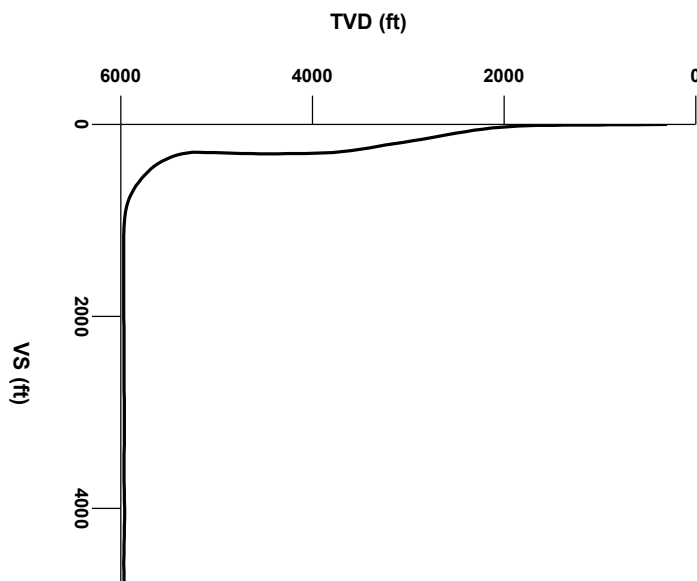


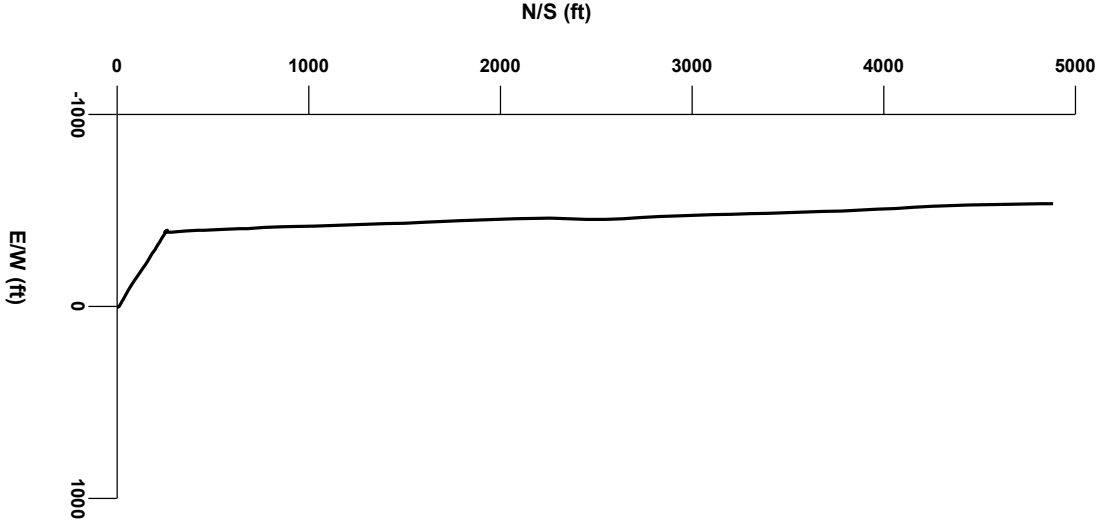
LOG created using LPLOT VH Version 3.0, May 04, 2013, Copyright (C) 1999-2009 Pason Systems Corp.

OPERATOR: NOBLE ENERGY INC.
WELL: Timbro LC13-75-1HN
LOCATION: SEC 24, T9N, R59W
COUNTY: WELD
STATE: COLORADO
SPOT: 280' FNL, 1912' FEL
ELEVATION: 4857' GL, 4881' KB
FIELD: WILDCAT
SPUD DATE: 4/27/13
TD DATE: 5/3/13
DATES LOGGED: 4/28/13 - 5/4/13
DEPTHS LOGGED: 2000' - 10390'
LOGGERS: John T. Ready, Elizabeth M. van Diepen
DRILLING FLUID: WATER, MUD, POLY
DRILLING RIG: H&P 322
API: 05-123-36683
LOG TYPE: HORIZONTAL
SCALE: 1:240 (5 inches per 100 feet)
REMARKS: WELLSITE GEOLOGICAL SERVICES PROVIDED BY COLUMBINE LOGGING INC.





Survey Elevation


Survey Plan




6000


Chalk


Marl


Shaly Sandstone


Silty Shale


ENGINEERING SYMBOLS


Casing


Connection Gas


Midnight Depth


Casing

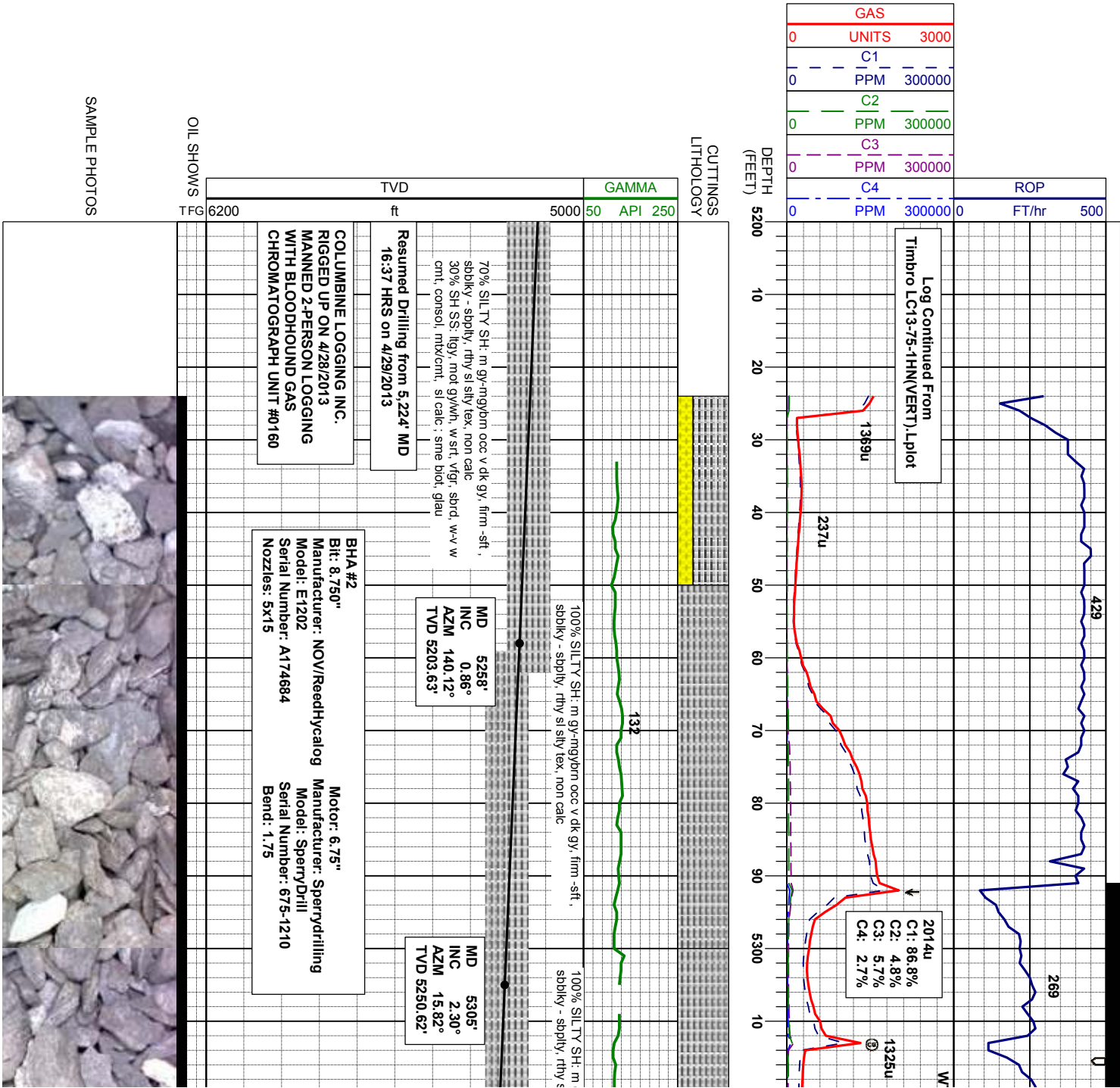
Arrow

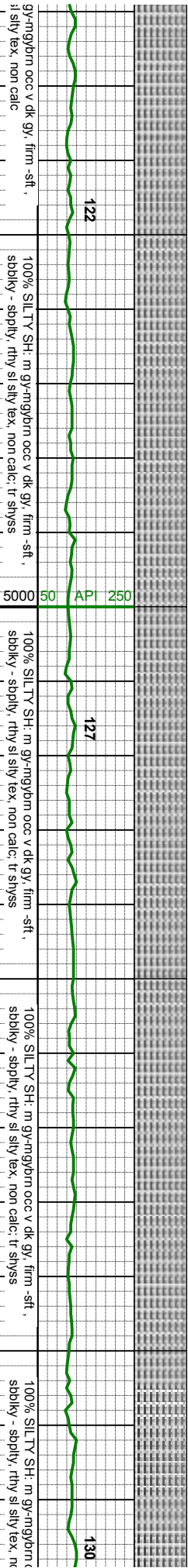
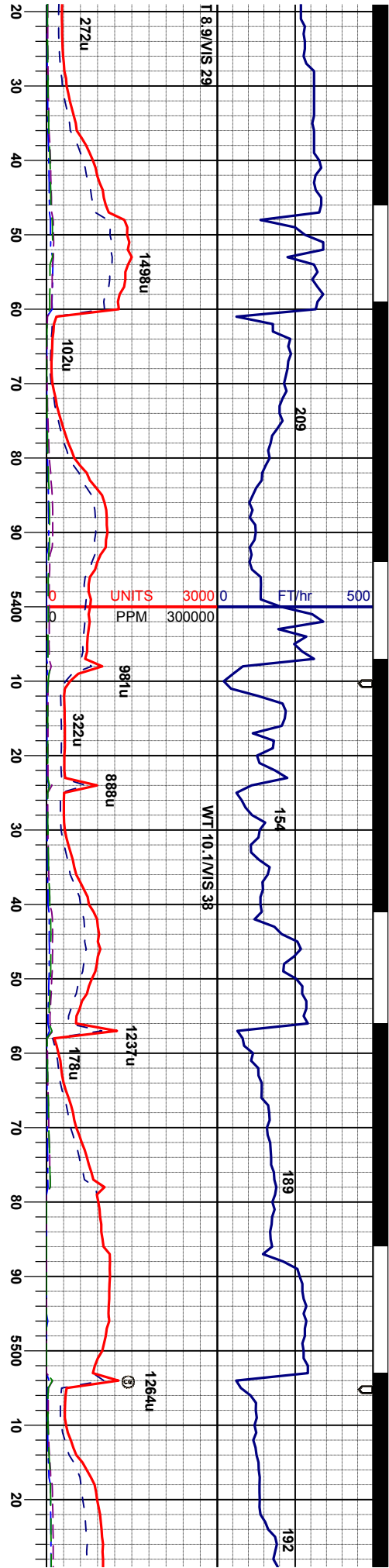
Normal Fault

