



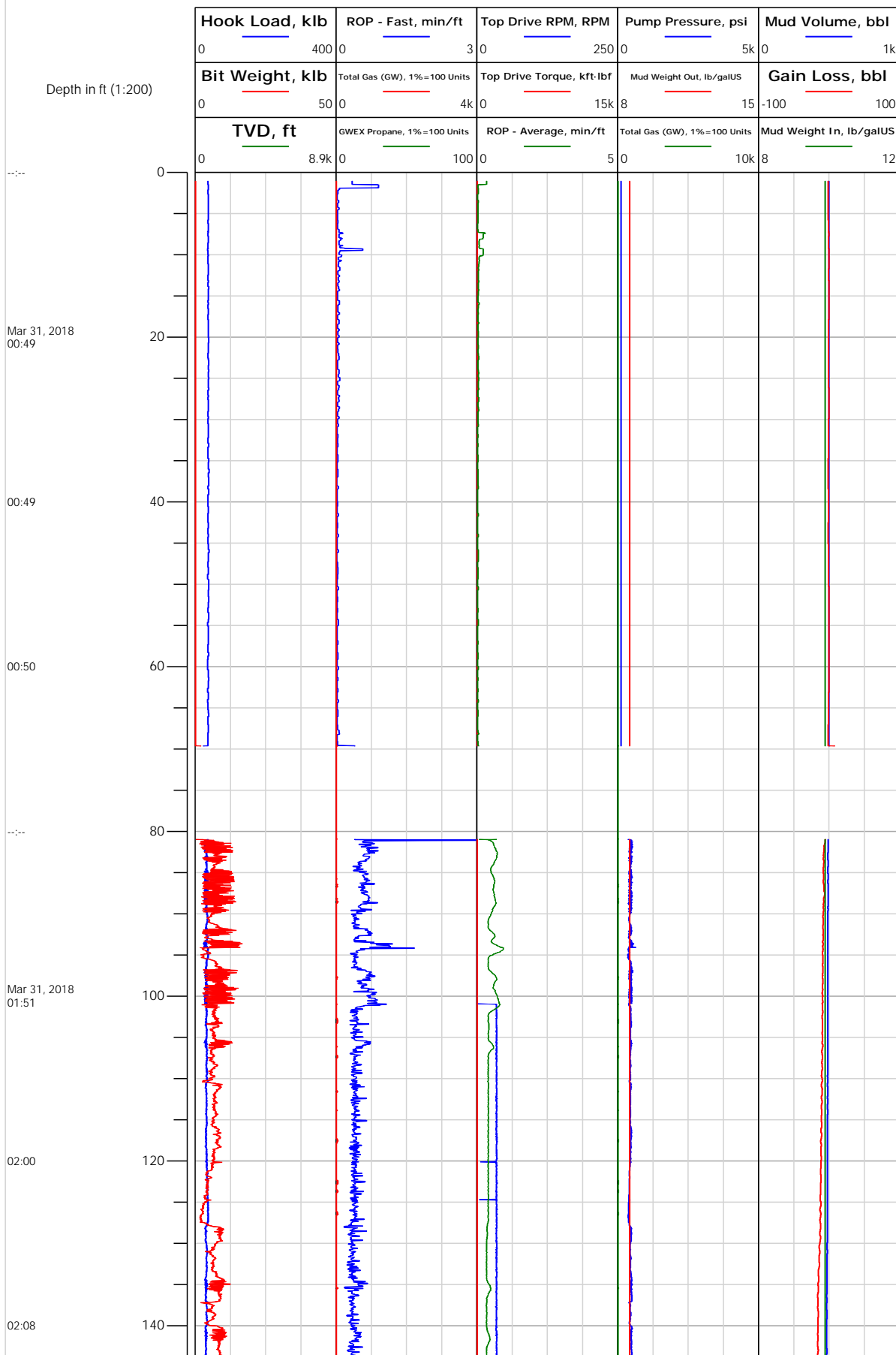
Electronic Drilling Recorder

Operator: Laramie Energy
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-15E
Rig: 290

Location: SE/4 of NW/4

Notes





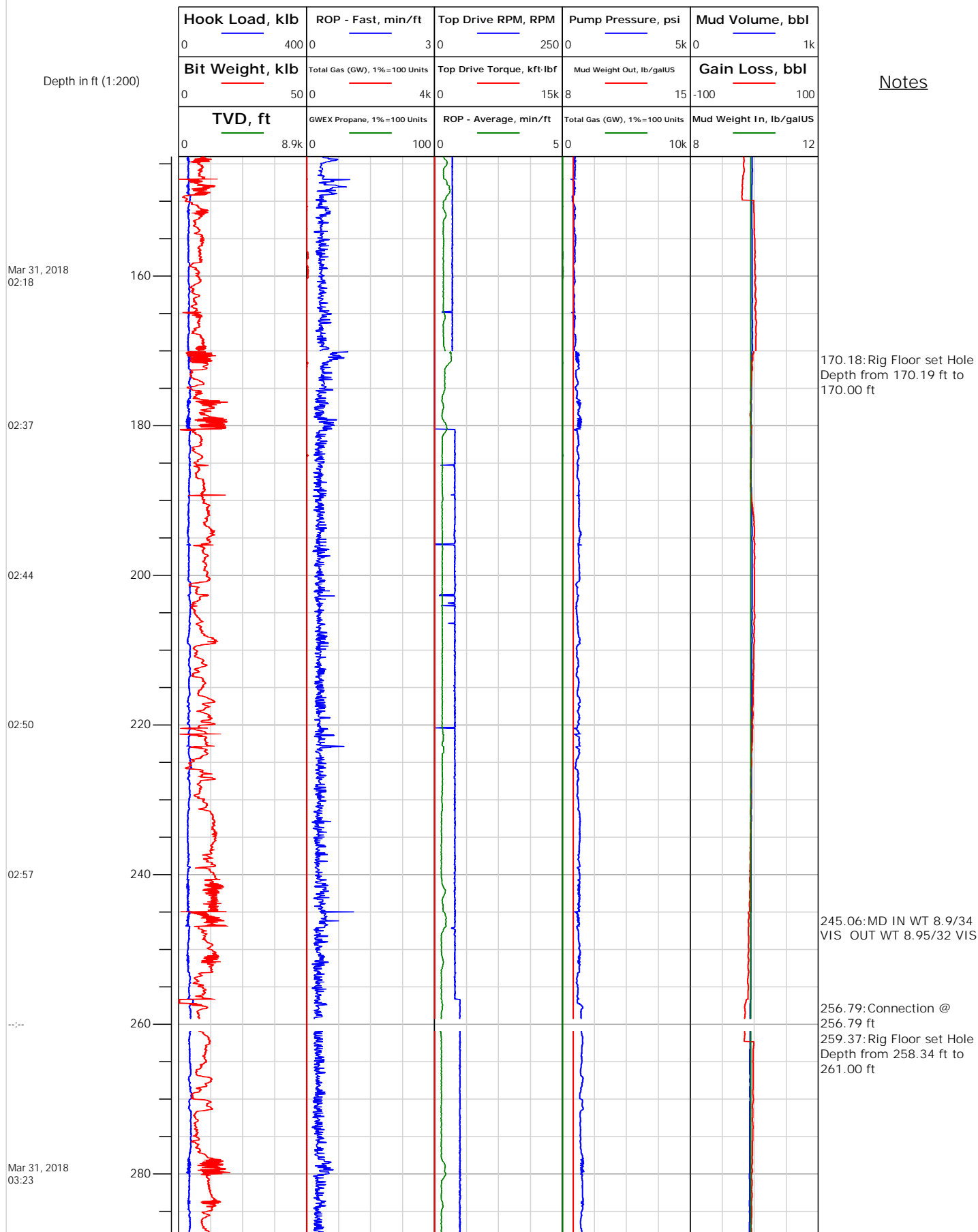
Electronic Drilling Recorder

Operator: Laramie Energy
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-15E
Rig: 290

Location: SE/4 of NW/4

Notes





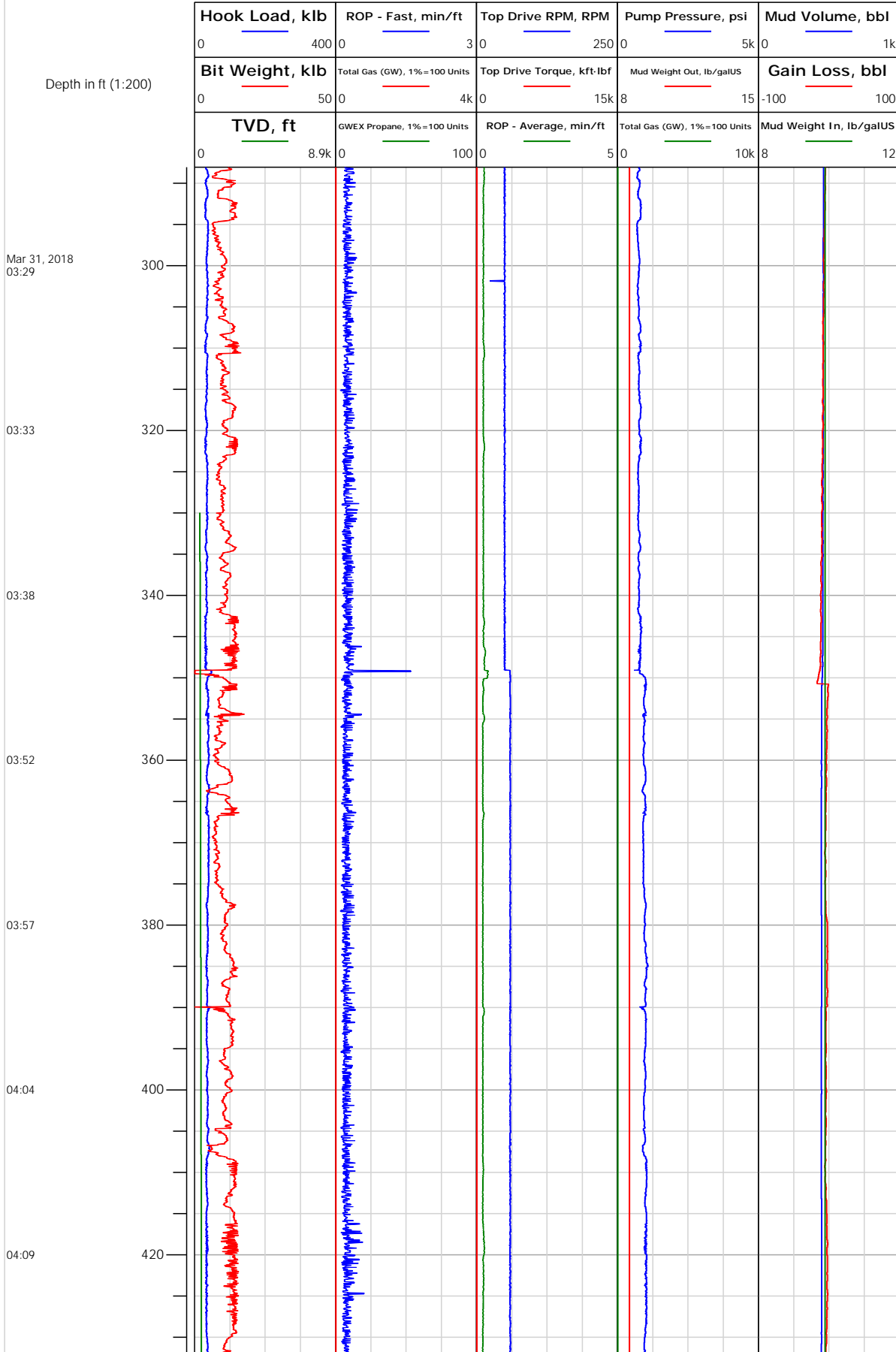
Electronic Drilling Recorder

Operator: Laramie Energy
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-15E
Rig: 290

Location: SE/4 of NW/4

Notes





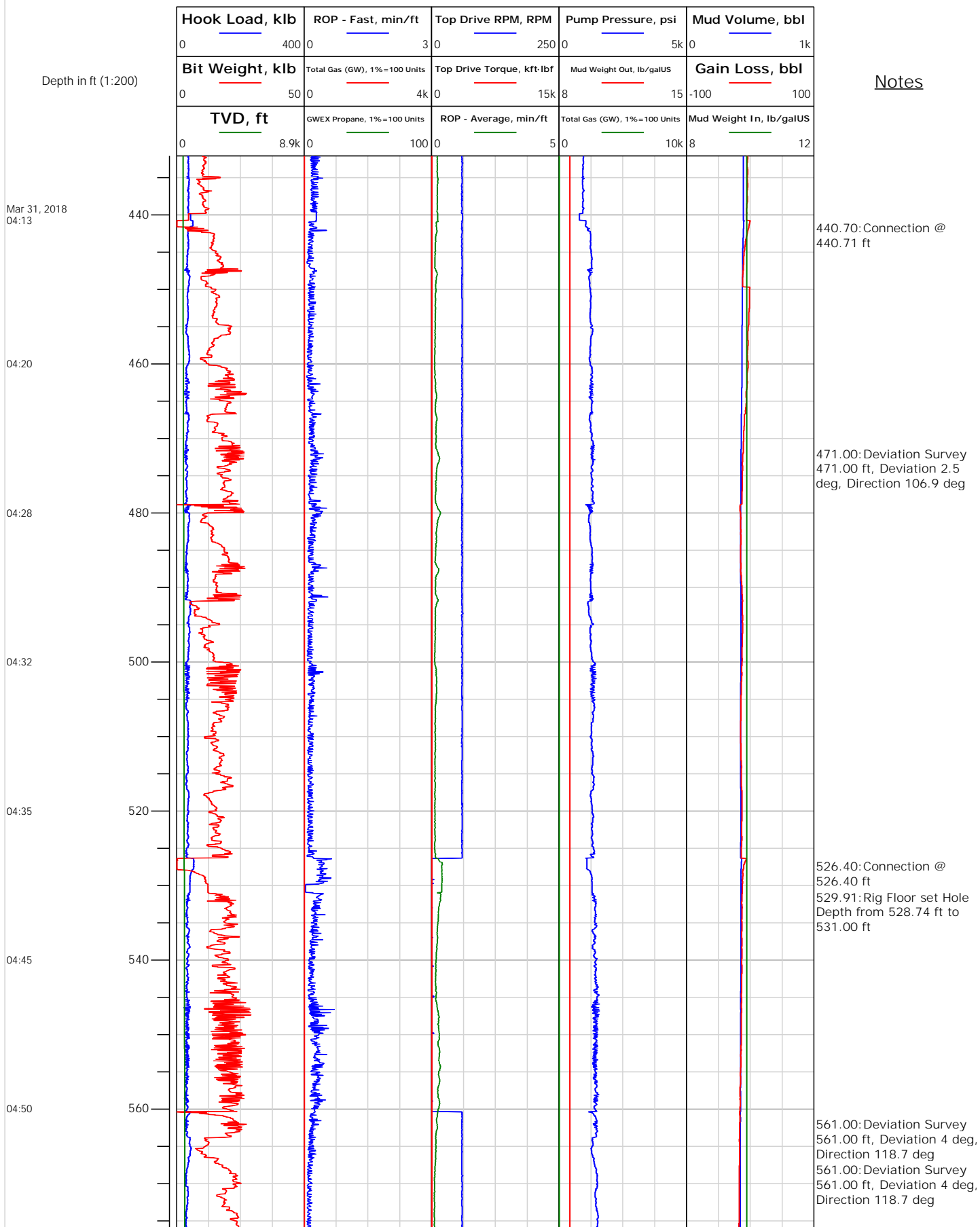
Electronic Drilling Recorder

Operator: Laramie Energy
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-15E
Rig: 290

Location: SE/4 of NW/4

Notes





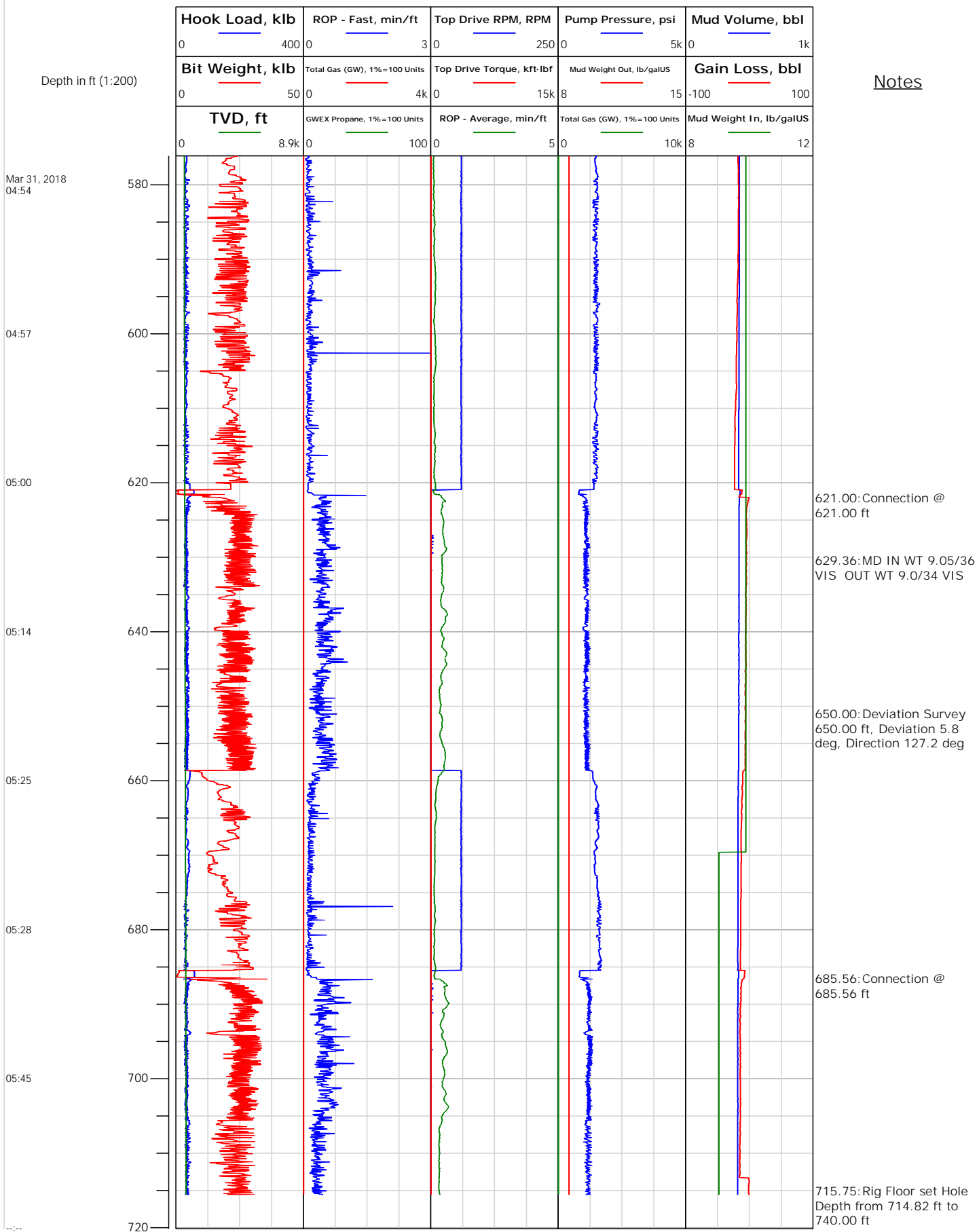
Electronic Drilling Recorder

Operator: Laramie Energy
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-15E
Rig: 290

Location: SE/4 of NW/4

Notes





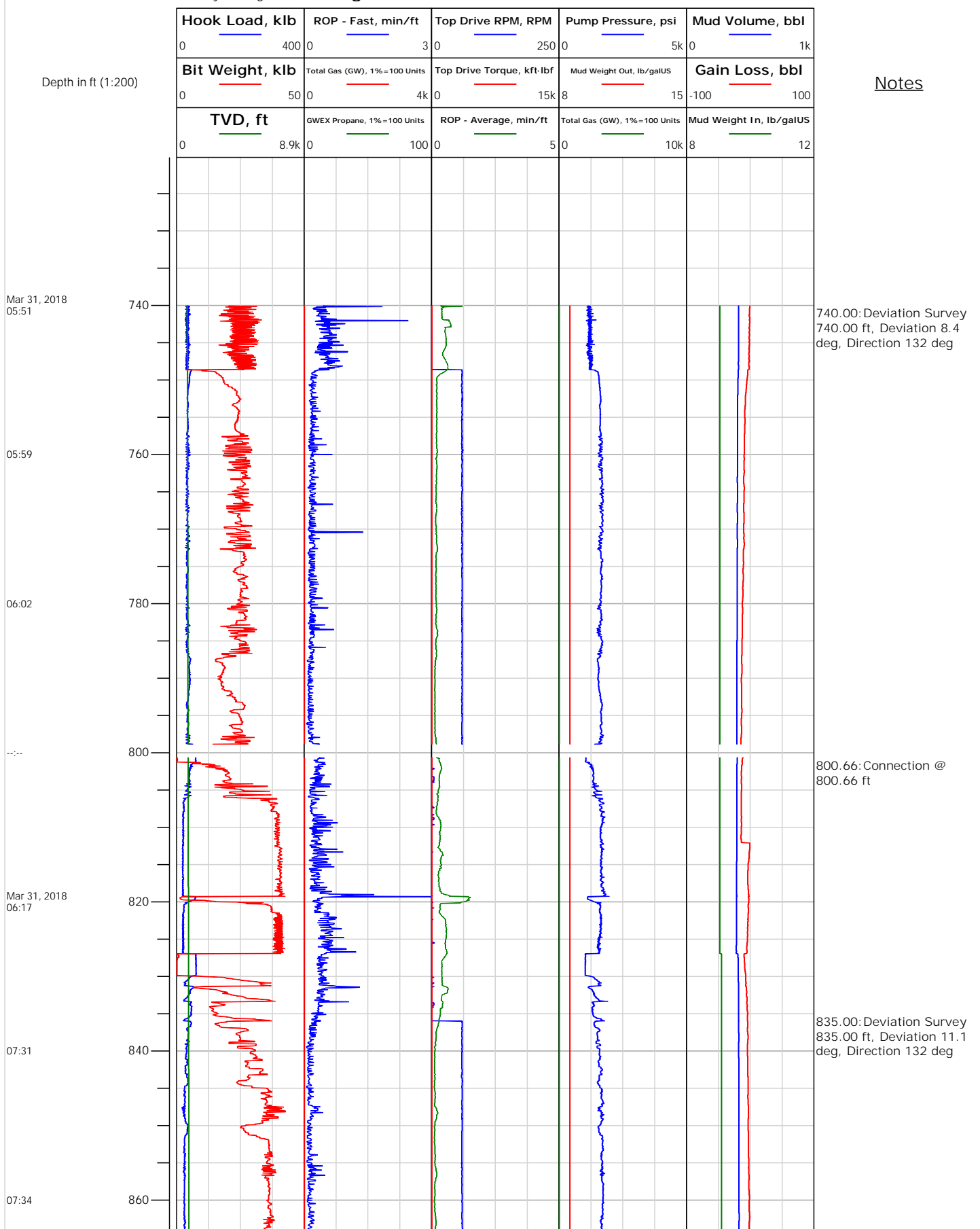
Electronic Drilling Recorder

Operator: Laramie Energy
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-15E
Rig: 290

Location: SE/4 of NW/4

Notes





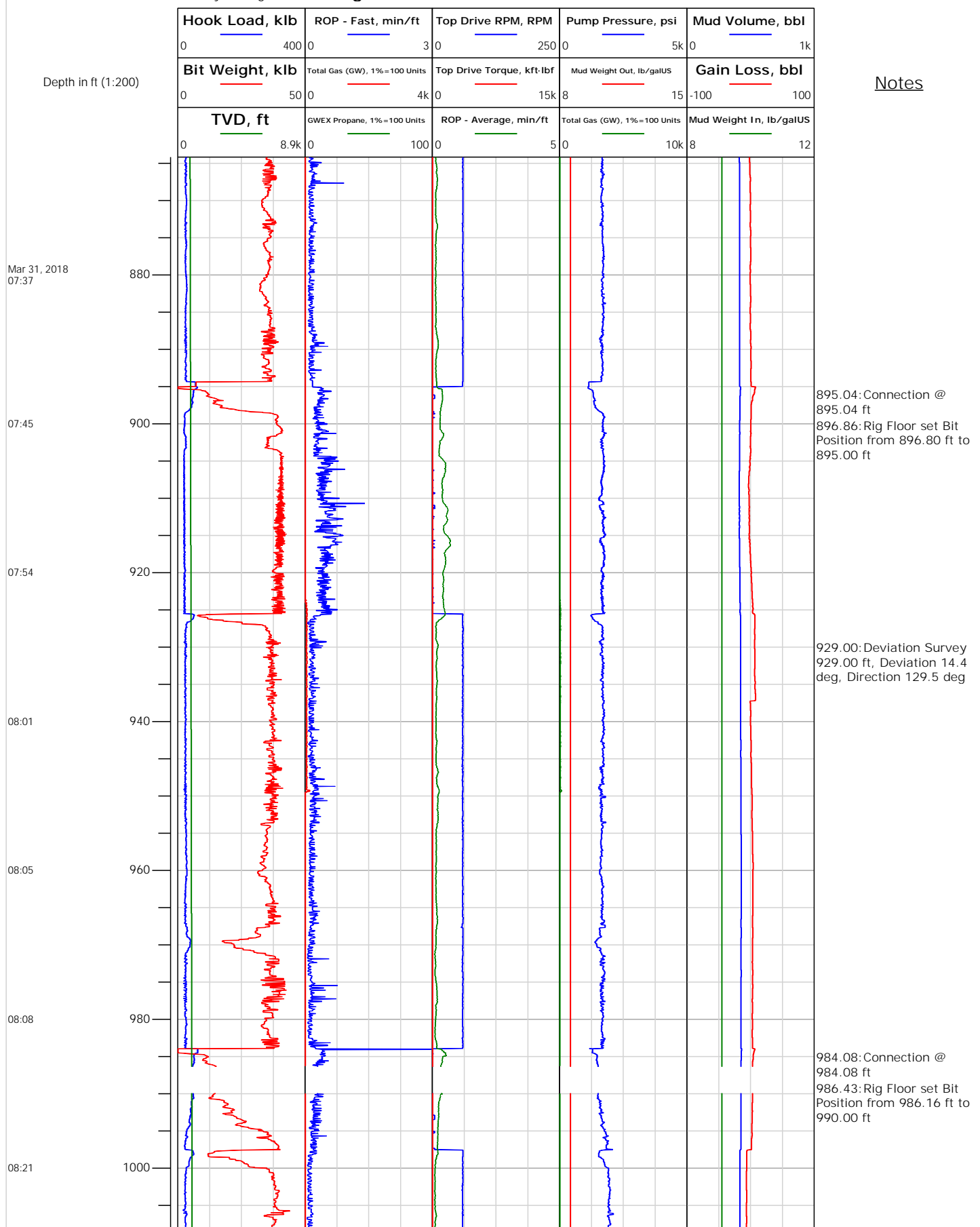
Electronic Drilling Recorder

Operator: Laramie Energy
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-15E
Rig: 290

