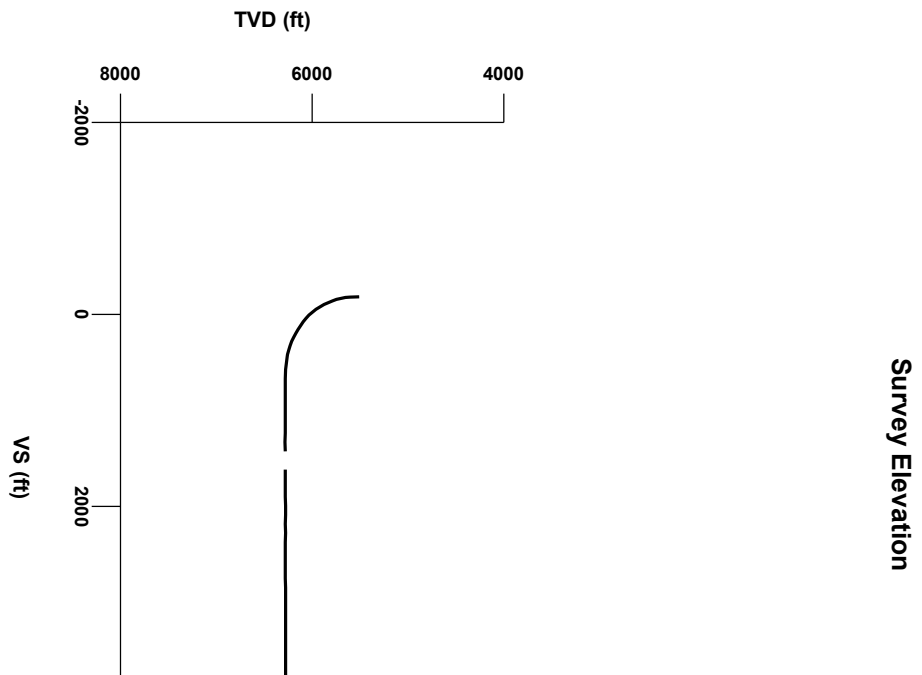
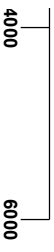
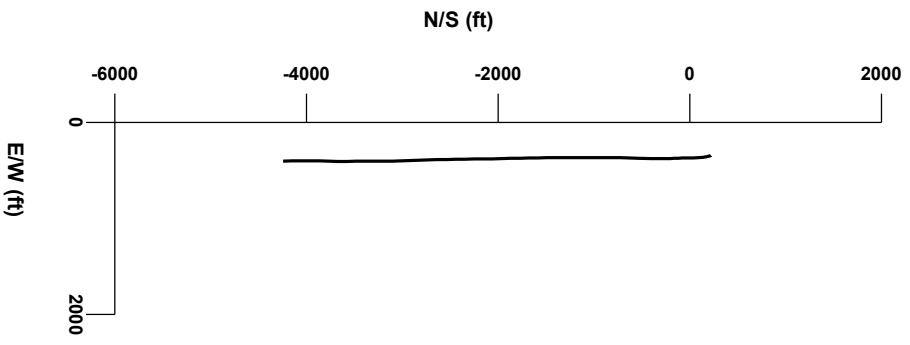


LOG created using LPLOT VH Version 3.0, January 08, 2013, Copyright (C) 1999-2009 Pason Systems Corp.

**OPERATOR:** NOBLE ENERGY INC  
**WELL:** PTASNIK FEDERAL LC19-74HN  
**LOCATION:** NWNE, SEC 19, T9N, R59W  
**COUNTY:** WELD  
**STATE:** COLORADO  
**SPOT:** 270' FNL, 2317' FEL  
**ELEVATION:** GE 5005', KB 5029'  
**FIELD:** WILDCAT  
**SPUD DATE:** 01/01/2013  
**TD DATE:** 01/08/2013  
**DATES LOGGED:** 01/04/13 - 01/08/13  
**DEPTHS LOGGED:** 5542' - 10590' MD  
**LOGGERS:** MIKE KERSCHEN, JACOB PAMMER  
**DRILLING FLUID:** LSND  
**DRILLING RIG:** H&P 322  
**API:** 05-123-33475  
**LOG TYPE:** HORIZONTAL  
**SCALE:** 1:240 (5 inches per 100 feet)  
**REMARKS:** WELLSITE GEOLOGICAL SERVICES PROVIDED BY COLUMBINE LOGGING INC.

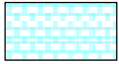


Survey Plan

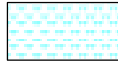


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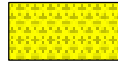
### LITHOLOGIES



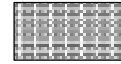
Chalk



Marl



Shaly Sandstone



Silty Shale

### ENGINEERING SYMBOLS



Connection



Connection Gas



Arrow



Midnight Depth



Arrow

SAMPLE PHOTOS



OIL SHOWS

TFG 6800

TVD

ft

5400

GAMMA RAY  
50 API 200

MD 5552'  
INC 0.92°  
AZM 22.8°  
TVD 5510.82'

Log Continued From  
Ptasnik Federal LC19-74HN VERT.1plot

DRILLING ON CURVE BEGAN:  
01/04/2013 @ 20:11hrs  
@ 5542' MD

100% SLTYSH: mgy-dkgy, occ blk, sbply-  
pty, sft, v sl calc, scat shyss

6800

ft

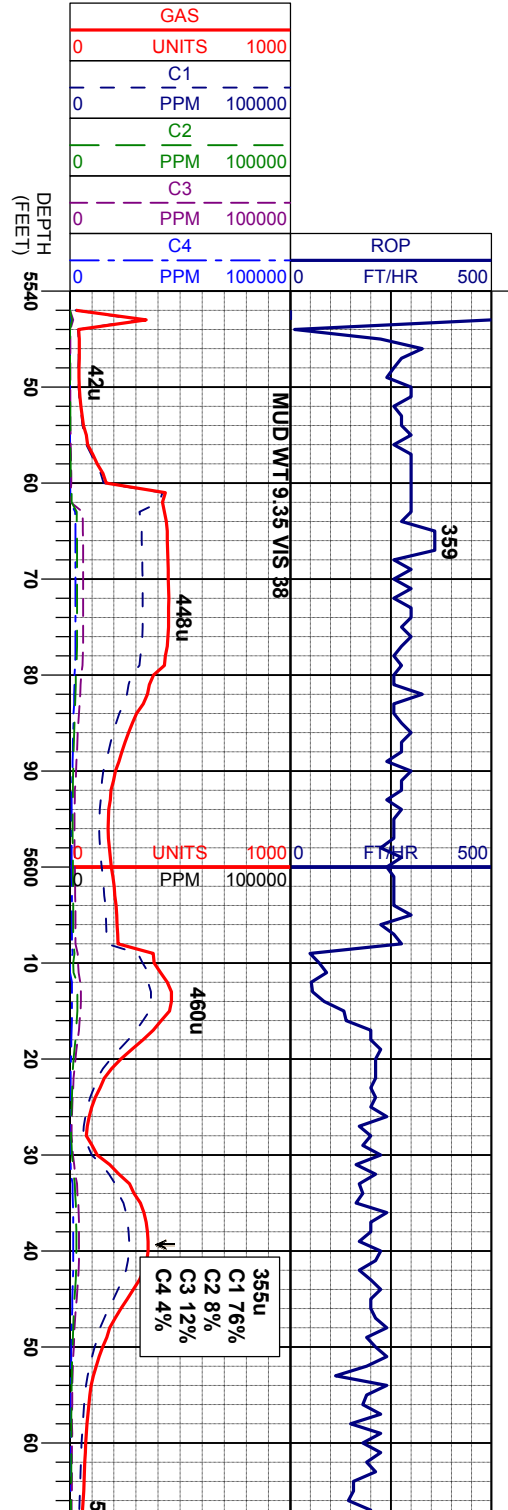
5400

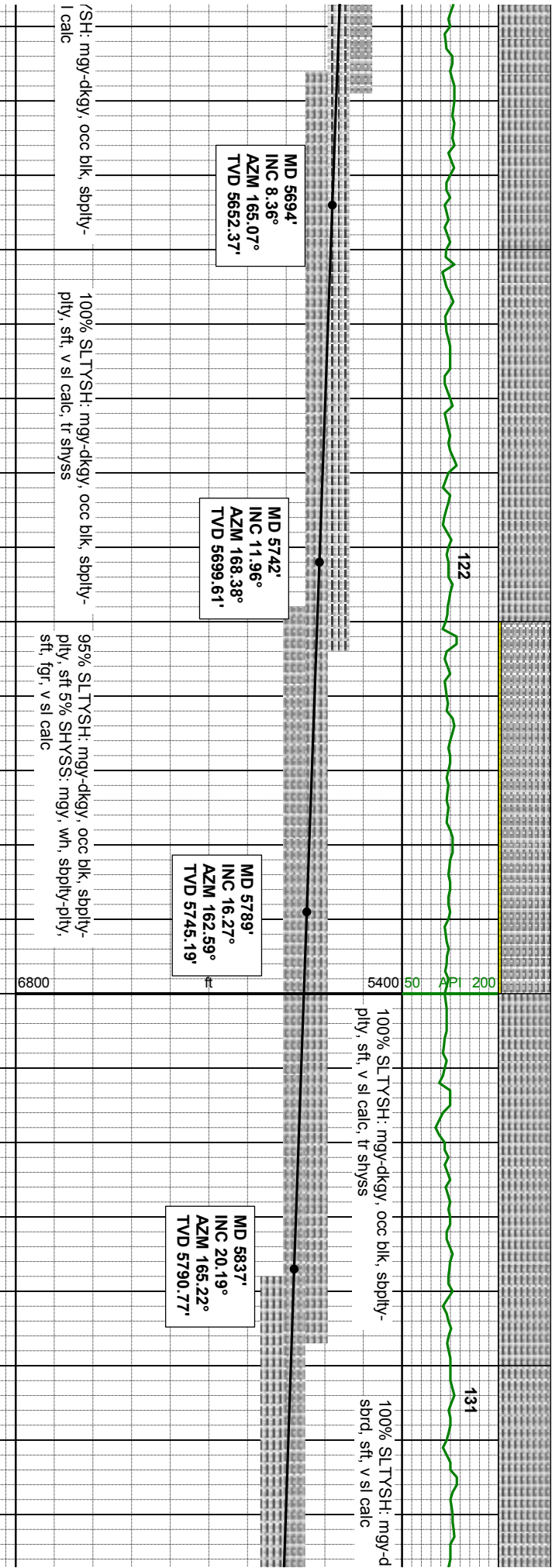
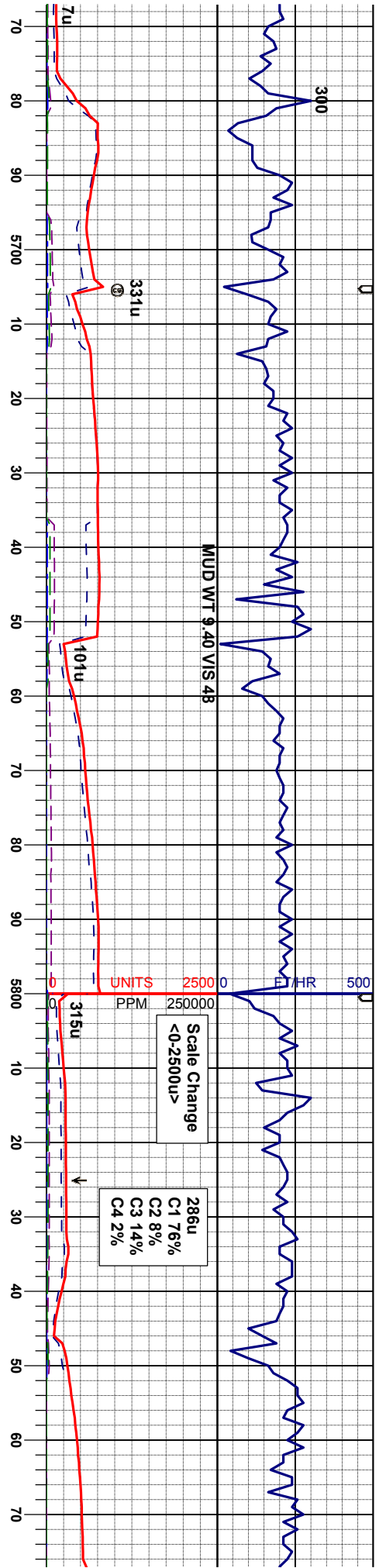
50 API 200

