

Décollement Consulting Inc.



Scale: 5" / 100'
Measured Depth Log

Well Name North Platte P31-T34-34HC_Lateral

Location SE/SW Section 27, T5N - R63W

State CO

County Weld

Country USA

Rig Number Xtreme 22

API Number 05-123-41817

Field Wattenberg

Region D.J. Basin

Drilling Completed 9/22/2015

Spud Date 8/20/2015

Surface Coordinates 1239 FSL x 2521 FWL (Lat: 40.36662, -104.42222)

Bottom Hole Coordinates 470 FSL x 1449 FEL (Lat: 40.35005, -104.41787)

Ground Elevation 4,541

K.B. Elevation 4,558

Logged Interval 7,300 To 11,380

Total Depth 11,380

Formation Codell

Type of Drilling Fluid Water Based Mud

Operator

Address Bonanza Creek Energy, Inc.
410 17th Street, Suite 1500
Denver, Colorado 80202

Geologist

Name Dan Kabala & Brian Spitzmiller
Company Decollement Consulting Inc.
Address 13300 Braun Rd.
Golden, CO. 80401

Zone Color Coding

- | | | |
|-------|------------|----------|
| Oil | Condensate | Gas |
| Note | Core | Pressure |
| Error | Water | Seal |

Rock Types

Blank

 CEMENT



 MPF

 SHALE S

CHALK



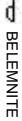
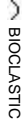
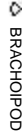
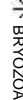
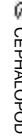





 LIMESTONE  SANDSTONE

 SHALE SF



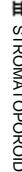
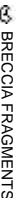
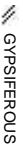

CPF  MARLSTONE  SHALE

Accessories



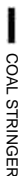

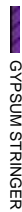
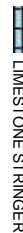
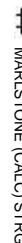
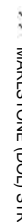
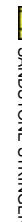

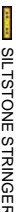
Fossils

-  ALGAE
-  AMPHIPORA
-  BELEMNITE
-  BIOCLASTIC
-  BRACHIOPOD
-  BRYOZOA
-  CEPHALOPOD
-  CORAL
-  CRINOID
-  ECHINOID
-  FISH
-  FORAMINIFERA


Minerals

-  FOSSIL
-  GASTROPOD
-  OOLITE
-  OSTRACOD
-  PELECYPOD
-  PELLET
-  PISOLITE
-  PLANT REMAINS
-  PLANT SPORES
-  SCAPHOPOD
-  STROMATOPOROID
-  ARGILLACEOUS
-  ARGILLITE GRAIN
-  BENTONITE
-  BITUMENOUS SUBSTANCE
-  BRECCIA FRAGMENTS
-  CALCAREOUS
-  CARBONACEOUS FLAKES
-  CHTDK
-  CHTLT
-  COAL - THIN BEDS
-  DOLOMITIC
-  FELDSPAR
-  FERRUGINOUS PELLET
-  FERRUGINOUS
-  GLAUCONITE
-  GYPSIFEROUS
-  HEAVY MINERAL
-  KAOLIN
-  MARLSTONE
-  MINERAL CRYSTALS
-  NODULES
-  PHOSPHATE PELLETS
-  PYRITE
-  SALT CAST
-  SANDY
-  SILICEOUS
-  SILTY
-  TUFFACEOUS

Stringer

-  ANHYDRITE STRINGER
-  BENTONITE STRINGER
-  COAL STRINGER
-  DOLOMITE STRINGER
-  GYPSUM STRINGER
-  LIMESTONE STRINGER
-  MARLSTONE (CAL.C) STRG
-  MARLSTONE (DOL) STRG
-  SANDSTONE STRINGER
-  SHALE STRINGER
-  SILTSTONE STRINGER


Other Symbols

 FORMATION TOP

Oil Show

 PINPOINT

 GAS SHOW

 MICROXLN

Rounding

 VUGGY

 MN DEPTH

 ANGULAR

 MUDSTONE

DEAD



 ROUNDED



EVEN





Engineering


 OIL SHOW


 SUBANG



QUESTIONABLE


 BIT

 OVERTURNED STRATA



SPOTTED STAINING

 CASING

 REVERSE FAULT

Porosity

 CONNECTION (LEFT)

 SIDEWALL CORE (LEFT)



 CONNECTION (RIGHT)

 SIDEWALL CORE (RIGHT)

