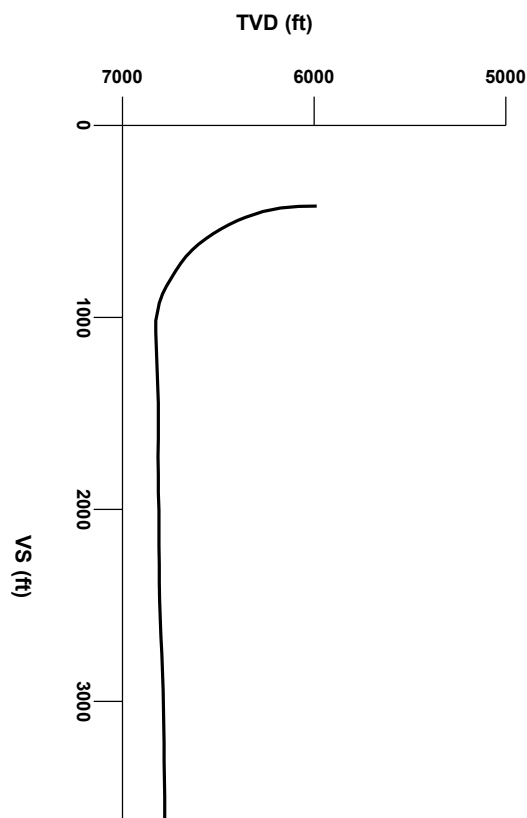


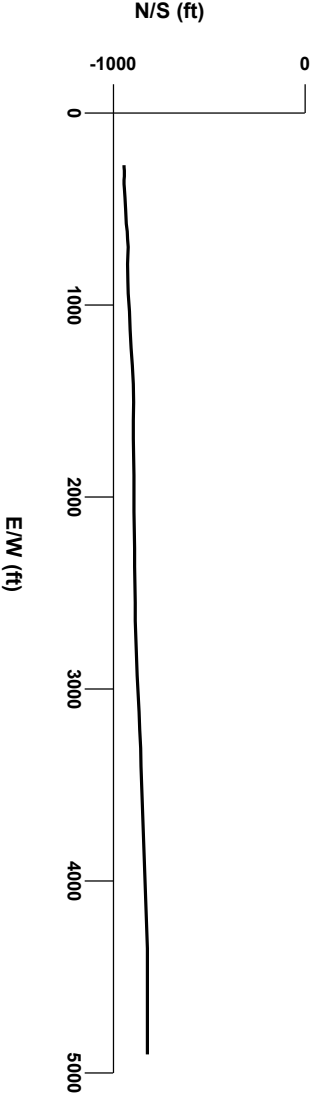
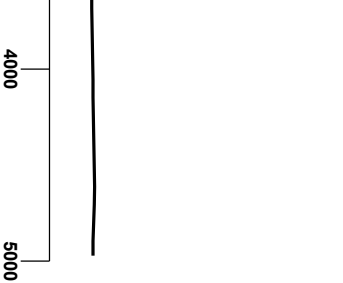
LOG created using Lplot VH Version 3.0, December 22, 2012, Copyright (C) 1999-2009 Pason Systems Corp.

OPERATOR: NOBLE ENERGY INC.
WELL: KAUFMAN PC GL20-68HN
LOCATION: SESE SEC18, T11N, R60W
COUNTY: WELD
STATE: COLORADO
SPOT: 275' FSL, 275' FEL
ELEVATION: GR 5282' KB 5312'
FIELD: WILDCAT
SPUD DATE: 12/14/2012
TD DATE: 12/22/2012
DATES LOGGED: 12/16/2012 - 12/22/2012
DEPTHS LOGGED: 6165' MD - 11290' MD
LOGGERS: ANDREA ZUIDEMA, LAURA KELLOGG
DRILLING FLUID: LSND
DRILLING RIG: H&P 326
API: 05-123-35887
LOG TYPE: HORIZONTAL
SCALE: 1:240 (5 inches per 100 feet)
REMARKS: WELLSITE GEOLOGICAL SERVICES
 PROVIDED BY COLUMBINE LOGGING INC.



Survey Elevation

Survey Plan



Chalk

Marl

Silty Shale

ENGINEERING SYMBOLS

Casing

Casing

Connection

Connection Gas

Midnight Depth

Oil To Surface

GAS

0

UNITS

3000

C1

0

PPM

300000

C2

0

PPM

300000

C3

0

PPM

300000

C4

0

PPM

300000

DEPTH

(FEET)

6100

10

20

30

40

50

60

70

80

90

6200

10

20

30

40

50

ROP

FT/HR

500

COLUMBINE LOGGING

RIGGED UP ON 12/14/2012

MANNED 2-PERSON LOGGING

WITH BLOODHOUND GAS

CHROMATOGRAPH UNIT #0298

SEE KAUFMAN PC GL20-68HN(VERT)

FOR VERTICAL LOG

BEGAN DRILLING CURVE

@ 4:13PM 12/16/2012

2214u

725u

1156u

C1: 86.0%

C2: 4.8%

C3: 6.3%

C4: 2.9%

UNITS

3000

0

PPM

300000

FT/HR

500

CUTTINGS

LITHOLOGY

GAMMA

30

CPS

200

BHA BIT:

SMITH 8.75", STC

Serial #: JG4833

Jets: 5x14

MD

6125'

INC

0.9°

AZM

123.0°

TVD

5985.92'

Acetone was used as the cutting agent with the dimple filled to the rim

The ratings are based on 7 descriptors: None, Slight trace, Trace, Fair, Moderate, Good, and Excellent. The descriptor used is based on the loggers observations and best judgment of brilliance, color and longevity of the cut.

SLTYSH: m - lt gy, occ dk gy, sft - mod firm, sbblky - sbply, rthy mtX, tr arg mtX, trphlog, noncalc, tr SHYSS:

SLTYSH: m - lt gy, occ dk gy, sft - mod firm, sbblky - sbply, rthy mtX, tr arg mtX, trphlog, noncalc, tr SHYSS:

TVD

ft

7900

5900

ft

7900

5900

TFG

7900

5900

30

CPS

200

MD

6219'

INC

1.3°

AZM

108.9°

TVD

6079.91'

7900

ft

5900

30

CPS

200

11

22

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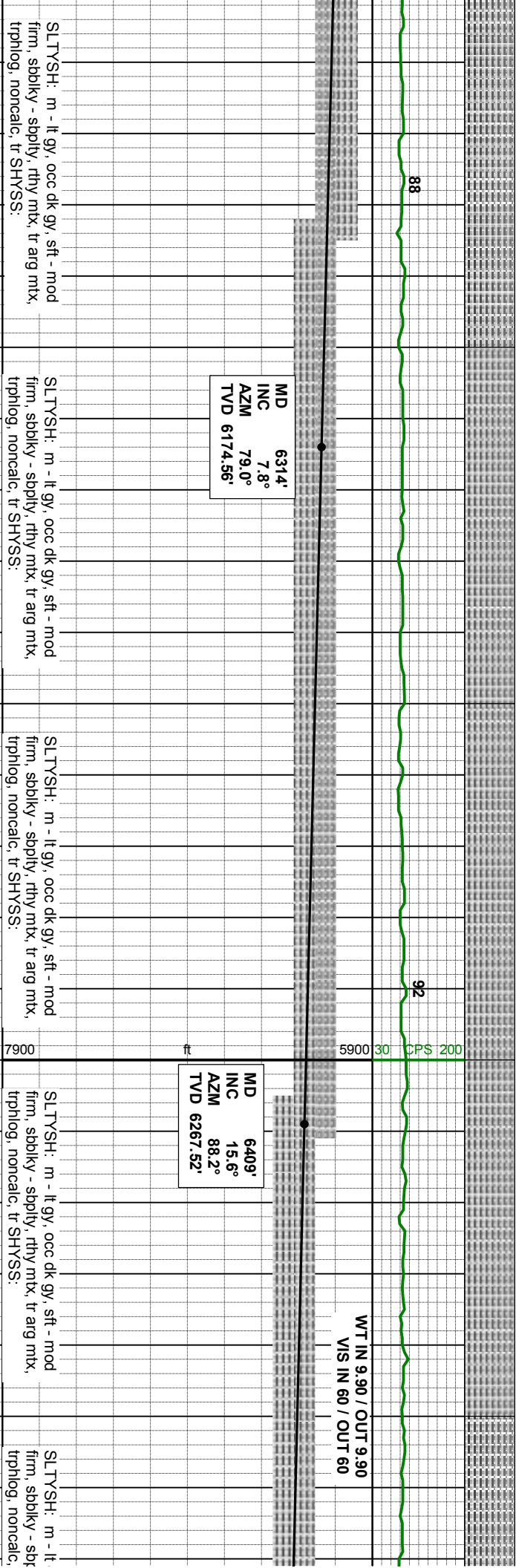
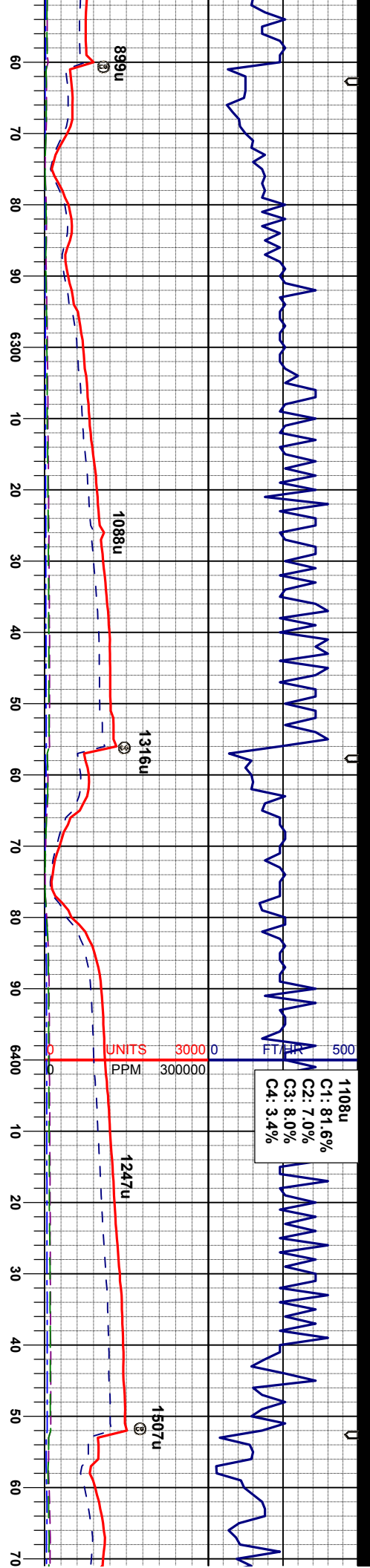
44