Connection

Midnight Depth

Arrow





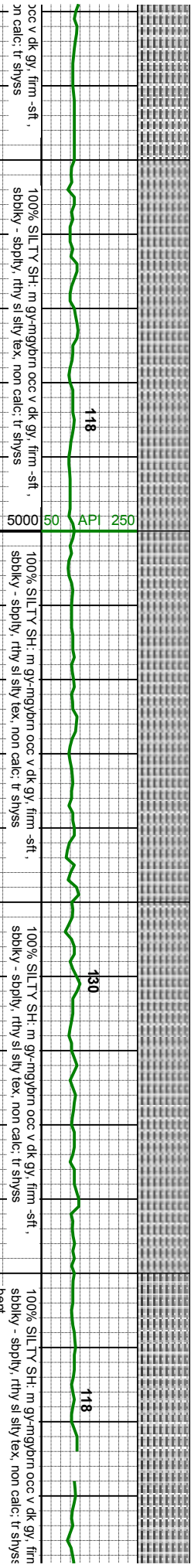
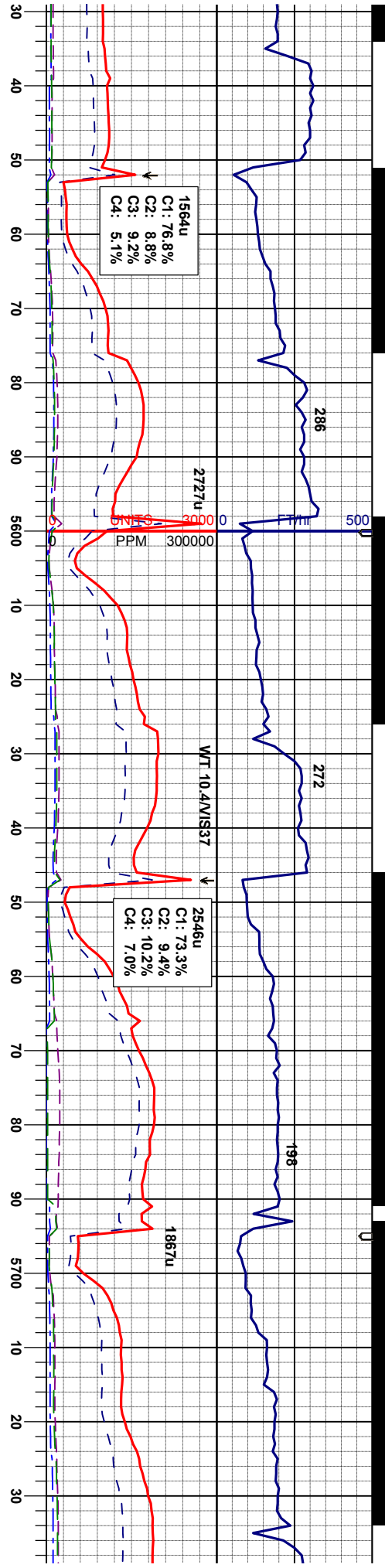
MD 5353'
INC 8.32°
AZM 5.39°
TVD 5298.39'

MD 5400'
INC 11.51°
AZM 359.97°
TVD 5344.68'

MD 5448'
INC 14.11°
AZM 357.77°
TVD 5391.52'

MD 5495'
INC 18.40°
AZM 358.65°
TVD 5436.60'





MD 5543'
INC 22.04°
AZM 356.33°
TVD 5481.63'

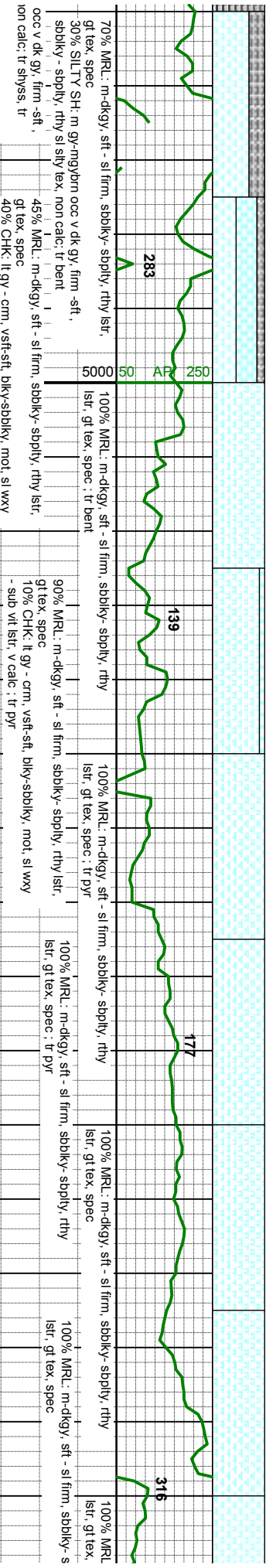
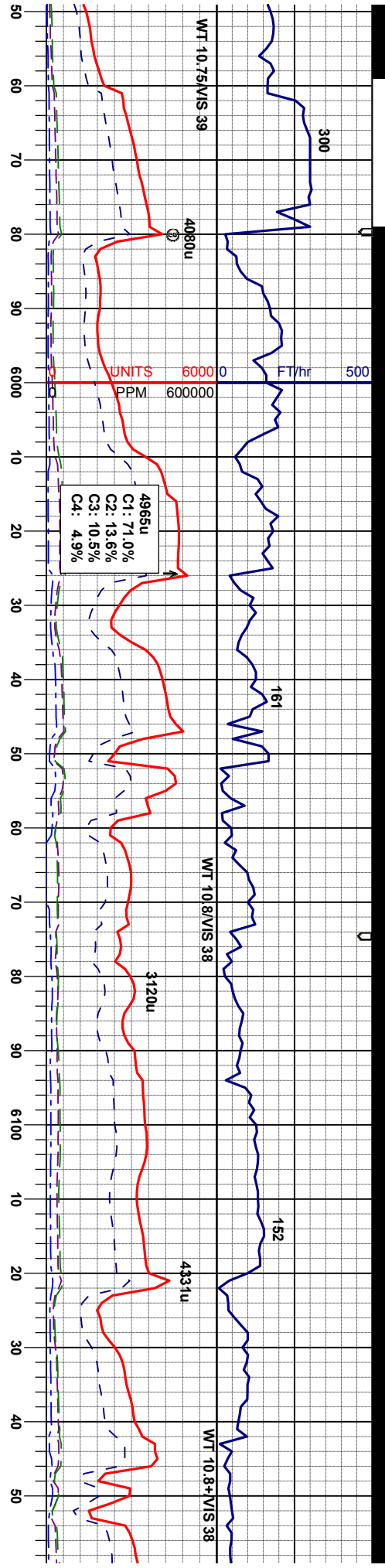
MD 5590'
INC 24.02°
AZM 354.09°
TVD 5524.88'

MD 5638'
INC 27.00°
AZM 355.23°
TVD 5568.20'

MD 5685'
INC 32.28°
AZM 357.02°
TVD 5609.04'

MD 5733'
INC 37.98°
AZM 356.58°
TVD 5648.28'

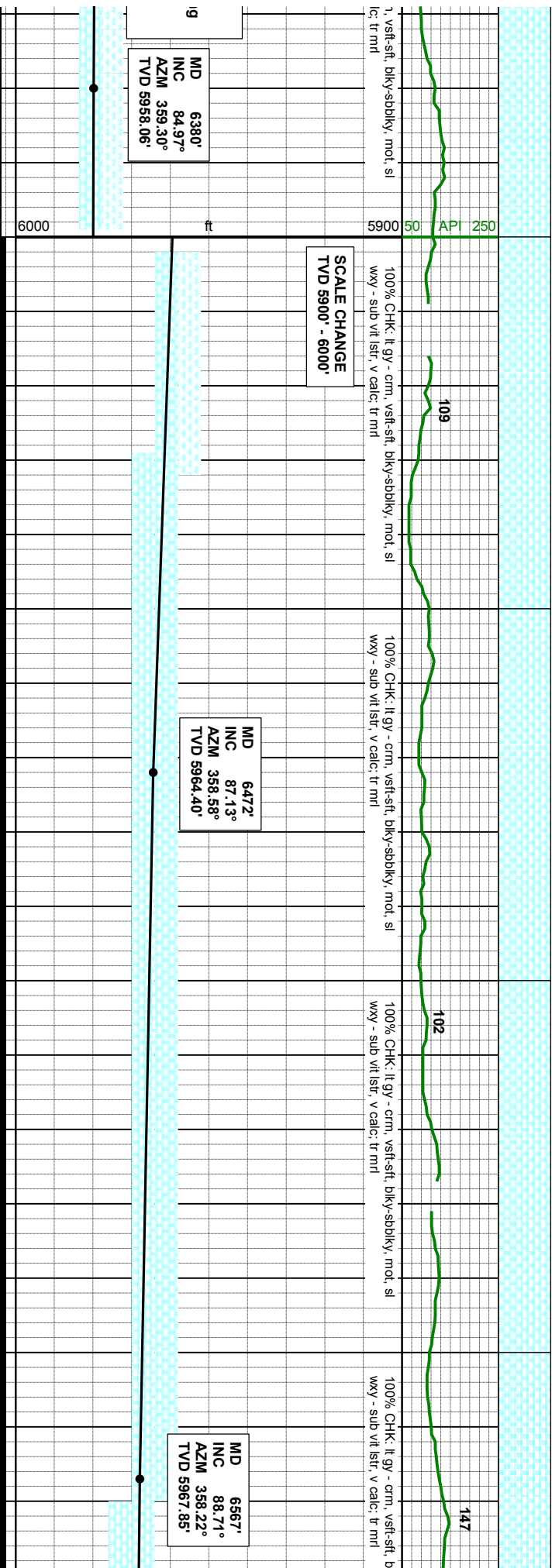
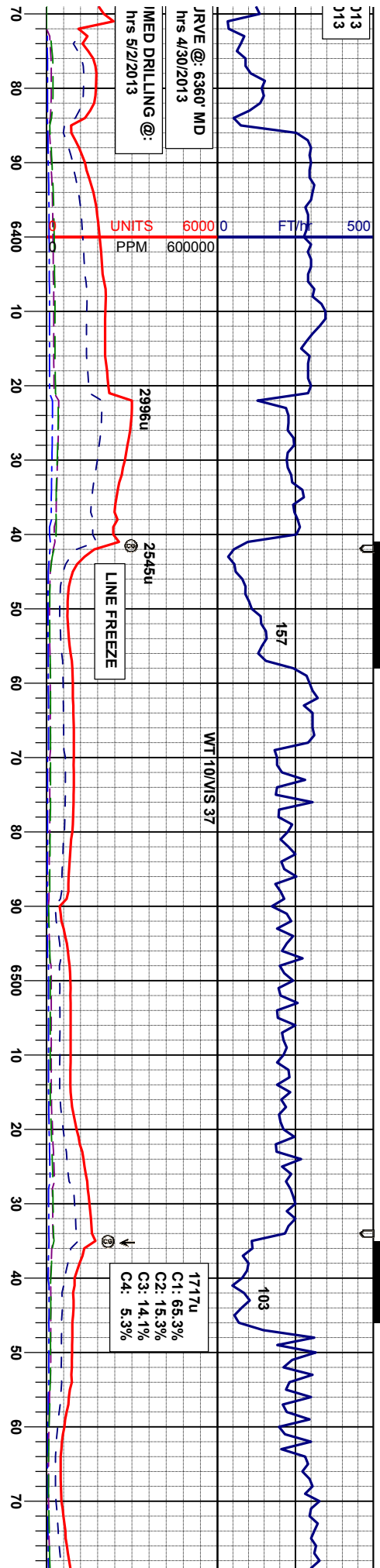


