

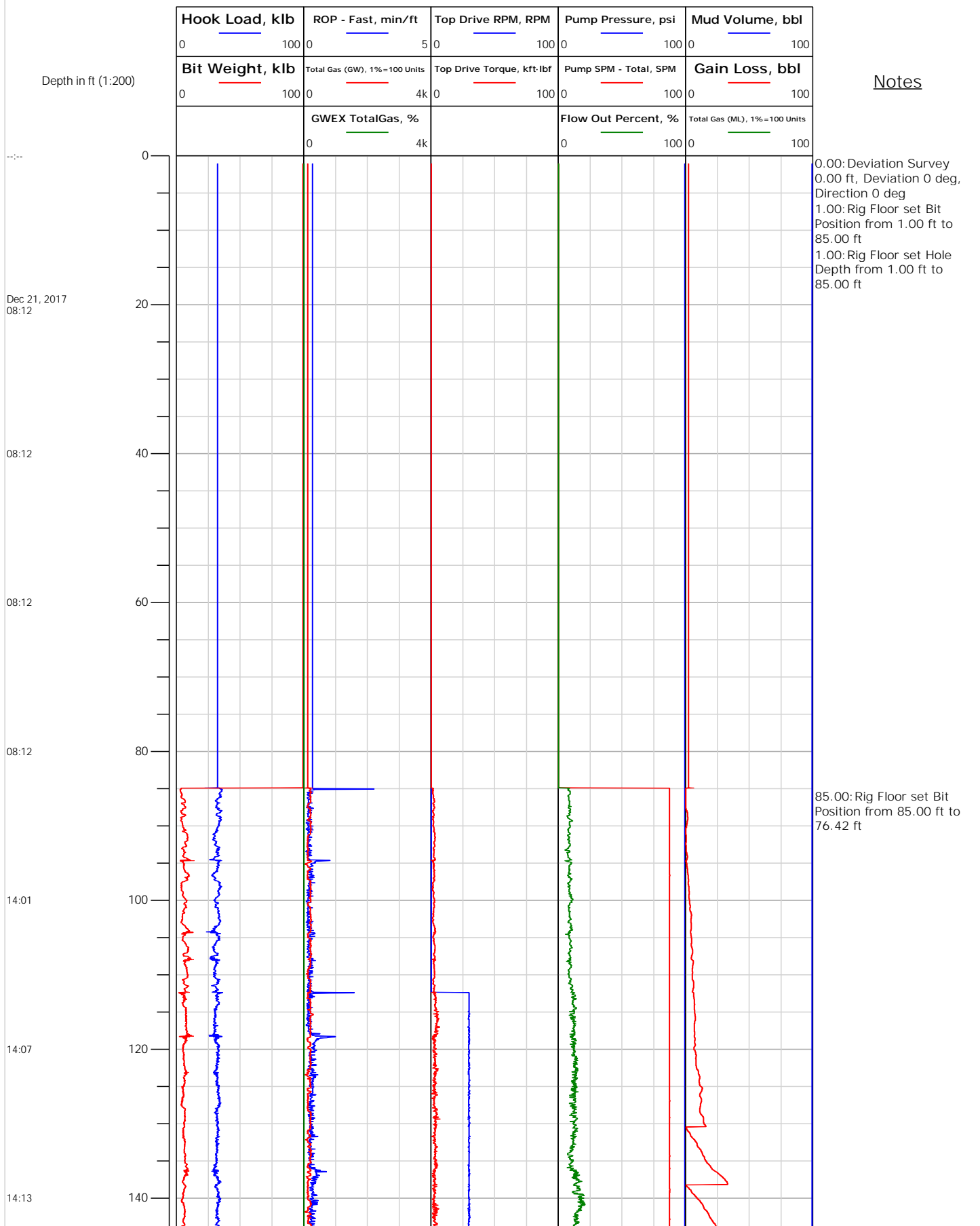


# Electronic Drilling Recorder

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

**Well Name:** Nichols 24-05W  
**Rig:** 290

**Location:**