Location: SE/4 of NW/4

Notes





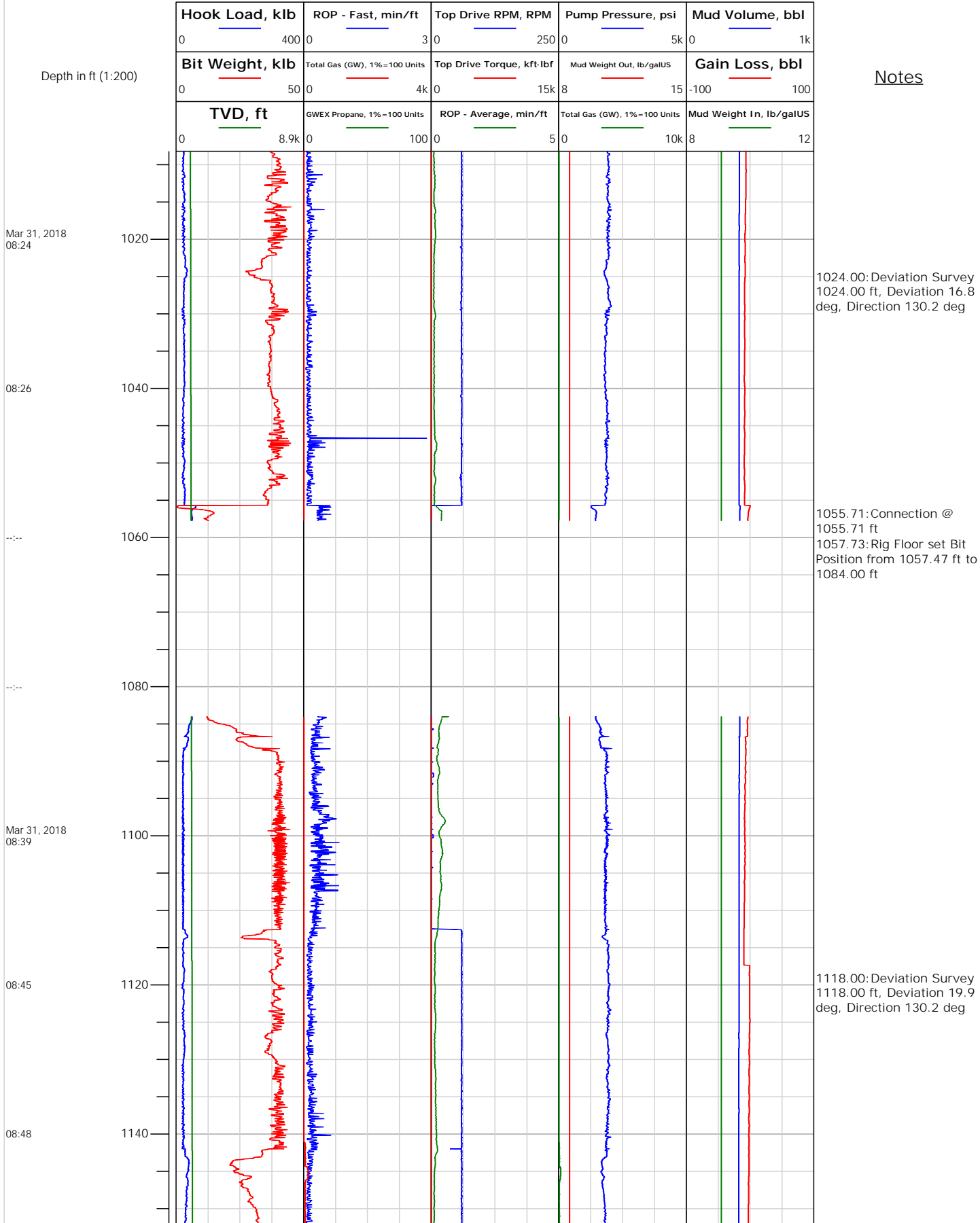
Electronic Drilling Recorder

Operator: Laramie Energy
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-15E
Rig: 290

Location: SE/4 of NW/4

Notes





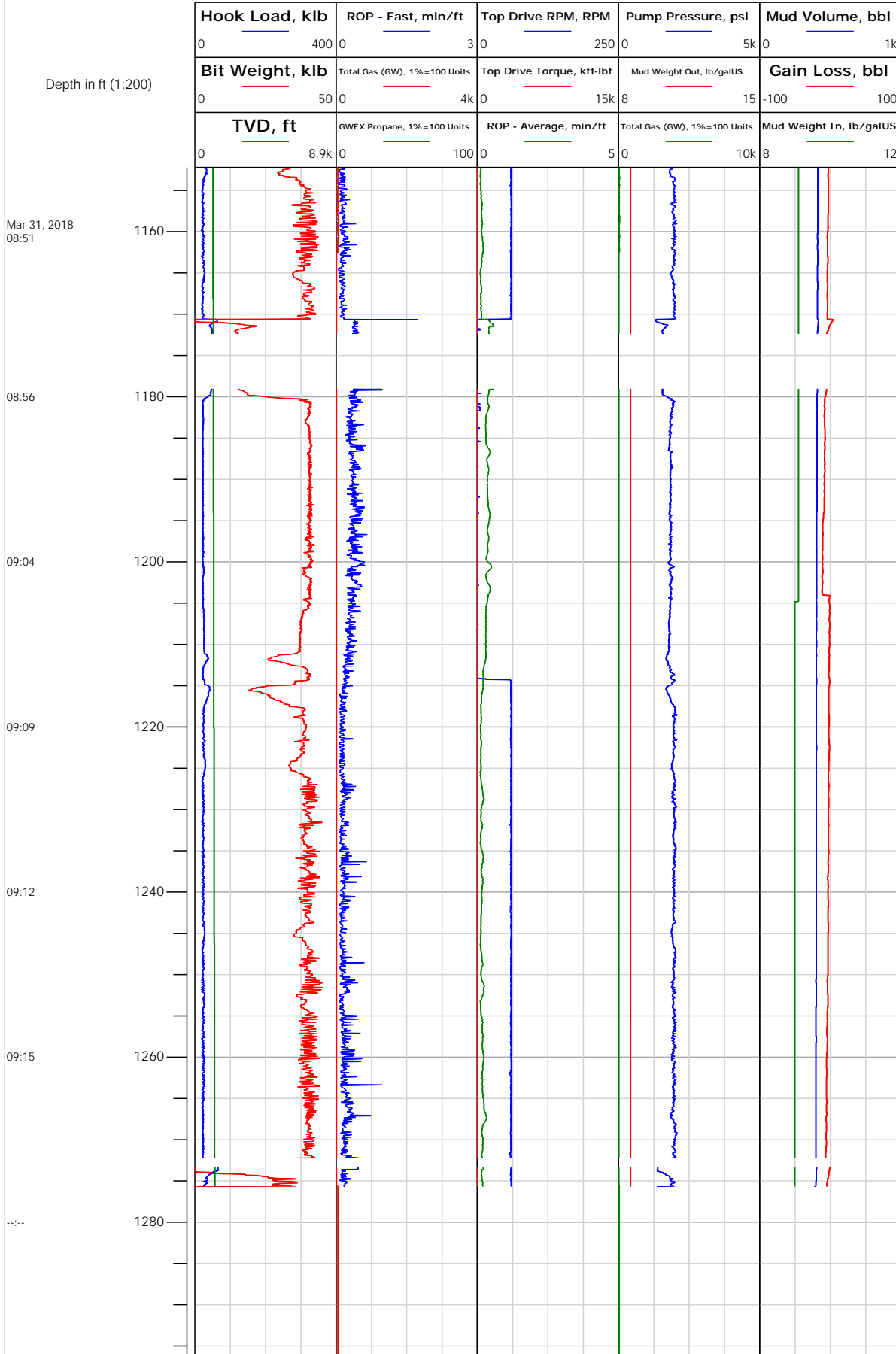
Electronic Drilling Recorder

Operator: Laramie Energy
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-15E
Rig: 290

Location: SE/4 of NW/4

Notes





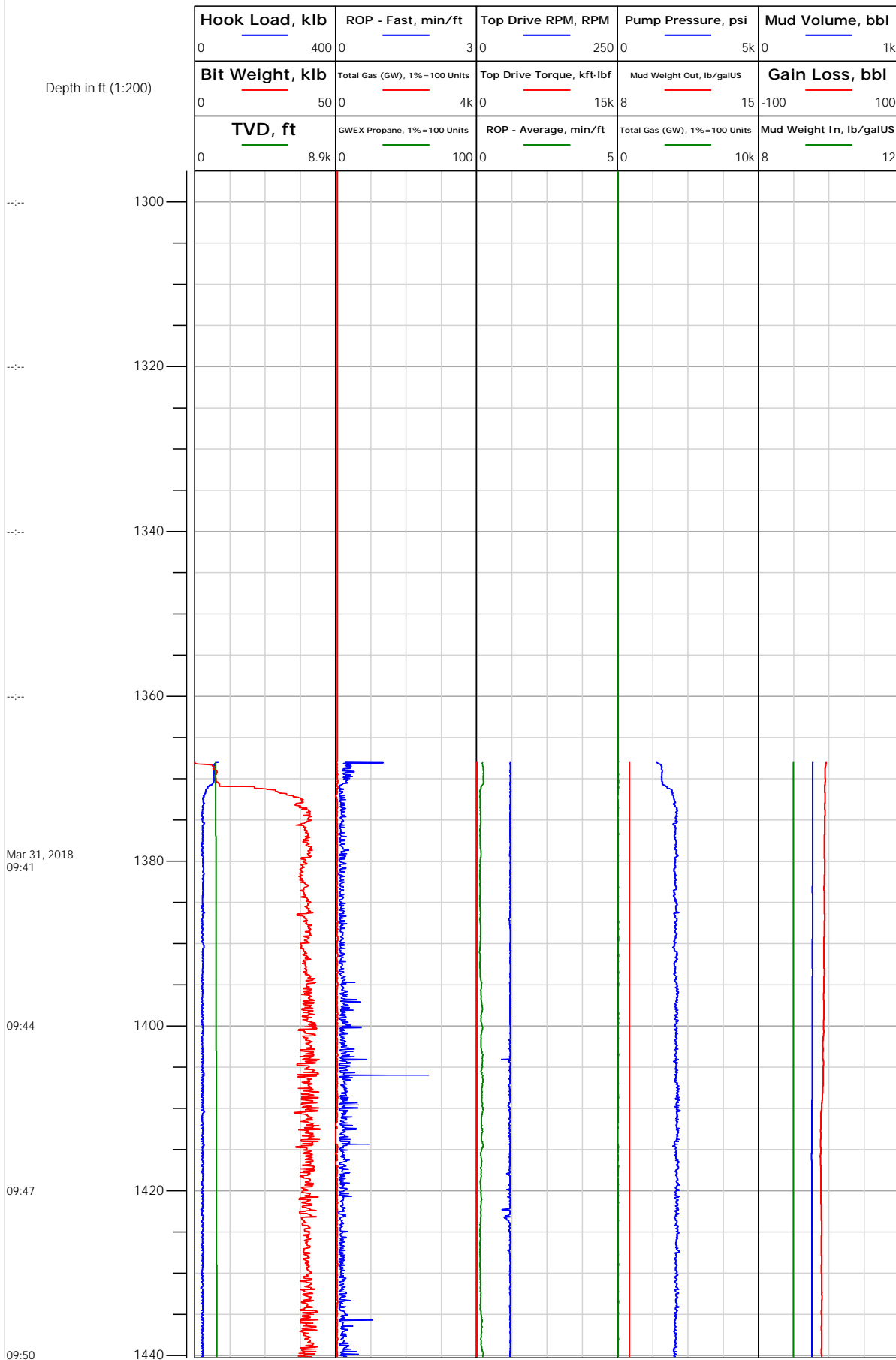
Electronic Drilling Recorder

Operator: Laramie Energy
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-15E
Rig: 290

Location: SE/4 of NW/4

Notes





Electronic Drilling Recorder

Operator: Laramie Energy
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-15E
Rig: 290

Location: SE/4 of NW/4

Notes

Depth in ft (1:200)

Mar 31, 2018
09:53

10:04

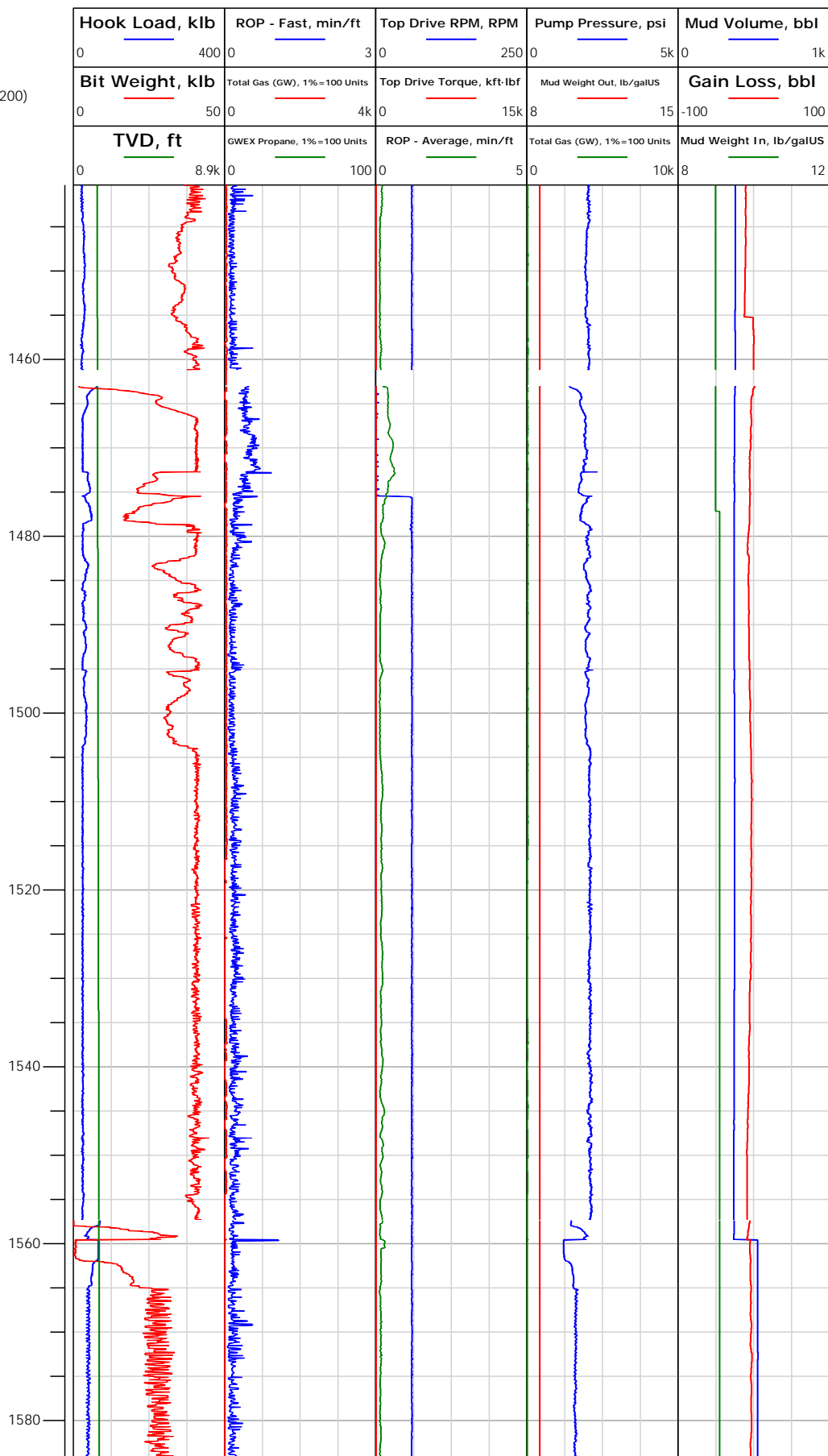
10:07

10:10

10:14

Apr 1, 2018
05:59

06:02



1462.95: Connection @
1462.95 ft

1497.00: Deviation Survey
1497.00 ft, Deviation 23.6
deg, Direction 127.3 deg

1557.44: Connection @
1557.44 ft
1559.67: Rig Floor set Bit
Position from 1474.36 ft to
1456.00 ft
1559.67: Rig Floor set Bit
Position from 1549.32 ft to
1551.00 ft
1559.67: Rig Floor set Bit
Position from 1549.09 ft to
76.00 ft
1559.67: Rig Floor set Bit
Position from 1559.68 ft to
1557.00 ft
1559.67: Rig Floor set Bit
Position from 83.62 ft to
449.00 ft
1559.68: Connection @
1559.68 ft



Electronic Drilling Recorder

Operator: Laramie Energy
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-15E
Rig: 290

Location: SE/4 of NW/4

Notes

Depth in ft (1:200)

Apr 1, 2018
06:05

06:08

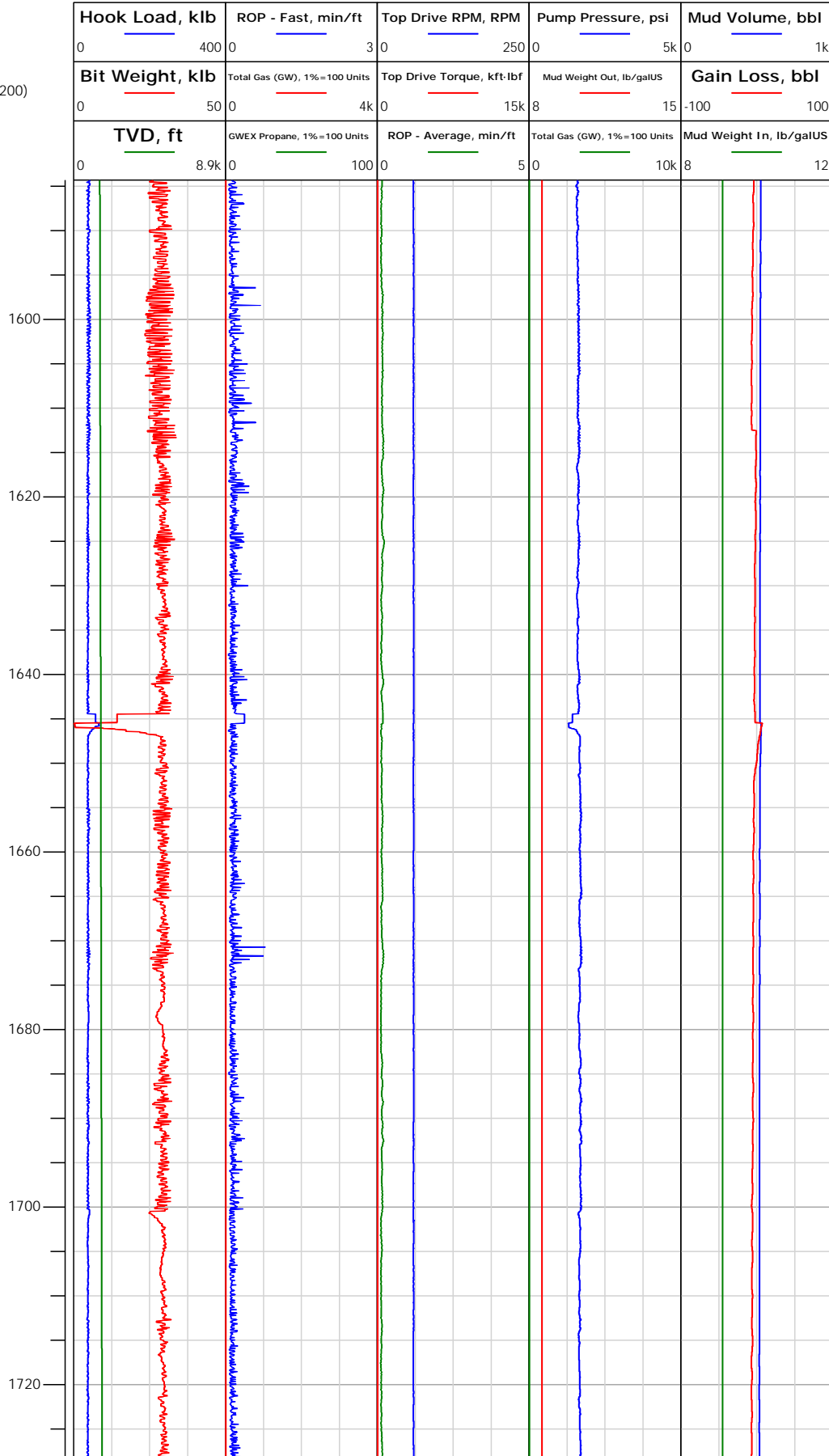
06:11

06:17

06:20

06:23

06:25



1589.00: Deviation Survey
1589.00 ft, Deviation 23
deg, Direction 125.7 deg

1645.52: Connection @
1645.52 ft

1683.00: Deviation Survey
1683.00 ft, Deviation 22.8
deg, Direction 124.5 deg



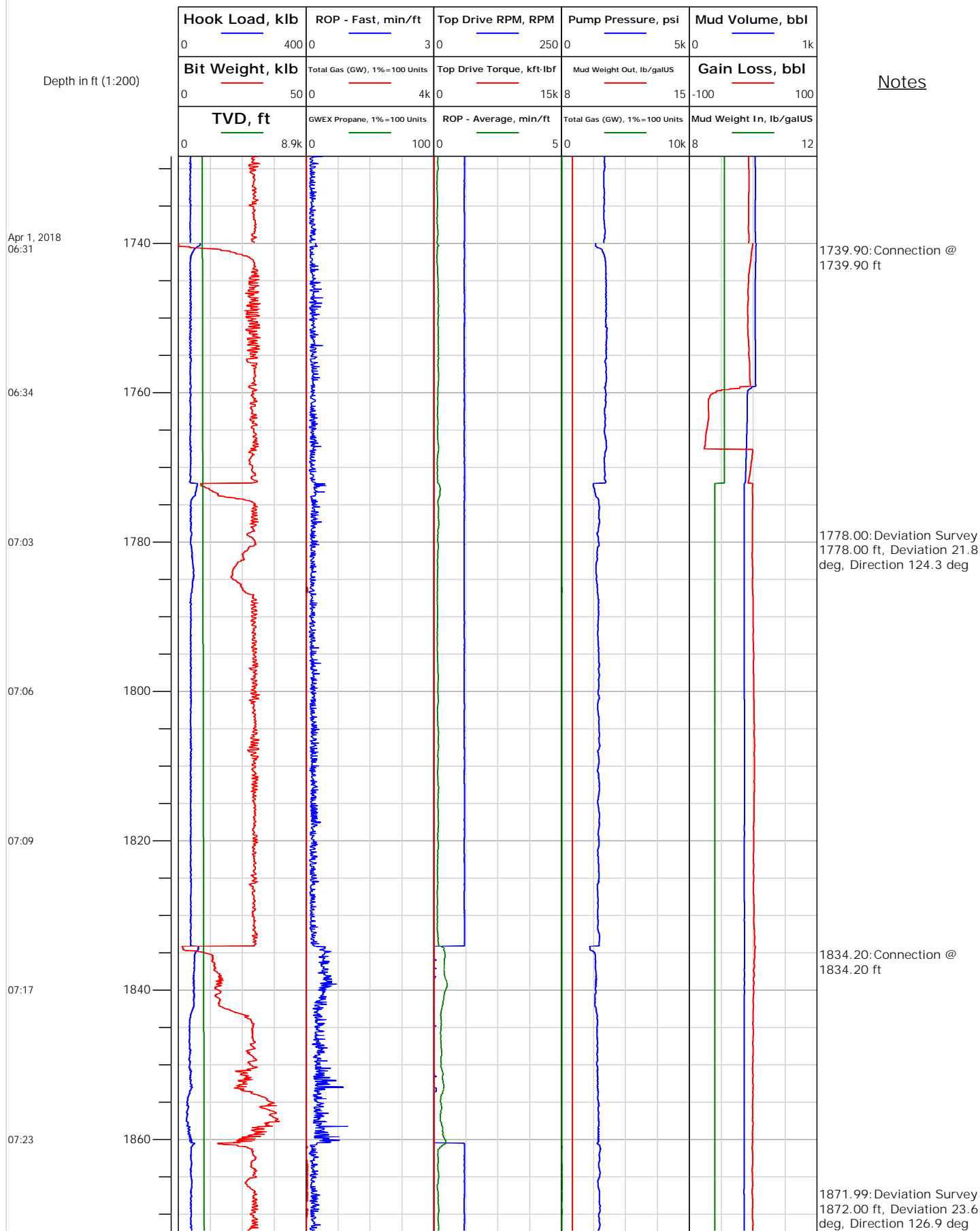
Electronic Drilling Recorder

Operator: Laramie Energy
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-15E
Rig: 290

Location: SE/4 of NW/4

Notes





Electronic Drilling Recorder

Operator: Laramie Energy
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-15E
Rig: 290

Location: SE/4 of NW/4

Notes

Depth in ft (1:200)

