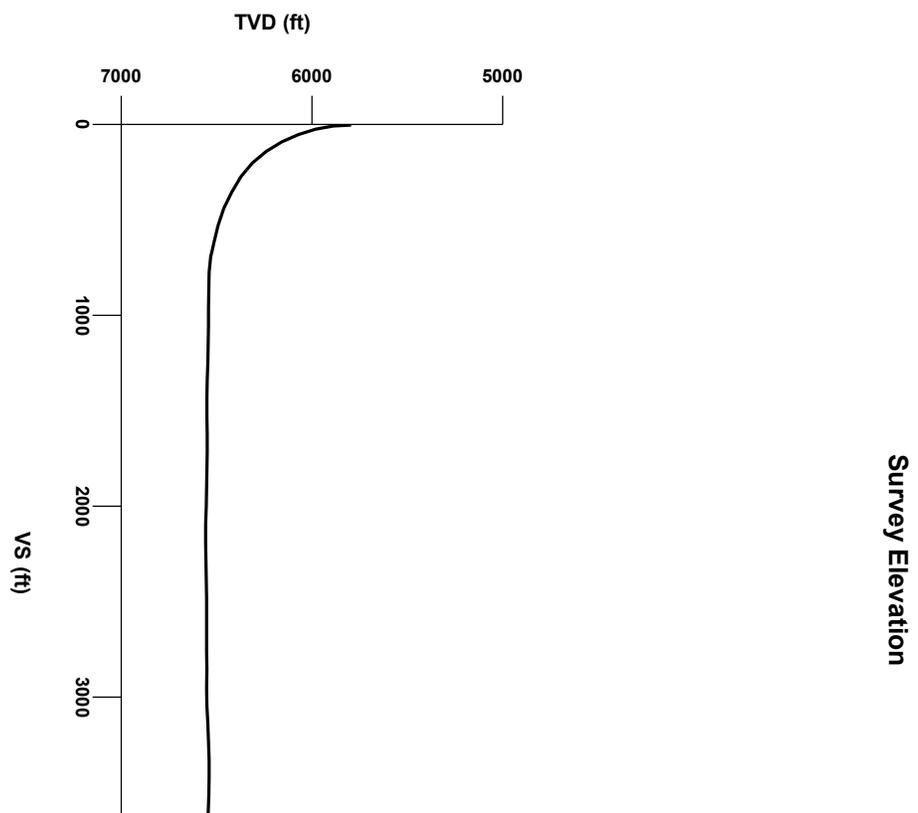
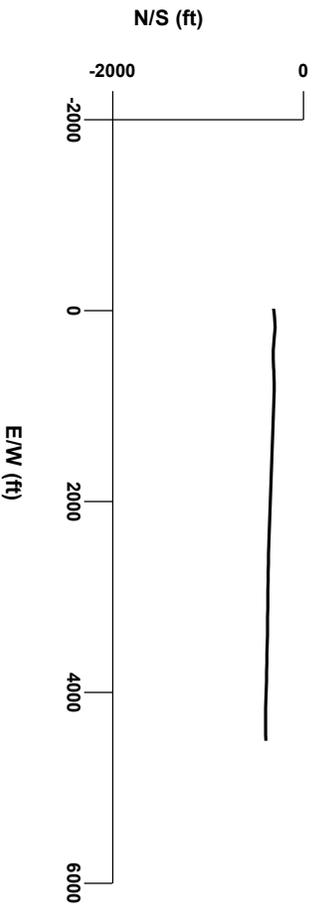


LOG created using L PLOT VH Version 3.0, May 08, 2013, Copyright (C) 1999-2009 Pason Systems Corp.

**OPERATOR:** NOBLE ENERGY INC.  
**WELL:** SLW RANCH STATE B12-62-1HN  
**LOCATION:** SWSW SEC 12, T5N, R64W  
**COUNTY:** WELD  
**STATE:** COLORADO  
**SPOT:** 648' FSL, 246' FWL  
**ELEVATION:** GR 4,596', KB 4,626'  
**FIELD:** KERSEY  
**SPUD DATE:** 05/02/2013  
**TD DATE:** 05/08/2013  
**DATES LOGGED:** 05/05/2013 - 05/08/2013  
**DEPTHS LOGGED:** 5779' MD - 10779'MD  
**LOGGERS:** ANDREA ZUIDEMA, SHANA SWIRIN  
**DRILLING FLUID:** LSND  
**DRILLING RIG:** H&P 326  
**API:** 05-123-36532  
**LOG TYPE:** HORIZONTAL  
**SCALE:** 1:240 (5 inches per 100 feet)  
**REMARKS:** WELLSITE GEOLOGICAL SERVICES  
PROVIDED BY COLUMBINE LOGGING INC.



Survey Plan



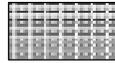
LITHOLOGIES



Chalk



Marl



Silty Shale

### ENGINEERING SYMBOLS



Casing



Casing



Connection



Connection Gas



Midnight Depth



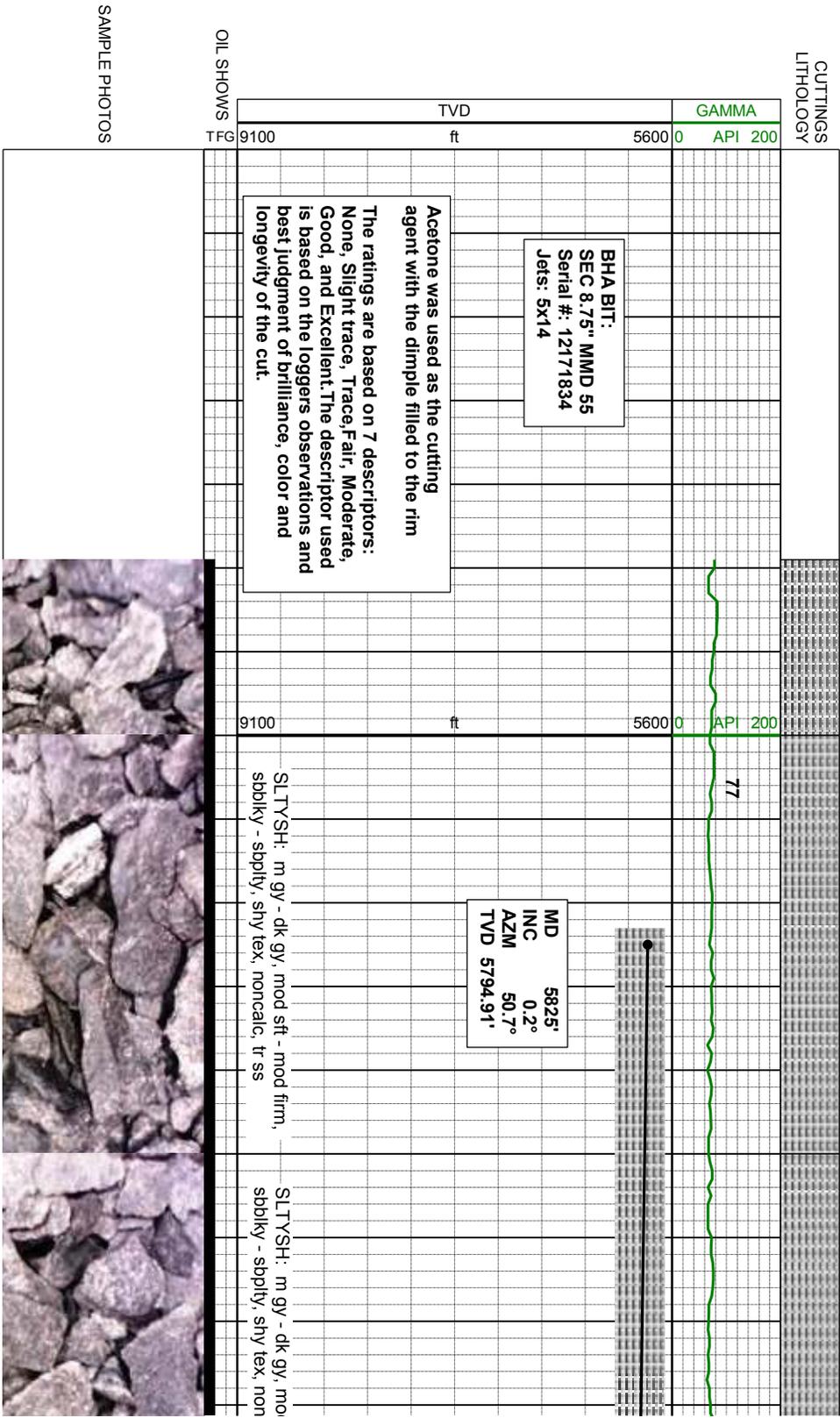
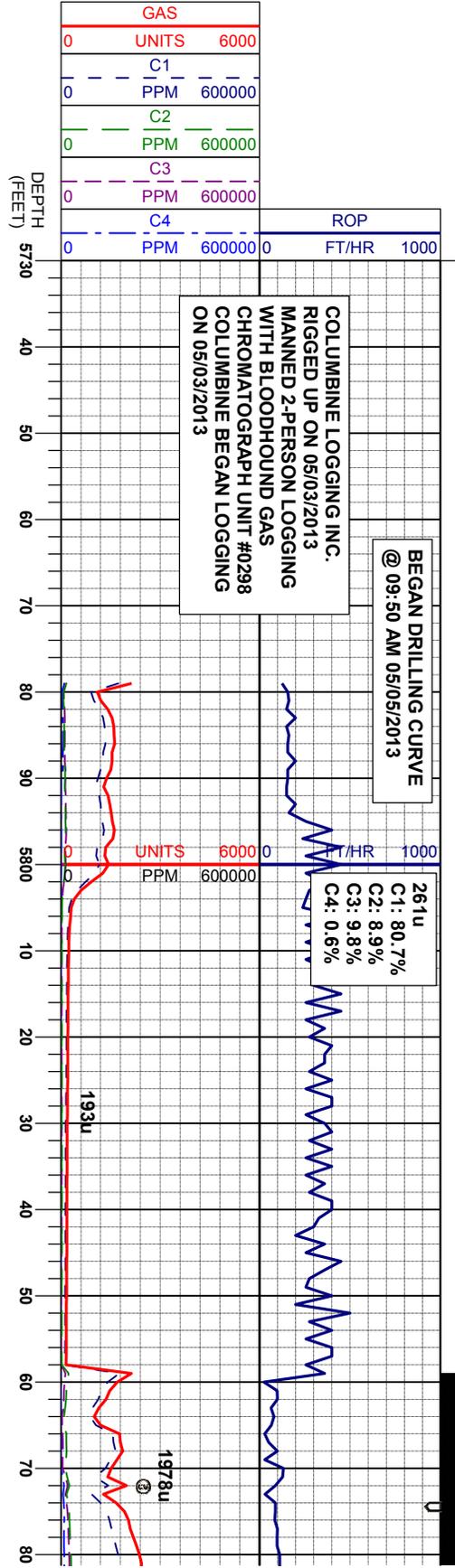
Normal Fault



