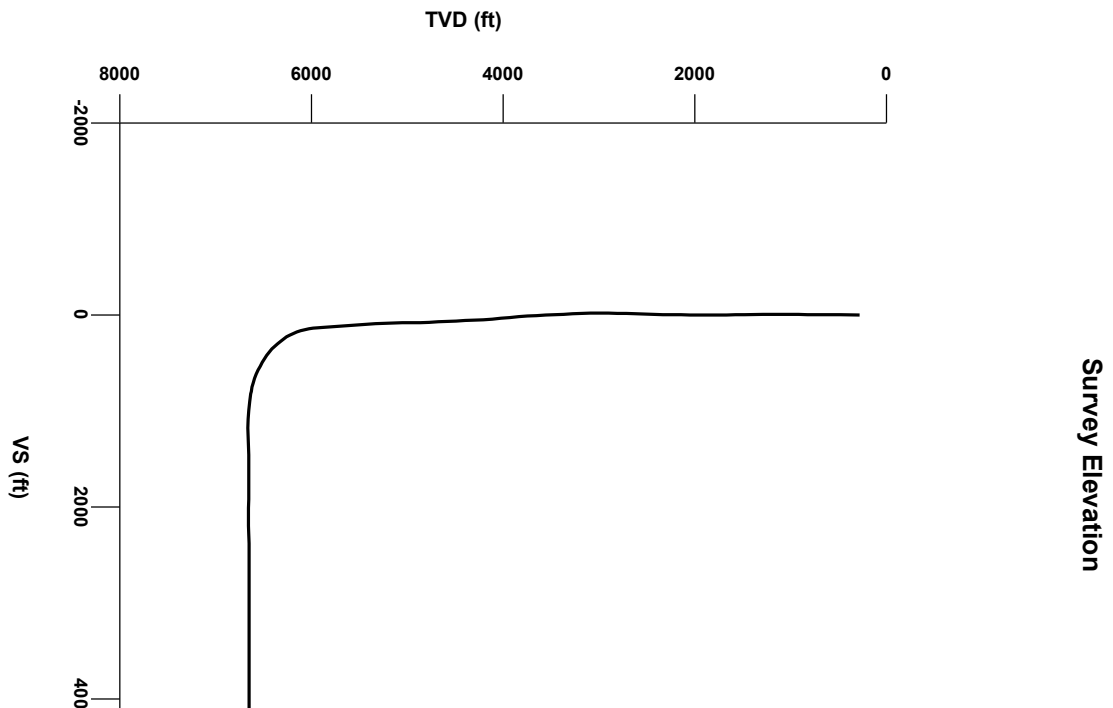
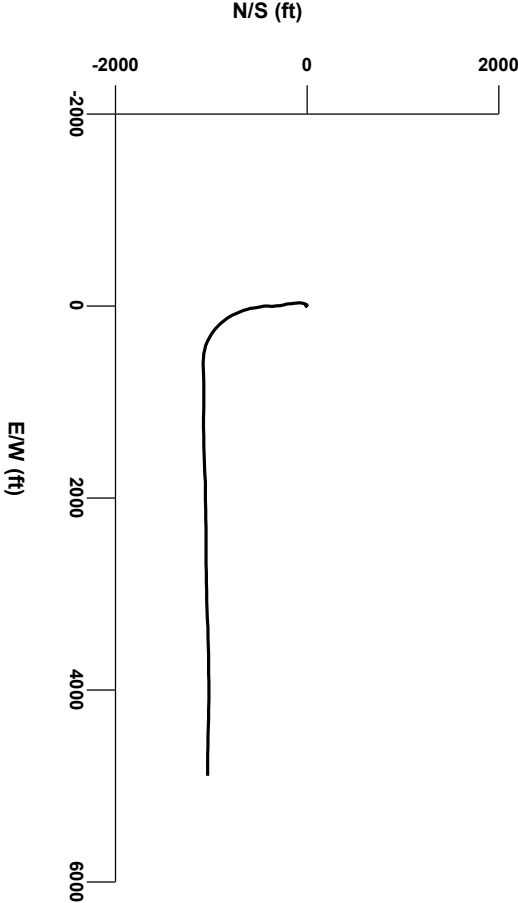


LOG created using LPLOT VH Version 3.0, July 27, 2013, Copyright (C) 1999-2009 Pason Systems Corp.

OPERATOR: NOBLE ENERGY INC.
WELL: WELLS RANCH USX AA27-62-1HN
LOCATION: SEC 27, T6N, R63W
COUNTY: WELD
STATE: COLORADO
SPOT: 1426 FSL, 221 FEL
ELEVATION: GL 4793' , KB 4817
FIELD: WATTENBURG
SPUD DATE: 07/18/2013
TD DATE: 07/26/2013
DATES LOGGED: 07/19/2013 - 07/26/2013
DEPTHS LOGGED: 1000' - 11434'
LOGGERS: JOHN READY, MIKE GREENE
DRILLING FLUID: WATER, MUD, POLY
DRILLING RIG: H&P 322
API: 05-123-37143
LOG TYPE: HORIZONTAL
SCALE: 1:240 (5 inches per 100 feet)
REMARKS: WELLSITE SERVICES PROVIDED BY COLUMBINE LOGGING INC.



Survey Plan



Chalk

Marl

Shaly Sandstone

Silty Shale

ENGINEERING SYMBOLS

▲

Casing

▲

Casing

◻

Connection

⊗

Connection Gas

↙

Arrow

▣

Midnight Depth

↗

Normal Fault

➔

Arrow

0

UNITS

3000

0

C1

PPM

300000

0

C2

PPM

300000

0

C3

PPM

300000

0

C4

PPM

300000

DEPTH
(FEET)

5940

50

60

70

80

90

6000

10

20

30

40

50

60

70

ROP

FT/HR

400

272

2192u

1708u

1972u

105

BEGAN BUILD @
02:54hrs 07/22/2013

Log Continued From:
WELLS RANCH USX AA27-62-1HN(VERT).Iplot

C1: 66.9%

C2: 10.9%

C3: 13.1%

C4: 9.1%

MUD WT 9.90 VS 35

5800

50

API

250

5987'

INC

15.93°

AZM

175.63°

TVD

5938.09'

6035'

INC

19.32°

AZM

171.16°

TVD

5983.84'

COLUMBINE LOGGING INC.

RIGGED UP ON 07/19/2013

MANNED 2-PERSON LOGGING

WITH BLOODHOUND GAS

CHROMATOGRAPH UNIT #0315

BHA #2

Bit: 8.750"

Manufacturer: NOV/ReedHycalog

Model: E1202

Serial Number: E168010

Nozzles: 5x15

Motor: 6.75"

Manufacturer: SperryDrill

Model: E1202

Serial Number: 675-0154

Bend: 2.00

100% SILTY SH: m-dk gy occ m brn tan, firm - sl sft, rthy - sl sily tex, tr ss

90% SILTY SH: m gy - occ v dk gy, firm - sft, sbblky - sbply, rthy sl sily tex

10% SHVSS: lt gy- sme sdp v-fgr, sbnd - sbang, mod sft, fri, p por, arg cnt, sme tr blot

