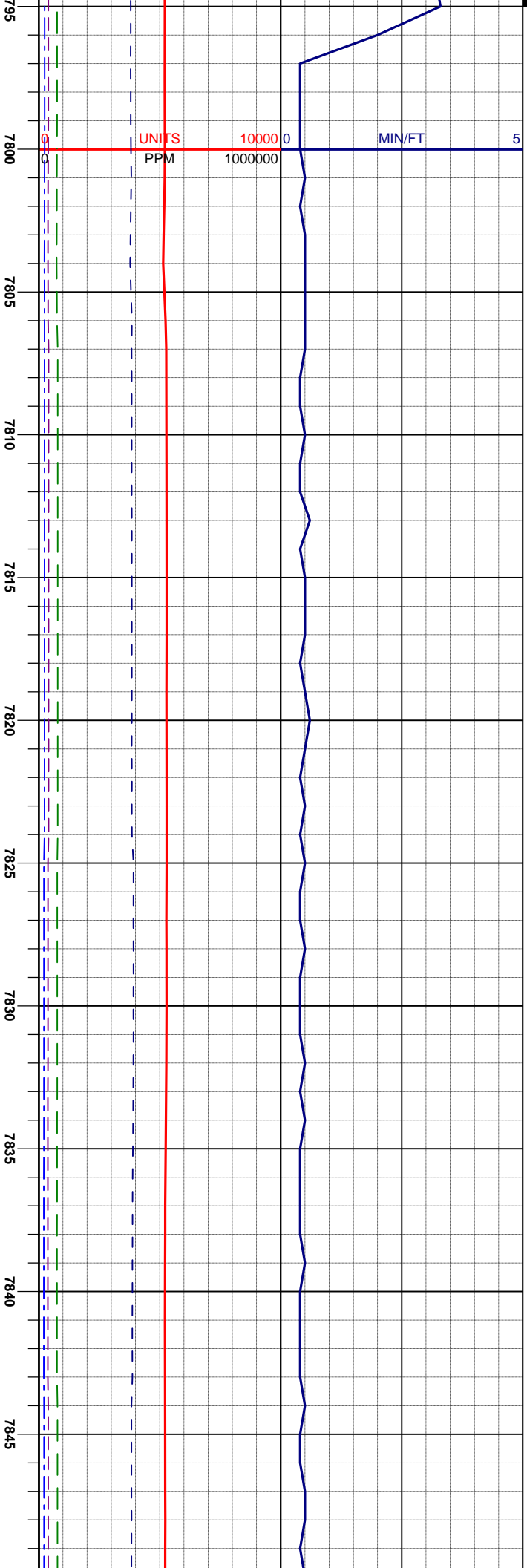
MUD CHECK:  
WT 11.2  
VIS 50 pH 8.8

5-12' FLARE



SH: mgybrn, occ lgybrn, sbblky-sbply,  
mfrn, sl-m slty, tr v slty strk, sl-m gt tex, tr  
dk mica & vfgr dism pyr, rr fos shell frag, m-  
v calc



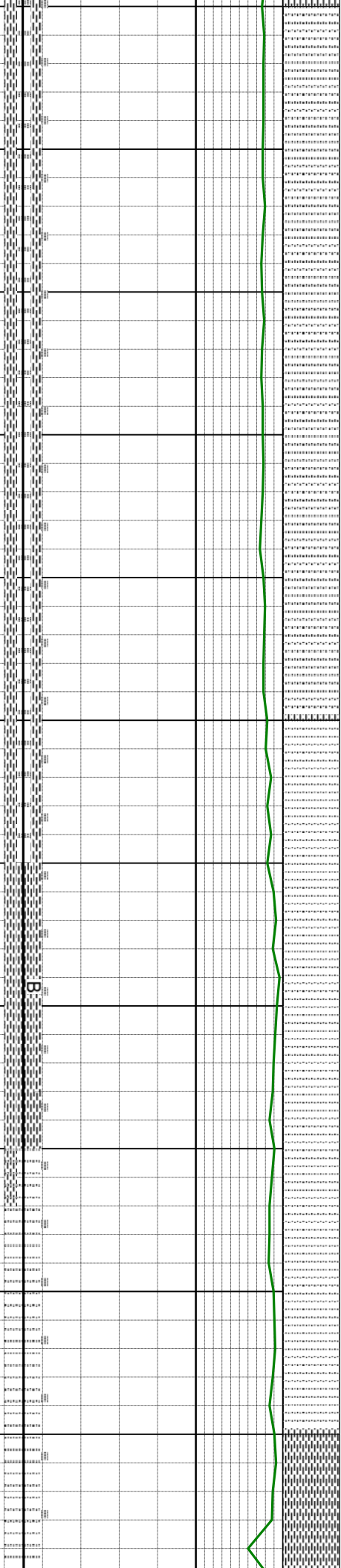


0

MUD CHECK:  
WT 11.15  
VIS 48 pH 8.8

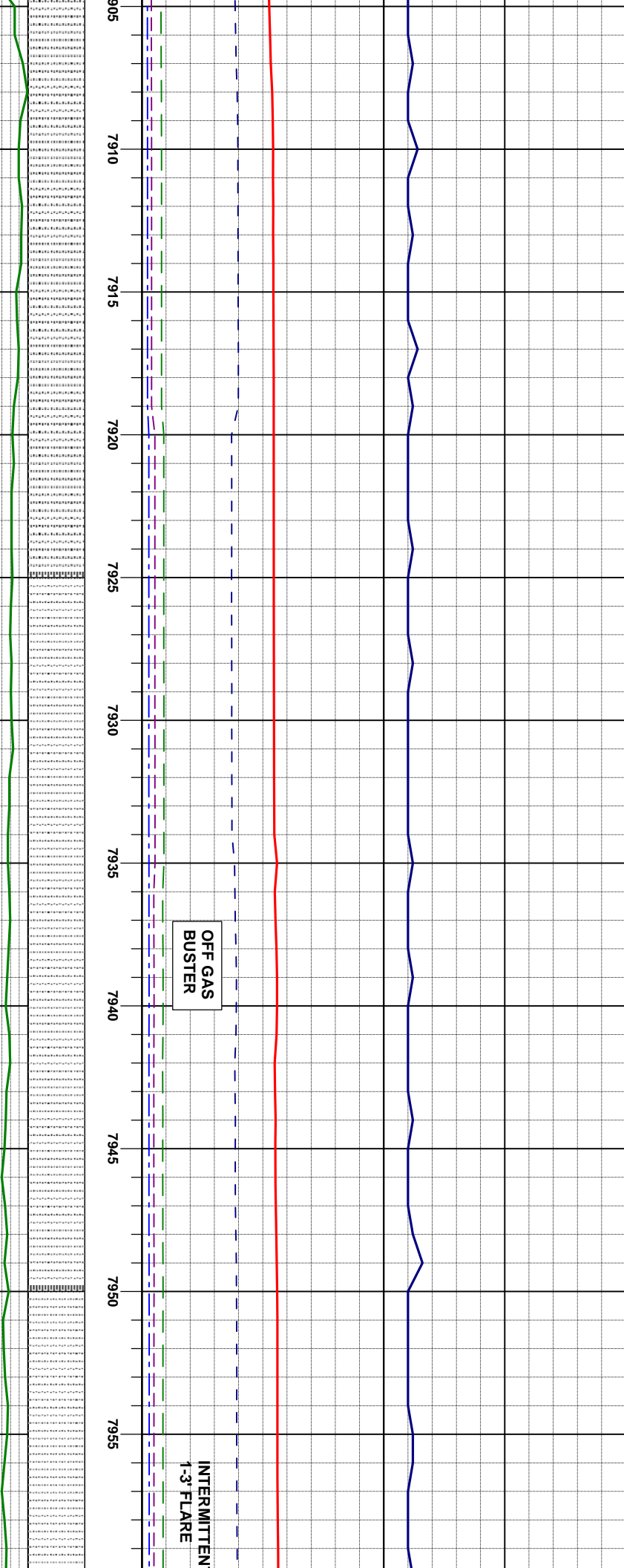
INTERMITTENT  
1-5' FLARE

7850 7855 7860 7865 7870 7875 7880 7885 7890 7895 7900



SH: mg,brn, occ lgy,brn, sbblky-sbply,  
mfirm, sl-m sily, tr v sily strk, sl-m gt tex, tr  
dk mica & vgr dism pyr, r tos shell frag, m-  
v calc, w/ tr-occ lse ofwh BENT frag

