



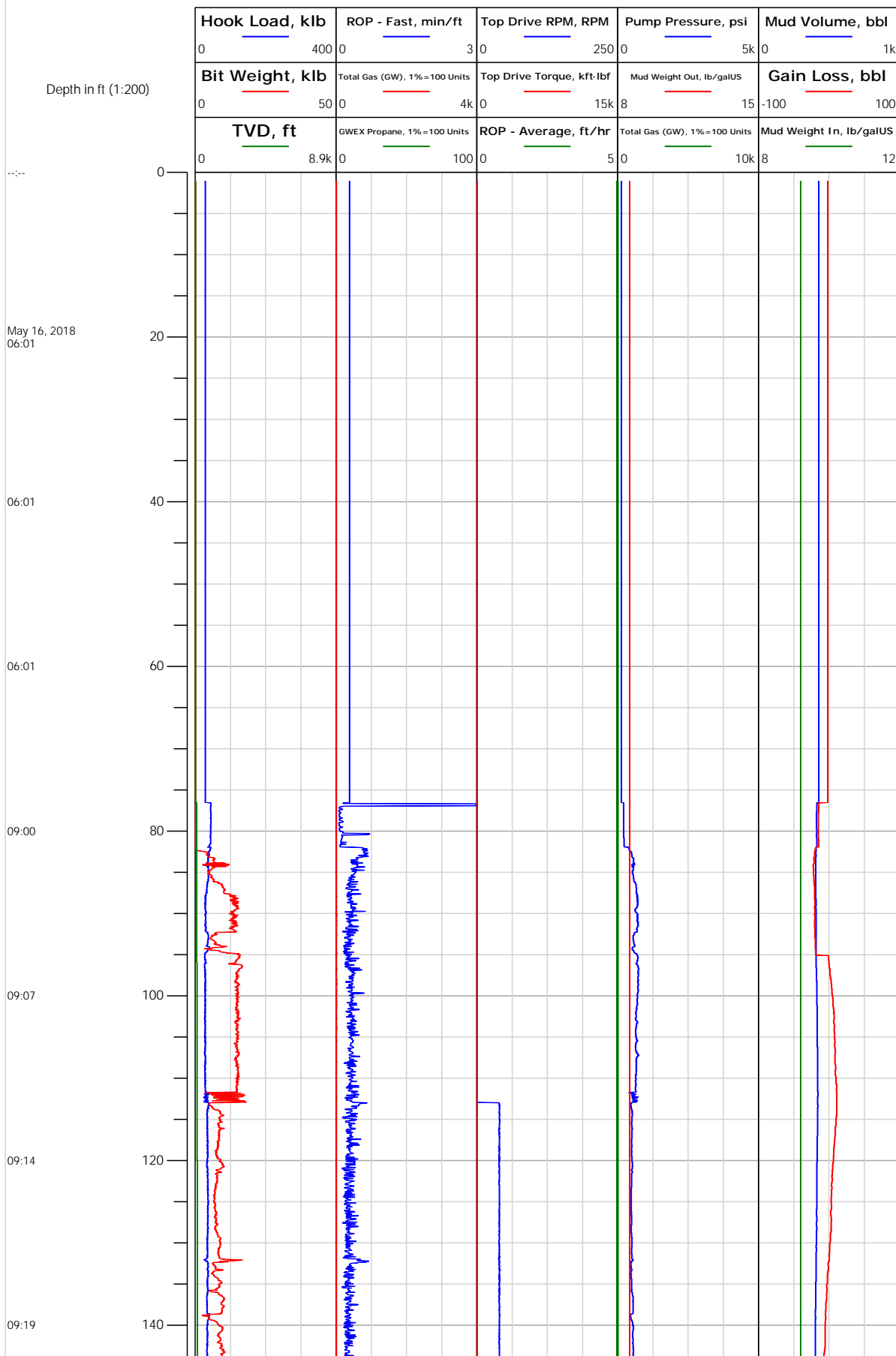
# Electronic Drilling Recorder

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

**Well Name:** Nichols Federal 24-20E  
**Rig:** 290

**Location:**

## Notes



0.00: Deviation Survey  
0.00 ft, Deviation 0 deg,  
Direction 0 deg  
1.00: Rig Floor set Bit  
Position from 1.00 ft to  
76.62 ft

87.53: Rig Floor set Hole  
Depth from 87.54 ft to  
76.62 ft  
87.54: Connection @ 87.54  
ft



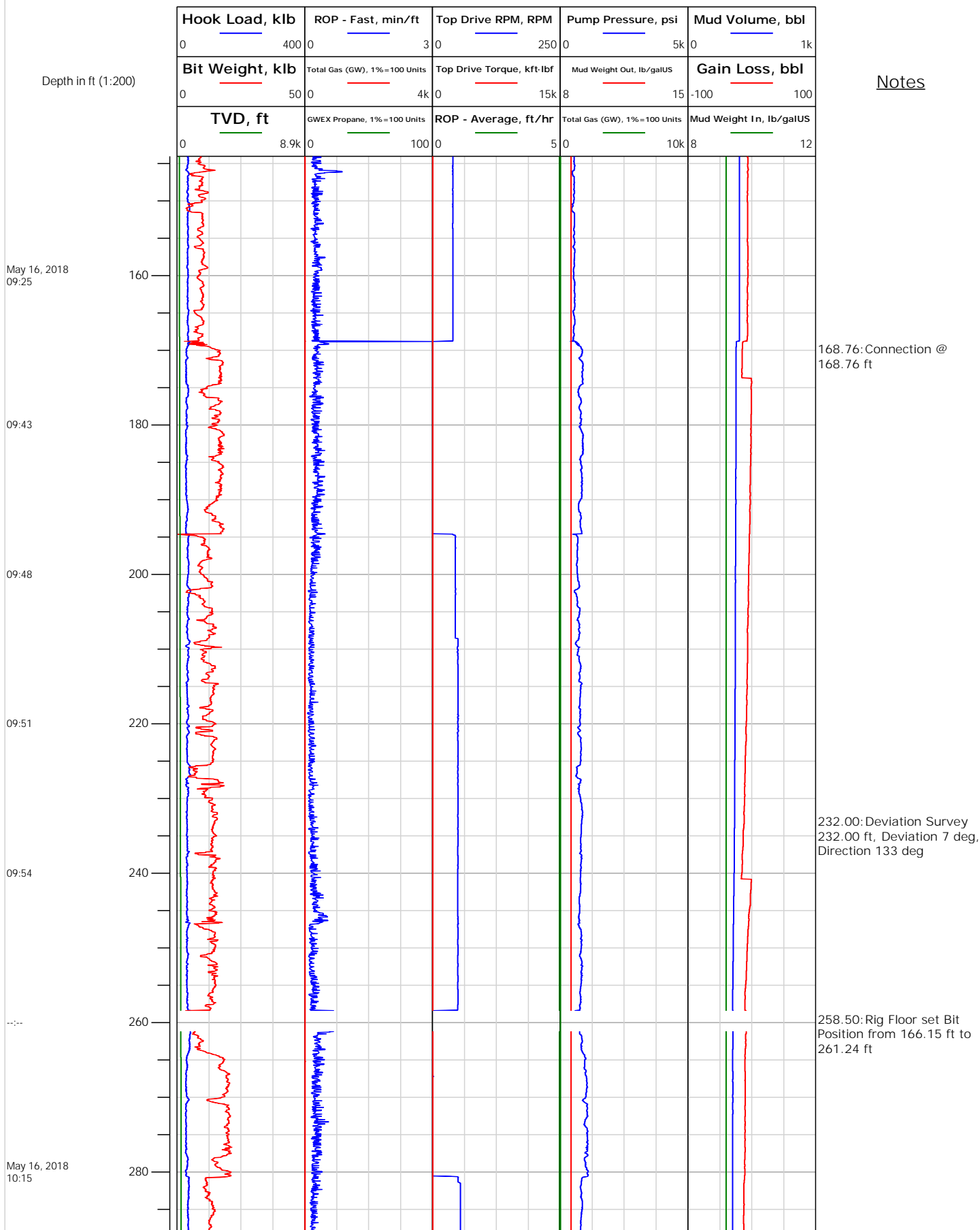
# Electronic Drilling Recorder

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

**Well Name:** Nichols Federal 24-20E  
**Rig:** 290

**Location:**

## Notes







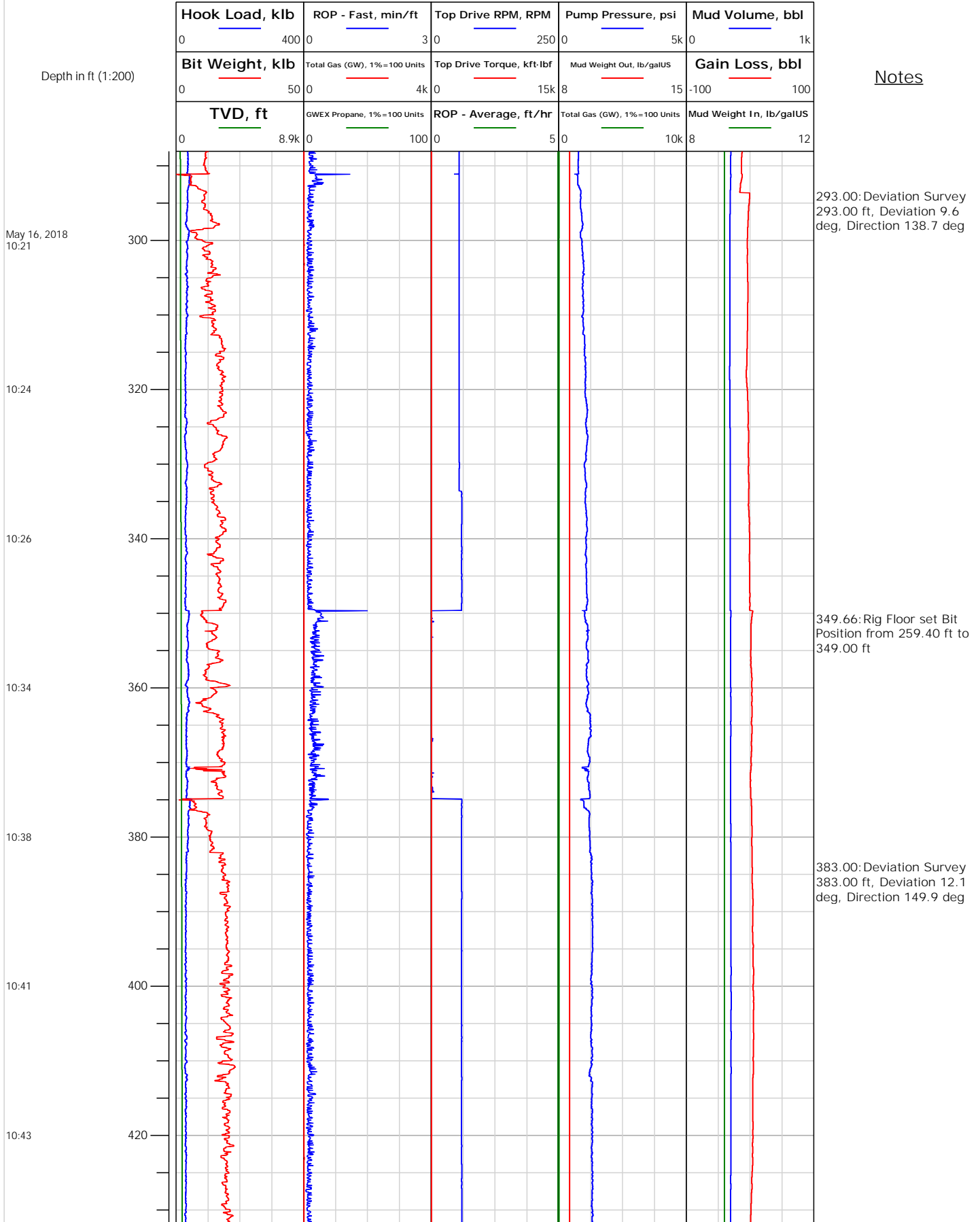
# Electronic Drilling Recorder

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

**Well Name:** Nichols Federal 24-20E  
**Rig:** 290

**Location:**

## Notes





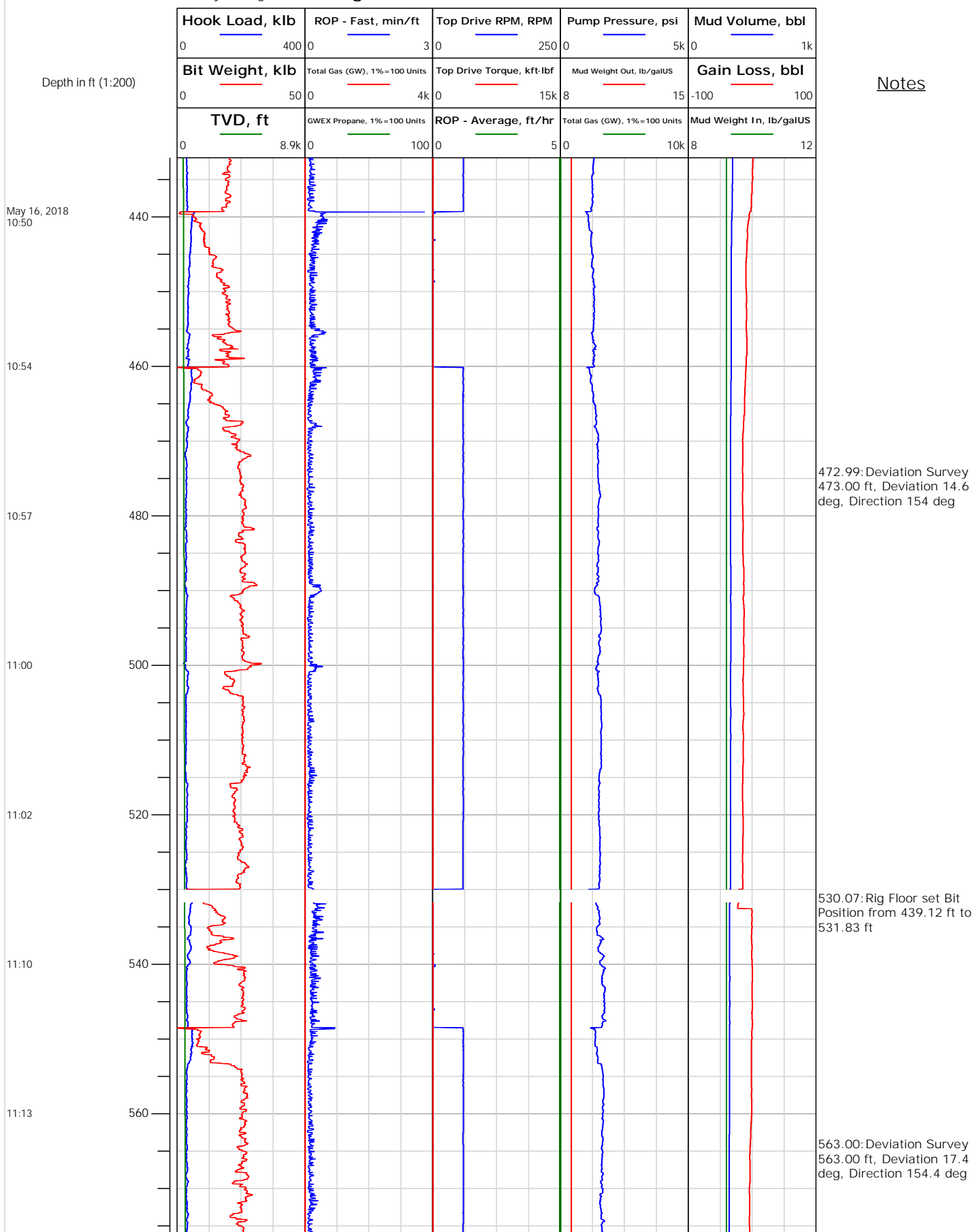
## Electronic Drilling Recorder

Operator: Laramie Energy  
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols Federal 24-20E  
Rig: 290

Location:

Notes





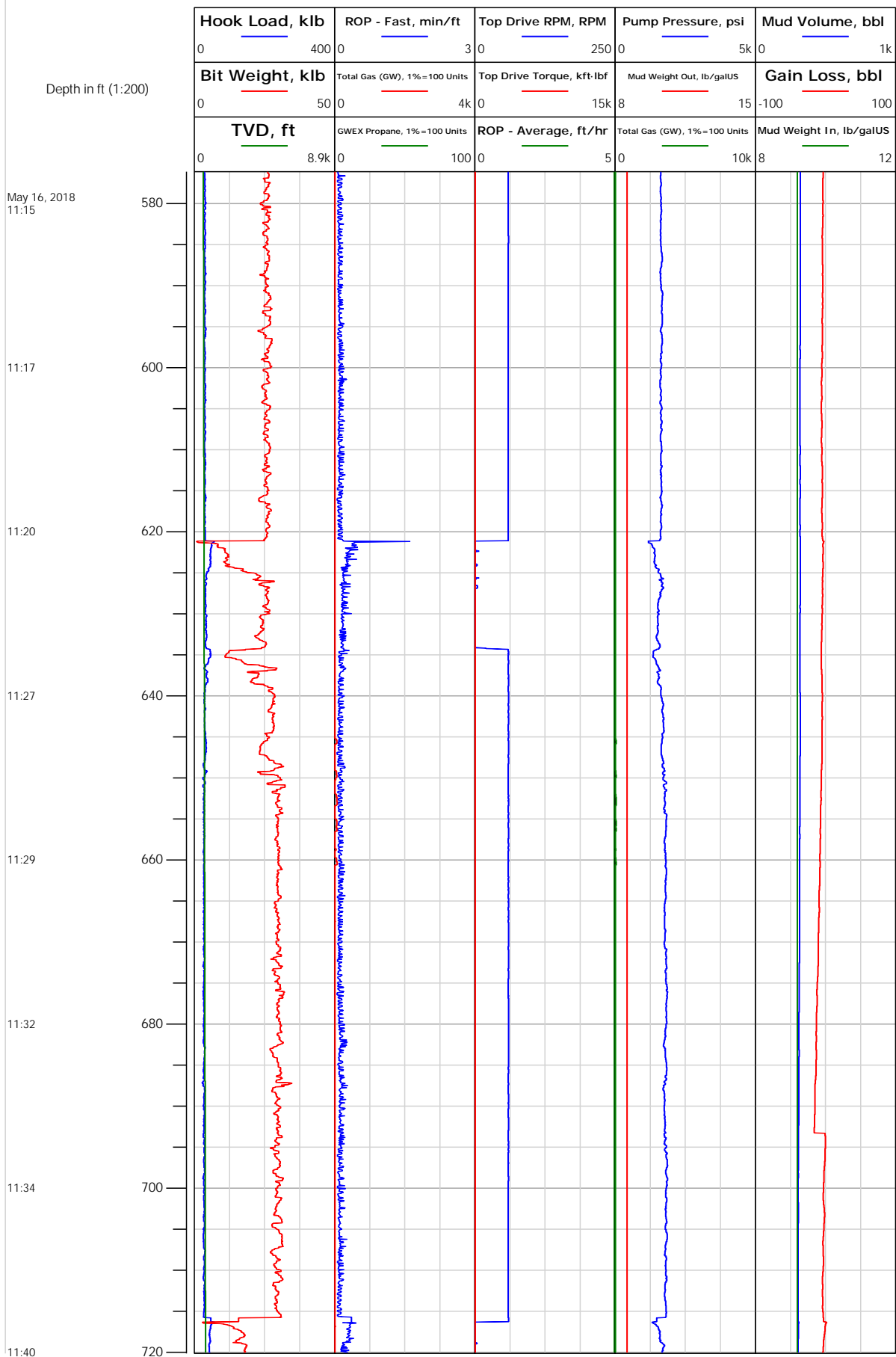
# Electronic Drilling Recorder

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

**Well Name:** Nichols Federal 24-20E  
**Rig:** 290

**Location:**

Notes





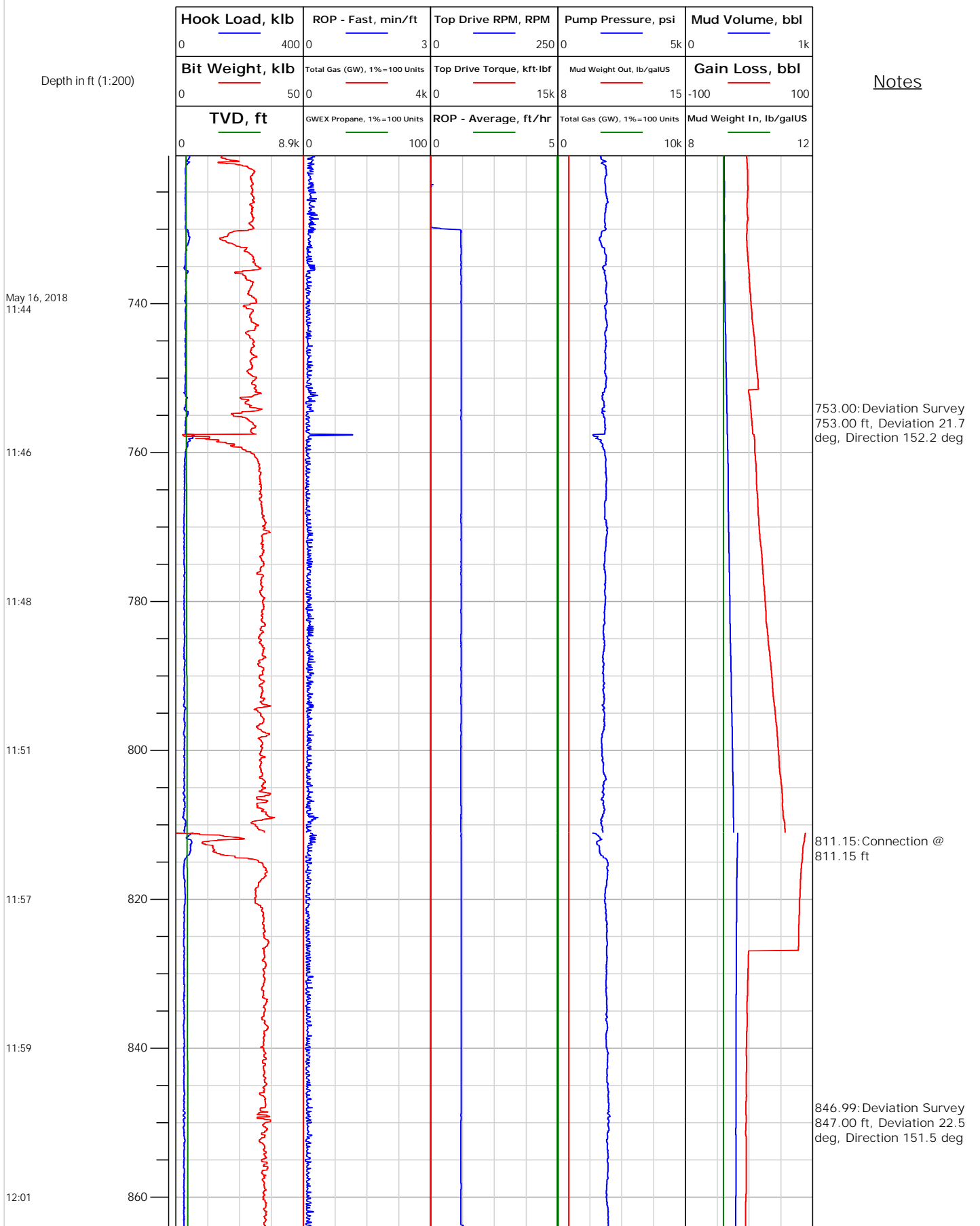
# Electronic Drilling Recorder

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

**Well Name:** Nichols Federal 24-20E  
**Rig:** 290

**Location:**

Notes





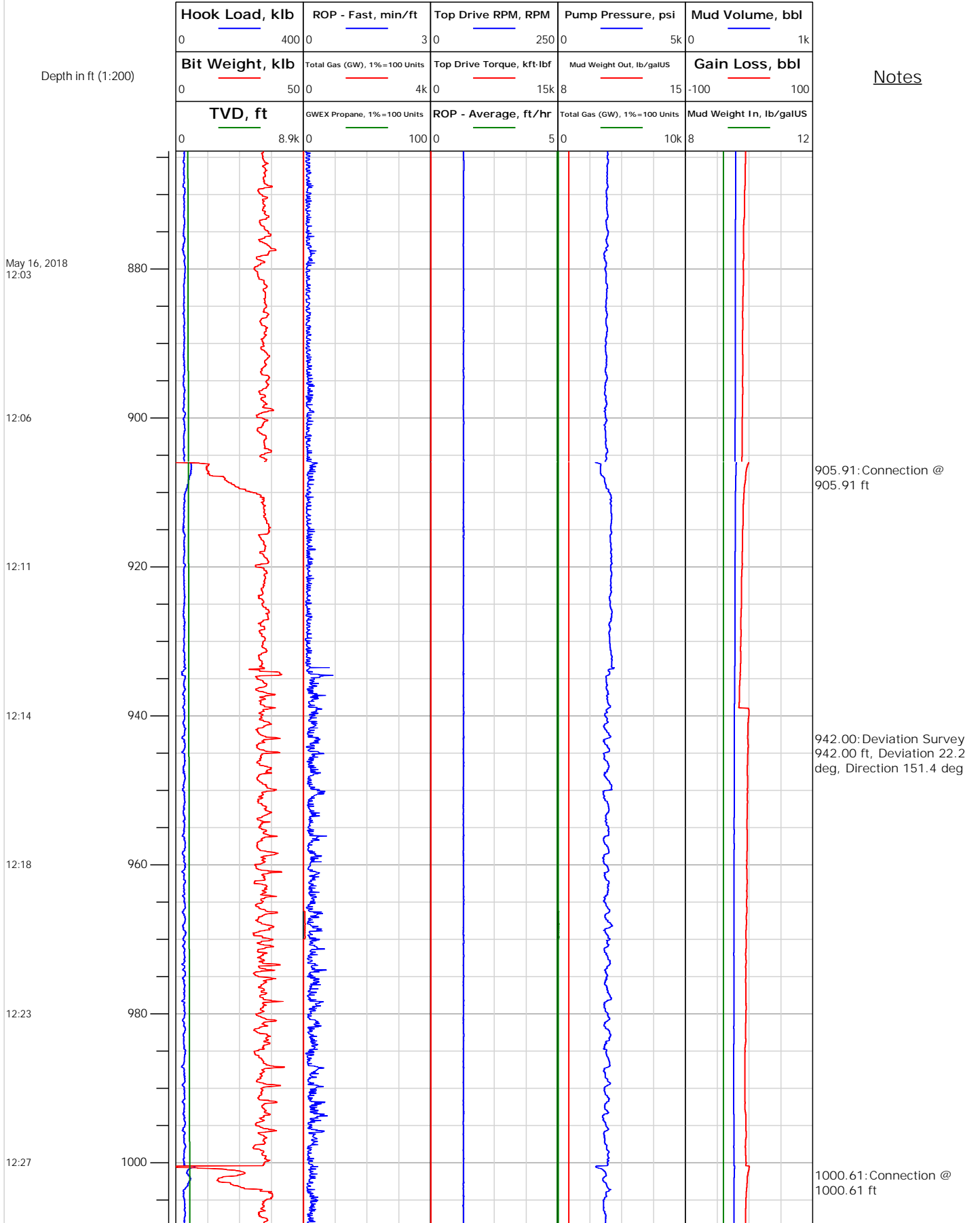
# Electronic Drilling Recorder

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

**Well Name:** Nichols Federal 24-20E  
**Rig:** 290

**Location:**

Notes





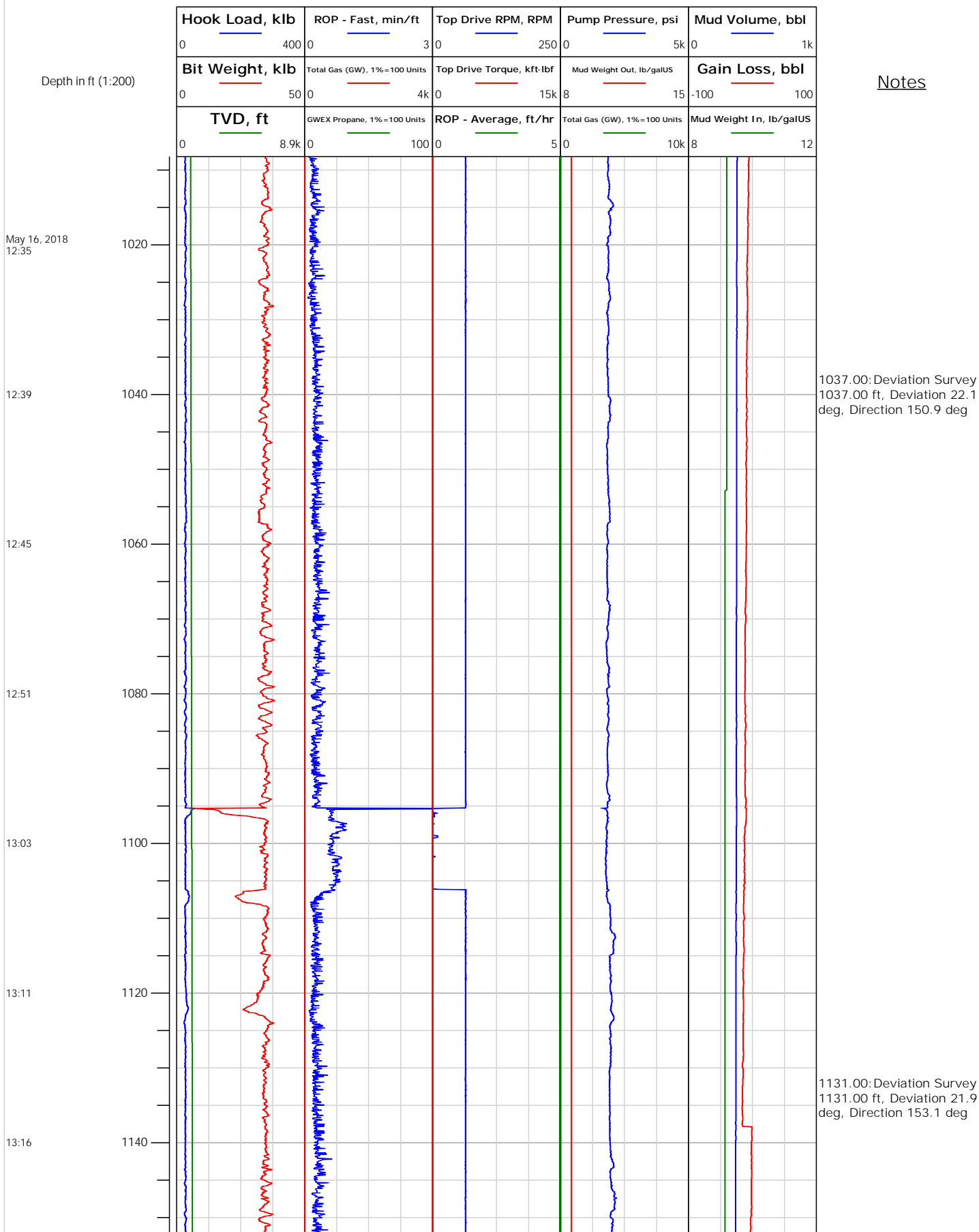
# Electronic Drilling Recorder

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

**Well Name:** Nichols Federal 24-20E  
**Rig:** 290

**Location:**

## Notes





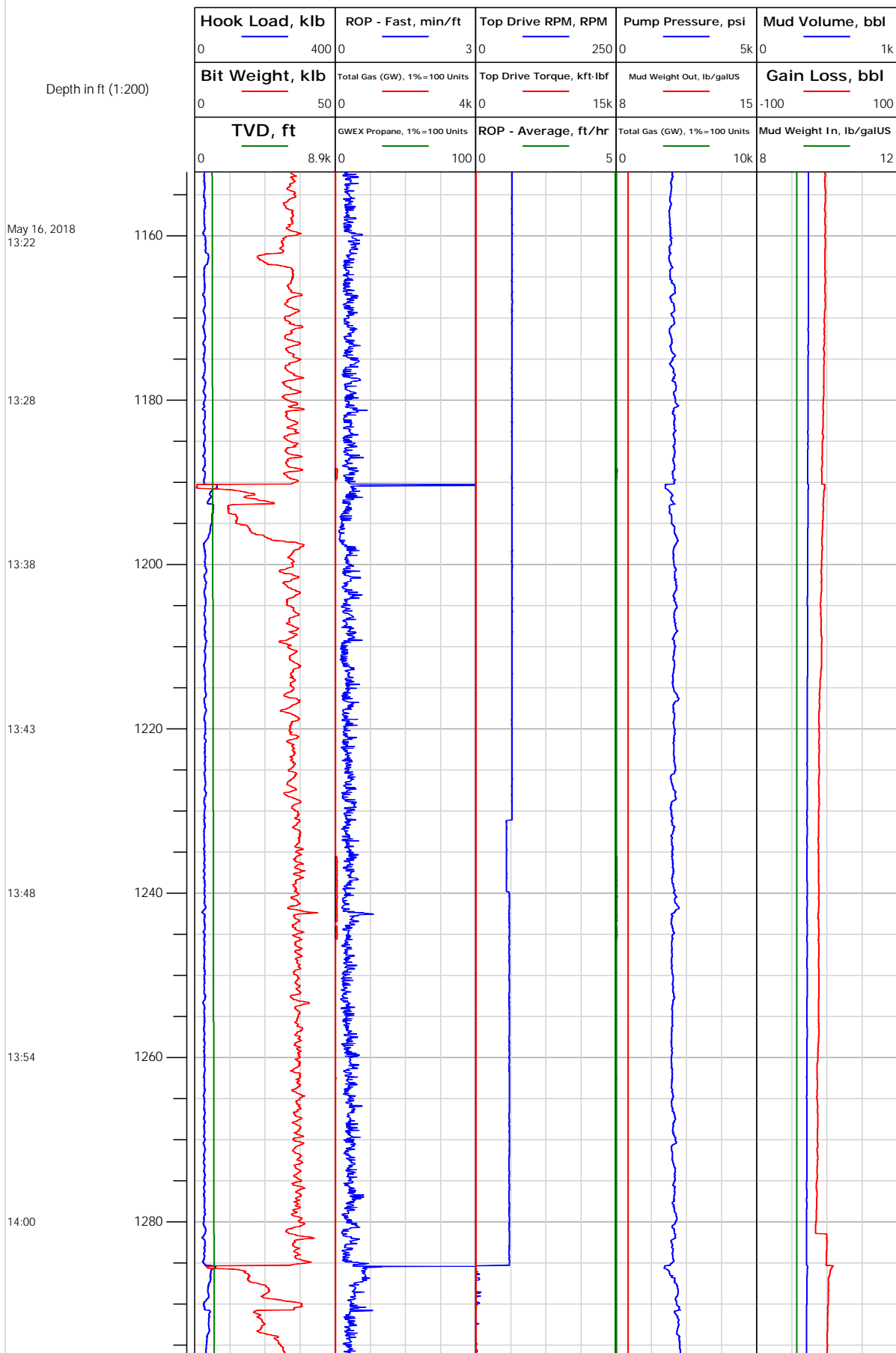
# Electronic Drilling Recorder

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

**Well Name:** Nichols Federal 24-20E  
**Rig:** 290

**Location:**

Notes





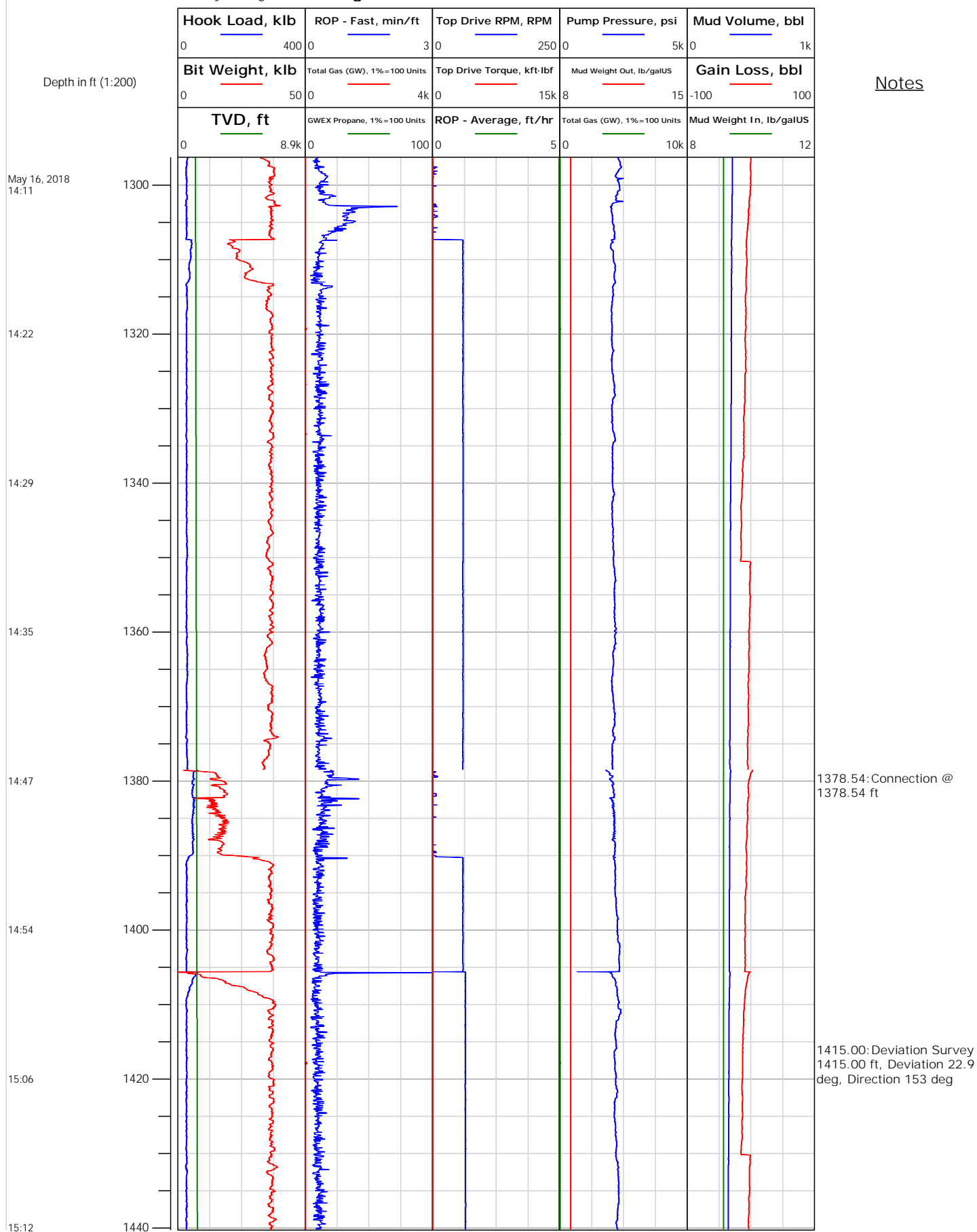
# Electronic Drilling Recorder

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

**Well Name:** Nichols Federal 24-20E  
**Rig:** 290

**Location:**

Notes







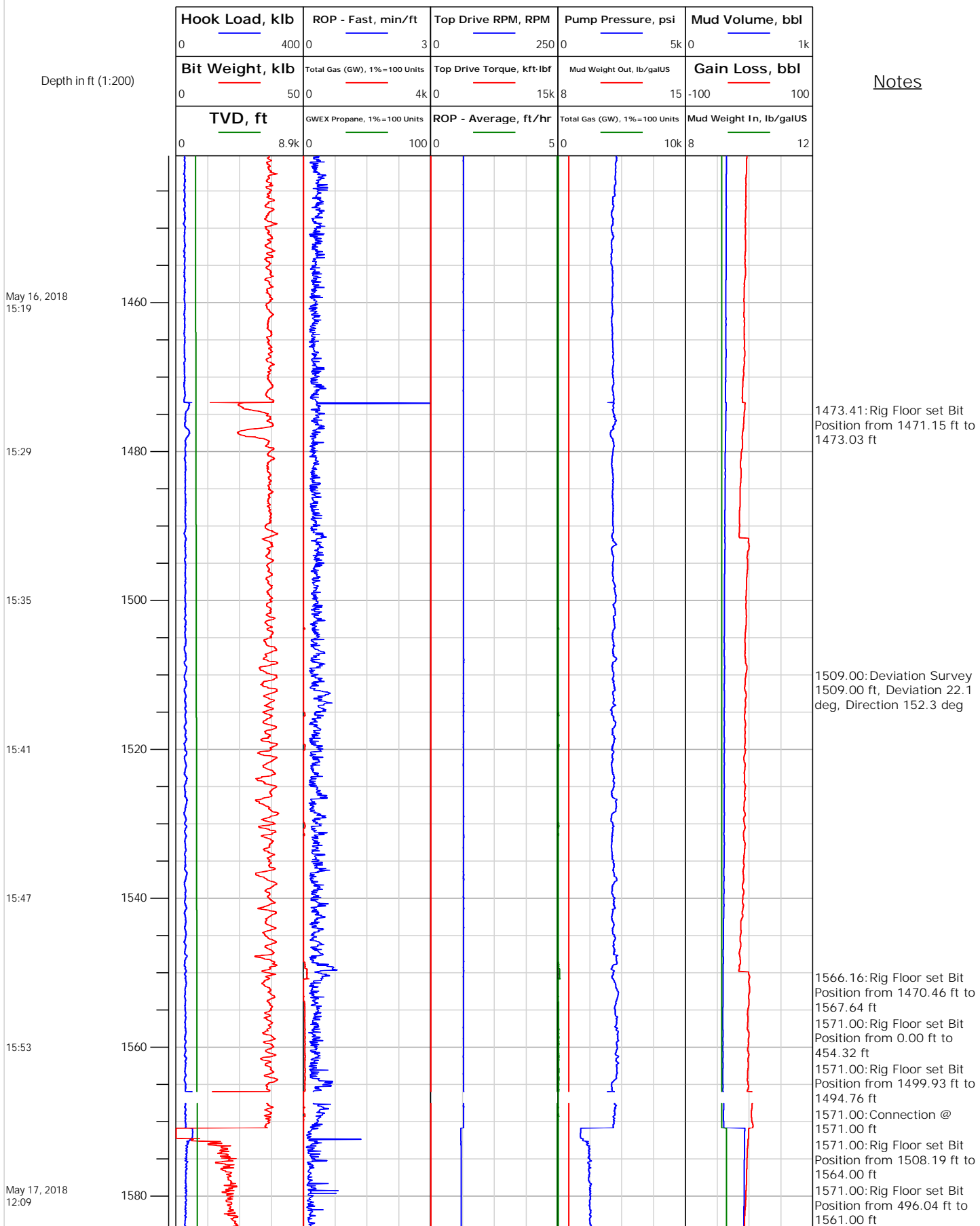
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**Operator:** Laramie Energy  
**Contractor:** Helmerich & Payne Drlg Co

**Well Name:** Nichols Federal 24-20E  
**Rig:** 290

**Location:**

## Notes





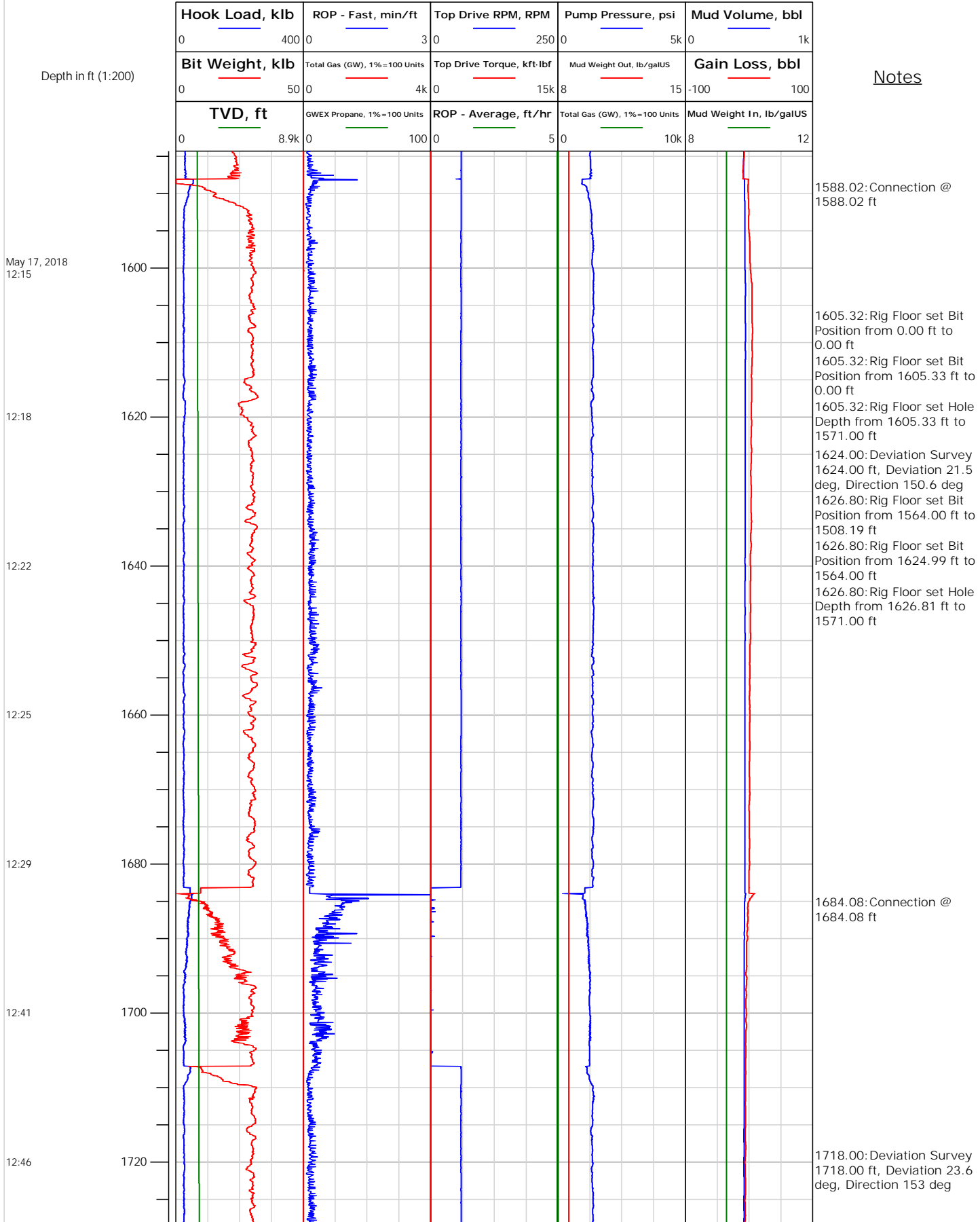
# Electronic Drilling Recorder

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

**Well Name:** Nichols Federal 24-20E  
**Rig:** 290

**Location:**

## Notes





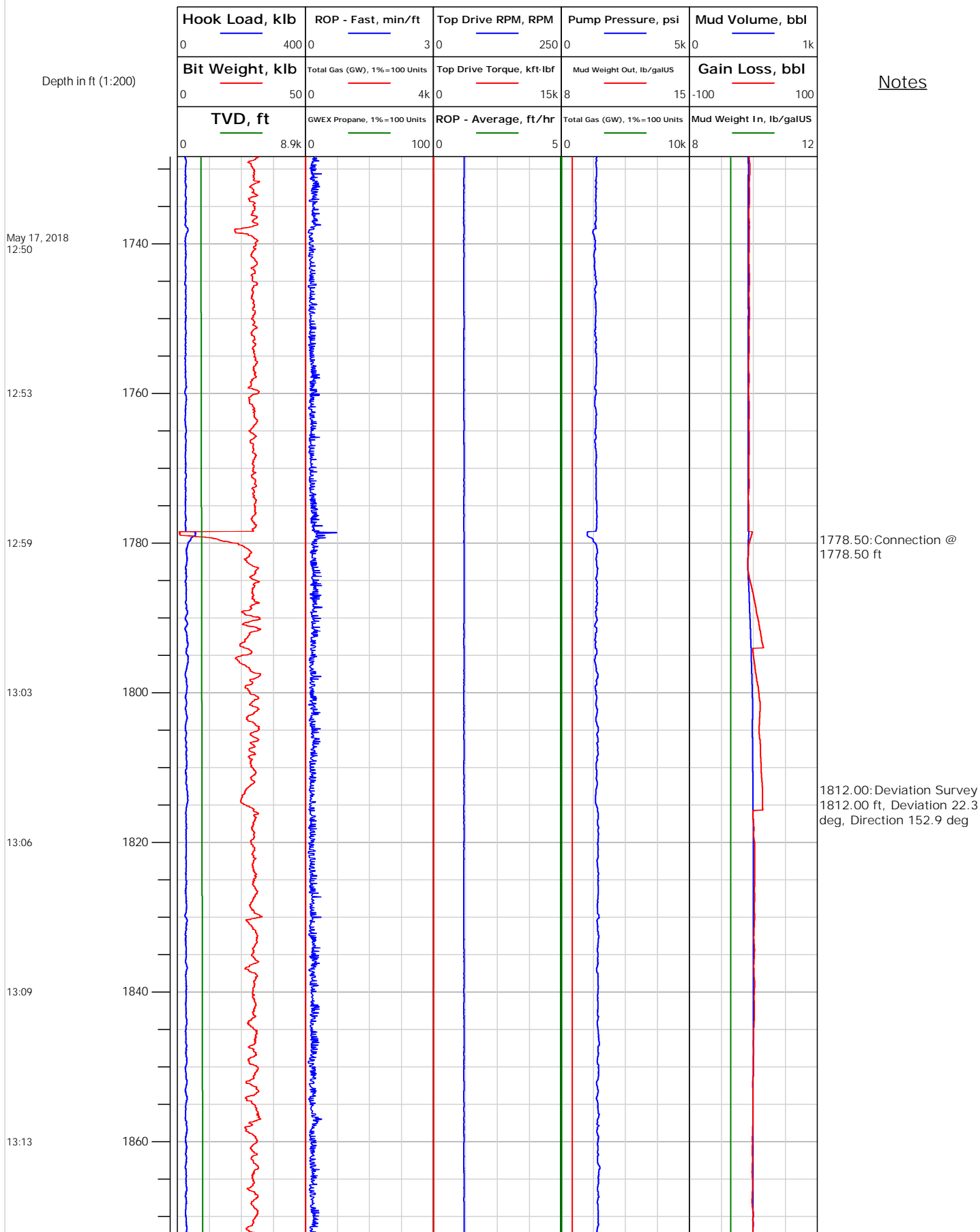
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**Operator:** Laramie Energy  
**Contractor:** Helmerich & Payne Drlg Co

**Well Name:** Nichols Federal 24-20E  
**Rig:** 290

**Location:**

Notes





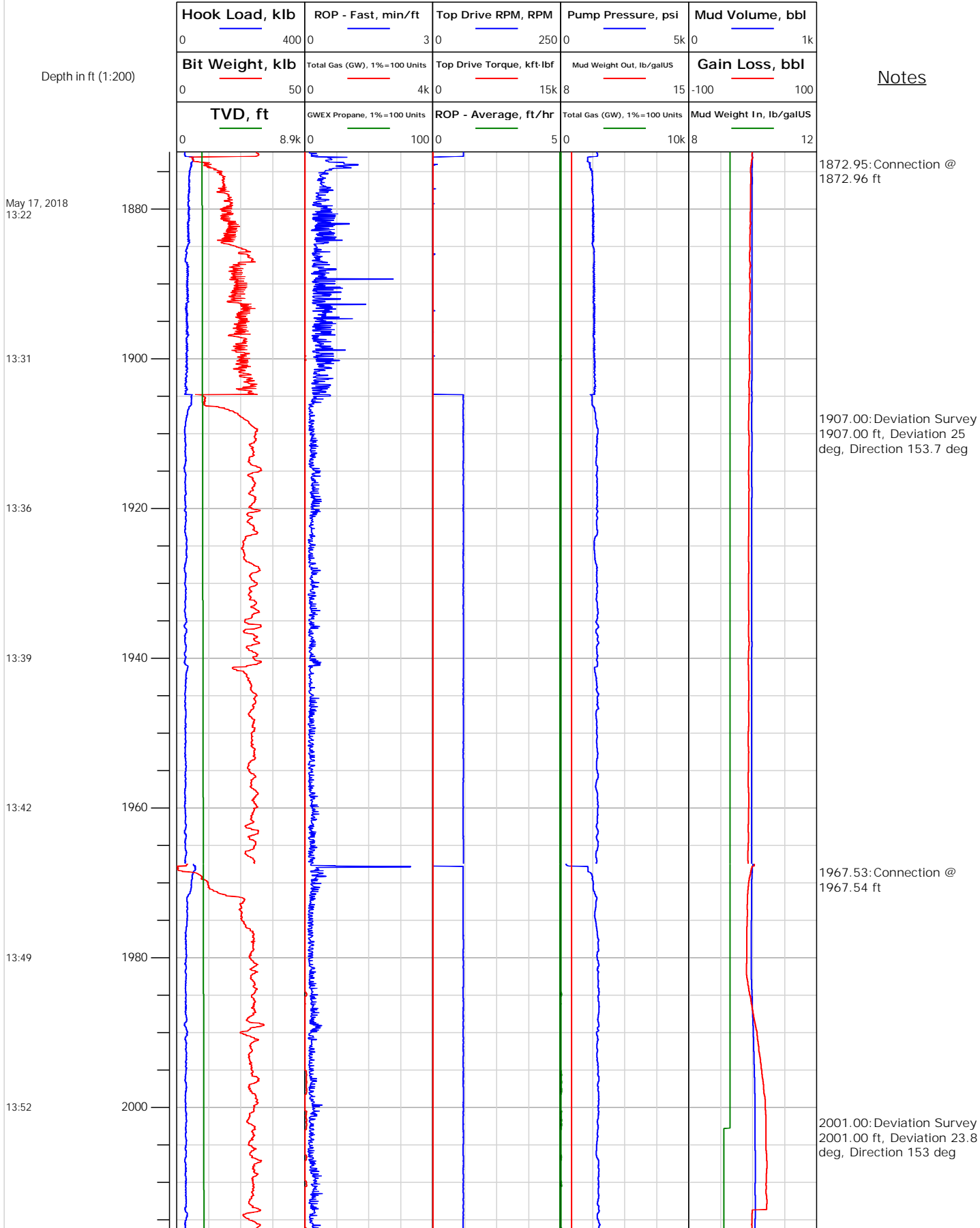
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**Operator:** Laramie Energy  
**Contractor:** Helmerich & Payne Drlg Co