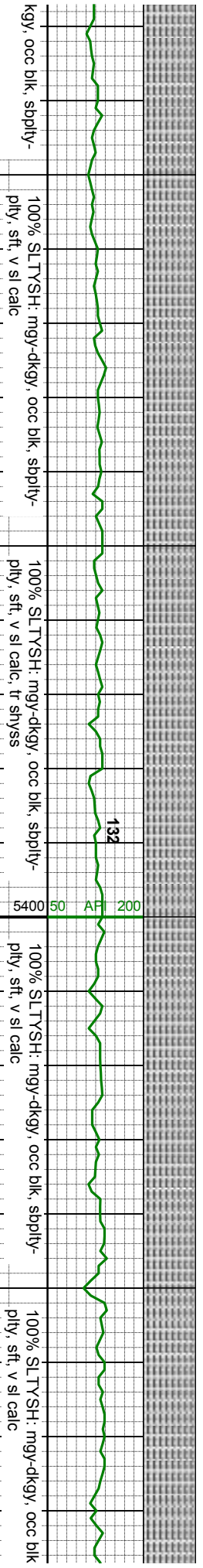
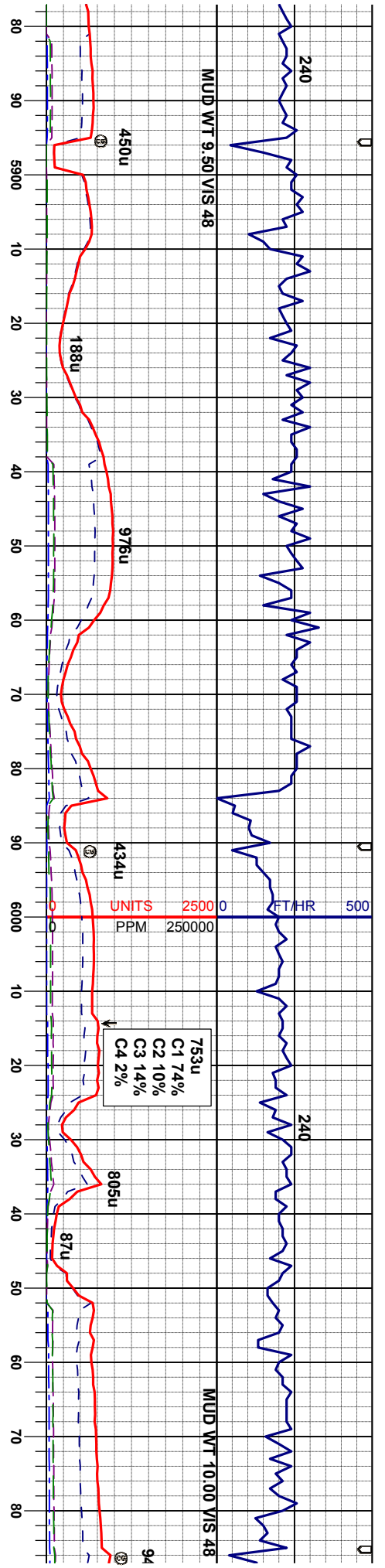
MD 5647'  
INC 5.14°  
AZM 169.14°  
TVD 5605.71'

100% SLTYSH: mgy-dkgy, occ blk, sbply-  
pty, sft, v sl calc

100% SLTY  
pty, sft, v s





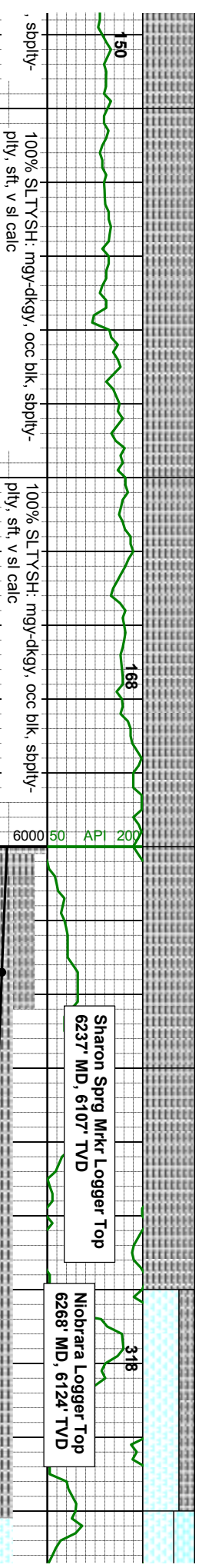
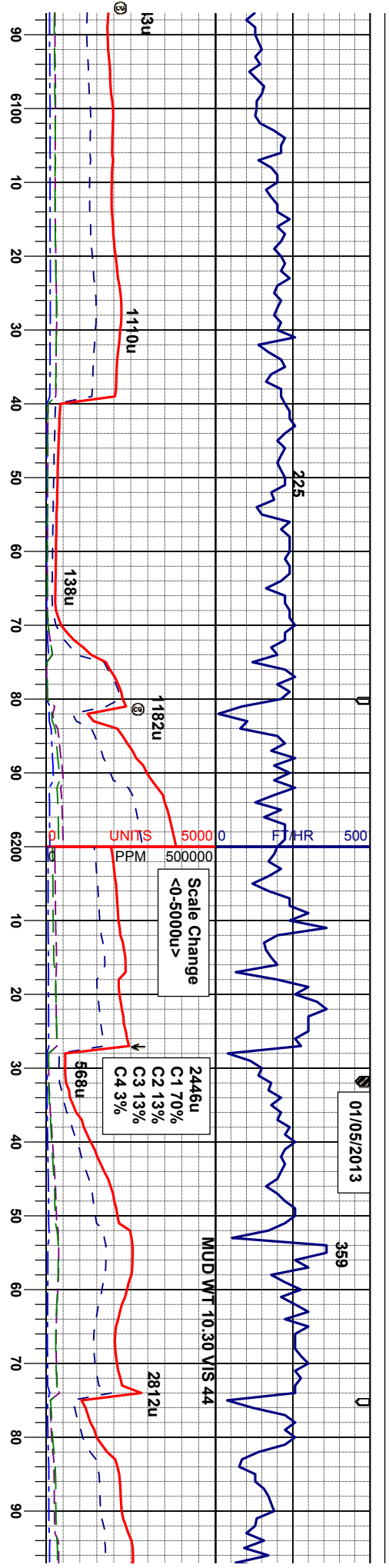


MD 5932'  
INC 27.67°  
AZM 171.83°  
TVD 5877.56'

MD 6027'  
INC 34.86°  
AZM 178.13°  
TVD 5958.74'

6800 ft





MD 6122'  
INC 43.50°  
AZM 179.49°  
TVD 6032.31'

MD 6169'  
INC 48.61°  
AZM 178.43°  
TVD 6064.92'

MD 6217'  
INC 53.66°  
AZM 178.91°  
TVD 6095.03'

MD 6264'  
INC 56.49°  
AZM 177.76°  
TVD 6121.93'

Scale Change  
<6800-6000>

100% SLTYSH: mgy-dkgy, occ blk, sbply-  
ply, sft, v sl calc

100% SLTYSH: mgy-dkgy, occ blk, sbply-  
ply, sft, abnt bent, v sl calc

70% MRL: m-dkgy, mot, sbbky-blk  
30% SLTYSH: mgy-dkgy, occ blk, s  
ply, sft, abnt bent, v calc

60% MF  
40% Ch  
sft, scat



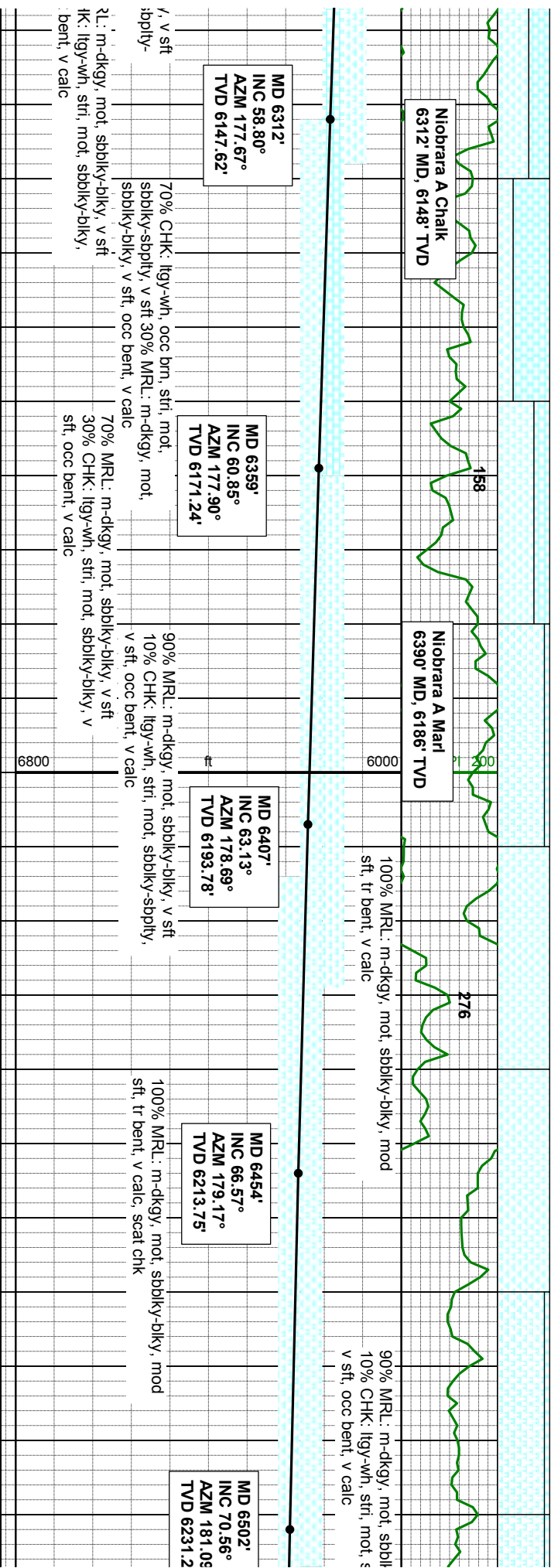
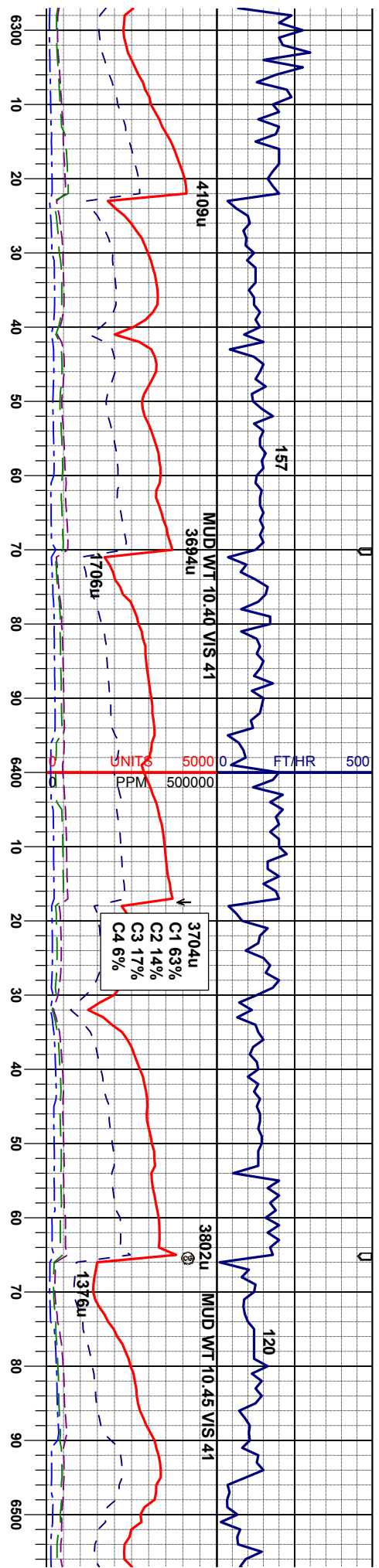
6800

6000

50

API

200



MD 6312' INC 58.80° AZM 177.67° TVD 6147.62'

70% CHK: lgy-wh, occ brn, stri, mot, sbblky-spbly, v sft 30% MRL: m-dkgy, mot, sbblky-blky, v sft, occ bent, v calc

MD 6359' INC 60.85° AZM 177.90° TVD 6171.24'

70% MRL: m-dkgy, mot, sbblky-blky, v sft 30% CHK: lgy-wh, stri, mot, sbblky-blky, v sft, occ bent, v calc

MD 6407' INC 63.13° AZM 178.69° TVD 6193.78'

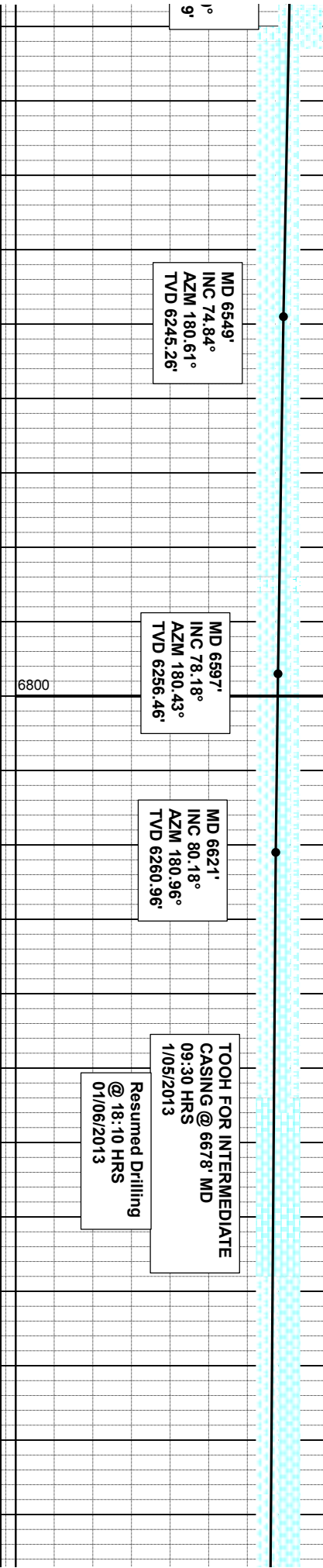
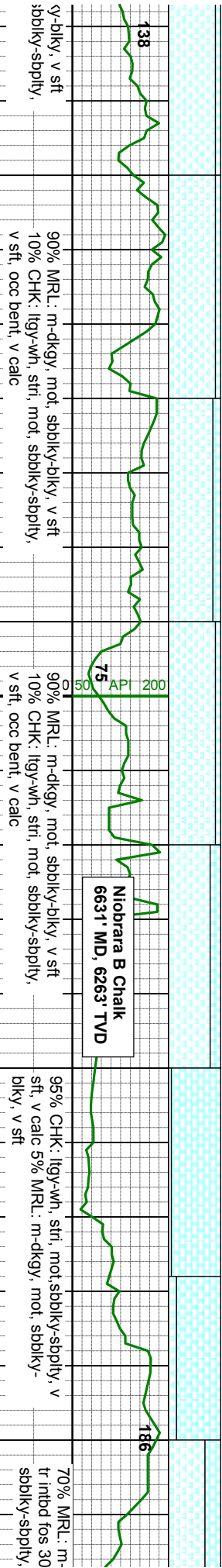
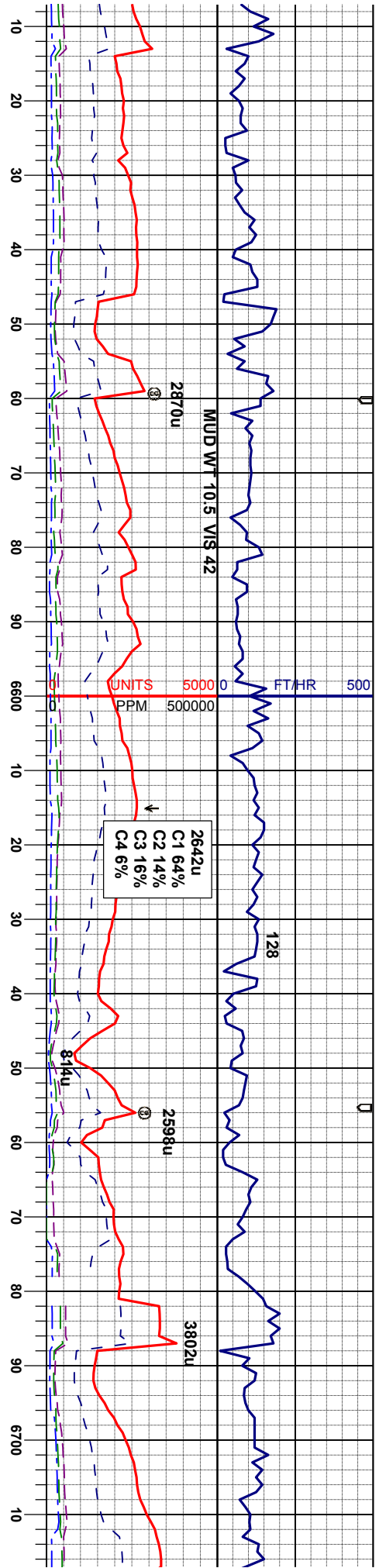
90% MRL: m-dkgy, mot, sbblky-blky, v sft 10% CHK: lgy-wh, stri, mot, sbblky-spbly, v sft, occ bent, v calc