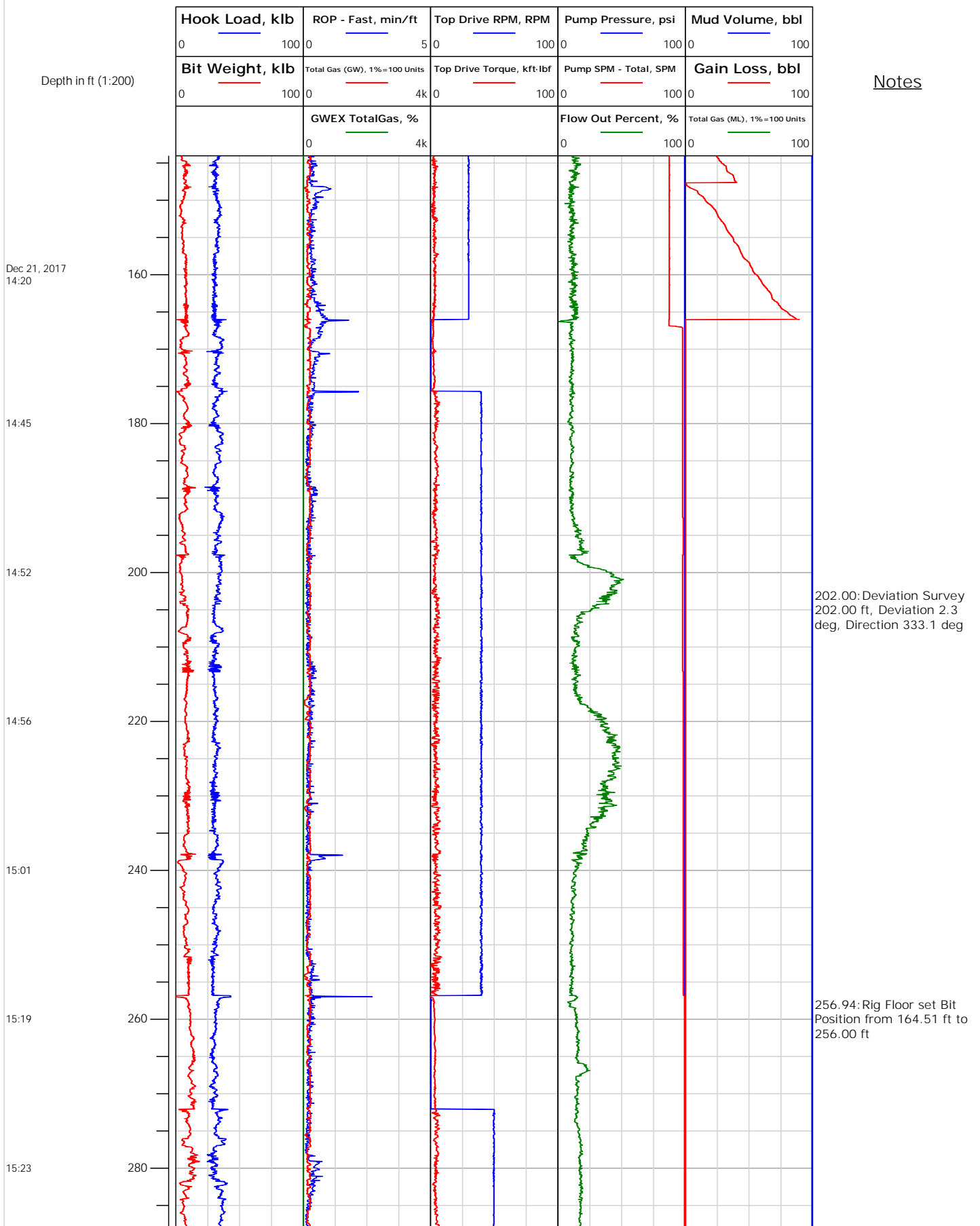
# Electronic Drilling Recorder

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

**Well Name:** Nichols 24-05W  
**Rig:** 290

**Location:**

Notes