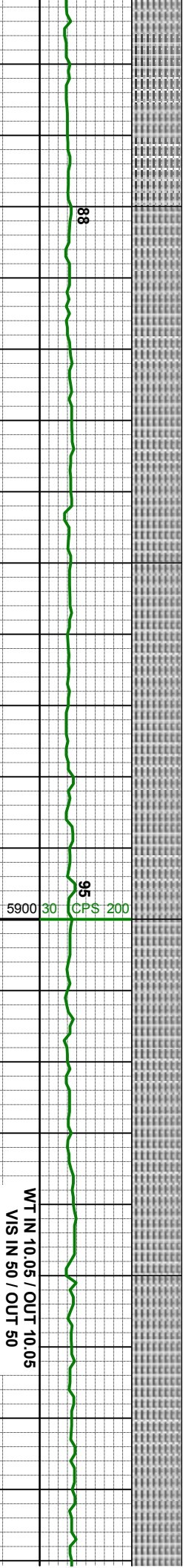
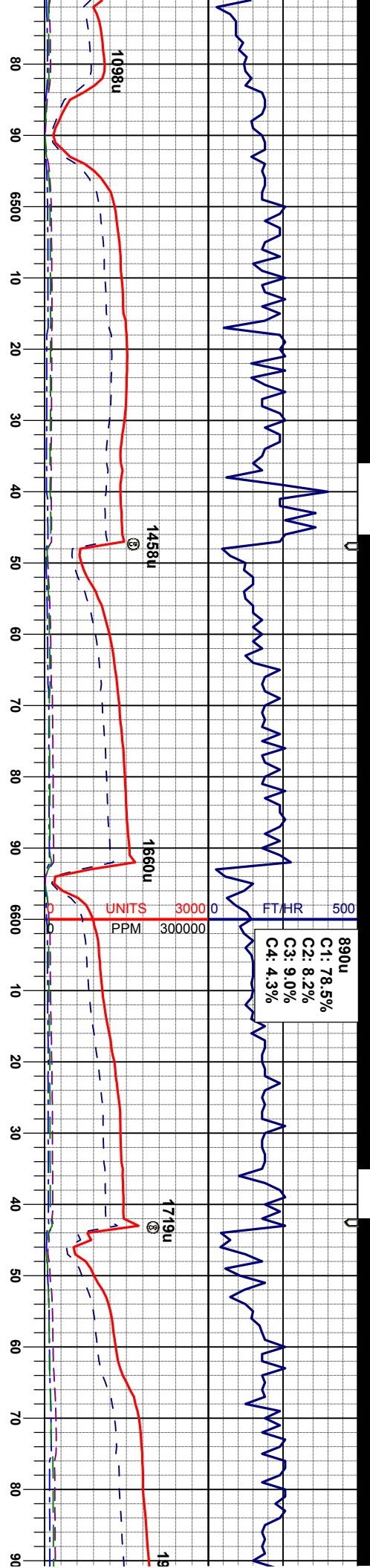
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MD 6504'
INC 21.4°
AZM 94.5°
TVD 6357.58'

MD 6549'
INC 24.3°
AZM 91.8°
TVD 6399.05'

MD 6599'
INC 27.9°
AZM 88.7°
TVD 6443.94'

MD 6644'
INC 29.8°
AZM 85.2°
TVD 6483.36'

MD
INC
AZM
TVD

SLTYSH: m - lt gy, occ dk gy, sft - mod
firm, sbblky - sbply, rthy mtx, tr arg mtx,
tr SHYSS:

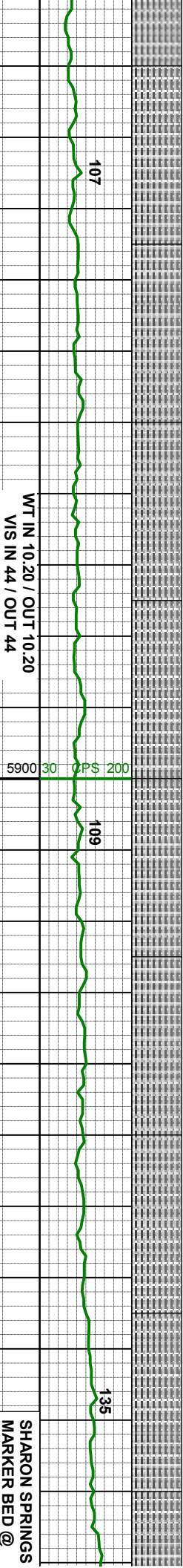
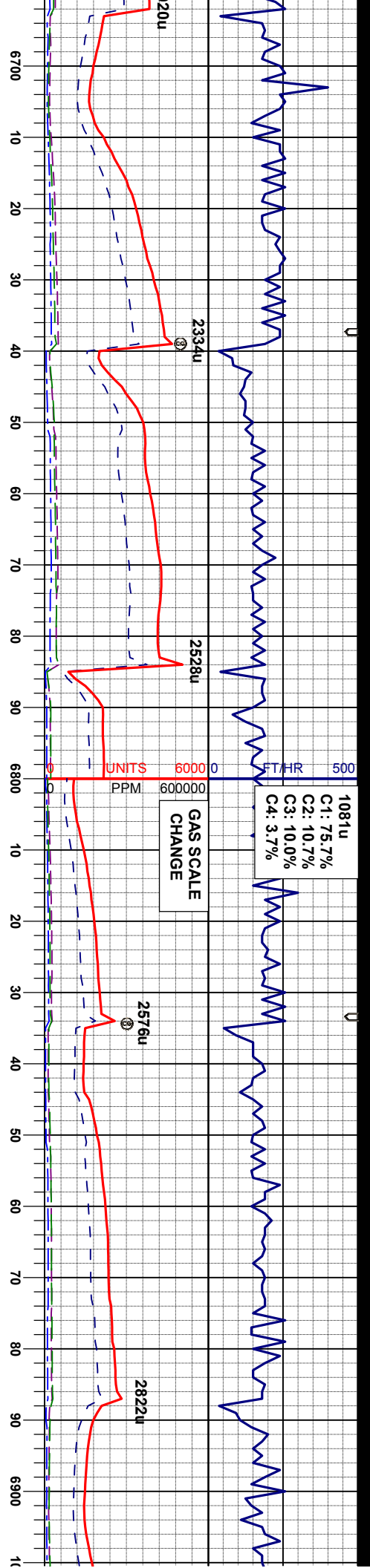
SLTYSH: m - lt gy, occ dk gy, sft - mod
firm, sbblky - sbply, rthy mtx, tr arg mtx,
trphlog, noncalc, tr SHYSS:

SLTYSH: m - lt gy, occ dk gy, sft - mod
firm, sbblky - sbply, rthy mtx, tr arg mtx,
trphlog, noncalc, tr SHYSS:

SLTYSH: m - lt gy, occ dk gy, sft - mod
firm, sbblky - sbply, rthy mtx, tr arg mtx,
trphlog, noncalc, tr SHYSS:

SLTYSH: m - lt gy, occ dk gy, sft - r
firm, sbblky - sbply, rthy mtx, tr arg n
trphlog, noncalc, tr SHYSS:





SHARON SPRINGS
MARKER BED @
6912' MD/ 6686' TVD

6694' 32.3° 85.0° 66526.19'	MD INC AZM TVD	6739' 35.9° 86.4° 6563.45'
--------------------------------------	-------------------------	-------------------------------------

MD INC AZM TVD	6789' 40.5° 87.3° 6602.73'
-------------------------	-------------------------------------

MD INC AZM TVD	6834' 44.5° 87.8° 6635.90'
-------------------------	-------------------------------------

MD INC AZM TVD	6884' 50.3° 87.4° 6669.73'
-------------------------	-------------------------------------

SLTYSH: m - lt gy, occ dk gy, sft - mod
firm, sbblky - sbply, rthy mtx, tr aig mtx,
trphlog, noncalc, tr SHYSS:

SLTYSH: m - lt gy, occ dk gy, sft - mod
firm, sbblky - sbply, rthy mtx, tr aig mtx,
trphlog, noncalc, tr SHYSS:

SLTYSH: m - lt gy, occ dk gy, sft - mod
firm, sbblky - sbply, rthy mtx, tr aig mtx,
trphlog, noncalc, tr SHYSS:

SLTYSH: m - lt gy, occ dk gy, sft - mod
firm, sbblky - sbply, rthy mtx, tr aig mtx,
trphlog, noncalc, tr SHYSS:

SLTYSH:
ply, rthy
CHK, lfg
v calc, c
MRL, gy
sbply, s

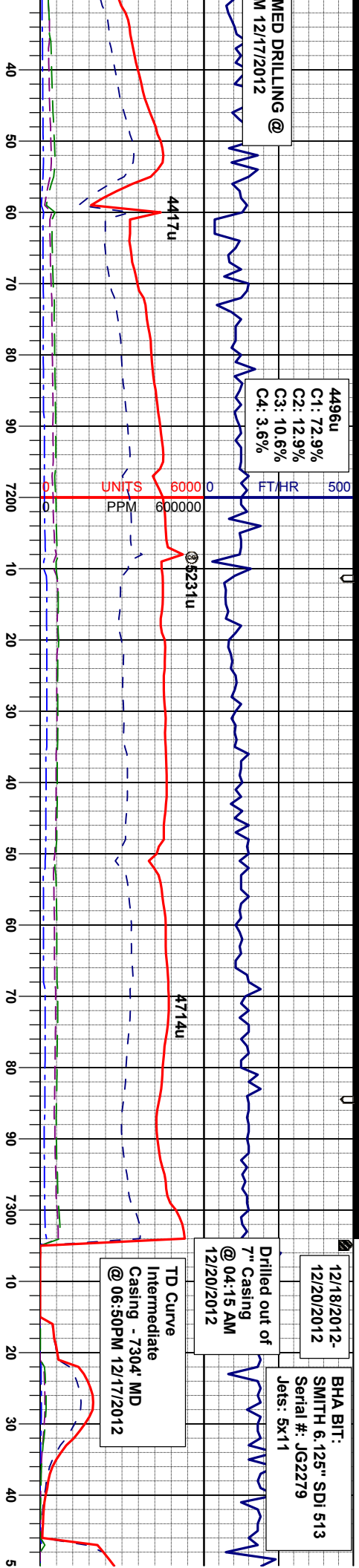
MED DRILLING @
M 12/17/2012

4496u
C1: 72.9%
C2: 12.9%
C3: 10.6%
C4: 3.6%

12/18/2012-
12/20/2012
BHA BIT:
SMITH 6.125" SDI 513
Serial #: JG2279
Jets: 5x11

Drilled out of
7" Casing
@ 04:15 AM
12/20/2012

TD Curve
Intermediate
Casing - 7304' MD
@ 06:50PM 12/17/2012



NIO B CHALK @
7130MD/ 6794TVD

WT IN 10.70 / OUT 10.70
VIS IN 48 / OUT 48

5900 CPS 200

MD 7262'
INC 86.3°
AZM 89.7°
TVD 6825.82'