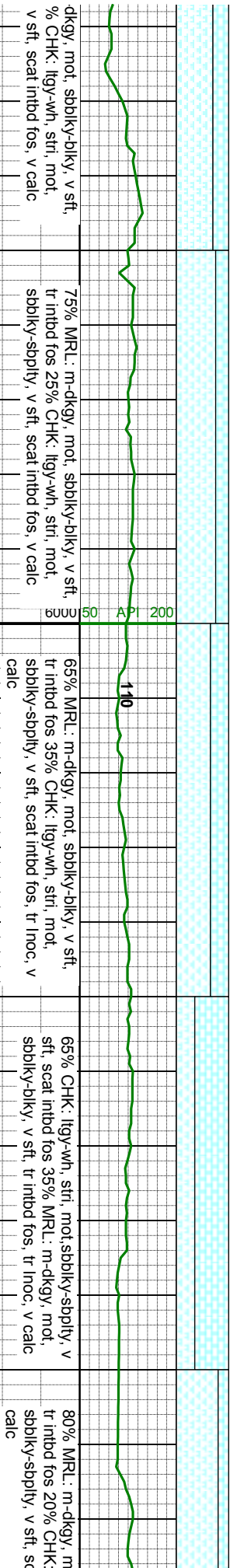
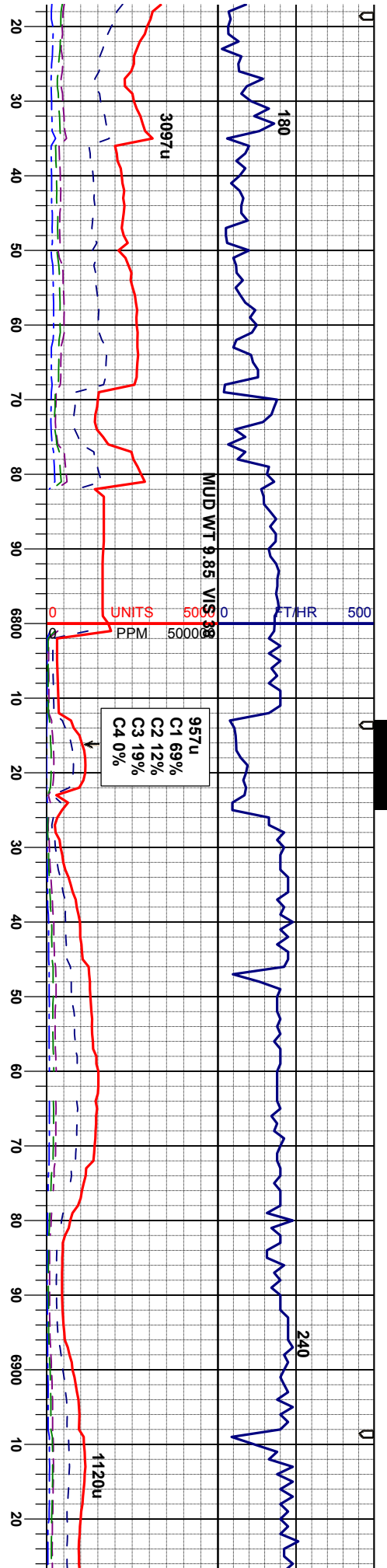
MD 6454' INC 66.57° AZM 179.17° TVD 6213.75'

100% MRL: m-dkgy, mot, sbblky-blky, mod sft, tr bent, v calc, scat chk

MD 6502' INC 70.56° AZM 181.09° TVD 6231.2'

90% MRL: m-dkgy, mot, sbblky-blky, mod 10% CHK: lgy-wh, stri, mot, v sft, occ bent, v calc



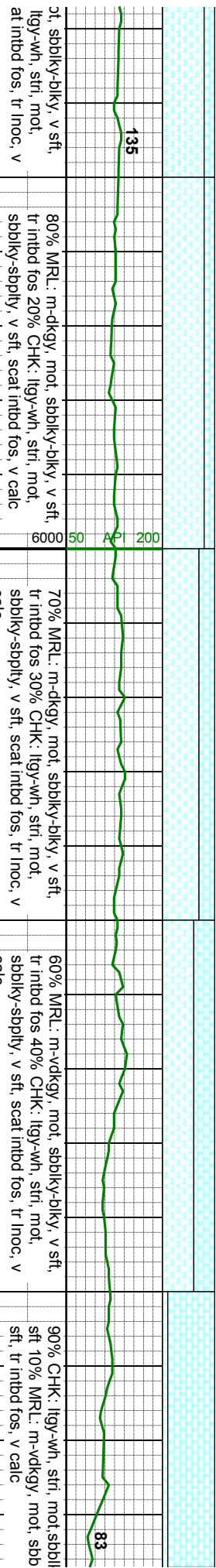
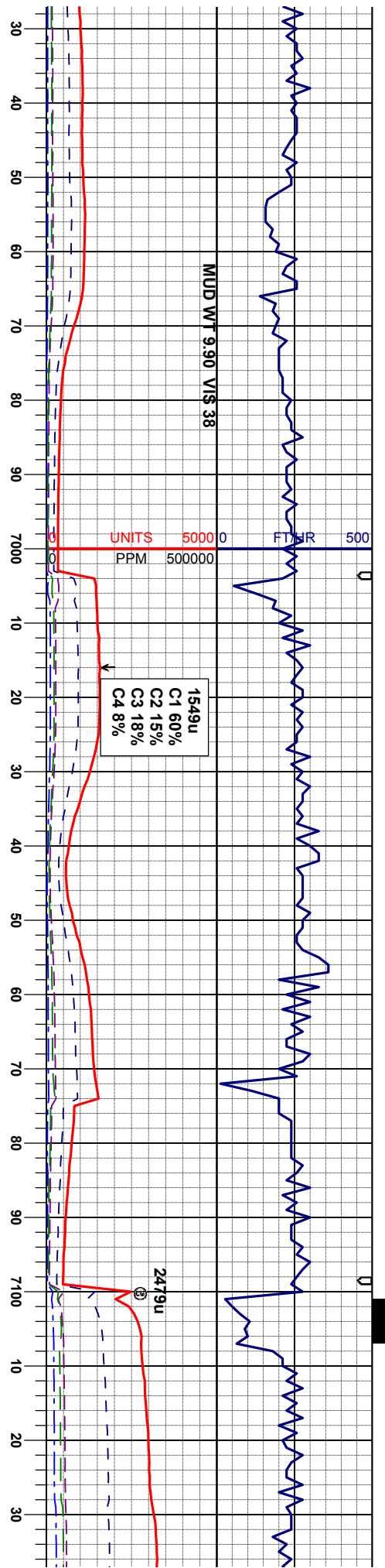


MD 6758°  
INC 86.80°  
AZM 181.80°  
TVD 6276.50'

MD 6853°  
INC 89.14°  
AZM 181.46°  
TVD 6279.87'

6800 ft





80% MRL: m-dkgy, mot, sbbiky-dlky, v sft,  
tr inbd fos 20% CHK: lgy-wh, stri, mot,  
sbbiky-sbply, v sft, scat inbd fos, v calc

70% MRL: m-dkgy, mot, sbbiky-dlky, v sft,  
tr inbd fos 30% CHK: lgy-wh, stri, mot,  
sbbiky-sbply, v sft, scat inbd fos, tr inoc, v  
calc

60% MRL: m-vdkgy, mot, sbbiky-dlky, v sft,  
tr inbd fos 40% CHK: lgy-wh, stri, mot,  
sbbiky-sbply, v sft, scat inbd fos, tr inoc, v  
calc

90% CHK: lgy-wh, stri, mot, sbbi  
sft, tr inbd fos, v calc

MD 6948'  
INC 89.88°  
AZM 180.71°  
TVD 6280.69'

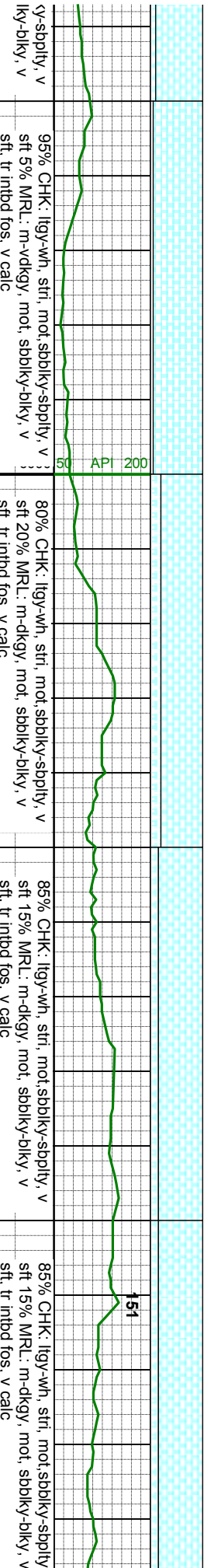
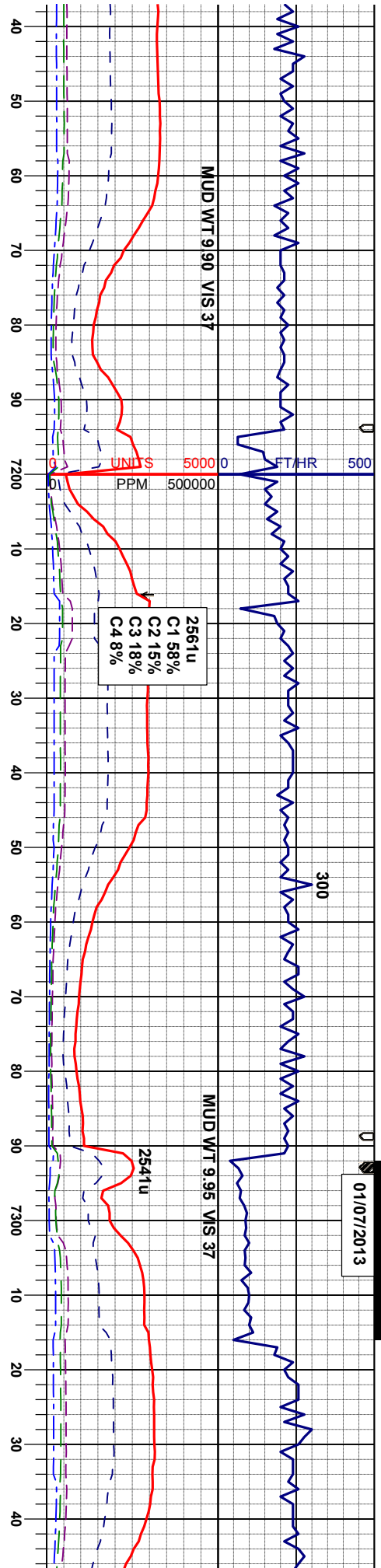
MD 7043'  
INC 90.34°  
AZM 180.43°  
TVD 6280.51'