 BOUNDSTONE



EARTHY

 CONNECTION GAS

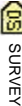


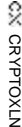




ENESTRAL

 CORE - LOST






RACTURE

 CORE - RECOVERED





INTERCRYSTALLINE


 DST INTERVAL

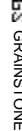
 WIRELINE TESTED - LEFT



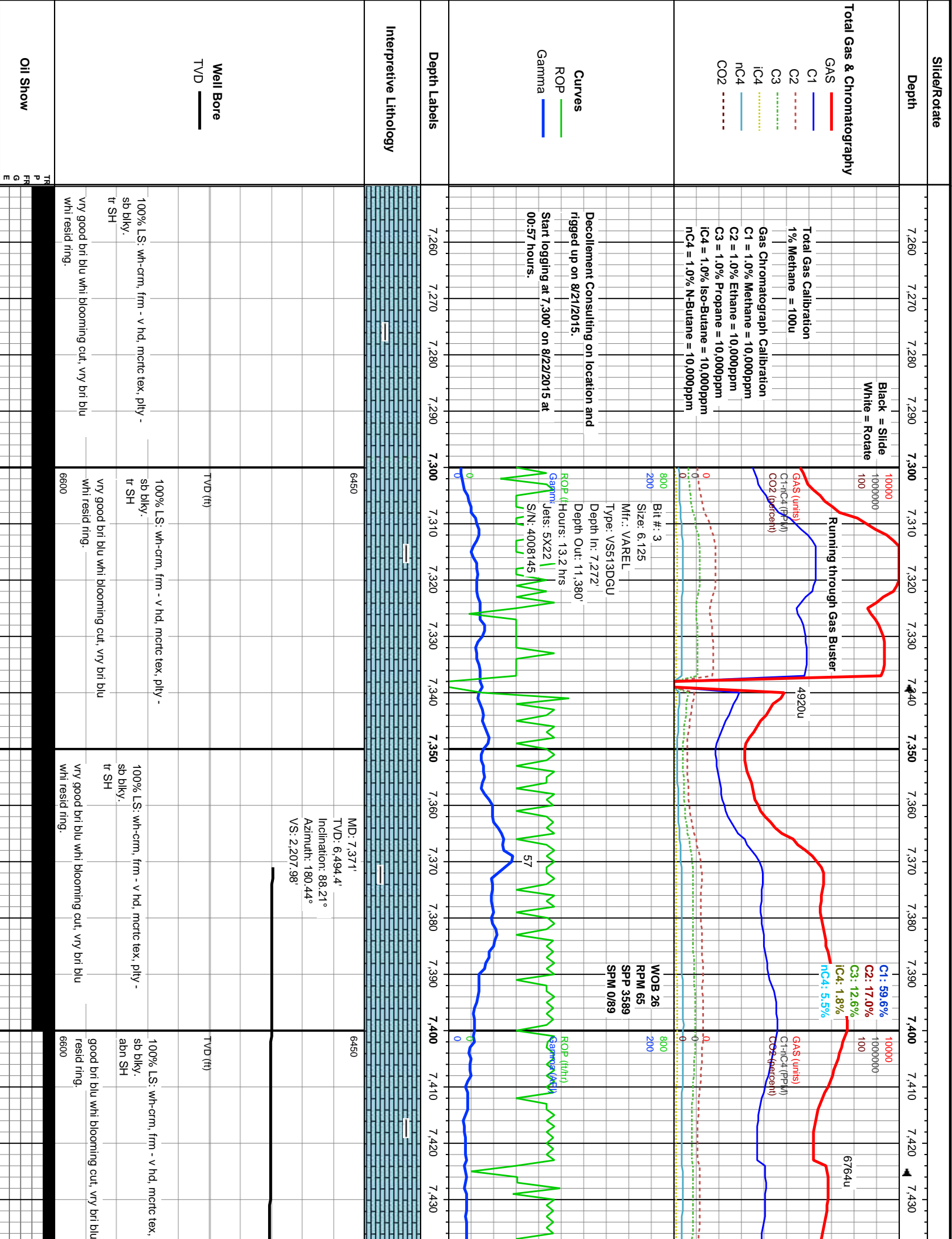
INTEROOLITIC

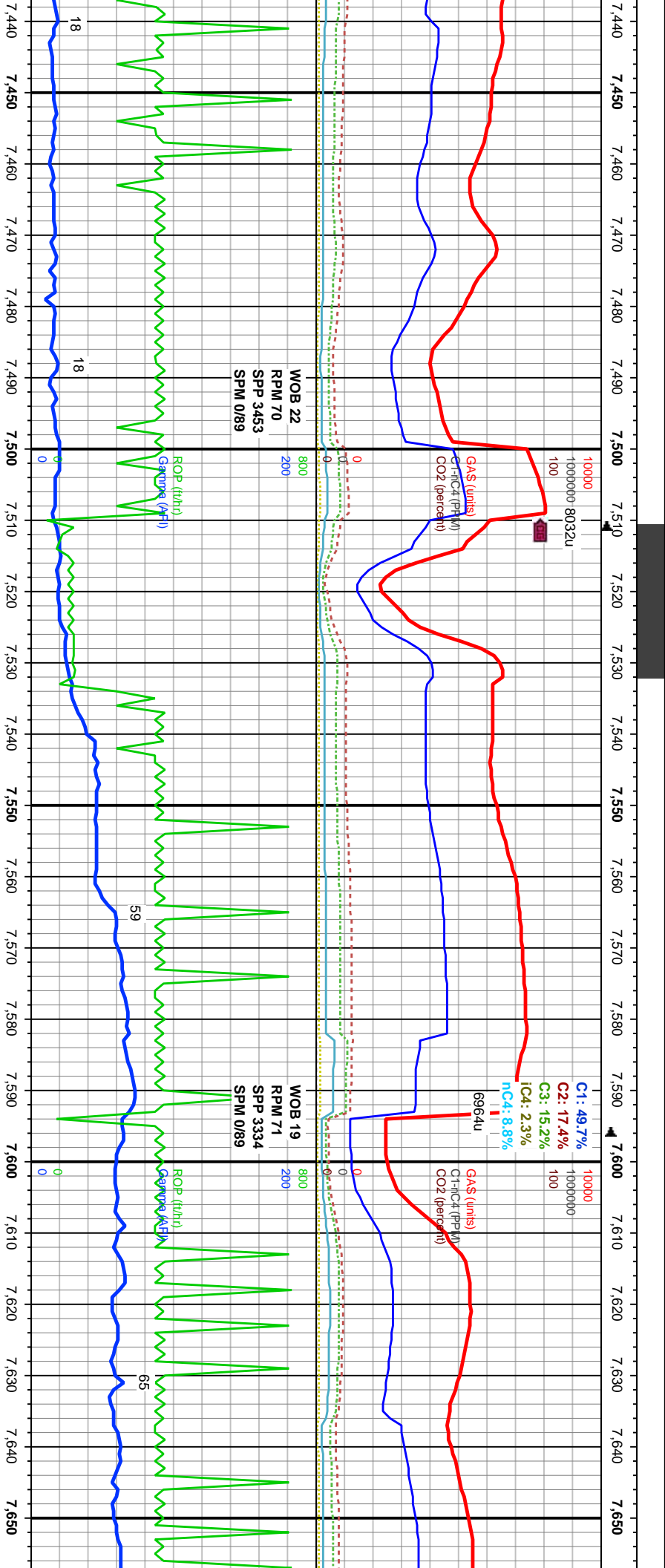
 FAULT

 WIRELINE TESTED - RT

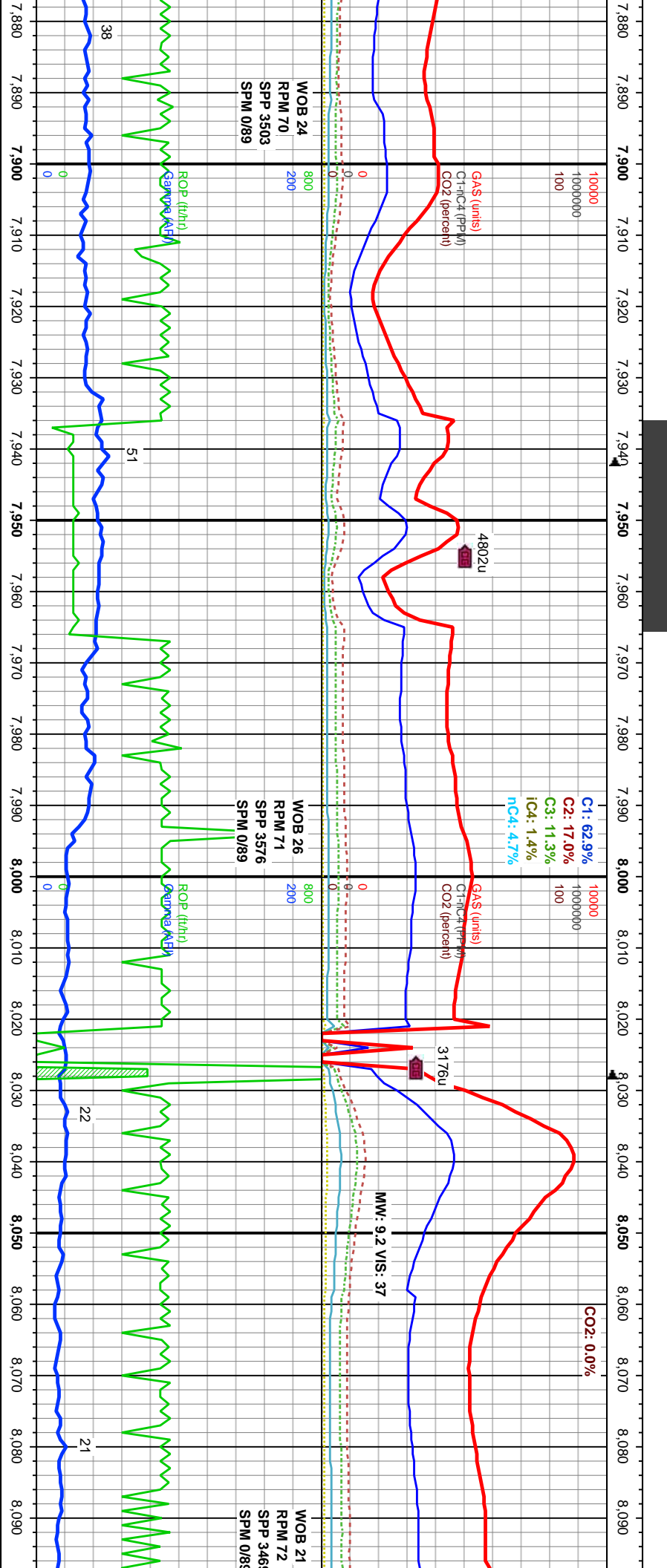


MOLDIC

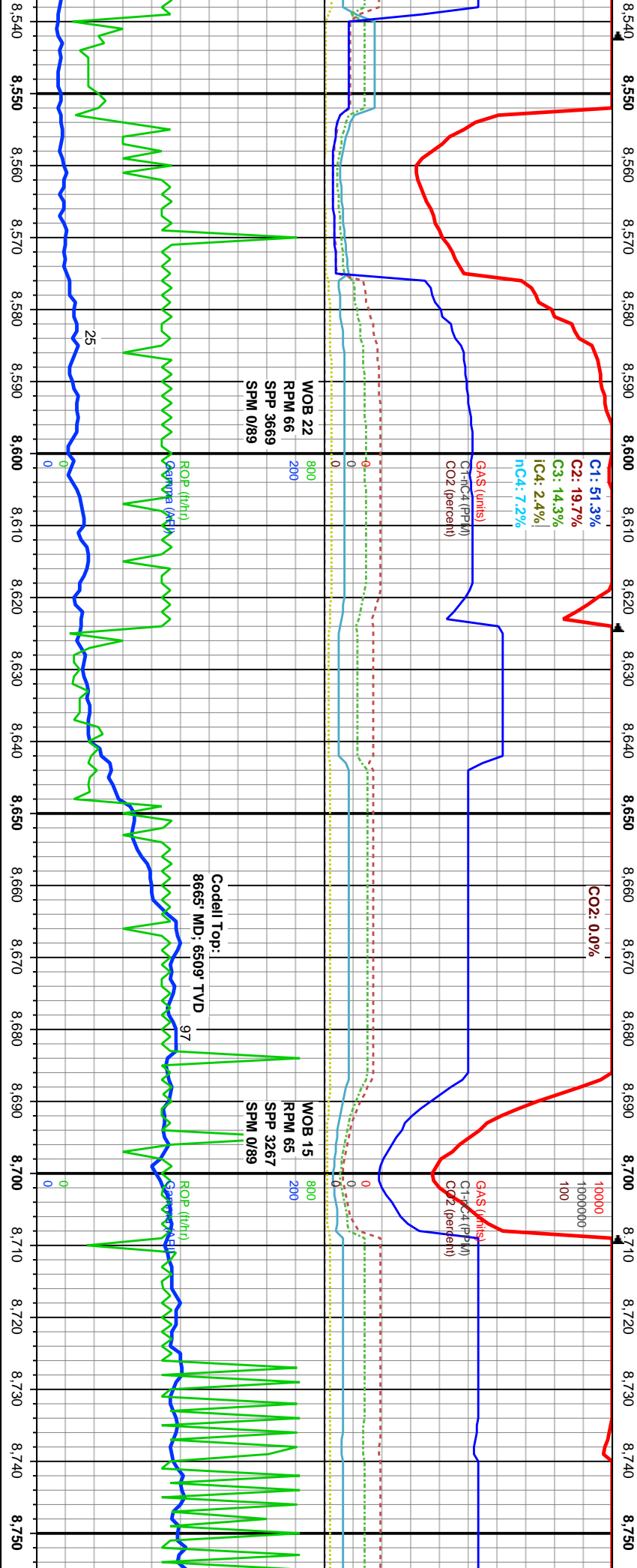




MD: 7.457' TVD: 6.496.07' Inclination: 89.56° Azimuth: 179.48° VS: 2.292.28'		MD: 7.542' TVD: 6.497.41' Inclination: 88.64° Azimuth: 180.14° VS: 2.375.66'		MD: 7.628' TVD: 6.498.96' Inclination: 89.29° Azimuth: 179.93° VS: 2.459.95'	
100% LS: wh-crm, frm - v hd, mcrtc tex, pily - sb blkly. abn SH		100% LS: wh-crm, frm - v hd, mcrtc tex, pily - sb blkly. abn SH		100% LS: wh-crm, frm - v hd, mcrtc tex, pily - sb blkly. abn SH	
good bri blu whi blooming cut, vry bri blu whi resid ring.		vry good bri blu whi blooming cut, vry bri blu whi resid ring.		vry good bri blu whi blooming cut, vry bri blu whi resid ring.	