**Well Name:** Nichols Federal 24-20E  
**Rig:** 290

**Location:**

## Notes





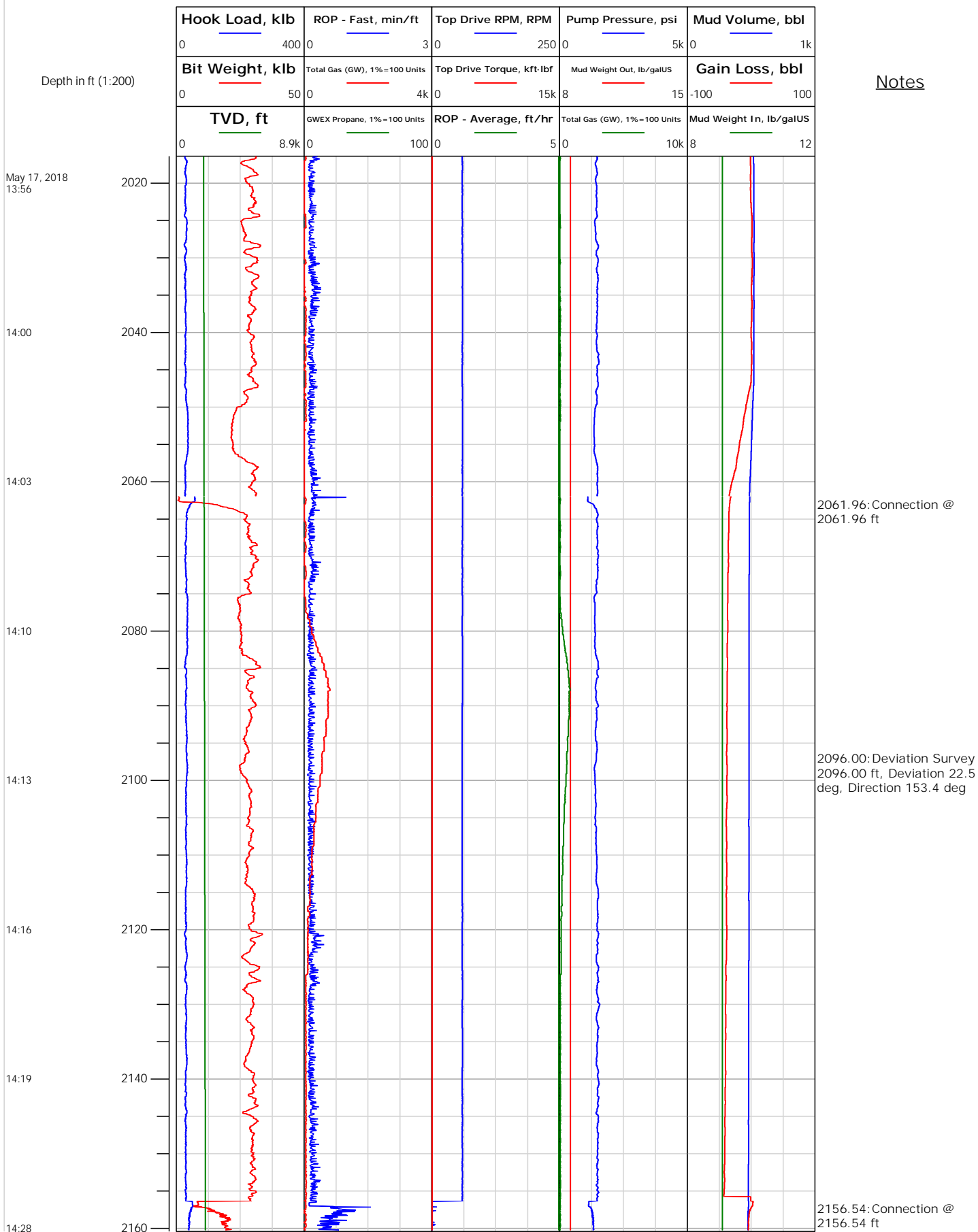
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**Operator:** Laramie Energy  
**Contractor:** Helmerich & Payne Drlg Co

**Well Name:** Nichols Federal 24-20E  
**Rig:** 290

**Location:**

Notes





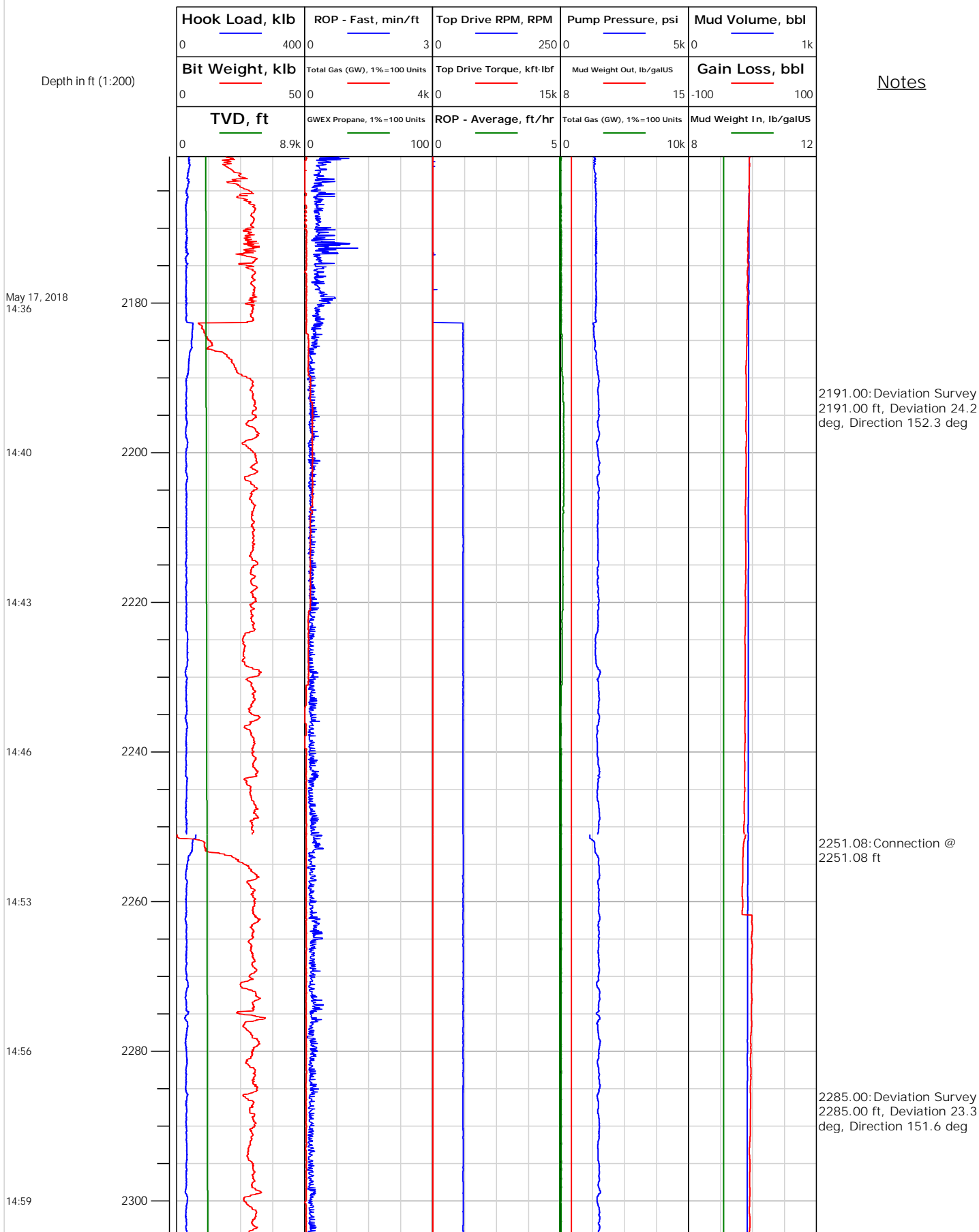
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**Operator:** Laramie Energy  
**Contractor:** Helmerich & Payne Drlg Co

**Well Name:** Nichols Federal 24-20E  
**Rig:** 290

**Location:**

## Notes





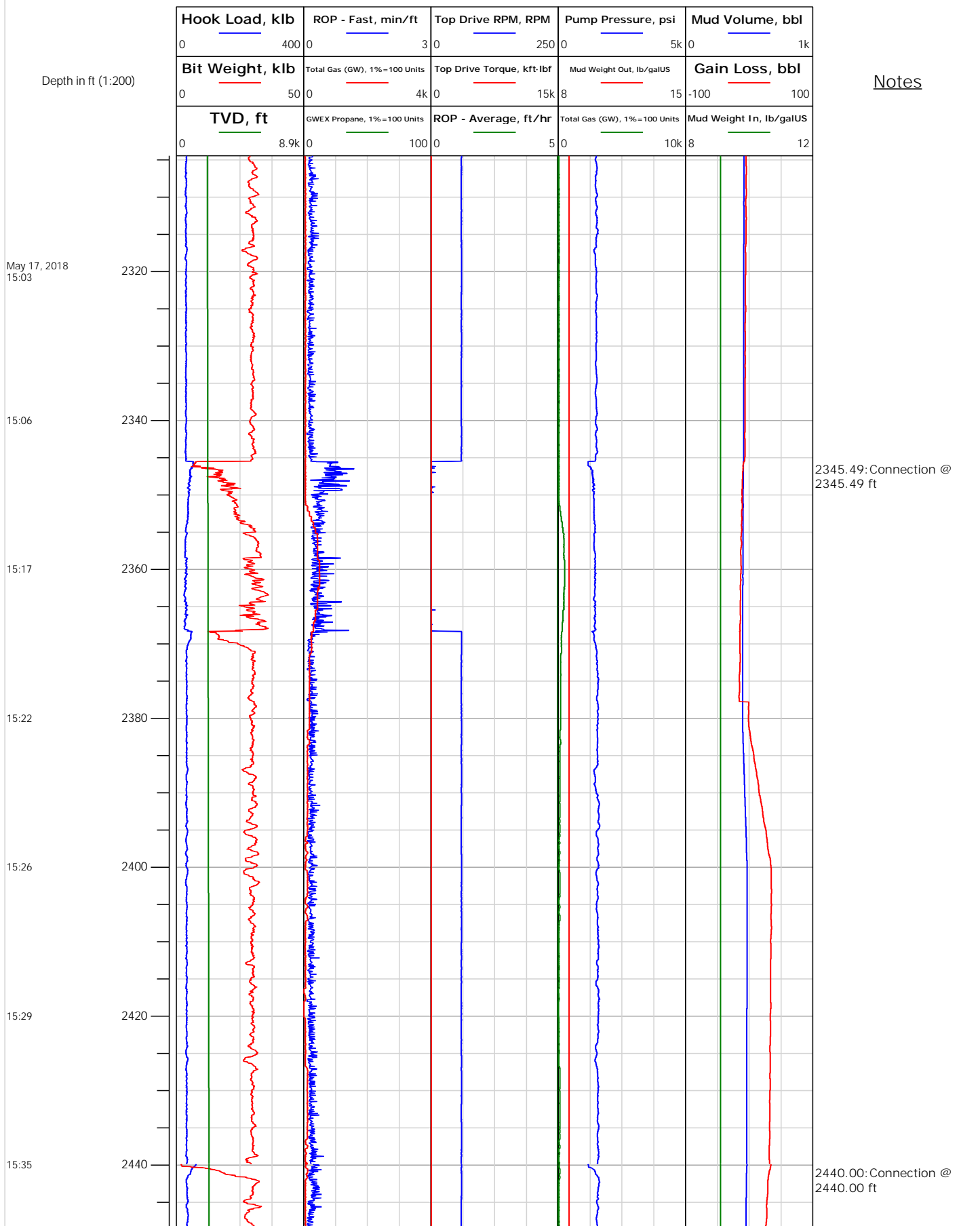
# Electronic Drilling Recorder

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

**Well Name:** Nichols Federal 24-20E  
**Rig:** 290

**Location:**

Notes





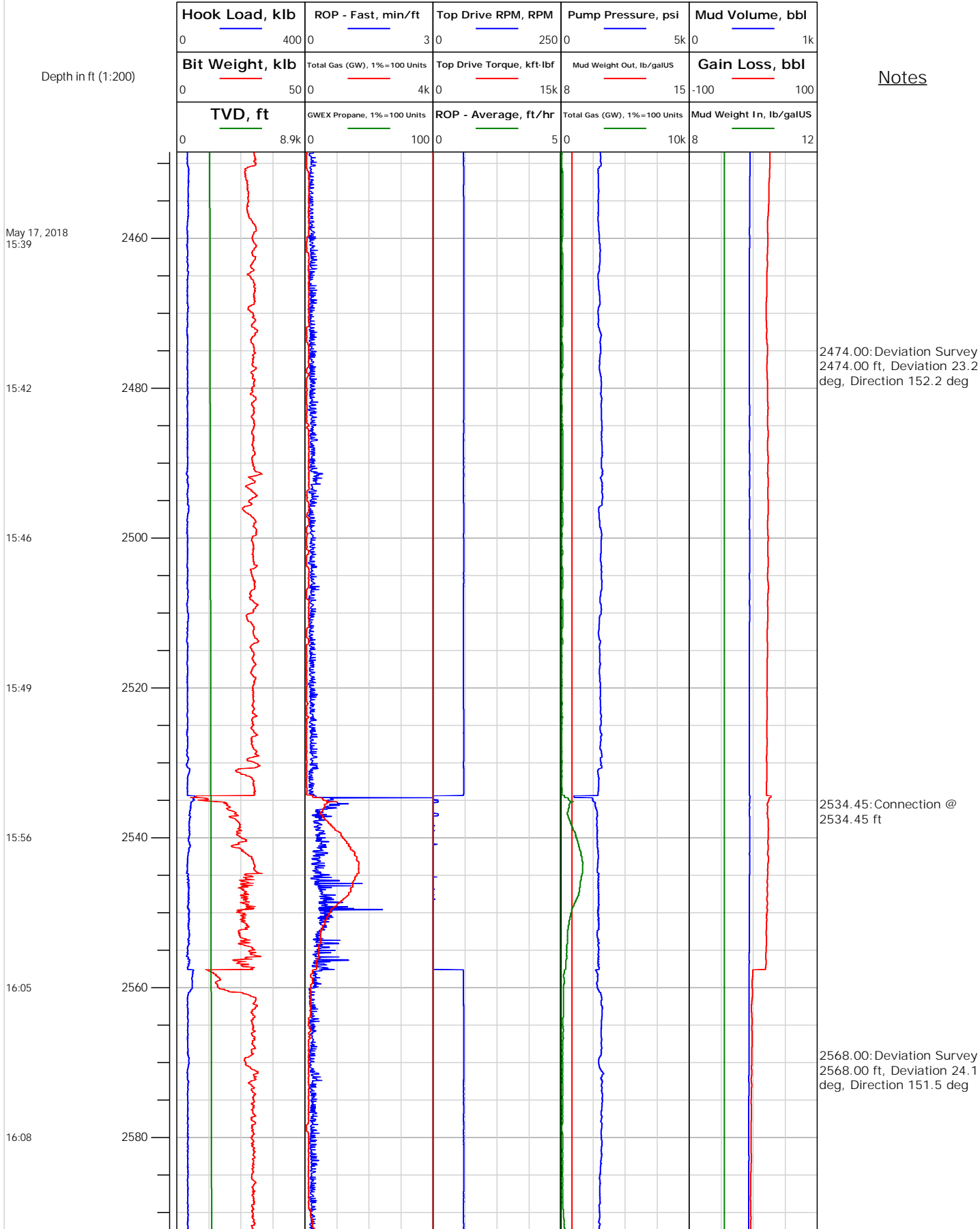
# Electronic Drilling Recorder

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

**Well Name:** Nichols Federal 24-20E  
**Rig:** 290

**Location:**

## Notes







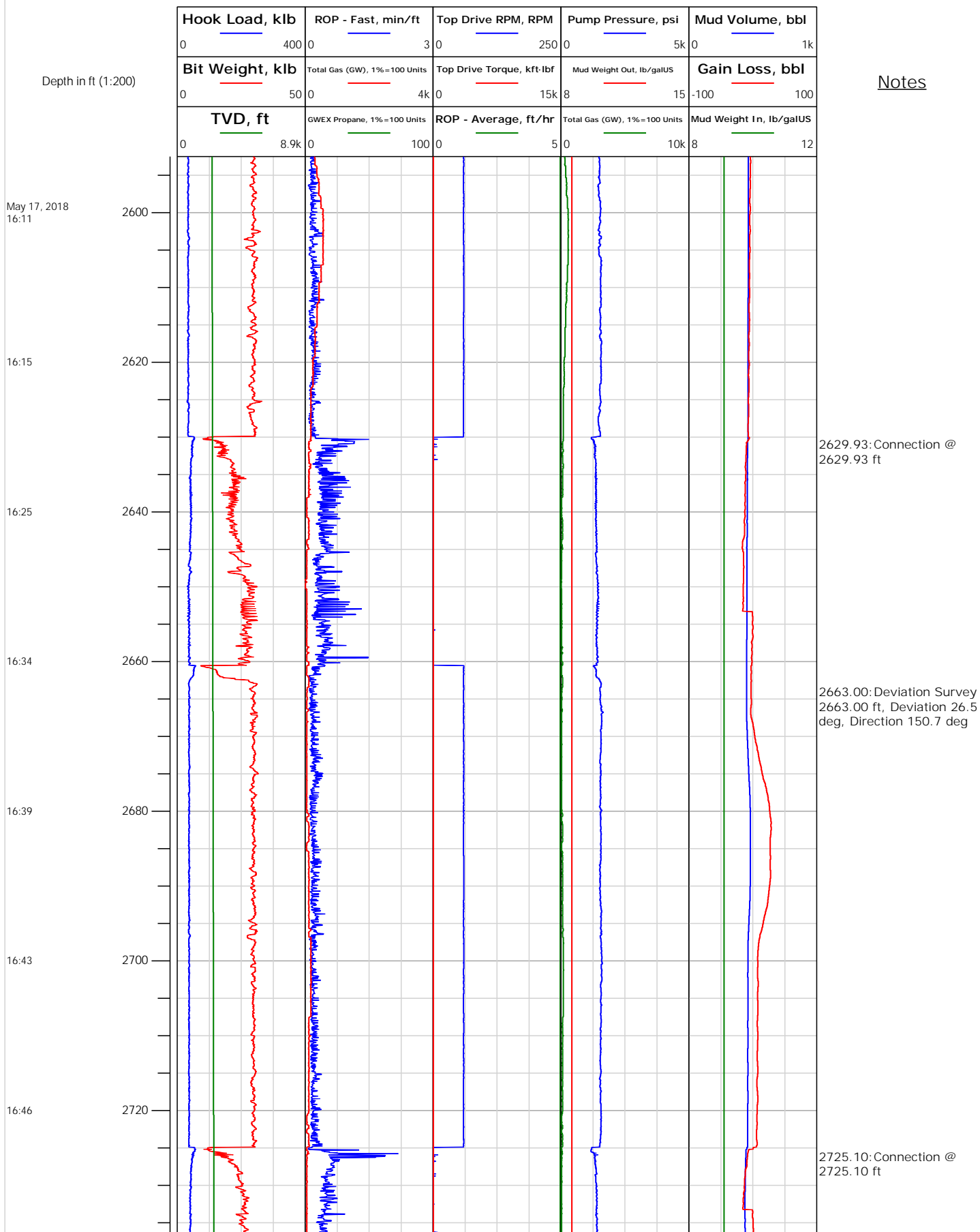
# Electronic Drilling Recorder

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

**Well Name:** Nichols Federal 24-20E  
**Rig:** 290

**Location:**

Notes





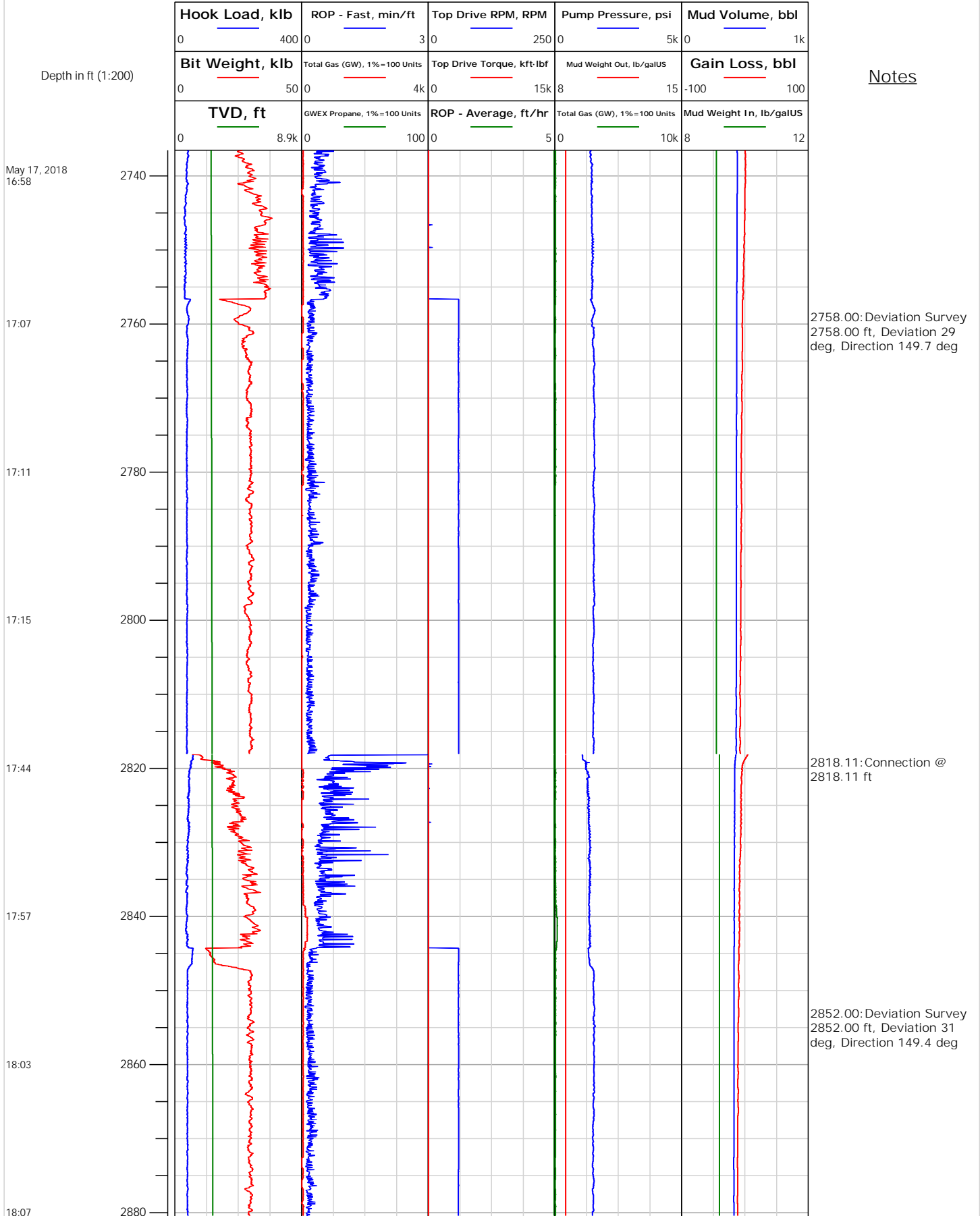
# Electronic Drilling Recorder

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

**Well Name:** Nichols Federal 24-20E  
**Rig:** 290

**Location:**

## Notes





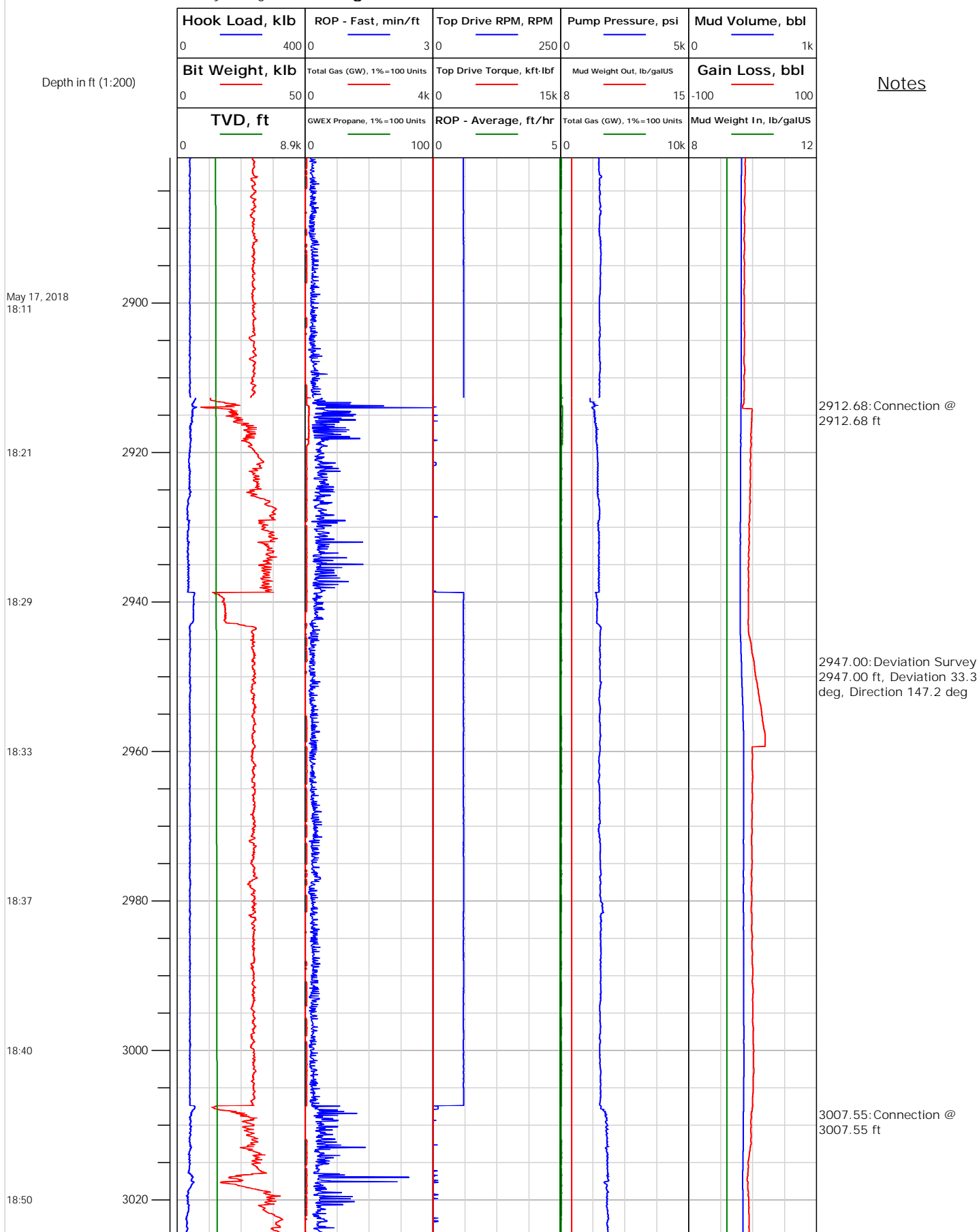
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**Operator:** Laramie Energy  
**Contractor:** Helmerich & Payne Drlg Co

