

COLUMBINE LOGGING

Scale: 5" / 100'
Measured Depth Log

Well Name Piceance 28-02W

Location SW NW SEC 28 T9S R93W 1522 FNL 1181 FWL

State Colorado

County Mesa

Country United States

Rig Number Patterson 306

API Number 05-077-09770

Field Vega

Region Piceance Basin

Drilling Completed 9/21/2015

Spud Date 9/17/2015

Surface Coordinates N 39.251167 W 107.779619

Bottom Hole Coordinates SW NW SEC 28 T9S R93W 375FNL 871FWL

Ground Elevation 7556'

K.B. Elevation 7578'

Logged Interval 1609' To 8091'

Total Depth 8091'

Formation Rollins

Type of Drilling Fluid Water Based

Operator

Company Piceance Energy, LLC.

Address 1512 Larimer Street, Suite 1000
Denver, CO 80202


Geologist

Name Andy McCarthy

Company Laramie Energy II, LLC.

Address 1512 Larimer Street, Suite 1000
Denver, CO 80202

Zone Color Coding

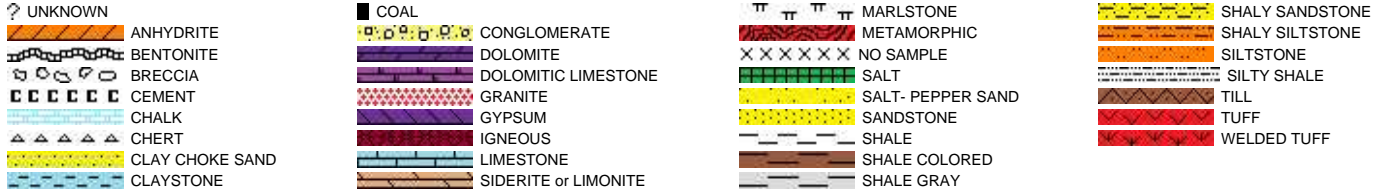
 Oil	 Condensate	 Gas
 Note	 Core	 Pressure
 Error	 Water	 Seal

Other

Jordan Mccullugh Well Site Geologist

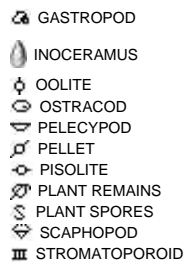
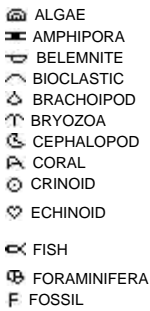
Columbine Logging Computer 14A

Rock Types

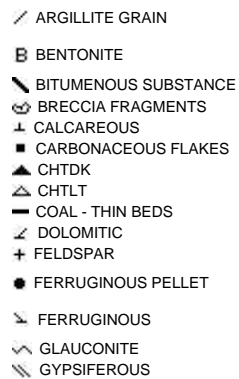
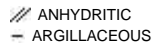


Accessories

Fossils



Minerals

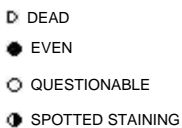


Stringer

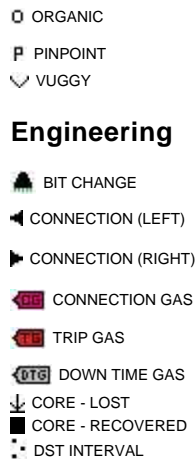


Other Symbols

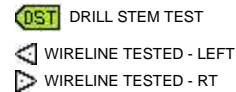
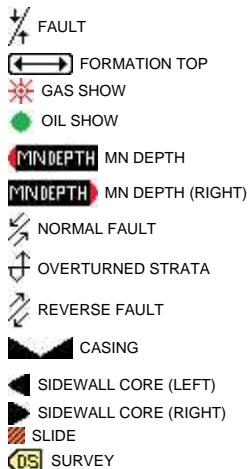
Oil Show



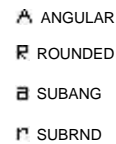
Porosity



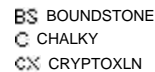
Engineering



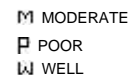
Rounding



Textures



Sorting



ROP
ROP

Slide/Rotate

Depth Labels

Total Gas & Chromatograph

GAS
C1
C2
C3
C4
C5

One-Man Strip Logging
Rigged Up 9/18/15
Began Logging @ 1609'
@ 02:15 hrs MST on 9/19/15

Bit #: 2
Type: T505
Size: 7.875"
Depth In: 1609'
Depth Out: 8091'
Hours: 47.75
Avg Ft/Hr: 138
Jets: 5x12
S/N: 7157850

0 ROP (min/ft) 2

0.25 min/ft

WOB: 8.3 klbs
ROP: 124 ft/hr
SPP: 1383 psi
RPM: 27
Strokes: 48 spm

0.68 min/ft

0 ROP (min/ft) 2

WOB: 12.6 klbs
ROP: 350 ft/hr
SPP: 1622 psi
RPM: 52
Strokes: 40 spm

1,570
1,580
1,590
1,600
1,610
1,620
1,630
1,640
1,650
1,660
1,670
1,680
1,690
1,700
1,710
1,720
1,730
1,740
1,750

0 GAS (units) 250
0 C1-C5 (units) 250

9u

MD: 1,632'
TVD: 1,605'
Inclination: 17.09°
Azimuth: 345.56°

4u

MD: 1,696'
TVD: 1,666'
Inclination: 16.61°
Azimuth: 344.86°

51u

Strokes: 49 spm

0.08 min/ft

ROP (min/ft)

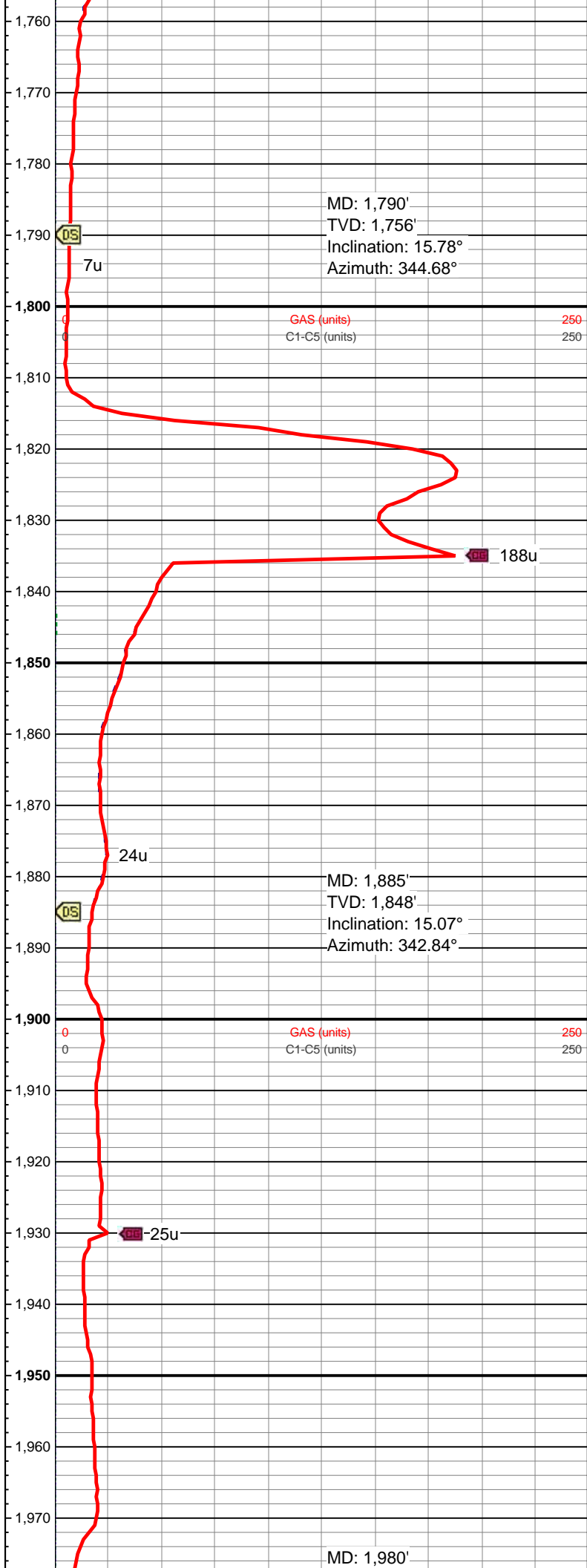
0.59 min/ft

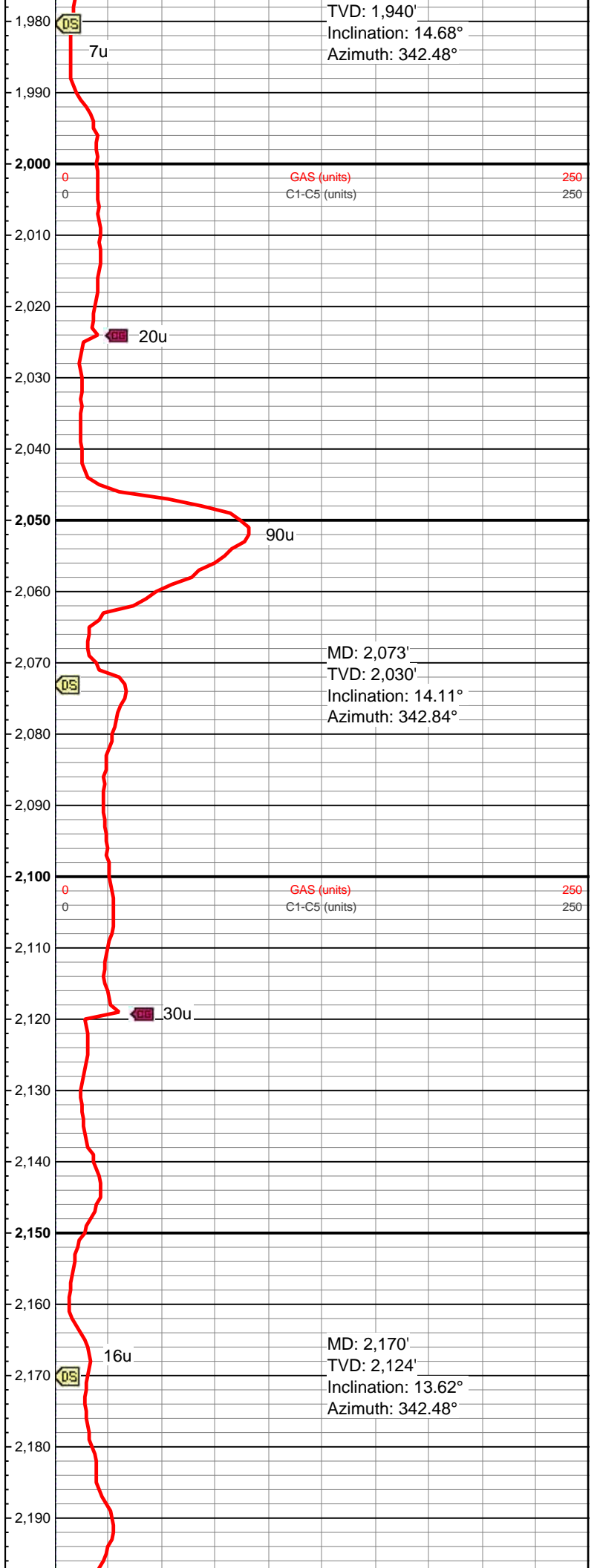
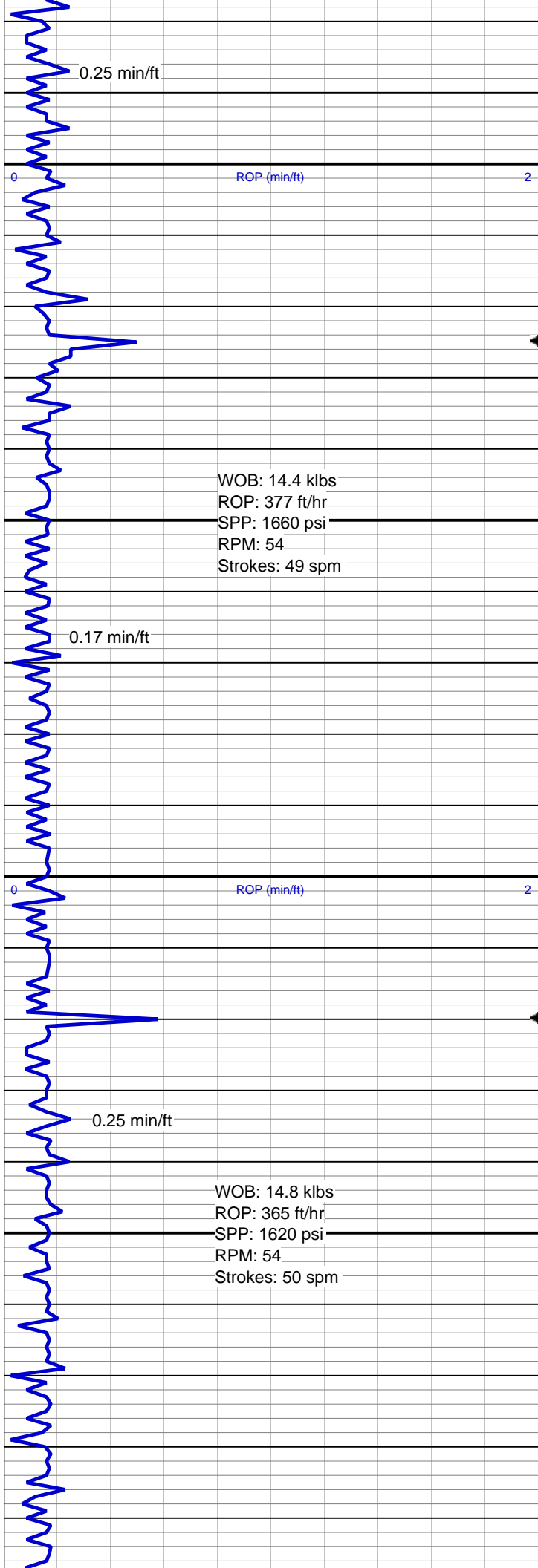
WOB: 14.2 klbs
ROP: 472 ft/hr
SPP: 1576 psi
RPM: 53
Strokes: 48 spm