SH: mg,  
mfirm, sl  
dk mica  
v calc, w



OFF GAS  
BUSTER

INTERMITTEN  
1-3' FLARE

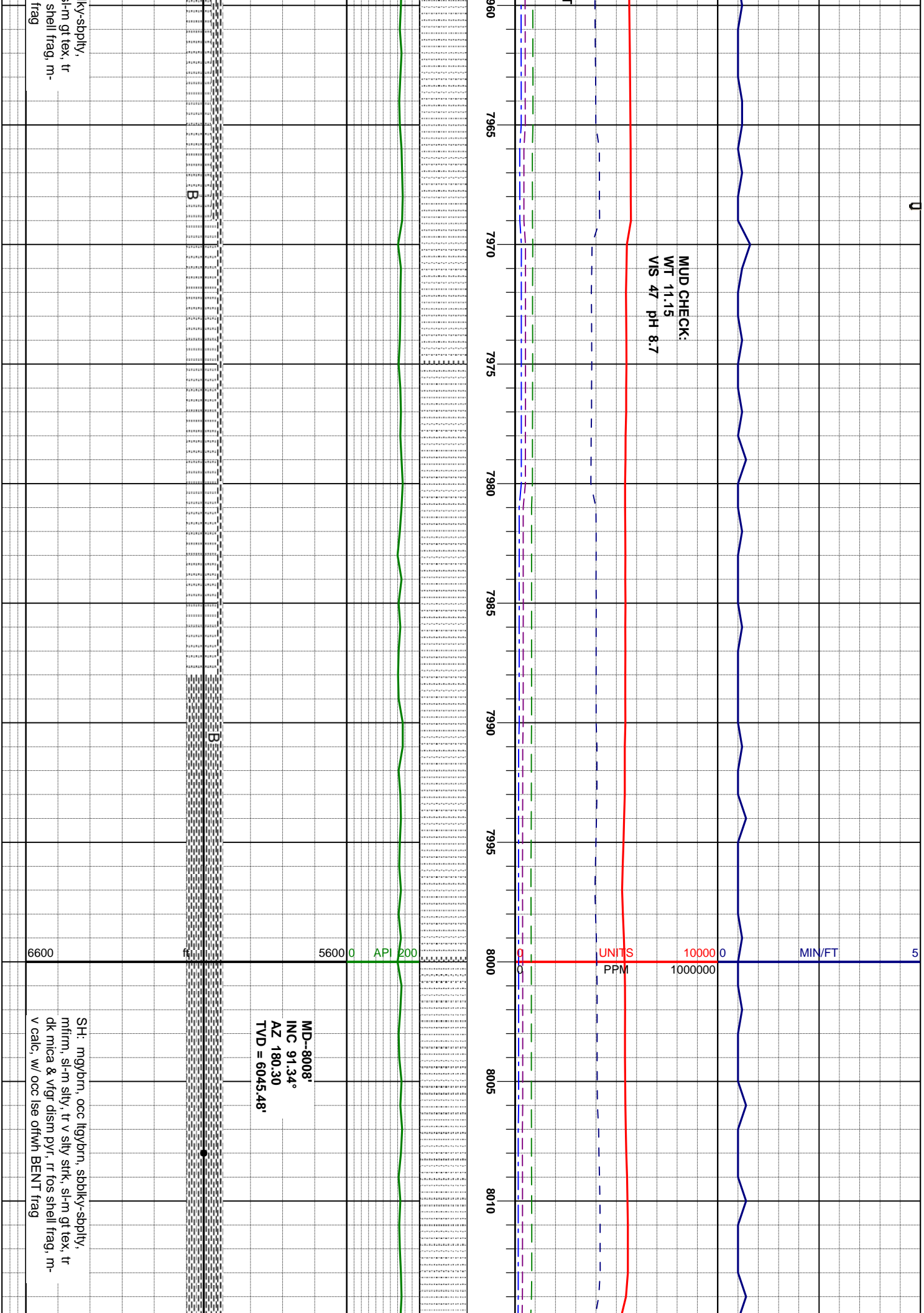
MD--7913'  
INC 92.45°  
AZ 180.29  
TVD = 6048.63'

B

bm, occ ltybm, sbbkly-sbply,  
m slty, tr v slty strk, sl-m of tex, tr  
& vfgt dism pyr, rr fos shell frag, m-  
tr-occ lse ofthw BENT frag

Sht: mgybm, occ ltybm, sbb  
mfrm, sl-m slty, tr v slty strk, s  
dk mica & vfgt dism pyr, rr fos  
v calic, w/ occ lse ofthw BENT