**Well Name:** Nichols Federal 24-20E  
**Rig:** 290

**Location:**

## Notes





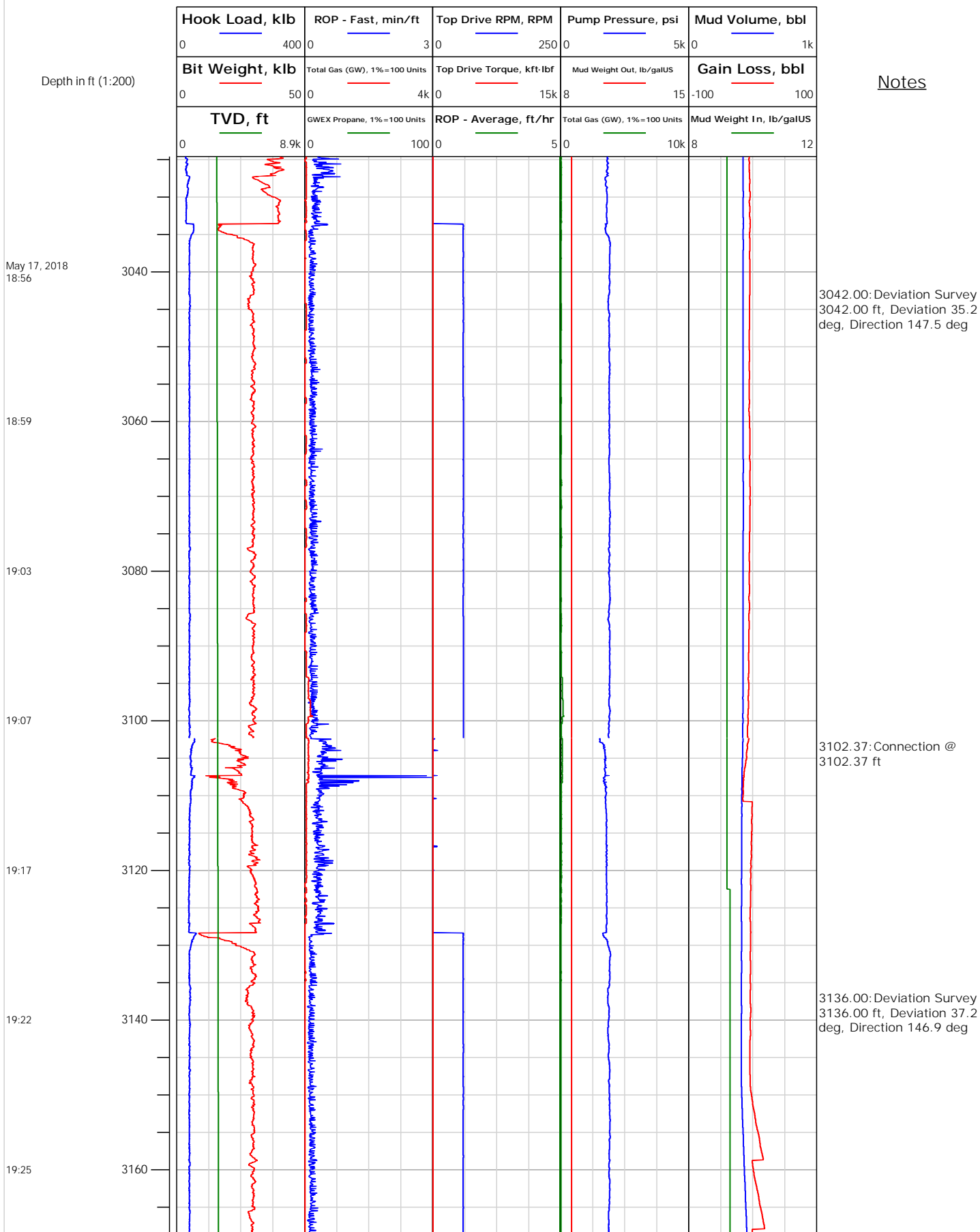
# Electronic Drilling Recorder

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

**Well Name:** Nichols Federal 24-20E  
**Rig:** 290

**Location:**

## Notes





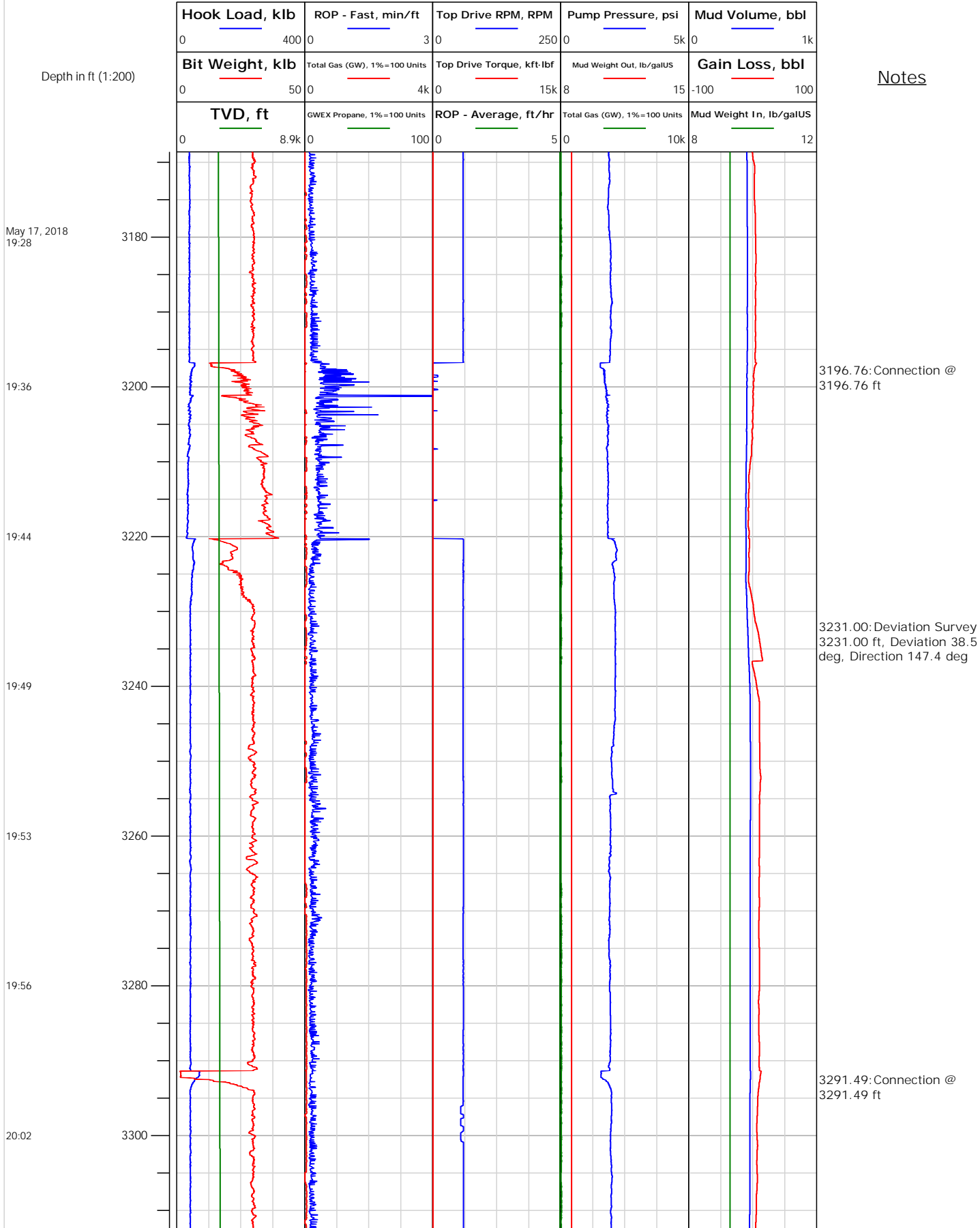
# Electronic Drilling Recorder

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

**Well Name:** Nichols Federal 24-20E  
**Rig:** 290

**Location:**

Notes





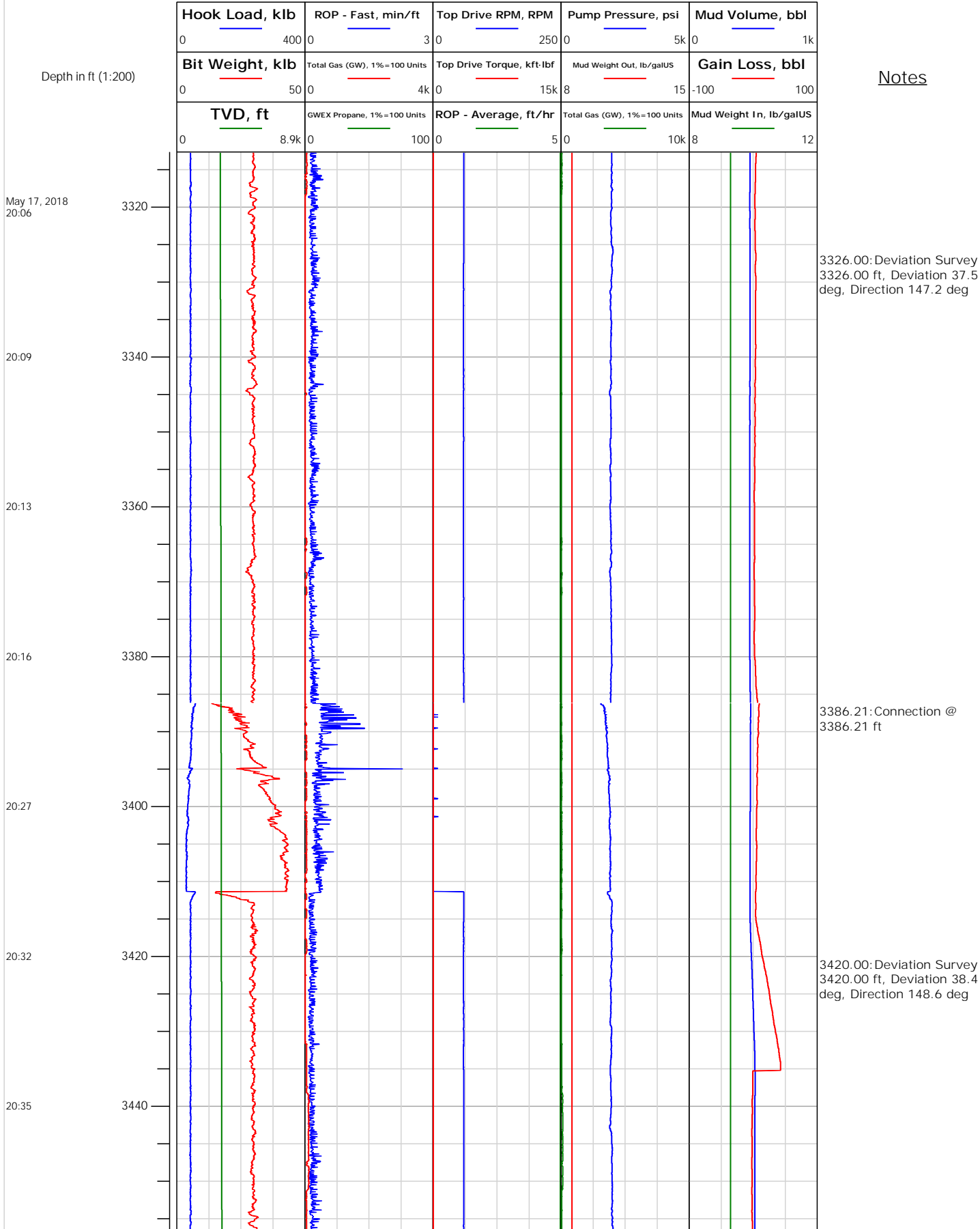
# Electronic Drilling Recorder

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

**Well Name:** Nichols Federal 24-20E  
**Rig:** 290

**Location:**

## Notes





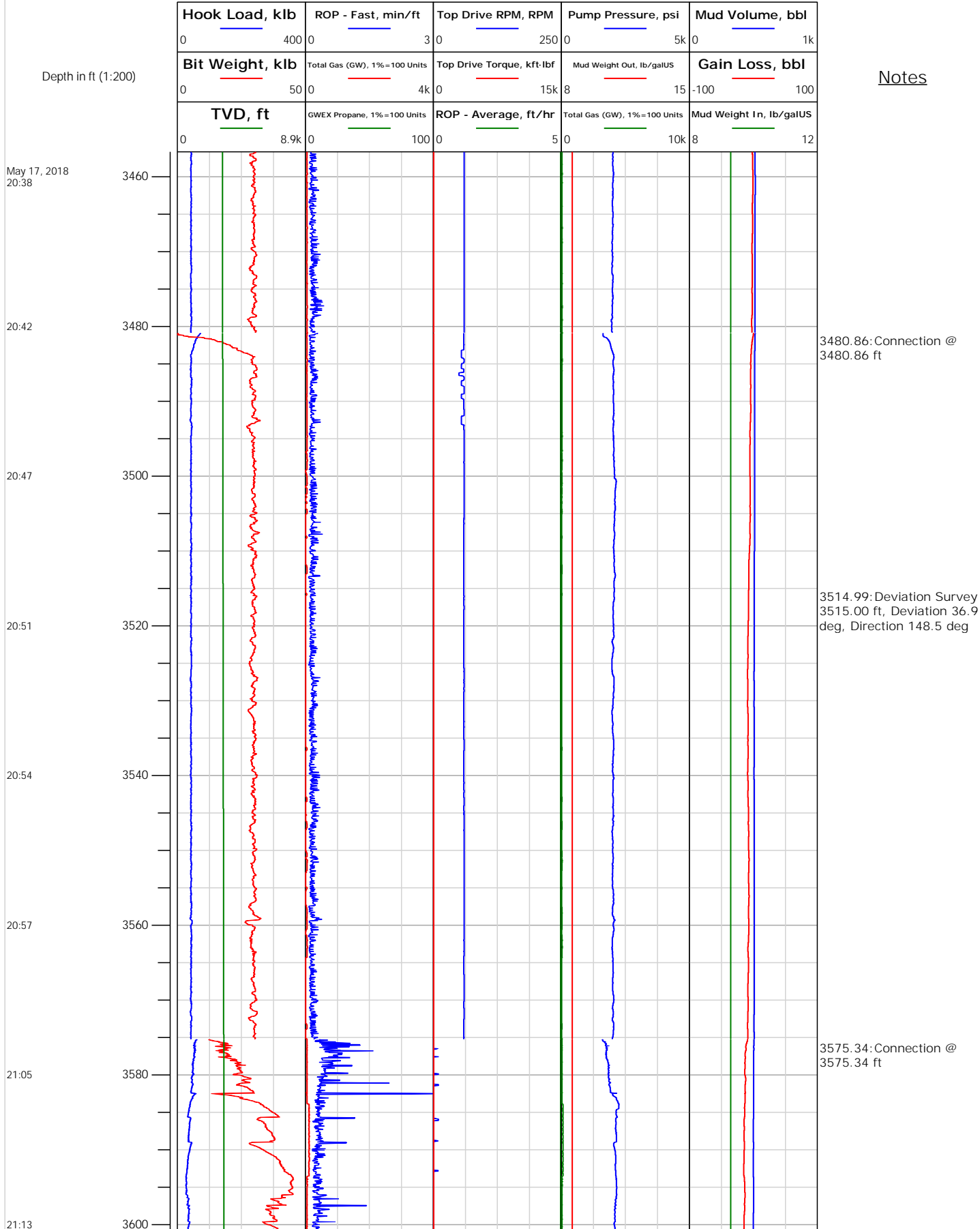
# Electronic Drilling Recorder

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

**Well Name:** Nichols Federal 24-20E  
**Rig:** 290

**Location:**

## Notes





# Electronic Drilling Recorder

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

**Well Name:** Nichols Federal 24-20E  
**Rig:** 290

**Location:**

## Notes

Depth in ft (1:200)

