



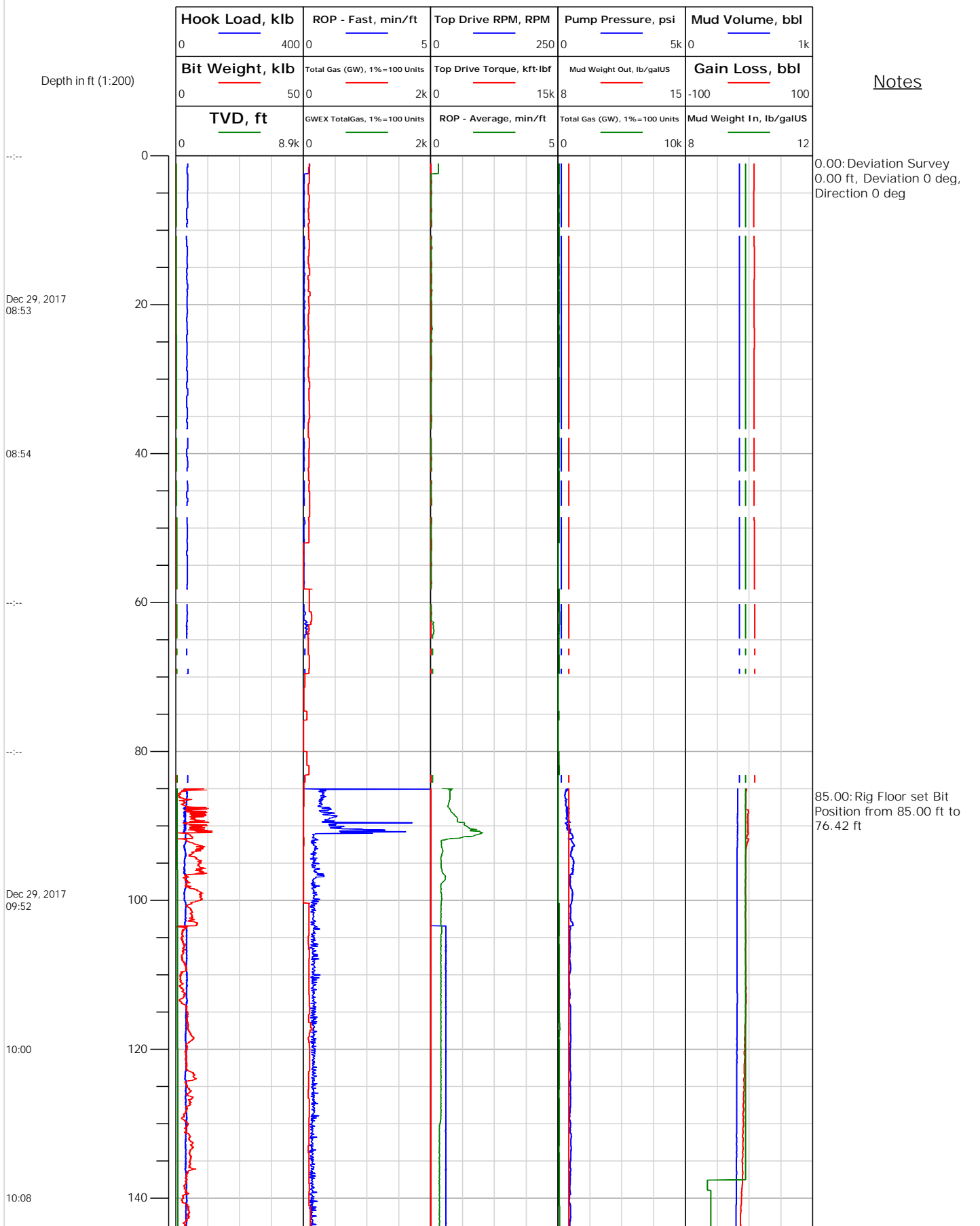
# Electronic Drilling Recorder

**Operator:** Laramie Energy  
**Contractor:** Helmerich & Payne Drlg Co

**Well Name:** Nichols 24-03E  
**Rig:** 290

**Location:** SW/4 of NE/4

## Notes



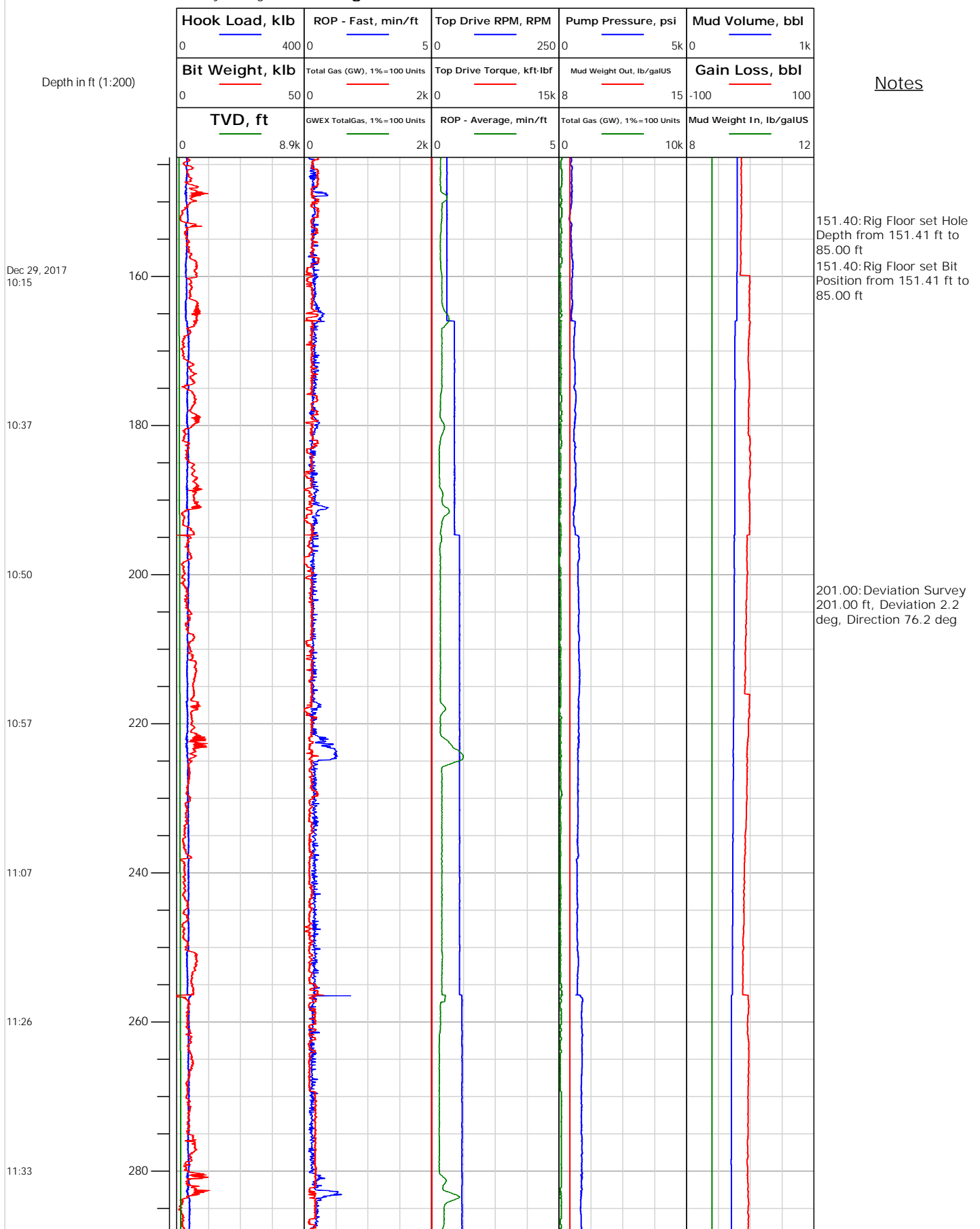


# Electronic Drilling Recorder

**Operator:** Laramie Energy  
**Contractor:** Helmerich & Payne Drlg Co

**Well Name:** Nichols 24-03E  
**Rig:** 290

**Location:** SW/4 of NE/4







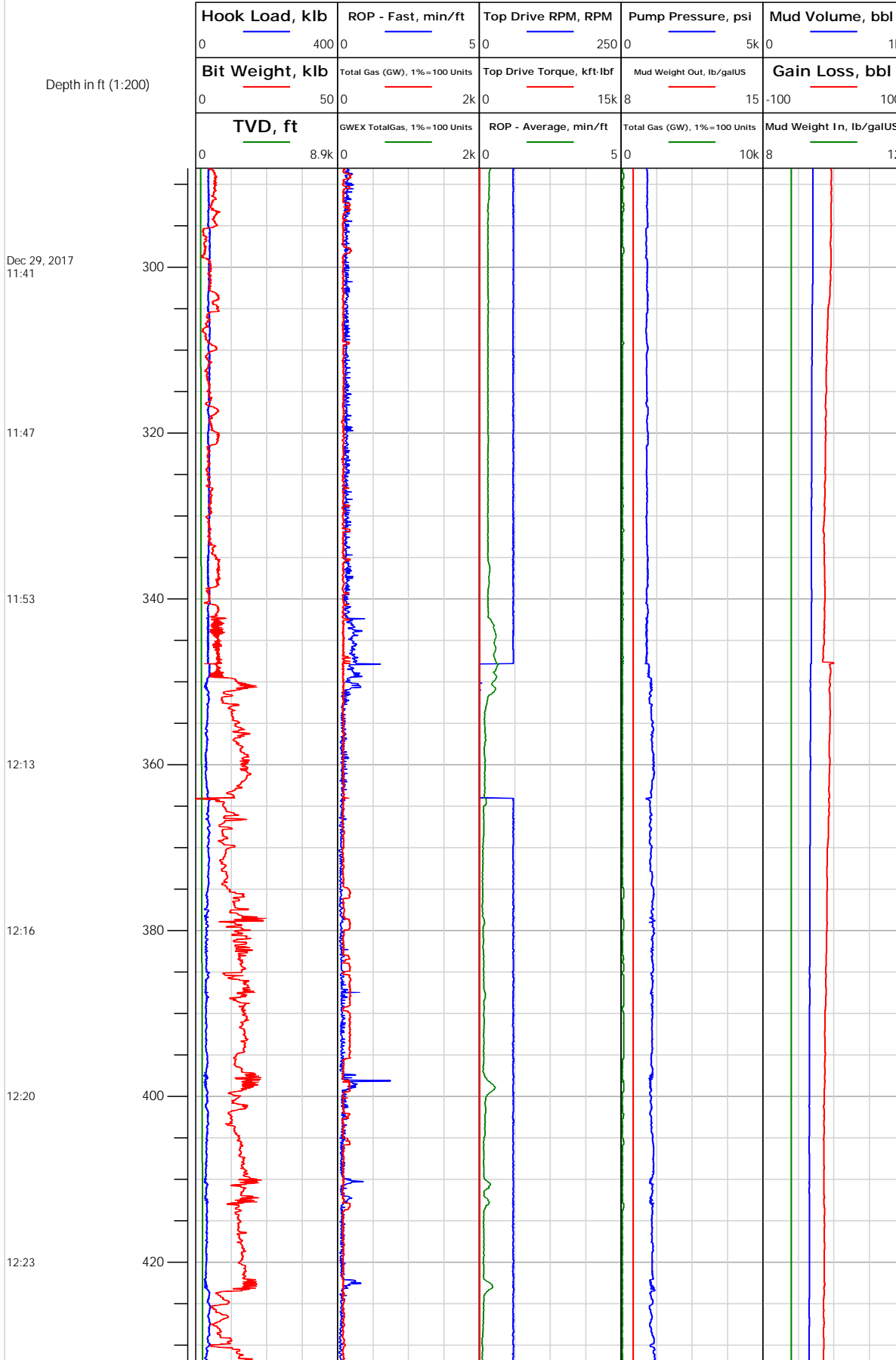
# Electronic Drilling Recorder

**Operator:** Laramie Energy  
**Contractor:** Helmerich & Payne Drlg Co

**Well Name:** Nichols 24-03E  
**Rig:** 290

**Location:** SW/4 of NE/4

## Notes





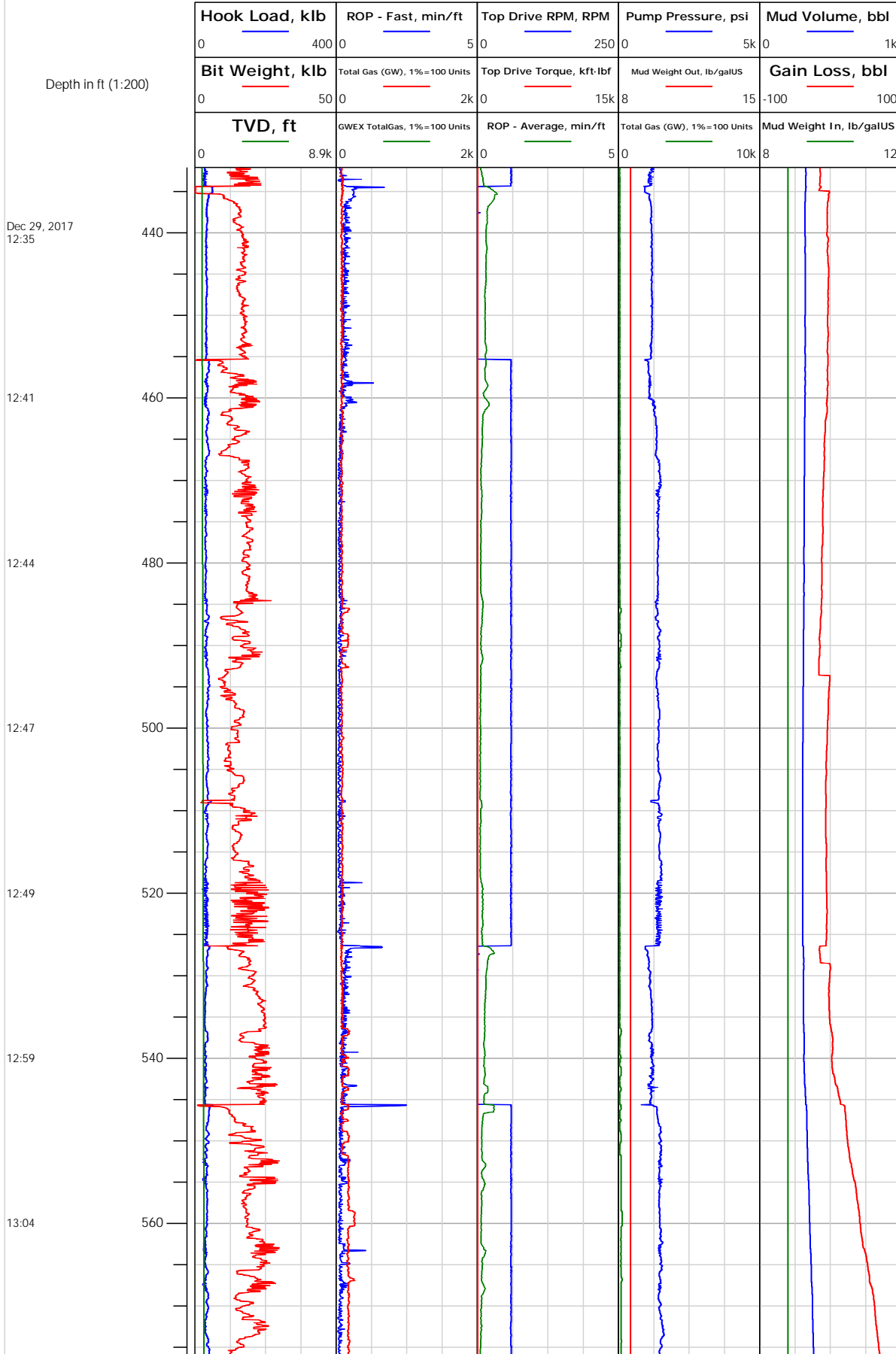
# Electronic Drilling Recorder

**Operator:** Laramie Energy  
**Contractor:** Helmerich & Payne Drlg Co

**Well Name:** Nichols 24-03E  
**Rig:** 290

**Location:** SW/4 of NE/4

## Notes





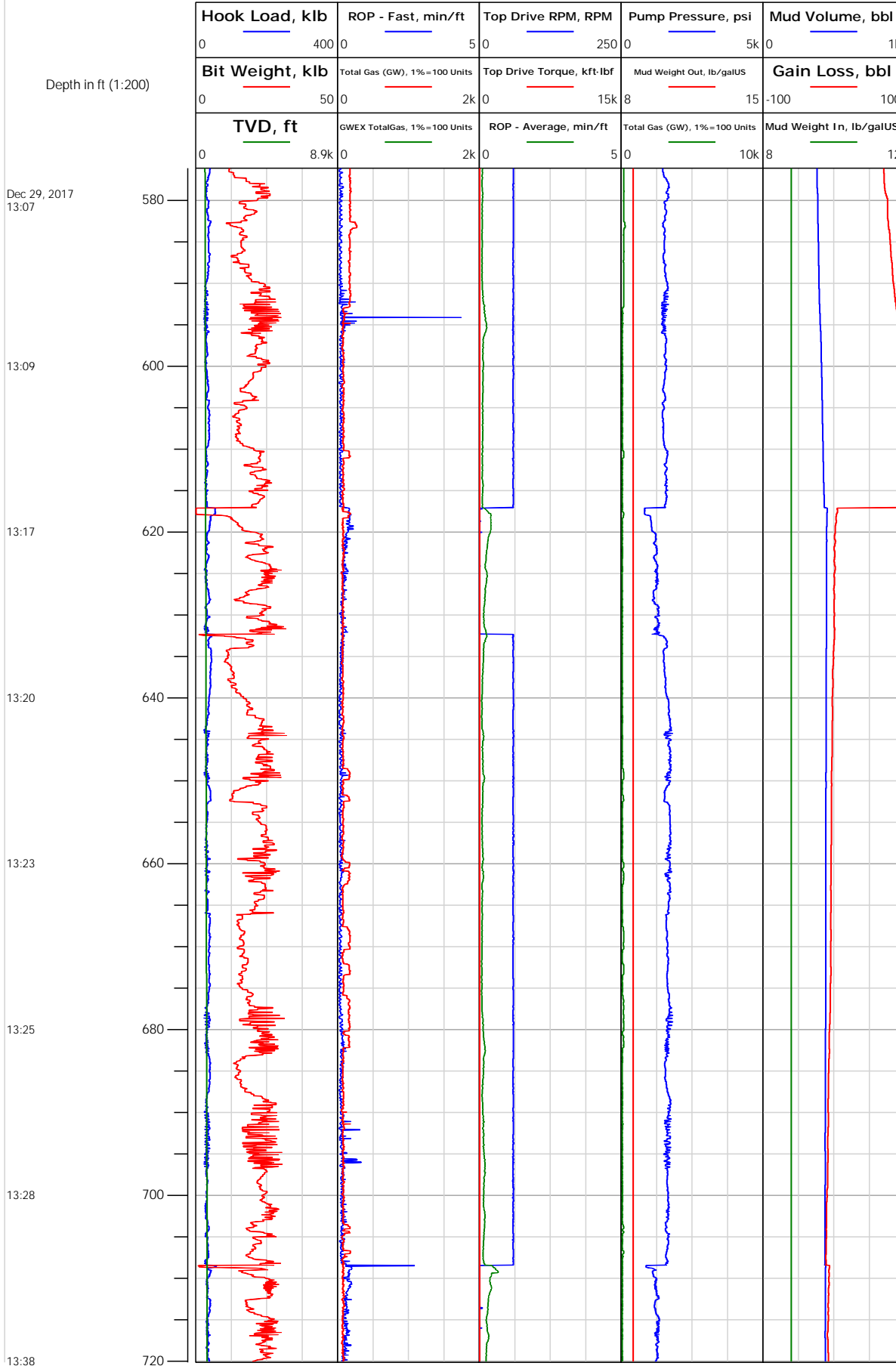
# Electronic Drilling Recorder

**Operator:** Laramie Energy  
**Contractor:** Helmerich & Payne Drlg Co

**Well Name:** Nichols 24-03E  
**Rig:** 290

**Location:** SW/4 of NE/4

Notes





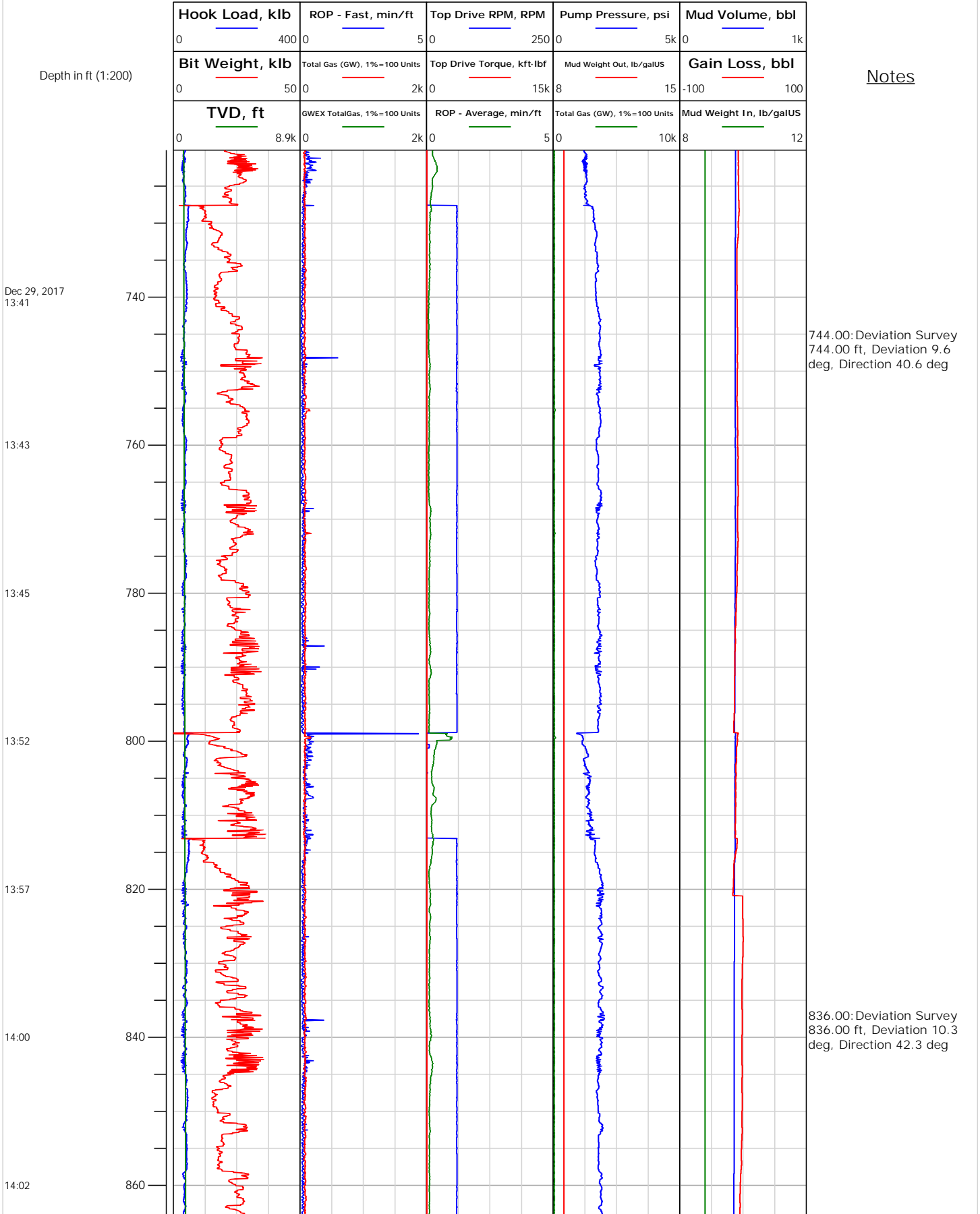
# Electronic Drilling Recorder

**Operator:** Laramie Energy  
**Contractor:** Helmerich & Payne Drlg Co

**Well Name:** Nichols 24-03E  
**Rig:** 290

**Location:** SW/4 of NE/4

## Notes





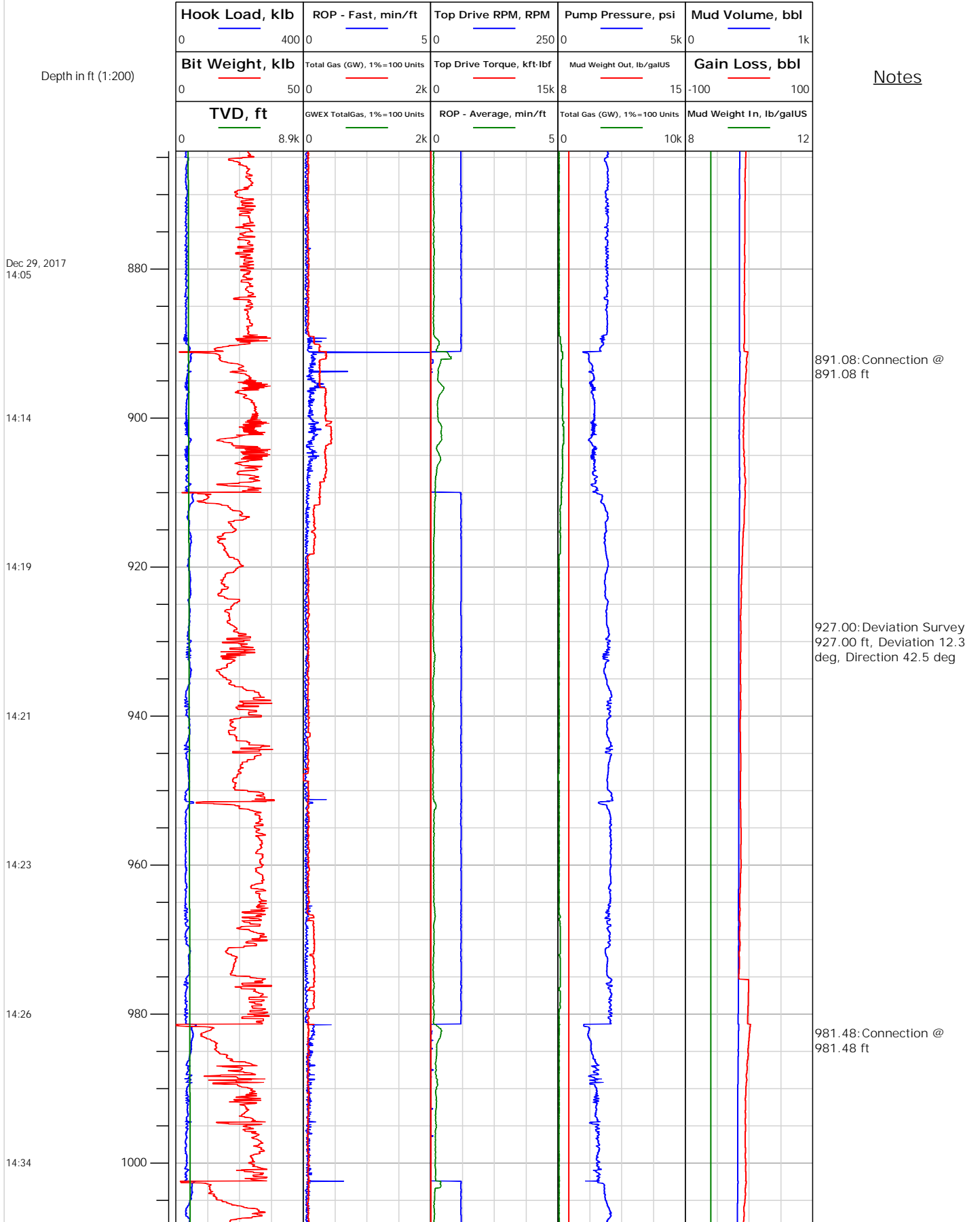
# Electronic Drilling Recorder

**Operator:** Laramie Energy  
**Contractor:** Helmerich & Payne Drlg Co

**Well Name:** Nichols 24-03E  
**Rig:** 290

**Location:** SW/4 of NE/4

## Notes





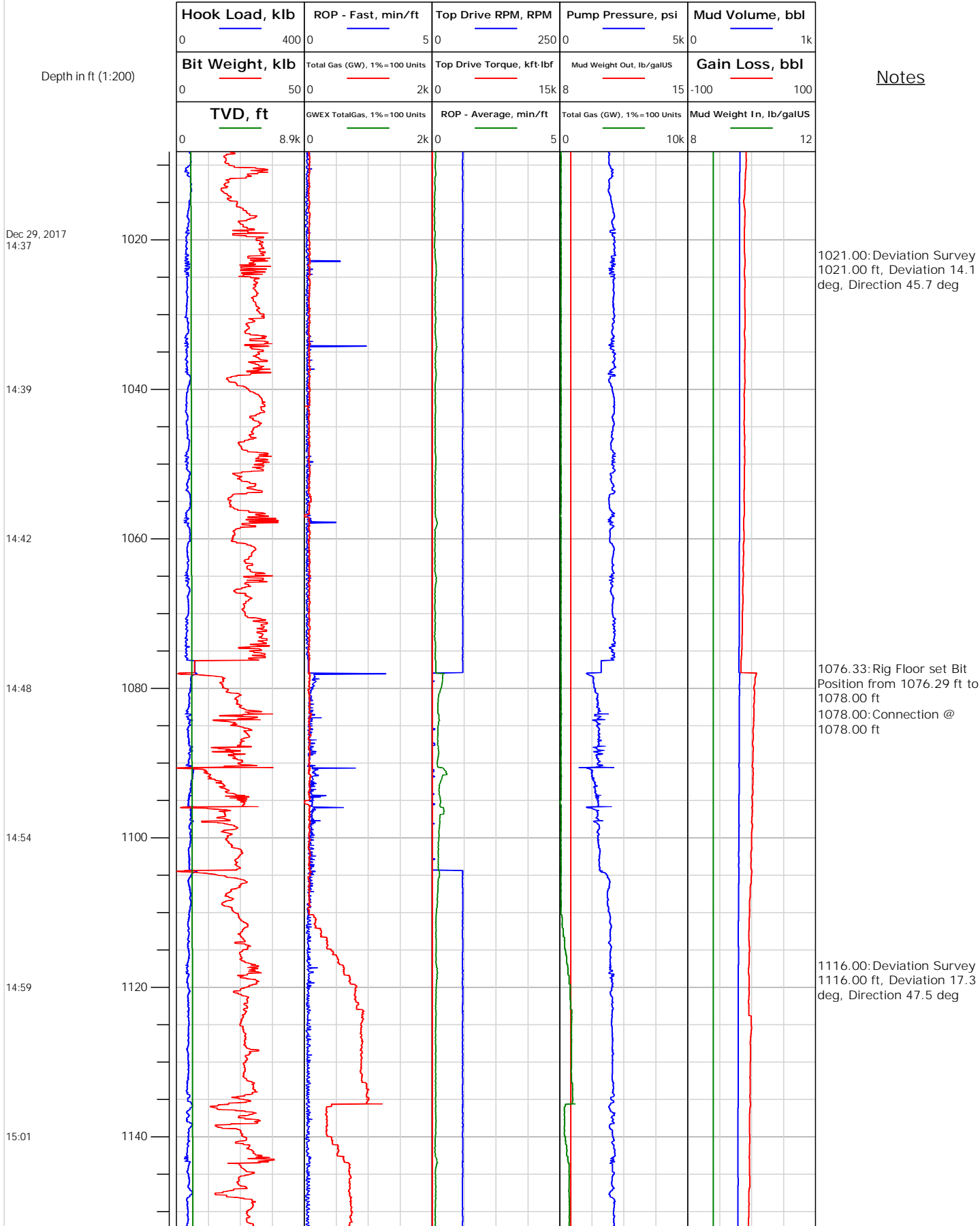