Oil To Surface

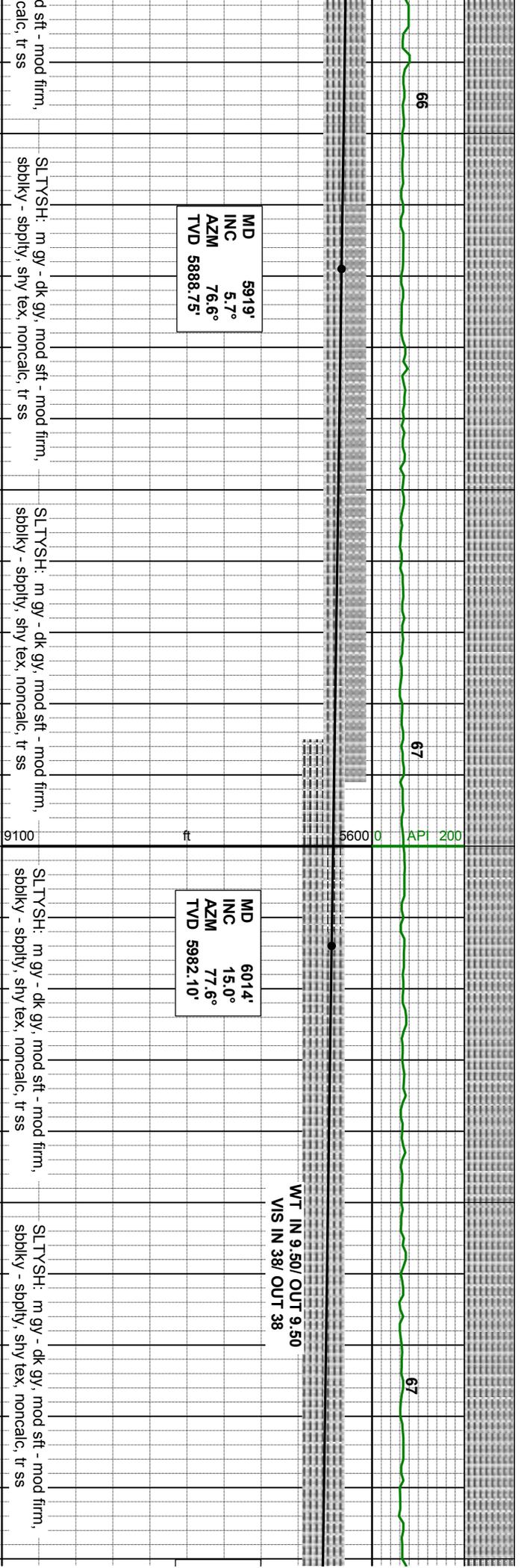
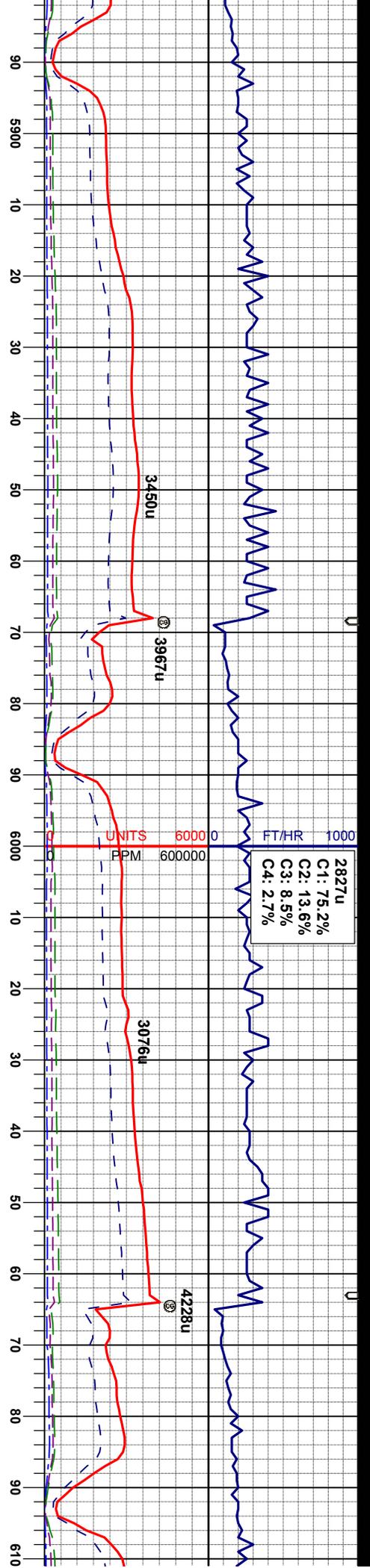


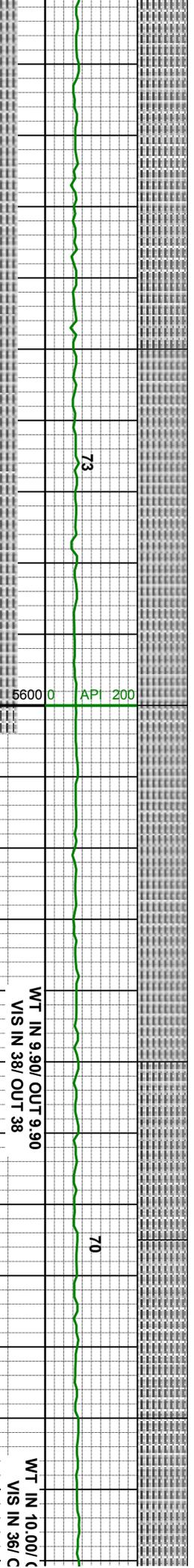
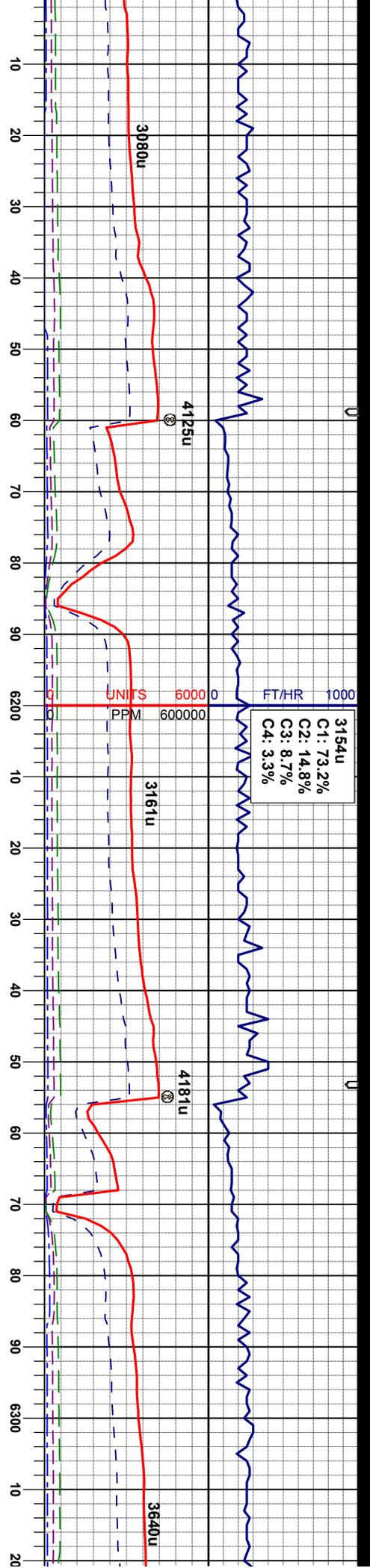
Reverse Fault



SAMPLE PHOTOS







MD	61109'	MD	6204'	MD	6299'
INC	20.8°	INC	27.5°	INC	35.6°
AZM	89.0°	AZM	86.8°	AZM	84.3°
TVD	6072.49'	TVD	6159.13'	TVD	6240.02'

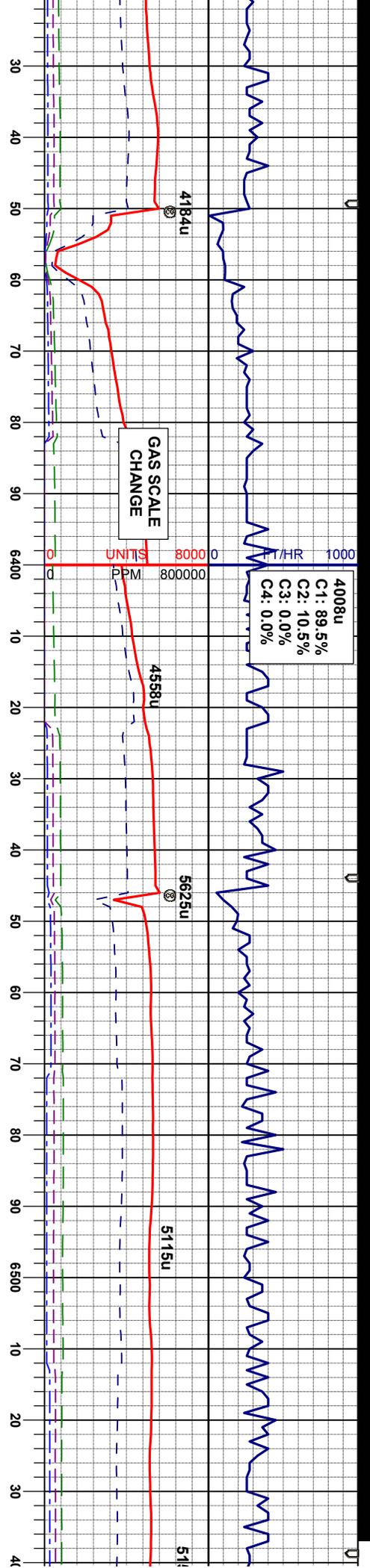
SLTYSH: m gy - dk gy, mod sft - mod firm, sbblky - sbply, shy tex, noncalc, tr ss

SLTYSH: m gy - dk gy, mod sft - mod firm, sbblky - sbply, shy tex, noncalc, tr ss

SLTYSH: m gy - dk gy, mod sft - mod firm, sbblky - sbply, shy tex, noncalc, tr ss

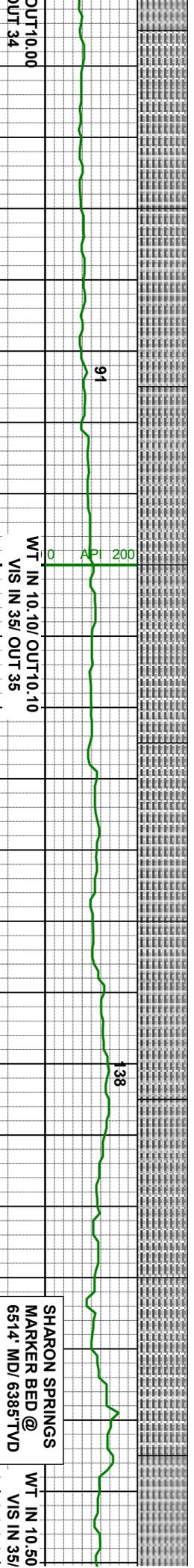
SLTYSH: m gy - dk gy, mod sft - mod firm, sbblky - sbply, shy tex, noncalc, tr ss





4008u  
 C1: 89.5%  
 C2: 10.5%  
 C3: 0.0%  
 C4: 0.0%

GAS SCALE  
 CHANGE



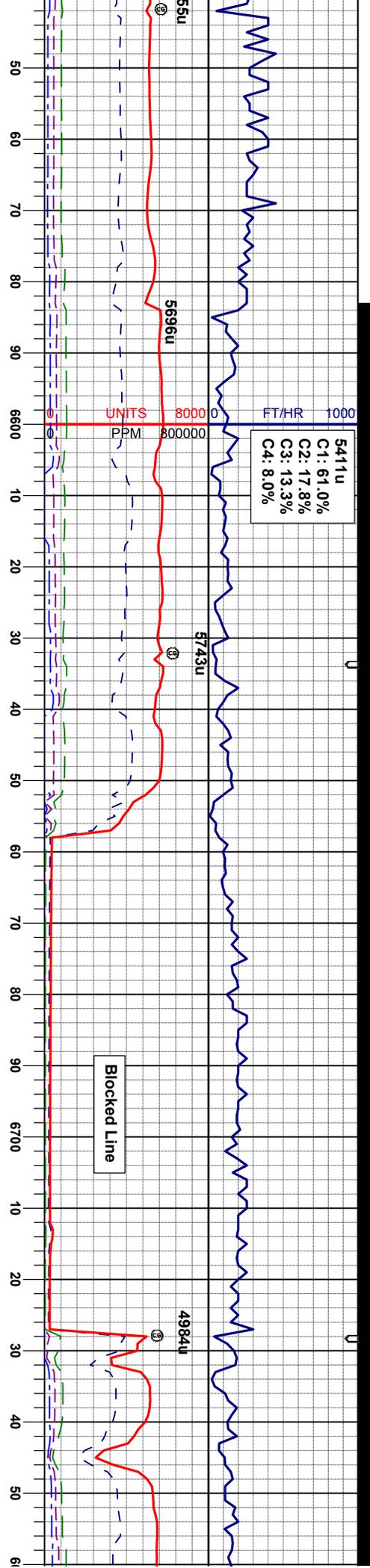
SHARON SPRINGS  
 MARKER BED @  
 6514' MD/ 6385' TVD

