



Scale: 5" / 100'
Measured Depth Log

Well Name Cecil Farms PC 106-67HN(Horz)

Location NENE, SEC 6, T6N, R6W

State COLORADO

Country USA

API Number 05-123-38118

Region DJ BASIN

Spud Date 3/6/2014

Surface Coordinates SEC6, T6N, R66W
292' FNL, 259' FEL

County WELD

Rig Number H&P 326

Field EATON

Drilling Completed 3/14/2014

Ground Elevation 4870'

Logged Interval 1100' To 11718'

Formation NIOBRARA, B CHALK

Type of Drilling Fluid LSND

K.B. Elevation 4900'

Total Depth 11718'

Company Noble Energy Inc

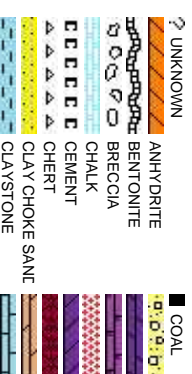
Address 1625 Broadway Suite
Denver, CO 80202

Name Evan Howell

Company Noble Energy Inc

Address 1625 Broadway Suite
Denver, CO 80202

COLUMBINE LOGGING INC.



Operator

2200

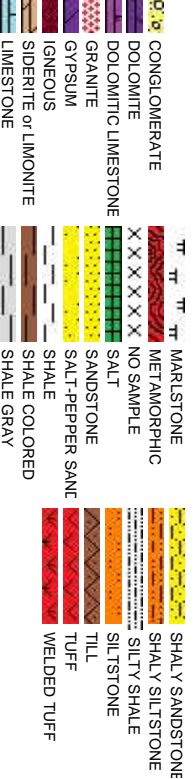
Geologist

2200

Other

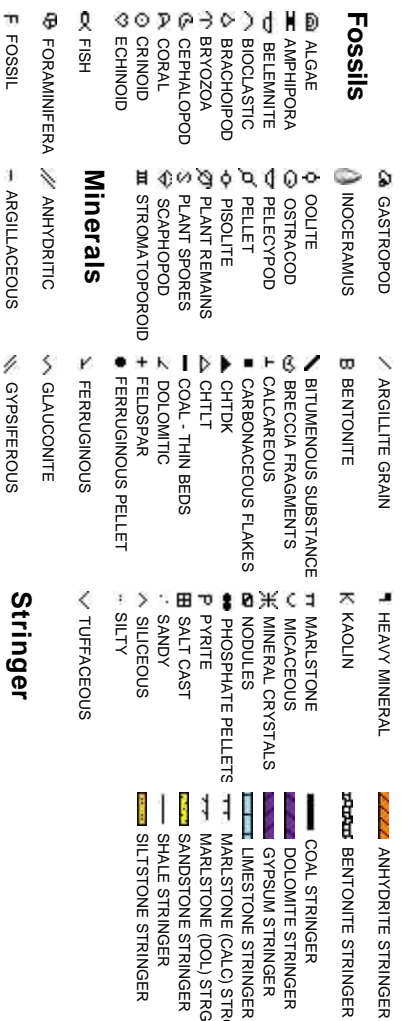
Mike Kerschen
Mike Rooks

Rock Types



Accessories

Fossils



Other Symbols

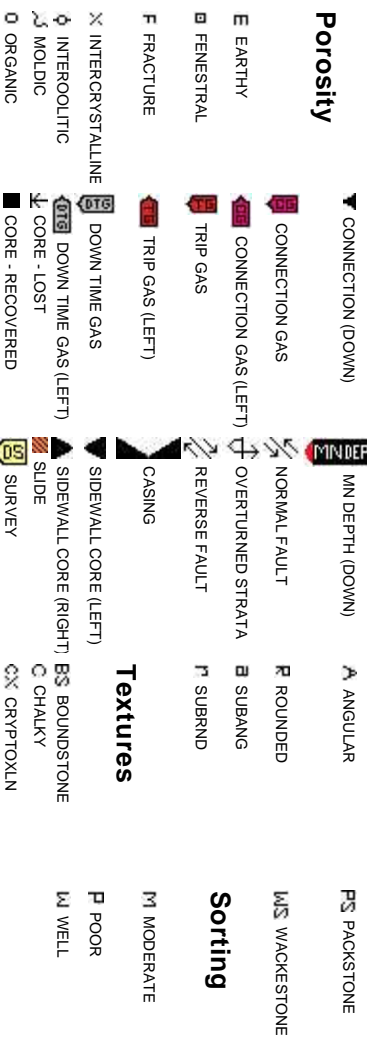
Oil Show



Engineering



Porosity



Textures

Sorting

Springer

Slide/Rotate

ROP

ROP (ft/hr)

Total Gas & Chromatograph

GAS

C1

C2

C3

C4

Depth Labels

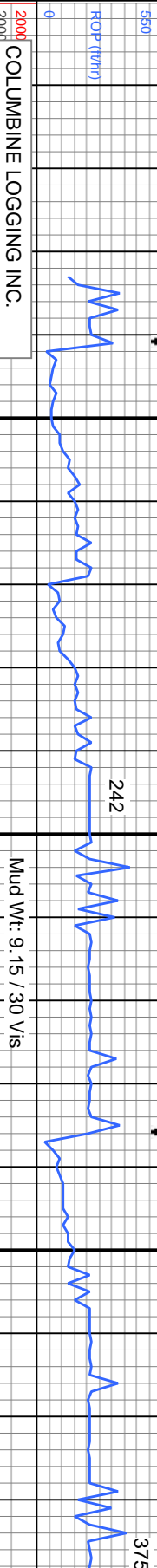
% Lith

Gamma
GR

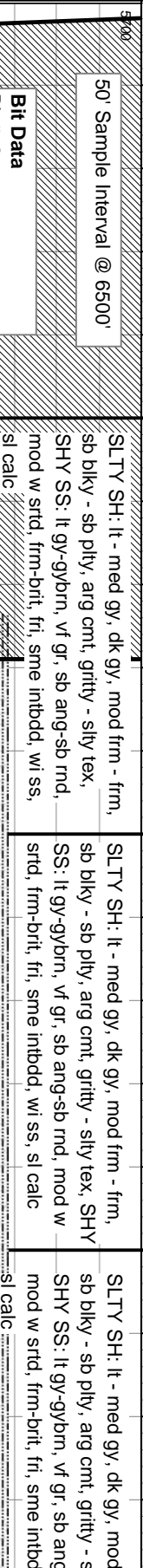
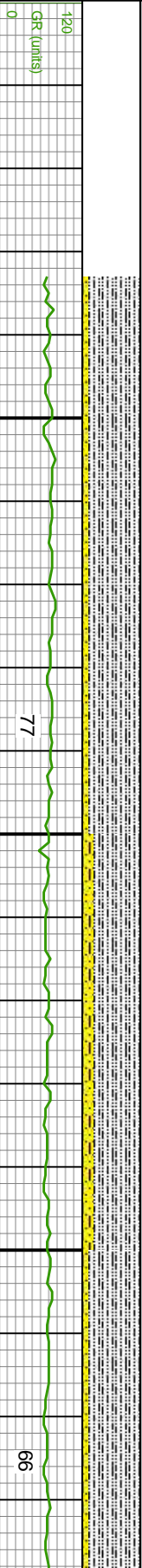
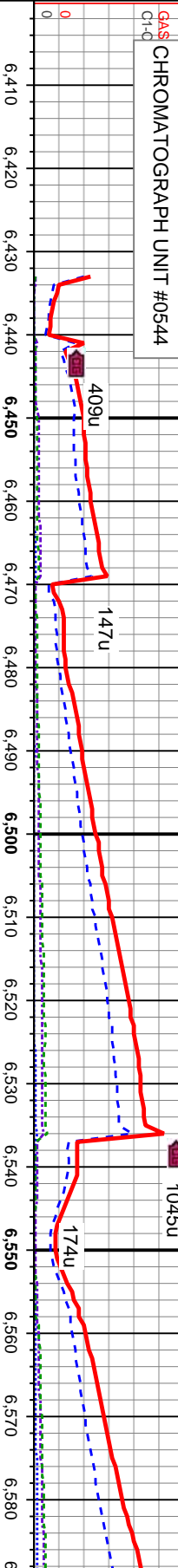
Well Bore
TVD

Oil Show

Images



COLUMBINE LOGGING INC.
RIGGED UP ON 03/07/2014
MANNED 2-PERSON LOGGING
WITH BLOODHOUND GAS
CHROMATOGRAPH UNIT #0544



50' Sample Interval @ 6500'