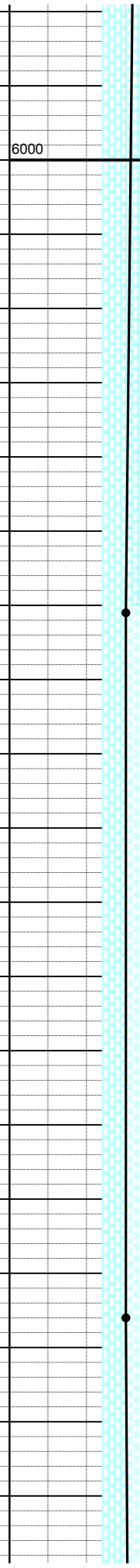
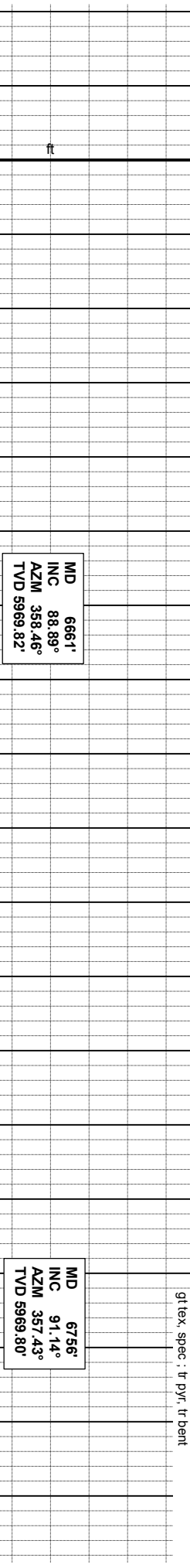
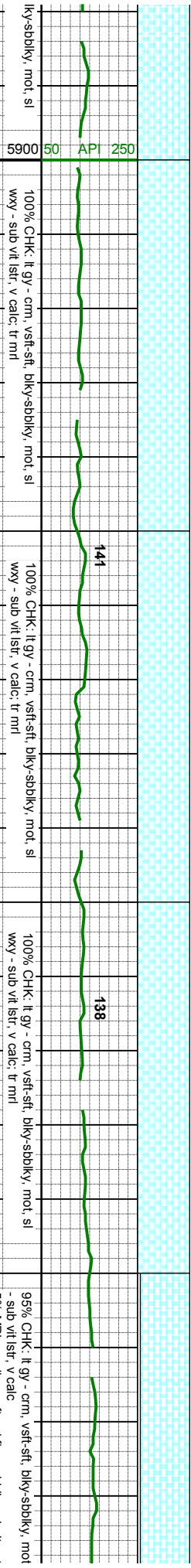
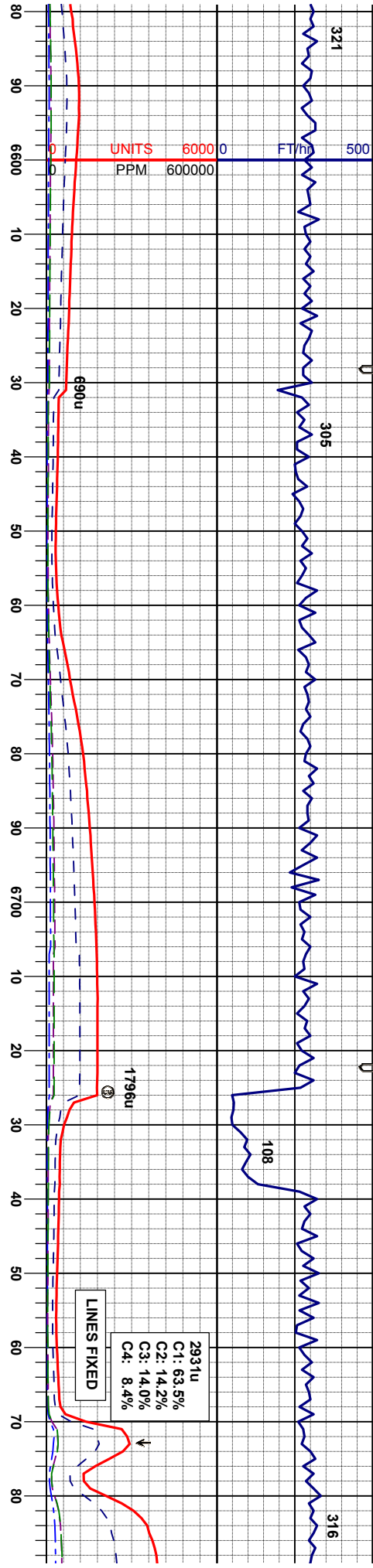


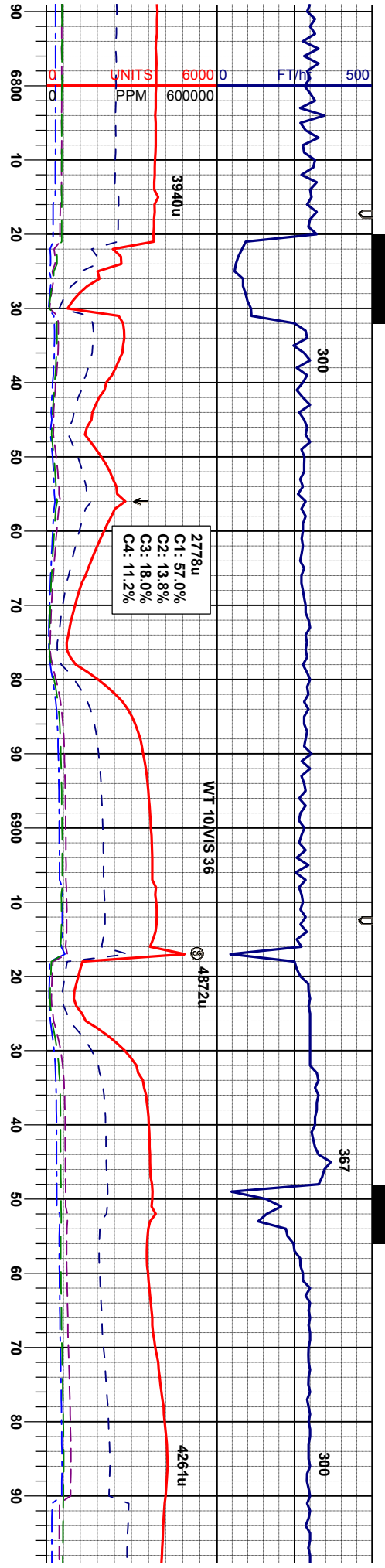
MD 5969' INC 52.70° AZM 357.49° TVD 5812.42'	MD 6017' INC 55.76° AZM 356.80° TVD 5840.47'	MD 6064' INC 58.28° AZM 359.04° TVD 5866.06'	MD 6112' INC 62.93° AZM 358.11° TVD 5889.61'	MD INC AZM TVD
----------------------------------------------	----------------------------------------------	----------------------------------------------	----------------------------------------------	----------------

Marker TVD	A Chalk GeoProg: 5847' TVD Loggers: 5834' TVD	A Marl GeoProg: 5874' TVD Loggers: 5864' TVD
------------	-----------------------------------------------	----------------------------------------------









278u
C1: 57.0%
C2: 13.8%
C3: 18.0%
C4: 11.2%

WT 10MVIS 36

4872u

4261u

MD 6851'
INC 90.18°
AZM 358.48°
TVD 5968.70'

MD 6946'
INC 91.05°
AZM 357.92°
TVD 5967.68'