# Electronic Drilling Recorder

**Operator:** Laramie Energy  
**Contractor:** Helmerich & Payne Drlg Co

**Well Name:** Nichols 24-03E  
**Rig:** 290

**Location:** SW/4 of NE/4

## Notes





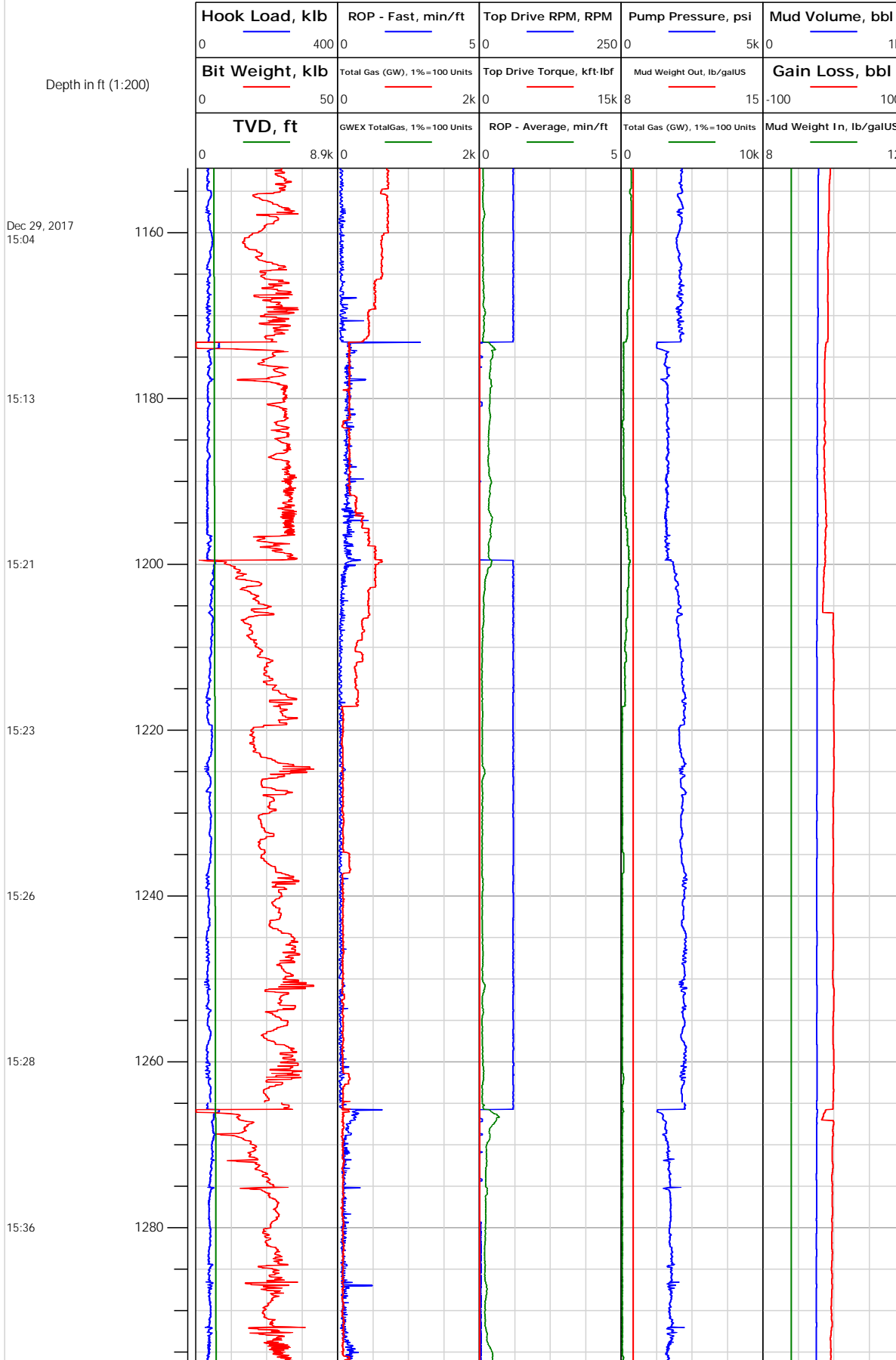
# Electronic Drilling Recorder

**Operator:** Laramie Energy  
**Contractor:** Helmerich & Payne Drlg Co

**Well Name:** Nichols 24-03E  
**Rig:** 290

**Location:** SW/4 of NE/4

## Notes



1173.18: Connection @  
1173.19 ft

1210.00: Deviation Survey  
1210.00 ft, Deviation 18.8  
deg, Direction 46.5 deg

1265.85: Connection @  
1265.85 ft  
1267.52: Rig Floor set Hole  
Depth from 1266.75 ft to  
1265.00 ft



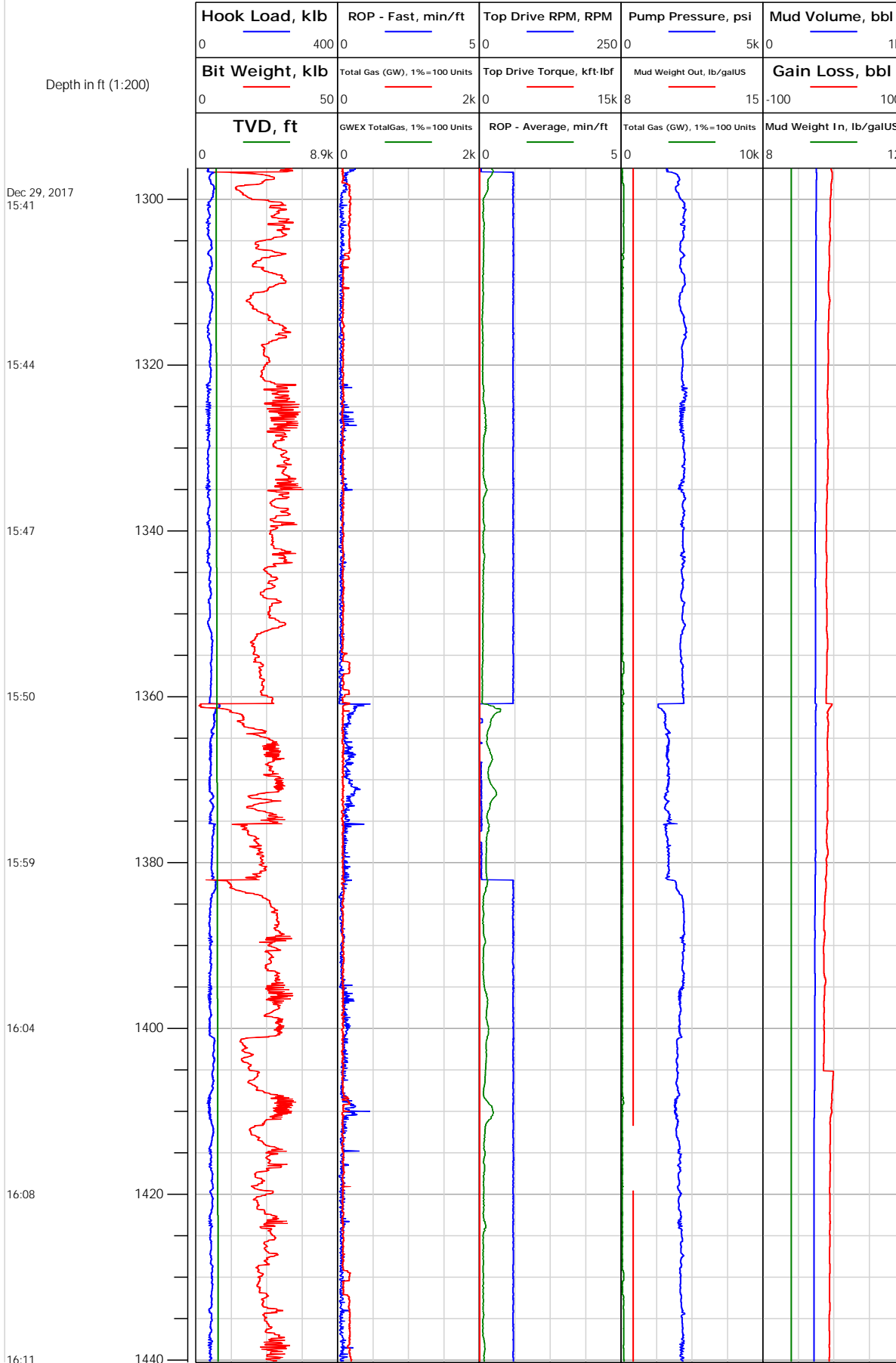
# Electronic Drilling Recorder

**Operator:** Laramie Energy  
**Contractor:** Helmerich & Payne Drlg Co

**Well Name:** Nichols 24-03E  
**Rig:** 290

**Location:** SW/4 of NE/4

## Notes



1305.00: Deviation Survey  
1305.00 ft, Deviation 21.9 deg, Direction 45.3 deg

1360.90: Connection @  
1360.90 ft

1399.00: Deviation Survey  
1399.00 ft, Deviation 23.4 deg, Direction 44.8 deg





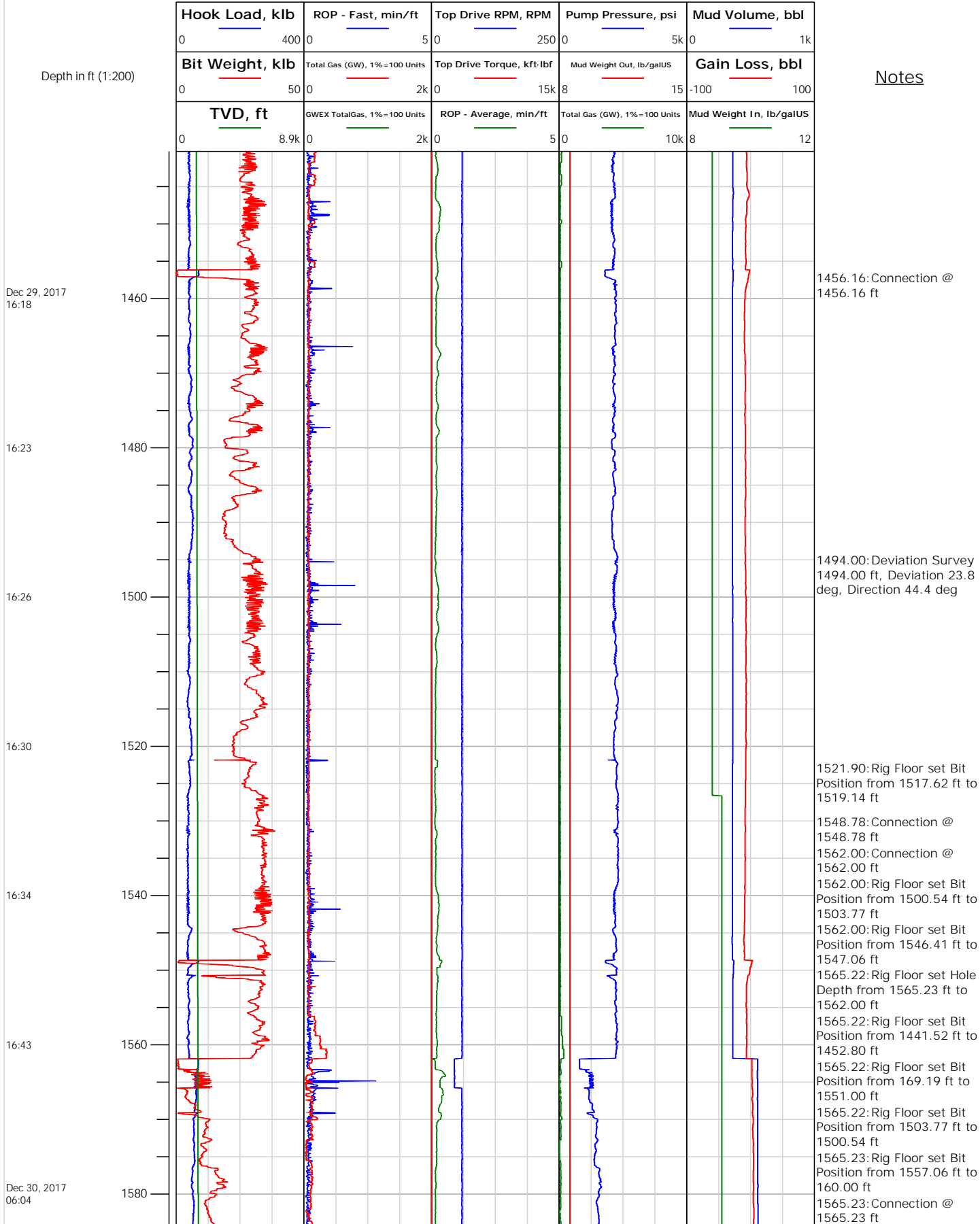
# Electronic Drilling Recorder

**Operator:** Laramie Energy  
**Contractor:** Helmerich & Payne Drlg Co

**Well Name:** Nichols 24-03E  
**Rig:** 290

**Location:** SW/4 of NE/4

## Notes





## Electronic Drilling Recorder

Operator: Laramie Energy  
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-03E  
Rig: 290

Location: SW/4 of NE/4

## Notes

Depth in ft (1:200)

Dec 30, 2017  
06:07

06:10

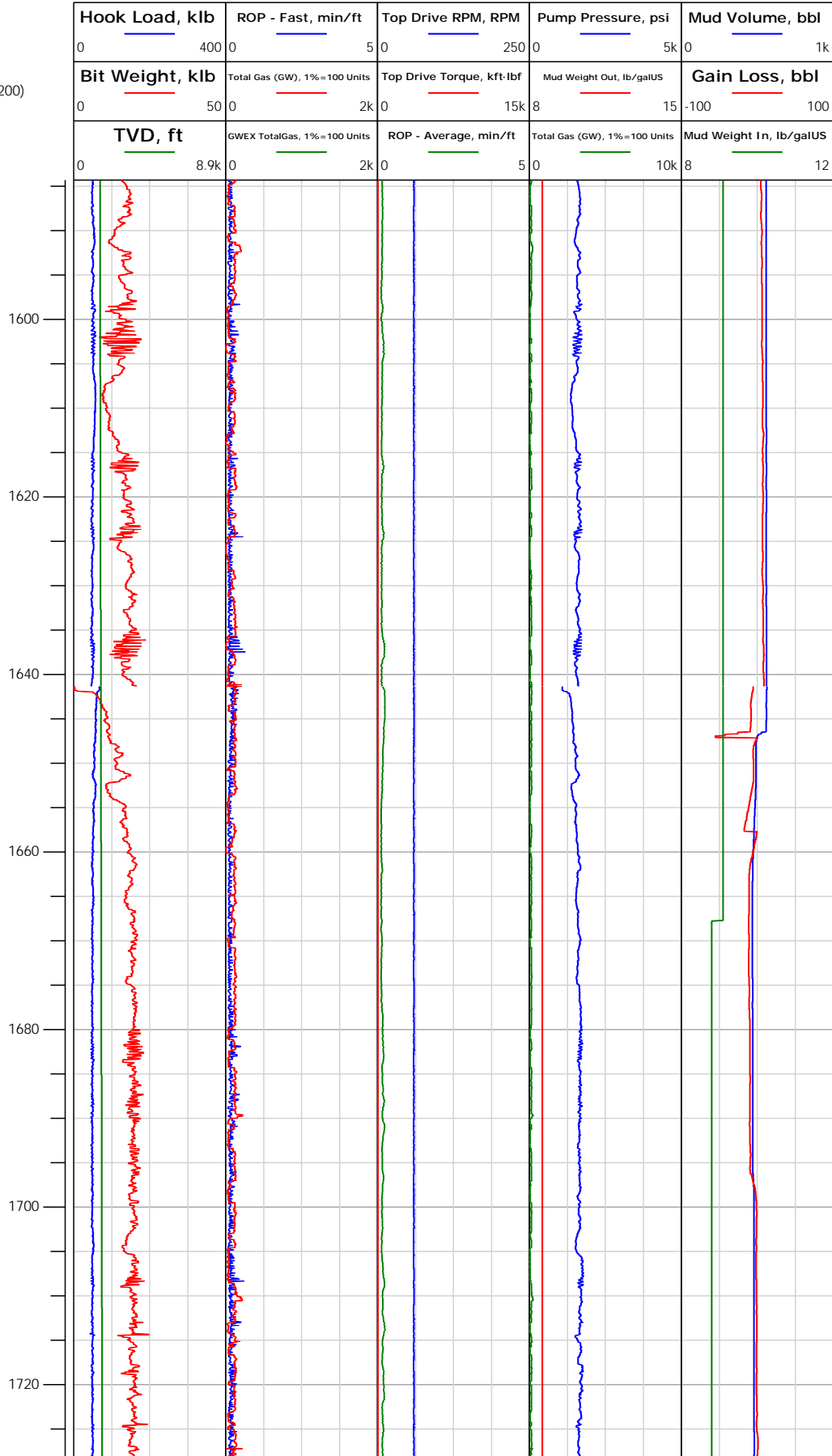
06:13

06:21

06:24

06:27

06:30





# Electronic Drilling Recorder

**Operator:** Laramie Energy  
**Contractor:** Helmerich & Payne Drlg Co

**Well Name:** Nichols 24-03E  
**Rig:** 290

**Location:** SW/4 of NE/4

## Notes

Depth in ft (1:200)

