



Scale: 5" / 100'
Measured Depth Log

Well Name Mecklenburg State LD01-73HN

Location SESE SEC 1, T9N, ROW 58W, 6 PM

State COLORADO **County** WELD

Country USA **Rig Number** H&P 326

API Number 05-123-39699 **Field** WILDCAT

Region DJ BASIN **Drilling Completed** 11/22/2014

Spud Date 11/15/2014

Surface Coordinates 400' FSL, 1265' FEL
40.77427/-103.8069

Bottom Hole Coordinates (PROJ)
810' FFNLL, 1320' FFELL

Ground Elevation 4651' **K.B. Elevation** 4681'

Logged Interval 4812' To 14,710' **Total Depth** 14,710'

Formation NIOBRARA B CHALK

Type of Drilling Fluid LSND

Operator

Company Noble Energy Inc

Address 1625 Broadway Suite 2200
Denver, CO 80202

Geologist

Name JAMES TAYLOR

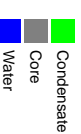
Company NOBLE ENERGY INC.

Address 1625 Broadway Suite 2200
Denver, CO 80202

Other

COLUMBINE LOGGING MATT HOPKINS
MIKE KERSCHEN

Zone Color Coding



Rock Types

UNKNOWN	COAL	MARLSTONE	SHALY SANDSTONE
ANHYDRITE	CONGLOMERATE	METAMORPHIC	SHALY SILTSTONE
BENTONITE	DOLOMITE	NO SAMPLE	SILTY SHALE
BRECCIA	DOLOMITIC LIMESTONE	SALT	SILTSTONE
CHALK	GRANITE	SANDSTONE	TILL
CEMENT	GYPSUM	SALT-PEPPER SAND	TUFF
CHERT	IGNEOUS	SHALE	WELDED TUFF
CLAY CHOKE SAND	SIDERITE or LIMONITE	SHALE COLORED	
CLAYSTONE	LIMESTONE	SHALE GRAY	

Accessories

GASTROPOD	ARGILLITE GRAIN	HEAVY MINERAL	ANHYDRITE STRINGER
INOCERAMUS	BENTONITE	KAOLIN	BENTONITE STRINGER
ALGAE	BITUMENOUS SUBSTANCE	MARLSTONE	COAL STRINGER
AMPHIPORA	BRECCIA FRAGMENTS	MICACEOUS	DOLOMITE STRINGER
BELEMNITE	PELECYPOD	CALCAREOUS	GYPSUM STRINGER
BIOCLASTIC	PELLET	CARBONACEOUS FLAKES	LIMESTONE STRINGER
BRACHIOPOD	PISOLITE	CHTDK	MARLSTONE (CALC) STRG
BRYOZOA	PLANT REMAINS	CHTLT	MARLSTONE (DOL) STRG
CEPHALOPOD	PLANT SPORES	COAL - THIN BEDS	SANDSTONE STRINGER
CORAL	SCAPHOPOD	DOLOMITIC	SHALE STRINGER
CRINOID	STROMATOPOROID	FELDSPAR	SILTSTONE STRINGER
ECHINOID		FERRUGINOUS PELLET	
FISH		FERRUGINOUS	TUFFACEOUS
FORAMINIFERA	ANHYDRITIC	GLAUCONITE	
FOSSIL	ARGILLACEOUS	GYPSEFEROUS	

Stringer

Oil Show

PINPOINT
VUGGY






































Engineering

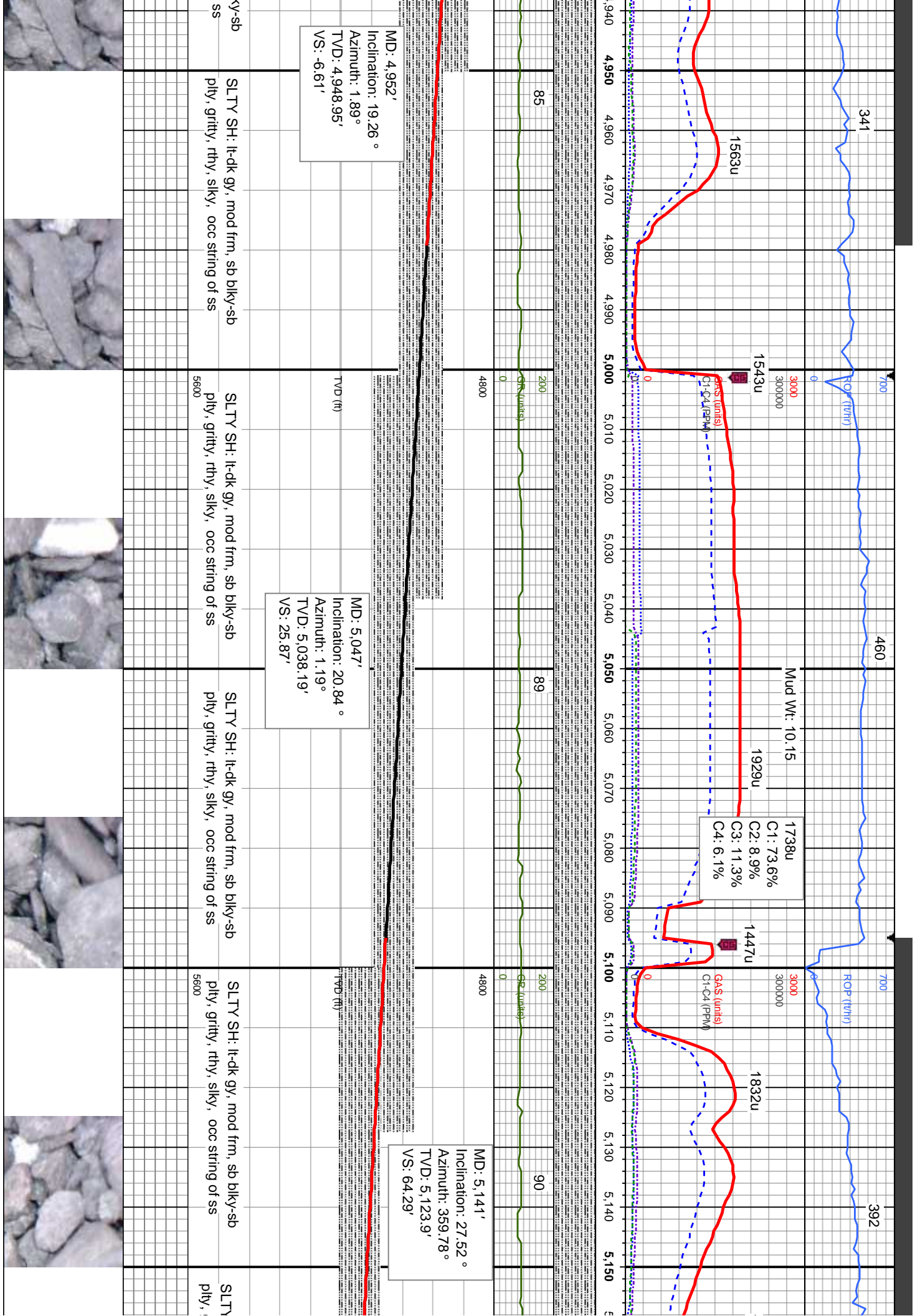
● EVEN	○ QUESTIONABLE	● BIT
● SPOTTED STAINING	▲ CONNECTION (UP)	

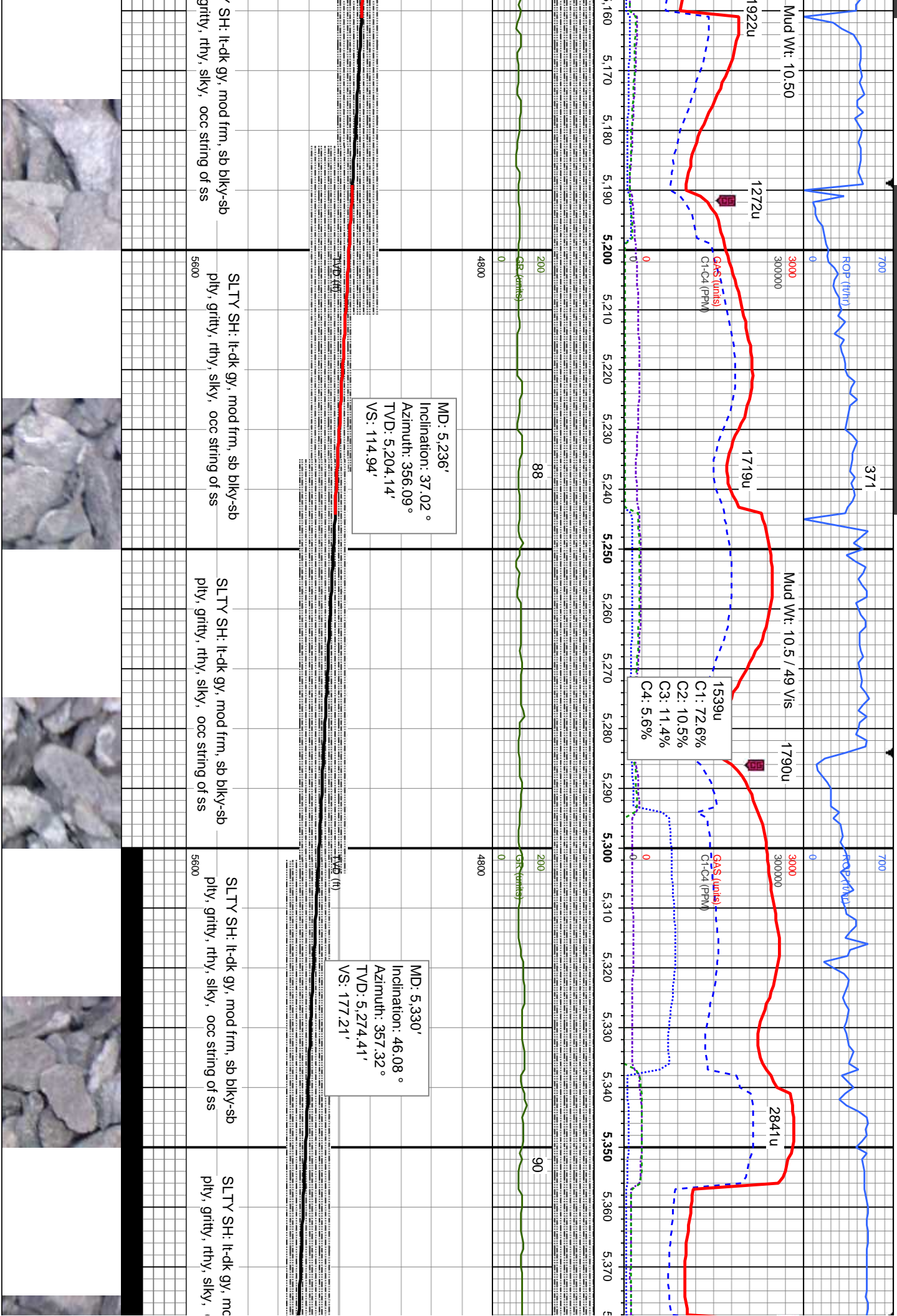
Porosity

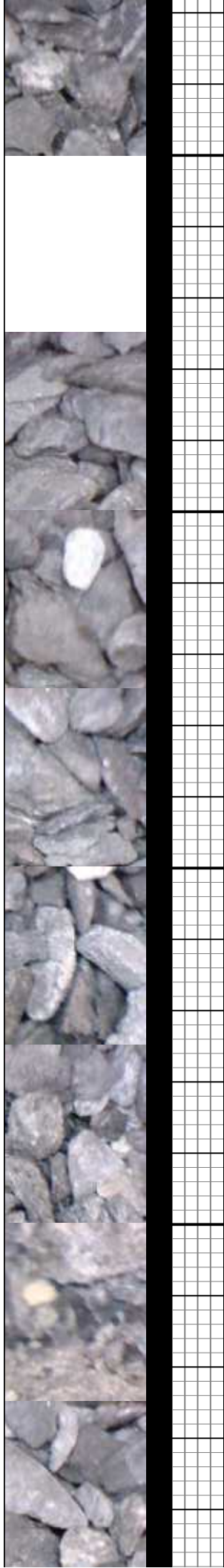
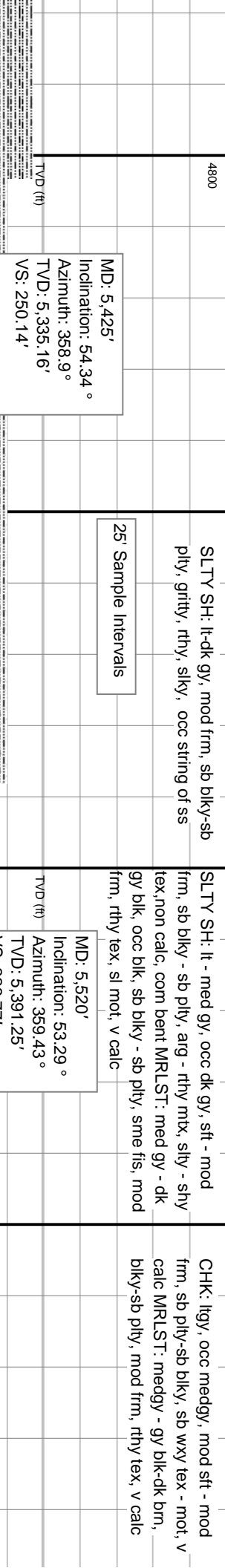
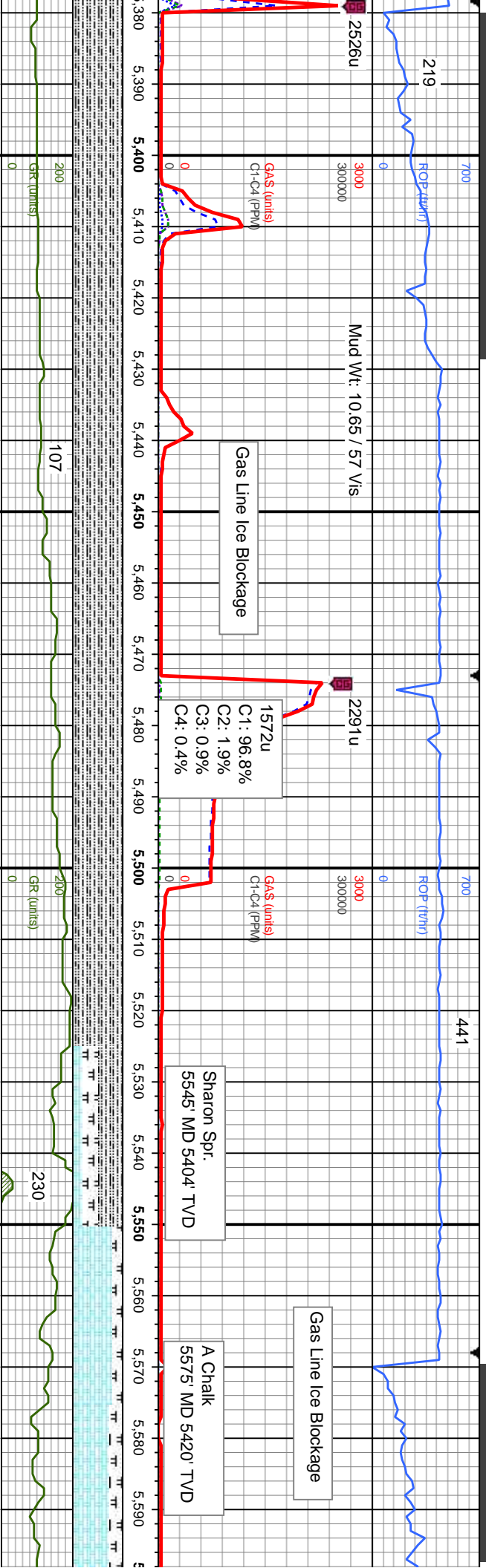
CONNECTION GAS	CONNECTION G	TRIP GAS	TRIP GAS (LEFT)
EARTHY	FENESTRAL	FRACTURE	INTERCRYSTALLINE
INTEROOLITIC	MOLDIC	ORGANIC	CORE - RECOVERED