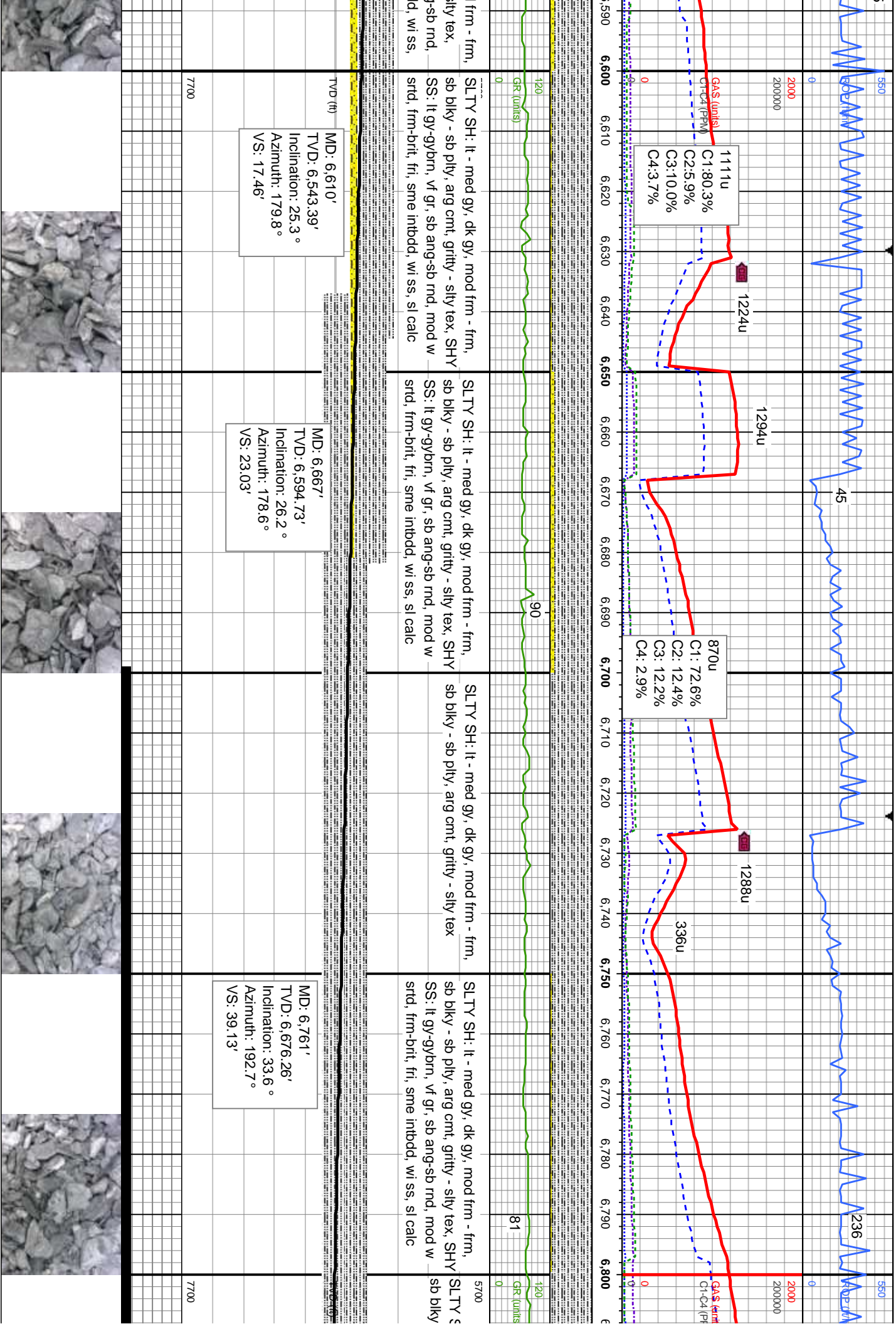
Bit Data
Bit #: 2
Type: SMITH/SDi611MPX
Size: 8.75"
Depth In: 6433'
Jets: 6x14
S/N: JH3611

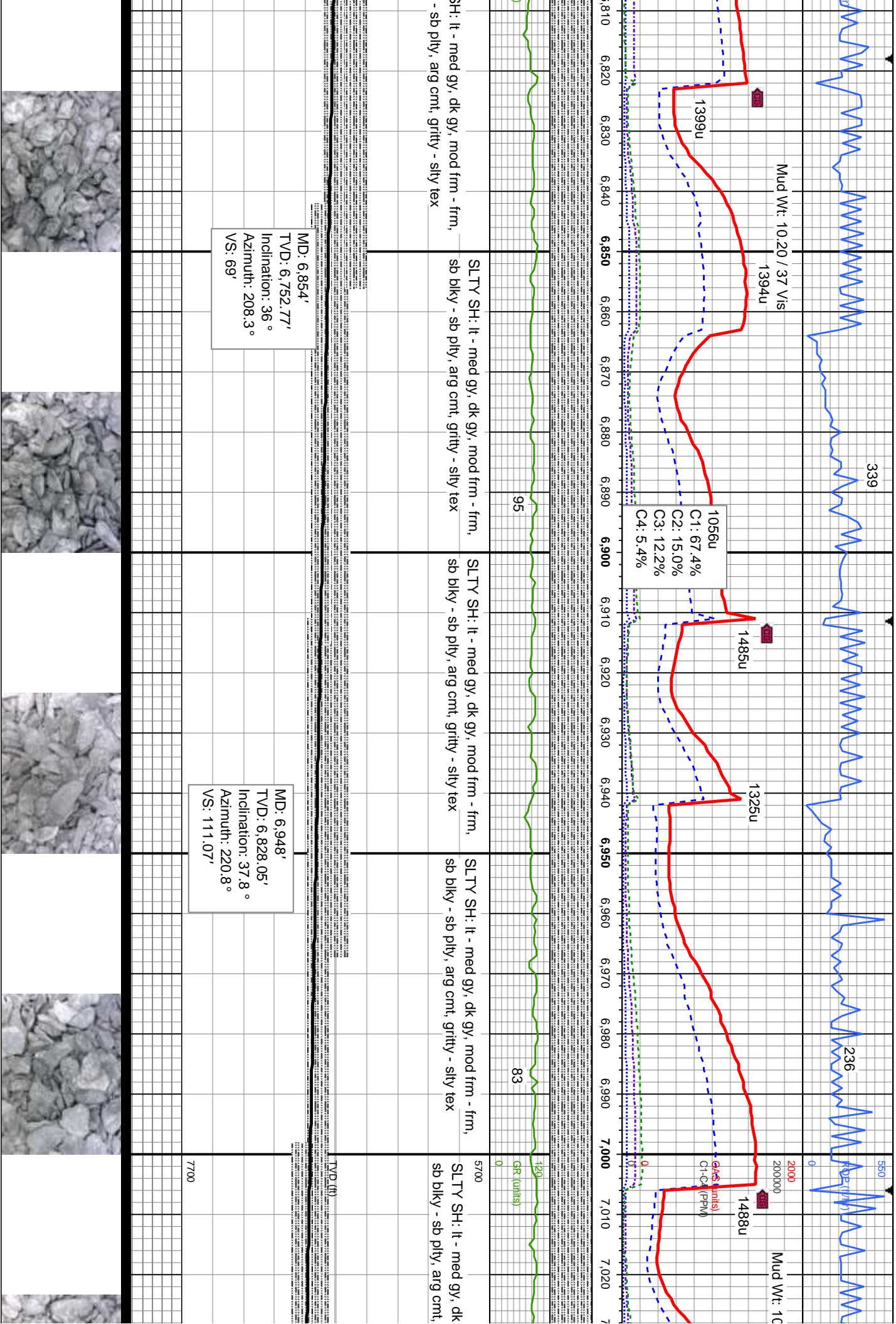
MD: 6,478'
TVD: 6,420.27'
Inclination: 14.8 °
Azimuth: 170.2 °
VS: 10.09'

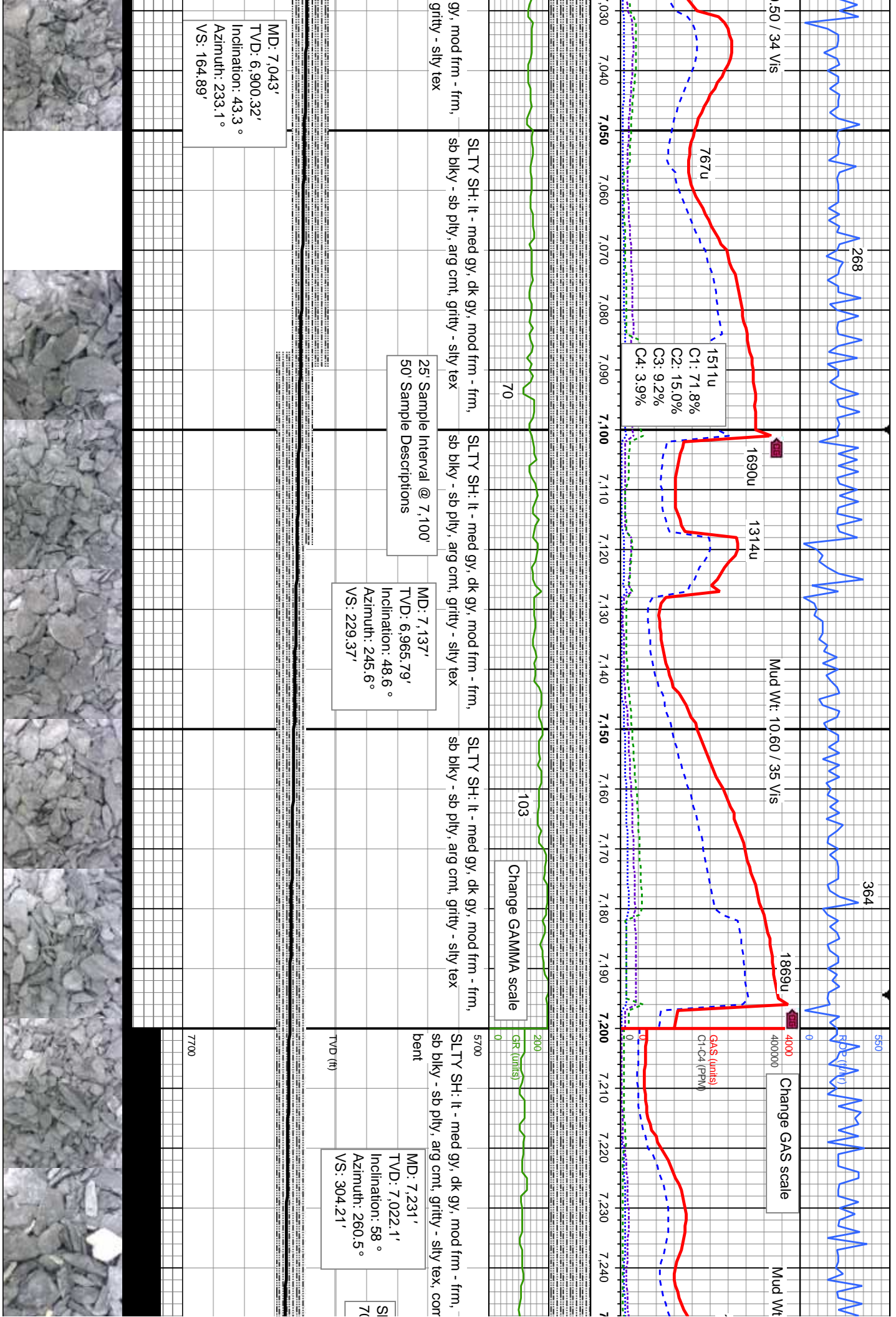
MD: 6,572'
TVD: 6,508.85'
Inclination: 24 °
Azimuth: 176.1 °
VS: 14.22'