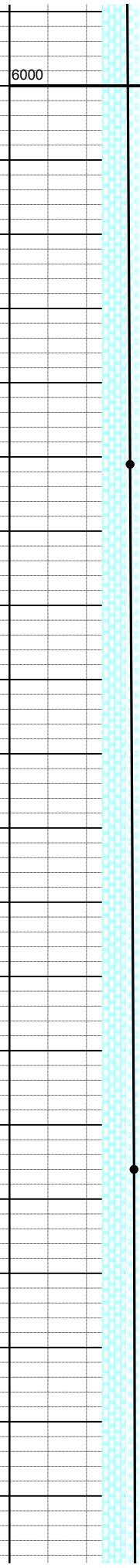
167 167 161 161

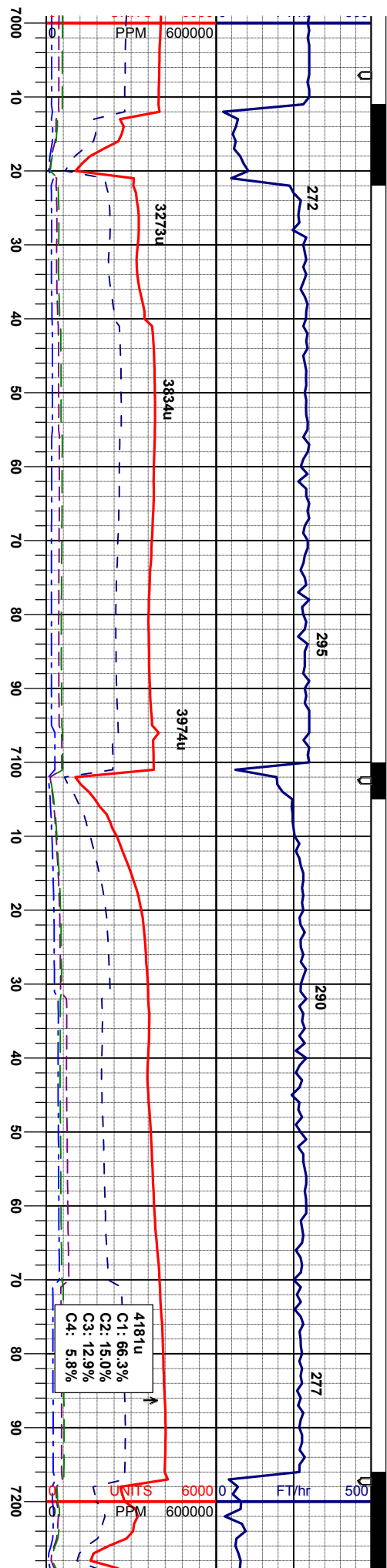
sl wxy
80% CHK: lt gy - crm, vsft-sft, biky-sbdky, mot, sl wxy
- sub vit istr, v calc
20% MRL: m-dkgy, sft - sl firm, sbdky- spdky, rthy istr,
gt'lex, spec

55% CHK: lt gy - crm, vsft-sft, biky-sbdky, mot, sl wxy
- sub vit istr, v calc
45% MRL: m-dkgy, sft - sl firm, sbdky- spdky, rthy istr,
gt'lex, spec

50% CHK: lt gy - crm, vsft-sft, biky-sbdky, mot, sl wxy
- sub vit istr, v calc
50% MRL: m-dkgy, sft - sl firm, sbdky- spdky, rthy istr,
gt'lex, spec, sme tos frag

65% MRL: m-dkgy, sft - sl firm, sbdky- spdky, rthy istr,
gt'lex, spec
35% CHK: lt gy - crm, vsft-sft, biky-sbdky, mot, sl wxy
- sub vit istr, v calc: sme tos frag





65% MRL: m-dkg, sft - sl firm, sbdky- sbply, rthy lstr,
gt tex, spec
35% CHK: lt gy - crm, vsft-sft, bky-sbdky, mot, sl wxy
- sub vit lstr, v calc, sme fos frag

80% MRL: m-dkg, sft - sl firm, sbdky- sbply, rthy lstr,
gt tex, spec
20% CHK: lt gy - crm, vsft-sft, bky-sbdky, mot, sl wxy
- sub vit lstr, v calc, sme fos frag

80% MRL: m-dkg, sft - sl firm, sbdky- sbply, rthy lstr,
gt tex, spec
20% CHK: lt gy - crm, vsft-sft, bky-sbdky, mot, sl wxy
- sub vit lstr, v calc

75% MRL: m-dkg, sft - sl firm, sbdky- sbply, rthy lstr,
gt tex, spec
25% CHK: lt gy - crm, vsft-sft, bky-sbdky, mot, sl wxy
- sub vit lstr, v calc

75% M
gt tex,
25% Cl
- sub vi

MD 7041'
INC 89.48°
AZM 357.81°
TVD 5967.24'

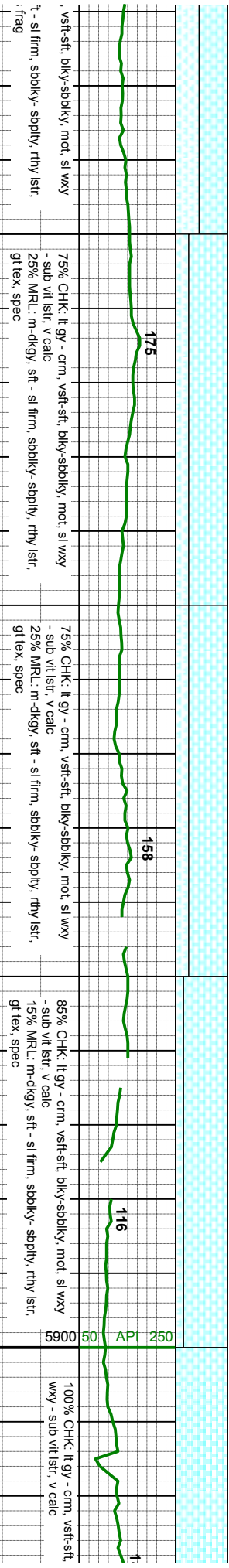
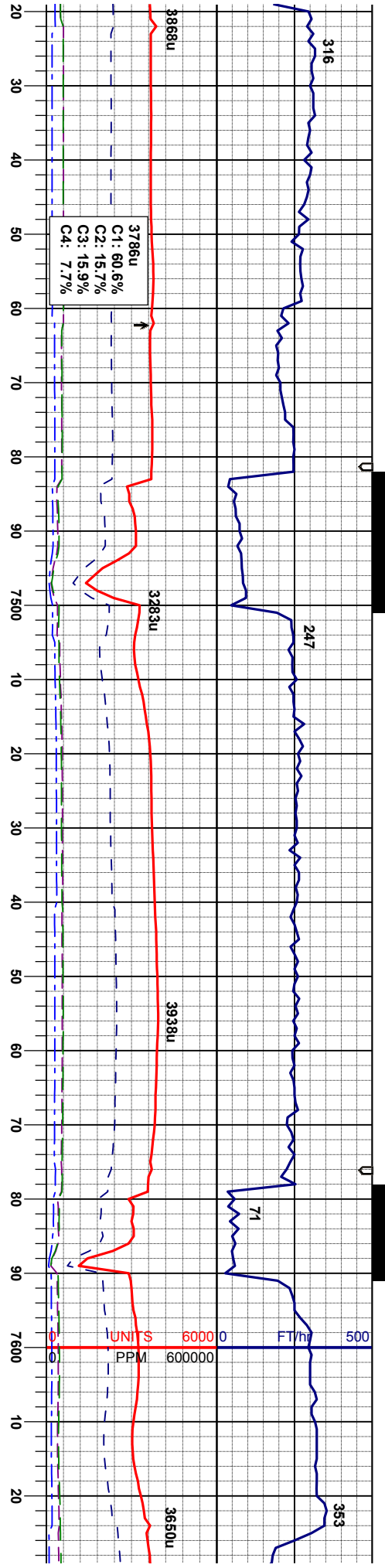
MD 7118'
INC 89.78°
AZM 357.03°
TVD 5967.74'

6000

ft

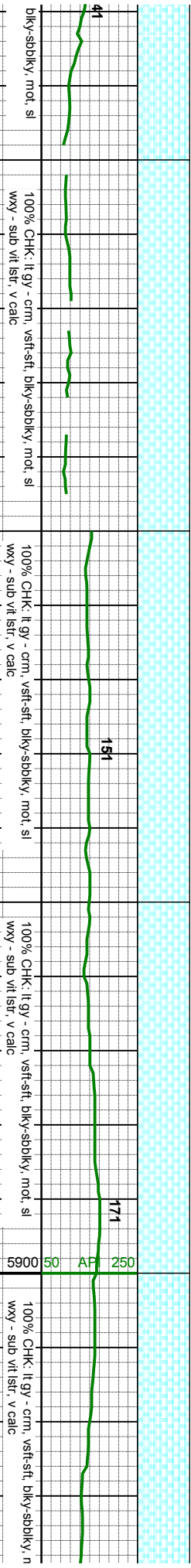
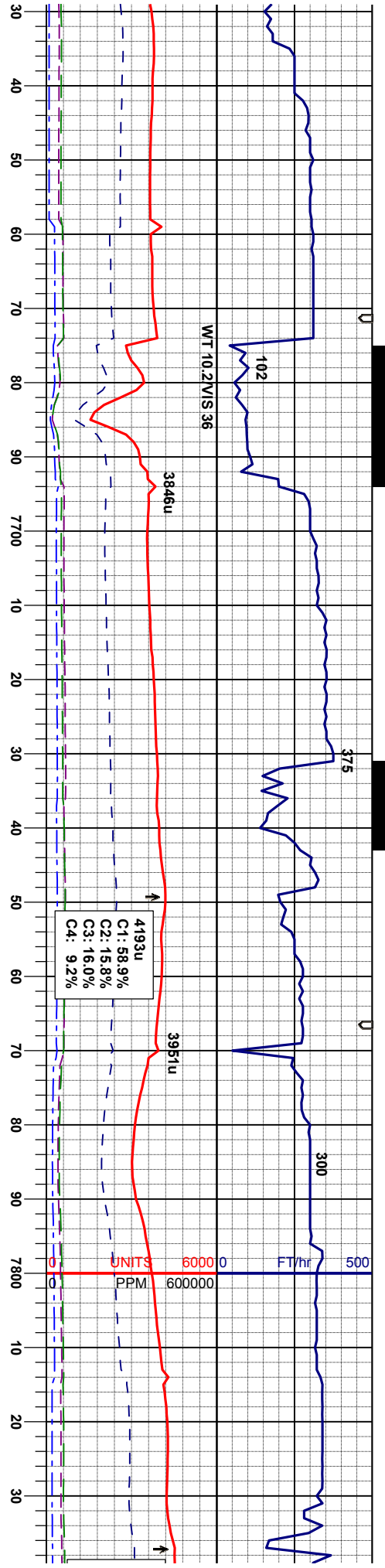
5900 50 API 250