May 17, 2018  
21:17

21:20

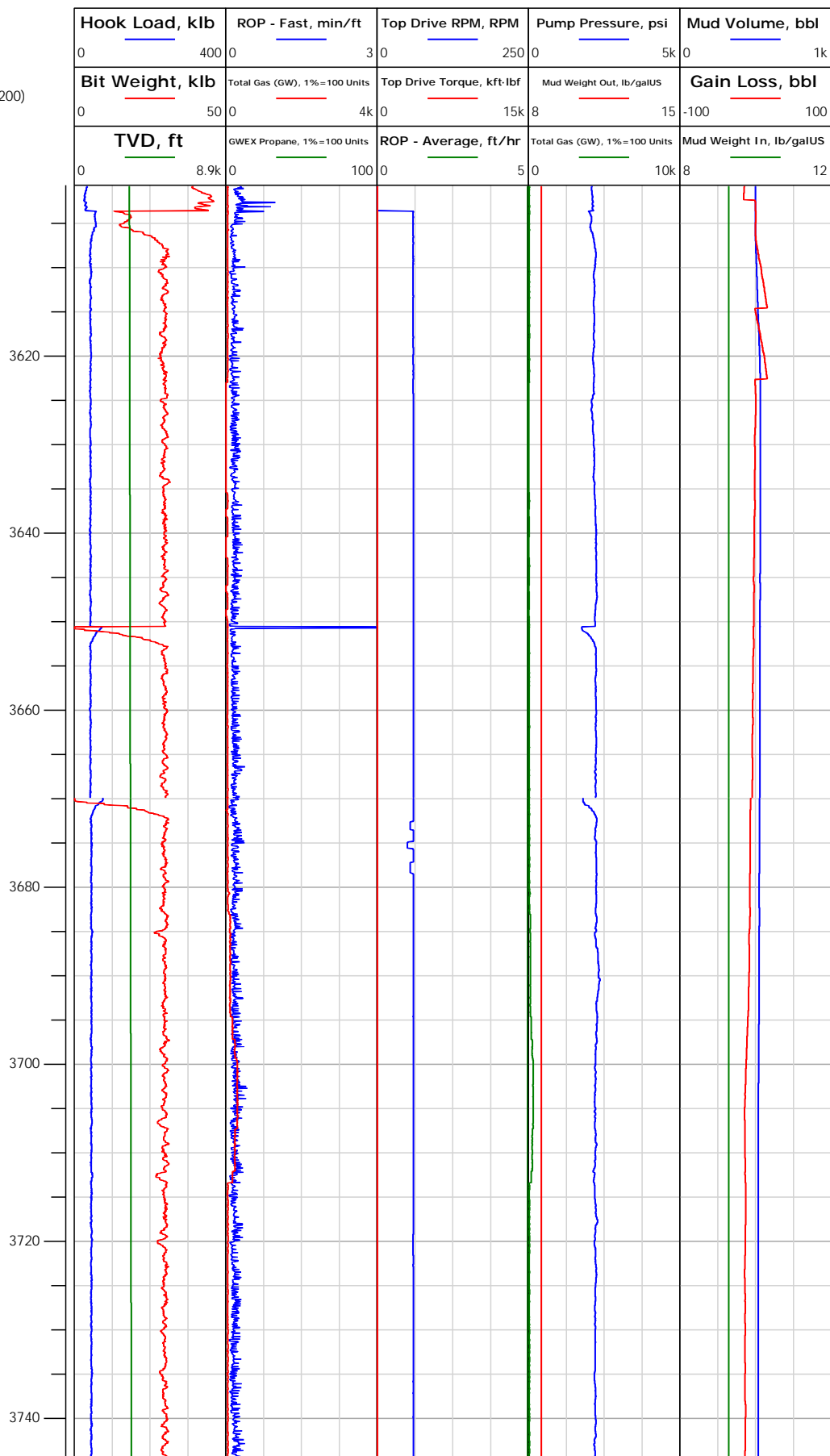
21:24

21:31

21:34

21:38

21:41







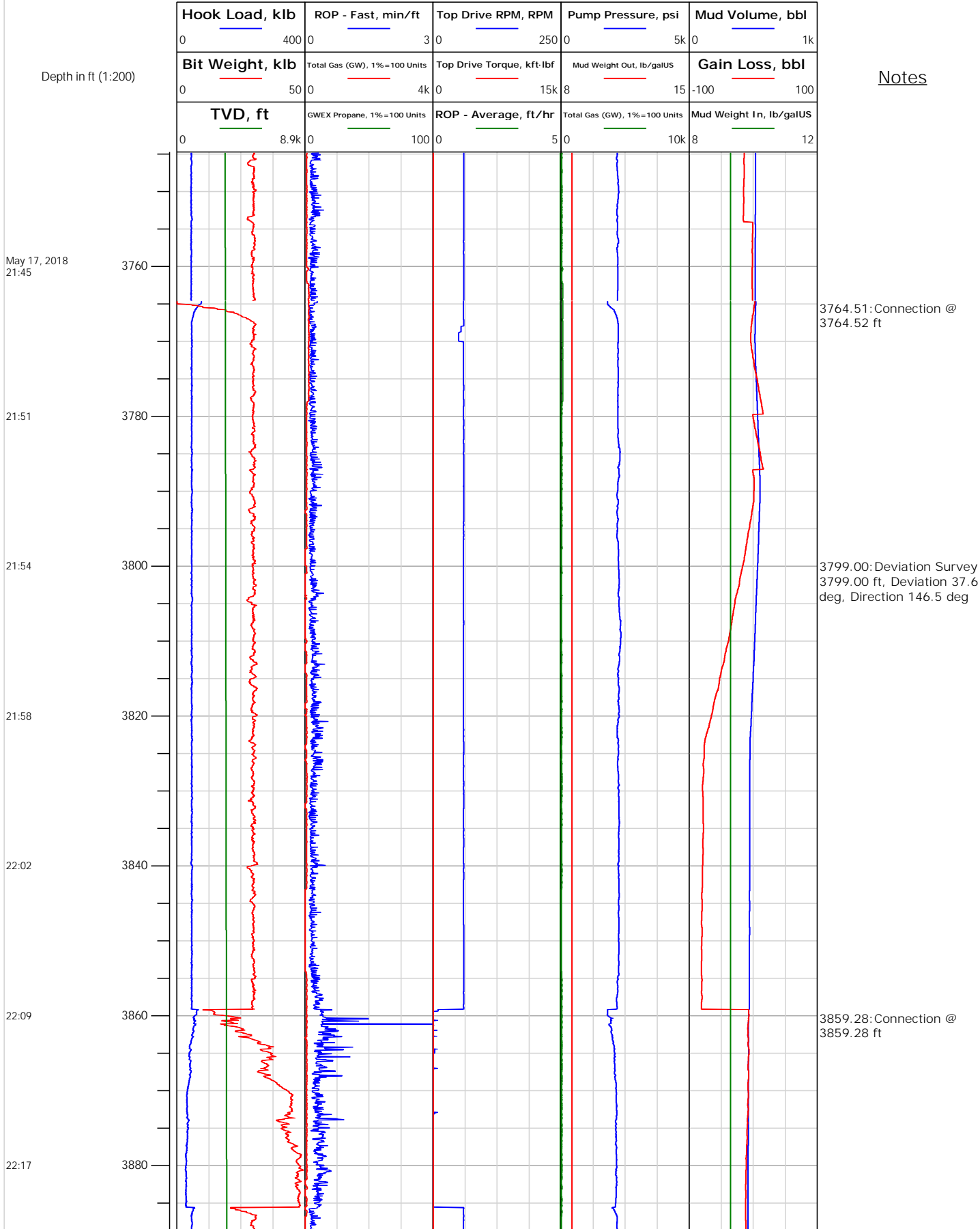
# Electronic Drilling Recorder

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

**Well Name:** Nichols Federal 24-20E  
**Rig:** 290

**Location:**

## Notes





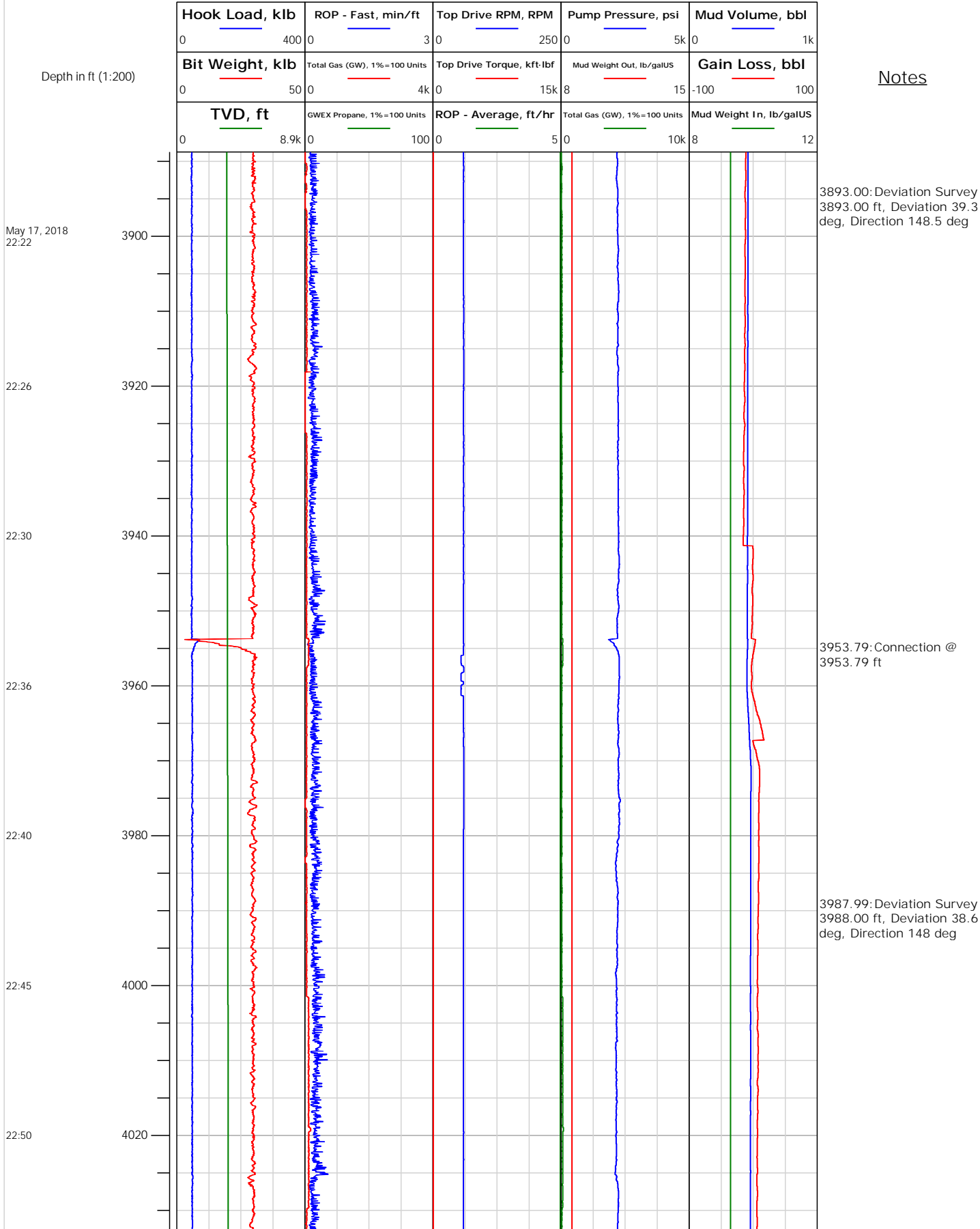
# Electronic Drilling Recorder

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

**Well Name:** Nichols Federal 24-20E  
**Rig:** 290

**Location:**

## Notes





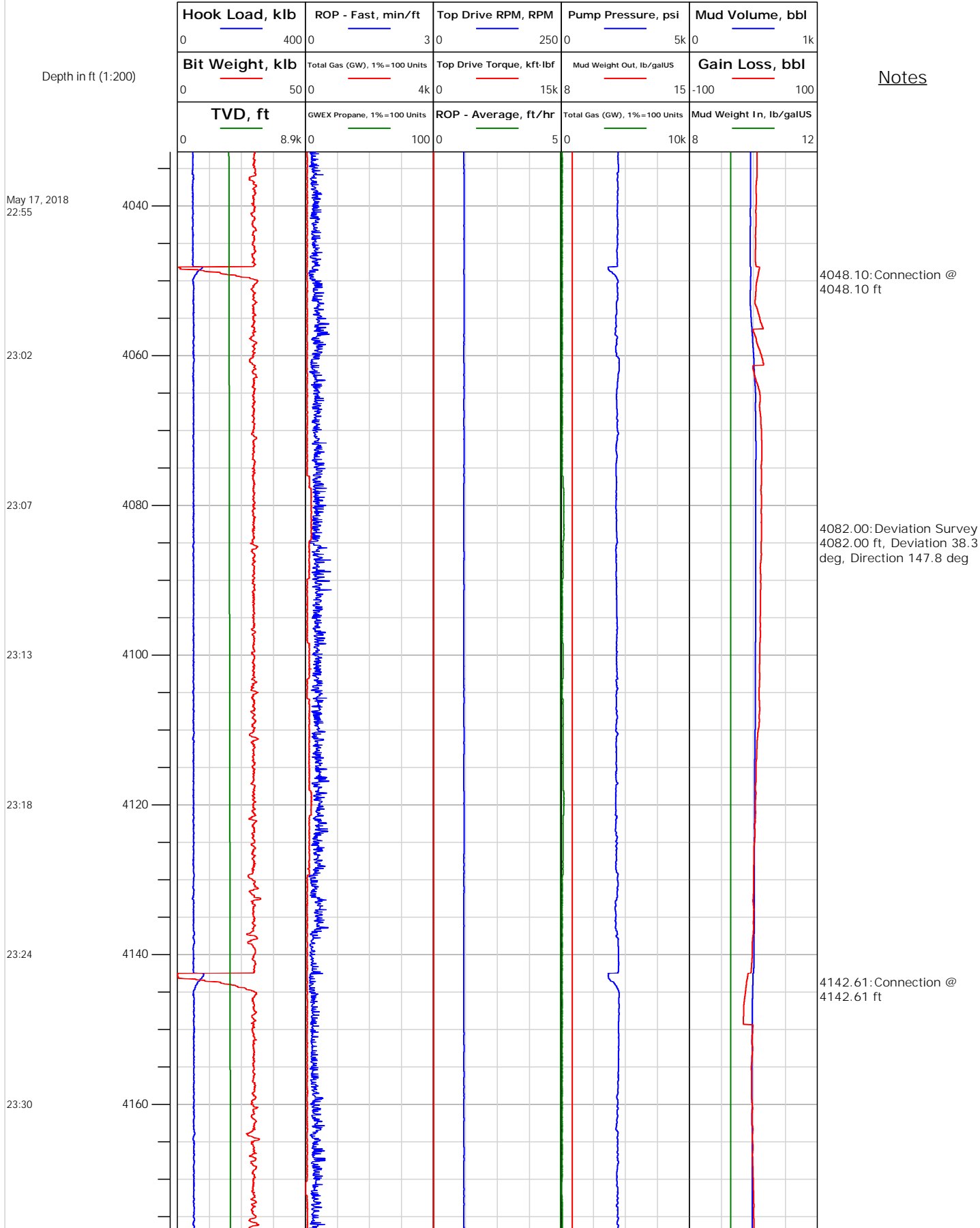
# Electronic Drilling Recorder

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

**Well Name:** Nichols Federal 24-20E  
**Rig:** 290

**Location:**

## Notes





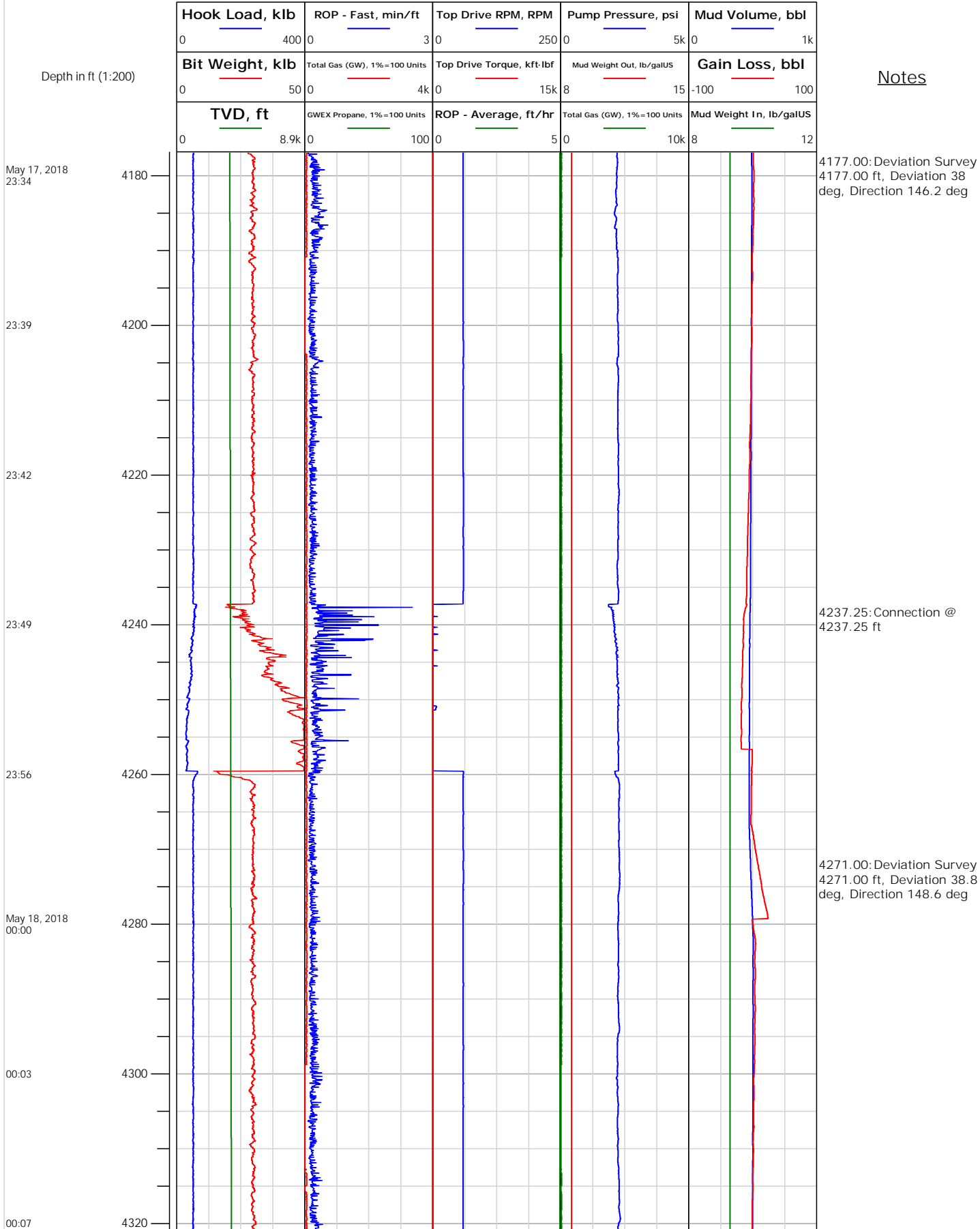
# Electronic Drilling Recorder

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

**Well Name:** Nichols Federal 24-20E  
**Rig:** 290

**Location:**

## Notes





## Electronic Drilling Recorder

Operator: Laramie Energy  
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols Federal 24-20E  
Rig: 290

Location:

### Notes

Depth in ft (1:200)

May 18, 2018  
00:23

00:27

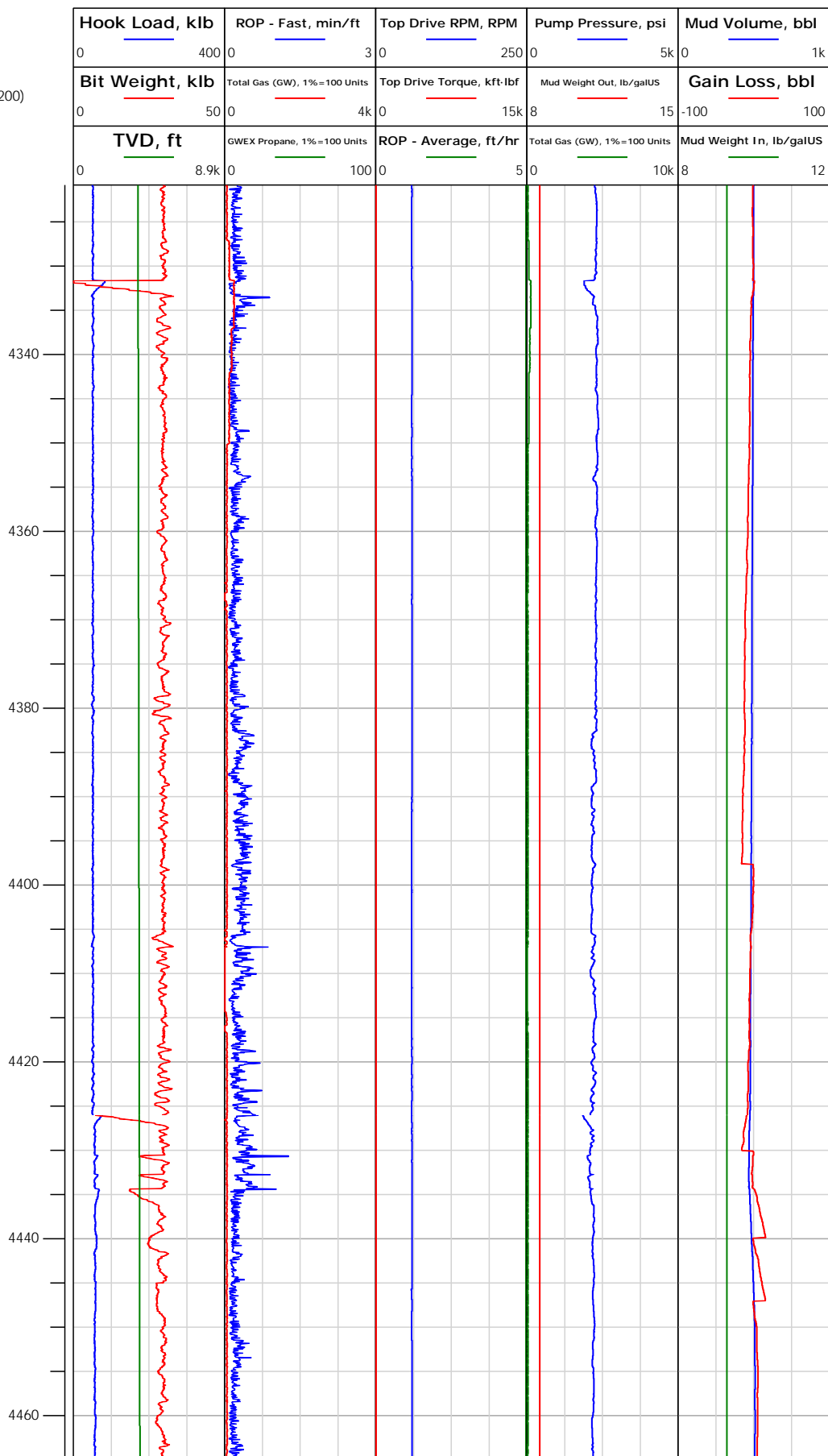
00:31

00:37

00:43

00:52

00:56



4331.61: Connection @  
4331.61 ft

4366.00: Deviation Survey  
4366.00 ft, Deviation 38.3  
deg, Direction 147.2 deg

4426.13: Connection @  
4426.13 ft

4460.00: Deviation Survey  
4460.00 ft, Deviation 37.9  
deg, Direction 147.2 deg



# Electronic Drilling Recorder

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

**Well Name:** Nichols Federal 24-20E  
**Rig:** 290

**Location:**

Notes

Depth in ft (1:200)