MD: 7,888' TVD: 6,500.96' Inclination: 89.87° Azimuth: 178.09° VS: 2,715.55'	6450	MD: 7,973' TVD: 6,502.27' Inclination: 88.36° Azimuth: 178.8° VS: 2,799.3'	6450	MD: 8,058' TVD: 6,504.04' Inclination: 89.26° Azimuth: 178.92° VS: 2,882.93'
	TVD (ft)		TVD (ft)	
, mottic tex, pily - sb gry, frm, sb blkly-blky, tr SH thin brwn resid ring.	100% LS: wh-crm, frm - v hd, mottic tex, pily - sb blkly, tr SH	100% LS: wh-crm, frm - v hd, mottic tex, pily - sb blkly, tr SH	100% LS: wh-crm, frm - v hd, mottic tex, pily - sb blkly, tr SH	100% LS: wh-crm, frm - v hd, mottic tex, pily - sb blkly, tr SH
	poor dull blu whi blooming cut, thin brwn resid ring.		poor dull blu whi blooming cut, thin brwn resid ring.	mod-good dull blu whi blooming cut, thin brwn resid ring.



MD: 8,573'
TVD: 6,508.06'
Inclination: 89.48°
Azimuth: 178.33°
VS: 3,389.35'

MD: 8,658'
TVD: 6,509.68'
Inclination: 88.34°
Azimuth: 179.09°
VS: 3,473.03'

MD: 8,744'
TVD: 6,512.14'
Inclination: 88.37°
Azimuth: 178.72°
VS: 3,557.61'

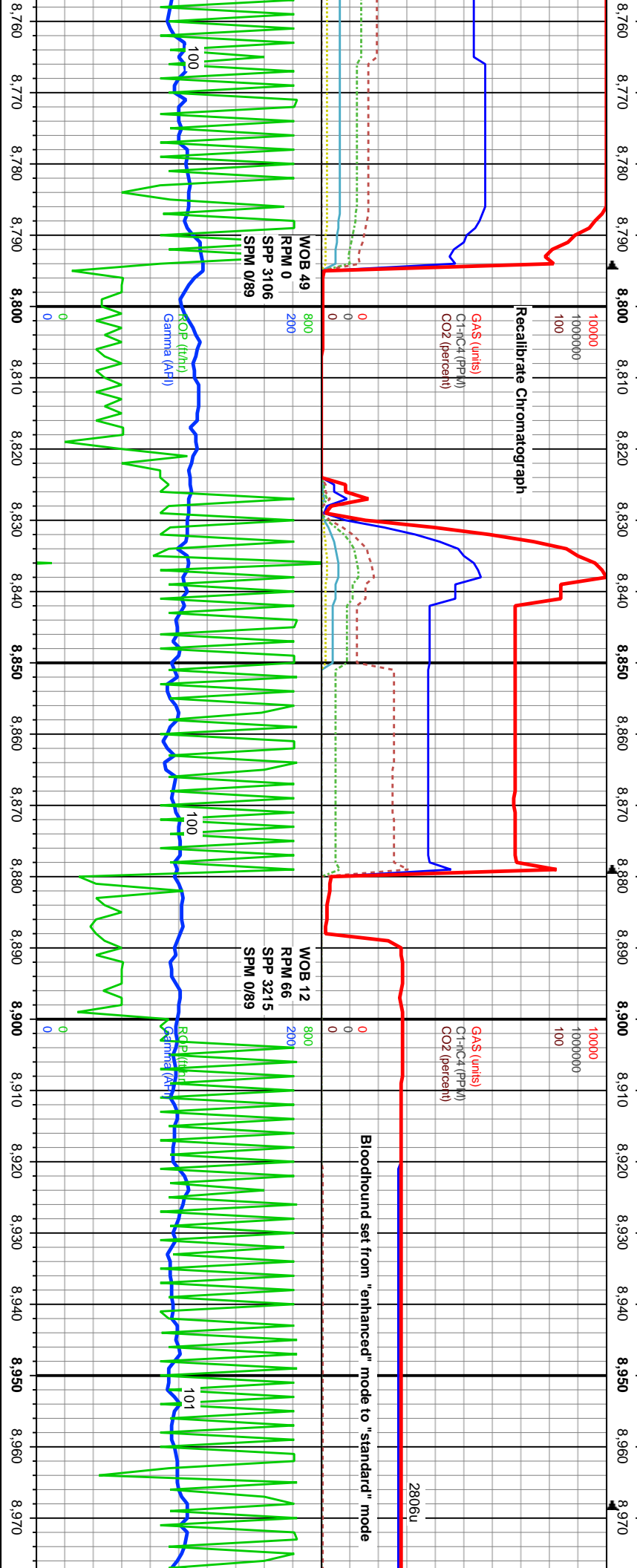
100% L.S: wh-crm, frm - v hd, mortc tex, ply -
sb blkly.
tr SH

