



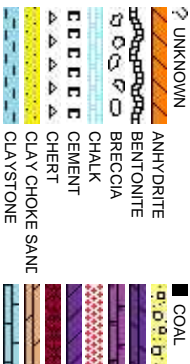
Scale: 5" / 100'
Measured Depth Log

Well Name	Trisha LC29-76HNB(Horz)		
Location	SESW SEC 29, T9N, R59W		
State	COLORADO	County	WELD
Country	USA		
API Number	05-123-38779	Rig Number	H&P 326
Region	DJ BASIN	Field	WILDCAT
Spud Date	4/24/2014	Drilling Completed	5/4/2014
Surface Coordinates	SESW SEC 29, T9N, R59W 340' FSL, 1982' FWL		
Ground Elevation	4879'	K.B. Elevation	4909'
Logged Interval	5375'	To	15585'
		Total Depth	15585'
Formation	NIOBRARA, B CHALK		
Type of Drilling Fluid	LSND		

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



Operator

2200

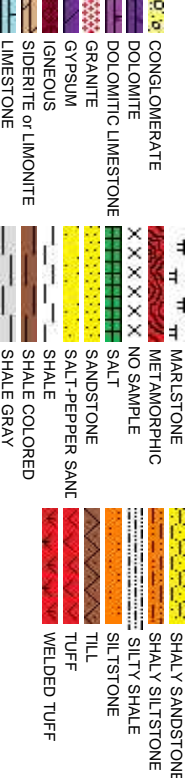
Geologist

2200

Other

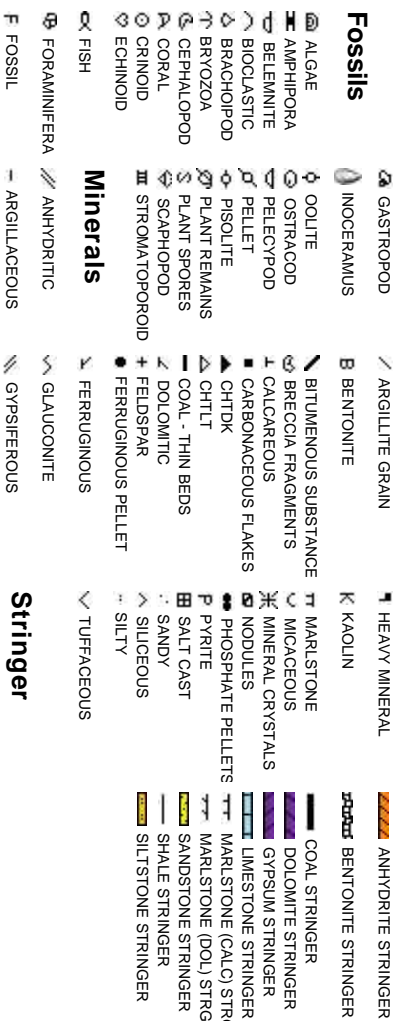
Mike Kerschen
Matt Hopkins

Rock Types



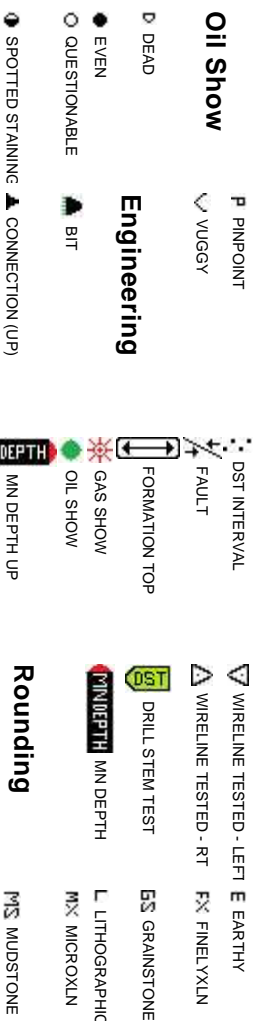
Accessories

Fossils

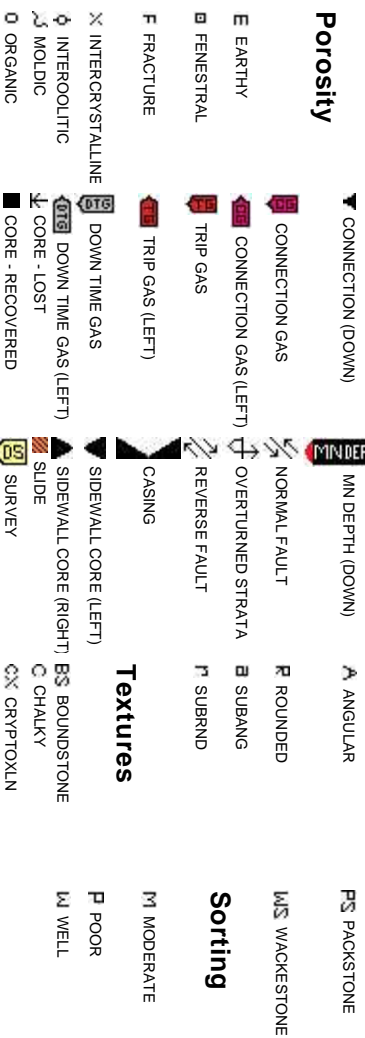


Other Symbols

Oil Show



Porosity



Slide/Rotate

ROP

ROP (t/hr)

800

4/28/2014

MINDEPTH

357

Mud Wt: 10.40 / 65 Vis

TOOH For MWD @ 5457

Resumed Drilling at 09:00 hr

Total Gas & Chromatograph

GAS

C1

C2

C3

C4

COLUMBINE LOGGING INC.
RIGGED UP ON 04/25/2014
MANNED 2-PERSON LOGGING
WITH BLOODHOUND GAS
CHROMATOGRAPH UNIT #0684

GAS (units)
C1-C4 (PPM)

102u

164u

Began curve at 17:18 hrs on 4/27/2014

Depth Labels

% Lith

GAMMA

GR

50 Sample Intervals

50SLTY SH: It - med gy, dk gy, mod frm -
frm, sb blkY - sb plty, arg cnt, rthy - silty
tex

No Gamma

Well Bore
TVD

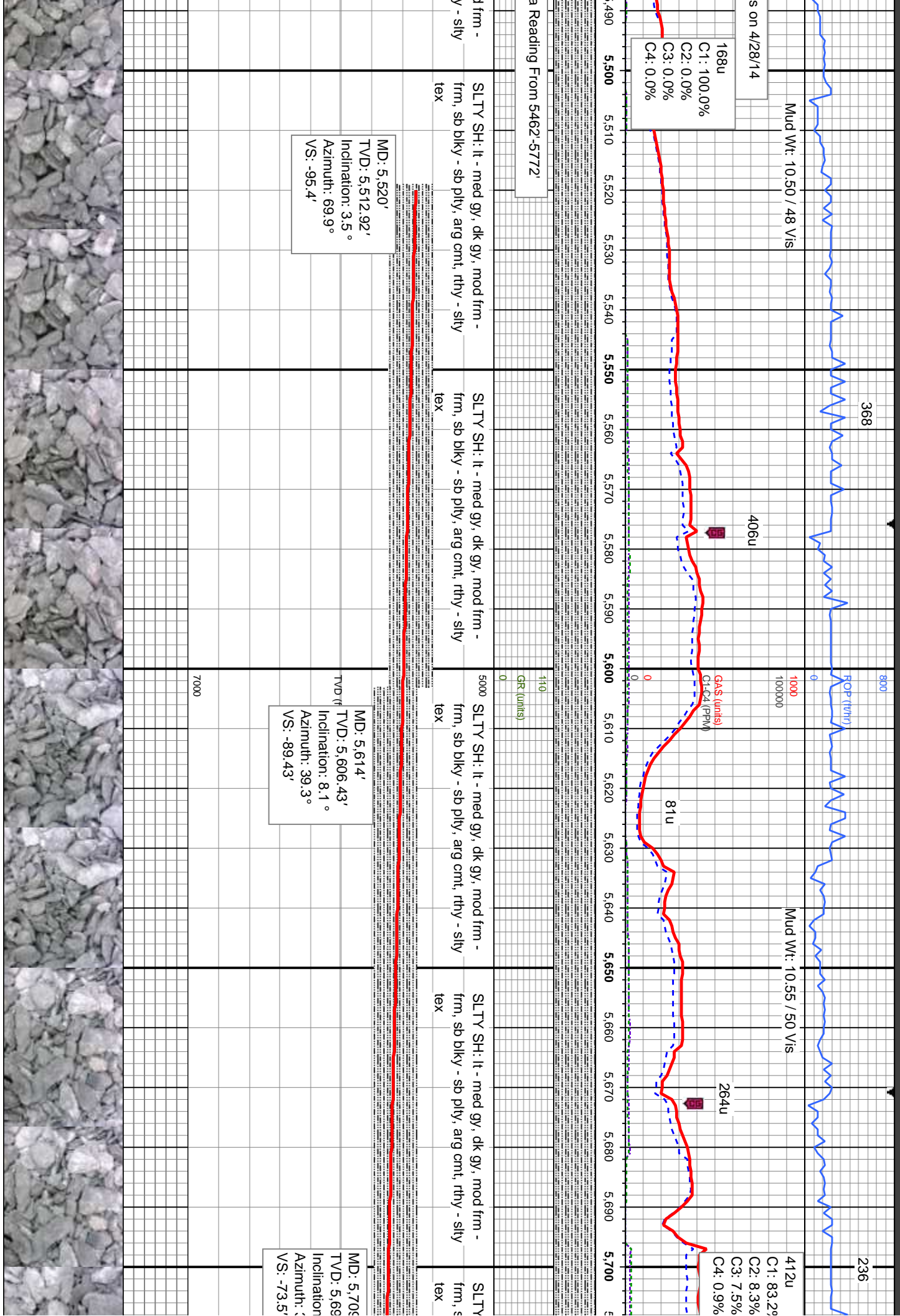
TVD (ft)

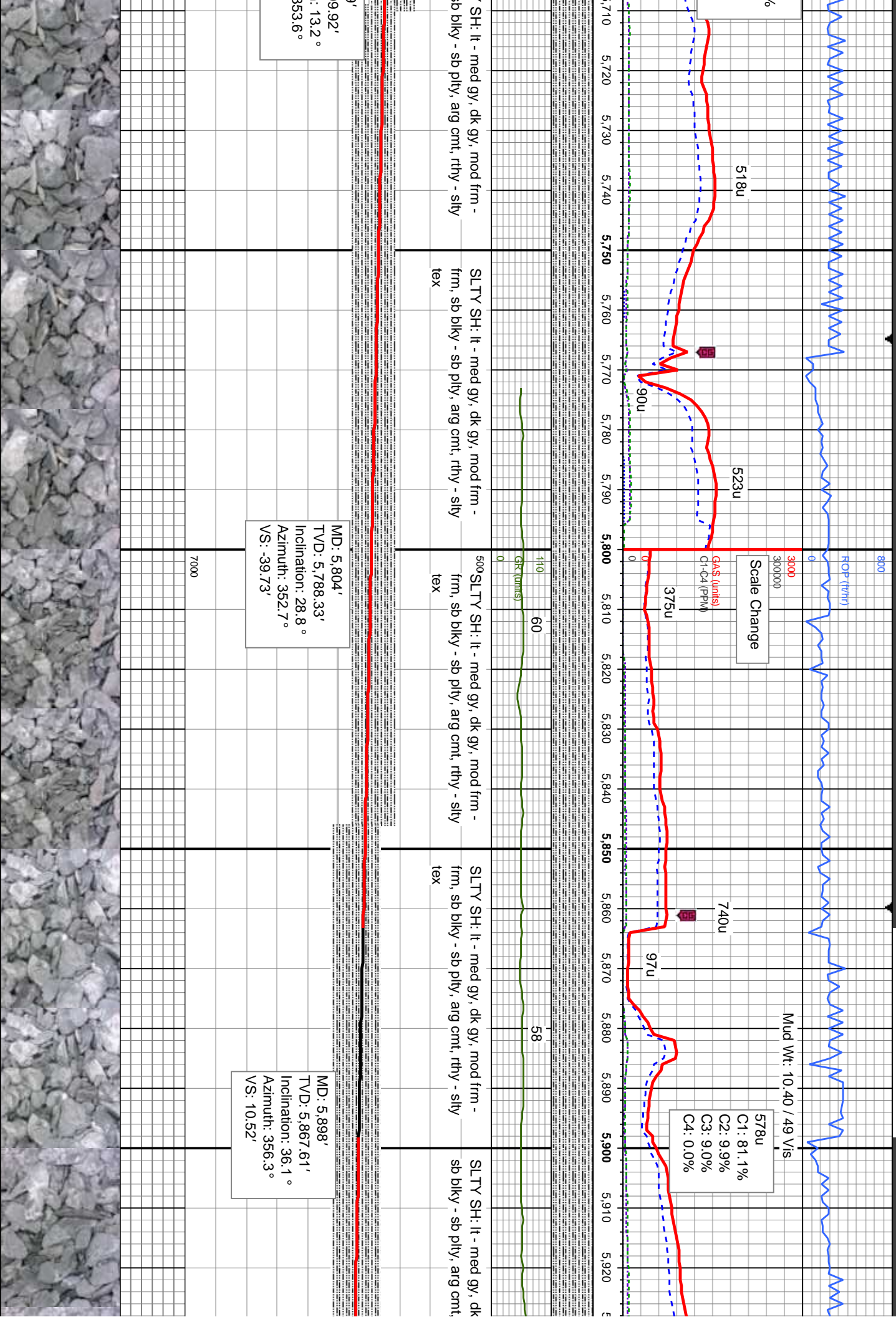
Oil Show

EOH
F
T
ST

Images



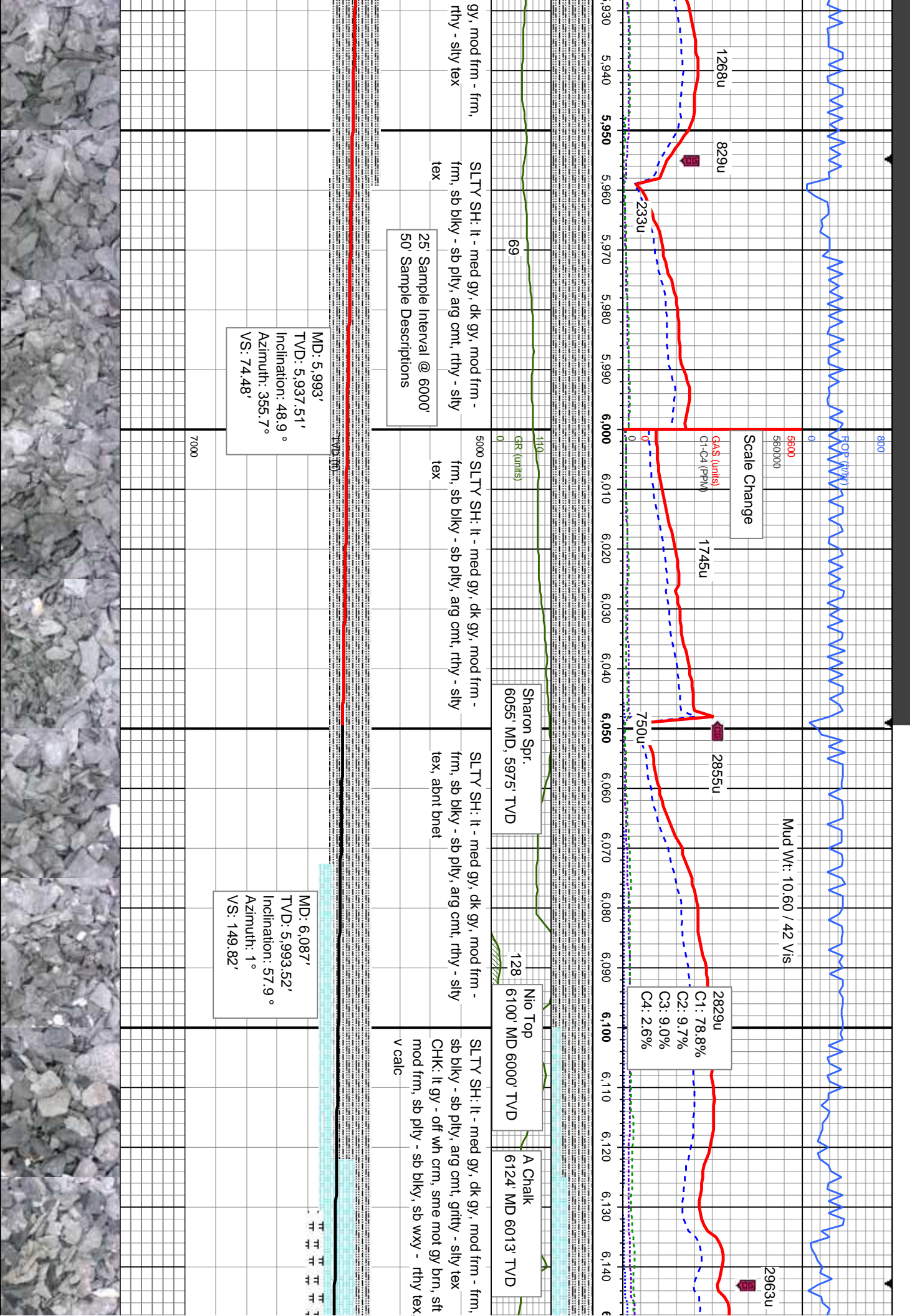


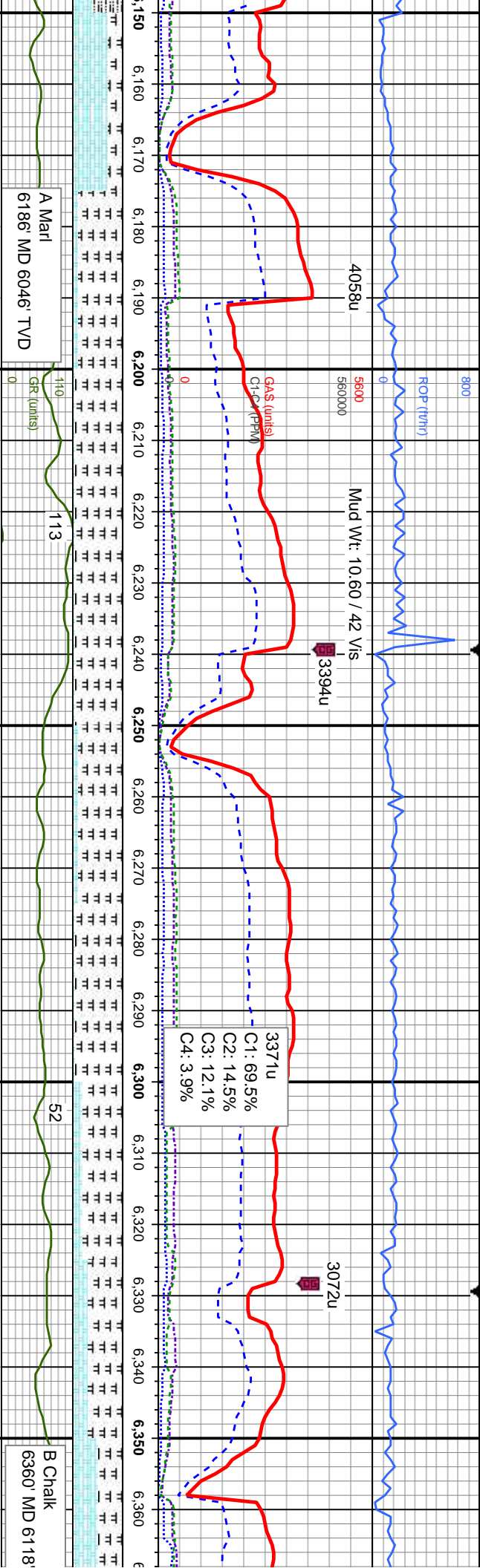


9.92'
: 13.2°
353.6°

MD: 5,804'
TVD: 5,788.33'
Inclination: 28.8°
Azimuth: 352.7°
VS: -39.73'

MD: 5,898'
TVD: 5,867.61'
Inclination: 36.1°
Azimuth: 356.3°
VS: 10.52'





A Marl
6186' MD 6046' TVD

GR (units)
110
113

3371u
C1: 69.5%
C2: 14.5%
C3: 12.1%
C4: 3.9%

B Chalk
6360' MD 6118'

CHK: It gy - off wh crm, some 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