7420'	MD	7515'	MD	7610'
91.54°	INC	90.68°	INC	90.99°
357.27°	AZM	358.28°	AZM	359.34°
366.99'	TVD	5965.15'	TVD	5963.77'

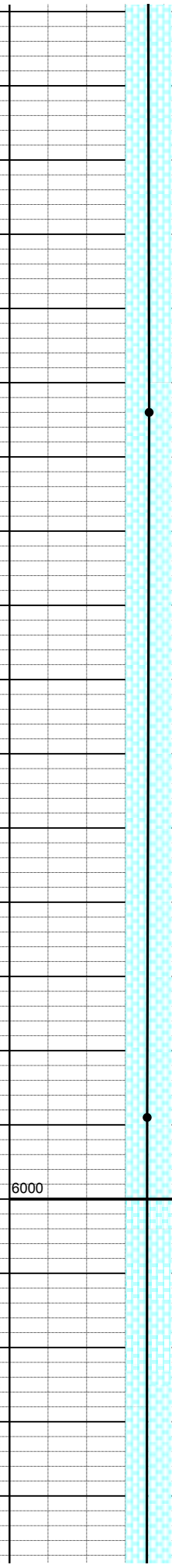
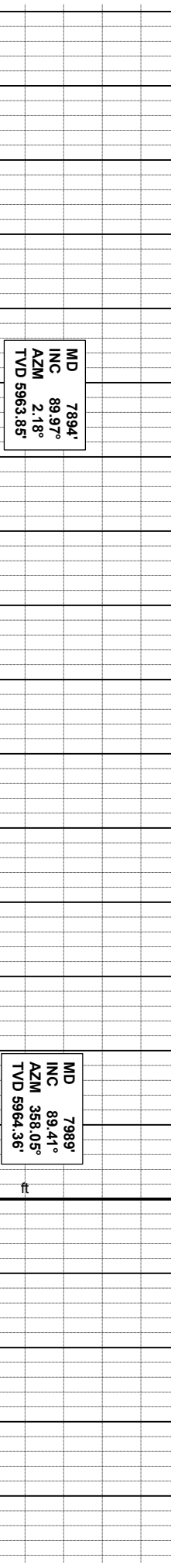
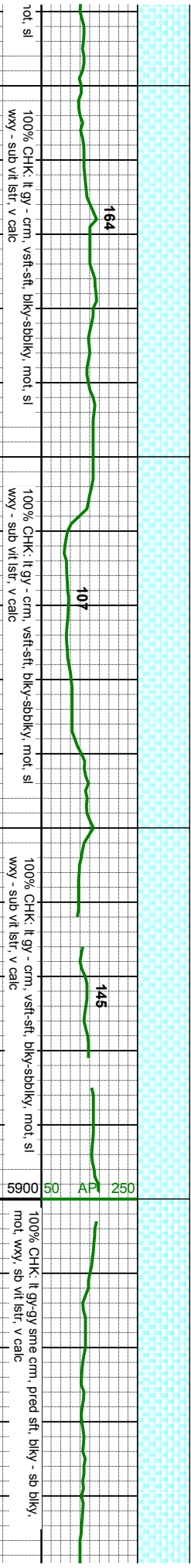
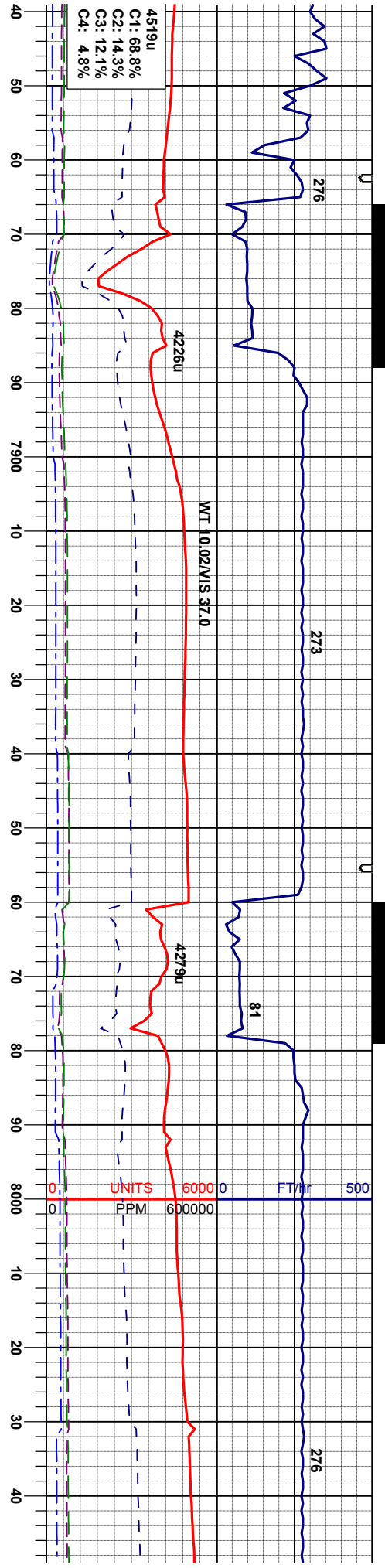


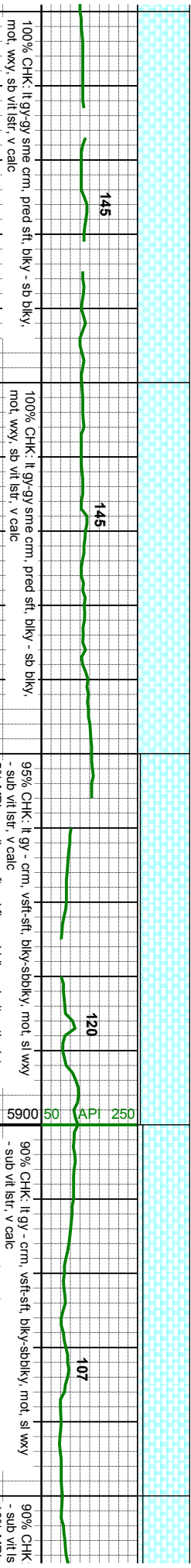
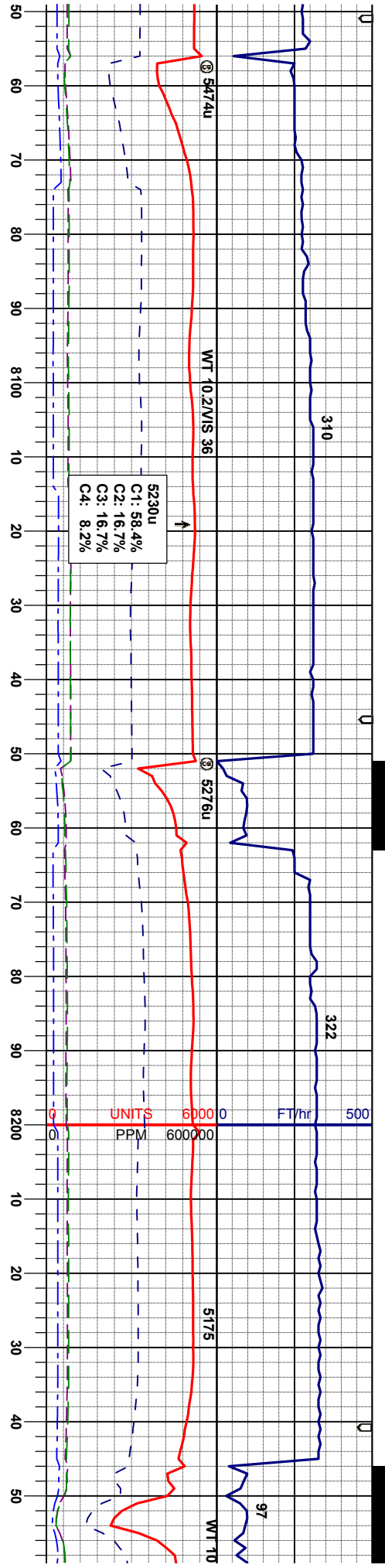


MD 7705'
INC 88.89°
AZM 359.65°
TVD 5963.79'

MD 7800'
INC 90.49°
AZM 2.72°
TVD 5964.23'