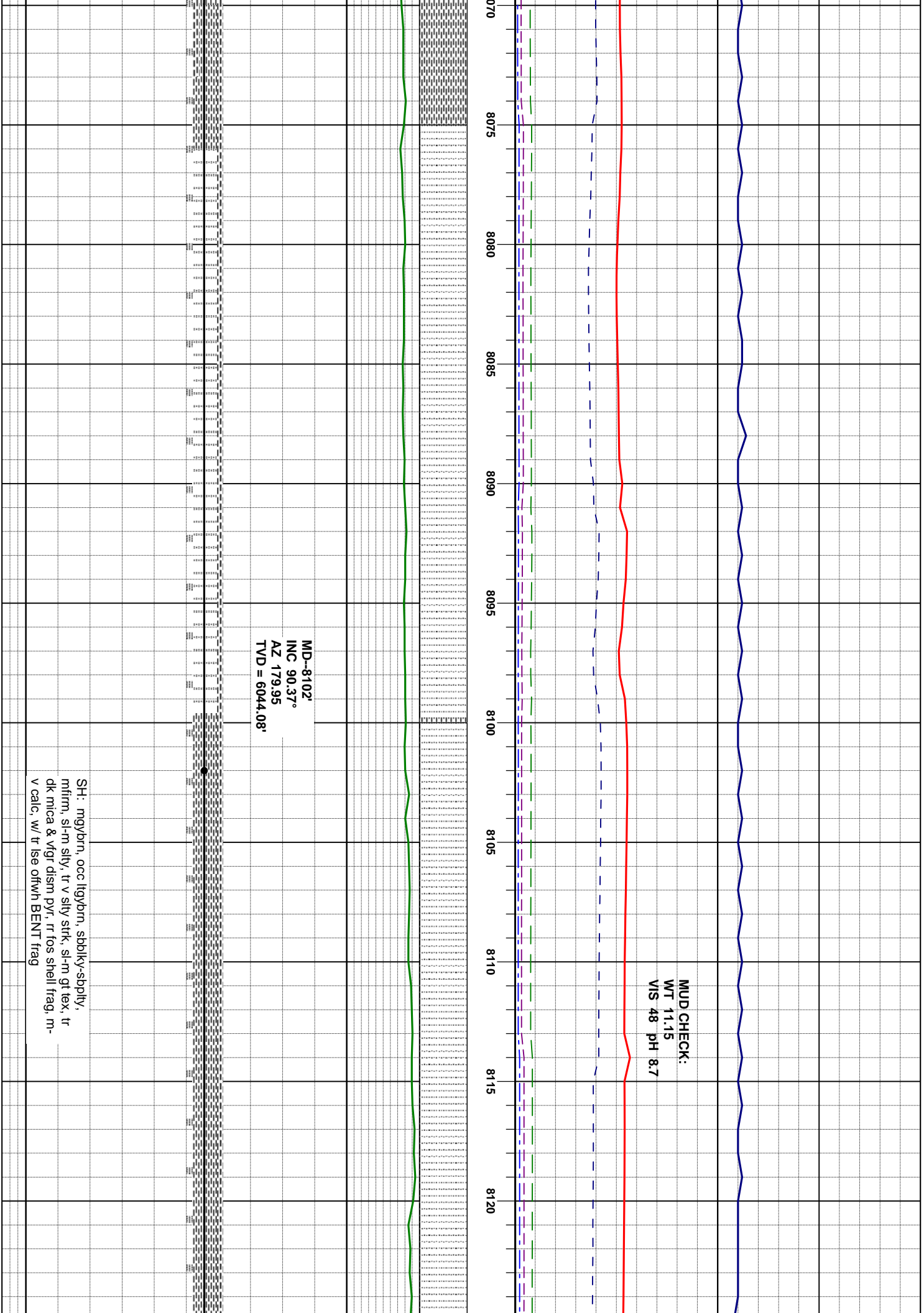




GAS TRAP  
PLUGGED  
WITH  
CUTTINGS

NO FLARE

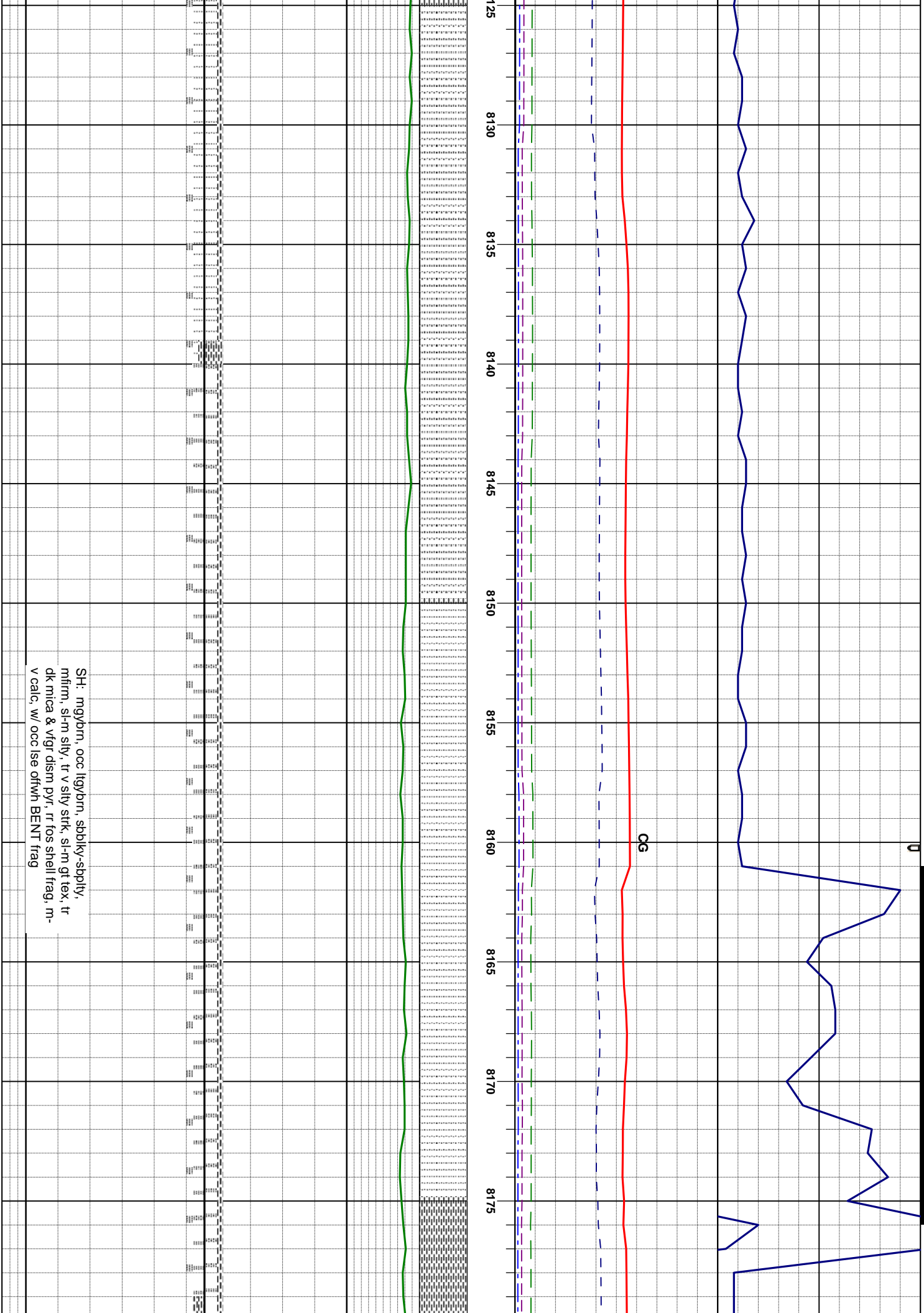
SH: mglybrn, occ ltgybrn, sbblky-sbply,  
mflrm, sl-m slty, tr v slty strk, sl-m gt tex, tr  
dk mica & vfgr dism pyr, rr fos shell frag, m-  
v calc, w/ tr lse ofthw BENT frag



MUD CHECK:  
WT 11.15  
VIS 48 pH 8.7

MD-8102'  
INC 90.37°  
AZ 179.95  
TVD = 6044.08'

SH: mgybrn, occ lgybrn, sbbkly-sbply,  
mfirm, sl-m slty, tr v slty stfk, sl-m gt tex, tr  
dk mica & vfgr dism pyr, rr tos shell frag, m-  
v calc, w/ tr lse ofwh BENT frag





MUD REPORT AT 8255':  
WT 11.1 VIS 49 YP 16  
WL 3.9 CK 1 pH 8.9  
CI 2000 SOL 13.25%

MUD CHECK:  
WT 11.1  
VIS 49 pH 8.9

UNITS  
PPM

MIN/FT

5

1000000  
0

8185

8190

8195

8200

8205

8210

8215

8220

8225

8230

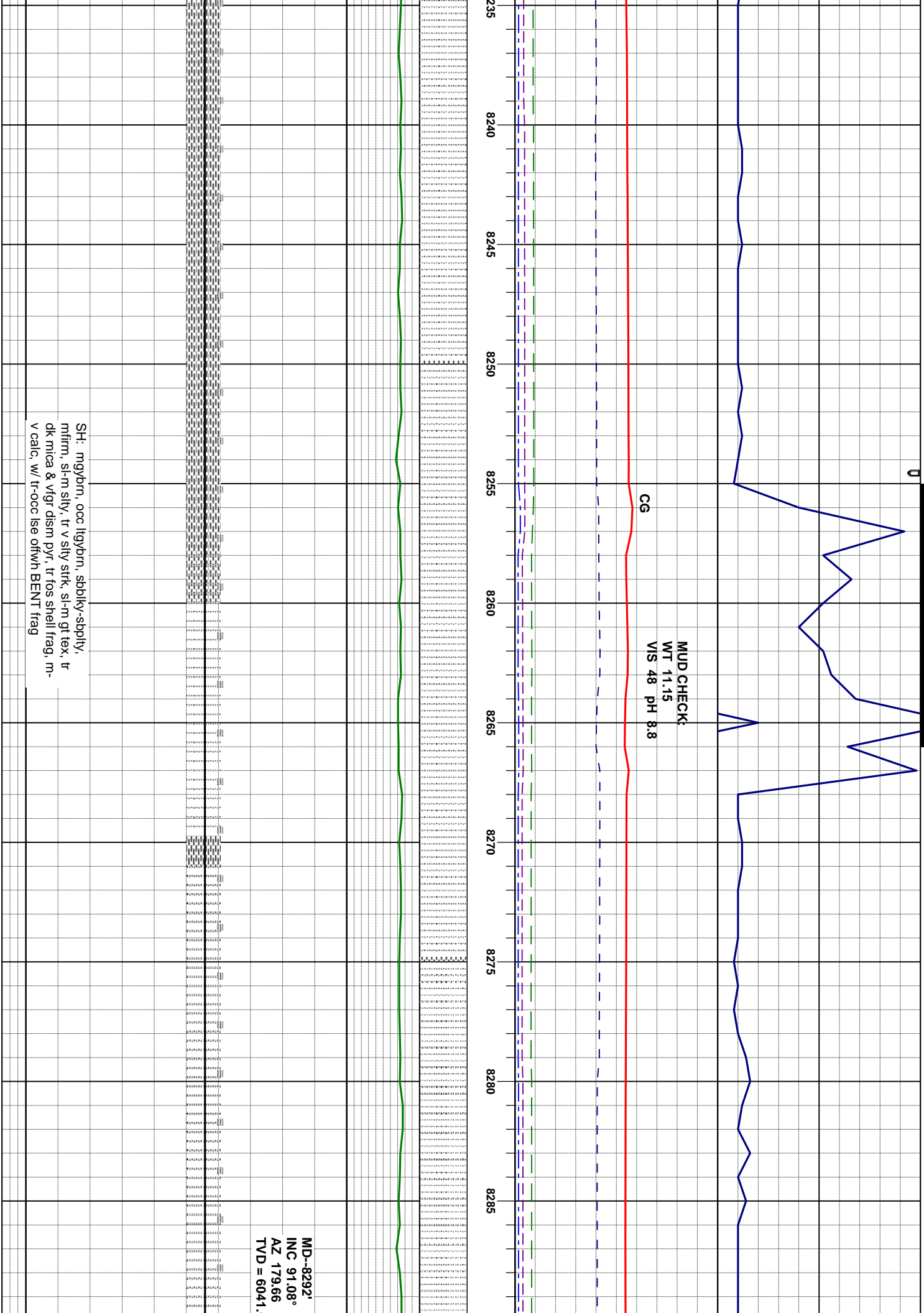
MD-8197'  
INC 90.74°  
AZ 179.71  
TVD = 6043.16'