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

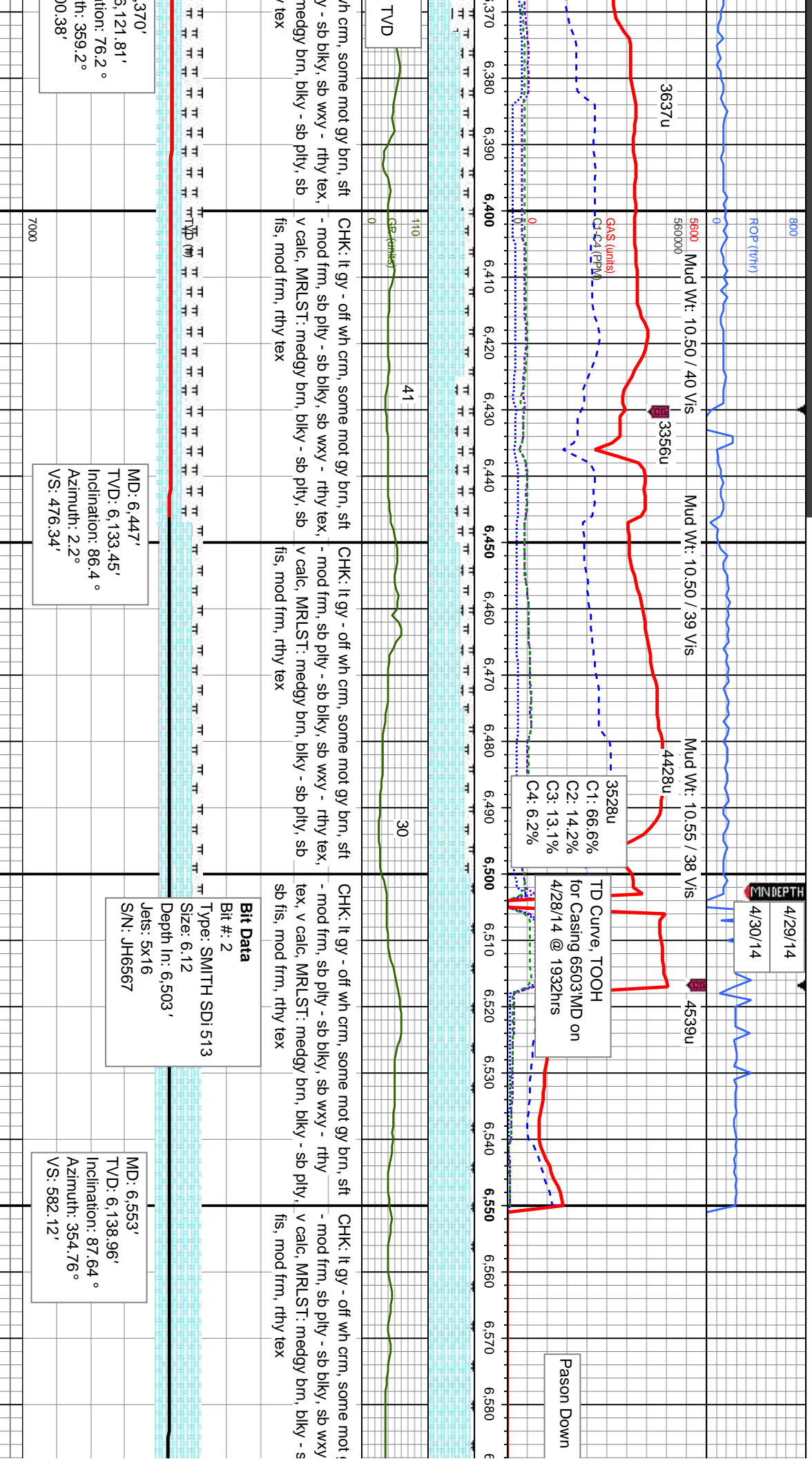
MRLST: medgy brn, blk - sb ply, sb fis,
mod frm, rthy tex, CHK: It gy - off wh crm,
some mot gy brn, sft - mod frm, sb ply - sb
blk, sb wxy - rthy tex, v calc

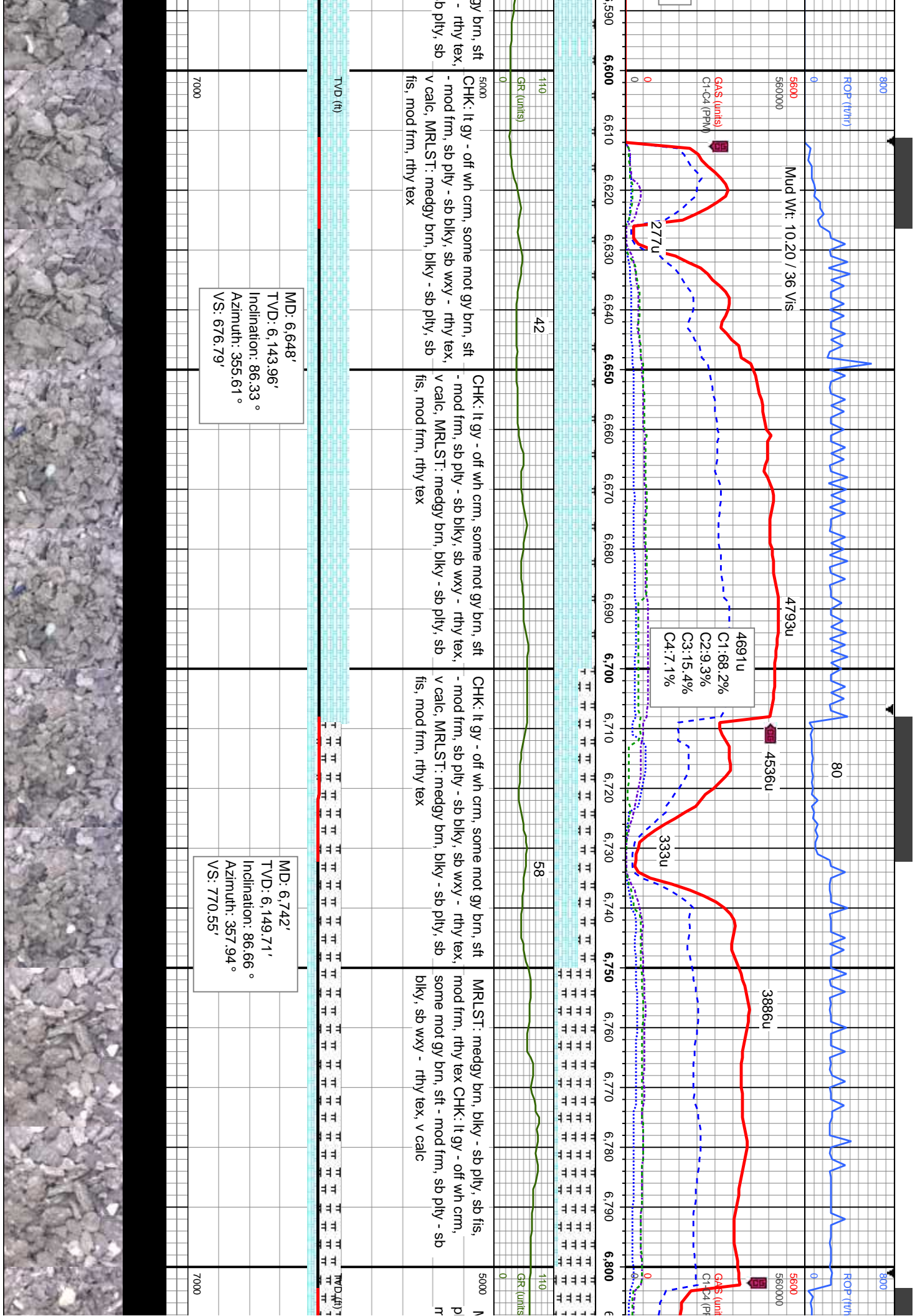
CHK: It gy - off wh crm, some mot gy brn, sft
- mod frm, sb ply - sb blk, sb wxy - rthy tex,
v calc, MRLST: medgy brn, blk - sb ply, sb
fis, mod frm, rthy tex

MD: 6,182'
TVD: 6,044.5'
Inclination: 57.2°
Azimuth: 358.3°
VS: 229.97'

MD: 6,276'
TVD: 6,090.26'
Inclination: 64.5°
Azimuth: 358.1°
VS: 312.01'

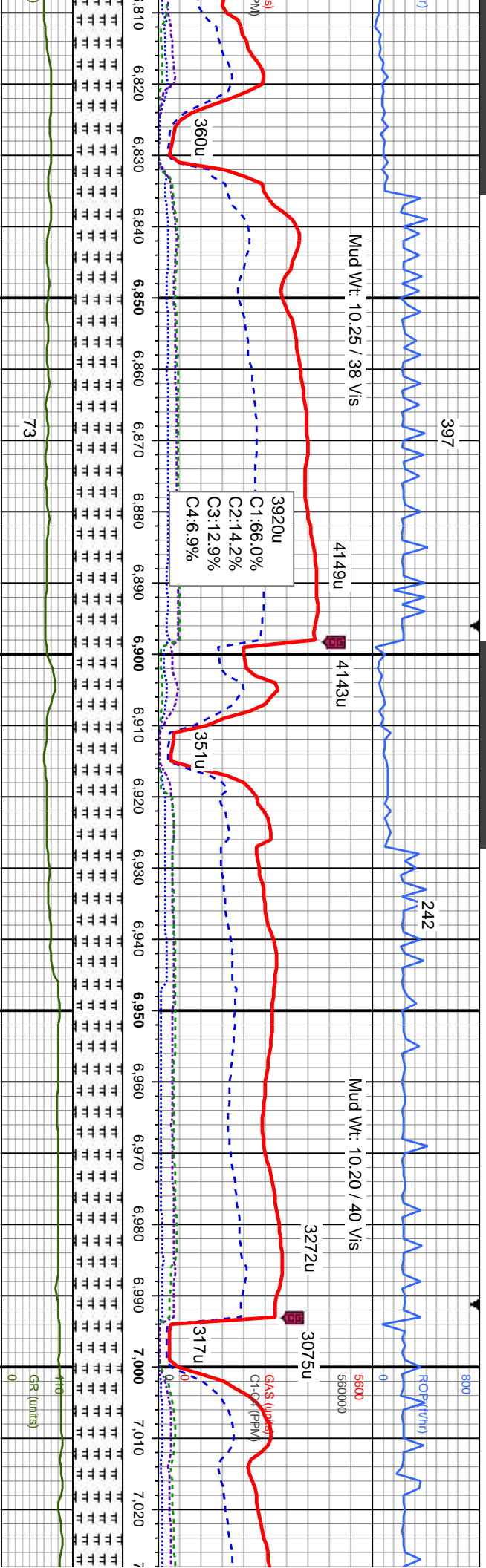
MD: 6,360'
TVD: 6,118.0'
Inclination: 64.5°
Azimuth: 358.1°
VS: 312.01'





MD: 6,648'
TVD: 6,143.96'
Inclination: 86.33 °
Azimuth: 355.61 °
VS: 676.79'

MD: 6,742'
TVD: 6,149.71'
Inclination: 86.66 °
Azimuth: 357.94 °
VS: 770.55'



MRLST: medgy-dkgy brn, blkly - sb
ty, sb fis, mod frm, rthy tex, imbd
ic fos, Inoc frags

MRLST: medgy-dkgy brn, blkly - sb
ply, sb fis, mod frm, rthy tex, imbd mic
fos, Inoc frags, abnt bent

MRLST: medgy-dkgy brn, blkly - sb
sb fis, mod frm, rthy tex, imbd mic fos,
Inoc frags, abnt bent

MRLST: medgy-dkgy brn, blkly - sb
sb fis, mod frm, rthy tex, imbd mic fos,
Inoc frags, abnt bent

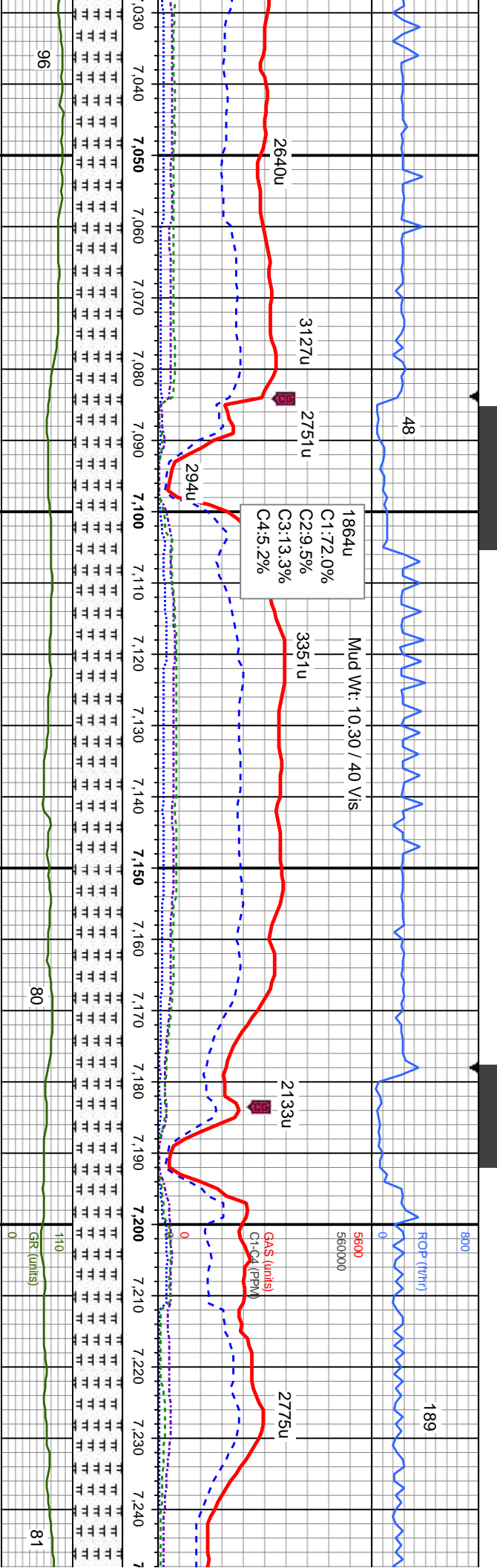
MRLST: medgy-dkgy
sb fis, mod frm, rthy t
Inoc frags, com bent

MD: 6,837'
TVD: 6,153.97'
Inclination: 88.19 °
Azimuth: 6.8 °
VS: 864.33'

MD: 6,930'
TVD: 6,154.85'
Inclination: 90.72 °
Azimuth: 6.53 °
VS: 956.45'

MD: 7,025'
TVD: 6,153.3'
Inclination: 9
Azimuth: 6.4
VS: 1,050.55'



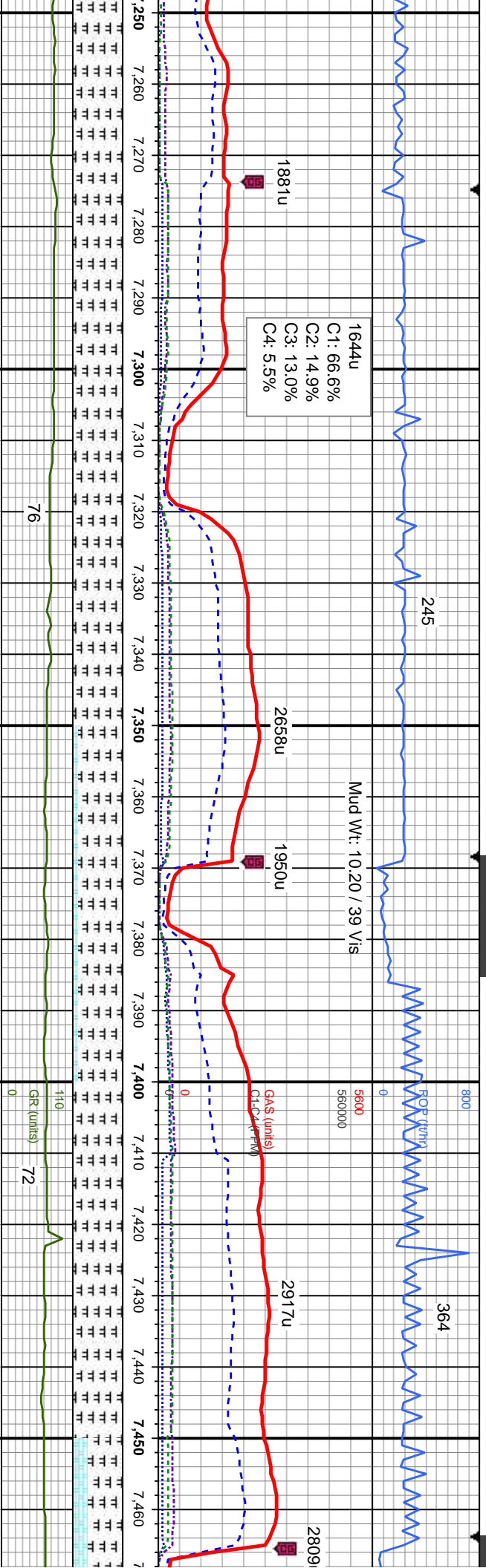


brn, blkly - sb pfty, tex, imbd mic fos,	MRLST: medgy-dkgy brn, blkly - sb pfty, sb fis, mod frm, rthy tex, imbd mic fos, Inoc frags, com bent	MRLST: medgy-dkgy brn, blkly - sb pfty, sb fis, mod frm, rthy tex, imbd mic fos, Inoc frags, com bent	MRLST: medgy-dkgy brn, blkly - sb pfty, sb fis, mod frm, rthy tex, imbd mic fos, Inoc frags, com bent	MRLST: medgy-dkgy brn, blkly - sb pfty, sb fis, mod frm, rthy tex, imbd mic fos, Inoc frags, com bent
96			80	
			110	
			81	
			Gr (units)	
			0	
			5000	

MD: 7,119'
TVD: 6,150.99'
Inclination: 91.71 °
Azimuth: 3.5°
VS: 1,144.01'

MD: 7,214'
TVD: 6,148.95'
Inclination: 90.8 °
Azimuth: 2°
VS: 1,238.76'





MRLST: medgy-dkgy brn, blkly - sb pily,
sb fis, mod frm, rthy tex, imbd mic fos,
Inoc frags, com bent

MRLST: medgy-dkgy brn, blkly - sb pily,
sb fis, mod frm, rthy tex, imbd mic fos,
Inoc frags, com bent

MRLST: medgy-dk gy brn, blkly - sb pily,
sb fis, mod frm, rthy tex, imbd mic fos,
Inoc frags, com bent, CHK: lt gy - off wh
crrn, some mot gy brn, sft - mod frm, sb
pily - sb blkly, sb wxy - rthy tex, v calc

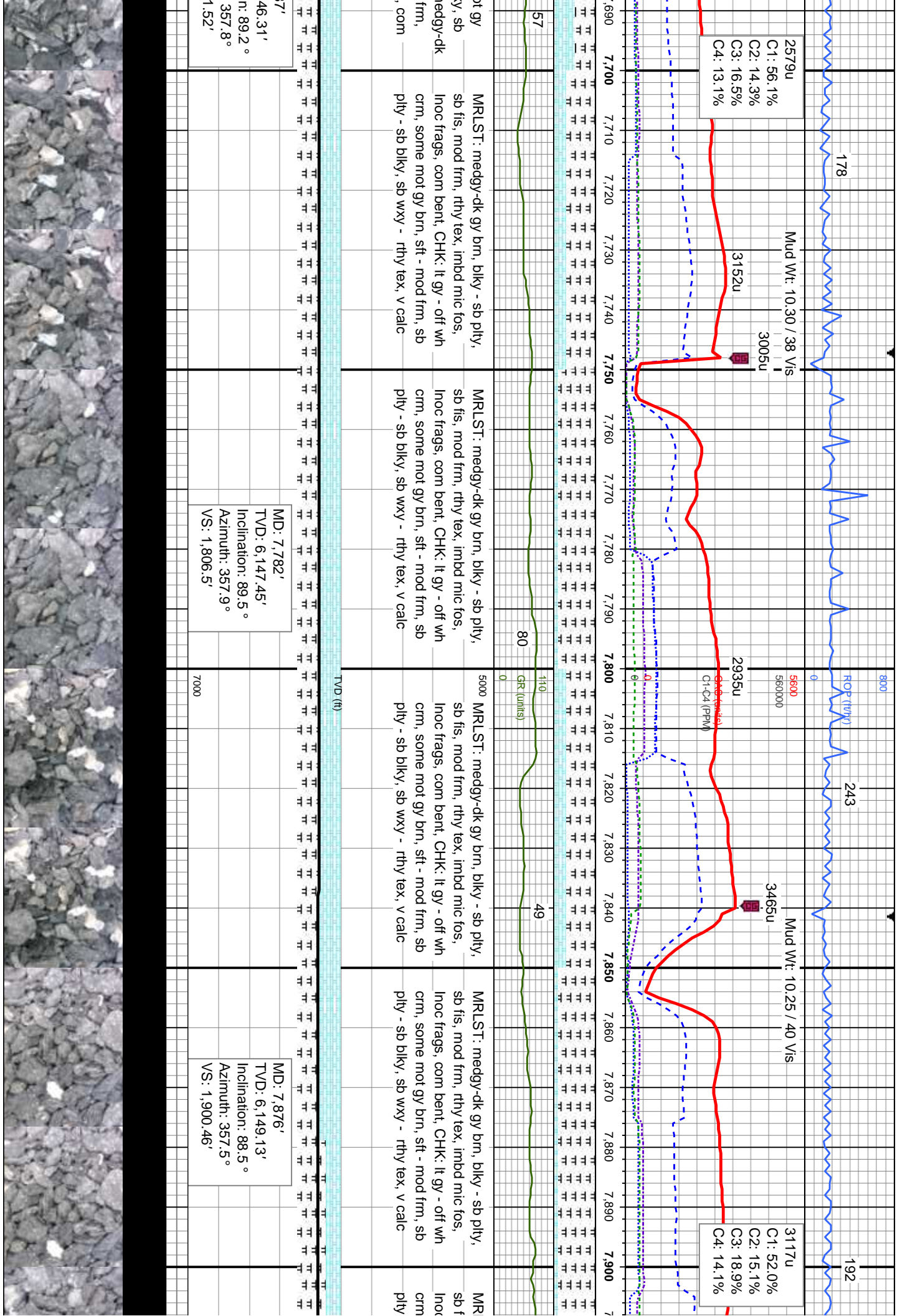
MRLST: medgy-dkgy brn, blkly - sb pily,
sb fis, mod frm, rthy tex, imbd mic fos,
Inoc frags, com bent