MD 7  
INC 8  
AZM  
TVD

6800 ft



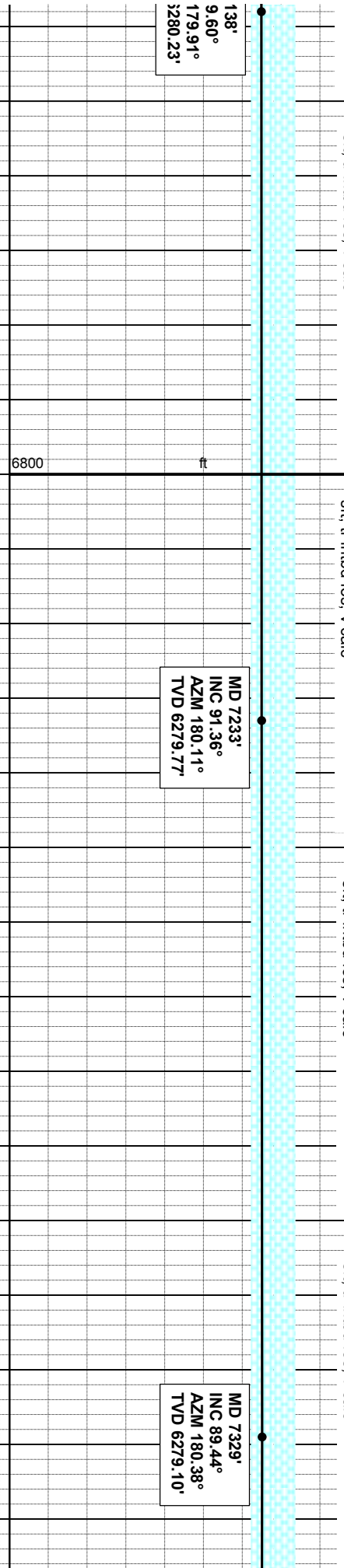
01/07/2013

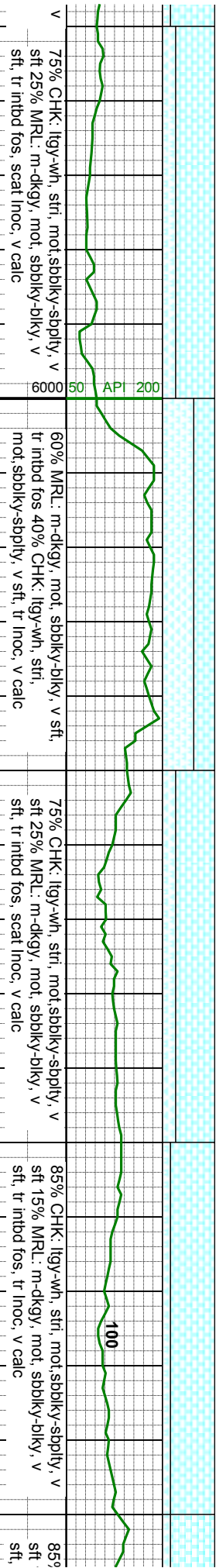
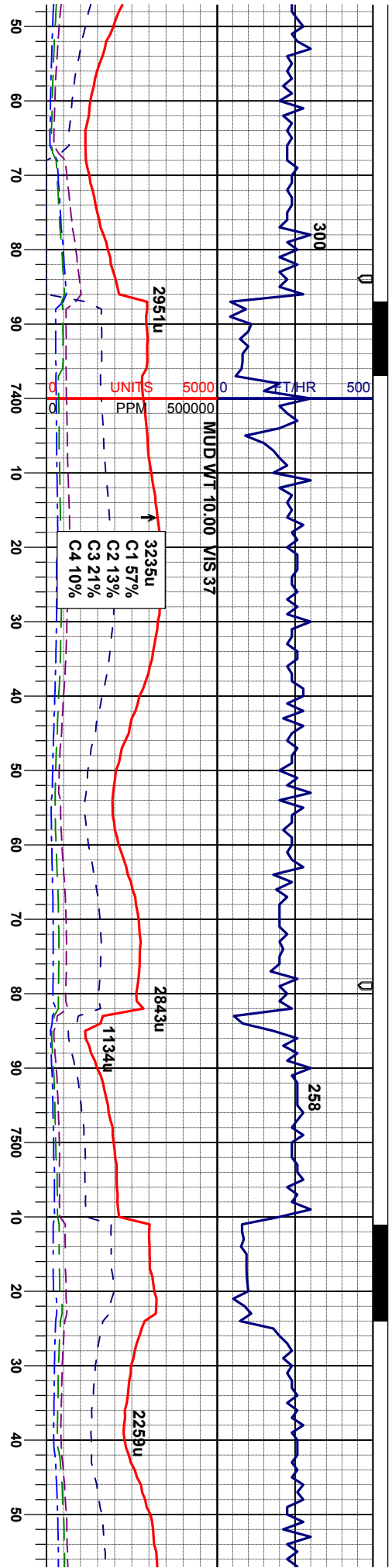


138°  
9.60°  
179.91°  
3280.23'

MD 7233'  
INC 91.36°  
AZM 180.11°  
TVD 6279.77'

MD 7329'  
INC 89.44°  
AZM 180.38°  
TVD 6279.10'





75% CHK: lgy-wh, stri, mot, sbblky-sbply, v  
 sft 25% MRU: m-dkgy, mot, sbblky-blky, v  
 sft, tr intbd fos, scat inoc, v calc

60% MRU: m-dkgy, mot, sbblky-blky, v sft,  
 tr intbd fos 40% CHK: lgy-wh, stri,  
 mot, sbblky-sbply, v sft, tr inoc, v calc

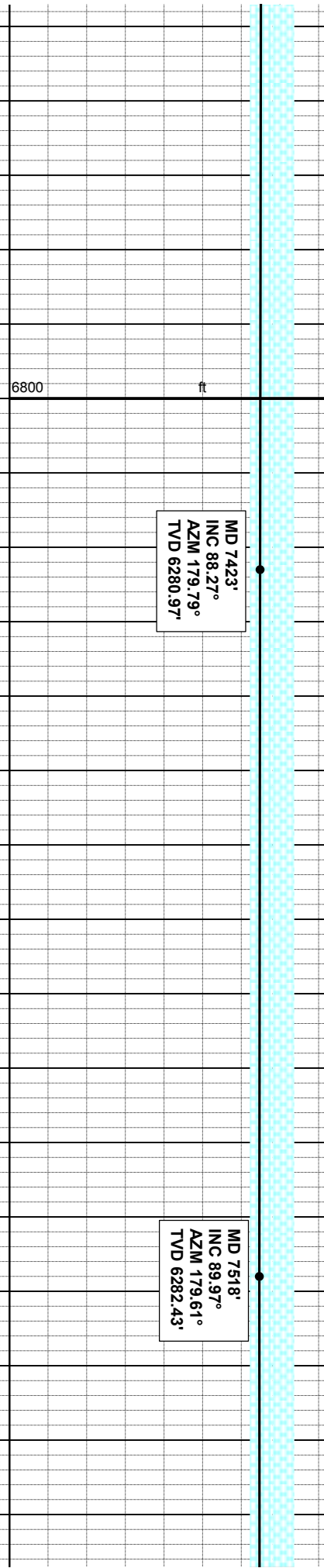
75% CHK: lgy-wh, stri, mot, sbblky-sbply, v  
 sft 25% MRU: m-dkgy, mot, sbblky-blky, v  
 sft, tr intbd fos, scat inoc, v calc

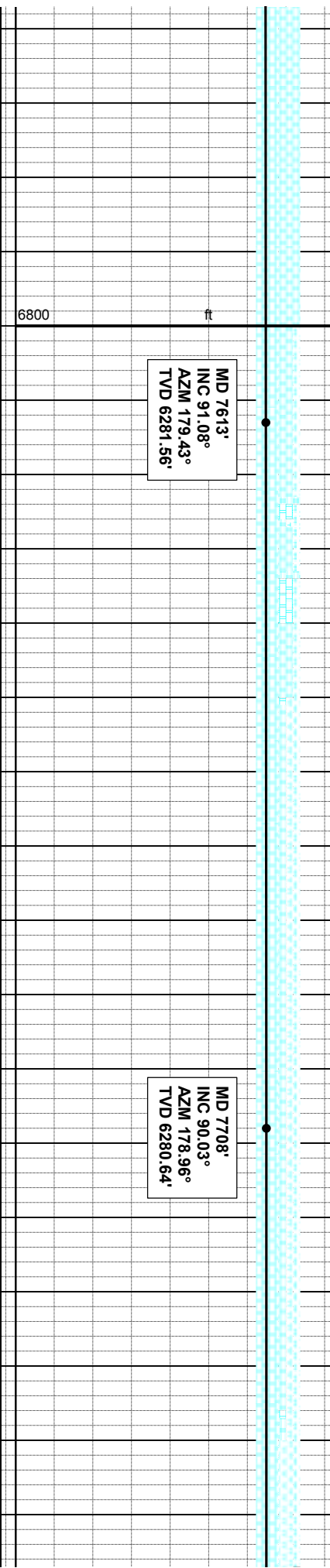
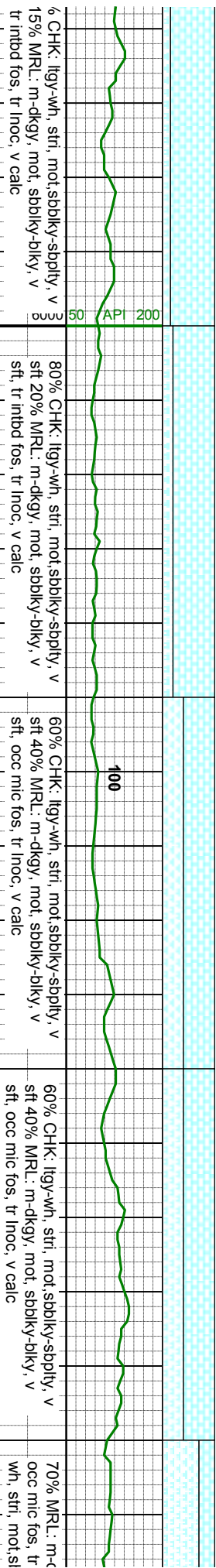
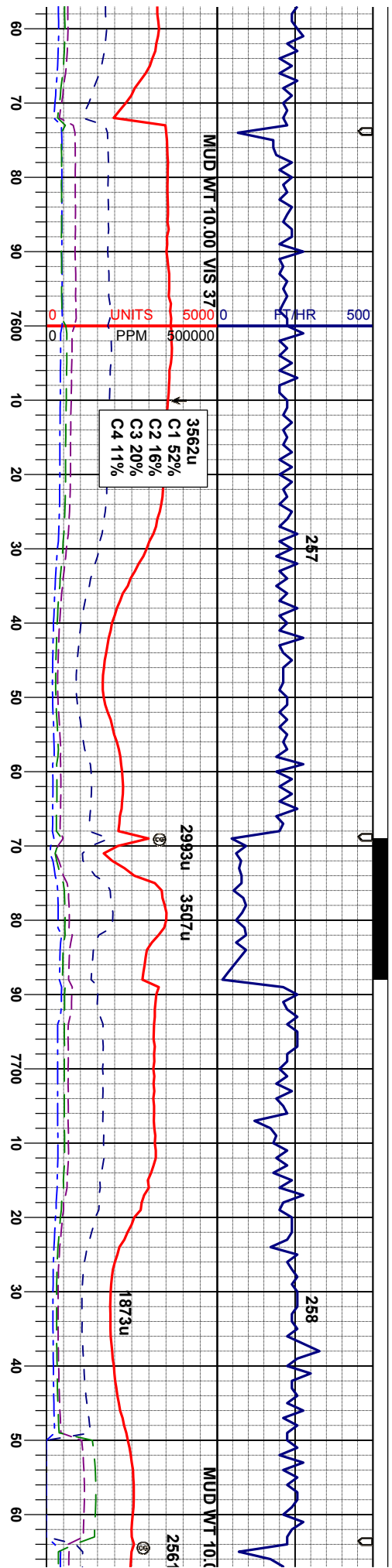
85% CHK: lgy-wh, stri, mot, sbblky-sbply, v  
 sft 15% MRU: m-dkgy, mot, sbblky-blky, v  
 sft, tr intbd fos, tr inoc, v calc

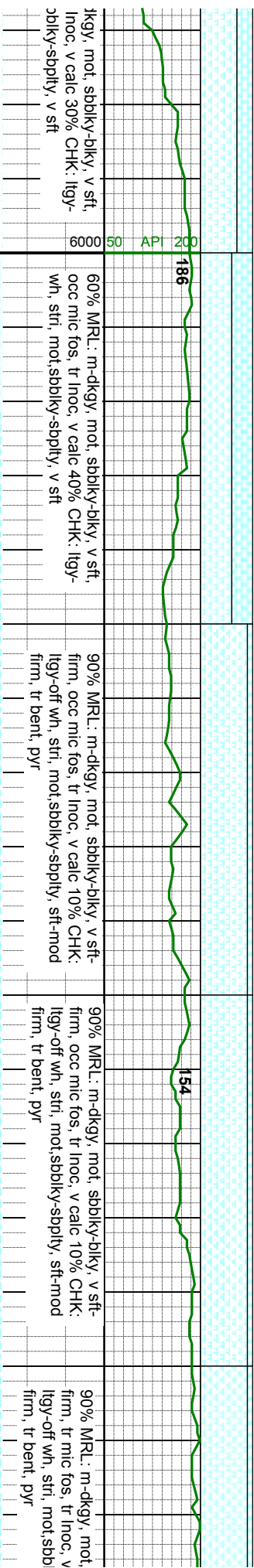
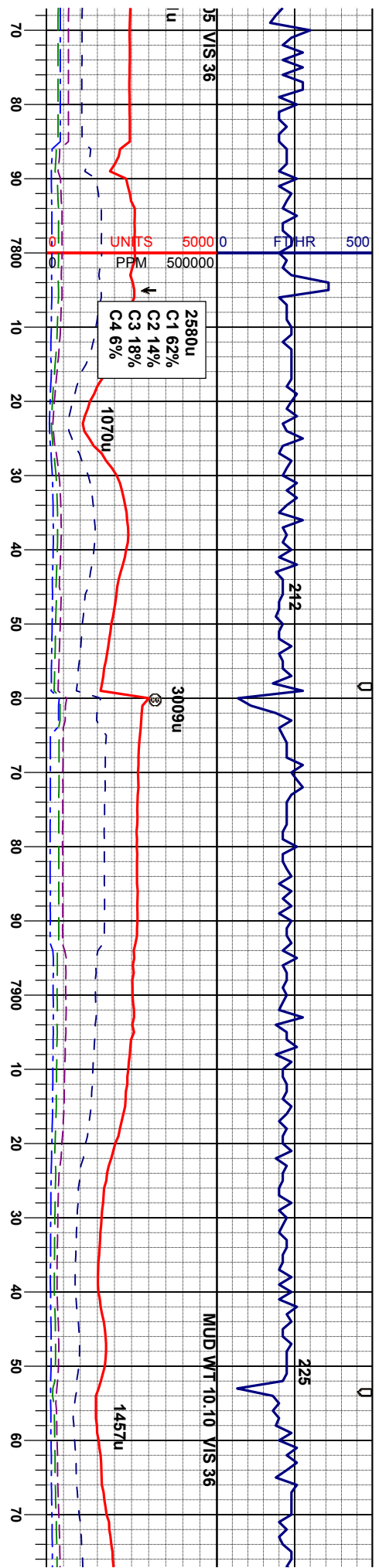
85%  
 sft