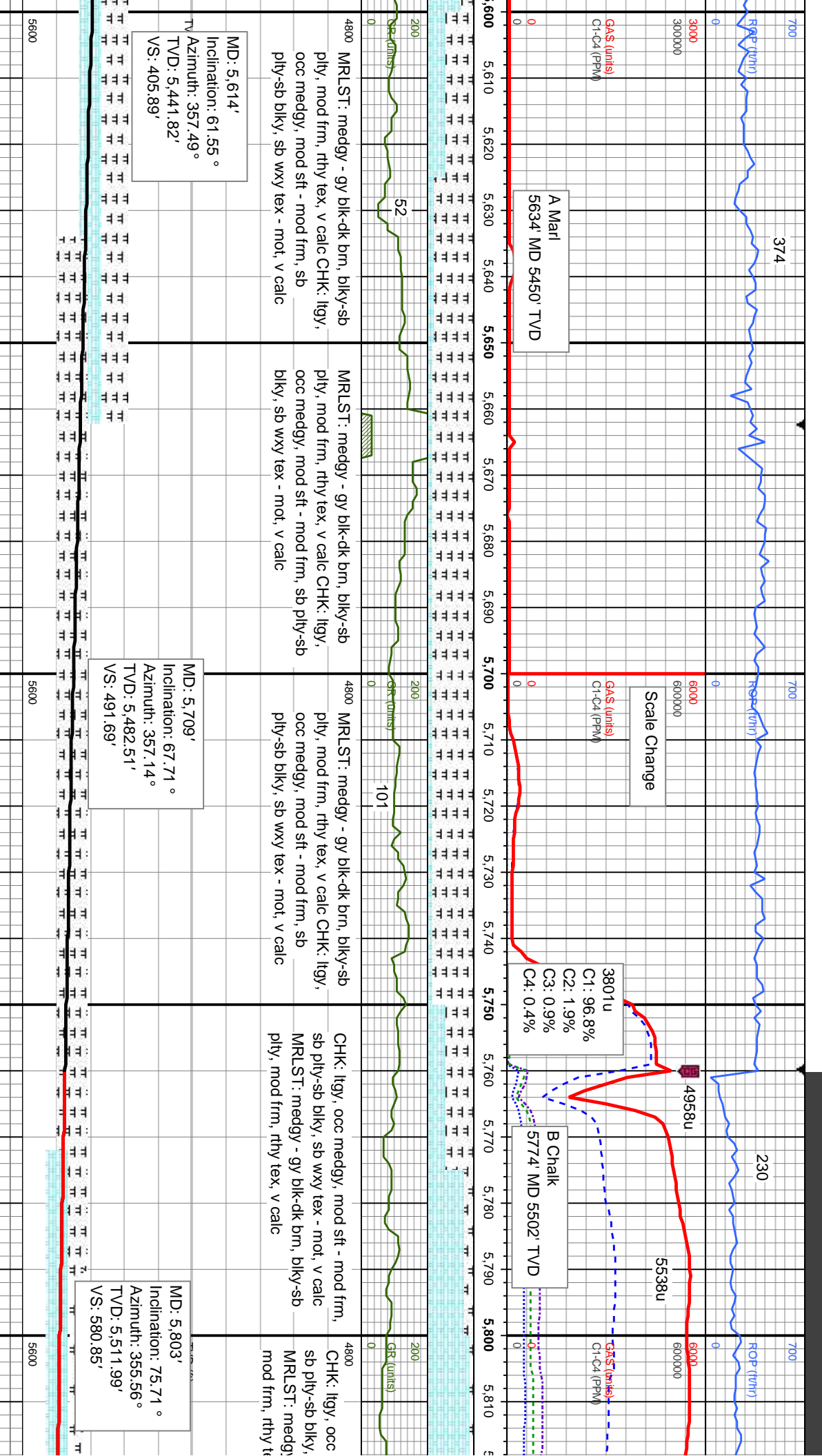
Other Symbols

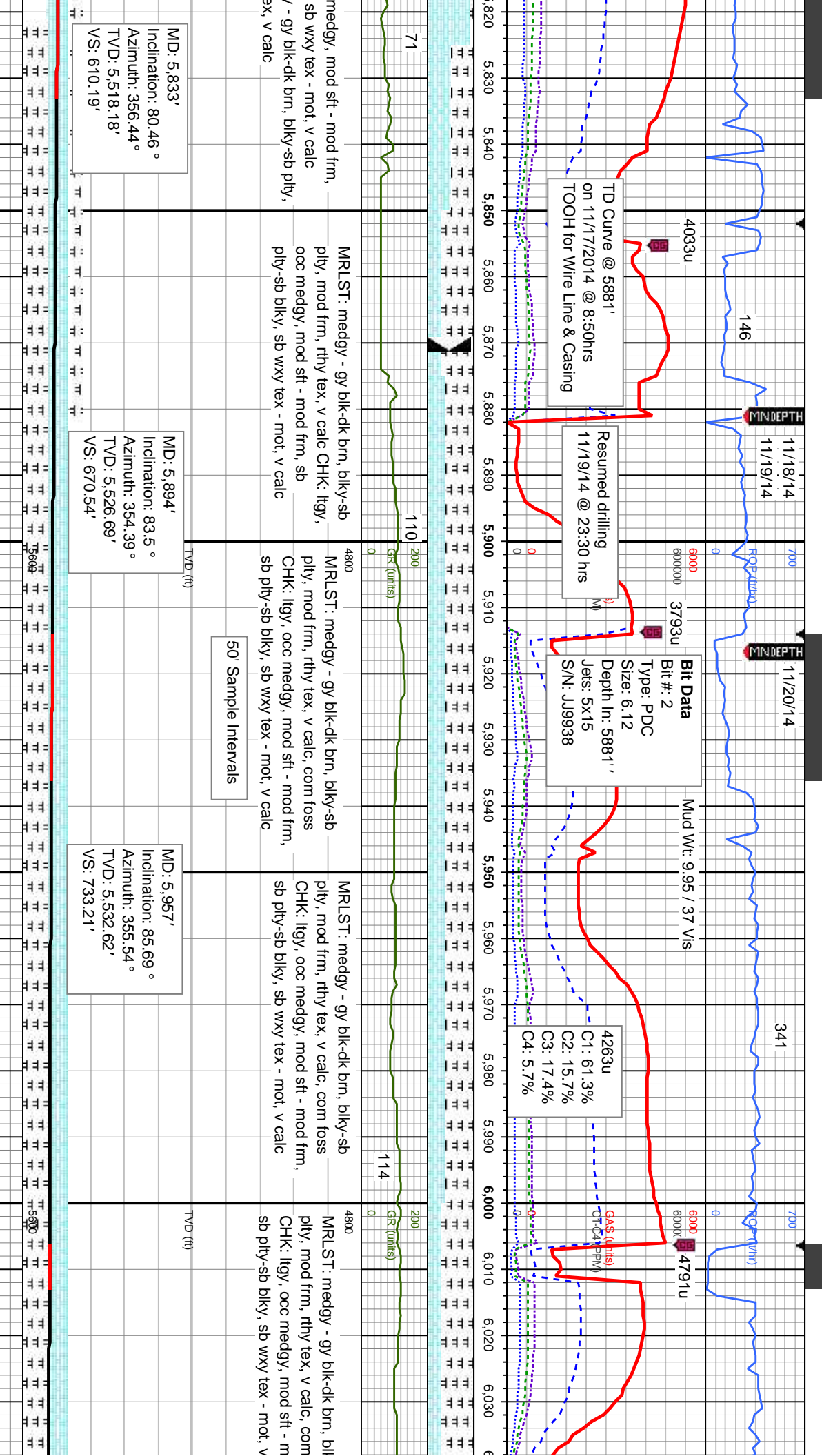
	DST INTERVAL		WIRELINE TESTED - LEFT		E EARTHY
	FAULT		WIRELINE TESTED - RT		FX FINELYXLN
	FORMATION TOP		DRILL STEM TEST		GS GRAINSTONE
	GAS SHOW		MNDEPTH MN DEPTH		L LITHOGRAPHIC
	OIL SHOW				MX MICROXLN
	MNDEPTH MN DEPTH UP				MS MUDSTONE
Rounding					
	MNDEPTH MN DEPTH (DOWN)		A ANGULAR		PS PACKSTONE
	NORMAL FAULT		R ROUNDED		WS WACKESTONE
	OVERTURNED STRATA		B SUBANG		
	REVERSE FAULT		P SUBRND		
Sorting					
	CASING				M MODERATE
Textures					
	SIDEWALL CORE (LEFT)				P POOR
	SIDEWALL CORE (RIGHT)		BS BOUNDSTONE		W WELL
	SLIDE		C CHALKY		
	SURVEY		CX CRYPTOXLN		

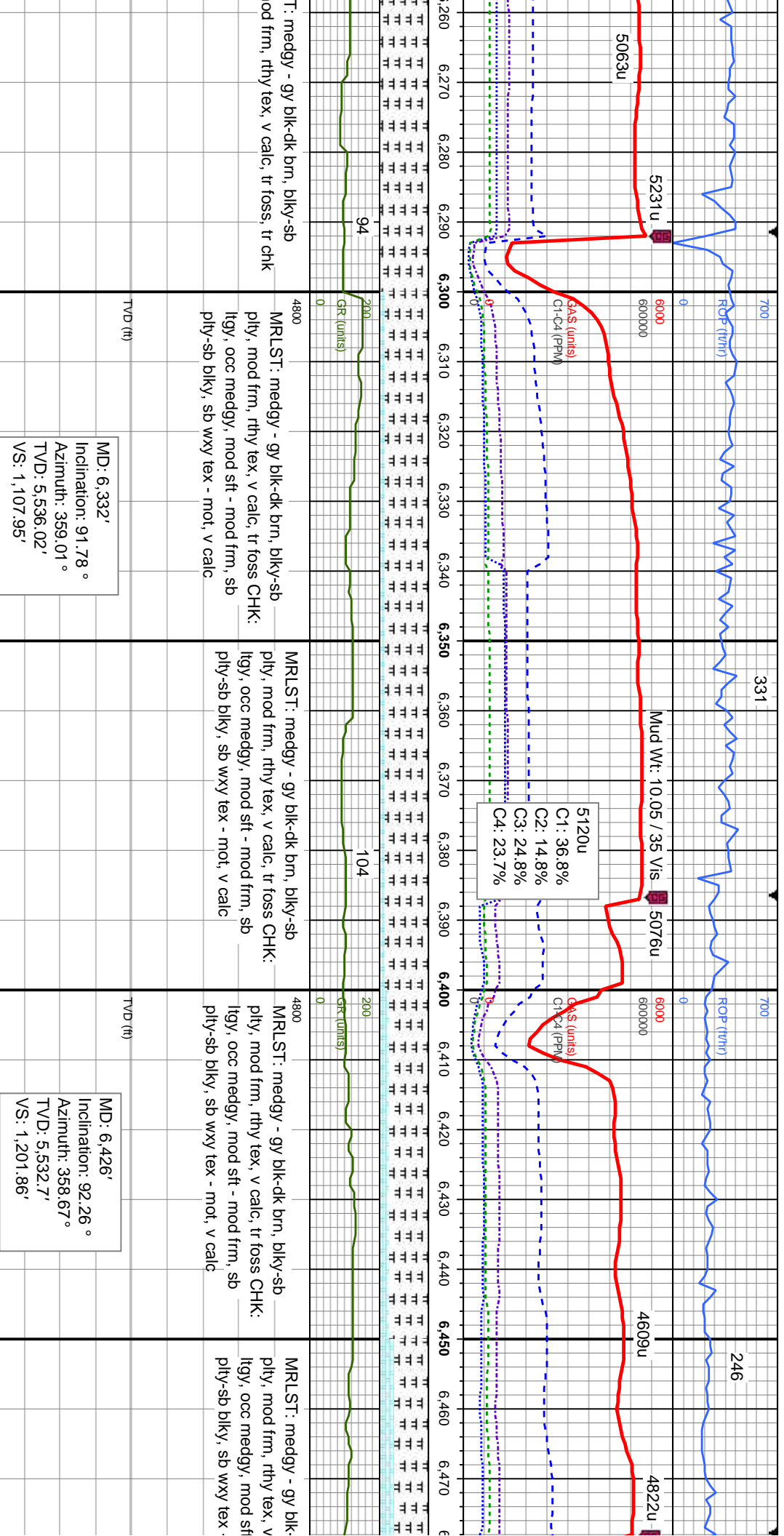


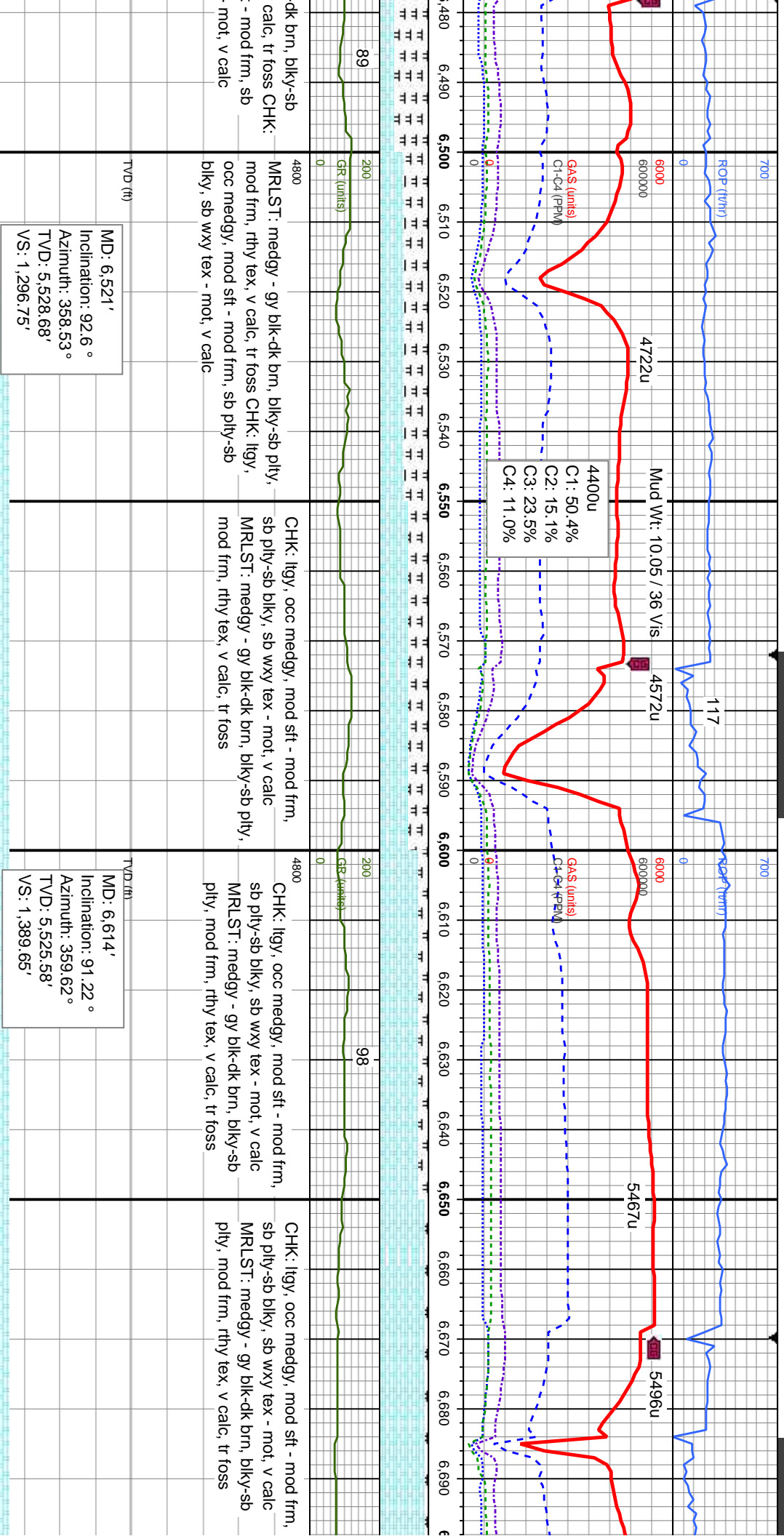












89

200

GR (units)

0

4800

MD: 6.521'
Inclination: 92.6°
Azimuth: 358.53°
TVD: 5,528.68'
VS: 1,296.75'

TV D (ft)

dk brn, blk-y-sb
calc, tr foss CHK:
- mod frm, sb
mot, v calc

MRSLT: medgy - gy blk-dk brn, blk-y-sb plty,
mod frm, rthy tex, v calc, tr foss CHK: lgy,
occ medgy, mod sft - mod frm, sb plty-sb
blk-y, sb wxy tex - mot, v calc

CHK: lgy, occ medgy, mod sft - mod frm,
sb plty-sb blk-y, sb wxy tex - mot, v calc
MRSLT: medgy - gy blk-dk brn, blk-y-sb plty,
mod frm, rthy tex, v calc, tr foss

98

200

GR (units)

0

4800

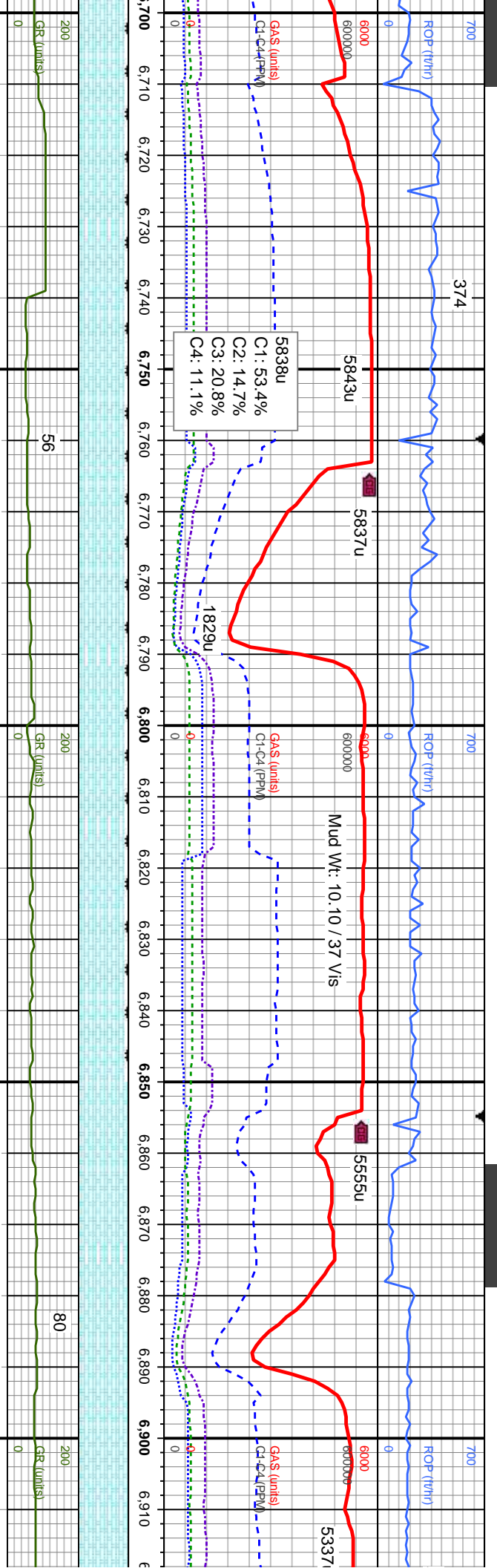
MD: 6.614'
Inclination: 91.22°
Azimuth: 359.62°
TVD: 5,525.58'
VS: 1,389.65'

TV D (ft)

CHK: lgy, occ medgy, mod sft - mod frm,
sb plty-sb blk-y, sb wxy tex - mot, v calc
MRSLT: medgy - gy blk-dk brn, blk-y-sb
plty, mod frm, rthy tex, v calc, tr foss

CHK: lgy, occ medgy, mod sft - mod frm,
sb plty-sb blk-y, sb wxy tex - mot, v calc
MRSLT: medgy - gy blk-dk brn, blk-y-sb
plty, mod frm, rthy tex, v calc, tr foss





CHK: Itgy, occ medgy, mod sft - mod frm,
sb pily-sb blkly, sb wxy tex - mot, v calc
MRLST: medgy - gy blk-dk brn, blkly-sb
pily, mod frm, rthy tex, v calc, tr foss

CHK: Itgy, occ medgy, mod sft - mod frm,
sb pily-sb blkly, sb wxy tex - mot, v calc
MRLST: medgy - gy blk-dk brn, blkly-sb
pily, mod frm, rthy tex, v calc, tr foss

CHK: Itgy, occ medgy, mod sft - mod frm,
sb pily-sb blkly, sb wxy tex - mot, v calc
MRLST: medgy - gy blk-dk brn, blkly-sb pily,
mod frm, rthy tex, v calc, tr foss

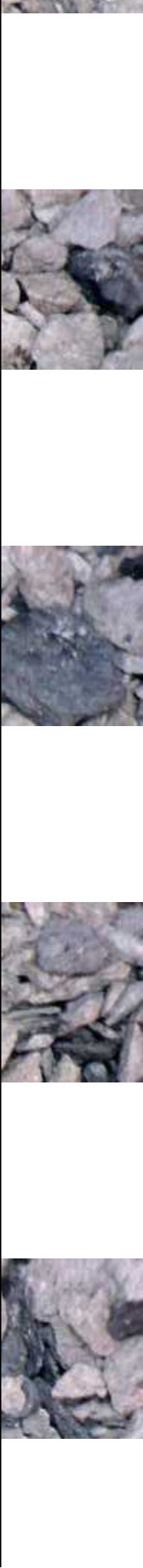
CHK: Itgy, occ medgy, mod sft - mod frm,
sb pily-sb blkly, sb wxy tex - mot, v calc