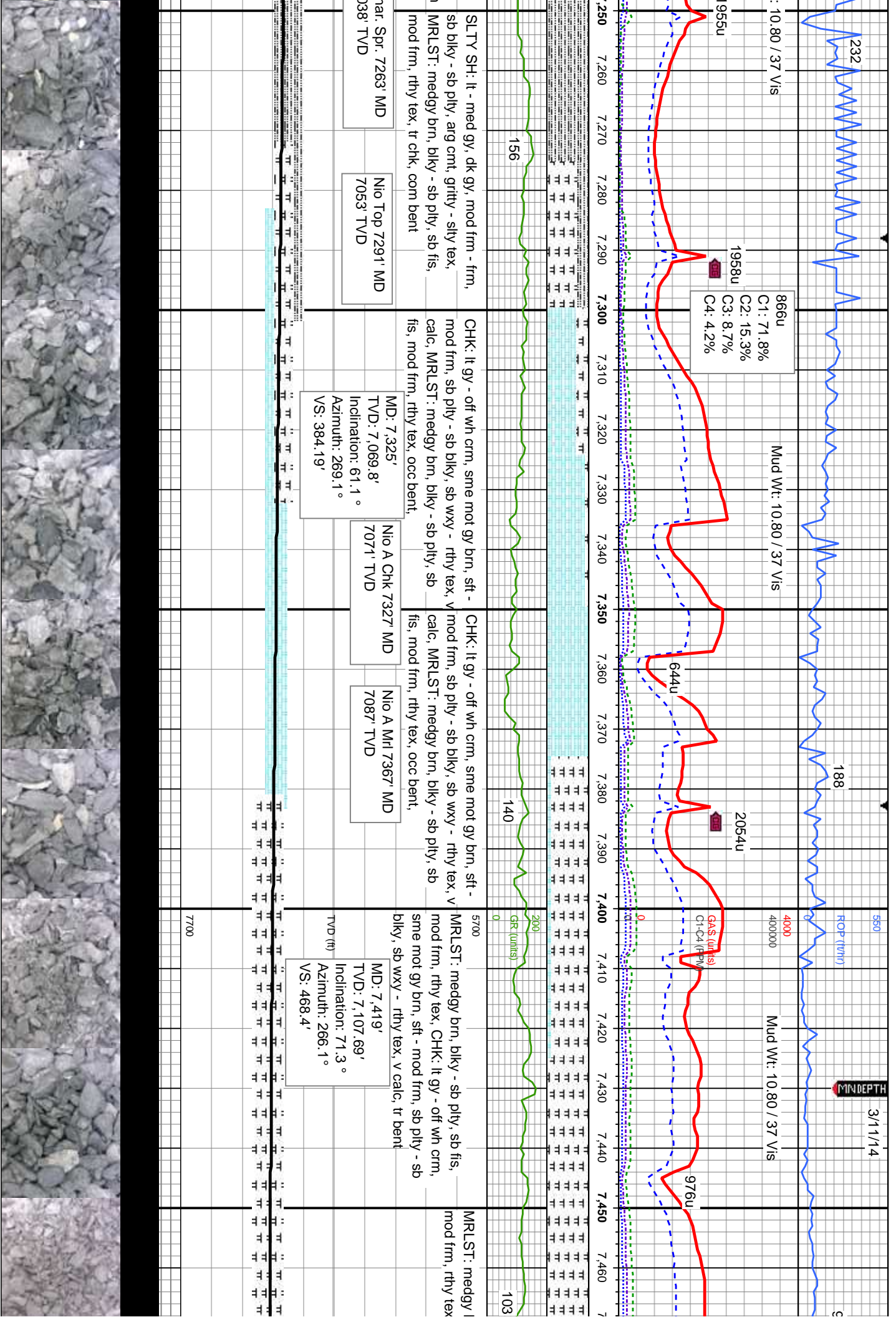
CO
M
F
T
ST

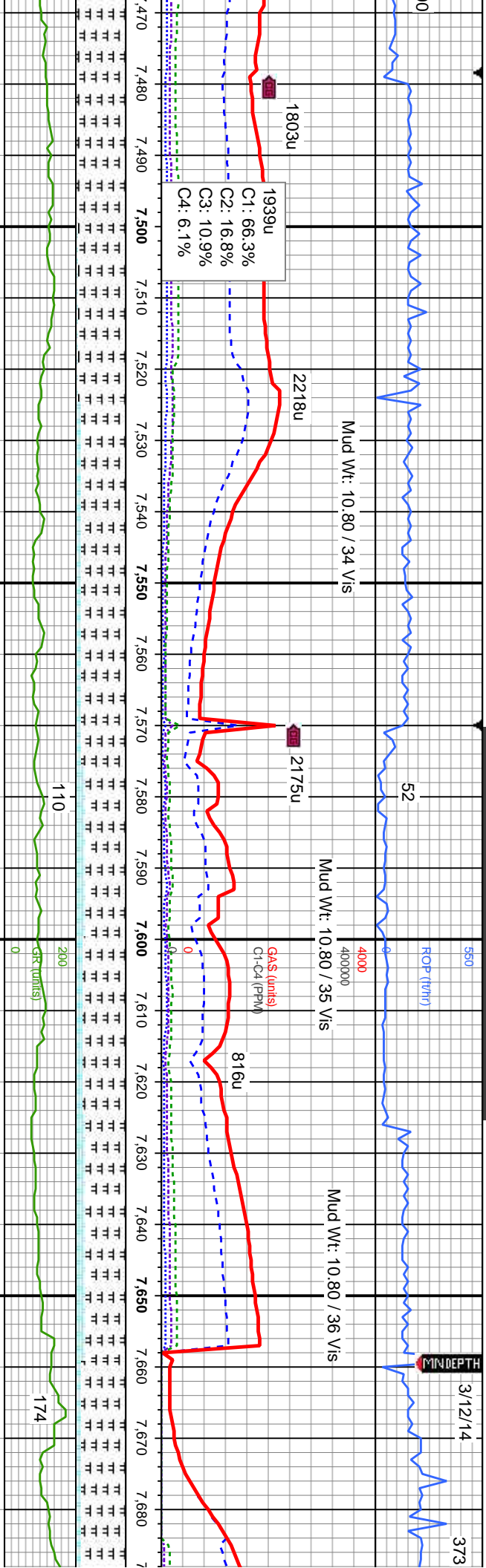












MD: 7,513'
TVD: 7,132.5'
Inclination: 78.1°
Azimuth: 261.6°
VS: 558.19'

MD: 7,602'
TVD: 7,147.64'
Inclination: 82.3°
Azimuth: 262.5°
VS: 645.41'

MD: 7,659'
TVD: 7,154.04'
Inclination: 84.8°
Azimuth: 262.5°
VS: 701.7'

MD: 7,513'
TVD: 7,132.5'
Inclination: 78.1°
Azimuth: 261.6°
VS: 558.19'

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TVD: 7,147.64'
Inclination: 82.3°
Azimuth: 262.5°
VS: 645.41'

MD: 7,659'
TVD: 7,154.04'
Inclination: 84.8°
Azimuth: 262.5°
VS: 701.7'

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Azimuth: 262.5°
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TVD: 7,132.5'
Inclination: 78.1°
Azimuth: 261.6°
VS: 558.19'

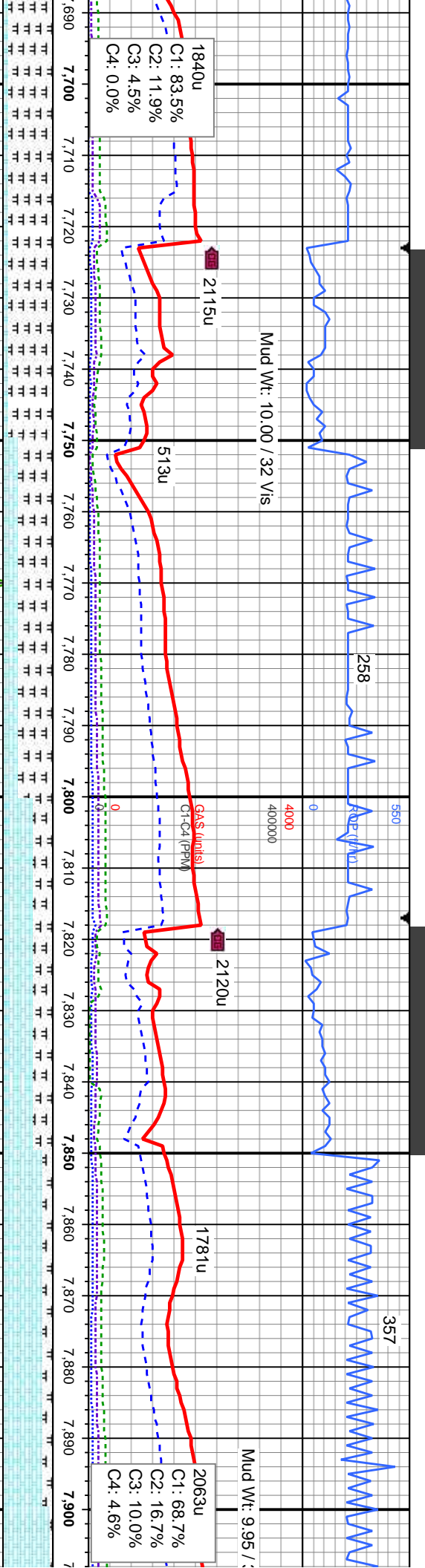
MD: 7,602'
TVD: 7,147.64'
Inclination: 82.3°
Azimuth: 262.5°
VS: 645.41'

MD: 7,659'
TVD: 7,154.04'
Inclination: 84.8°
Azimuth: 262.5°
VS: 701.7'

MD: 7,513'
TVD: 7,132.5'
Inclination: 78.1°
Azimuth: 261.6°
VS: 558.19'

MD: 7,602'
TVD: 7,147.64'
Inclination: 82.3°
Azimuth: 262.5°
VS: 645.41'

MD: 7,659'
TVD: 7,154.04'
Inclination: 84.8°
Azimuth: 262.5°
VS: 701.7'