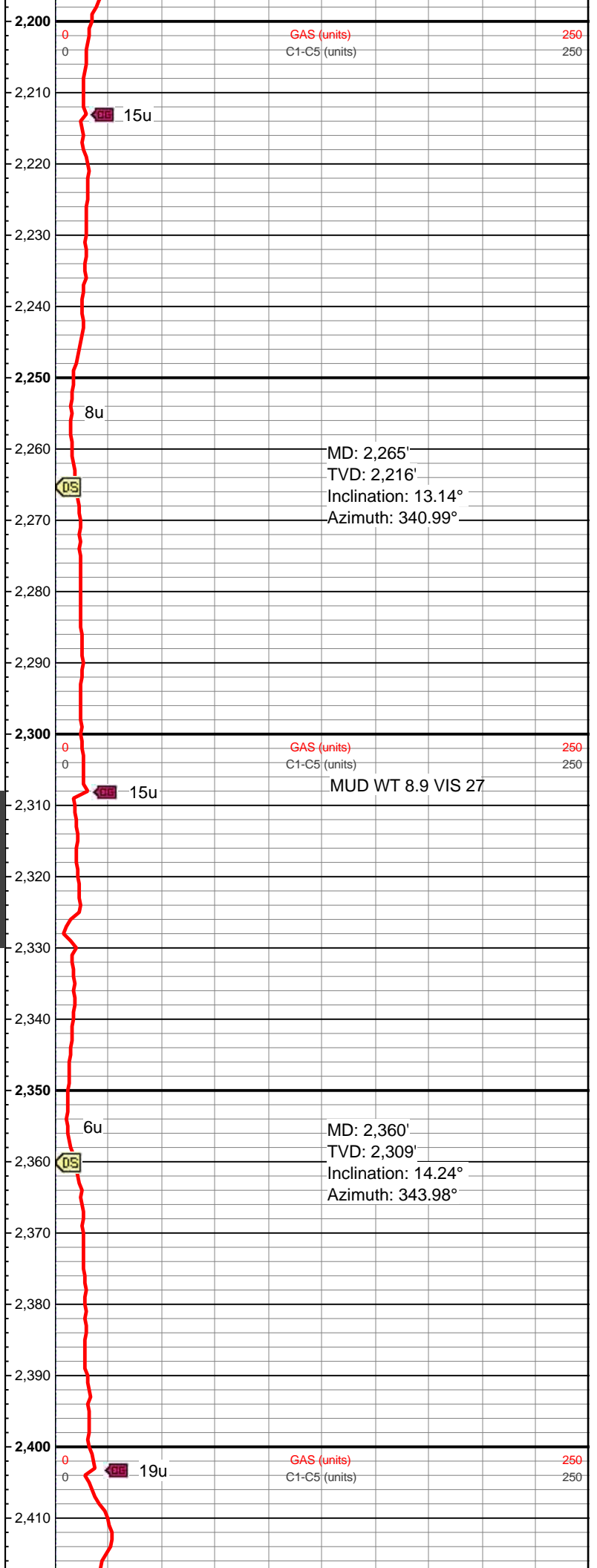
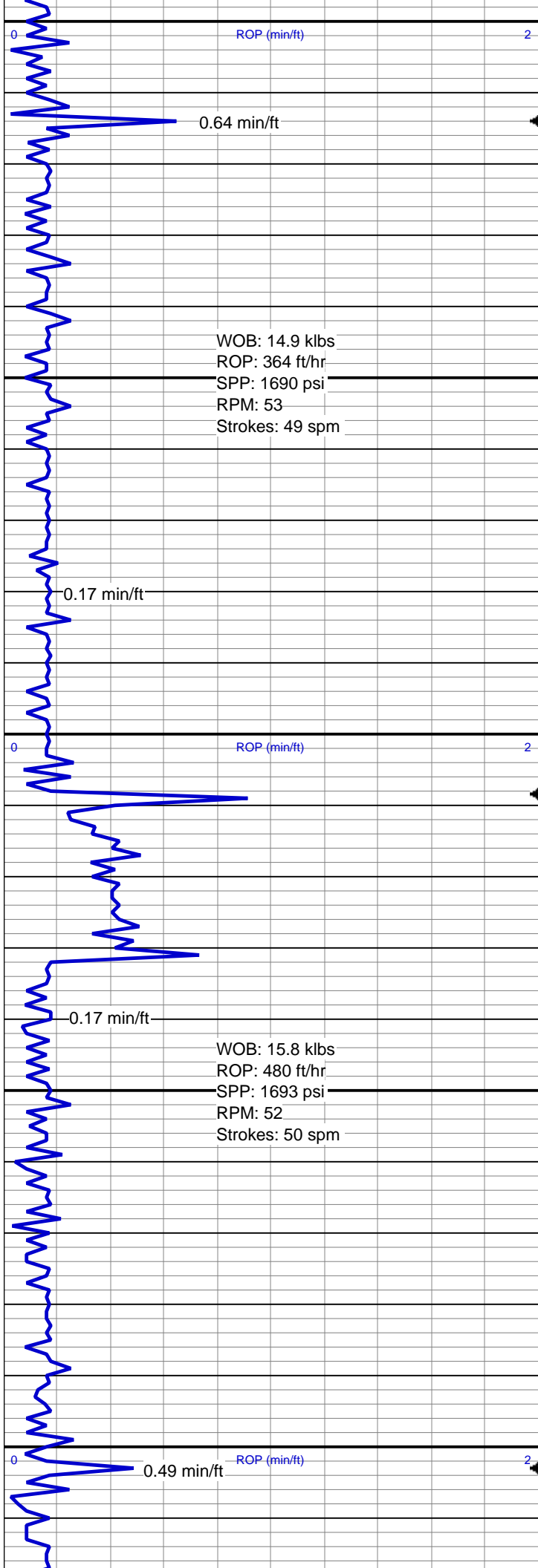
ROP (min/ft)

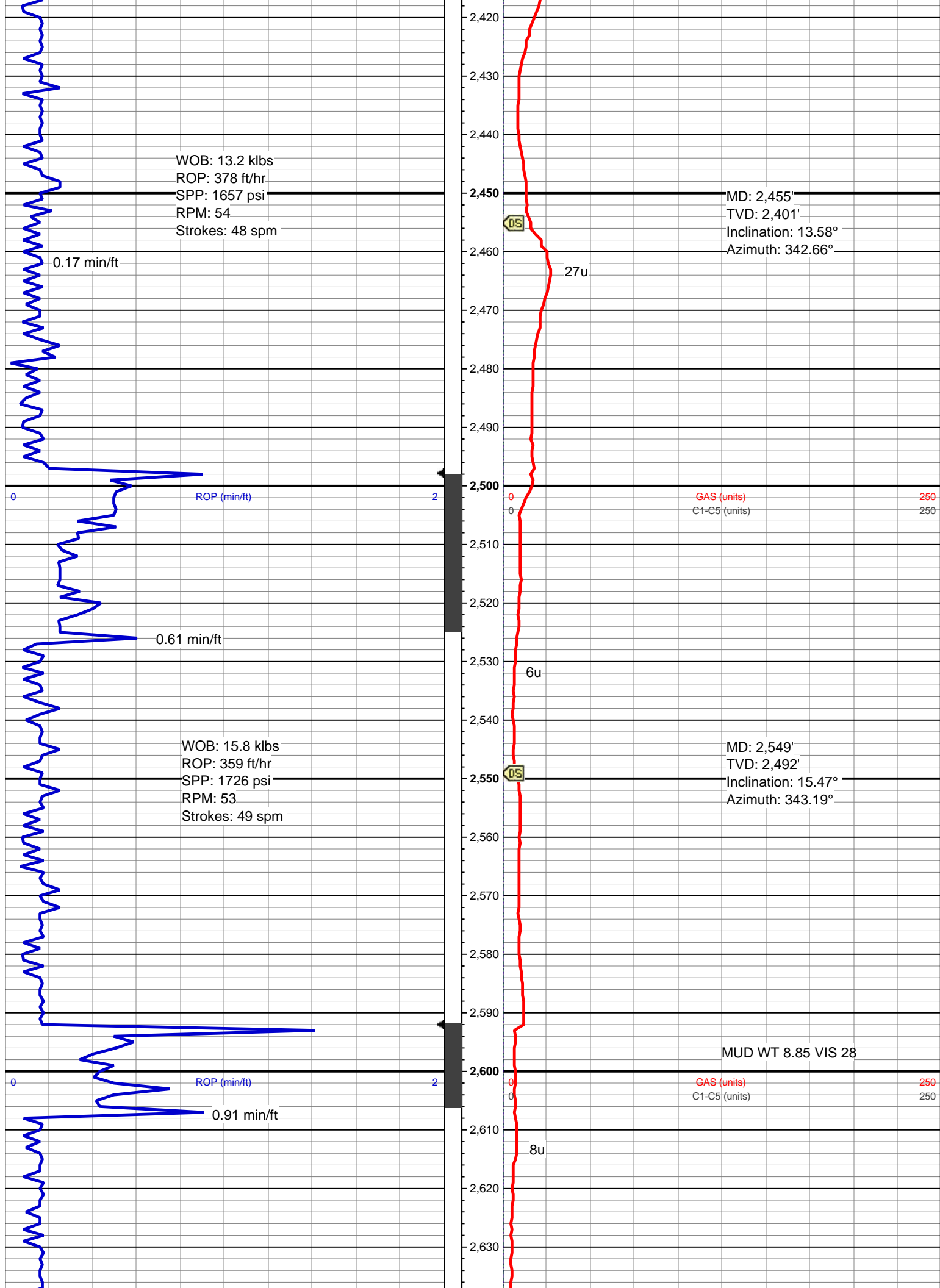
0.17 min/ft

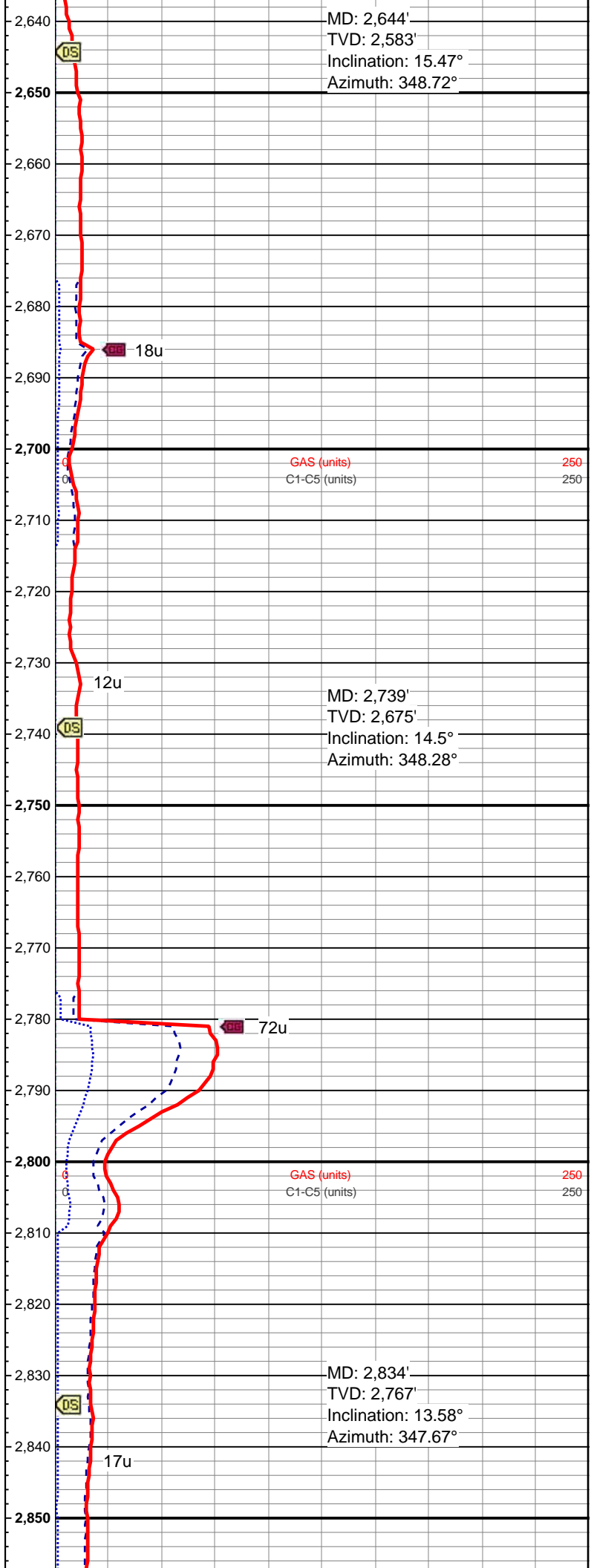
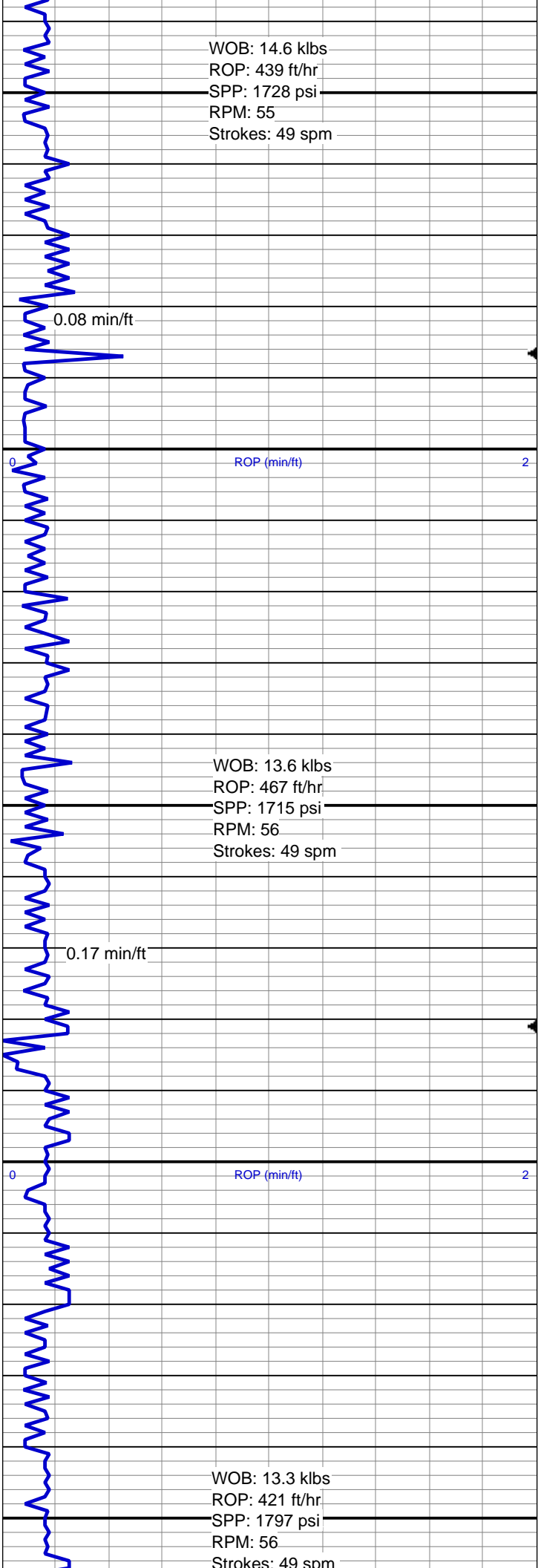
WOB: 13.0 klbs
ROP: 399 ft/hr
SPP: 1593 psi
RPM: 53
Strokes: 48 spm