Dec 30, 2017  
06:36

06:39

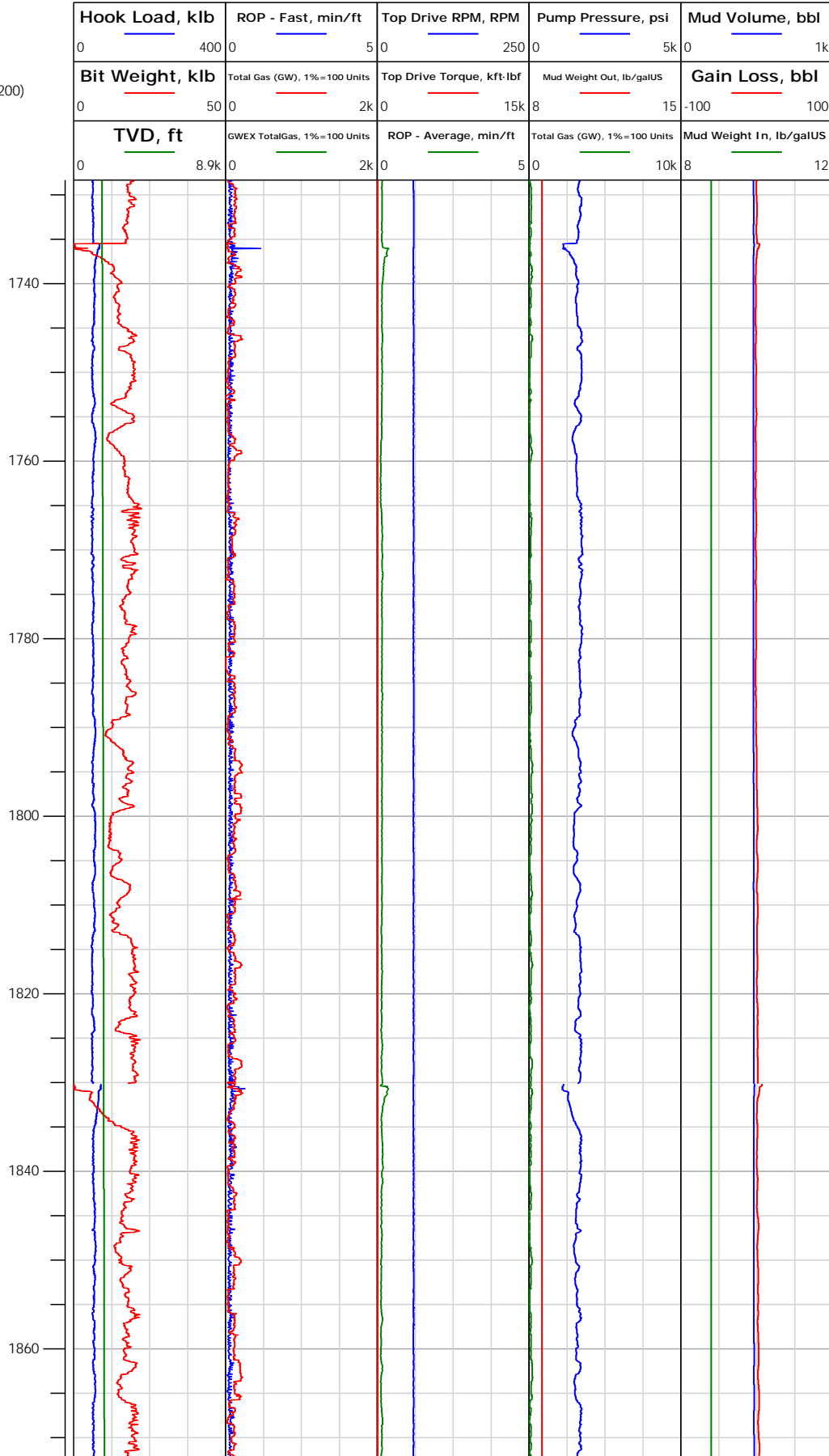
06:42

06:45

06:48

06:54

06:57



1735.43: Connection @  
1735.43 ft

1776.00: Deviation Survey  
1776.00 ft, Deviation 23.3  
deg, Direction 42.5 deg

1830.23: Connection @  
1830.23 ft

1871.00: Deviation Survey  
1871.00 ft, Deviation 22.4  
deg, Direction 41.7 deg



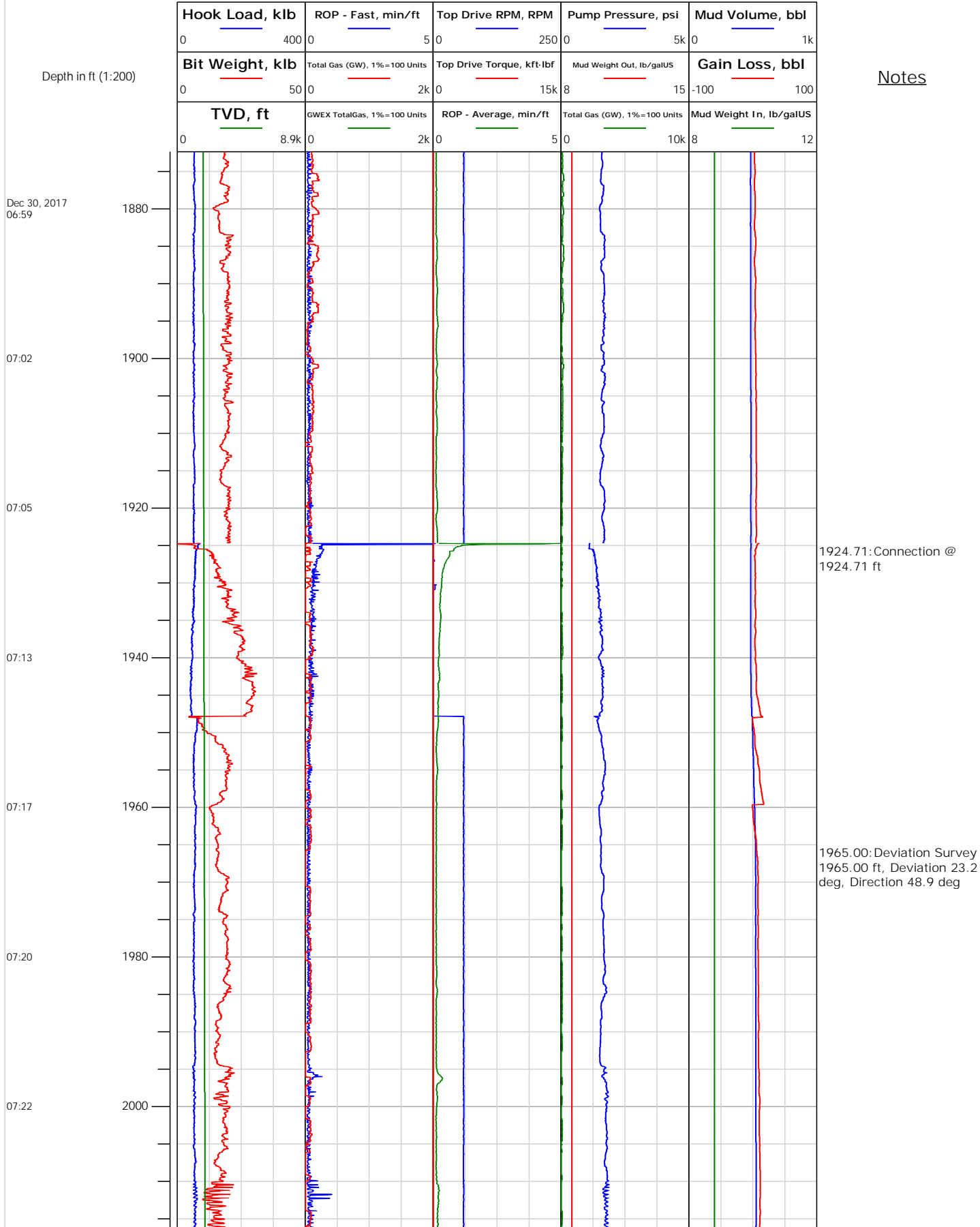
# Electronic Drilling Recorder

**Operator:** Laramie Energy  
**Contractor:** Helmerich & Payne Drlg Co

**Well Name:** Nichols 24-03E  
**Rig:** 290

**Location:** SW/4 of NE/4

Notes



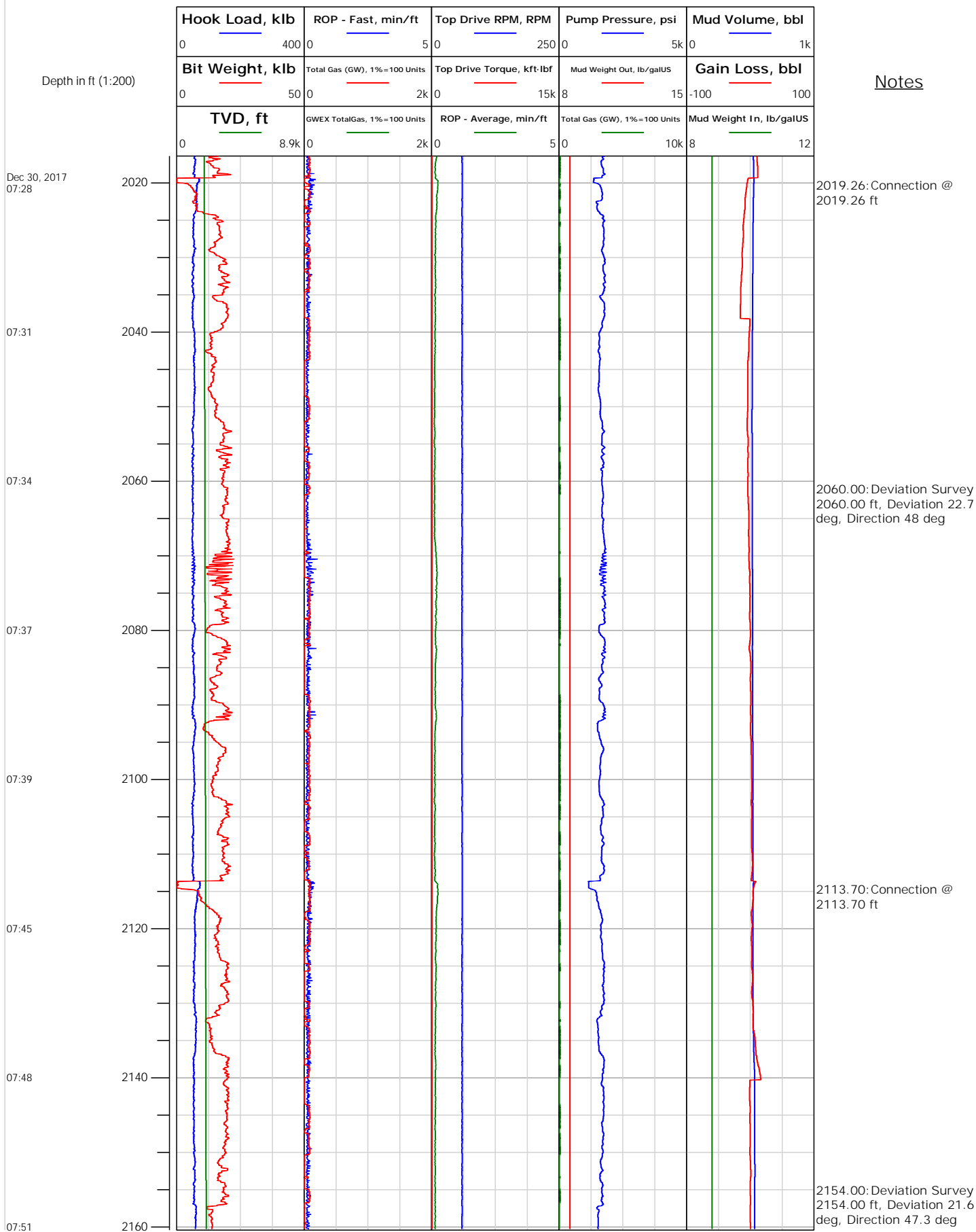


## Electronic Drilling Recorder

Operator: Laramie Energy  
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-03E  
Rig: 290

Location: SW/4 of NE/4





# Electronic Drilling Recorder

**Operator:** Laramie Energy  
**Contractor:** Helmerich & Payne Drlg Co

**Well Name:** Nichols 24-03E  
**Rig:** 290

**Location:** SW/4 of NE/4

Notes

Depth in ft (1:200)

Dec 30, 2017  
07:54

07:57

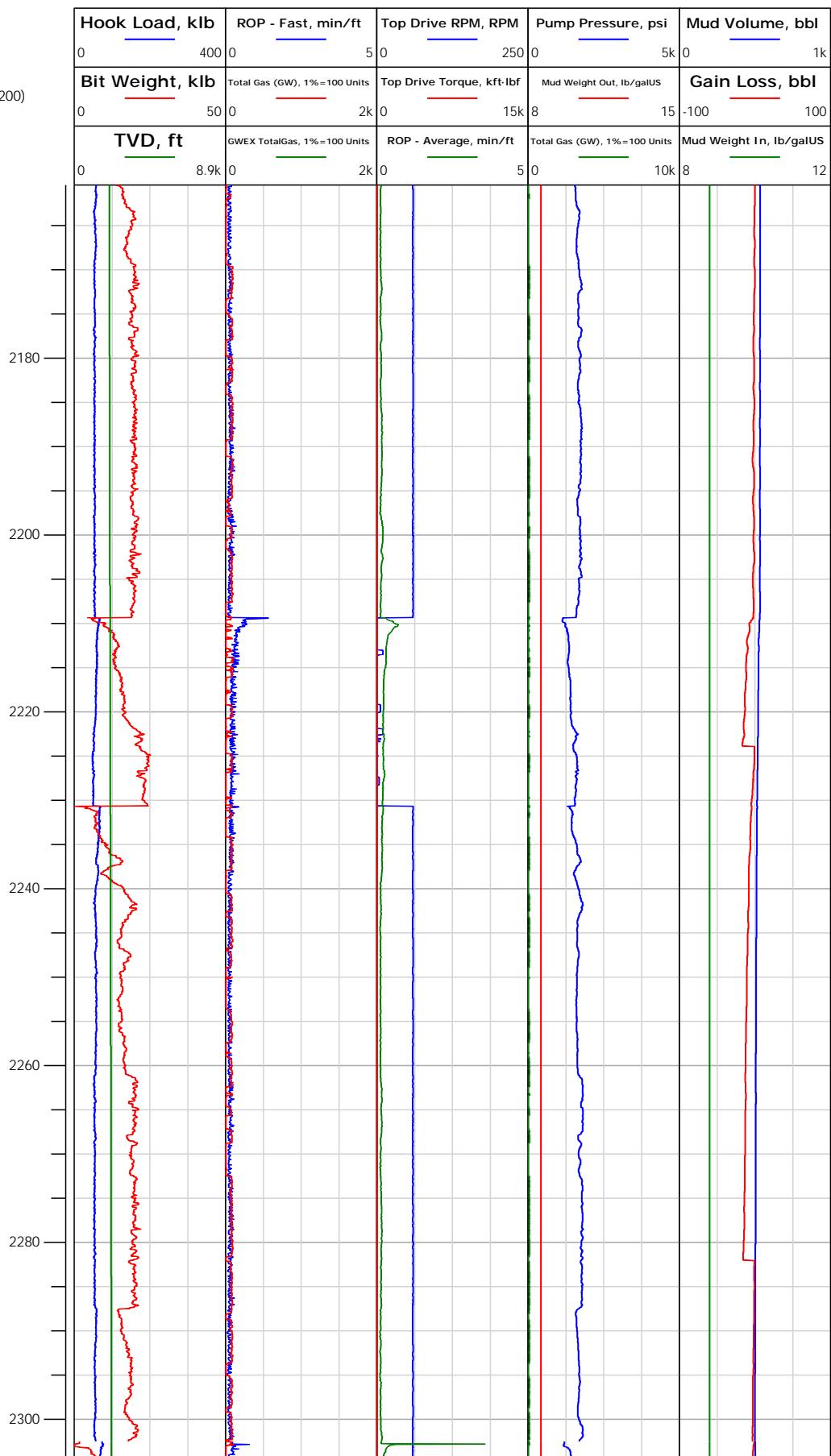
08:04

08:08

08:10

08:13

08:16



2209.37: Connection @  
2209.38 ft

2249.00: Deviation Survey  
2249.00 ft, Deviation 23.4  
deg, Direction 49.1 deg

2302.65: Connection @  
2302.66 ft



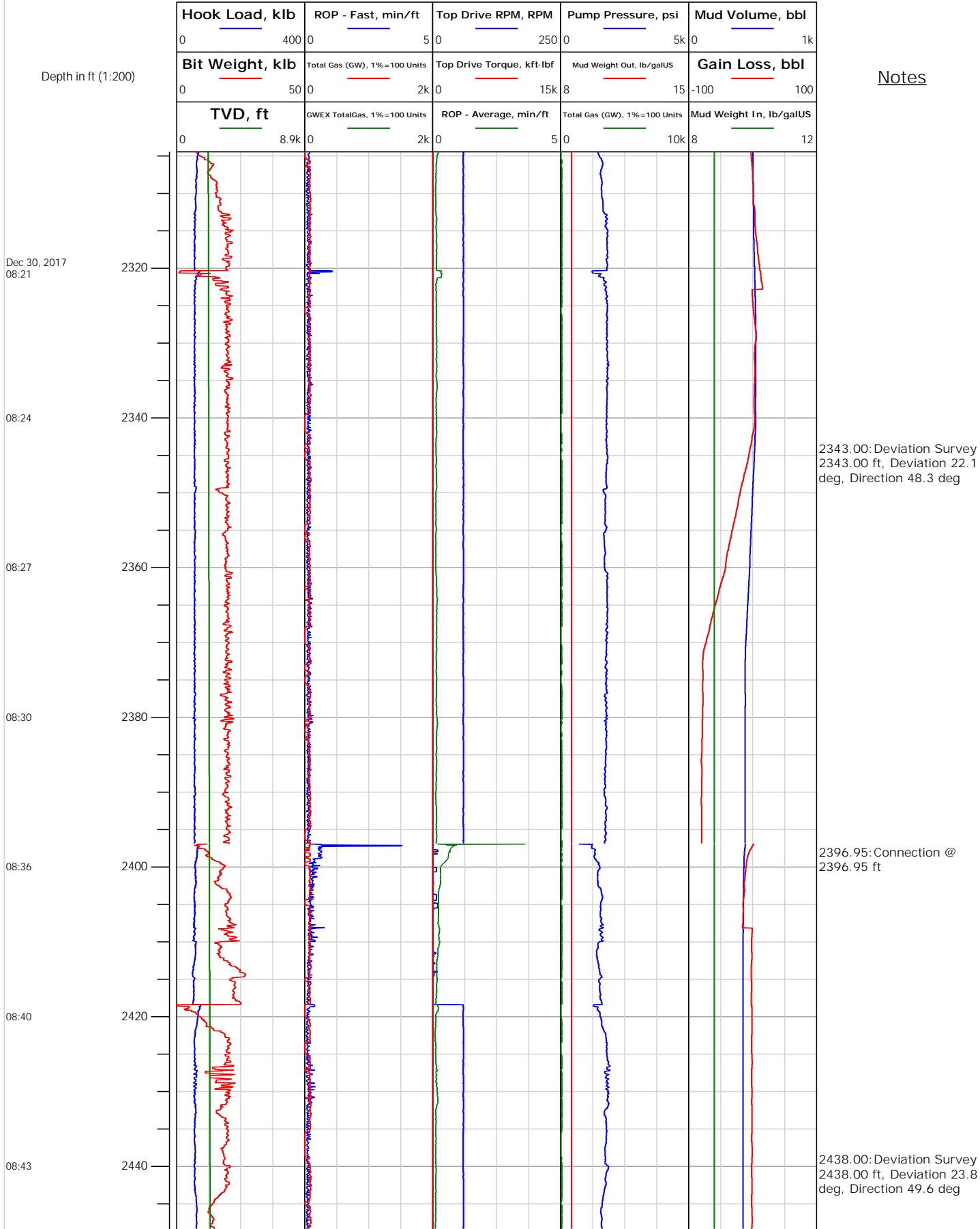
# Electronic Drilling Recorder

**Operator:** Laramie Energy  
**Contractor:** Helmerich & Payne Drlg Co

**Well Name:** Nichols 24-03E  
**Rig:** 290

**Location:** SW/4 of NE/4

## Notes





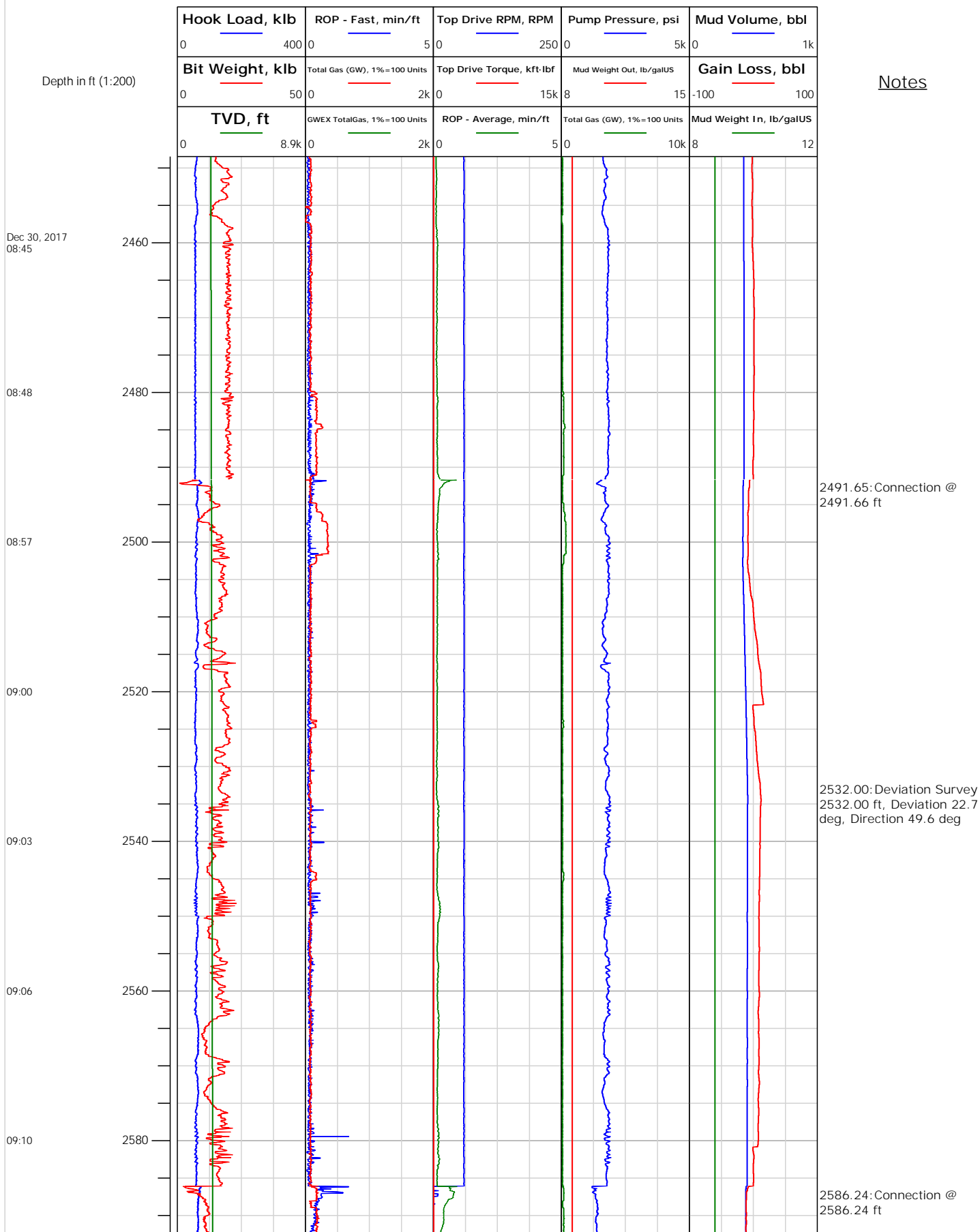
# Electronic Drilling Recorder

**Operator:** Laramie Energy  
**Contractor:** Helmerich & Payne Drlg Co

**Well Name:** Nichols 24-03E  
**Rig:** 290

**Location:** SW/4 of NE/4

Notes







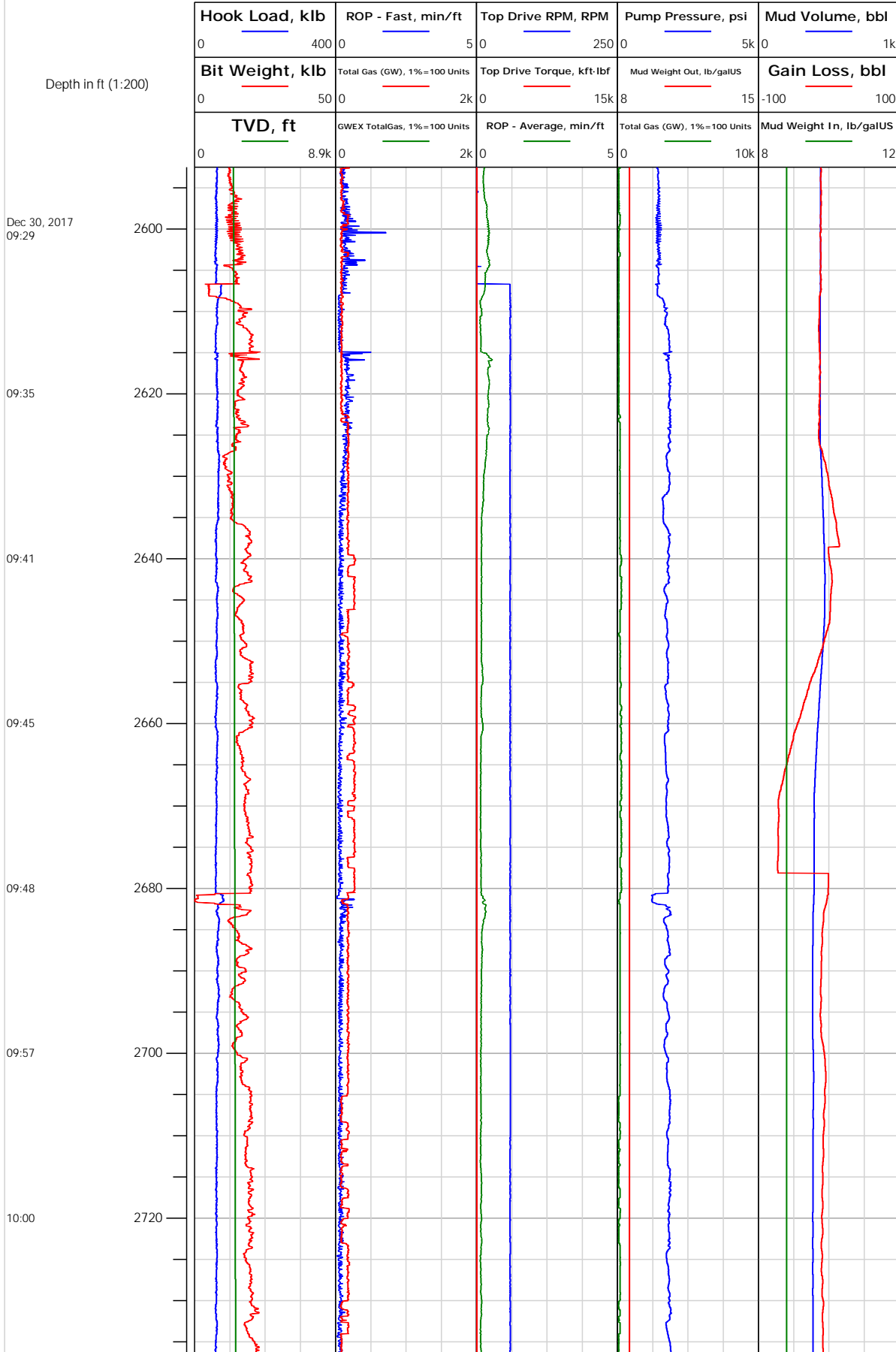
# Electronic Drilling Recorder

**Operator:** Laramie Energy  
**Contractor:** Helmerich & Payne Drlg Co

**Well Name:** Nichols 24-03E  
**Rig:** 290

**Location:** SW/4 of NE/4

## Notes



2627.00: Deviation Survey  
2627.00 ft, Deviation 24  
deg, Direction 46 deg

2680.87: Connection @  
2680.87 ft

2722.00: Deviation Survey  
2722.00 ft, Deviation 23  
deg, Direction 46.2 deg



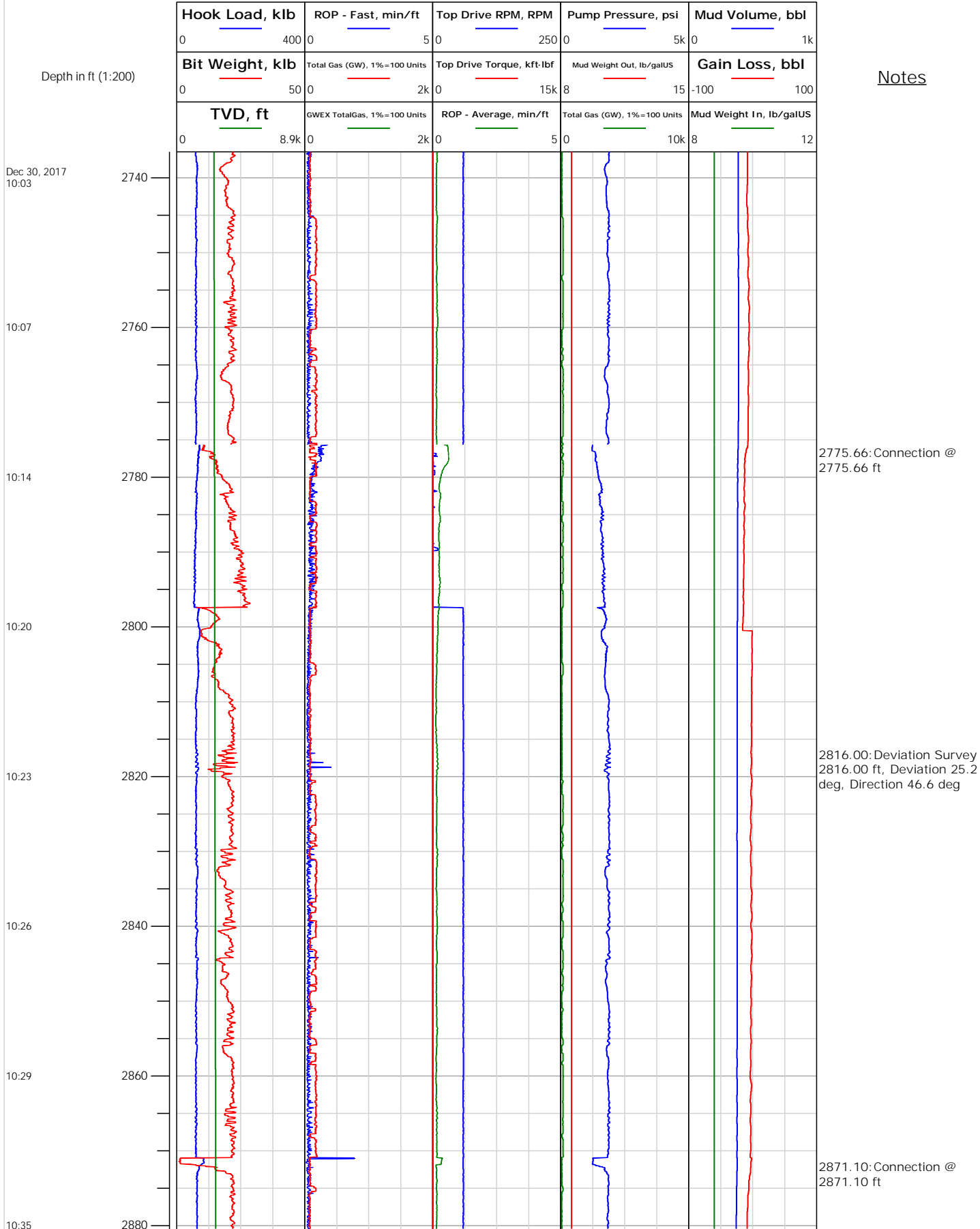
# Electronic Drilling Recorder

**Operator:** Laramie Energy  
**Contractor:** Helmerich & Payne Drlg Co

**Well Name:** Nichols 24-03E  
**Rig:** 290

**Location:** SW/4 of NE/4

## Notes





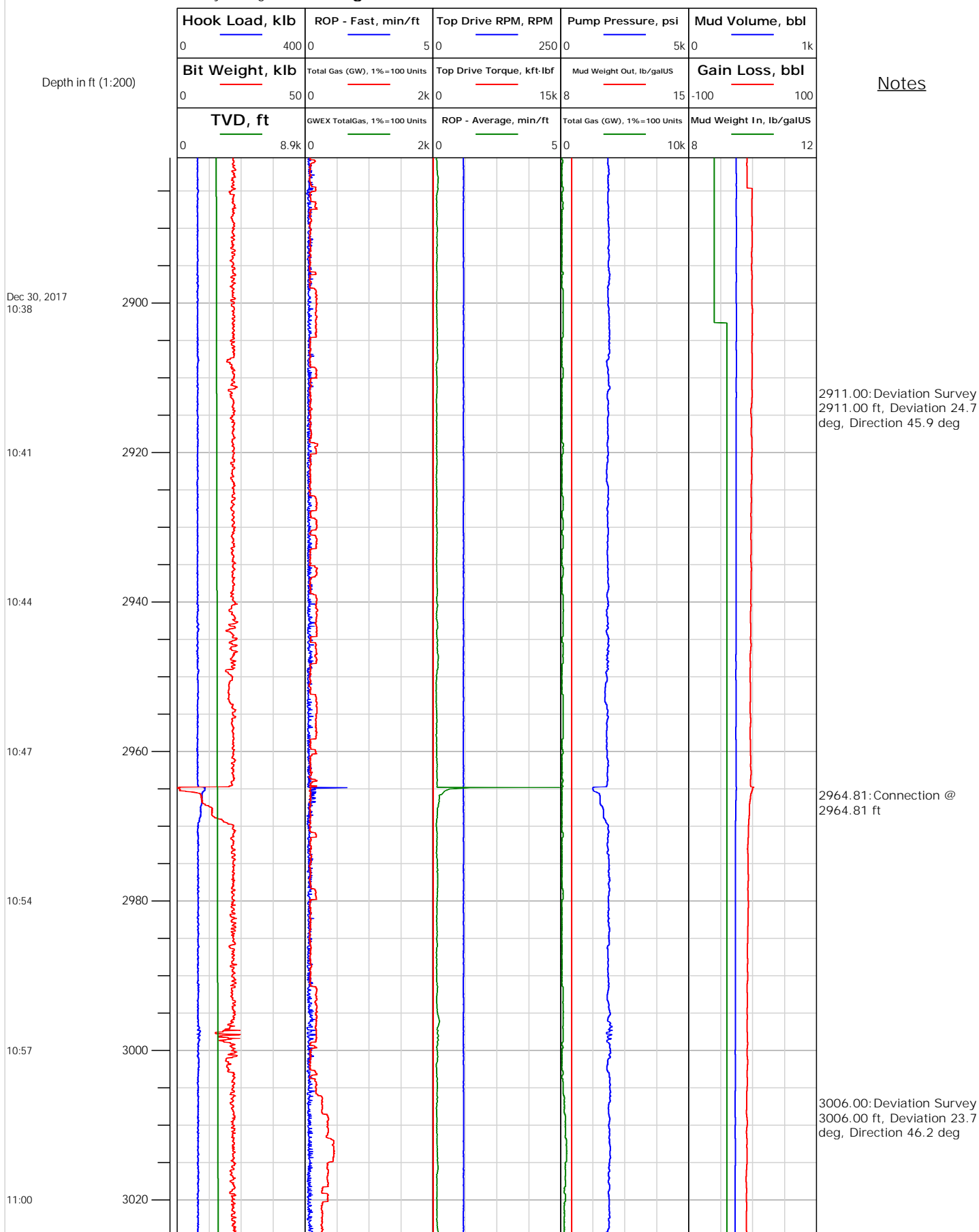
# Electronic Drilling Recorder

**Operator:** Laramie Energy  
**Contractor:** Helmerich & Payne Drlg Co

**Well Name:** Nichols 24-03E  
**Rig:** 290

**Location:** SW/4 of NE/4

## Notes





## Electronic Drilling Recorder

Operator: Laramie Energy  
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-03E  
Rig: 290