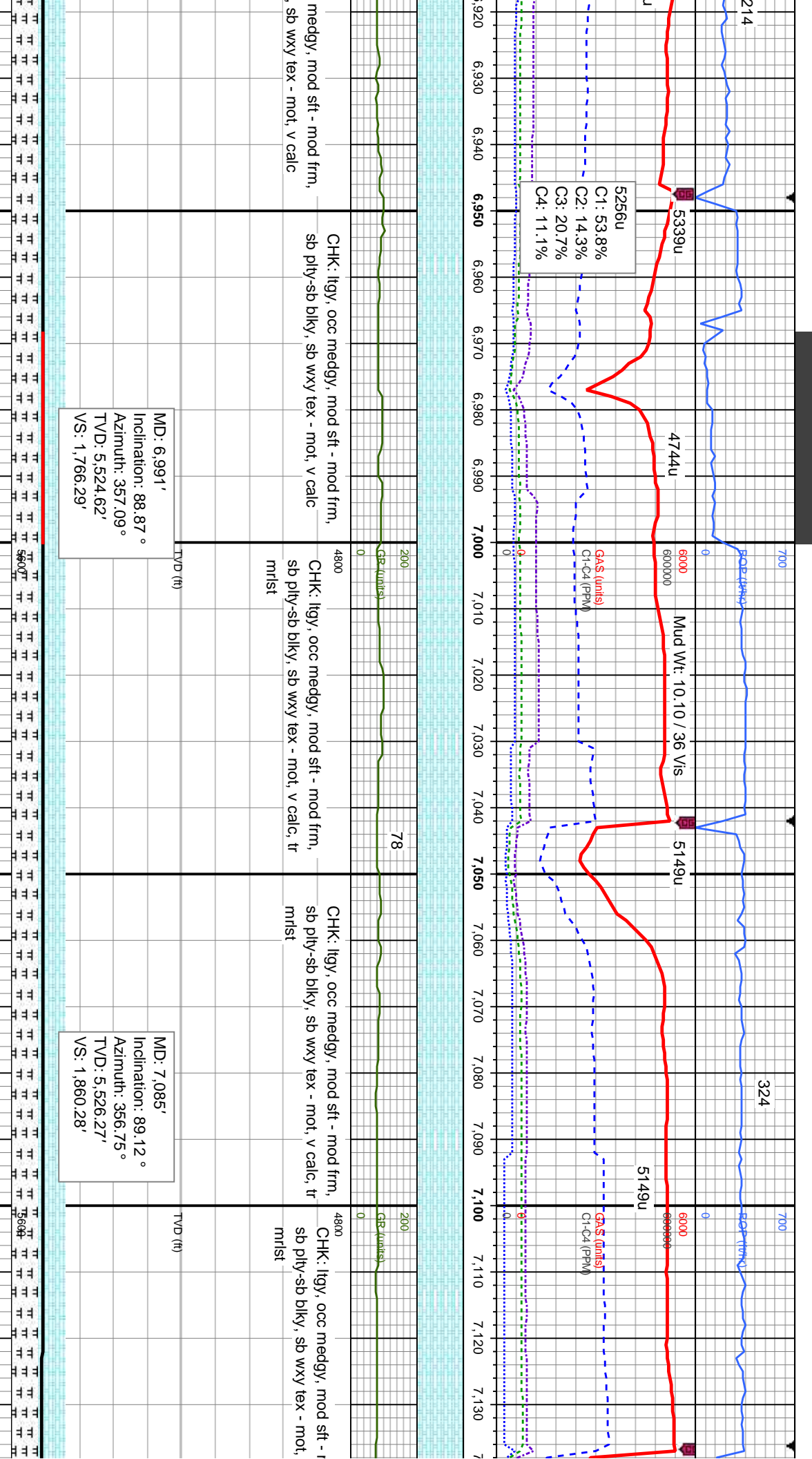
CHK: Itgy, occ
sb pily-sb blkly

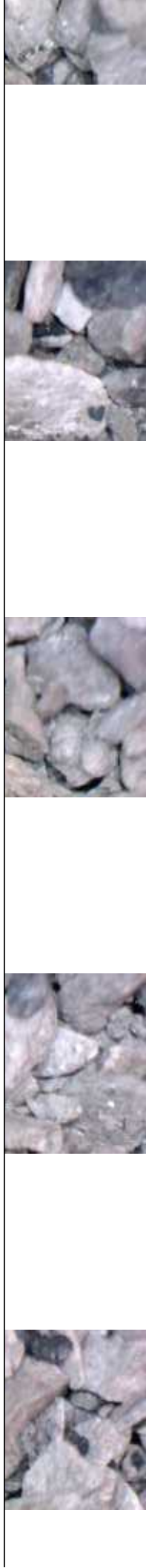
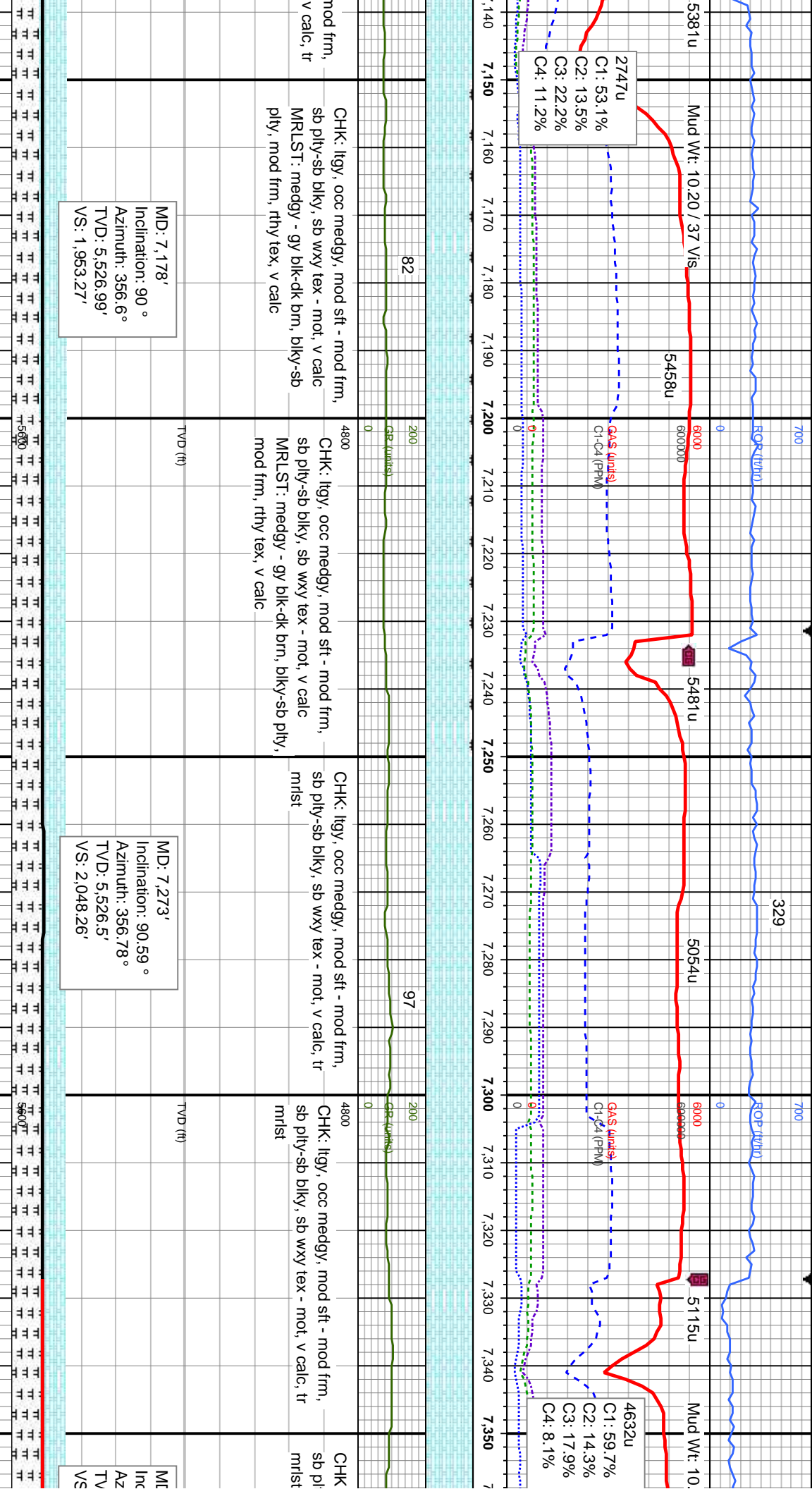
MD: 6,709'
Inclination: 89.9 °
Azimuth: 0.55 °
TVD: 5,524.65'
VS: 1,484.53'

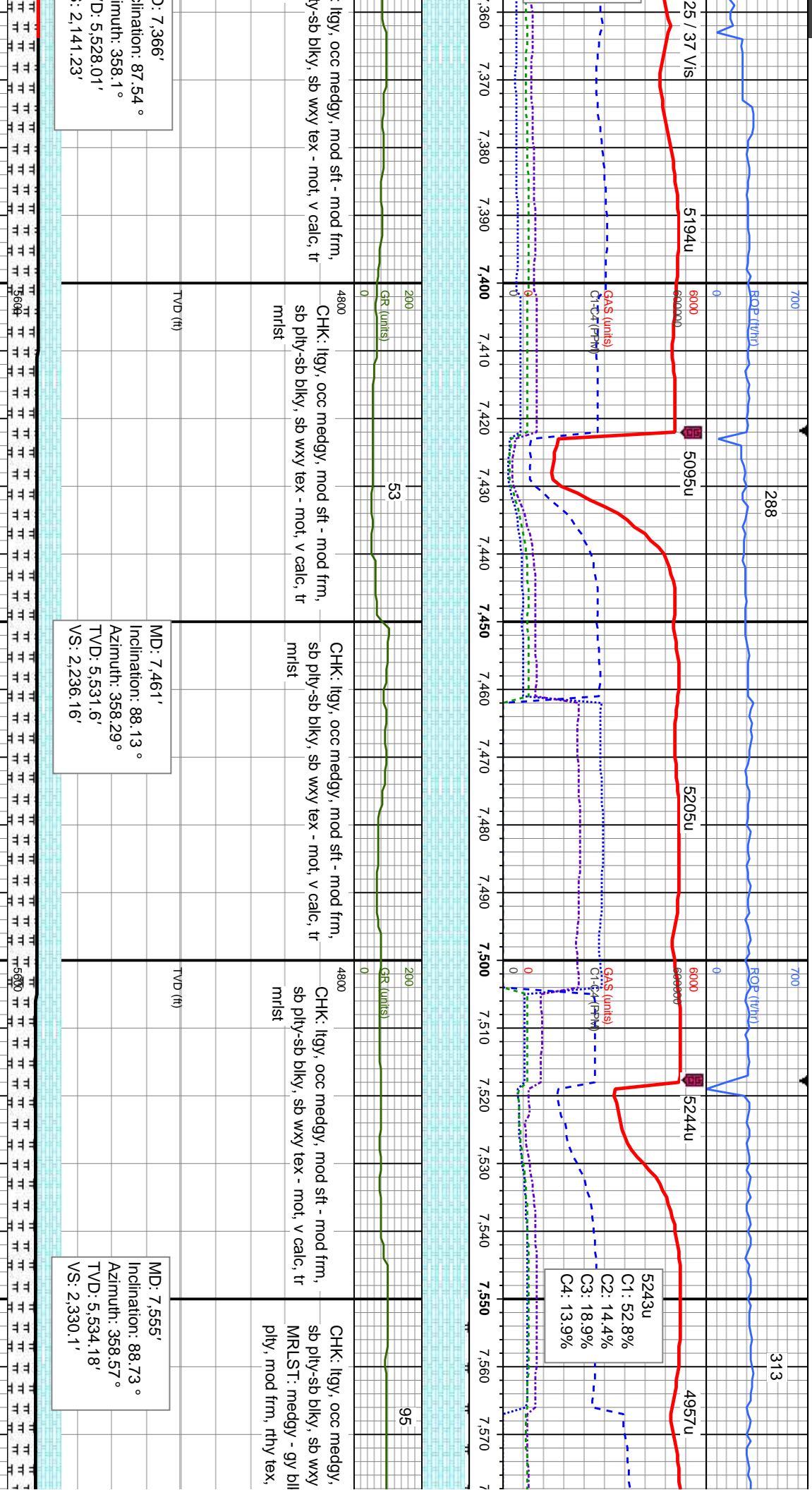
MD: 6,803'
Inclination: 90.28 °
Azimuth: 0.52 °
TVD: 5,524.5'
VS: 1,578.38'

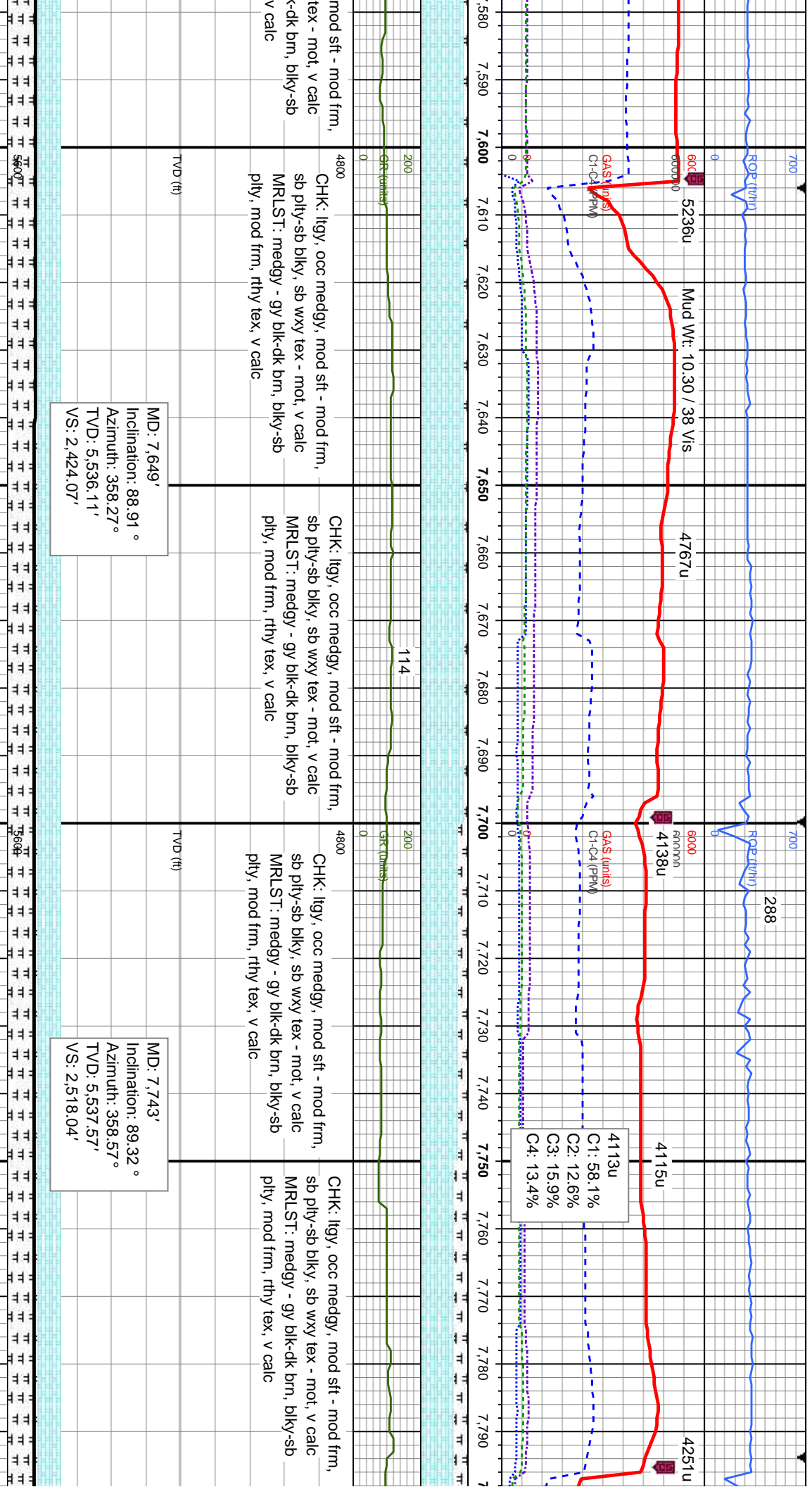
MD: 6,897'
Inclination: 90.35 °
Azimuth: 358.65 °
TVD: 5,523.98'
VS: 1,672.31'