MD 7423'  
 INC 88.27°  
 AZM 179.79°  
 TVD 6280.97'

MD 7518'  
 INC 89.97°  
 AZM 179.61°  
 TVD 6282.43'







MD 7803'  
INC 89.88°  
AZM 178.85°  
TVD 6280.72'

MD 7898'  
INC 90.00°  
AZM 179.12°  
TVD 6280.82'

kggy, mot, sbbkly-bkly, v sft, Inoc, v calc 30% CHK: lgy-bkly-sply, v sft

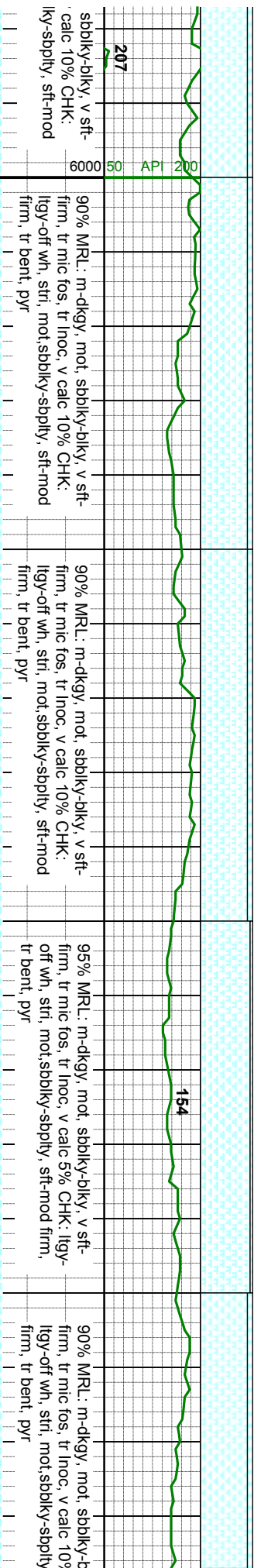
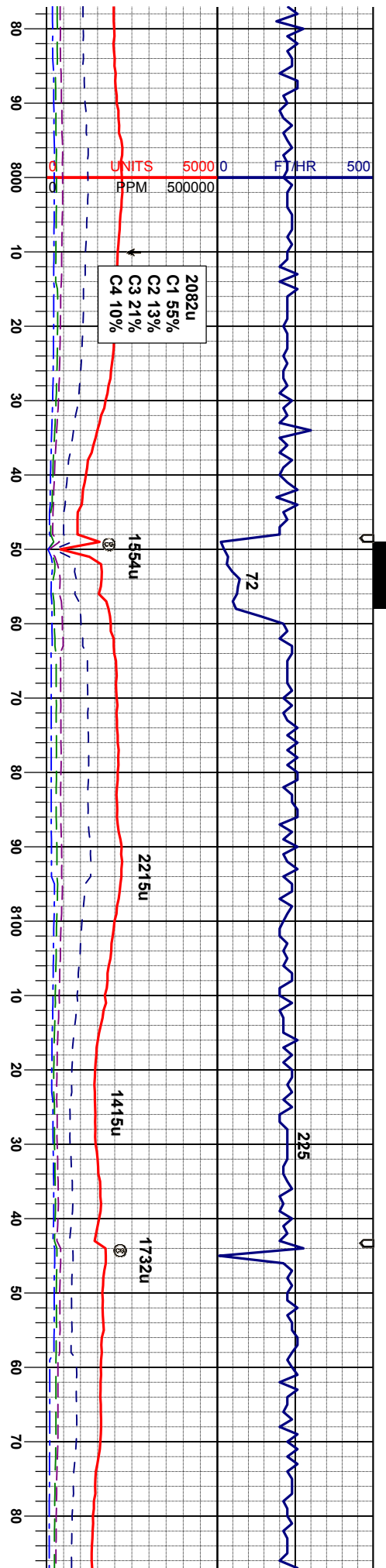
60% MRL: m-dkgy, mot, sbbkly-bkly, v sft, occ mic fos, tr Inoc, v calc 40% CHK: lgy-wh, stri, mot, sbbkly-sply, v sft

90% MRL: m-dkgy, mot, sbbkly-bkly, v sft, firm, occ mic fos, tr Inoc, v calc 10% CHK: lgy-off wh, stri, mot, sbbkly-sply, sft-mod firm, tr bent, pyr

90% MRL: m-dkgy, mot, sbbkly-bkly, v sft, firm, occ mic fos, tr Inoc, v calc 10% CHK: lgy-off wh, stri, mot, sbbkly-sply, sft-mod firm, tr bent, pyr

90% MRL: m-dkgy, mot, sbbkly-bkly, v sft, firm, tr mic fos, tr Inoc, v lgy-off wh, stri, mot, sbbkly-sply, sft-mod firm, tr bent, pyr





sbblky-blky, v sft-  
calc 10% CHK:  
lgy-sply, sft-mod

90% MRL: m-dkgy, mot, sbblky-blky, v sft-  
firm, tr mic fos, tr Inoc, v calc 10% CHK:  
lgy-off wh, stri, mot, sbblky-sply, sft-mod  
firm, tr bent, pyr

90% MRL: m-dkgy, mot, sbblky-blky, v sft-  
firm, tr mic fos, tr Inoc, v calc 10% CHK:  
lgy-off wh, stri, mot, sbblky-sply, sft-mod  
firm, tr bent, pyr

95% MRL: m-dkgy, mot, sbblky-blky, v sft-  
firm, tr mic fos, tr Inoc, v calc 5% CHK: lgy-  
off wh, stri, mot, sbblky-sply, sft-mod firm,  
tr bent, pyr

90% MRL: m-dkgy, mot, sbblky-b  
firm, tr mic fos, tr Inoc, v calc 10%  
lgy-off wh, stri, mot, sbblky-sply  
firm, tr bent, pyr

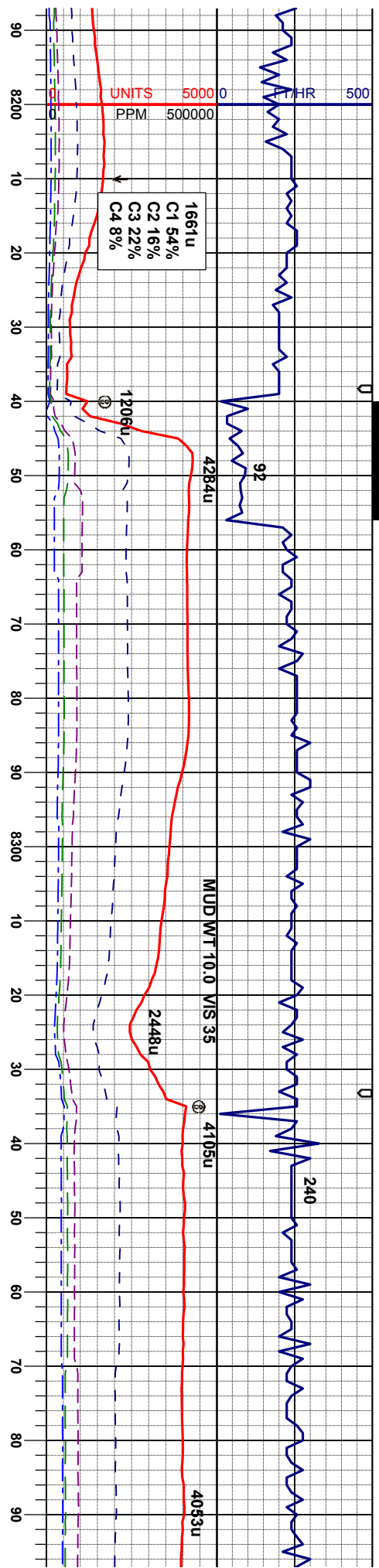
MD 7993.  
INC 90.71°  
AZM 179.39°  
TVD 6280.23'

MD 8088.  
INC 90.15°  
AZM 178.83°  
TVD 6279.52'

MD 8183.  
INC 90.95°  
AZM 179.0  
TVD 6278.

6800





95% MRL: m-dkgy, mot, sbblky-blky, v sft-firm, tr mic fos, tr inoc, v calc 5% CHK; lly-off wh, stri, mot, sbblky-sbply, sft-mod firm, tr bent, pyr

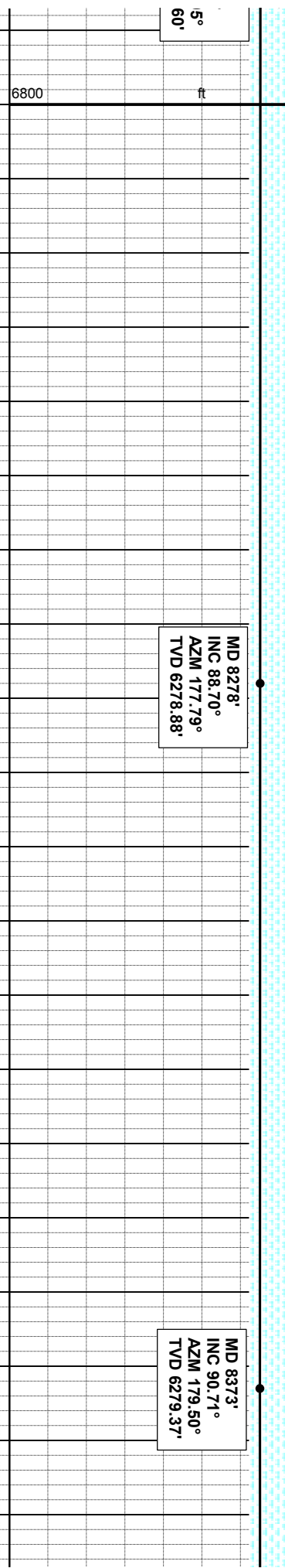
90% MRL: m-dkgy, mot, sbblky-blky, v sft-firm, tr mic fos, tr inoc, v calc 10% CHK; lly-off wh, stri, mot, sbblky-sbply, sft-mod firm, tr bent, pyr

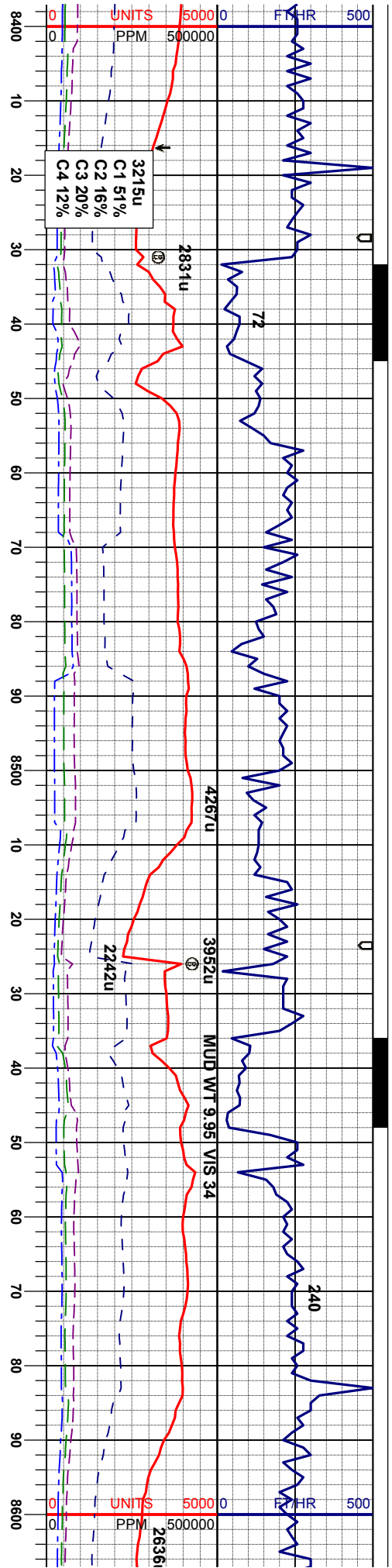
90% MRL: m-dkgy, mot, sbblky-blky, v sft-firm, tr mic fos, tr inoc, v calc 10% CHK; lly-off wh, stri, mot, sbblky-sbply, sft-mod firm, tr bent, pyr

80% MRL: m-dkgy, mot, sbblky-blky, v sft-firm, tr mic fos, tr inoc, v calc 20% CHK; lly-off wh, stri, mot, sbblky-sbply, sft-mod firm, tr bent, pyr

MD 8278°  
INC 88.70°  
AZM 177.79°  
TVD 6278.88'

MD 8373°  
INC 90.74°  
AZM 179.50°  
TVD 6279.37'





90% MRL: m-dkgy, mot, sbbkly-blky, v sft-firm, tr mic fos, tr inoc, v calc 10% CHK: lgy-off wh, stri, mot, sbbkly-sbply, sft-mod firm, tr bent, pyr

90% MRL: m-dkgy, mot, sbbkly-blky, v sft-firm, tr mic fos, tr inoc, v calc 10% CHK: lgy-off wh, stri, mot, sbbkly-sbply, sft-mod firm, tr bent, pyr