May 18, 2018  
01:00

01:06

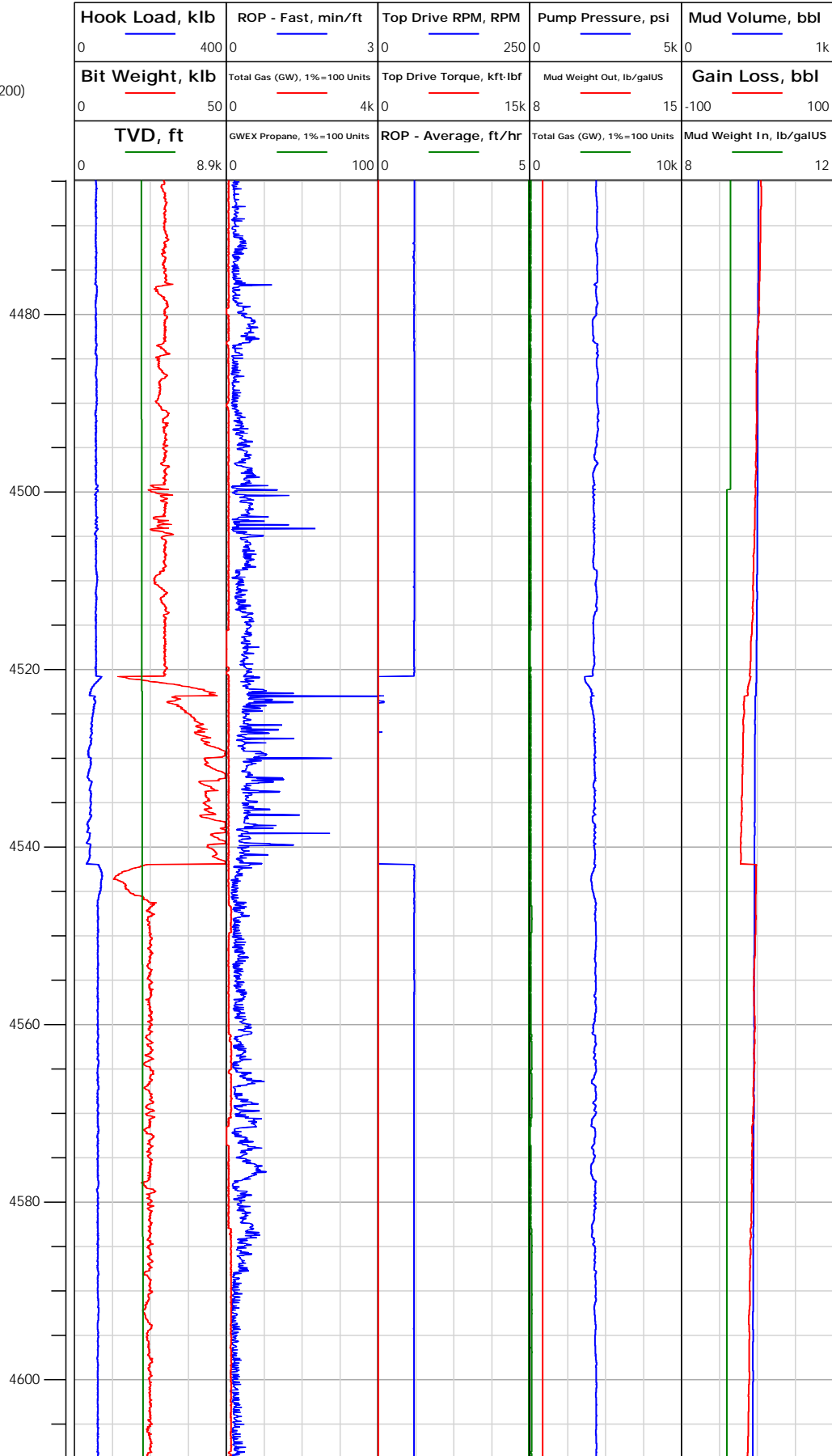
01:14

01:27

01:33

01:40

01:44





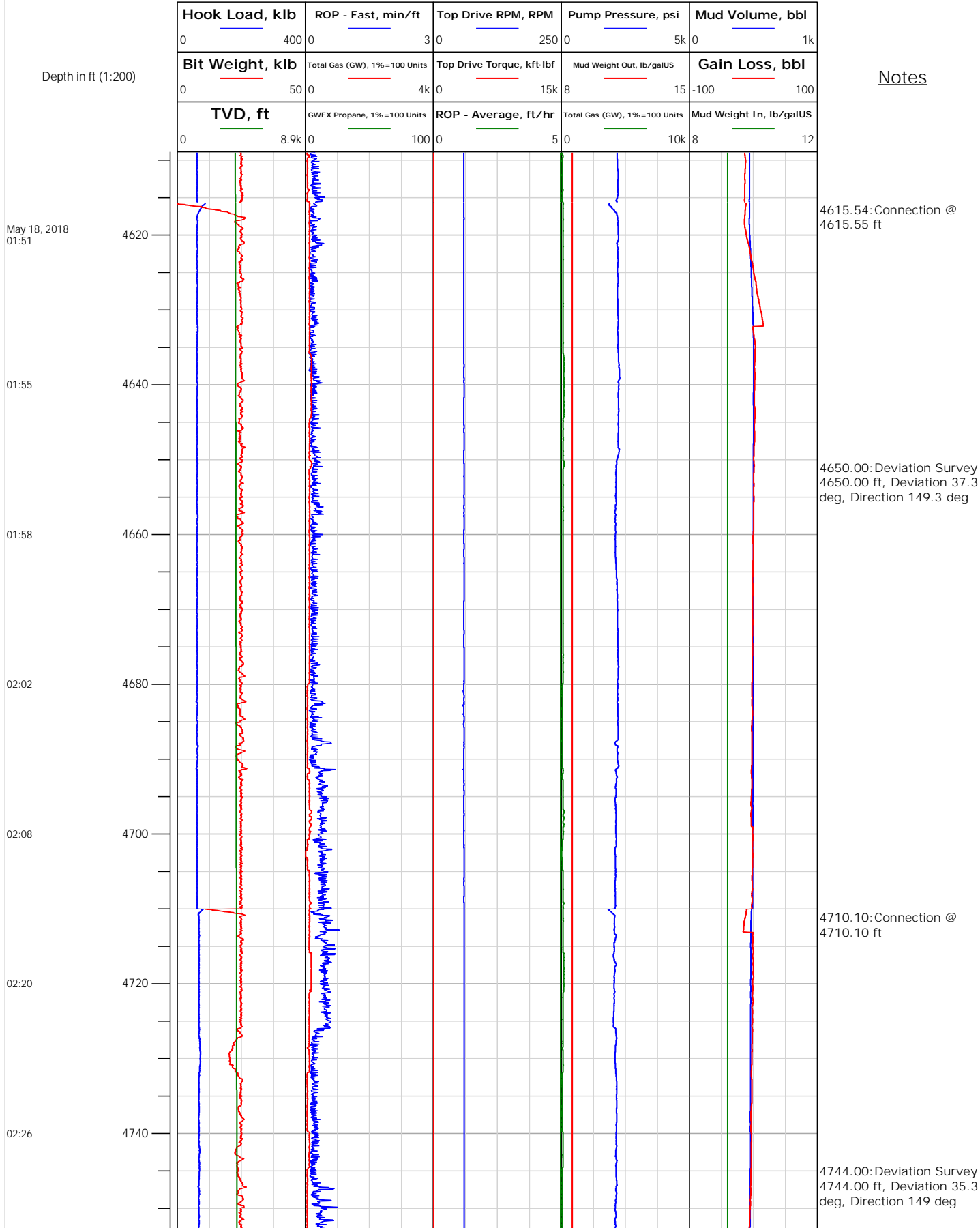
# Electronic Drilling Recorder

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

**Well Name:** Nichols Federal 24-20E  
**Rig:** 290

**Location:**

## Notes





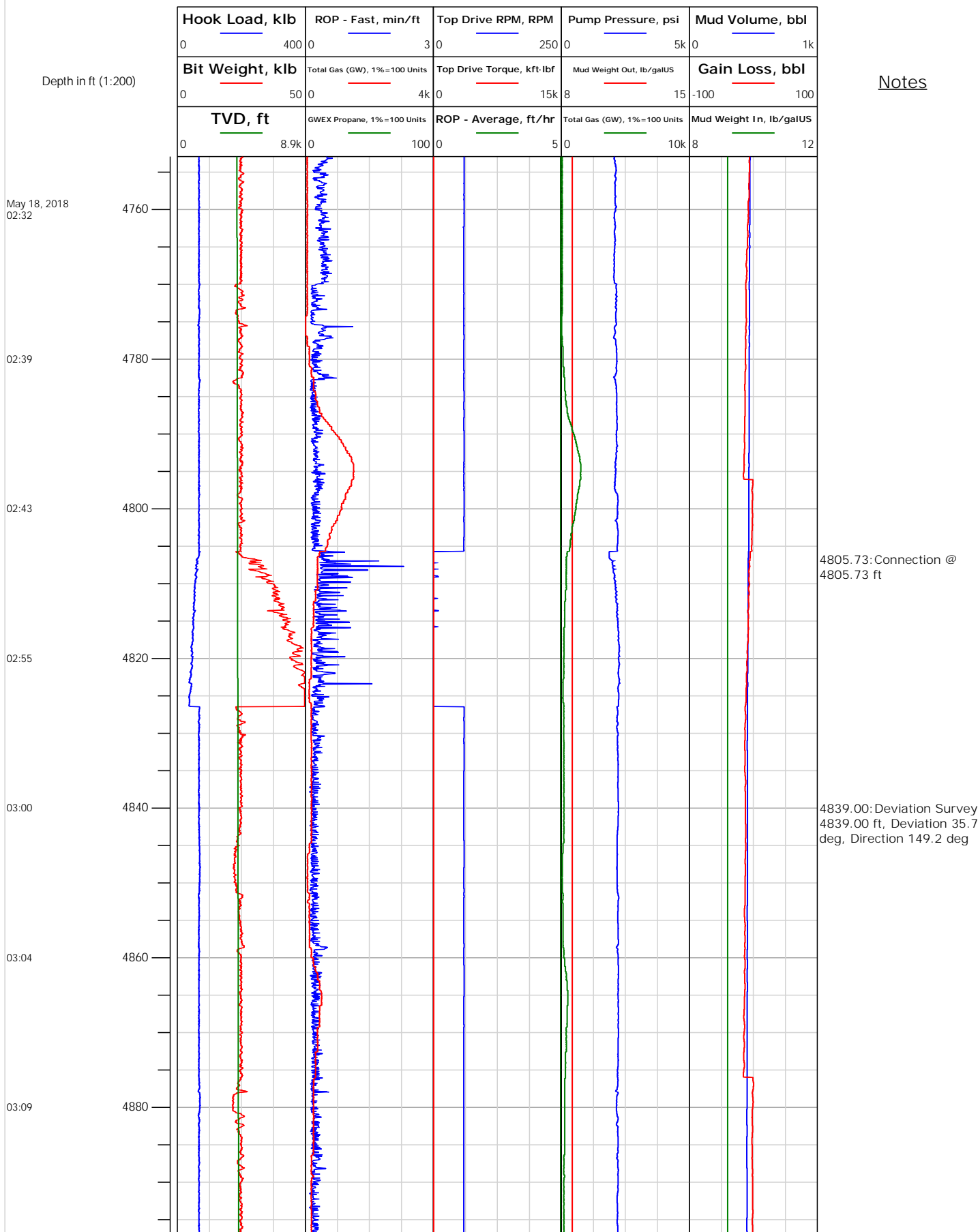
# Electronic Drilling Recorder

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

**Well Name:** Nichols Federal 24-20E  
**Rig:** 290

**Location:**

Notes







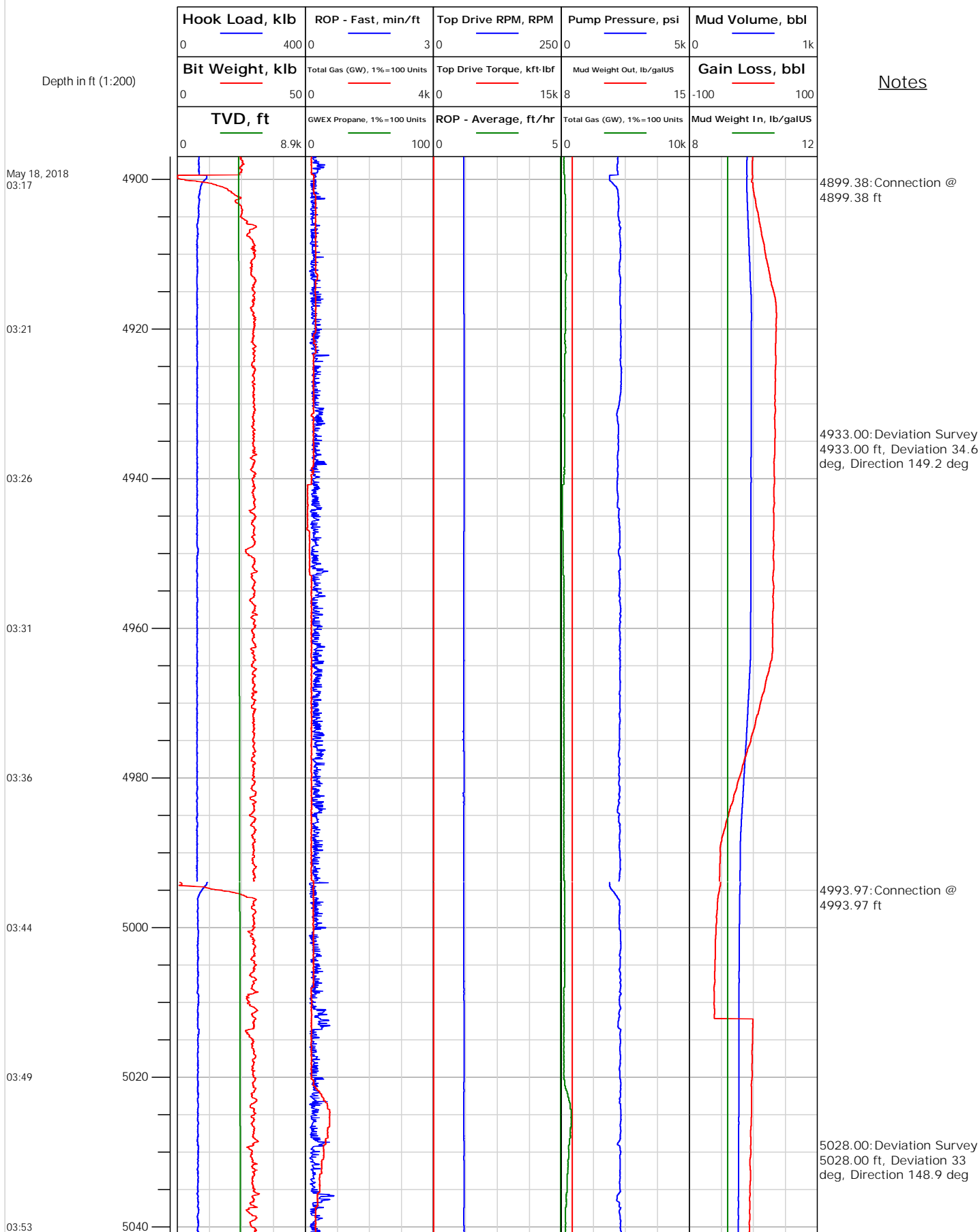
# Electronic Drilling Recorder

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

**Well Name:** Nichols Federal 24-20E  
**Rig:** 290

**Location:**

## Notes





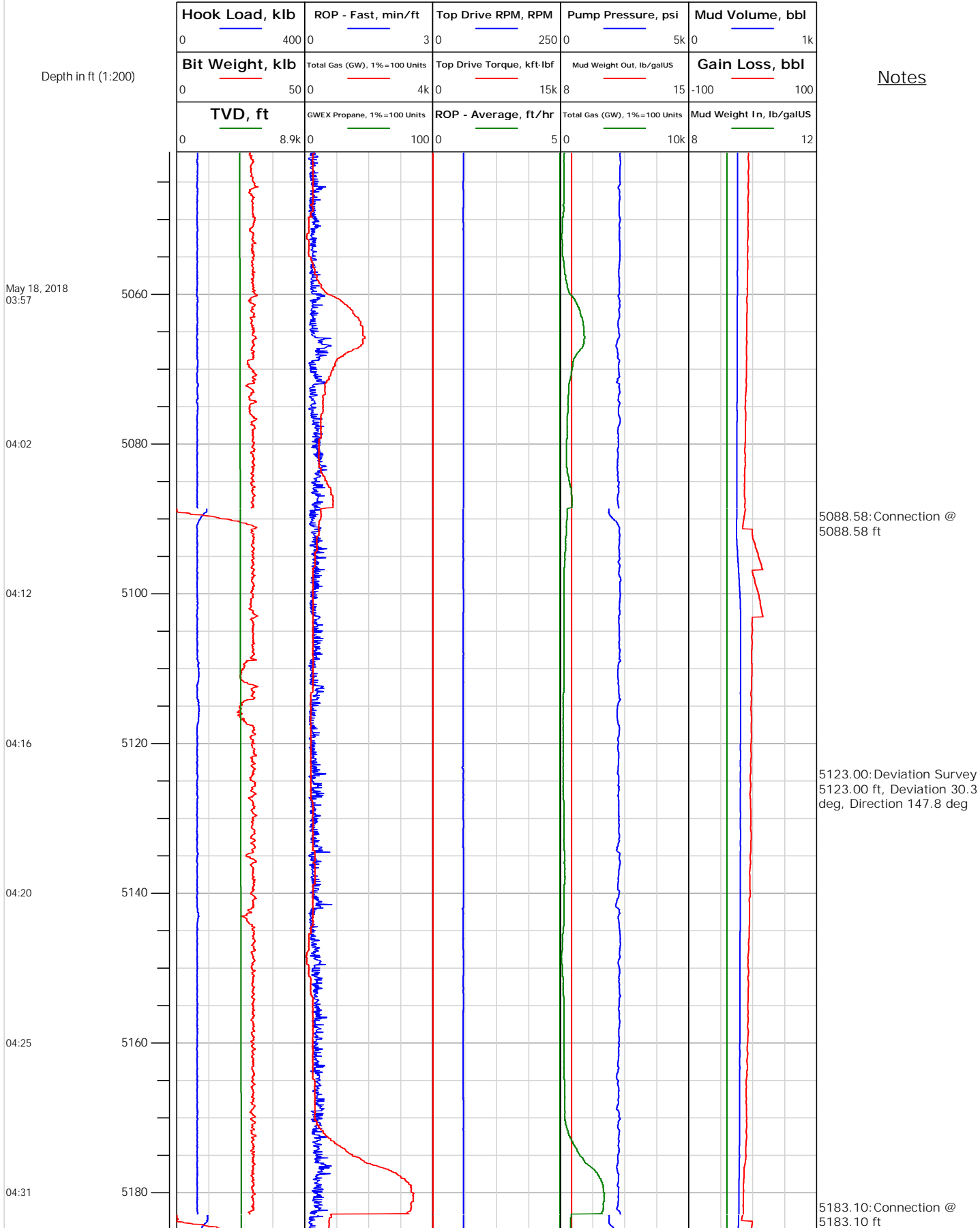
# Electronic Drilling Recorder

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

**Well Name:** Nichols Federal 24-20E  
**Rig:** 290

**Location:**

Notes





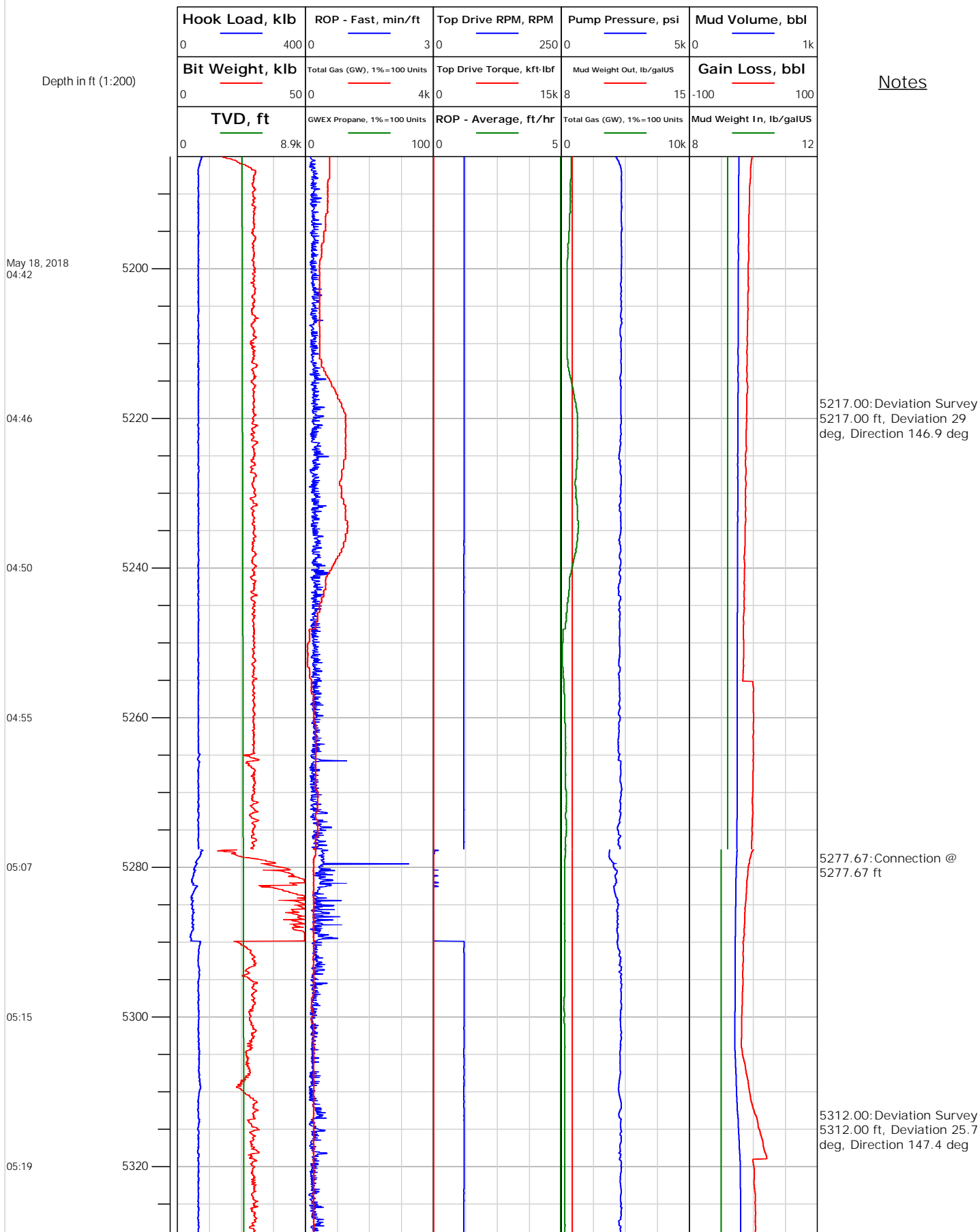
# Electronic Drilling Recorder

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

**Well Name:** Nichols Federal 24-20E  
**Rig:** 290

**Location:**

Notes





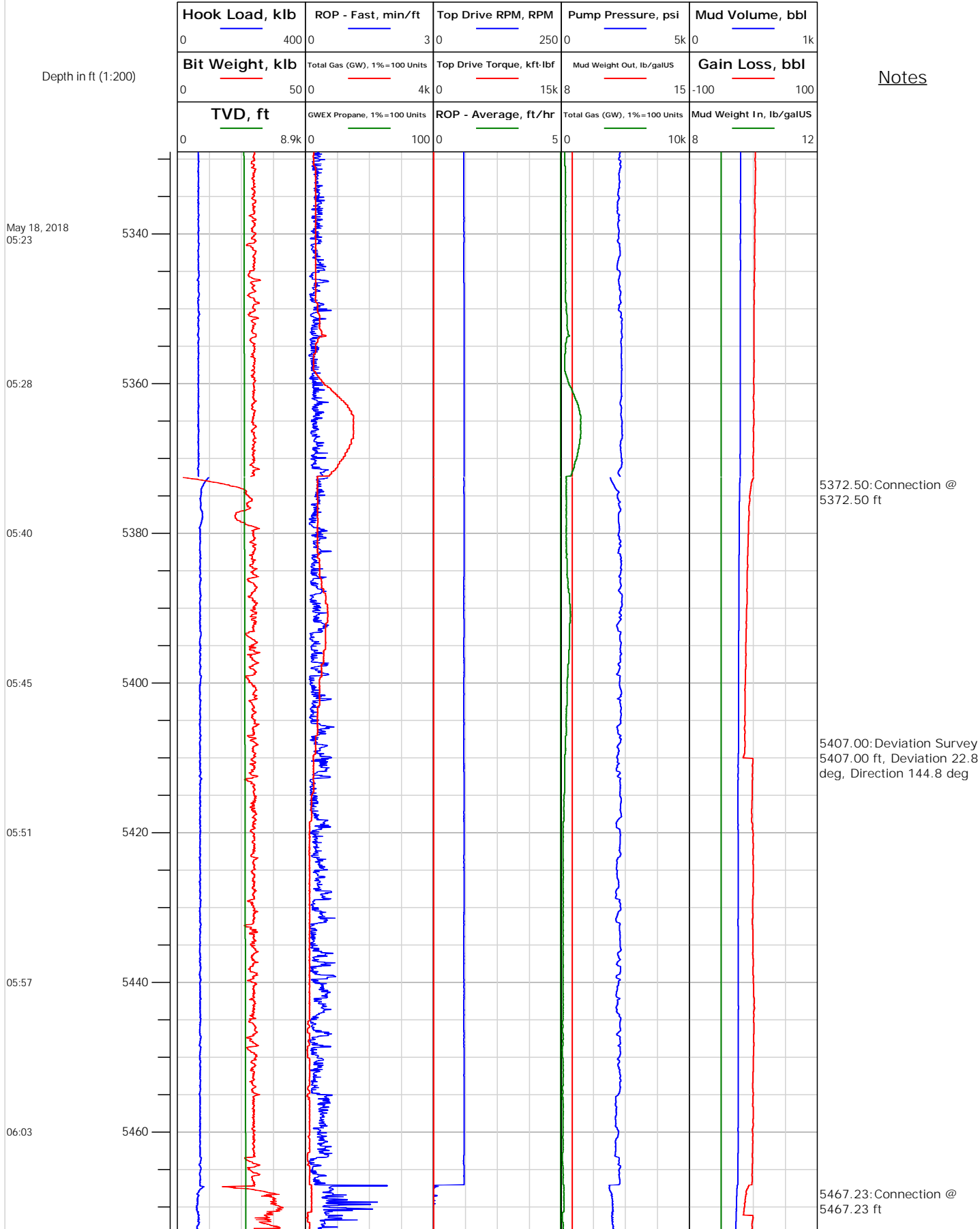
# Electronic Drilling Recorder

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

**Well Name:** Nichols Federal 24-20E  
**Rig:** 290

**Location:**

Notes





# Electronic Drilling Recorder

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

**Well Name:** Nichols Federal 24-20E  
**Rig:** 290

**Location:**

Notes

Depth in ft (1:200)

May 18, 2018  
06:25

06:32

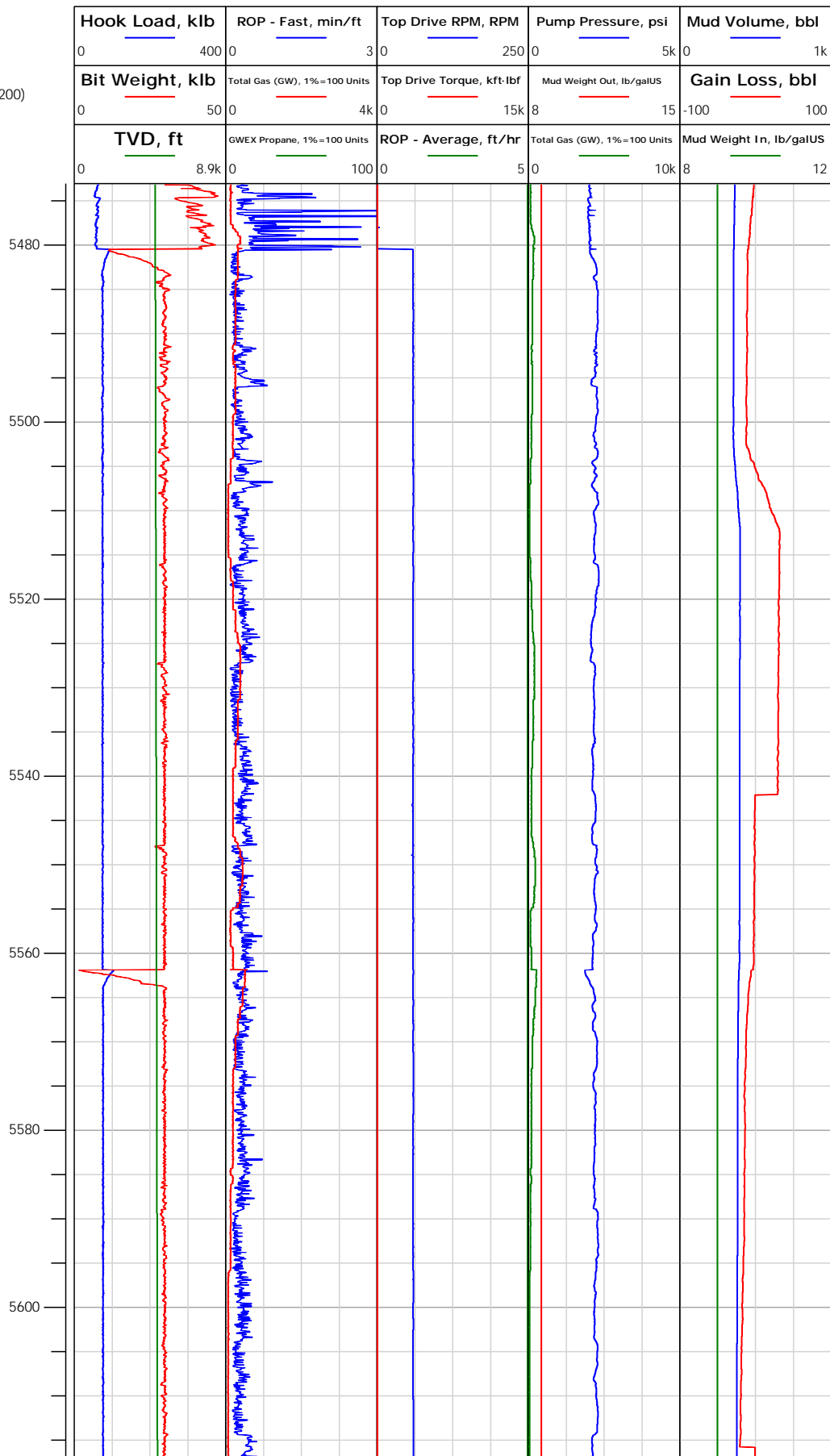
06:39

06:45

06:51

07:06

07:11



5501.00: Deviation Survey  
5501.00 ft, Deviation 22  
deg, Direction 146.7 deg

5561.94: Connection @  
5561.94 ft

5596.00: Deviation Survey  
5596.00 ft, Deviation 21.3  
deg, Direction 144.9 deg



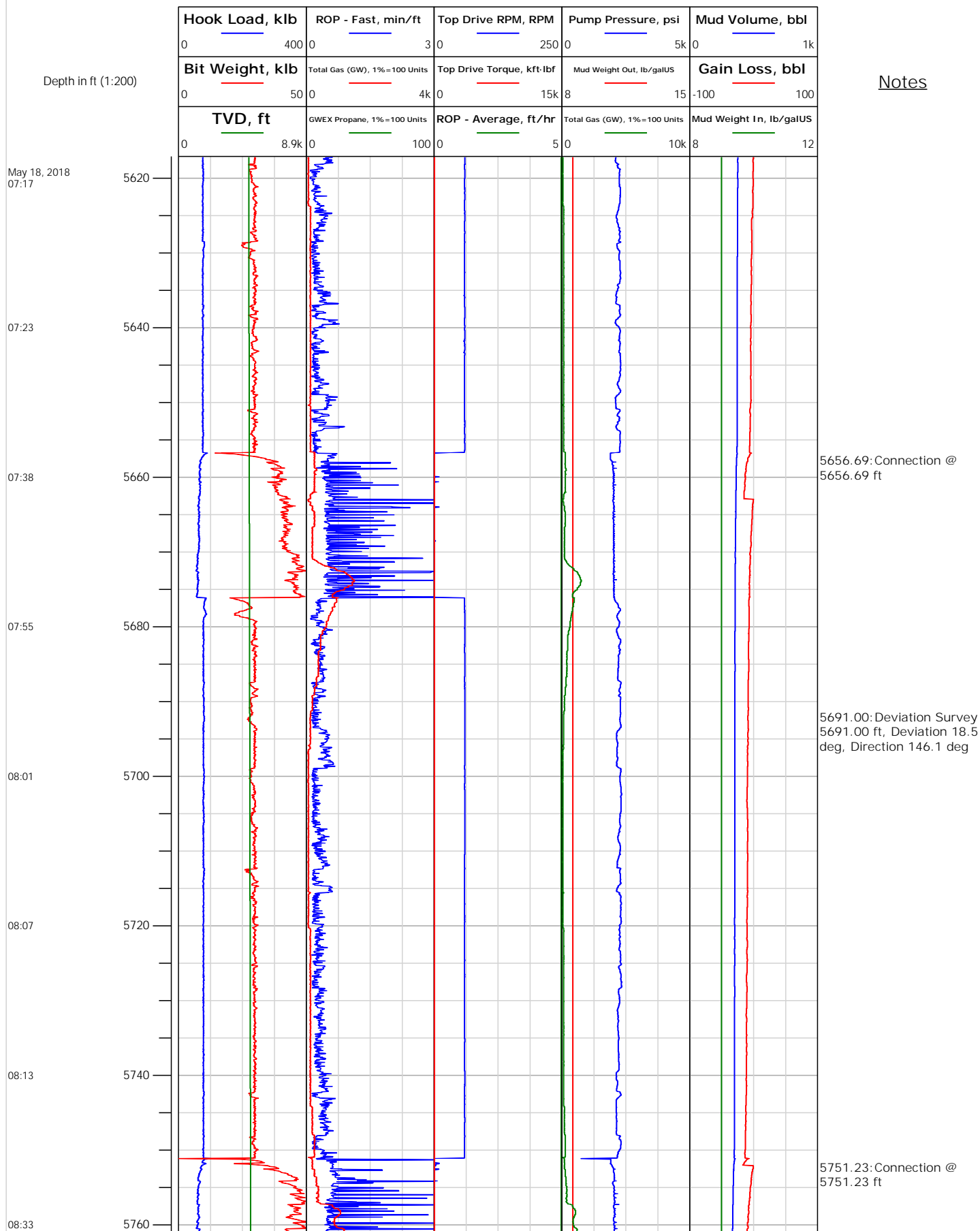
# Electronic Drilling Recorder

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

**Well Name:** Nichols Federal 24-20E  
**Rig:** 290

**Location:**

Notes





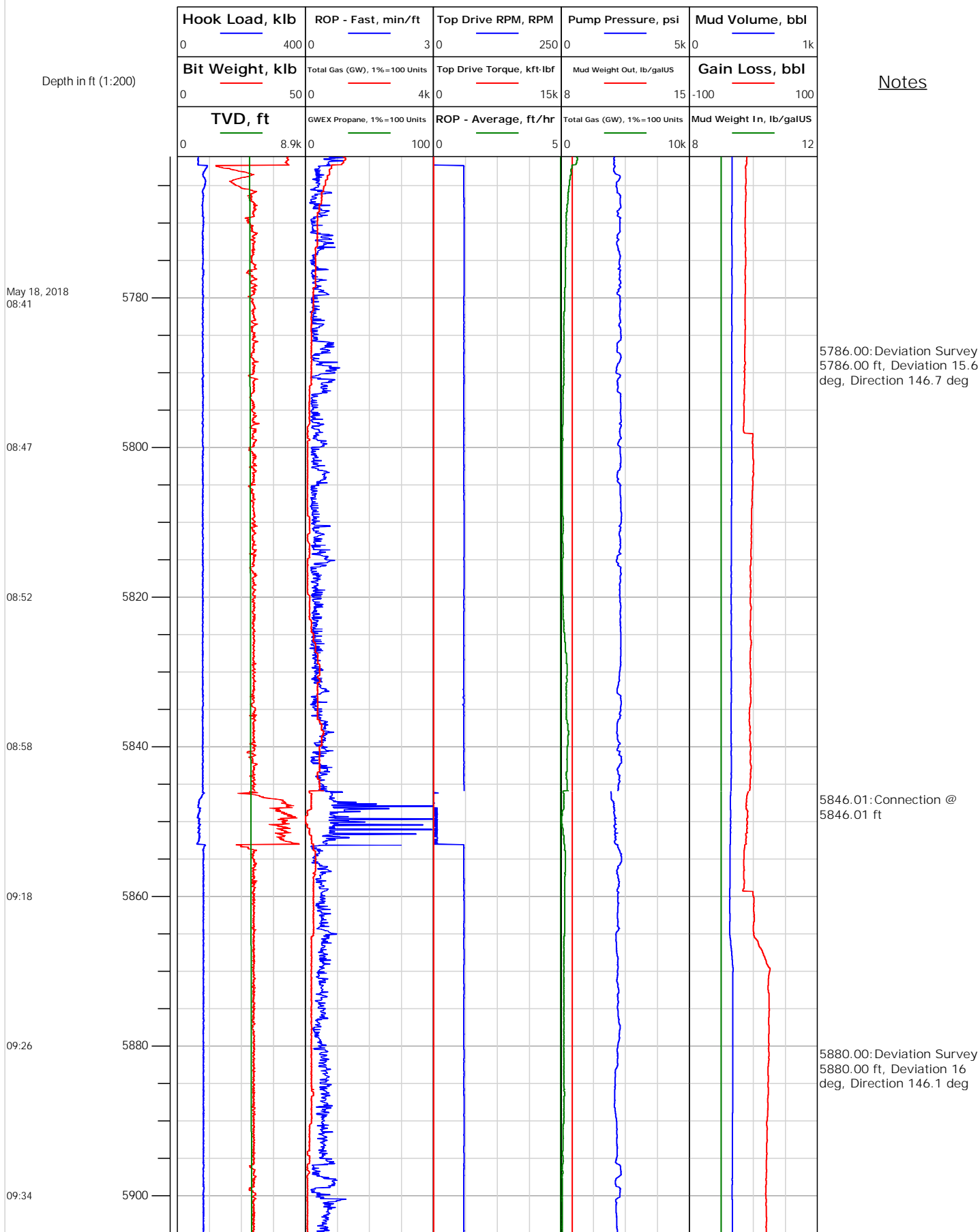
# Electronic Drilling Recorder

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

**Well Name:** Nichols Federal 24-20E  
**Rig:** 290

**Location:**

## Notes





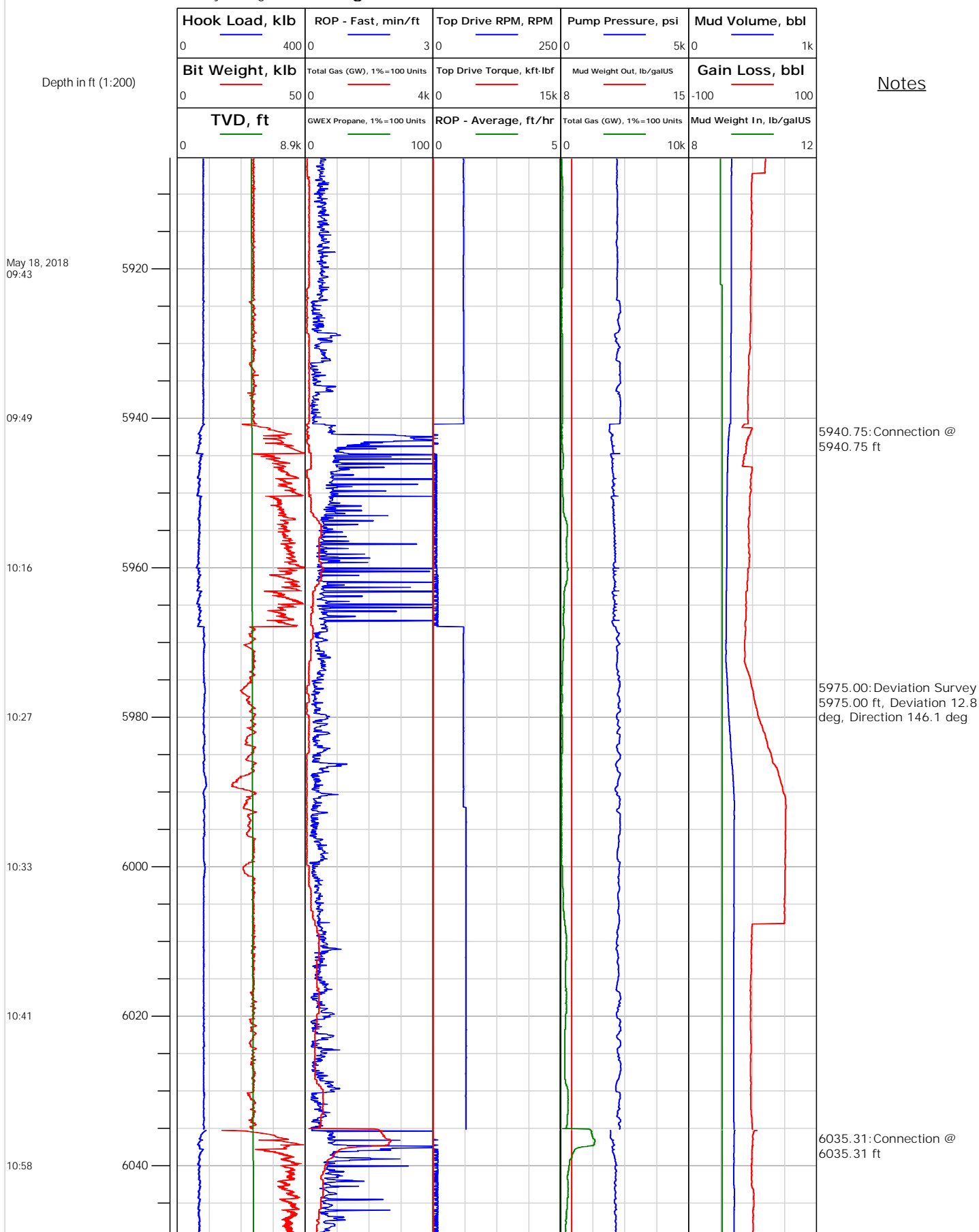
# Electronic Drilling Recorder

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

**Well Name:** Nichols Federal 24-20E  
**Rig:** 290

**Location:**

Notes







# Electronic Drilling Recorder

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

**Well Name:** Nichols Federal 24-20E  
**Rig:** 290

**Location:**

## Notes

Depth in ft (1:200)