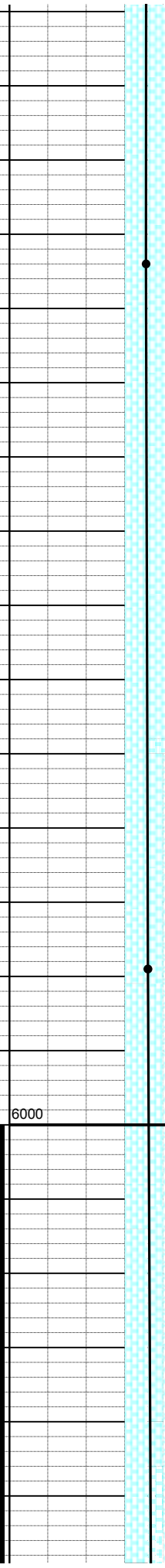


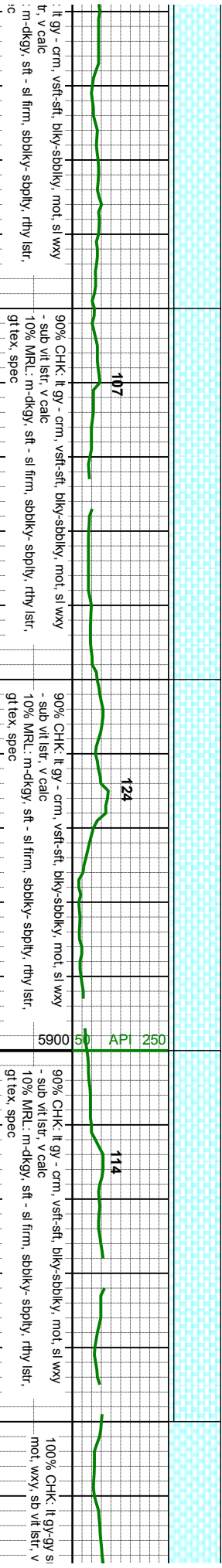
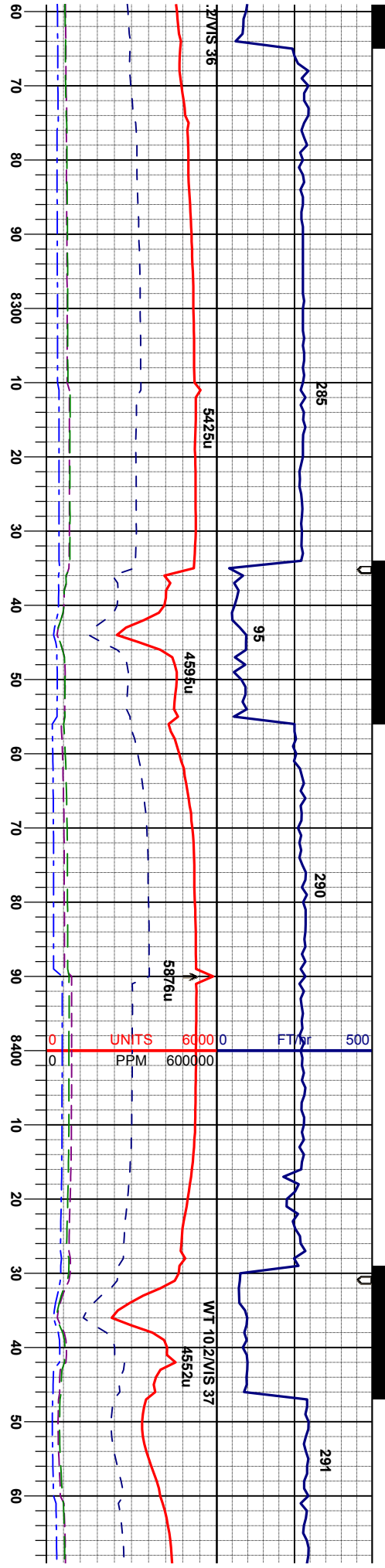




MD 8084'
INC 90.49°
AZM 356.82°
TVD 5964.44'

MD 8179'
INC 90.09°
AZM 356.53°
TVD 5963.96'



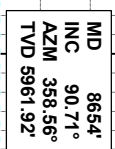
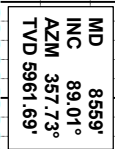
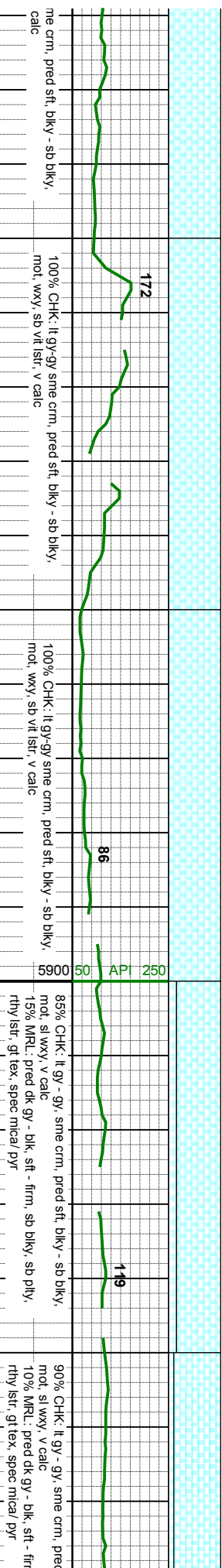
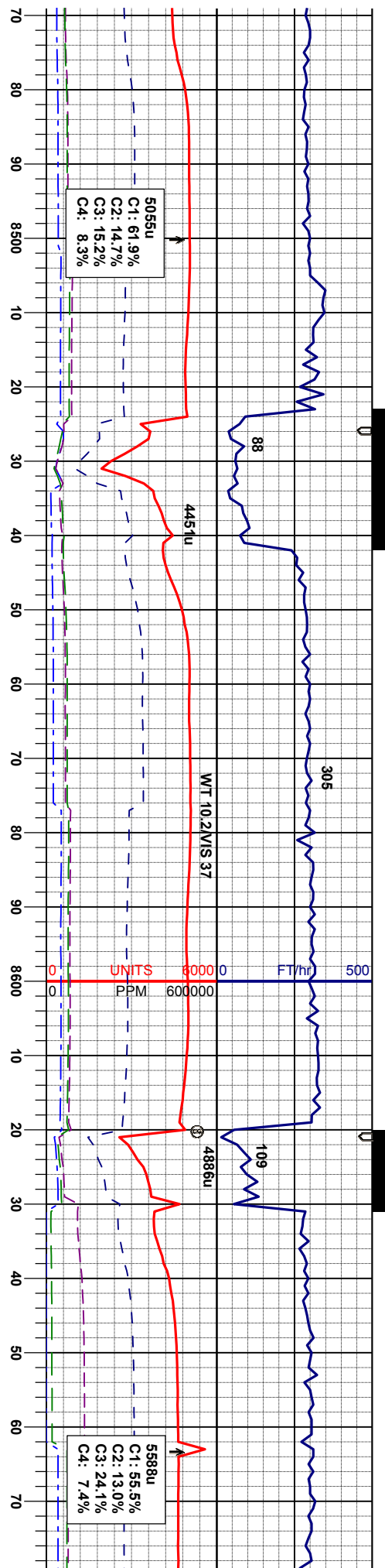


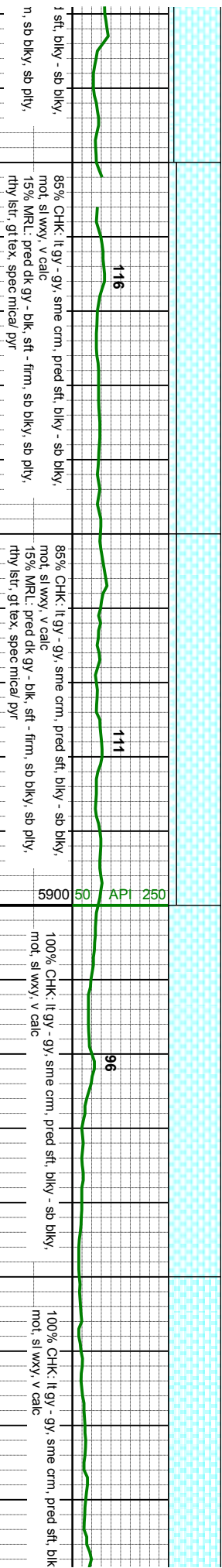
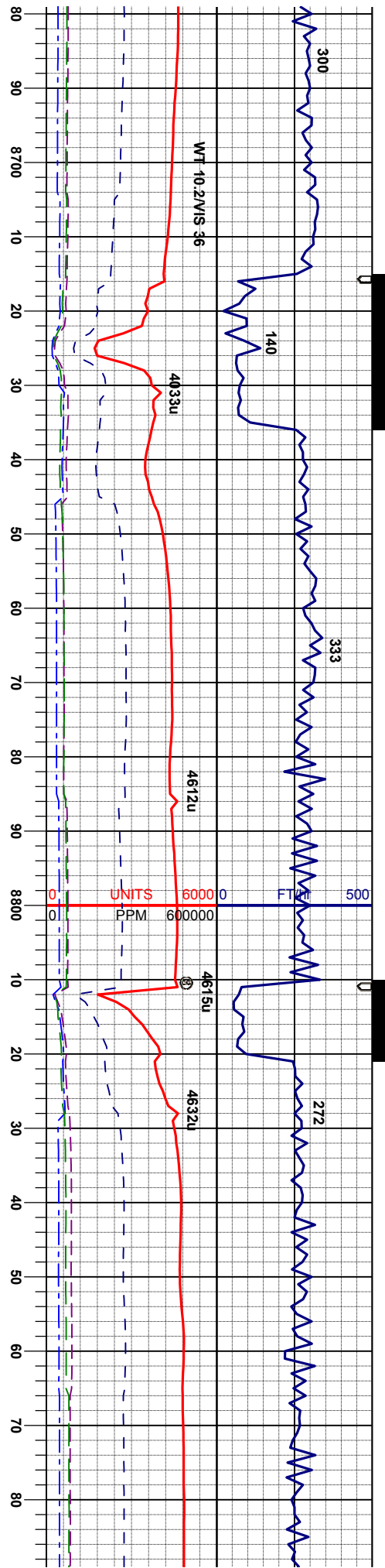
MD 8274'
INC 90.99°
AZM 357.30°
TVD 5963.06'

MD 8369'
INC 90.62°
AZM 357.93°
TVD 5961.73'

MD 8463'
INC 90.22°
AZM 358.68°
TVD 5961.05'