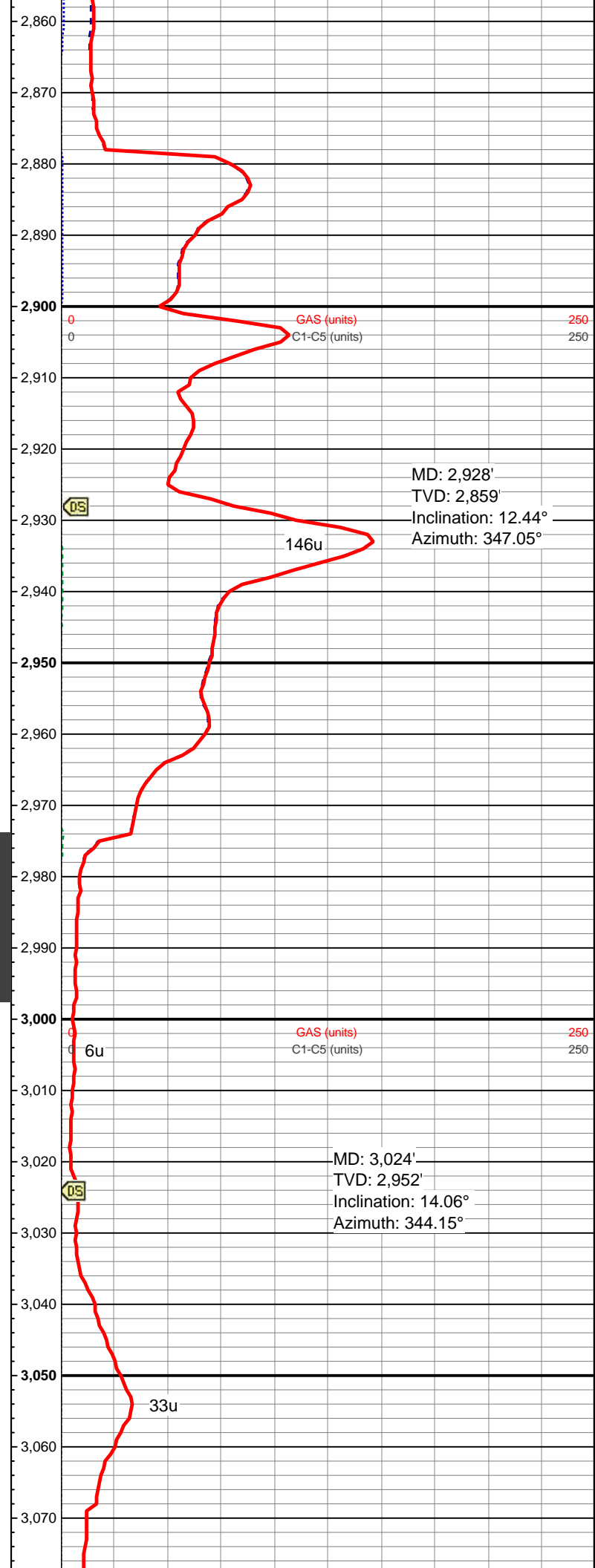
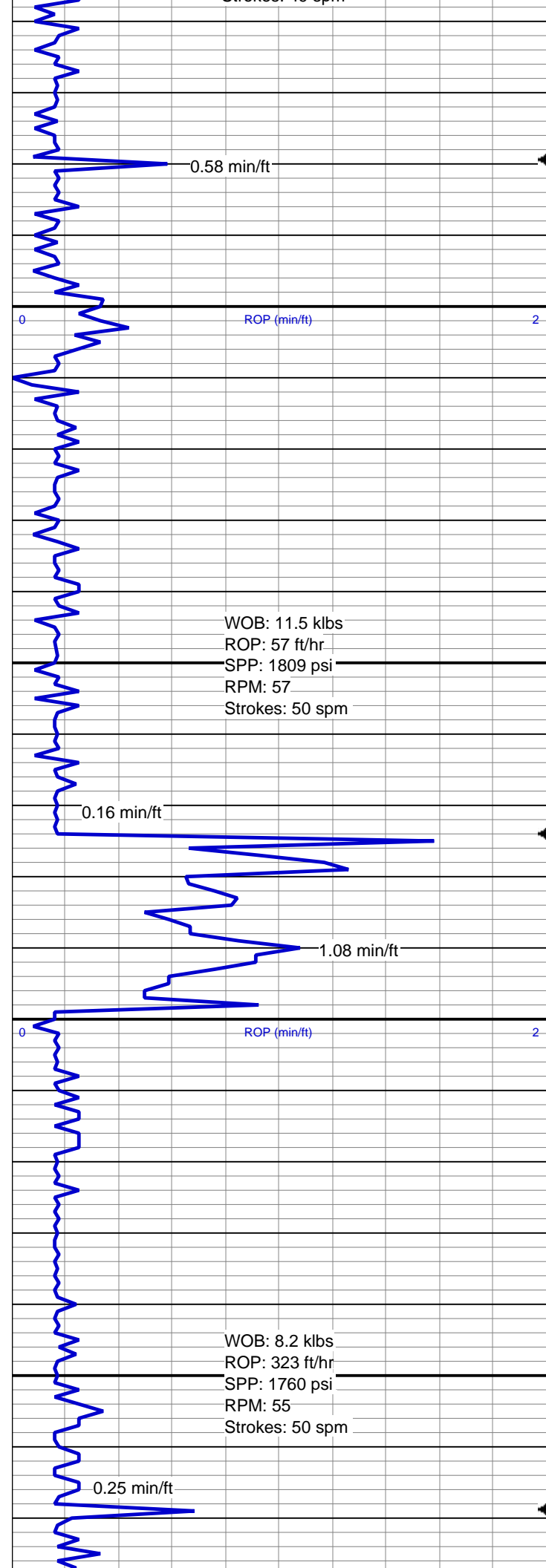


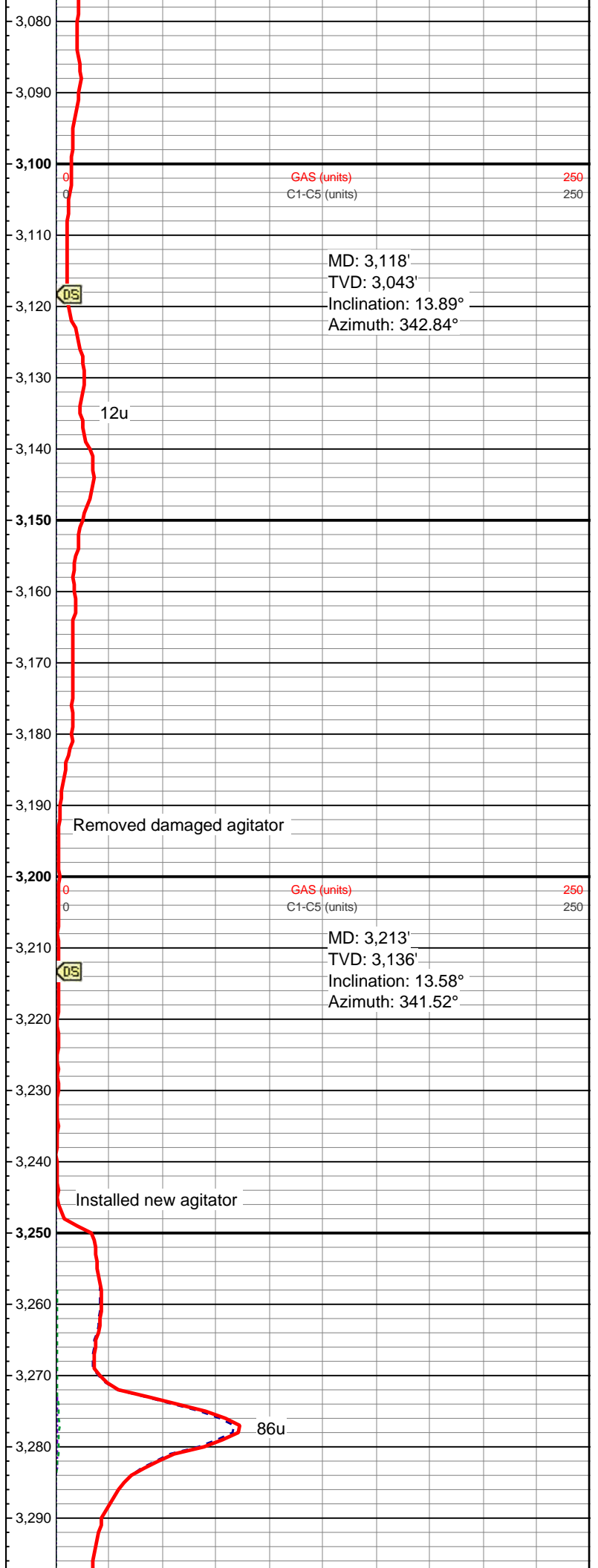
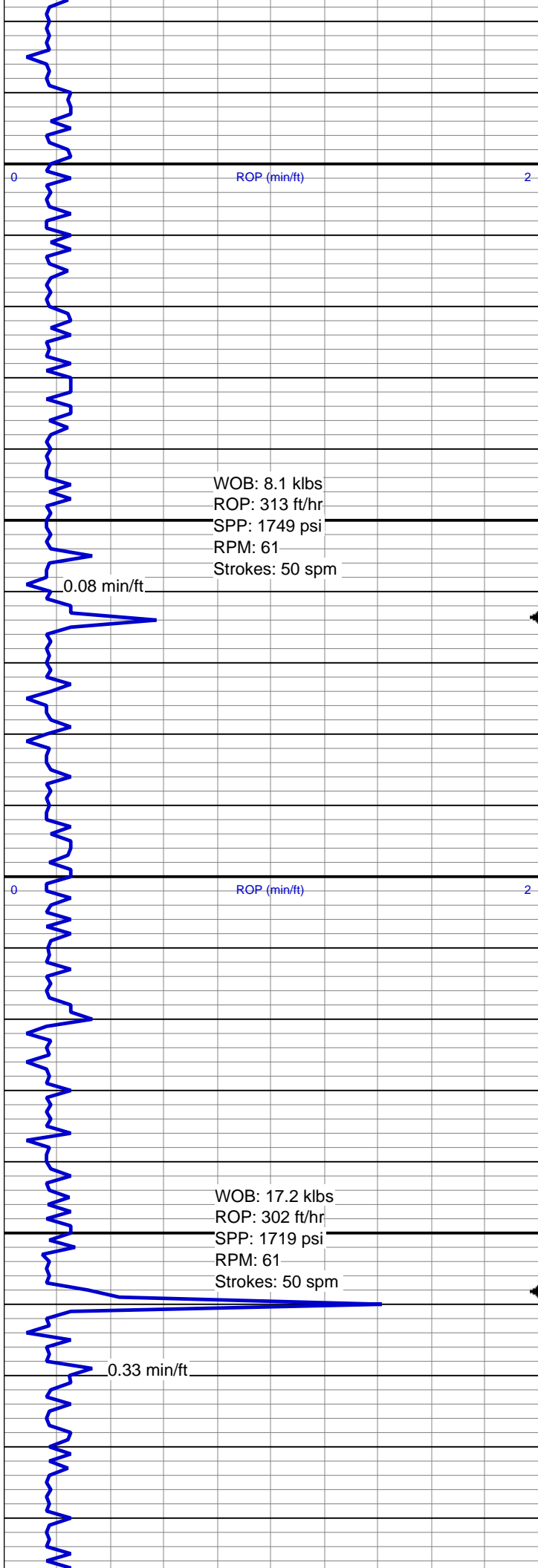


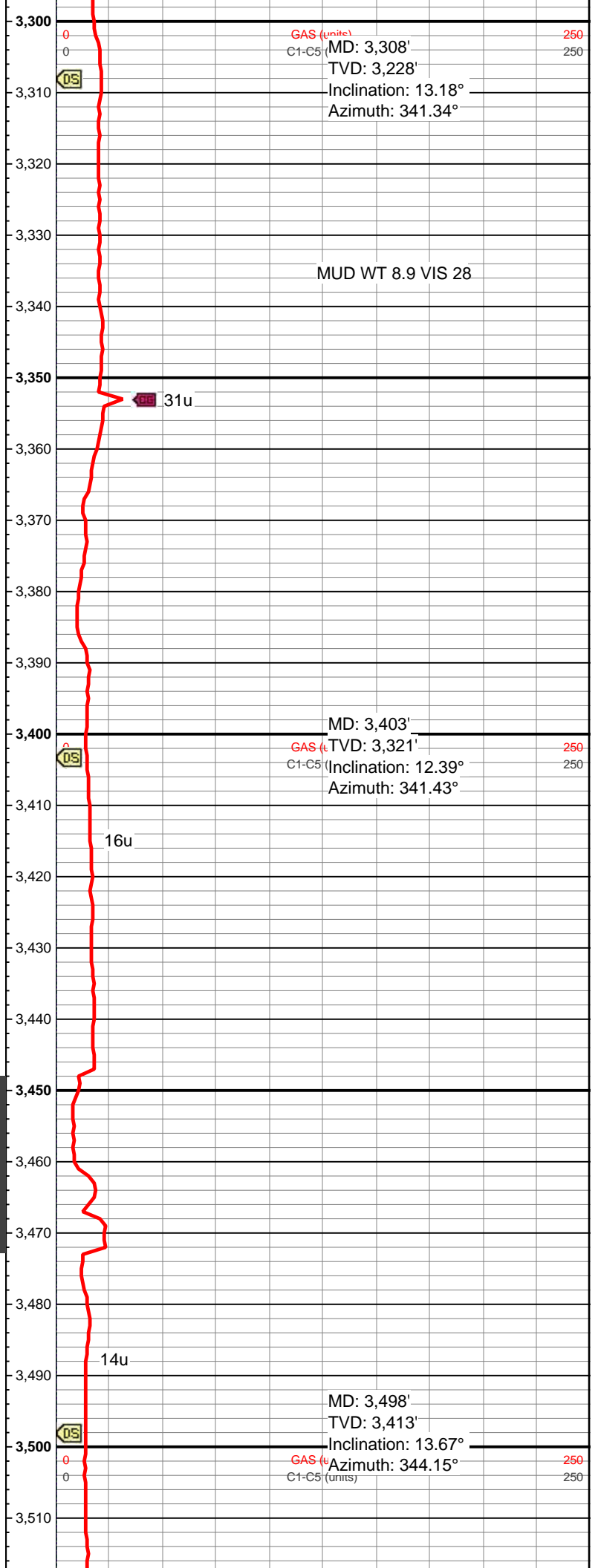
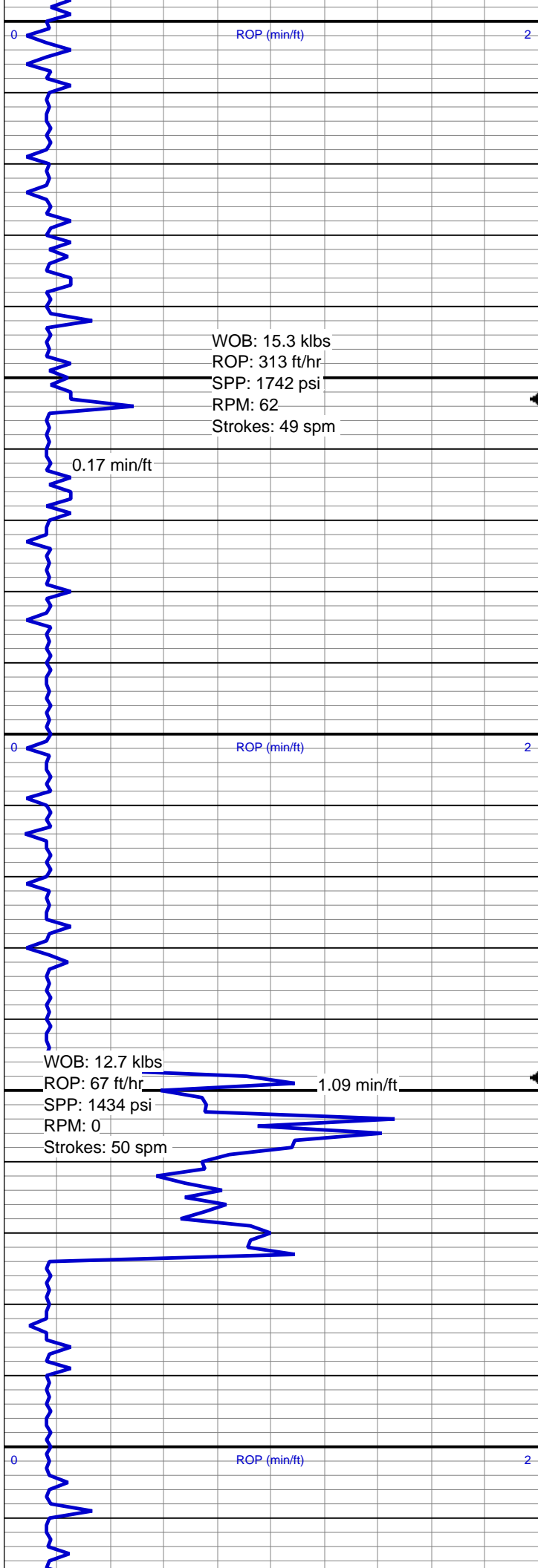