MD 7323'
INC 92.6°
AZM 86.0°
TVD 6826.40'

MD 7168'
INC 72.1°
AZM 89.9°
TVD 6808.25'

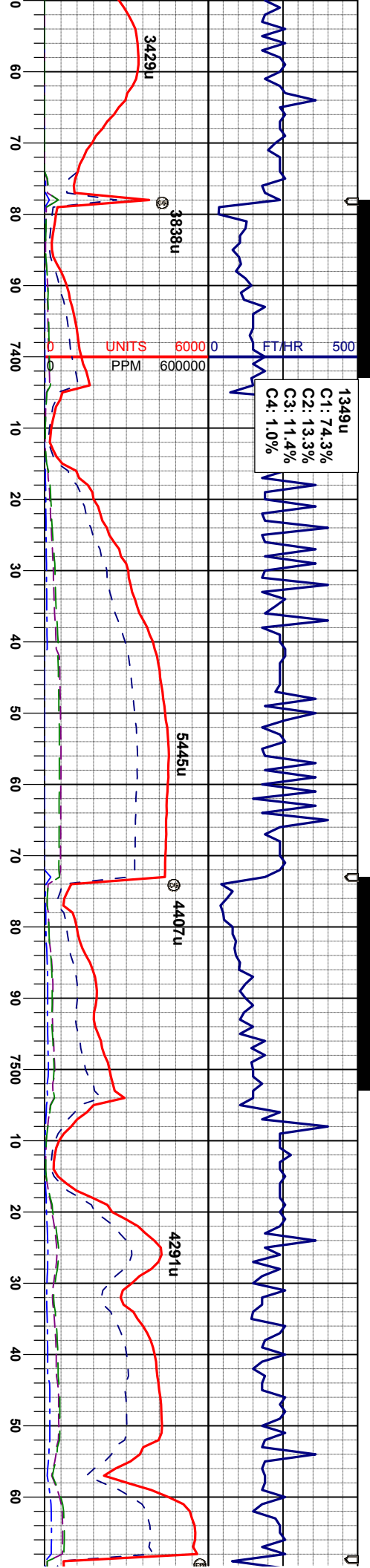
CHK: lgy-wh-crm, sft, sbbky, wxy-mot tex,
v calc, tr bent
MRL: gy - dkgy - brngy, sft - firm, sbbky-
sbbly, sbwxy-rthy tex, v calc

CHK: lgy-wh-crm, sft, sbbky, wxy-mot tex,
v calc, tr bent
MRL: gy - dkgy - brngy, sft - firm, sbbky-
sbbly, sbwxy-rthy tex, v calc

CHK: lgy-wh-crm, sft, sbbky, wxy-mot tex,
v calc, tr bent
MRL: gy - dkgy - brngy, sft - firm, sbbky-
sbbly, sbwxy-rthy tex, v calc

CHK: lgy-wh-crm, mgy - tan sft, sbbky,
wxy-mot tex, v calc,
MRL: gy - dkgy - brngy, sft - firm, sbbky-
sbbly, sbwxy-rthy tex, occ clac incl v calc





WT IN 9.80 / OUT 9.80
VIS IN 38 / OUT 38

MD 7418'
INC 92.0°
AZM 86.0°
TVD 6822.59'

MD 7513'
INC 91.7°
AZM 88.0°
TVD 6819.53'

MR.L: gy - dkgy - brngy, sft - firm, sbblky-
sbply, sbwxy- rthy tex, occ calc incl, v calc
CHK: lgy-wh-crm, mgy - tan sft, sbblky,
wxy-mot tex, v calc

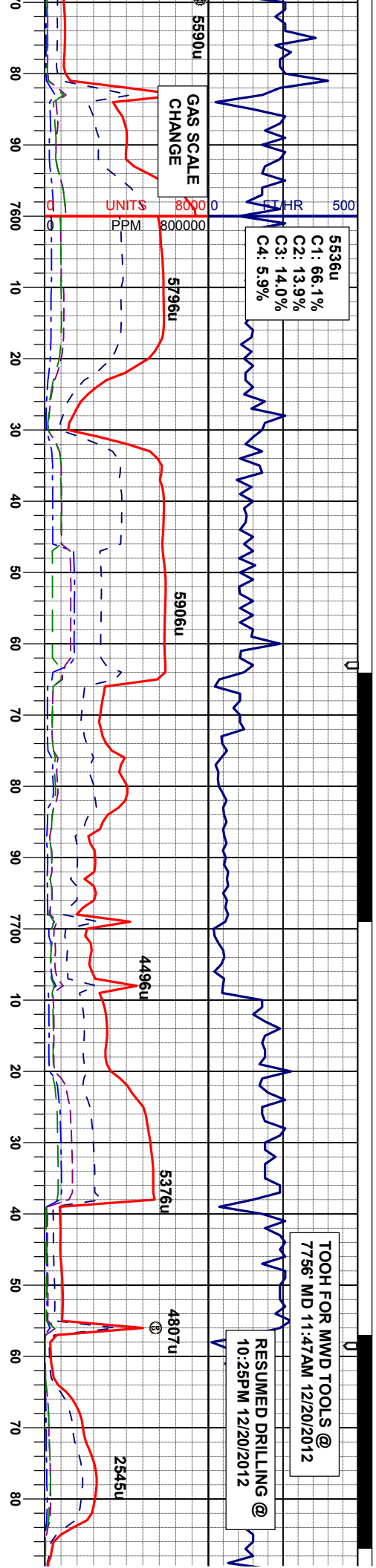
MR.L: gy - dkgy - brngy, sft - firm, sbblky-
sbply, sbwxy- rthy tex, occ calc incl, v calc
CHK: lgy-wh-crm, mgy - tan sft, sbblky,
wxy-mot tex, v calc

CHK: lgy-wh-crm, mgy - tan sft, sbblky,
wxy-mot tex, v calc
MR.L: gy - dkgy - brngy, sft - firm, sbblky-
sbply, sbwxy- rthy tex, occ calc incl, v calc

CHK: lgy-wh-crm, mgy - tan sft, sbblky,
wxy-mot tex, v calc
MR.L: gy - dkgy - brngy, sft - firm, sbblky-
sbply, sbwxy- rthy tex, occ calc incl, v calc

CHK: lgy-wh-crm, mgy - tan sft, sbblky,
wxy-mot tex, v calc
MR.L: gy - dkgy - brngy, sft - firm, sbblky-
sbply, sbwxy- rthy tex, occ calc incl, v calc





WT IN 9.90 / OUT 9.90
VIS IN 37 / OUT 37

MD 7608'
INC 92.4°
AZM 86.6°
TVD 6816.13'

WT IN 9.70 / OUT 9.70
VIS IN 38 / OUT 38

MD 7702'
INC 90.8°
AZM 86.0°
TVD 6813.50'

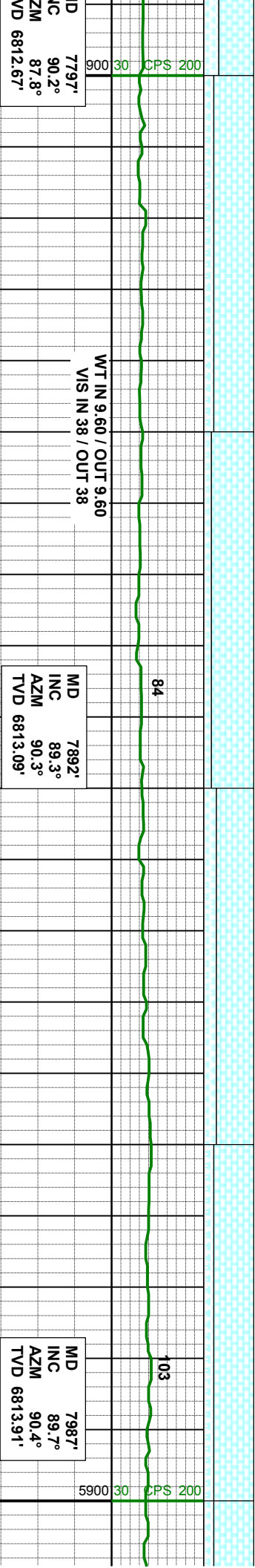
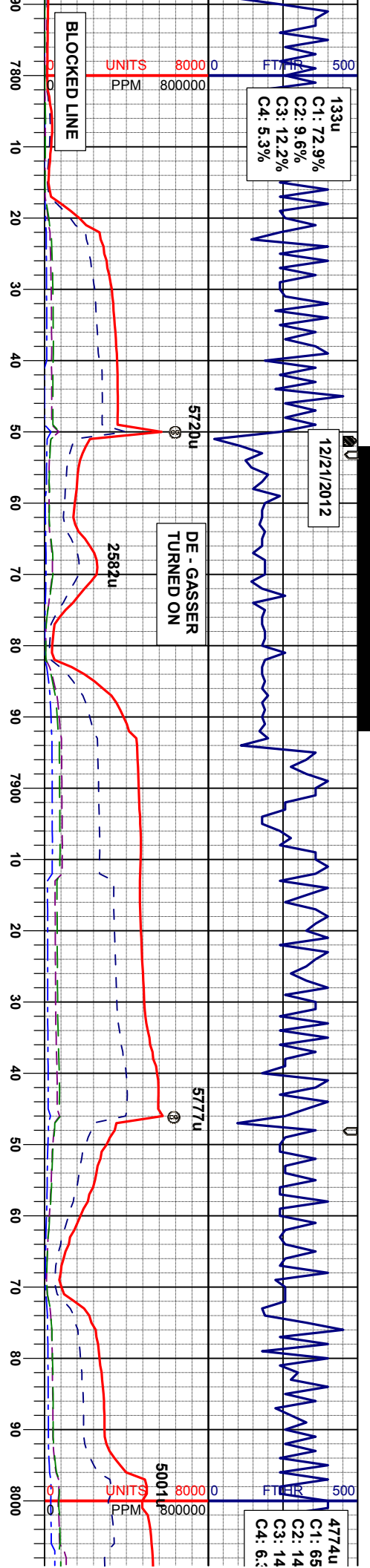
CHK: ltgy-wh-crm, mgy - tan sft, sbblky,
wxy-mot tex, v calc
MRL: gy - dkgy - brngy, sft - firm, sbblky-
sbply, sbwxy- rthy tex, occ calc incl, v calc