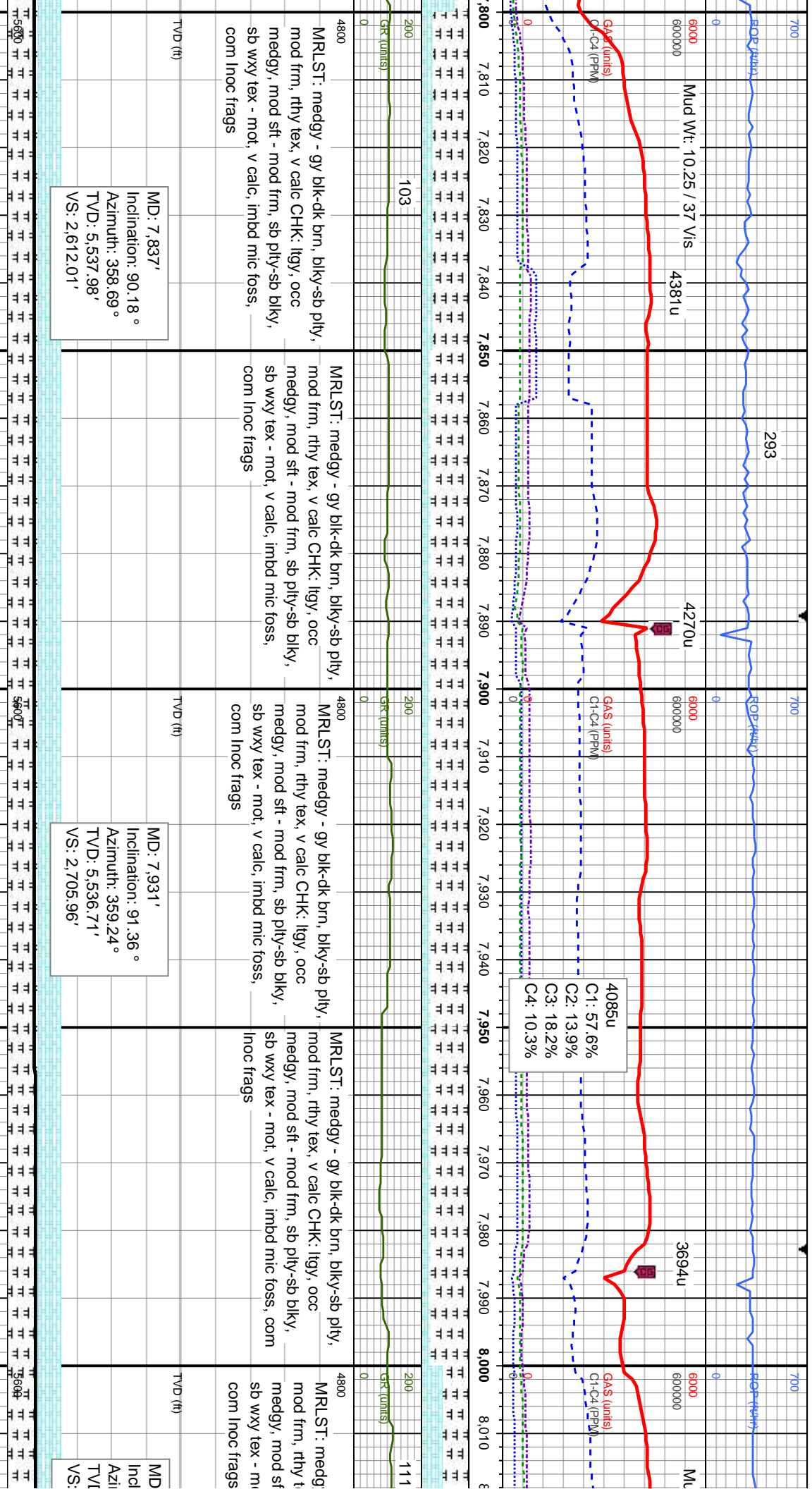


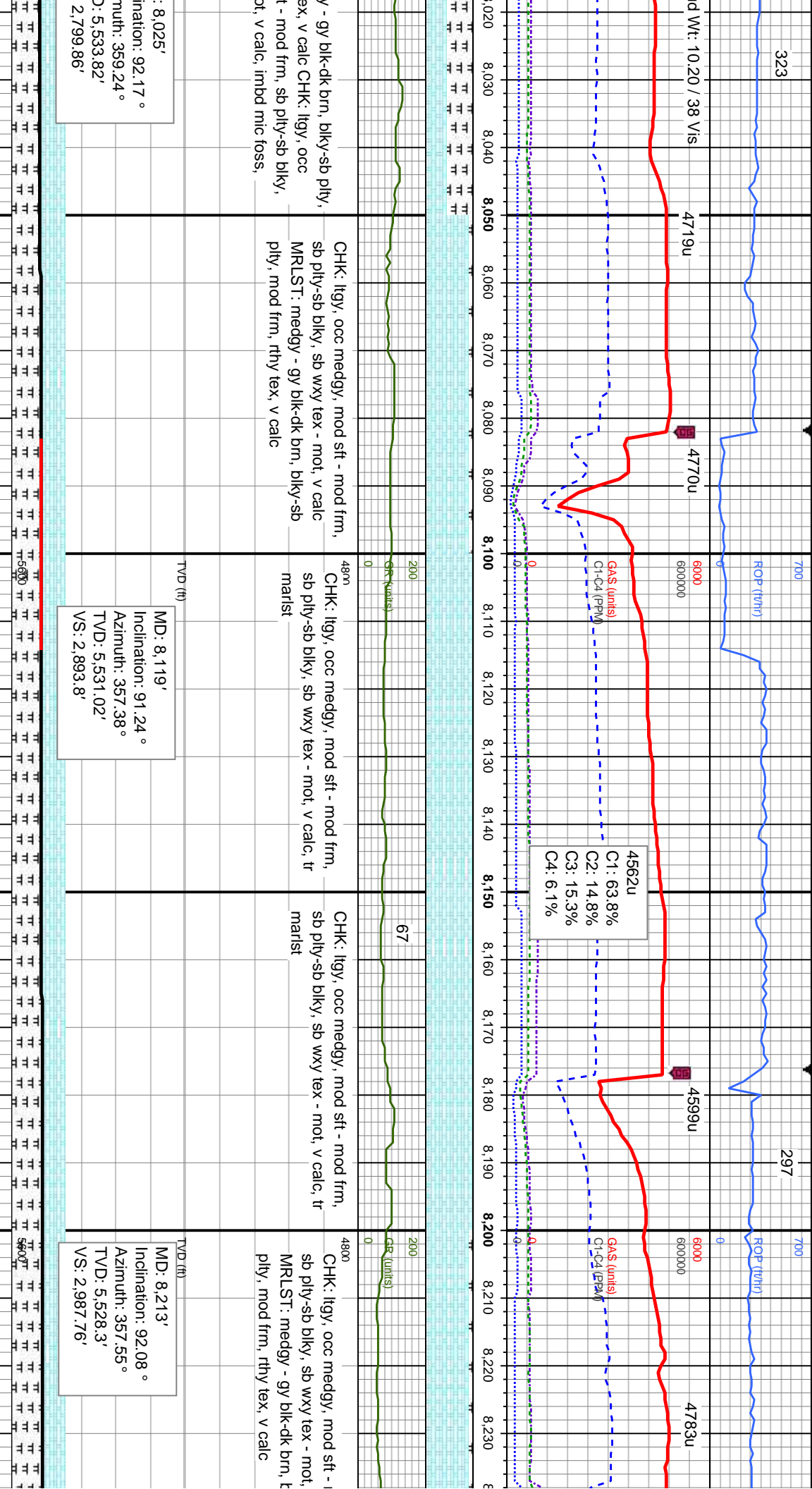


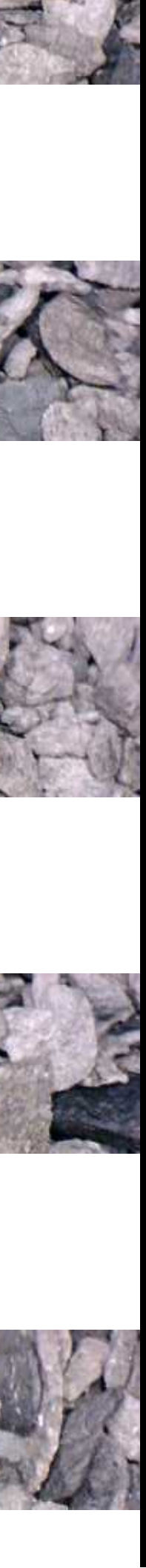
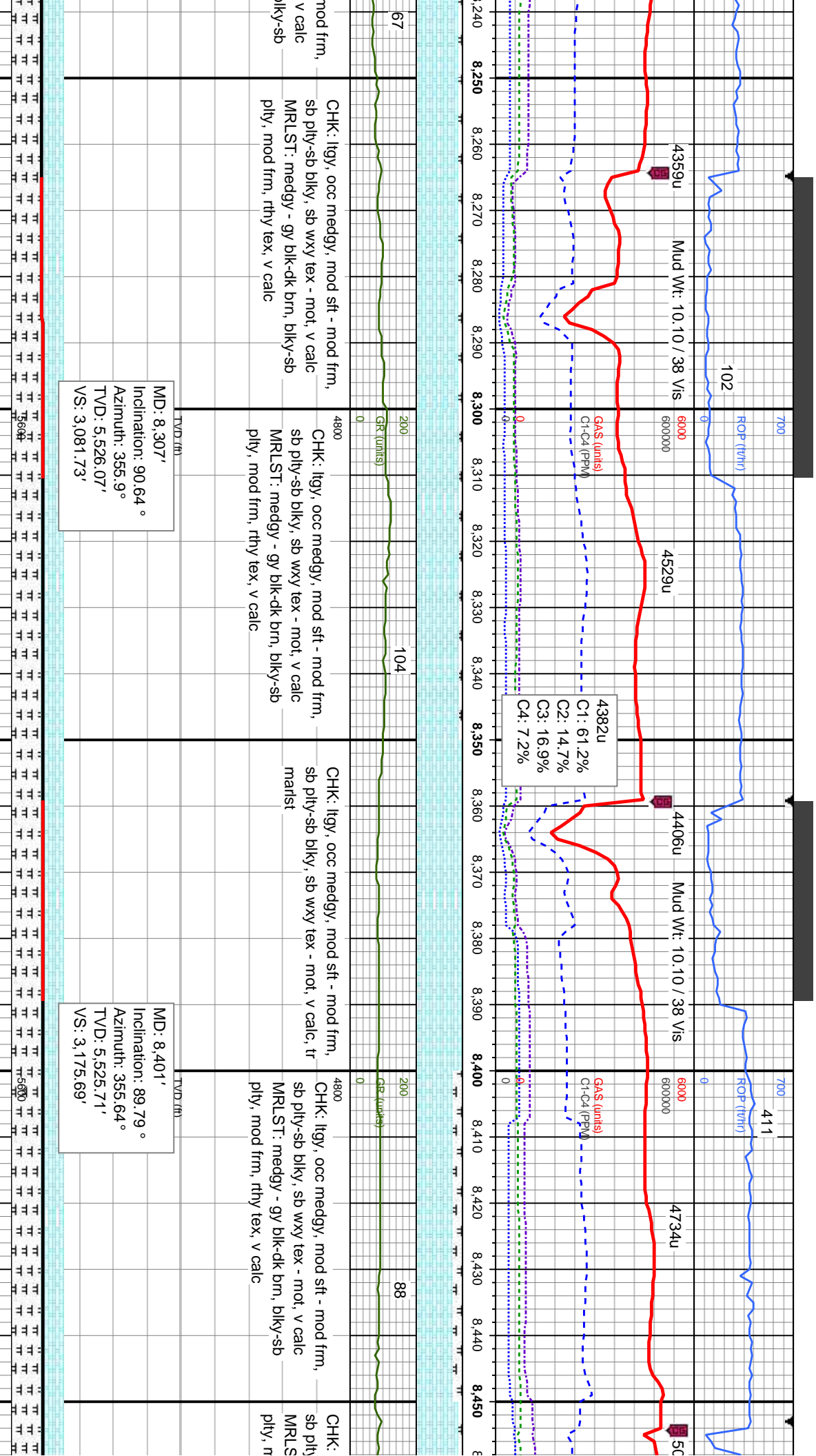