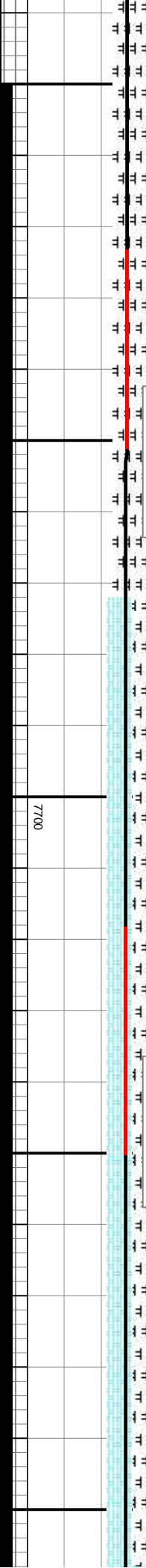
sb fis,	MRLST: medgy brn, blkly - sb ply, sb fis,	MRLST: medgy brn, blkly - sb ply, sb fis,	5700	CHK: It gy - off wh crm, sme mot gy brn, sft - mod frm, sb ply - sb blkly, sb wxy - rthy tex, MRLST: medgy brn, blkly - sb ply, sb fis,	CHK: It gy - off wh crm, sme mot gy brn, sft - mod frm, sb ply - sb blkly, sb wxy - rthy tex, MRLST: medgy brn, blkly - sb ply, sb fis,	mod frm, rthy tex, v calc
h crm,	mod frm, rthy tex, CHK: It gy - off wh crm,	mod frm, rthy tex, CHK: It gy - off wh crm,				
ity - sb	sme mot gy brn, sft - mod frm, sb ply - sb	sme mot gy brn, sft - mod frm, sb ply - sb				
nt	blkly, sb wxy - rthy tex, v calc, tr bent	blkly, sb wxy - rthy tex, v calc, tr bent				

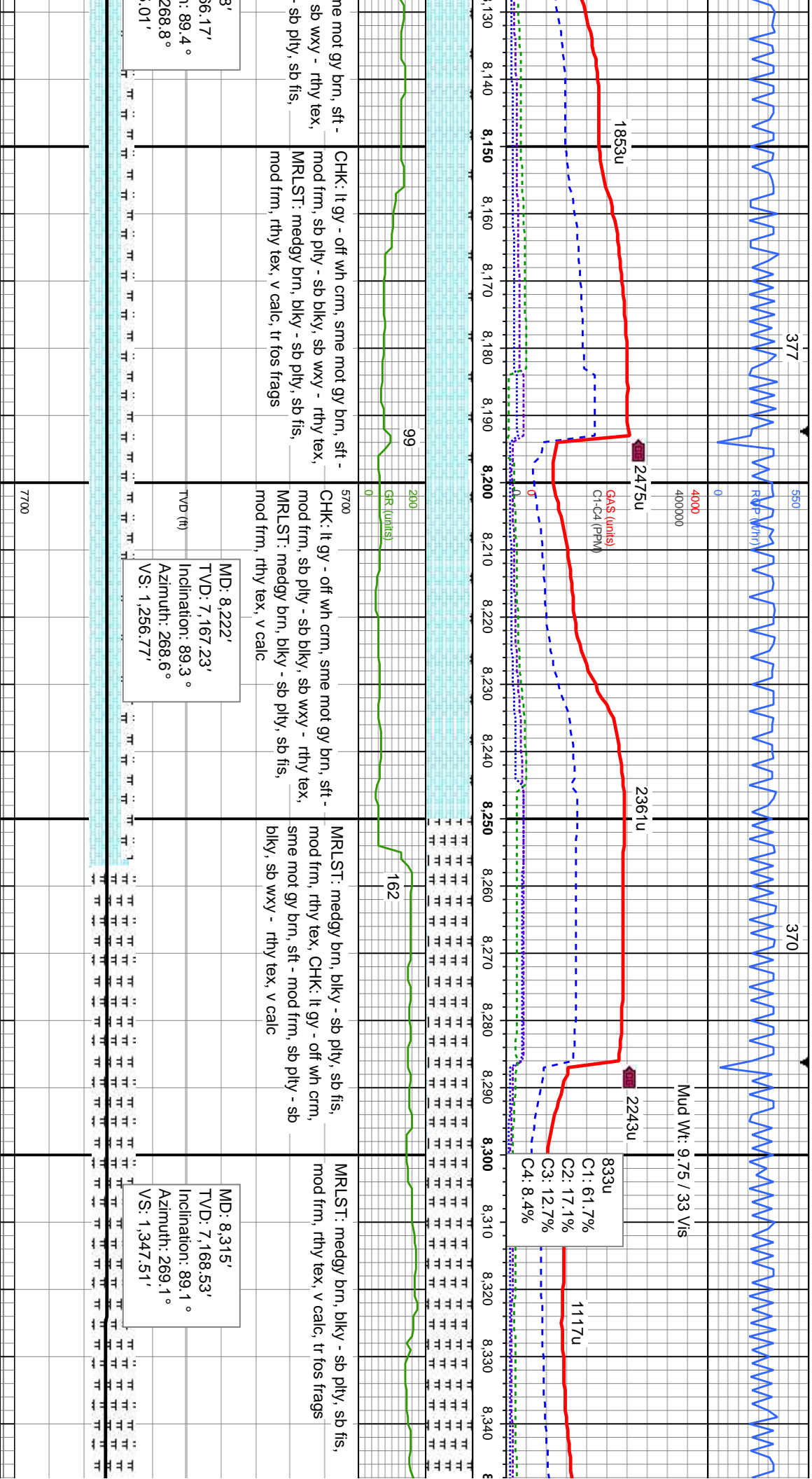
Assumed Drilling
12/2014

MD: 7,753'
TVD: 7,161.01'
Inclination: 86.7°
Azimuth: 262.6°
VS: 794.87'

TVD (ft)

MD: 7,847'
TVD: 7,164.29'
Inclination: 89.3°
Azimuth: 262.6°
VS: 888.22'





mod mot gy brn, sft -
mod frm, sb ply - rthy tex,
sb ply, sb fis,
mod frm, rthy tex, v calc, tr fos frags

CHK: lt gy - off wh crm, sme mot gy brn, sft -
mod frm, sb ply - sb blk, sb wxy - rthy tex,
MRLST: medgy brn, blk - sb ply, sb fis,
mod frm, rthy tex, v calc, tr fos frags

5700

CHK: lt gy - off wh crm, sme mot gy brn, sft -
mod frm, sb ply - sb blk, sb wxy - rthy tex,
MRLST: medgy brn, blk - sb ply, sb fis,
mod frm, rthy tex, v calc

MRLST: medgy brn, blk - sb ply, sb fis,
mod frm, rthy tex, CHK: lt gy - off wh crm,
sme mot gy brn, sft - mod frm, sb ply - sb
blk, sb wxy - rthy tex, v calc

MRLST: medgy brn, blk - sb ply, sb fis,
mod frm, rthy tex, v calc, tr fos frags

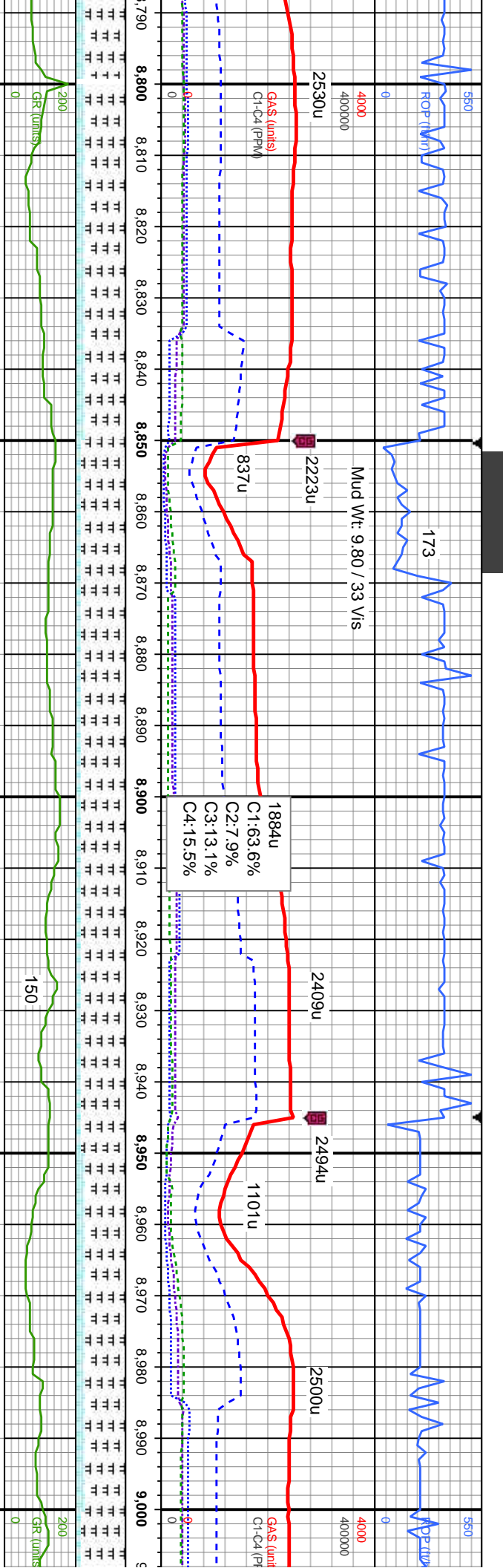
3'
6.17'
1: 89.4°
268.8°
.01'

TV (ft)

MD: 8,222'
TVD: 7,167.23'
Inclination: 89.3°
Azimuth: 268.6°
VS: 1,256.77'

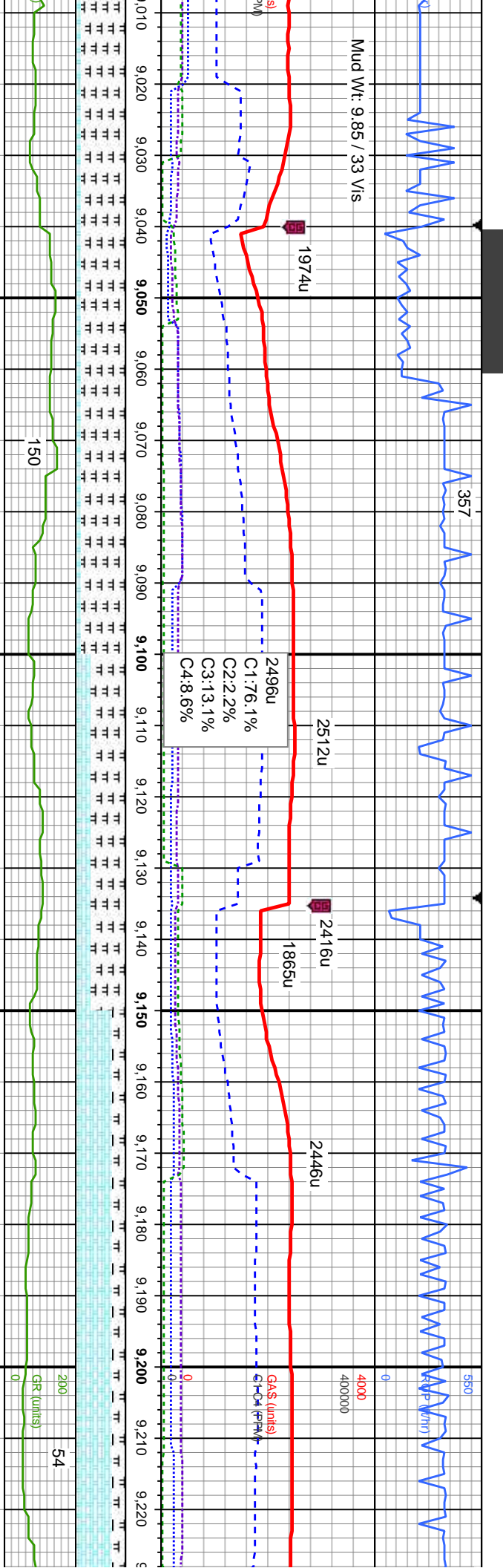
MD: 8,315'
TVD: 7,168.53'
Inclination: 89.1°
Azimuth: 269.1°
VS: 1,347.51'