CHK: ltgy-wh-crm, mgy - tan sft, sbblky,
wxy-mot tex, v calc
MRL: gy - dkgy - brngy, sft - firm, sbblky-
sbply, sbwxy- rthy tex, occ calc incl, v calc

CHK: ltgy-wh-crm, mgy - tan sft, sbblky,
wxy-mot tex, v calc
MRL: gy - dkgy - brngy, sft - firm, sbblky-
sbply, sbwxy- rthy tex, occ calc incl, v calc

CHK: ltgy-wh-crm, mgy - tan sft, sbblky,
wxy-mot tex, v calc
MRL: gy - dkgy - brngy, sft - firm, sbblky-
sbply, sbwxy- rthy tex, occ calc incl, v calc

M IN A T



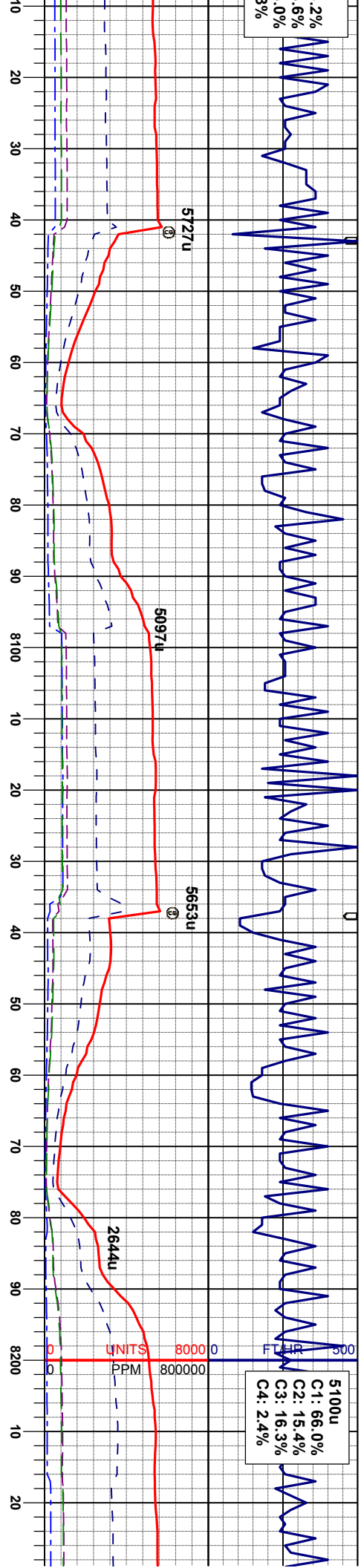
CHK: ltgy-wh-crm, mgy - tan sft, sbbiky,
wxy-mot tex, v calc
MR.L: gy - dkgy - brngy, sft - firm, sbbiky-
sbbiky, sbwxy- rthy tex, occ calc incl, v calc

CHK: ltgy-wh-crm, mgy - tan sft, sbbiky,
wxy-mot tex, v calc
MR.L: gy - dkgy - brngy, sft - firm, sbbiky-
sbbiky, sbwxy- rthy tex, occ calc incl, v calc

CHK: ltgy-wh-crm, mgy - tan sft, sbbiky,
wxy-mot tex, v calc
MR.L: gy - dkgy - brngy, sft - firm, sbbiky-
sbbiky, sbwxy- rthy tex, v calc

CHK: ltgy-wh-crm, mgy - tan sft, sbbiky,
wxy-mot tex, v calc
MR.L: gy - dkgy - brngy, sft - firm, sbbiky-
sbbiky, sbwxy- rthy tex, v calc





5100u
C1: 66.0%
C2: 15.4%
C3: 16.3%
C4: 2.4%

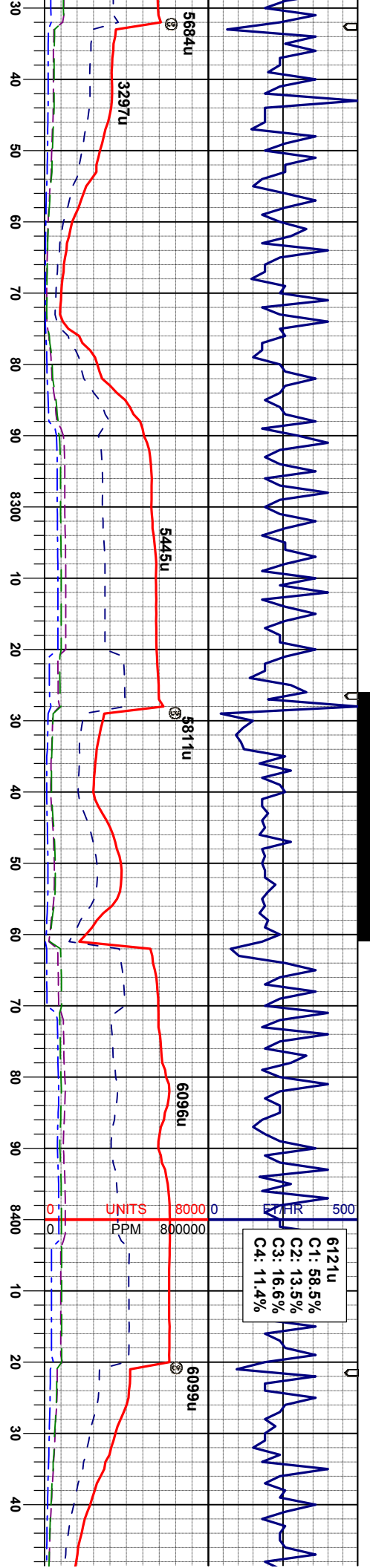
MD 8081'
INC 90.6°
AZM 89.6°
TVD 6813.67'

MD 8176'
INC 90.8°
AZM 89.0°
TVD 6812.51'

WT IN 9.70 / OUT 9.70
VIS IN 37 / OUT 37

lgy-wh-crm, mgy - tan sft, sbblky, not tex, v calc
gy - dkgy - brngy, sft - firm, sbblky- v, sbwxy- rthy tex, occ calc incl, v calc
CHK: lgy-wh-crm, mgy - tan sft, sbblky, wxy-mot tex, v calc
MR.L: gy - dkgy - brngy, sft - firm, sbblky- sbply, sbwxy- rthy tex, occ calc incl, v calc
CHK: lgy-wh-crm, mgy - tan sft, sbblky, wxy-mot tex, v calc
MR.L: gy - dkgy - brngy, sft - firm, sbblky- sbply, sbwxy- rthy tex, tr dac incl, v calc
CHK: lgy-wh-crm, mgy - tan sft, sbblky, wxy-mot tex, v calc
MR.L: gy - dkgy - brngy, sft - firm, sbblky- sbply, sbwxy- rthy tex, tr





MD 8271'
INC 91.7°
AZM 89.7°
TVD 6810.44'

MD 8366'
INC 89.9°
AZM 89.7°
TVD 6809.11'

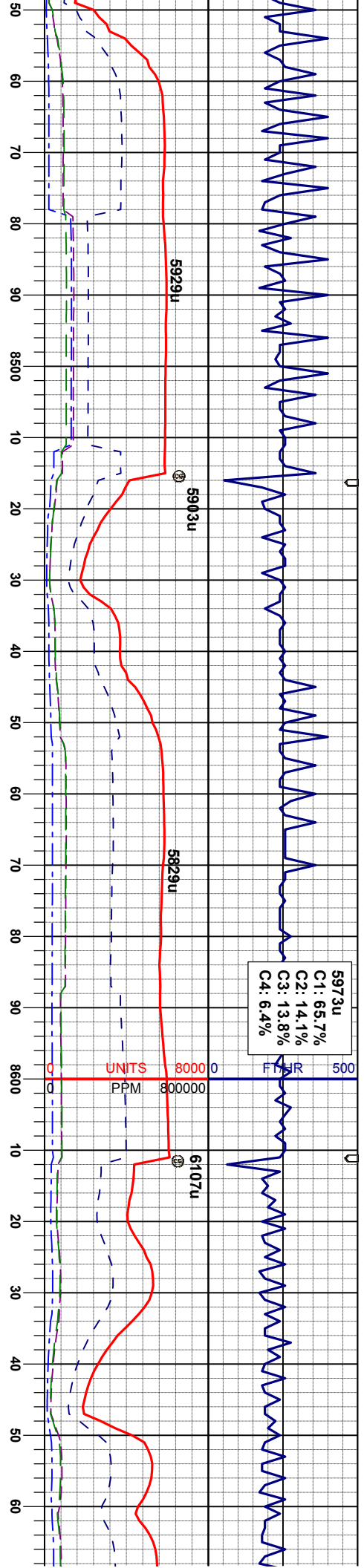
WT IN 9.70 / OUT 9.70
VIS IN 36 / OUT 36

an sft, sbbiky, CHK: lgy-wh-crm, mgy - tan, sft, sbbiky, wxy-mot tex, v calc
t - firm, sbbiky- MRL: gy - dkgy - brngy, sft - firm, sbbiky- sbply, sbwxy- rthy tex, tr calc incl, v calc
7900