API 200

5600 0

6600

SH: mybmn, occ ltybmn, sbblky-sbply,  
mfirm, sl-m sily, tr v sily strk, sl-m qt tex, tr  
dk mica & vfrg dism pyr, tr fos shell frag, m-  
v calc, w/ tr-occ lse offwh BENT frag



CG

MUD CHECK:  
WT 11.15  
VIS 48 pH 8.8

SH: mgybm, occ ltybm, sbby-sply, mfirm, sl-m sily, tr v sily stfk, sl-m gt tex, tr dk mica & vfgr dism pyr, tr fos shell frag, m-v calc, w/ tr-occ lse offwh BENT frag

MD-8292'  
INC 91.08°  
AZ 179.66  
TVD = 6041.

WOB 10  
RPM 45  
PP 3000  
SPM 65

MUD CHECK  
WT 11.1  
VIS 48 pH 8.9

8295

8300

8305

8310

8315

8320

8325

8330

8335

8340

86'

SH: mybmn, occ itybm, spbiky-spbly,  
mlfrm, sl-m slty, tr v slty strk, sl-m gt tex, tr  
dk mica & vfrg dism pyr, tr fos shell frag, m-  
v calc, occ lse ofwh BENT frag

U

MUD CHECK:  
WT 11.1  
VIS 48 pH 8.9

8345

8350

8355

8360

8365

8370

8375

8380

8385

8390

8395

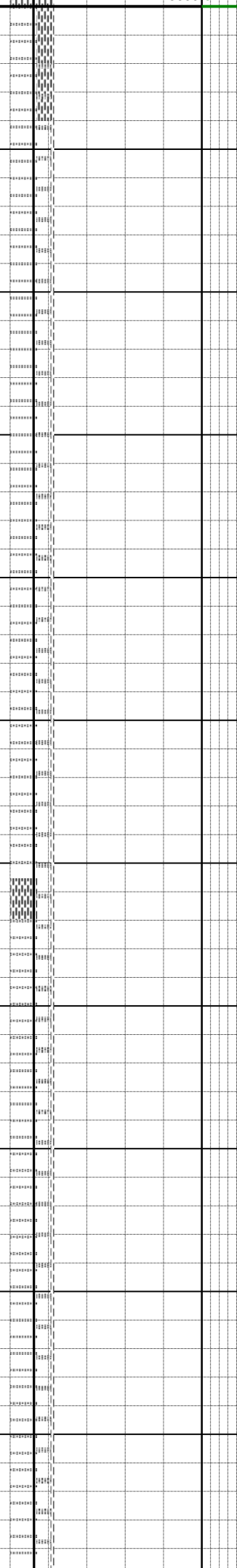
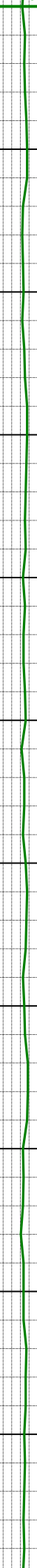
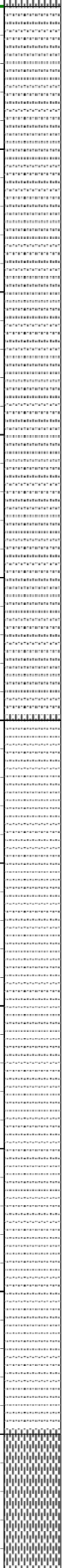
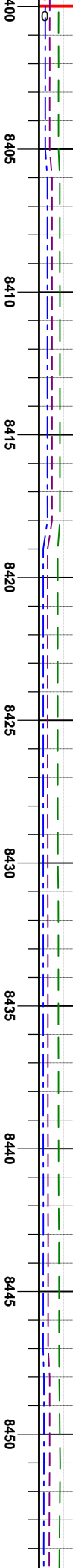
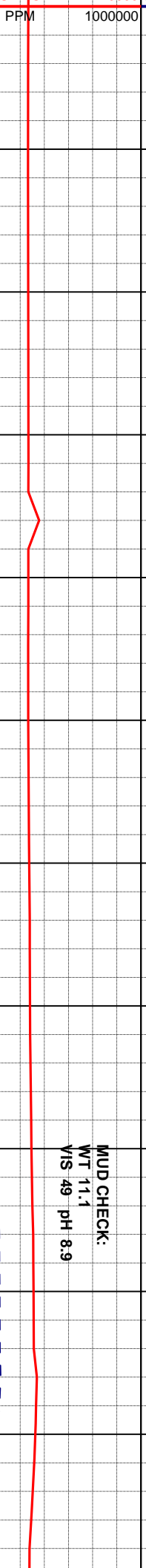
MD-8387'  
INC 91.64°  
AZ 178.07  
TVD = 6039.40'

SH: mybrn, occ lgybrn, sbblky-sbply,  
mfirm, sl-m slty, tr v slty strk, sl-m gt tex, tr  
dk mica & vlgf dism pyr, tr fos shell frag, tr  
calc fl frac, m-v calc, occ lse offwh BENT  
frag