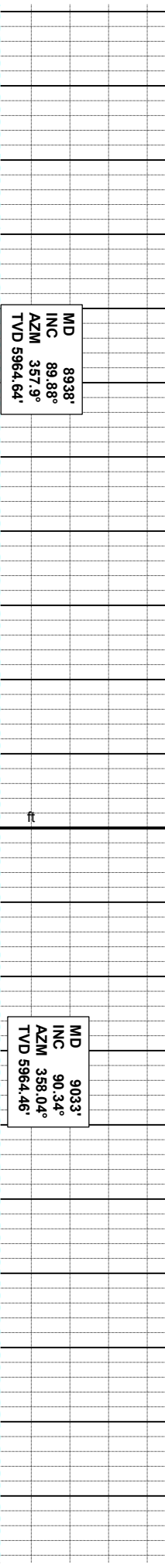
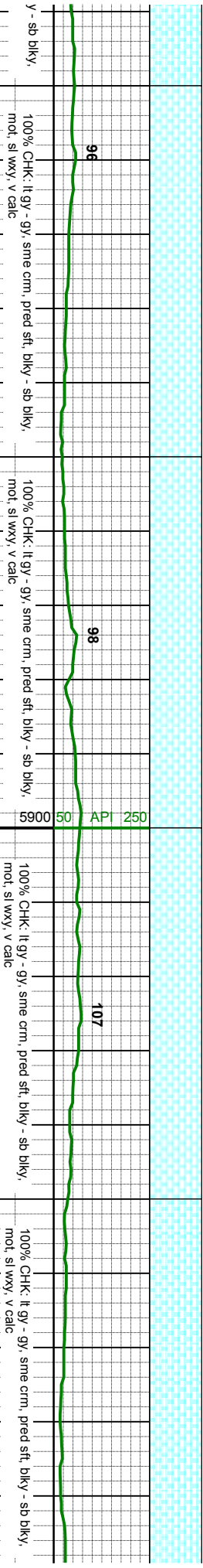
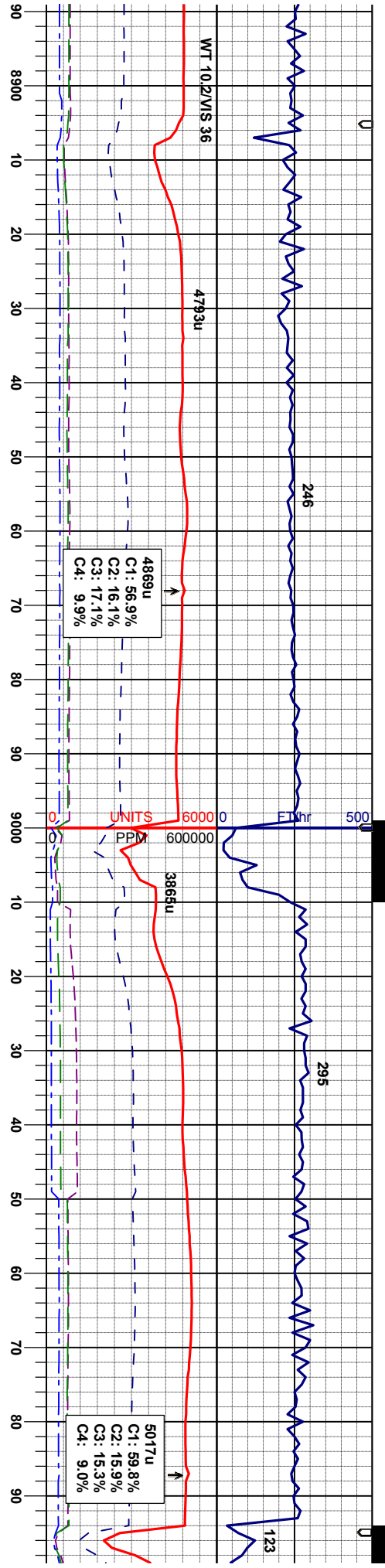


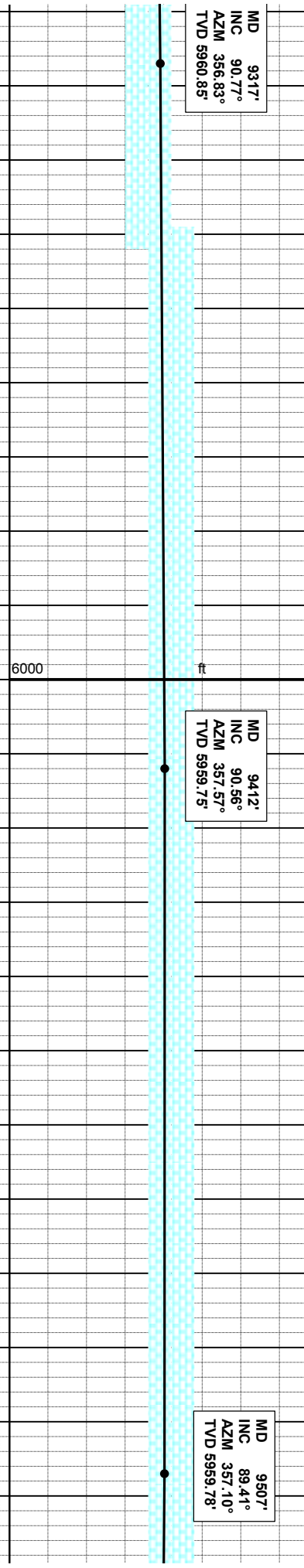
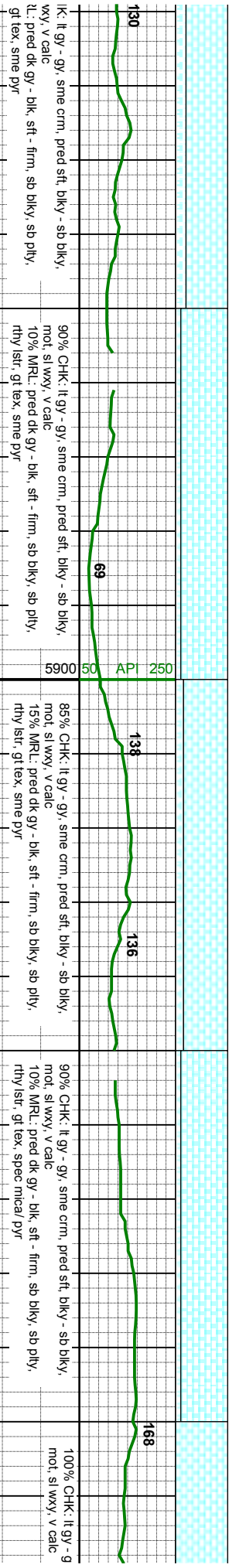
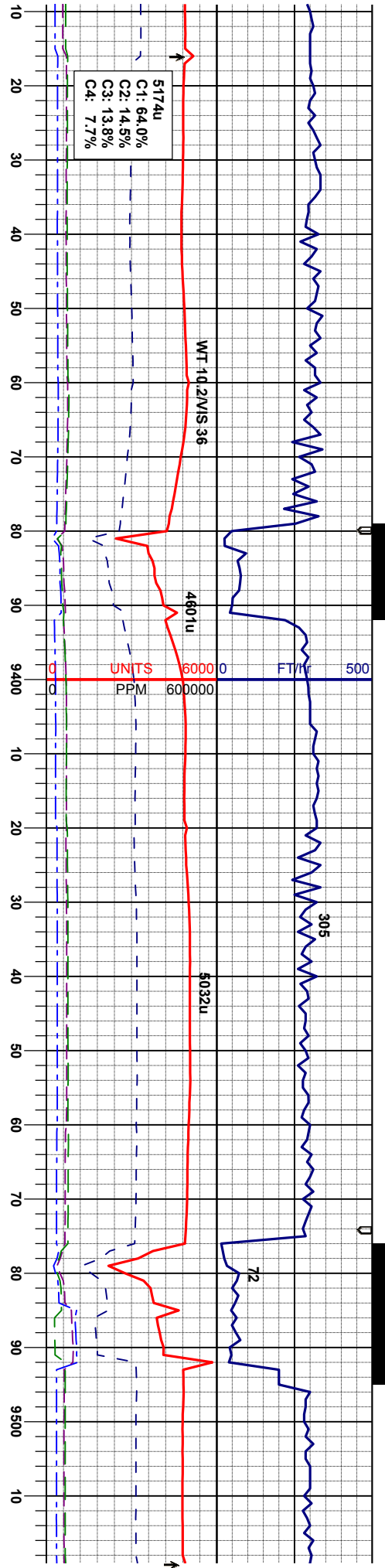


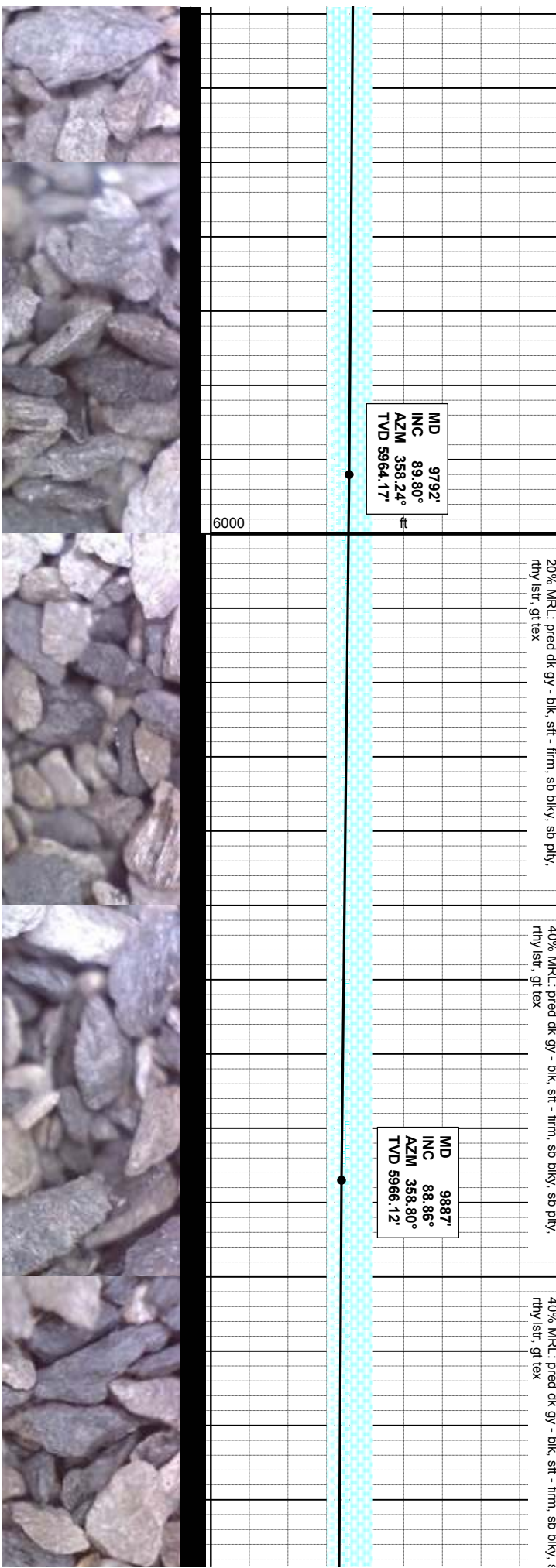
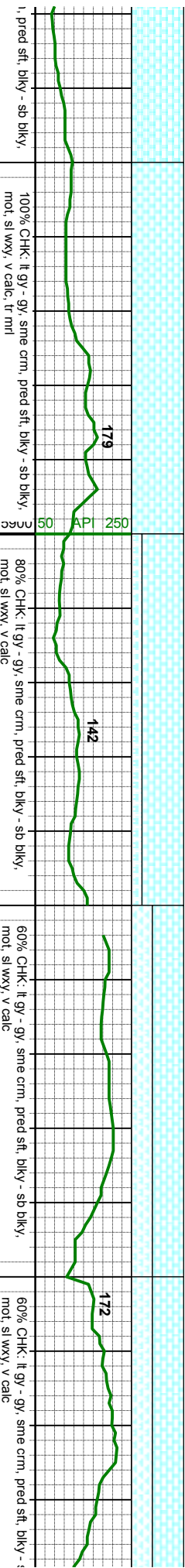
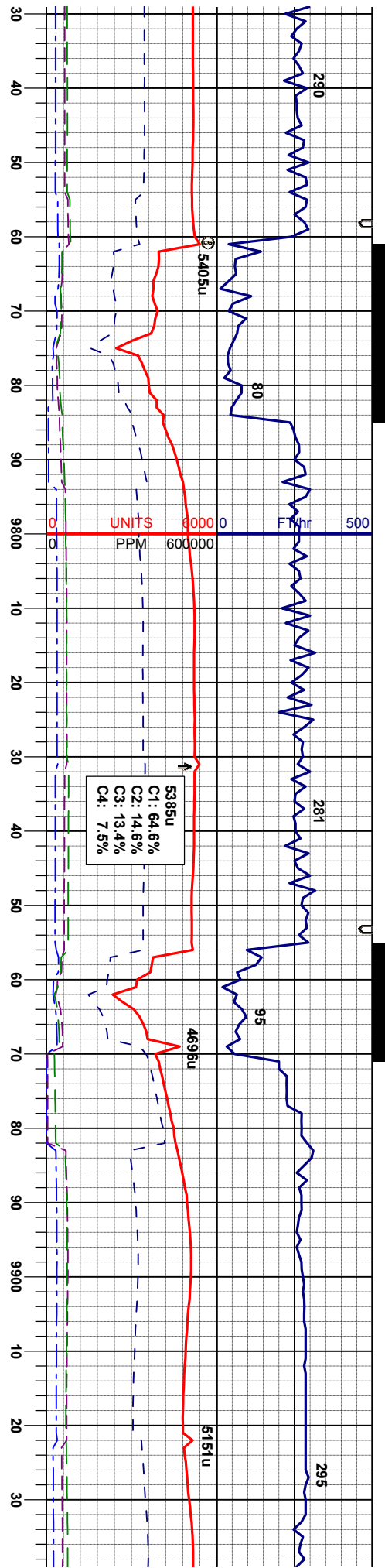
MD 8749'
INC 89.45°
AZM 359.11°
TVD 5961.79'