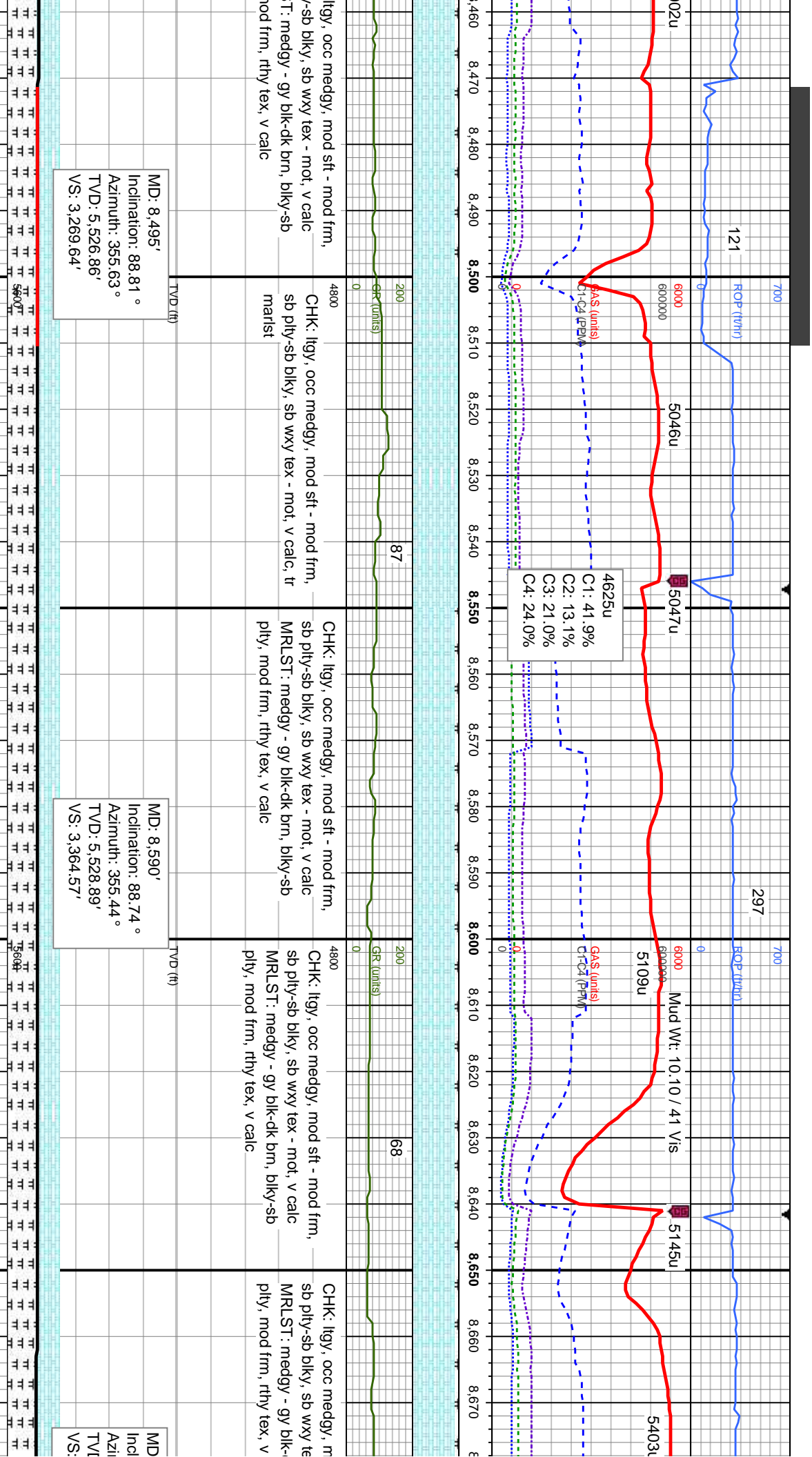


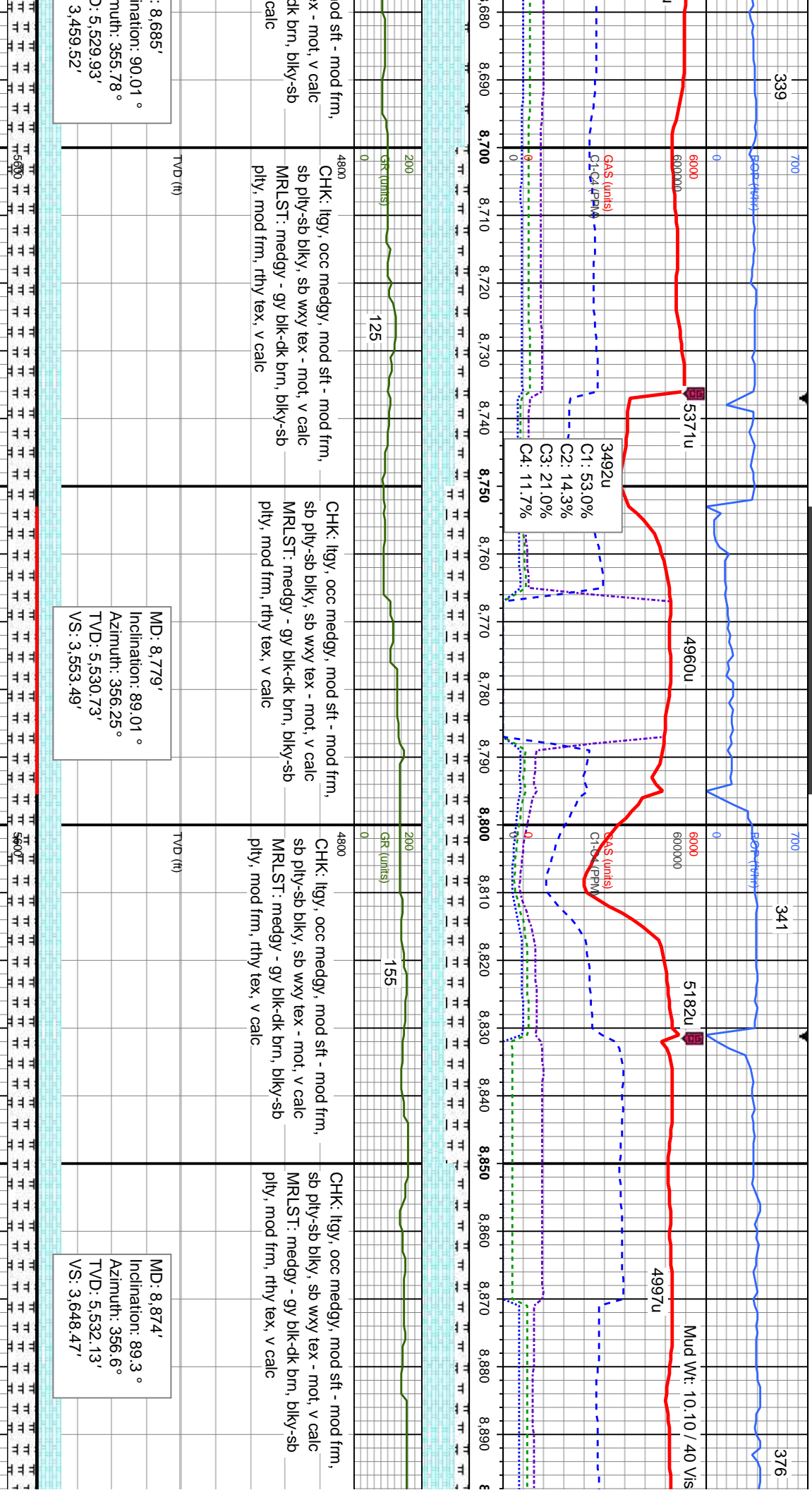


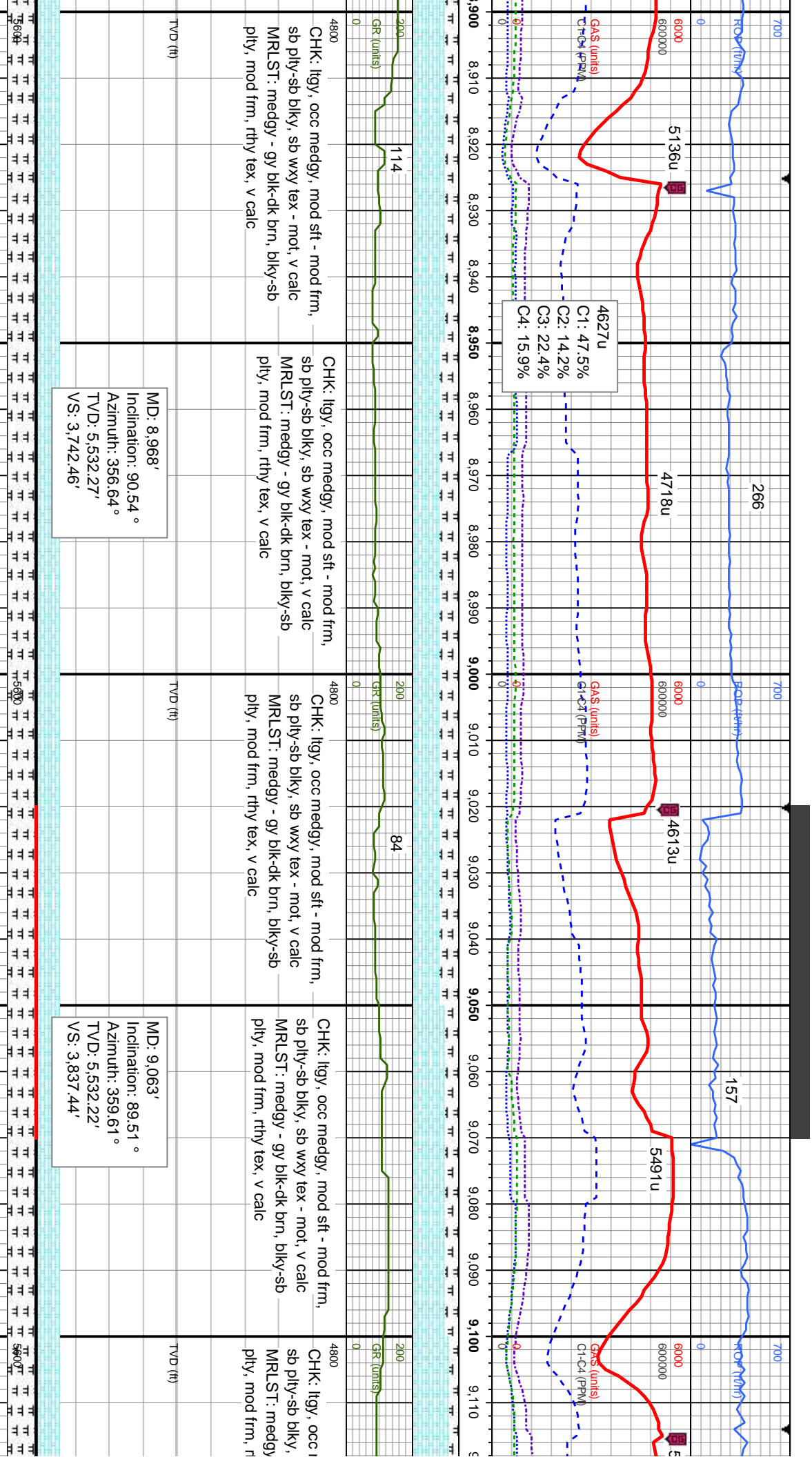


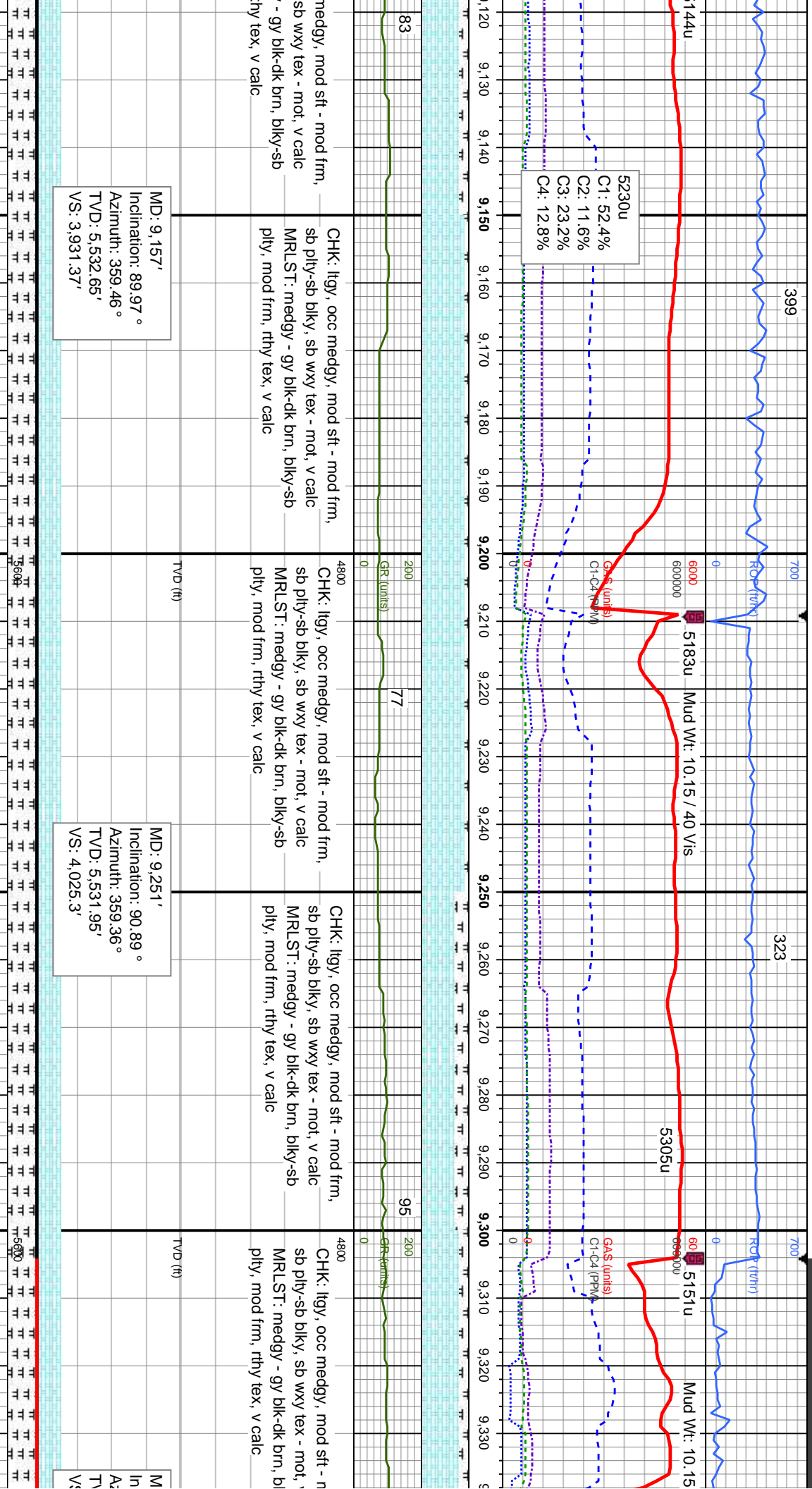






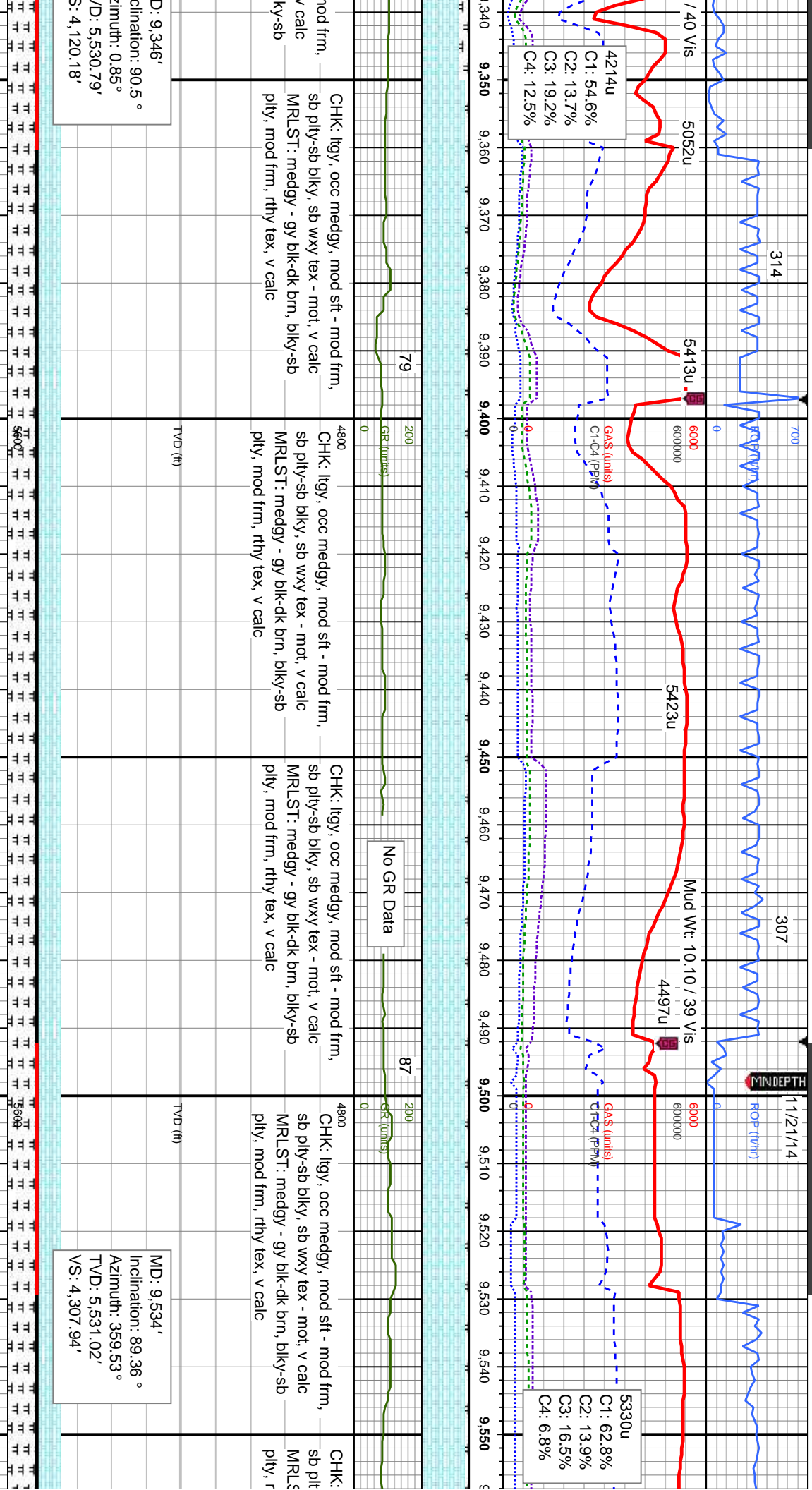


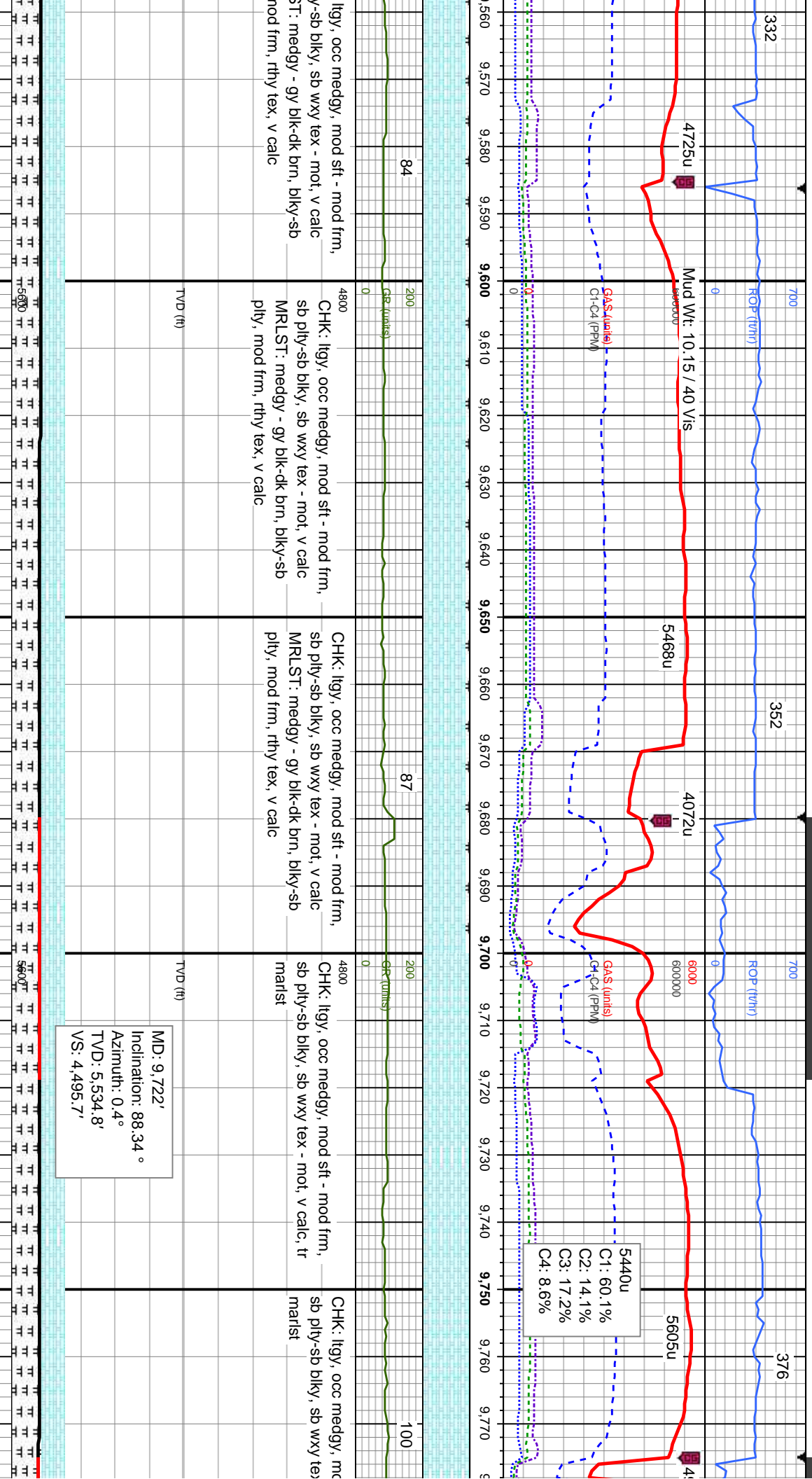




M In A₂ T₁ V₂

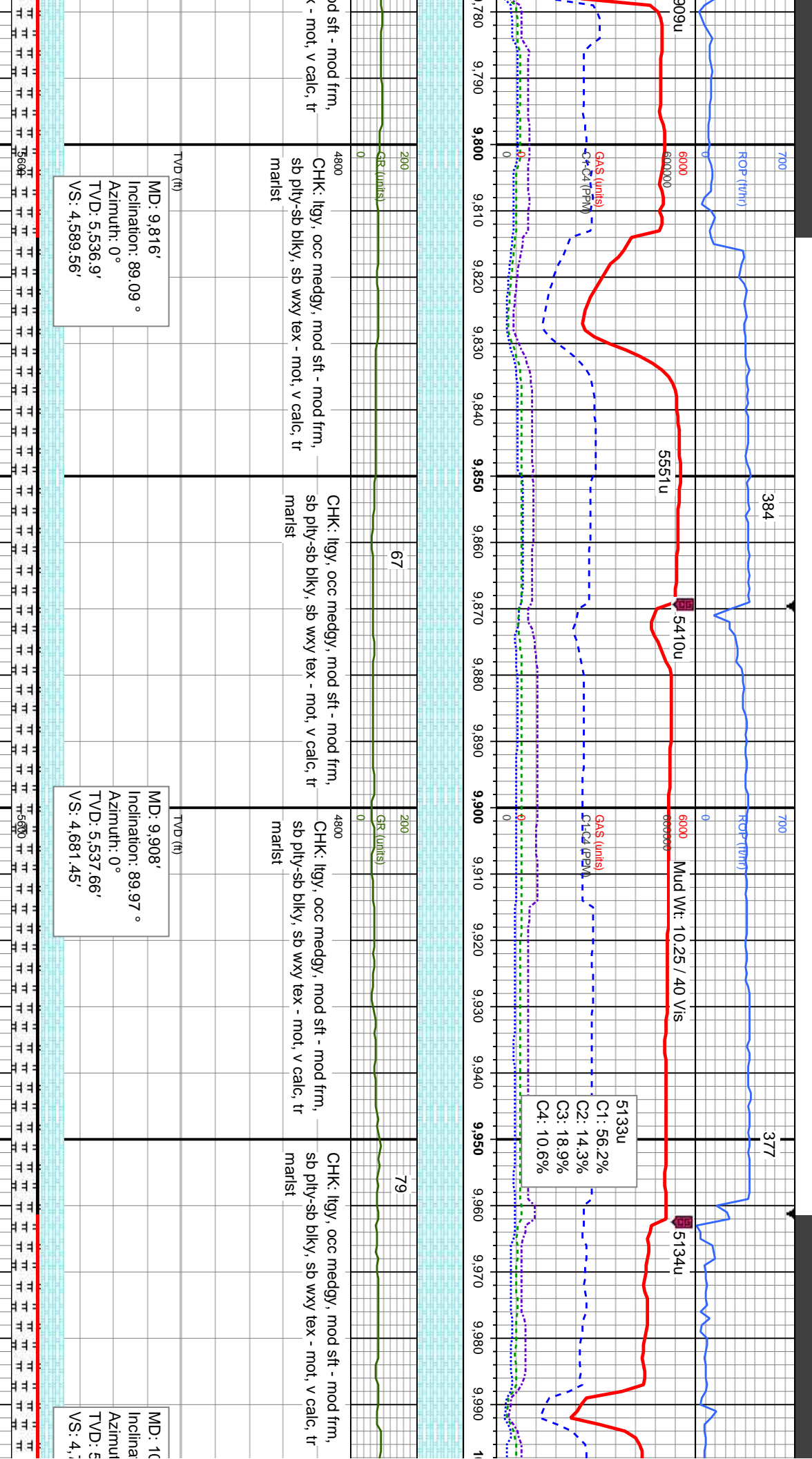






MD: 9,722'
Inclination: 88.34 °
Azimuth: 0.4°
TVD: 5,534.8'
VS: 4,495.7'

5440u
C1: 60.1%
C2: 14.1%
C3: 17.2%
C4: 8.6%

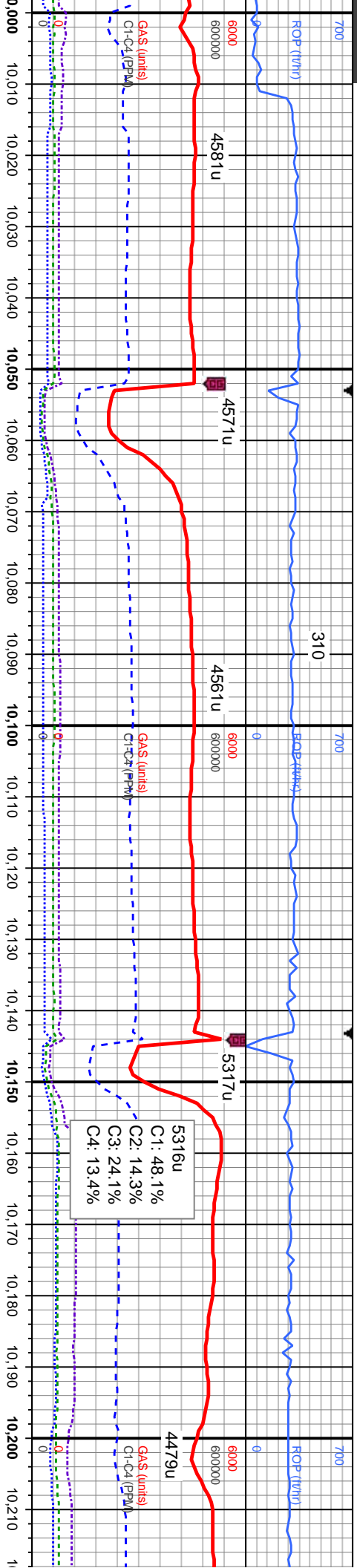


MD: 9,816'
Inclination: 89.09 °
Azimuth: 0 °
TVD: 5,536.9'
VS: 4,589.56'

MD: 9,908'
Inclination: 89.97 °
Azimuth: 0 °
TVD: 5,537.66'
VS: 4,681.45'

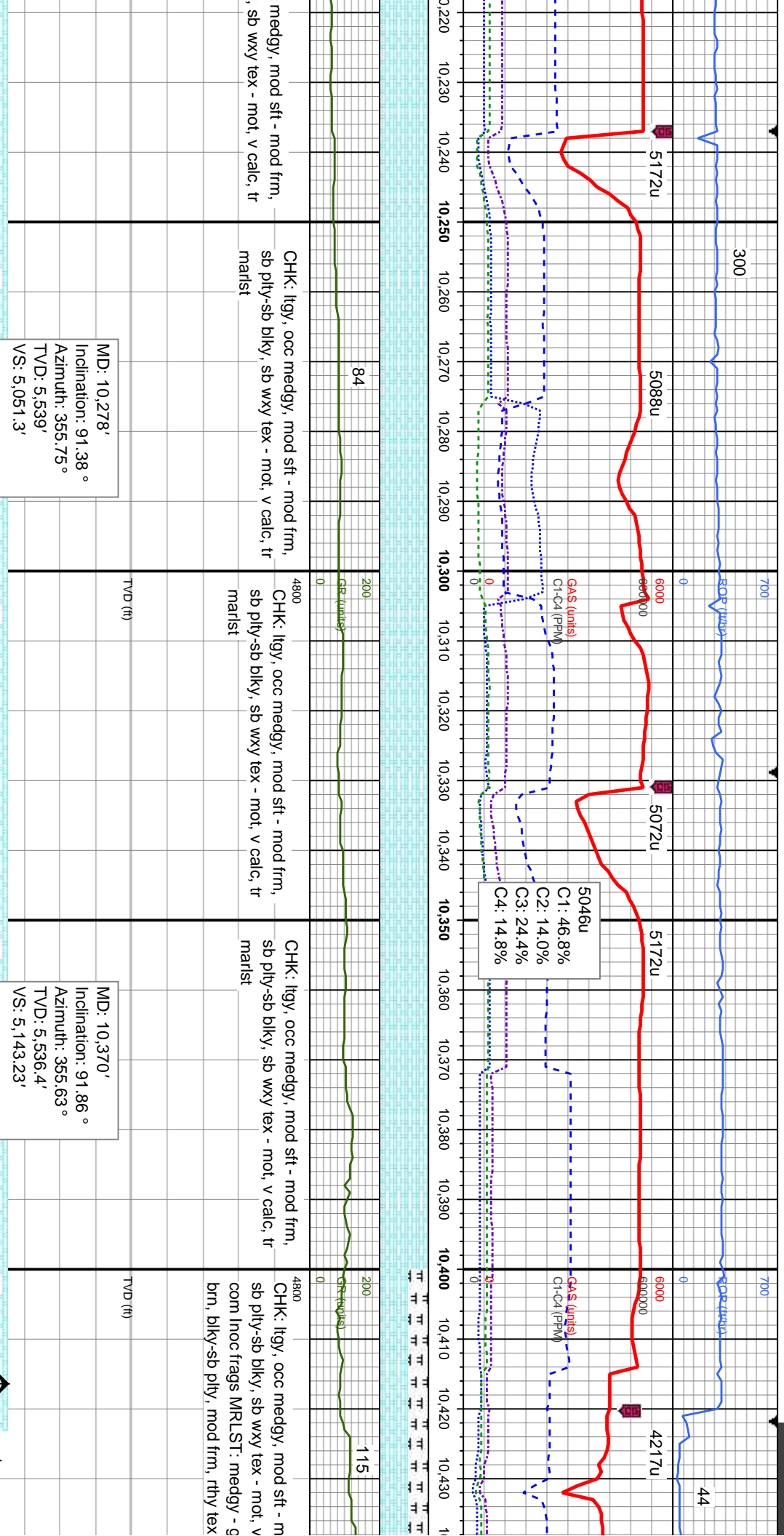
MD: 10,000'
Inclination: 89.97 °
Azimuth: 0 °
TVD: 5,537.66'
VS: 4,681.45'





4800	200	GR (units)	55	4800	200	GR (units)	4800	200	GR (units)
CHK: lgy, occ medgy, mod sft - mod frm, sb pty-sb blk, sb wxy tex - mot, v calc, tr marst				CHK: lgy, occ medgy, mod sft - mod frm, sb pty-sb blk, sb wxy tex - mot, v calc, tr marst			CHK: lgy, occ medgy, mod sft - mod frm, sb pty-sb blk, sb wxy tex - mot, v calc, tr marst		CHK: lgy, occ medgy, mod sft - mod frm, sb pty-sb blk, sb wxy tex - mot, v calc, tr marst
TVD (ft)				TVD (ft)			TVD (ft)		
MD: 10,092' Inclination: 89.54 ° Azimuth: 355.97 ° TVD: 5,540.14' VS: 4,865.39'				MD: 10,185' Inclination: 90.24 ° Azimuth: 355.63 ° TVD: 5,540.31' VS: 4,958.35'					





CHK: lgy, occ medgy, mod sft - mod frm, sb pily-sb blkly, sb wxy tex - mot, v calc, tr marist