CHK: lgy-wh-crm, mgy - tan, sft, sbbiky, wxy-mot tex, v calc
MRL: gy - dkgy - brngy, sft - firm, sbbiky- sbply, sbwxy- rthy tex, tr calc incl, v calc

CHK: lgy-wh-crm, mgy - tan, sft, sbbiky, wxy-mot tex, v calc
MRL: gy - dkgy - brngy, sft - firm, sbbiky- sbply, sbwxy- rthy tex, tr calc incl, v calc





MD 8461'
INC 90.2°
AZM 89.6°
TVD 6809.03'

CHK: lgy-wh-crm, mgy - tan, sft, sbbky,
wxy-mot tex, v calc
MRL: gy - dkgy - brngy, sft - firm, sbbky-
sbply, sbwxy- rthy tex, tr calc incl, v calc

MD 8556'
INC 90.2°
AZM 89.4°
TVD 6808.70'

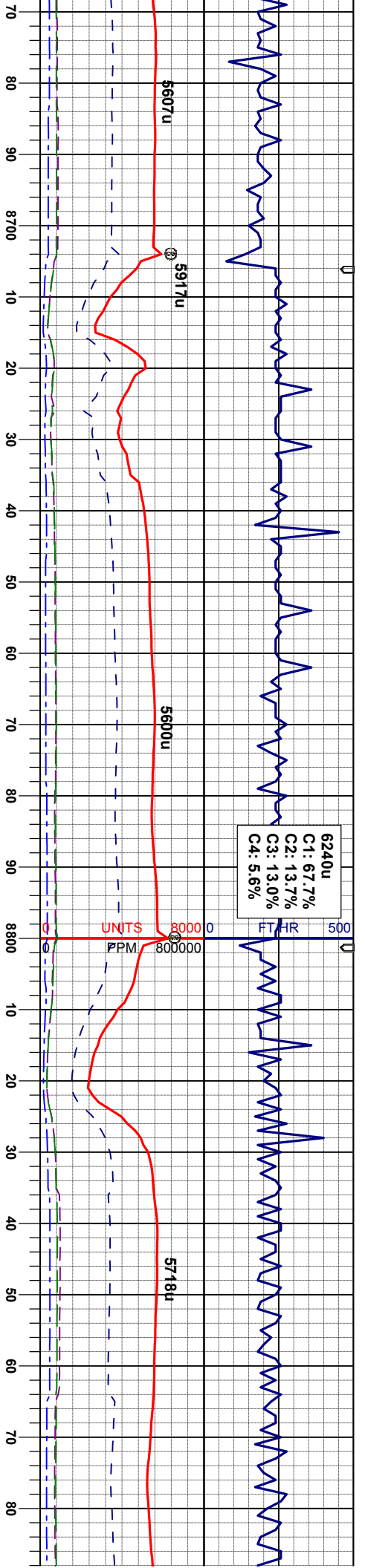
CHK: lgy-wh-crm, mgy - tan, sft, sbbky,
wxy-mot tex, v calc
MRL: gy - dkgy - brngy, sft - firm, sbbky-
sbply, sbwxy- rthy tex, tr calc incl, v calc

MD 8651'
INC 91.0°
AZM 89.4°
TVD 6807.70'

CHK: lgy-wh-crm, mgy - tan, sft, sbbky,
wxy-mot tex, v calc
MRL: gy - dkgy - brngy, sft - firm, sbbky-
sbply, sbwxy- rthy tex, tr calc incl, v calc

CHK: lgy-wh-crm, mgy - tan, sft, sbbky,
wxy-mot tex, v calc
MRL: gy - dkgy - brngy, sft - firm, sbbky-
sbply, sbwxy- rthy tex, tr calc incl, v calc





WT IN 9.90 / OUT 9.90
VIS IN 35 / OUT 35

MD 8746'
INC 90.9°
AZM 89.2°
TVD 6806.13'

MD 8840'
INC 91.9°
AZM 89.4°
TVD 6803.83'

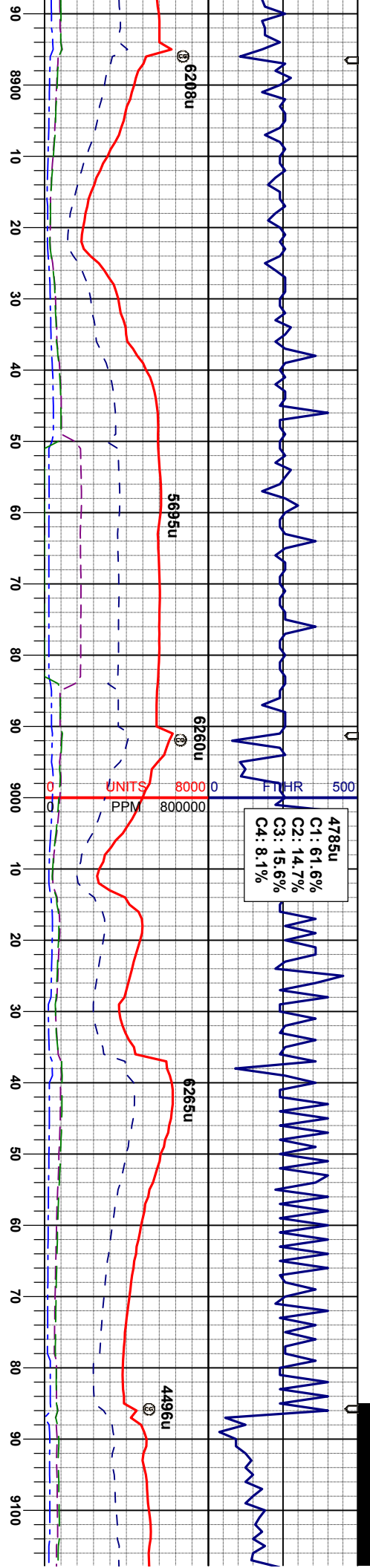
cm, mgy - tan, sft, sbblky,
calc
/ - brngy, sft - firm, sbblky-
rthy tex, tr calc incl, v calc

CHK: llyg-wt-crm, mgy - tan, sft, sbblky,
wxy-mot tex, v calc
MRL: gy - dkgy - brngy, sft - firm, sbblky-
sbply, sbwxy- rthy tex, tr calc incl, v calc

CHK: llyg-wt-crm, mgy - tan, sft, sbblky,
wxy-mot tex, v calc
MRL: gy - dkgy - brngy, sft - firm, sbblky-
sbply, sbwxy- rthy tex, tr calc incl, v calc

CHK: llyg-wt-crm, mgy - tan, sft, sbblky,
wxy-mot tex, v calc
MRL: gy - dkgy - brngy, sft - firm, sbblky-
sbply, sbwxy- rthy tex, tr calc incl, v calc

CHK: llyg-wt-crm, mgy - tan, sft, s
wxy-mot tex, v calc
MRL: gy - dkgy - brngy, sft - firm, s
sbply, sbwxy- rthy tex, tr calc incl



MD 8935'
INC 92.4°
AZM 89.2°
TVD 6800.27'

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

MD 9030'
INC 93.4°
AZM 89.0°
TVD 6975.46'

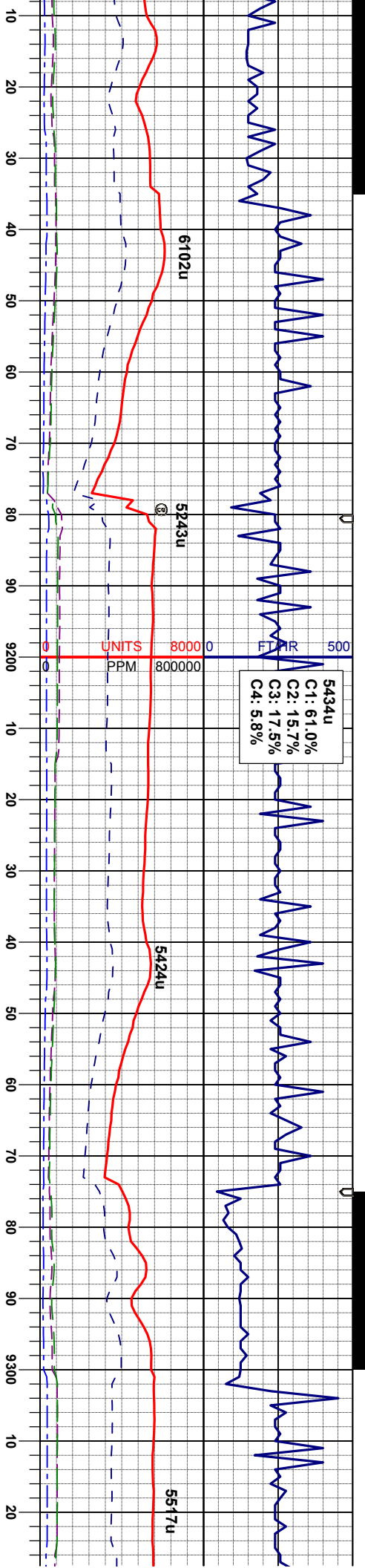
WT IN 10.00 / OUT 10.00
VIS IN 35 / OUT 35

CHK: Itgy-wh-crm, mgy - tan, sft, sbblky,
wxy-mot tex, v calc
MR.L: gy - dkgy - brngy, sft - firm, sbblky-
sbply, sbwxy- rthy tex, tr calc incl, v calc

CHK: Itgy-wh-crm, mgy - tan, sft, sbblky,
wxy-mot tex, v calc
MR.L: gy - dkgy - brngy, sft - firm, sbblky-
sbply, sbwxy- rthy tex, tr calc incl, v calc

CHK: Itgy-wh-crm, mgy - tan, sft, sbblky,
wxy-mot tex, v calc
MR.L: gy - dkgy - brngy, sft - firm, sbblky-
sbply, sbwxy- rthy tex, tr calc incl, v calc





MD 9125'
INC 91.5°
AZM 88.0°
TVD 6791.40'

MD 9220'
INC 91.8°
AZM 88.0°
TVD 6788.66'

MD 9315'
INC 90.7°
AZM 87.4°
TVD 6786.59'

CHK: llyg-wh-crm, mgy - tan, sft, sbblky,
wxy-mot tex, v calc
MRL: gy - dkgv - brngy, sft - firm, sbblky-
sblply, sbwxy- rthy tex, tr calc incl, v calc