MD 6394'  
 INC 44.8°  
 AZM 89.4°  
 TVD 6312.53'

MD 6488'  
 INC 56.1°  
 AZM 96.3°  
 TVD 6372.33'

dk gy, mod sft - mod firm, sblky - noncalc, tr ss  
 SLTYSH: m gy - dk gy, mod sft - mod firm, sblky - spily, shy tex, noncalc, tr ss  
 910  
 SLTYSH: m gy - dk gy, mod sft - mod firm, sblky - spily, shy tex, noncalc, tr ss, tr bent  
 SLTYSH: m gy - dk gy, mod sft - mod firm, sblky - spily, shy tex, noncalc, tr bent  
 SLTYSH: m gy - dk gy, mod sft - mod firm, sblky - spily, shy tex, noncalc, abnt





MD	65883'
INC	61.8°
AZM	97.1°
TVD	6421.31'

MD	6678'
INC	66.4°
AZM	91.0°
TVD	6462.82'

SLTYSH: m gy - dk gy, mod sft - mod firm, sbblky - sbply, sry tex, abnt bent, tr-sl calc  
MRL: mgy-gyblk, occdkbrn, blkY-sbply, sme fis, mod firm, rthy tex, sl mot, v calc  
CHK: mgy, occ lgy, mod sft - mod firm, sbply-sbblky, rthy tex - mot, v calc

MRL: mgy-gyblk, occdkbrn, blkY-sbply, sme fis, mod firm, rthy tex, sl mot, v calc, abnt bent  
CHK: mgy, occ lgy, mod sft - mod firm, sbply-sbblky, rthy tex - mot, v calc

MRL: mgy-gyblk, occdkbrn, blkY-sbply, sme fis, mod firm, rthy tex, sl mot, v calc, occ bent  
CHK: mgy, occ lgy, mod sft - mod firm, sbply-sbblky, rthy tex - mot, v calc

MRL: mgy-gyblk, occdkbrn, blkY-sbply, sme fis, mod firm, rthy tex, sl mot, v calc, tr bent  
CHK: mgy, occ lgy, mod sft - mod firm, sbply-sbblky, rthy tex - mot, v calc

MRL: i  
sme fis  
CHK: i  
sbply-



OUT 10.50 / OUT 35  
NIOBARA TOP @ 6588 MD / 6423 TVD  
WT IN 10.50 / OUT 10.50  
VIS IN 34 / OUT 34  
NIO A CHALK @ 6603 MD / 6430 TVD  
NIO A MARL @ 6640 MD / 6446 TVD

9100

API 200

6600

10

20

30

40

50

60

70

80

90

6700

10

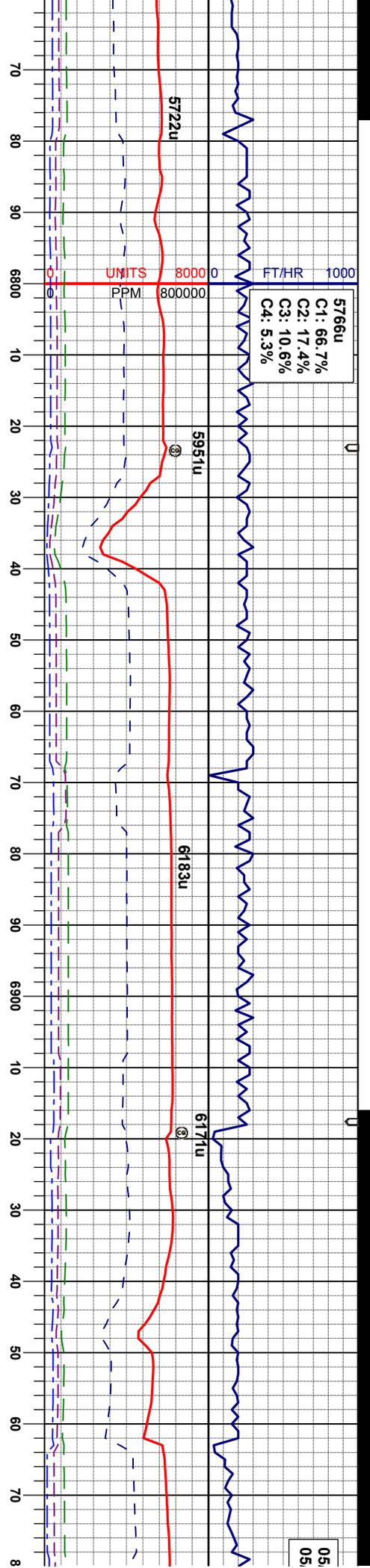
20

30

40

50

60



NIO B CHALK @  
 6823'MD/6504'TVD  
 WT IN 10.50/ OUT 10.50  
 VIS IN 33/ OUT 33

MD 6773'  
 INC 76.5°  
 AZM 87.8°  
 TVD 6493.01'

mgy-gyblk, occdkbrn, blk-y-sbply,  
 s, mod firm, rthy tex, sl mot, v calc  
 mgy, occ lgy, mod sft - mod firm,  
 sbply, rthy tex - mot, v calc

MRL: mgy-gyblk, occdkbrn, blk-y-sbply,  
 sme fis, mod firm, rthy tex, sl mot, v calc  
 CHK: mgy, occ lgy, mod sft - mod firm,  
 sbply-sbply, rthy tex - mot, v calc

MD 6867'  
 INC 76.8°  
 AZM 86.9°  
 TVD 6514.72'

CHK: m-dkgy, occ lgy, mod sft - mod firm,  
 sbply-sbply, rthy tex - mot, v calc  
 MRL: mgy-gyblk, occdkbrn, blk-y-sbply,  
 sme fis, mod firm, rthy tex, sl mot, v calc

MD 6912'  
 INC 76.9°  
 AZM 87.1°  
 TVD 6524.95'

CHK: m-dkgy, occ lgy, mod sft - mod firm,  
 sbply-sbply, rthy tex - mot, v calc

MD 6941'  
 INC 80.6°  
 AZM 88.2°  
 TVD 6530.61'

CHK: m-dkgy, occ lgy, mod sft - mod firm,  
 sbply-sbply, rthy tex - mot, v calc



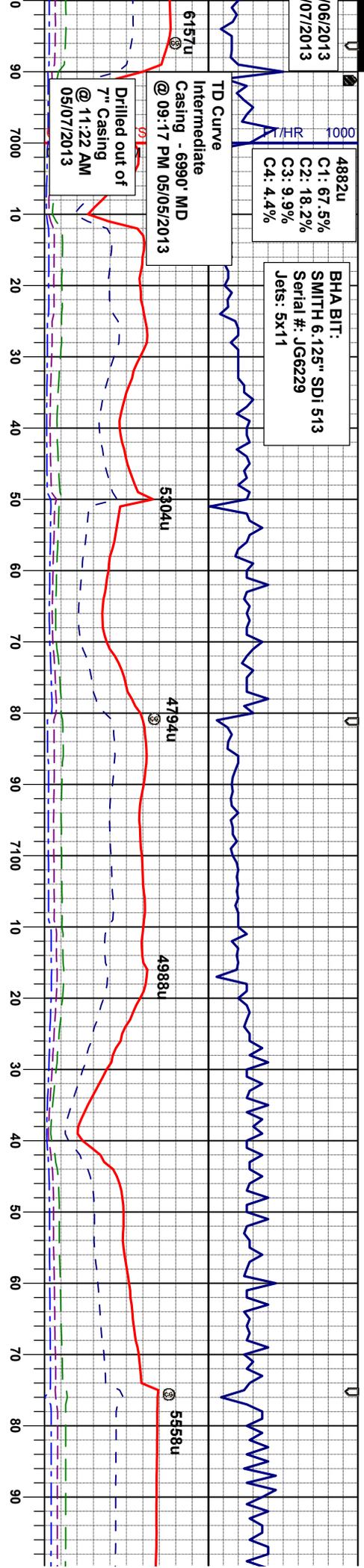
06/20/13  
07/20/13

4882u  
C1: 67.5%  
C2: 18.2%  
C3: 9.9%  
C4: 4.4%

BHA BIT:  
SMITH 6.125" SD1 513  
Serial #: JG6229  
Jets: 5x11

TD Curve  
Intermediate  
Casing - 6990' MD  
@ 09:17 PM 05/05/2013

Drilled out of  
7" Casing  
@ 11:22 AM  
05/07/2013



WT IN 10.50/OUT 8.0.50  
VIS IN 33/OUT 3.3

MD 7022'  
INC 87.7°  
AZM 89.6°  
TVD 6538.68'

CHK: m-dkgy, occ lgy, mod sft - mod firm,  
sloply-sbdky, rthy tex - mot, abnt fos frag &  
calc incl, v calc  
MRL: mgy-gyblk, occdkbrn, blkly-sbply,  
sme fis, mod firm, rthy tex, sl mot, v calc

MRL: mgy-gyblk, occdkbrn, blkly-sbply,  
sme fis, mod firm, rthy tex, sl mot, v calc  
CHK: m-dkgy, occ lgy, mod sft - mod firm,  
sloply-sbdky, rthy tex - mot, abnt fos frag &  
calc incl, v calc

MD 7116'  
INC 89.5°  
AZM 91.7°  
TVD 6541.16'

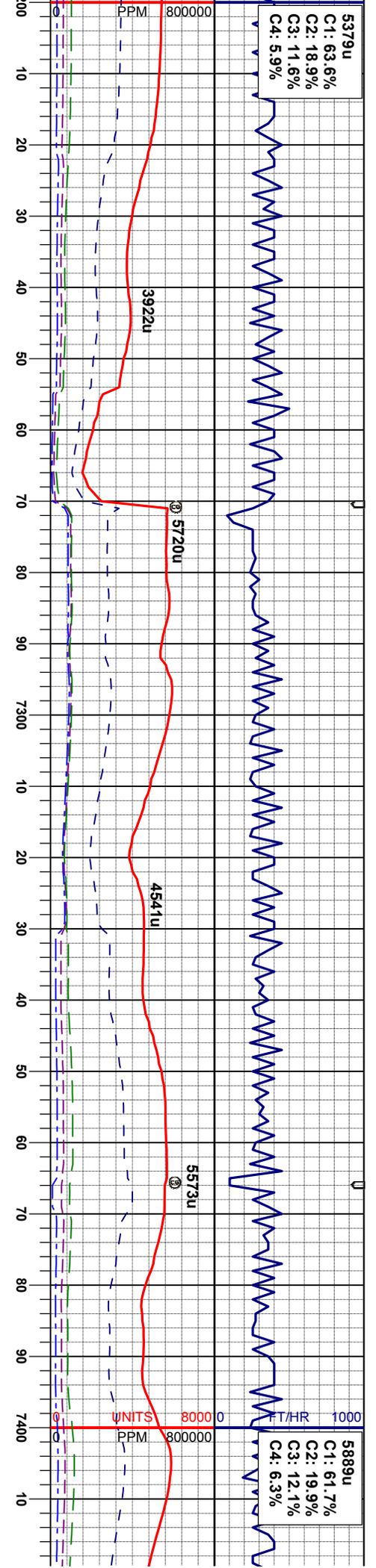
MRL: mgy-gyblk, occdkbrn, blkly-sbply,  
sme fis, mod firm, rthy-mot, tex, sl mot, occ  
calc inc, v calc  
CHK: m-dkgy, occ lgy, mod sft - mod firm,  
sloply-sbdky, rthy tex - mot, occ fos frag &  
calc incl, v calc

MRL: mgy-gyblk, occdkbrn, blkly-sbply,  
sme fis, mod firm, rthy-mot, tex, sl mot, occ  
calc inc, v calc  
CHK: m-dkgy, occ lgy, mod sft - mod firm,  
sloply-sbdky, rthy tex - mot, occ fos frag &  
calc incl, v calc