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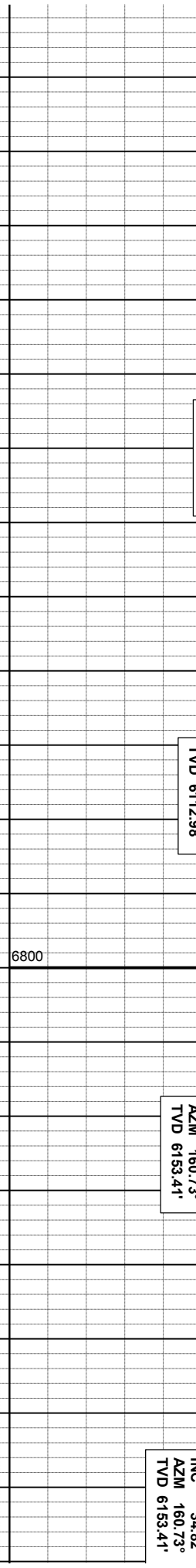
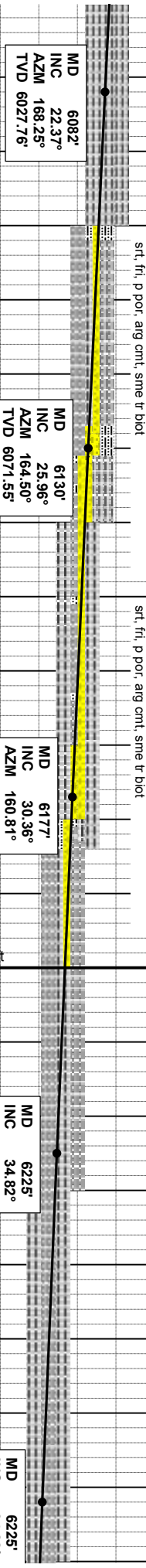
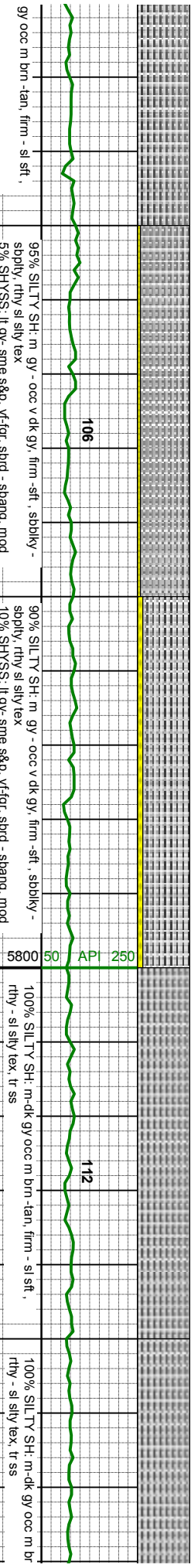
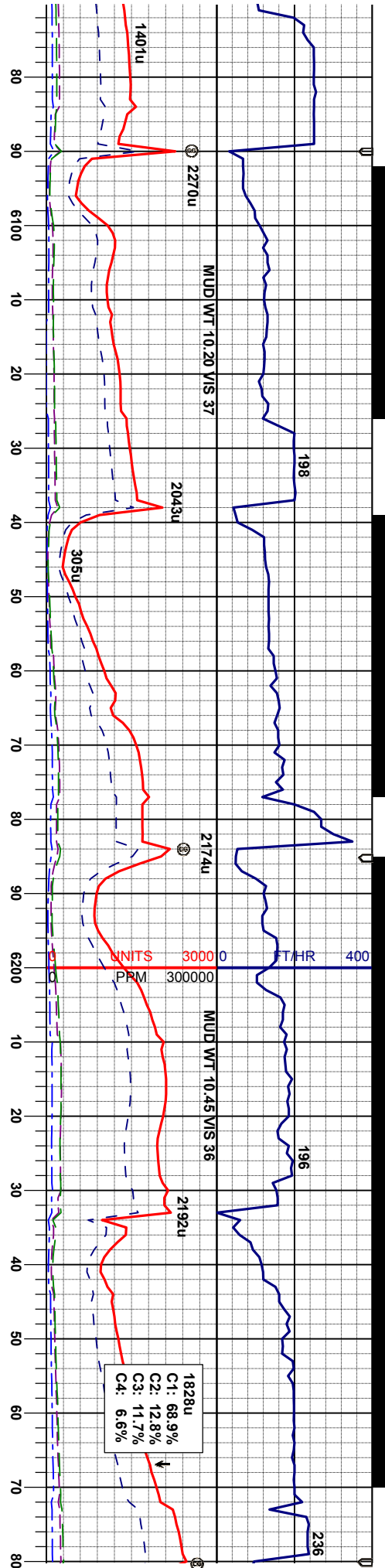
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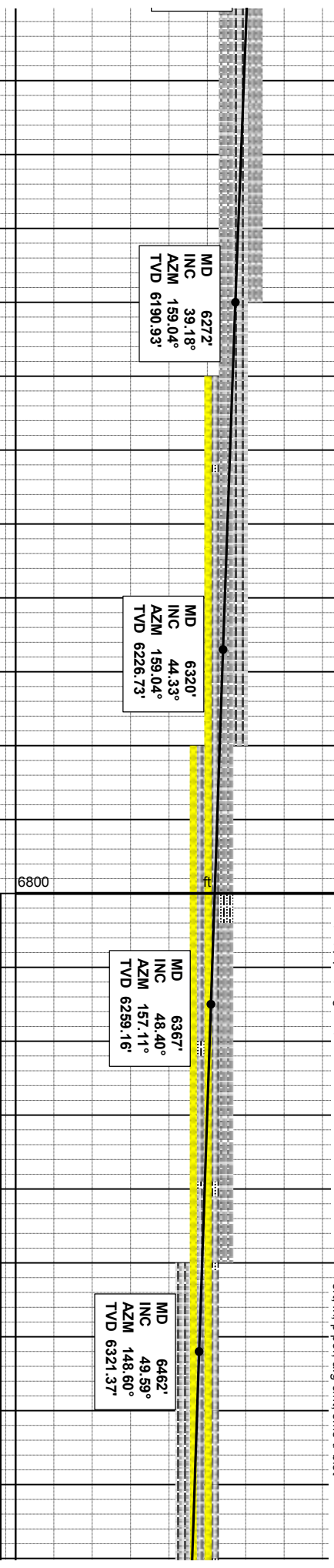
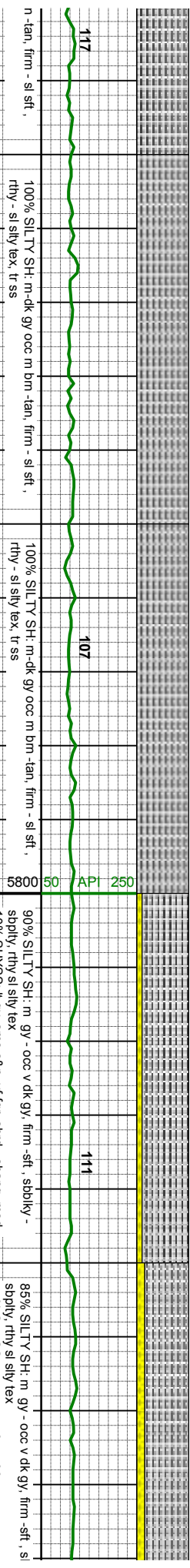
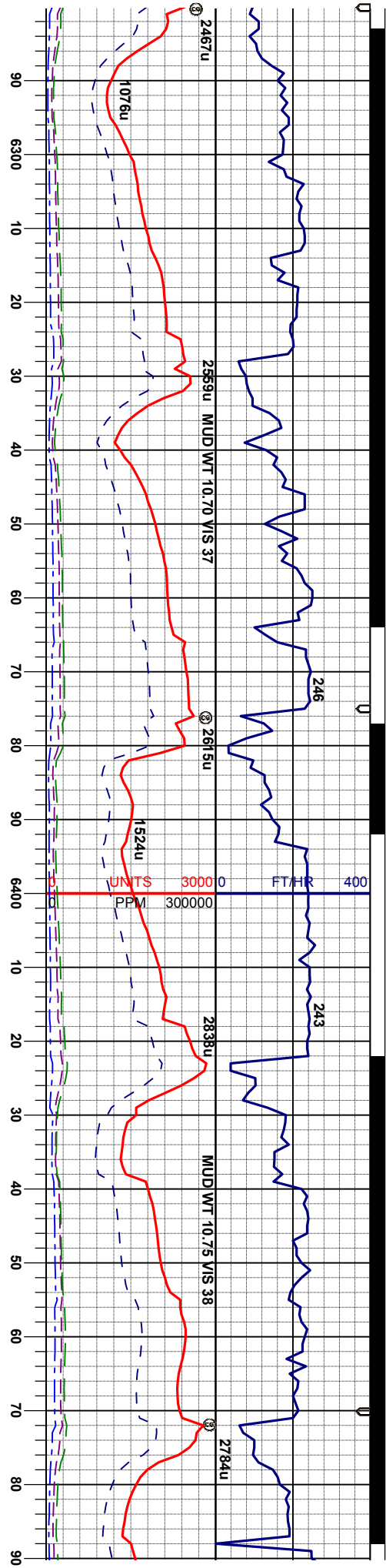