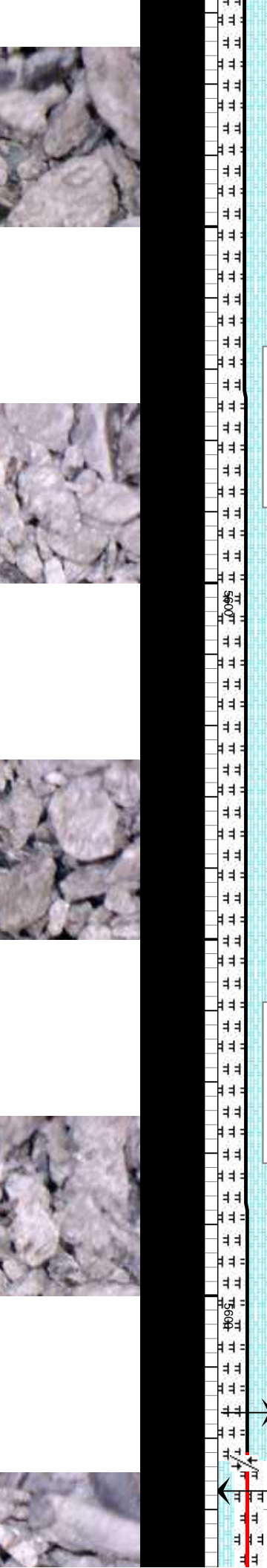
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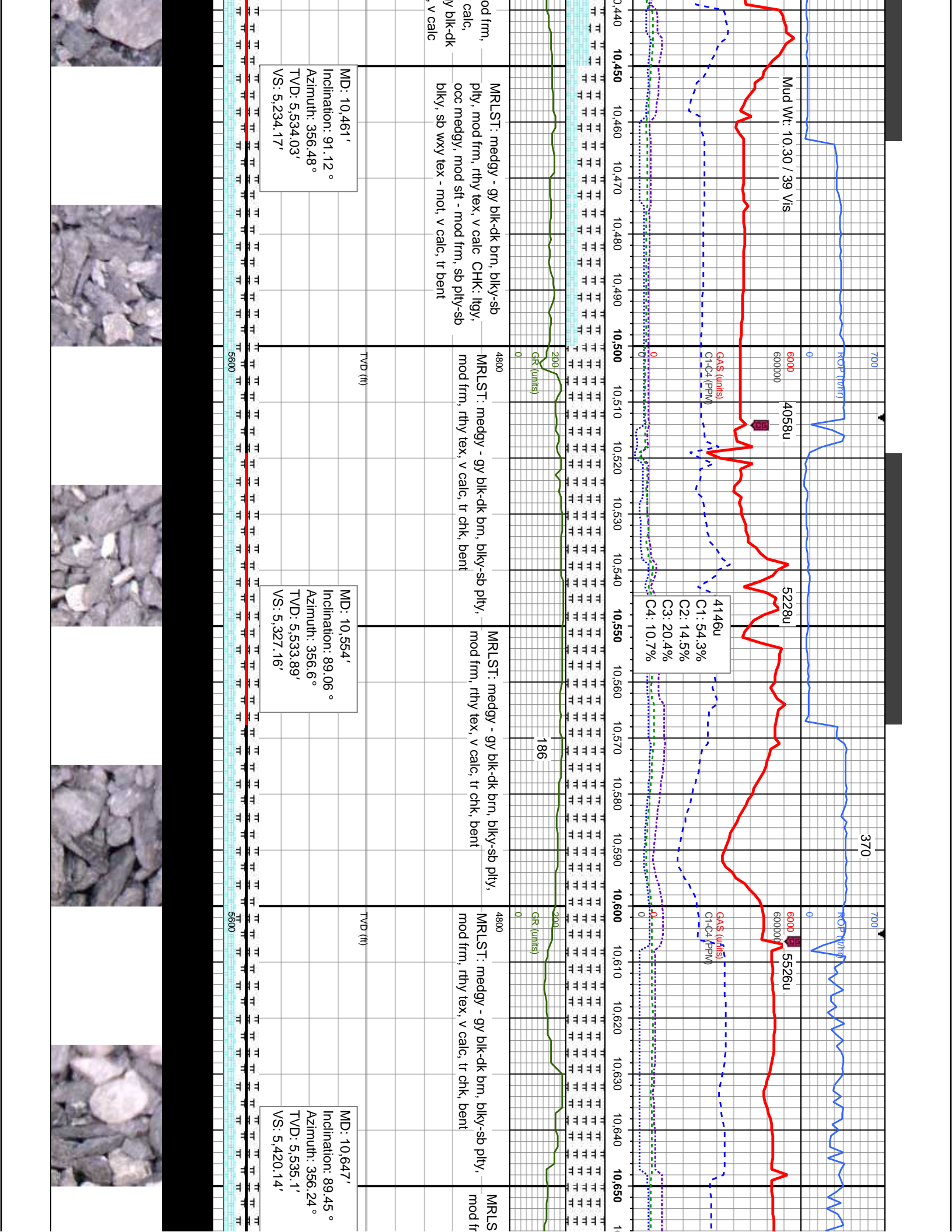
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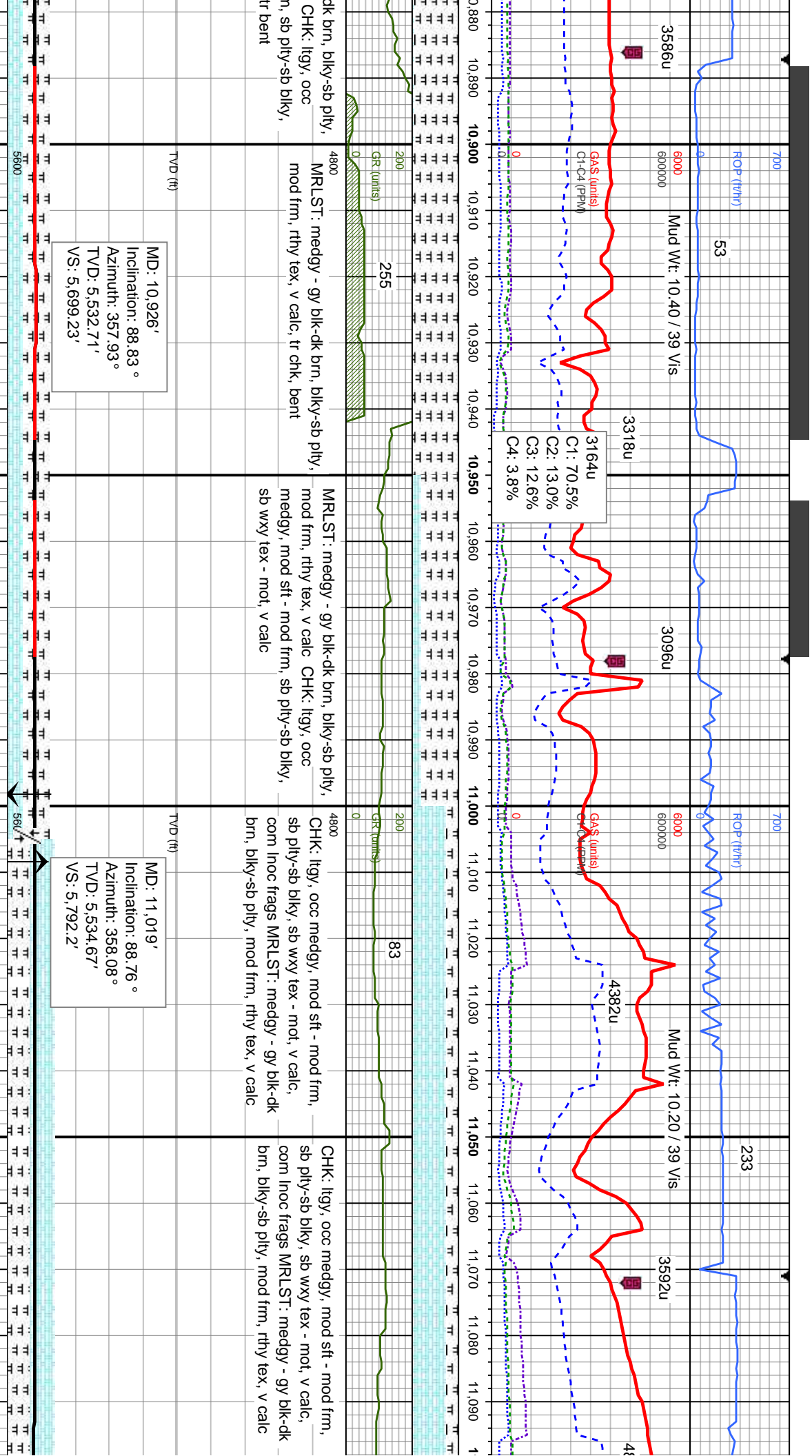
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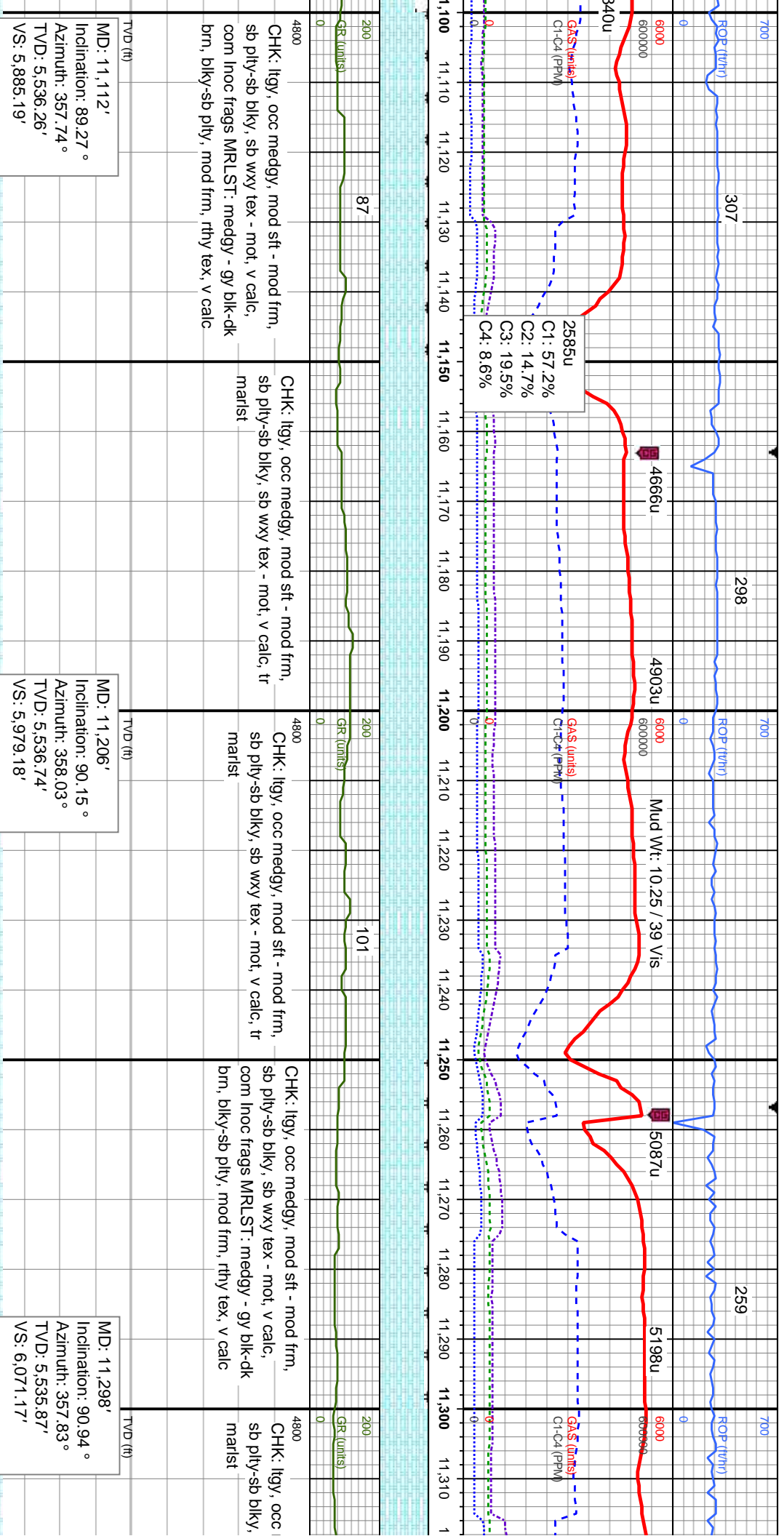
MD: 10,278'
Inclination: 91.38°
Azimuth: 355.75°
TVD: 5,539'
VS: 5,051.3'

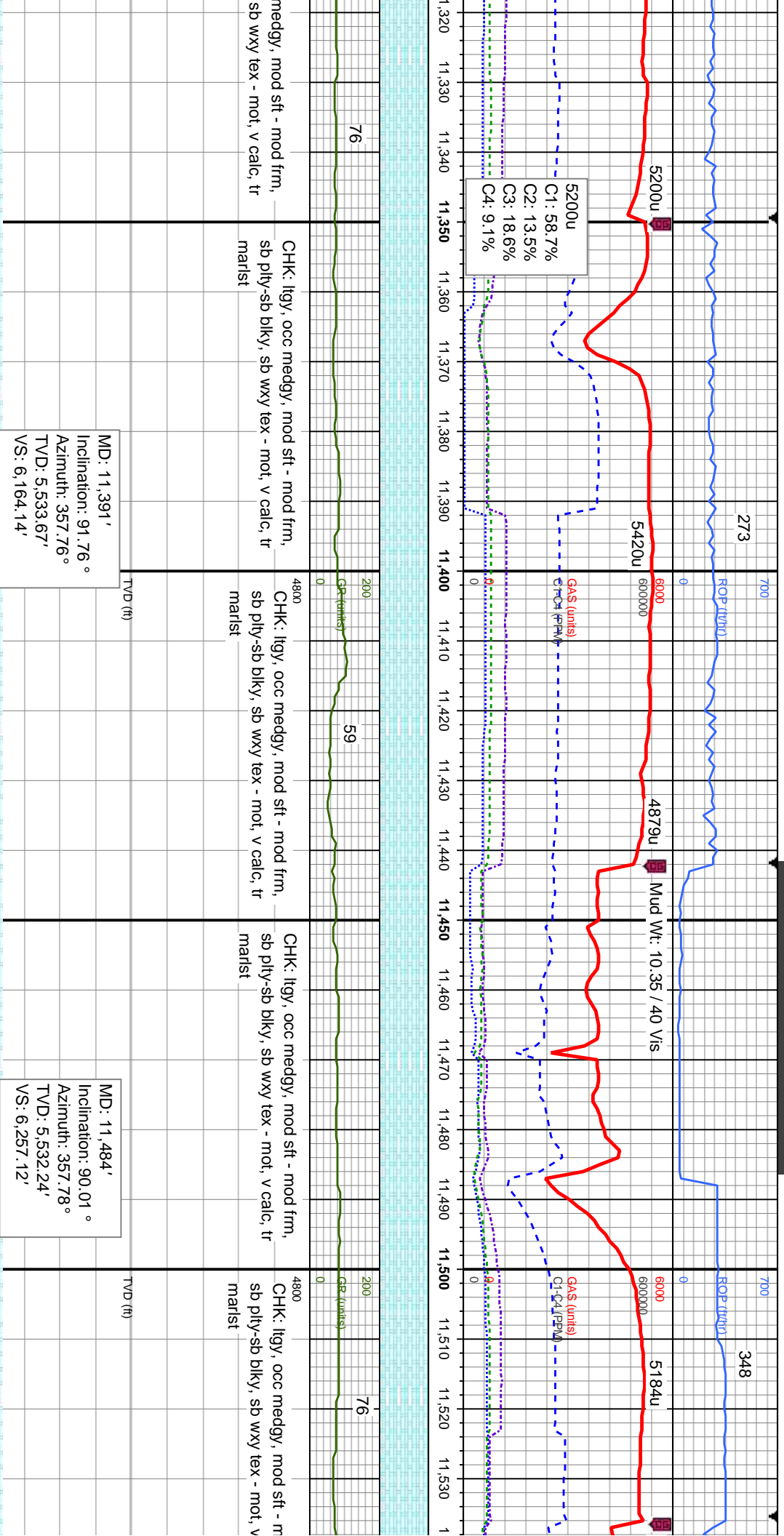
MD: 10,370'
Inclination: 91.86°
Azimuth: 355.63°
TVD: 5,536.4'
VS: 5,143.23'