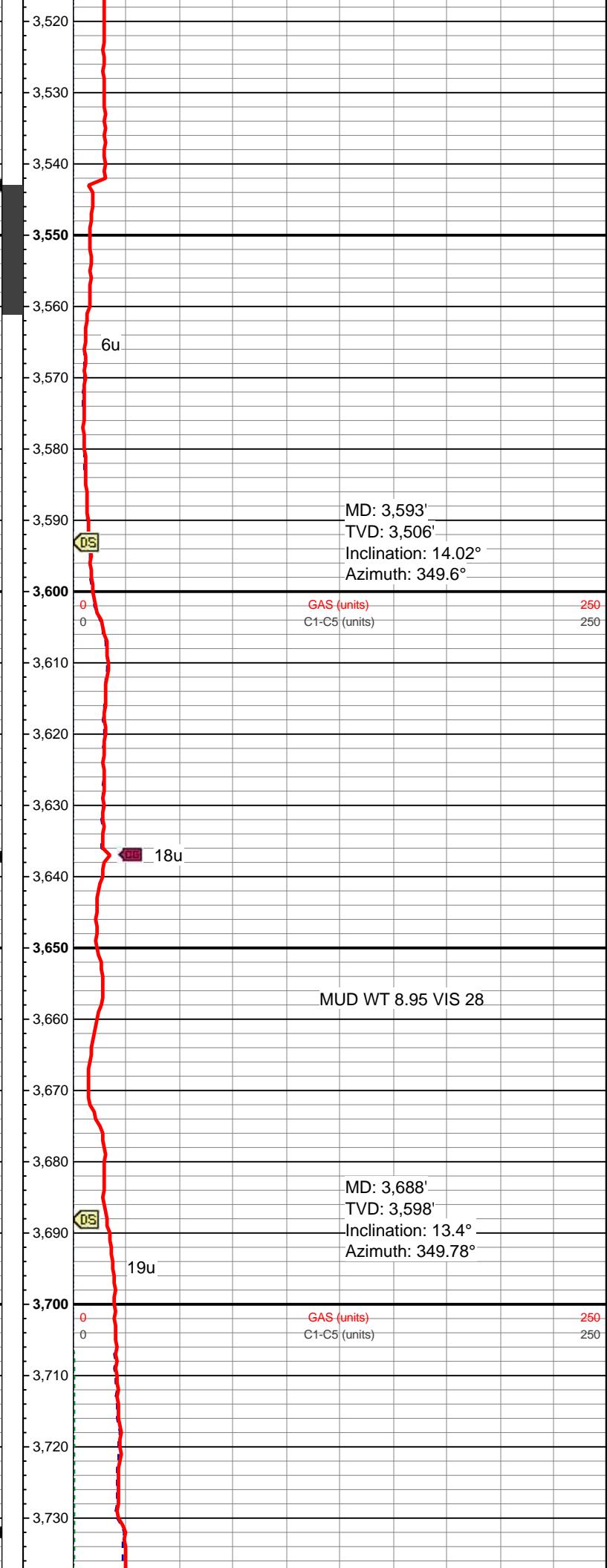
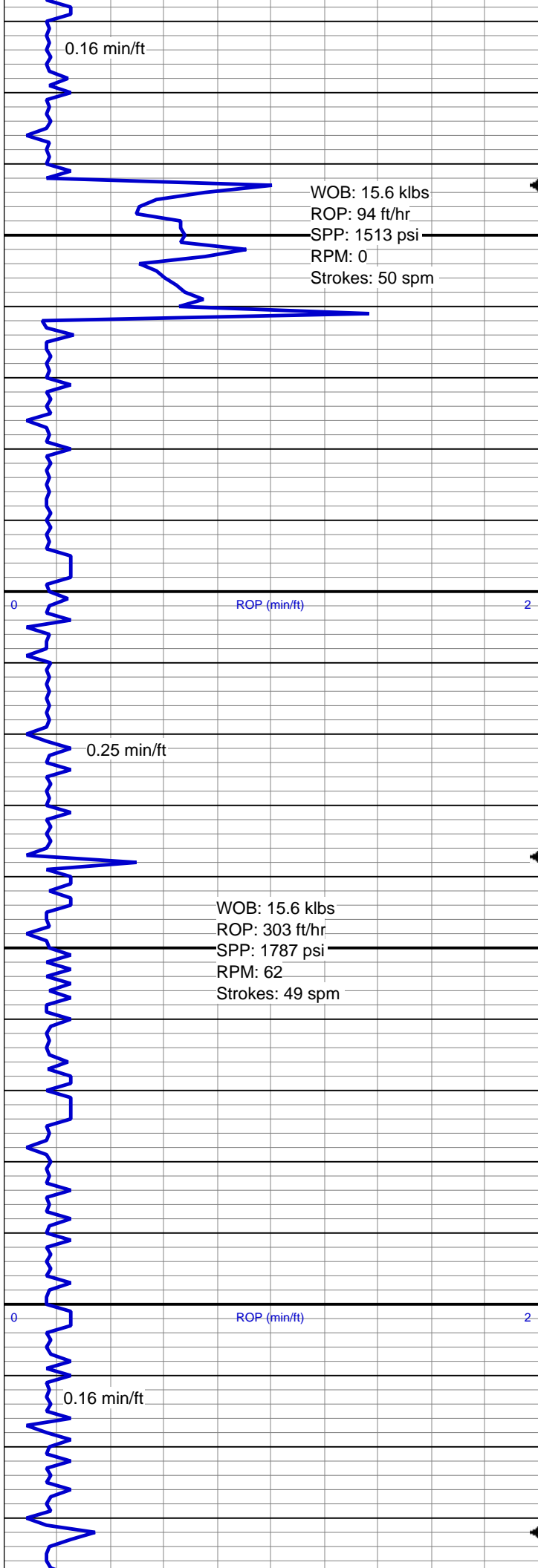


Strokes: 50 spm









WOB: 13.3 klbs
ROP: 305 ft/hr
SPP: 1776 psi
RPM: 63
Strokes: 50 spm

ROP (min/ft)

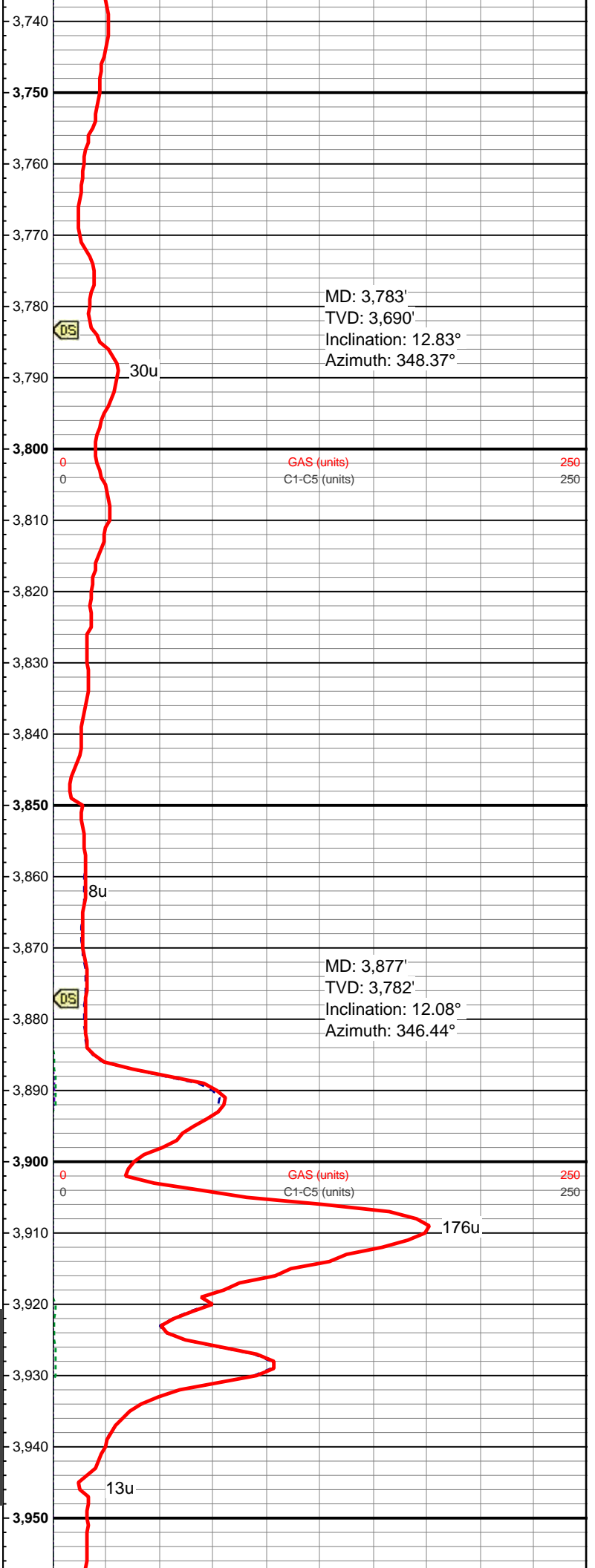
0.42 min/ft

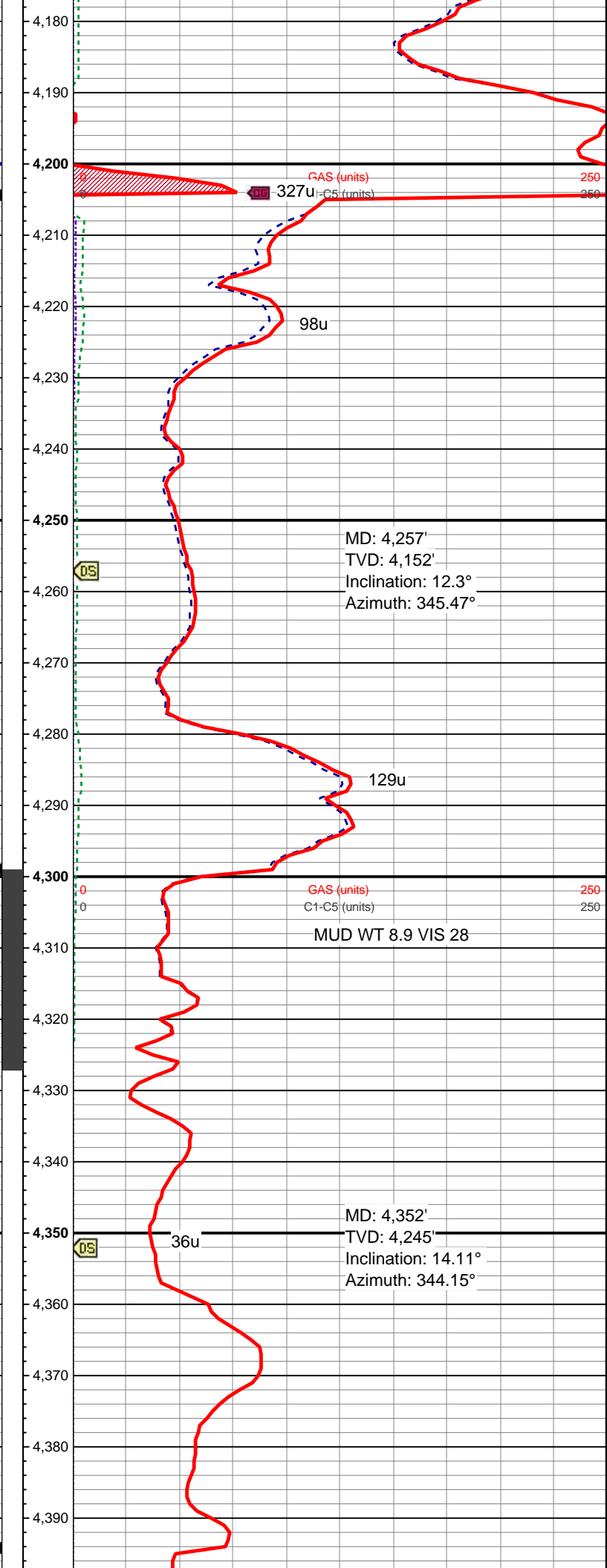
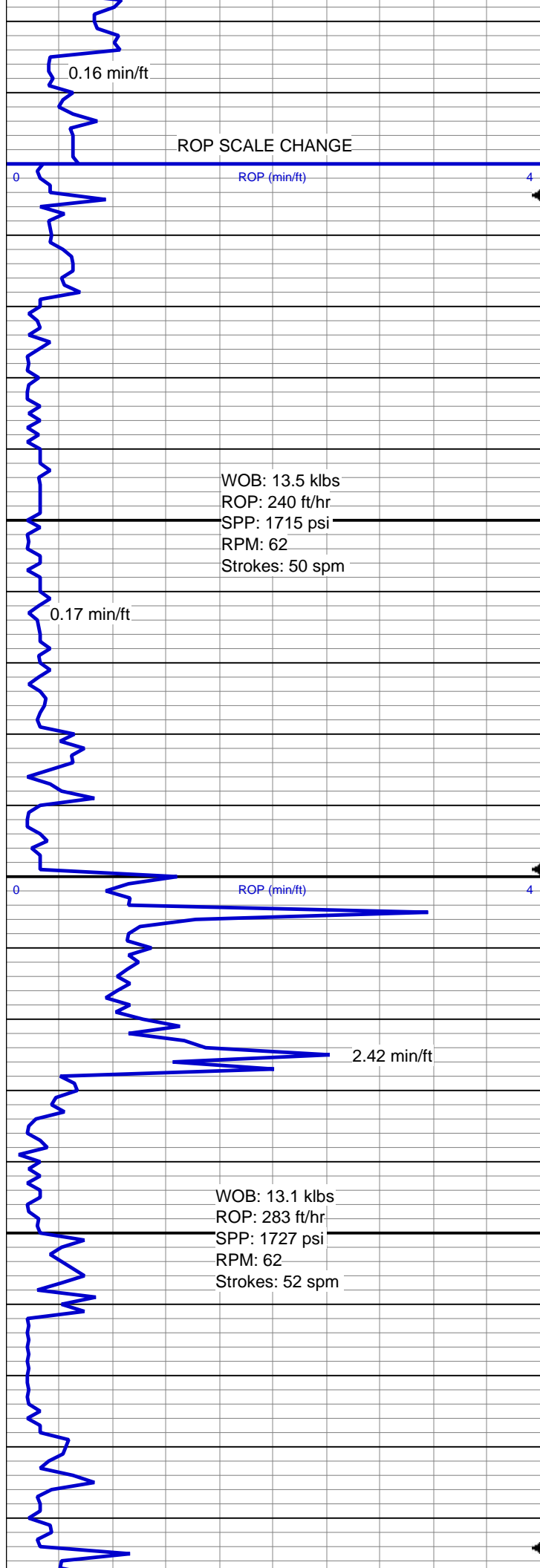
WOB: 12.2 klbs
ROP: 312 ft/hr
SPP: 1769 psi
RPM: 62
Strokes: 49 spm