Apr 1, 2018
07:29

07:32

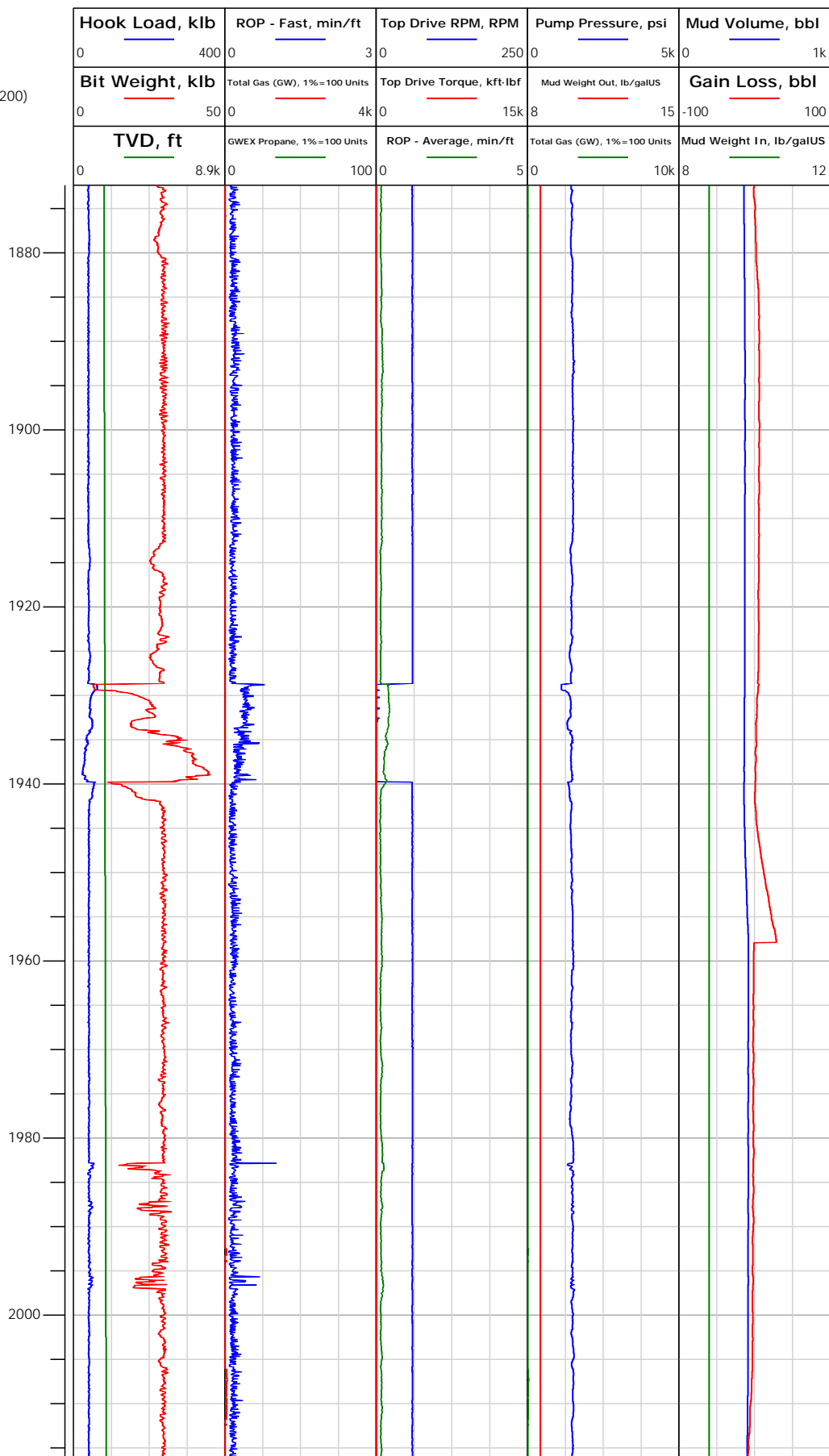
07:35

07:45

07:48

07:51

07:55



1928.73: Connection @
1928.73 ft

1967.00: Deviation Survey
1967.00 ft, Deviation 23.5
deg, Direction 131.3 deg



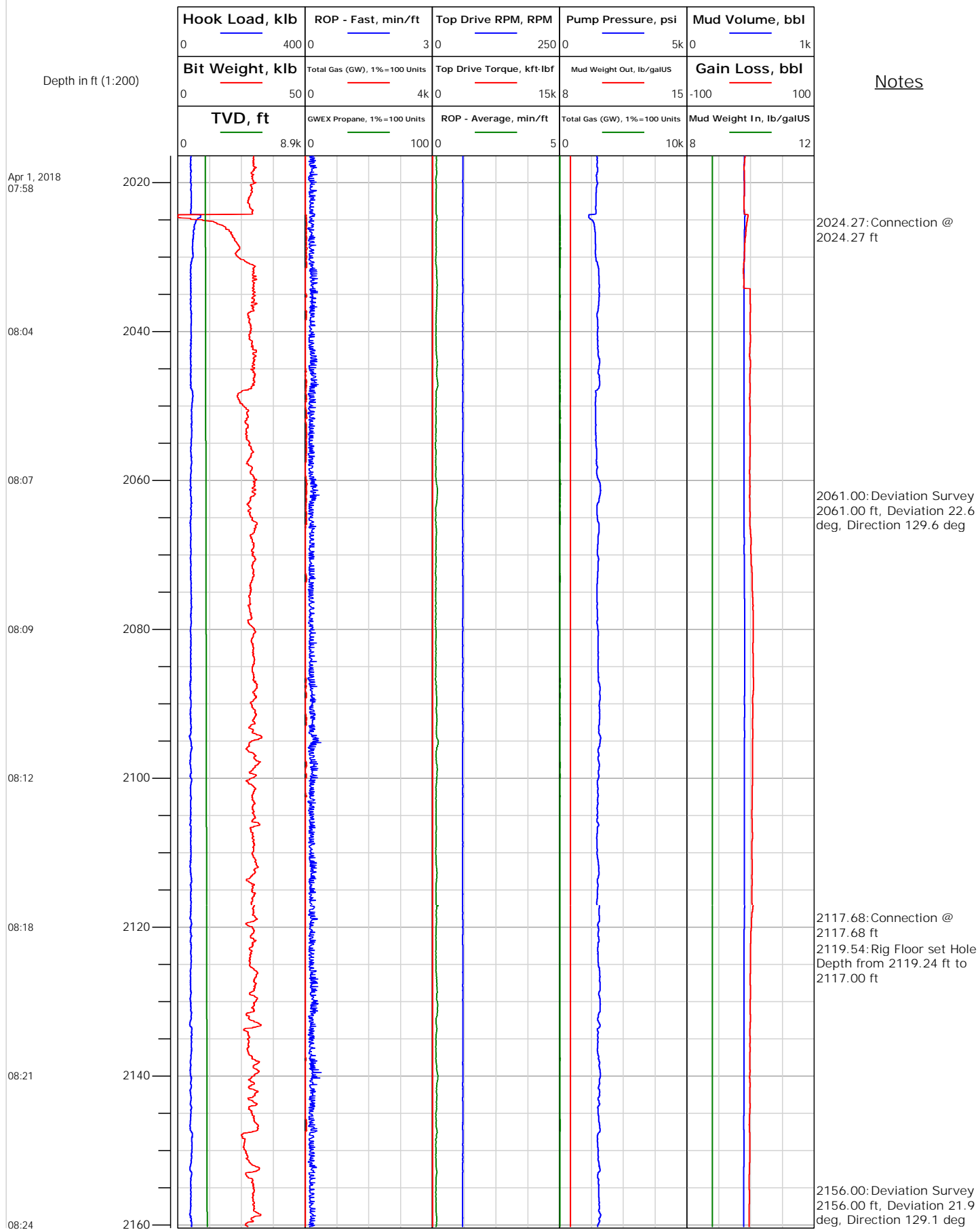
Electronic Drilling Recorder

Operator: Laramie Energy
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-15E
Rig: 290

Location: SE/4 of NW/4

Notes





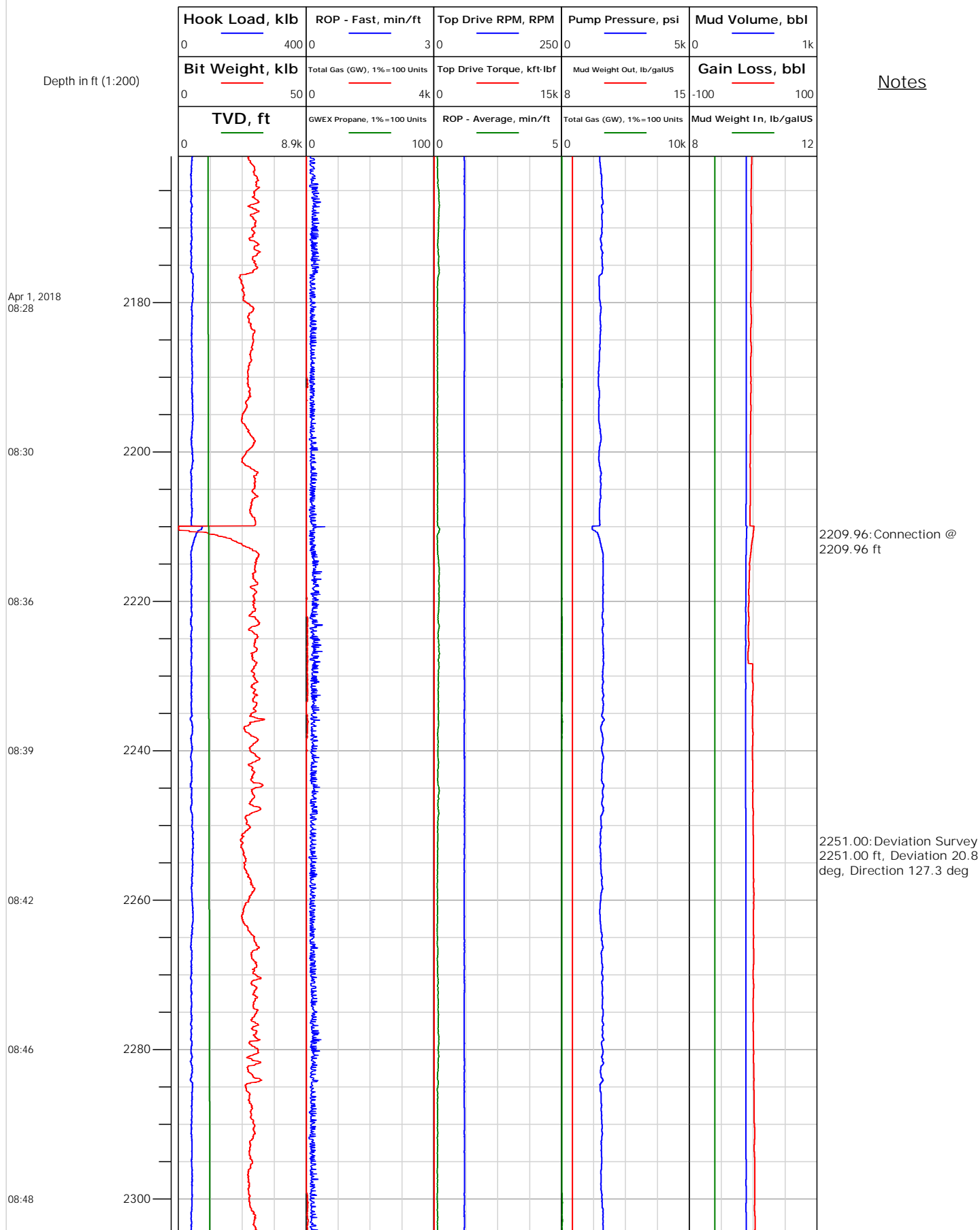
Electronic Drilling Recorder

Operator: Laramie Energy
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-15E
Rig: 290

Location: SE/4 of NW/4

Notes





Electronic Drilling Recorder

Operator: Laramie Energy
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-15E
Rig: 290

Location: SE/4 of NW/4

Notes

Depth in ft (1:200)

Apr 1, 2018
08:56

09:03

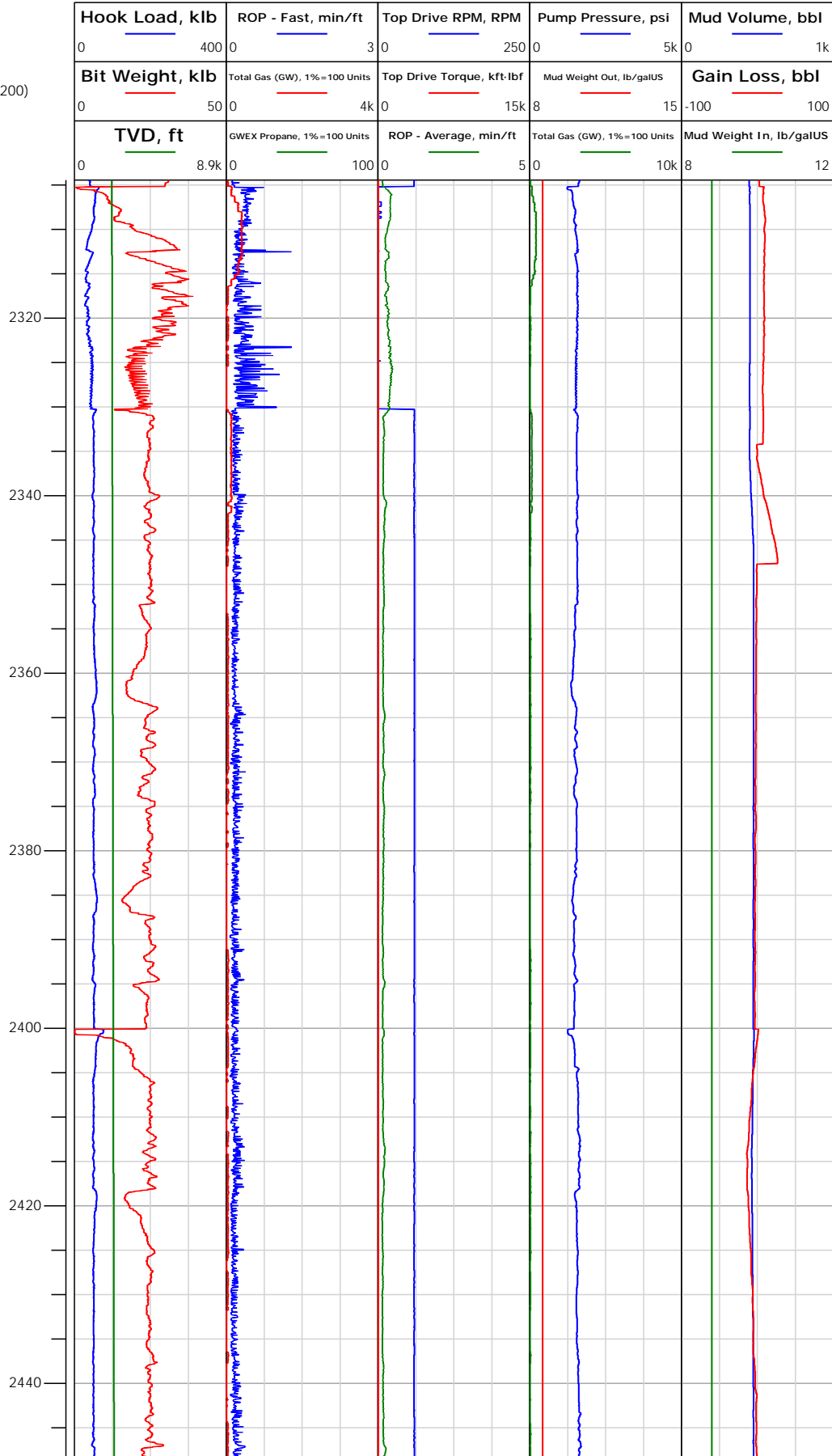
09:07

09:11

09:14

09:19

09:22



2305.15: Connection @
2305.16 ft

2345.00: Deviation Survey
2345.00 ft, Deviation 22.4
deg, Direction 131.4 deg

2400.19: Connection @
2400.19 ft

2439.00: Deviation Survey
2439.00 ft, Deviation 21.5
deg, Direction 130.6 deg



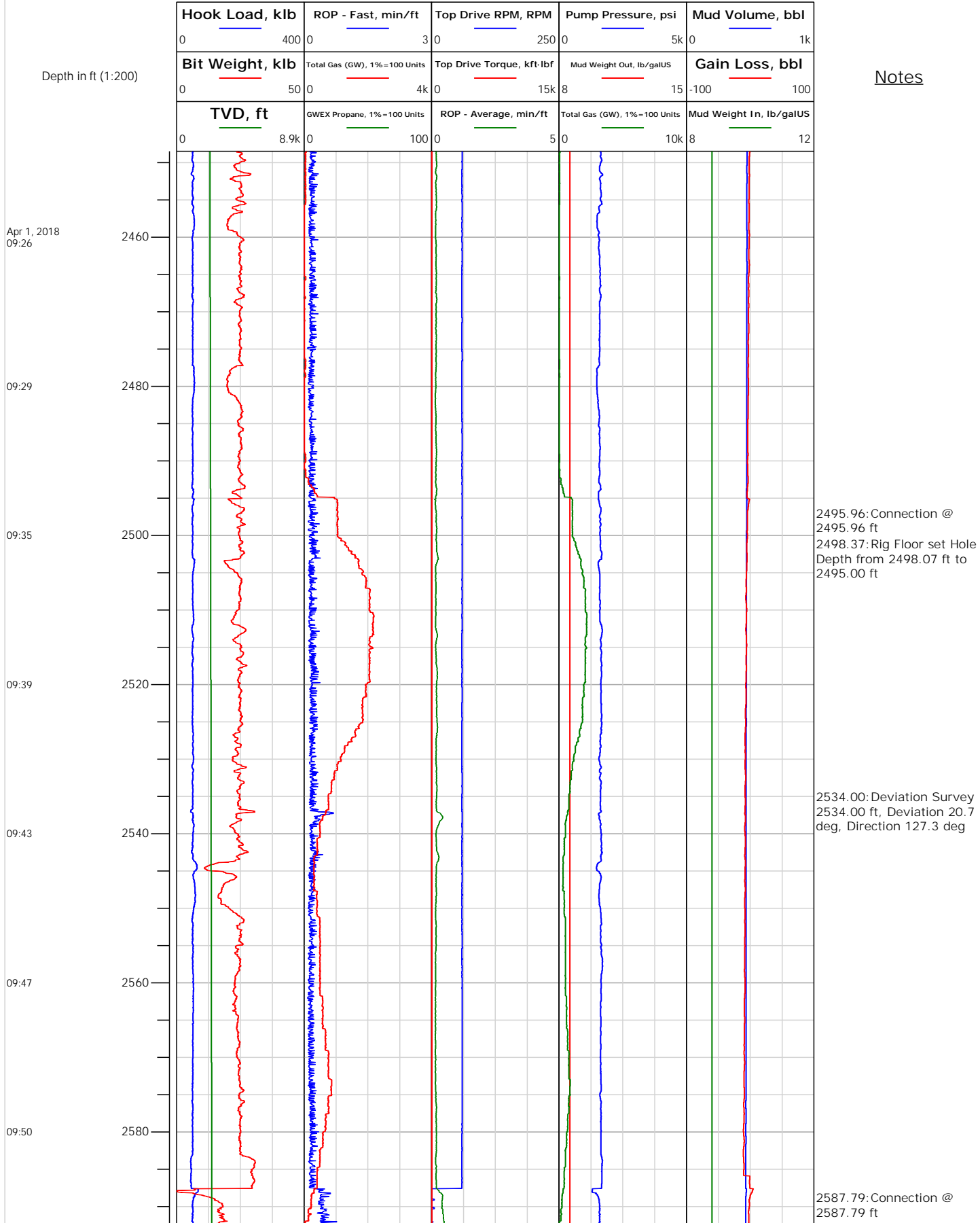
Electronic Drilling Recorder

Operator: Laramie Energy
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-15E
Rig: 290

Location: SE/4 of NW/4

Notes





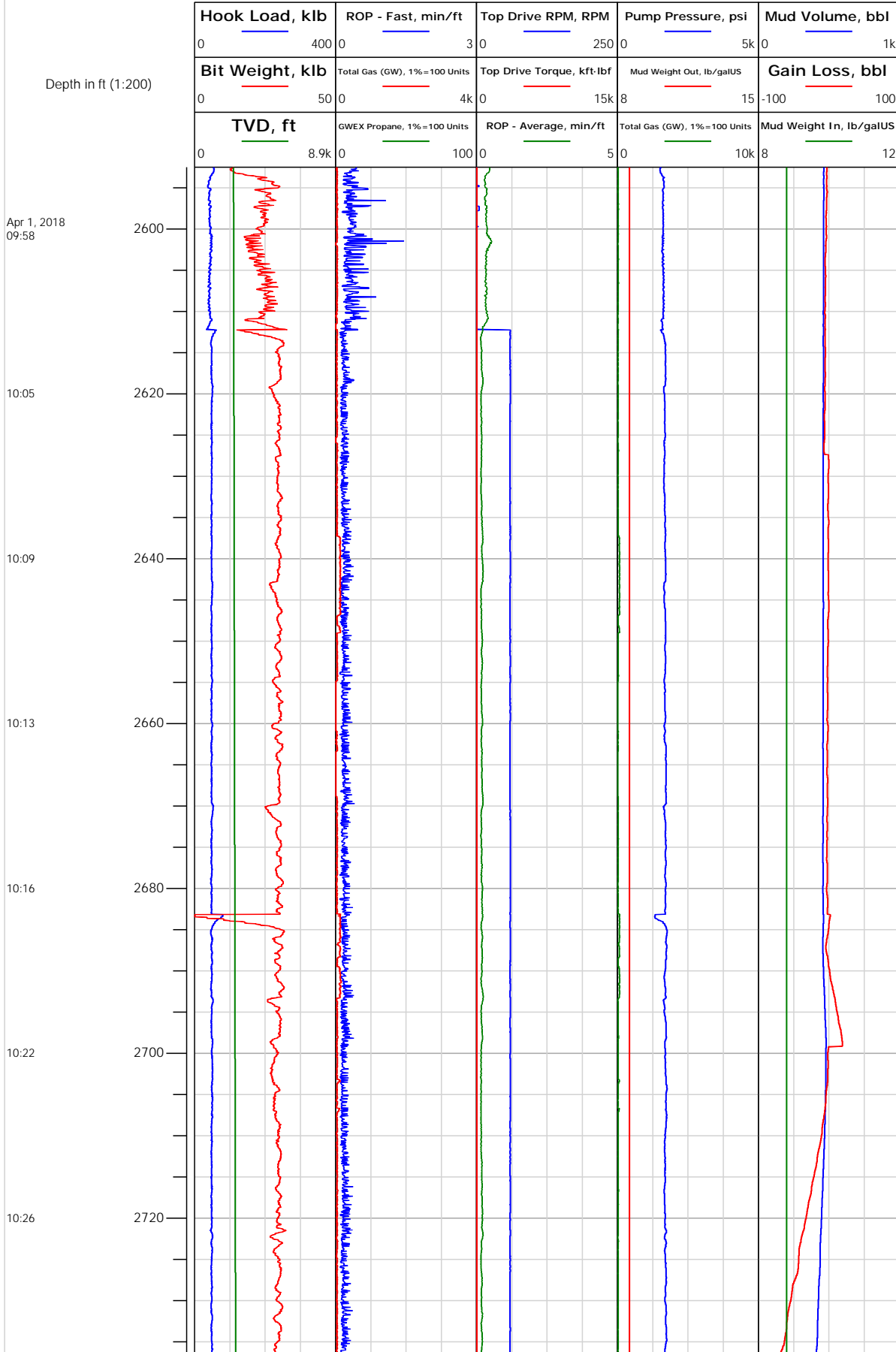
Electronic Drilling Recorder

Operator: Laramie Energy
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-15E
Rig: 290

Location: SE/4 of NW/4

Notes



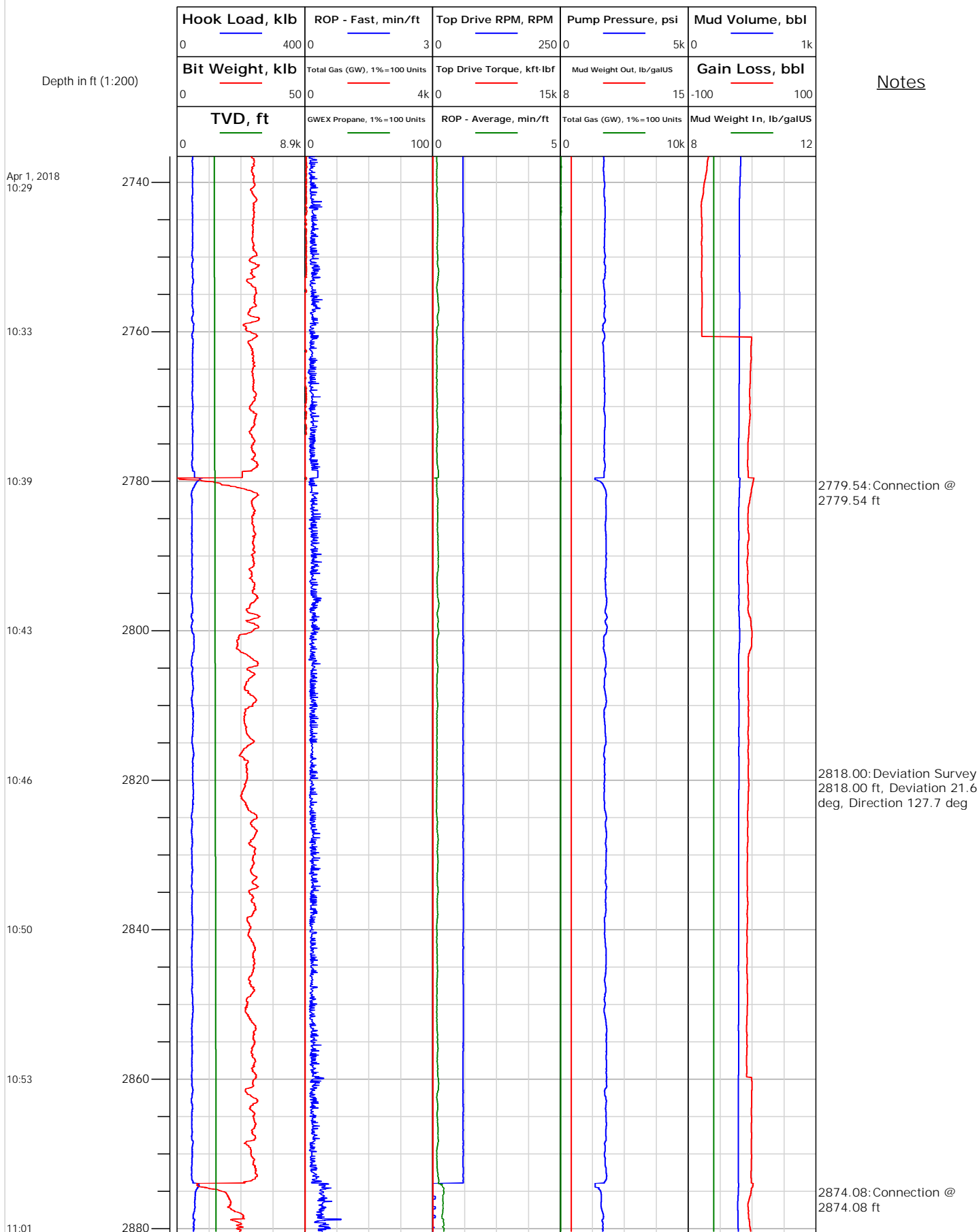


Electronic Drilling Recorder

Operator: Laramie Energy
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-15E
Rig: 290