100% L.S: wh-crm, frm - v hd, mortc tex, ply -
sb blkly.
tr SH, tr SS

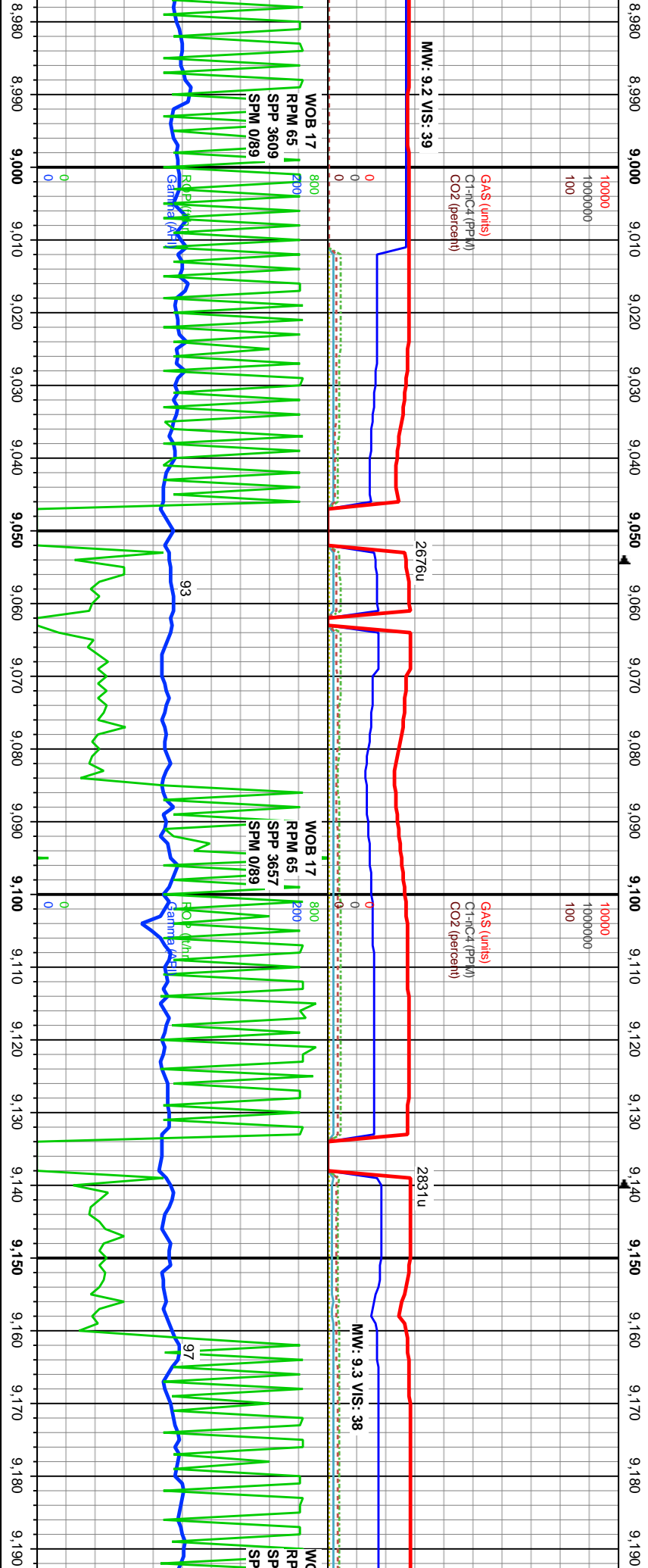
70% L.S: wh-crm, frm - v hd, mortc tex, ply - sb
blkly.
30% SS: med - med drk gry, occ sl brn, gy-whi
ip, fri, dom v fr - fr w/ occ med grms, subang -
md, mod sphrcly, fr - w strd, grn suprd, no mtrx,
~10% vis por, pnt - lng cntct.

TV60% L.S: wh-crm, frm - v hd, mortc tex, ply - sb
blkly.
50% SS: med - med drk gry, occ sl brn, gy-whi
ip, fri, dom v fr - fr w/ occ med grms, subang -
rnd, mod sphrcly, fr - w strd, grn suprd, no mtrx,
~10% vis por, pnt - lng cntct.

60%
ip, fri
rnd,
~10%
40%
blkly.
tr SH
mod
ring.



SS: med - med dk gry, occ sl brn, gy-whi dom v fn - fn w/ occ med grns, subang - mod sphrcty, fr - w strd, grn suprd, no mtrx, 6 vis por, pnt - lng cnct. LS: wh-crm, frm - v hd, mctc tex, ply - sb		70% SS: med - med dk gry, occ sl brn, gy-whi ip, fri, dom v fn - fn w/ occ med grns, subang - md, mod sphrcty, fr - w strd, grn suprd, no mtrx, ~10% vis por, pnt - lng cnct. 30% LS: wh-crm, frm - v hd, mctc tex, ply - sb blky.		70% SS: med - med dk gry, occ sl brn, gy-whi ip, fri, dom v fn - fn w/ occ med grns, subang - md, mod sphrcty, fr - w strd, grn suprd, no mtrx, ~10% vis por, pnt - lng cnct. 30% LS: wh-crm, frm - v hd, mctc tex, ply - sb blky.		TVD (ft) 100% SS: med - med dk gry, occ sl brn, gy-whi ip, fri, dom v fn - fn w/ occ med grns, subang - md, mod sphrcty, fr - w strd, grn suprd, no mtrx, ~10% vis por, pnt - lng cnct. tr LS: wh-crm, frm - v hd, mctc tex, ply - sb blky.		100% SS: med - med dk gry, fri, dom v fn - fn w/ occ med g mod sphrcty, fr - w strd, grn s vis por, pnt - lng cnct. tr LS: wh-crm, frm - v hd, mcr	
6450		MD: 8,830' TVD: 6,512.53' Inclination: 91.11° Azimuth: 179.26° VS: 3,642.21'		6450		MD: 8,915' TVD: 6,511.23' Inclination: 90.65° Azimuth: 178.75° VS: 3,725.81'		6450	
instint mod bri blu-whi strmg cut, thn brwn resid 6blu resid ring.		instint v bri blu-whi blooming cut, mod thick resid ring.		V 1st mod bri blu-whi blooming cut, mod thick blu resid ring.		instint bri blu-whi blooming cut, mod thick blu		instint bri blu-whi blooming cut,	



MD: 9,000'
TVD: 6,510.11'
Inclination: 90.86°
Azimuth: 178.43°
VS: 3,809.52'

MD: 9,086'
TVD: 6,509.25'
Inclination: 90.28°
Azimuth: 178.33°
VS: 3,894.28'

MD: 9,173'
TVD: 6,509.63'
Inclination: 89.23°
Azimuth: 177.33°
VS: 3,980.16'

occ sl brn, gy-whi ip, fri, dom v fn - fn w/ occ med grns, subang - md, mod sphrcty, fr - w strd, gm suprd, no mtrix, ~10% vis por, pnt - lng cntct.