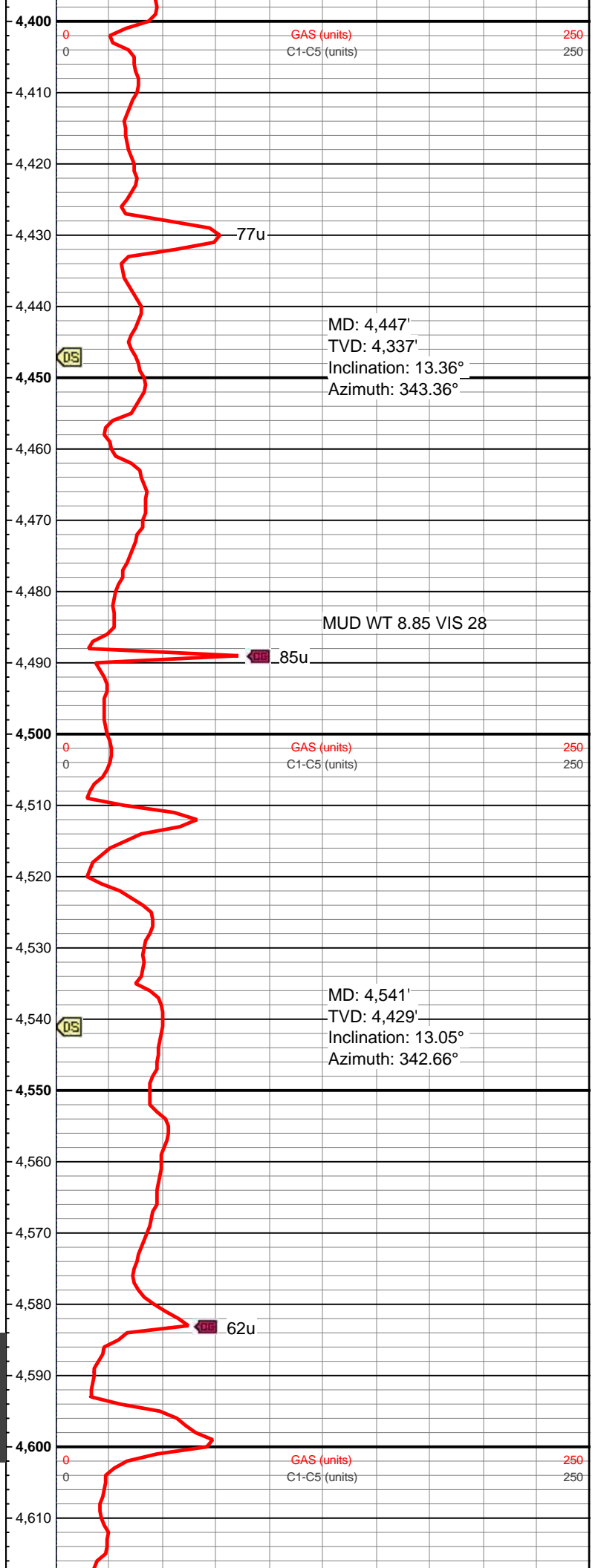
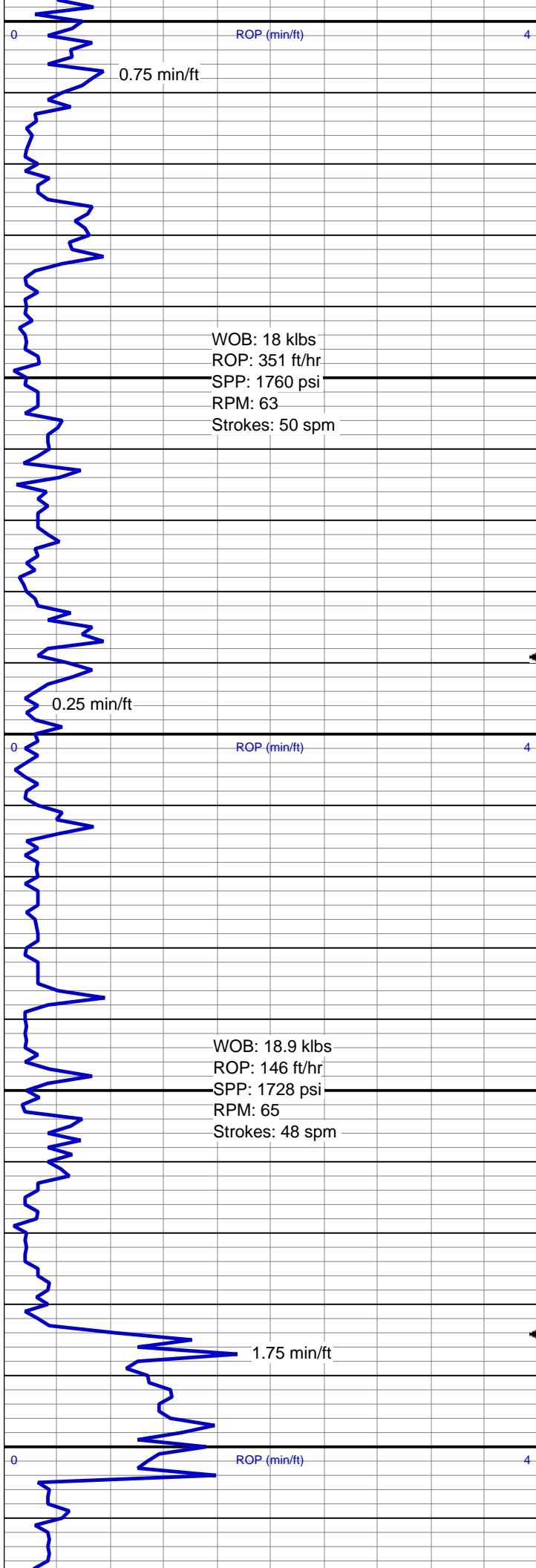
ROP (min/ft)

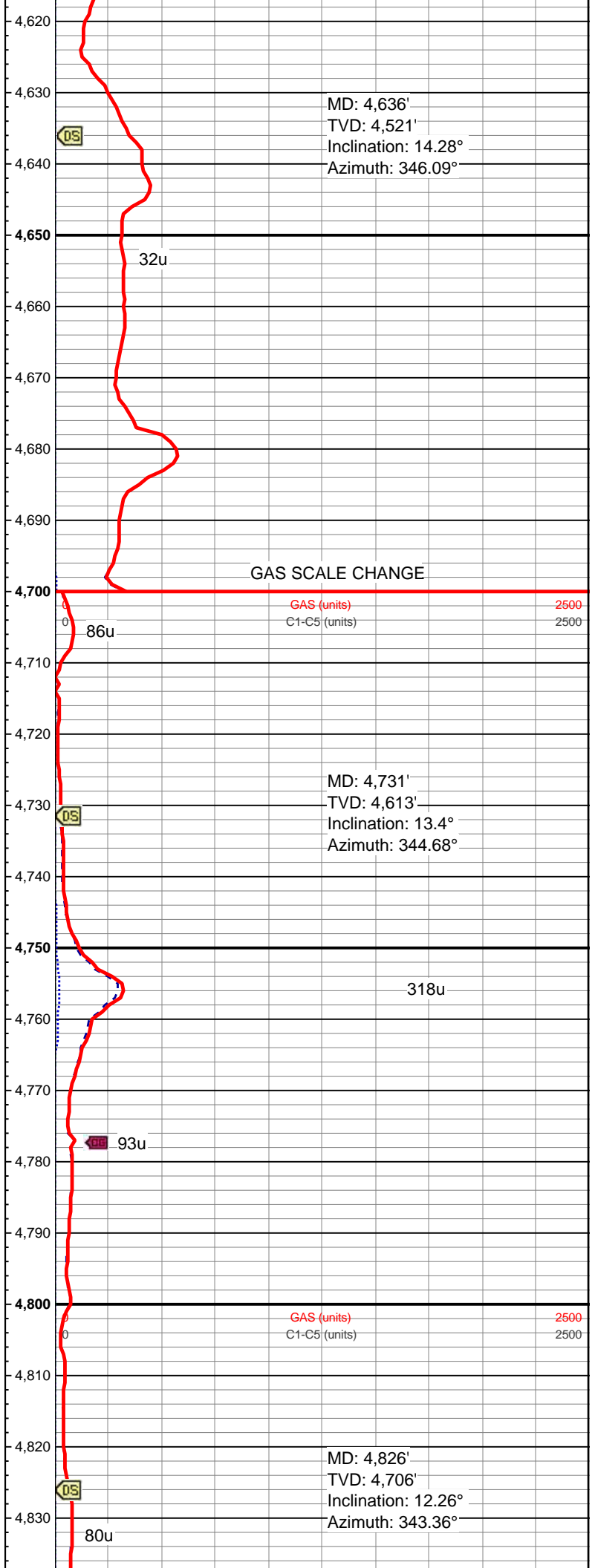
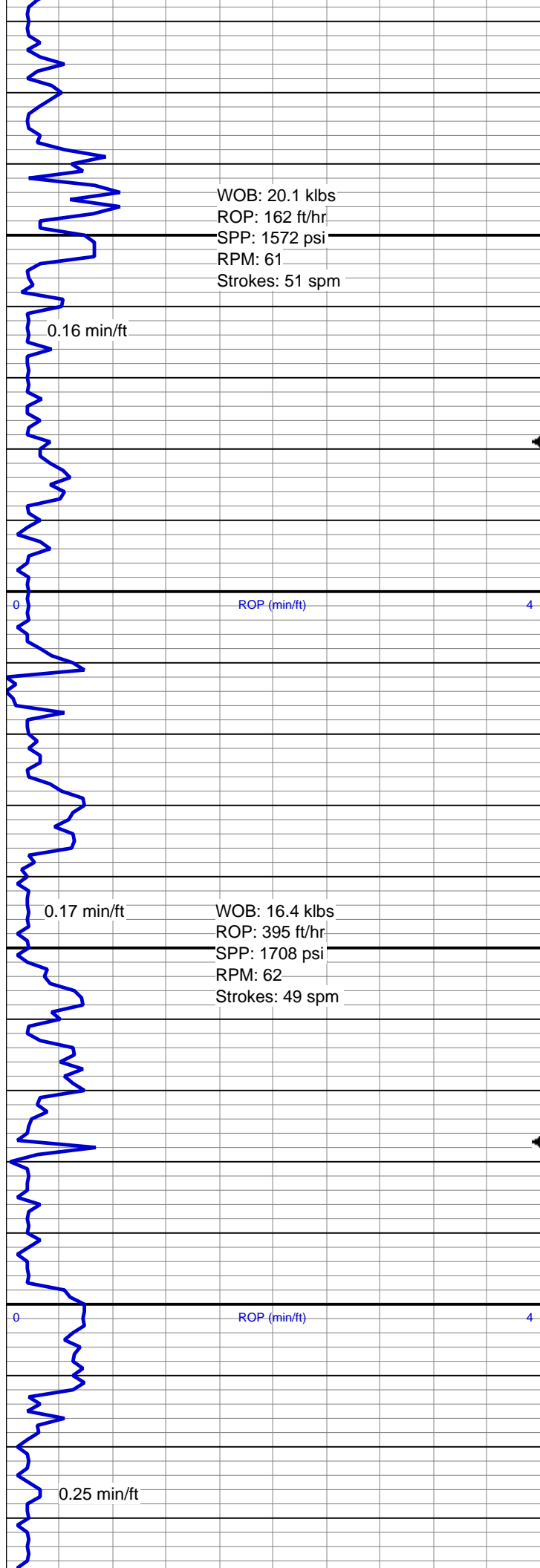
1.25 min/ft

WOB: 10.3 klbs
ROP: 51 ft/hr
SPP: 1668 psi
RPM: 63
Strokes: 49 spm









WOB: 19.9 klbs
ROP: 408 ft/hr
SPP: 1726 psi
RPM: 59
Strokes: 49 spm

0.68 min/ft

WOB: 19 klbs
ROP: 176 ft/hr
SPP: 1662 psi
RPM: 60
Strokes: 49 spm

1.59 min/ft

WOB: 20.7 klbs
ROP: 185 ft/hr
SPP: 1640 psi
RPM: 58
Strokes: 48 spm

191u

MUD WT 8.8 VIS 28

483u

GAS (units) 2500
C1-C5 (units) 2500

MD: 4,921'
TVD: 4,799'
Inclination: 11.29°
Azimuth: 343.27°

132u

344u

MUD WT 8.8 VIS 27

50u

GAS (units) 2500
C1-C5 (units) 2500

MD: 5,016'
TVD: 4,892'
Inclination: 12.08°
Azimuth: 348.72°

Strokes: 48 spm

0.16 min/ft

ROP (min/ft)