Location: SE/4 of NW/4





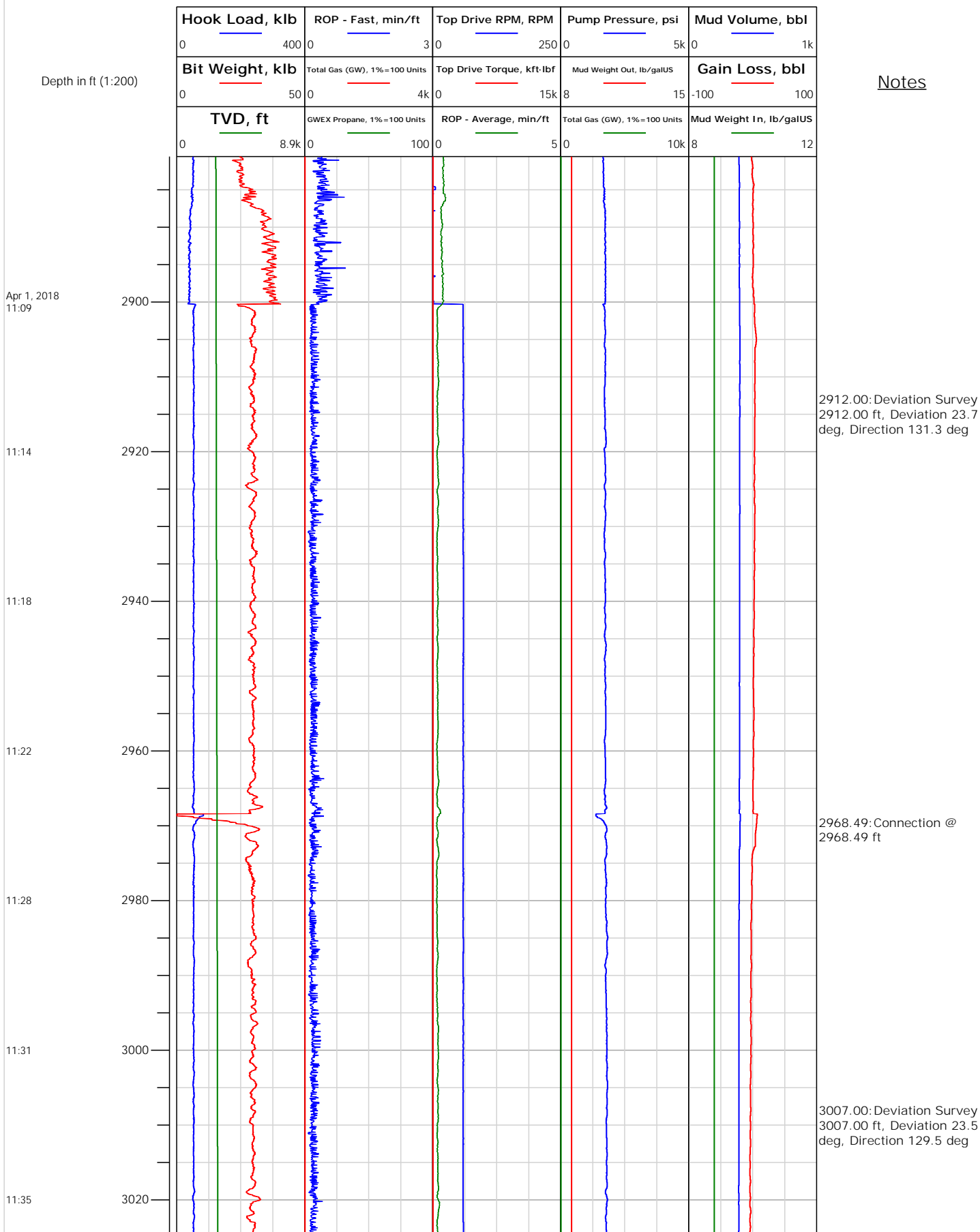
Electronic Drilling Recorder

Operator: Laramie Energy
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-15E
Rig: 290

Location: SE/4 of NW/4

Notes





Electronic Drilling Recorder

Operator: Laramie Energy
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-15E
Rig: 290

Location: SE/4 of NW/4

Notes

Depth in ft (1:200)

Apr 1, 2018
11:39

11:43

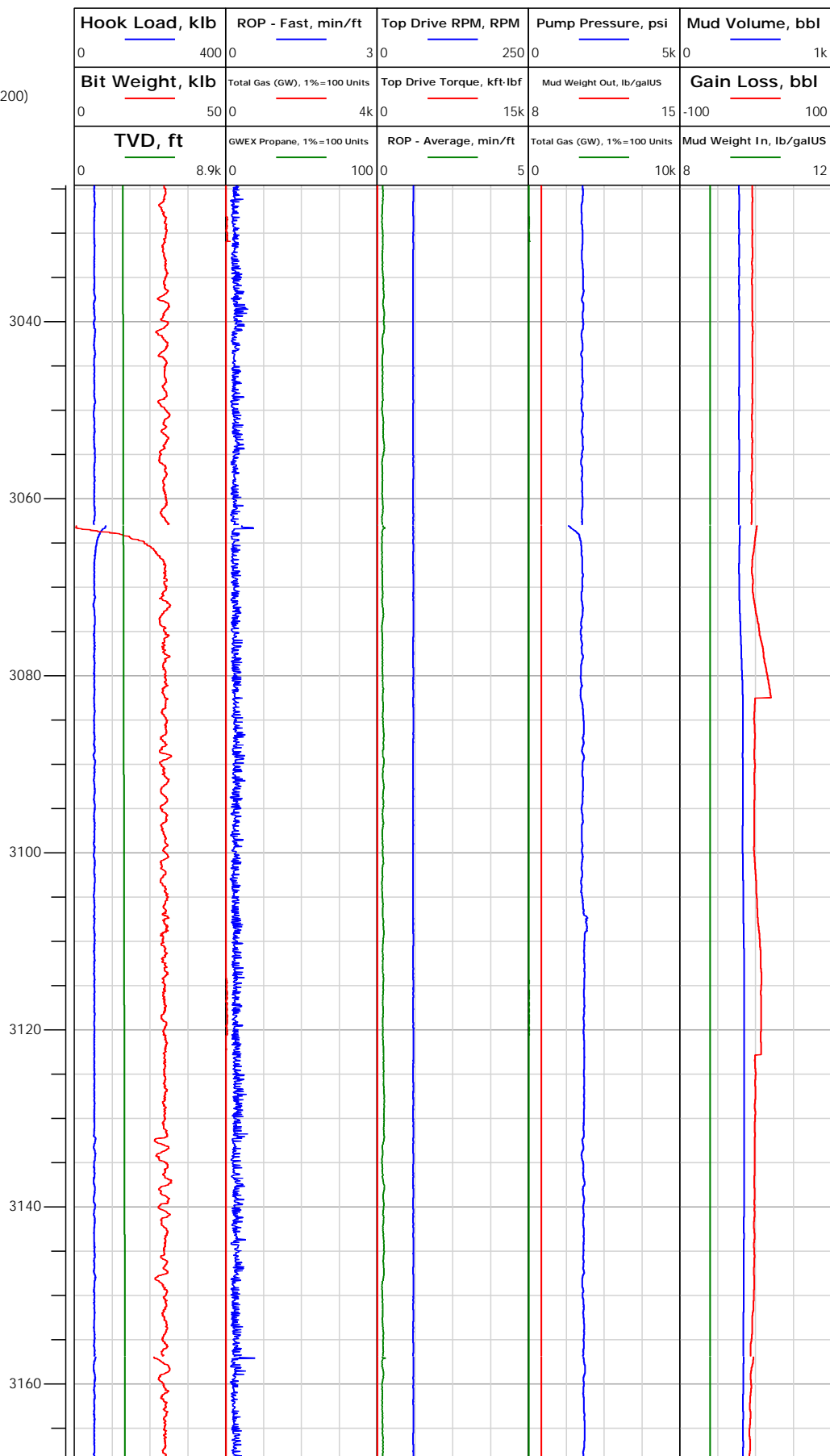
11:49

11:52

11:56

12:00

12:07





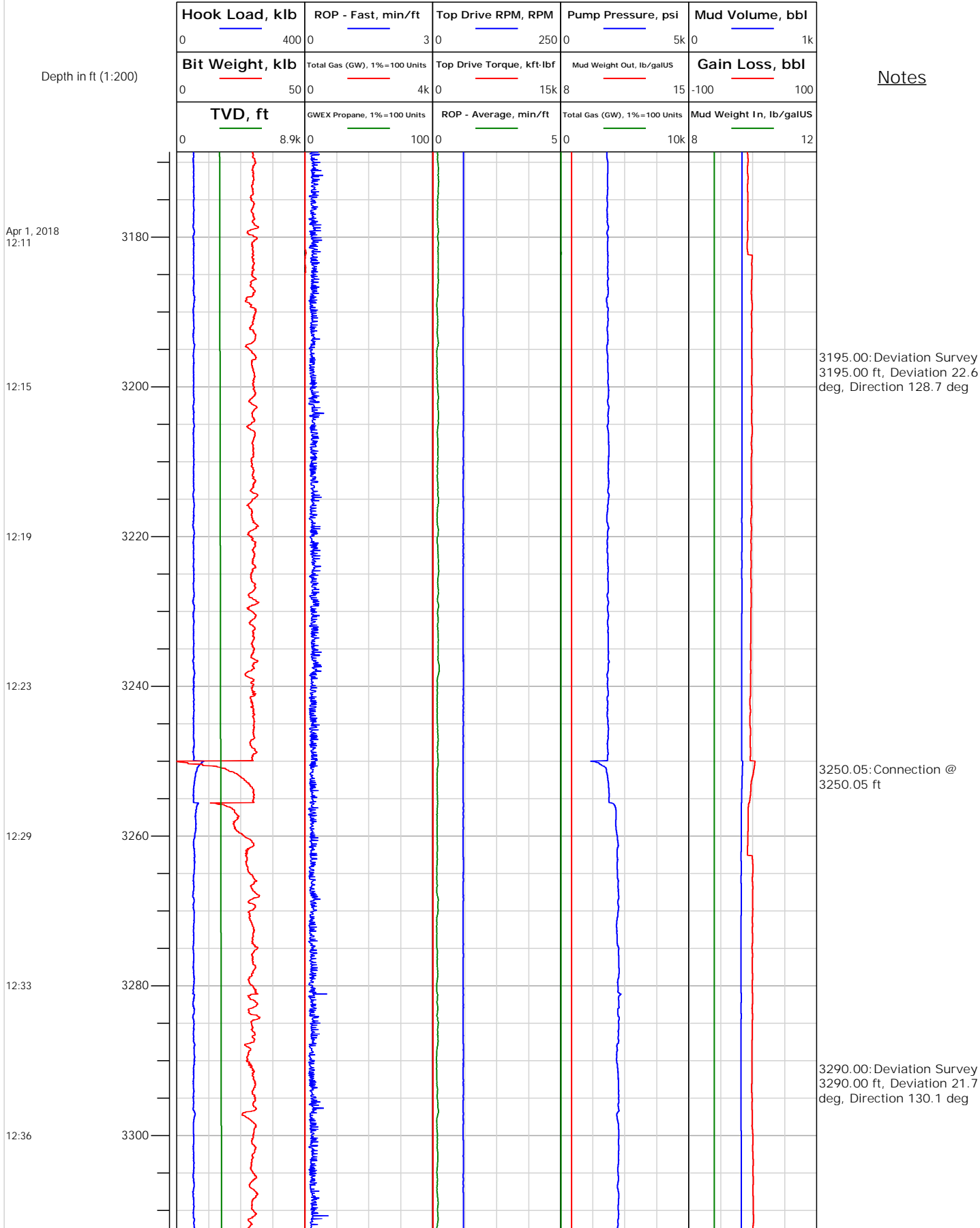
Electronic Drilling Recorder

Operator: Laramie Energy
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-15E
Rig: 290

Location: SE/4 of NW/4

Notes





Electronic Drilling Recorder

Operator: Laramie Energy
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-15E
Rig: 290

Location: SE/4 of NW/4

Notes

Depth in ft (1:200)

Apr 1, 2018
12:40

12:43

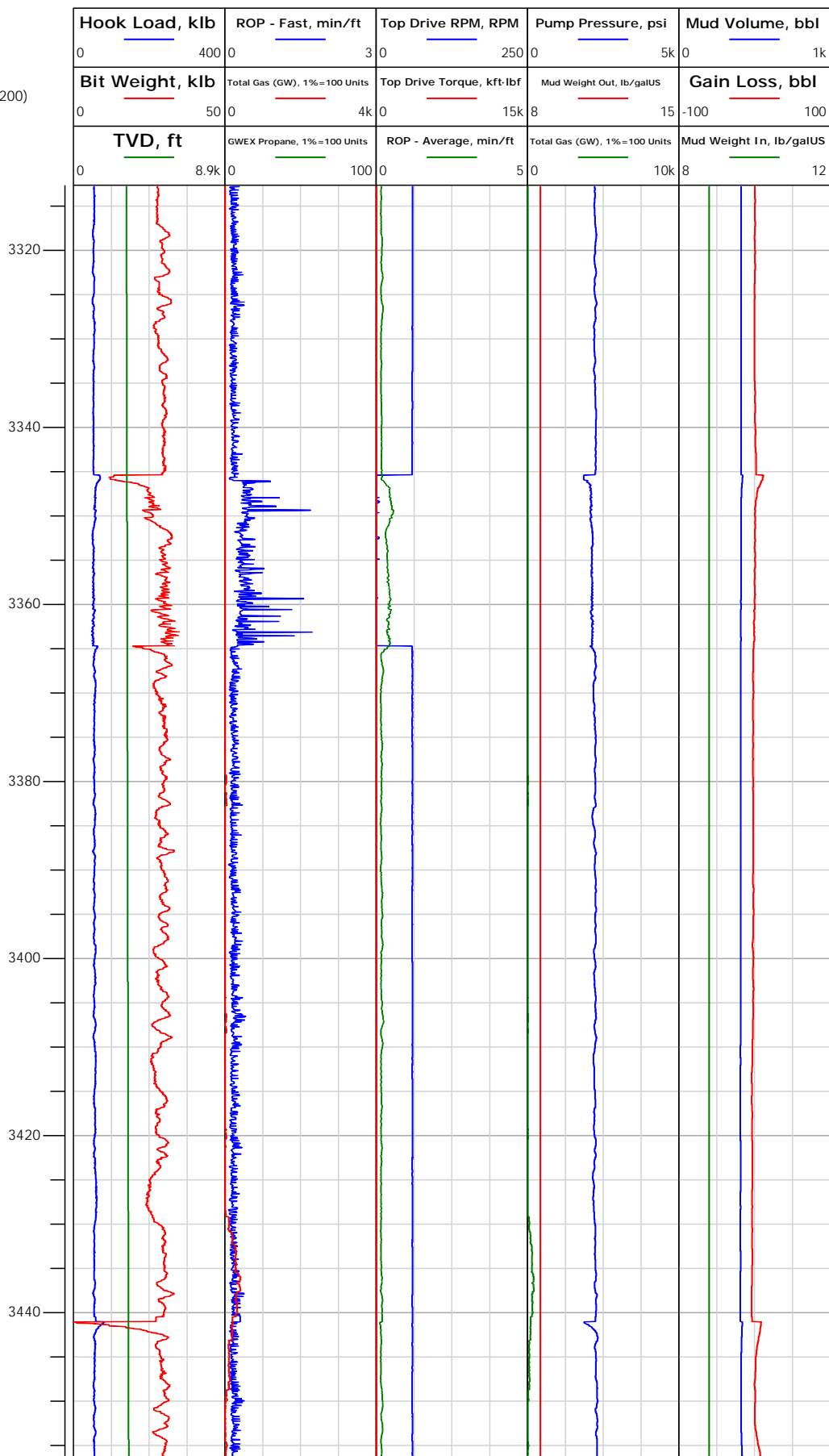
12:52

12:58

13:02

13:05

13:09



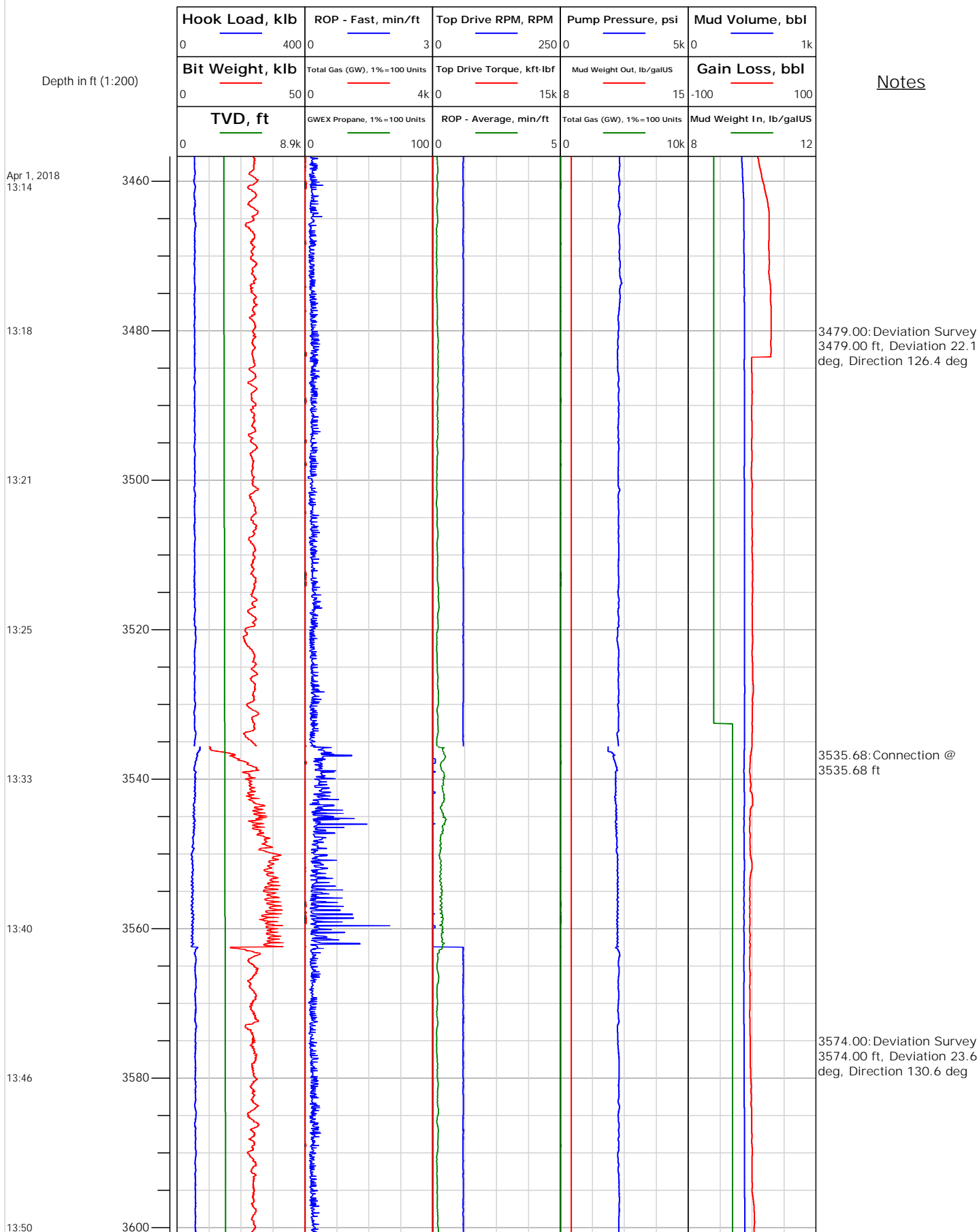


Electronic Drilling Recorder

Operator: Laramie Energy
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-15E
Rig: 290

Location: SE/4 of NW/4





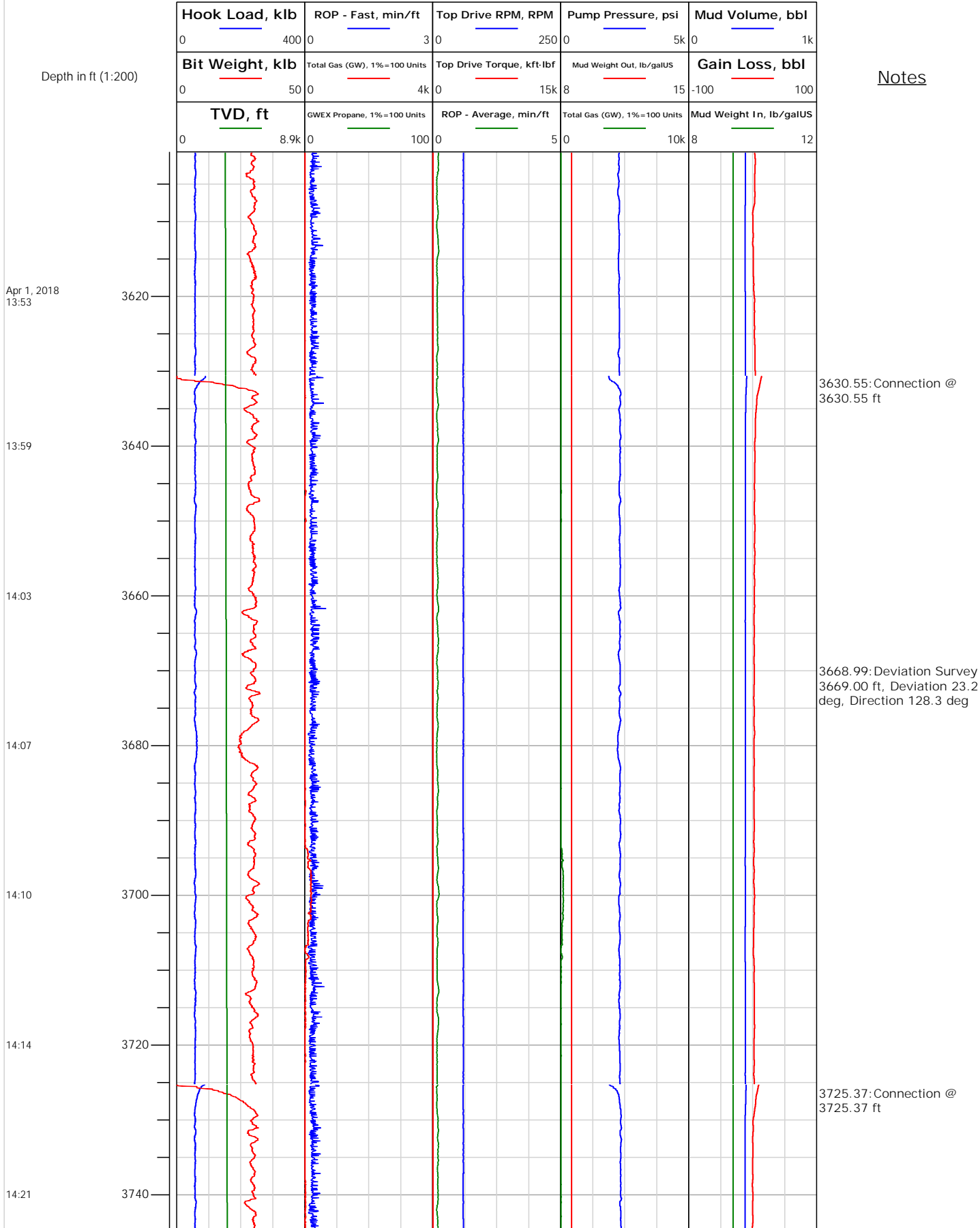
Electronic Drilling Recorder

Operator: Laramie Energy
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-15E
Rig: 290

Location: SE/4 of NW/4

Notes





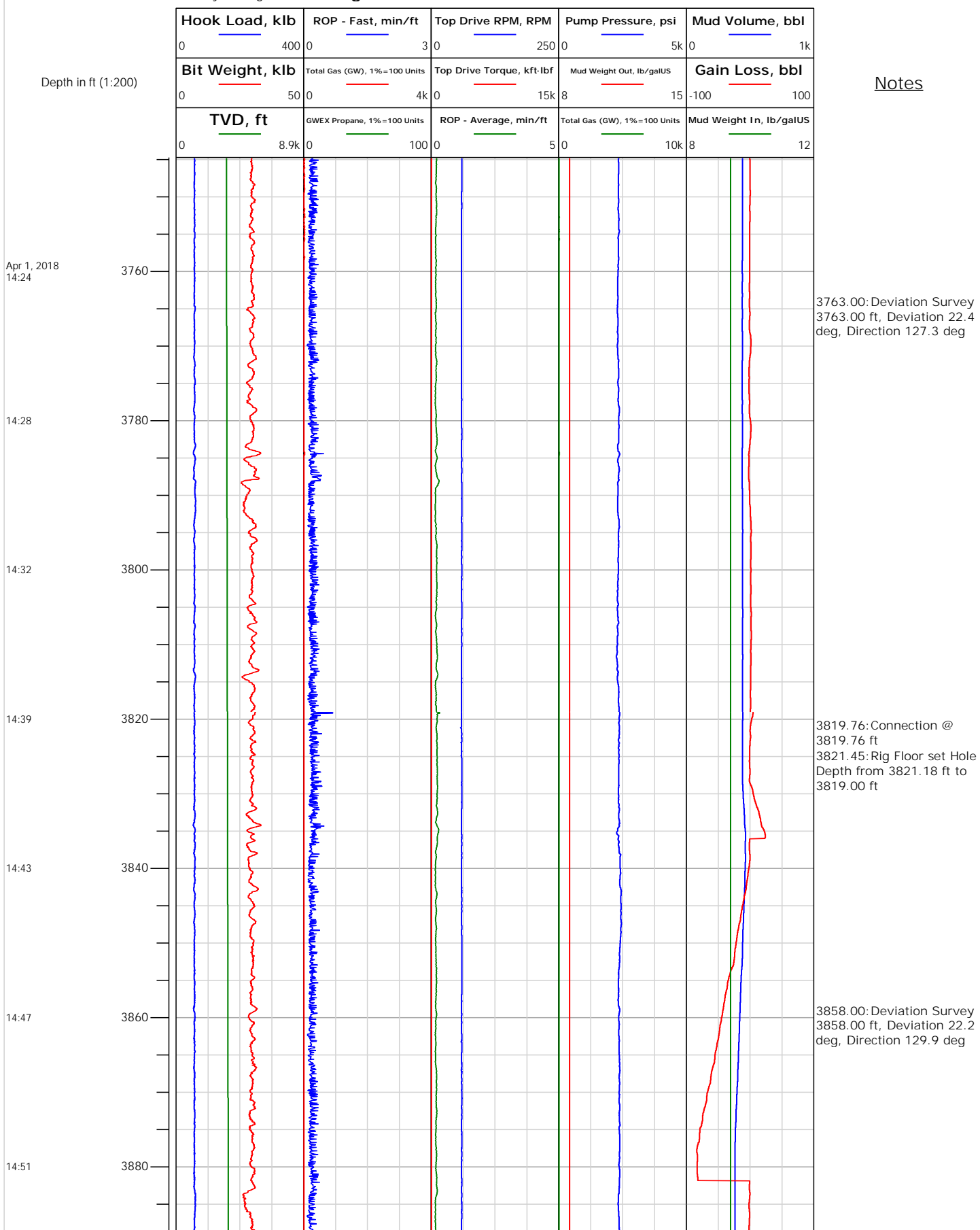
Electronic Drilling Recorder

Operator: Laramie Energy
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-15E
Rig: 290