5379u  
 C1: 63.6%  
 C2: 18.9%  
 C3: 11.6%  
 C4: 5.9%

5889u  
 C1: 61.7%  
 C2: 19.9%  
 C3: 12.1%  
 C4: 6.3%



WT IN 9.80/ OUT 9.80  
 VIS IN 31/ OUT 31

WT IN 9.95/ OUT 9.95  
 VIS IN 29/ OUT 29

5600 0 API 200

B MARL

B CHALK

A MARL

B CHALK

MD 7211'  
 INC 89.6°  
 AZM 92.0°  
 TVD 6541.91'

MD 7306'  
 INC 89.4°  
 AZM 91.8°  
 TVD 6542.74'

MD 7401'  
 INC 88.9°  
 AZM 91.7°  
 TVD 6544.15'

MRL: mgy-gyblk, occdkbrn, blkY-sbply, sme fis, mod firm, rthy-mot, tex, sl mot, tr calc inc, v calc  
 CHK: m-dkgy, occ lgy, mod sft - mod firm, sbply-sbblky, rthy tex - mot, v calc

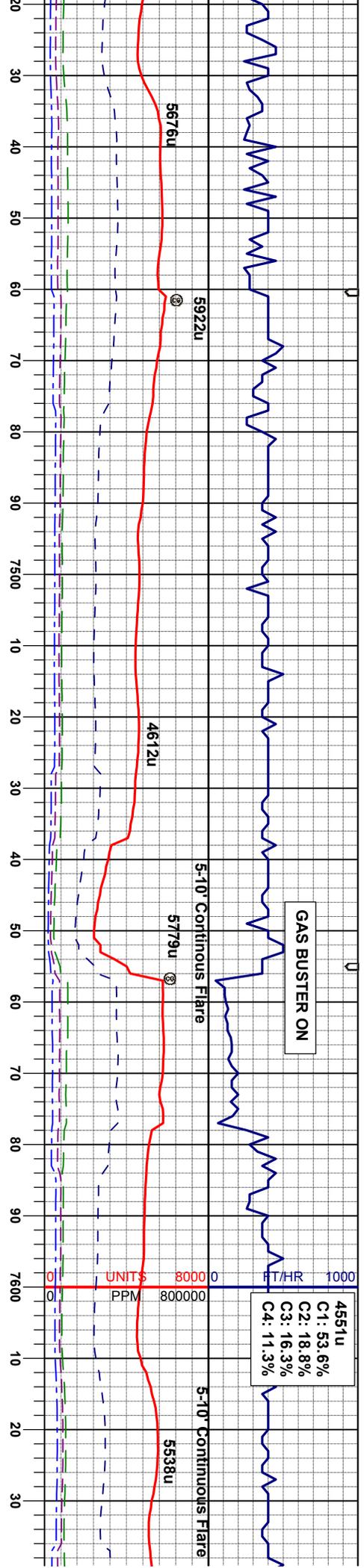
MRL: mgy-gyblk, occdkbrn, blkY-sbply, sme fis, mod firm, rthy-mot, tex, sl mot, tr bent, tr calc inc, occ-abnt ss, v calc  
 CHK: m-dkgy, occ lgy, mod sft - mod firm, sbply-sbblky, rthy tex - mot, v calc

MRL: mgy-gyblk, occdkbrn, blkY-sbply, sme fis, mod firm, rthy-mot, tex, sl mot, tr bent, tr calc inc, tr ss, v calc

MRL: mgy-gyblk, occdkbrn, blkY-sbply, sme fis, mod firm, rthy-mot, tex, sl mot, tr bent, v calc

MRL: mgy-gyblk, sme fis, mod firm bent, v calc





4551u
C1: 53.6%
C2: 18.8%
C3: 16.3%
C4: 11.3%

MD	7496'
INC	88.0°
AZM	91.8°
TVD	6546.72'

MRU: mgy-gy/bk, occdckbrn, bky-spbly, sme fis, mod firm, rthy-mot, tex, sl mot, v calc  
 CHK: m-dkgy, occ lgy, mod sft - mod firm, sbply-sbblky, rthy tex - mot, v calc

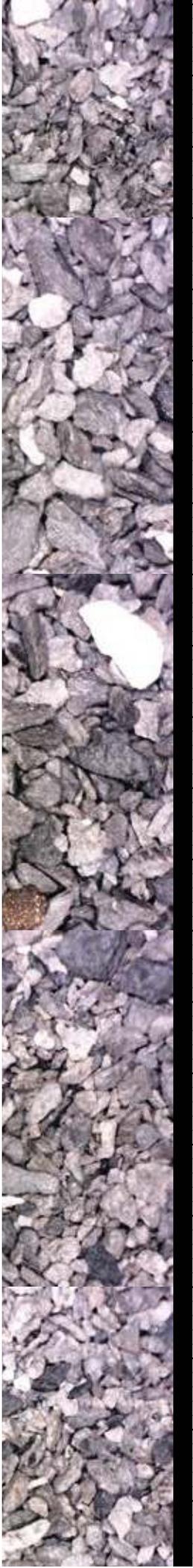
MRU: mgy-gy/bk, occdckbrn, bky-spbly, sme fis, mod firm, rthy-mot, tex, sl mot, v calc  
 CHK: m-dkgy, occ lgy, mod sft - mod firm, sbply-sbblky, rthy tex - mot, v calc

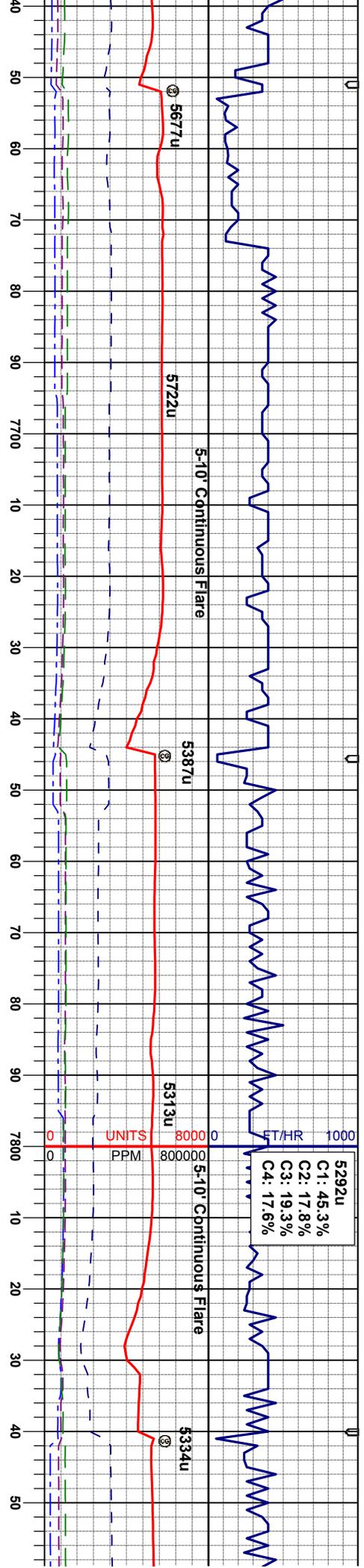
CHK: lt-mgy, occ dkgy, mod sft - mod firm, sbply-sbblky, rthy tex - mot, v calc  
 MRU: mgy-gy/bk, occdckbrn, bky-spbly, sme fis, mod firm, rthy-mot, tex, sl mot, v calc

MD	7591'
INC	88.3°
AZM	92.6°
TVD	6549.78'

CHK: lt-mgy, occ dkgy, mod sft - mod firm, sbply-sbblky, rthy tex - mot, v calc  
 MRU: mgy-gy/bk, occdckbrn, bky-spbly, sme fis, mod firm, rthy-mot, tex, sl mot, v calc

WT IN 10.00/ OUT10.00  
 VIS IN 33/ OUT 33





MD 7685'  
INC 90.4°  
AZM 92.0°  
TVD 6550.85'

CHK: m-dkgy, occ lgy, mod sft - mod firm, sbply-sbply, rthy tex - mot, v calc  
MRL: mgy-gy/bk, occdkbrn, blk-y-sbply, sme fis, mod firm, rthy-mot, tex, sl mot, v calc

MD 7780'  
INC 90.4°  
AZM 92.2°  
TVD 6550.19'

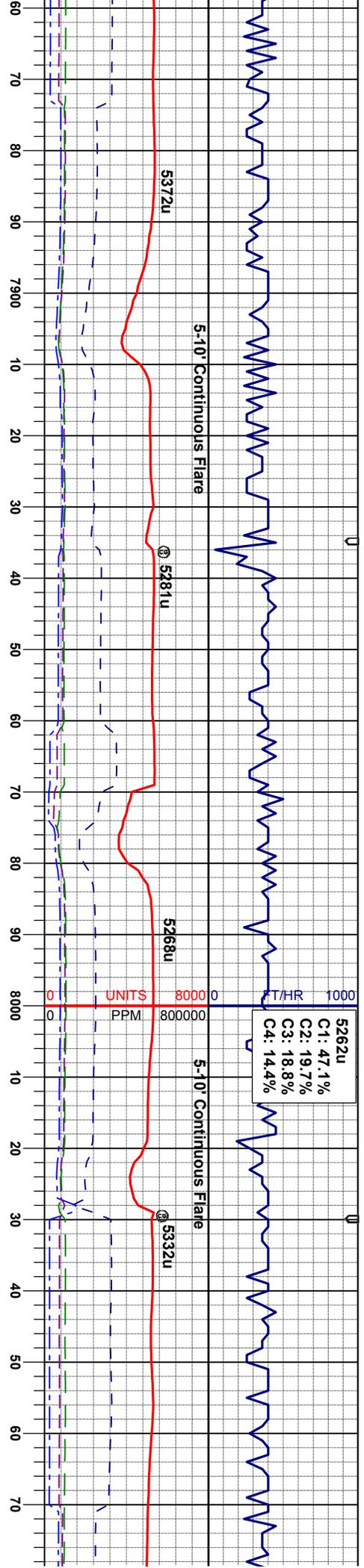
CHK: m-dkgy, occ lgy, mod sft - mod firm, sbply-sbply, rthy tex - mot, v calc  
MRL: mgy-gy/bk, occdkbrn, blk-y-sbply, sme fis, mod firm, rthy-mot, tex, sl mot, v calc

CHK: m-dkgy, occ lgy, mod sft - mod firm, sbply-sbply, rthy tex - mot, v calc  
MRL: mgy-gy/bk, occdkbrn, blk-y-sbply, sme fis, mod firm, rthy-mot, tex, sl mot, v calc

CHK: lt-mgy, occ dkgy, mod sft - mod firm, sbply-sbply, rthy tex - mot, v calc  
MRL: mgy-gy/bk, occdkbrn, blk-y-sbply, sme fis, mod firm, rthy-mot, tex, sl mot, v calc

CHK: sbply  
MRL: sme fi  
calc





WT IN 10.10/ OUT 10.10  
VIS IN 35/ OUT 35

MD 7874'  
INC 90.0°  
AZM 92.2°  
TVD 6549.86'

CHK: It-mgy, occ dkg, mod sft - mod firm, sbply-sbply, rhy tex - mot, v calc  
MRL: mgy-gy/bk, occdkbrn, blk-y-sply, sme fis, mod firm, rhy-mot, tex, sl mot, v calc

MD 7969'  
INC 90.0°  
AZM 92.2°  
TVD 6549.86'

CHK: It-mgy, occ dkg, mod sft - mod firm, sbply-sbply, rhy tex - mot, v calc  
MRL: mgy-gy/bk, occdkbrn, blk-y-sply, sme fis, mod firm, rhy-mot, tex, sl mot, v calc