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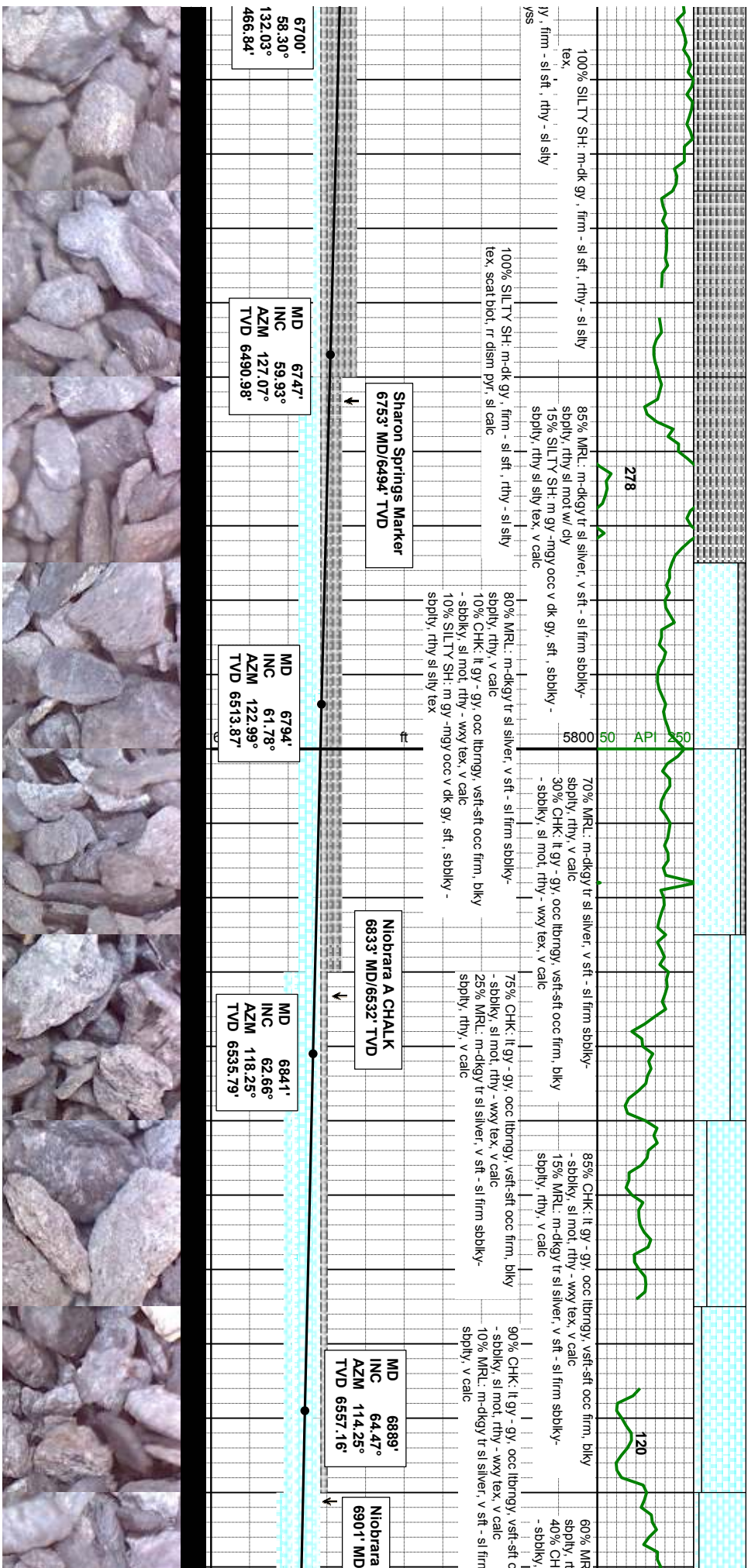
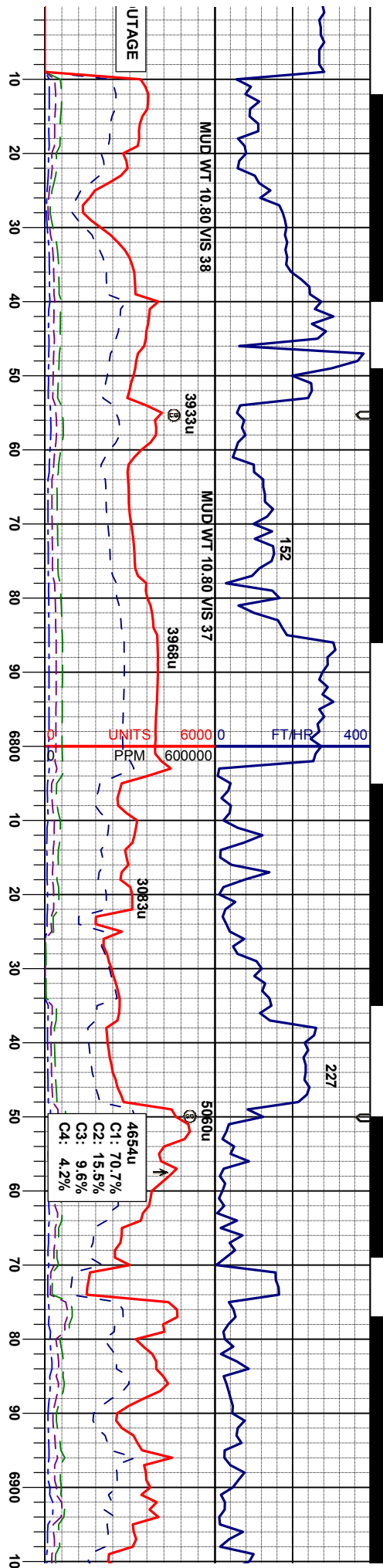
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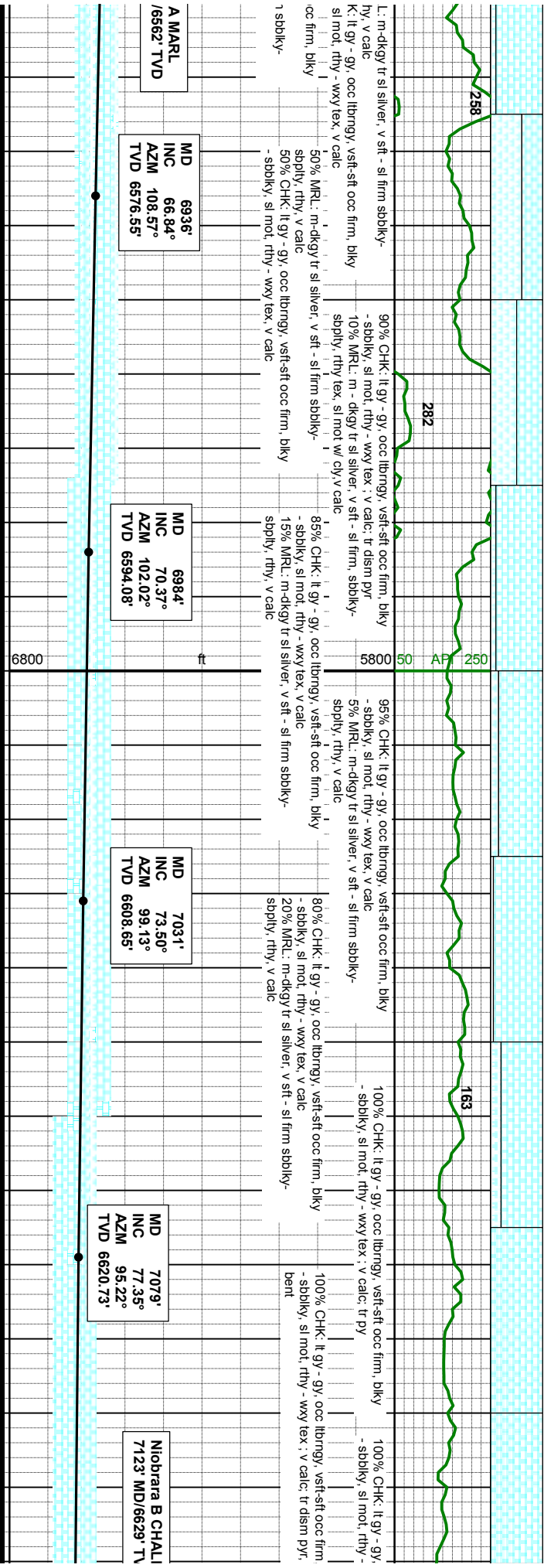
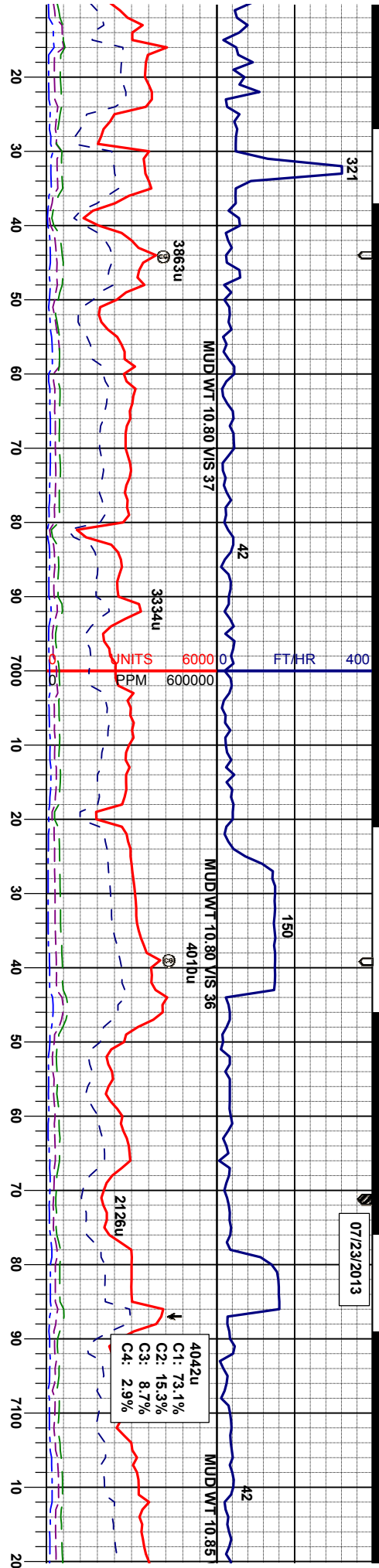
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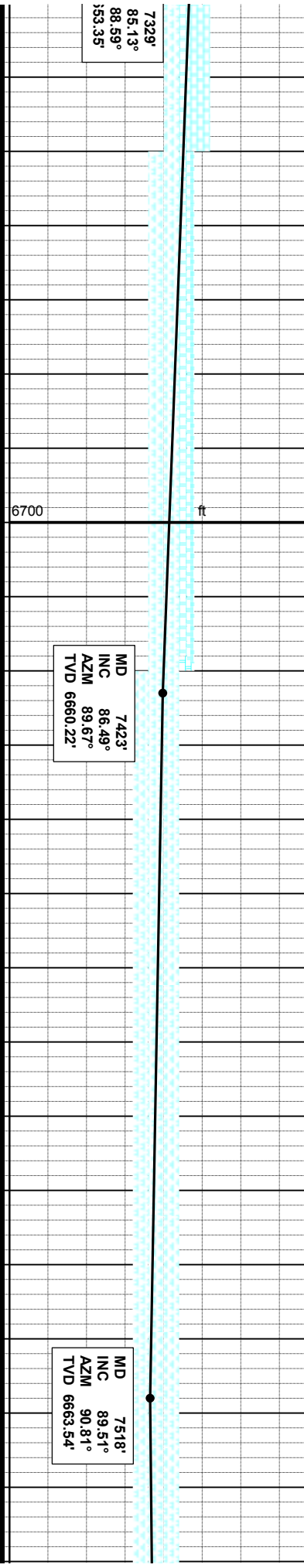
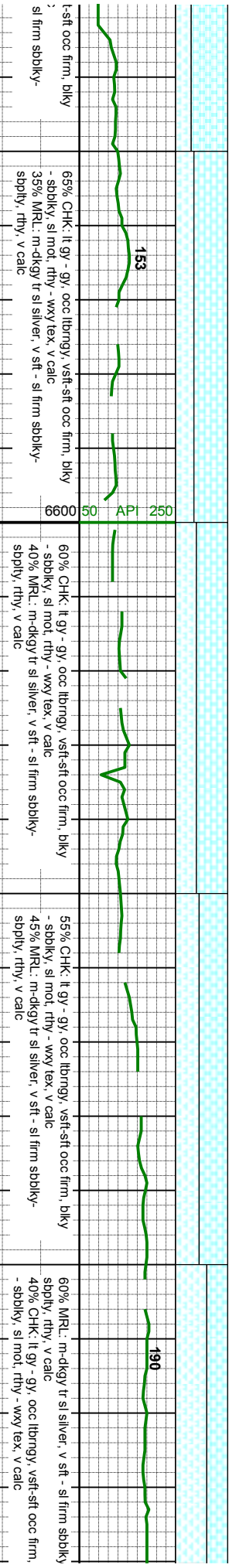
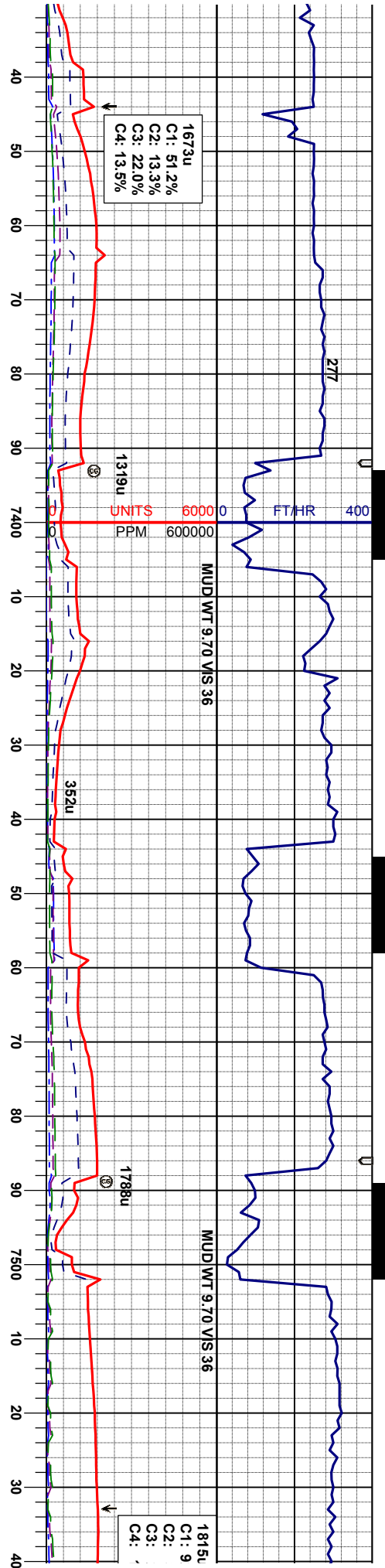