Location: SE/4 of NW/4

Notes



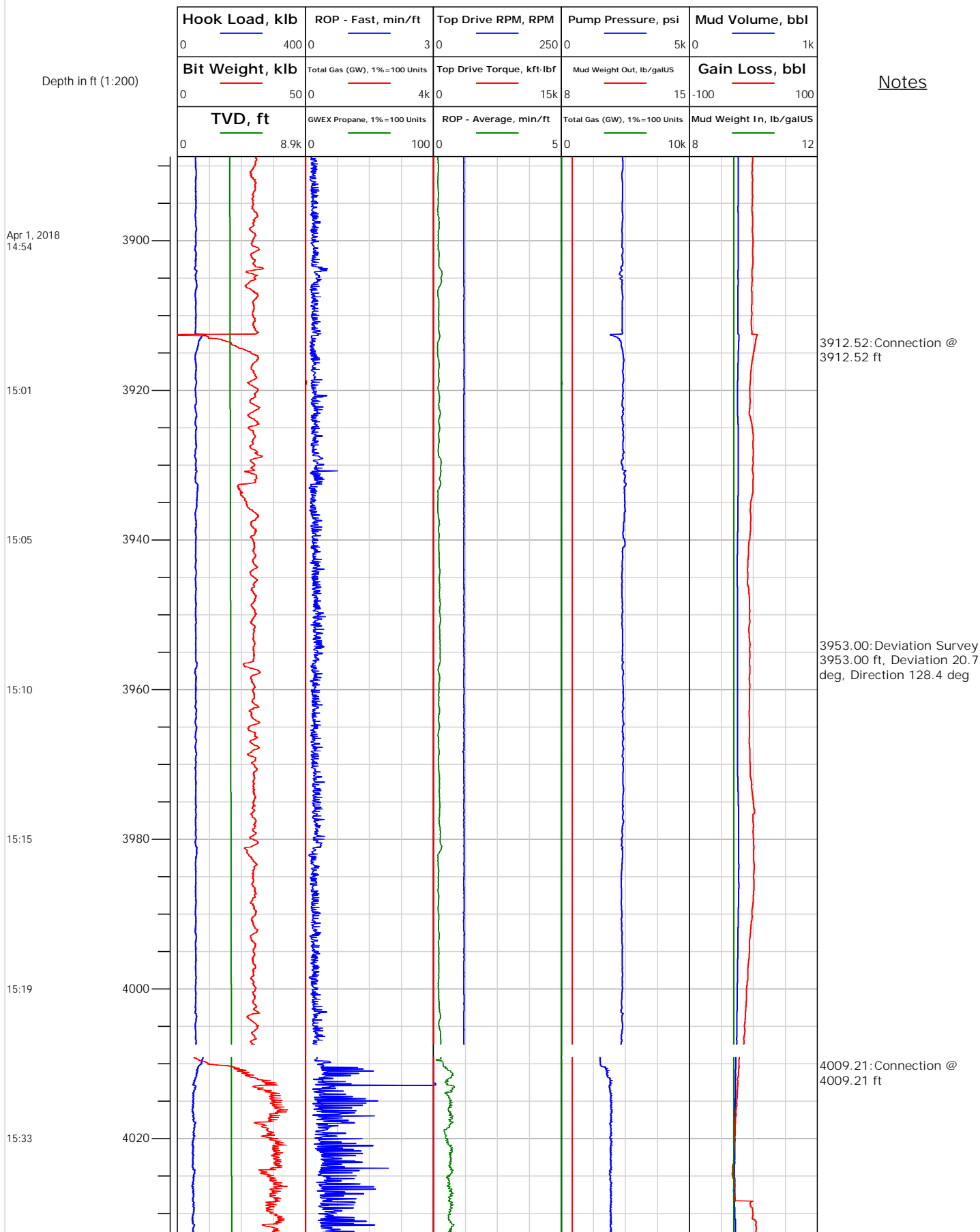


Electronic Drilling Recorder

Operator: Laramie Energy
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-15E
Rig: 290

Location: SE/4 of NW/4





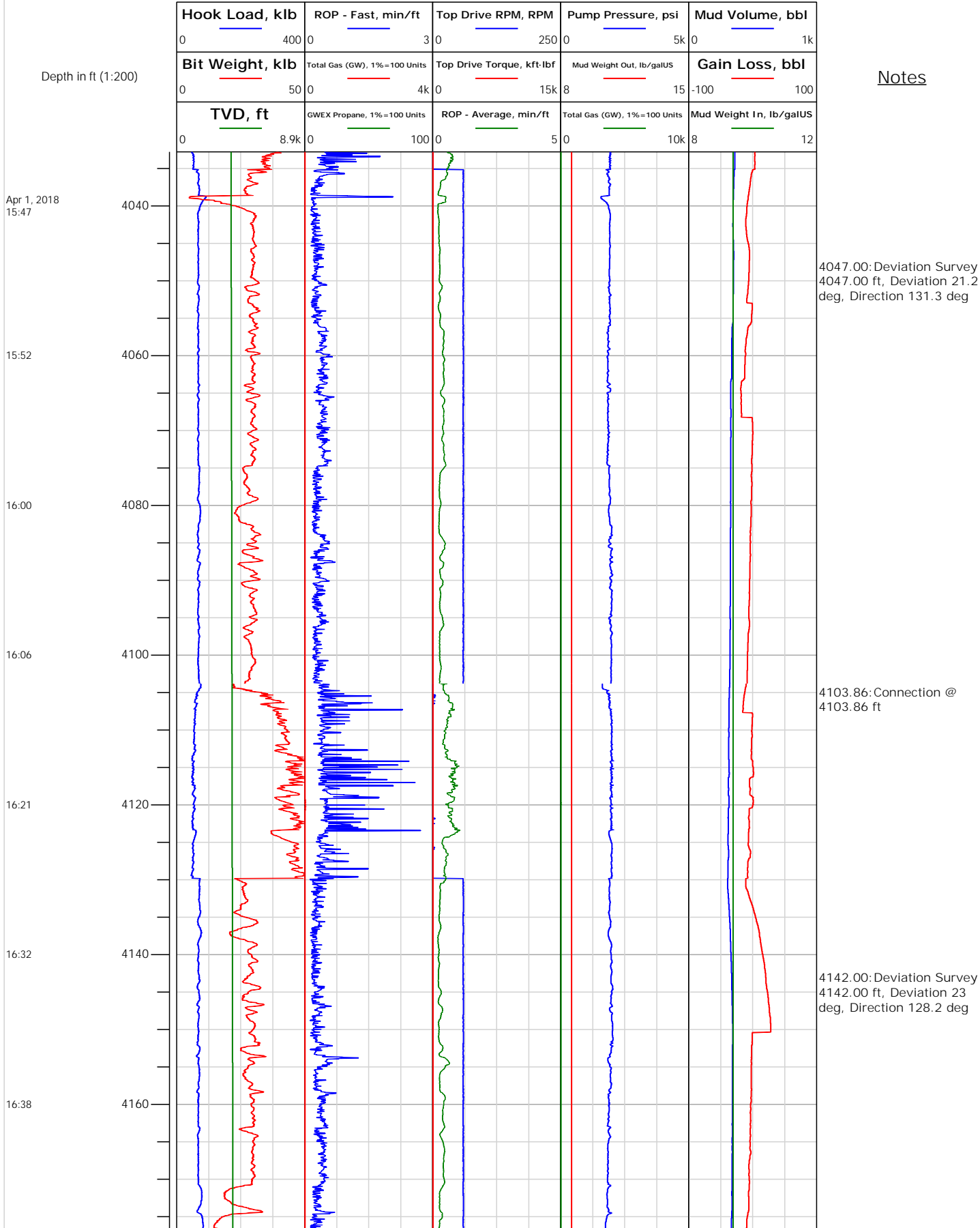
Electronic Drilling Recorder

Operator: Laramie Energy
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-15E
Rig: 290

Location: SE/4 of NW/4

Notes





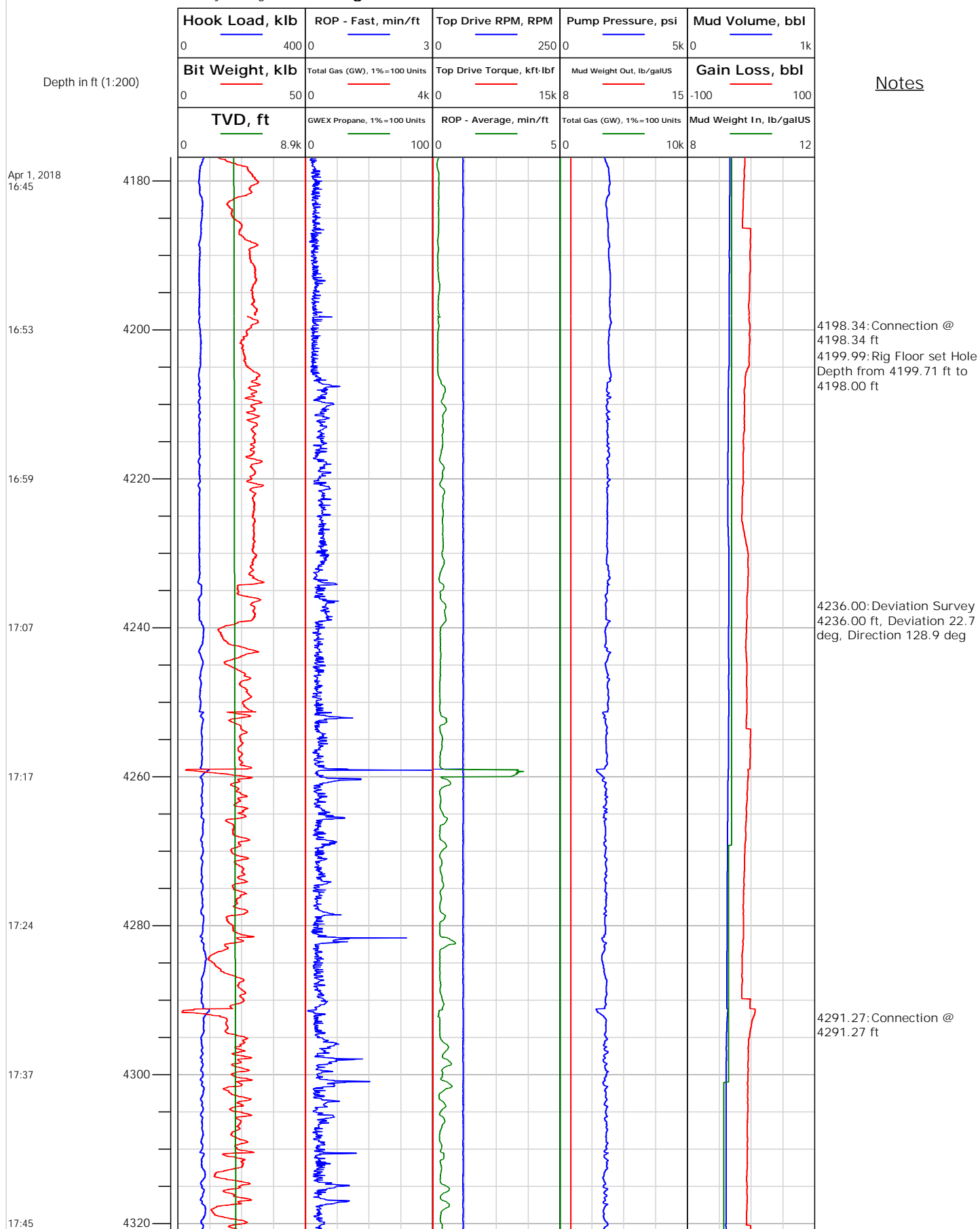
Electronic Drilling Recorder

Operator: Laramie Energy
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-15E
Rig: 290

Location: SE/4 of NW/4

Notes





Electronic Drilling Recorder

Operator: Laramie Energy
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-15E
Rig: 290

Location: SE/4 of NW/4

Notes

Depth in ft (1:200)

Apr 1, 2018
17:52

17:56

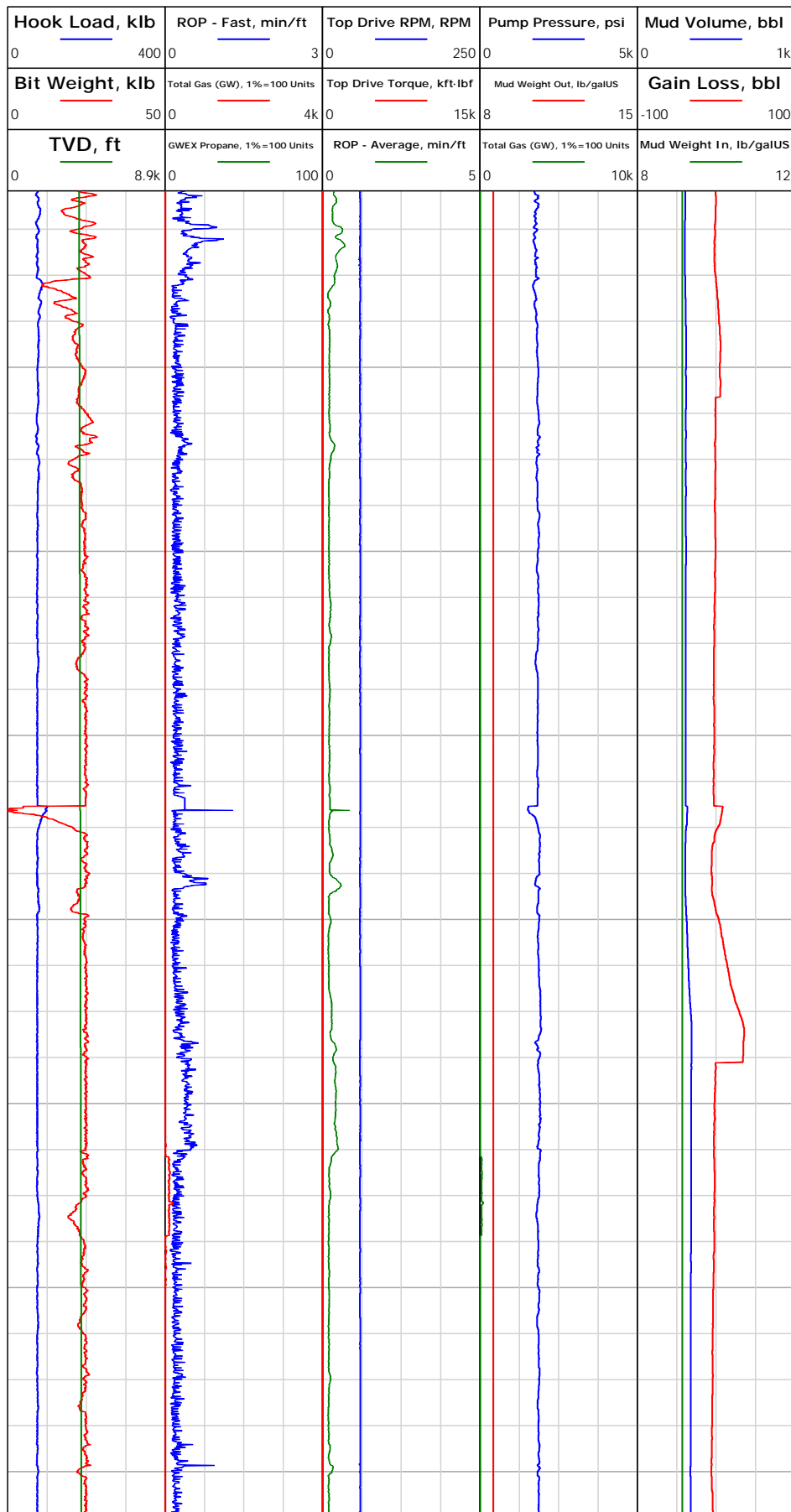
18:01

18:07

18:13

18:19

18:23



4331.00: Deviation Survey
4331.00 ft, Deviation 22.3 deg, Direction 127.7 deg

4387.52: Connection @
4387.52 ft

4413.31: MD IN WT
9.45/33 VIS OUT WT
9.5/32 VIS

4426.00: Deviation Survey
4426.00 ft, Deviation 21.1 deg, Direction 126.5 deg



Electronic Drilling Recorder

Operator: Laramie Energy
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-15E
Rig: 290

Location: SE/4 of NW/4

Notes

Depth in ft (1:200)

Apr 1, 2018
18:27

18:36

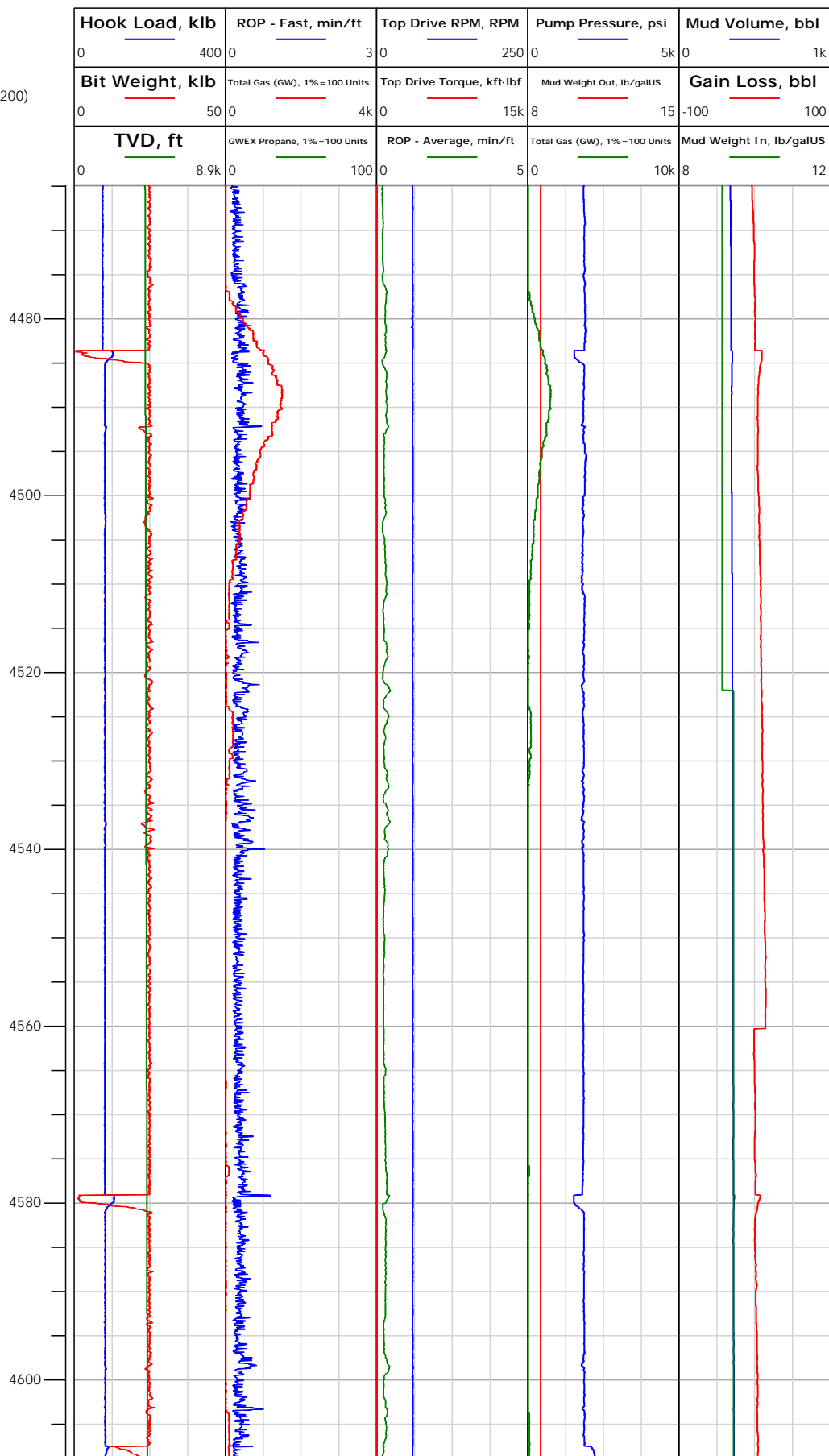
18:41

18:47

18:52

19:00

19:06





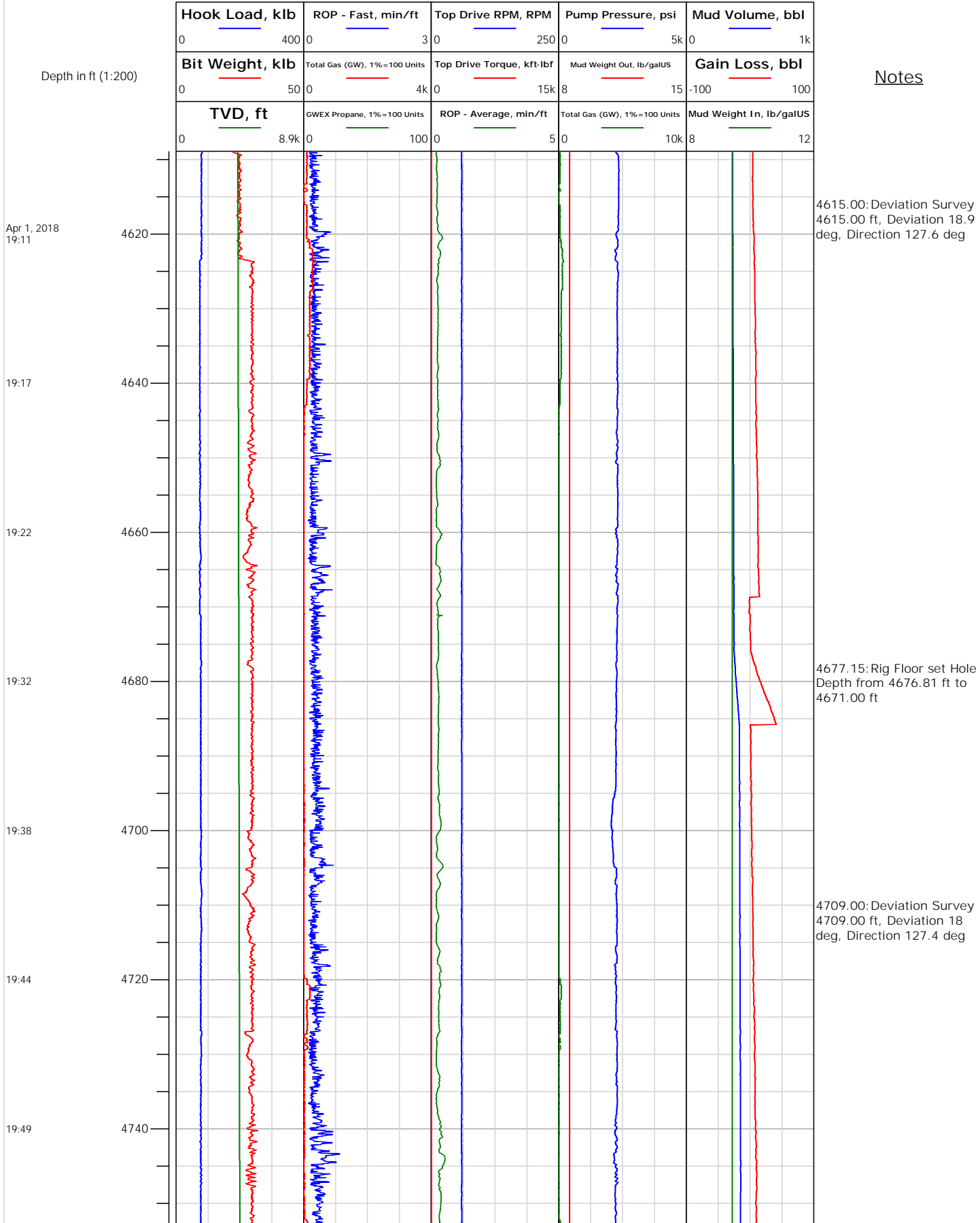
Electronic Drilling Recorder

Operator: Laramie Energy
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-15E
Rig: 290

Location: SE/4 of NW/4

Notes





Electronic Drilling Recorder

Operator: Laramie Energy
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-15E
Rig: 290

Location: SE/4 of NW/4

Notes

Depth in ft (1:200)