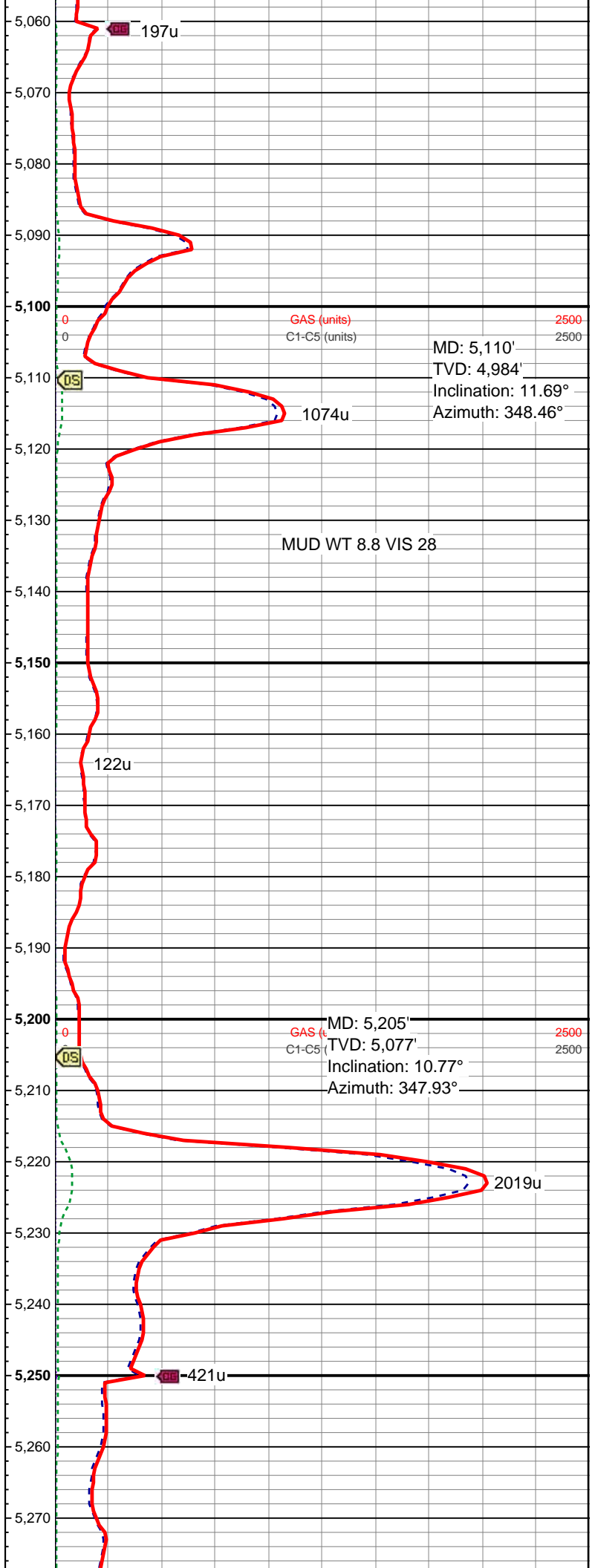
WOB: 21 klbs
ROP: 135 ft/hr
SPP: 1709 psi
RPM: 58
Strokes: 49 spm

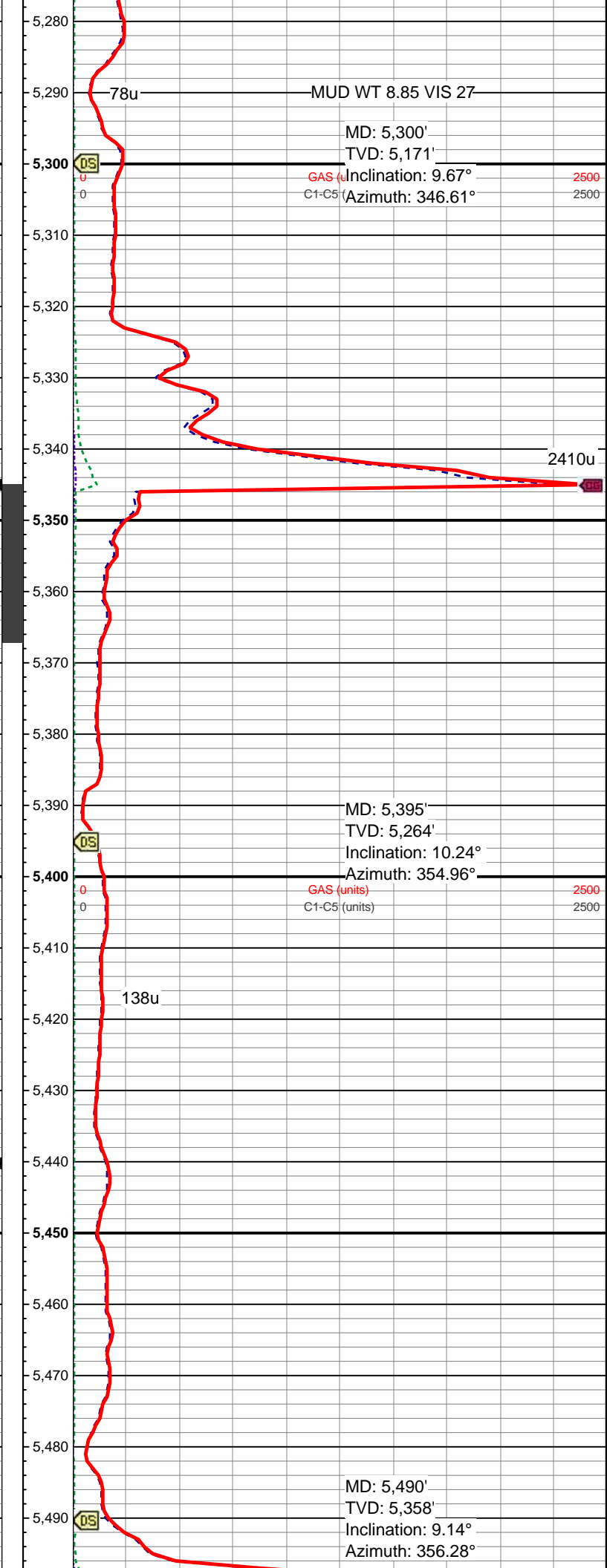
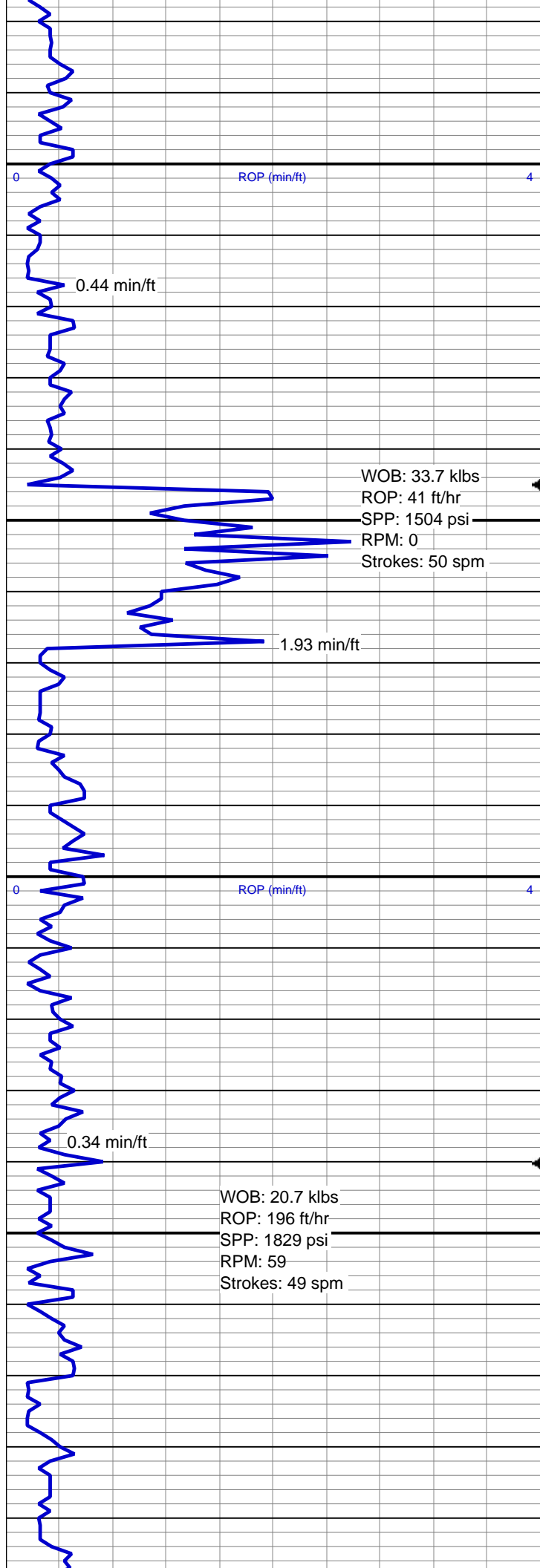
0.67 min/ft

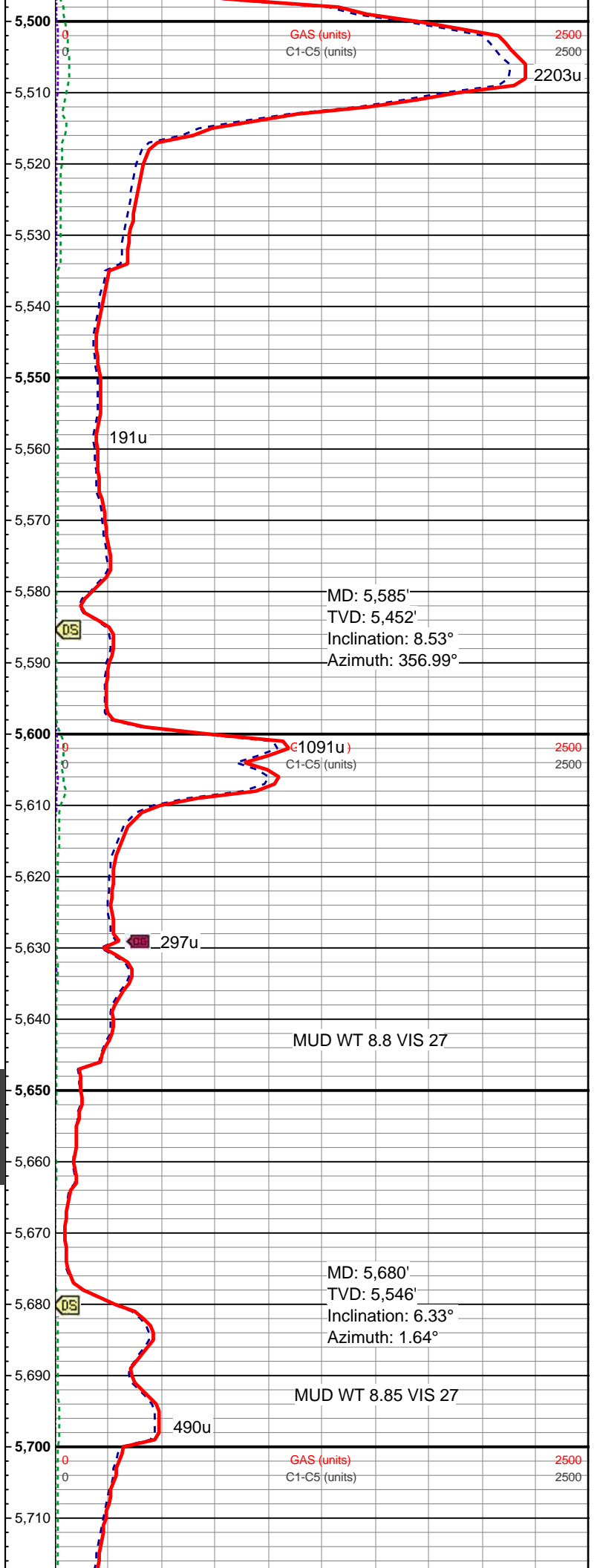
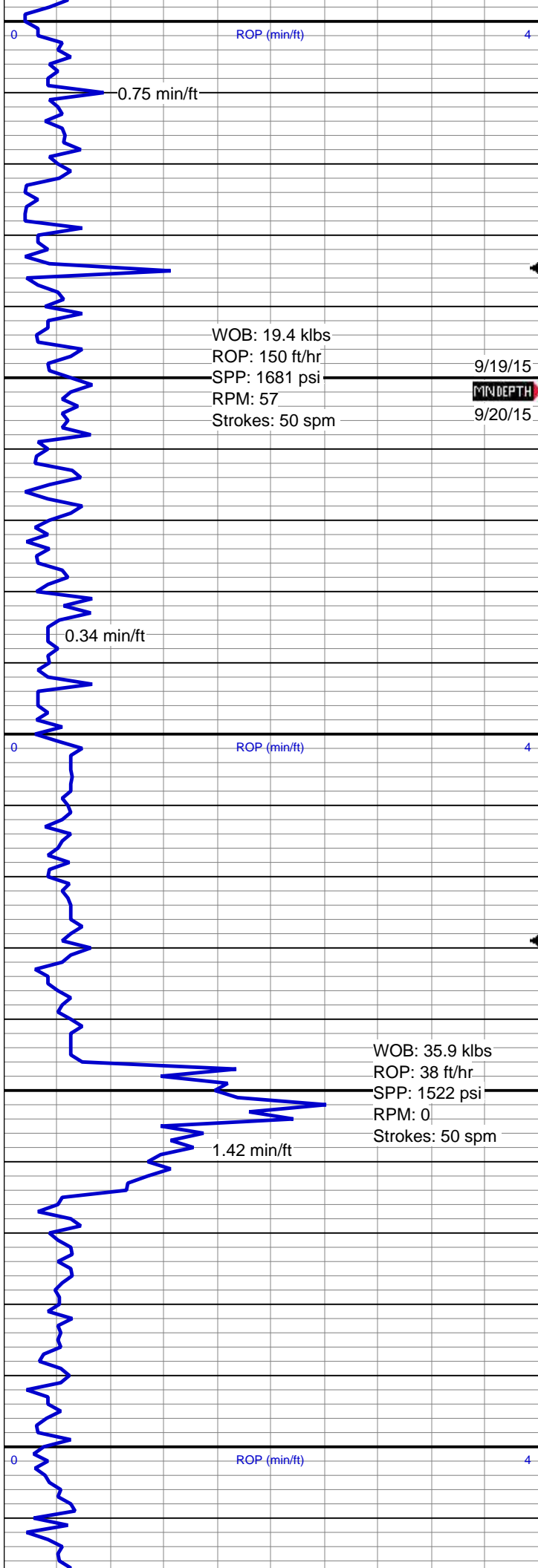
ROP (min/ft)