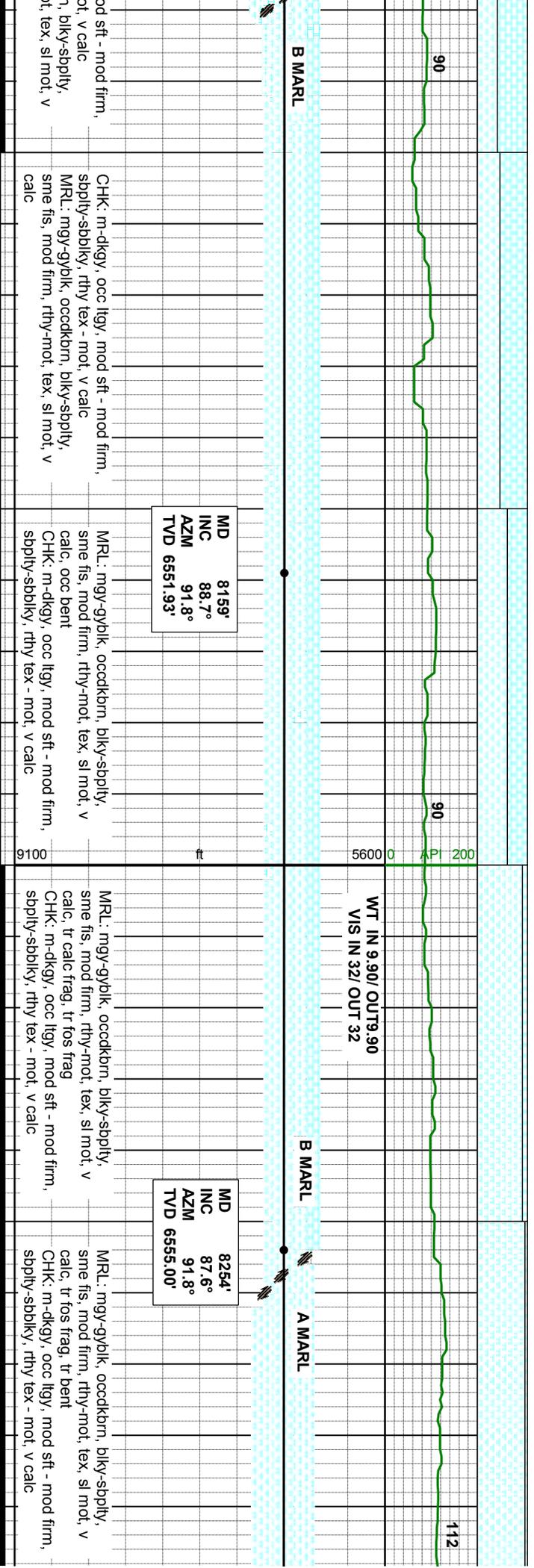
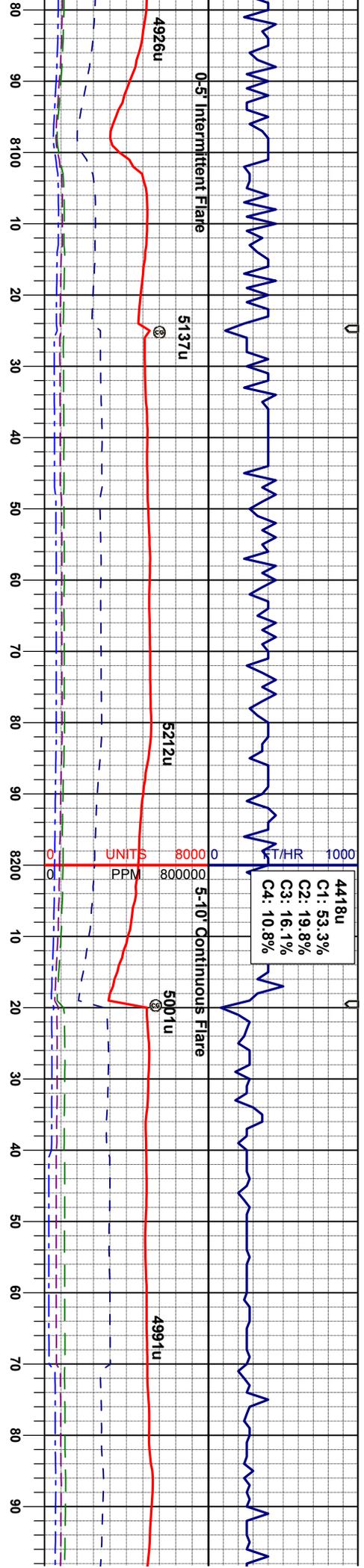
CHK: It-mgy, occ dkg, mod sft - mod firm, sbply-sbply, rhy tex - mot, v calc  
MRL: mgy-gy/bk, occdkbrn, blk-y-sply, sme fis, mod firm, rhy-mot, tex, sl mot, v calc

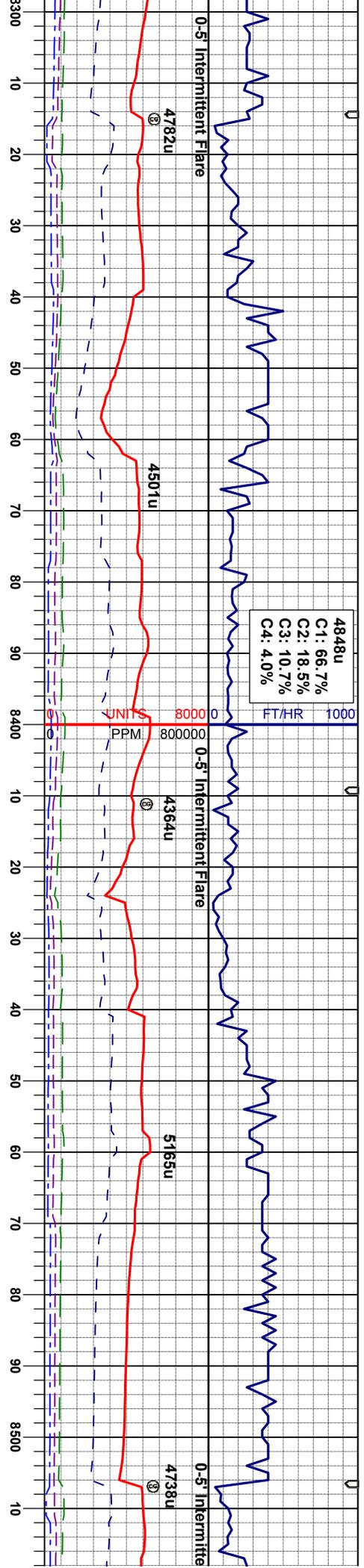
MD 8064'  
INC 89.4°  
AZM 92.0°  
TVD 6550.35'

CHK: It-mgy, occ dkg, mod sft - mod firm, sbply-sbply, rhy tex - mot, v calc  
MRL: mgy-gy/bk, occdkbrn, blk-y-sply, sme fis, mod firm, rhy-mot, tex, sl mot, v calc

CHK: m-dkg, occ lgy, m sbply-sbply, rhy tex - m  
MRL: mgy-gy/bk, occdkbrn  
sme fis, mod firm, rhy-mc  
calc, occ bent







4848u  
 C1: 66.7%  
 C2: 18.5%  
 C3: 10.7%  
 C4: 4.0%

MD 8349'  
 INC 88.9°  
 AZM 92.2°  
 TVD 6557.90'

MRL: mgy-gyblk, occdkbrn, blkysbply, sme fis, mod firm, rthy-mot, tex, sl mot, v calc, tr fos frag, occ bent  
 CHK: m-dkgy, occ lgy, mod sft - mod firm, sbply-sbblky, rthy tex - mot, v calc

MRL: mgy-gyblk, occdkbrn, blkysbply, sme fis, mod firm, rthy-mot, tex, sl mot, v calc, tr fos frag, abnt bent  
 CHK: m-dkgy, occ lgy, mod sft - mod firm, sbply-sbblky, rthy tex - mot, v calc

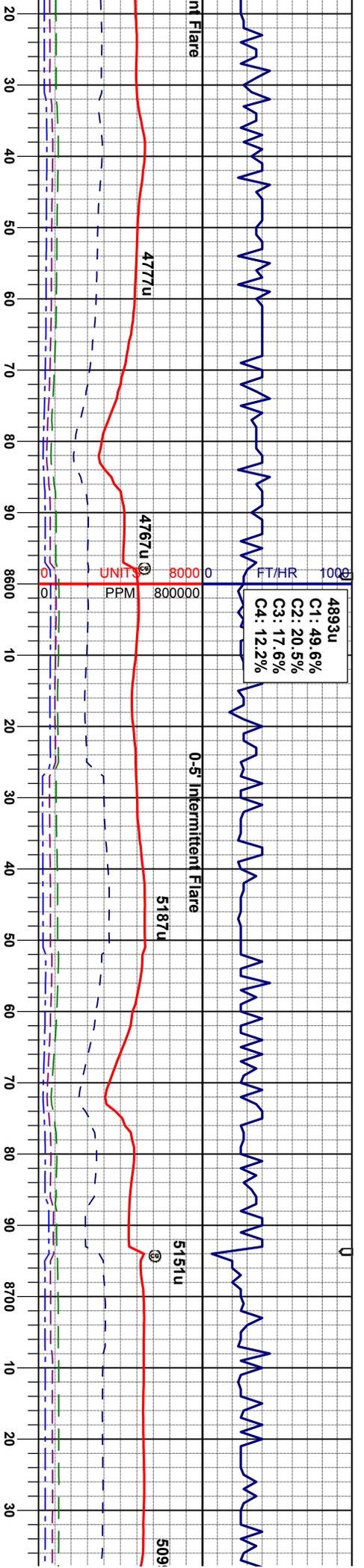
MD 8444'  
 INC 90.9°  
 AZM 91.5°  
 TVD 6558.06'

MRL: mgy-gyblk, occdkbrn, blkysbply, sme fis, mod firm, rthy-mot, tex, sl mot, v calc, occ bent, tr chk

MRL: mgy-gyblk, occdkbrn, blkysbply, sme fis, mod firm, rthy-mot, tex, sl mot, v calc, tr bent, tr chk

MRL: mgy-gyblk, occdkbrn, blkysbply, sme fis, mod firm, rthy-mot, tex, sl mot, v calc, tr chk





MD 8538'  
INC 91.4°  
AZM 92.2°  
TVD 6556.18'

MRU: mgy-gyblk, occdkbrn, biky-sbply, sme fis, mod firm, rthy-mot, tex, sl mot, v calc  
CHK: m-dkgy, occ lgy, mod sft - mod firm, sbply-sbblky, rthy tex - mot, v calc

MD 8633'  
INC 90.8°  
AZM 91.8°  
TVD 6554.35'

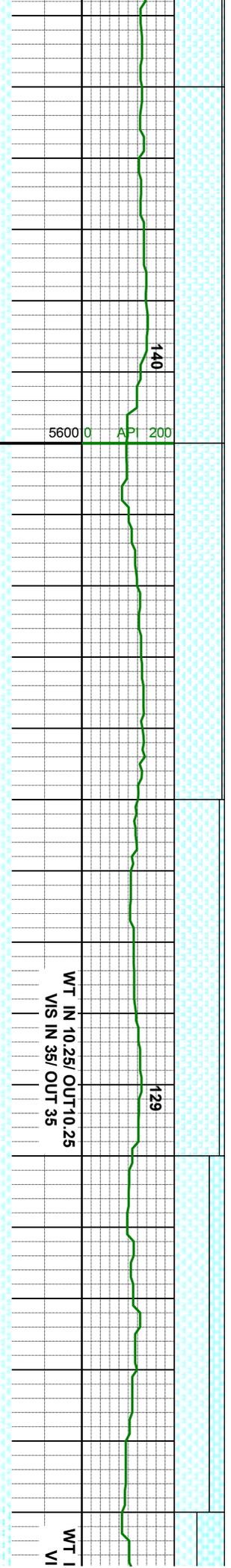
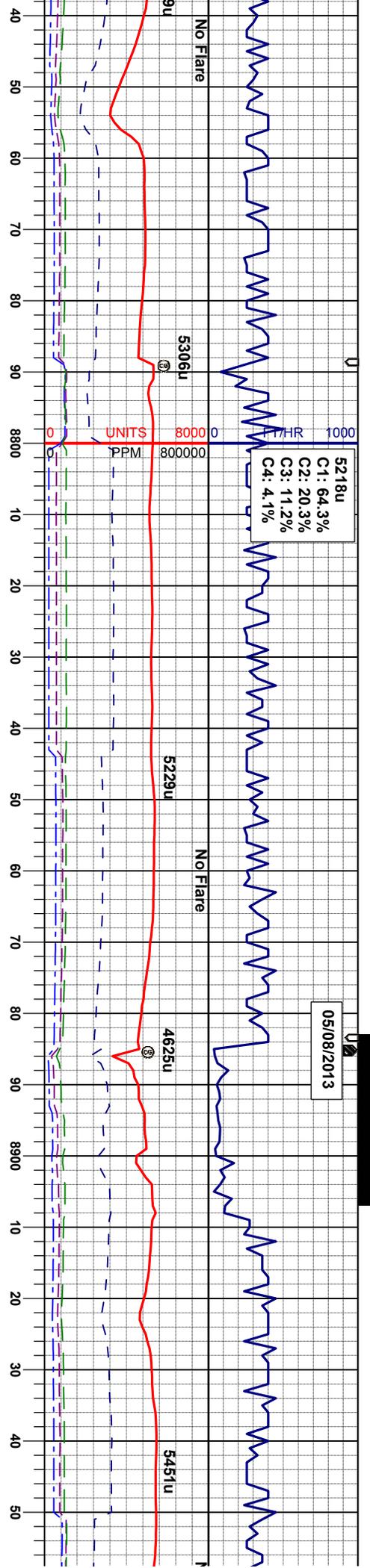
MRU: mgy-gyblk, occdkbrn, biky-sbply, sme fis, mod firm, rthy-mot, tex, sl mot, v calc  
CHK: m-dkgy, occ lgy, mod sft - mod firm, sbply-sbblky, rthy tex - mot, v calc