May 18, 2018  
 11:10

11:15

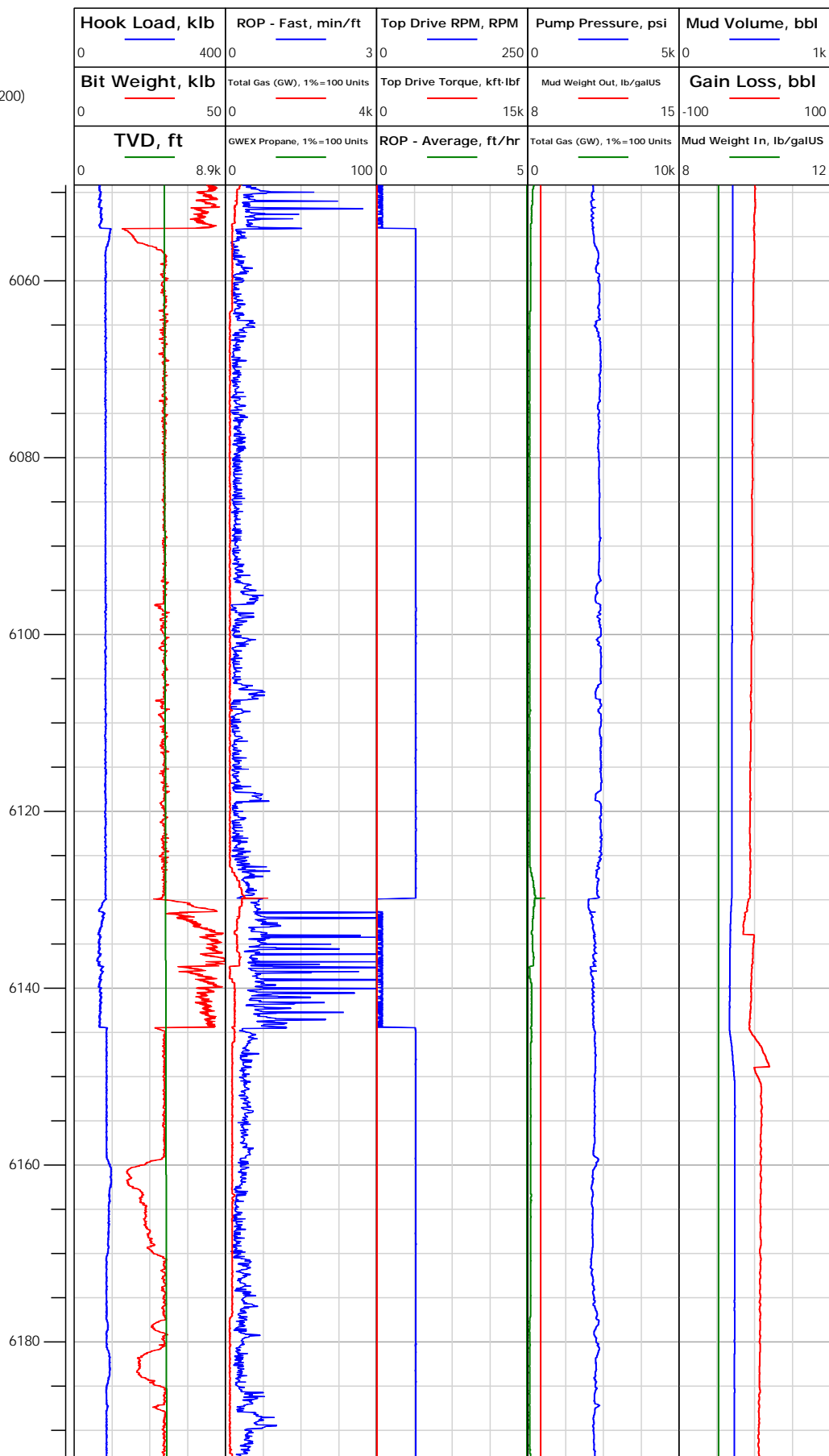
11:20

11:25

11:47

11:59

12:05



6069.00: Deviation Survey  
 6069.00 ft, Deviation 10.3 deg, Direction 147.4 deg

6129.93: Connection @  
 6129.93 ft

6164.00: Deviation Survey  
 6164.00 ft, Deviation 8.4 deg, Direction 148.1 deg



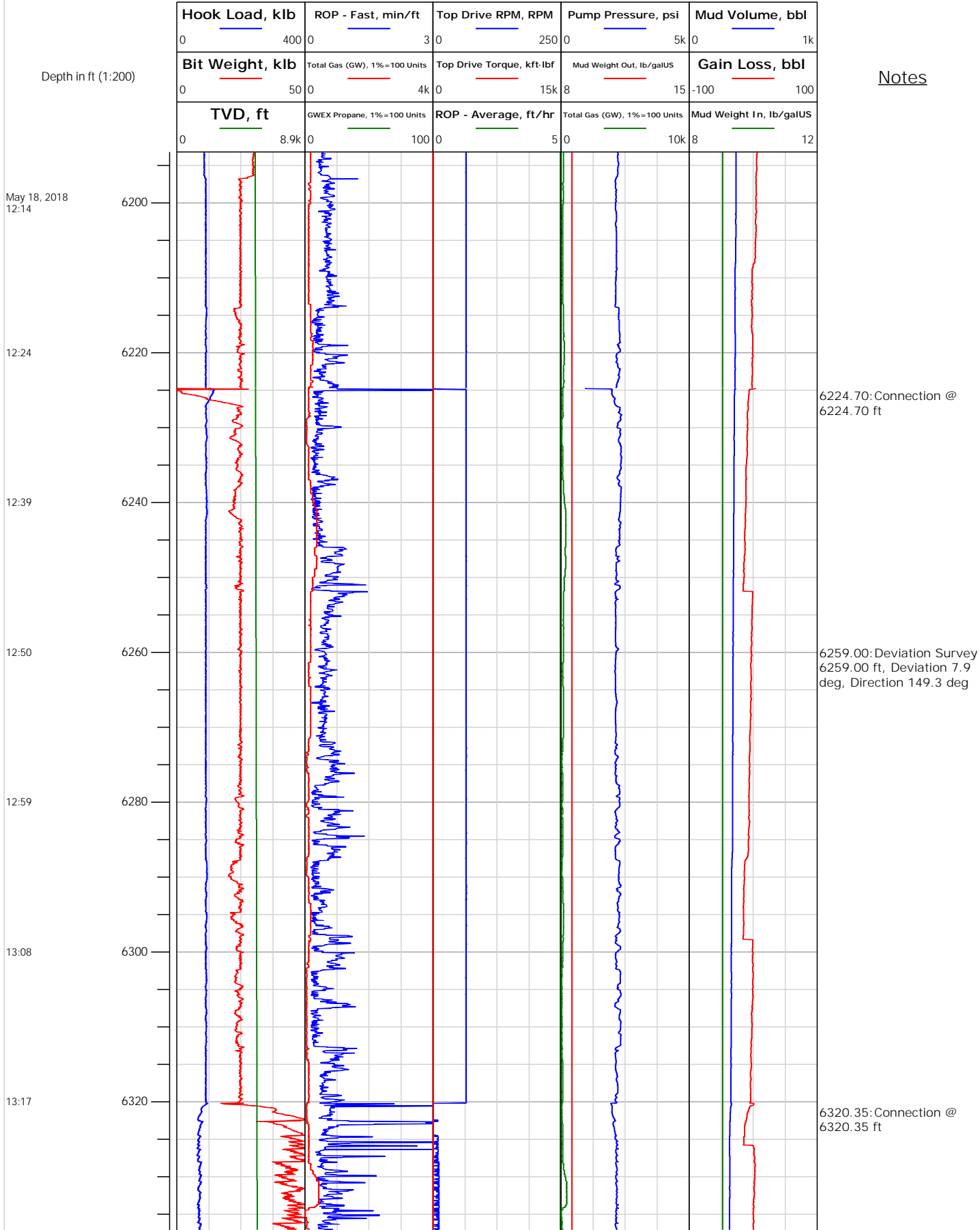
# Electronic Drilling Recorder

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

**Well Name:** Nichols Federal 24-20E  
**Rig:** 290

**Location:**

Notes





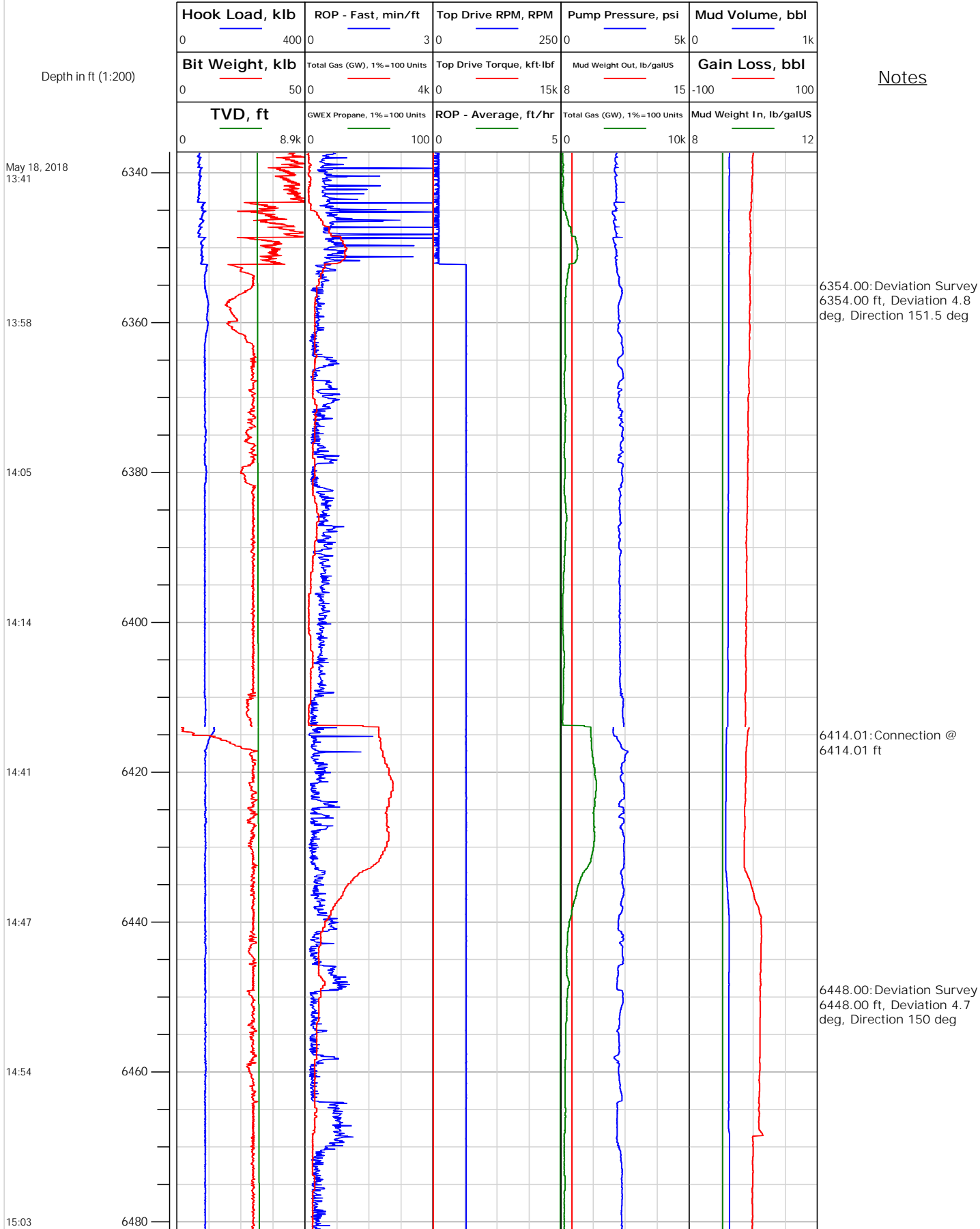
# Electronic Drilling Recorder

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

**Well Name:** Nichols Federal 24-20E  
**Rig:** 290

**Location:**

## Notes





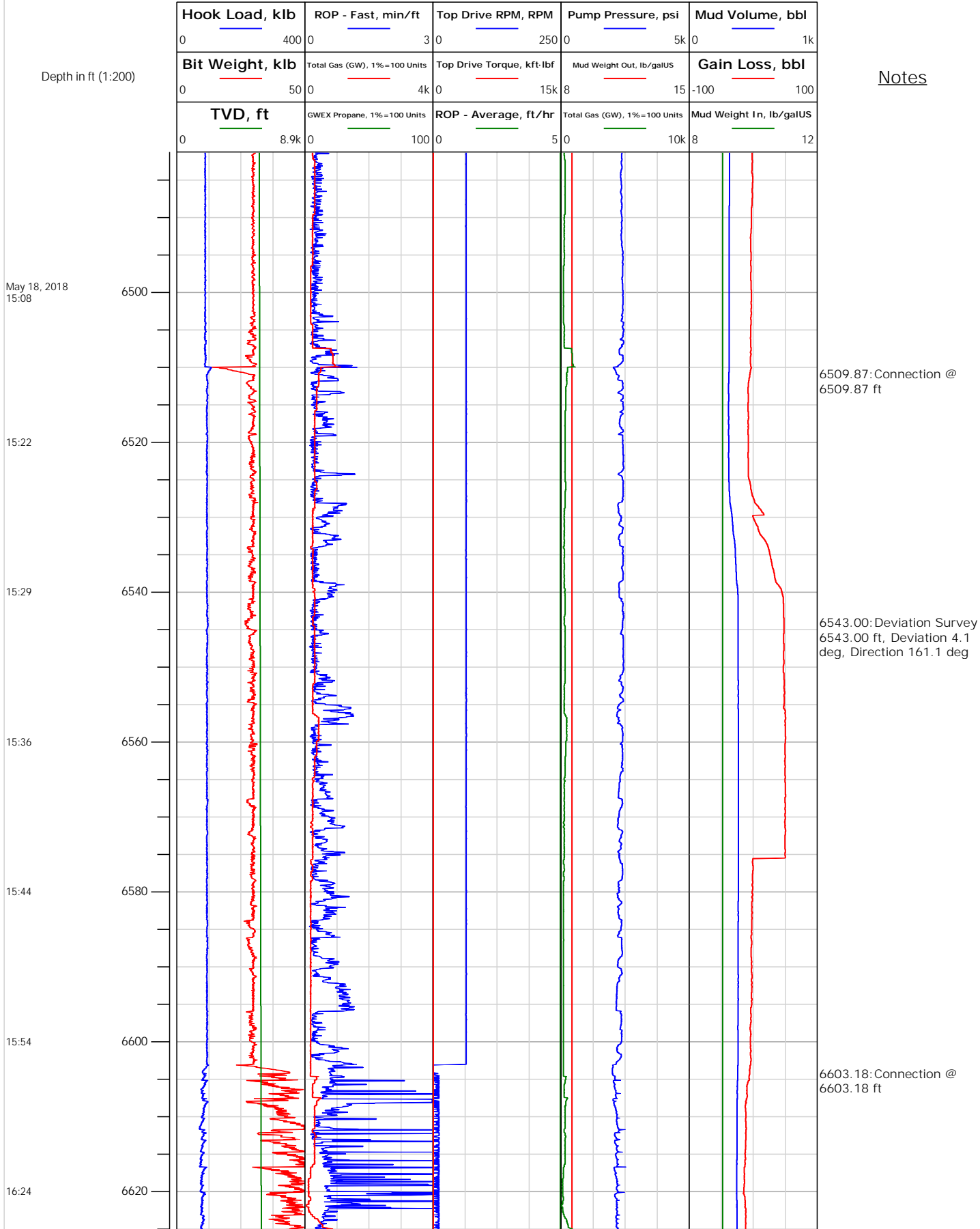
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**Contractor:** Helmerich & Payne Drlg Co

**Well Name:** Nichols Federal 24-20E  
**Rig:** 290

**Location:**

Notes





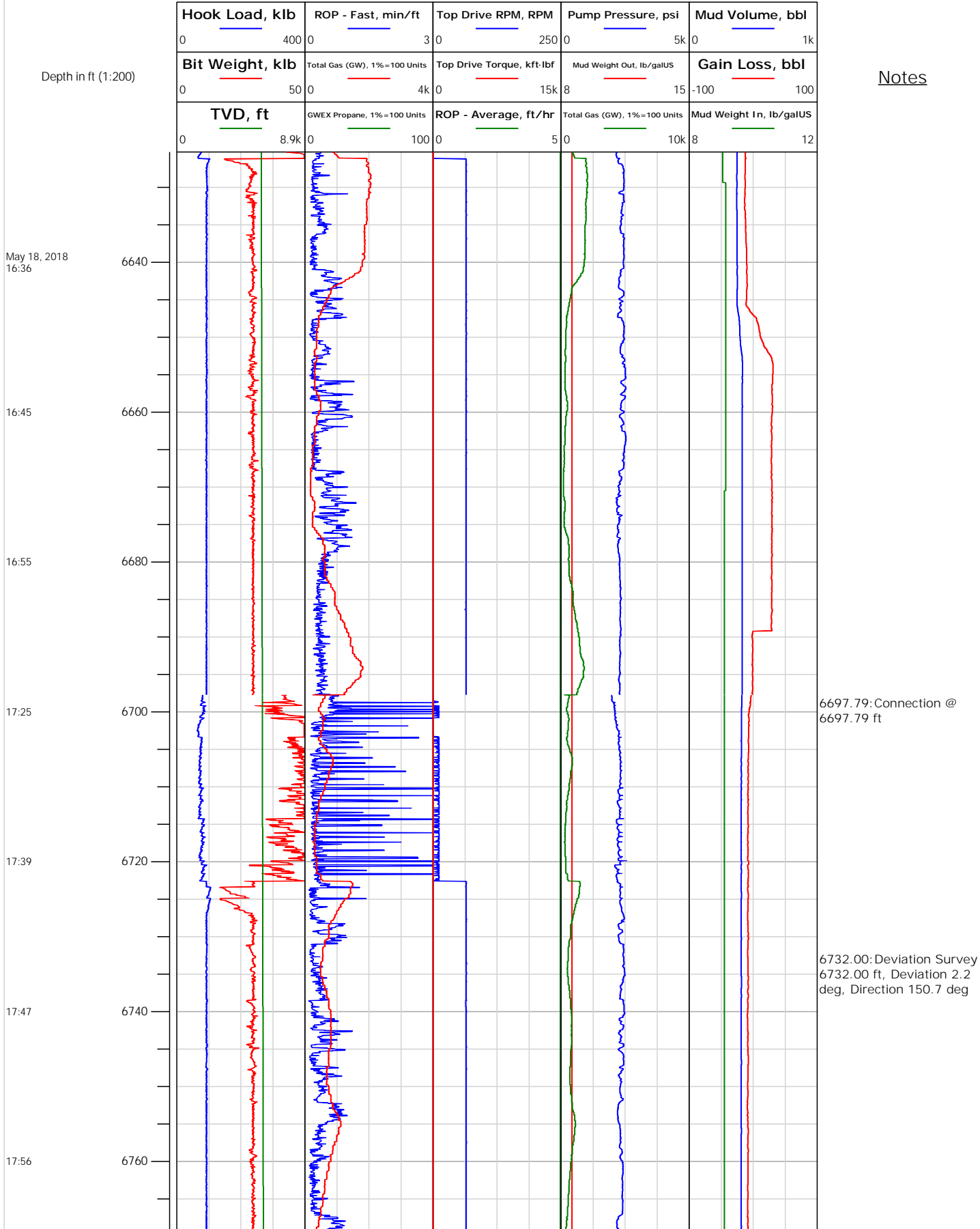
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**Contractor:** Helmerich & Payne Drlg Co

**Well Name:** Nichols Federal 24-20E  
**Rig:** 290

**Location:**

Notes





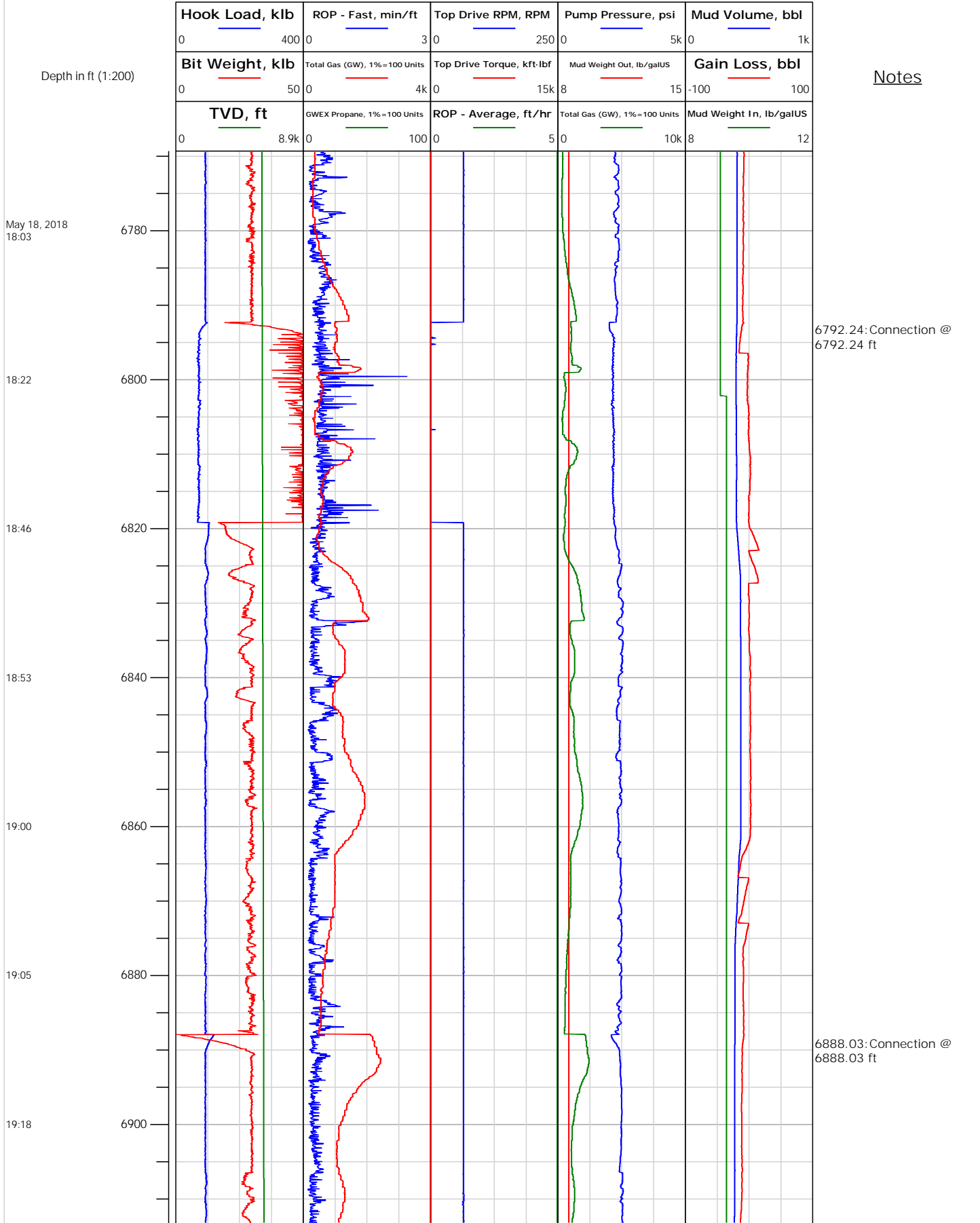
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**Well Name:** Nichols Federal 24-20E  
**Rig:** 290

**Location:**

Notes





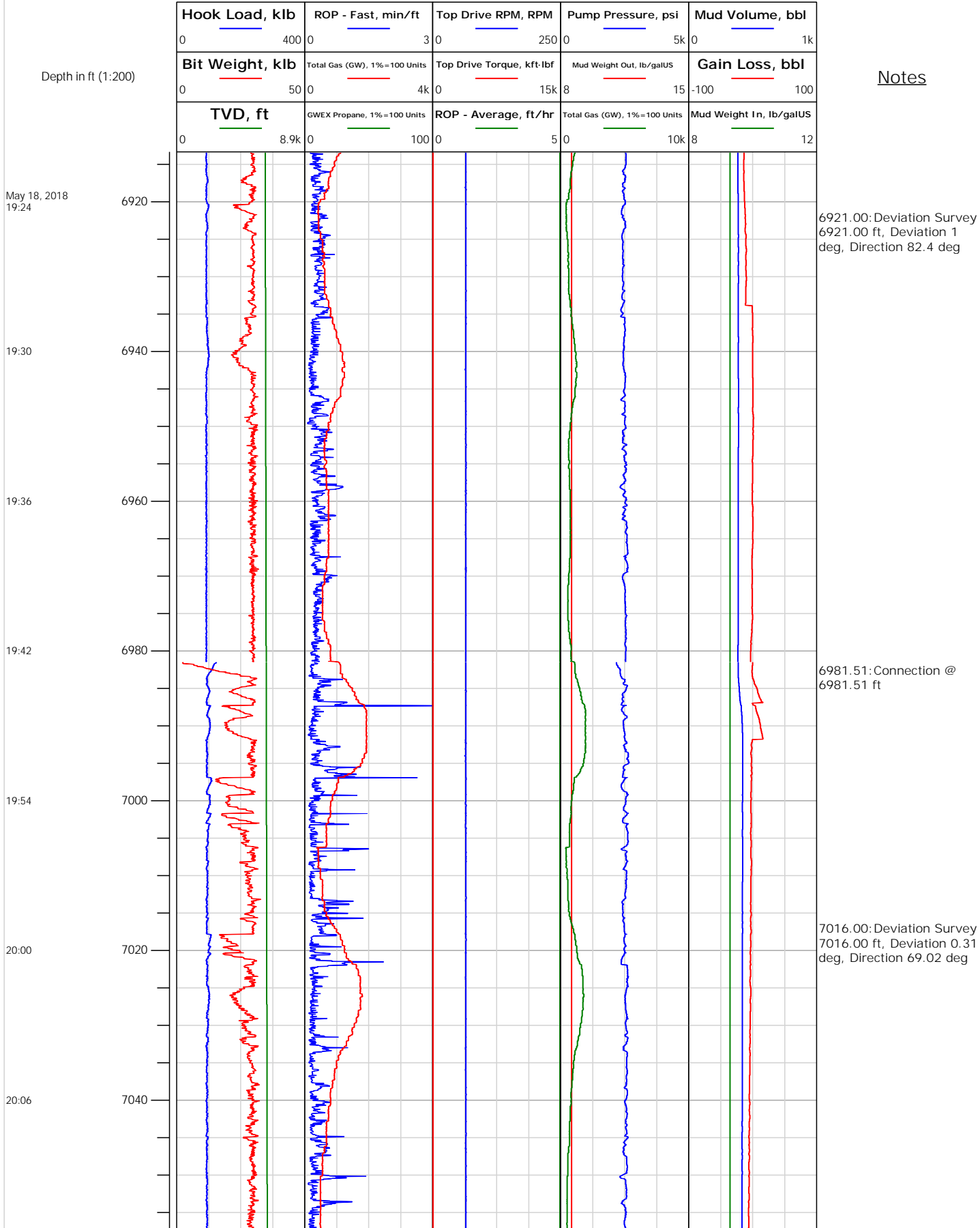
# Electronic Drilling Recorder

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

**Well Name:** Nichols Federal 24-20E  
**Rig:** 290

**Location:**

## Notes





# Electronic Drilling Recorder

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

**Well Name:** Nichols Federal 24-20E  
**Rig:** 290

**Location:**

Depth in ft (1:200)

Notes

May 18, 2018  
20:11

20:22

20:27

20:34

20:40

20:47

20:56

21:02

7060

7080

7100

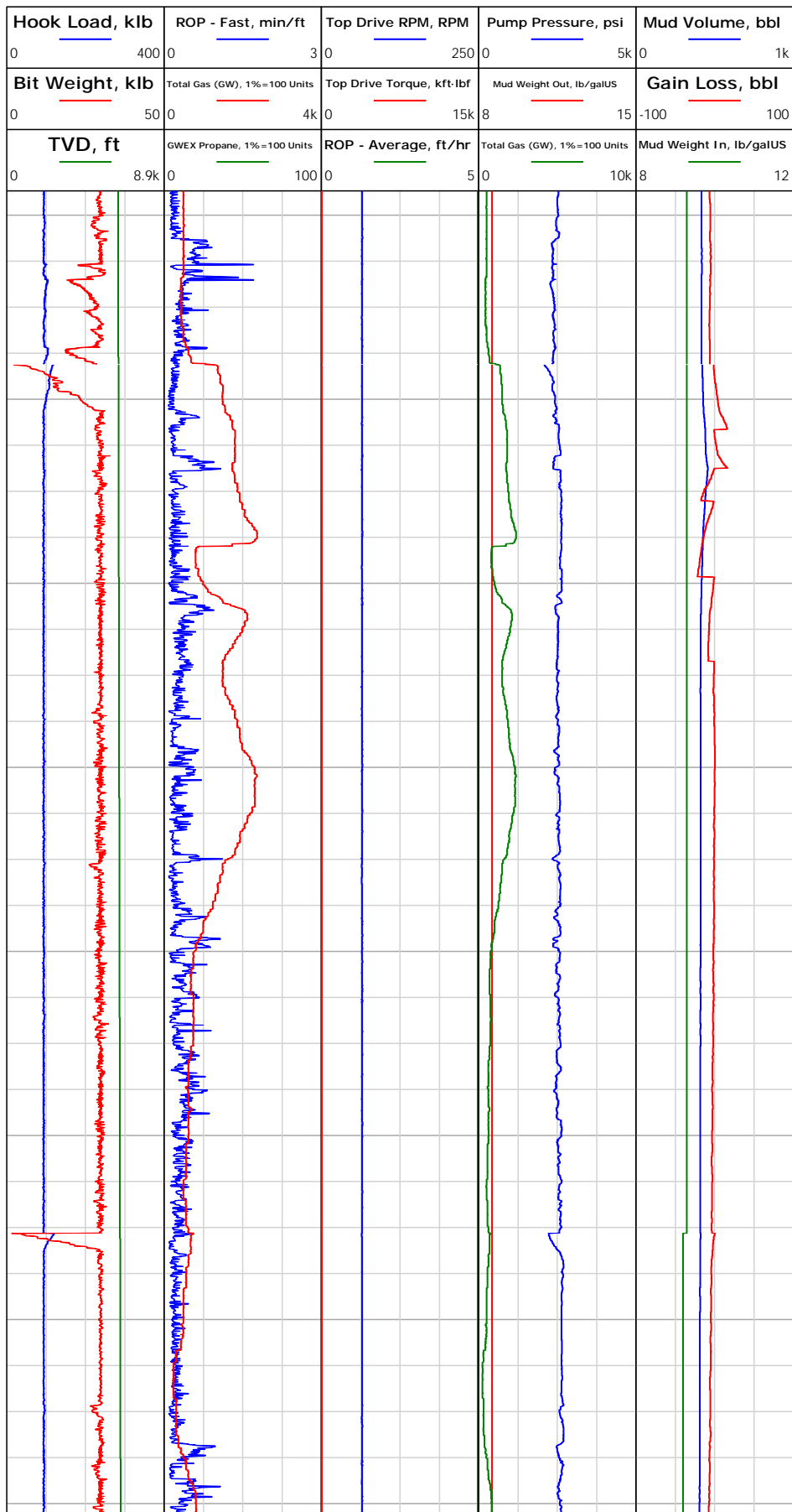
7120

7140

7160

7180

7200



7076.20: Connection @  
7076.20 ft

7110.00: Deviation Survey  
7110.00 ft, Deviation 0.09  
deg, Direction 241.2 deg