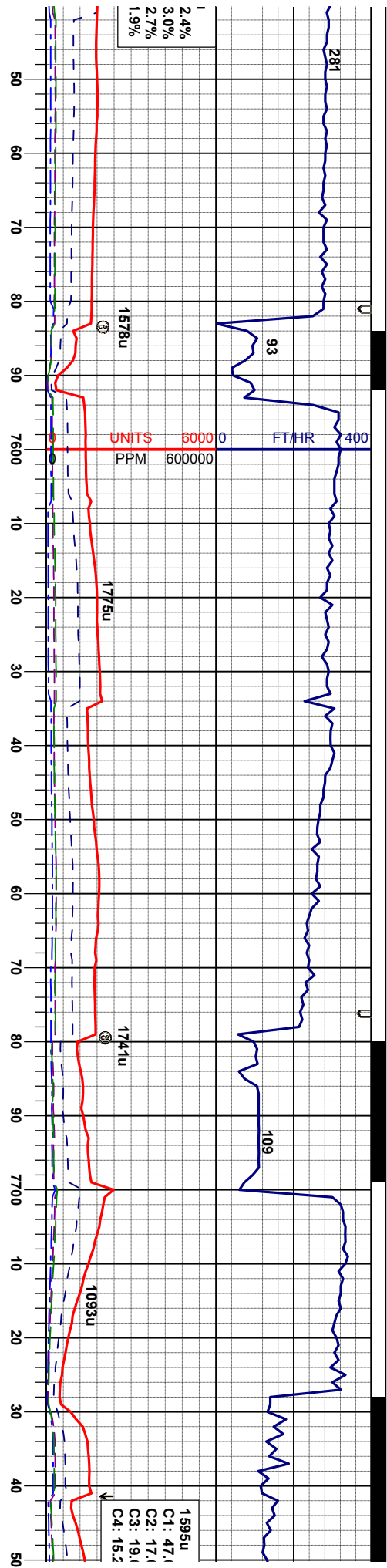




07/23/2013





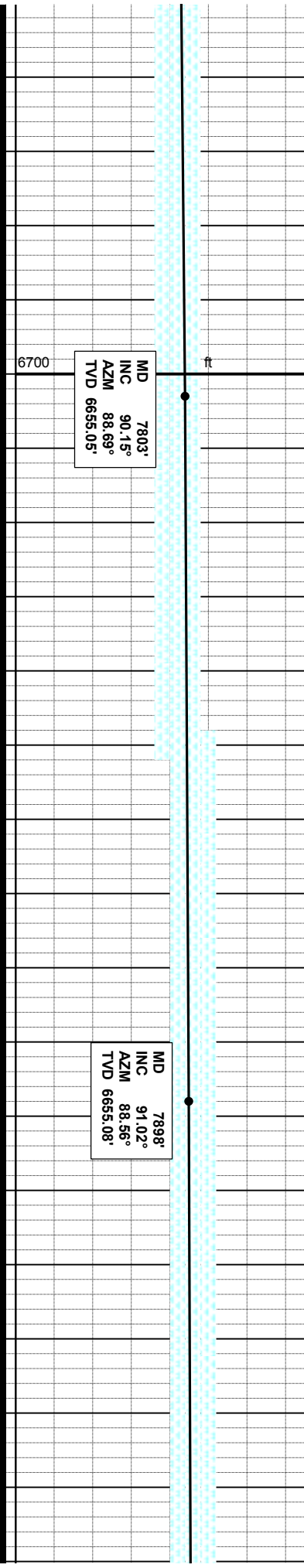
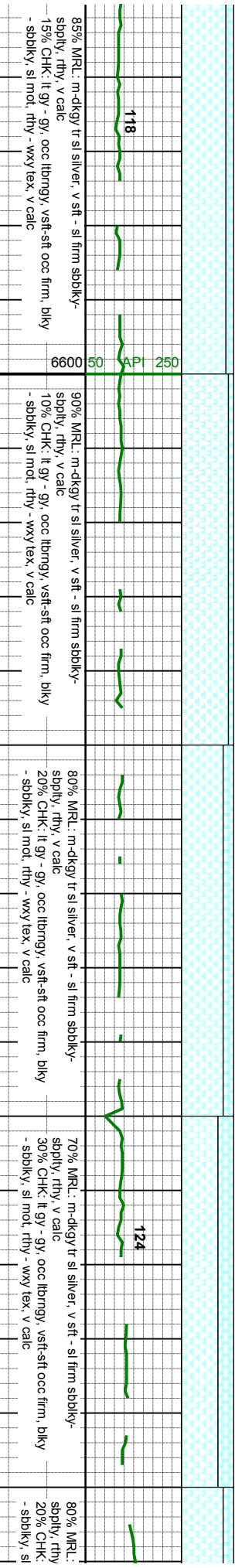
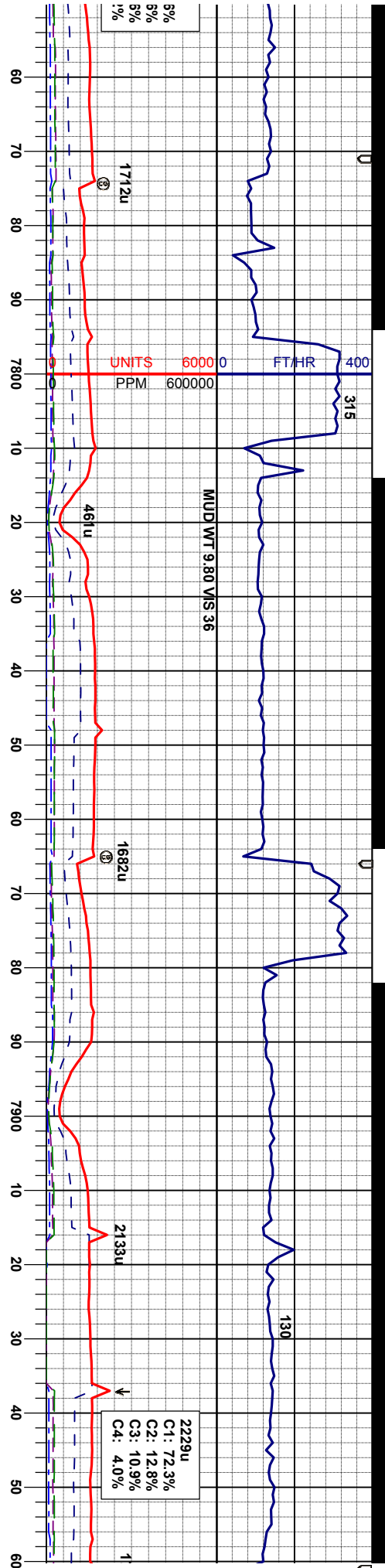


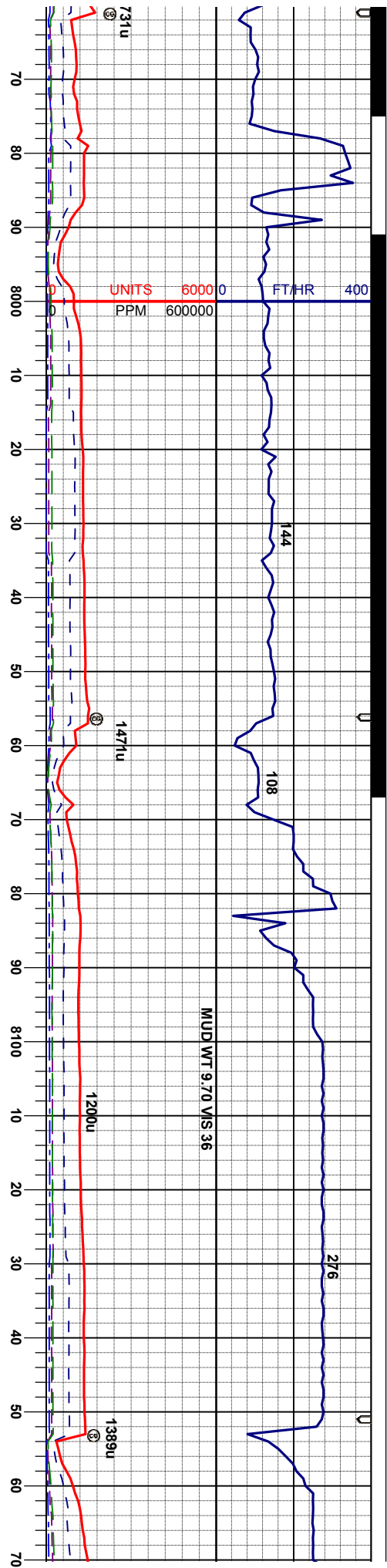
75% MRL: m-dkgy tr sl silver, v sft - sl firm sdbiky- spply, rthy, v calc	70% MRL: m-dkgy tr sl silver, v sft - sl firm sdbiky- spply, rthy, v calc	75% MRL: m-dkgy tr sl silver, v sft - sl firm sdbiky- spply, rthy, v calc	80% MRL: m-dkgy tr sl silver, v sft - sl firm sdbiky- spply, rthy, v calc
25% CHK: lt gy - gy, occ lbrngy, vsft-sft occ firm, bkly - sdbiky, sl mot, rthy - wxy tex, v calc	30% CHK: lt gy - gy, occ lbrngy, vsft-sft occ firm, bkly - sdbiky, sl mot, rthy - wxy tex, v calc	25% CHK: lt gy - gy, occ lbrngy, vsft-sft occ firm, bkly - sdbiky, sl mot, rthy - wxy tex, v calc	20% CHK: lt gy - gy, occ lbrngy, vsft-sft occ firm, bkly - sdbiky, sl mot, rthy - wxy tex, v calc

MD 7613'
INC 92.74°
AZIM 92.08°
TVD 6661.67'

MD 7708'
INC 91.94°
AZIM 90.69°
TVD 6667.79'