MRLST: medgy-dkgy brn, blkly - sb pily,
sb fis, mod frm, rthy tex, imbd mic fos,
Inoc frags, com bent, CHK: lt gy - off wh
crrn, some mot gy brn, sft - mod frm, sb
pily - sb blkly, sb wxy - rthy tex, v calc

MD: 7,309'
TVD: 6,147.85'
Inclination: 90.6°
Azimuth: 1.4°
VS: 1,333.63'

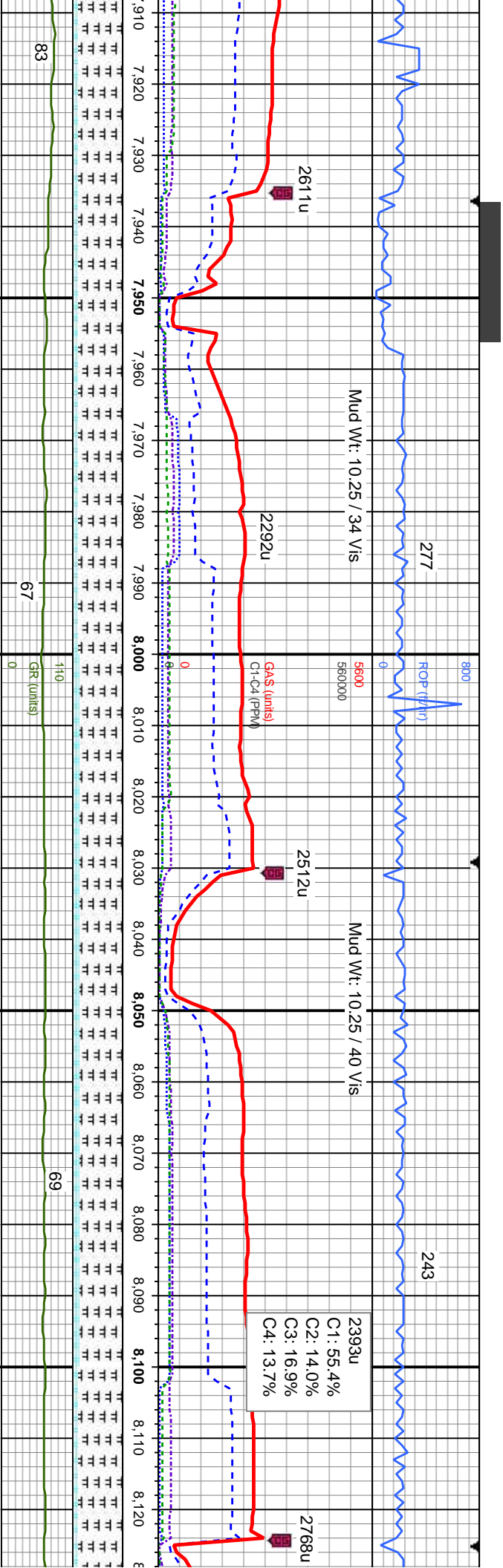
MD: 7,403'
TVD: 6,147.5'
Inclination: 89.8°
Azimuth: 359.8°
VS: 1,427.58'





MD: 7,782'
TVD: 6,147.45'
Inclination: 89.5°
Azimuth: 357.9°
VS: 1,806.5'

MD: 7,876'
TVD: 6,149.13'
Inclination: 88.5°
Azimuth: 357.5°
VS: 1,900.46'



83

67

5000

69

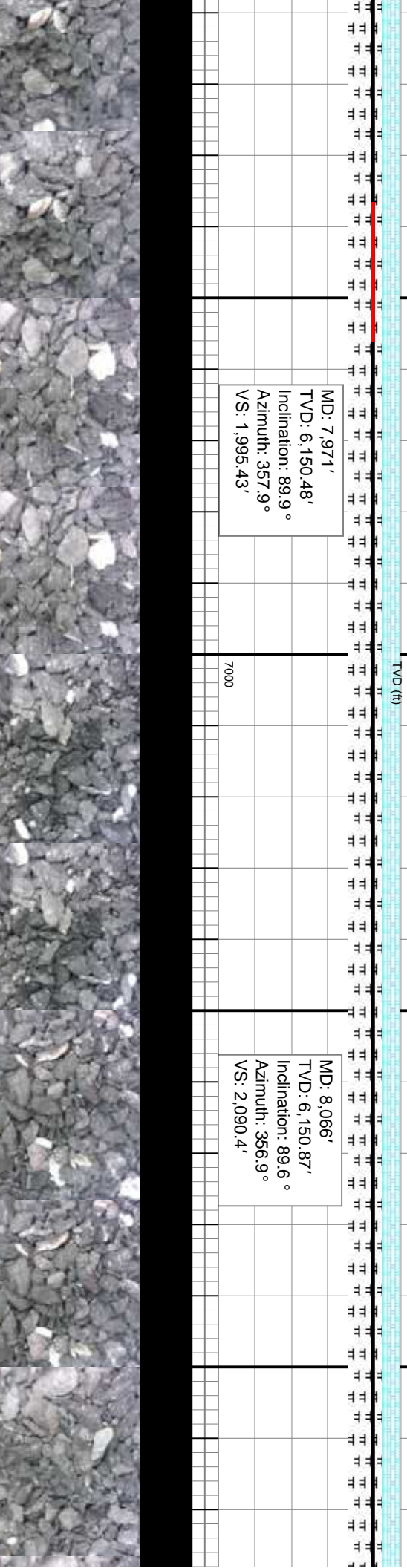
MRLST: medgy-dk gy brn, blkly - sb pty, sb fis, mod frm, rthy tex, imbd mic fos, inoc frags, com bent, CHK: lt gy - off wh crm, some mot gy brn, sft - mod frm, sb pty - sb blkly, sb wxy - rthy tex, v calc

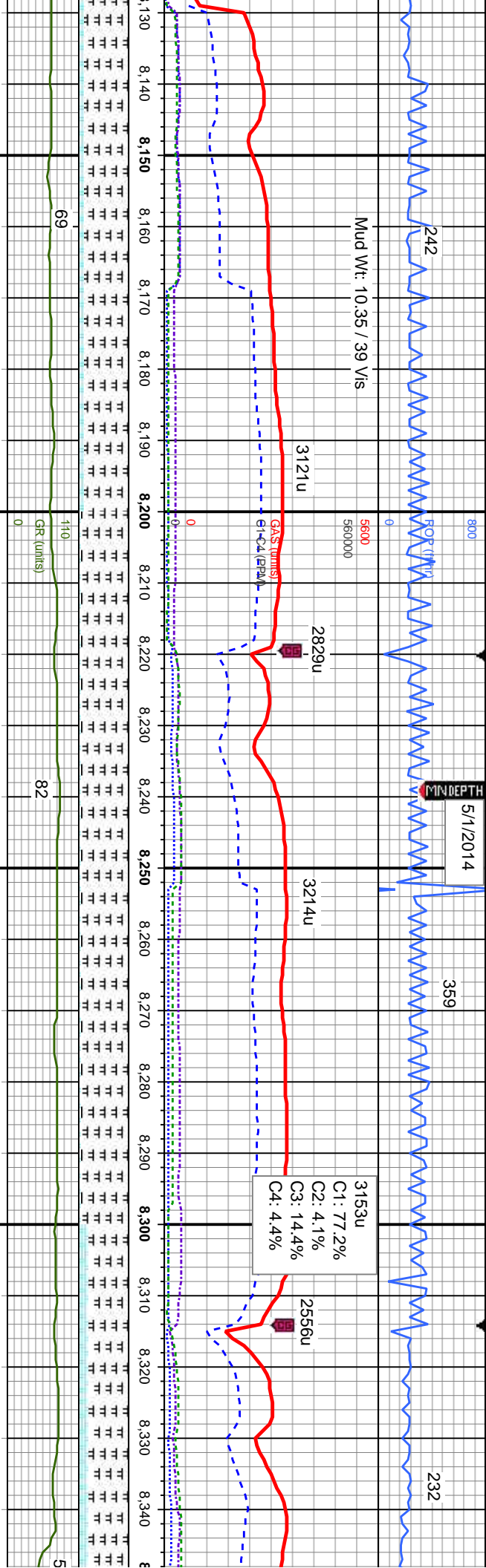
MRLST: medgy-dk gy brn, blkly - sb pty, sb fis, mod frm, rthy tex, imbd mic fos, inoc frags, com bent, CHK: lt gy - off wh crm, some mot gy brn, sft - mod frm, sb pty - sb blkly, sb wxy - rthy tex, v calc

MRLST: medgy-dk gy brn, blkly - sb pty, sb fis, mod frm, rthy tex, imbd mic fos, inoc frags, com bent, CHK: lt gy - off wh crm, some mot gy brn, sft - mod frm, sb pty - sb blkly, sb wxy - rthy tex, v calc

MD: 7,971'
TVD: 6,150.48'
Inclination: 89.9°
Azimuth: 357.9°
VS: 1,995.43'

MD: 8,066'
TVD: 6,150.87'
Inclination: 89.6°
Azimuth: 356.9°
VS: 2,090.4'





brn, blkly - sb pily,
k, imbd mic fos,
CHK: lt gy - off wh
sft - mod frm, sb
rthy tex, v calc

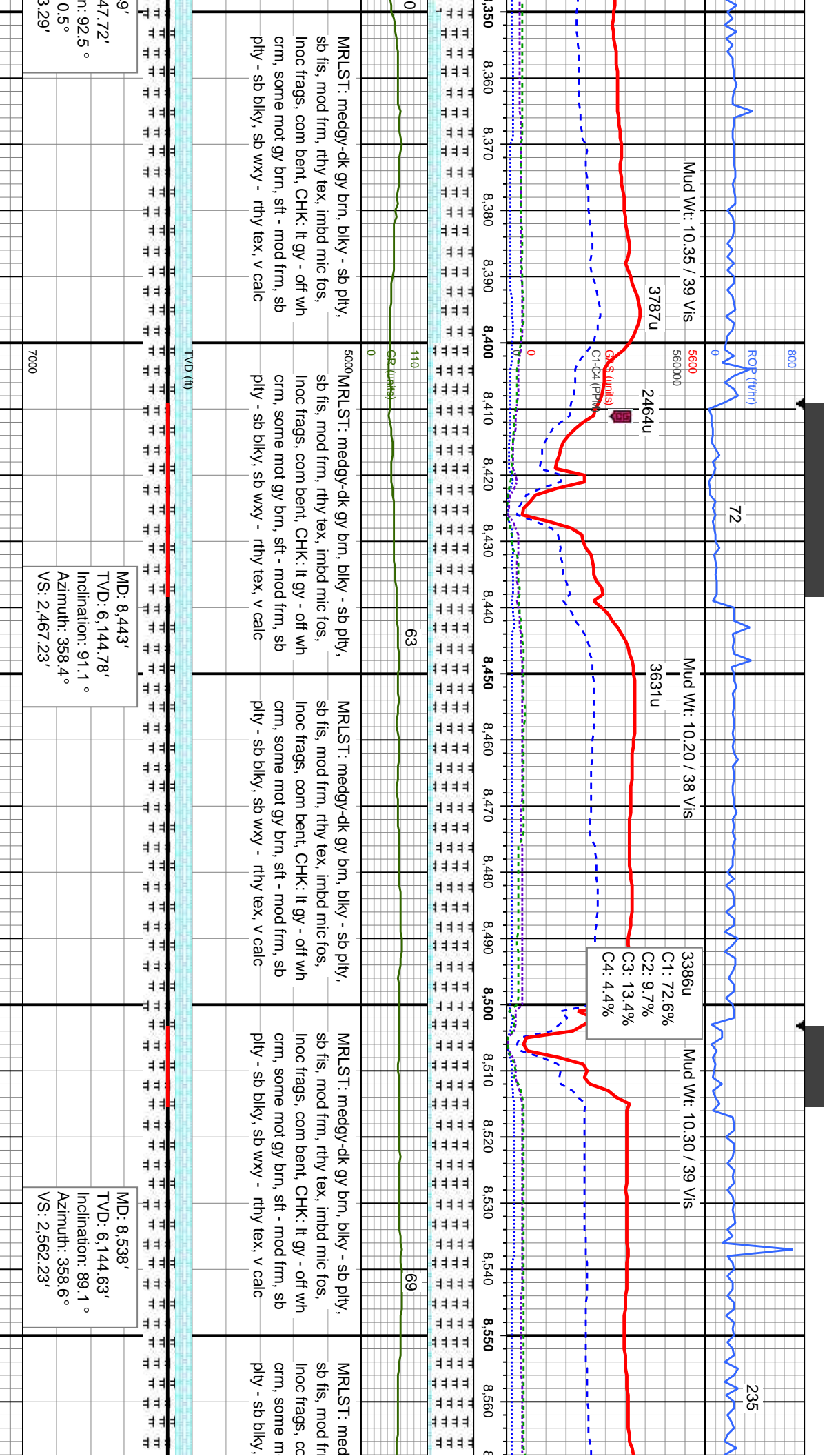
MRLST: medgy-dk gy brn, blkly - sb pily,
sb fis, mod frm, rthy tex, imbd mic fos,
Inoc frags, com bent, CHK: lt gy - off wh
crm, some mot gy brn, sft - mod frm, sb
pily - sb blkly, sb wxy - rthy tex, v calc

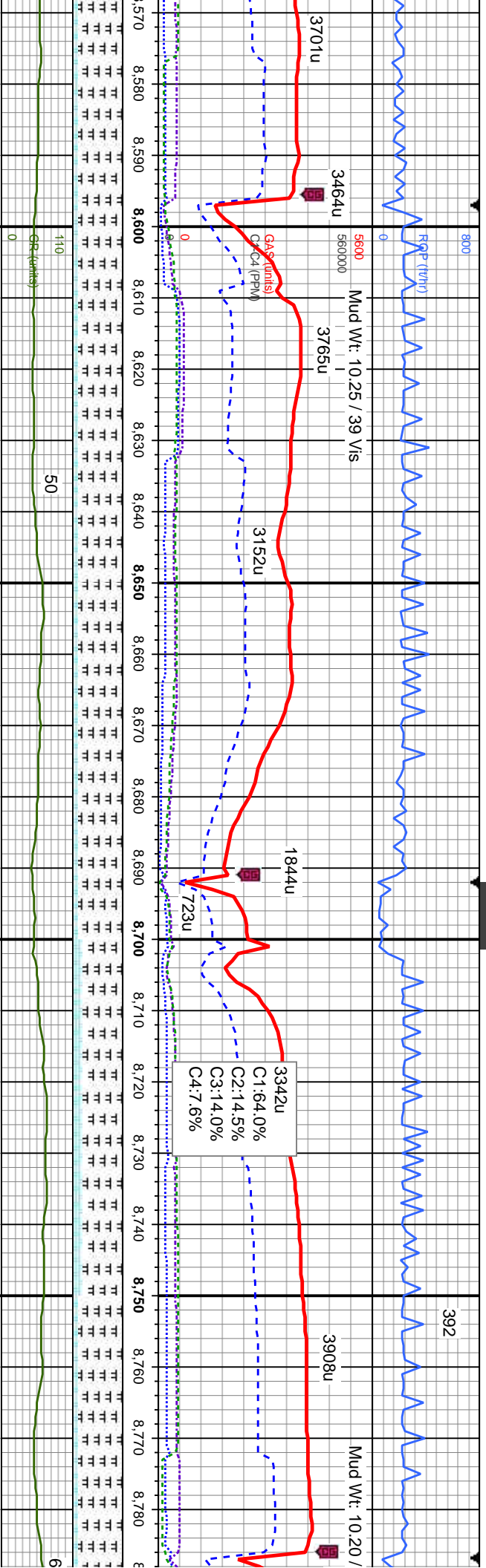
MRLST: medgy-dk gy brn, blkly - sb pily,
sb fis, mod frm, rthy tex, imbd mic fos,
Inoc frags, com bent, CHK: lt gy - off wh
crm, some mot gy brn, sft - mod frm, sb
pily - sb blkly, sb wxy - rthy tex, v calc

MRLST: medgy-dk gy brn, blkly - sb pily,
sb fis, mod frm, rthy tex, imbd mic fos,
Inoc frags, com bent, CHK: lt gy - off wh
crm, some mot gy brn, sft - mod frm, sb
pily - sb blkly, sb wxy - rthy tex, v calc

MD: 8,160'	TVD: 6,151.32'	Inclination: 89.8°	Azimuth: 357.9°	VS: 2,184.36'
MD: 8,255'	TVD: 6,150.62'	Inclination: 91°	Azimuth: 358.4°	VS: 2,279.35'
MD: 8,34	TVD: 6,1	Inclination	Azimuth:	VS: 2,37







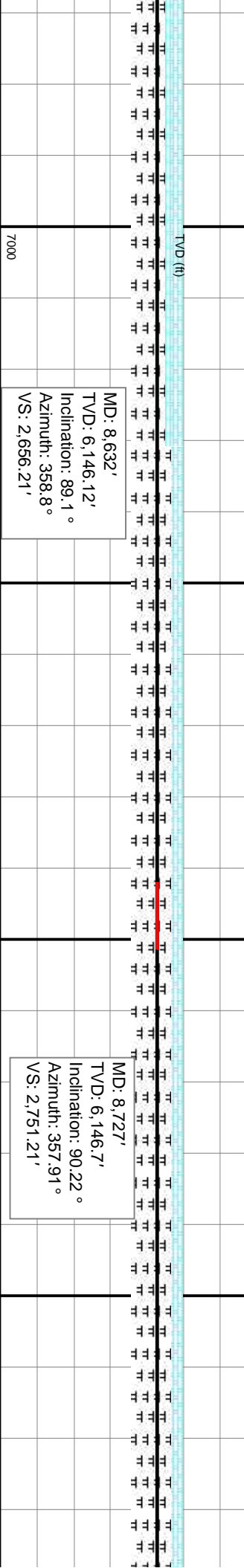
gy-dk gy brn, blkly - sb pily,
n, rthy tex, imbd mic fos,
m bent, CHK: lt gy - off wh
mot gy brn, sft - mod frm, sb
sb wxy - rthy tex, v calc

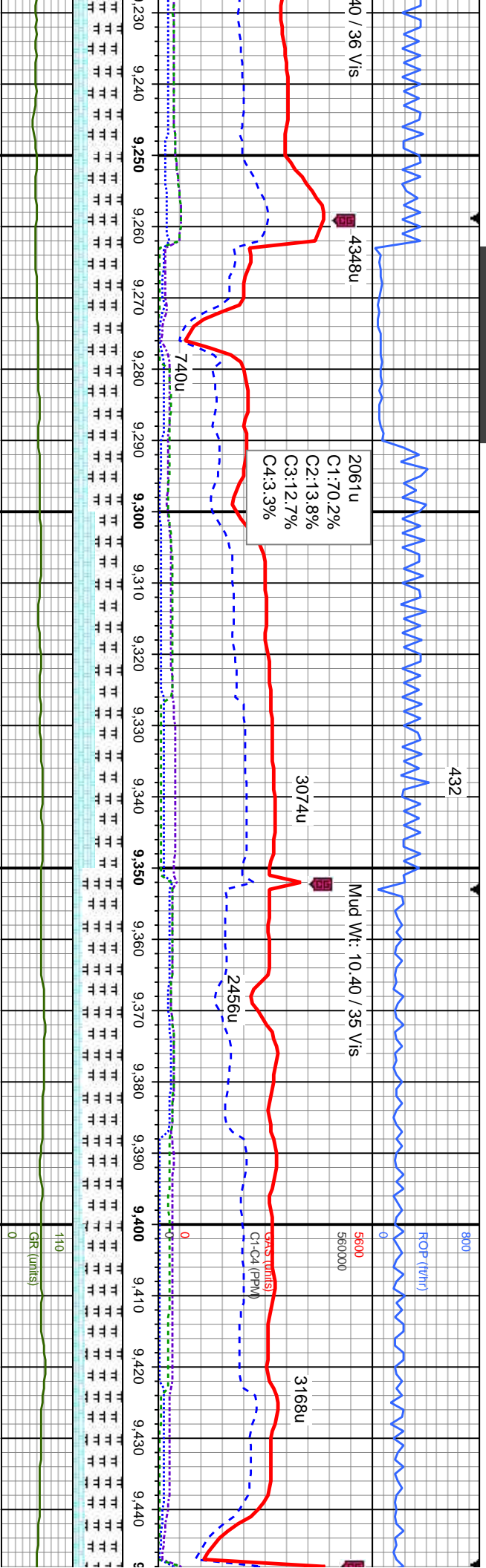
500' MRLST: medgy-dk gy brn, blkly - sb pily,
sb fis, mod frm, rthy tex, imbd mic fos,
Inoc frags CHK: lt gy - off wh crm, some
mot gy brn, sft - mod frm, sb pily - sb
blkly, sb wxy - rthy tex, v calc