Apr 1, 2018
19:56

20:08

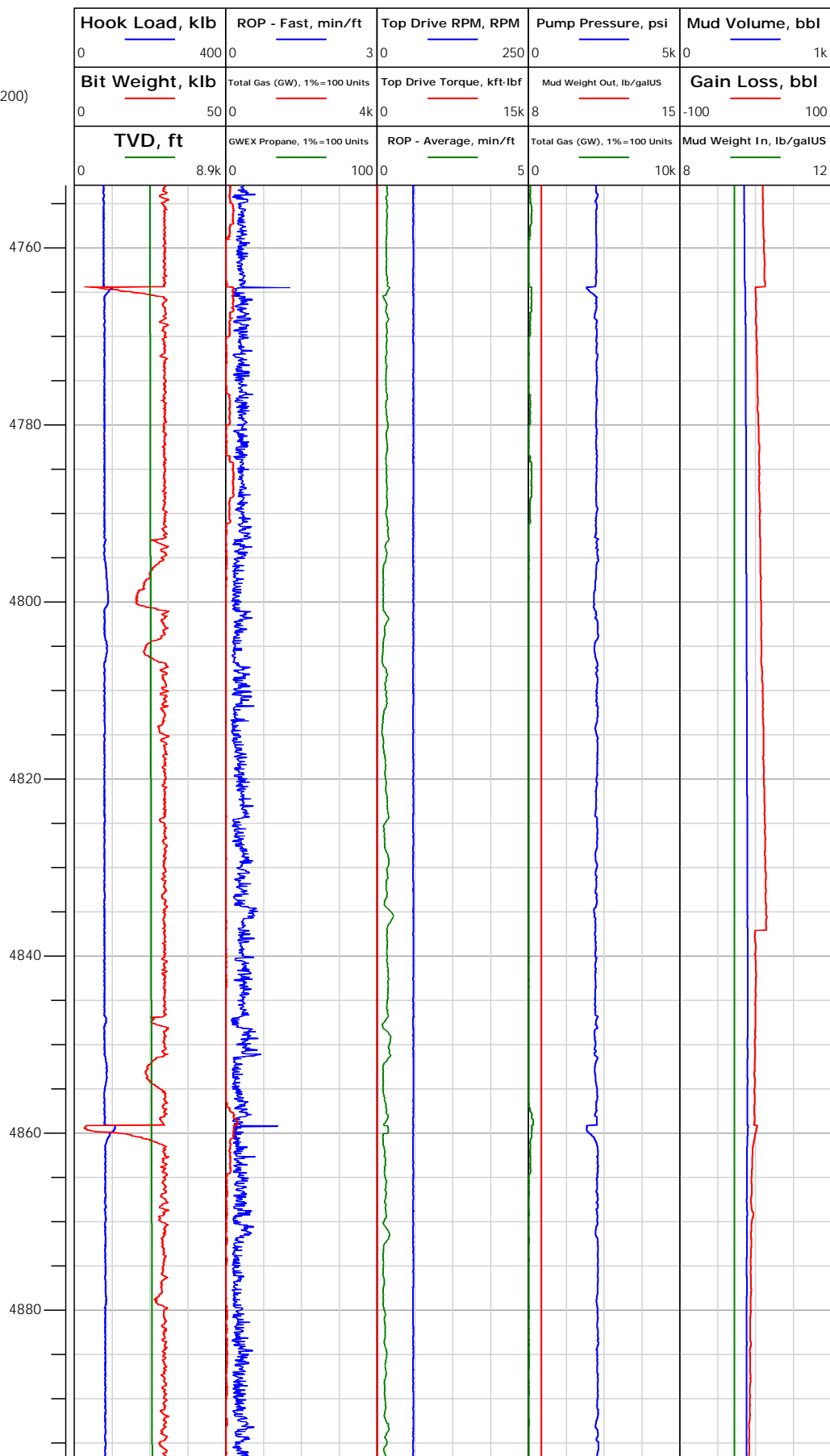
20:14

20:18

20:25

20:36

20:41



4764.37: Connection @
4764.37 ft

4804.00: Deviation Survey
4804.00 ft, Deviation 17.8
deg, Direction 127.6 deg

4859.25: Connection @
4859.25 ft



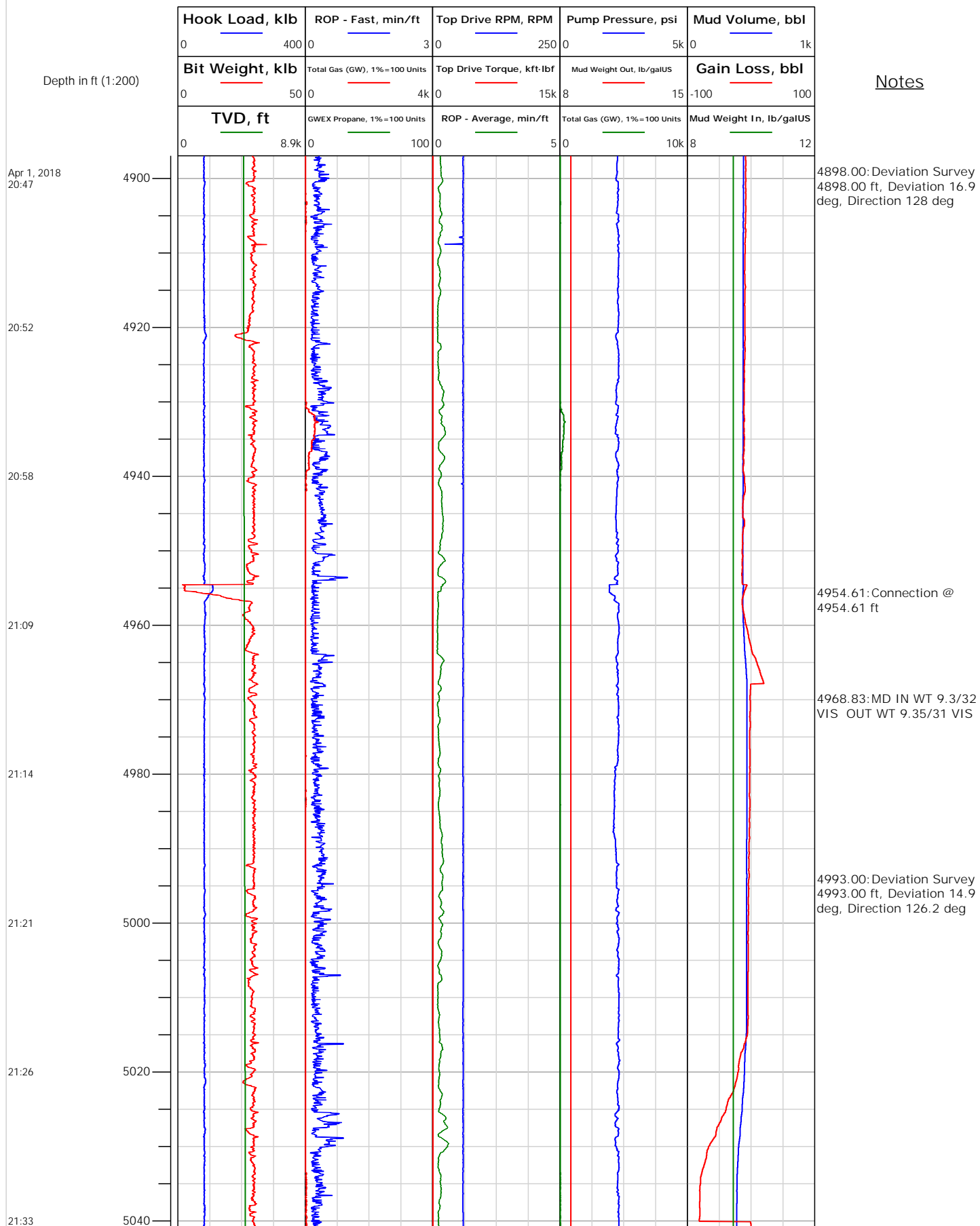
Electronic Drilling Recorder

Operator: Laramie Energy
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-15E
Rig: 290

Location: SE/4 of NW/4

Notes





Electronic Drilling Recorder

Operator: Laramie Energy
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-15E
Rig: 290

Location: SE/4 of NW/4

Notes

Depth in ft (1:200)

Apr 1, 2018
21:48

22:00

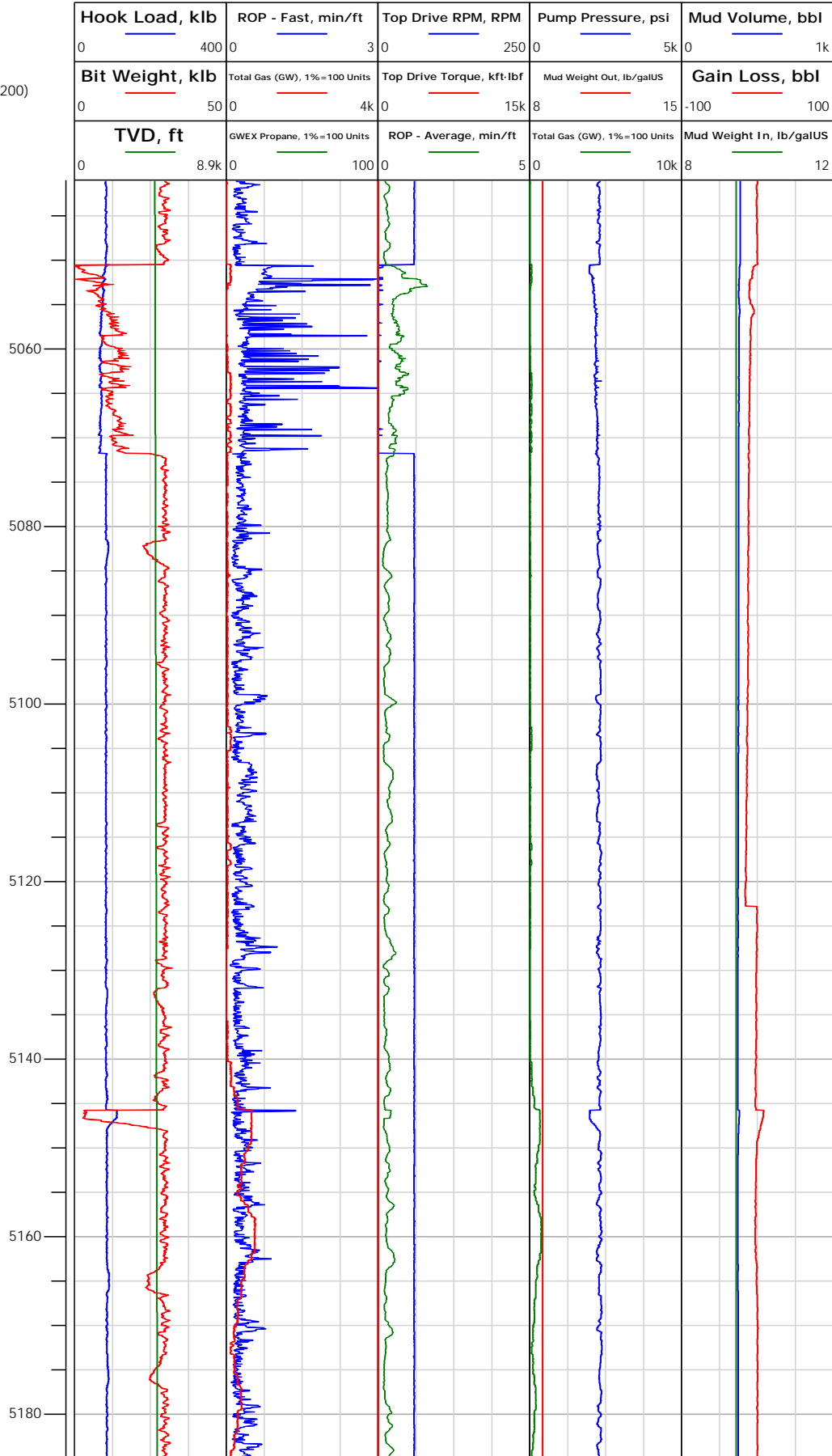
22:06

22:12

22:18

22:28

22:34





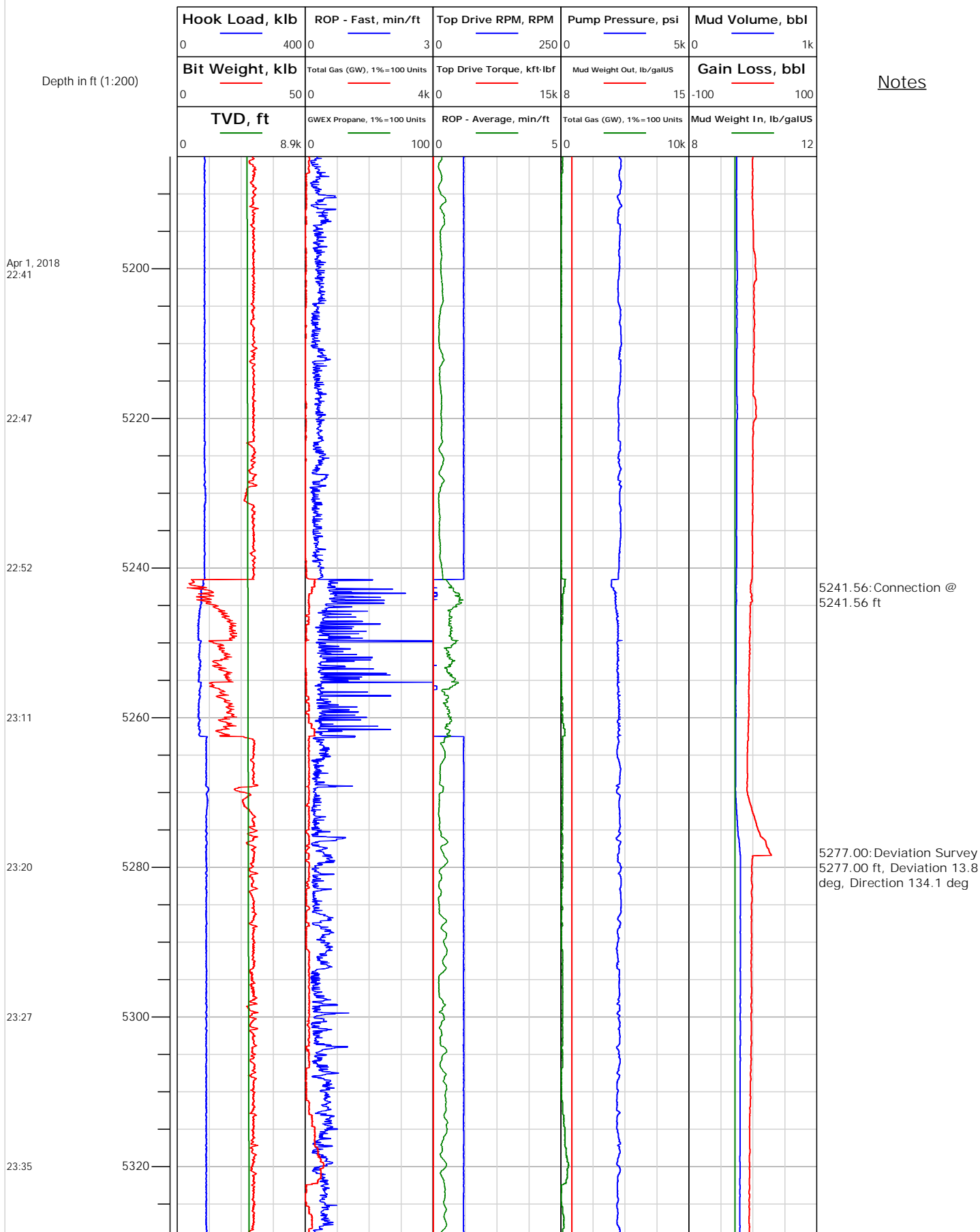
Electronic Drilling Recorder

Operator: Laramie Energy
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-15E
Rig: 290

Location: SE/4 of NW/4

Notes





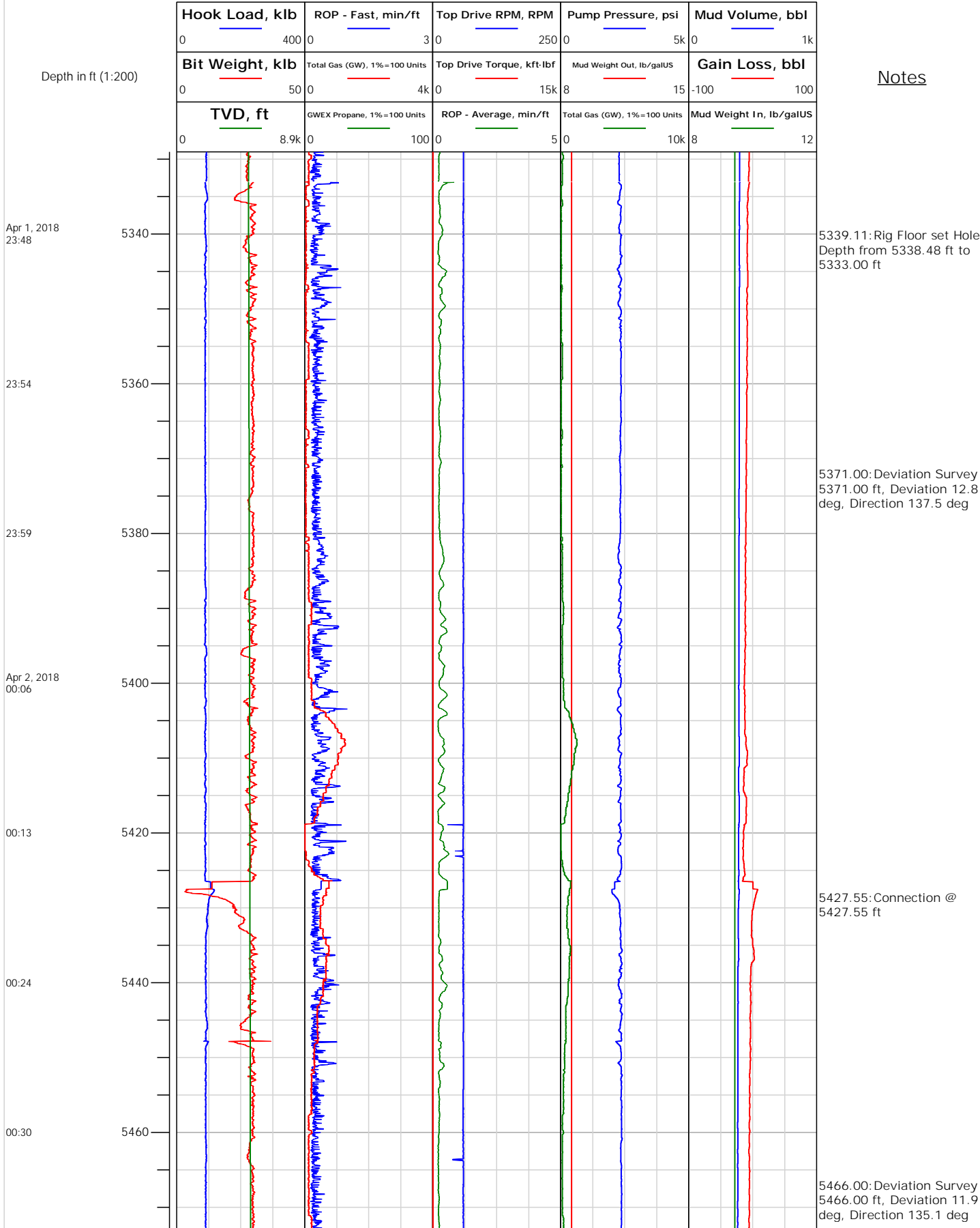
Electronic Drilling Recorder

Operator: Laramie Energy
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-15E
Rig: 290

Location: SE/4 of NW/4

Notes





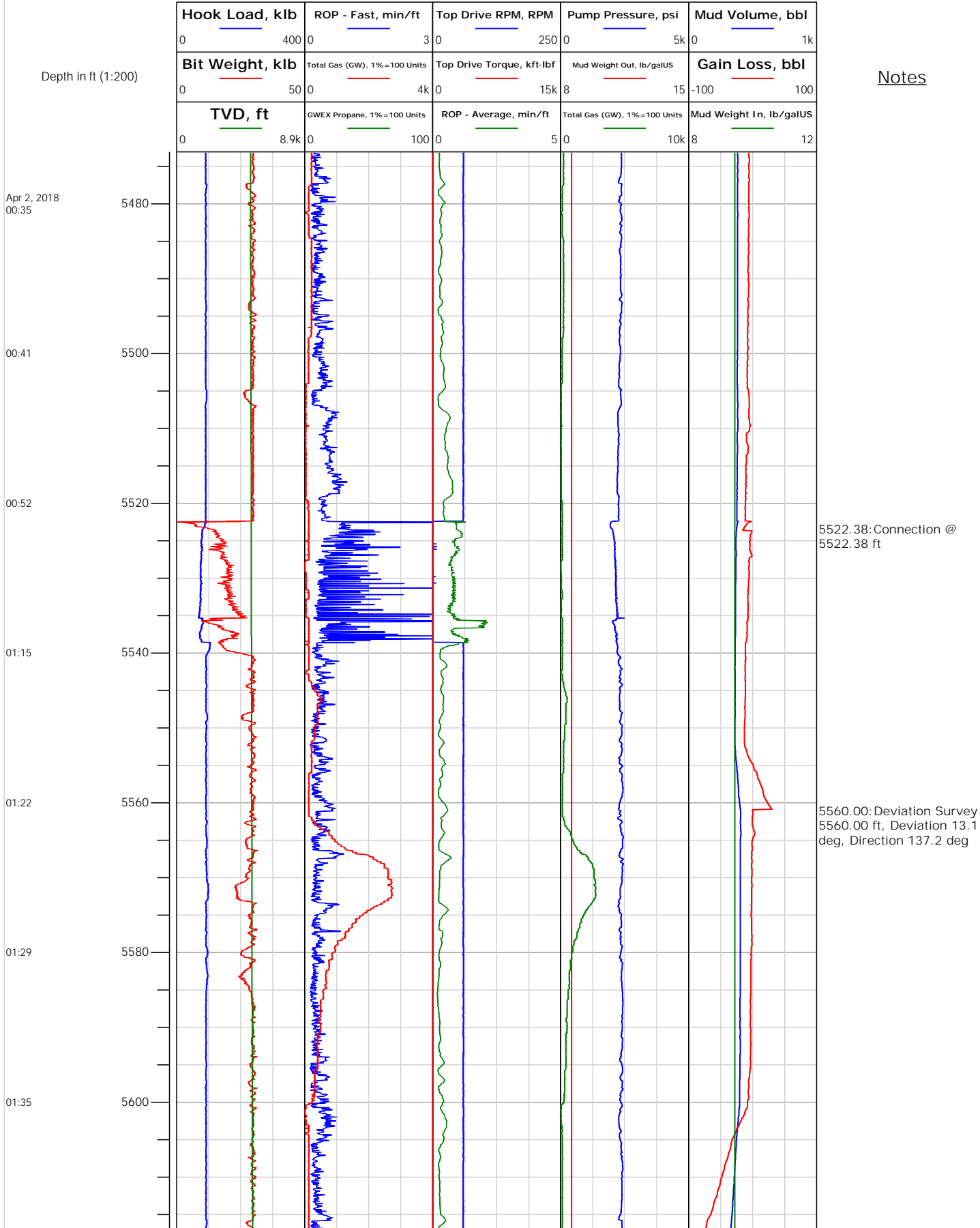
Electronic Drilling Recorder

Operator: Laramie Energy
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-15E
Rig: 290

Location: SE/4 of NW/4

Notes





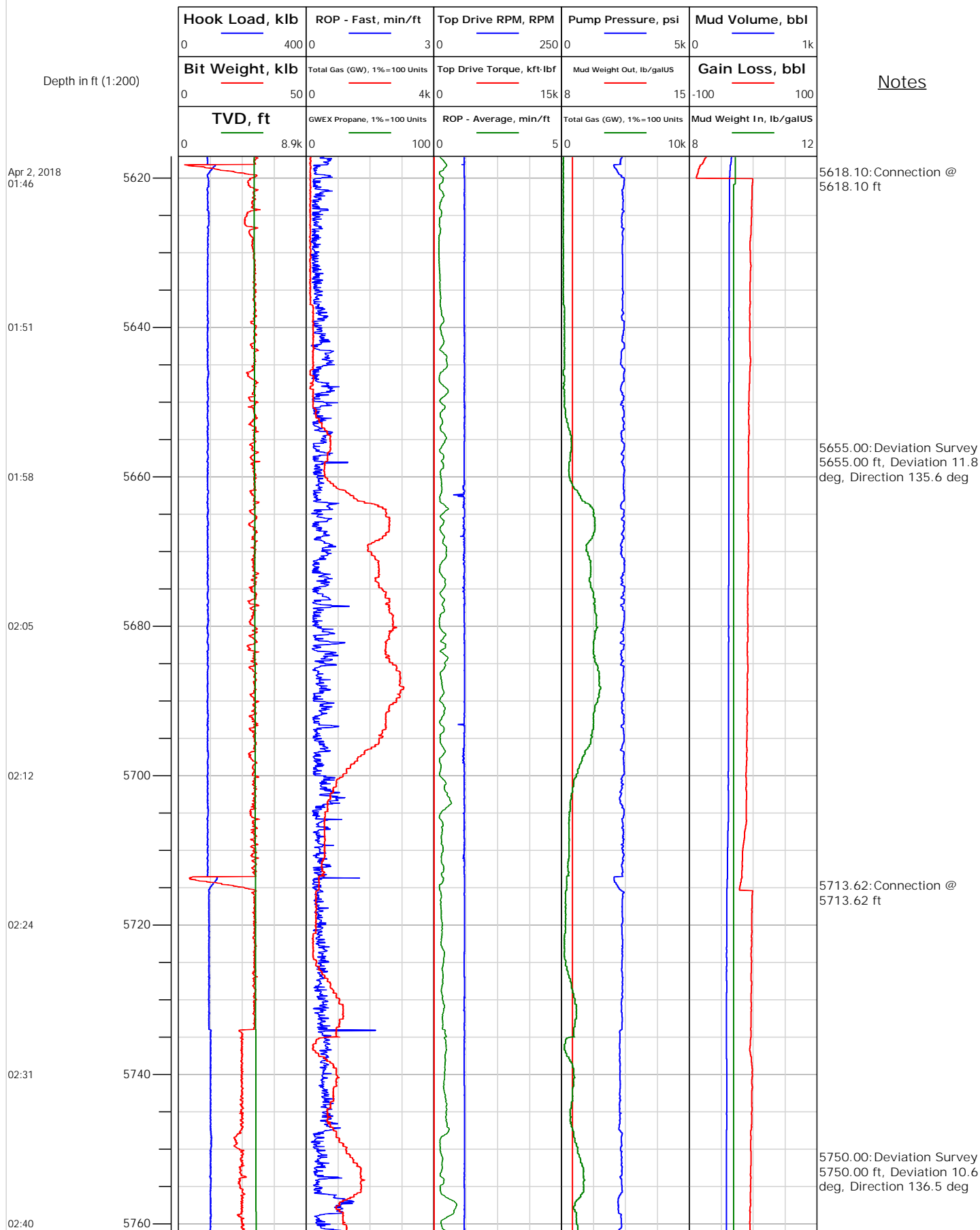
Electronic Drilling Recorder

Operator: Laramie Energy
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-15E
Rig: 290

Location: SE/4 of NW/4

Notes





Electronic Drilling Recorder

Operator: Laramie Energy
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-15E
Rig: 290

Location: SE/4 of NW/4

Notes

Depth in ft (1:200)