MD 8728'  
INC 90.4°  
AZM 91.5°  
TVD 6553.36'

MRU: mgy-gyblk, occdkbrn, biky-sst, sme fis, mod firm, rthy-mot, tex, sl calc  
CHK: m-dkgy, occ lgy, mod sft - r r sbply-sbblky, rthy tex - mot, v calc

WT IN 10.25/ OUT 10.25  
VIS IN 35/ OUT 35





MD 8823'  
 INC 89.8°  
 AZM 91.2°  
 TVD 6553.19'

MD 8917'  
 INC 90.8°  
 AZM 91.2°  
 TVD 6552.69'

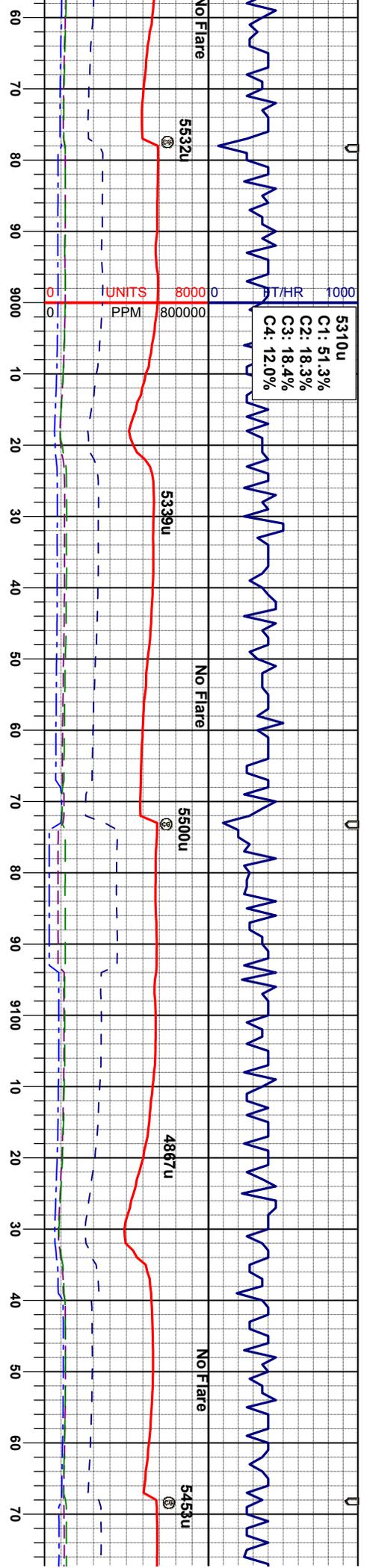
MRL: mgy-gyblk, occdkbrn, blkly-sbply, sme fis, mod firm, rthy-mot, tex, sl mot, v calc  
 CHK: m-dkgy, occ lgy, mod sft - mod firm, sbply-sbblky, rthy tex - mot, v calc

MRL: mgy-gyblk, occdkbrn, blkly-sbply, sme fis, mod firm, rthy-mot, tex, sl mot, v calc  
 CHK: m-dkgy, occ lgy, mod sft - mod firm, sbply-sbblky, rthy tex - mot, v calc

MRL: mgy-gyblk, occdkbrn, blkly-sbply, sme fis, mod firm, rthy-mot, tex, sl mot, v calc  
 CHK: m-dkgy, occ lgy, mod sft - mod firm, sbply-sbblky, rthy tex - mot, v calc

MRL: mgy-gyblk, occdkbrn, blkly-sbply, sme fis, mod firm, rthy-mot, tex, sl mot, v calc  
 CHK: m-dkgy, occ lgy, mod sft - mod firm, sbply-sbblky, rthy tex - mot, v calc





5310u
C1: 51.3%
C2: 18.3%
C3: 18.4%
C4: 12.0%

**B CHALK**

N 10.20/ OUT 10.20  
S IN 32/ OUT 32

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

MD	9013'
INC	90.2°
AZM	91.0°
TVD	6551.87'

MD	9108'
INC	89.9°
AZM	91.0°
TVD	6551.78'

CHK: It-mgy, occ dkgy, mod sft - mod firm, sbply-sbblky, rthy tex - mot, v calc  
MR.L: mgy-gyblk, occdkbrn, blkysbply, sme fis, mod firm, rthy-mot, tex, sl mot, v calc

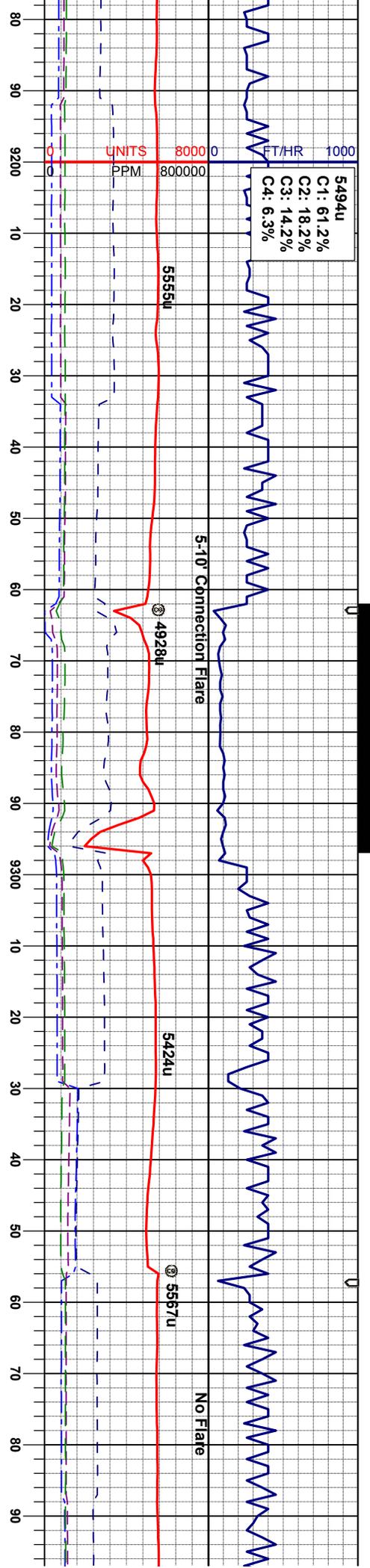
CHK: It-mgy, occ dkgy, mod sft - mod firm, sbply-sbblky, rthy tex - mot, v calc  
MR.L: mgy-gyblk, occdkbrn, blkysbply, sme fis, mod firm, rthy-mot, tex, sl mot, v calc

CHK: It-mgy, occ dkgy, mod sft - mod firm, sbply-sbblky, rthy tex - mot, v calc  
MR.L: mgy-gyblk, occdkbrn, blkysbply, sme fis, mod firm, rthy-mot, tex, sl mot, v calc

CHK: It-mgy, occ dkgy, mod sft - mod firm, sbply-sbblky, rthy tex - mot, v calc  
MR.L: mgy-gyblk, occdkbrn, blkysbply, sme fis, mod firm, rthy-mot, tex, sl mot, v calc

CHK: It-mgy, occ dkgy, mod sft - mod firm, sbply-sbblky, rthy tex - mot, v calc  
MR.L: mgy-gyblk, occdkbrn, blkysbply, sme fis, mod firm, rthy-mot, tex, sl mot, v calc





5494u  
 C1: 61.2%  
 C2: 18.2%  
 C3: 14.2%  
 C4: 6.3%

UNITS 80000  
 PPM 800000

5555u

5-10' Connection Flare

③ 4928u

5424u

③ 5557u

No Flare

62 API 200  
 5600

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

57

45

MD 9203'  
 INC 89.4°  
 AZM 91.5°  
 TVD 6552.36'

MD 9298'  
 INC 92.4°  
 AZM 90.4°  
 TVD 6550.87'

MD 9  
 INC \$  
 AZM \$  
 TVD 6544

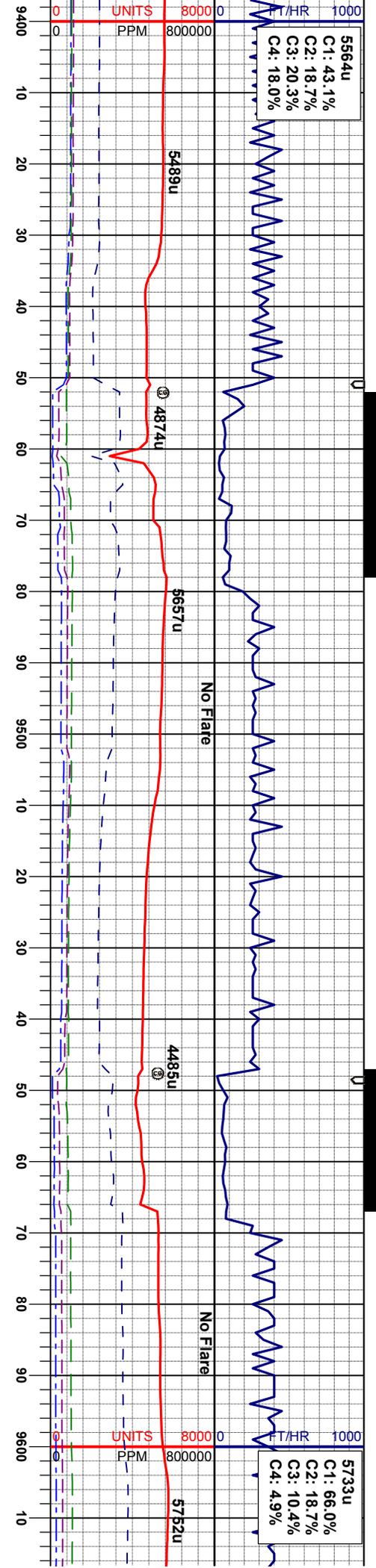
mod sft - mod firm,  
 not, v calc  
 n, blkY-sbply,  
 dot, tex, sl mot, v

CHK: lt-mgy, occ dkgy, mod sft - mod firm,  
 sbply-sbply, rthy tex - mot, v calc  
 MRL: mgy-gyblk, occdkbrn, blkY-sbply,  
 sme fis, mod firm, rthy tex, sl mot, v calc

CHK: lt-mgy, occ dkgy, mod sft - mod firm,  
 sbply-sbply, rthy tex - mot, v calc  
 MRL: mgy-gyblk, occdkbrn, blkY-sbply,  
 sme fis, mod firm, rthy tex, sl mot, v calc