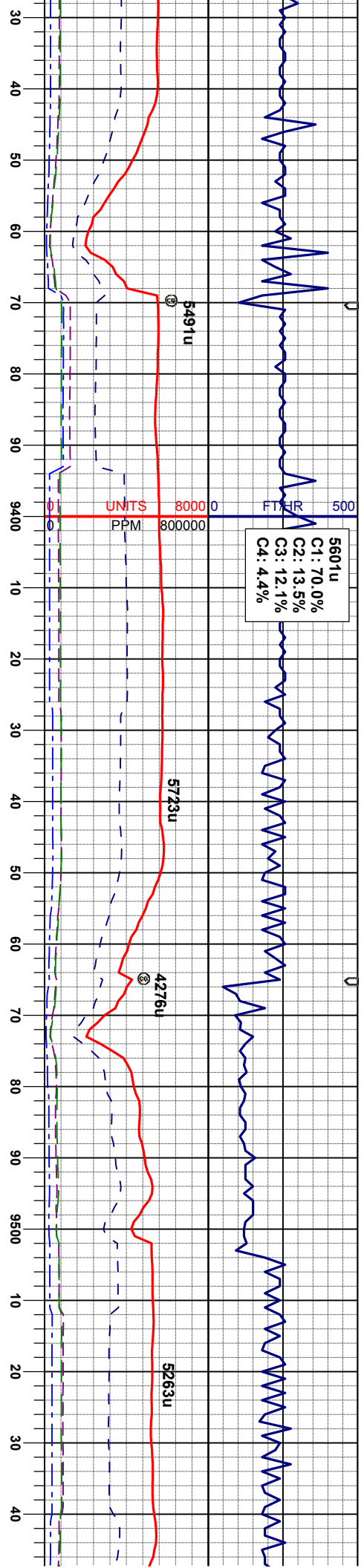
CHK: llyg-wh-crm, mgy - tan, sft, sbblky,
wxy-mot tex, v calc
MRL: gy - dkgv - brngy, sft - firm, sbblky-
sblply, sbwxy- rthy tex, tr calc incl, v calc

CHK: llyg-wh-crm, mgy - tan, sft, sbblky,
wxy-mot tex, v calc, grdg -
MRL: gy - dkgv - brngy, sft - firm, sbblky-
sblply, sbwxy- rthy tex, tr calc incl, v calc

CHK: llyg-wh-crm, mgy - tan, sft, sbblky,
wxy-mot tex, v calc, grdg -
MRL: gy - dkgv - brngy, sft - firm, sbblky-
sblply, sbwxy- rthy tex, tr calc incl, v calc

CHK: llyg-wh-crm, mgy - tan, sft, sbblky,
wxy-mot tex, v calc, grdg -
MRL: gy - dkgv - brngy, sft - firm, sbblky-
sblply, sbwxy- rthy tex, tr calc incl, v calc





MD 9410'
INC 91.6°
AZM 86.9°
TVD 6784.68'

MD 9505'
INC 90.5°
AZM 87.3°
TVD 6782.94'

WT IN 10.00 / OUT 10.00
VIS IN 38 / OUT 38

MARL

B CHALK

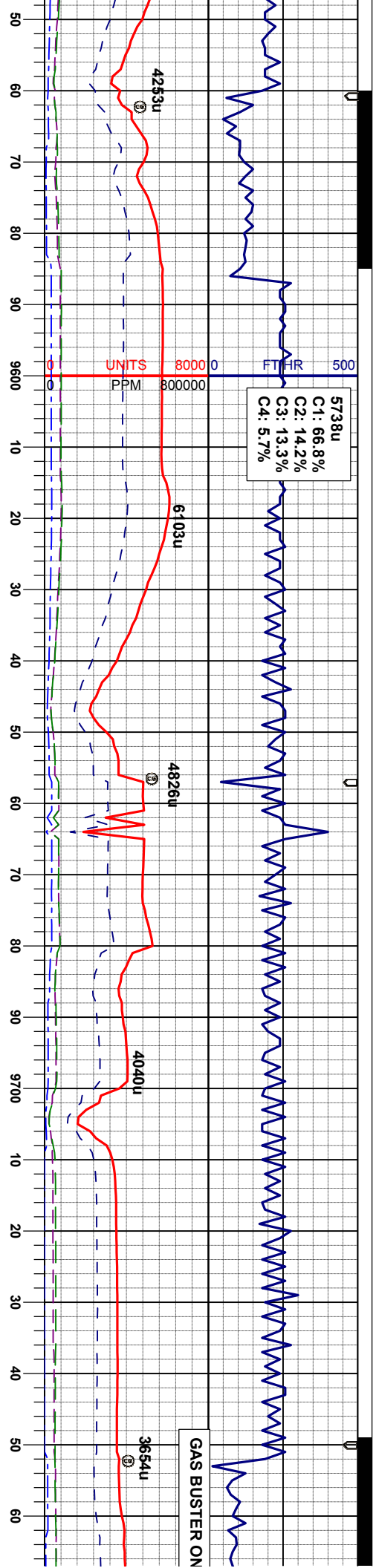
tan, sft, sbblky,
wxy-mot tex, v calc, grdg -
MR.L: gy - dkgy - brngy, sft - firm, sbblky-
spblty, sbwxy- rthy tex, tr calc incl, v calc

CHK: ltgy-wh-crm, mgy - tan, sft, sbblky,
wxy-mot tex, v calc, grdg -
MR.L: gy - dkgy - brngy, sft - firm, sbblky-
spblty, sbwxy- rthy tex, tr calc incl, v calc

CHK: ltgy-wh-crm, mgy - tan, sft, sbblky,
wxy-mot tex, v calc, grdg -
MR.L: gy - dkgy - brngy, sft - firm, sbblky-
spblty, sbwxy- rthy tex, tr calc incl, v calc

CHK: ltgy-wh-crm, mgy - tan, sft, sbblky,
wxy-mot tex, v calc, grdg -
MR.L: gy - dkgy - brngy, sft - firm, sbblky-
spblty, sbwxy- rthy tex, tr calc incl, v calc,
tr bent





MD 9599'
INC 90.0°
AZM 87.6°
TVD 6782.53'

WT IN 10.00 / OUT 10.00
VIS IN 38 / OUT 38

MD 9694'
INC 91.5°
AZM 88.2°
TVD 6781.29'

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

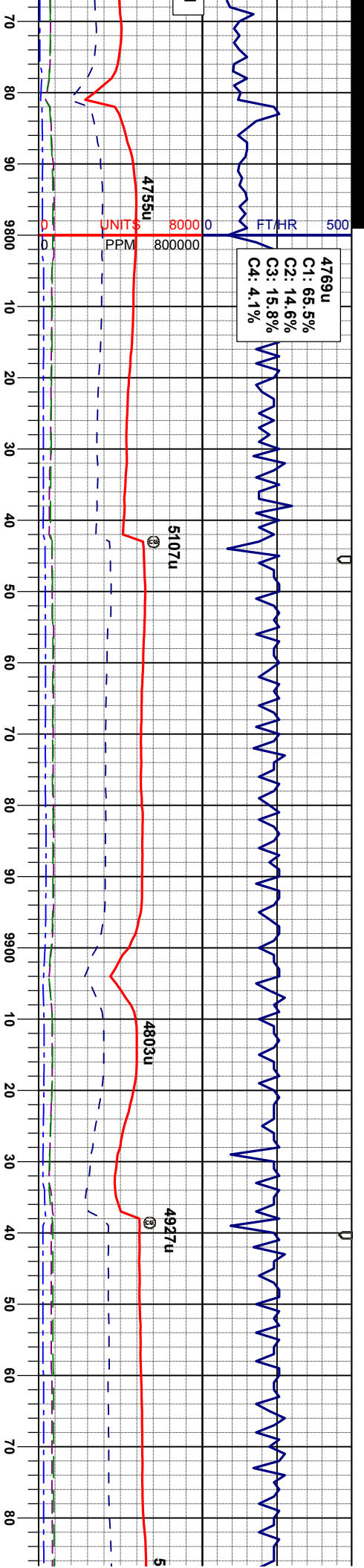
MR.L: gy - dkgy - brngy, sft - firm, sbblky-sbply, sbwxy- rthy tex, tr calc incl, v calc, tr bent
CHK: lgy-wh-crm, mgy - tan, sft, sbblky, wxy-mot tex, v calc

MR.L: gy - dkgy - brngy, sft - firm, sbblky-sbply, sbwxy- rthy tex, tr calc incl, v calc, tr bent
CHK: mgy - tan, occ dkgy sft, sbblky, wxy-mot tex, v calc

MR.L: gy - dkgy - brngy, sft - firm, sbblky-sbply, sbwxy- rthy tex, tr calc incl, v calc, tr bent
CHK: mgy - tan, occ dkgy sft, sbblky, wxy-mot tex, v calc

MR.L: gy - dkgy - brngy, sft - firm, sbblky-sbply, sbwxy- rthy tex, tr calc incl, v calc, tr bent
CHK: mgy - tan, occ dkgy sft, sbblky, wxy-mot tex, v calc

MR.L: gy - dkgy - brngy, sft - firm, sbblky-sbply, sbwxy- rthy tex, tr calc incl, v calc, tr bent
CHK: mgy - tan, occ dkgy sft, sbblky, wxy-mot tex, v calc



MD 9789'
INC 90.0°
AZM 88.5°
TVD 6780.05'

MD 9884'
INC 90.0°
AZM 88.3°
TVD 6780.05'

MD 9979'
INC 90.4°
AZM 87.6°
TVD 6779.71'