85% CHK: lgy-off wh, stri, mot, sbbkly-sbply, sft-mod firm 15% MRL: m-dkgy, mot, sbbkly-blky, v sft-firm, v calc

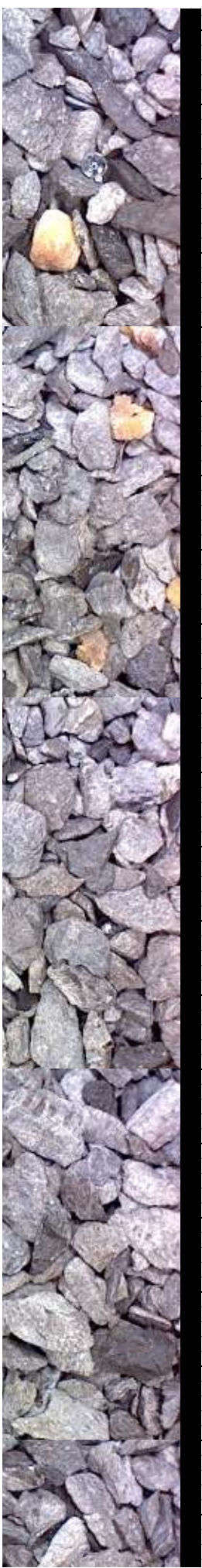
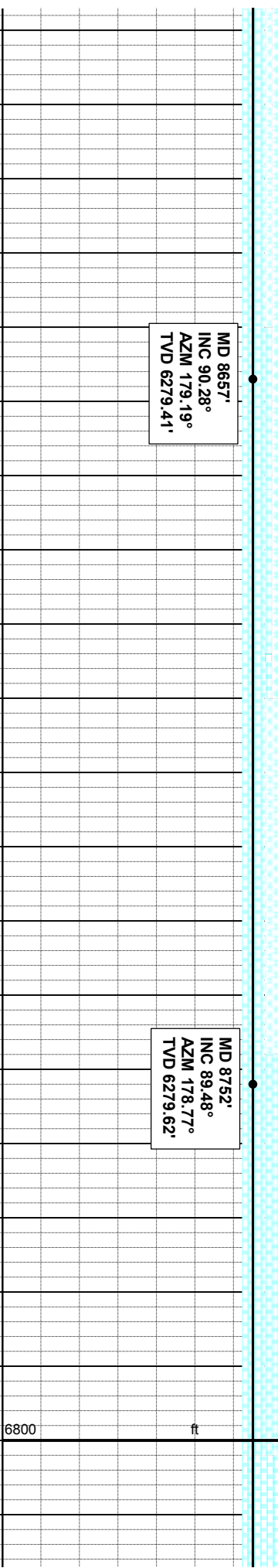
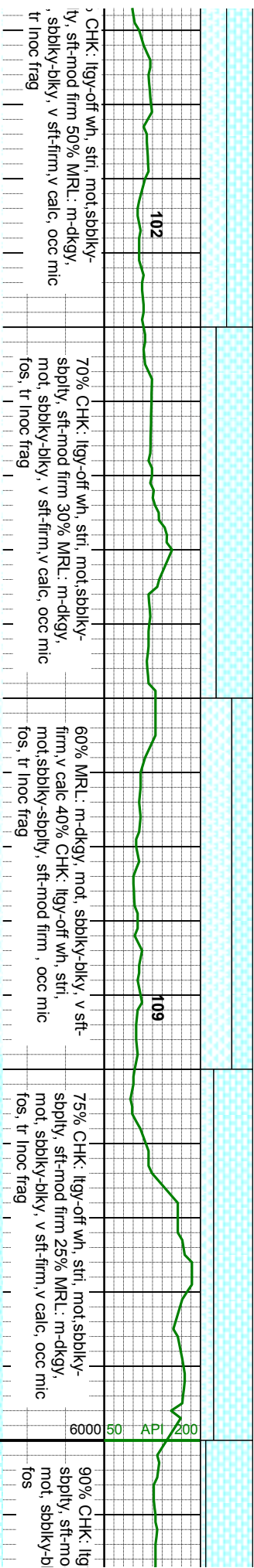
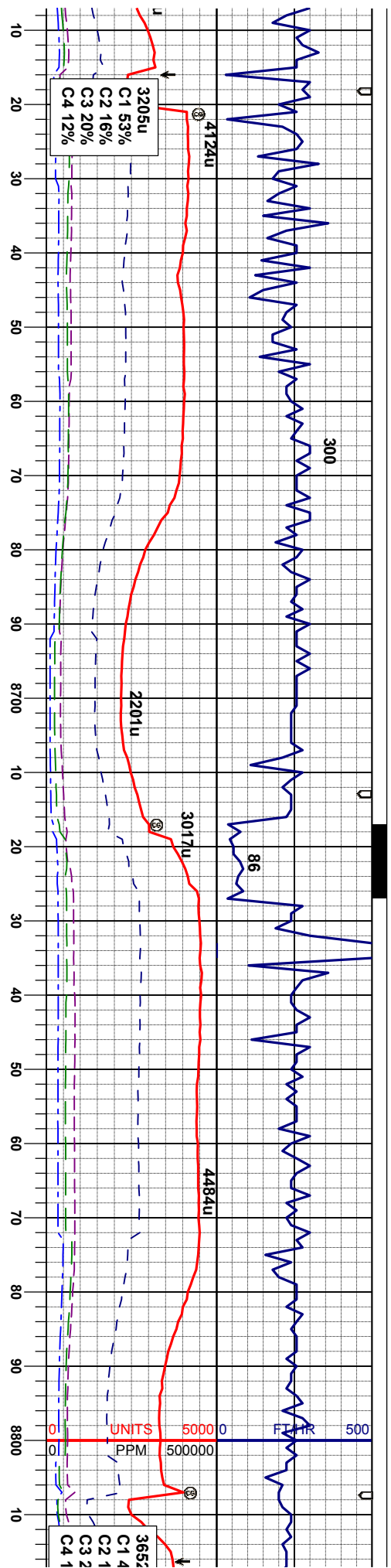
60% CHK: lgy-off wh, stri, mot, sbbkly-sbply, sft-mod firm 40% MRL: m-dkgy, mot, sbbkly-blky, v sft-firm, v calc

50% sbpl mot fos

MD 8468°  
INC 90.31°  
AZM 179.80°  
TVD 6278.52'

MD 8563°  
INC 89.17°  
AZM 179.37°  
TVD 6278.96'





MD 8657°  
INC 90.28°  
AZIM 179.19°  
TVD 6279.41'

MD 8752°  
INC 89.48°  
AZIM 178.77°  
TVD 6279.62'

CHK: lgy-off wh, stri, mot, sbblky-  
sply, sft-mod firm 50% MRL: m-dkgy,  
sbblky-blky, v sft-firm, v calc, occ mic  
fos, tr inoc frag

70% CHK: lgy-off wh, stri, mot, sbblky-  
sply, sft-mod firm 30% MRL: m-dkgy,  
mot, sbblky-blky, v sft-firm, v calc, occ mic  
fos, tr inoc frag

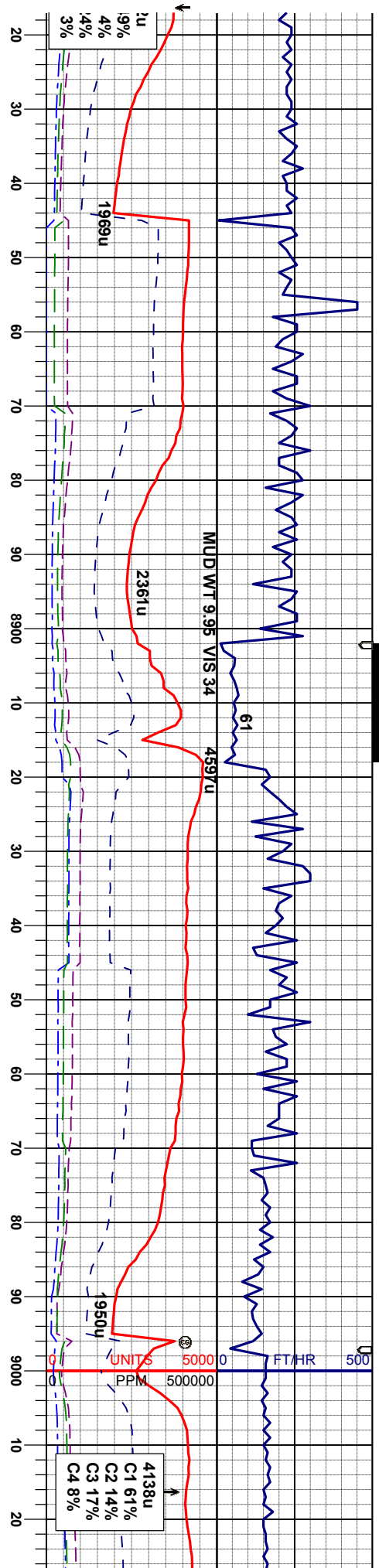
60% MRL: m-dkgy, mot, sbblky-blky, v sft-  
firm v calc 40% CHK: lgy-off wh, stri,  
mot, sbblky-sply, sft-mod firm, occ mic  
fos, tr inoc frag

75% CHK: lgy-off wh, stri, mot, sbblky-  
sply, sft-mod firm 25% MRL: m-dkgy,  
mot, sbblky-blky, v sft-firm, v calc, occ mic  
fos, tr inoc frag

90% CHK: lgy-  
sply, sft-mo  
mot, sbblky-bl  
fos

6800 ft 6000 50 API 200

UNITS 5000 0  
PPM 500000



90% CHK: lgy-off wh, stri, mot, sbblky-sbply, sft-mod firm 10% MRL: m-dkgy, mot, sbblky-dlky, v sft-firm, v calc, occ mic fos

90% CHK: lgy-off wh, stri, mot, sbblky-sbply, sft-firm, v calc, occ mic fos

85% CHK: lgy-off wh, stri, mot, sbblky-sbply, sft 15% MRL: m-dkgy, mot, sbblky-dlky, v sft-firm, v calc

65% CHK: lgy-off wh, stri, mot, sbblky-sbply, sft, occ intbd fos 35% MRL: m-dkgy, mot, sbblky-dlky, v sft, v calc

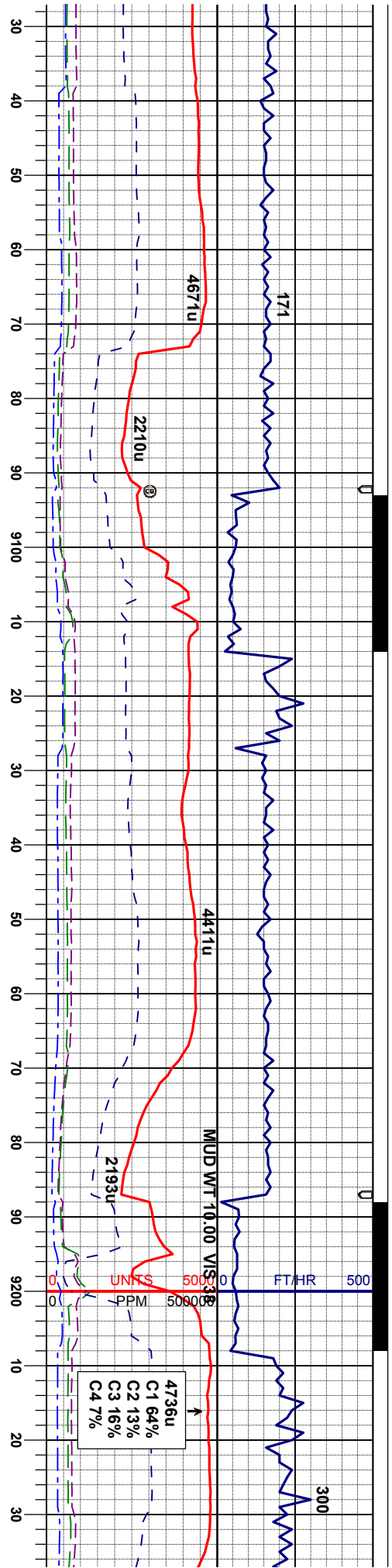
90% CHK: lgy-off wh, sbply, sft 10% MRL: r bly, sft, v calc

MD 8847'  
INC 90.68°  
AZM 178.17°  
TVD 6279.49'

MD 8942'  
INC 89.88°  
AZM 177.79°  
TVD 6279.03'

6800 ft





80% CHK: lgy-off wh, stri, mot, sbbkly-  
 sbbkly, sft 20% MRL: m-dkgy, mot, sbbkly-  
 blkly, sft, tr pyr, v calc

65% CHK: lgy-off wh, stri, mot, sbbkly-  
 sbbkly, sft 35% MRL: m-dkgy, mot, sbbkly-  
 blkly, sft, tr pyr, v calc

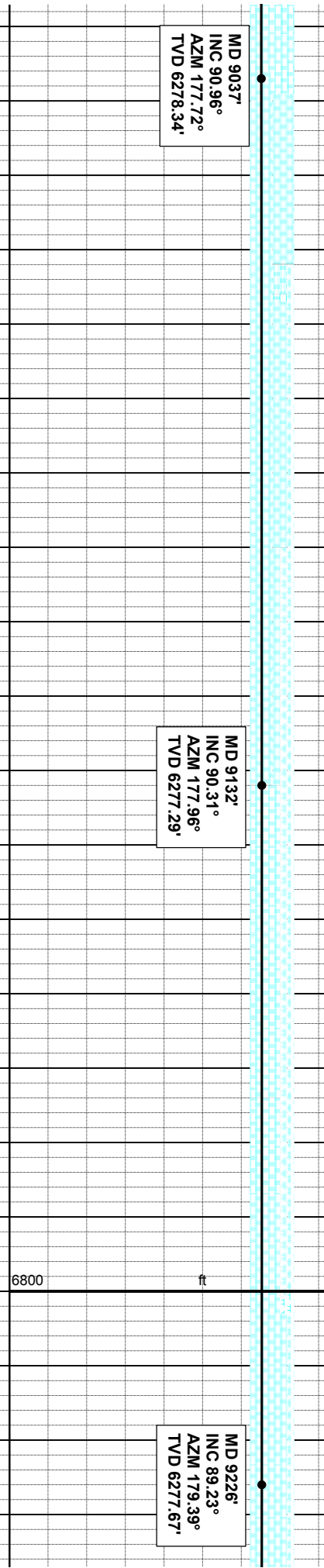
60% CHK: lgy-off wh, stri, mot, sbbkly-  
 sbbkly, sft 40% MRL: m-dkgy, mot, sbbkly-  
 blkly, sft, v calc