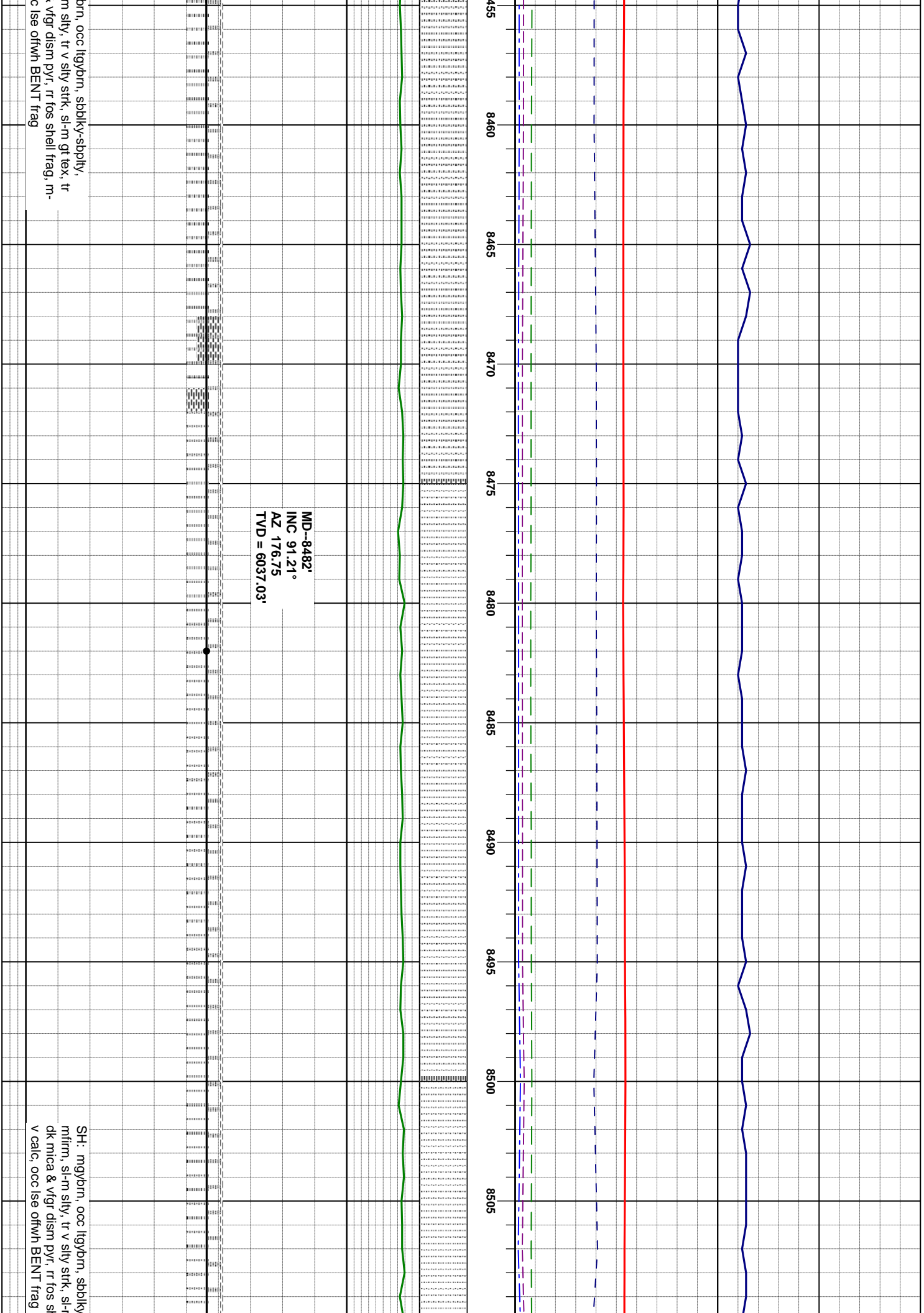
0

MUD CHECK:  
WT 11.1  
VIS 49 pH 8.9



SH: mybm, occ ltybm, sbkly-sbply,  
mlfrm, sl-m stly, tr v stly strk, sl-m qt tex, tr  
dk mica & vfgr dism pyr, tr fos shell frag, m-  
v calc, occ lse ofthw BENT frag

SH: my  
mlfrm, sl-  
dk mica &  
v calc, oo

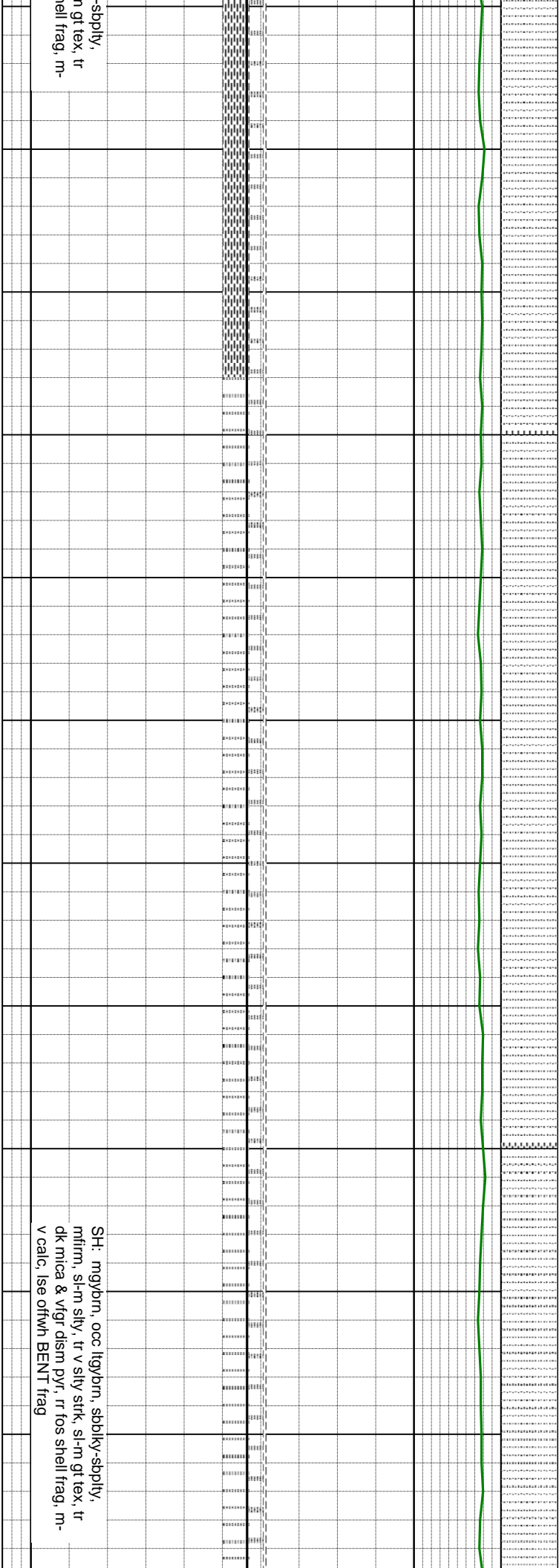


0

MUD CHECK:  
WT 11.1  
VIS 49 pH 8.8

MUD CHECK:  
WT 11.1  
VIS 48 pH 8.8

8510 8515 8520 8525 8530 8535 8540 8545 8550 8555 8560



5/1/12



5

MIN/FT

1000000

PPM

UNITS

8600

8605

8610

8615

8595

8590

8585

8580

8575

8570

8565

MD-8576'  
INC 90.77°  
AZ 176.93  
TVD = 6035.41'

6600

5600

API 200

SH: mgybrn, occ lgybrn, sbbkly-sbply,  
mfrn, sl-m slty, tr v slty stfk, sl-m gt tex, tr  
dk mica & vfgr dism pyr, m-v calc, occ lse  
otwh-tan BENT frag



0

MUD CHECK:  
Wt 11.1  
Vis 49 pH 8.8

8620 8625 8630 8635 8640 8645 8650 8655 8660 8665 8670

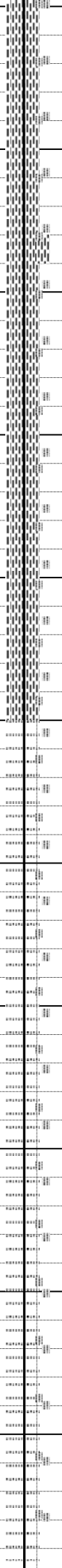
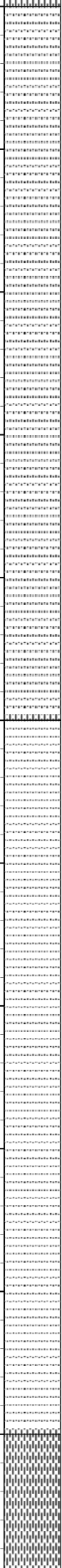
MD-8671'  
INC 91.41°  
AZ 177.29  
TVD = 6033.60'

SH: mg/bn, occ lgy/bn, sbkly-sbply,  
mfirm, sl-m sily, tr v sily stfk, sl-m gt tex, tr  
dk mica & vfgt dism pyr, m-v calc, occ lse  
ofwhtan BENT frag