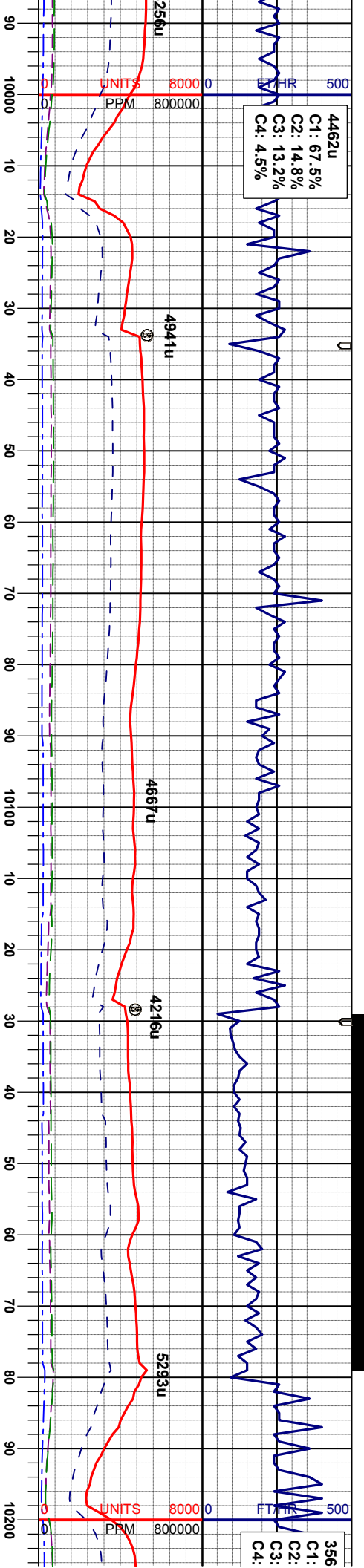
MR: gy - dkgy - brngy, sft - firm, sbblky-sbply, sbwxy-rtthy tex, tr calc incl, v calc, tr bent
CHK: mgy - tan, occ dkgy sft, sbblky, wxy-mot tex, v calc

MR: gy - dkgy - brngy, sft - firm, sbblky-sbply, sbwxy-rtthy tex, tr calc incl, v calc, tr bent
CHK: mgy - tan, occ dkgy sft, sbblky, wxy-mot tex, v calc

MR: gy - dkgy - brngy, sft - firm, sbblky-sbply, sbwxy-rtthy tex, tr calc incl, v calc, tr bent
CHK: mgy - tan, occ dkgy sft, sbblky, wxy-mot tex, v calc

MR: gy - dkgy - brngy, sft - firm, sbblky-sbply, sbwxy-rtthy tex, tr calc incl, v calc, tr bent
CHK: mgy - tan, occ dkgy sft, sbblky, wxy-mot tex, v calc

MR: gy - dkgy - brngy, sft - firm, sbblky-sbply, sbwxy-rtthy tex, tr calc incl, v calc, tr bent
CHK: mgy - tan, occ dkgy sft, sbblky, wxy-mot tex, v calc



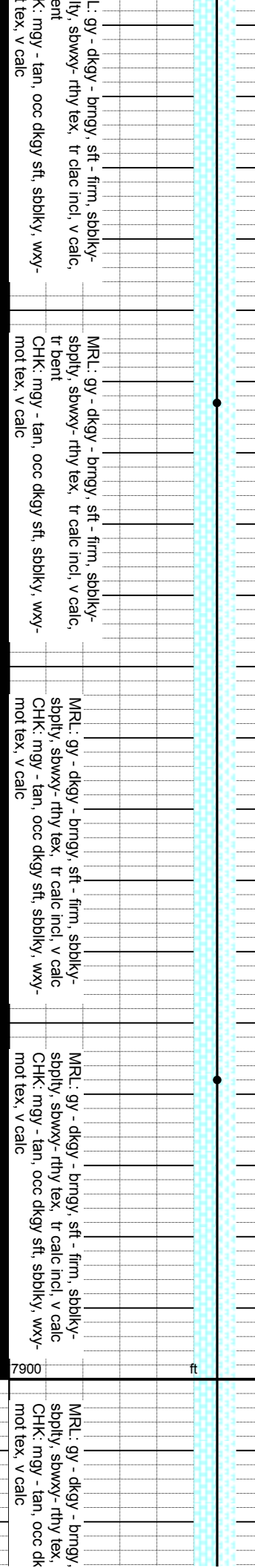
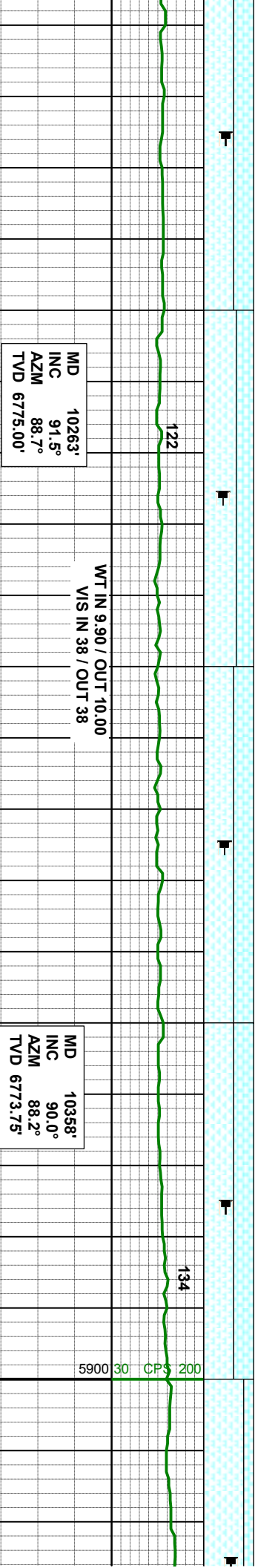
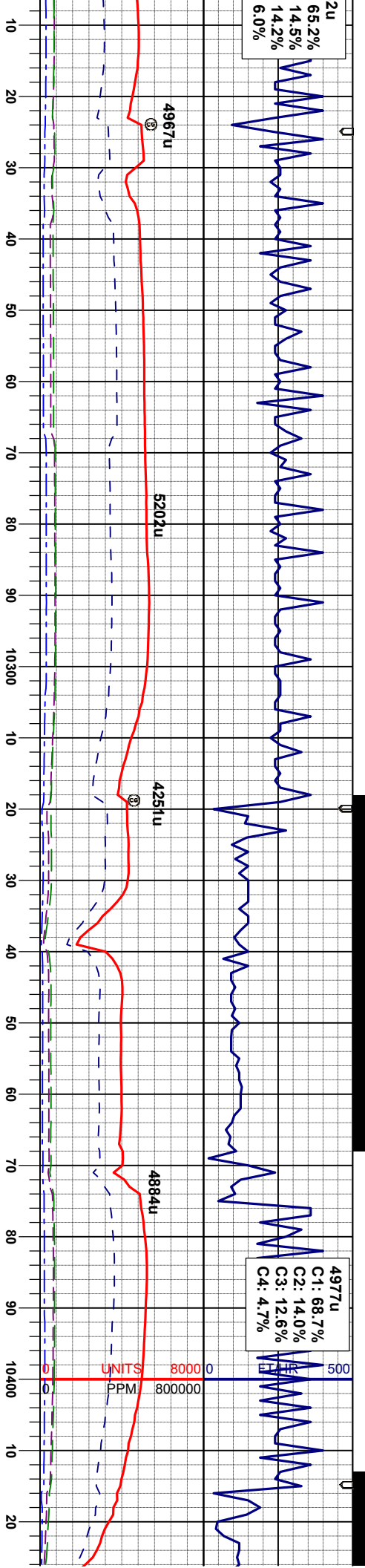
C1: 67.5%
C2: 14.8%
C3: 13.2%
C4: 4.5%

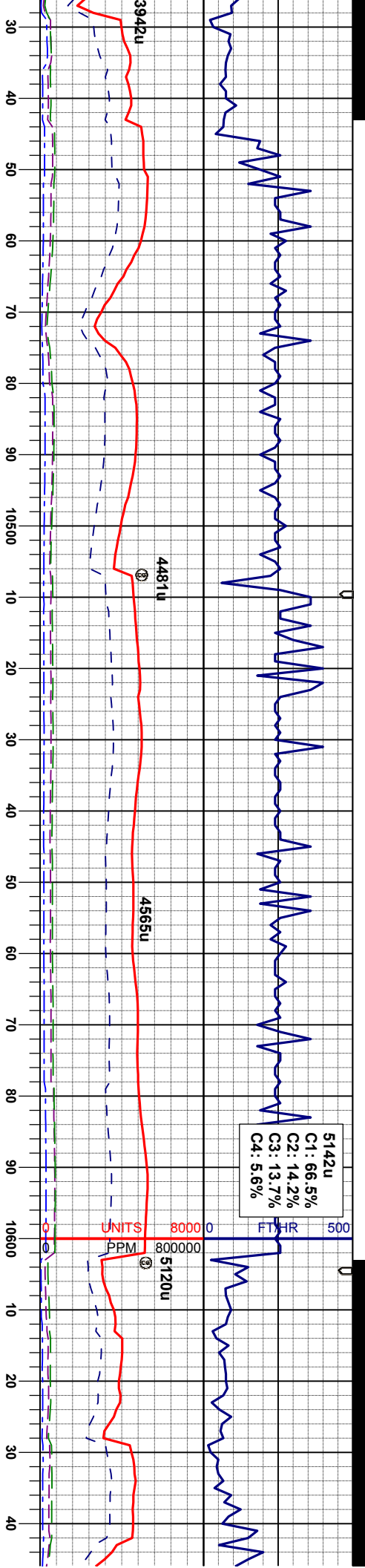
MD 10074'
INC 91.9°
AZM 88.2°
TVD 6777.80'

MD 10169'
INC 90.0°
AZM 87.3°
TVD 6776.23'

MR: gy - dkgy - brngy, sft - firm, sbblky-sbply, sbwxy-rthy tex, tr calc incl, v calc, tr bent
CHK: mgy - tan, occ dkgy sft, sbblky, wxy-mot tex, v calc

MR
sdp
tr bl
CHI
mot





MD 10453'
INC 90.2°
AZM 87.6°
TVD 6773.59'

MRL: gy - dkgy - brngy, sft - firm, sbblky-sbply, sbwxy- rthy tex, tr calc incl, v calc, tr bent
CHK: mgy - tan, occ dkgy sft, sbblky, wxy-mot tex, v calc

MD 10548'
INC 91.7°
AZM 88.0°
TVD 6772.01'