90% SS: med - med dk gry, occ sl brn, gy-whi ip, fri, dom v fn - fn w/ occ med grns, subang - md, mod sphrcty, fr - w strd, gm suprd, no mtrix, ~10% vis por, pnt - lng cntct.

10% LS: wh-crm, frm - v hd, mctic tex, pily - sb blkly.

ic tex, pily - sb blkly.

rr SH

rr SH

tr SH

instnt mod bri blu-whi blooming cut, mod thick blu resid ring.

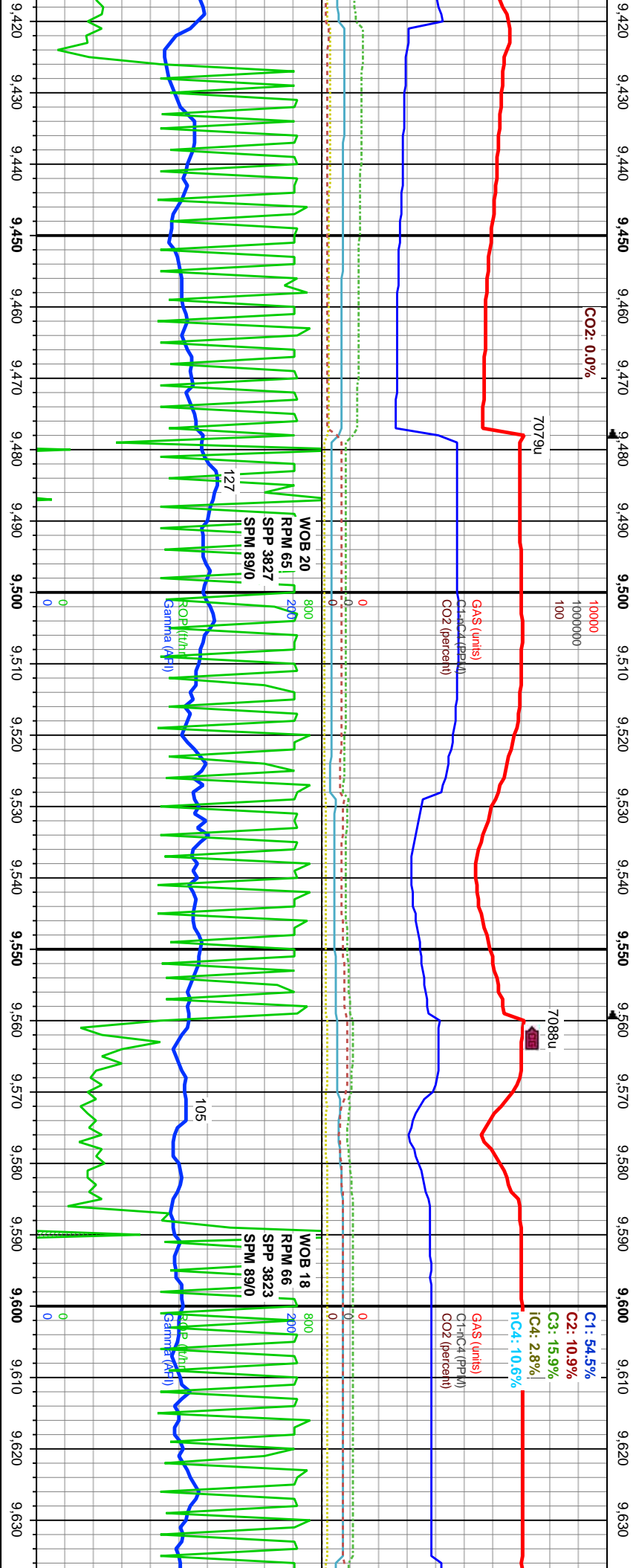
instnt mod bri blu-whi blooming cut, mod thick blu resid ring.

instnt mod bri blu-whi blooming cut, mod thick blu resid ring.

6600

6600

6600



MD: 9.431'
TVD: 6,511.11'
Inclination: 89.97°
Azimuth: 179.59°
VS: 4,234.79'

med dk gry, occ sl brn, gy-whi ip,
occ med grns, subang - md,
strd, grn suprd, no mtrx, ~10%
mctc
frm - v hd, mctc tex, pily - sb blk.

70% SS: med - med dk gry, occ sl brn, gy-whi ip,
fri, dom v fn - fn w/ occ med grns, subang - md,
mod sphrcy, fr - w strd, grn suprd, no mtrx, ~10%
vis por, pnt - lng cntct.
30% LS: wh-crm, frm - v hd, mctc tex, pily - sb blk.

abndt SH

eeding cut, mod thck blu resid

instnt bri blu-whi rad strng cut, mod thck blu resid
ring.

MD: 9.516'
TVD: 6,510.88'
Inclination: 90.34°
Azimuth: 179.74°
VS: 4,318.22'

50% SS: med - med dk gry, occ sl brn, gy-whi ip,
fri, dom v fn - fn w/ occ med grns, subang - md,
mod sphrcy, fr - w strd, grn suprd, no mtrx, ~10%
vis por, pnt - lng cntct.
50% LS: wh-crm, frm - v hd, mctc tex, pily - sb blk.

com SH

SI fst mod bri blu-whi mly cut, mod thck blu resid
ring.
6600

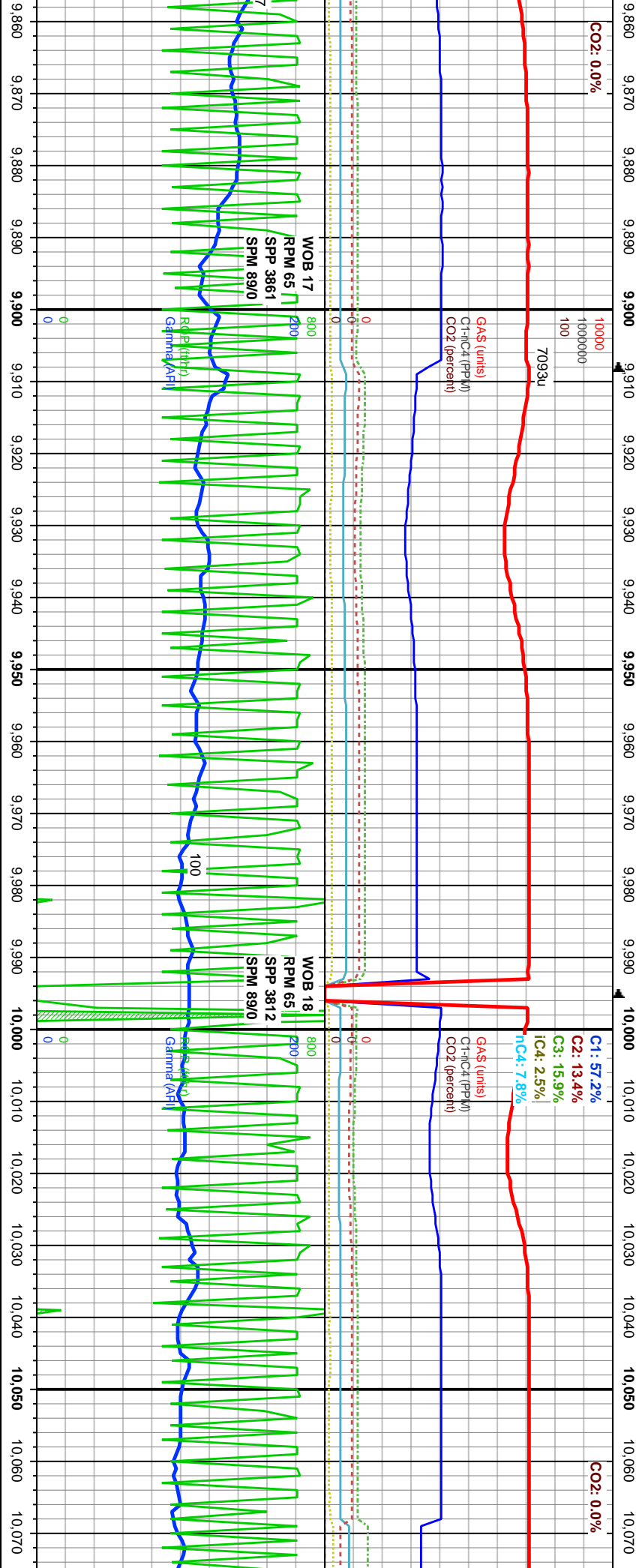
MD: 9.602'
TVD: 6,510.69'
Inclination: 89.91°
Azimuth: 180.28°
VS: 4,402.53'