Location: SW/4 of NE/4

## Notes

Depth in ft (1:200)

Dec 30, 2017  
11:03

11:08

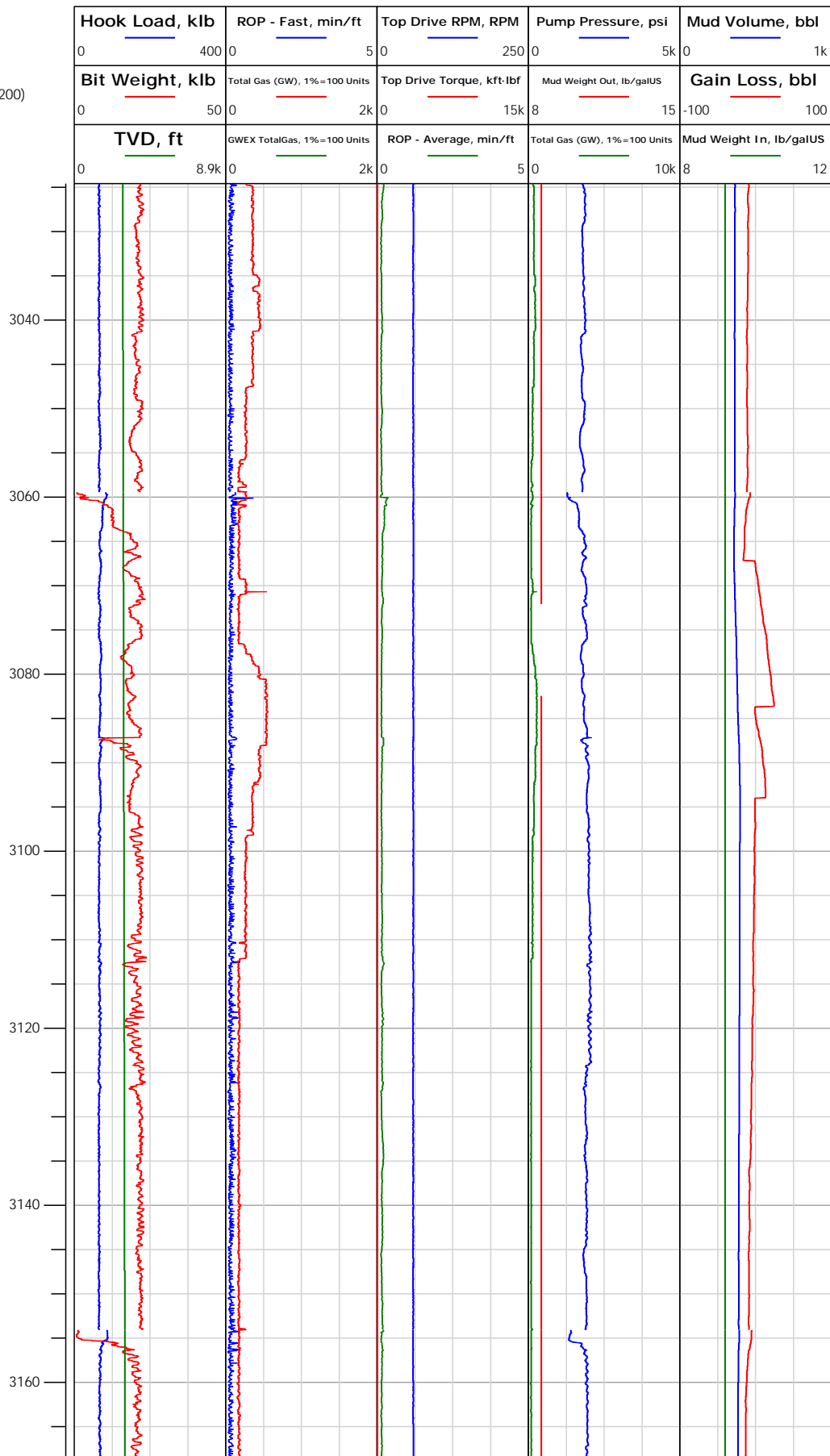
11:12

11:15

11:18

11:21

11:28





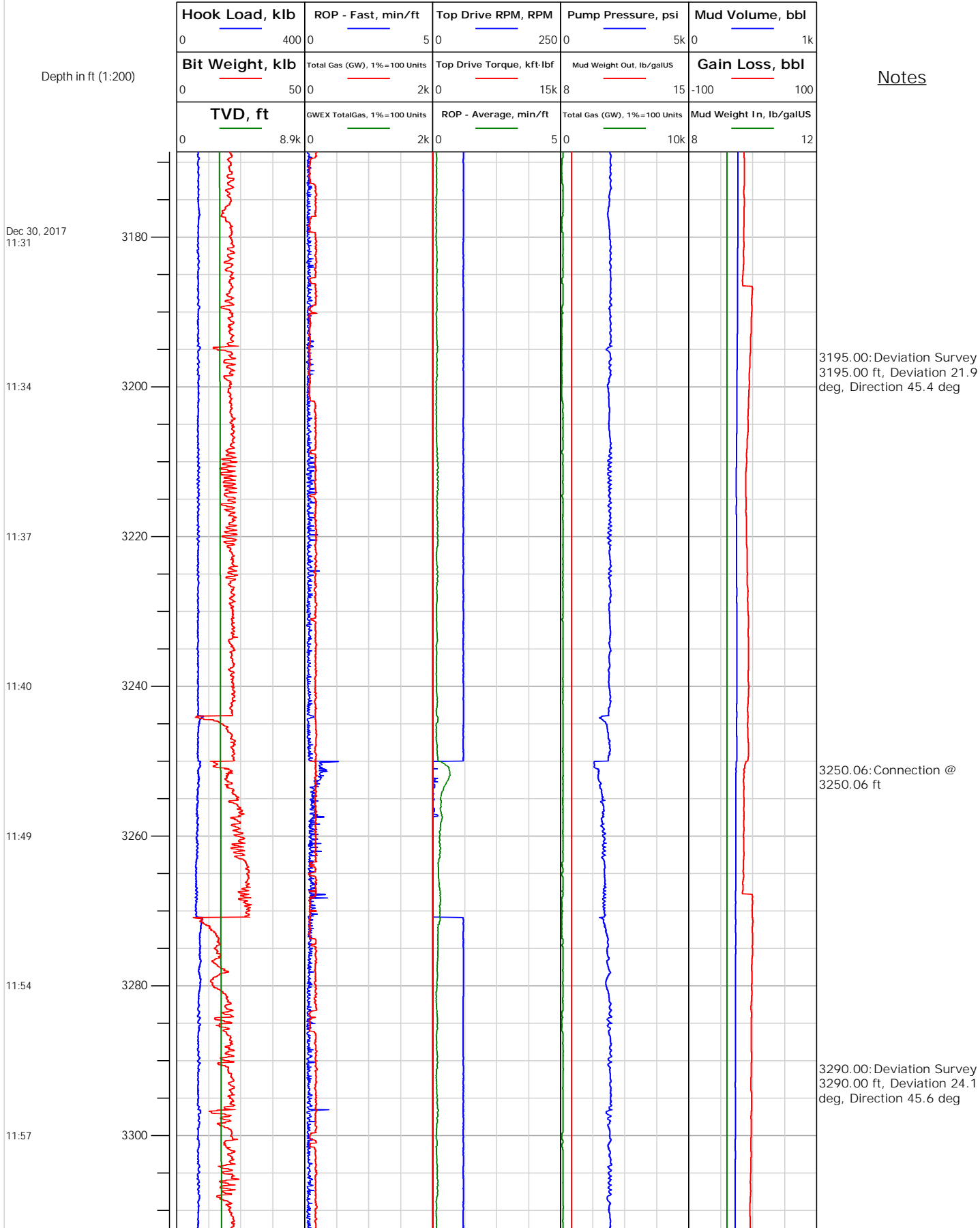
# Electronic Drilling Recorder

**Operator:** Laramie Energy  
**Contractor:** Helmerich & Payne Drlg Co

**Well Name:** Nichols 24-03E  
**Rig:** 290

**Location:** SW/4 of NE/4

## Notes





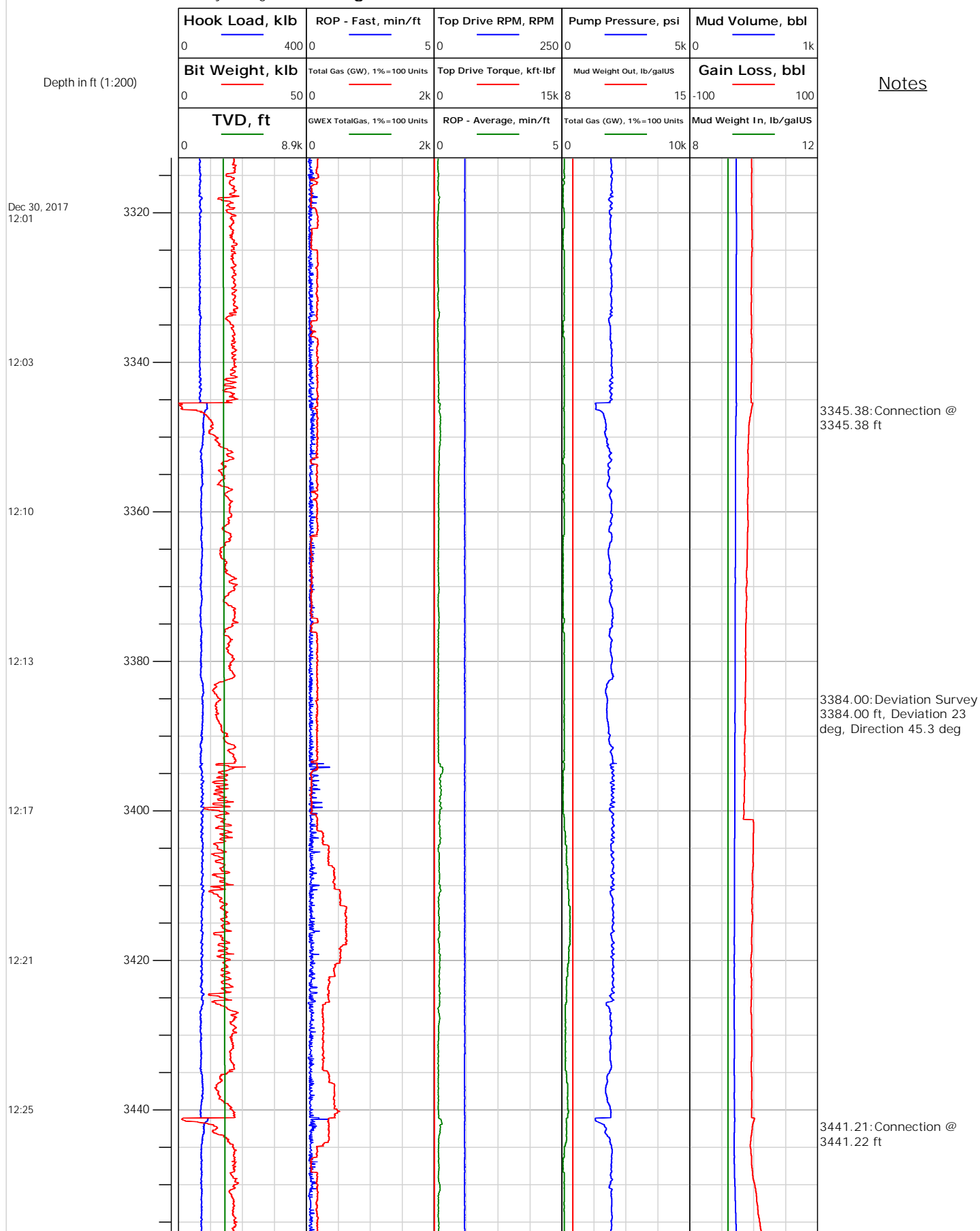
## Electronic Drilling Recorder

Operator: Laramie Energy  
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-03E  
Rig: 290

Location: SW/4 of NE/4

## Notes





# Electronic Drilling Recorder

**Operator:** Laramie Energy  
**Contractor:** Helmerich & Payne Drlg Co

**Well Name:** Nichols 24-03E  
**Rig:** 290

**Location:** SW/4 of NE/4

Depth in ft (1:200)

Notes

Dec 30, 2017  
12:31

12:34

12:37

12:41

12:48

12:51

12:54

12:58

3460

3480

3500

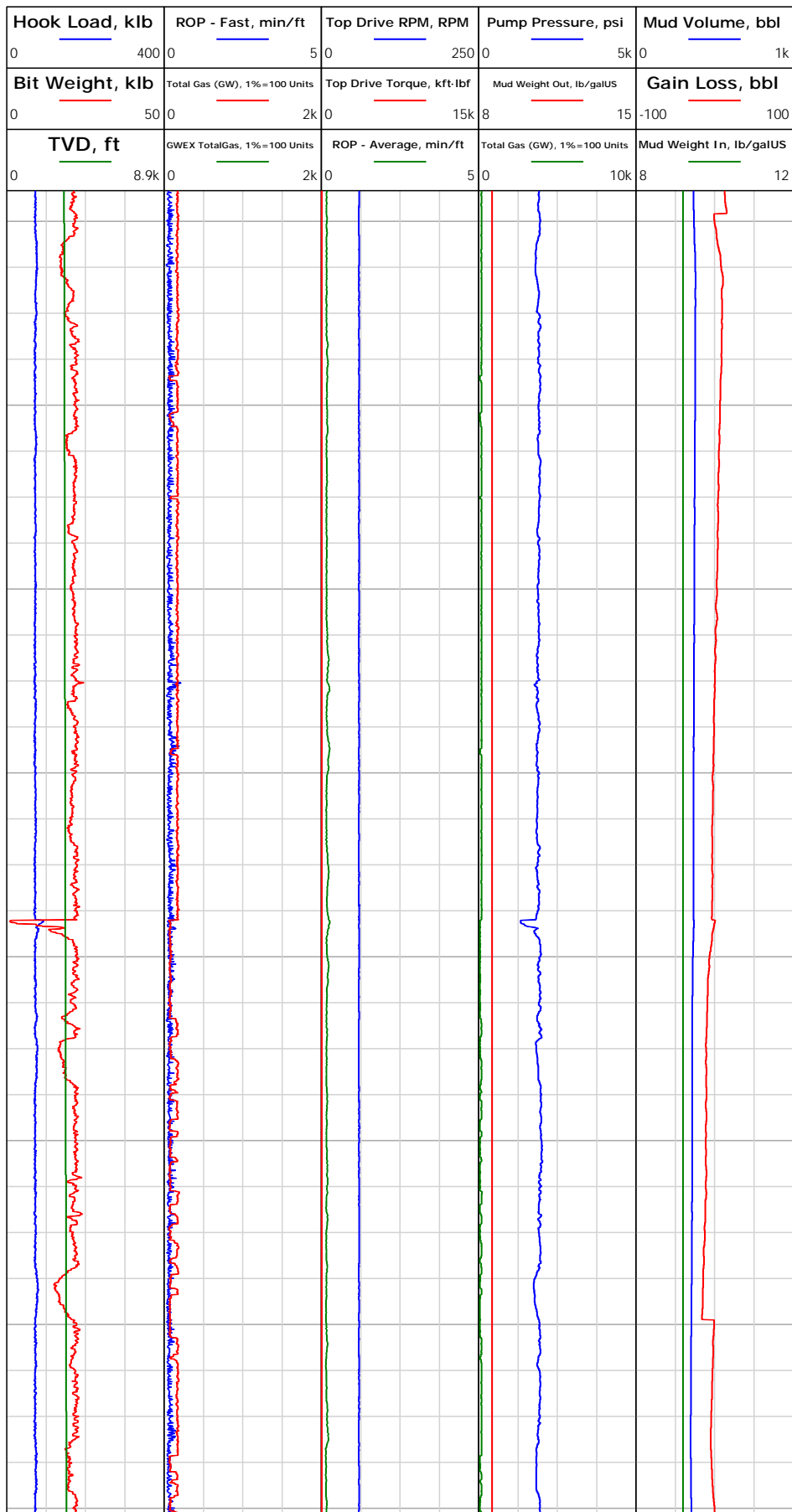
3520

3540

3560

3580

3600



3479.00: Deviation Survey  
3479.00 ft, Deviation 22.3  
deg, Direction 45.3 deg

3536.07: Connection @  
3536.07 ft

3574.00: Deviation Survey  
3574.00 ft, Deviation 21.9  
deg, Direction 45.2 deg



## Electronic Drilling Recorder

Operator: Laramie Energy  
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-03E  
Rig: 290

Location: SW/4 of NE/4

## Notes

Depth in ft (1:200)

Dec 30, 2017  
13:01

13:08

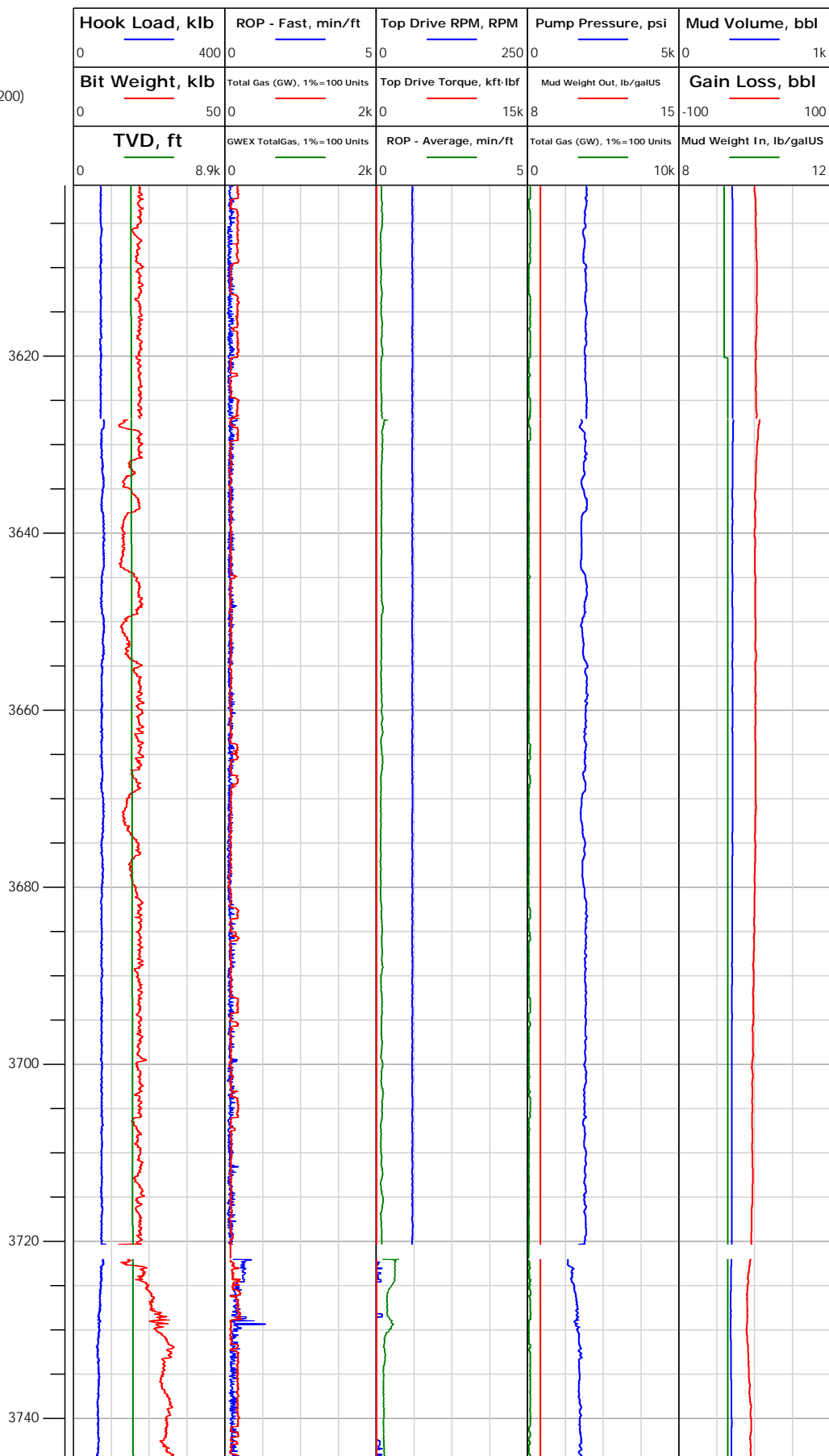
13:11

13:15

13:18

13:22

13:32



3631.28: Connection @  
3631.28 ft  
3632.90: Rig Floor set Hole  
Depth from 3632.38 ft to  
3627.00 ft

3667.99: Deviation Survey  
3668.00 ft, Deviation 20.8  
deg, Direction 44.8 deg

3722.10: Connection @  
3722.10 ft





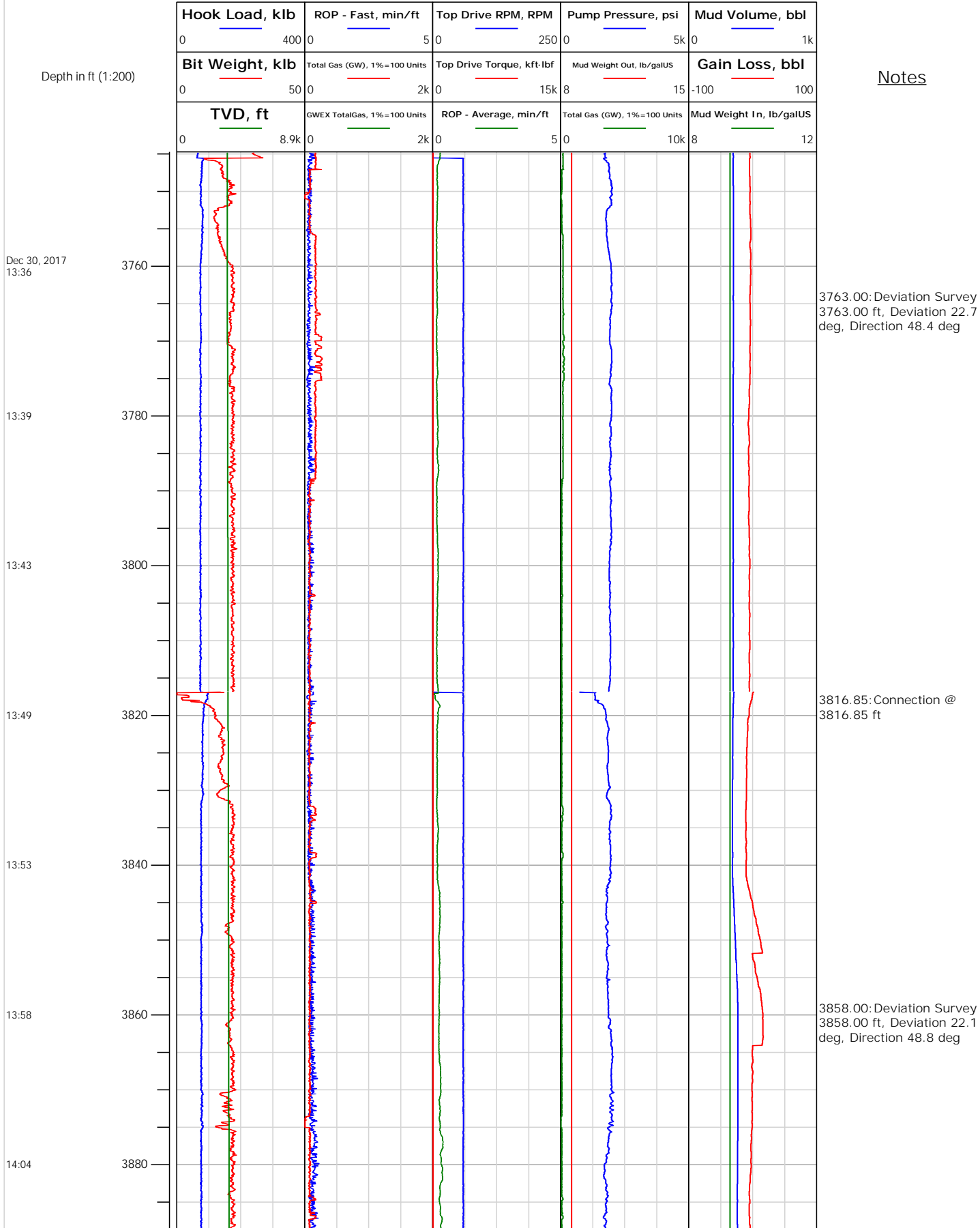
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**Operator:** Laramie Energy  
**Contractor:** Helmerich & Payne Drlg Co