MUD CHECK:  
WT 11.1  
VIS 49 pH 8.8

CG

675 8660 8675 8690 8695 8700 8705 8710 8715 8720 8725

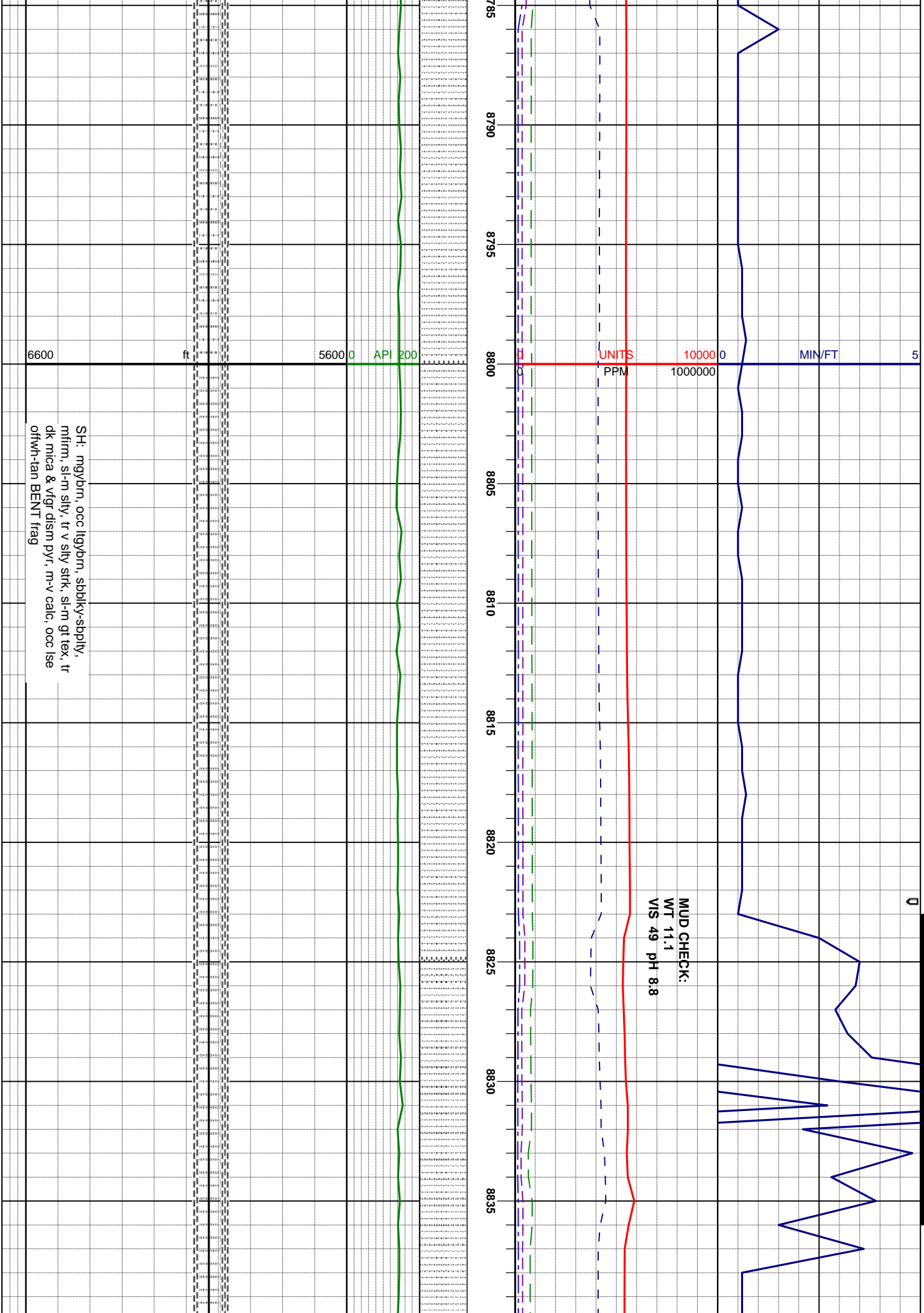


SH: mgybm, occ lgybm, sbblky-sply,  
mfrm, sl-m sily, tr v sily strk, sl-m qt tex, tr  
dk mica & vfgr dism pyr, m-v calc, tr-occ lse  
offwh-tan BENT frag

MUD CHECK:  
WT 11.1  
VIS 49 pH 8.8

MD--8766'  
INC 91.44°  
AZ 178.23  
TVD = 6031.23'

SH: mgylbrn, occ ltgybrn, sbblky-sbply,  
mfirm, sl-m silty, tr v silty strk, sl-m gt tex, tr  
dk mica & vfgt dism pyr, m-v calc, tr-occ lse  
offwh-tan BENT frag





WOB 10  
RPM 45  
PP 2500  
SPM 60

8840 8845 8850 8855 8860 8865 8870 8875 8880 8885 8890



MD-8874'  
INC 91.08°  
AZ 178.87  
TVD = 6028.71'

SH: mgybrn, occ ltybrn, sbbkly-sply,  
mfrfm, sl-m slty, tr v slty strk, sl-m gt tex, tr  
dk mica & vfgt dism pyr, m-v calc, tr-occ lse  
offwh-tan BENT frag, vrr fos shell frag

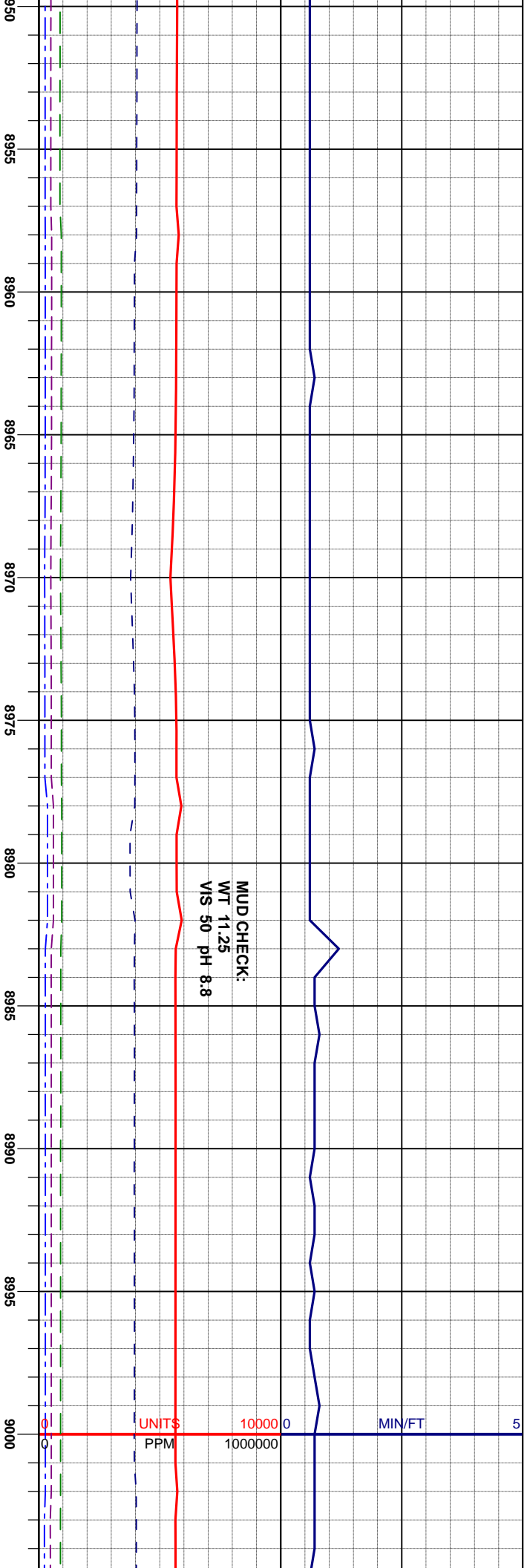
MUD REPORT AT 8921':  
WT 11.2 VIS 51 YP 19  
WL 3.9 CK 1 pH 8.7  
CI 2000 SOL 13.5%

MUD CHECK:  
WT 11.25  
VIS 51 pH 8.7

CG

SG

SH: mybmn, occ ltybmn, spbkly-sply,  
mlfrm, sl-m slty, tr v slty strk, sl-m qt tex, tr  
dk mica & vfrg dism pyr, m-v calc, tr-occ lse  
offwh-tan BENT frag, vrr fos shell frag



MD-8856'  
INC 92.72°  
AZ 178.91  
TVD = 6026.26'

SH: mgybrn, occ lgybrn, sbbkly-sbply,  
mfirm, sl-m sily, tr v sily strk, sl-m gt tex, tr  
dk mica & vgr dism pyr, m-v calc, tr-occ lse  
offwh-tan BENT frag