7170.74: Connection @  
7170.74 ft





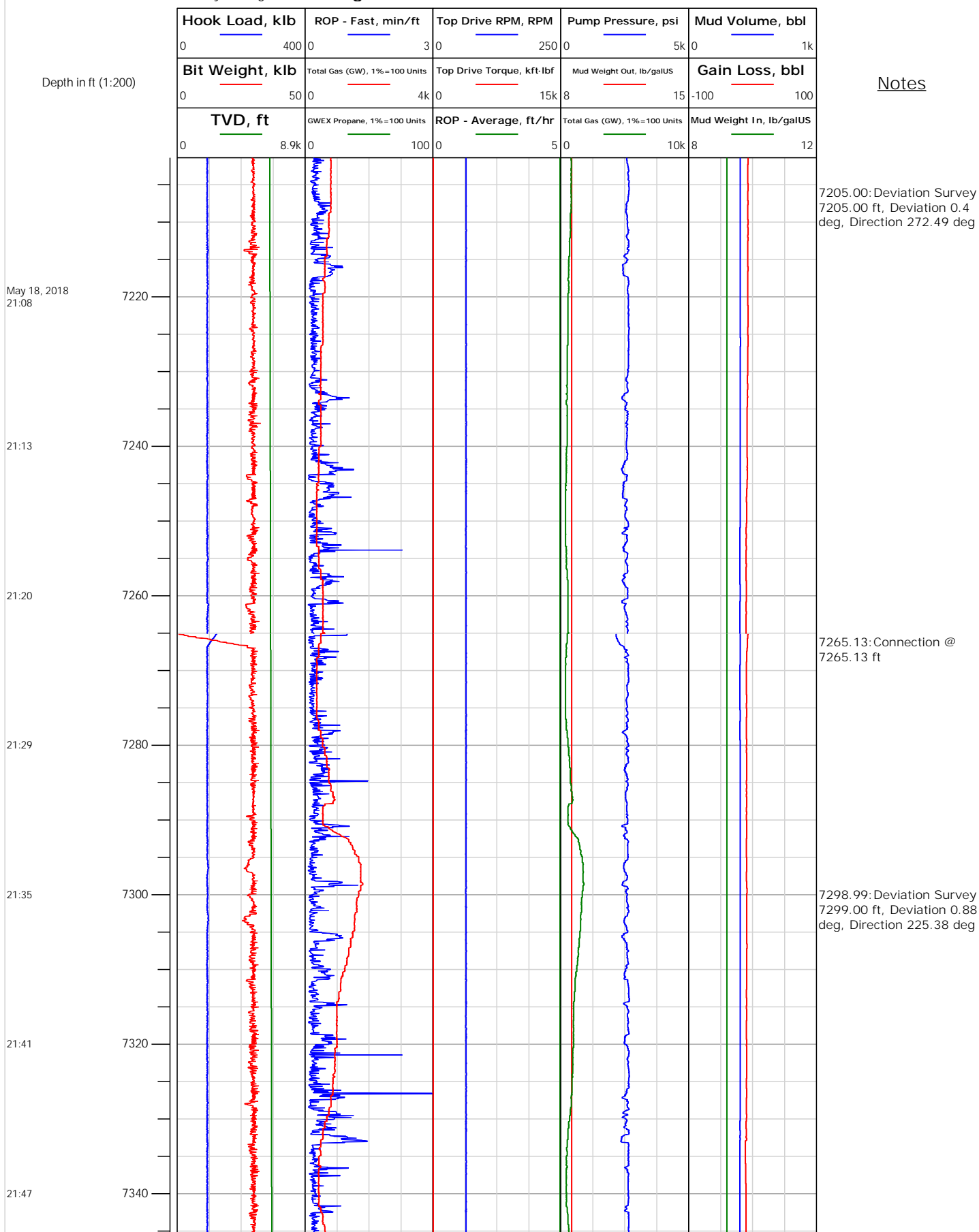
# Electronic Drilling Recorder

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

**Well Name:** Nichols Federal 24-20E  
**Rig:** 290

**Location:**

## Notes





# Electronic Drilling Recorder

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

**Well Name:** Nichols Federal 24-20E  
**Rig:** 290

**Location:**

## Notes

Depth in ft (1:200)

May 18, 2018  
 21:57

22:03

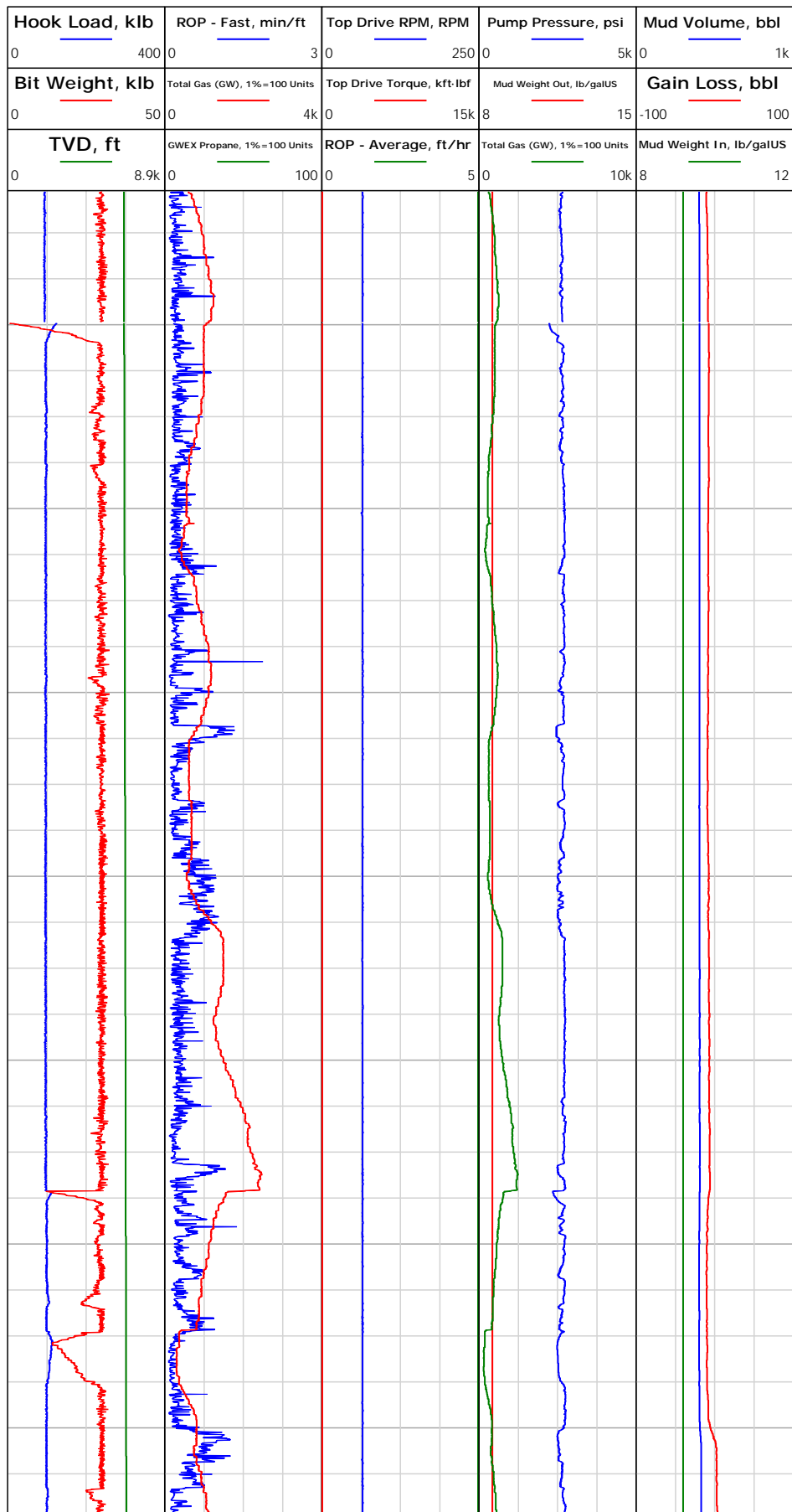
22:08

22:15

22:23

22:34

22:40



7359.66: Connection @  
 7359.66 ft

7394.00: Deviation Survey  
 7394.00 ft, Deviation 2.07  
 deg, Direction 242.43 deg

7454.36: Connection @  
 7454.36 ft

7489.00: Deviation Survey  
 7489.00 ft, Deviation 2.37  
 deg, Direction 246.21 deg



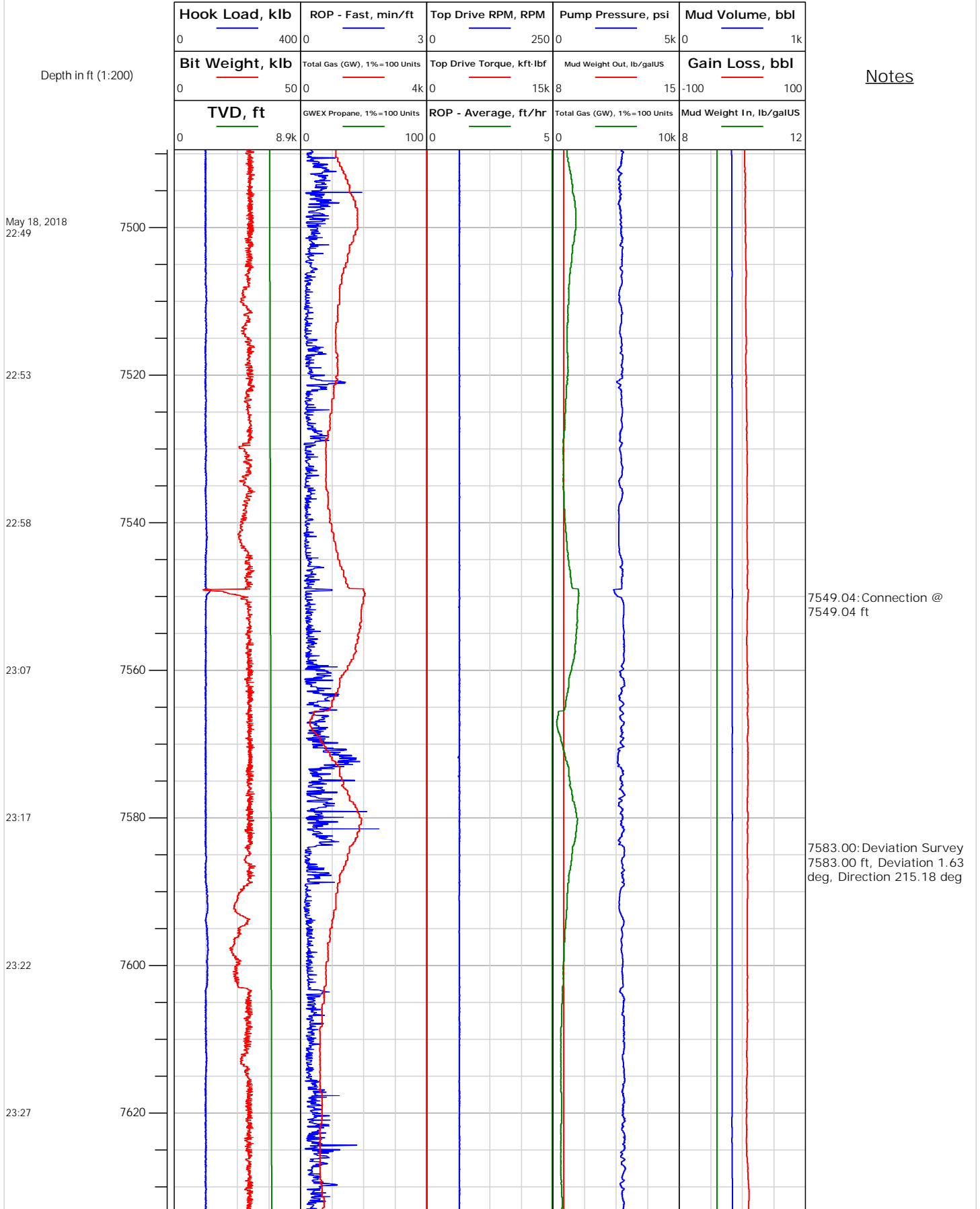
# Electronic Drilling Recorder

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

**Well Name:** Nichols Federal 24-20E  
**Rig:** 290

**Location:**

Notes





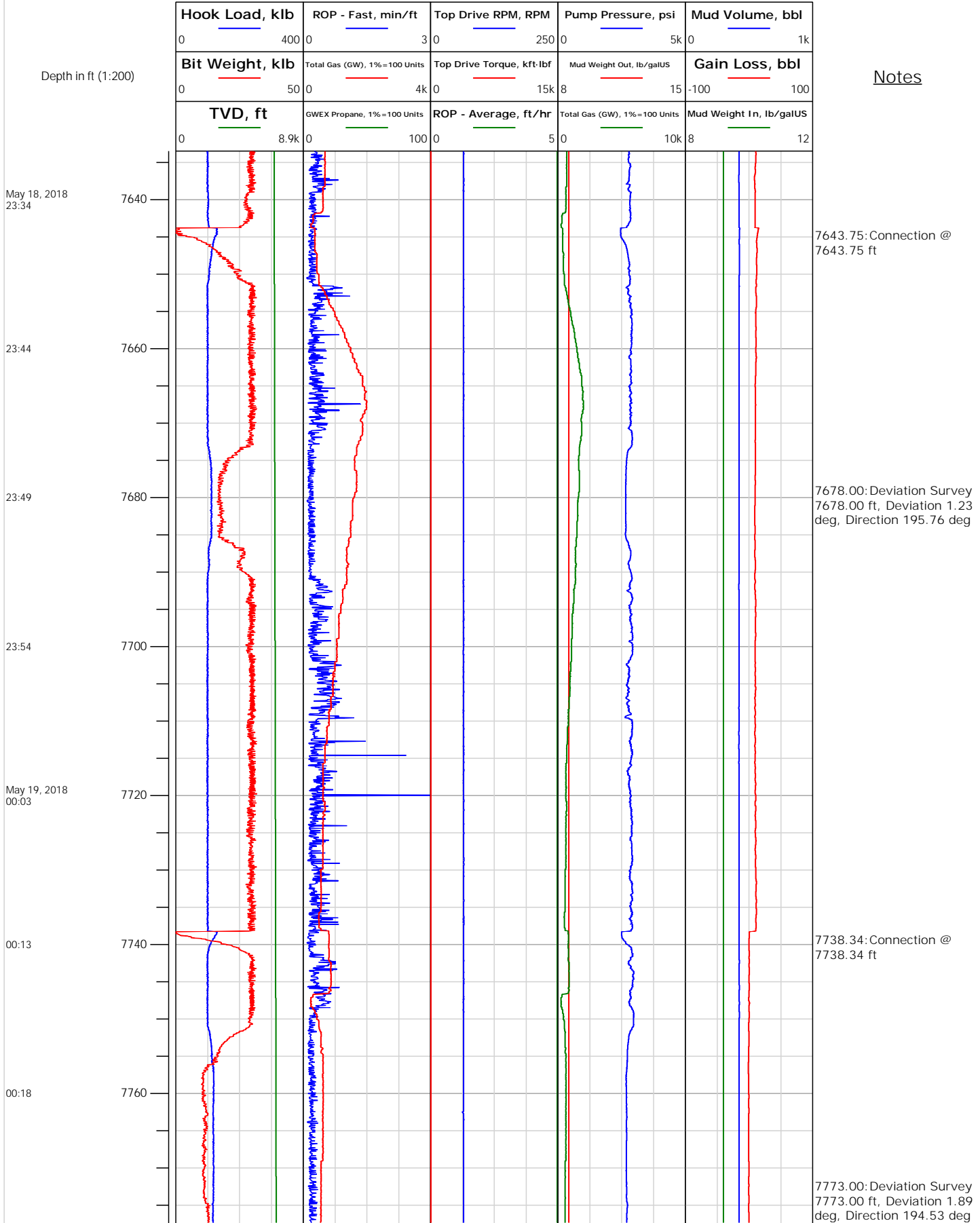
# Electronic Drilling Recorder

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

**Well Name:** Nichols Federal 24-20E  
**Rig:** 290

**Location:**

## Notes





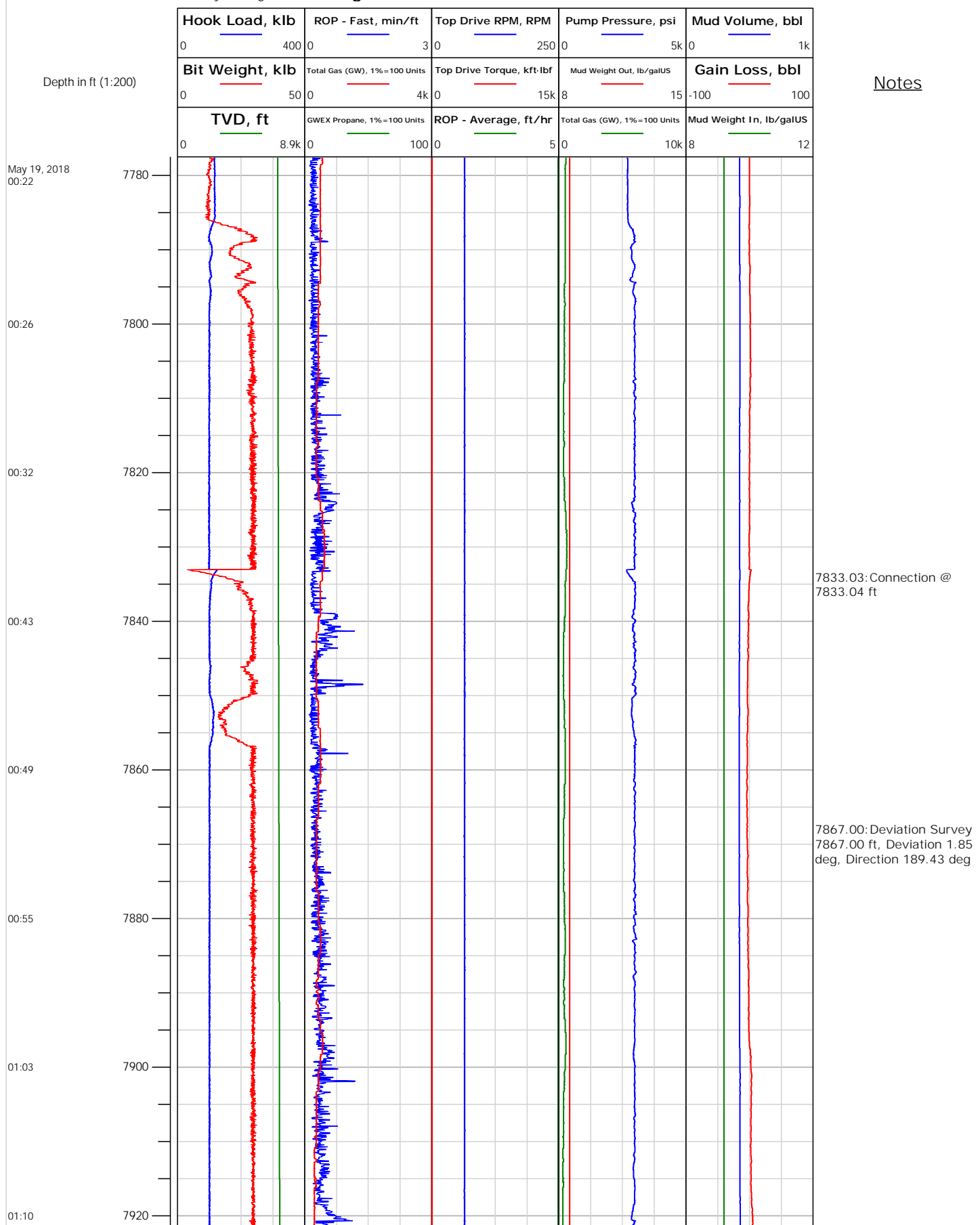
# Electronic Drilling Recorder

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

**Well Name:** Nichols Federal 24-20E  
**Rig:** 290

**Location:**

Notes





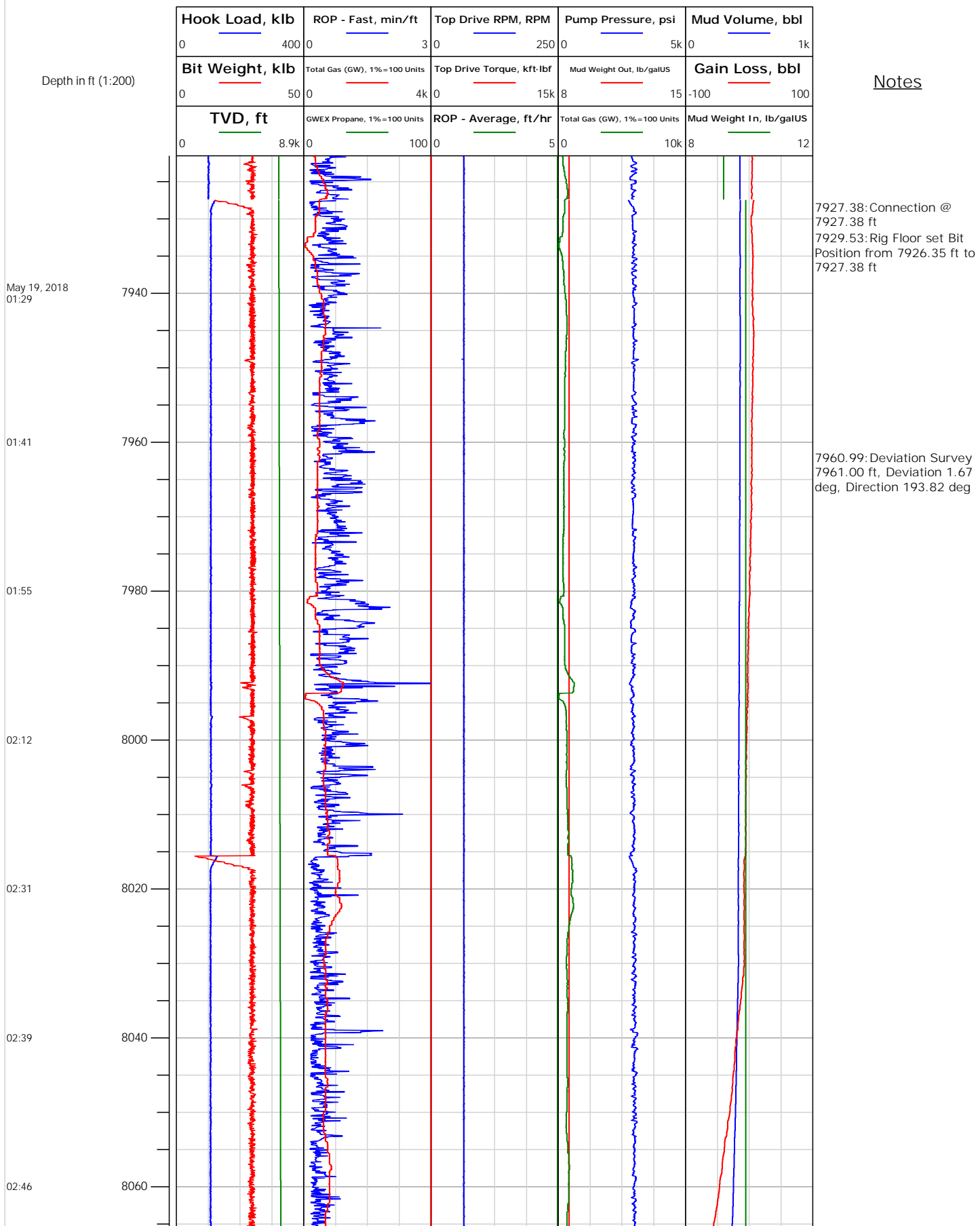
# Electronic Drilling Recorder

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

**Well Name:** Nichols Federal 24-20E  
**Rig:** 290

**Location:**

## Notes





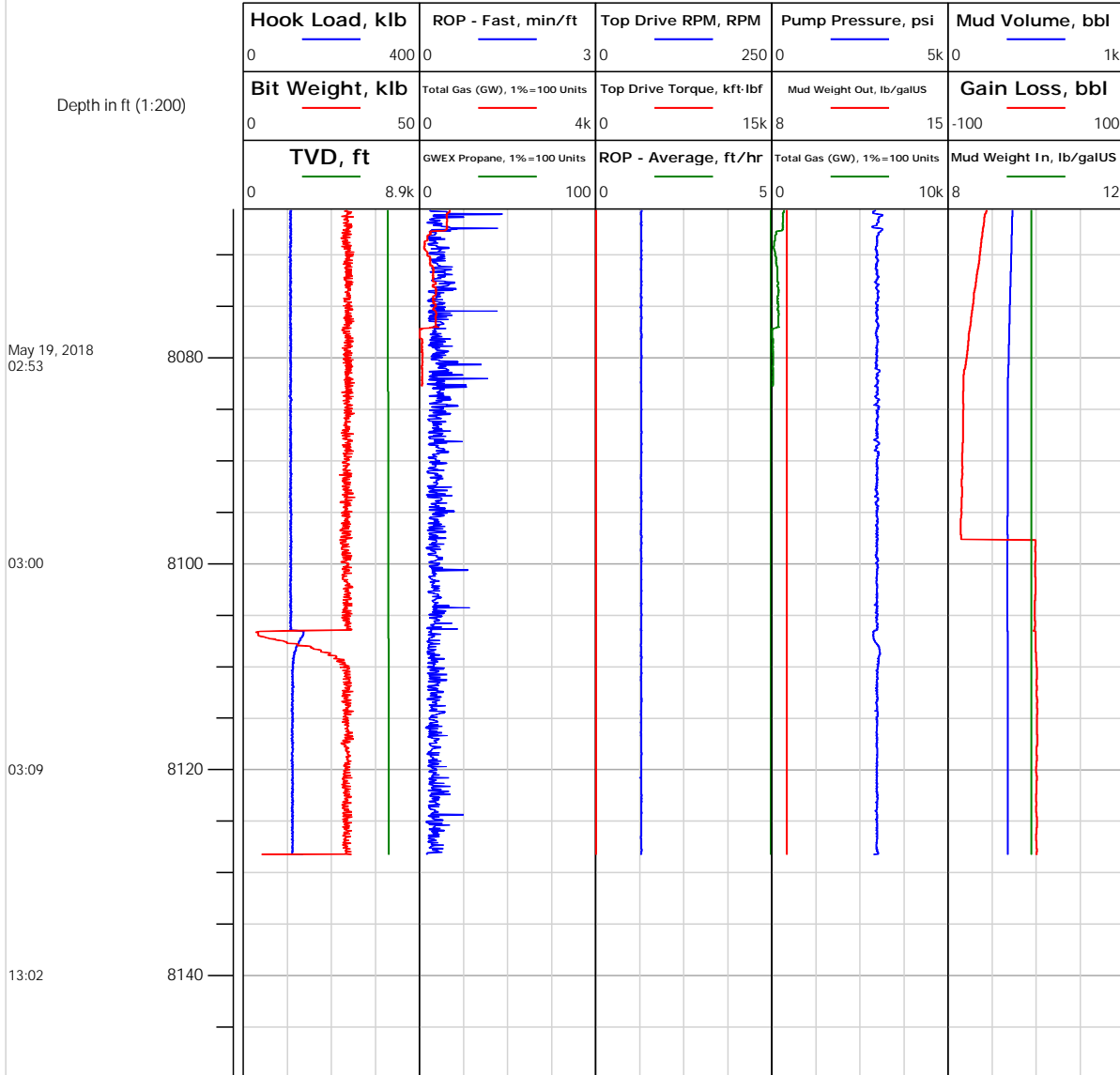
# Electronic Drilling Recorder

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

**Well Name:** Nichols Federal 24-20E  
**Rig:** 290

**Location:**

## Notes



8068.00: Deviation Survey  
 8068.00 ft, Deviation 2.02 deg, Direction 197.87 deg

8128.38: Connection @  
 8128.39 ft