**Well Name:** Nichols 24-03E  
**Rig:** 290

**Location:** SW/4 of NE/4

## Notes





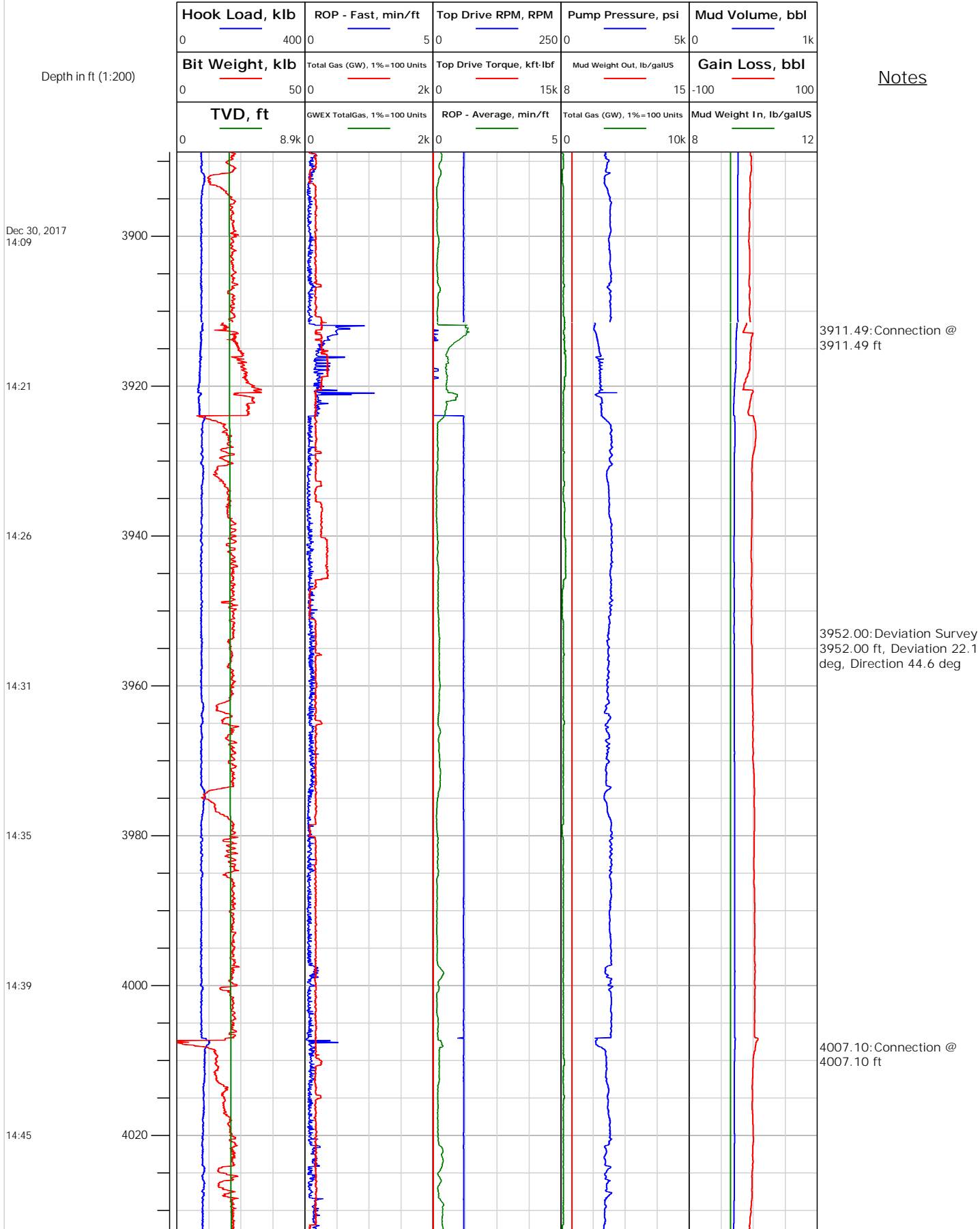
# Electronic Drilling Recorder

**Operator:** Laramie Energy  
**Contractor:** Helmerich & Payne Drlg Co

**Well Name:** Nichols 24-03E  
**Rig:** 290

**Location:** SW/4 of NE/4

## Notes





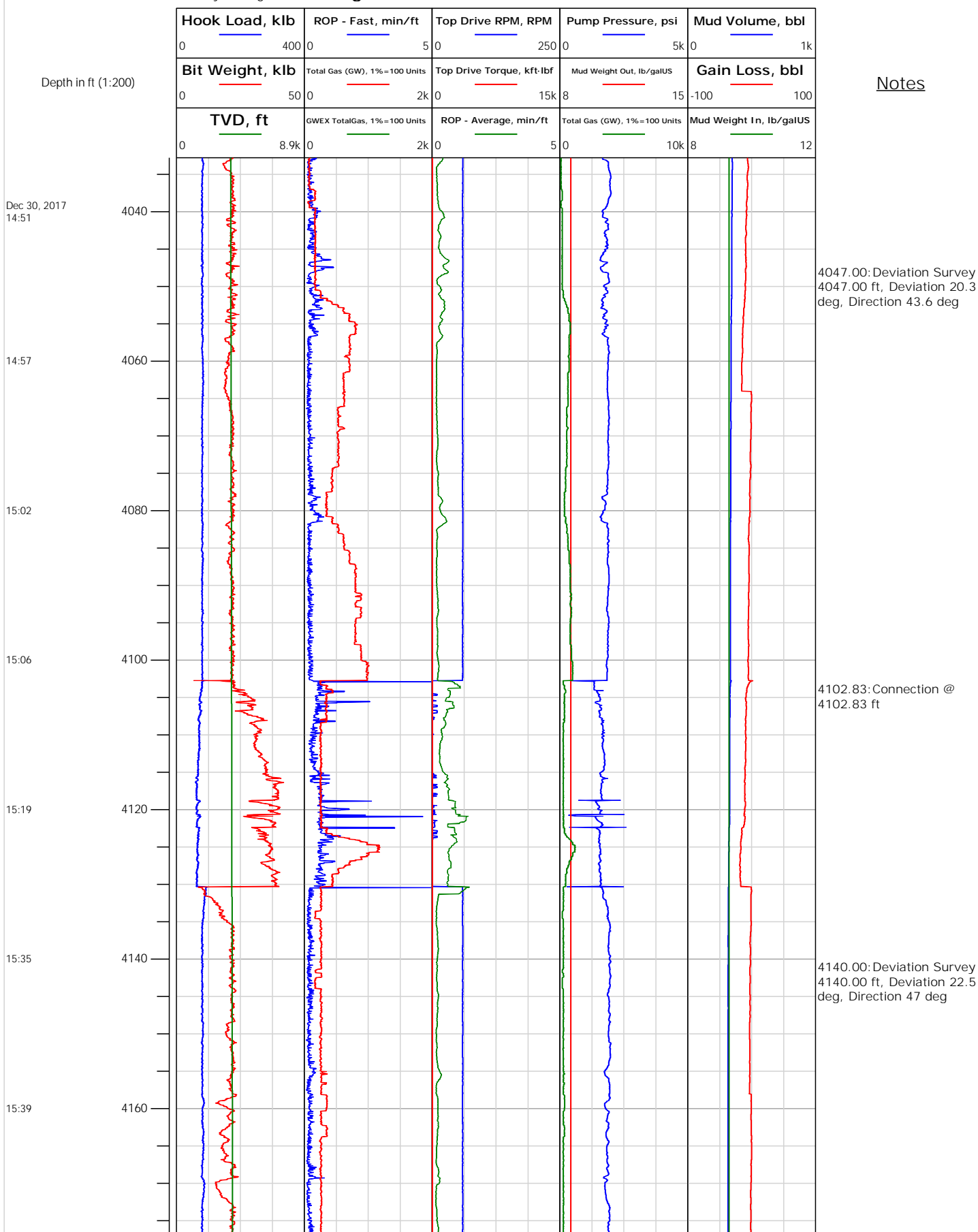
# Electronic Drilling Recorder

**Operator:** Laramie Energy  
**Contractor:** Helmerich & Payne Drlg Co

**Well Name:** Nichols 24-03E  
**Rig:** 290

**Location:** SW/4 of NE/4

## Notes





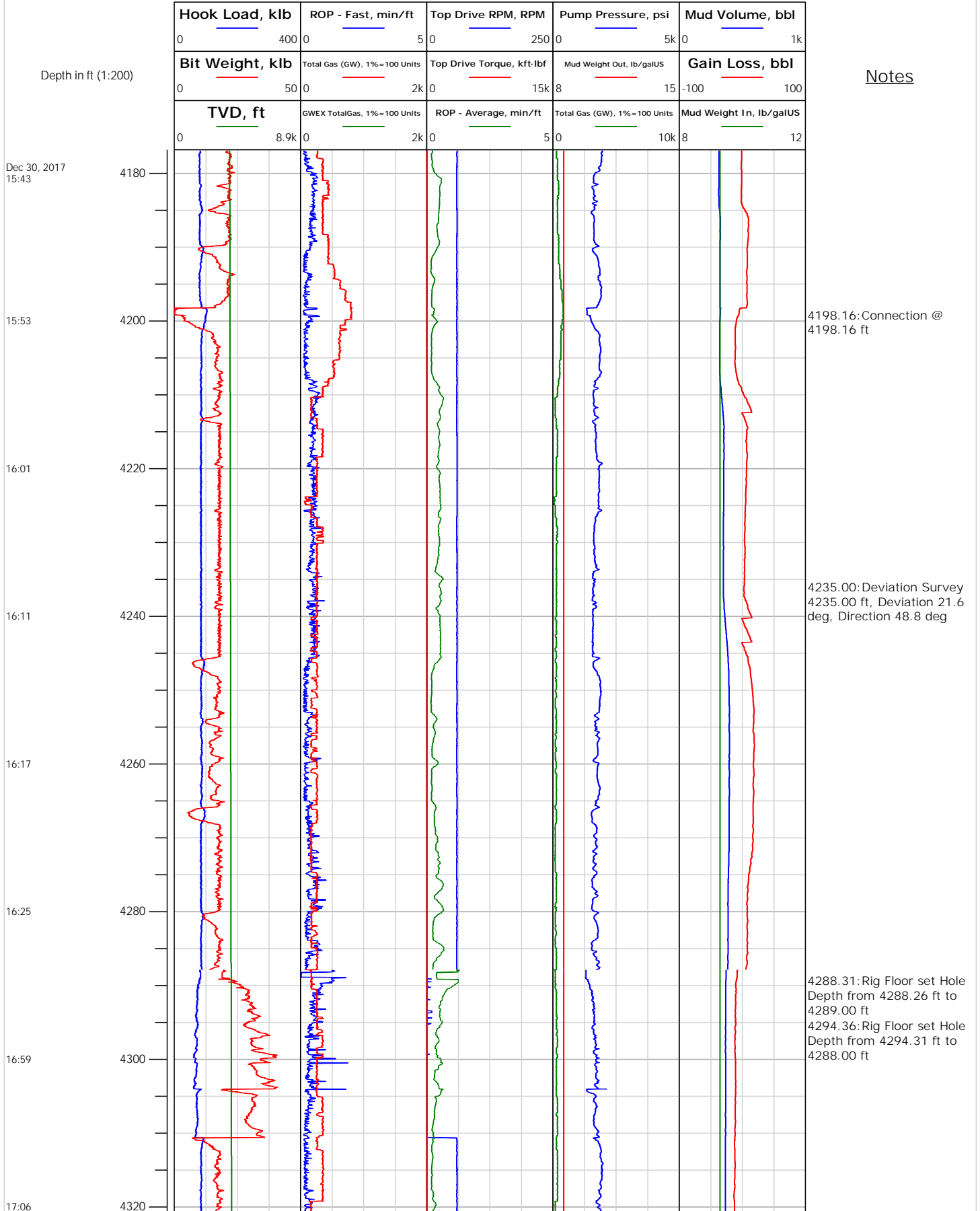
# Electronic Drilling Recorder

**Operator:** Laramie Energy  
**Contractor:** Helmerich & Payne Drlg Co

**Well Name:** Nichols 24-03E  
**Rig:** 290

**Location:** SW/4 of NE/4

## Notes





# Electronic Drilling Recorder

**Operator:** Laramie Energy  
**Contractor:** Helmerich & Payne Drlg Co

**Well Name:** Nichols 24-03E  
**Rig:** 290

**Location:** SW/4 of NE/4

## Notes

Depth in ft (1:200)

Dec 30, 2017  
17:13

17:17

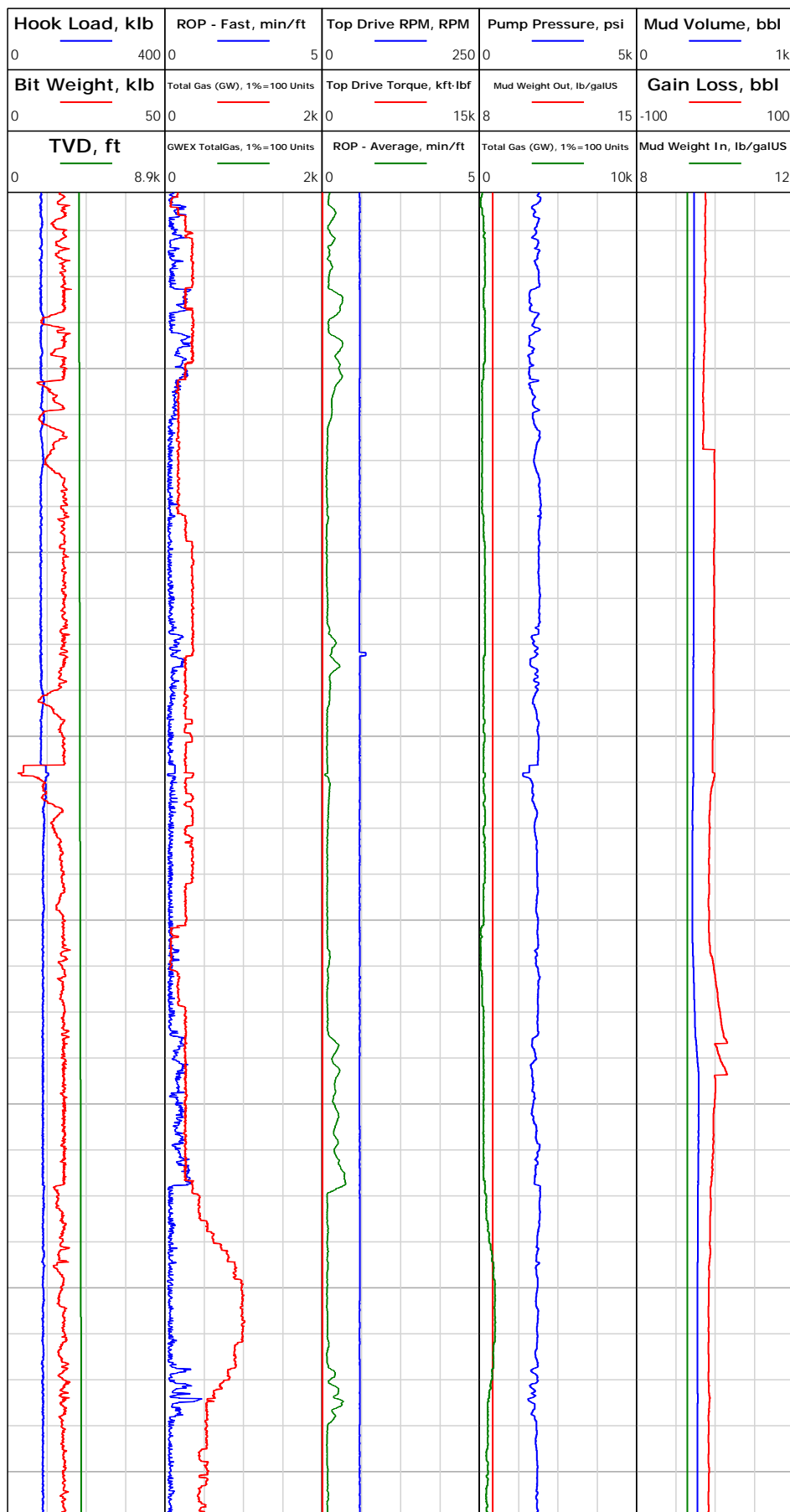
17:22

17:28

17:34

17:40

17:45



4330.00: Deviation Survey  
4330.00 ft, Deviation 23.6  
deg, Direction 43.2 deg

4384.02: Connection @  
4384.02 ft

4424.00: Deviation Survey  
4424.00 ft, Deviation 22.1  
deg, Direction 41.5 deg



# Electronic Drilling Recorder

**Operator:** Laramie Energy  
**Contractor:** Helmerich & Payne Drlg Co

**Well Name:** Nichols 24-03E  
**Rig:** 290

**Location:** SW/4 of NE/4

## Notes

Depth in ft (1:200)

Dec 30, 2017  
17:51

17:56

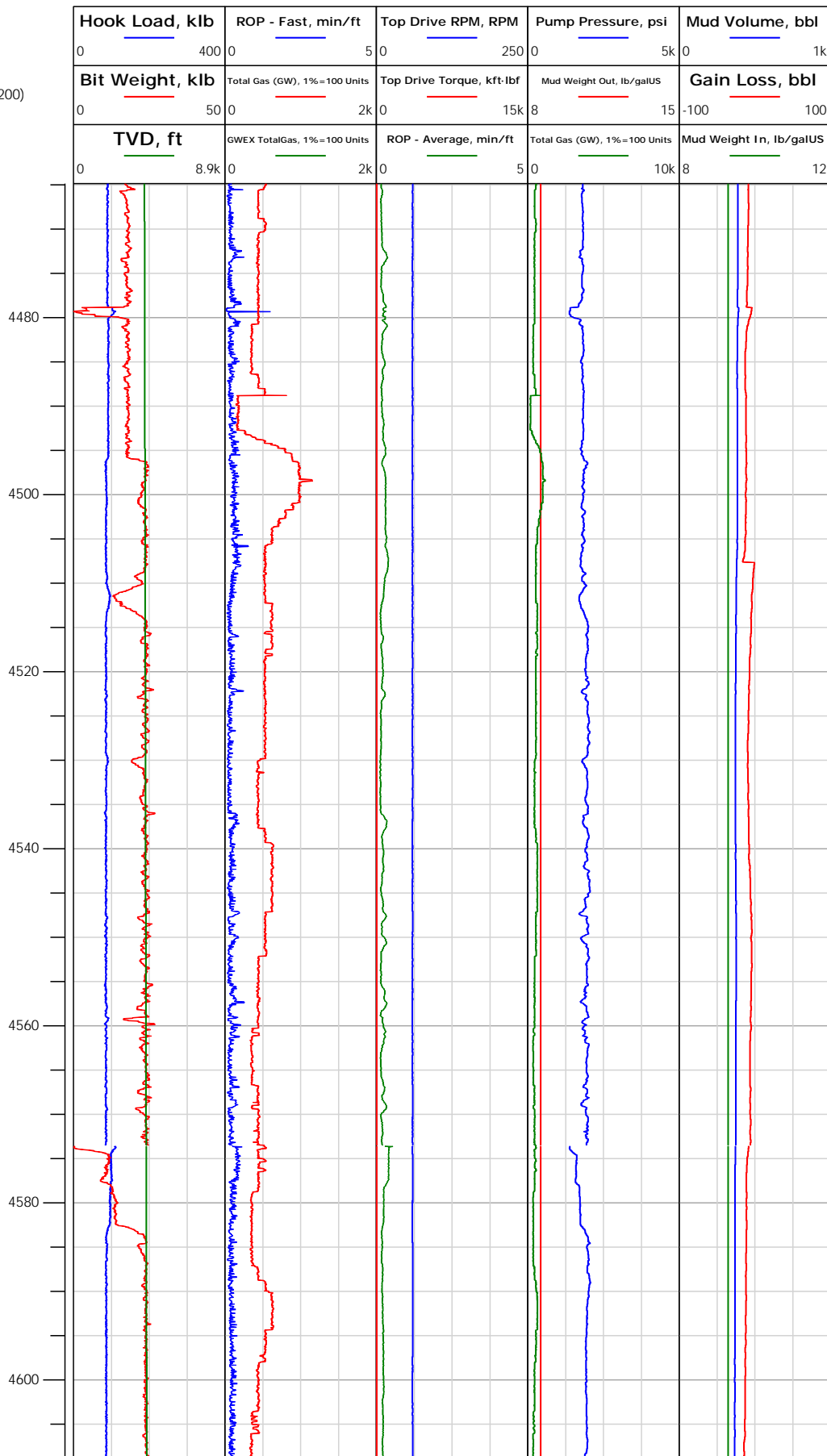
18:01

18:04

18:08

18:18

18:22



4478.86: Connection @  
4478.86 ft

4519.00: Deviation Survey  
4519.00 ft, Deviation 20.5  
deg, Direction 42.5 deg

4573.65: Connection @  
4573.65 ft



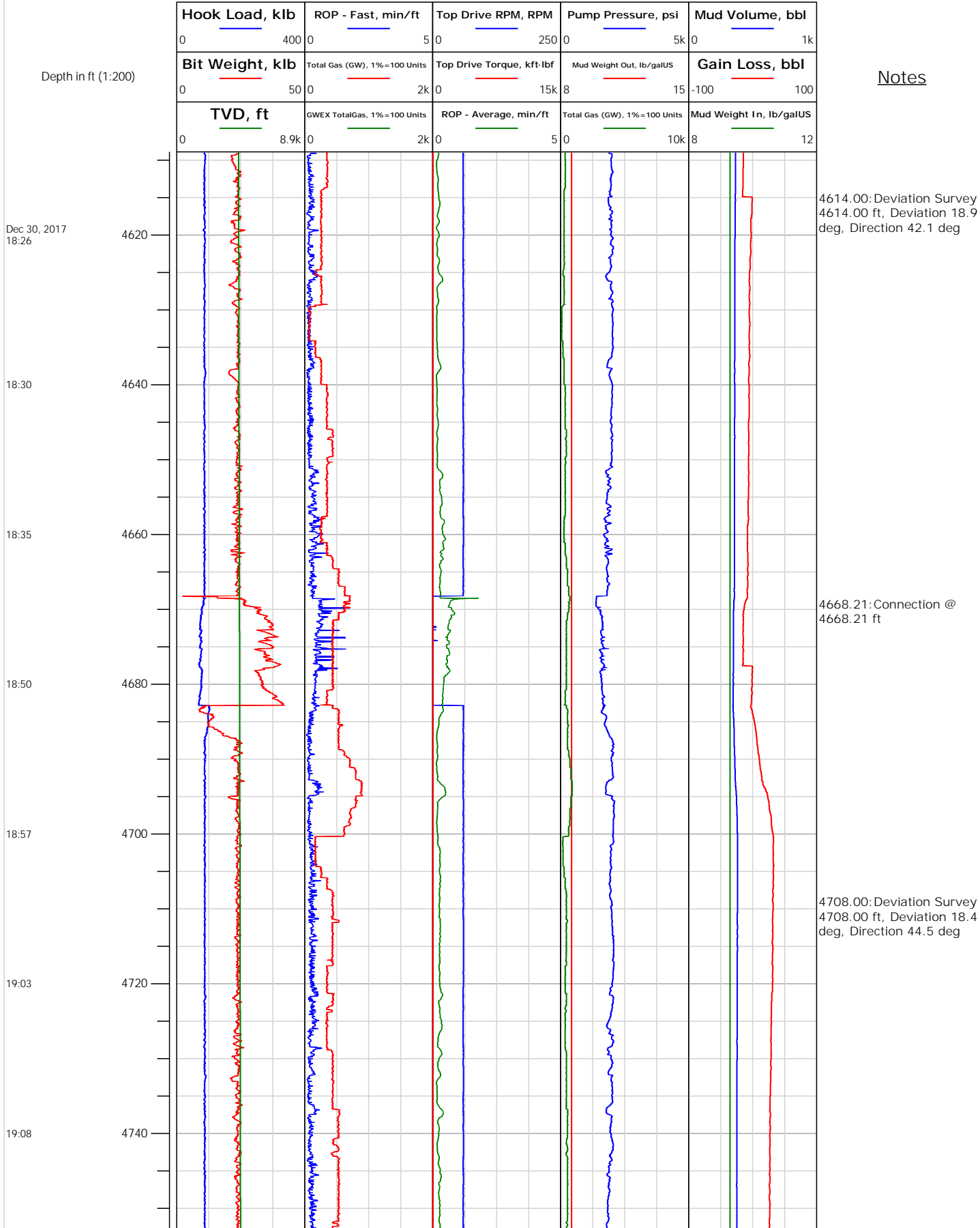
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**Operator:** Laramie Energy  
**Contractor:** Helmerich & Payne Drlg Co

**Well Name:** Nichols 24-03E  
**Rig:** 290

**Location:** SW/4 of NE/4

## Notes





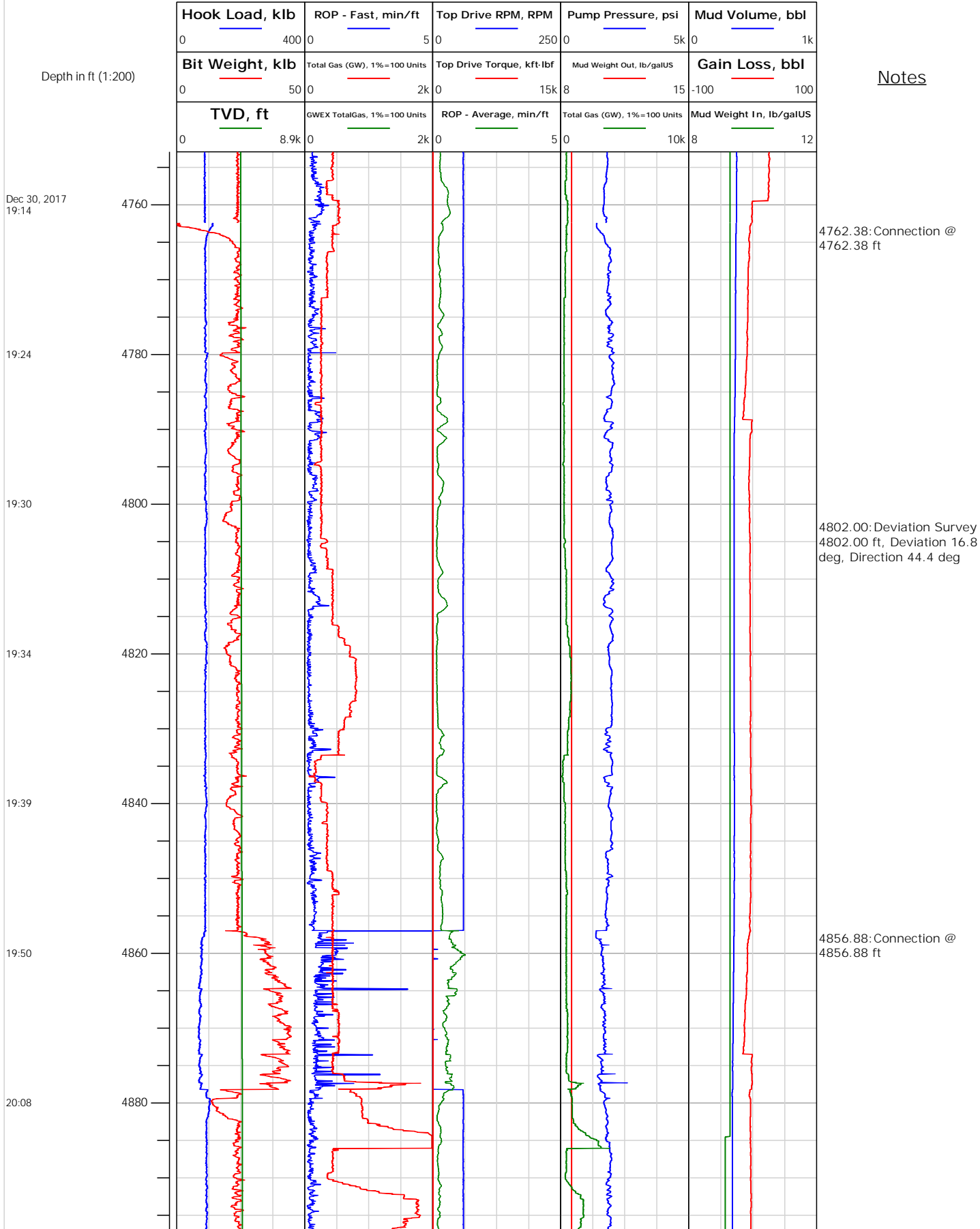
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**Operator:** Laramie Energy  
**Contractor:** Helmerich & Payne Drlg Co