Apr 2, 2018
02:50

03:02

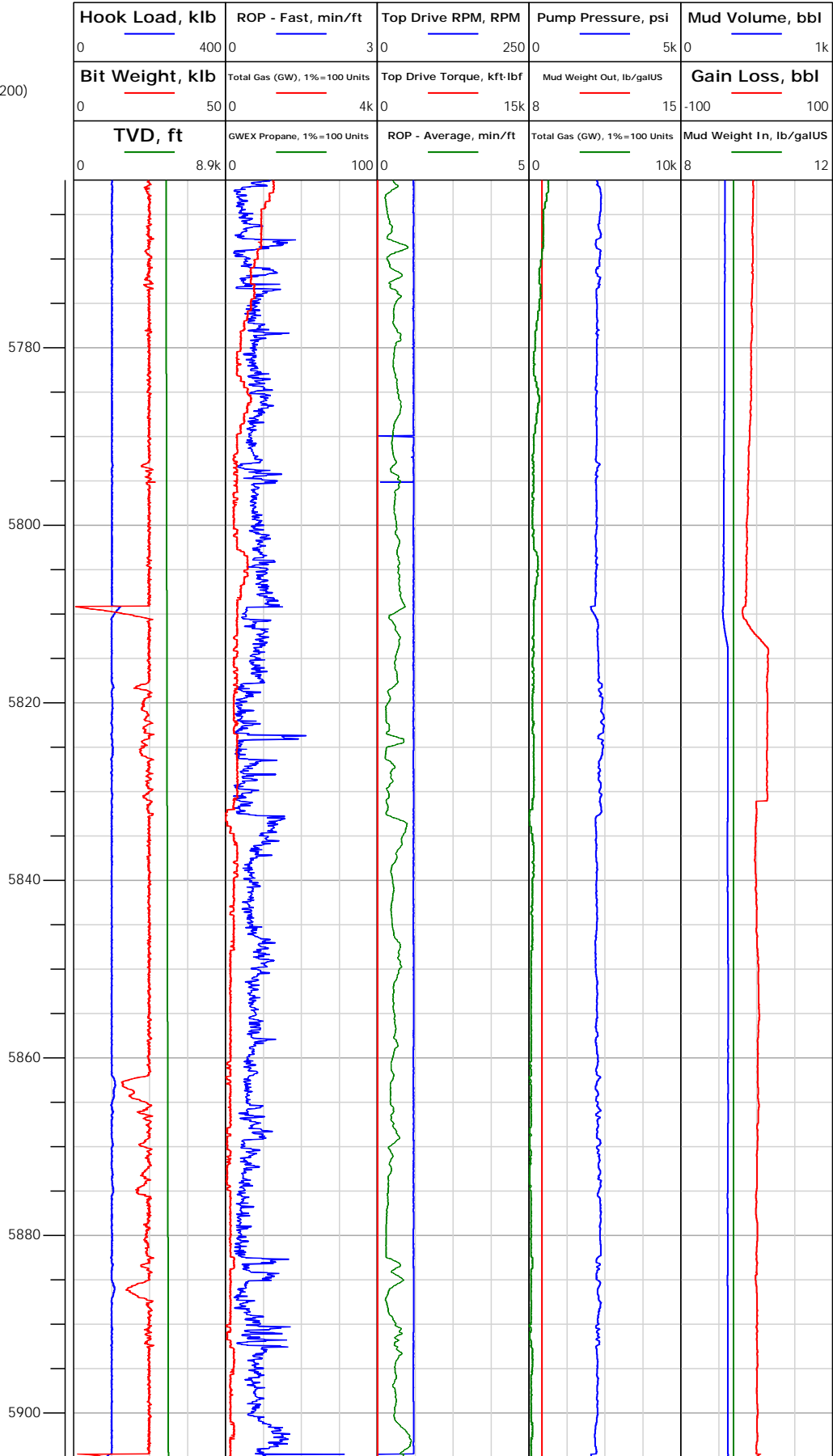
03:19

03:30

03:41

03:50

04:01





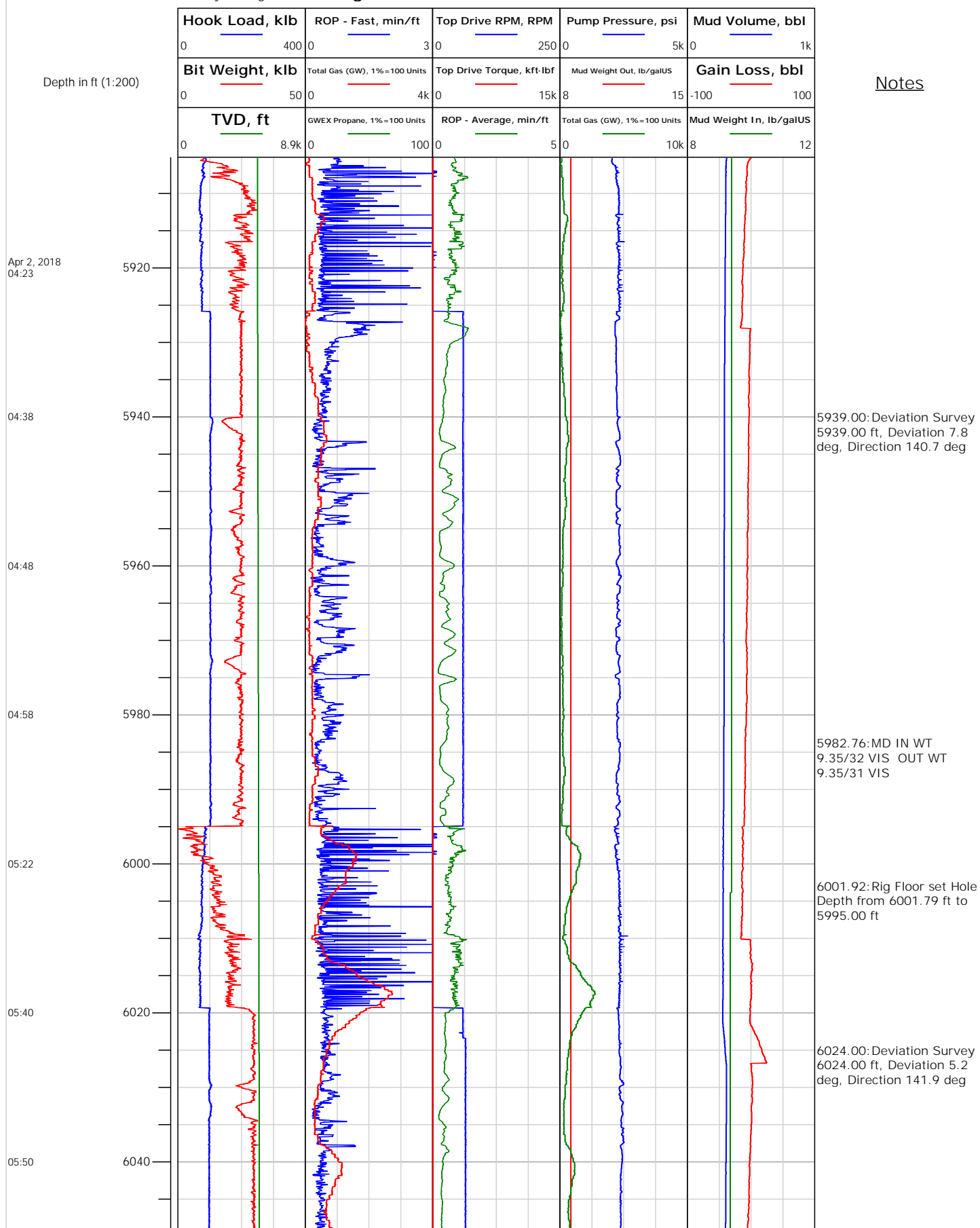
Electronic Drilling Recorder

Operator: Laramie Energy
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-15E
Rig: 290

Location: SE/4 of NW/4

Notes





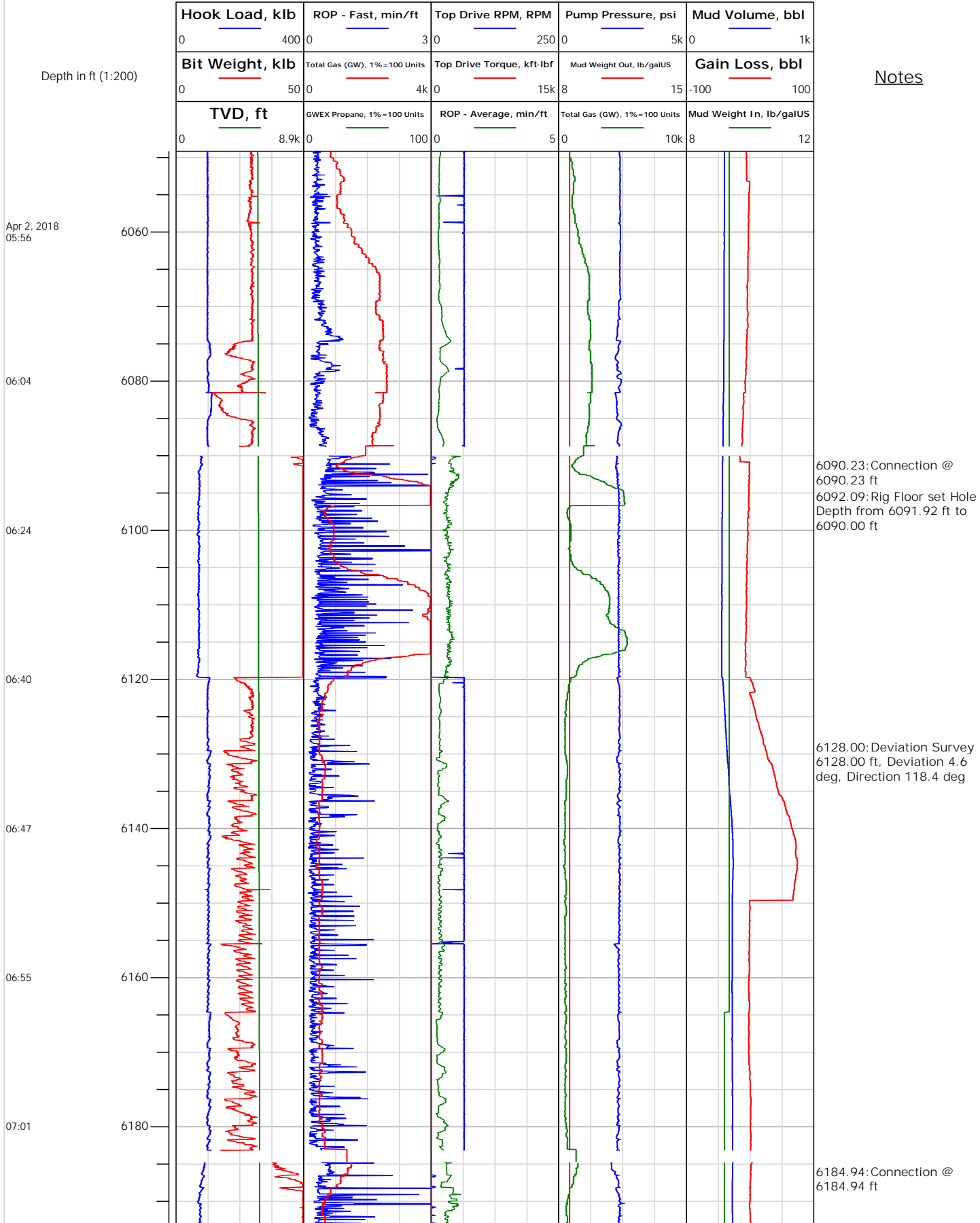
Electronic Drilling Recorder

Operator: Laramie Energy
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-15E
Rig: 290

Location: SE/4 of NW/4

Notes





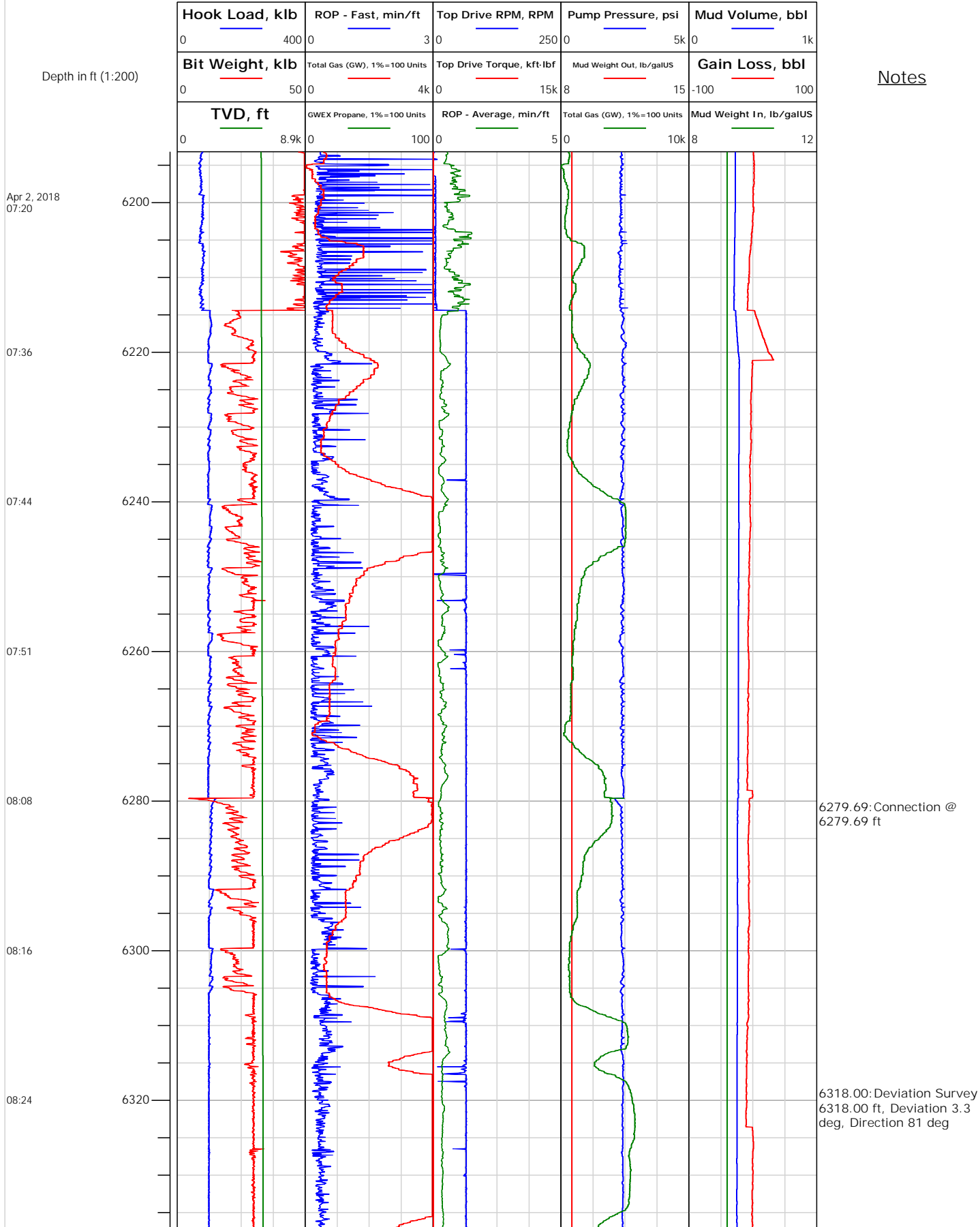
Electronic Drilling Recorder

Operator: Laramie Energy
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-15E
Rig: 290

Location: SE/4 of NW/4

Notes





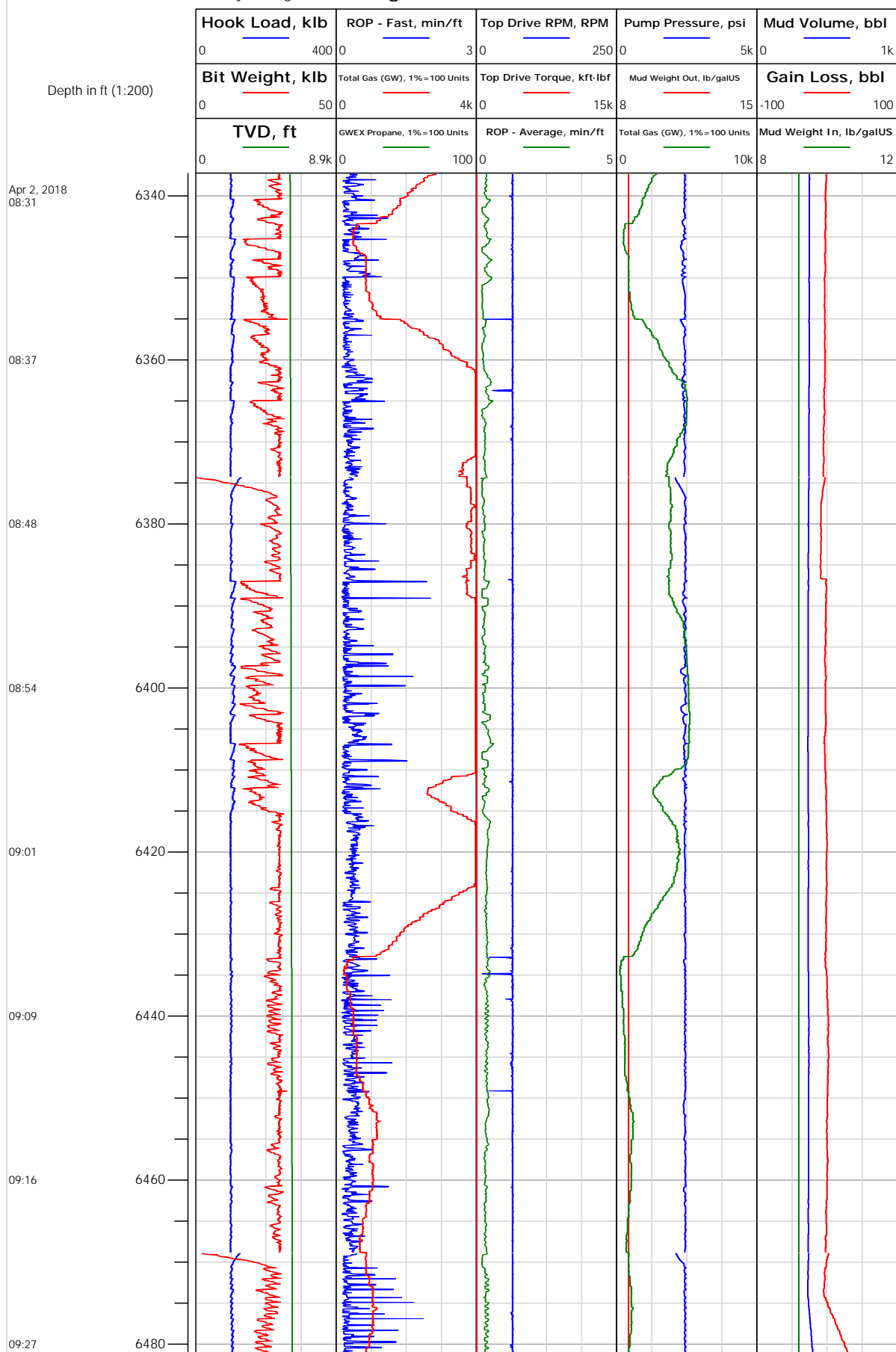
Electronic Drilling Recorder

Operator: Laramie Energy
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-15E
Rig: 290

Location: SE/4 of NW/4

Notes





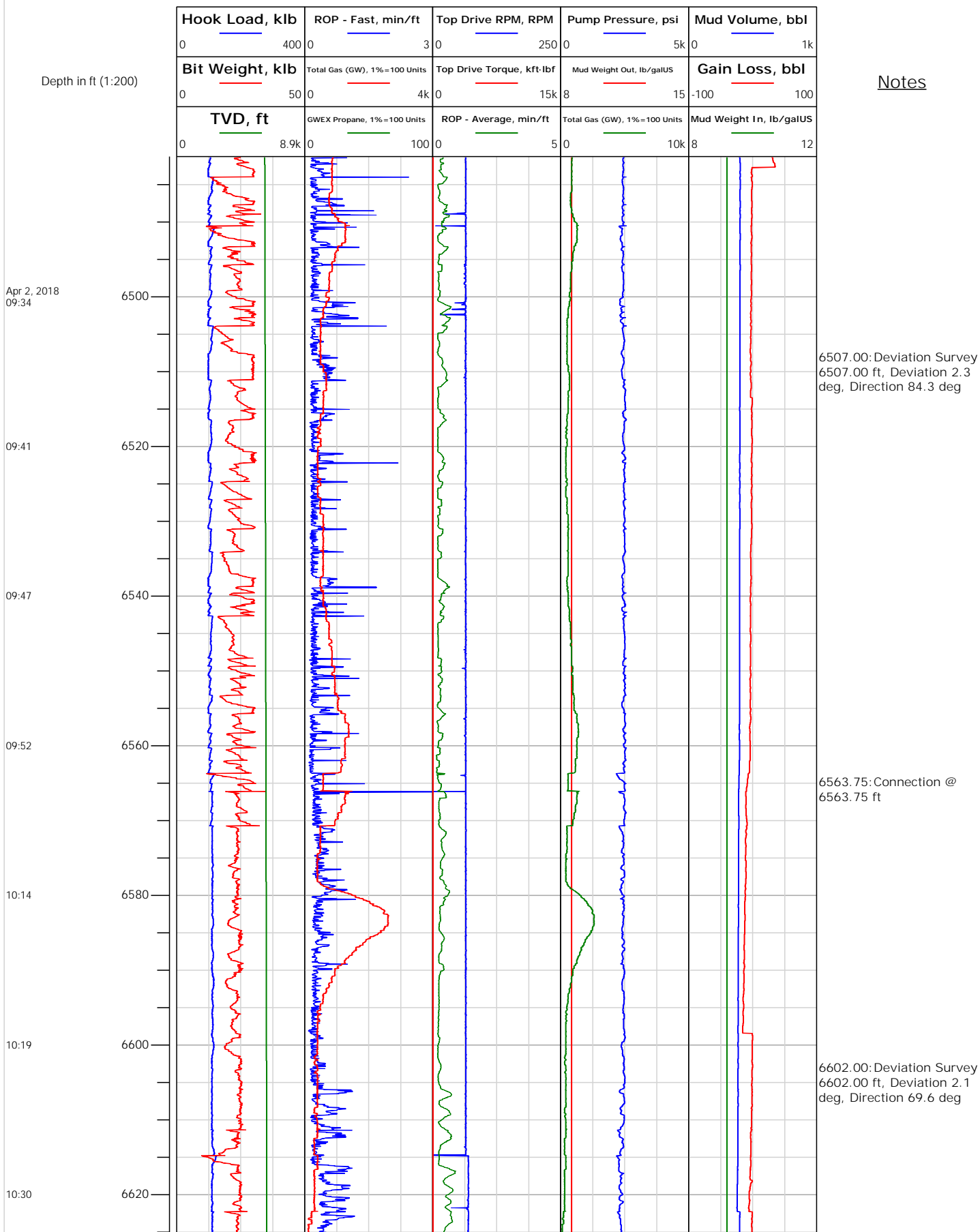
Electronic Drilling Recorder

Operator: Laramie Energy
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-15E
Rig: 290

Location: SE/4 of NW/4

Notes





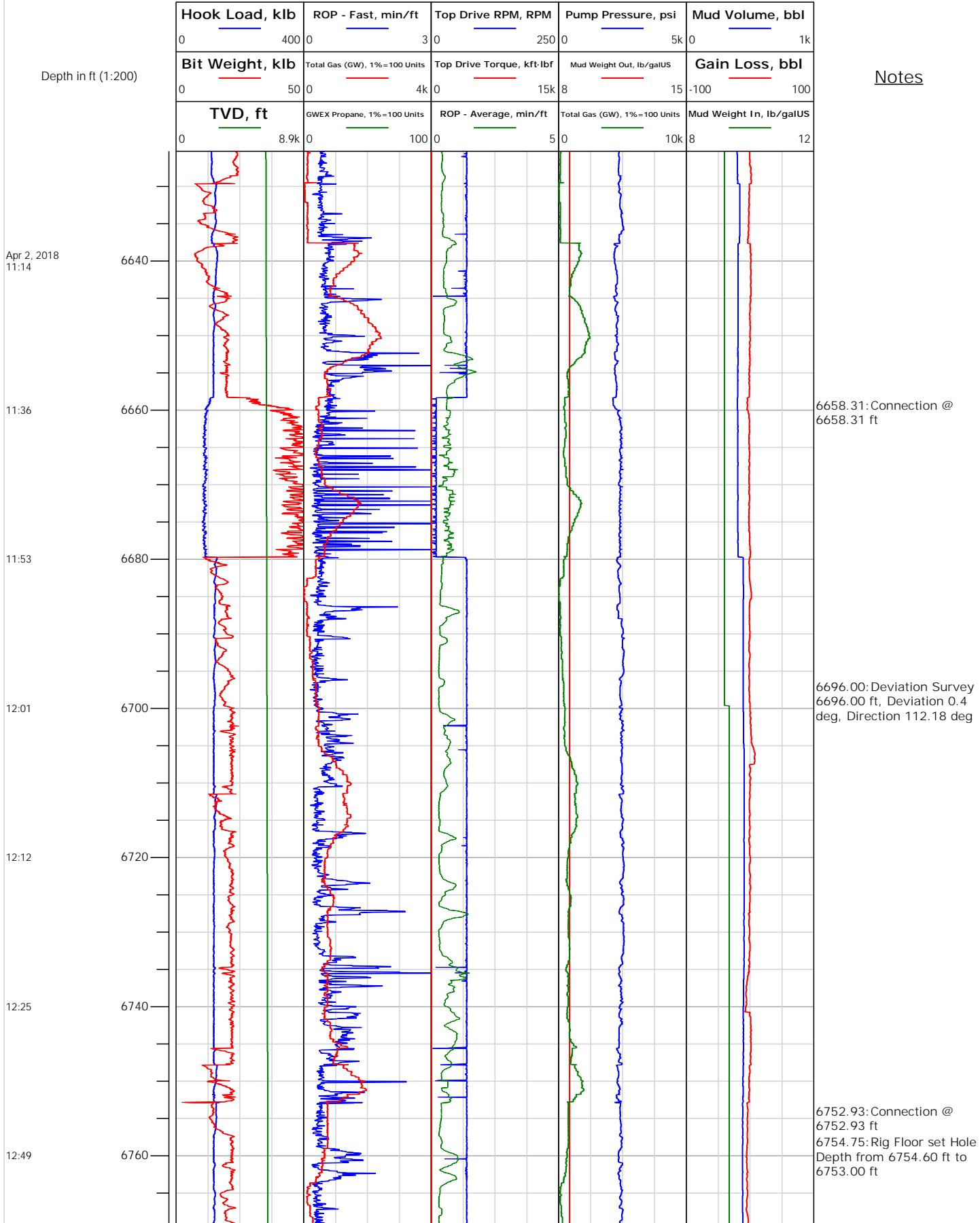
Electronic Drilling Recorder

Operator: Laramie Energy
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-15E
Rig: 290