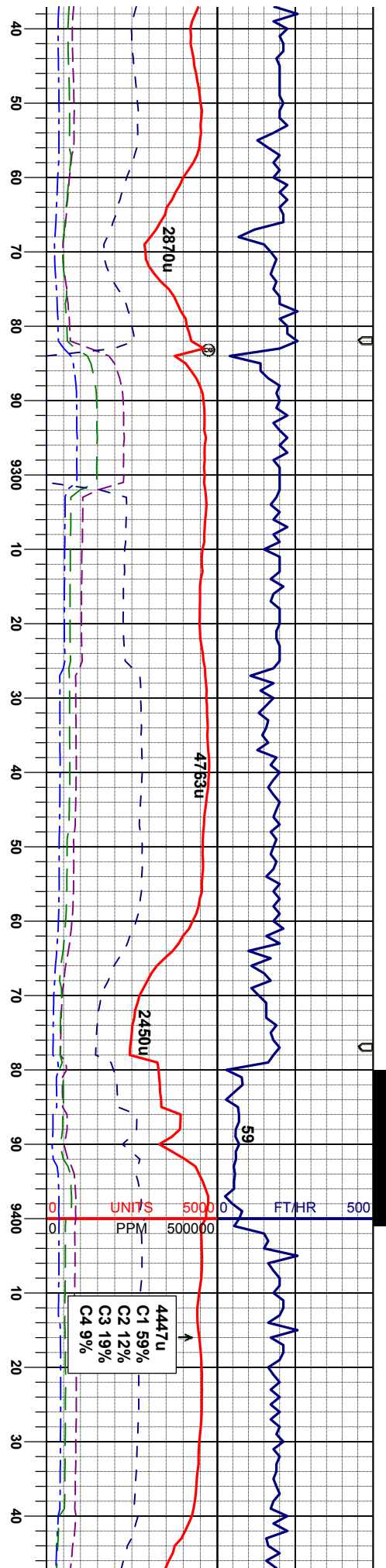
90% CHK: lgy-off wh, stri, mot, sbbkly-  
 sbbkly, sft 10% MRL: m-dkgy, mot, sbbkly-  
 blkly, sft, v calc

MD 9037  
 INC 90.96°  
 AZM 177.72°  
 TVD 6278.34'

MD 9132  
 INC 90.31°  
 AZM 177.96°  
 TVD 6277.29'

MD 9226  
 INC 89.23°  
 AZM 179.39°  
 TVD 6277.67'





95% CHK: lgy-off wh, stri, mot, sbbiky-sbbiky, sft 5% MRL: m-dkgy, mot, sbbiky-biky, sft, v calc

95% CHK: lgy-off wh, stri, mot, sbbiky-sbbiky, sft 5% MRL: m-dkgy, mot, sbbiky-biky, sft, v calc

95% CHK: lgy-off wh, stri, mot, sbbiky-sbbiky, sft 5% MRL: m-dkgy, mot, sbbiky-biky, sft, v calc

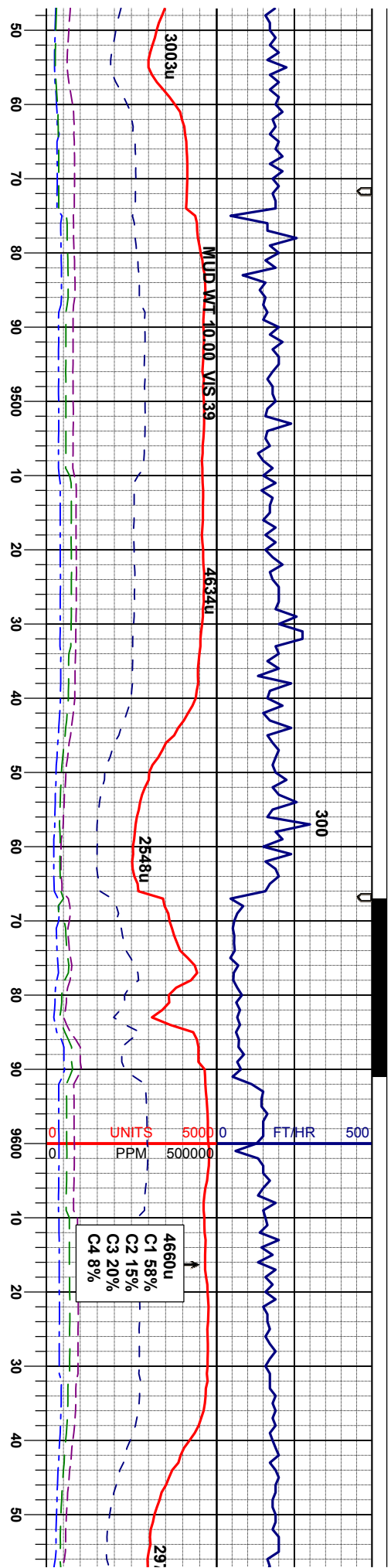
90% CHK: lgy-off wh, stri, mot, sbbiky-sbbiky, sft 10% MRL: m-dkgy, mot, sbbiky-biky, sft, v calc

MD 9322'  
INC 89.94°  
AZM 178.37°  
TVD 6278.37'

MD 9416'  
INC 89.41°  
AZM 179.86°  
TVD 6278.90'

6800 ft 6000 50 API 200





85% CHK: Itgy-off wh, stri, mot, sbilky-sbply, sft 15% MRL: m-dkgy, mot, sbilky-biky, sft, v calc

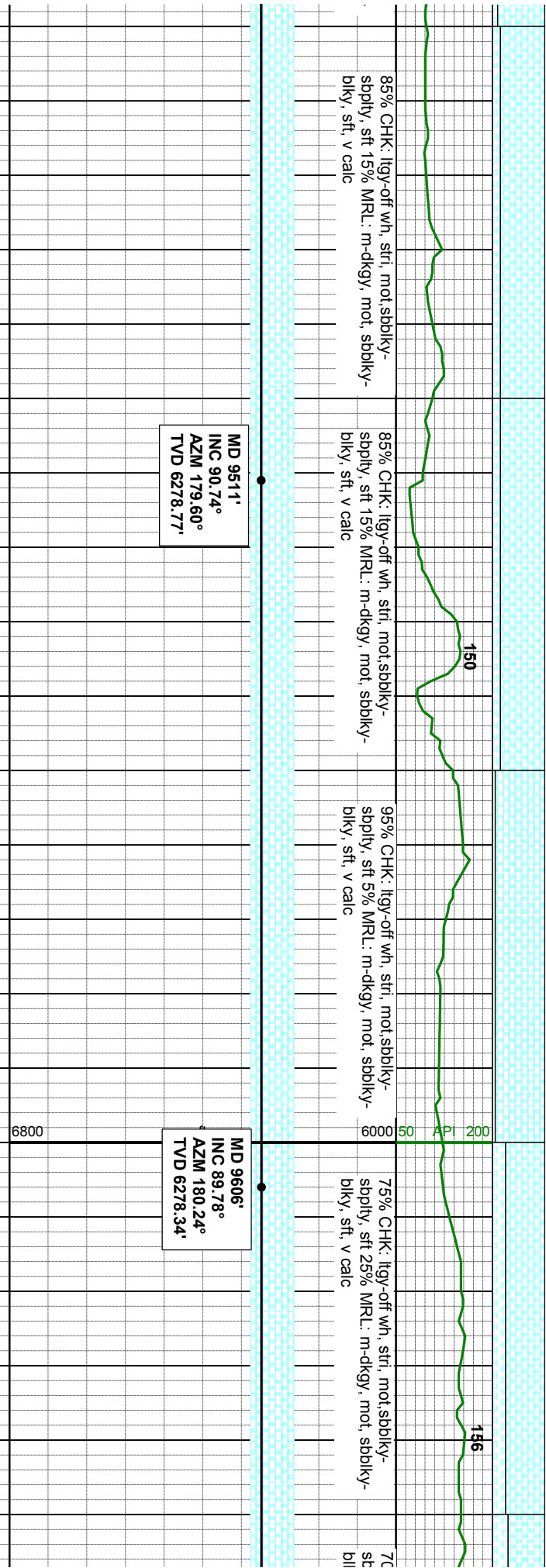
85% CHK: Itgy-off wh, stri, mot, sbilky-sbply, sft 15% MRL: m-dkgy, mot, sbilky-biky, sft, v calc

95% CHK: Itgy-off wh, stri, mot, sbilky-sbply, sft 5% MRL: m-dkgy, mot, sbilky-biky, sft, v calc

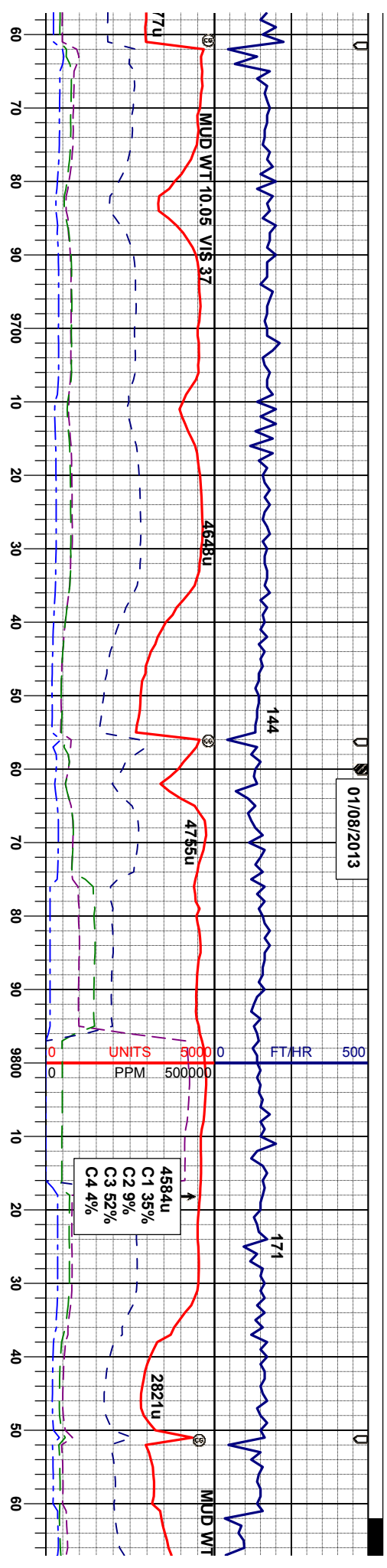
75% CHK: Itgy-off wh, stri, mot, sbilky-sbply, sft 25% MRL: m-dkgy, mot, sbilky-biky, sft, v calc

MD 9511'  
INC 90.74°  
AZM 179.60°  
TVD 6278.77'

MD 9606'  
INC 89.78°  
AZM 180.24°  
TVD 6278.34'



01/08/2013



4584u  
 C1 35%  
 C2 9%  
 C3 52%  
 C4 4%

90% CHK: Itgy-off wh, stri, mot, sbbiky-  
 sbbiky, sft 10% MRL: m-dkgy, mot, sbbiky-  
 biky, sft, tr pyr, v calc

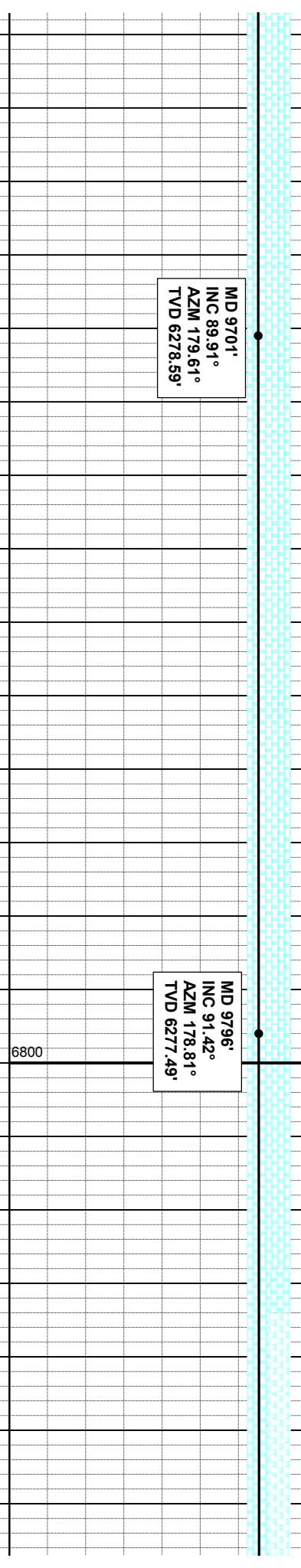
95% CHK: Itgy-off wh, stri, mot, sbbiky-  
 sbbiky, sft 5% MRL: m-dkgy, mot, sbbiky-  
 biky, sft, tr noc, v calc

85% CHK: Itgy-off wh, stri, mot, sbbiky-  
 sbbiky, sft 15% MRL: m-dkgy, mot, sbbiky-  
 biky, sft, v calc