**Well Name:** Nichols 24-03E  
**Rig:** 290

**Location:** SW/4 of NE/4

## Notes







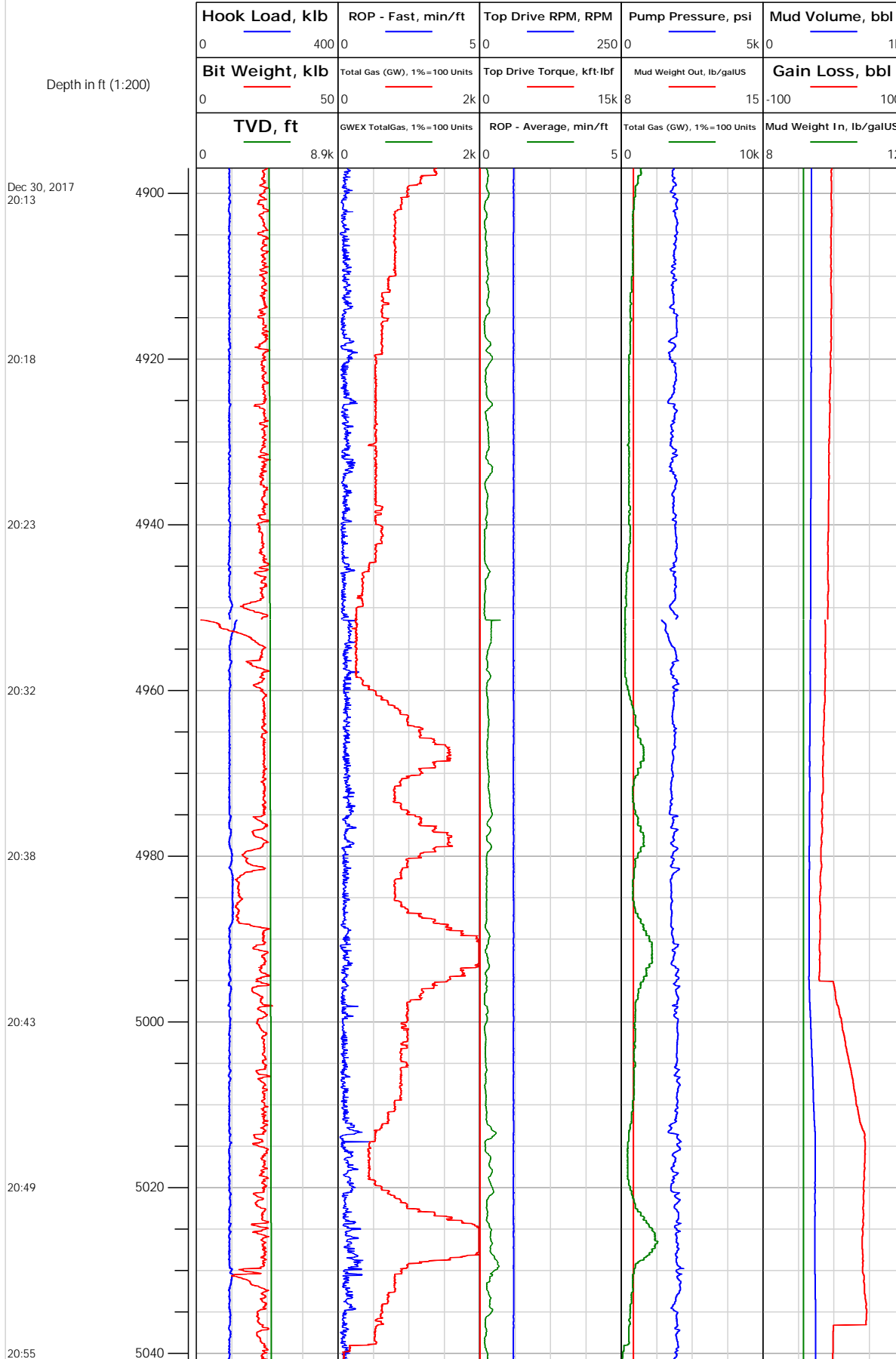
# Electronic Drilling Recorder

**Operator:** Laramie Energy  
**Contractor:** Helmerich & Payne Drlg Co

**Well Name:** Nichols 24-03E  
**Rig:** 290

**Location:** SW/4 of NE/4

## Notes



4897.00: Deviation Survey  
4897.00 ft, Deviation 17.3 deg, Direction 47.8 deg

4951.47: Connection @  
4951.47 ft

4991.00: Deviation Survey  
4991.00 ft, Deviation 15.8 deg, Direction 47.3 deg



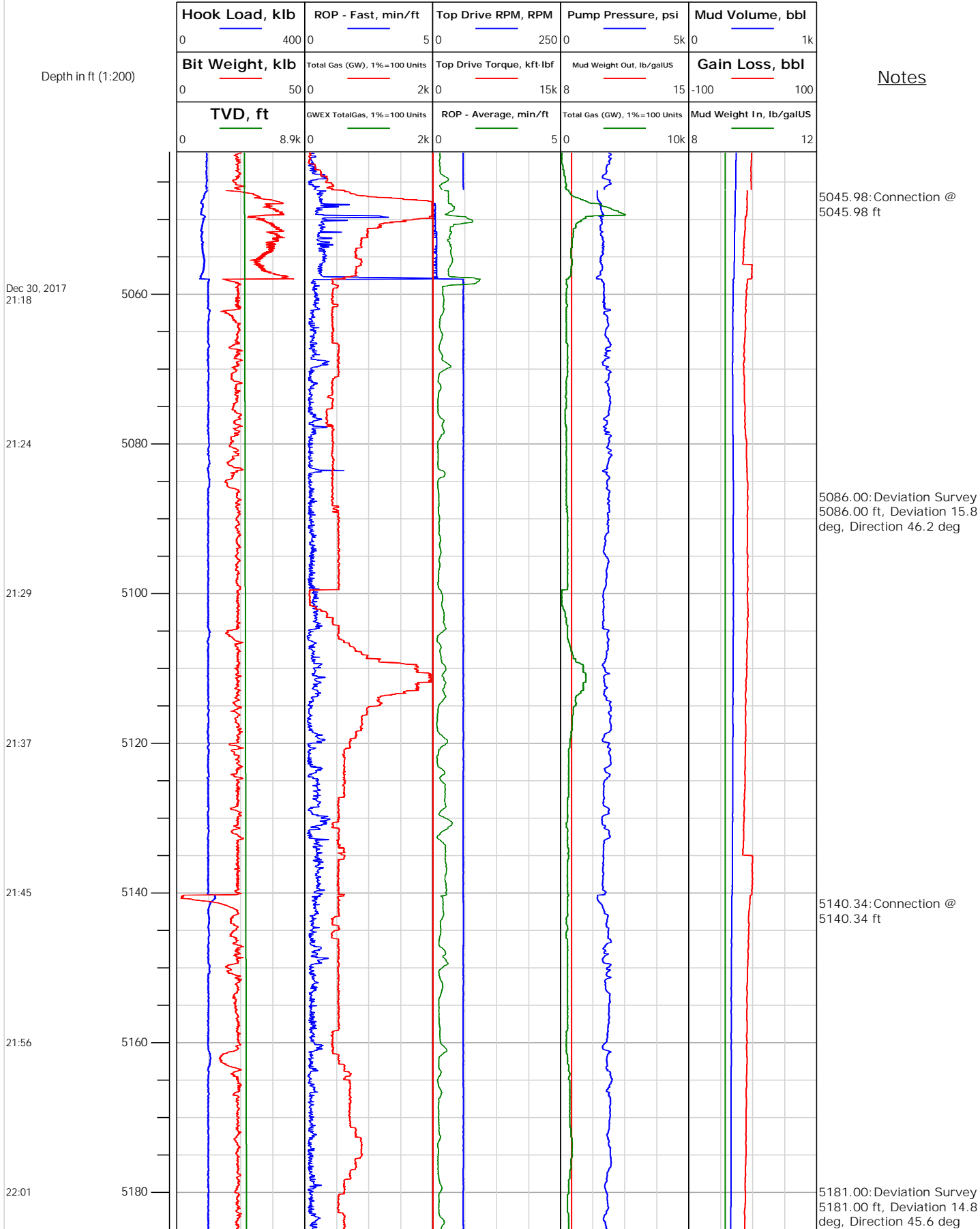
# Electronic Drilling Recorder

**Operator:** Laramie Energy  
**Contractor:** Helmerich & Payne Drlg Co

**Well Name:** Nichols 24-03E  
**Rig:** 290

**Location:** SW/4 of NE/4

## Notes





# Electronic Drilling Recorder

**Operator:** Laramie Energy  
**Contractor:** Helmerich & Payne Drlg Co

**Well Name:** Nichols 24-03E  
**Rig:** 290

**Location:** SW/4 of NE/4

## Notes

Depth in ft (1:200)

Dec 30, 2017  
22:09

22:15

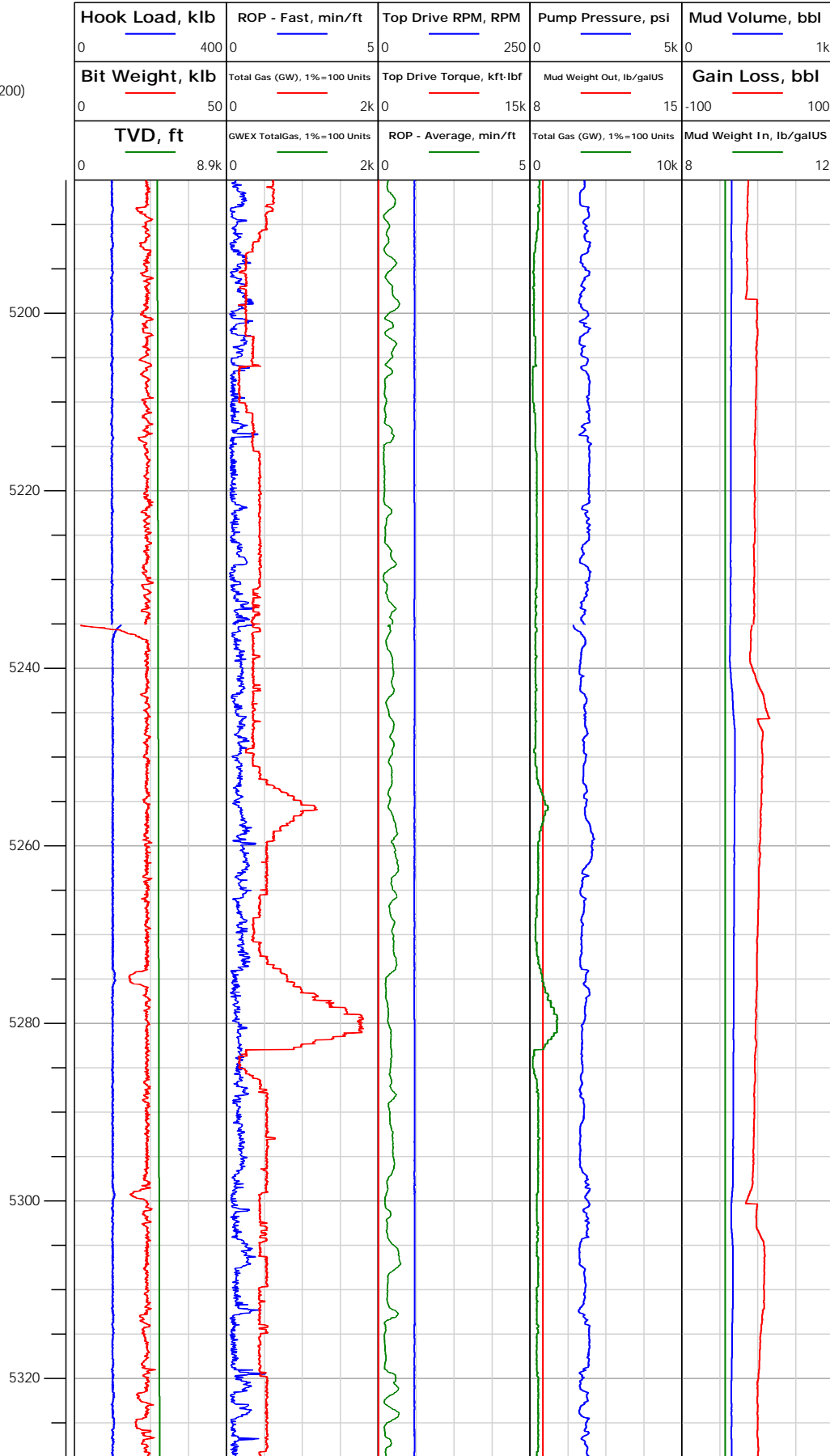
22:26

22:35

22:44

22:52

22:59



5235.13: Connection @  
5235.13 ft

5275.00: Deviation Survey  
5275.00 ft, Deviation 13.7  
deg, Direction 44.5 deg



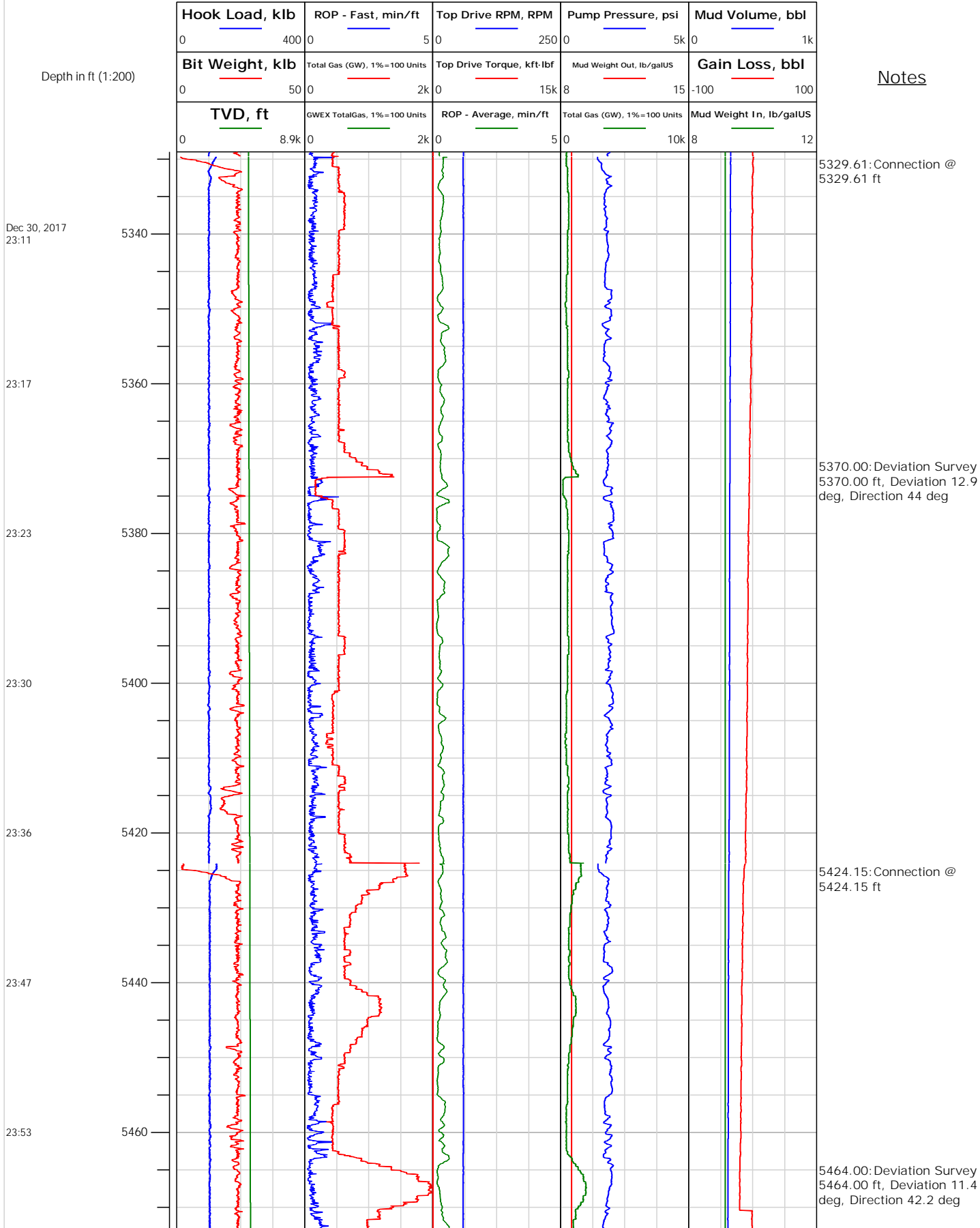
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**Operator:** Laramie Energy  
**Contractor:** Helmerich & Payne Drlg Co

**Well Name:** Nichols 24-03E  
**Rig:** 290

**Location:** SW/4 of NE/4

## Notes





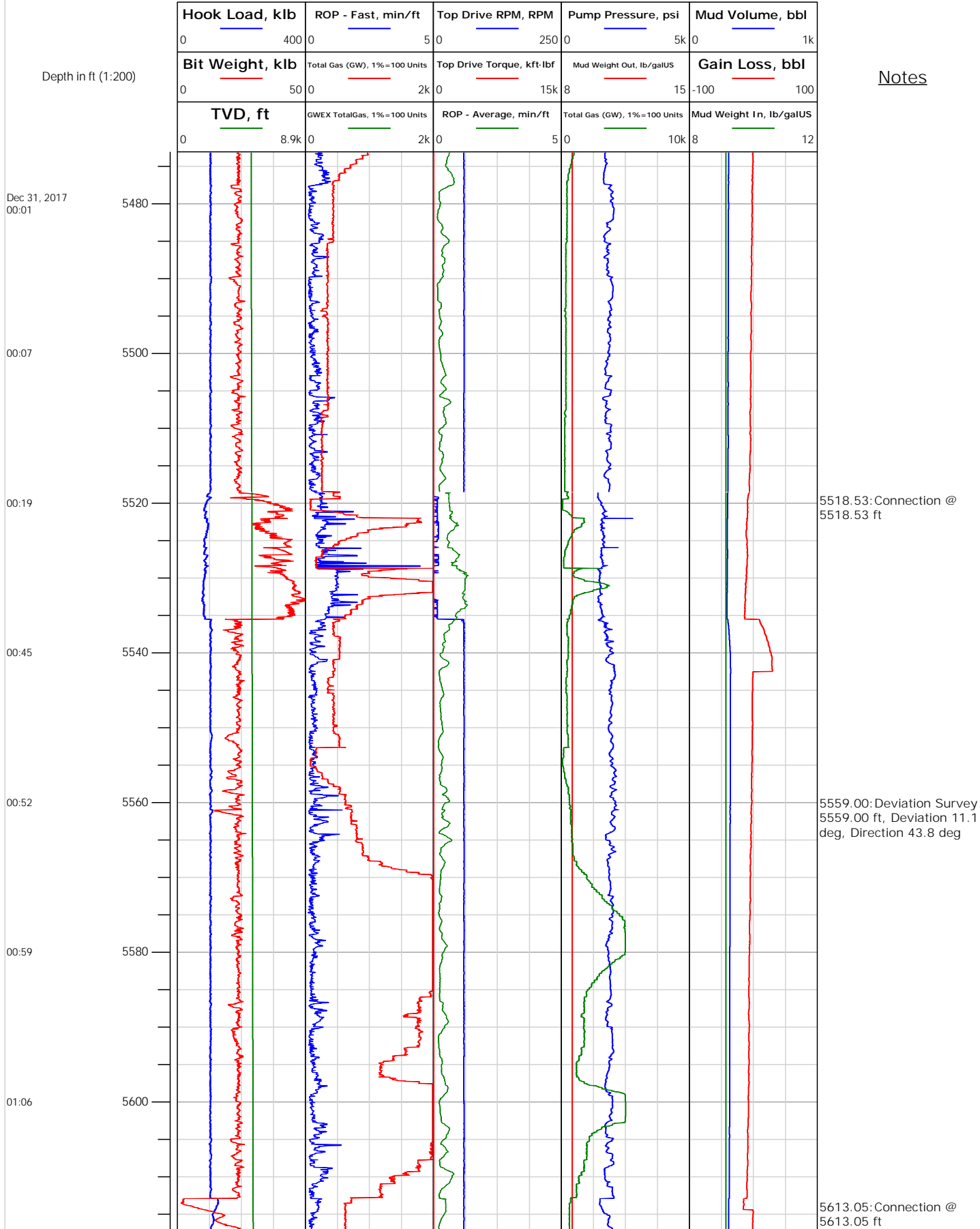
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**Operator:** Laramie Energy  
**Contractor:** Helmerich & Payne Drlg Co

**Well Name:** Nichols 24-03E  
**Rig:** 290

**Location:** SW/4 of NE/4

Notes





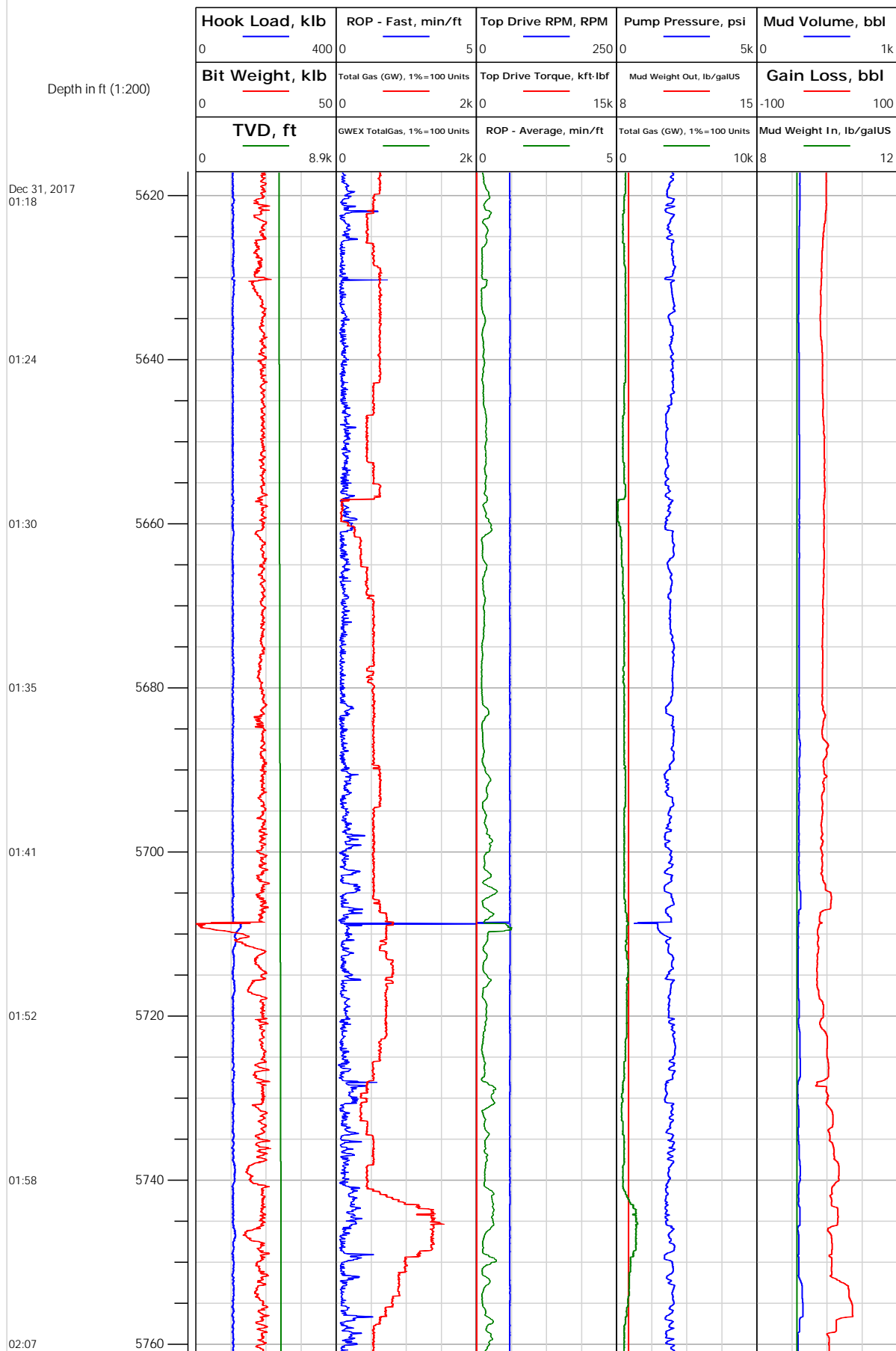
# Electronic Drilling Recorder

**Operator:** Laramie Energy  
**Contractor:** Helmerich & Payne Drlg Co

**Well Name:** Nichols 24-03E  
**Rig:** 290

**Location:** SW/4 of NE/4

## Notes





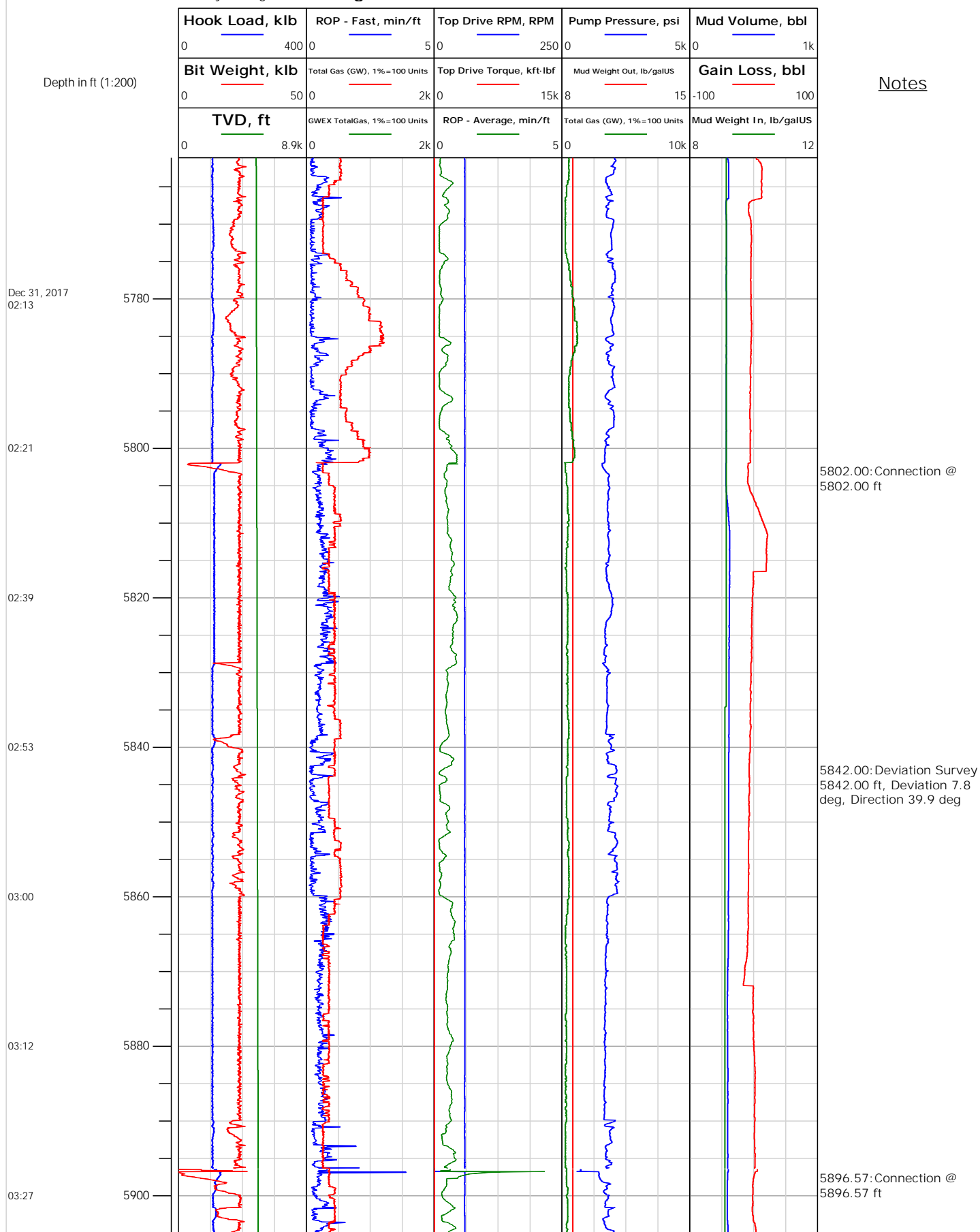
## Electronic Drilling Recorder

Operator: Laramie Energy  
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-03E  
Rig: 290