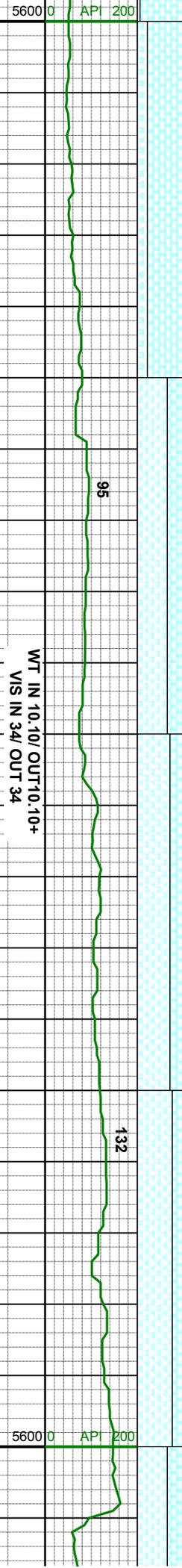
CHK: cm-lt-mgy, tr dkgy, mod sft - mod firm,  
 firm, sbply-sbply, rthy tex - mot, v calc  
 MRL: mgy-gyblk, occdkbrn, blkY-sbply,  
 sme fis, mod firm, rthy tex, sl mot, v calc





5564u  
 C1: 43.1%  
 C2: 18.7%  
 C3: 20.3%  
 C4: 18.0%

5733u  
 C1: 66.0%  
 C2: 18.7%  
 C3: 10.4%  
 C4: 4.9%



383.3°  
 93.1°  
 99.9°  
 3.31'

MD 9488'  
 INC 91.9°  
 AZM 90.8°  
 TVD 6542.17'

MD 9583'  
 INC 90.9°  
 AZM 90.6°  
 TVD 6539.85'

CHK: crm-lt-mgy, tr dkgy, mod sft - mod firm, spbly-spbkly, rthy tex - mot, v calc  
 MRL: mgy-gyblk, occdkbrn, blk-y-spbly, sme fis, mod firm, rthy tex, sl mot, v calc

MRL: mgy-gyblk, occdkbrn, blk-y-spbly, sme fis, mod firm, rthy tex, sl mot, v calc  
 CHK: crm-lt-mgy, tr dkgy, mod sft - mod firm, spbly-spbkly, rthy tex - mot, v calc

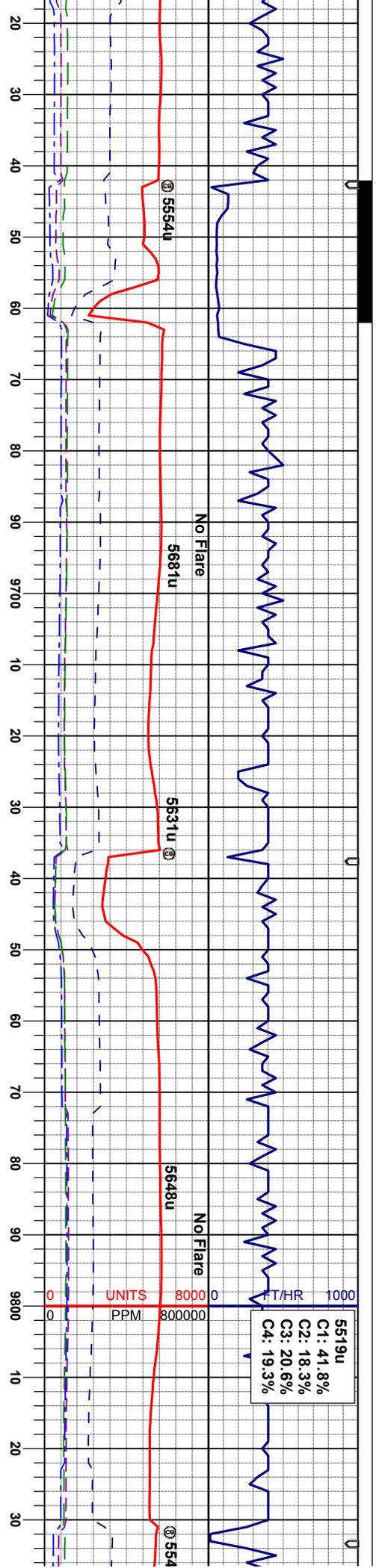
MRL: mgy-gyblk, occdkbrn, blk-y-spbly, sme fis, mod firm, rthy tex, sl mot, v calc  
 CHK: crm-lt-mgy, tr dkgy, mod sft - mod firm, spbly-spbkly, rthy tex - mot, v calc

MRL: mgy-gyblk, occdkbrn, blk-y-spbly, sme fis, mod firm, rthy tex, sl mot, v calc  
 CHK: crm-lt-mgy, tr dkgy, mod sft - mod firm, spbly-spbkly, rthy tex - mot, v calc

MRL: mgy-gyblk, occdkbrn, blk-y-spbly, sme fis, mod firm, rthy tex, sl mot, v calc  
 CHK: crm-lt-mgy, tr dkgy, mod sft - mod firm, spbly-spbkly, rthy tex - mot, v calc



B MARL



**B CHALK**

112

WT IN 10.00/ OUT 10.00  
VIS IN 34/ OUT 34

MD	9678'
INC	89.2°
AZM	91.3°
TVD	6539.77'

CHK: crm-lt-mgy, mod sft - mod firm, sbply  
-sbblky, rthy tex - mot, v calc  
MRL: mgy-gyblk, occdkbrn, blkly-sbply,  
sme fis, mod firm, rthy tex, sl mot, tr fos  
frag, tr calc frag, v calc

62

CHK: crm-lt-mgy, mod sft - mod firm, sbply  
-sbblky, rthy tex - mot, v calc  
MRL: mgy-gyblk, occdkbrn, blkly-sbply,  
sme fis, mod firm, rthy tex, sl mot, tr fos  
frag, tr calc frag, v calc

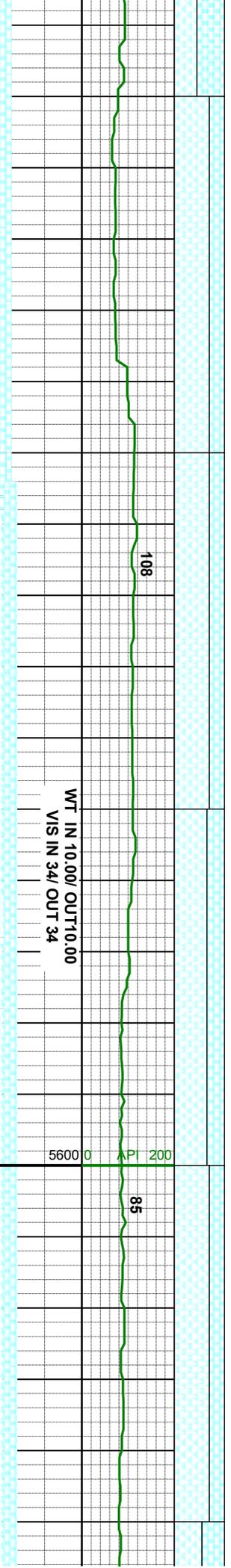
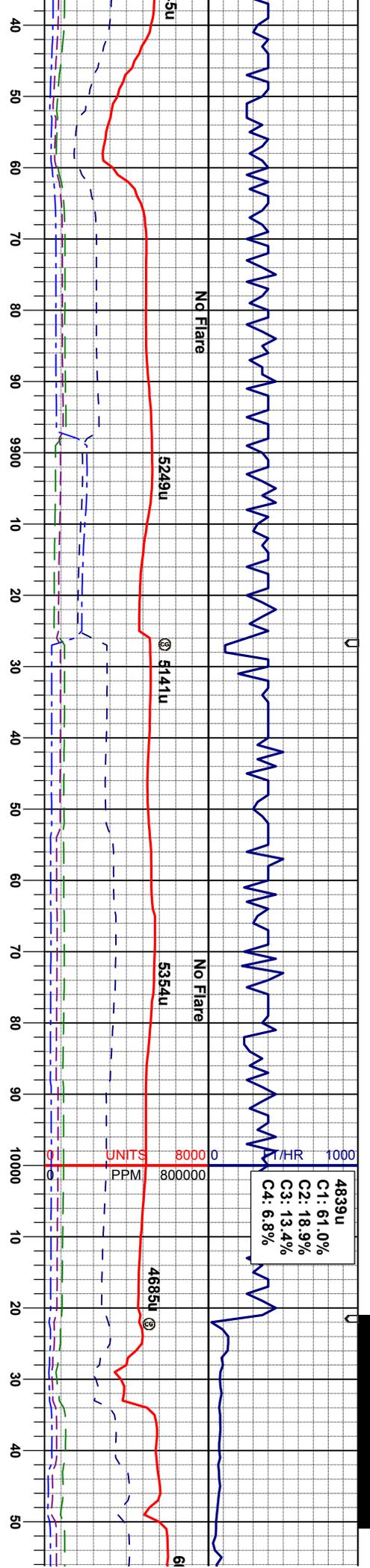
MD	9772'
INC	88.7°
AZM	91.3°
TVD	6541.49'

CHK: crm-lt-mgy, mod sft - mod firm, sbply  
-sbblky, rthy tex - mot, v calc  
MRL: mgy-gyblk, occdkbrn, blkly-sbply,  
sme fis, mod firm, rthy tex, sl mot, tr fos  
frag, tr calc frag, tr pyr, v calc

86

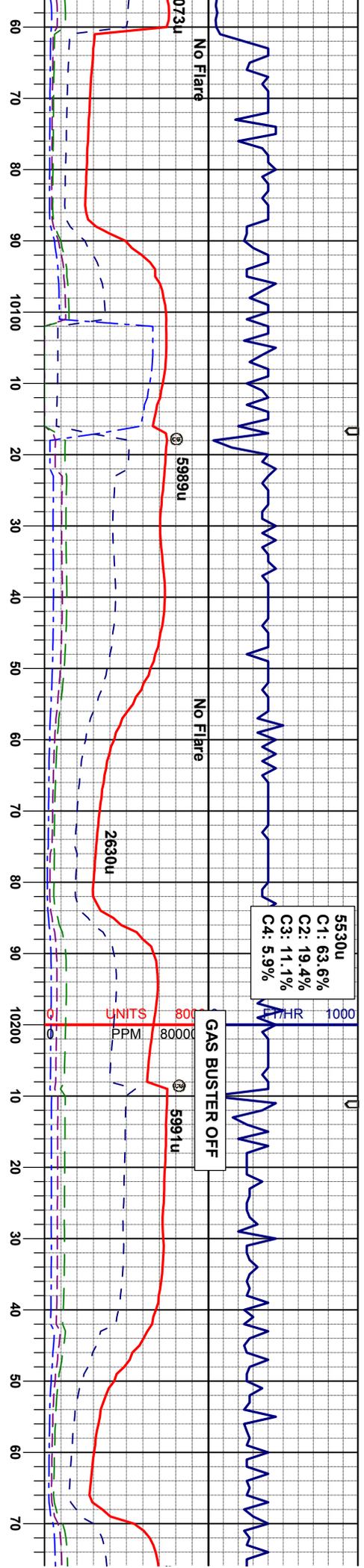
CHK: crm-lt-mgy, mod sft - mod  
-sbblky, rthy tex - mot, v calc  
MRL: mgy-gyblk, occdkbrn, blkly  
sme fis, mod firm, rthy tex, sl mot  
frag, tr calc frag, tr pyr, v calc





MD	INC	AZM	TVD	MRU
9856'	88.2°	90.8°	6543.76'	MRU: mgy-gyblk, occdkbrn, blkys-sbply, sme fis, mod firm, rthy tex, sl mot, tr fos frag, tr calc frag, tr bent, v calc
9962'	87.8°	92.0°	6547.37'	MRU: mgy-gyblk, occdkbrn, blkys-sbply, sme fis, mod firm, rthy tex, sl mot, tr fos frag, tr calc frag, tr bent, v calc
10000'	85.0°	92.0°	6544'	MRU: mgy-gyblk, occdkbrn, blkys-sbply, sme fis, mod firm, rthy tex, sl mot, tr fos frag, tr calc frag, tr bent, v calc