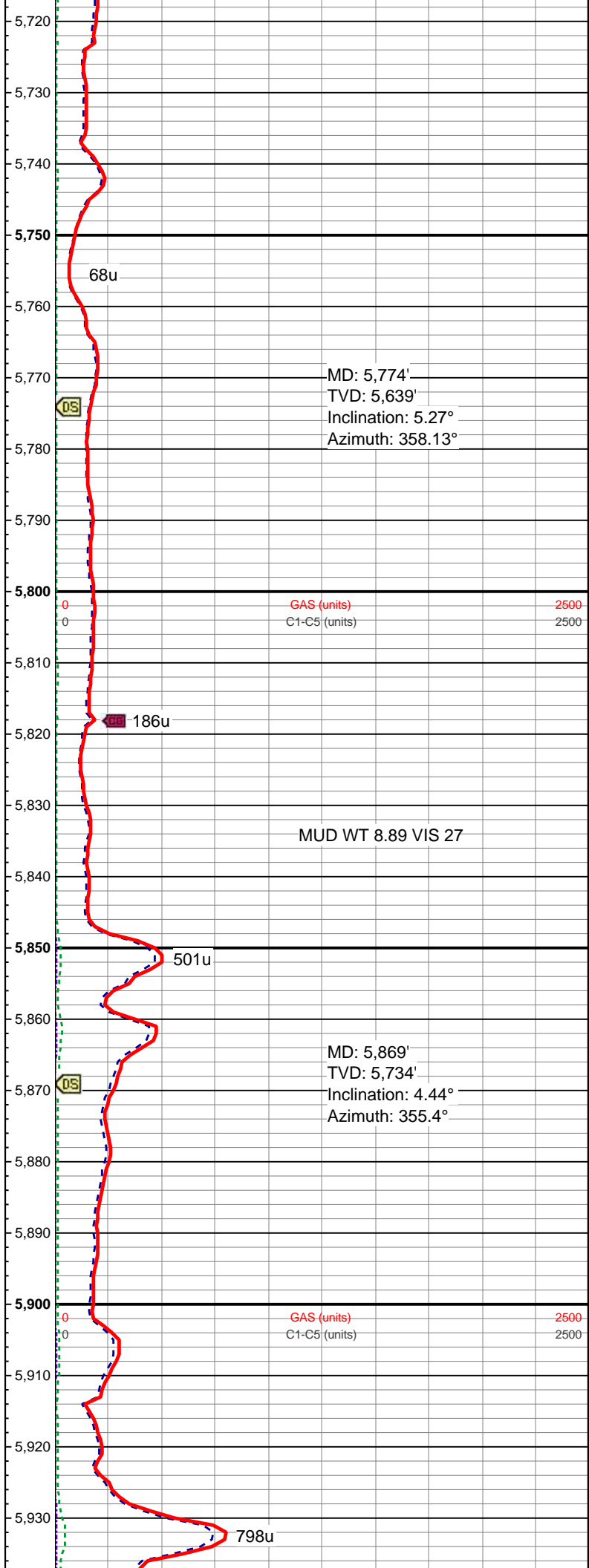
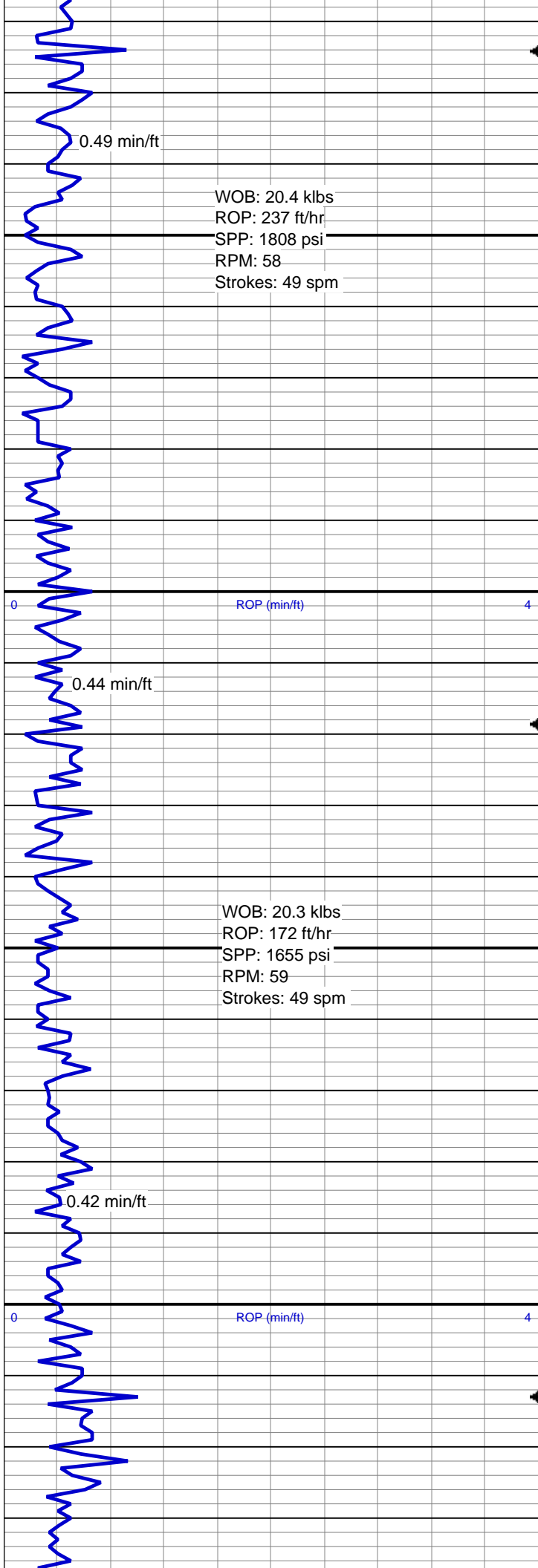
WOB: 0 klbs
ROP: 0 ft/hr
SPP: 1419 psi
RPM: 59
Strokes: 50 spm

0.25 min/ft









WOB: 19.8 klbs
ROP: 106 ft/hr
SPP: 1692 psi
RPM: 59
Strokes: 49 spm

0.59 min/ft

ROP (min/ft)

WOB: 20.6 klbs
ROP: 231 ft/hr
SPP: 1814 psi
RPM: 60
Strokes: 48 spm

0.76 min/ft

ROP (min/ft)

2.49 min/ft

0.57 min/ft

WOB: 20.2 klbs
ROP: 211 ft/hr
SPP: 1868 psi
RPM: 60
Strokes: 50 spm

MUD WT 8.9 VIS 27

MD: 5,964'
TVD: 5,829'
Inclination: 3.52°
Azimuth: 354.79°

GAS (units)
C1-C5 (units)

2500
2500

481u

GAS (units)
C1-C5 (units)

4000
4000

190u

(MD: 6,059'
TVD: 5,924'
Inclination: 2.77°
Azimuth: 350.13°

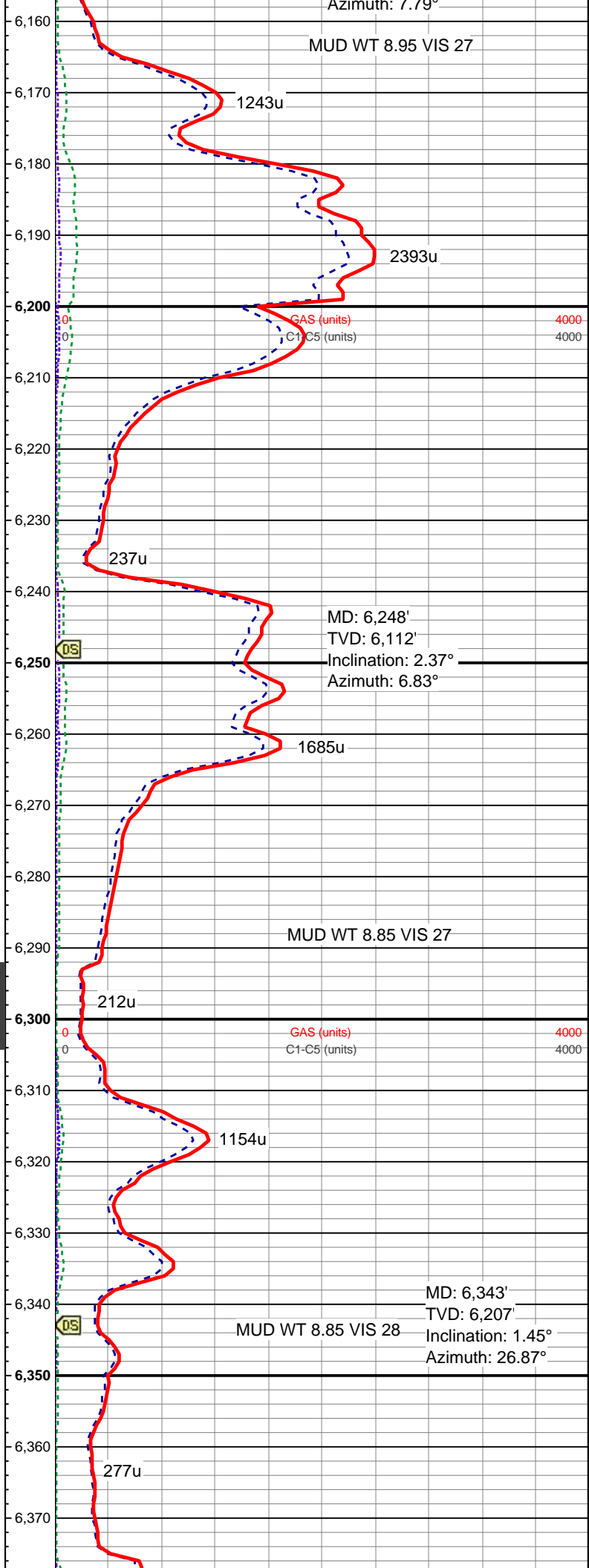
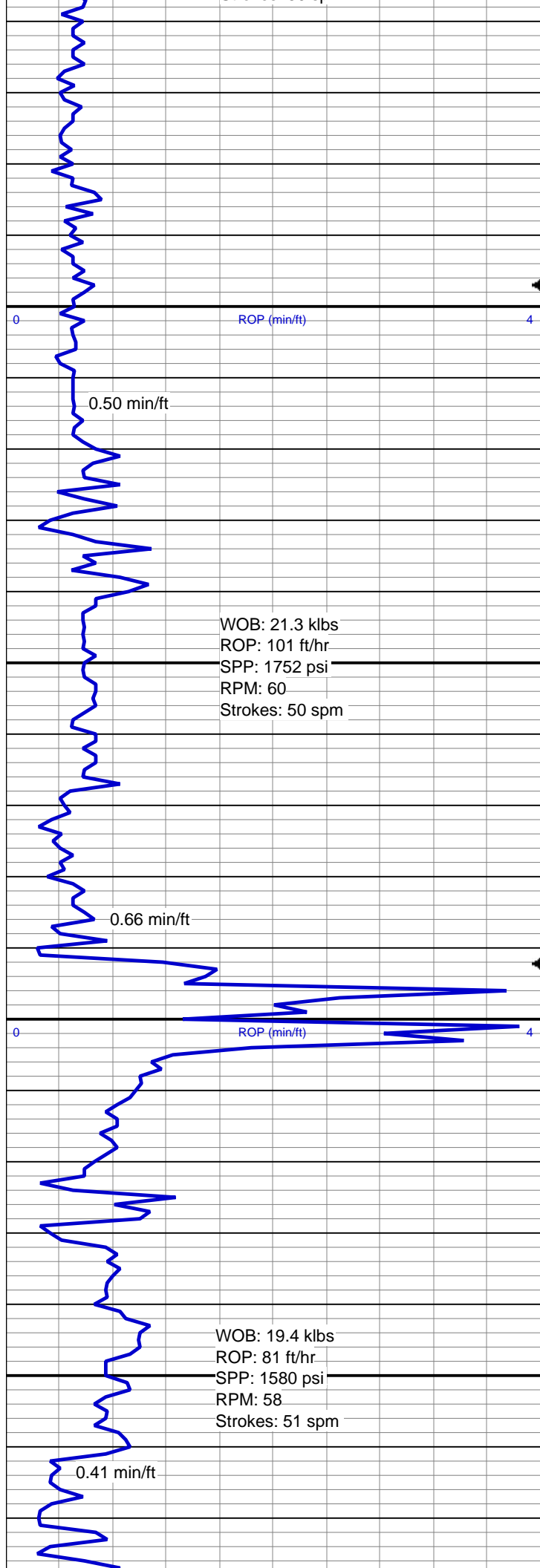
GAS (units)
C1-C5 (units)

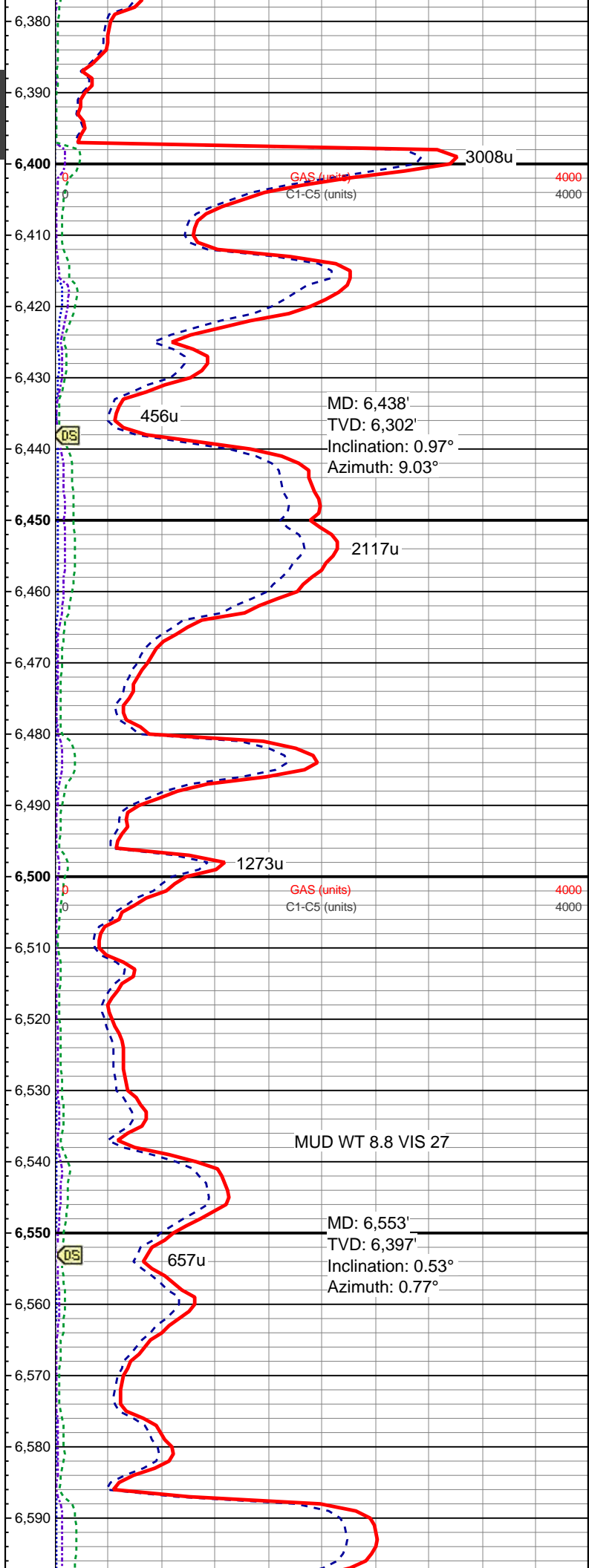
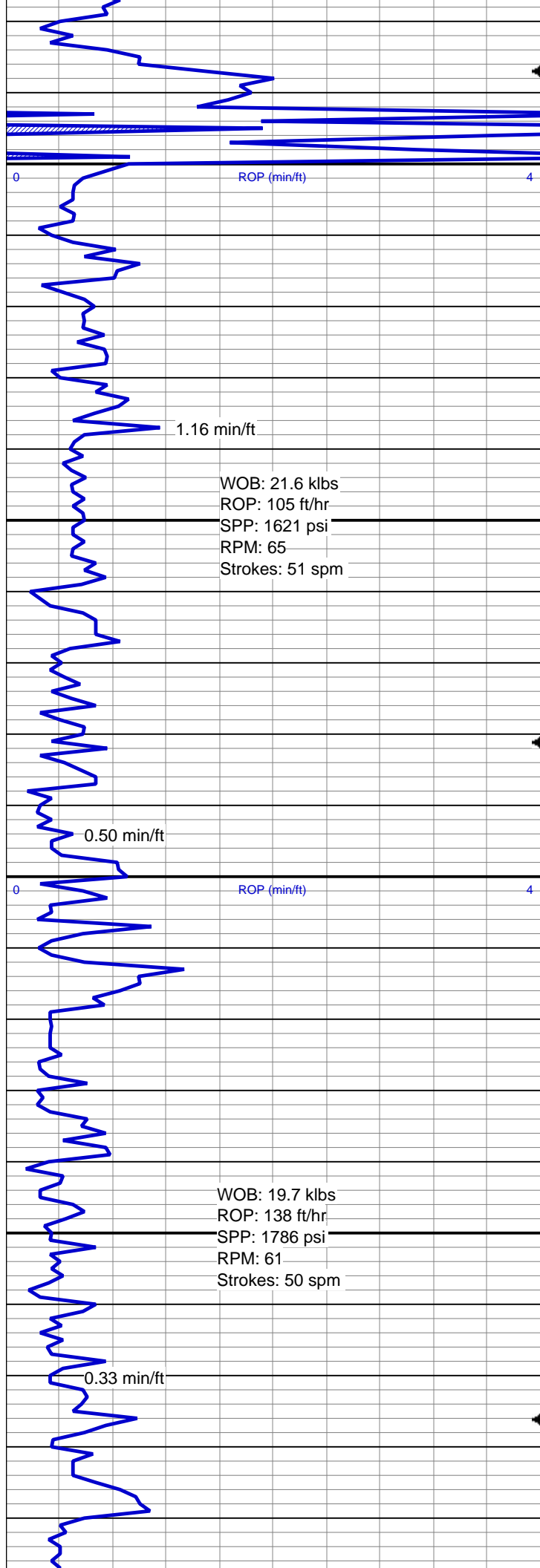
4000
4000