MRLST: medgy-dk gy brn, blkly - sb pily, sb
fis, mod frm, rthy tex, imbd mic fos, Inoc
frags CHK: lt gy - off wh crm, some mot gy
brn, sft - mod frm, sb pily - sb blkly, sb wxy
- rthy tex, v calc

MRLST: medgy-dk gy brn, blkly - sb pily,
sb fis, mod frm, rthy tex, imbd mic fos,
Inoc frags CHK: lt gy - off wh crm, some
mot gy brn, sft - mod frm, sb pily - sb
blkly, sb wxy - rthy tex, v calc

MRLST: medgy-dk gy brn, blkly - sb pily,
sb fis, mod frm, rthy tex, imbd m
Inoc frags CHK: lt gy - off wh cr
mot gy brn, sft - mod frm, sb pily
blkly, sb wxy - rthy tex, v calc





brn, blkly - sb ply, x, imbd mic fos, off wh crm, some m, sb ply - sb v calc

MRLST: medgy-dk gy brn, blkly - sb ply, sb fis, mod frm, rthy tex, imbd mic fos, Inoc frags CHK: It gy - off wh crm, some mot gy brn, sft - mod frm, sb ply - sb blkly, sb wxy - rthy tex, v calc

MRLST: medgy-dk gy brn, blkly - sb ply, sb fis, mod frm, rthy tex, imbd mic fos, Inoc frags CHK: It gy - off wh crm, some mot gy brn, sft - mod frm, sb ply - sb blkly, sb wxy - rthy tex, v calc

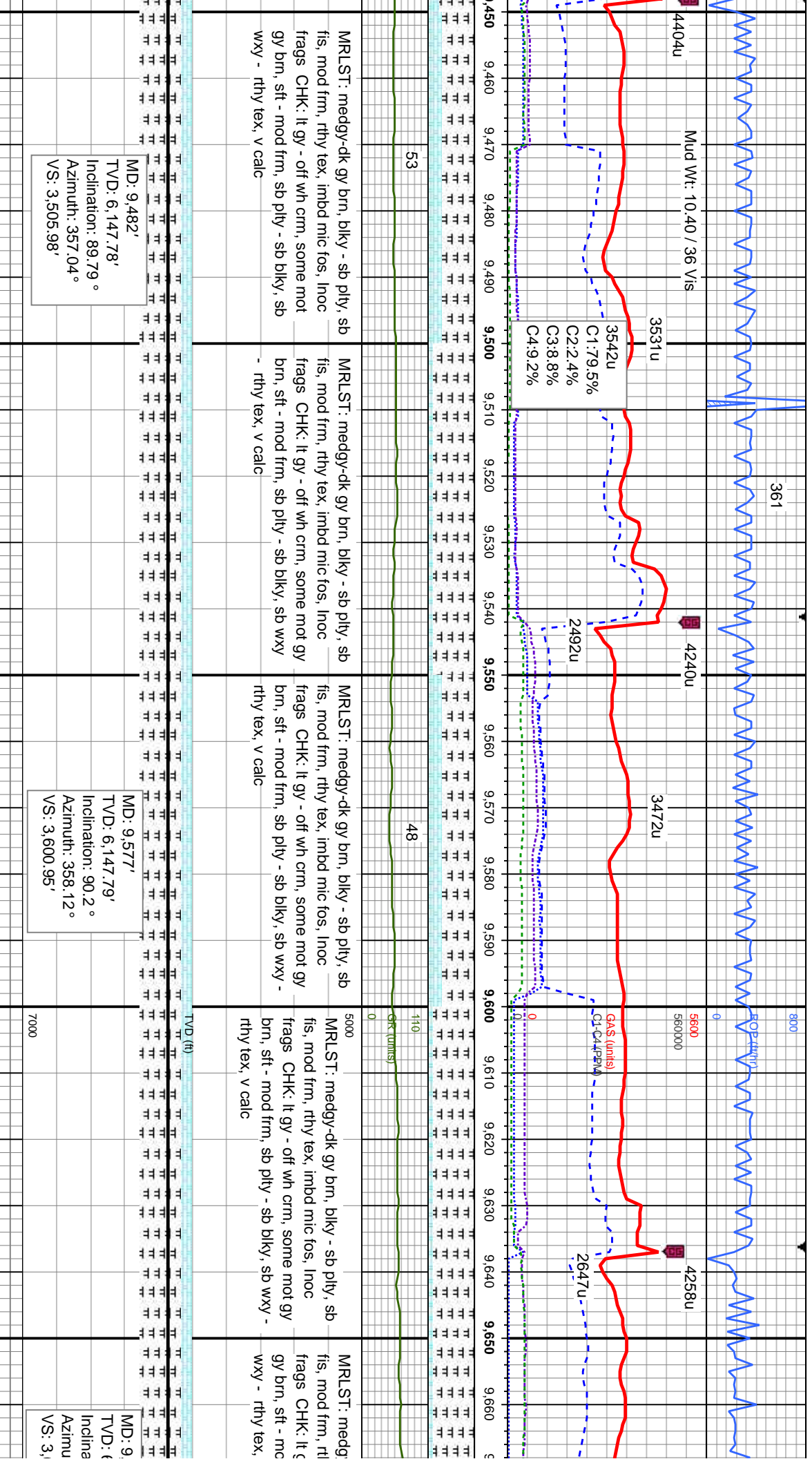
MRLST: medgy-dk gy brn, blkly - sb ply, sb fis, mod frm, rthy tex, imbd mic fos, Inoc frags CHK: It gy - off wh crm, some mot gy brn, sft - mod frm, sb ply - sb blkly, sb wxy - rthy tex, v calc

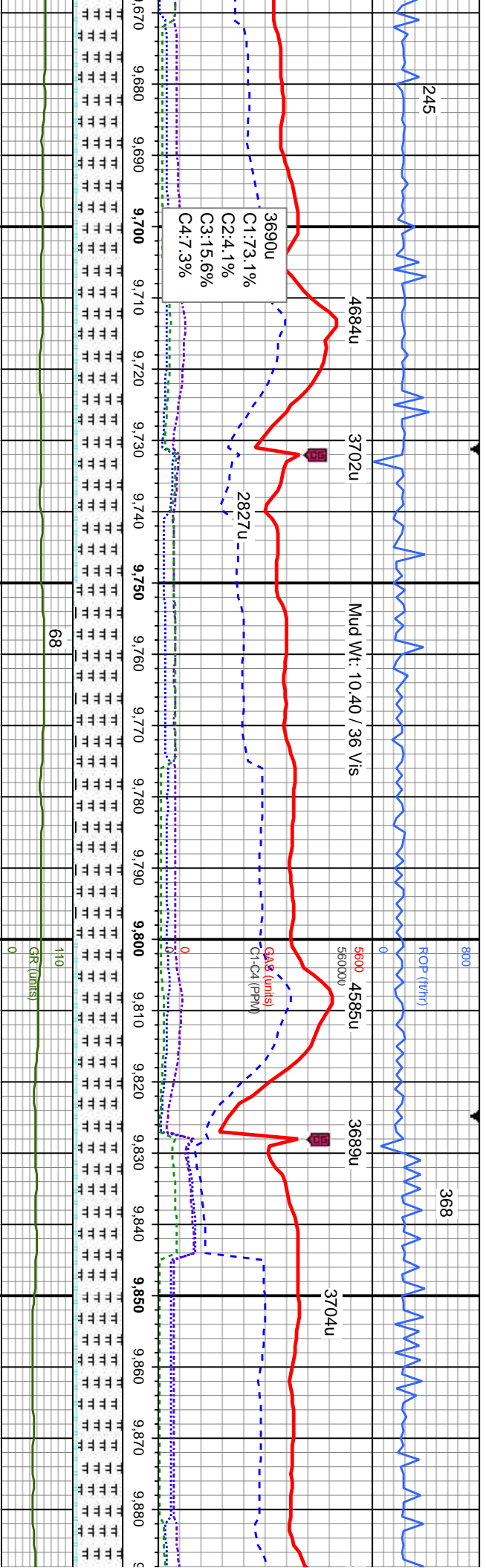
MRLST: medgy-dk gy brn, blkly - sb ply, sb fis, mod frm, rthy tex, imbd mic fos, Inoc frags CHK: It gy - off wh crm, some mot gy brn, sft - mod frm, sb ply - sb blkly, sb wxy - rthy tex, v calc

MD: 9,294'
TVD: 6,147.61'
Inclination: 90.26°
Azimuth: 357.76°
VS: 3,318.08'

MD: 9,388'
TVD: 6,147.5'
Inclination: 89.87°
Azimuth: 356.61°
VS: 3,412.03'







9,670 9,680 9,690 9,700 9,710 9,720 9,730 9,740 9,750 9,760 9,770 9,780 9,790 9,800 9,810 9,820 9,830 9,840 9,850 9,860 9,870 9,880

4684u 3702u 2827u 5600u 4585u 3689u 3704u

Mud Wt: 10.40 / 36 Vis

ROP (ft/hr)

GAC (units)

C1-C4 (ppm)

3690u 2827u 5600u 4585u 3689u 3704u

C1:7.3,1%
C2:4.1%
C3:15.6%
C4:7.3%

MD: 9.766'
TVD: 6,147.89'
Inclination: 89.03°
Azimuth: 356.25°
VS: 3,789.87'

MRSLT: medgy-dk gy brn, blkly - sb pily, sb
fis, mod frm, rthy tex, imbd mic fos, inoc
frags CHK: lt gy - off wh crm, some mot gy
brn, sft - mod frm, sb pily - sb blkly, sb wxy -
rthy tex, v calc

MRSLT: medgy-dk gy brn, blkly - sb pily, sb
fis, mod frm, rthy tex, imbd mic fos, inoc
frags CHK: lt gy - off wh crm, some mot gy
brn, sft - mod frm, sb pily - sb blkly, sb wxy -
rthy tex, v calc

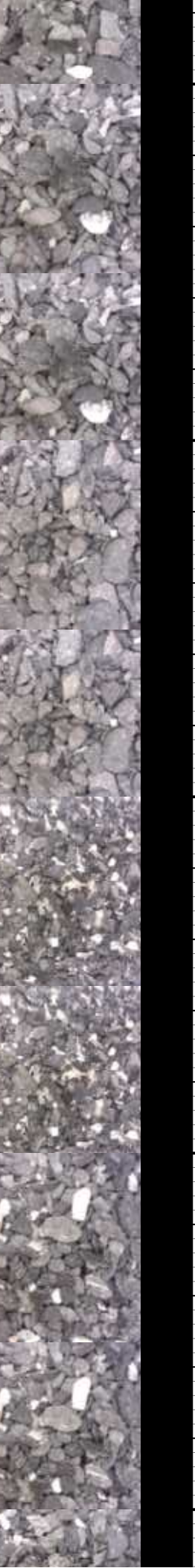
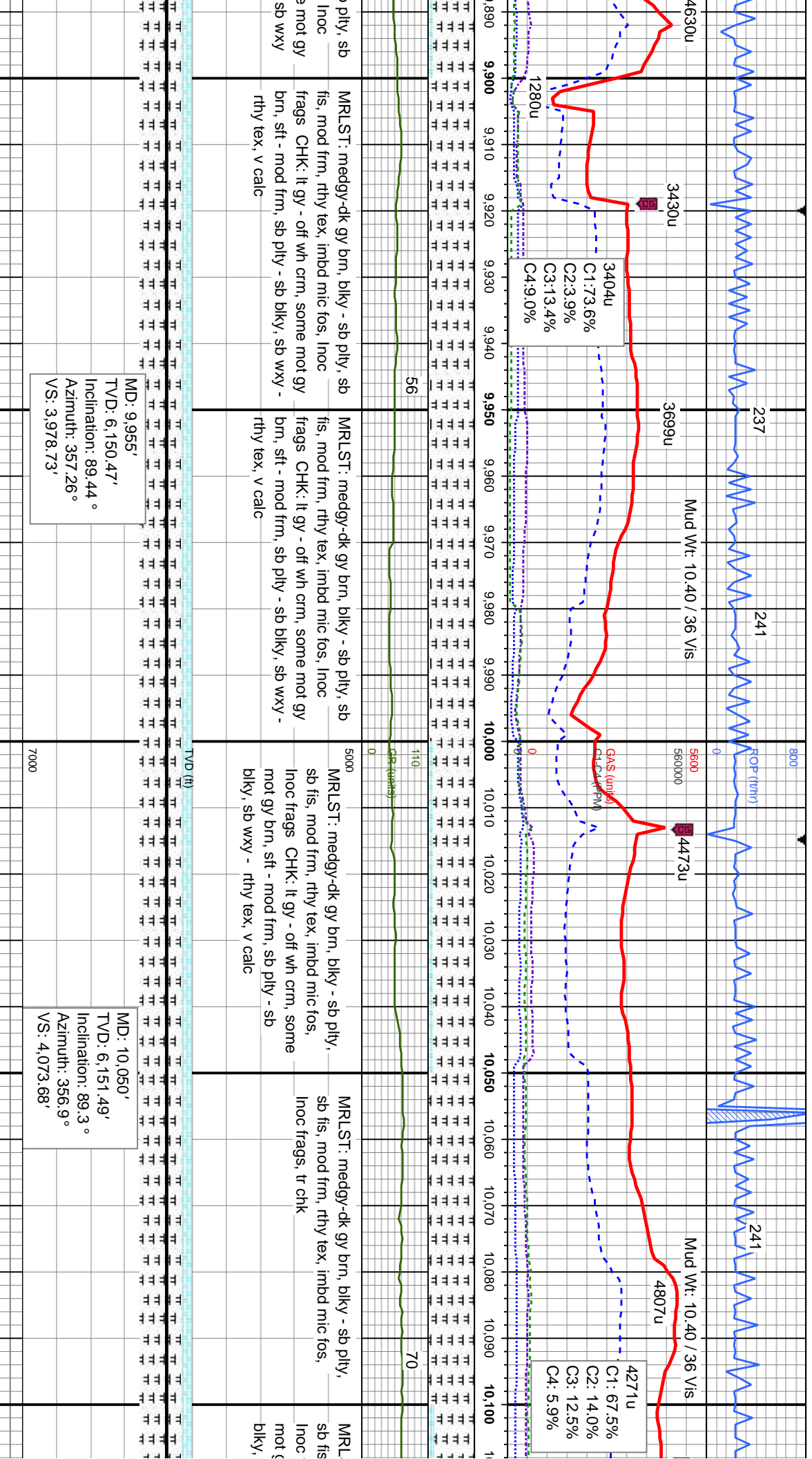
MRSLT: medgy-dk gy brn, blkly - sb pily, sb
fis, mod frm, rthy tex, imbd mic fos, inoc
frags CHK: lt gy - off wh crm, some mot gy
brn, sft - mod frm, sb pily - sb blkly, sb wxy -
rthy tex, v calc

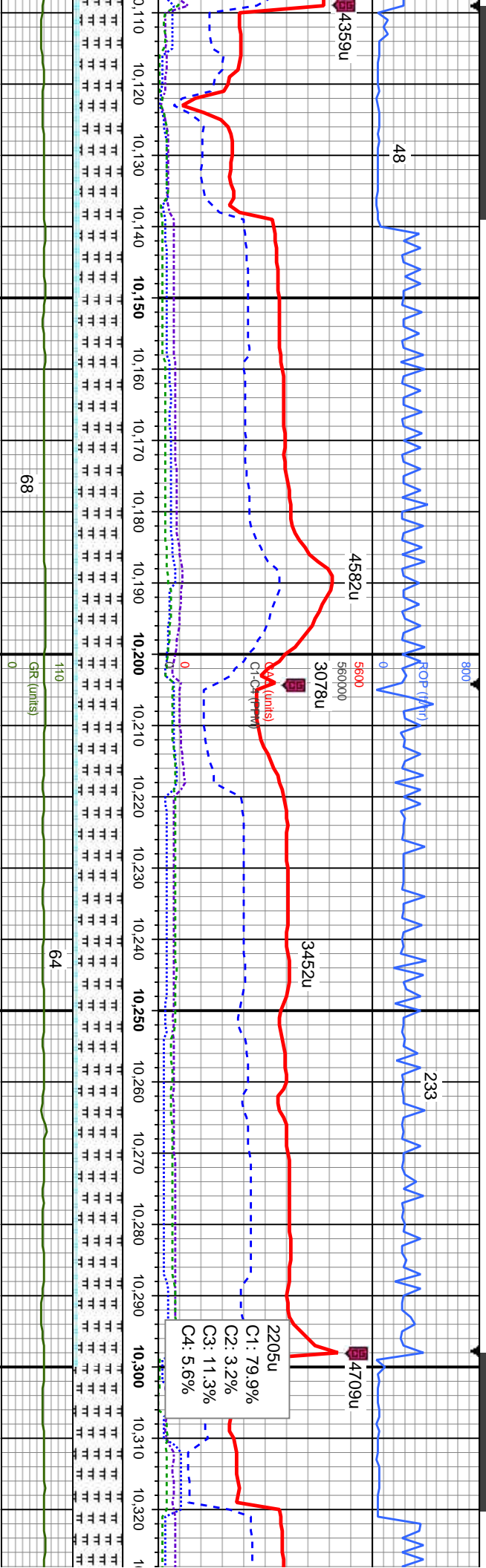
671'

3,147.36'
Inclination: 90.33°
Azimuth: 357.48°
VS: 694.93'

MD: 9.860'
TVD: 6,149.34'
Inclination: 89.2°
Azimuth: 356.85°
VS: 3,883.78'







ST: medgy-dk gy brn, blkly - sb pily, mod frm, rthy tex, imbd mic fos, frags CHK: lt gy - off wh crm, some mot gy brn, sft - mod frm, sb pily - sb blkly, sb wxy - rthy tex, v calc

MRLST: medgy-dk gy brn, blkly - sb pily, sb fis, mod frm, rthy tex, imbd mic fos, Inoc frags CHK: lt gy - off wh crm, some mot gy brn, sft - mod frm, sb pily - sb blkly, sb wxy - rthy tex, v calc

5000 MRLST: medgy-dk gy brn, blkly - sb pily, sb fis, mod frm, rthy tex, imbd mic fos, Inoc frags CHK: lt gy - off wh crm, some mot gy brn, sft - mod frm, sb pily - sb blkly, sb wxy - rthy tex, v calc

MRLST: medgy-dk gy brn, blkly - sb pily, sb fis, mod frm, rthy tex, imbd mic fos, Inoc frags CHK: lt gy - off wh crm, some mot gy brn, sft - mod frm, sb pily - sb blkly, sb wxy - rthy tex, v calc