97

93

98

5600 0 API 200

WT IN 10.10/ OUT 10.10  
 VIS IN 35/ OUT 35

MD 10057'  
 INC 99.3°  
 AZM 90.3°  
 TVD 9.78'

MD 10152'  
 INC 91.4°  
 AZM 92.0°  
 TVD 6549.20'

MD 10247'  
 INC 89.8°  
 AZM 91.5°  
 TVD 6548.20'

MRL: mgy-gyblk, occdkbrn, blkY-sbply, sme fis, mod firm, rthy tex, sl mot, tr fos frag, tr calc frag, tr bent, v calc  
 CHK: crm-lt-mgy, mod sft - mod firm, sbply -sbblky, rthy tex - mot, v calc

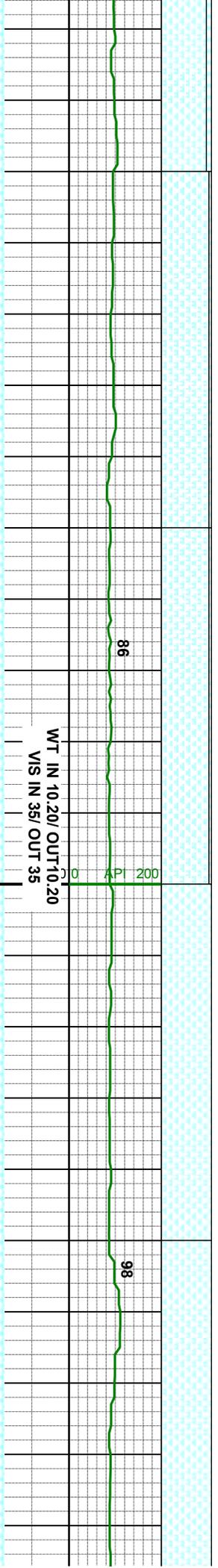
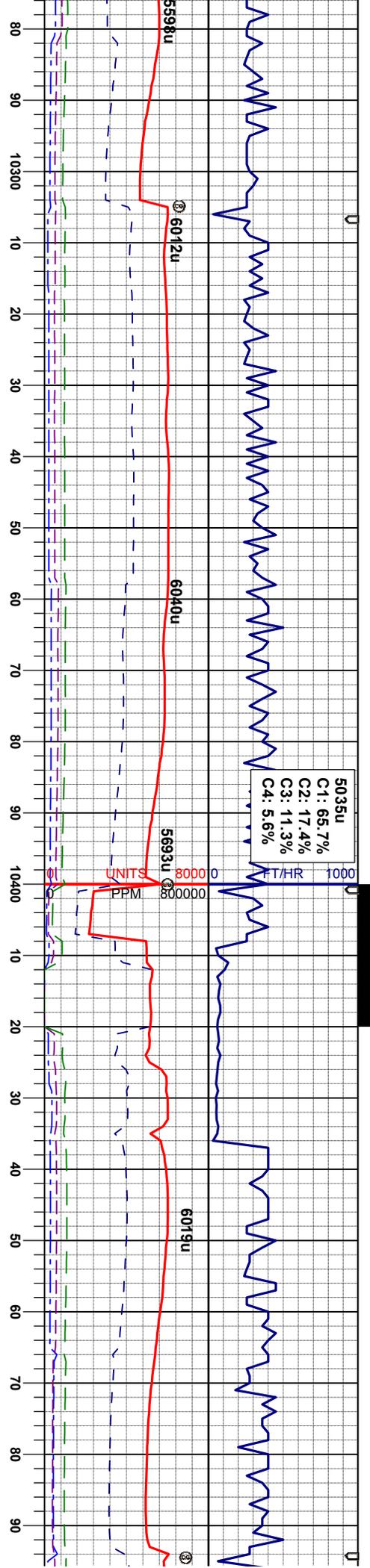
MRL: mgy-gyblk, occdkbrn, blkY-sbply, sme fis, mod firm, rthy tex, tr mot, tr fos frag, occ calc incl, occ bent, v calc  
 CHK: crm-lt-mgy, mod sft - mod firm, sbply -sbblky, rthy tex - mot, v calc

MRL: mgy-gyblk, occdkbrn, blkY-sbply, sme fis, mod firm, rthy tex, tr mot, tr fos frag, occ calc incl, occ bent, v calc  
 CHK: crm-lt-mgy, mod sft - mod firm, sbply -sbblky, rthy tex - mot, v calc

MRL: mgy-gyblk, occdkbrn, blkY-sbply, sme fis, mod firm, rthy tex, tr mot, tr fos frag, occ calc incl, occ bent, v calc  
 CHK: crm-lt-mgy, mod sft - mod firm, sbply -sbblky, rthy tex - mot, v calc

MRL: mgy-gyblk, occdkbrn, blkY-sbply, sme fis, mod firm, rthy tex, tr mot, tr fos frag, occ calc incl, occ bent, v calc  
 CHK: crm-lt-mgy, mod sft - mod firm, sbply -sbblky, rthy tex - mot, v calc





MD 10341'  
 INC 90.8°  
 AZM 92.9°  
 TVD 6547.71'

MRL: mgy-gy/bk, occdkbrn, blkY-sbply,  
 sme fis, mod firm, rthy tex, tr mot, tr fos  
 frag, occ calc incl, occ bent, v calc  
 CHK: crm-lt-mgy, mod sft - mod firm, sbply  
 -sbblky, rthy tex - mot, v calc

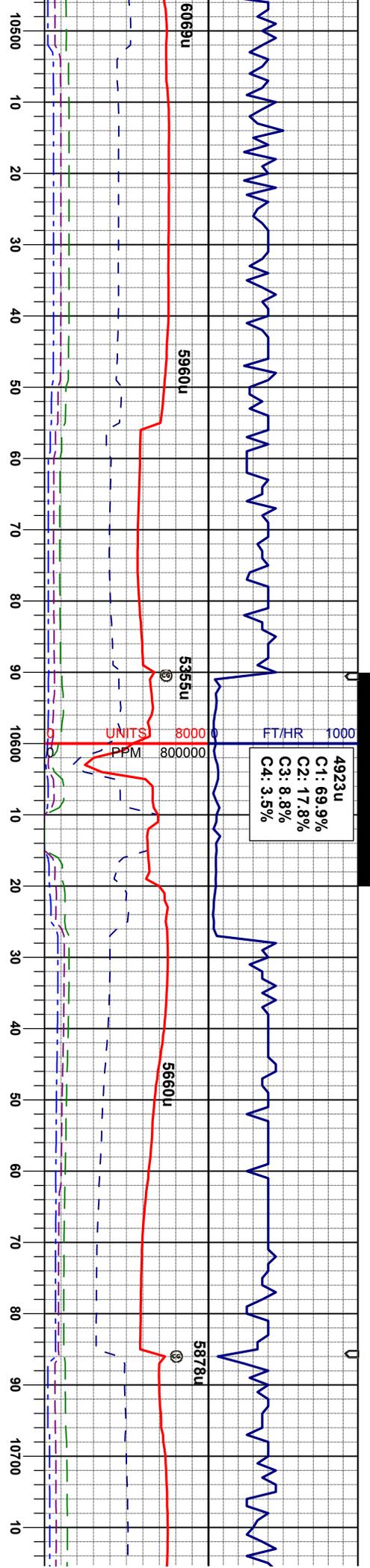
MRL: mgy-gy/bk, occdkbrn, blkY-sbply,  
 sme fis, mod firm, rthy tex, tr mot, tr fos  
 frag, occ calc incl, occ bent, v calc  
 CHK: crm-lt-mgy, mod sft - mod firm, sbply  
 -sbblky, rthy tex - mot, v calc

MD 10436'  
 INC 88.6°  
 AZM 90.6°  
 TVD 6548.21'

MRL: mgy-gy/bk, occdkbrn, blkY-sbply,  
 sme fis, mod firm, rthy tex, tr mot, tr fos  
 frag, occ calc incl, occ-abnt bent, v calc

MRL: mgy-gy/bk, occdkbrn, blkY-sbply,  
 sme fis, mod firm, rthy tex, tr mot, tr fos  
 frag, occ calc incl, occ-abnt bent, tr chk, v  
 calc





MD 10531'  
 INC 86.9°  
 AZM 90.4°  
 TVD 6551.94'

MRL: mgy-gyblk, occdkbrn, bkly-sbply, sme fis, mod firm, rthy tex, tr mot, tr fos frag, occ calc incl, occ-abnt bent, tr chk, v calc

WT IN 10.00/OUT 10.00  
 VIS IN 34/OUT 34

91

MD 10625'  
 INC 88.7°  
 AZM 88.9°  
 TVD 6555.55'

MRL: mgy-gyblk, occdkbrn, bkly-sbply, sme fis, mod firm, rthy tex, tr mot, tr fos frag, tr chk, v calc

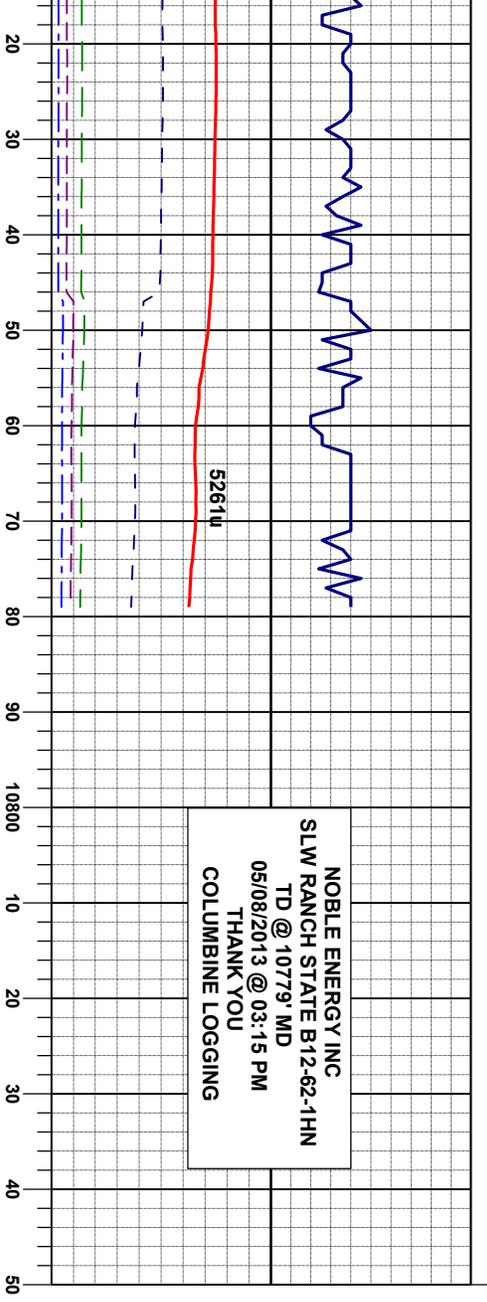
WT IN 10.00/OUT 10.00  
 VIS IN 34/OUT 34

128

MD  
 INC  
 AZI  
 TVI

MRL: mgy sme fis, m frag, v calc CHK: crn -sbblky, tl





10720'  
 M 88.1°  
 D 6558.20'

-gyblk, occdkbrn, blkly-sbply,  
 mod firm, rthy tex, tr mot, tr fos  
 -lt-rngy, mod sft - mod firm, sbply  
 ny tex - mot, v calc

WT IN 10.00/ OUT 10.00  
 VIS IN 35/ OUT 35

PROJECTION  
 MD 10779'  
 INC 87.4°  
 AZM 89.0°  
 TVD 6560.46'

MRL: mgy-gyblk, occdkbrn, blkly-sbply,  
 sme fis, mod firm, rthy tex, tr mot, v calc  
 CHK: crm-lt-mgy, mod sft - mod firm, sbply  
 -sbbkly, rthy tex - mot, v calc

NOBLE ENERGY INC  
 SLW RANCH STATE B12-62-1HN  
 TD @ 10779' MD