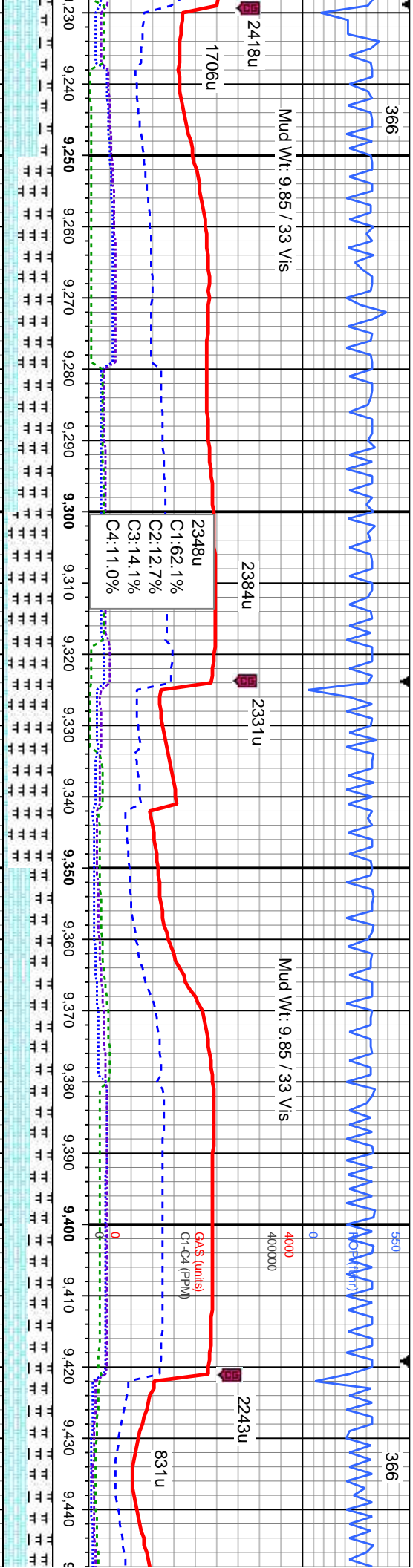




5700	CHK: It gy - off wh crm, sme mot gy brn, sft - mod frm, sb pily - sb blkly, sb wxy - rthy tex, MRLST: medgy brn, blkly - sb pily, sb fis, mod frm, rthy tex, v calc, occ bent, imbd mic foss, tr inoc frag	MD: 8,881' TVD: 7,174.56' Inclination: 89.4° Azimuth: 269.1° VS: 1,899.47'	5700	MR mod wh sb f ben
	CHK: It gy - off wh crm, sme mot gy brn, sft - mod frm, sb pily - sb blkly, sb wxy - rthy tex, MRLST: medgy brn, blkly - sb pily, sb fis, mod frm, rthy tex, v calc, occ bent, imbd mic foss, tr inoc frag	MD: 8,976' TVD: 7,176.14' Inclination: 88.7° Azimuth: 269.6° VS: 1,991.97'		MR mod wh sb f ben







ne mot gy brn, sft -
sb wxy - rthy tex,
r inoc frag

MRLST: medgy brn, blkly - sb pty, sb fis,
mod frm, rthy tex, v calc, CHK: lt gy - off wh
crm, sme mot gy brn, sft - mod frm, sb pty
- sb blkly, sb wxy - rthy tex, tr inoc frag

MRLST: medgy brn, blkly - sb pty, sb fis,
mod frm, rthy tex, v calc, CHK: lt gy - off
wh crm, sme mot gy brn, sft - mod frm,
sb pty - sb blkly, sb wxy - rthy tex

CHK: lt gy - off wh crm, sme mot gy brn, sft -
mod frm, sb pty - sb blkly, sb wxy - rthy tex,
MRLST: medgy brn, blkly - sb pty, sb fis,
mod frm, rthy tex, v calc

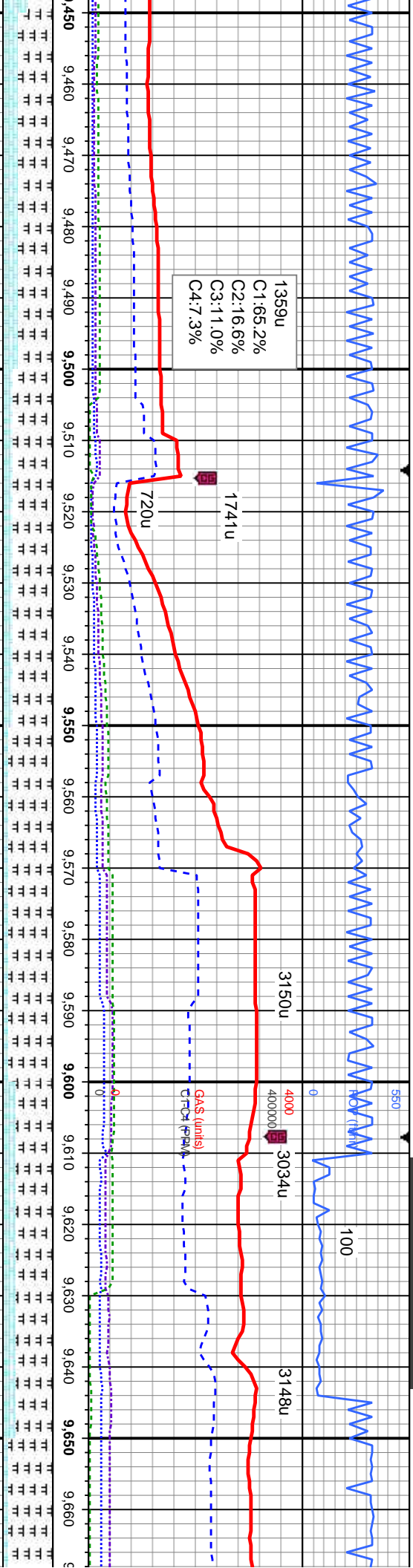
CHK: lt gy - off wh crm, sme mot gy brn, sft
mod frm, sb pty - sb blkly, sb wxy - rthy tex,
MRLST: medgy brn, blkly - sb pty, sb fis,
mod frm, rthy tex, v calc

MD: 9,260'
TVD: 7,175.06'
Inclination: 90.2°
Azimuth: 270.2°
VS: 2,268.37'

MD: 9,354'
TVD: 7,174.56'
Inclination: 90.4°
Azimuth: 270.2°
VS: 2,359.58'

MD: 9,440'
TVD: 7,174.56'
Inclination: 90.4°
Azimuth: 270.2°
VS: 2,450.00'





MRLST: medgy brn, blkly - sb pty, sb fis, mod frm, rthy tex, v calc, CHK: lt gy - off wh crm, sme mot gy brn, sft - mod frm, sb pty - sb blkly, sb wxy - rthy tex

CHK: lt gy - off wh crm, sme mot gy brn, sft - mod frm, sb pty - sb blkly, sb wxy - rthy tex, MRLST: medgy brn, blkly - sb pty, sb fis, mod frm, rthy tex, v calc

MRLST: medgy brn, blkly - sb pty, sb fis, mod frm, rthy tex, v calc, CHK: lt gy - off wh crm, sme mot gy brn, sft - mod frm, sb pty - sb blkly, sb wxy - rthy tex, occ inoc frag

57 MRLST: medgy brn, blkly - sb pty, sb fis, mod frm, rthy tex, v calc, CHK: lt gy - off wh crm, sme mot gy brn, sft - mod frm, sb pty - sb blkly, sb wxy - rthy tex, imbd mic fos, occ inoc frag

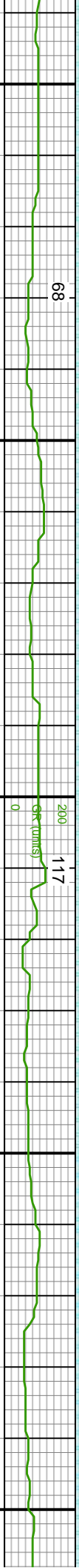
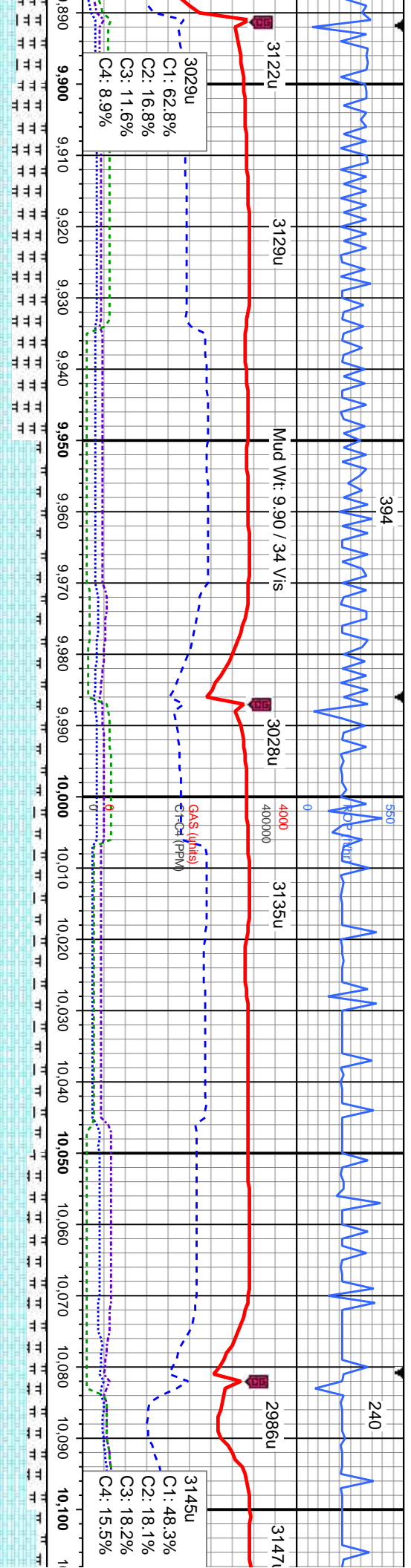
MRLST: medgy mod frm, rthy te crm, sme mot gy sb blkly, sb wxy inoc frag