TVD (ft)
100% SS: med - med dk gry, occ sl brn, gy-whi ip,
fri, dom v fn - fn w/ occ med grns, subang - md,
mod sphrcy, fr - w strd, grn suprd, no mtrx, ~10%
vis por, pnt - lng cntct.
tr LS: wh-crm, frm - v nd, mctc tex, pily -

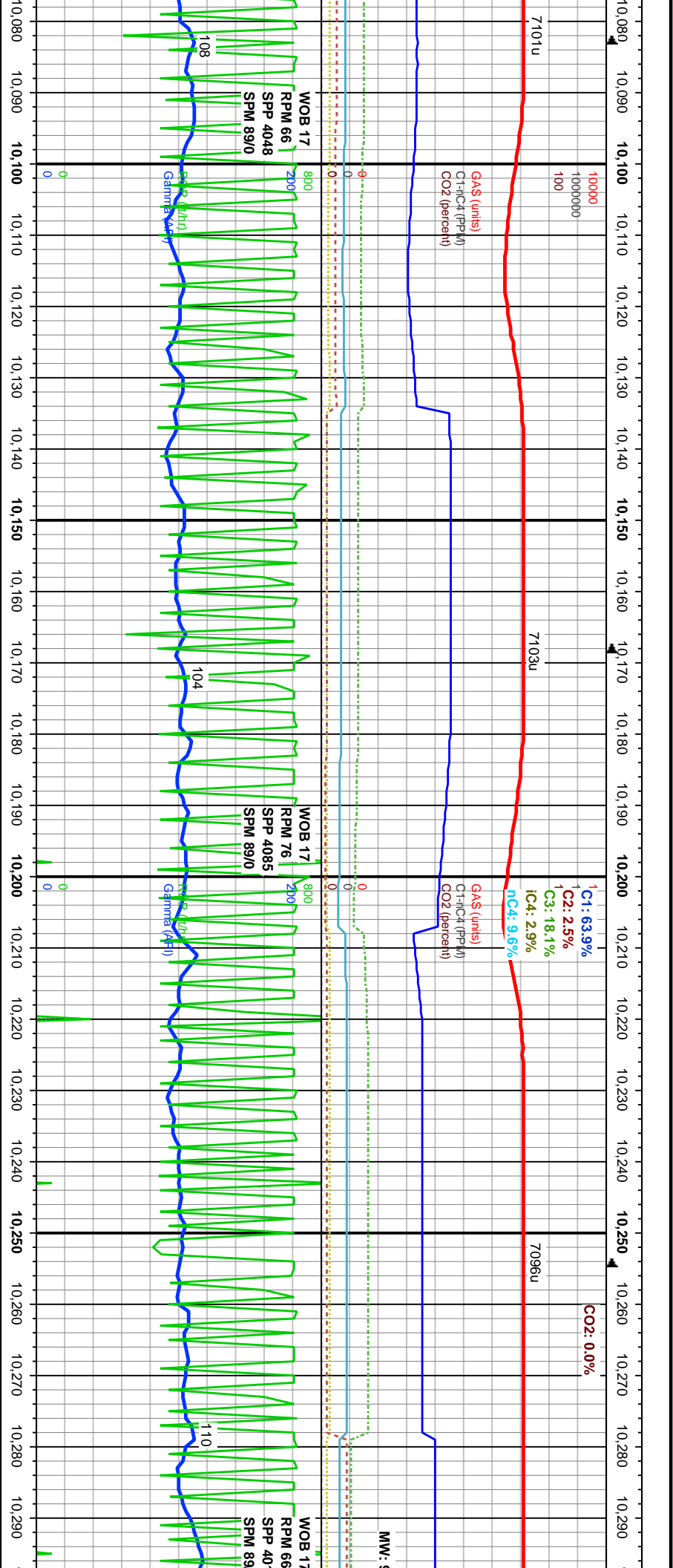
com SH

instnt bri blu-whi rad strng cut, mod thck blu resid
ring.

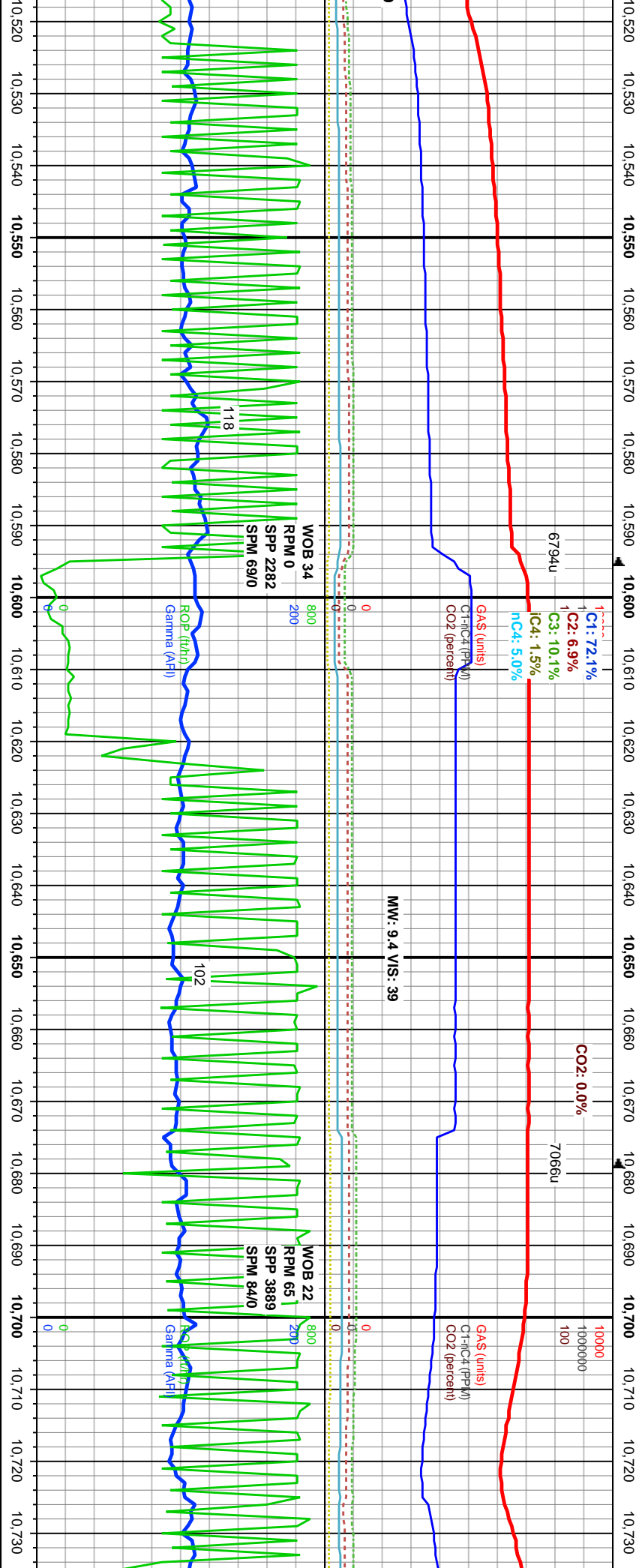
instnt bri blu-whi blooming cut, thck blu r