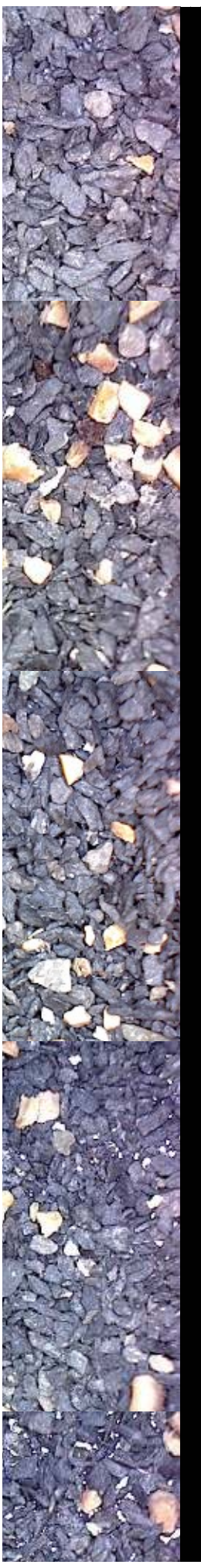


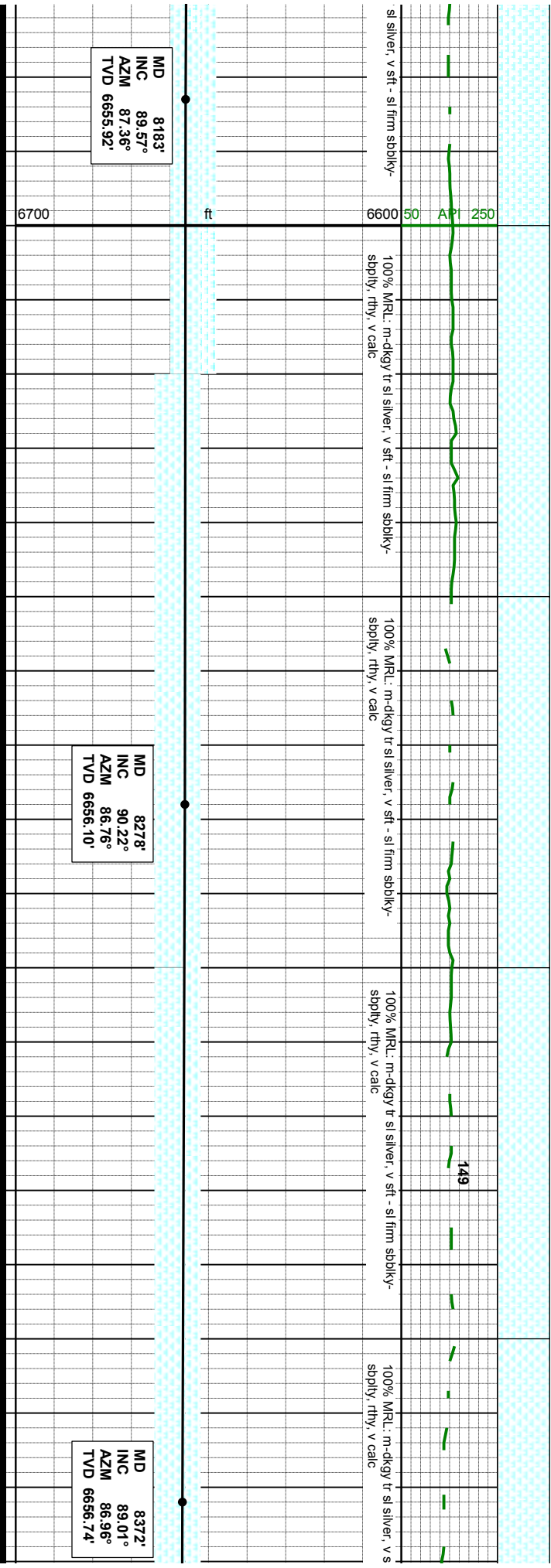
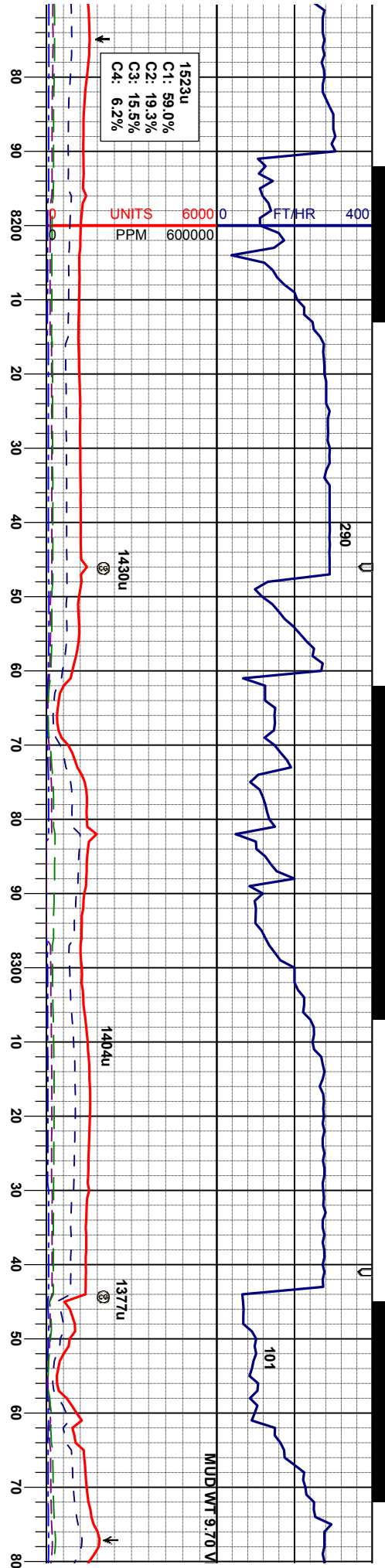


m-dkgy tr sl silver, v sft - sl firm sdbkly- v calc	85% MRL: m-dkgy tr sl silver, v sft - sl firm sdbkly- sbply, rthy, v calc	85% MRL: m-dkgy tr sl silver, v sft - sl firm sdbkly- sbply, rthy, v calc	100% MRL: m-dkgy tr sl silver, v sft - sl firm sdbkly- sbply, rthy, v calc	100% MRL: m-dkgy tr sbply, rthy, v calc
lt gy - gy, occ lbmgy, vsft-sft occ firm, bkly mot, rthy - wxy tex, v calc	15% CHK: lt gy - gy, occ lbmgy, vsft-sft occ firm, bkly - sdbkly, sl mot, rthy - wxy tex, v calc	15% CHK: lt gy - gy, occ lbmgy, vsft-sft occ firm, bkly - sdbkly, sl mot, rthy - wxy tex, v calc		
6600	152			153

MD 7993'
INC 89.82°
AZM 89.79°
TVD 6654.39'

MD 8088'
INC 89.39°
AZM 88.29°
TVD 6655.06'



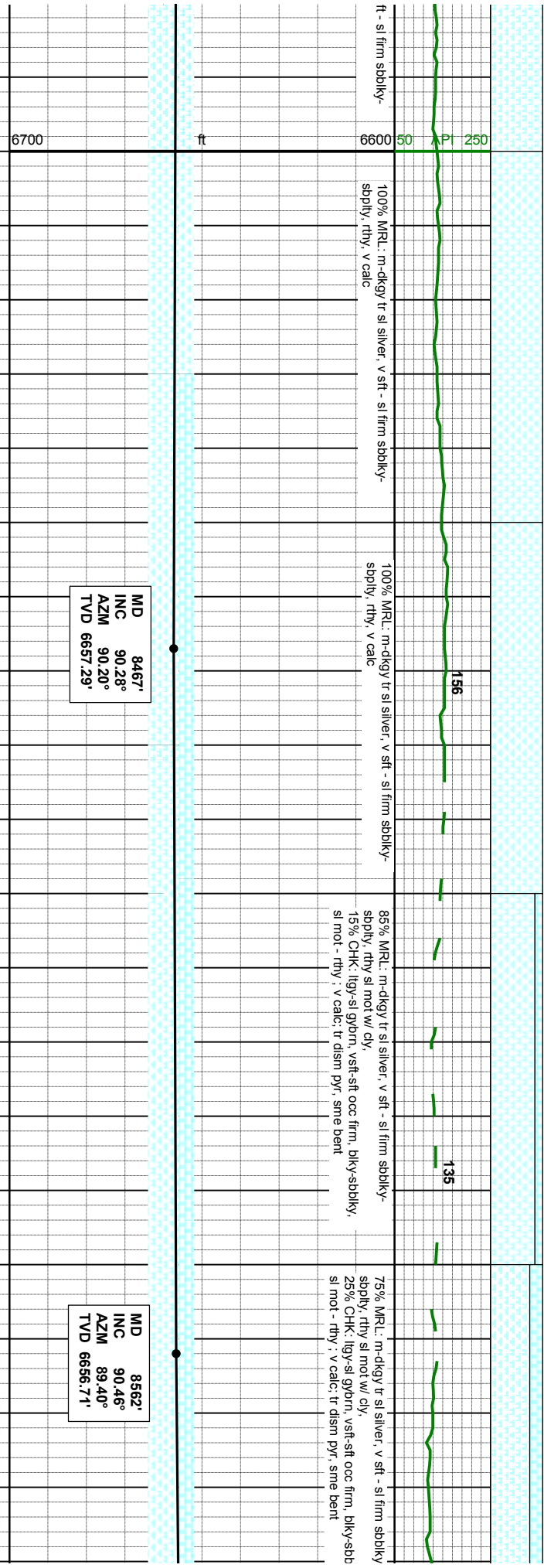
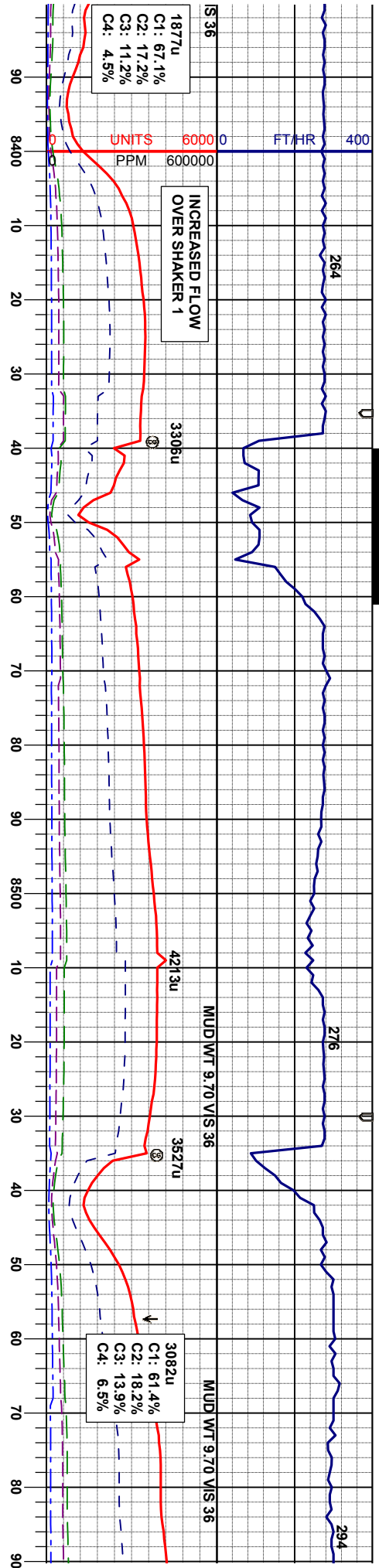


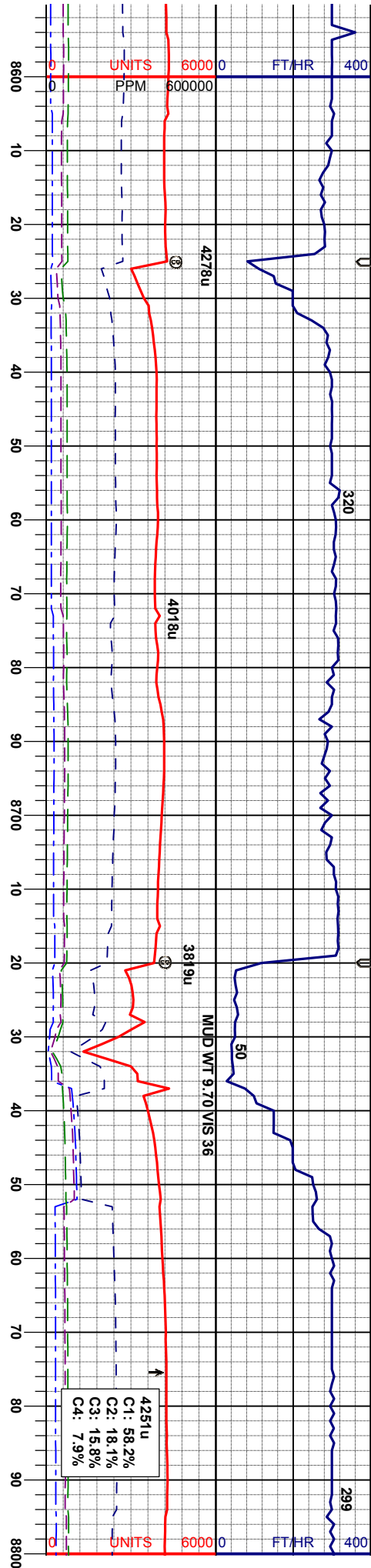
MD 8183'
INC 89.57°
AZM 87.36°
TVD 6655.92'

MD 8278'
INC 90.22°
AZM 86.76°
TVD 6656.10'

MD 8372'
INC 89.01°
AZM 86.96°
TVD 6656.74'







65% MRL: m-dkgy sl silver, v sft - sl firm sdbkly-
sdbly, rthy lstr, gt tex, spec
35% CHK: lt gy - crm, vsft-sft occ firm, bkly-sdbkly,
mot, sl wxy - sub vit lstr: v calc

50% CHK: lt gy - gy, occ lbrngy, vsft-sft occ firm, bkly
-sdbkly, sl mot, rthy - wxy tex: v calc, lt dism pyr, sme
bent

50% MRL: m - dkgy tr sl silver, v sft - sl firm, sdbkly-
sdbly, shly - rthy tex, sl mot w/ clay calc