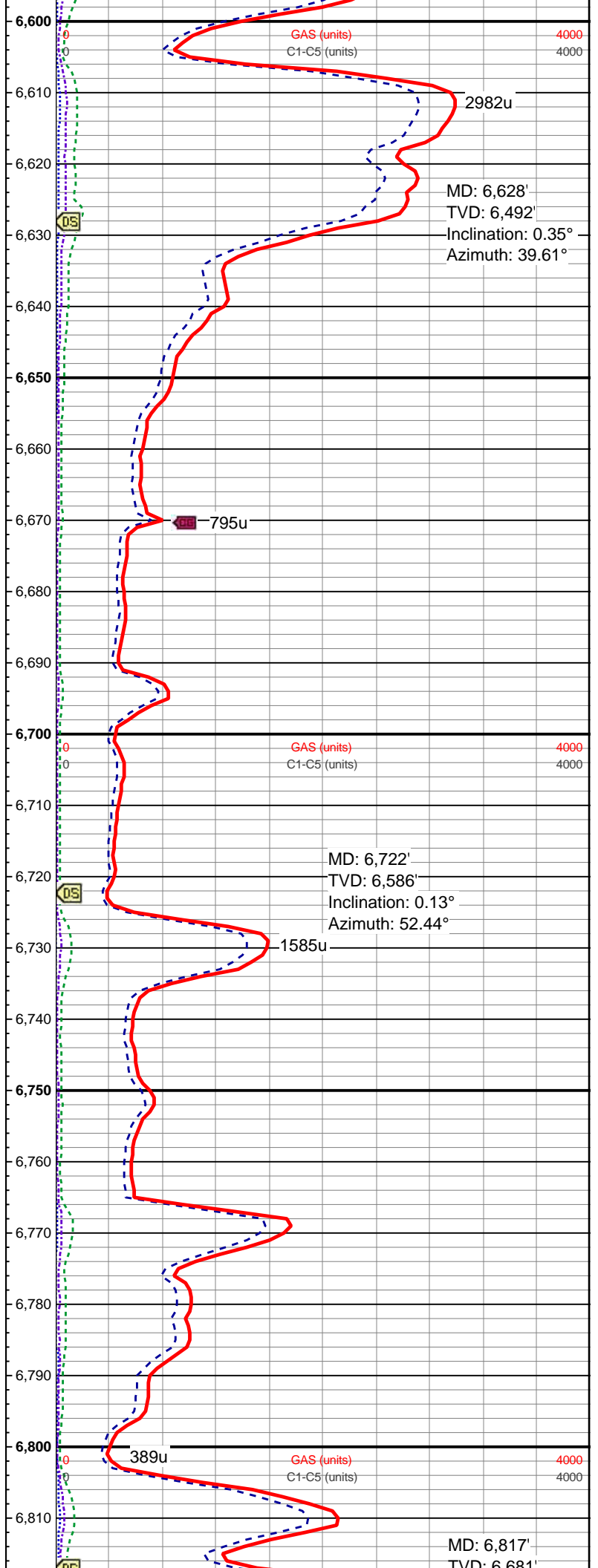
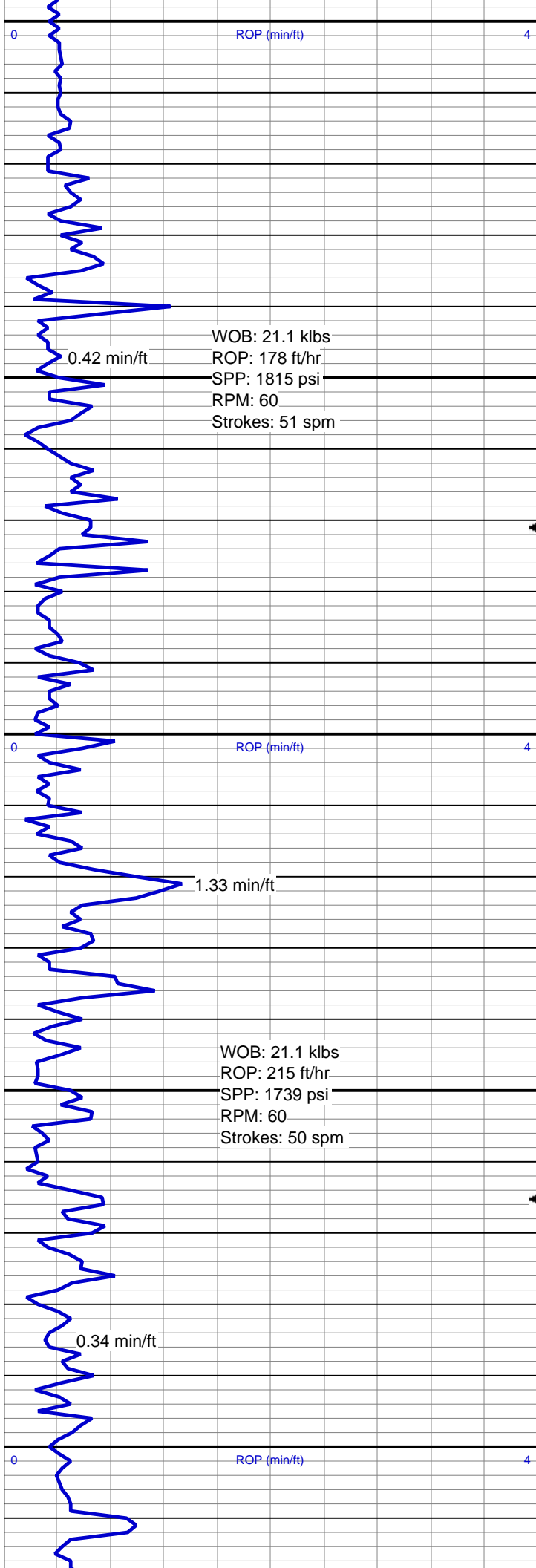
2550u

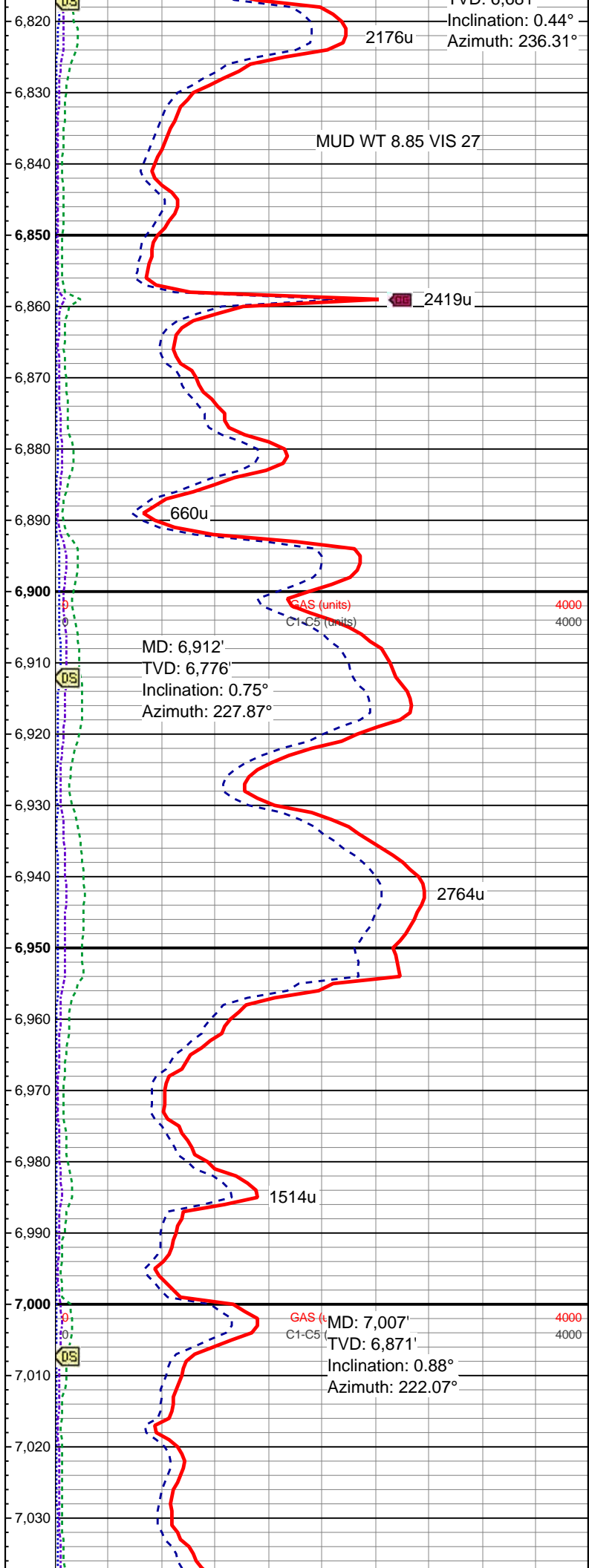
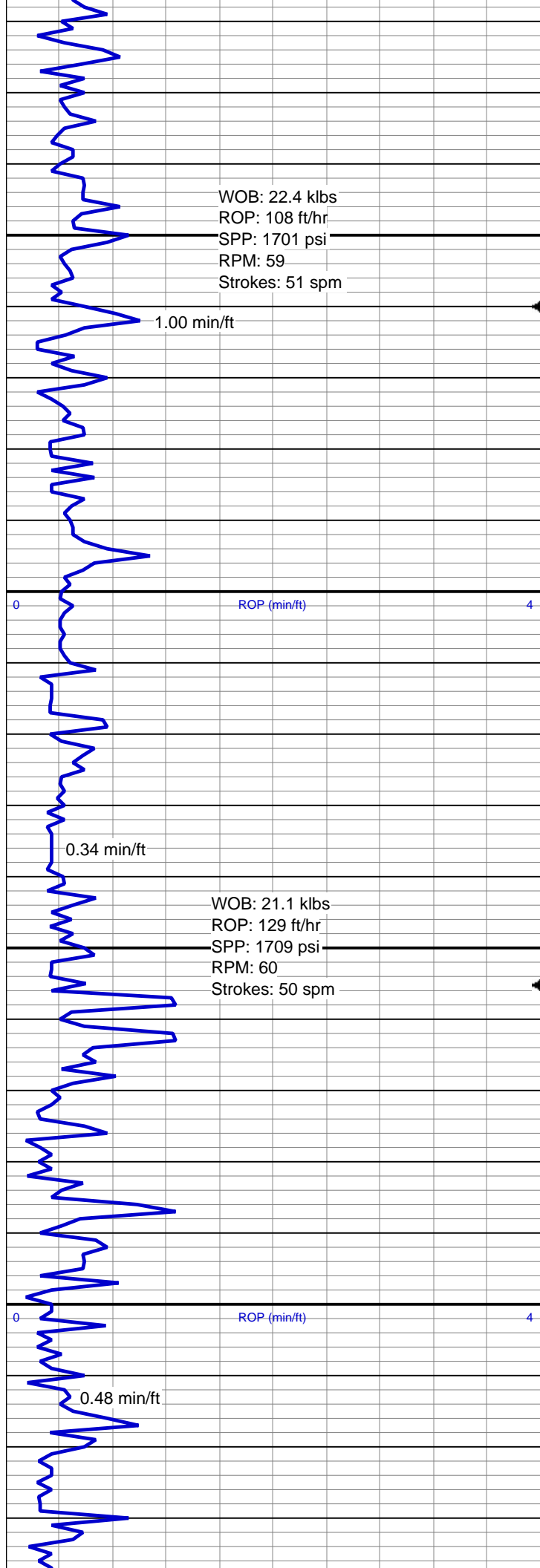
MD: 6,153'
TVD: 6,017'
Inclination: 2.68°
Azimuth: 353.22°

148u









WOB: 18.9 klbs
ROP: 39 ft/hr
SPP: 1555 psi
RPM: 58
Strokes: 49 spm

1.00 min/ft

ROP (min/ft)

WOB: 16 klbs
ROP: 194 ft/hr
SPP: 1625 psi
RPM: 58
Strokes: 49 spm

0.39 min/ft

ROP (min/ft)

0.25 min/ft

WOB: 16.6 klbs
ROP: 77 ft/hr
SPP: 1863 psi
RPM: 60
Strokes: 49 spm