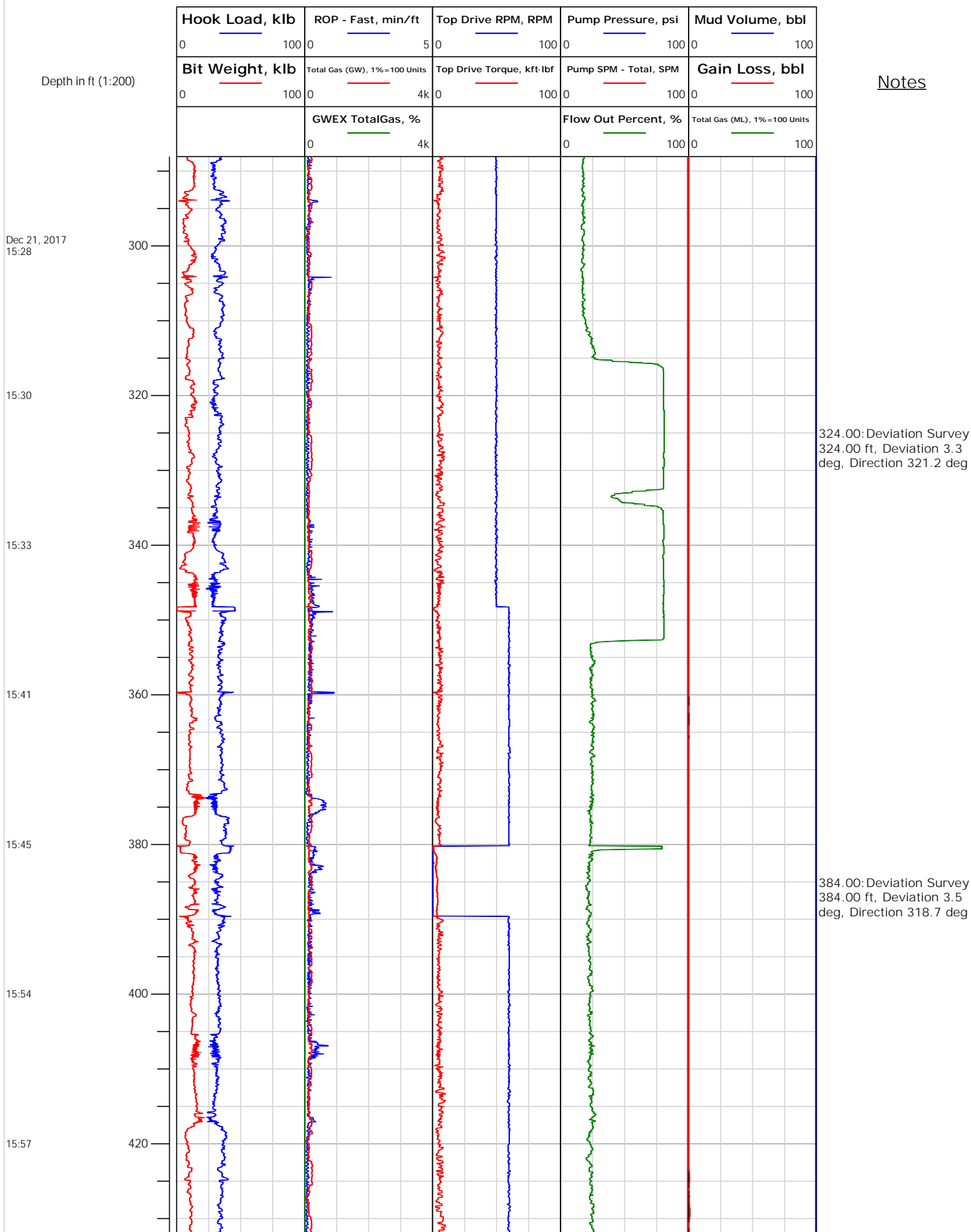
# Electronic Drilling Recorder

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

**Well Name:** Nichols 24-05W  
**Rig:** 290

**Location:**

Notes