Location: SW/4 of NE/4

## Notes





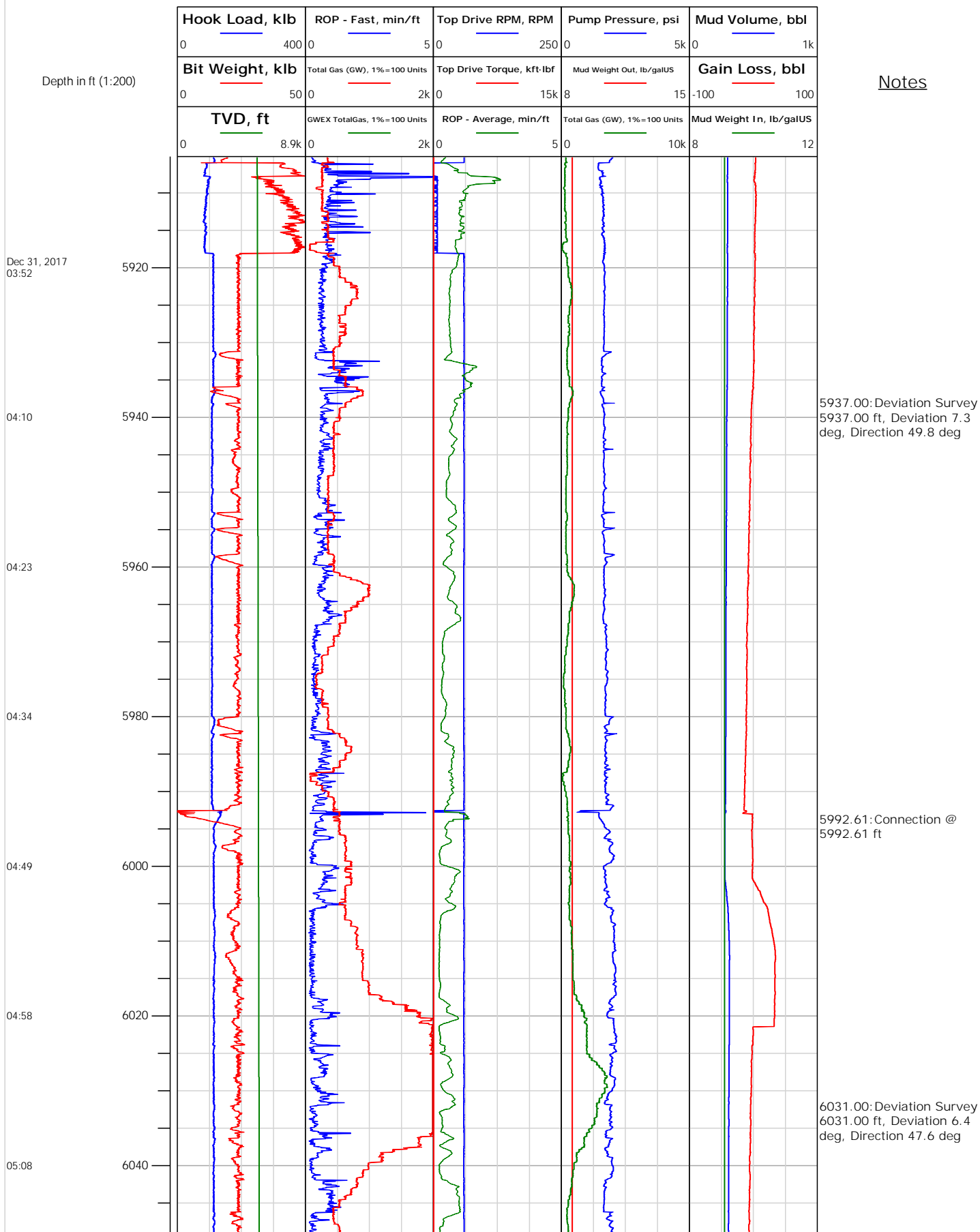
# Electronic Drilling Recorder

**Operator:** Laramie Energy  
**Contractor:** Helmerich & Payne Drlg Co

**Well Name:** Nichols 24-03E  
**Rig:** 290

**Location:** SW/4 of NE/4

## Notes







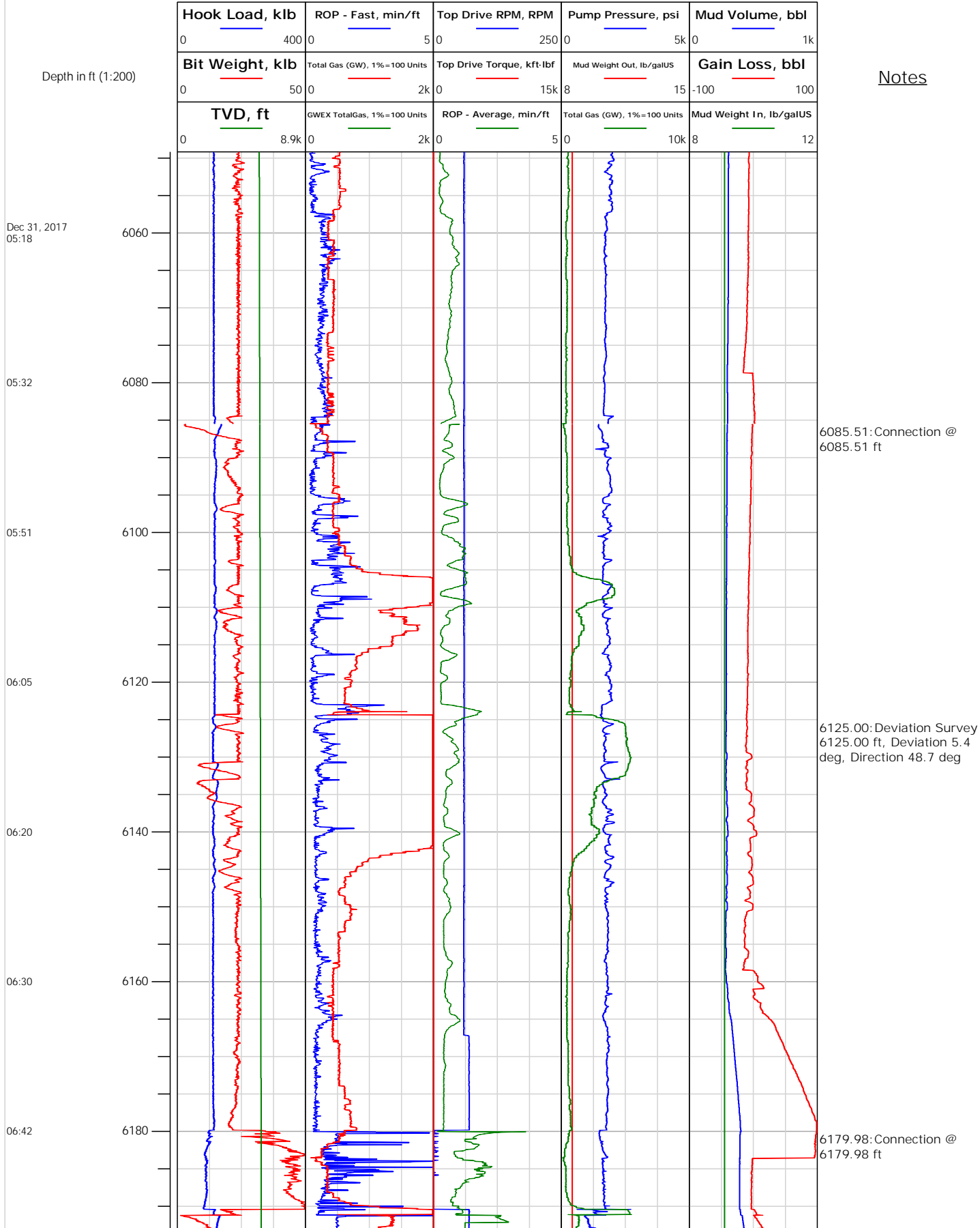
# Electronic Drilling Recorder

**Operator:** Laramie Energy  
**Contractor:** Helmerich & Payne Drlg Co

**Well Name:** Nichols 24-03E  
**Rig:** 290

**Location:** SW/4 of NE/4

## Notes





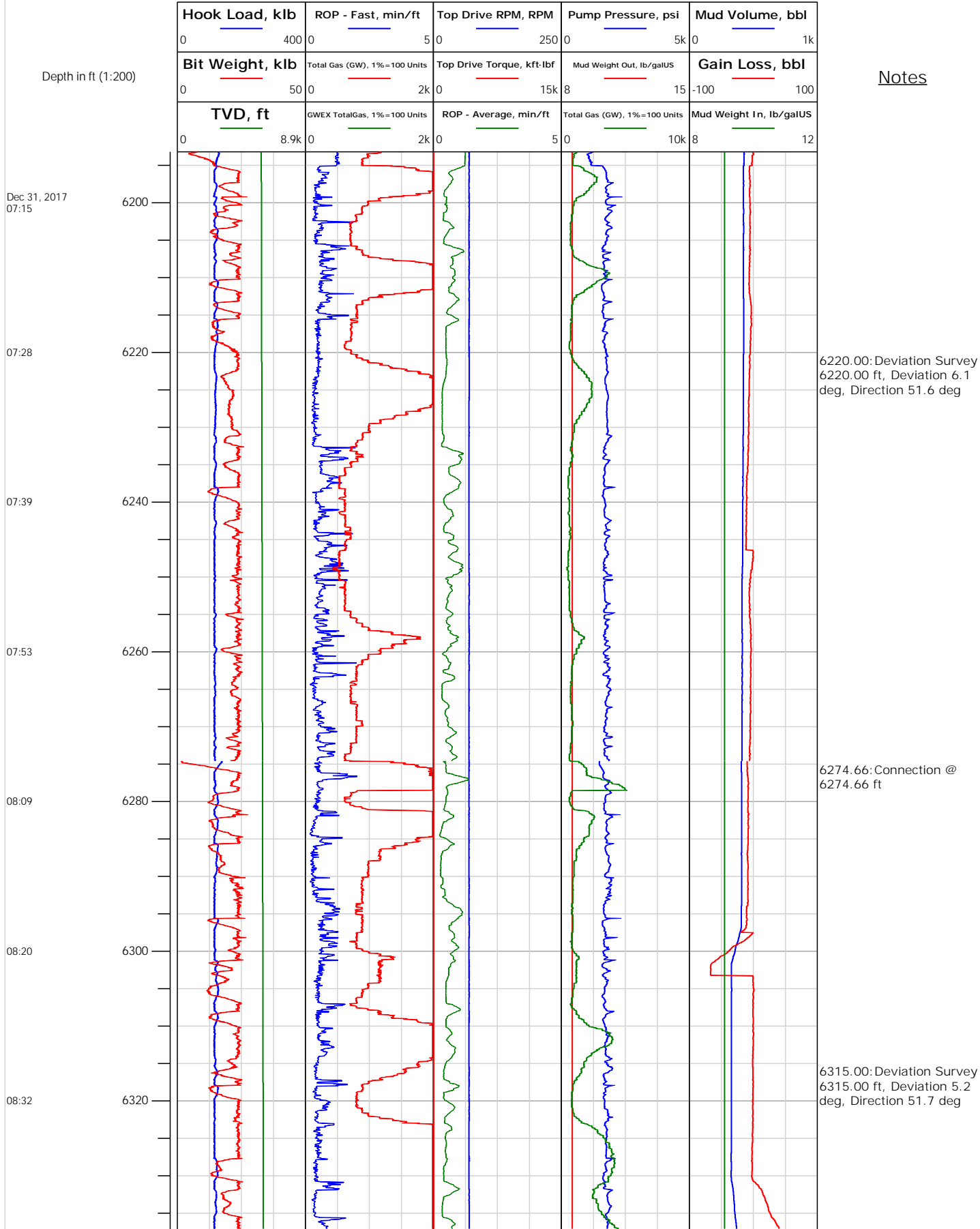
# Electronic Drilling Recorder

**Operator:** Laramie Energy  
**Contractor:** Helmerich & Payne Drlg Co

**Well Name:** Nichols 24-03E  
**Rig:** 290

**Location:** SW/4 of NE/4

## Notes





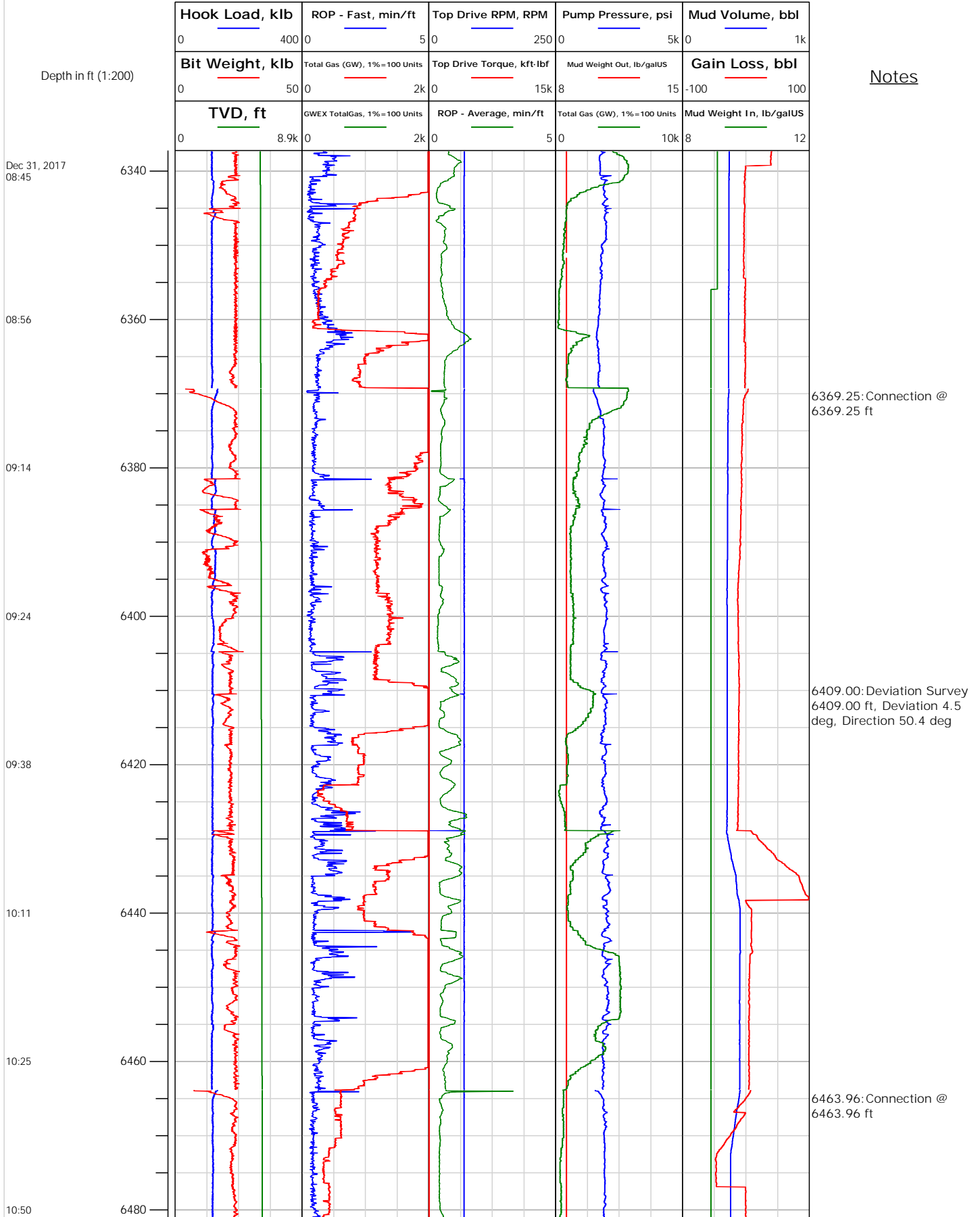
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**Operator:** Laramie Energy  
**Contractor:** Helmerich & Payne Drlg Co

**Well Name:** Nichols 24-03E  
**Rig:** 290

**Location:** SW/4 of NE/4

## Notes





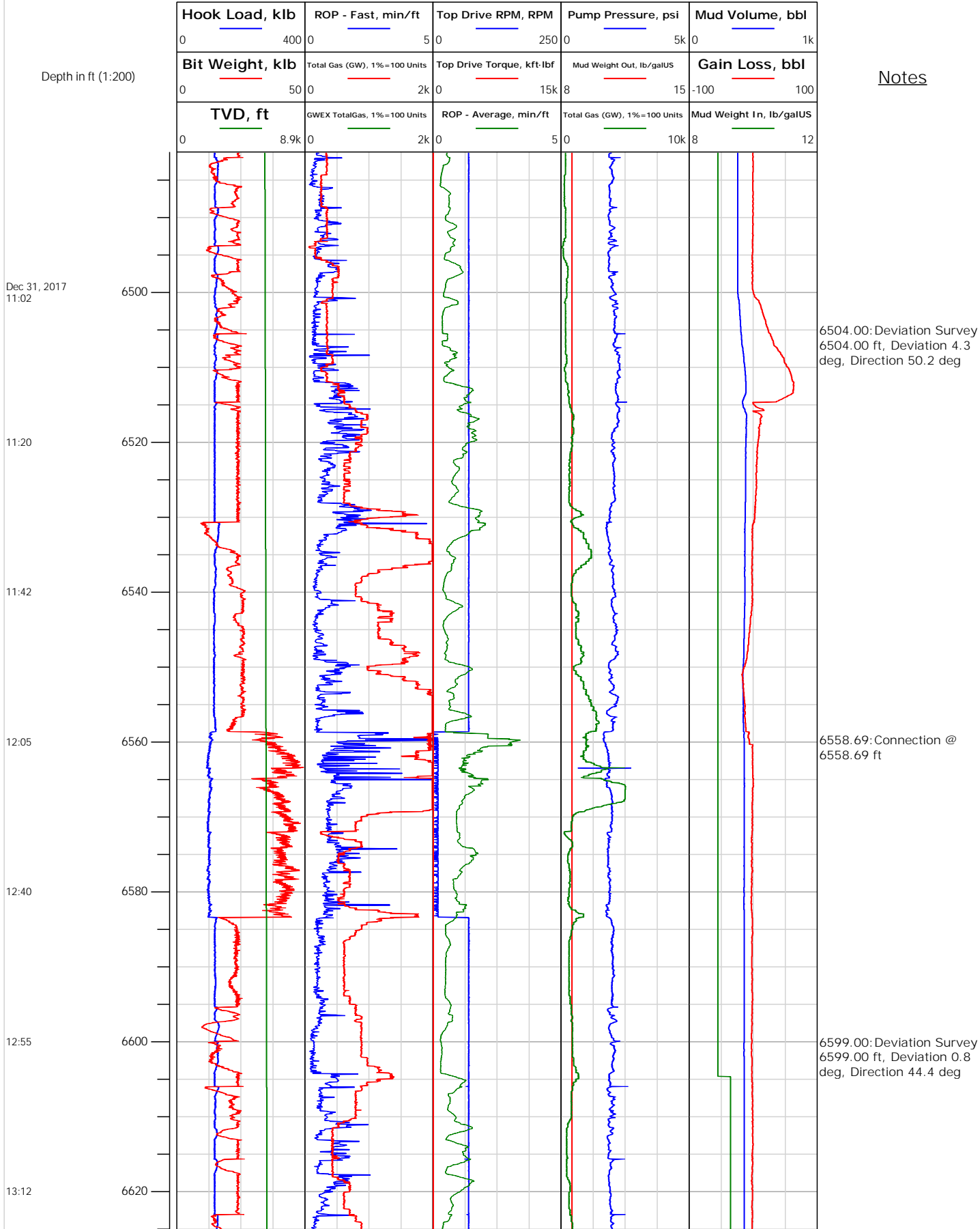
# Electronic Drilling Recorder

**Operator:** Laramie Energy  
**Contractor:** Helmerich & Payne Drlg Co

**Well Name:** Nichols 24-03E  
**Rig:** 290

**Location:** SW/4 of NE/4

## Notes





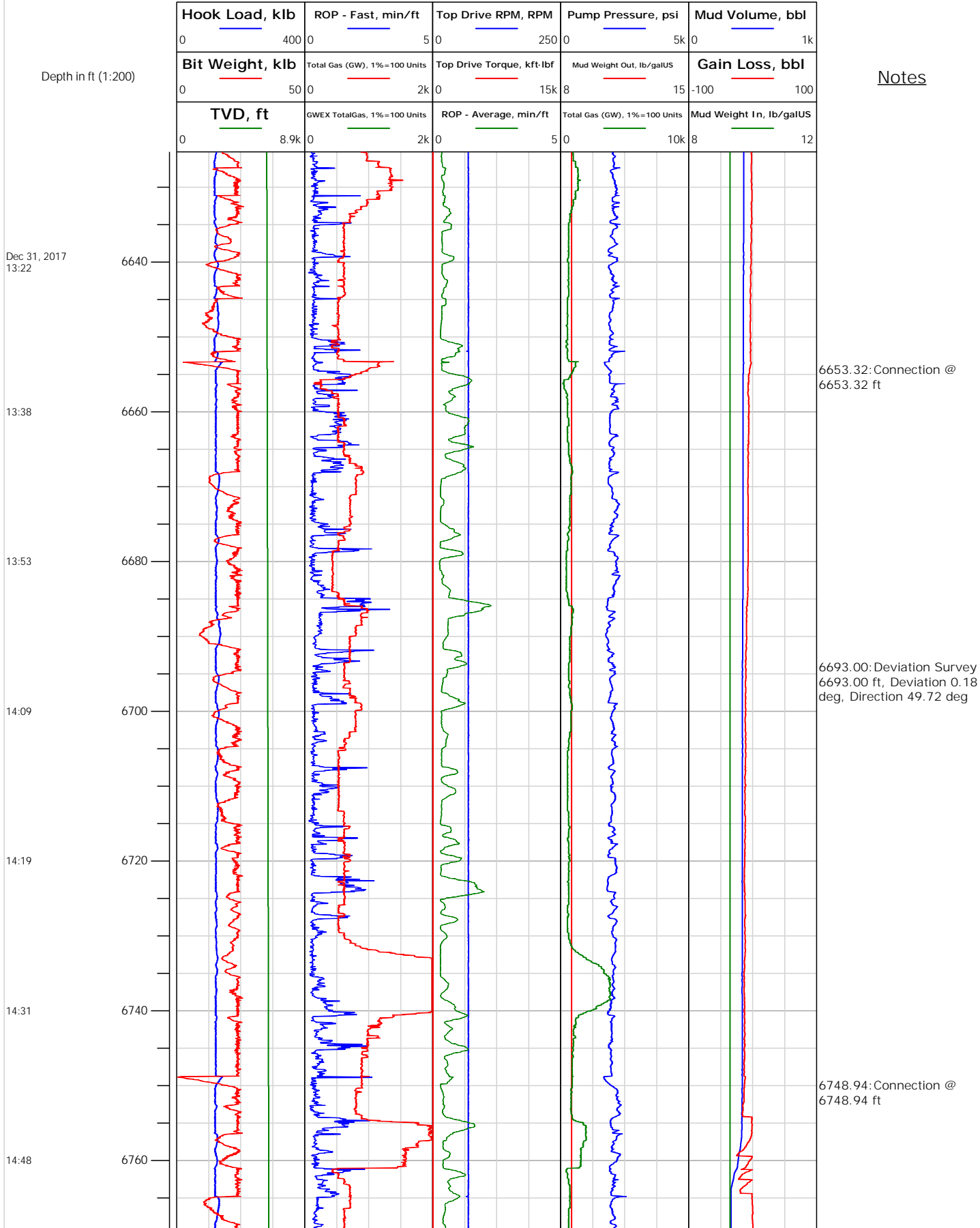
# Electronic Drilling Recorder

**Operator:** Laramie Energy  
**Contractor:** Helmerich & Payne Drlg Co

**Well Name:** Nichols 24-03E  
**Rig:** 290

**Location:** SW/4 of NE/4

## Notes





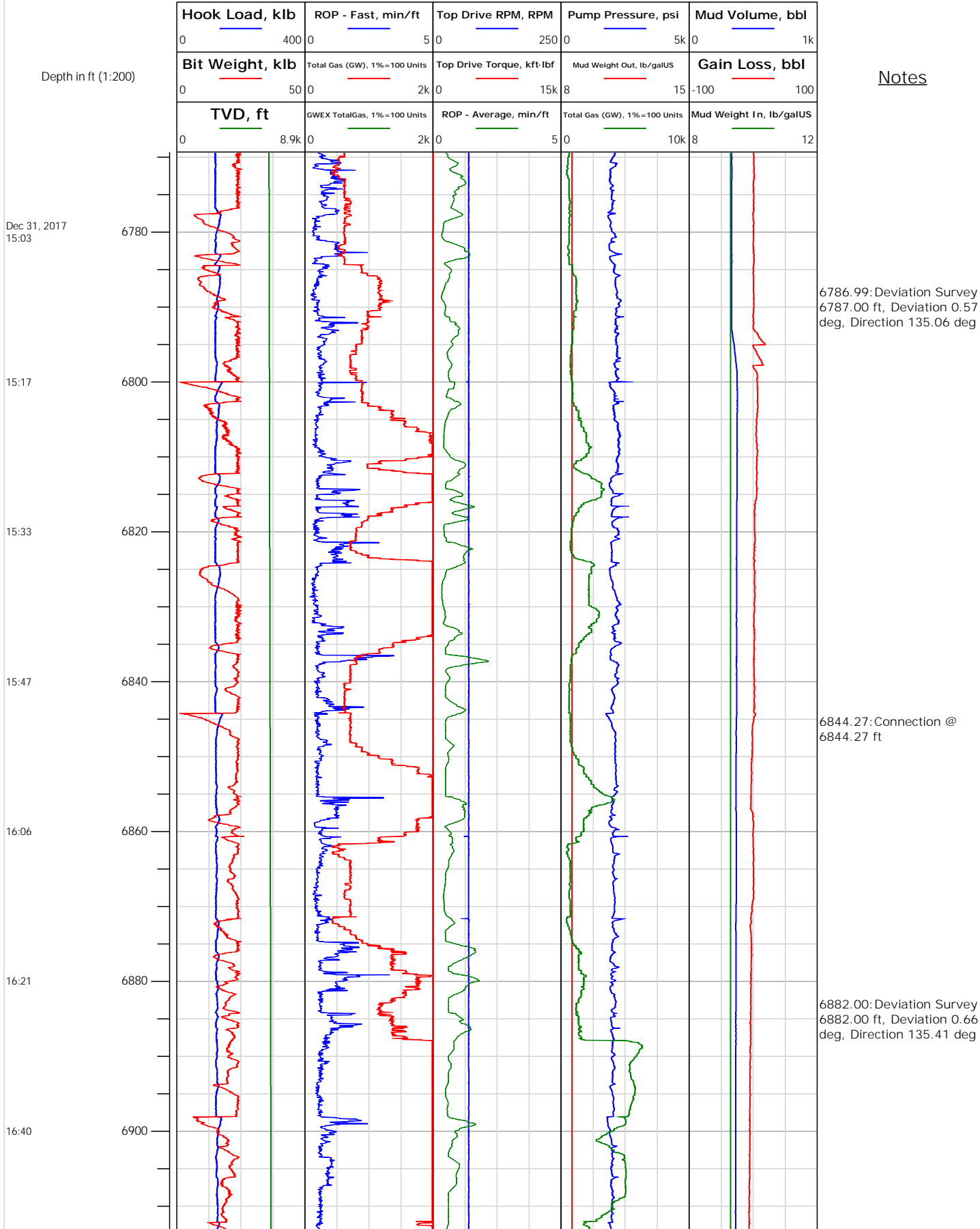
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## Notes