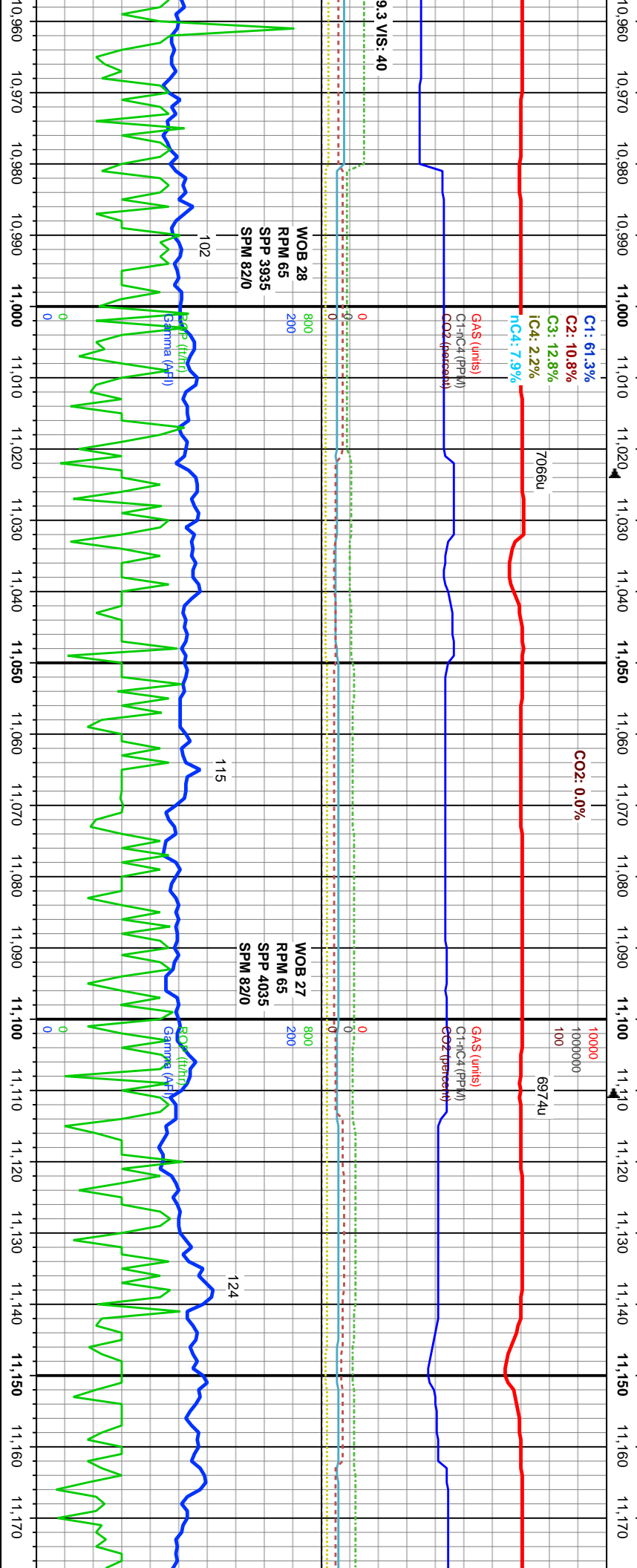
2.25' : 89.05° 179.04° 47'	MD: 9.943' TVD: 6,513.35' Inclination: 89.48° Azimuth: 178.78° VS: 4,737.09'	MD: 10.028' TVD: 6,513.9' Inclination: 89.78° Azimuth: 179° VS: 4,820.73'	
SS: med - med drk gry, occ sl brn, gy-whi ip, v fn - fn w/ occ med grns, subang - md, mod sphrcty, fr - w strd, gm suprd, no mtrx, ~10% vis por, pnt - lng cntct. rr LS: wh-crm, frm - v hd, mctic tex, ply - sb blkty.	100% SS: med - med drk gry, occ sl brn, gy-whi ip, fti, dom v fn - fn w/ occ med grns, subang - md, mod sphrcty, fr - w strd, gm suprd, no mtrx, ~10% vis por, pnt - lng cntct. rr LS: wh-crm, frm - v hd, mctic tex, ply - sb blkty.	100% SS: med - med drk gry, occ sl brn, gy-whi ip, fti, dom v fn - fn w/ occ med grns, subang - md, mod sphrcty, fr - w strd, gm suprd, no mtrx, ~10% vis por, pnt - lng cntct. rr SH	100% SS: med - med drk gry, occ sl brn, gy-whi ip, fti, dom v fn - fn w/ occ med grns, subang - md, mod sphrcty, fr - w strd, gm suprd, no mtrx, ~10% vis por, pnt - lng cntct. rr SH
insint v bri blu-whi blooming cut, mod thck blu resid	mod fst bri blu-whi rad strmg cut, sl thck blu resid	sl fst sl bri blu-whi rad strmg cut, mod thck blu resid	insint bri blu-whi blooming cut



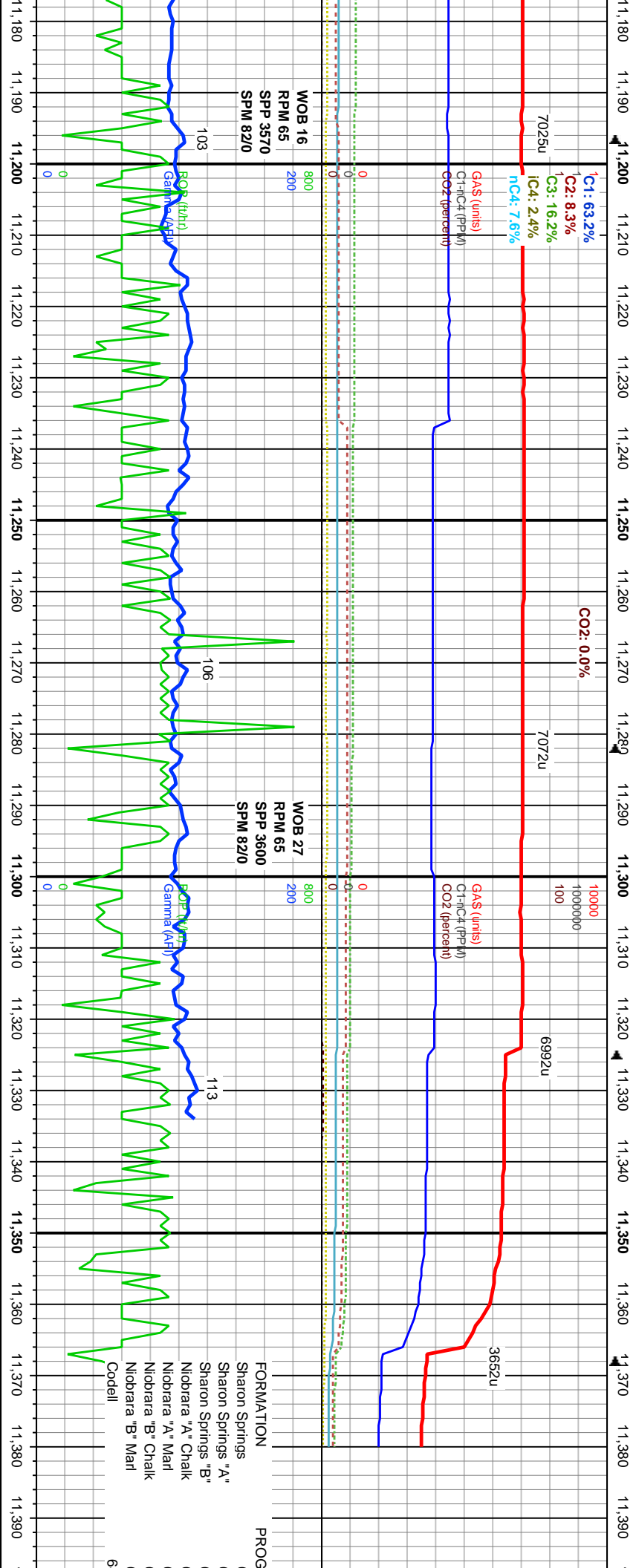
6450		MD: 10.114' TVD: 6,514.02' Inclination: 90.06° Azimuth: 178.65° VS: 4,905.38'	100% SS: med - med drk gry, occ sl brn, gy-whi ip, fri, dom v fn - fn w/ occ med grns, subang - md, mod sphrcy, fr - w strd, grn suprd, no mtrix, ~10% vis por, pnt - lng cntct.	tr SH	v fst bri blu-whi blooming cut, mod thick blu resid ring.
6450		MD: 10.139' TVD: 6,513.91' Inclination: 90.09° Azimuth: 178.11° VS: 4,989.15'	100% SS: med - med drk gry, occ sl brn, gy-whi ip, fri, dom v fn - fn w/ occ med grns, subang - md, mod sphrcy, fr - w strd, grn suprd, no mtrix, ~10% vis por, pnt - lng cntct.	tr SH	V fst v bri blu-whi rad stirng cut, thick blu resid ring.
6450		MD: 10.285' TVD: 6,514.01' Inclination: 89.78° Azimuth: 177.53° VS: 5,074.05'	100% SS: med - med drk gry, occ sl brn, gy-whi ip, fri, dom v fn - fn w/ occ med grns, subang - md, mod sphrcy, fr - w strd, grn suprd, no mtrix, ~10% vis por, pnt - lng cntct.	tr SH	instint bri blu-whi blooming cut, thick blu resid ring.