73.9' n: 90.4° 270.9° 1.61'

MD: 9,544' TVD: 7,173.4' Inclination: 90.2° Azimuth: 270.9° VS: 2,543.5'

MD: 9,639' TVD: 7,174.48' Inclination: 88.5° Azimuth: 266.7° VS: 2,636.18'





sb fis,	MRLST: medgy brn, biky - sb pty, sb fis,	CHK: It gy - off wh crm, sme mot gy brn, sft
ly - off wh	mod frm, rthy tex, v calc, CHK: It gy - off wh	- mod frm, sb pty - sb biky, sb wxy - rthy
sb pty	crm, sme mot gy brn, sft - mod frm, sb pty	tex, MRLST: medgy brn, biky - sb pty, sb
mic fos,	- sb biky, sb wxy - rthy tex, imbd mic fos,	fis, mod frm, rthy tex, v calc, abnt inoc frag
	occ inoc frag	

5700
 CHK: It gy - off wh crm, sme mot gy brn, sft
 - mod frm, sb pily - sb blkly, sb wxy - rthy
 tex, MR.LST: medgy brn, blkly - sb pily, sb
 fls, mod frm, rthy tex, v calc, com Inoc Frag

CHK: it gy - off wh crm, sme mot gy brn, sft
- mod frm, sb pily - sb biky, sb wxy - rthy
tex, MRLST: medy brn, biky - sb pily, sb
fls, mod frm, rthy tex, v calc, com Inoc Frag

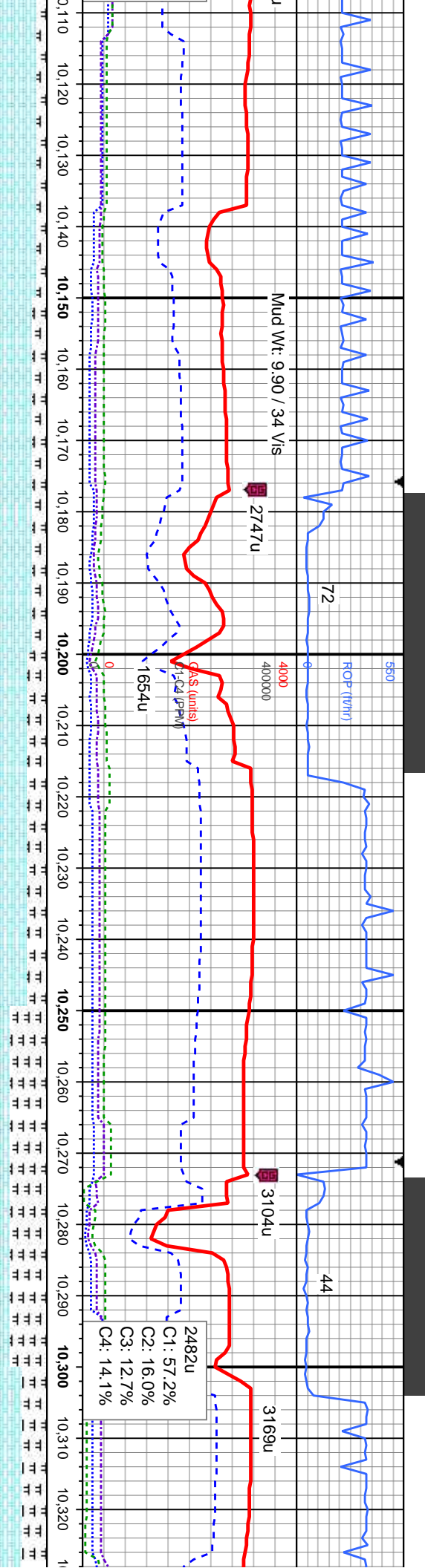
CHK:
- mod
tex, M
fis, m

MD: 9,922'
TVD: 7,178.19'
Inclination: 90.8 °
Azimuth: 265.1 °
VS: 2,914.96'

MD: 10,017'
TVD: 7,176.53'
Inclination: 91.2 °
Azimuth: 264.9 °
VS: 3,008.83'