SH: mgybrn,  
mfirm, sl-l  
dk mica &  
offwh-tan

0

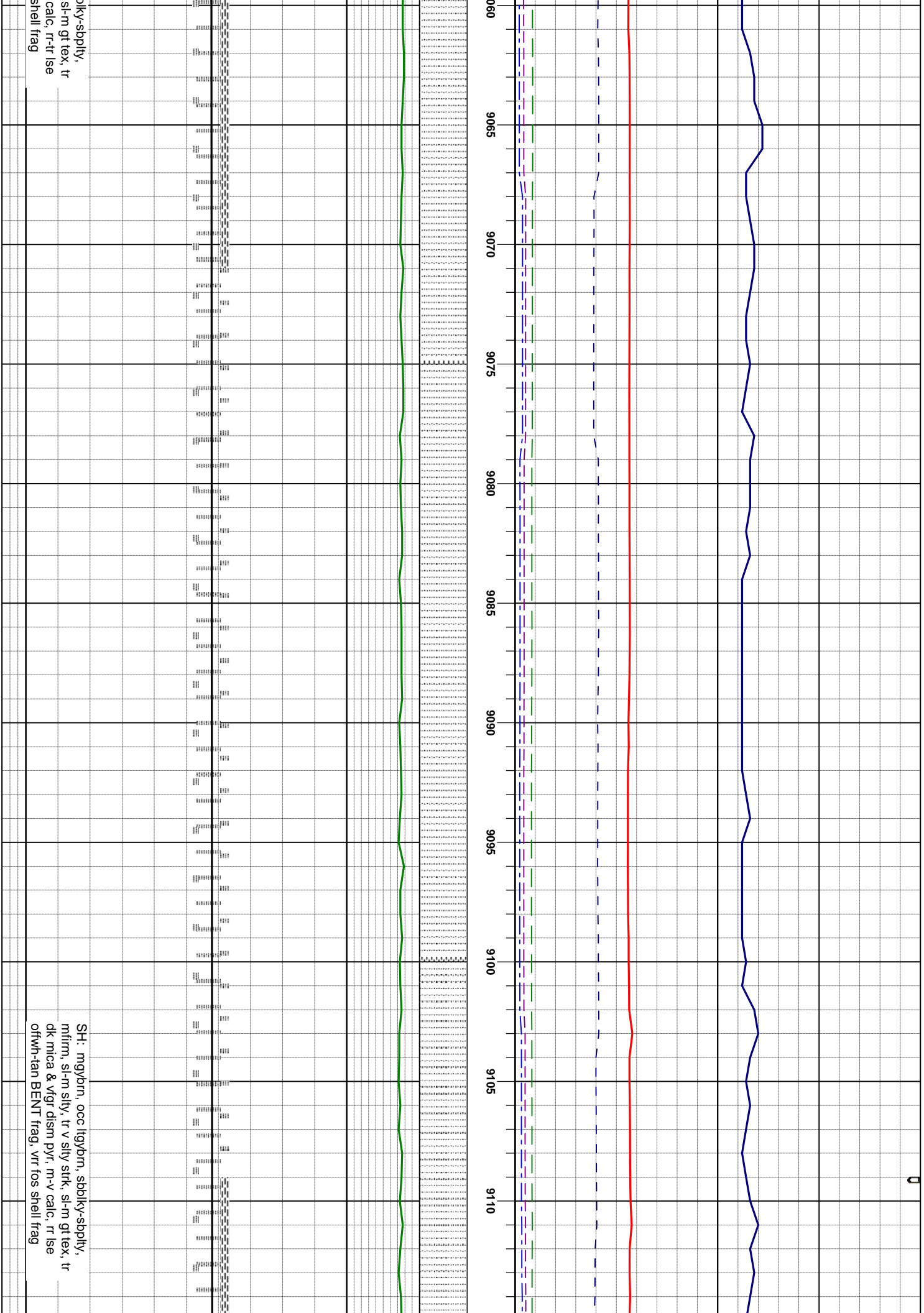
MUD CHECK:  
WT 11.2  
VIS 50 pH 8.7

MD--9051'  
INC 92.45°  
AZ 180.33  
TVD = 6021.97'

rn, occ lty/bm, sboly-sbply,  
n sily, tr v sily strk, sl-m gt tex, tr  
vgr dism pyr, m-v calc, r-tr lse  
BENT frag, vtr los shell frag

SH: mgy/bm, occ lty/bm, sb  
mtrn, sl-m sily, tr v sily strk,  
dk mica & vgr dism pyr, m-v  
ofwh-tan BENT frag, vtr los