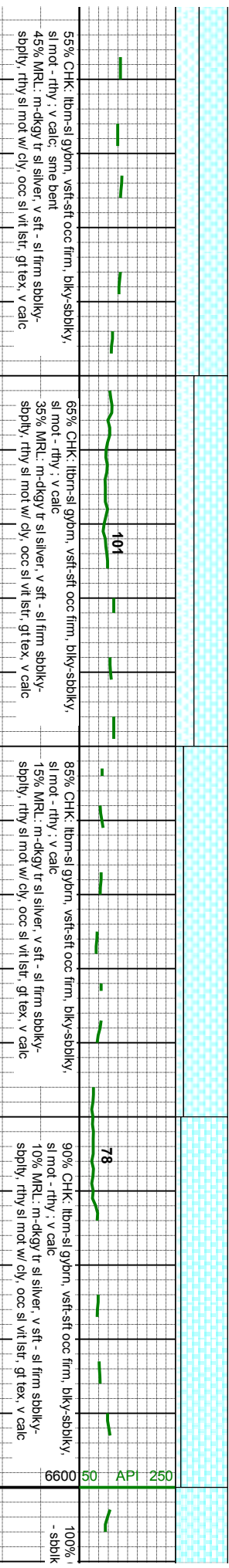
60% MRL: m-dkgy sl silver, v sft - sl firm sdbkly-
sdbly, rthy lstr, gt tex, spec
40% CHK: lt gy - crm, vsft-sft occ firm, bkly-sdbkly,
mot, sl wxy - sub vit lstr: v calc

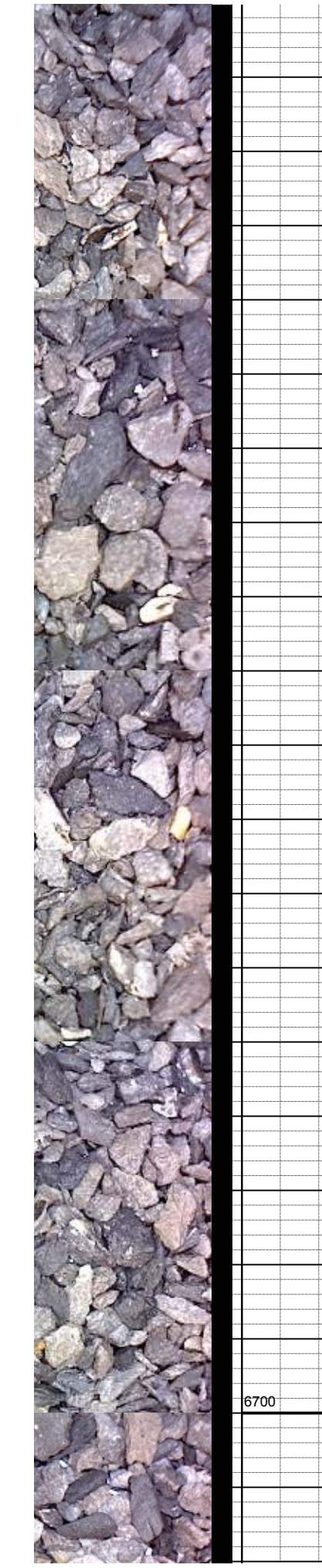
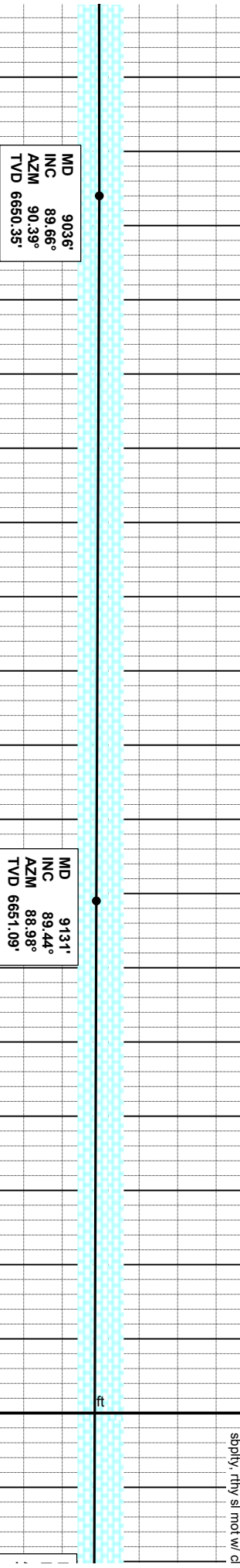
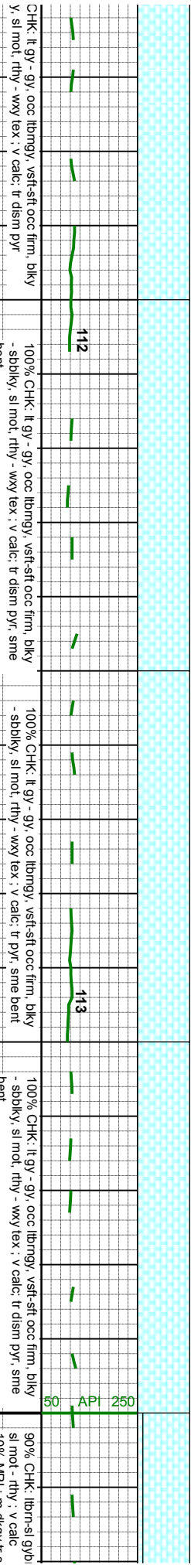
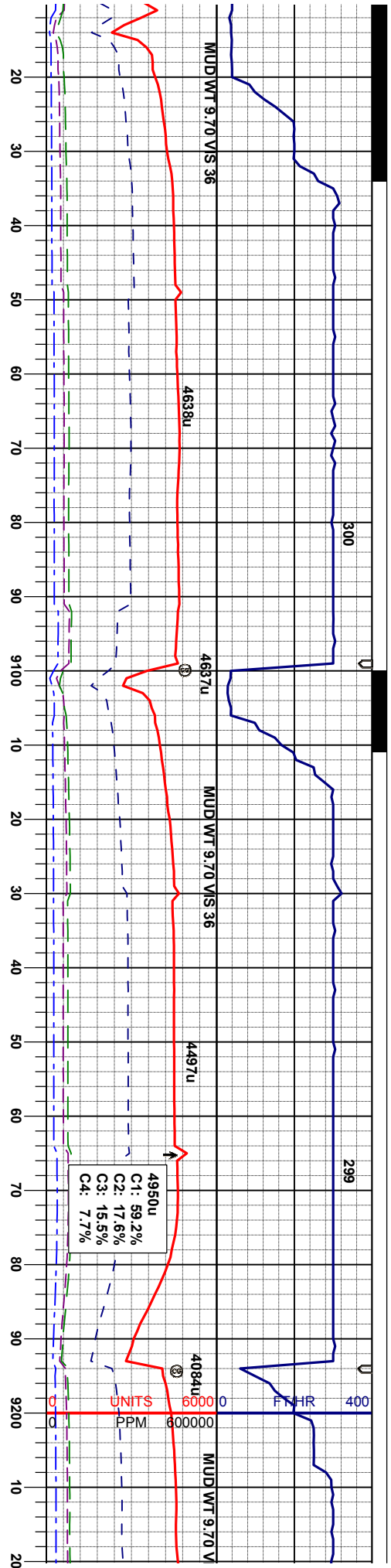
50% CHK: lt gy - gy, occ lbrngy, vsft-sft occ firm, bkly
-sdbkly, sl mot, rthy - wxy tex: v calc, lt dism pyr
50% MRL: m - dkgy tr sl silver, v sft - sl firm, sdbkly-
sdbly, shly - rthy tex, sl mot w/ clay calc

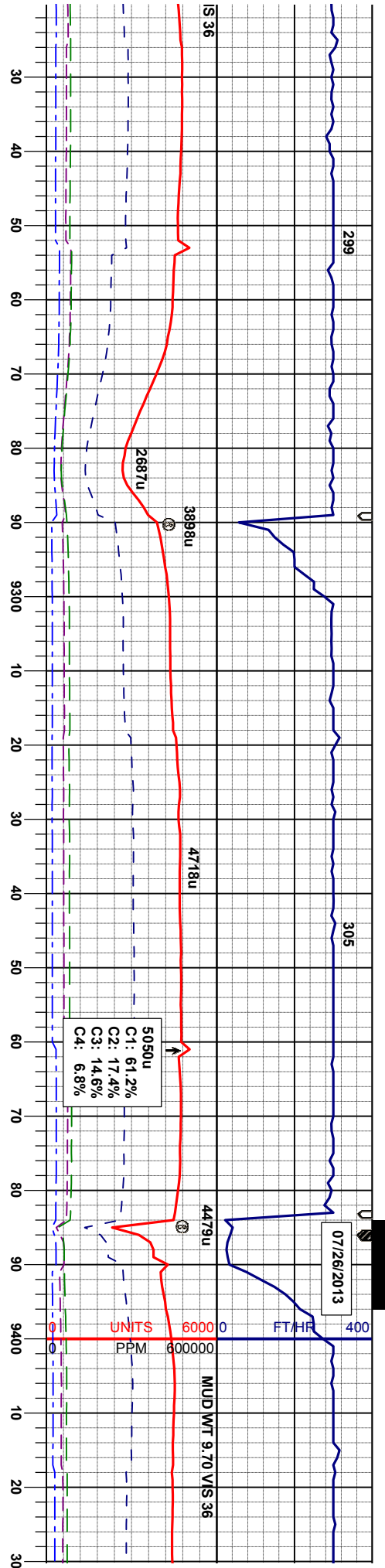
MD 8657'
INC 91.67°
AZM 89.35°
TVD 6654.95'

MD 8751'
INC 90.89°
AZM 88.46°
TVD 6652.83'