MD: 10,541' TVD: 6,512.97' Inclination: 90.4° Azimuth: 177.63° VS: 5,326.72'		MD: 10,627' TVD: 6,513.24' Inclination: 89.23° Azimuth: 178.9° VS: 5,411.51'		MD: 10,712' TVD: 6,513.84' Inclination: 89.97° Azimuth: 179.34° VS: 5,495.09'	
100% SS: med - med dk gry, occ sl brn, gy-whi ip, fti, don v fn - fn w/ occ med grns, subang - rnd, mod sphrcty, fr - w strd, grn suprd, no mtrx, ~10% vis por, pnt - lng cntct.		100% SS: med - med dk gry, occ sl brn, gy-whi ip, fti, don v fn - fn w/ occ med grns, subang - rnd, mod sphrcty, fr - w strd, grn suprd, no mtrx, ~10% vis por, pnt - lng cntct.		100% SS: med - med dk gry, occ sl brn, gy-whi ip, fti, don v fn - fn w/ occ med grns, subang - rnd, mod sphrcty, fr - w strd, grn suprd, no mtrx, ~10% vis por, pnt - lng cntct.	
tr SH		tr SH		tr SH	
V fst bri blu-whi blooming cut, mod thick blu resid ring.		V fst bri blu-whi blooming cut, mod thick blu resid ring.		V fst bri blu-whi blooming cut, mod thick k ring.	



MD: 10.969' TVD: 6,513.88' Inclination: 89.87° Azimuth: 178.62° VS: 5.747.91'		MD: 11.056' TVD: 6,514.36' Inclination: 89.5° Azimuth: 178.11° VS: 5.833.66'		MD: 11.143' TVD: 6,515.16' Inclination: 89.44° Azimuth: 178.14° VS: 5,919.46'	
100% SS: med - med dk gry, occ sl brn, gy-whi ip, fri, dom v fn - fn w/ occ med grns, subang - md, mod sphrcy, fr - w strd, grn suprd, no mtrx, ~10% vis por, pnt - lng cntct.		100% SS: med - med dk gry, occ sl brn, gy-whi ip, fri, dom v fn - fn w/ occ med grns, subang - md, mod sphrcy, fr - w strd, grn suprd, no mtrx, ~10% vis por, pnt - lng cntct.		100% SS: med - med dk gry, occ sl brn, gy-whi ip, fri, dom v fn - fn w/ occ med grns, subang - md, mod sphrcy, fr - w strd, grn suprd, no mtrx, ~10% vis por, pnt - lng cntct.	
tr SH		tr SH		tr SH	
inst blu-whi blooming cut, mod thn blu resid		inst blu-whi blooming cut, mod thk blu resid ring.		good blu-whi blooming cut, mod thk blu resid ring.	
6600		6600		6600	
mod blu-whi blooming cut, mod thn blu resid				inst blu-whi blooming cut, mo	



6450		6450		6450	
TVD (ft)		TVD (ft)		TVD (ft)	
100% SS: med - med dk gry, occ sl brn, gy-whi ip, fti, dom v fn - fn w/ occ med grns, subang - md, mod sphrcty, fr - w strd, gm suprd, no mtrx, ~10% vis por, pnt - lng cnct.		100% SS: med - med dk gry, occ sl brn, gy-whi ip, fti, dom v fn - fn w/ occ med grns, subang - md, mod sphrcty, fr - w strd, gm suprd, no mtrx, ~10% vis por, pnt - lng cnct.		100% SS: med - med dk gry, occ sl brn, gy-whi ip, fti, dom v fn - fn w/ occ med grns, subang - trd, mod sphrcty, fr - w strd, gm suprd, no mtrx, ~10% vis por, pnt - lng cnct.	
tr SH		abn SH		tr SH	
inst blu-whi blooming cut, mod thck blu resid ring.		mod-good blu-whi blooming cut, mod thck blu resid ring.		mod-good blu-whi blooming cut, mod thck blu resid ring.	
6600		6600		6600	
		MD: 11,326' TVD: 6,515.68' Inclination: 90.24° Azimuth: 178.31° VS: 6,099.91'		MD: 11,380' TVD: 6,515.45' Inclination: 90.24° Azimuth: 178.31° VS: 6,153.14'	
		Bottoms Up Sample			
		100% SS: med - med dk gry, occ sl brn, gy-whi ip, fti, dom v fn - fn w/ occ med grns, subang - md, mod sphrcty, fr - w strd, gm suprd, no mtrx, ~10% vis por, pnt - lng cnct.		100% SS: med - med dk gry, occ sl brn, gy-whi ip, fti, dom v fn - fn w/ occ med grns, subang - md, mod sphrcty, fr - w strd, gm suprd, no mtrx, ~10% vis por, pnt - lng cnct.	
		tr SH		tr SH	
		mod-good blu-whi blooming cut, mod thck blu resid ring.		vry-good blu-whi blooming cut, mod thck blu resid ring.	

	11,400	11,410	11,420	11,430	11,440	11,450
10000						
1000000						
100						
Reached DMTD @ 11,380 21.4hrs, on 09/22/2015, wiper trip 15 stands, pump high viscosity sweeps, condition hole.						
GAS (units)						
C1-NC4 (PPM)						
CO2 (percent)						
Decollement Consulting Inc Thanks you.						
Formation tops picked by Paul McKay, Geology Operations Manager at Bonanza Creek.						
0						
0						
800						
200						
. TVD (ft)ACTUAL TVD (ft)ACTUAL MD (ft)						
6125						
6178						
6209						
6238						
6254						
6312						
6341						
498						
11,400						
11,410						
11,420						
11,430						
11,440						
11,450						