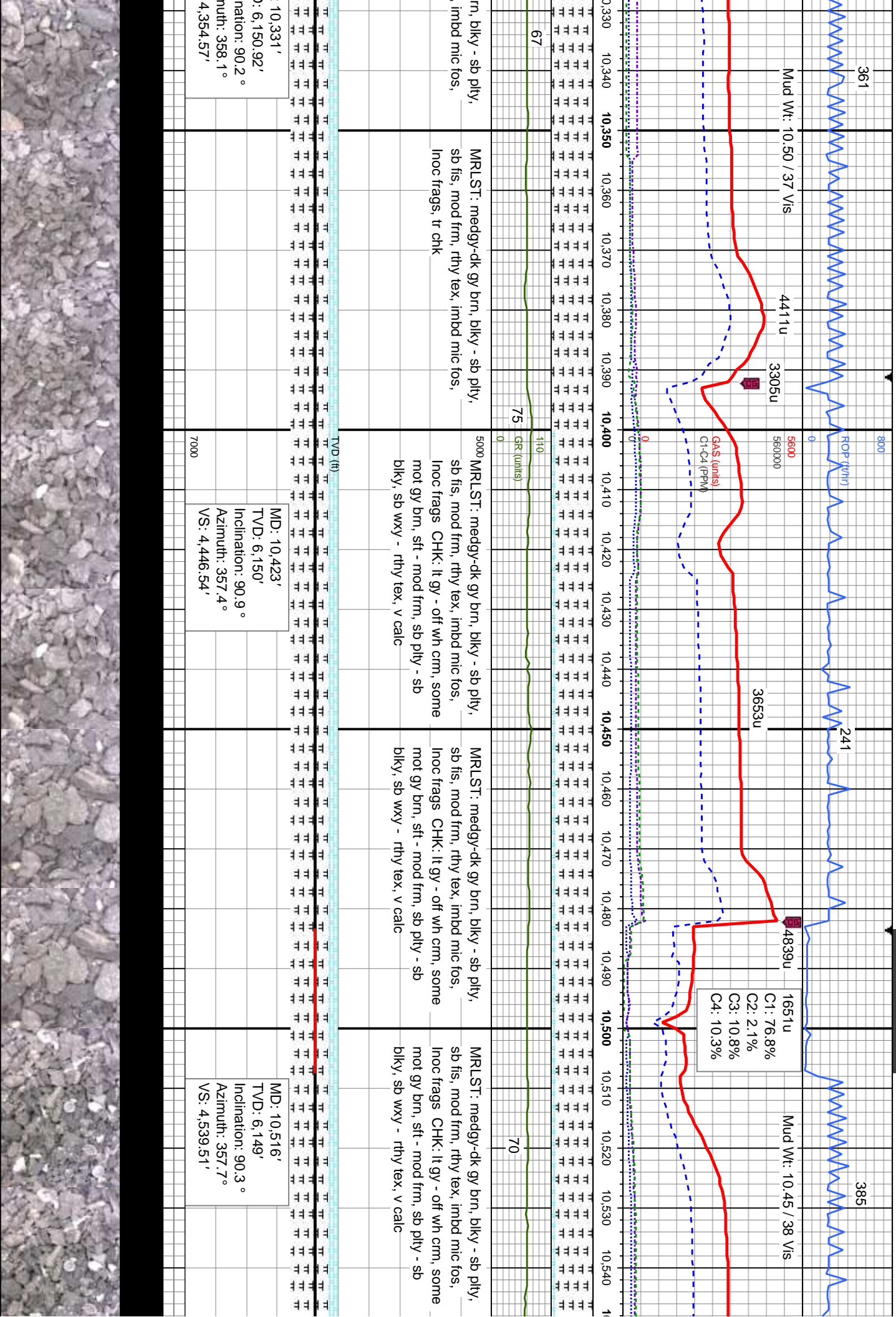
MRLST: medgy-dk gy b sb fis, mod frm, rthy tex Inoc frags, tr chk

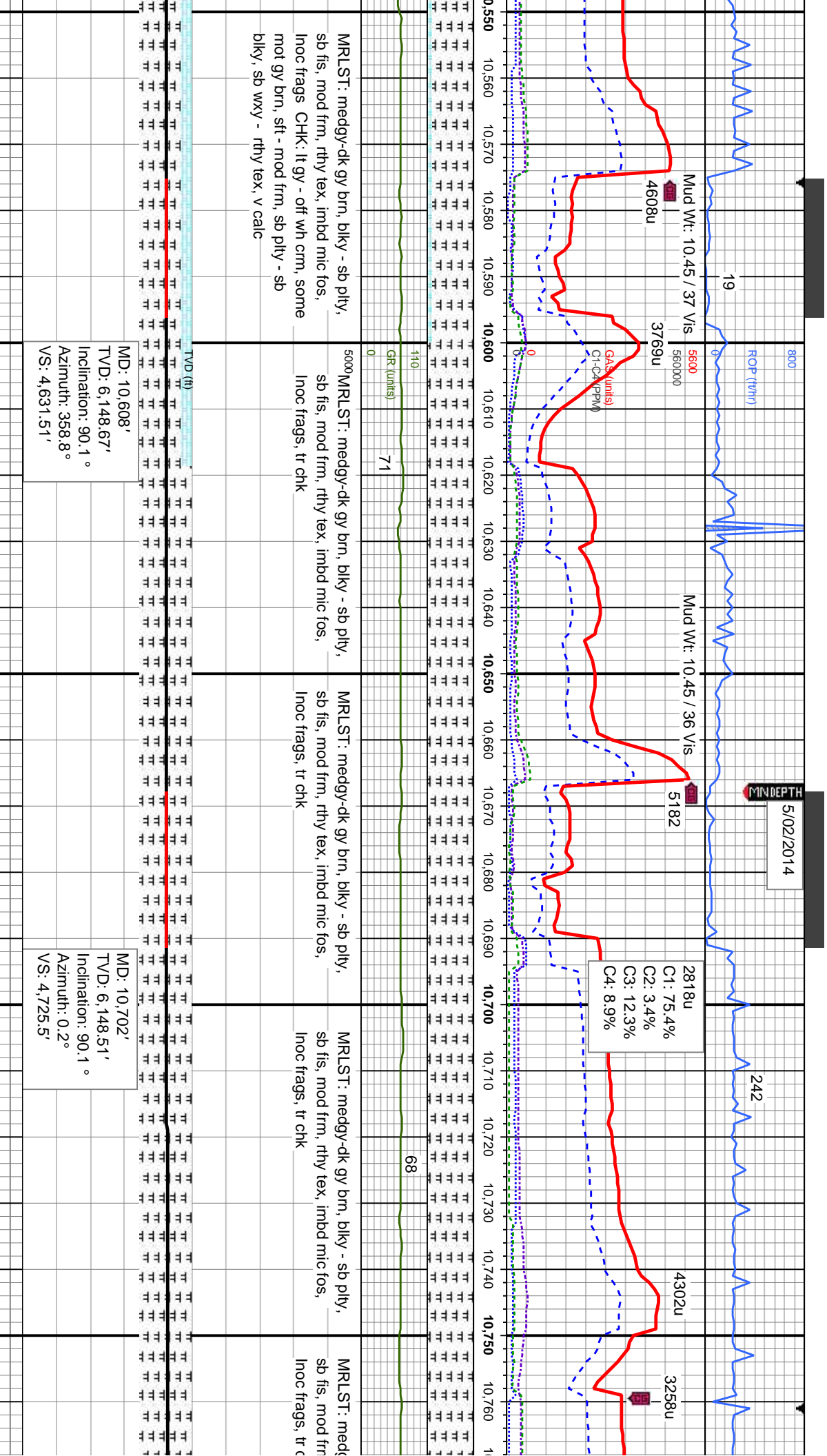
MD: 10,144'
TVD: 6,151.81'
Inclination: 90.3°
Azimuth: 357.9°
VS: 4,167.64'

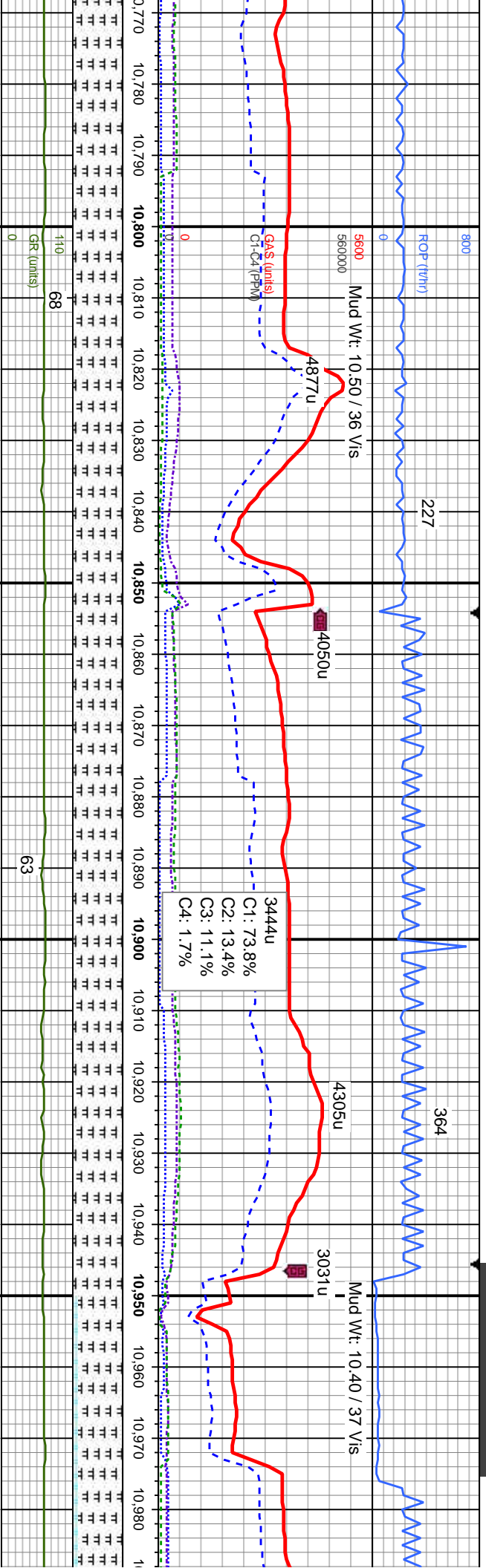
MD: 10,238'
TVD: 6,151.36'
Inclination: 90.3°
Azimuth: 356.6°
VS: 4,261.6'

MD:
TVD:
Incl:
Azir:
VS:









gy-brn, blkly - sb pty, rthy tex, imbd mic fos, blkly

MRLST: medgy-dk gy brn, blkly - sb pty, sb fis, mod frm, rthy tex, imbd mic fos, inoc frags, tr chk

MRLST: medgy-dk gy brn, blkly - sb pty, sb fis, mod frm, rthy tex, imbd mic fos, inoc frags, tr chk

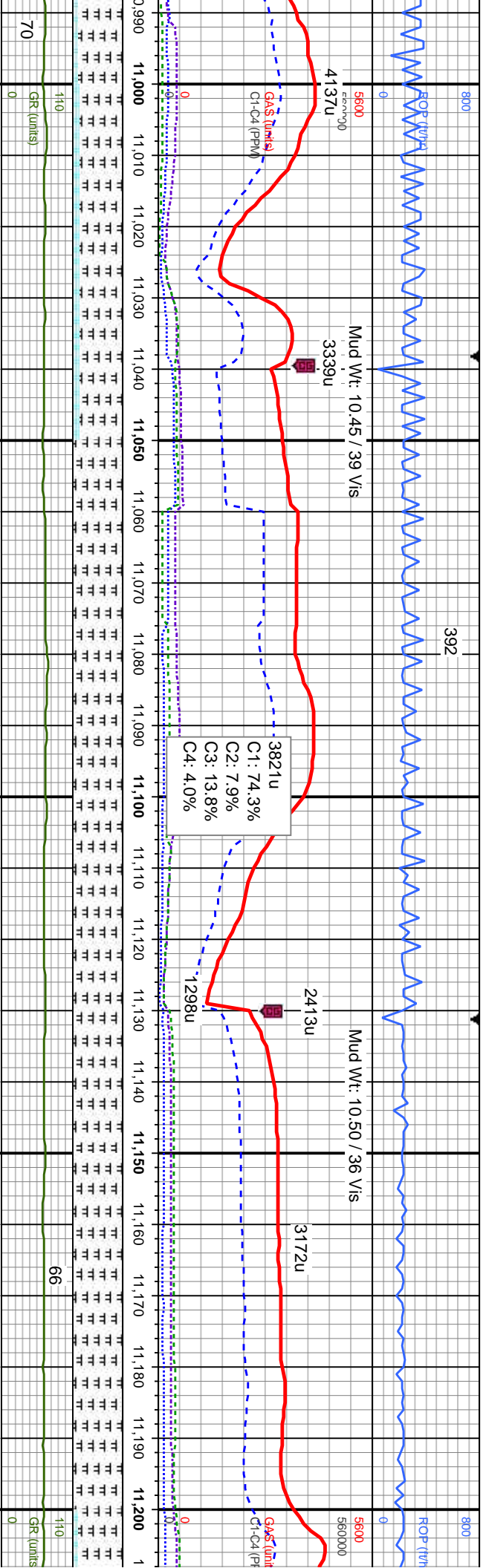
MRLST: medgy-dk gy brn, blkly - sb pty, sb fis, mod frm, rthy tex, imbd mic fos, inoc frags, tr chk

MD: 10,795'
TVD: 6,148.1'
Inclination: 90.4°
Azimuth: 359.5°
VS: 4,818.48'

MD: 10,887'
TVD: 6,147.79'
Inclination: 90°
Azimuth: 358.2°
VS: 4,910.48'

MD: 10,979'
TVD: 6,147.29'
Inclination: 90.62°
Azimuth: 359.94°
VS: 5,002.47'





70 0 110 0 70 0 66 0 5000 0

GR (units)

50~ MRLST: medgy-dk gy brn, blkly - sb pty, sb fis, mod frm, rthy tex, imbd mic fos, Inoc frags CHK: lt gy - off wh crm, some mot gy brn, sft - mod frm, sb pty - sb blkly, sb wxy - rthy tex, v calc

MRLST: medgy-dk gy brn, blkly - sb pty, sb fis, mod frm, rthy tex, imbd mic fos, Inoc frags, tr chk

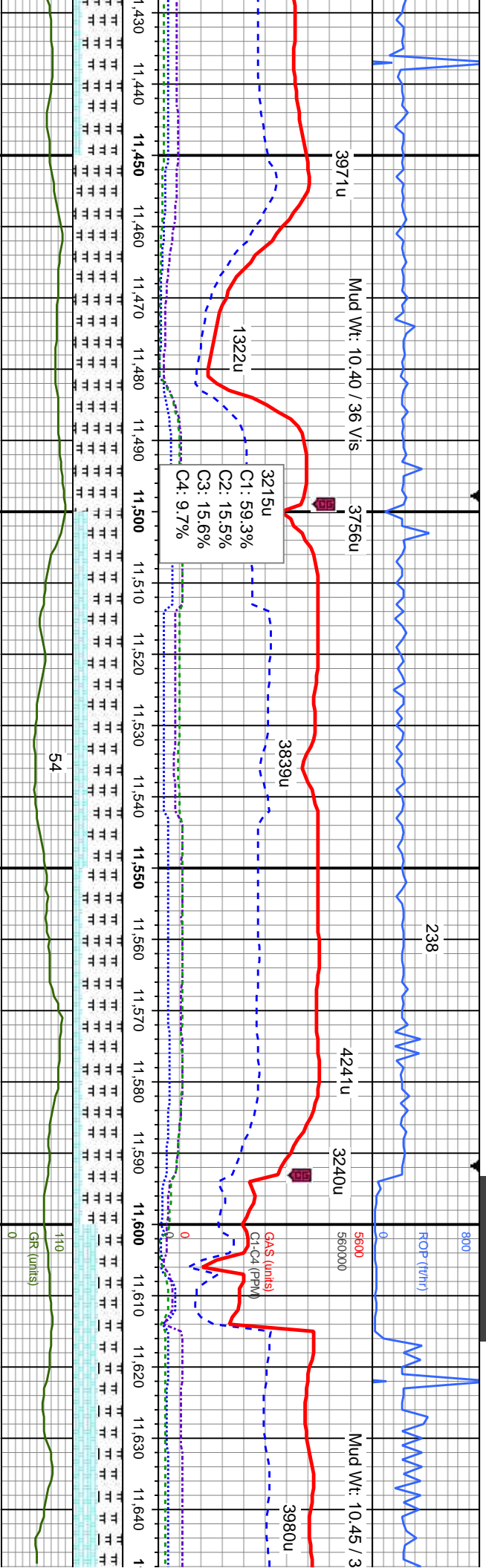
MRLST: medgy-dk gy brn, blkly - sb pty, sb fis, mod frm, rthy tex, imbd mic fos, Inoc frags, tr chk

MRLST: medgy-dk gy brn, blkly - sb pty, sb fis, mod frm, rthy tex, imbd mic fos, Inoc frags, tr chk

MD: 11,071'
TVD: 6,146.27'
Inclination: 90.66°
Azimuth: 358.95°
VS: 5,094.46'

MD: 11,163'
TVD: 6,143.9'
Inclination: 92.29°
Azimuth: 359.87°
VS: 5,186.42'





h, blkly - sb ply, sb
d mic fos, lnoc
crm, some mot gy
- sb blkly, sb wxy -

MRLST: medgy-dk gy brn, blkly - sb ply,
sb fis, mod frm, rthy tex, lnoc frags, tr chk

MRLST: medgy-dk gy brn, blkly - sb ply,
sb fis, mod frm, rthy tex, lnoc frags CHK:
lt gy - off wh crm, some mot gy brn, sft -
mod frm, sb ply - sb blkly, sb wxy - rthy
tex, v calc

MRLST: medgy-dk gy brn, blkly - sb ply,
sb fis, mod frm, rthy tex, lnoc frags
CHK: lt gy - off wh crm, some mot gy
brn, sft - mod frm, sb ply - sb blkly, sb
wxy - rthy tex, v calc

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

MD: 11,439'
TVD: 6,141.97'
Inclination: 89.43°
Azimuth: 3.18°
VS: 5,461.99'

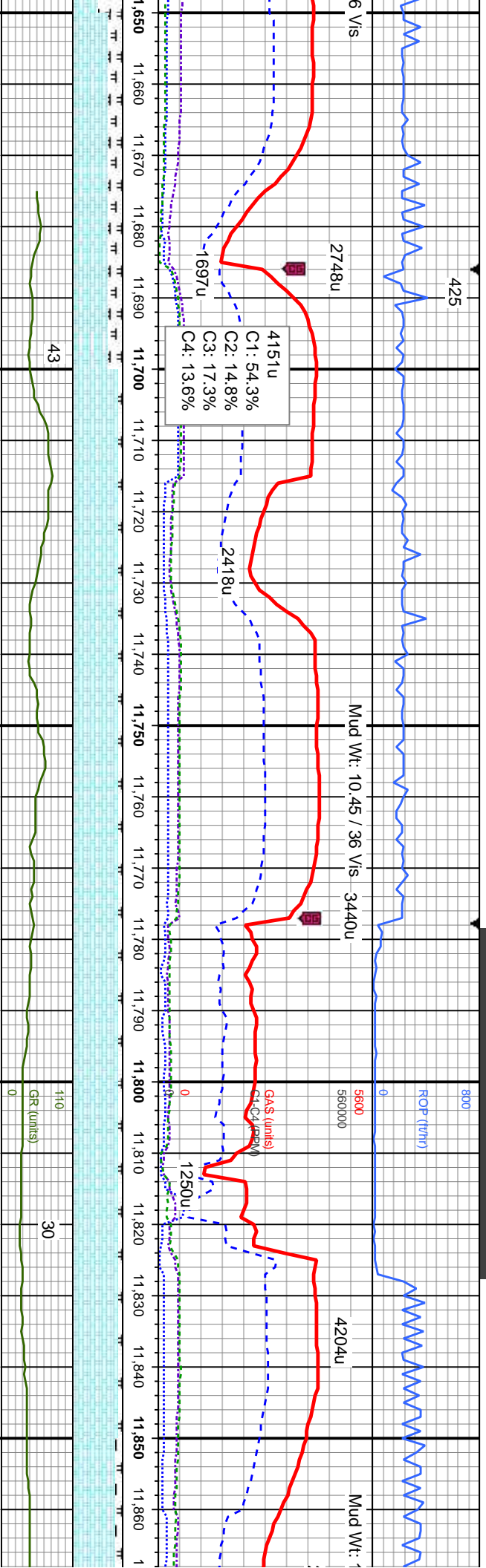
B Marl

B Chalk

MD: 11,532'
TVD: 6,142.61'
Inclination: 89.78°
Azimuth: 3.29°
VS: 5,554.71'

MD: 11,626'
TVD: 6,144.49'
Inclination: 87.93°
Azimuth: 0.61°
VS: 5,648.54'





CHK: lt gy - off wh crm, some mot gy brn,
sft - mod frm, sb pily - sb bily, sb wxy -
rthy tex, v calc MRLST: medgy-dk gy brn,
bily - sb pily, sb fis, mod frm, rthy tex

CHK: It gy - off wh crm, some mot gy brn,
sft - mod frm, sb pty - sb bky, sb wxy -
rthy tex, v calc MRLST: medgy-dk gy brn,
bky - sb pty, sb fis, mod frm, rthy tex