MD: 1
TVD: 1
Inclination:
Azimuth:
VS: 3

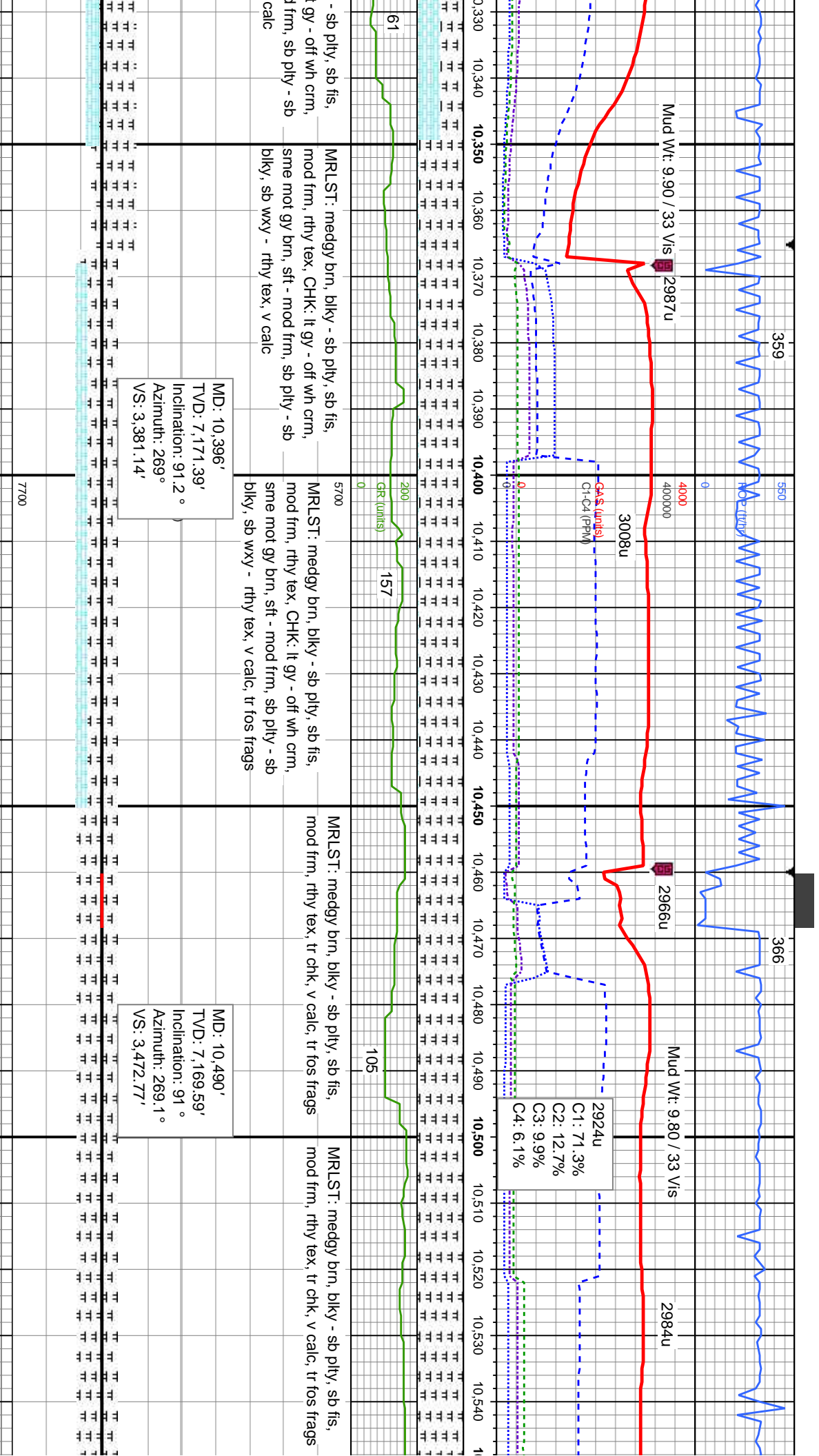


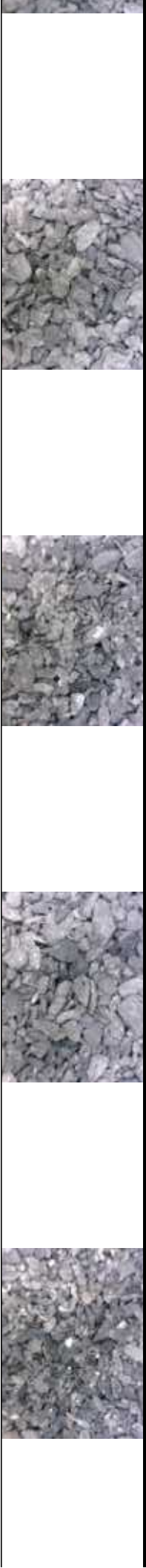
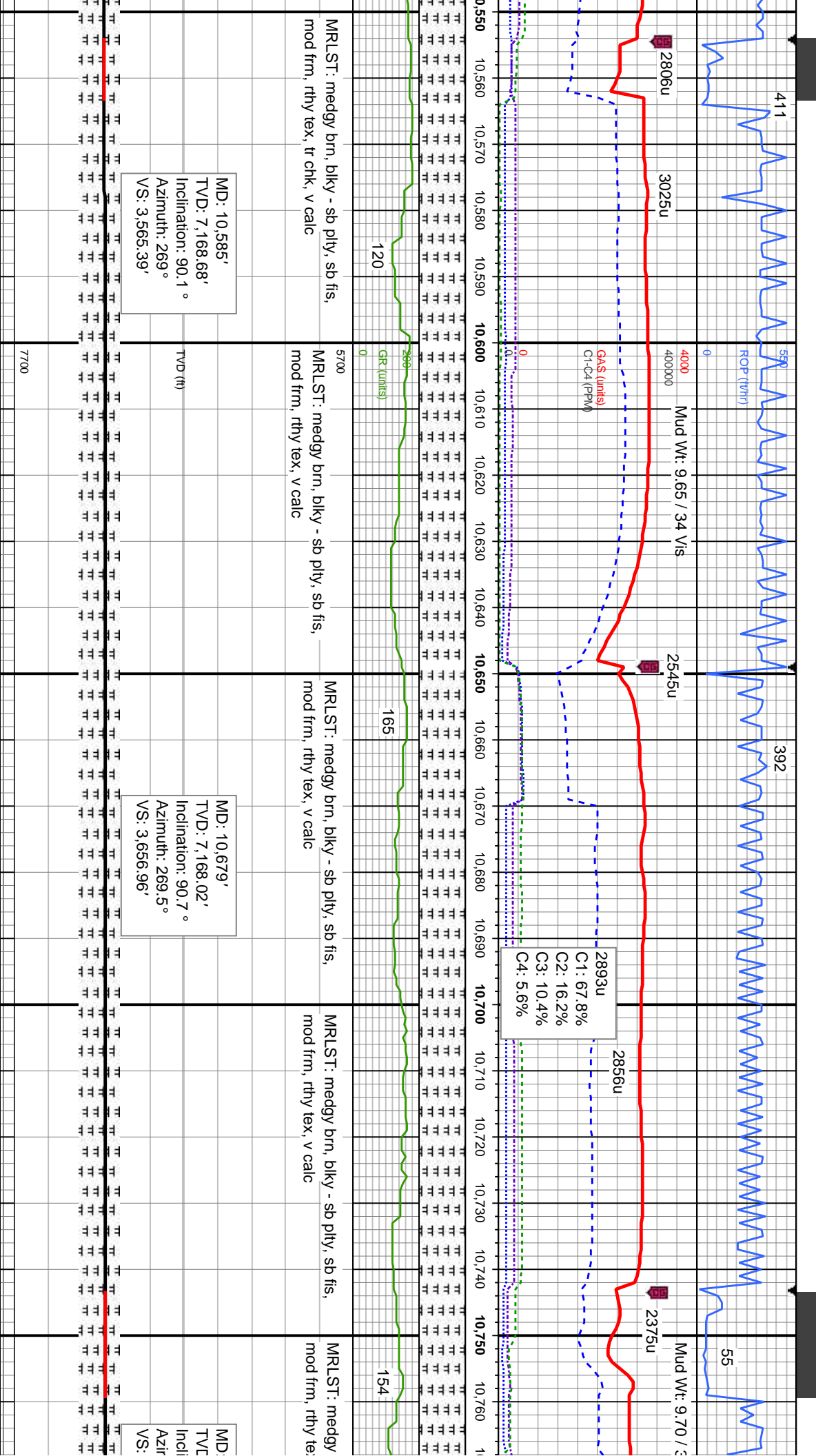


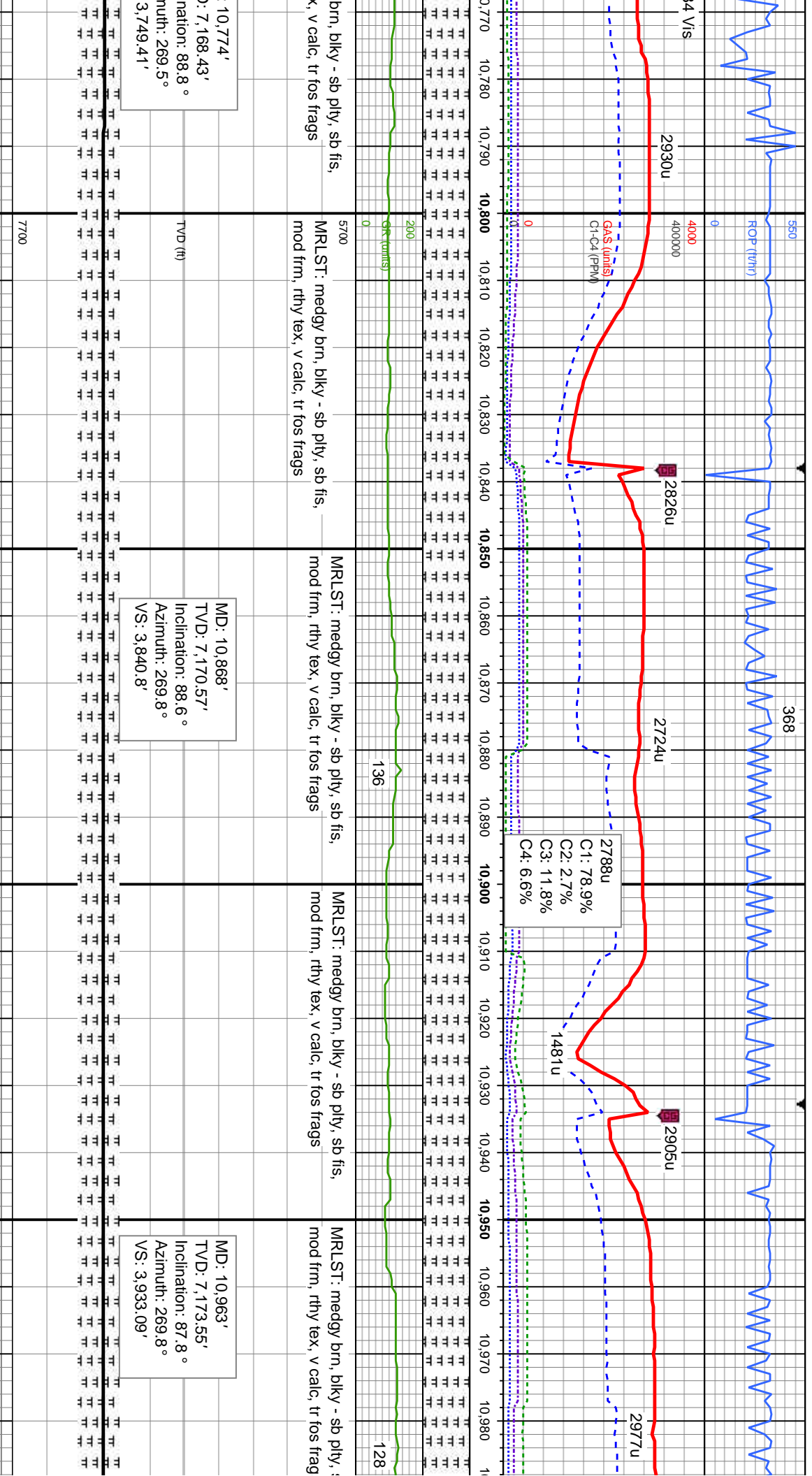
It gy - off wh crm, sme mot gy brn, sft frm, sb pily - sb blkly, sb wxy - rthy MRLST: medgy brn, blkly - sb pily, sb frm, rthy tex, v calc	CHK: It gy - off wh crm, sme mot gy brn, sft - mod frm, sb pily - sb blkly, sb wxy - rthy tex, MRLST: medgy brn, blkly - sb pily, sb fis, mod frm, rthy tex, v calc	5700 CHK: It gy - off wh crm, sme mot gy brn, sft - mod frm, sb pily - sb blkly, sb wxy - rthy tex, MRLST: medgy brn, blkly - sb pily, sb fis, mod frm, rthy tex, v calc	MRLST: medgy brn, blkly - sb pily, sb fis, mod frm, rthy tex, CHK: It gy - off wh crm, sme mot gy brn, sft - mod frm, sb pily - sb blkly, sb wxy - rthy tex, v calc	MRLST: medgy brn, blkly mod frm, rthy tex, CHK: l sme mot gy brn, sft - moc blkly, sb wxy - rthy tex, v
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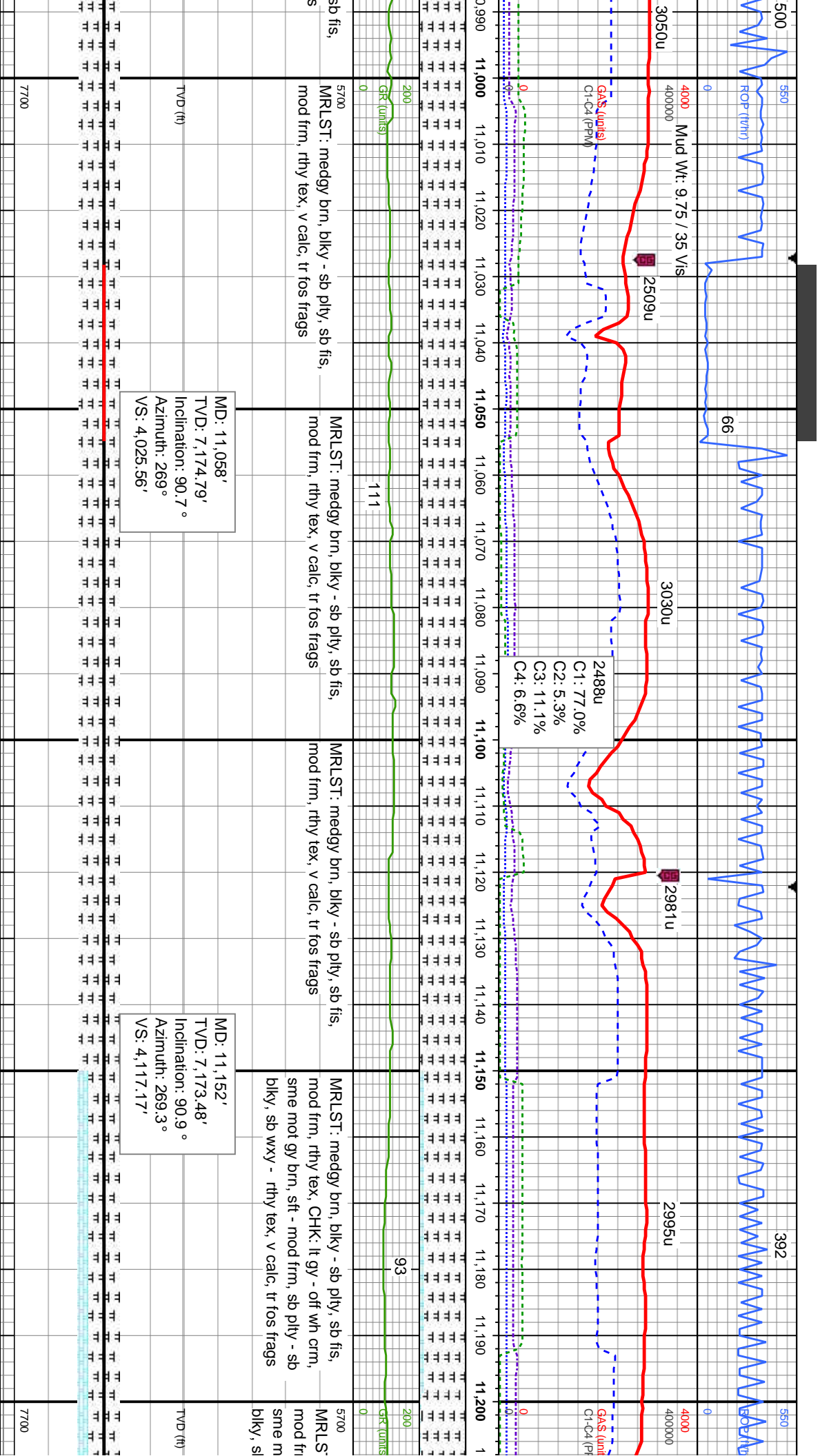
0,112' 7,174.04' ation: 91.8° th: 264.9° 102.7'	MD: 10,207' TVD: 7,173.13' Inclination: 89.3° Azimuth: 266.8° VS: 3,196.34'	MD: 10,301' TVD: 7,173.05' Inclination: 90.8° Azimuth: 268.6° VS: 3,288.45'
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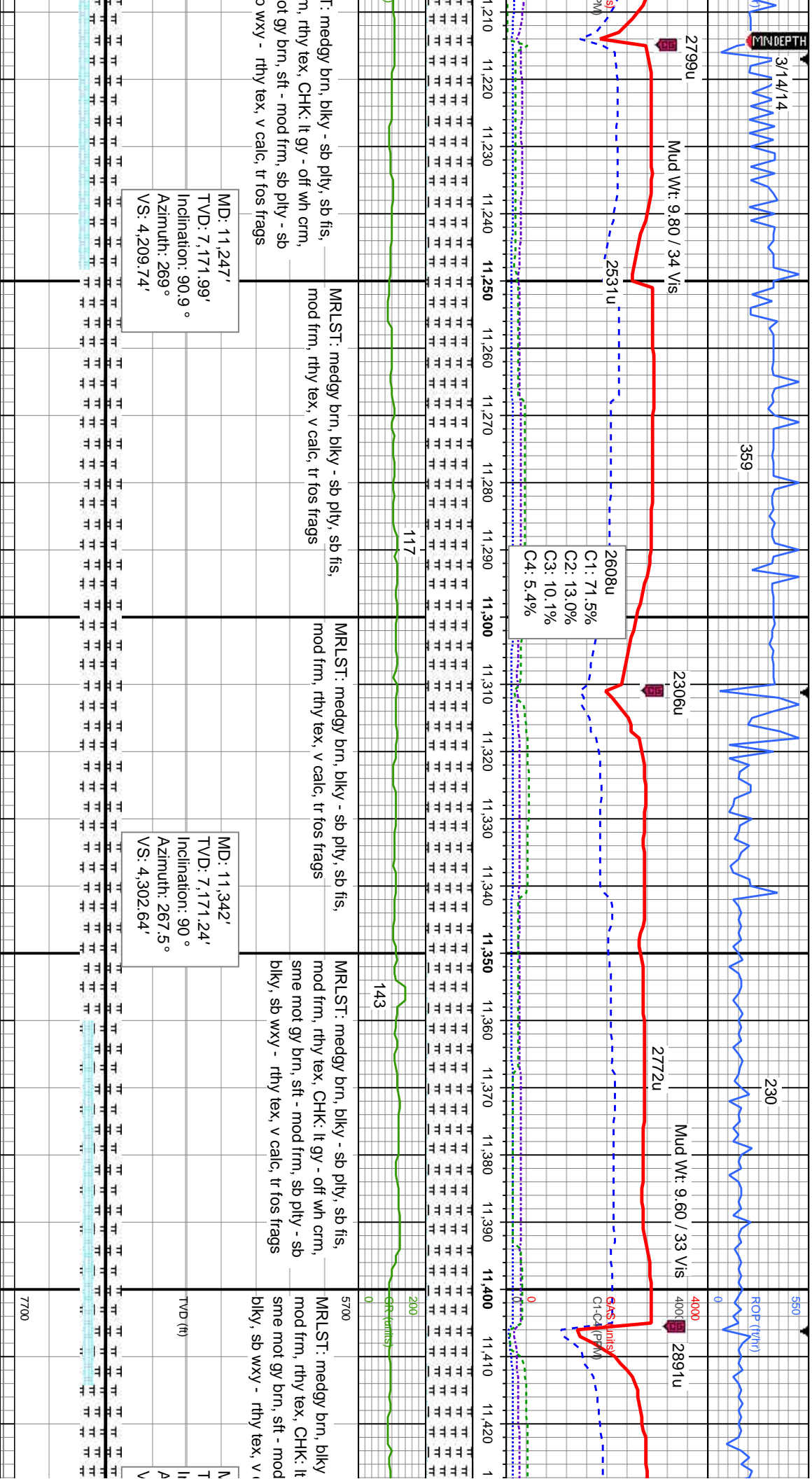