60% MRL:  
 40% CHK:  
 sbbiky, sft, 1

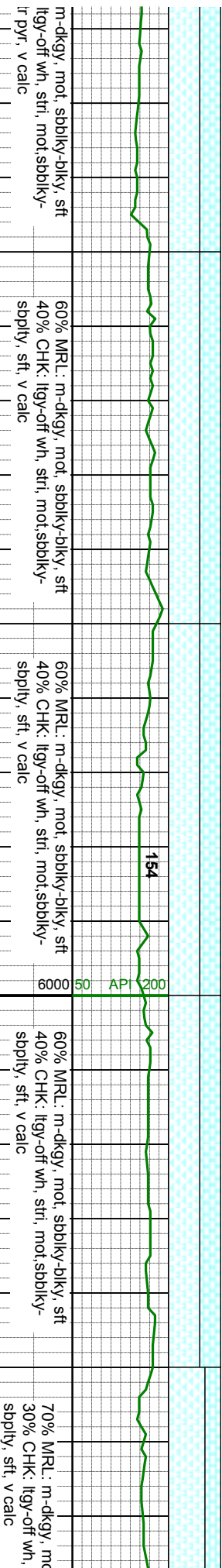
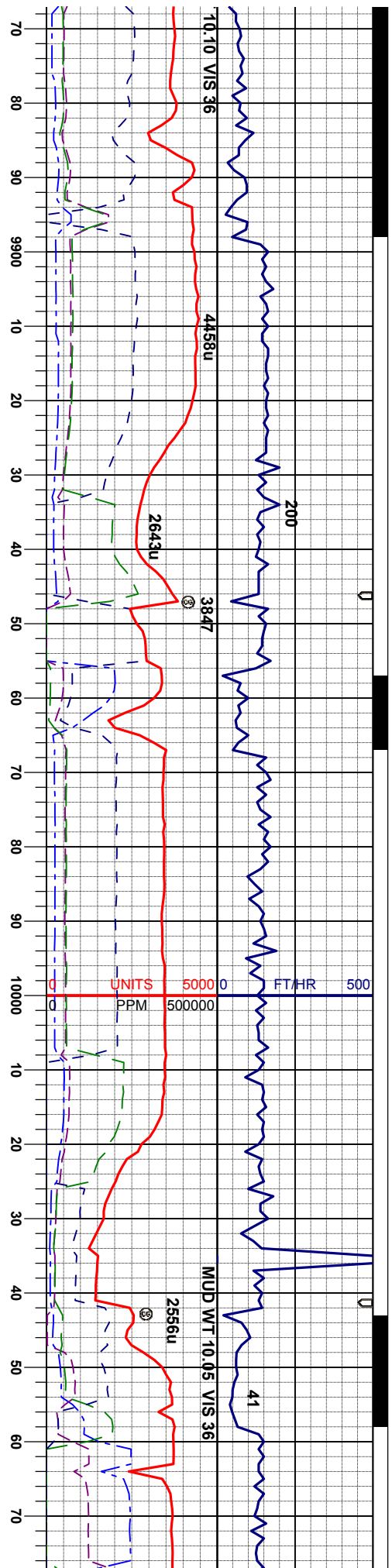
MD 9701'  
 INC 89.91°  
 AZM 179.61°  
 TVD 6278.59'

MD 9796'  
 INC 91.42°  
 AZM 178.81°  
 TVD 6277.49'



6800



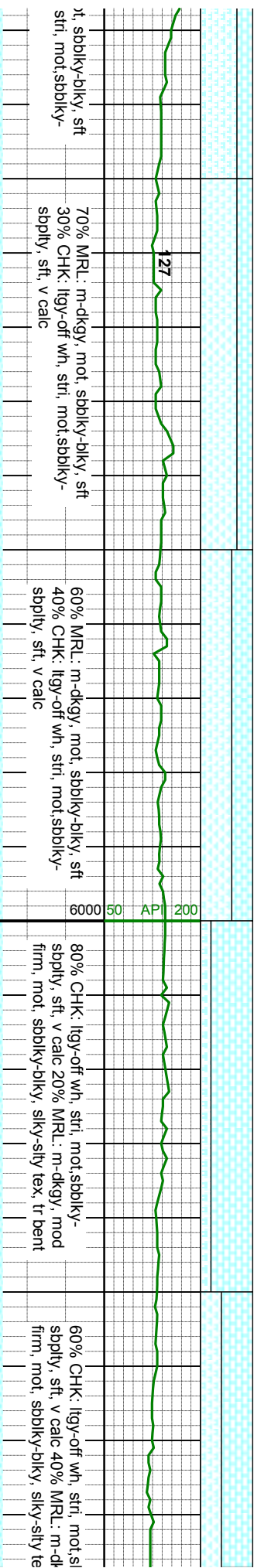
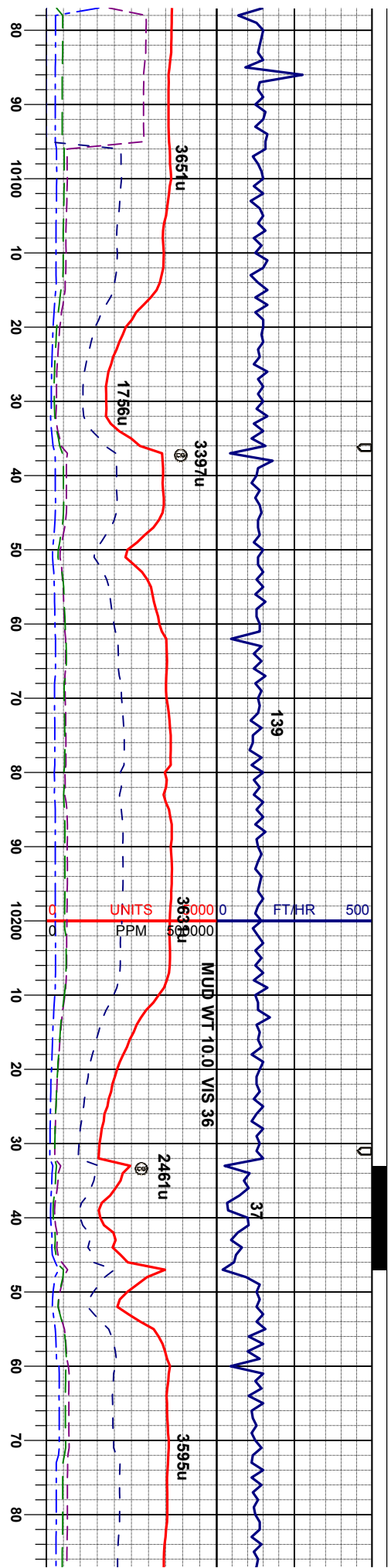


MD 9891'  
INC 89.85°  
AZM 180.94°  
TVD 6276.45°

MD 9986'  
INC 89.63°  
AZM 181.40°  
TVD 6276.88°

M1  
IN  
AZ  
TV

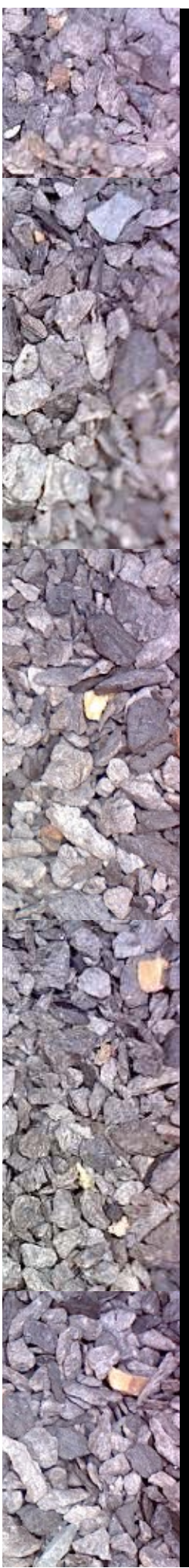
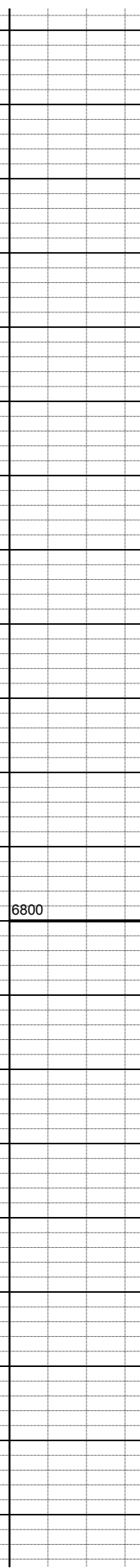


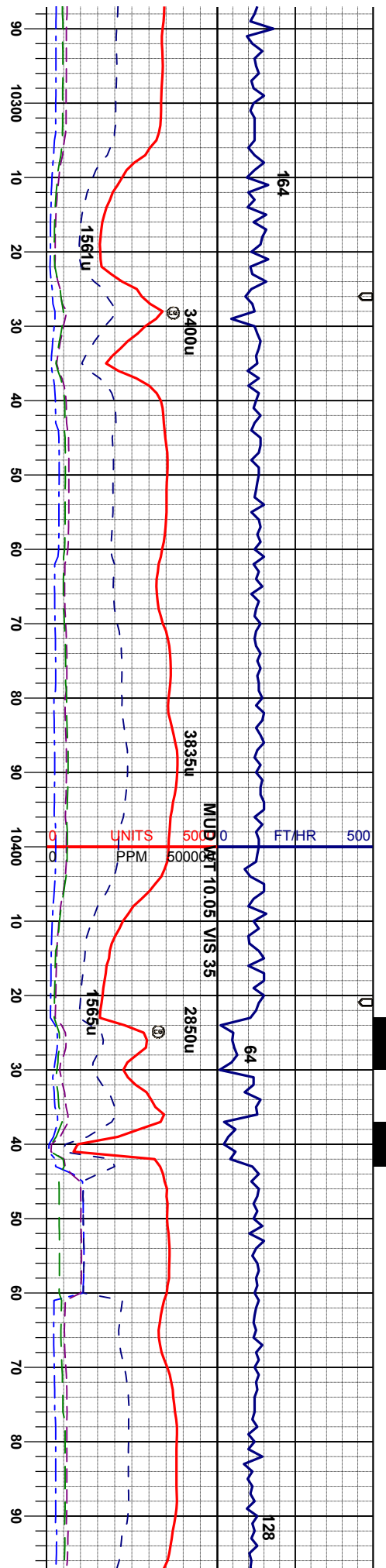


C 10081'  
 C 89.17°  
 M 181.27°  
 D 6277.88'

MD 10176'  
 INC 90.25°  
 AZM 181.35°  
 TVD 6278.36'

MD 10271'  
 INC 89.48°  
 AZM 179.40°  
 TVD 6278.59'





60% CHK: lgy-off wh, stri, mot, sbbkly-sbply, sft, v calc 40% MRL: m-dkgy, mod firm, mot, sbbkly-bkly, slky-slly tex, tr bent

70% MRL: m-dkgy, mod firm, mot, sbbkly-bkly, slky-slly tex 30% CHK: lgy-off wh, stri, mot, sbbkly-sbply, sft, v calc, tr bent

80% MRL: m-dkgy, mod firm, mot, sbbkly-bkly, slky-slly tex 20% CHK: lgy-off wh, stri, mot, sbbkly-sbply, sft, v calc, tr bent

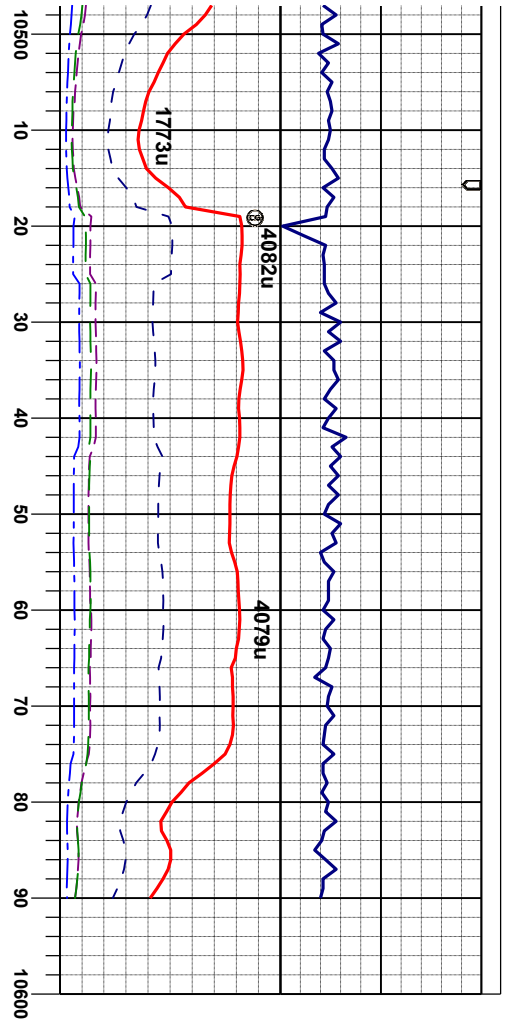
80% MRL: m-dkgy, mod firm, mot, sbbkly-bkly, slky-slly tex 20% CHK: lgy-off wh, stri, mot, sbbkly-sbply, sft, v calc, tr bent

MD 10366'  
INC 90.37°  
AZM 179.04°  
TVD 6278.72'

MD 10460'  
INC 90.68°  
AZM 177.66°  
TVD 6277.86'

6800 ft 6000 50 API 200





80% MR.L: m-dkgy, mod firm, mot, sbblky-  
 blky, slky-slty tex 20% CHK: lgy-off wh,  
 stri, mot,sbblky-sbply, sft, v calc, tr bent

70% MR.L: m-dkgy, mod firm, mot, sbblky-  
 blky, slky-slty tex 30% CHK: lgy-off wh,  
 stri, mot,sbblky-sbply, sft, v calc, tr bent

MD 10536'  
 INC 91.02°  
 AZM 177.05°  
 TVD 6276.74'

TD 10590' MD @ 11:09 hrs  
 on 01-08-2013

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 Columbine Logging Inc.