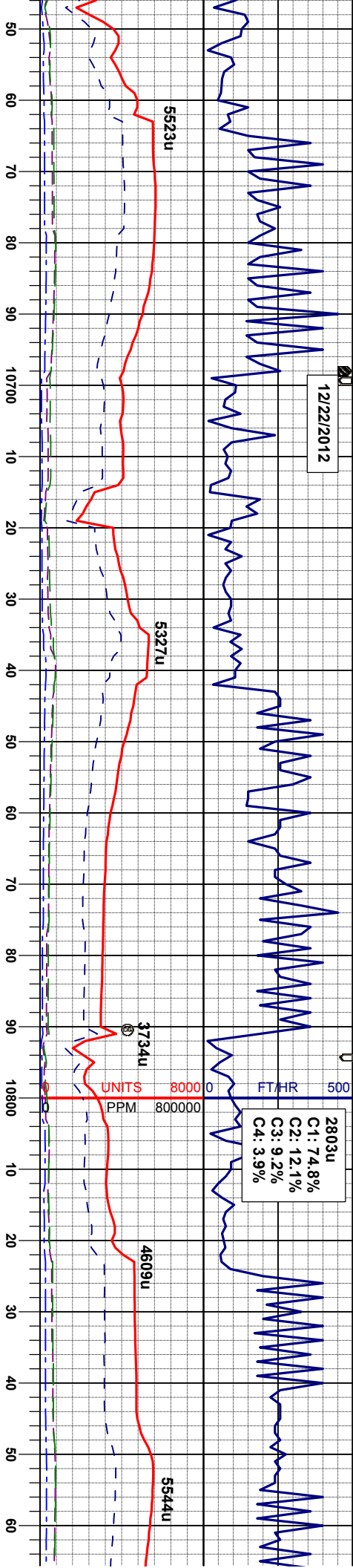
MRL: gy - dkgy - brngy, sft - firm, sbblky-sbply, sbwxy- rthy tex, tr calc incl, v calc, tr bent
CHK: mgy - tan, occ dkgy sft, sbblky, wxy-mot tex, v calc

MRL: gy - dkgy - brngy, sft - firm, sbblky-sbply, sbwxy- rthy tex, tr calc incl, v calc, tr bent
CHK: mgy - tan, occ dkgy sft, sbblky, wxy-mot tex, v calc

MRL: gy - dkgy - brngy, sft - firm, sbblky-sbply, sbwxy- rthy tex, tr calc incl, v calc, tr bent
CHK: mgy - tan, occ dkgy sft, sbblky, wxy-mot tex, v calc

MD 10610'
INC 91.7°
AZM 88.0°
TVD 6769.01'

12/22/2012



543'
1.2°
8.0°
61'

MD 10738'
INC 90.4°
AZM 88.5°
TVD 6768.29'

MD 10833'
INC 91.1°
AZM 90.1°
TVD 6767.04'

CHK: mgy - tan, occ dkgy sft, sbbiky, wxy-
mot tex, v calc
MRL: gy - dkgy - brngy, sft - firm, sbbiky-
sbbply, sbwxy- rthy tex, tr calc incl, v calc,
tr bent

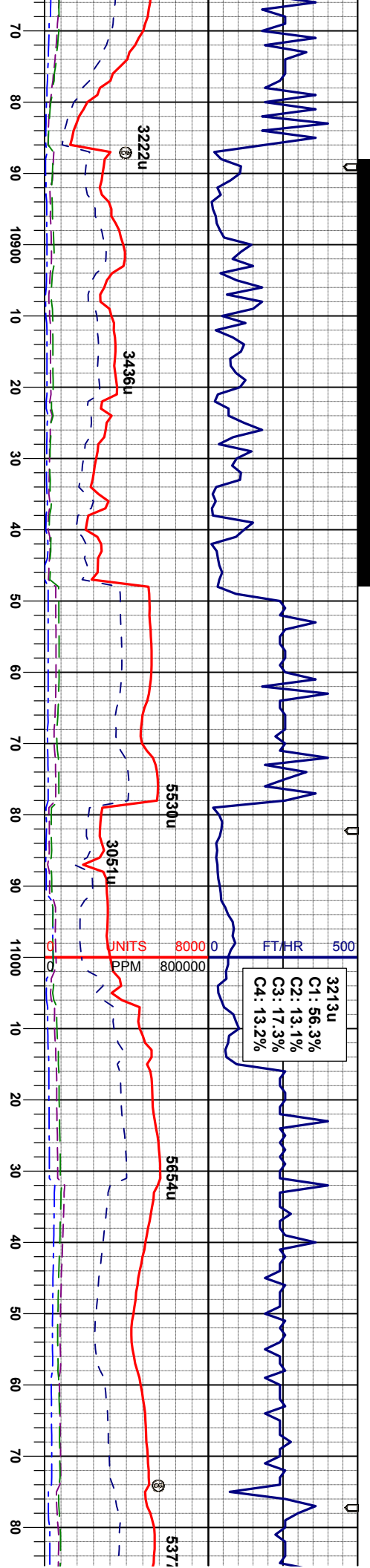
CHK: mgy - tan, occ dkgy sft, sbbiky, wxy-
mot tex, v calc
MRL: gy - dkgy - brngy, sft - firm, sbbiky-
sbbply, sbwxy- rthy tex, tr calc incl, v calc,
tr bent

MRL: gy - dkgy - brngy, sft - firm, sbbiky-
sbbply, sbwxy- rthy tex, tr calc incl, v calc,
tr bent
CHK: mgy - tan, occ dkgy sft, sbbiky, wxy-
mot tex, v calc

MRL: gy - dkgy - brngy, sft - firm, sbbiky-
sbbply, sbwxy- rthy tex, tr calc incl, v calc,
tr bent
CHK: mgy - tan, occ dkgy sft, sbbiky, wxy-
mot tex, v calc

MRL: gy - dkgy - brngy, sft - firm, sbbiky-
sbbply, sbwxy- rthy tex, tr calc incl, v calc,
tr bent
CHK: mgy - tan, occ dkgy sft, sbbiky, wxy-
mot tex, v calc





WT IN 9.90 / OUT 9.90
VIS IN 42 / OUT 42

MD 10927'
INC 90.8°
AZM 90.1°
TVD 6765.49'

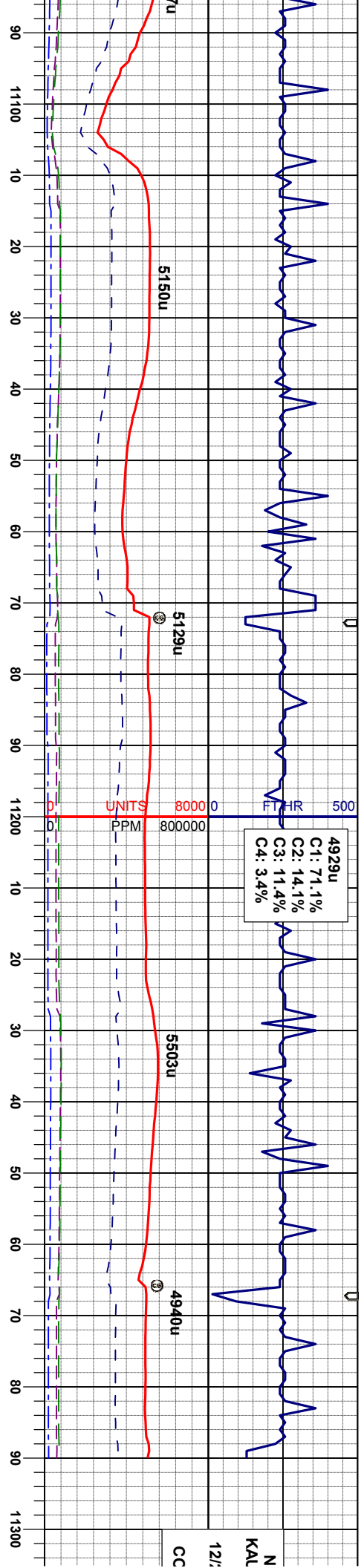
MRL: gy - dkgy - brngy, sft - firm, sbbky-
sbbly, sbwxy- rthy tex, tr calc incl, v calc,
tr bent
CHK: mgy - tan, occ dkgy sft, sbbky, wxy-
mot tex, v calc

WT IN 9.90 / OUT 9.90
VIS IN 40 / OUT 40

MD 11022'
INC 87.8°
AZM 90.4°
TVD 6766.65'

MRL: gy - dkgy - brngy, sft - firm, sbbky-
sbbly, sbwxy- rthy tex, tr calc incl, v calc,
tr bent
CHK: mgy - tan, occ dkgy sft, sbbky, wxy-
mot tex, v calc

MRL: gy - dkgy - brngy, sft - fir
sbbly, sbwxy- rthy tex, tr calc i
tr bent
CHK: mgy - tan, occ dkgy sft, s
mot tex, v calc



MD 11117'
INC 88.4°
AZM 90.1°
TVD 6769.80'

MD 11212'
INC 88.6°
AZM 89.9°
TVD 6772.28'

MD 11235'
INC 89.1°
AZM 89.9°
TVD 6772.74'

PROJECTED
MD 11290'
INC 91.5°
AZM 89.9°
TVD 6772.46'

MR: gy - dkgy - brngy, sft - firm, sbblky-sbply, sbwxy - rthy tex, tr calc incl, v calc, tr bent
CHK: mgy - tan, occ dkgy sft, sbblky, wxy-mot tex, v calc

MR: gy - dkgy - brngy, sft - firm, sbblky-sbply, sbwxy - rthy tex, tr calc incl, v calc, tr bent
CHK: mgy - tan, occ dkgy sft, sbblky, wxy-mot tex, v calc

MR: gy - dkgy - brngy, sft - firm, sbblky-sbply, sbwxy - rthy tex, tr calc incl, v calc, tr bent
CHK: mgy - tan, occ dkgy sft, sbblky, wxy-mot tex, v calc

MR: gy - dkgy - brngy, sft - firm, sbblky-sbply, sbwxy - rthy tex, tr calc incl, v calc, tr bent
CHK: mgy - tan, occ dkgy sft, sbblky, wxy-mot tex, v calc

WT IN 9.90 / OUT 9.90
VIS IN 40 / OUT 40



MOBLE ENERGY INC
JFMAN PC GL20-28HN
TD @ 111290' MD
22/2012 @ 8:00 AM
THANK YOU
LUMBINE LOGGING

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MOBLE ENERGY INC
JFMAN PC GL20-28HN
TD @ 111290' MD
22/2012 @ 8:00 AM