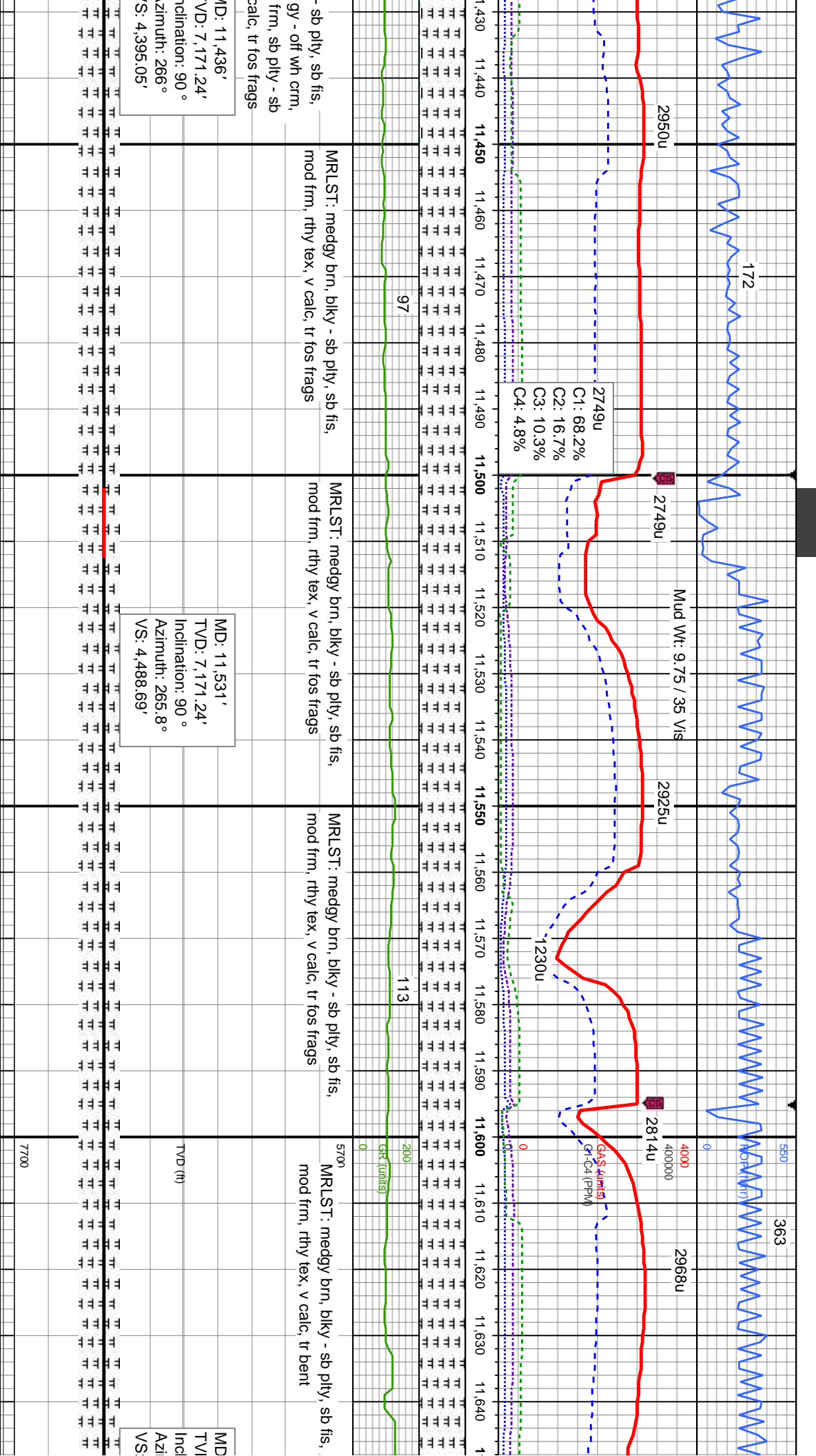


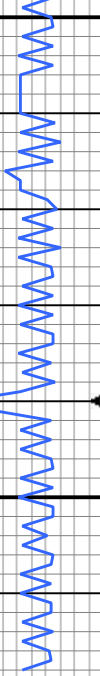












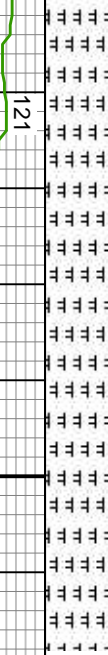
Mud Wt: 9.75 / 34 Vis

2916u

TD @ 11718' MD
@ 04:24hrs MDT
on 03/14/2014

Wellsite Geological Services
Provided By Columbine
Logging, Thank You!

11,650 11,660 11,670 11,680 11,690 11,700 11,710 11,720 11,730 11,740 11,750 11,760



121

MRLST: meddy bn, blkly - sb plty, sb fis,
mod frm, rthy tex, v calc, tr bent

11,654'
D: 7,171.24'
ination: 90 °
muth: 265.6 °
4,609.92'