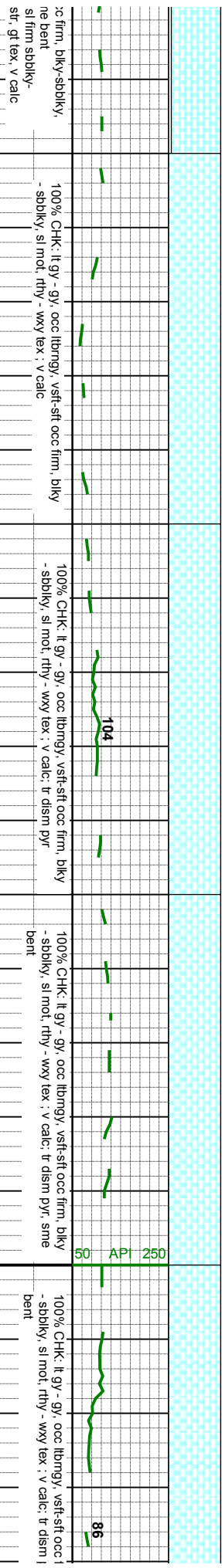


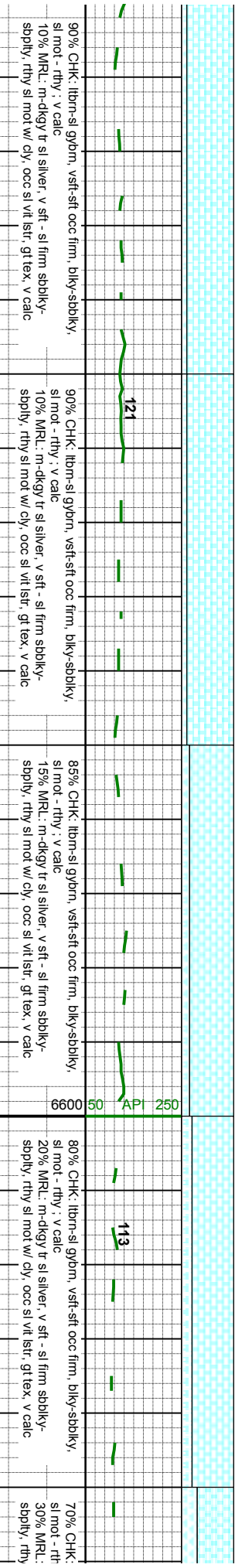
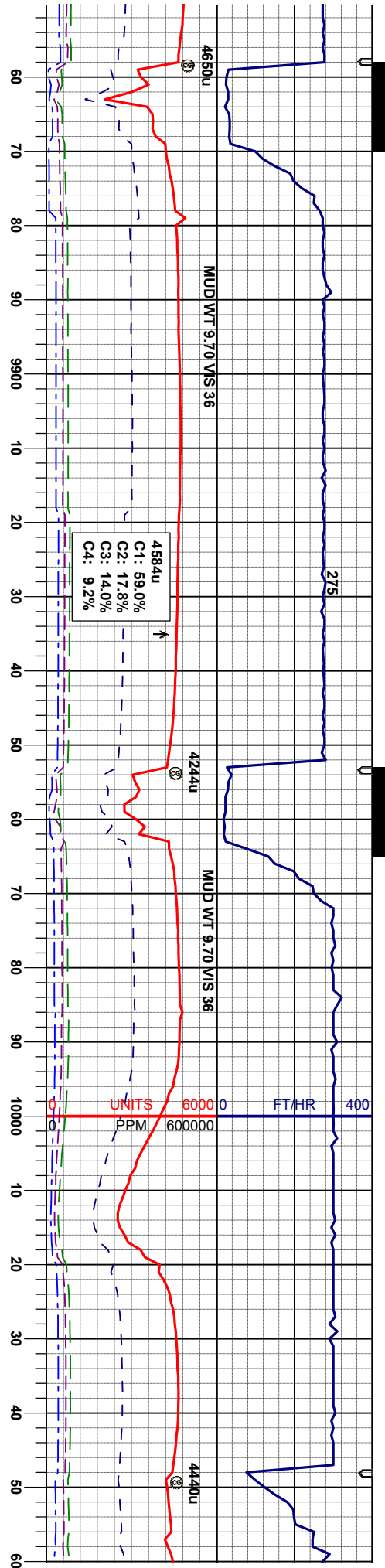


120	95% CHK: lbm-si gybm, vsft-sft occ firm, bky-sbdky, sl mot - rthy : v calc	80% CHK: lbm-si gybm, vsft-sft occ firm, bky-sbdky, sl mot - rthy : v calc; tr dism pyr, sme bent	85% CHK: lbm-si gybm, vsft-sft occ firm, bky-sbdky, sl mot - rthy : v calc	95% CHK: lbm-si gybm, vsft-sft occ firm, bky-sbdky, sl mot - rthy : v calc; tr dism pyr, sme bent
	5% MRLL: m-dkgy tr si silver, v sft - si firm sbdky-soply, rthy si mot w/ cly, occ si vit istr, gt tex, v calc	20% MRLL: m-dkgy tr si silver, v sft - si firm sbdky-soply, rthy si mot w/ cly, occ si vit istr, gt tex, v calc	15% MRLL: m-dkgy tr si silver, v sft - si firm sbdky-soply, rthy si mot w/ cly, occ si vit istr, gt tex, v calc	5% MRLL: m-dkgy tr si silver, v sft - si firm sbdky-soply, rthy si mot w/ cly, occ si vit istr, gt tex, v calc

MD 9226'	MD 9320'	MD 9415'
INC 89.85°	INC 90.22°	INC 89.26°
AZM 89.18°	AZM 89.29°	AZM 88.58°
TVD 6651.68'	TVD 6651.63'	TVD 6652.06'



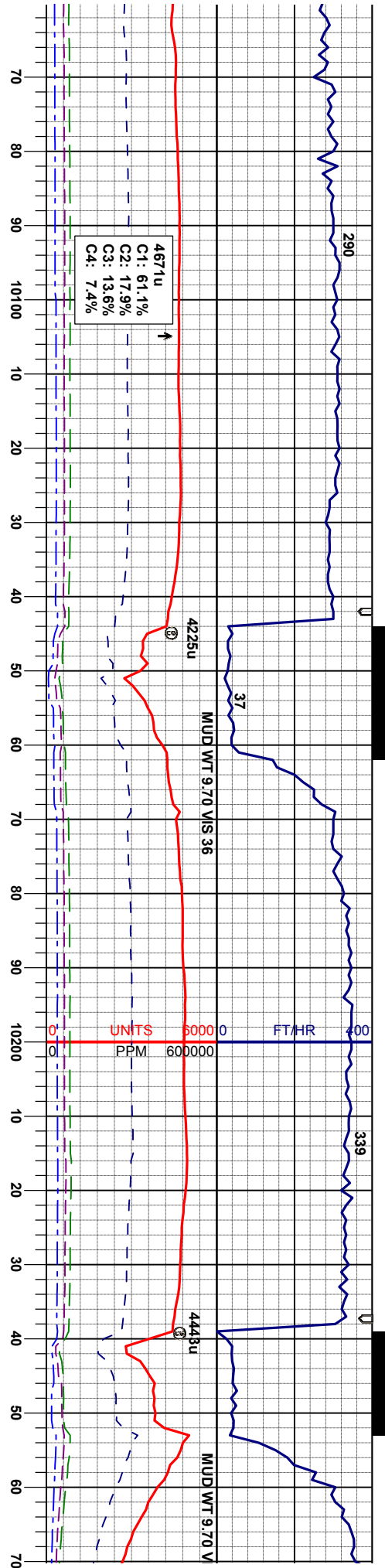




MD 9890'
INC 89.45°
AZM 87.72°
TVD 6650.11'

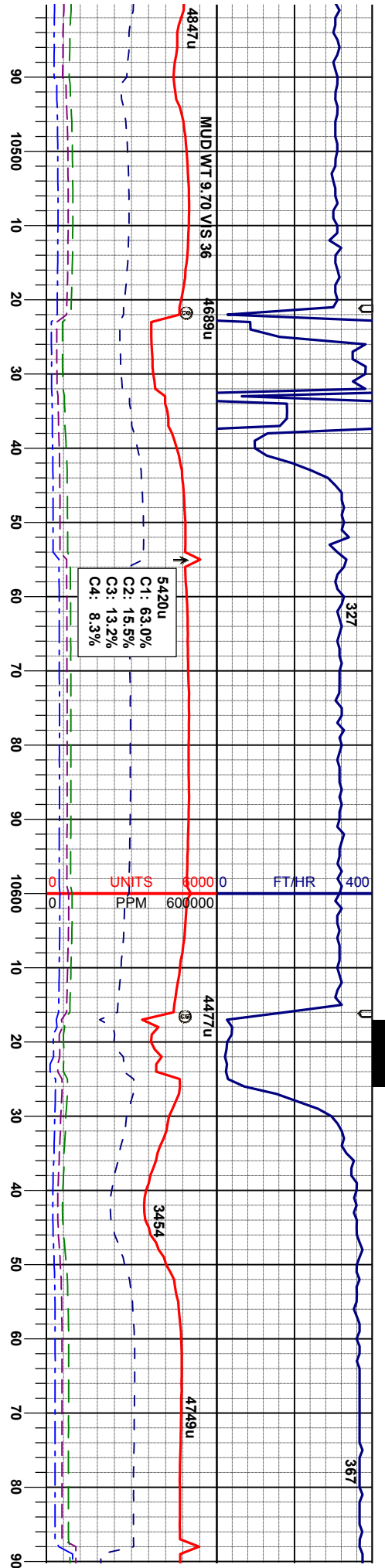
MD 9985'
INC 89.17°
AZM 88.65°
TVD 6651.27'





10079'		10174'		10279'	
INC 90.46°		INC 90.65°		INC 90.46°	
AZM 88.44°		AZM 89.60°		AZM 88.44°	
TVD 6651.57'		TVD 6650.11'		TVD 6651.57'	
108		122		108	
10m-si gybrn, vsft-sft occ firm, biky-sbbiky, si mot - rthy, v calc		10m-si gybrn, vsft-sft occ firm, biky-sbbiky, si mot - rthy, v calc		10m-si gybrn, vsft-sft occ firm, biky-sbbiky, si mot - rthy, v calc	
85% CHK: ibm-si gybrn, vsft-sft occ firm, biky-sbbiky, si mot - rthy, v calc		85% CHK: ibm-si gybrn, vsft-sft occ firm, biky-sbbiky, si mot - rthy, v calc		85% CHK: ibm-si gybrn, vsft-sft occ firm, biky-sbbiky, si mot - rthy, v calc	
15% MRL: m-dkgy tr si silver, v sft - si firm sbbiky-sbbiky, rthy si mot w/ cly, occ si vit lstr, gt tex, v calc ; tr bent, sme dism pyr		15% MRL: m-dkgy tr si silver, v sft - si firm sbbiky-sbbiky, rthy si mot w/ cly, occ si vit lstr, gt tex, v calc ; tr bent, sme dism pyr		15% MRL: m-dkgy tr si silver, v sft - si firm sbbiky-sbbiky, rthy si mot w/ cly, occ si vit lstr, gt tex, v calc ; tr bent, sme dism pyr	