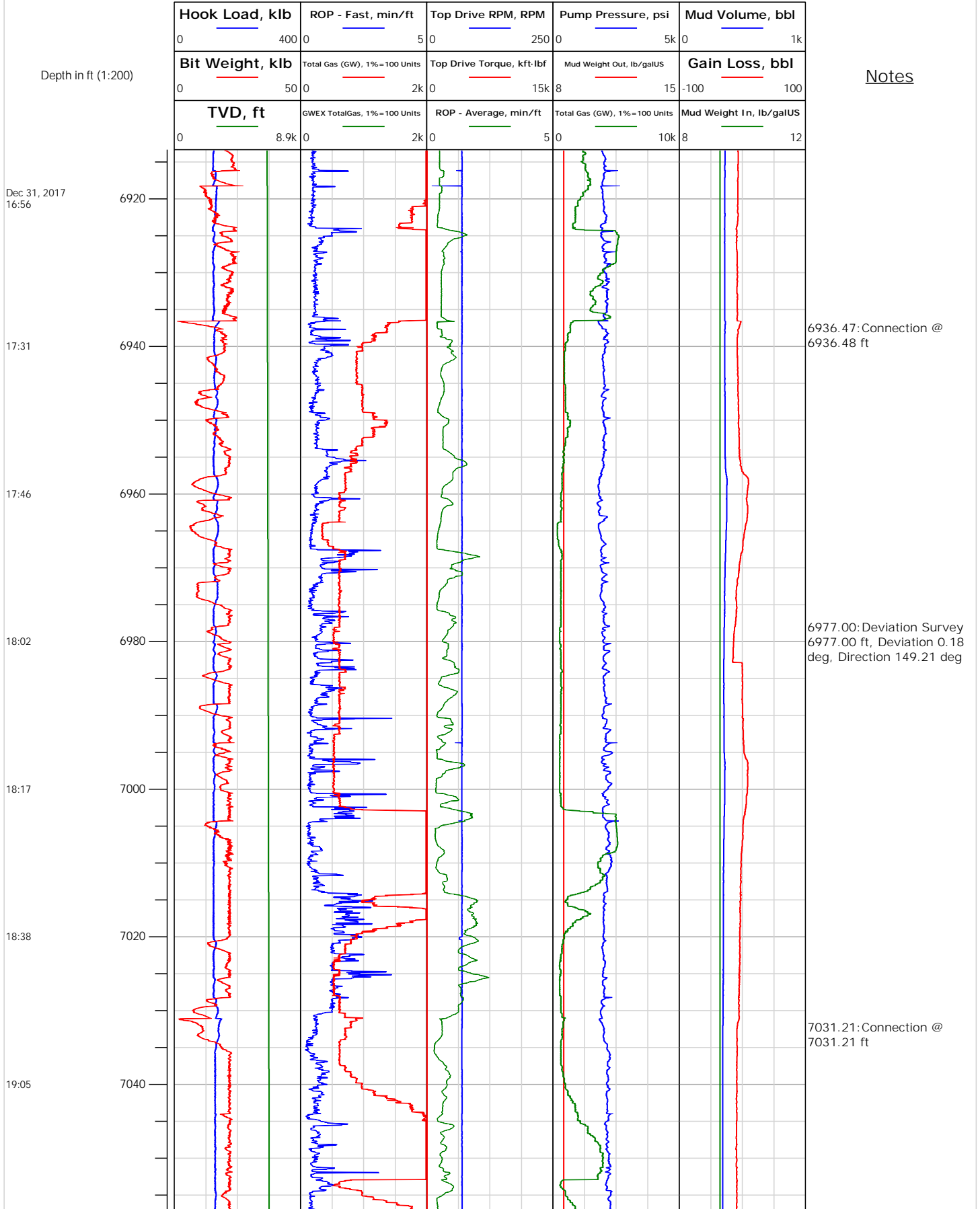
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## Notes





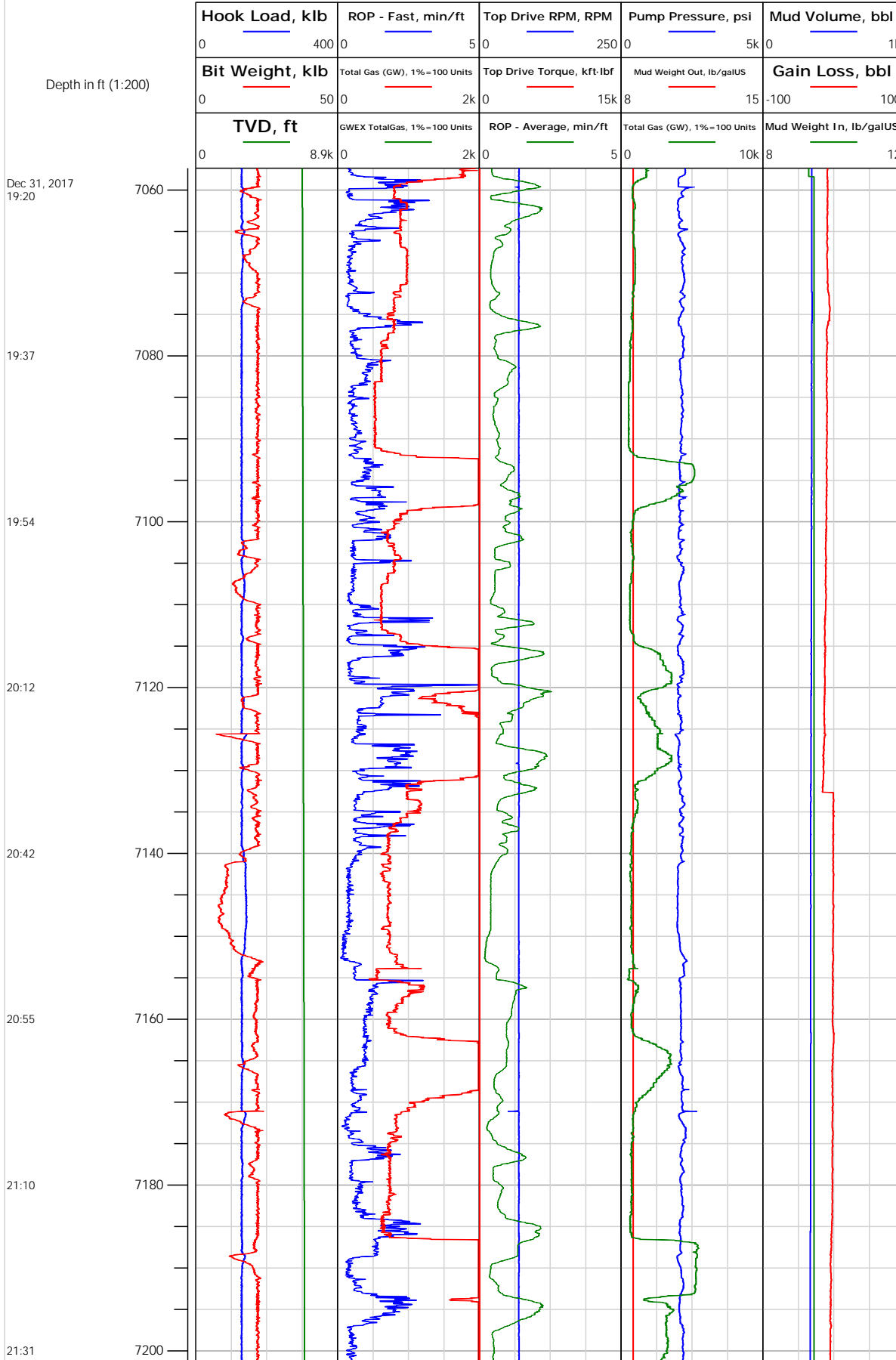
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**Rig:** 290

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## Notes







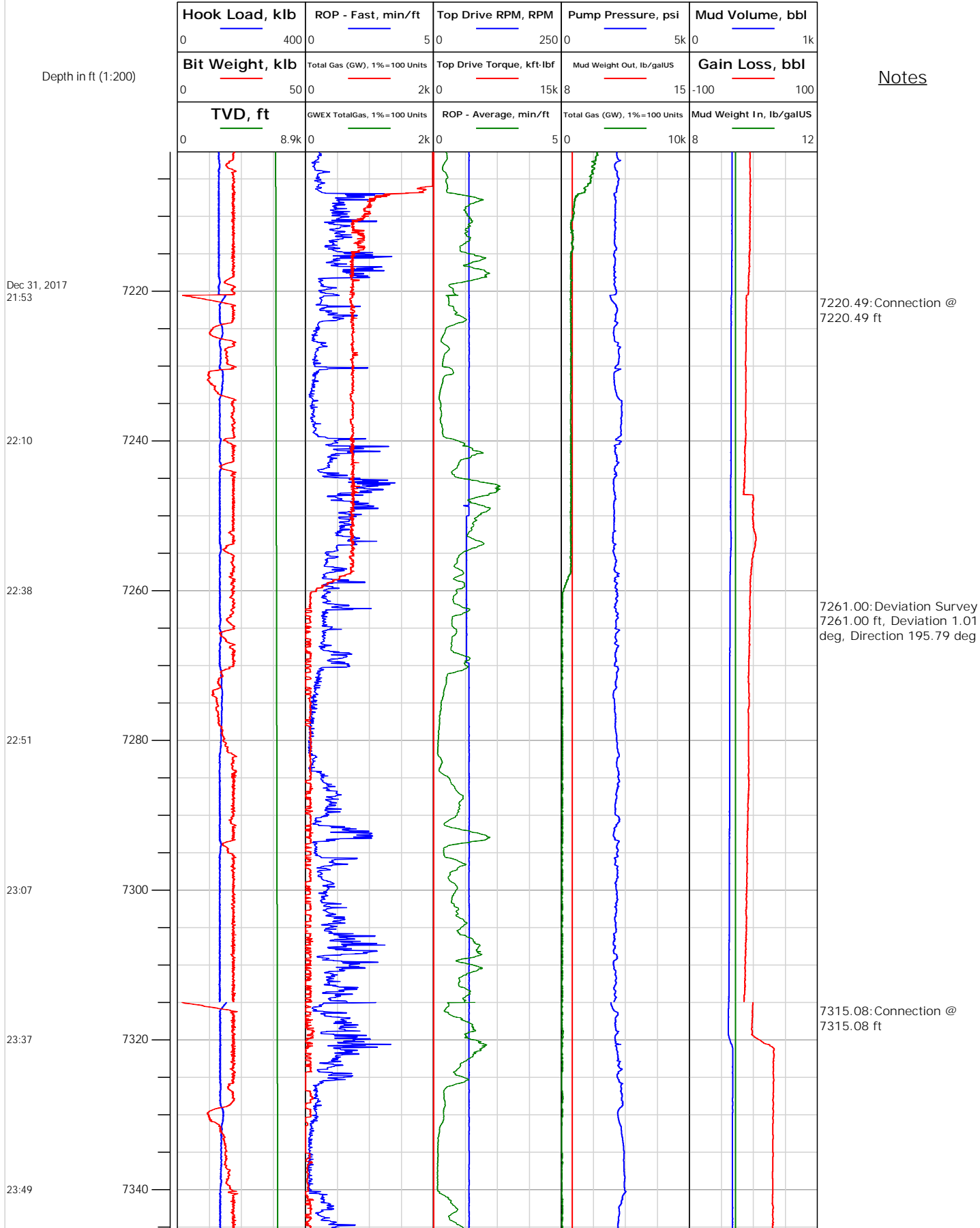
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**Well Name:** Nichols 24-03E  
**Rig:** 290

**Location:** SW/4 of NE/4

## Notes





# Electronic Drilling Recorder

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**Well Name:** Nichols 24-03E  
**Rig:** 290

**Location:** SW/4 of NE/4

## Notes

Depth in ft (1:200)

Jan 1, 2018  
00:17

00:32

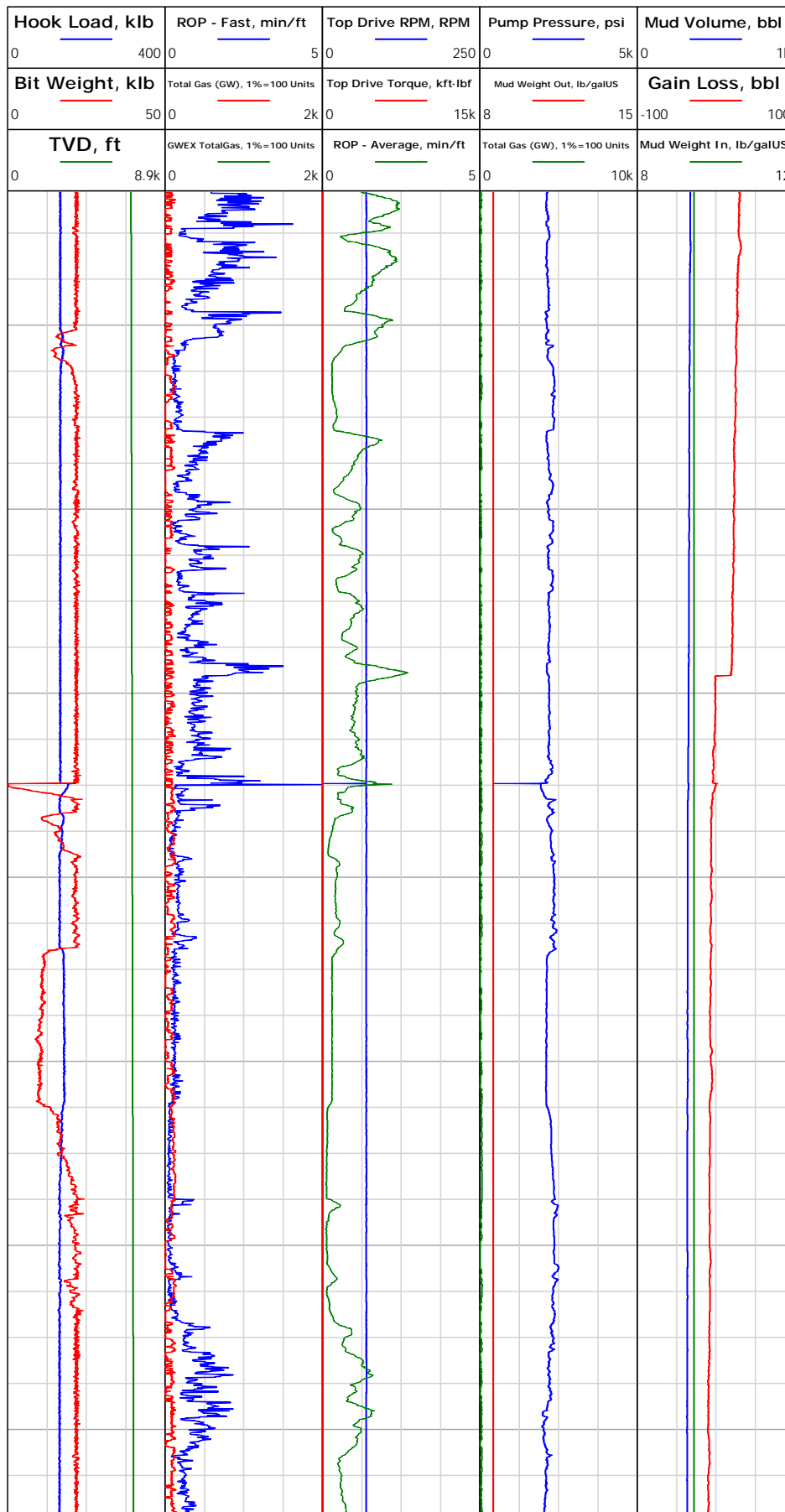
00:52

01:11

01:19

01:22

01:37



7355.00: Deviation Survey  
7355.00 ft, Deviation 1.01 deg, Direction 201.5 deg

7409.78: Connection @  
7409.78 ft

7450.00: Deviation Survey  
7450.00 ft, Deviation 0.88 deg, Direction 219.61 deg



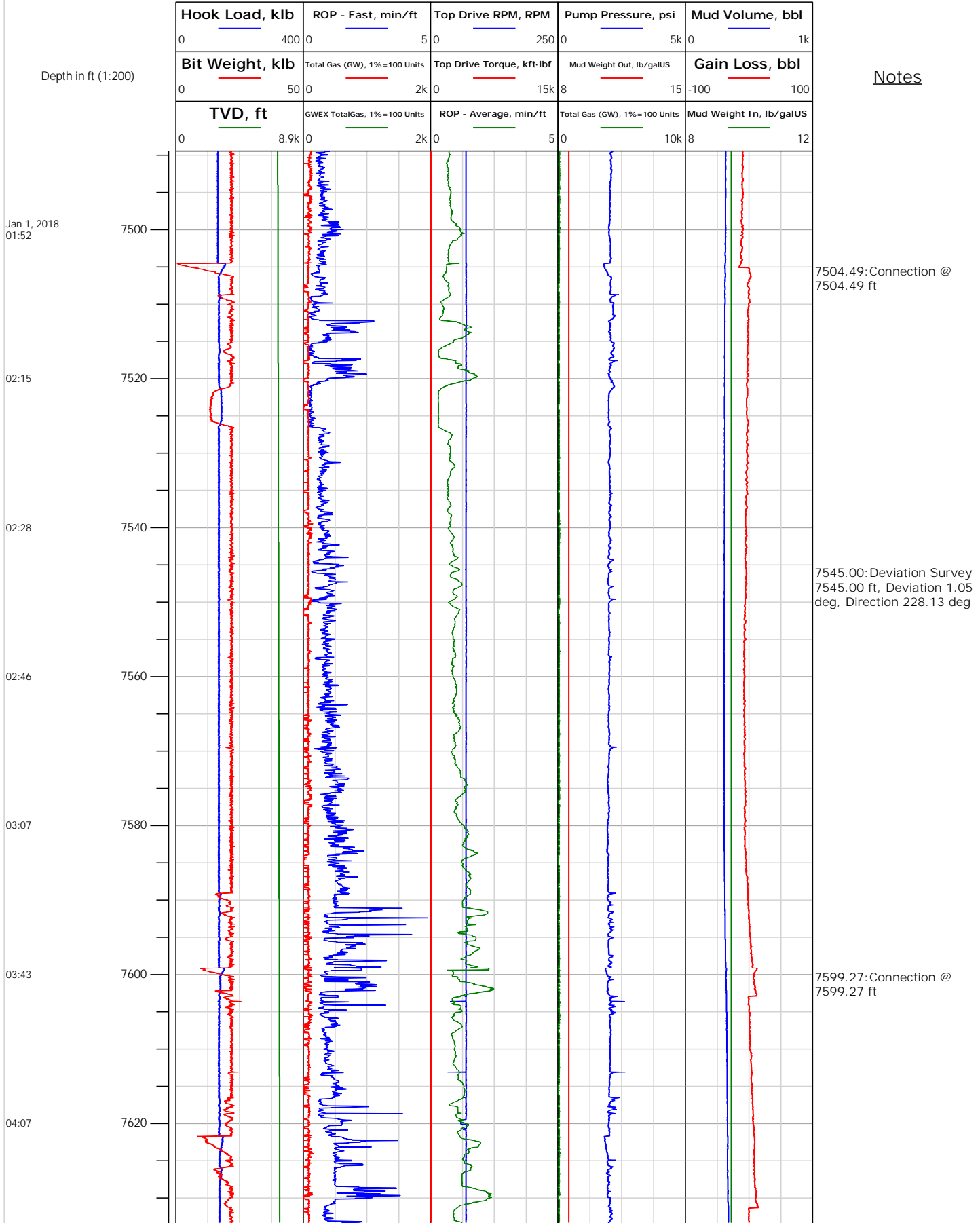
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## Notes





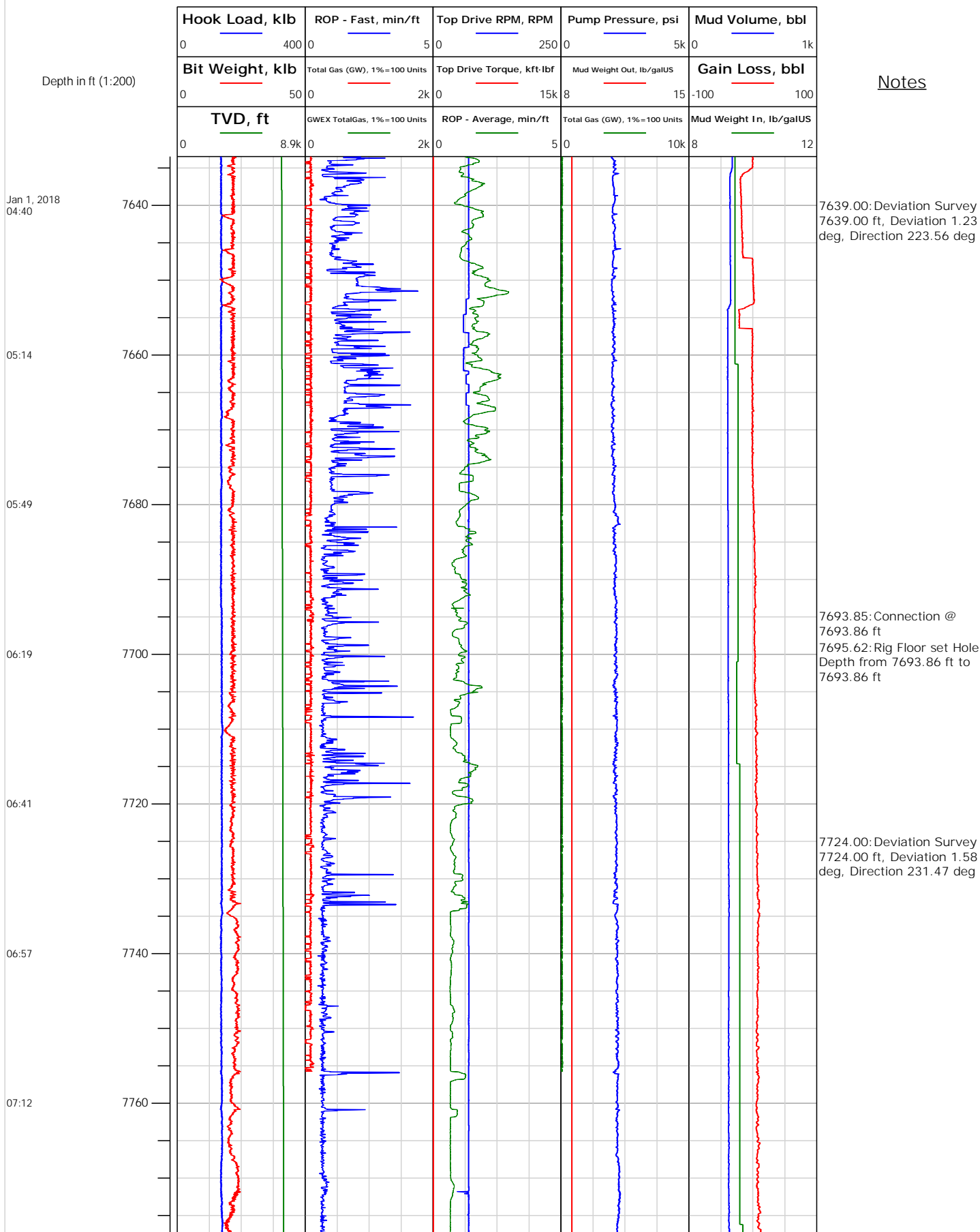
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**Well Name:** Nichols 24-03E  
**Rig:** 290

**Location:** SW/4 of NE/4

## Notes



**Operator:** Laramie Energy  
**Contractor:** Helmerich & Payne Drlg Co

**Well Name:** Nichols 24-03E  
**Rig:** 290

Depth in ft (1:200)

## Notes

Jan 1, 2018  
08:25

08:25

7780

7800 .

Hook Load, klb	ROP - Fast, min/ft	Top Drive RPM, RPM	Pump Pressure, psi	Mud Volume, bbl
0400	05	0250	05k	01k
Bit Weight, klb	Total Gas (GW), 1%=100 Units	Top Drive Torque, kft-lbf	Mud Weight Out, lb/galUS	Gain Loss, bbl
050	02k	015k	815	-100100
TVD, ft	GWEX TotalGas, 1%=100 Units	ROP - Average, min/ft	Total Gas (GW), 1%=100 Units	Mud Weight In, lb/galUS
08.9k	02k	05	010k	812