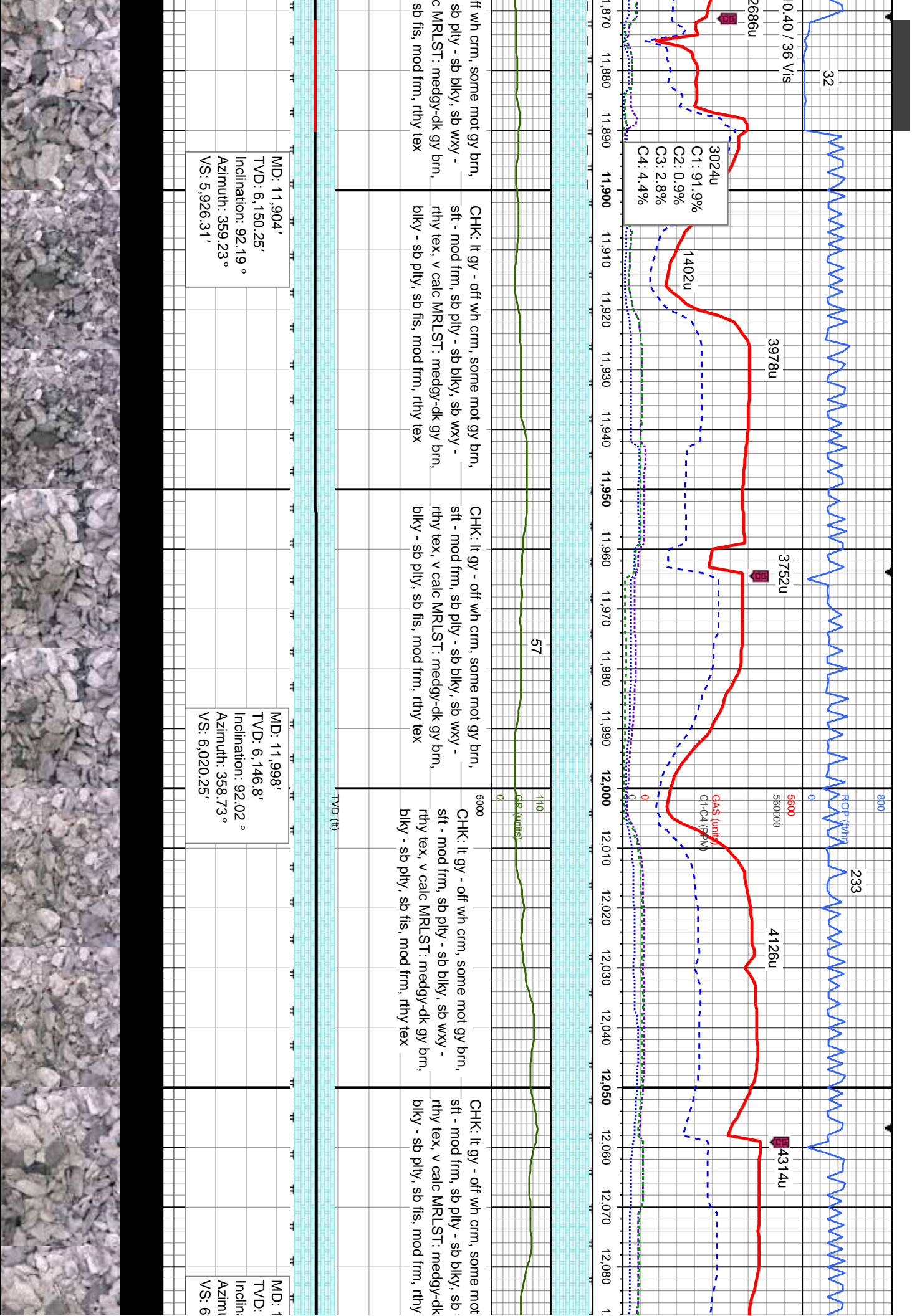
CHK: It gy - off wh crm, some mot gy brn,
sft - mod frm, sb ply - sb bly, sb wxy -
rthy tex, v calc MRLST: medgy-dk gy brn,
bly - sb ply, sb fis, mod frm, rthy tex

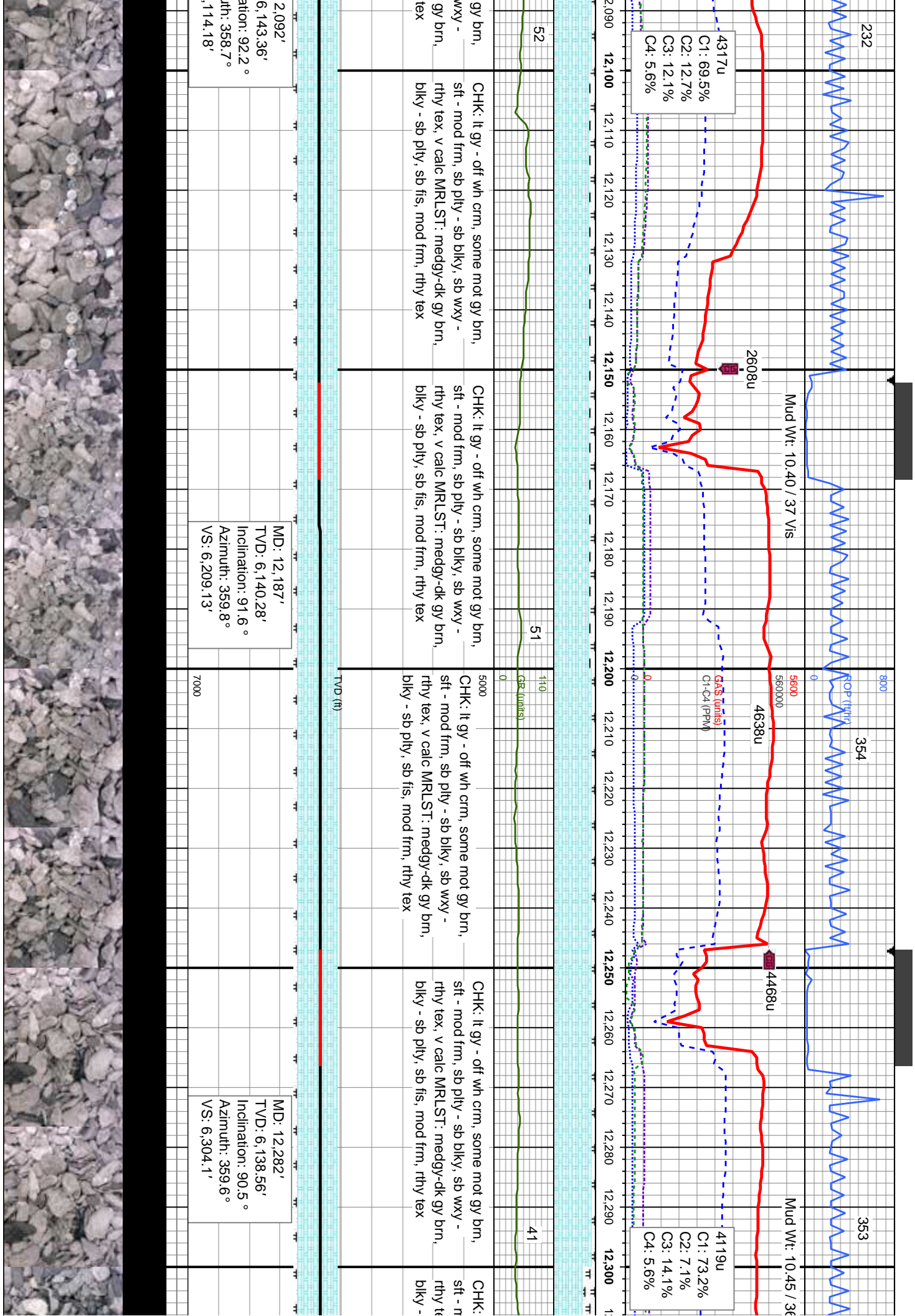
5000
CHK: It gy - off wh crm, some mot gy brn,
sft - mod frm, sb ply - sb blyk, sb wxy -
rthy tex, v calc MRLST: medgy-dk gy brn,
blyk - sb ply, sb fis, mod frm, rthy tex

CHK: It gy - o
sft - mod frm,
rthy tex, v cal
biky - sb ply,

MD: 11,719'
TVD: 6,148.9'
Inclination: 86.64 °
Azimuth: 359.81 °
VS: 5,741.41'

MD: 11,812'
TVD: 6,151.82'
Inclination: 89.76°
Azimuth: 359.76°
VS: 5,834.34'





4317u
C1: 69.5%
C2: 12.7%
C3: 12.1%
C4: 5.6%

2608u

Mud Wt: 10.40 / 37 Vis

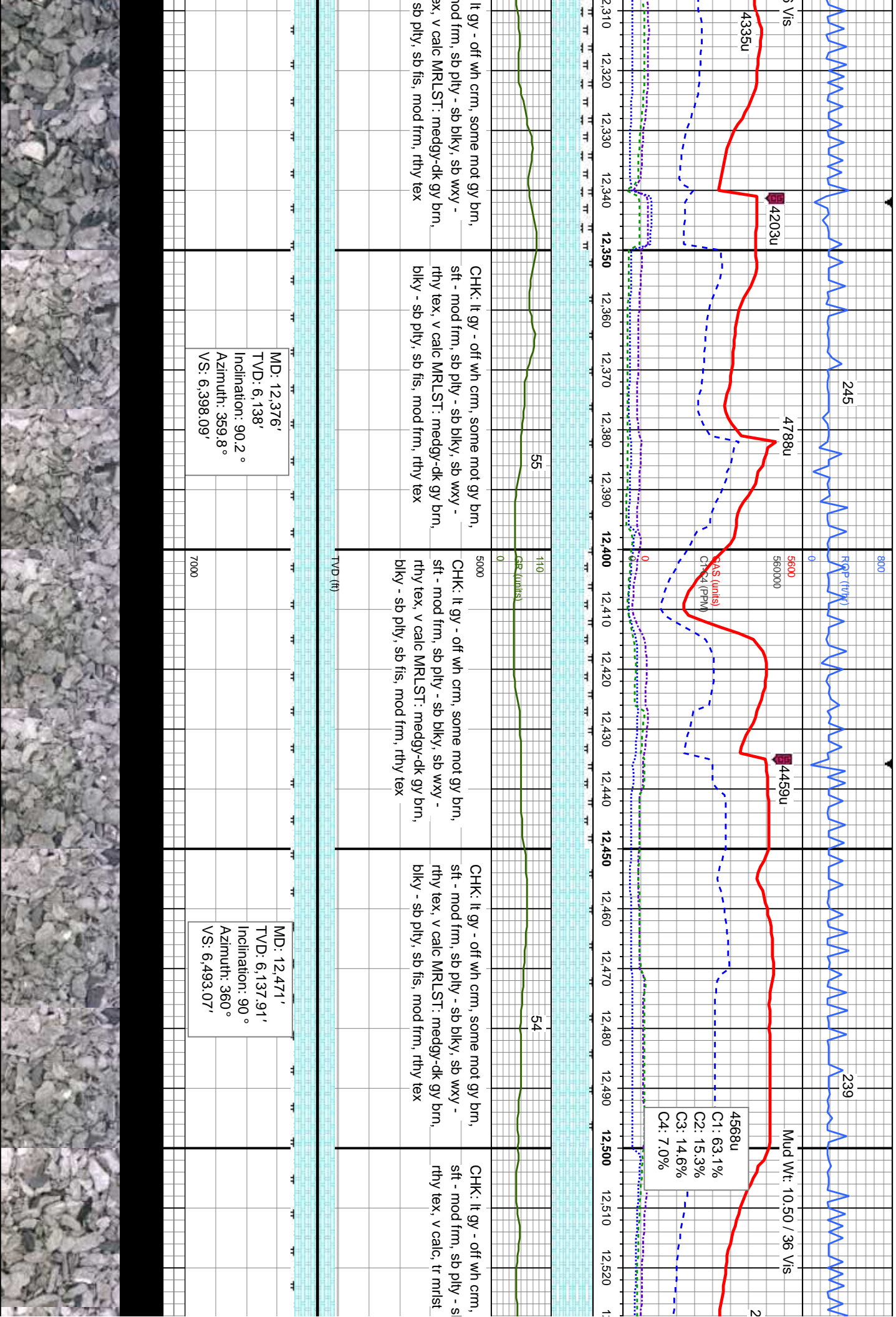
4638u

4468u

4119u
C1: 73.2%
C2: 7.1%
C3: 14.1%
C4: 5.6%

MD: 12,187'
TVD: 6,140.28'
Inclination: 91.6°
Azimuth: 359.8°
VS: 6,209.13'

MD: 12,282'
TVD: 6,138.56'
Inclination: 90.5°
Azimuth: 359.6°
VS: 6,304.1'



245

239

Mud Wt: 10.50 / 36 Vis

4568u

C1: 63.1%
C2: 15.3%
C3: 14.6%
C4: 7.0%

4459u

4788u

4203u

4335u

CHK: It gy - off wh crm, some mot gy brn, sft - mod frm, sb pily - sb blk, sb wxy - rthy tex, v calc MRLST: medgy-dk gy brn, blk - sb pily, sb fis, mod frm, rthy tex

CHK: It gy - off wh crm, some mot gy brn, sft - mod frm, sb pily - sb blk, sb wxy - rthy tex, v calc MRLST: medgy-dk gy brn, blk - sb pily, sb fis, mod frm, rthy tex

CHK: It gy - off wh crm, some mot gy brn, sft - mod frm, sb pily - sb blk, sb wxy - rthy tex, v calc MRLST: medgy-dk gy brn, blk - sb pily, sb fis, mod frm, rthy tex

CHK: It gy - off wh crm, some mot gy brn, sft - mod frm, sb pily - sb blk, sb wxy - rthy tex, v calc MRLST: medgy-dk gy brn, blk - sb pily, sb fis, mod frm, rthy tex

MD: 12,471'
TVD: 6,137.91'
Inclination: 90°
Azimuth: 360°
VS: 6,493.07'

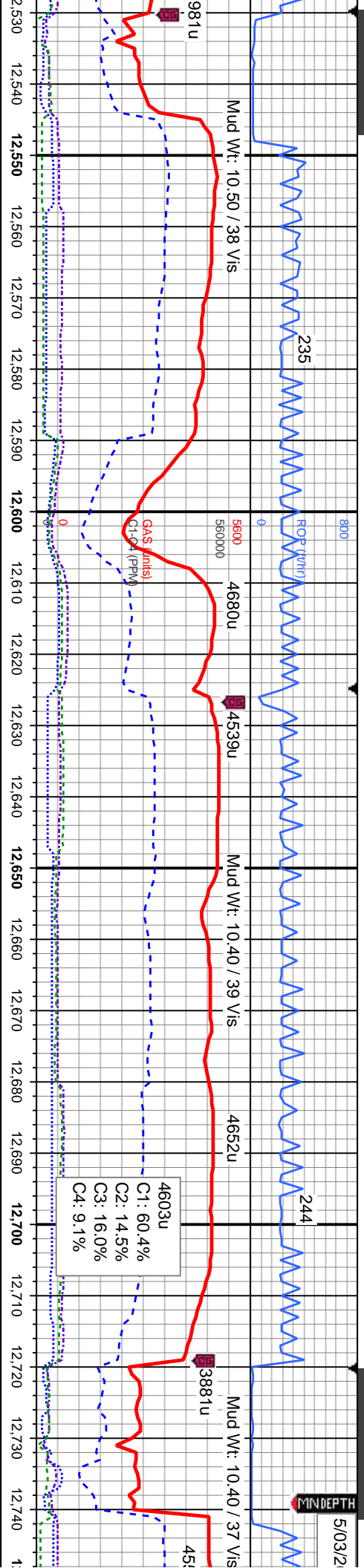
MD: 12,376'
TVD: 6,138'
Inclination: 90.2°
Azimuth: 359.8°
VS: 6,398.09'

7000

55

54

MINDEPTH



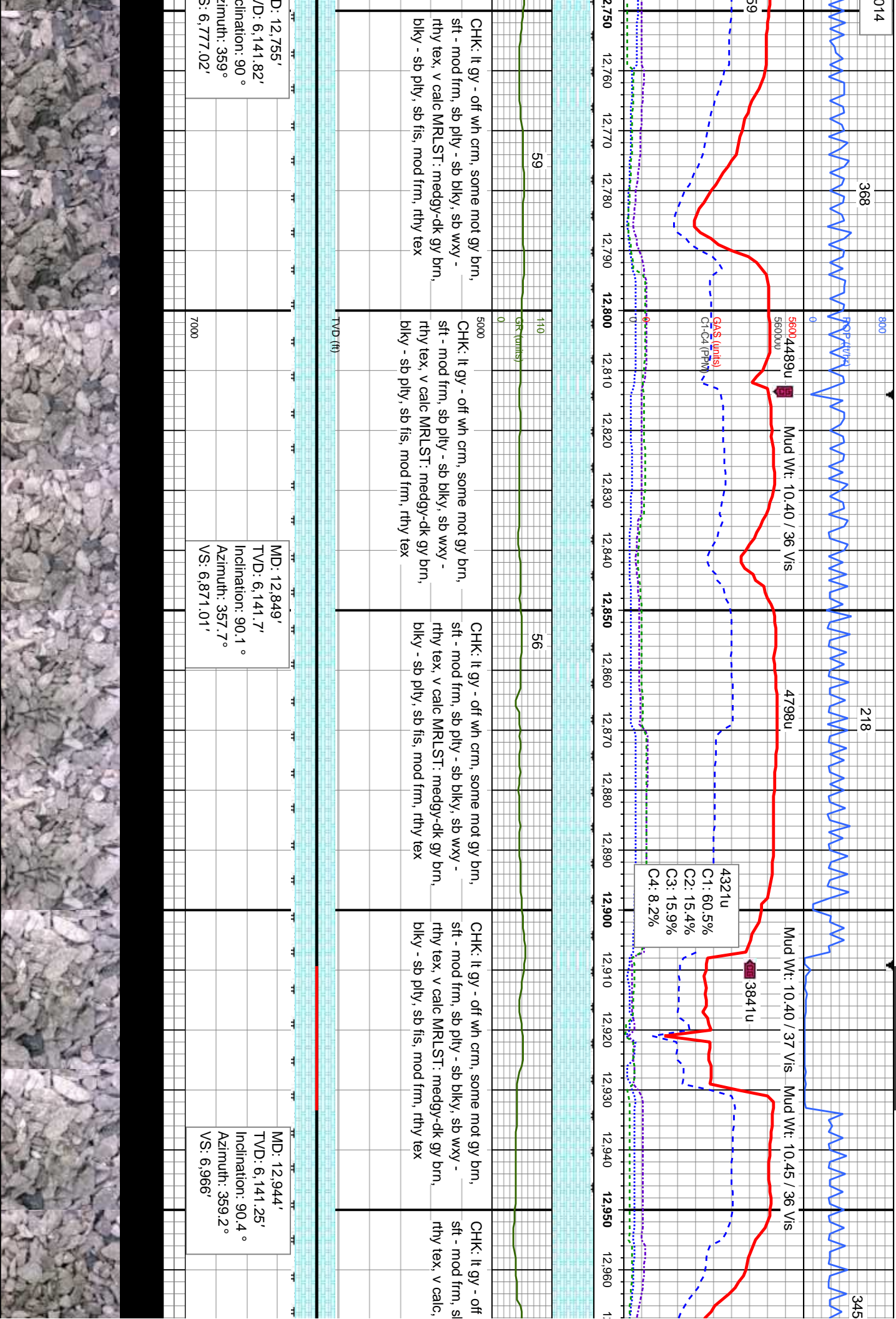
Depth (ft)	Description
12,530 - 12,550	some mot gy brn, sb biky, sb wxy -
12,550 - 12,600	CHK: lt gy - off wh crm, some mot gy brn, sft - mod frm, sb pily - sb biky, sb wxy - rthy tex, v calc, tr mist
12,600 - 12,650	CHK: lt gy - off wh crm, some mot gy brn, sft - mod frm, sb pily - sb biky, sb wxy - rthy tex, v calc MRLST: medgy-dk gy brn, biky - sb pily, sb fis, mod frm, rthy tex
12,650 - 12,700	CHK: lt gy - off wh crm, some mot gy brn, sft - mod frm, sb pily - sb biky, sb wxy - rthy tex, v calc MRLST: medgy-dk gy brn, biky - sb pily, sb fis, mod frm, rthy tex
12,700 - 12,740	CHK: lt gy - off wh crm, some mot gy brn, sft - mod frm, sb pily - sb biky, sb wxy - rthy tex, v calc MRLST: medgy-dk gy brn, biky - sb pily, sb fis, mod frm, rthy tex