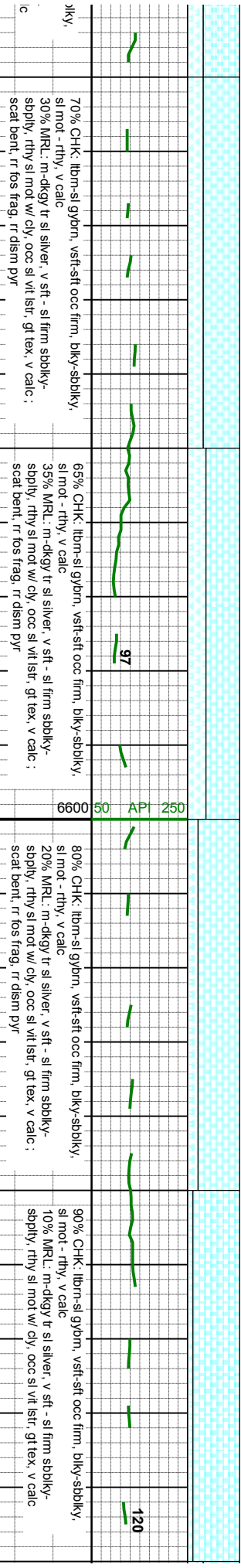
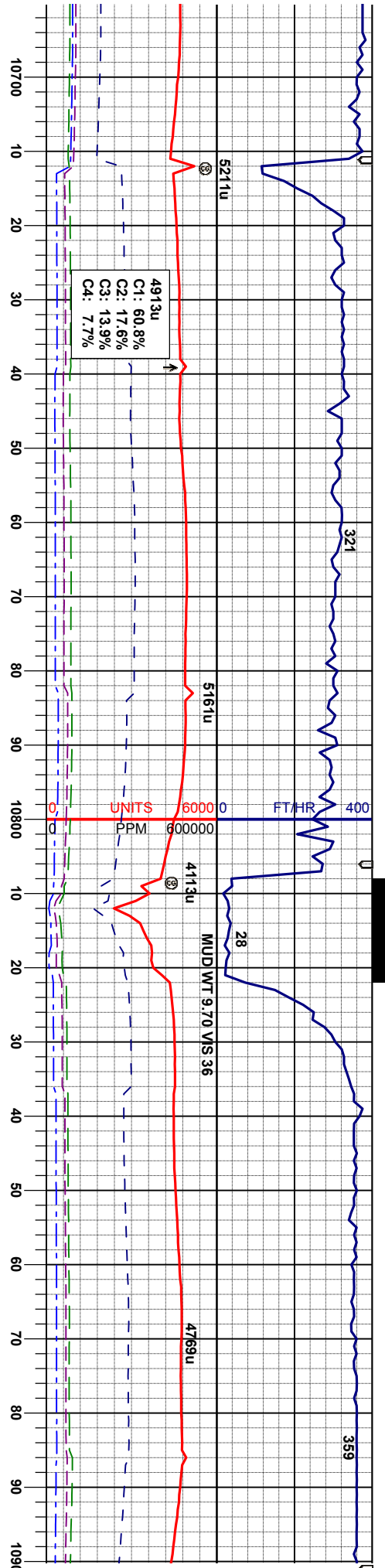


c firm, bily-sbdky,	93	100% CHK: lbm-si gybri, vsft-sft occ firm, bily-sbdky, si mot - rthy, v calc ; tr mrl	95% CHK: lbm-si gybri, vsft-sft occ firm, bily-sbdky, si mot - rthy, v calc	5% MRL: m-dkgy tr si silver, v sft - si firm sbdky-sbply, rthy si mot w/ cly, occ si vlt lstr, gt tex, v calc	80% CHK: lbm-si gybri, vsft-sft occ firm, bily-sbdky, si mot - rthy, v calc	20% MRL: m-dkgy tr si silver, v sft - si firm sbdky-sbply, rthy si mot w/ cly, occ si vlt lstr, gt tex, v calc	70% CHK: lbm-si gybri, vsft-sft occ firm, bily-sbdky, si mot - rthy, v calc	30% MRL: m-dkgy tr si silver, v sft - si firm sbdky-sbply, rthy si mot w/ cly, occ si vlt lstr, gt tex, v cal
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MD 10553'
INC 89.78°
AZM 89.84°
TVD 6650.77'

MD 10648'
INC 88.98°
AZM 90.59°
TVD 6651.79'

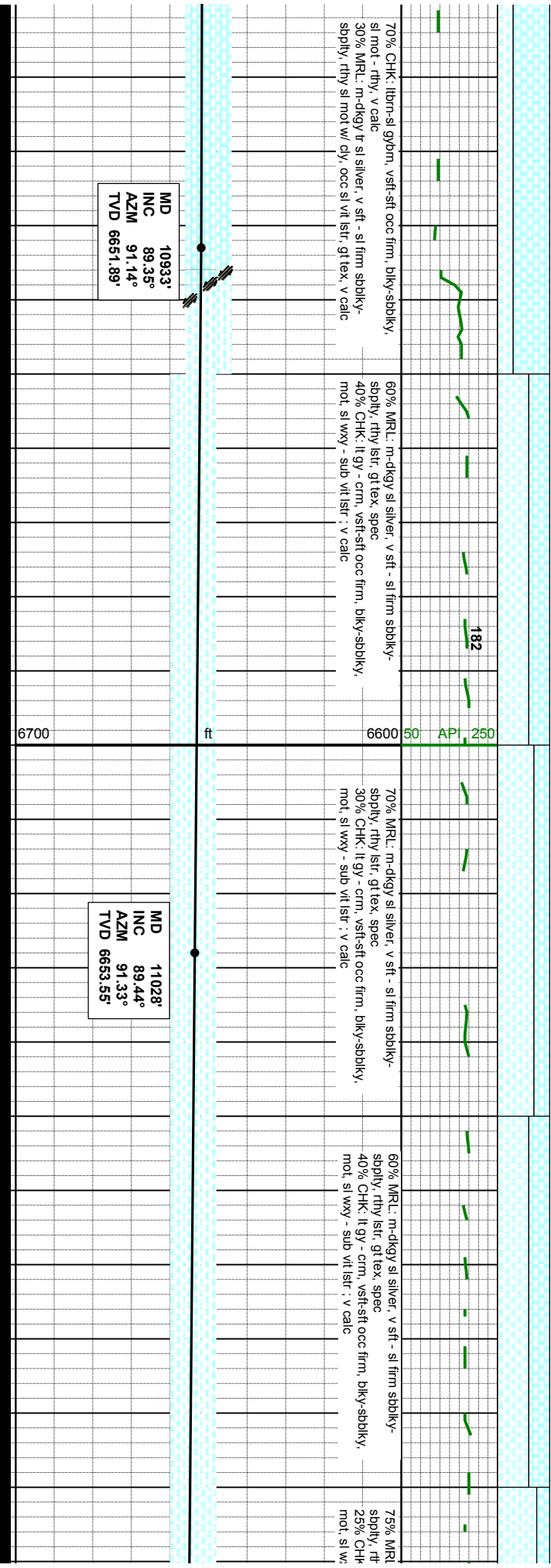
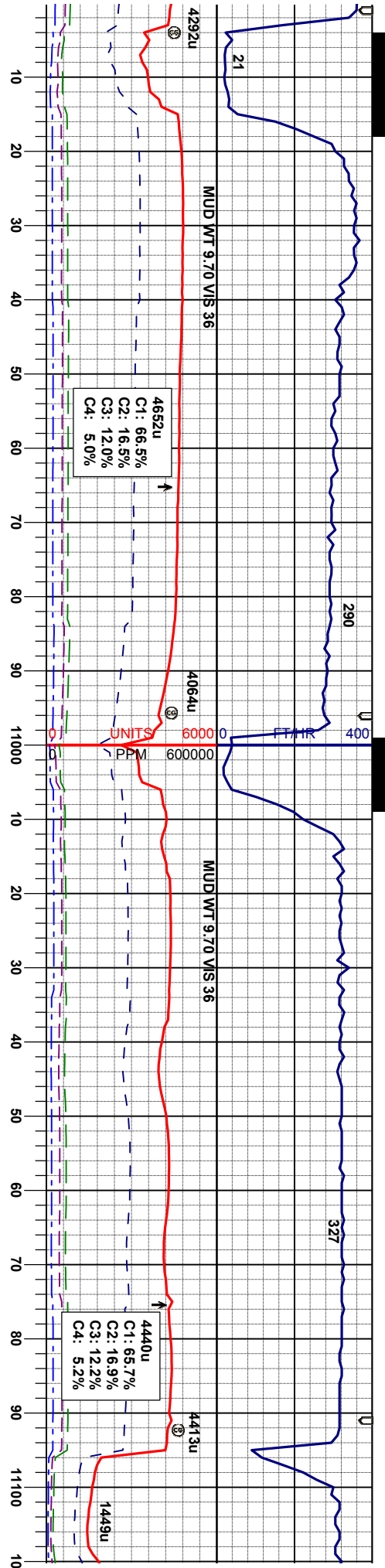


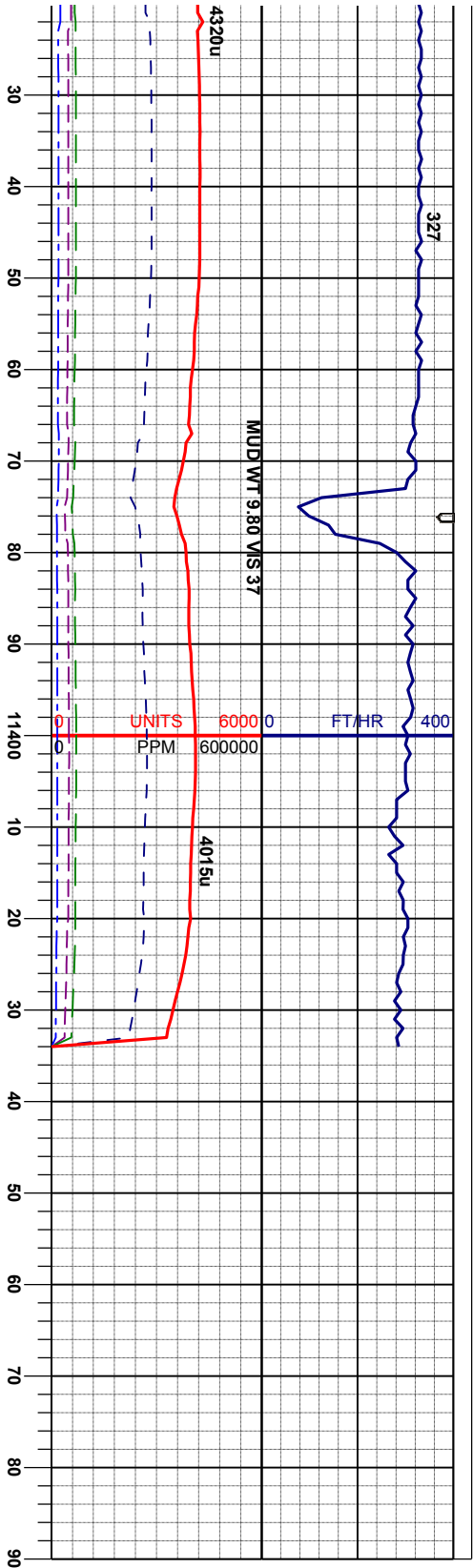


MD 10743'
INC 90.77°
AZM 91.86°
TVD 6651.99'

MD 10838'
INC 90.00°
AZM 91.41°
TVD 6651.35'







sl silver, v sft - sl firm sbdky- 3x, spec m, vsft-sft occ firm, bky-sbdky, : lsir : v calc	80% MRL: m-dkgy sl silver, v sft - sl firm sbdky- sbdky, rthy lsir, gt tex, spec 20% CHK: lt gy - crn, vsft-sft occ firm, bky-sbdky, mot, sl wxy - sub vt lsir : v calc	85% MRL: m-dkgy sl silver, v sft - sl firm sbdky- sbdky, rthy lsir, gt tex, spec 15% CHK: lt gy - crn, vsft-sft occ firm, bky-sbdky, mot, sl wxy - sub vt lsir : v calc
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MD 11371'
INC 91.48°
AZM 89.90°
TVD 6653.06'

PROJ. TO BIT
MD 11434'
INC 91.48°
AZM 89.90°
TVD 6651.44'

Thank you for choosing
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TD Well @ 11434' MD
18:03 hrs 07/26/2013

New Comment