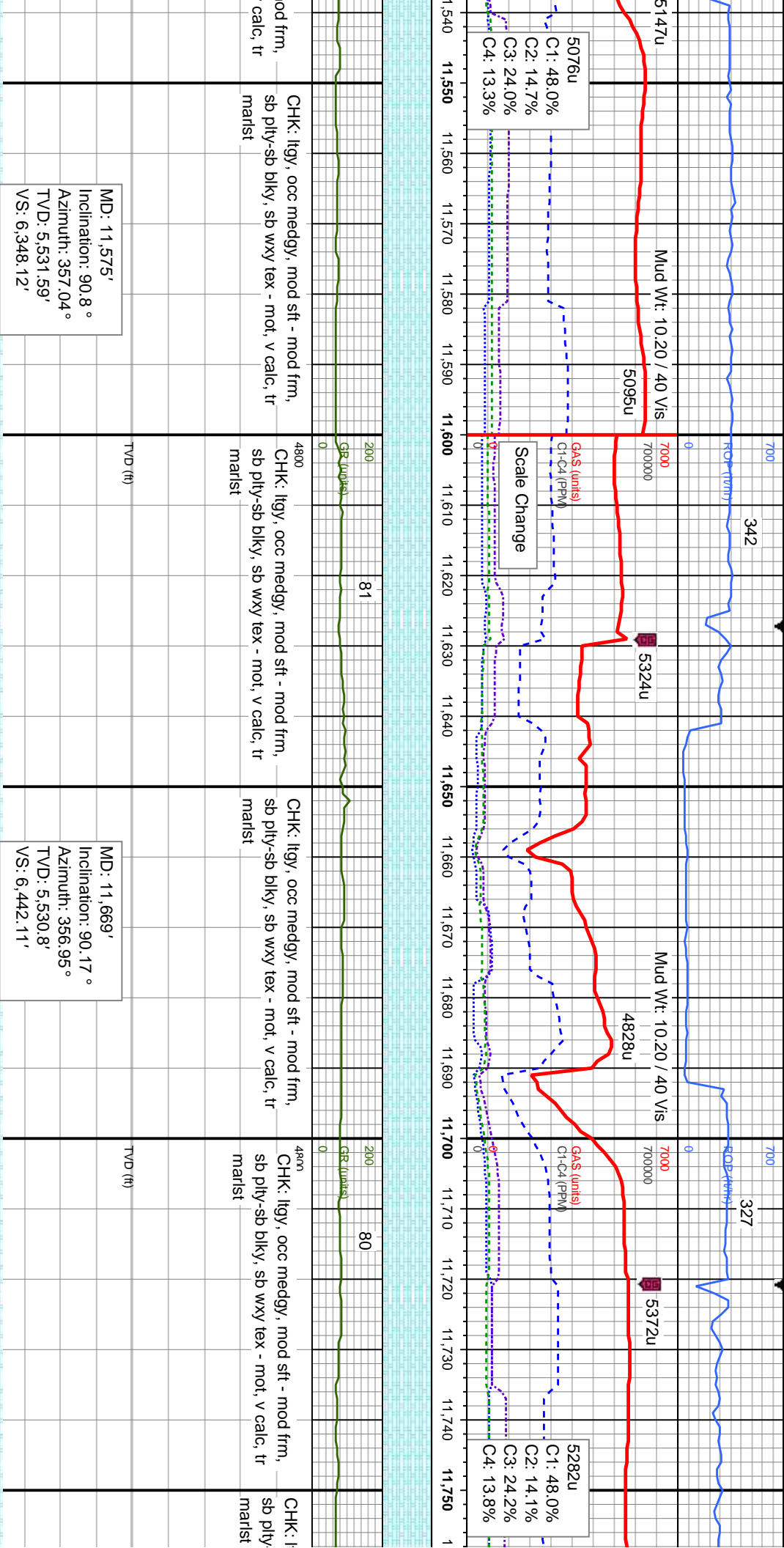


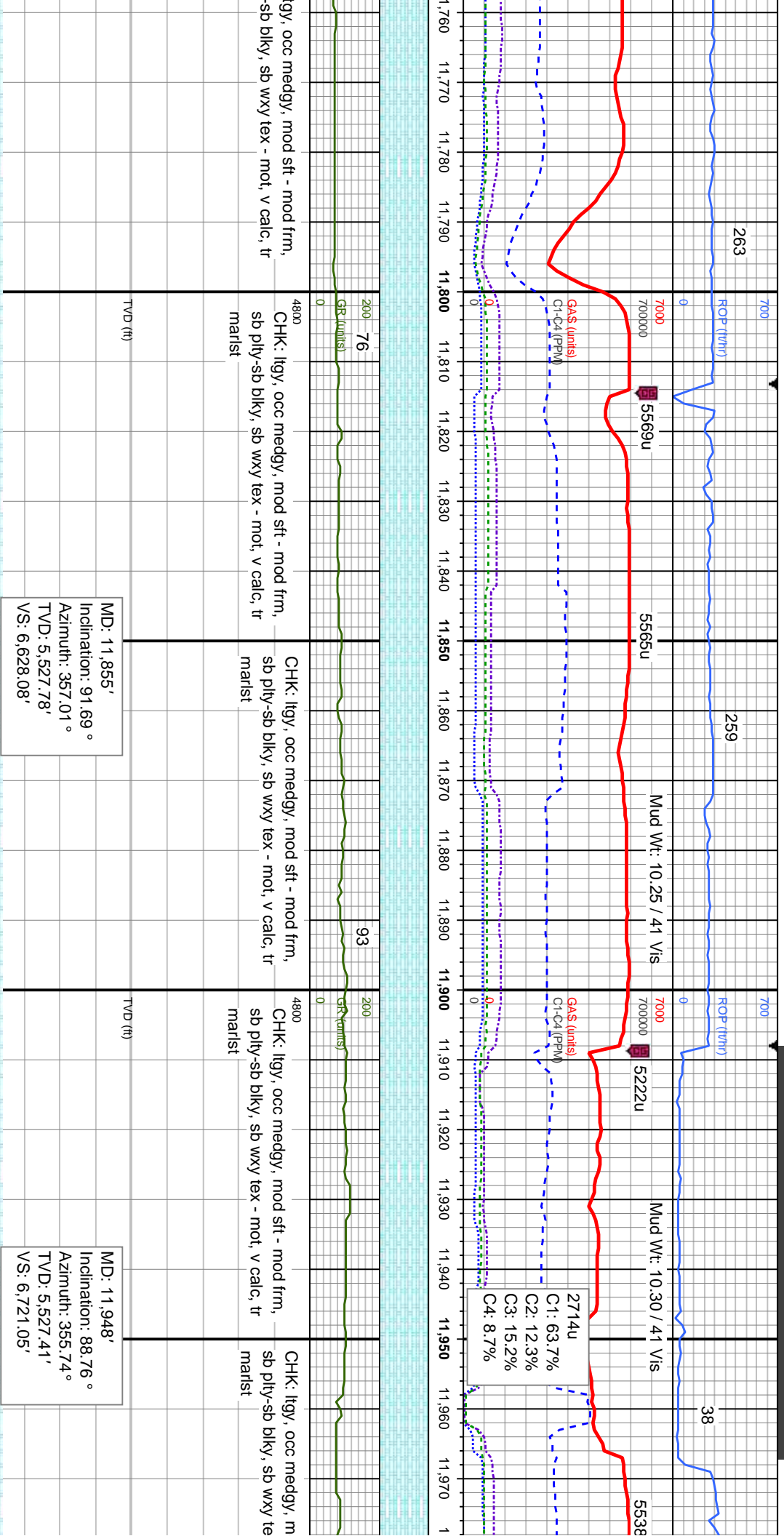


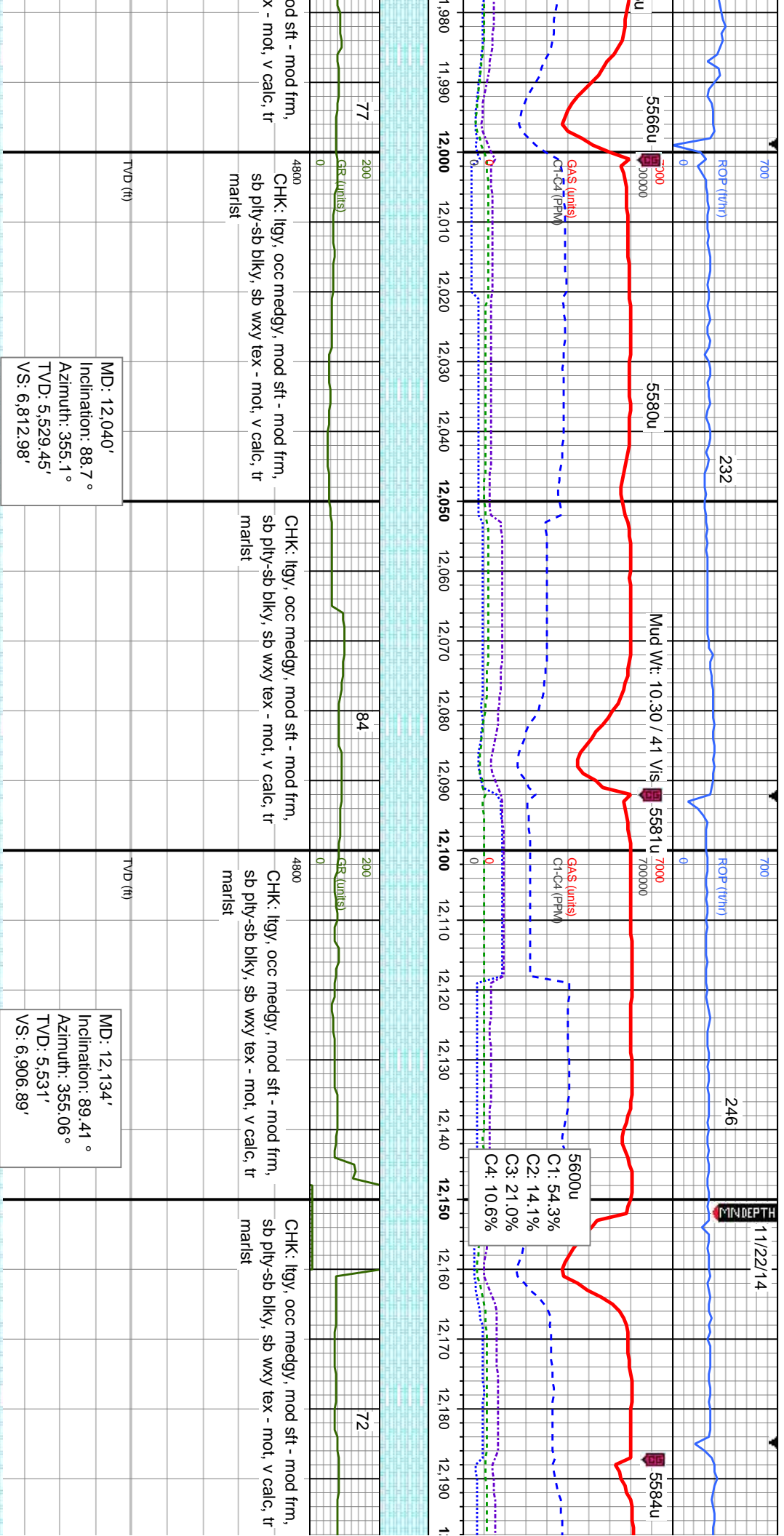






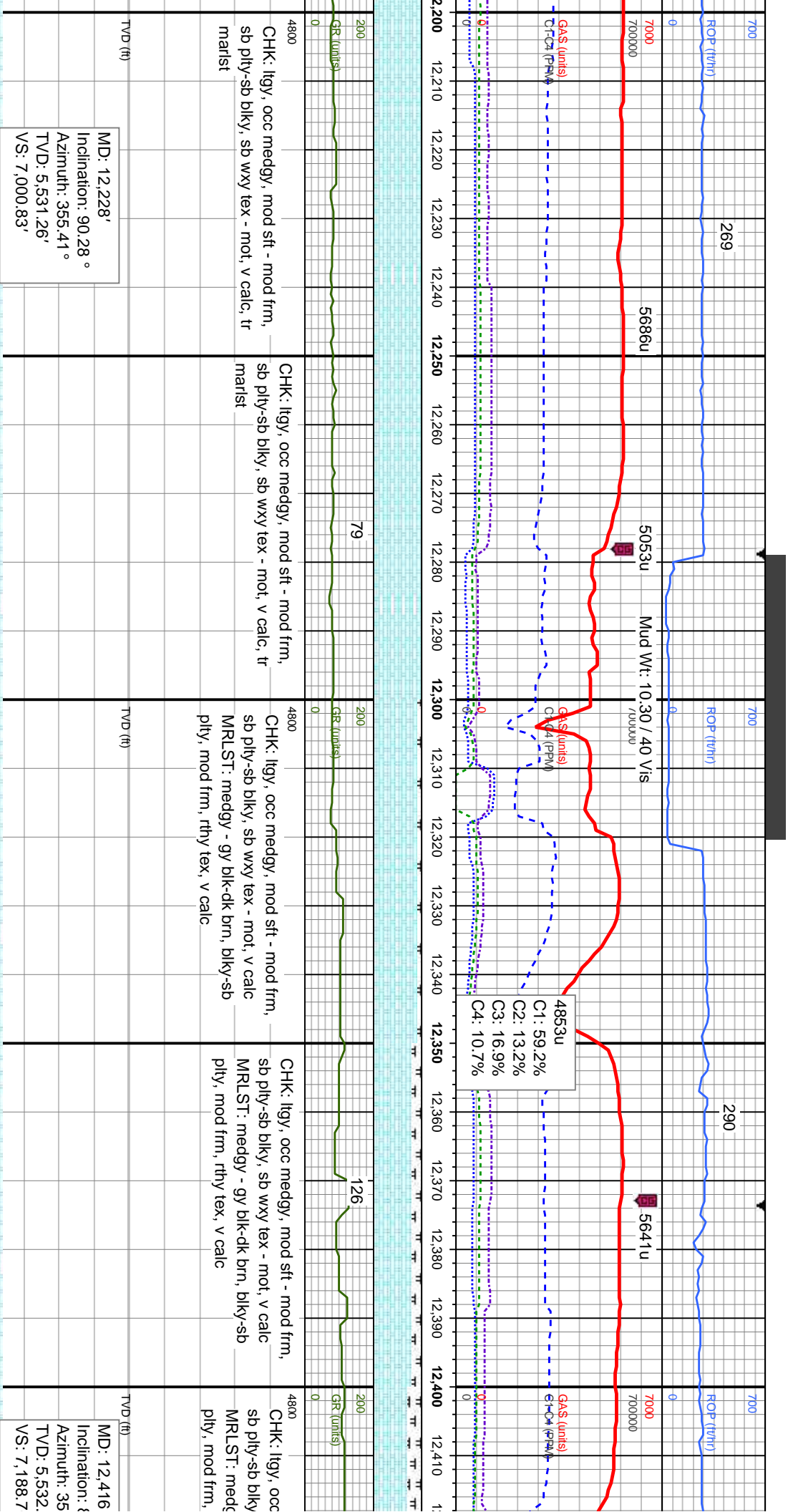


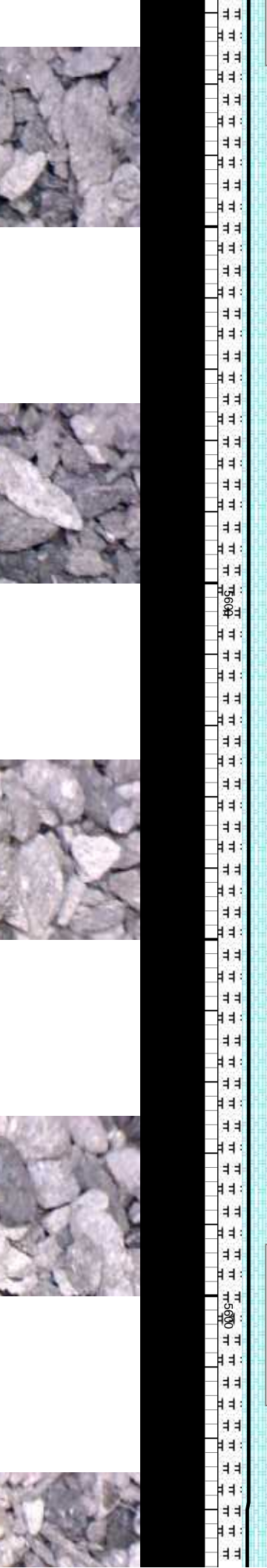
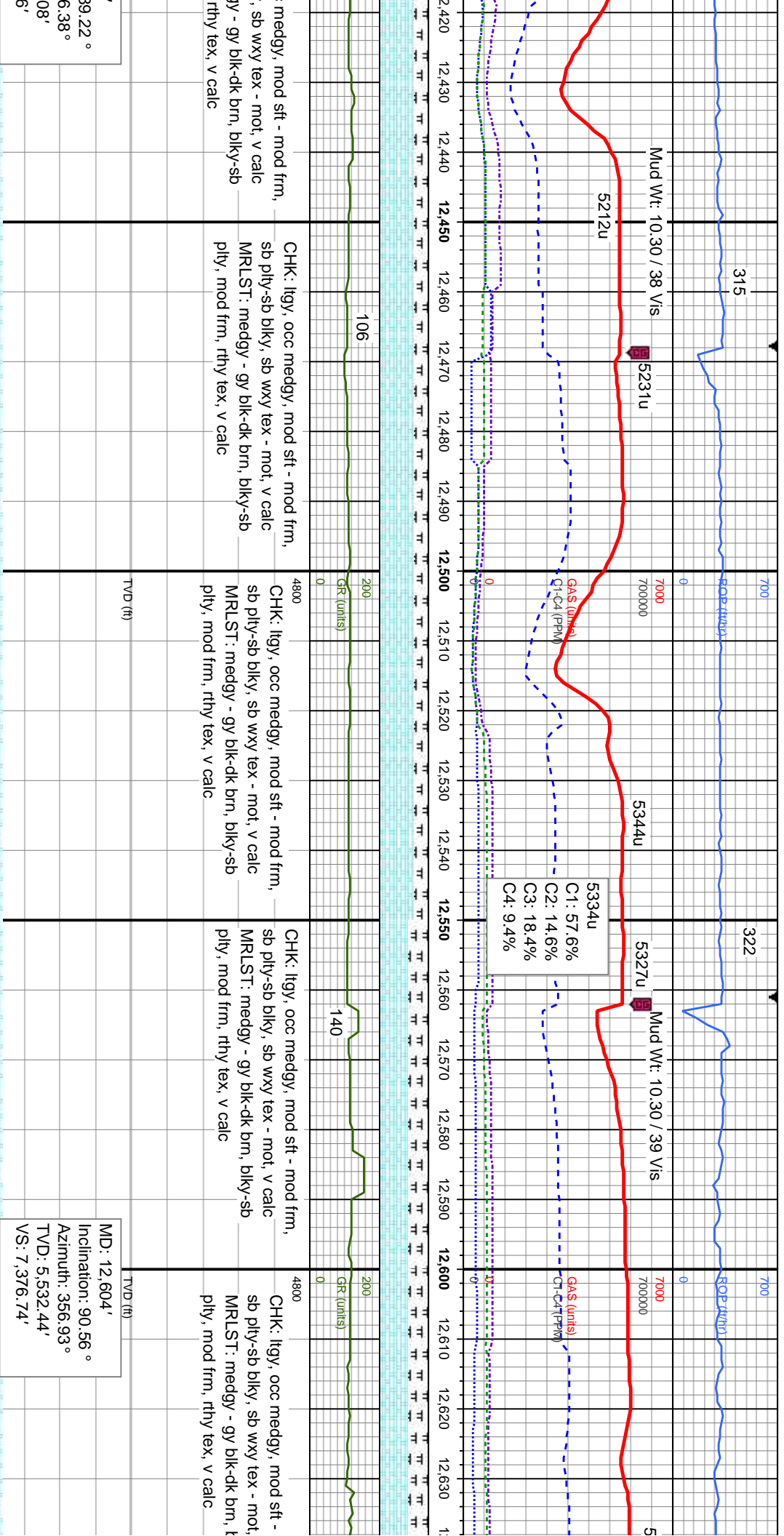


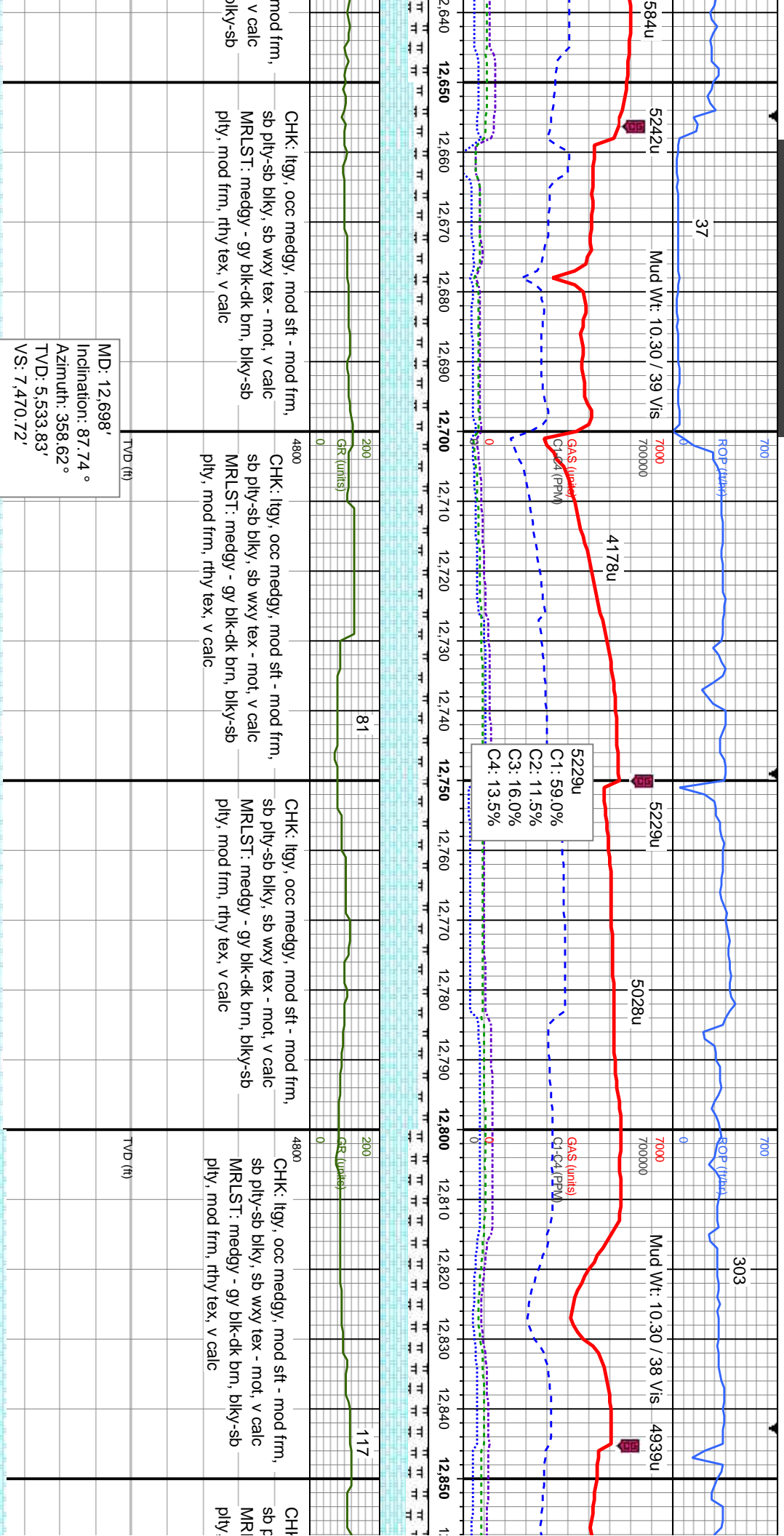


77	200	4800	CHK: lgy, occ medgy, mod sft - mod frm, sb pily-sb blkly, sb wxy tex - mot, v calc, tr marlst	MD: 12,040' Inclination: 88.7° Azimuth: 355.1° TVD: 5,529.45' VS: 6,812.98'
84	200	4800	CHK: lgy, occ medgy, mod sft - mod frm, sb pily-sb blkly, sb wxy tex - mot, v calc, tr marlst	MD: 12,134' Inclination: 89.41° Azimuth: 355.06° TVD: 5,531' VS: 6,906.89'
72	200	4800	CHK: lgy, occ medgy, mod sft - mod frm, sb pily-sb blkly, sb wxy tex - mot, v calc, tr marlst	