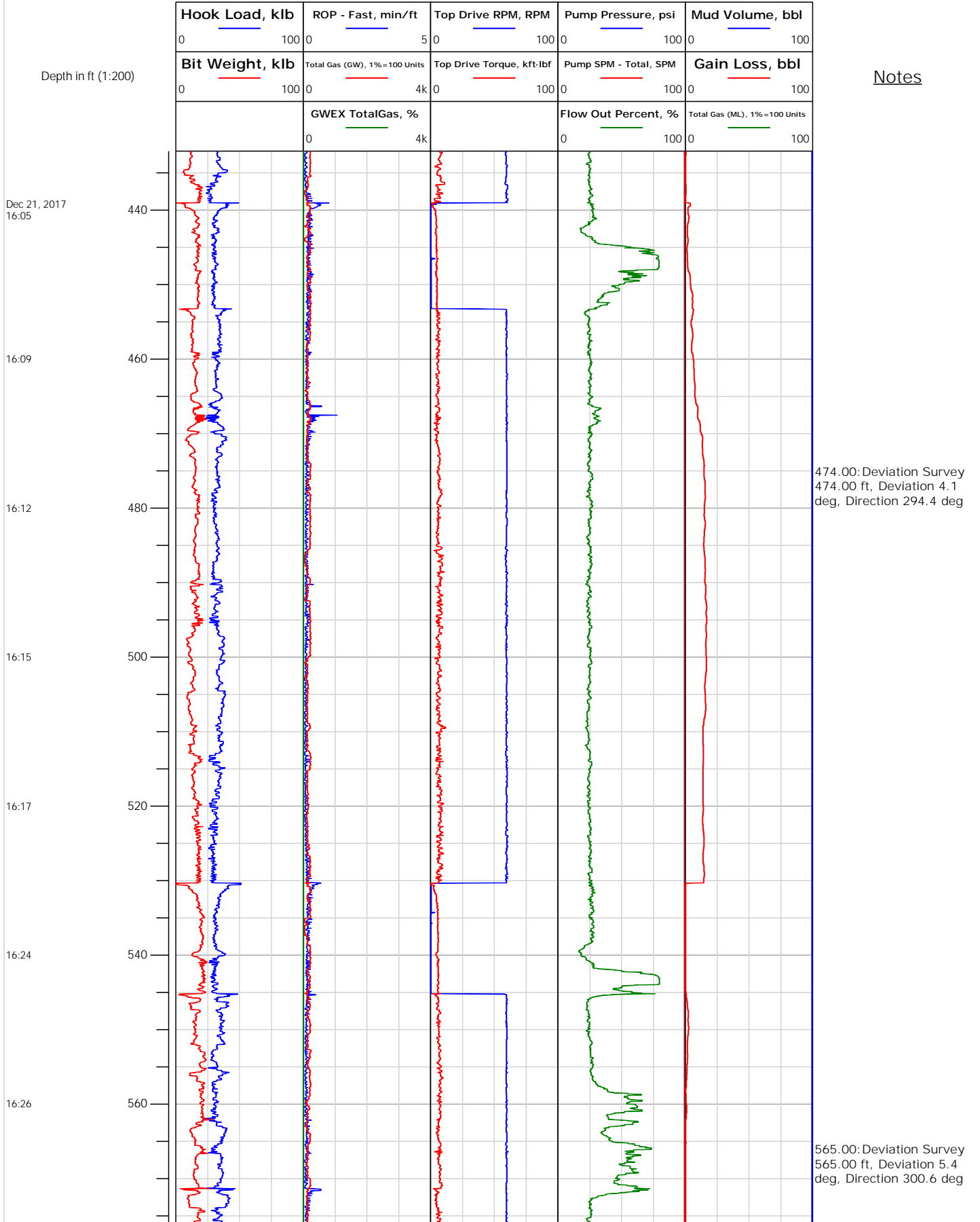
# Electronic Drilling Recorder

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

**Well Name:** Nichols 24-05W  
**Rig:** 290

**Location:**

Notes