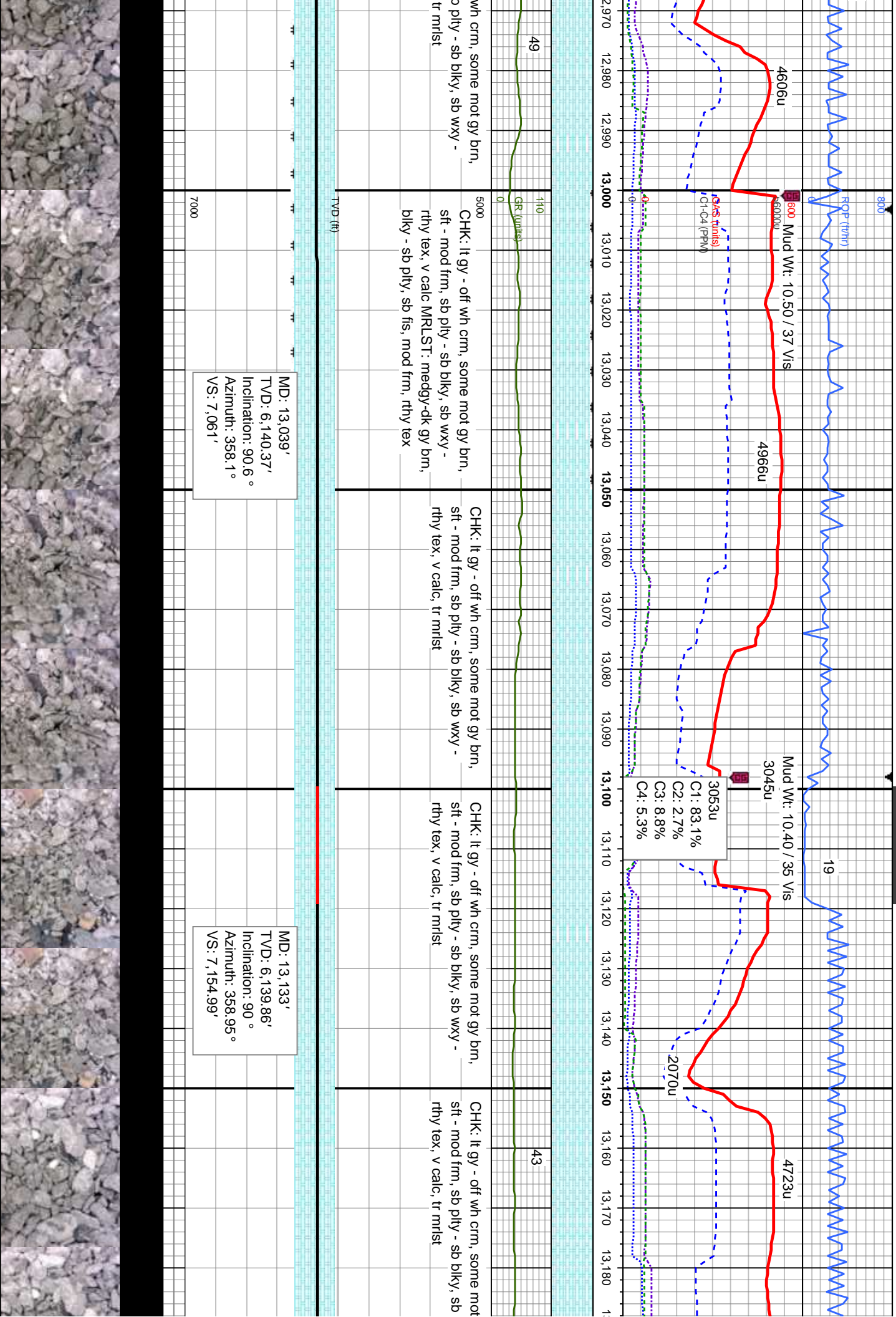
MD: 12,566'
TVD: 6,138.71'
Inclination: 89.1°
Azimuth: 358°
VS: 6,588.07'

MD: 12,660'
TVD: 6,140.65'
Inclination: 88.5°
Azimuth: 357.7°
VS: 6,682.03'

M
TV
In
A
VS

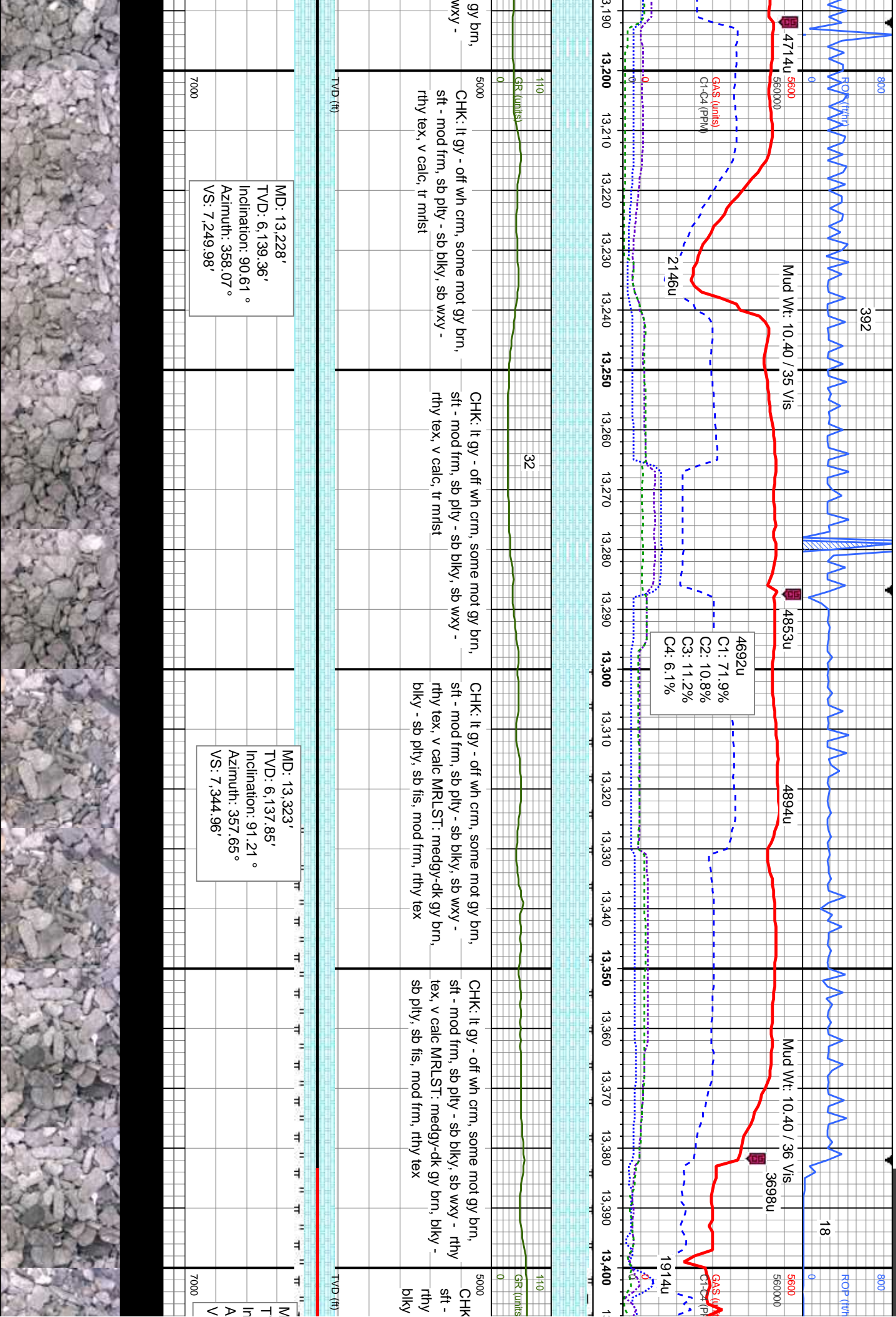


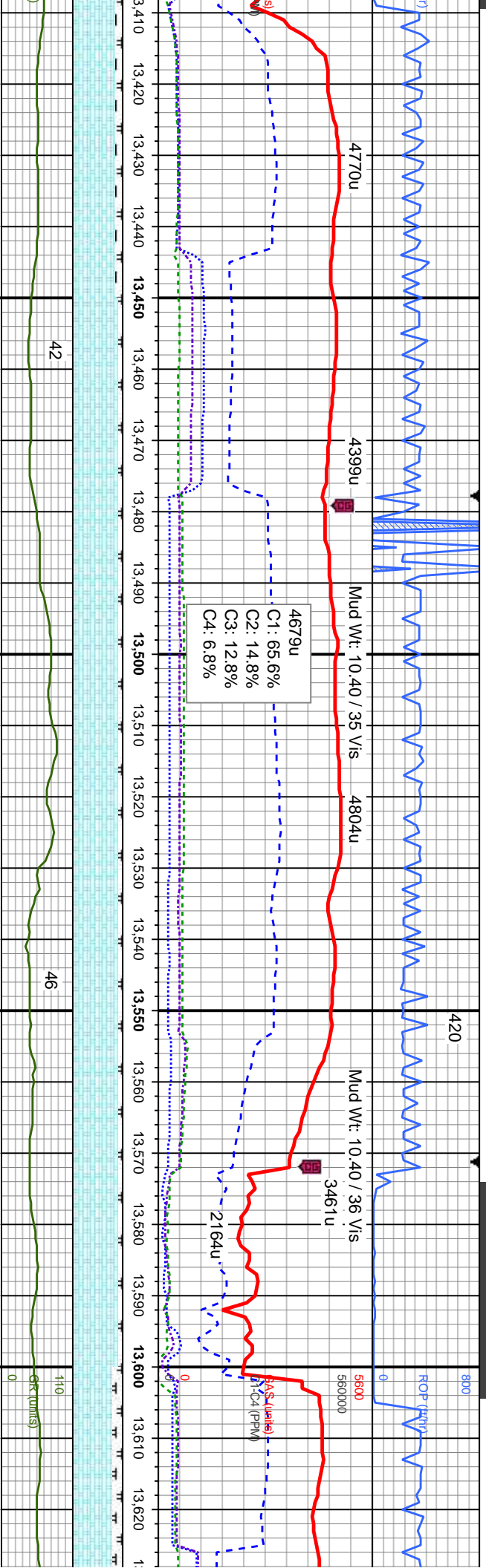




MD: 13,039'
TVD: 6,140.37'
Inclination: 90.6°
Azimuth: 358.1°
VS: 7.061'

MD: 13,133'
TVD: 6,139.86'
Inclination: 90°
Azimuth: 358.95°
VS: 7.154.99'





It gy - off wh crm, some mot gy brn, sft - mod frm, sb pily - sb blk, sb wxy - rthy tex, v calc MRLST: medgy-dk gy brn, blk - sb pily, sb fis, mod frm, rthy tex

CHK: It gy - off wh crm, some mot gy brn, sft - mod frm, sb pily - sb blk, sb wxy - rthy tex, v calc MRLST: medgy-dk gy brn, blk - sb pily, sb fis, mod frm, rthy tex

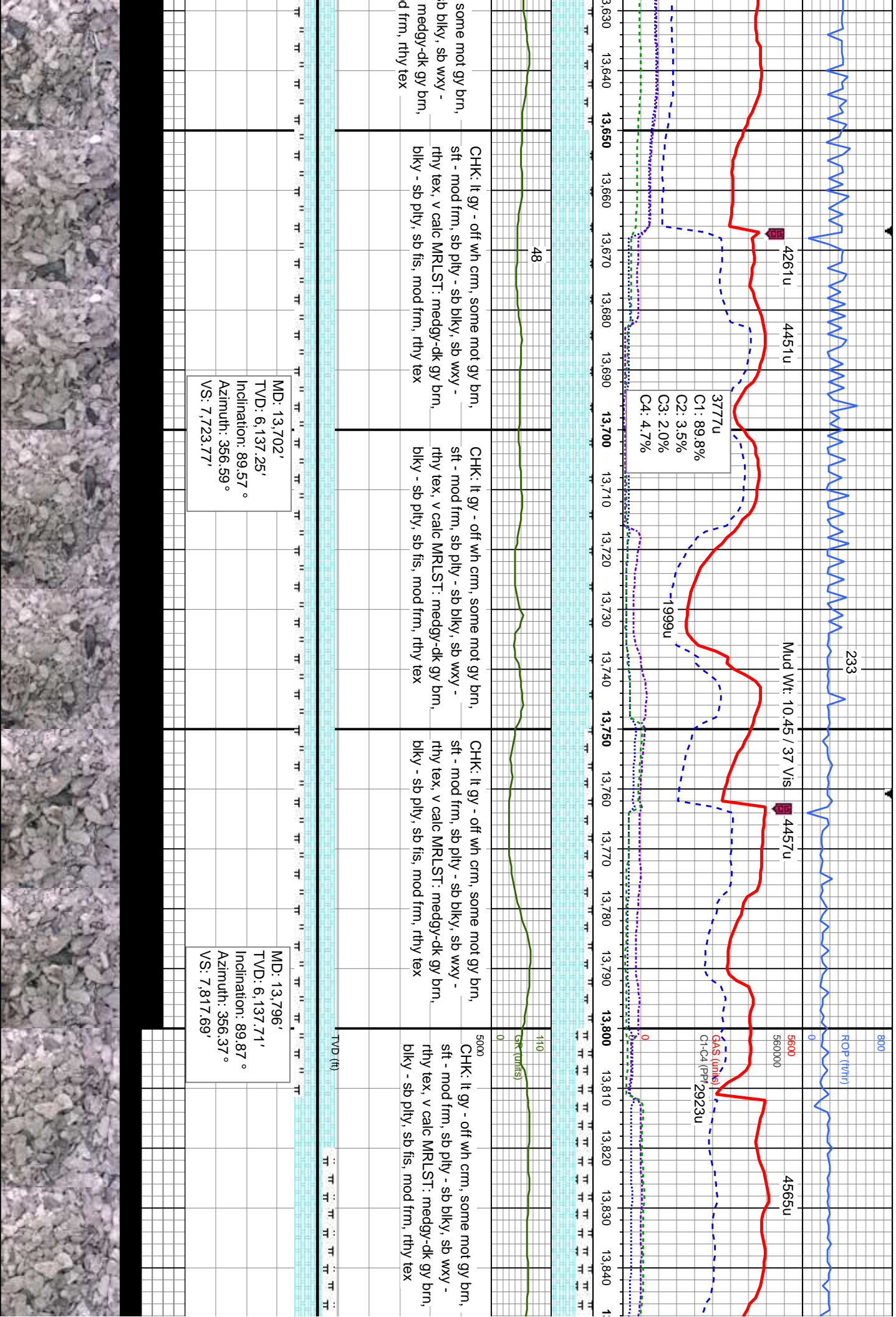
CHK: It gy - off wh crm, some mot gy brn, sft - mod frm, sb pily - sb blk, sb wxy - rthy tex, v calc MRLST: medgy-dk gy brn, blk - sb pily, sb fis, mod frm, rthy tex

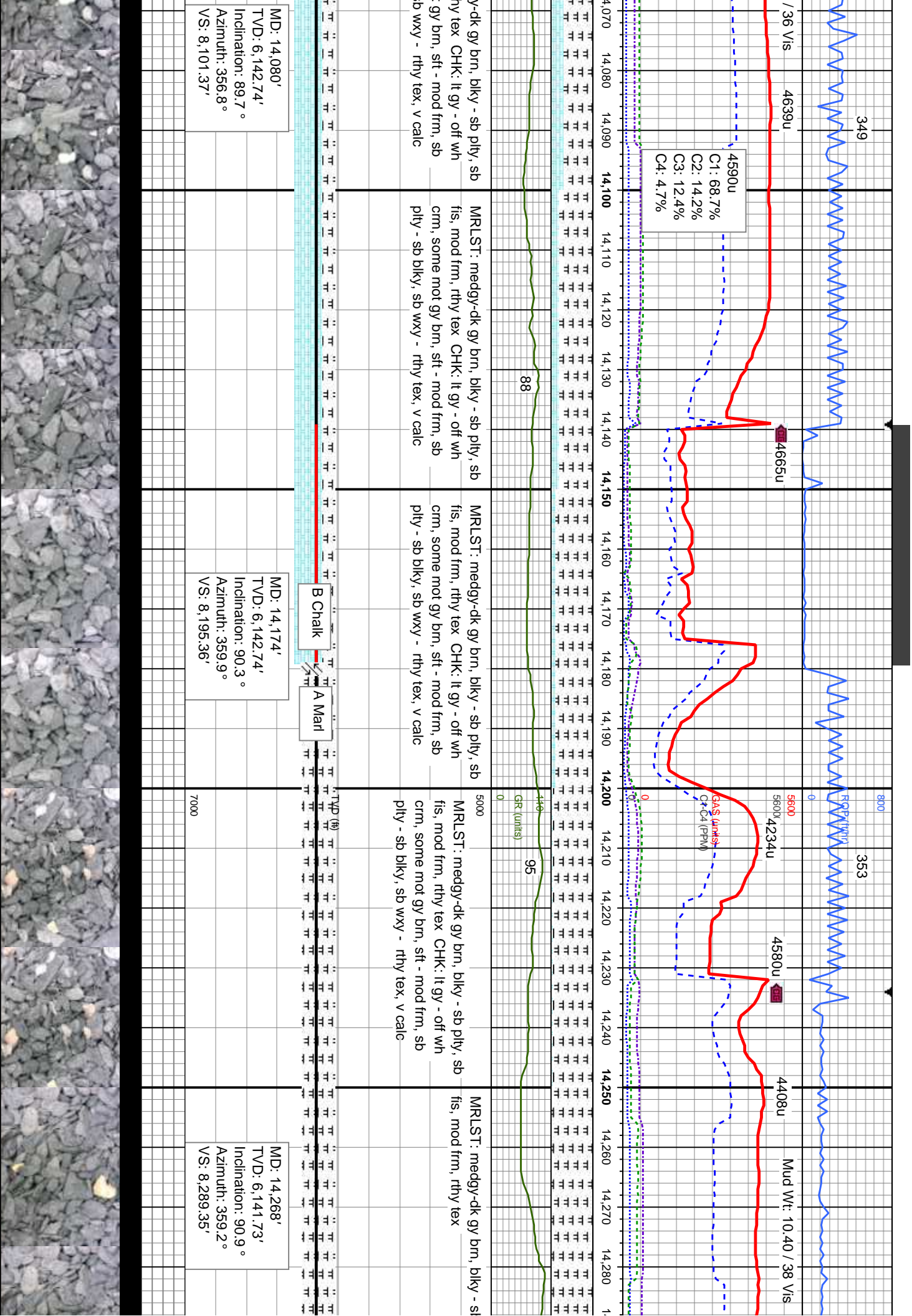
D: 13,417'
VD: 6,136.85'
Inclination: 90.01 °
Azimuth: 357.34 °
VS: 7,438.93'

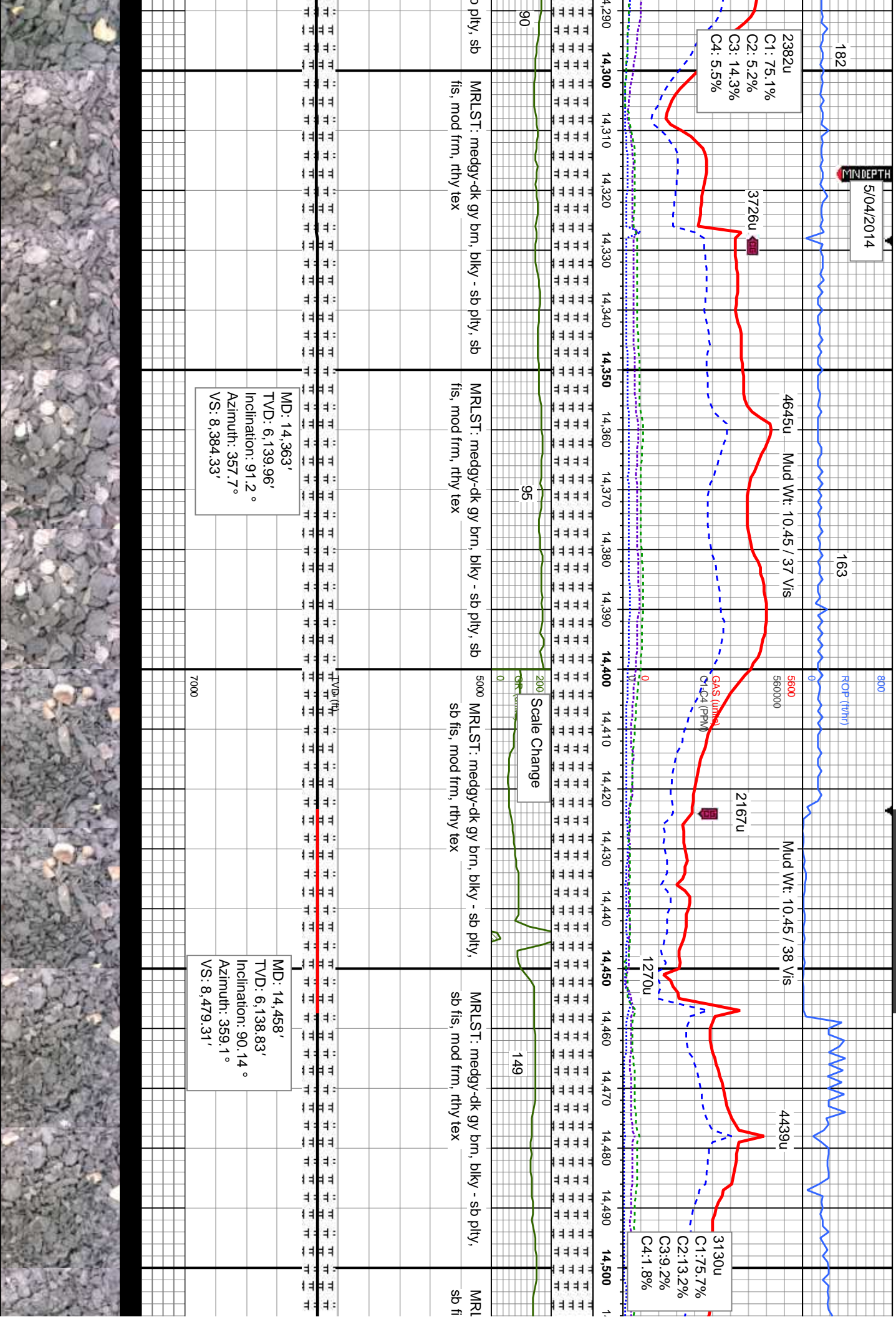
MD: 13,512'
TVD: 6,136.14'
Inclination: 90.85 °
Azimuth: 356.87 °
VS: 7,533.88'