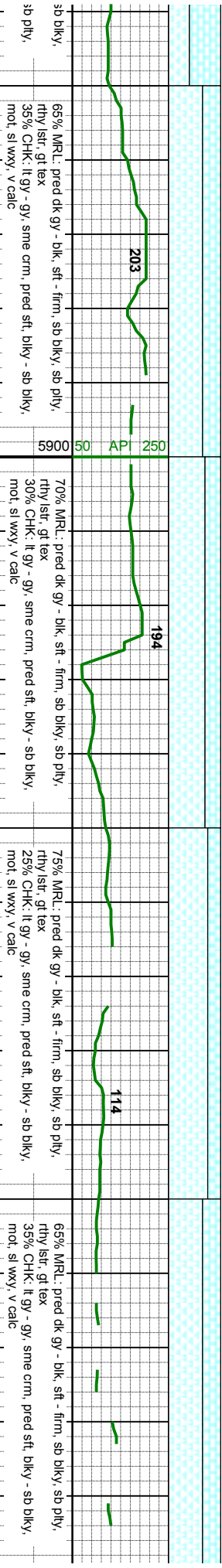
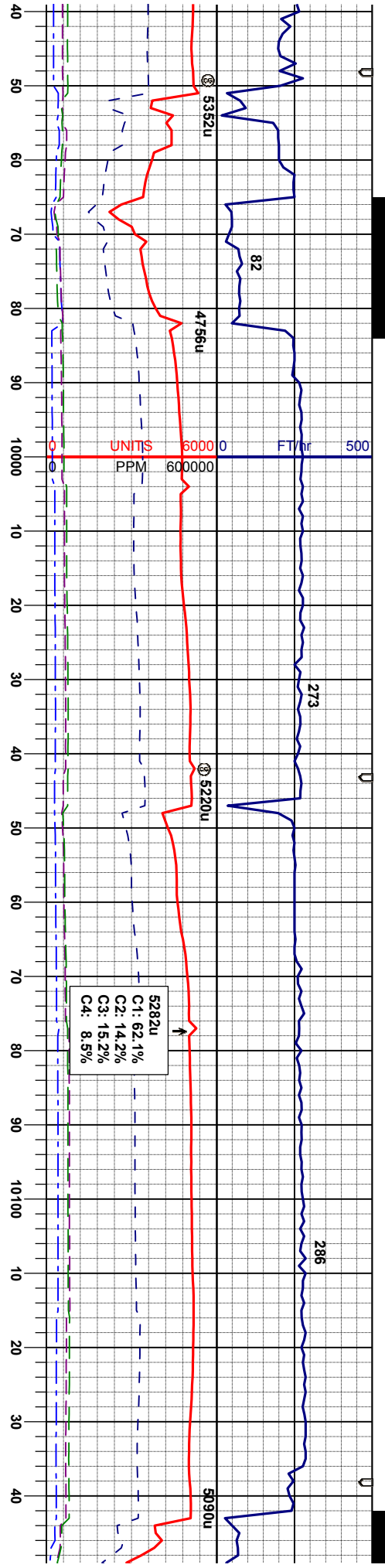
MD 8843'
INC 88.61°
AZM 358.4°
TVD 5963.39'







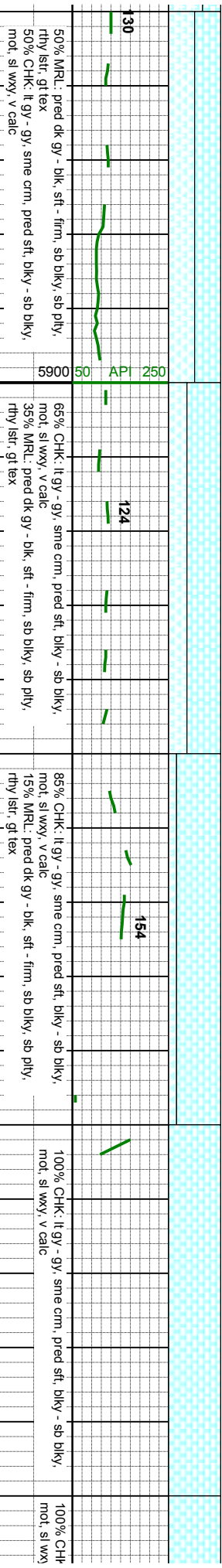
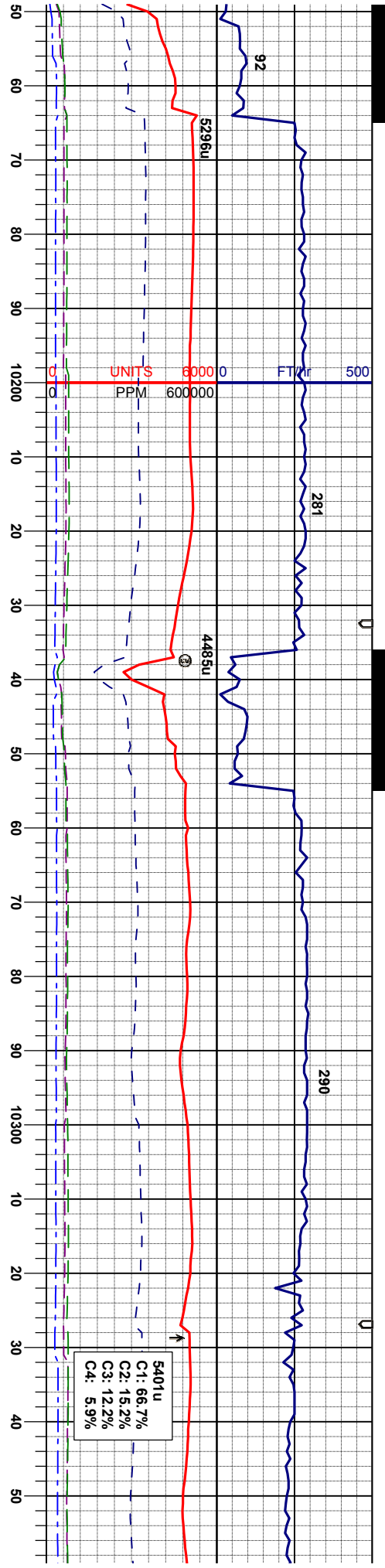




MD 9982.
INC 89.78°
AZM 359.46°
TVD 5967.24'

MD 10077.
INC 91.14°
AZM 358.48°
TVD 5966.47'



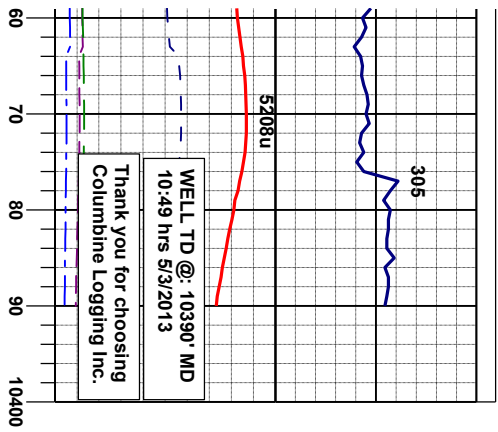


MD 10171'
INC 90.15°
AZM 359.34°
TVD 5965.41'

MD 10266'
INC 89.75°
AZM 359.11°
TVD 5965.48'

MD 10329'
INC 89.97°
AZM 358.83°
TVD 5965.64'





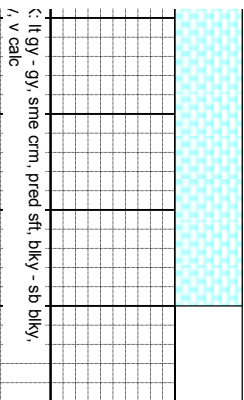
5208u

WELL TD @: 10390' MD
10:49 hrs 5/3/2013

0:49 hrs 5/3/2013

**Thank you for choosing
Columbine Logging Inc.**

Columbine Logging Inc



∴ It gy - gy, sme crm, pred sft, blkky - sb blkky,