Location: SE/4 of NW/4

Notes





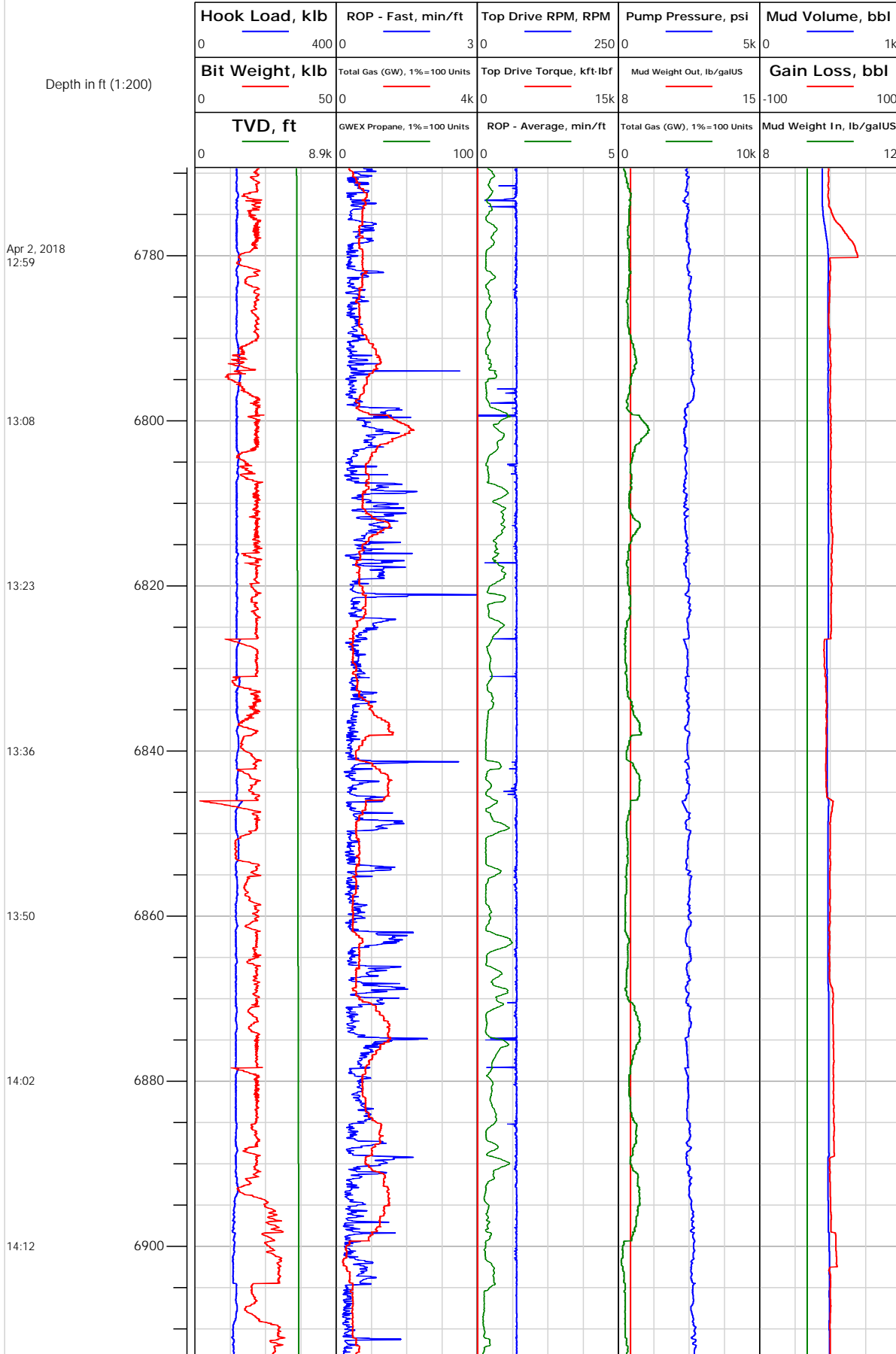
Electronic Drilling Recorder

Operator: Laramie Energy
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-15E
Rig: 290

Location: SE/4 of NW/4

Notes





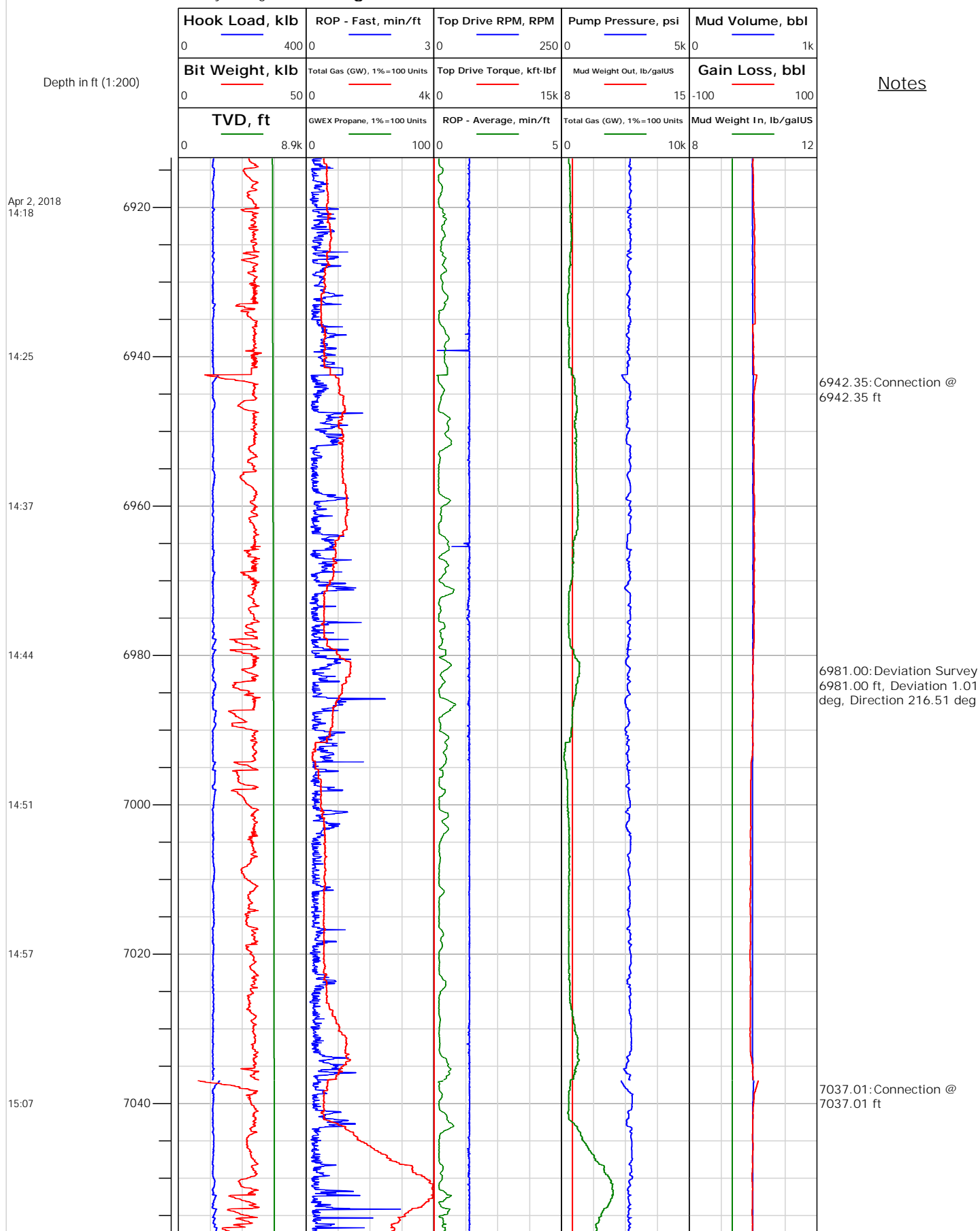
Electronic Drilling Recorder

Operator: Laramie Energy
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-15E
Rig: 290

Location: SE/4 of NW/4

Notes





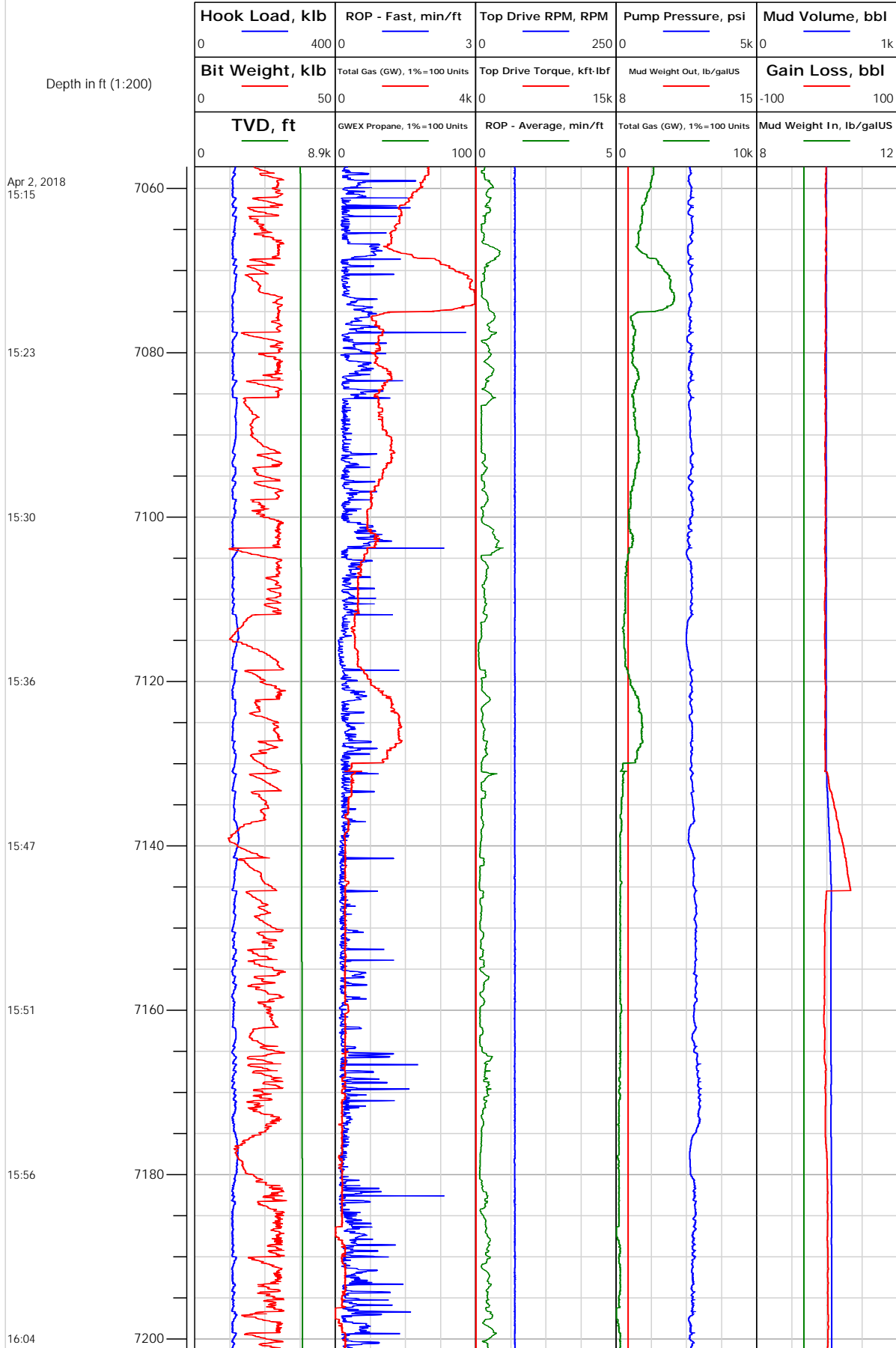
Electronic Drilling Recorder

Operator: Laramie Energy
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-15E
Rig: 290

Location: SE/4 of NW/4

Notes



7075.00: Deviation Survey
7075.00 ft, Deviation 2.02 deg, Direction 198.76 deg

7132.62: Connection @
7132.62 ft
7134.86: Rig Floor set Hole
Depth from 7134.54 ft to
7131.00 ft

7170.00: Deviation Survey
7170.00 ft, Deviation 2.77 deg, Direction 198.76 deg



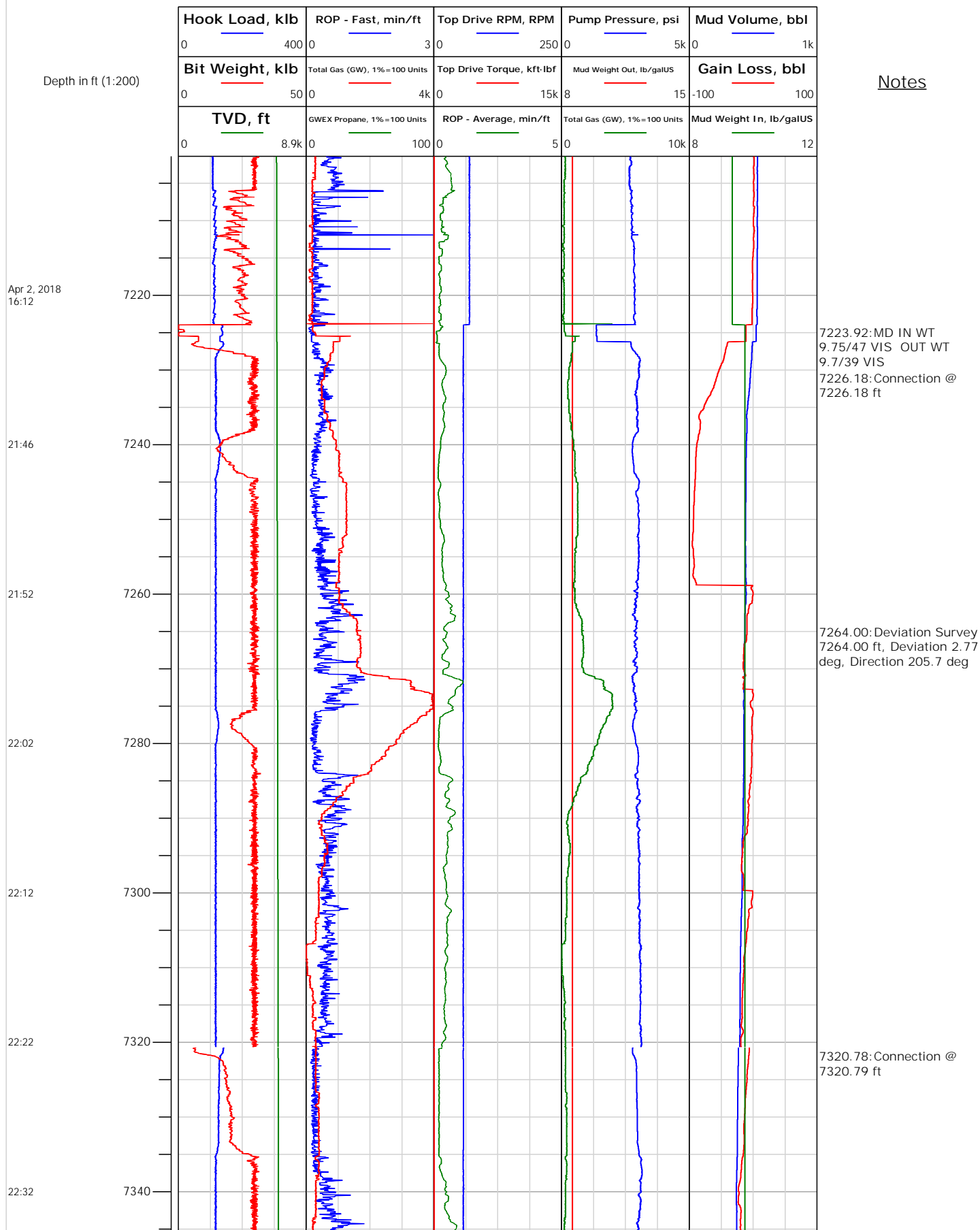
Electronic Drilling Recorder

Operator: Laramie Energy
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-15E
Rig: 290

Location: SE/4 of NW/4

Notes





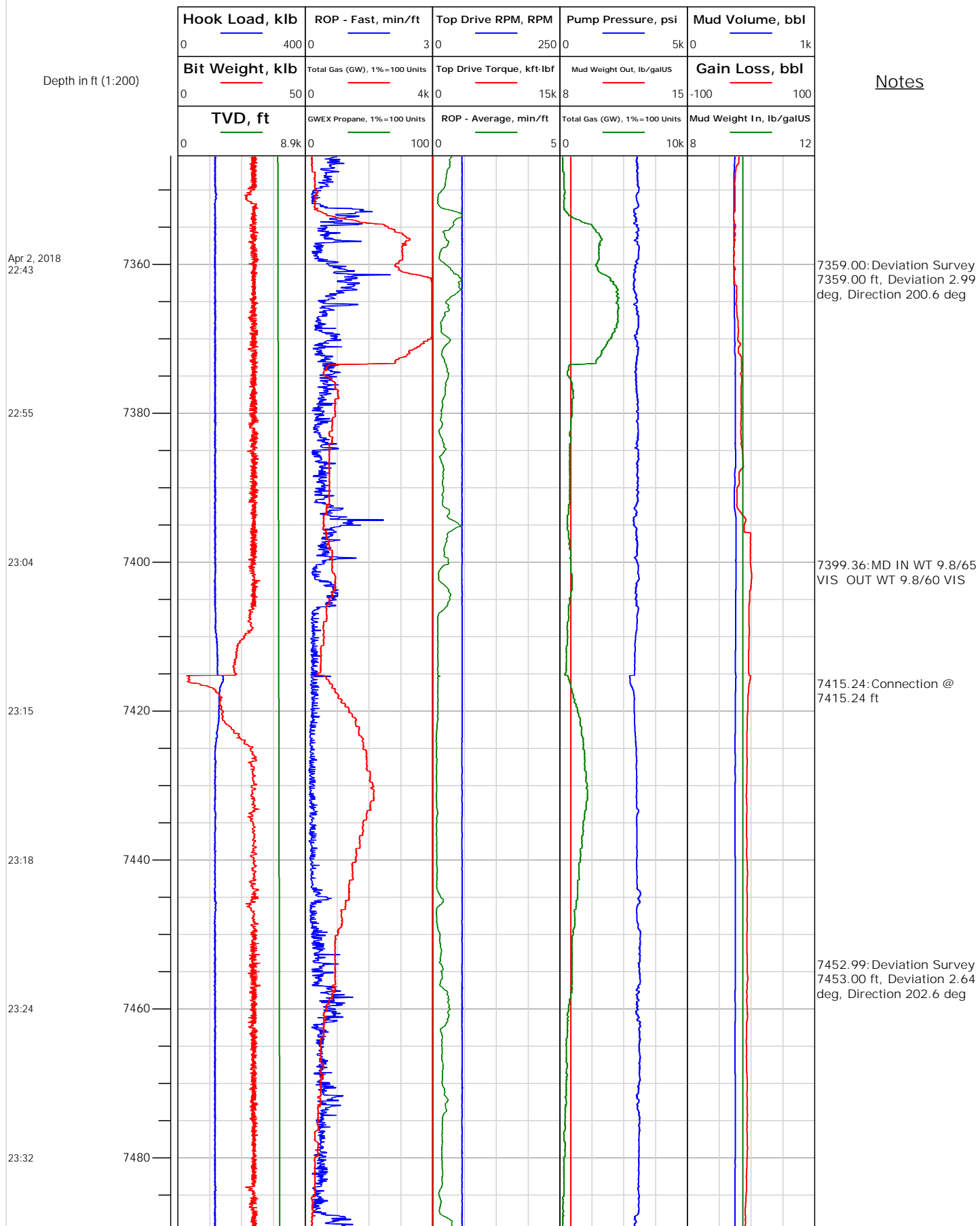
Electronic Drilling Recorder

Operator: Laramie Energy
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-15E
Rig: 290

Location: SE/4 of NW/4

Notes





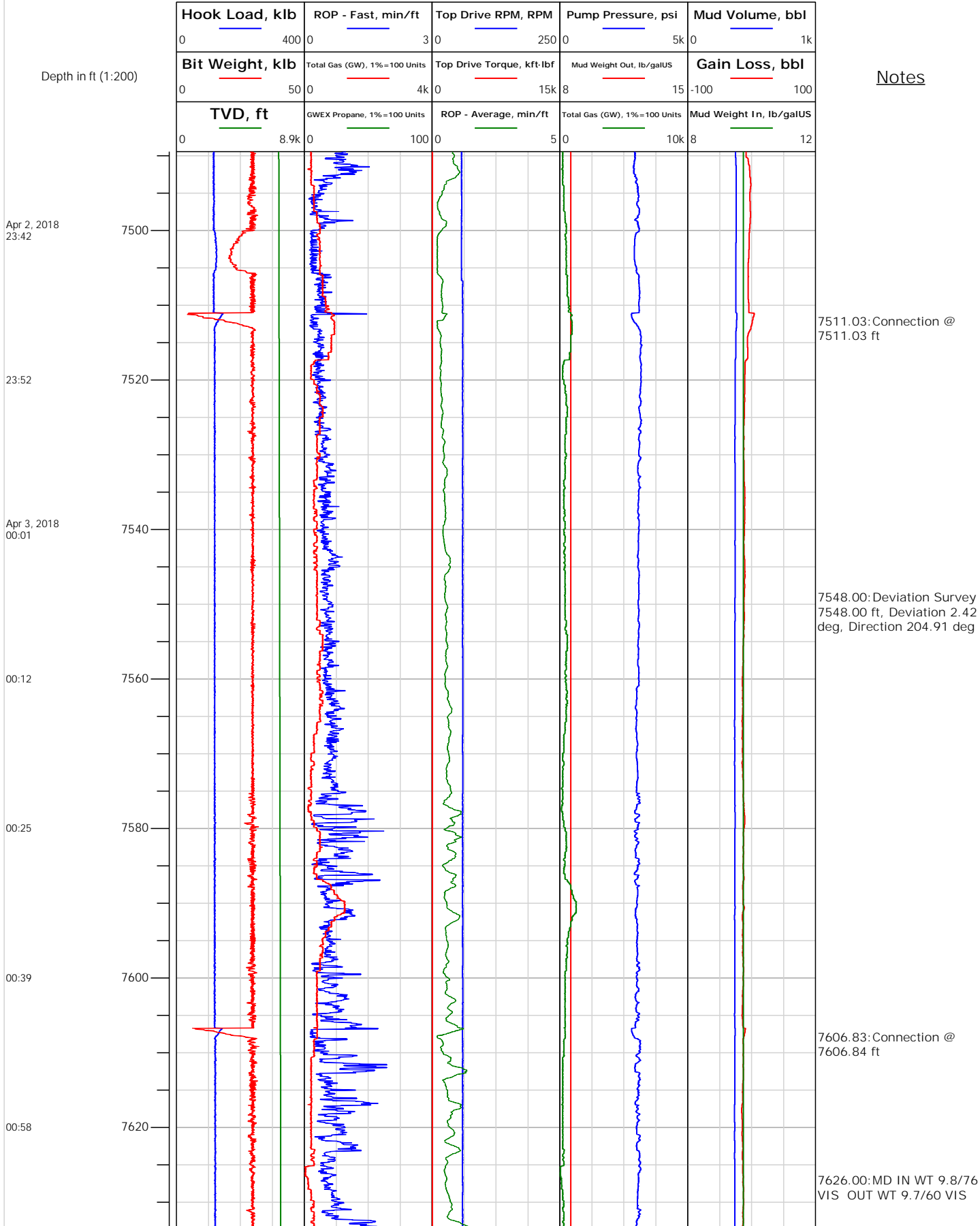
Electronic Drilling Recorder

Operator: Laramie Energy
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-15E
Rig: 290

Location: SE/4 of NW/4

Notes





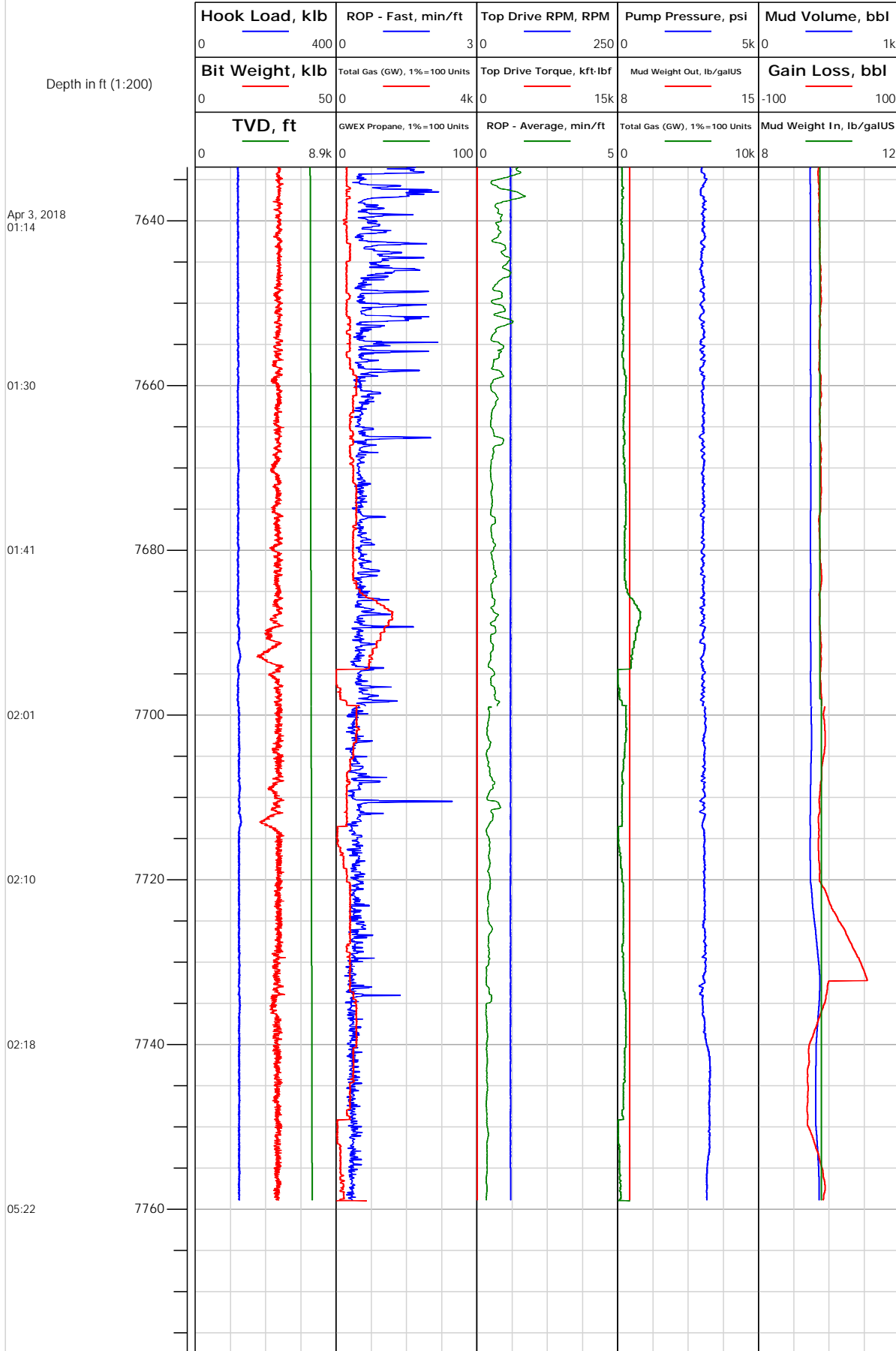
Electronic Drilling Recorder

Operator: Laramie Energy
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-15E
Rig: 290

Location: SE/4 of NW/4

Notes





Electronic Drilling Recorder

Operator: Laramie Energy
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-15E
Rig: 290

Location: SE/4 of NW/4

Depth in ft (1:200)

Notes

Hook Load, klb	ROP - Fast, min/ft	Top Drive RPM, RPM	Pump Pressure, psi	Mud Volume, bbl
0 400	0 3	0 250	0 5k	0 1k
Bit Weight, klb	Total Gas (GW), 1% = 100 Units	Top Drive Torque, kft-lbf	Mud Weight Out, lb/galUS	Gain Loss, bbl
0 50	0 4k	0 15k	8 15	-100 100
TVD, ft	GWEX Propane, 1% = 100 Units	ROP - Average, min/ft	Total Gas (GW), 1% = 100 Units	Mud Weight In, lb/galUS
0 8.9k	0 100	0 5	0 10k	8 12
7780				
7800				