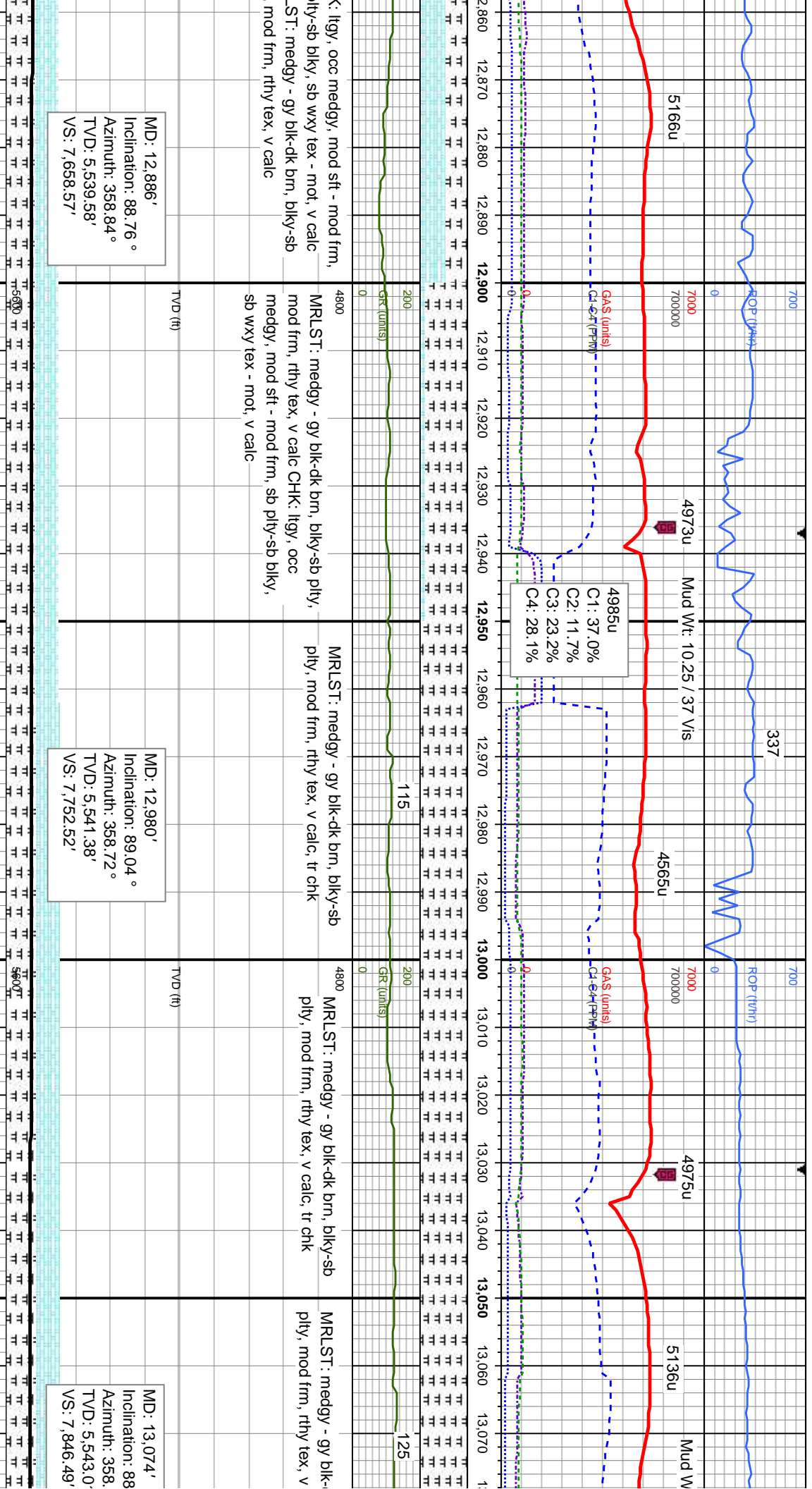


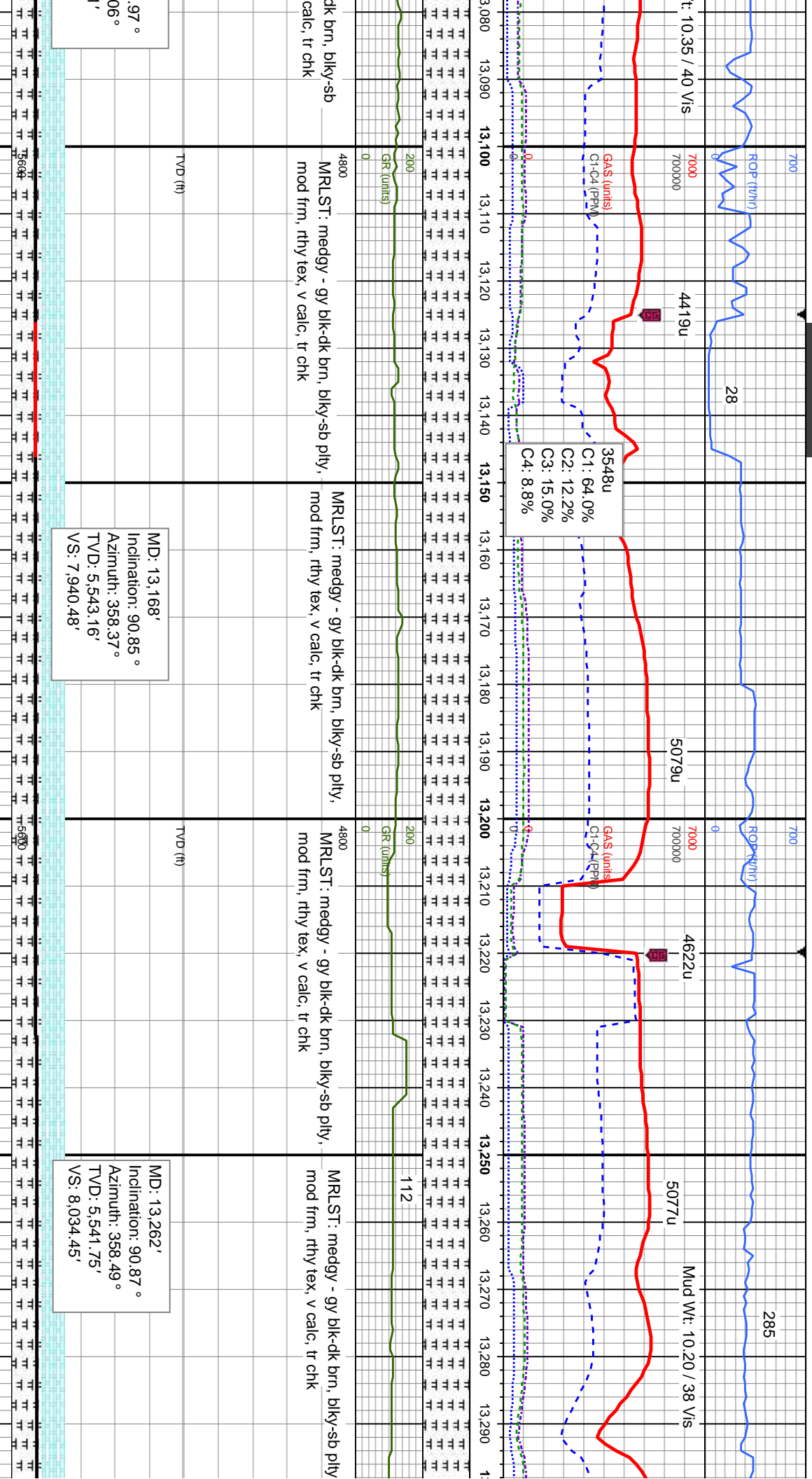


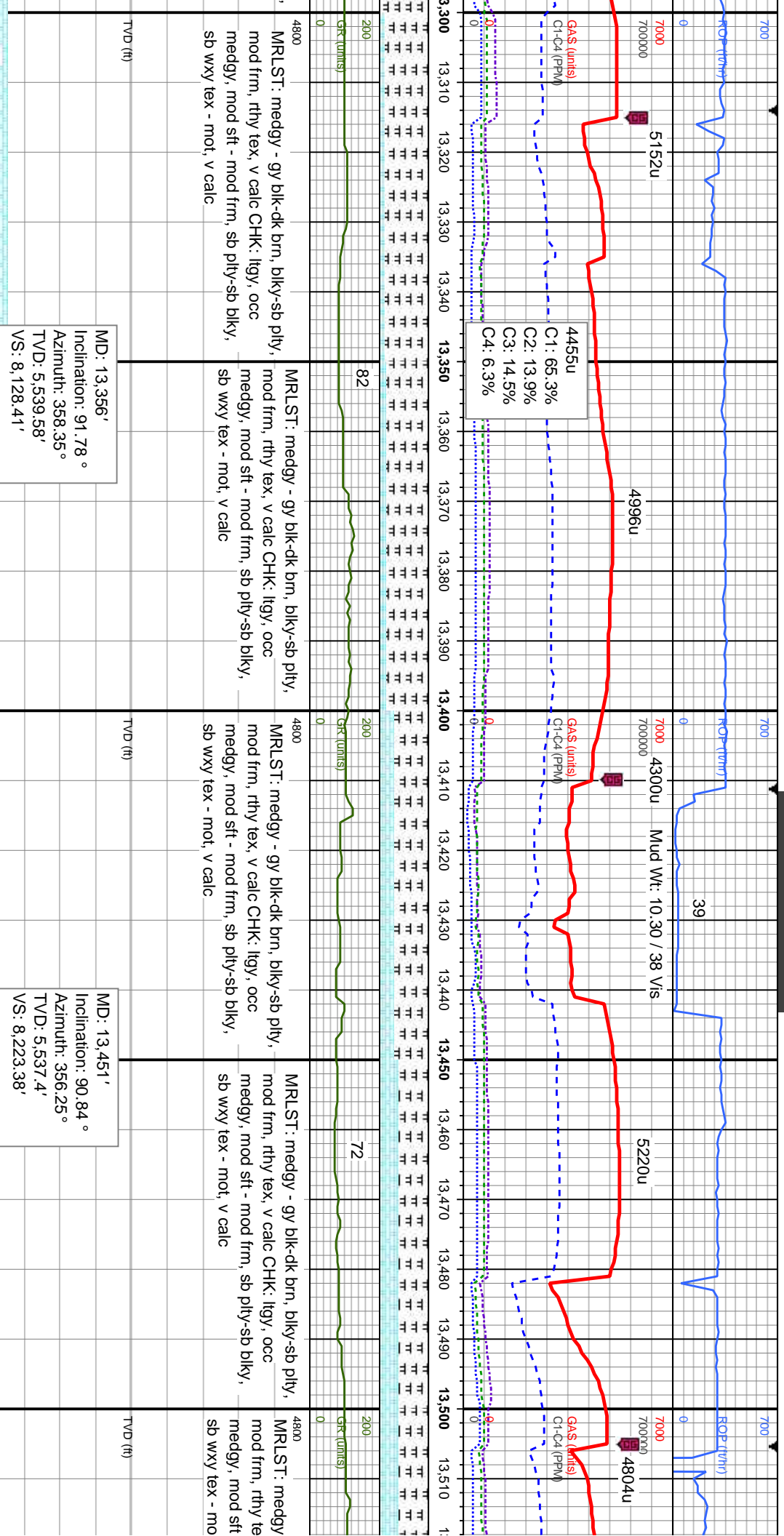


MD: 12,698'
Inclination: 87.74°
Azimuth: 358.62°
TVD: 5,533.83'
VS: 7,470.72'

C1: 59.0%
C2: 11.5%
C3: 16.0%
C4: 13.5%







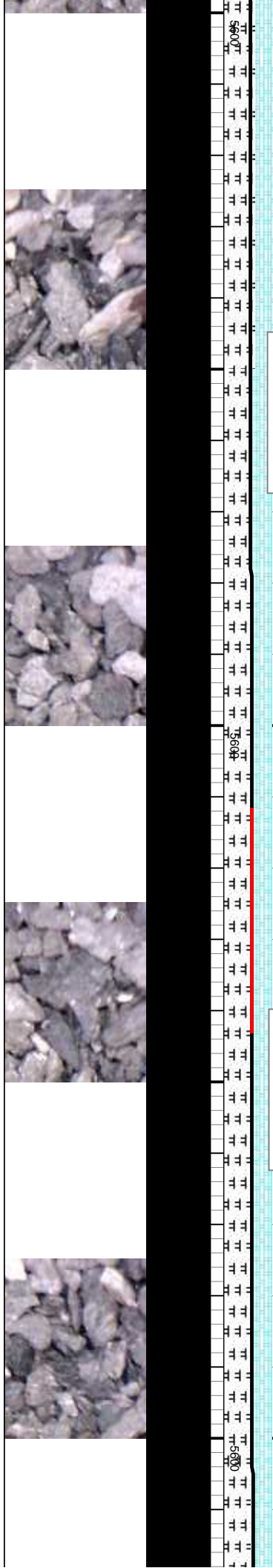
MRLST: medgy - gy blk-dk brn, blk-y-sb pty,
mod frm, rthy tex, v calc CHK: ltgy, occ
medgy, mod sft - mod frm, sb pty-sb blk-y,
sb wxy tex - mot, v calc

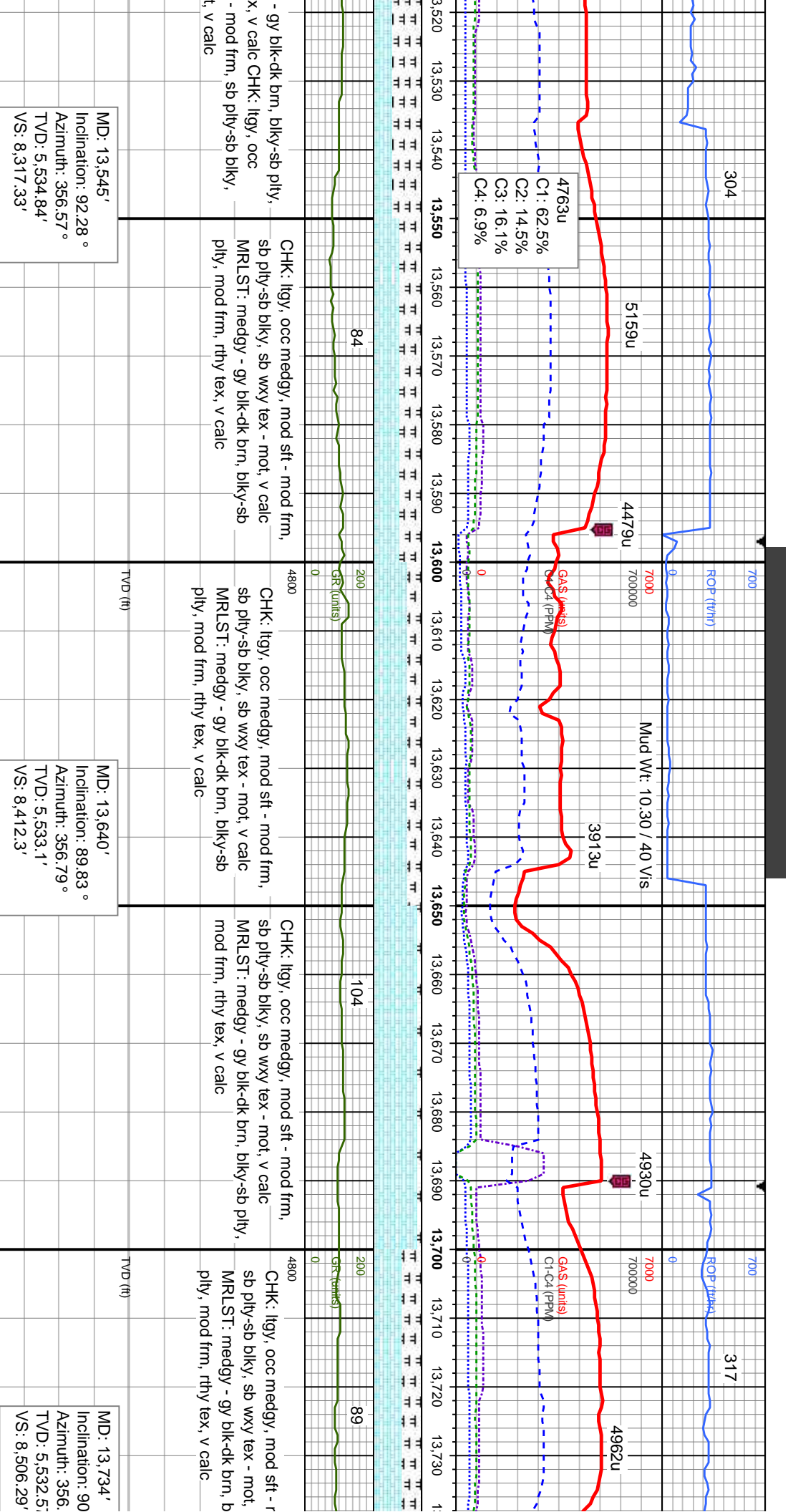
MRLST: medgy - gy blk-dk brn, blk-y-sb pty,
mod frm, rthy tex, v calc CHK: ltgy, occ
medgy, mod sft - mod frm, sb pty-sb blk-y,
sb wxy tex - mot, v calc

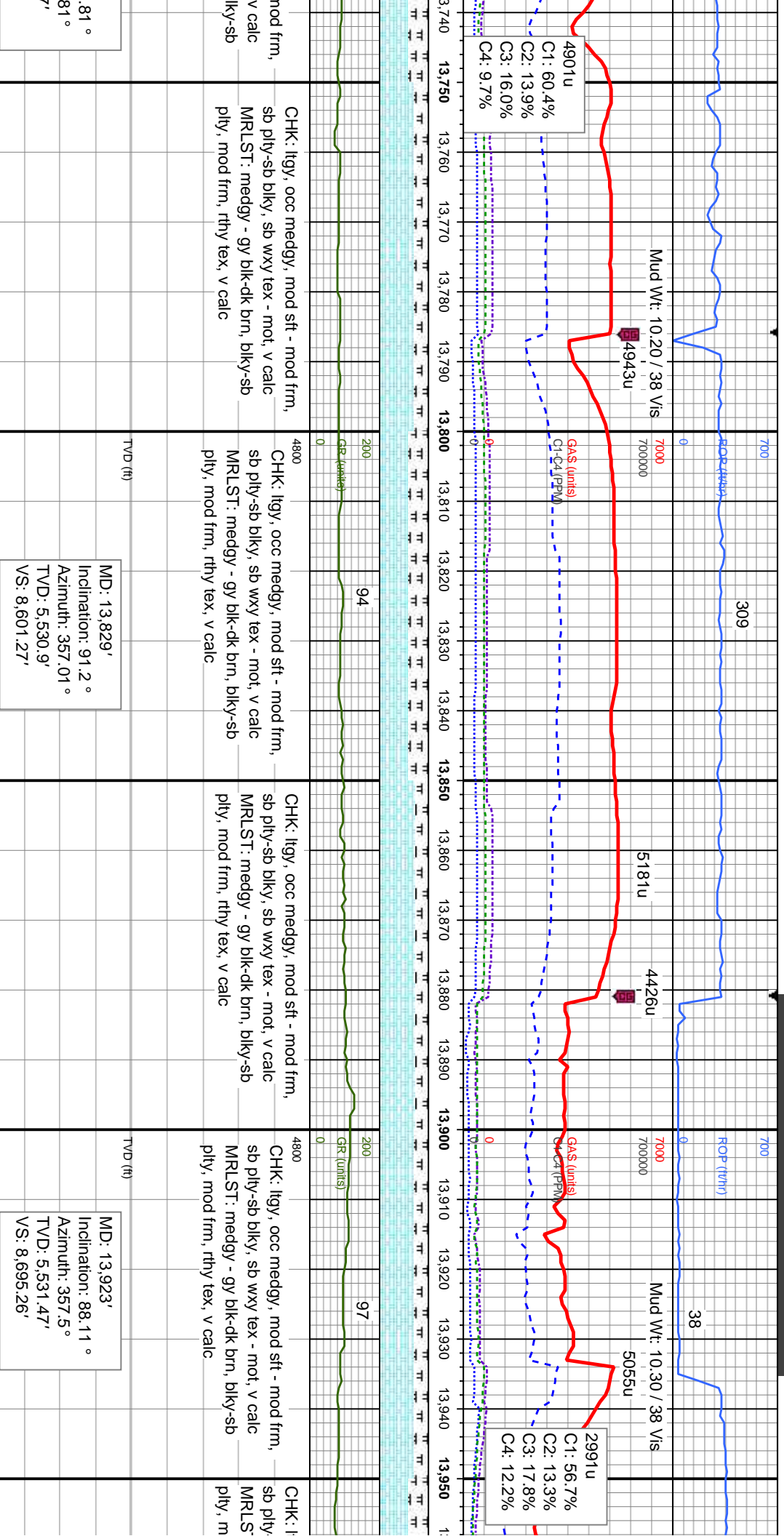
MRLST: medgy - gy blk-dk brn, blk-y-sb pty,
mod frm, rthy tex, v calc CHK: ltgy, occ
medgy, mod sft - mod frm, sb pty-sb blk-y,
sb wxy tex - mot, v calc

MRLST: medgy - gy blk-dk brn, blk-y-sb pty,
mod frm, rthy tex, v calc CHK: ltgy, occ
medgy, mod sft - mod frm, sb pty-sb blk-y,
sb wxy tex - mot, v calc

MRLST: medgy - gy blk-dk brn, blk-y-sb pty,
mod frm, rthy tex, v calc CHK: ltgy, occ
medgy, mod sft - mod frm, sb pty-sb blk-y,
sb wxy tex - mot, v calc







mod frm,
v calc
bly-sb

CHK: ltgy, occ medgy, mod sft - mod frm,
sb pty-sb biky, sb wxy tex - mot, v calc
MRLST: medgy - gy blk-dk brn, biky-sb
pty, mod frm, rthy tex, v calc

4800

CHK: ltgy, occ medgy, mod sft - mod frm,
sb pty-sb biky, sb wxy tex - mot, v calc
MRLST: medgy - gy blk-dk brn, biky-sb
pty, mod frm, rthy tex, v calc

4800

CHK: ltgy, occ medgy, mod sft - mod frm,
sb pty-sb biky, sb wxy tex - mot, v calc
MRLST: medgy - gy blk-dk brn, biky-sb
pty, mod frm, rthy tex, v calc

4800

CHK: ltgy, occ medgy, mod sft - mod frm,
sb pty-sb biky, sb wxy tex - mot, v calc
MRLST: medgy - gy blk-dk brn, biky-sb
pty, mod frm, rthy tex, v calc

CHK: l
sb pty
MRLS
pty, m

81°
81°
7'

MD: 13,829'
Inclination: 91.2°
Azimuth: 357.01°
TVD: 5,530.9'
VS: 8,601.27'

MD: 13,923'
Inclination: 88.11°
Azimuth: 357.5°
TVD: 5,531.47'
VS: 8,695.26'