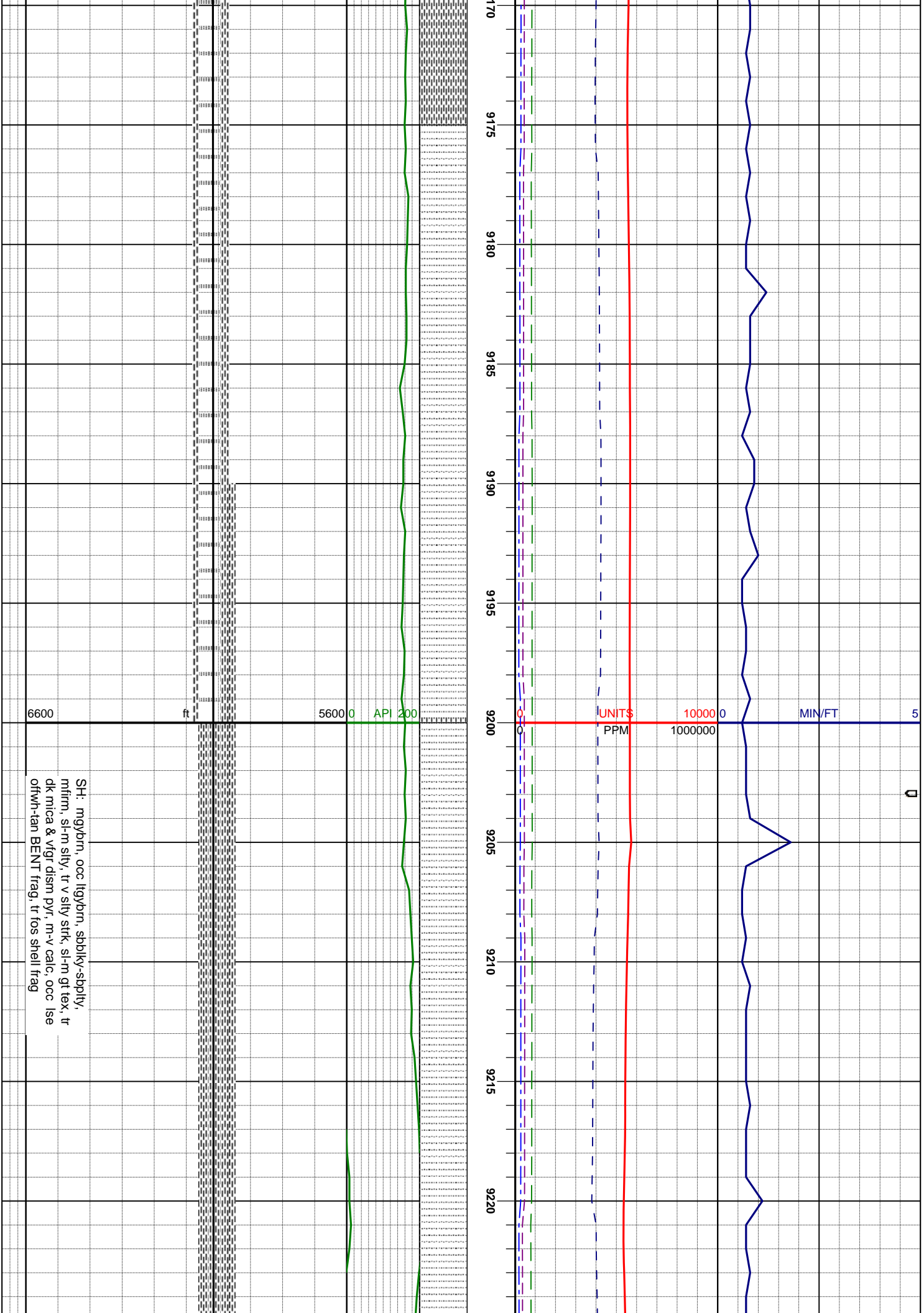


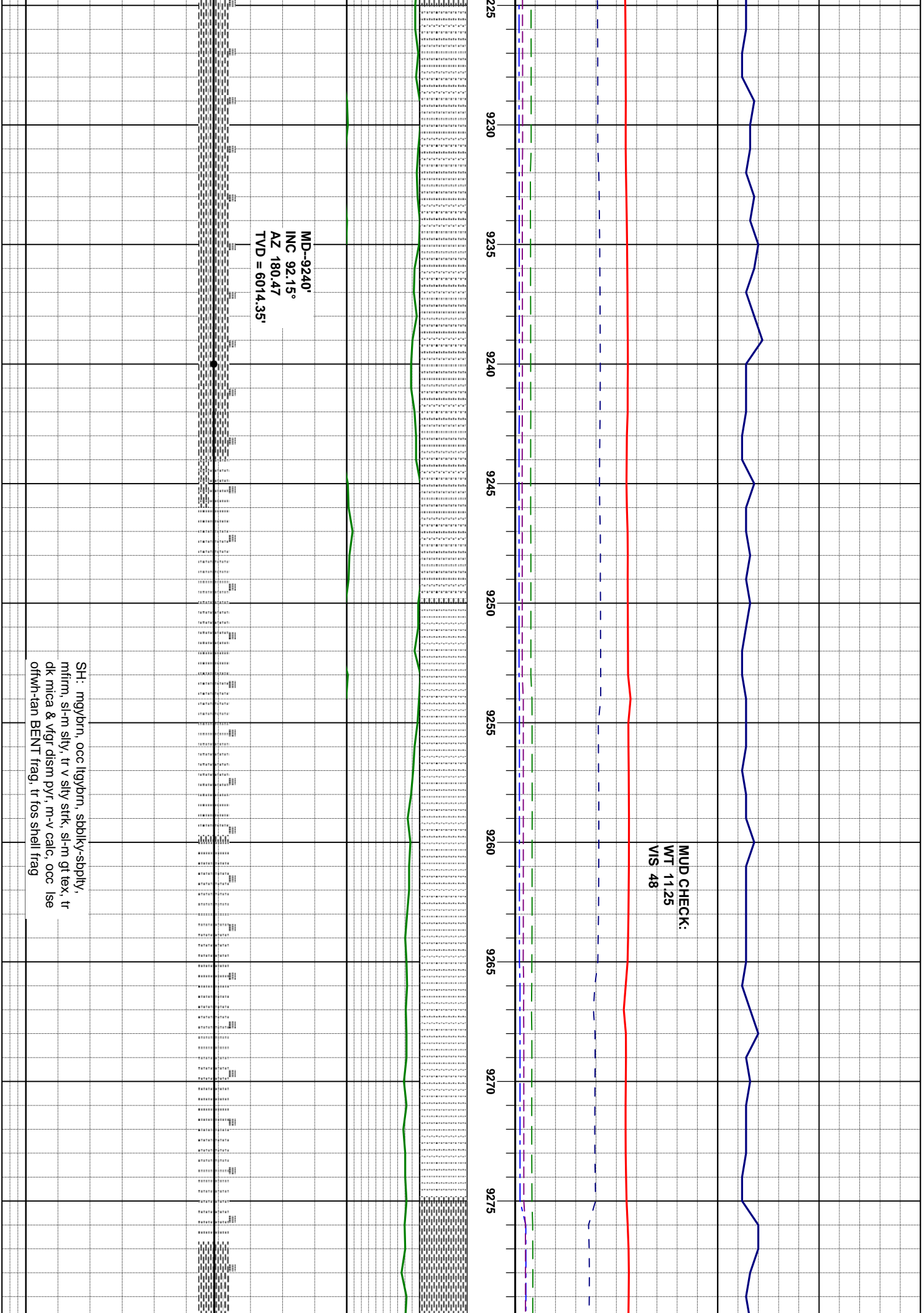


MUD CHECK:  
WT 11.25  
VIS 49 pH 8.6

MD--9146'  
INC 92.32°  
AZ 180.17  
TVD = 6018.01'

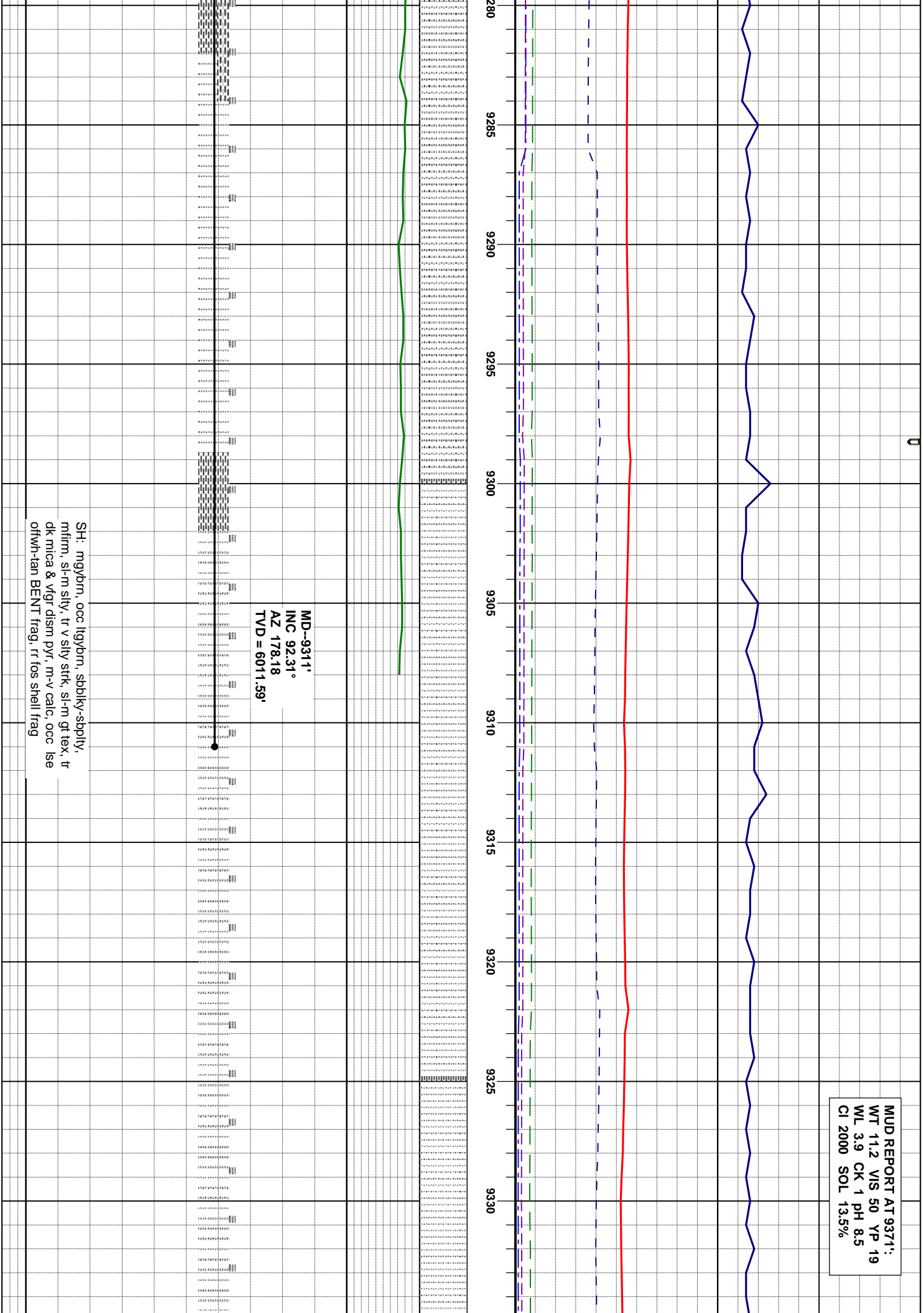
SH: mybmn, occ ltybmn, sbblky-sbply,  
mlfrm, sl-m slty, tr v slty strk, sl-m gt tex, tr  
dk mica & vgrf dism pyr, m-v calc, rr-tr lse  
offwh-tan BENT frag, vrr fos shell frag







MUD REPORT AT 9371':  
WT 11.2 VIS 50 YP 19  
WL 3.9 CK 1 pH 8.5  
CI 2000 SOL 13.5%



MD-9311'  
INC 92.31°  
AZ 178.18  
TVD = 6011.59'

SH: mgybrn, occ ltybrn, sbbkly-sply,  
mfrn, sl-m slty, tr v slty strk, sl-m gt tex, tr  
dk mica & vgr dism pyr, m-v calc, occ lse  
offwh-tan BENT frag, rr fos shell frag

OB #3 CUT  
4276' IN  
112 HRS.

DRILLER'S TD = 9371'  
AT 1545 HRS. ON  
5/11/2. CIRCULATE  
BOTTOMS UP &  
CONDITION MUD.  
COLUMBINE PER-  
SONNEL RELEASED  
AT 1800 HRS.

SH: mglybm, occ ltybm, sbblky-sbply,  
mfirm, sl-m sily, tr v sily strk, sl-m gt tex, tr  
dk mica & vgr dism pyr, m-v calc, tr lse  
otfwh-tan BENT frag, tr fos shell frag