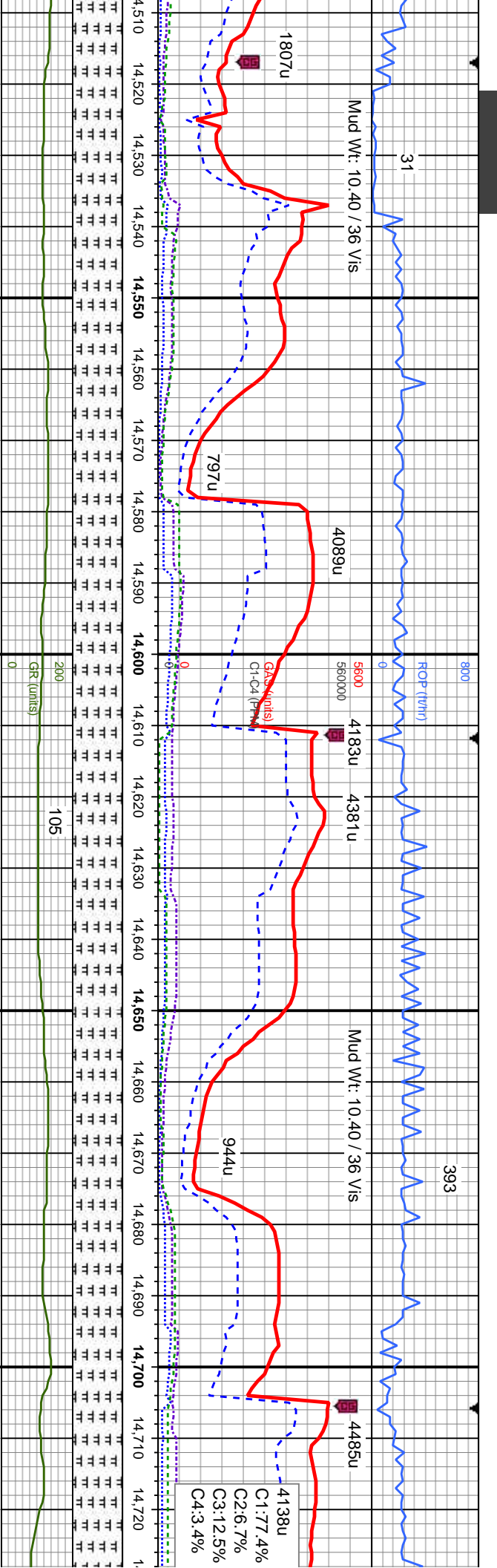
MD: 13,607'
TVD: 6,136.16'
Inclination: 89.12 °
Azimuth: 357.16 °
VS: 7,628.83'











ST: medgy-dk gy brn, blkly - sb plty,
s, mod frm, rthy tex , tr bent

MRLST: medgy-dk gy brn, blkly - sb plty,
sb fis, mod frm, rthy tex , tr bent

MRLST: medgy-dk gy brn, blkly - sb plty,
sb fis, mod frm, rthy tex , tr bent

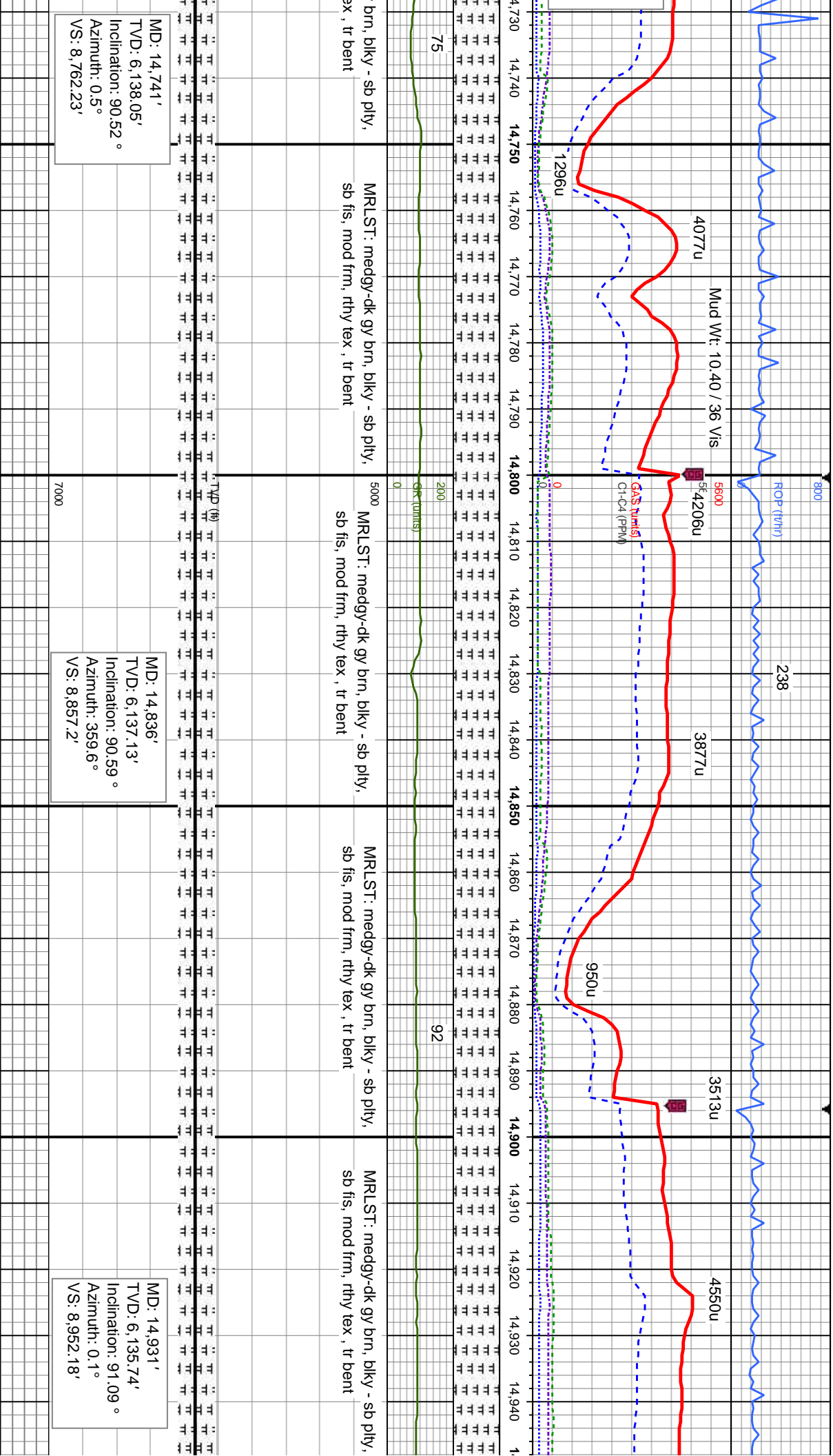
MRLST: medgy-dk gy brn, blkly - sb plty,
sb fis, mod frm, rthy tex , tr bent

MRLST: medgy-dk gy brn, blkly - sb plty,
sb fis, mod frm, rthy tex , tr bent

MD: 14,552'
TVD: 6,138.6'
Inclination: 90.14 °
Azimuth: 0.47 °
VS: 8,573.29'

MD: 14,647'
TVD: 6,138.48'
Inclination: 90 °
Azimuth: 0.06 °
VS: 8,668.26'

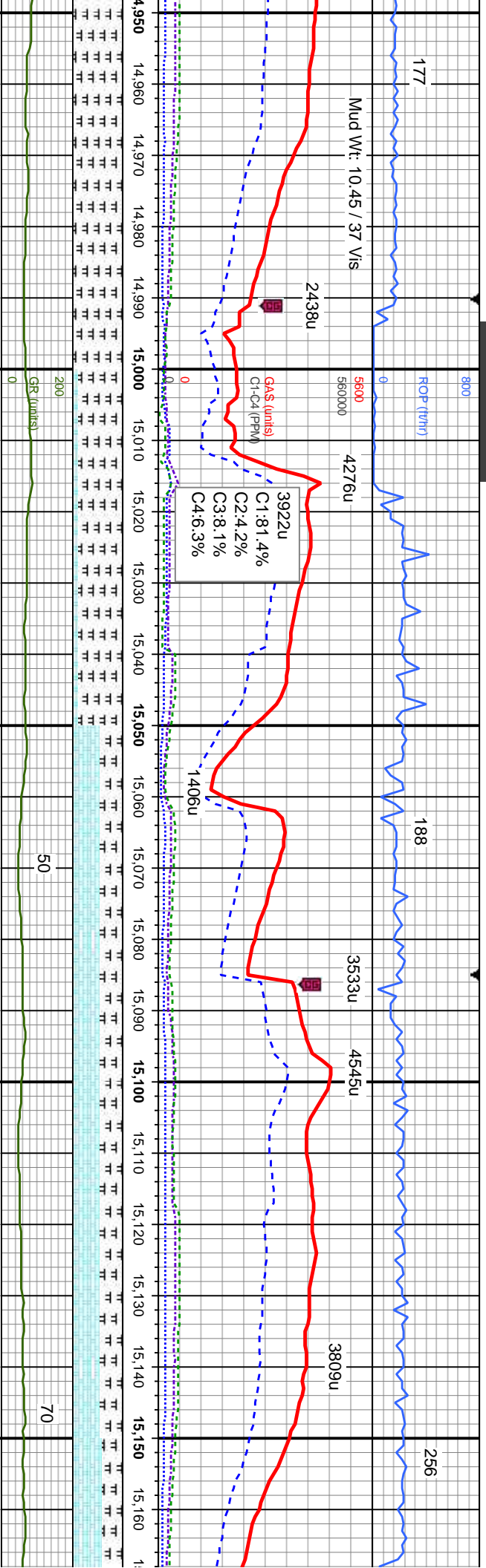




MD: 14,741'
TVD: 6,138.05'
Inclination: 90.52°
Azimuth: 0.5°
VS: 8,762.23'

MD: 14,836'
TVD: 6,137.13'
Inclination: 90.59°
Azimuth: 359.6°
VS: 8,857.2'

MD: 14,931'
TVD: 6,135.74'
Inclination: 91.09°
Azimuth: 0.1°
VS: 8,952.18'



14,950 14,960 14,970 14,980 14,990 15,000 15,010 15,020 15,030 15,040 15,050 15,060 15,070 15,080 15,090 15,100 15,110 15,120 15,130 15,140 15,150 15,160

MRLST: medgy-dk gy brn, blkly - sb ply, sb fis, mod frm, rthy tex, t bent

5000 MRLST: medgy-dk gy brn, blkly - sb ply, sb fis, mod frm, rthy tex

CHK: It gy - off wh crm, some mot gy brn, sft - mod frm, sb ply - sb blkly, sb wxy - rthy tex, v calc MRLST: medgy-dk gy brn, blkly - sb ply, sb fis, mod frm, rthy tex

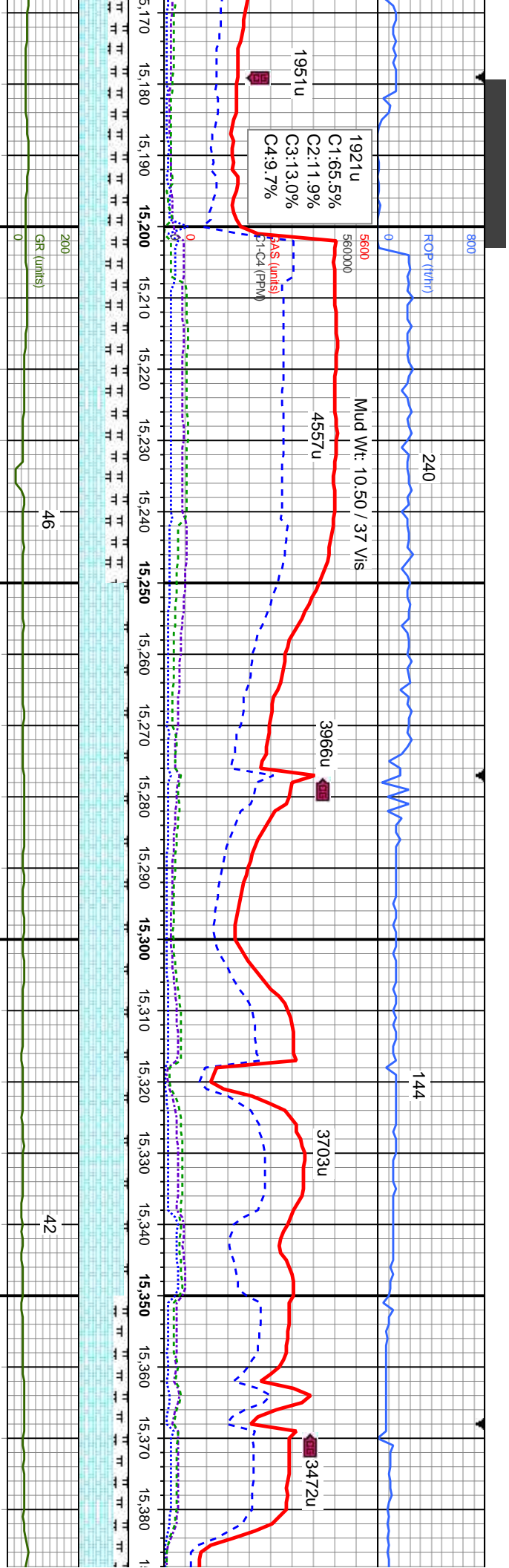
CHK: It gy - off wh crm, some mot gy brn, sft - mod frm, sb ply - sb blkly, sb wxy - rthy tex, v calc MRLST: medgy-dk gy brn, blkly - sb ply, sb fis, mod frm, rthy tex

CHK: It gy - of sft - mod frm, rthy tex, v calc blkly - sb ply,

MD: 15.025' TVD: 6,134.84' Inclination: 90.01° Azimuth: 0.03° VS: 9,046.15'

MD: 15.120' TVD: 6,134.71' Inclination: 90.15° Azimuth: 0.28° VS: 9,141.12'





1951u
1921u
C1:65.5%
C2:11.9%
C3:13.0%
C4:9.7%

GR (units)
S (units)
C (units)
C4 (PPM)

56000
560000
4557u
3966u
3703u
3472u

Mud Wt: 10.50 / 37 Vis

15,170 15,180 15,190 15,200 15,210 15,220 15,230 15,240 15,250 15,260 15,270 15,280 15,290 15,300 15,310 15,320 15,330 15,340 15,350 15,360 15,370 15,380 15,390

5000
200
GR (units)
0

46
42

CHK: It gy - off wh crm, some mot gy brn, sft - mod frm, sb pily - sb blk, sb wxy - rthy tex, v calc MRLST: medgy-dk gy brn, blk - sb pily, sb fis, mod frm, rthy tex

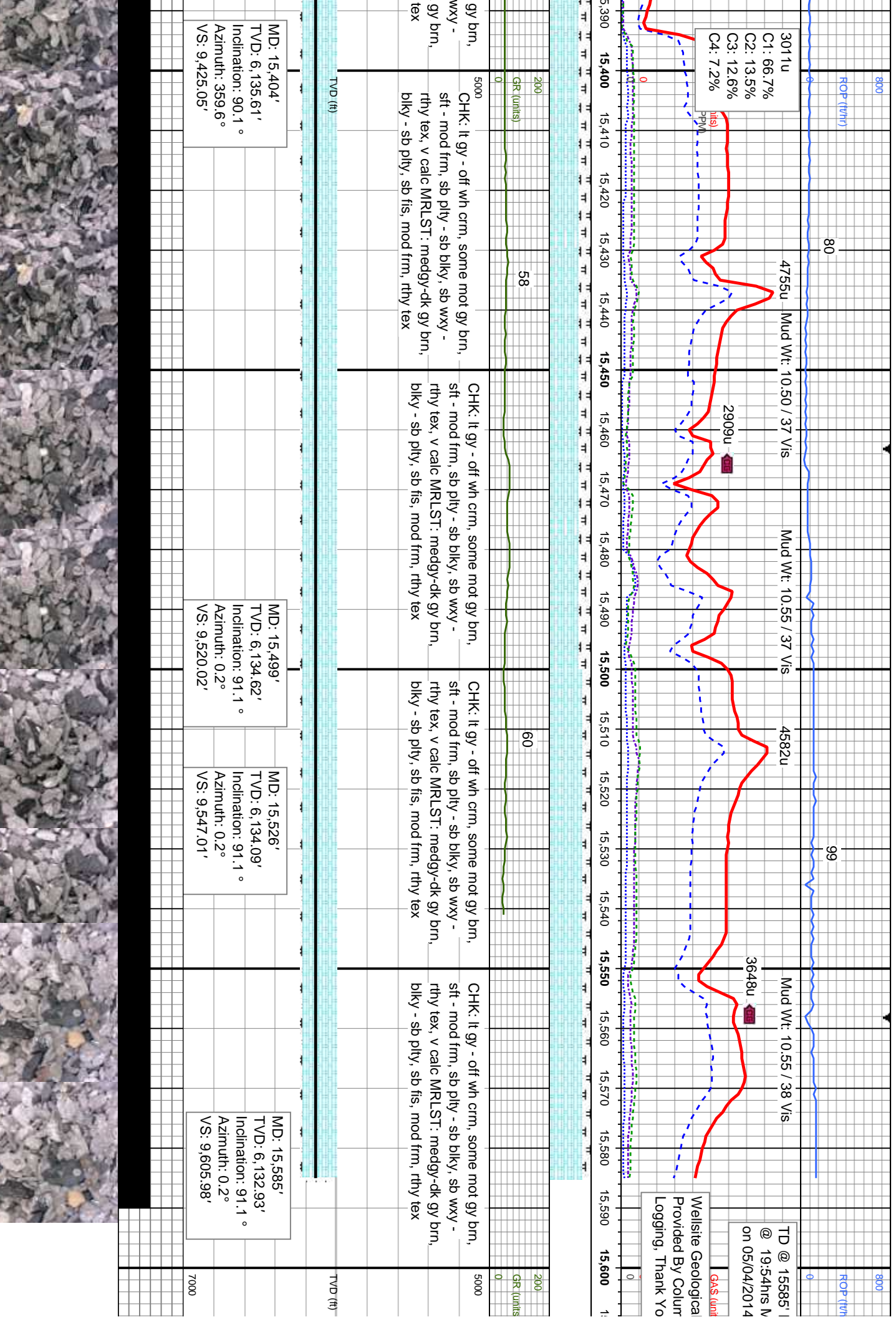
CHK: It gy - off wh crm, some mot gy brn, sft - mod frm, sb pily - sb blk, sb wxy - rthy tex, v calc MRLST: medgy-dk gy brn, blk - sb pily, sb fis, mod frm, rthy tex

CHK: It gy - off wh crm, some mot gy brn, sft - mod frm, sb pily - sb blk, sb wxy - rthy tex, v calc MRLST: medgy-dk gy brn, blk - sb pily, sb fis, mod frm, rthy tex

CHK: It gy - off wh crm, some mot gy brn, sft - mod frm, sb pily - sb blk, sb wxy - rthy tex, v calc MRLST: medgy-dk gy brn, blk - sb pily, sb fis, mod frm, rthy tex

MD: 15,214'
TVD: 6,134.83'
Inclination: 89.7°
Azimuth: 0.4°
VS: 9,235.09'

MD: 15,309'
TVD: 6,135.38'
Inclination: 89.6°
Azimuth: 0.1°
VS: 9,330.06'



MD	
MDT	

Services

5,610	15,610
-------	--------

[illegible]