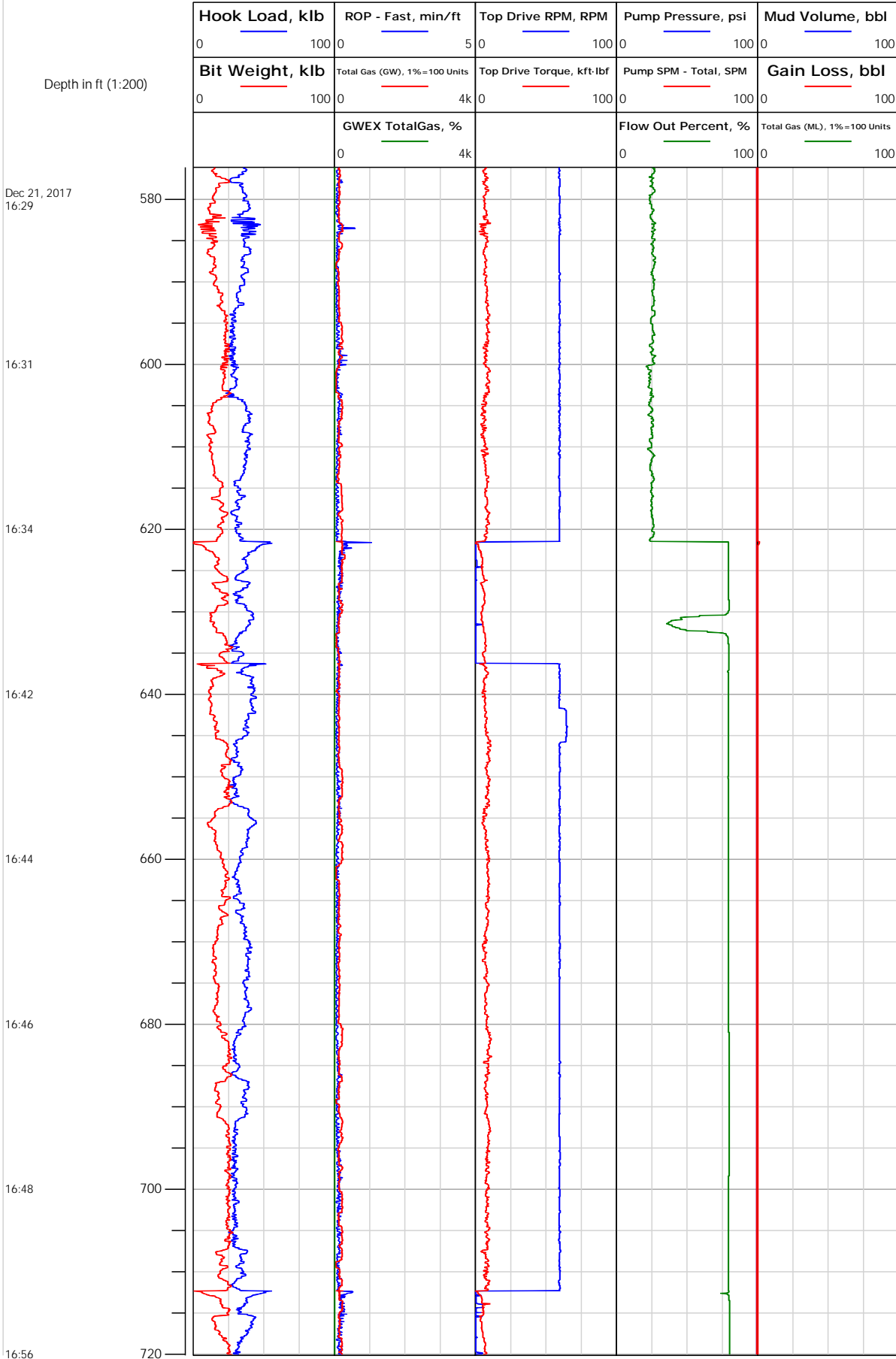
# Electronic Drilling Recorder

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

**Well Name:** Nichols 24-05W  
**Rig:** 290

**Location:**

Notes





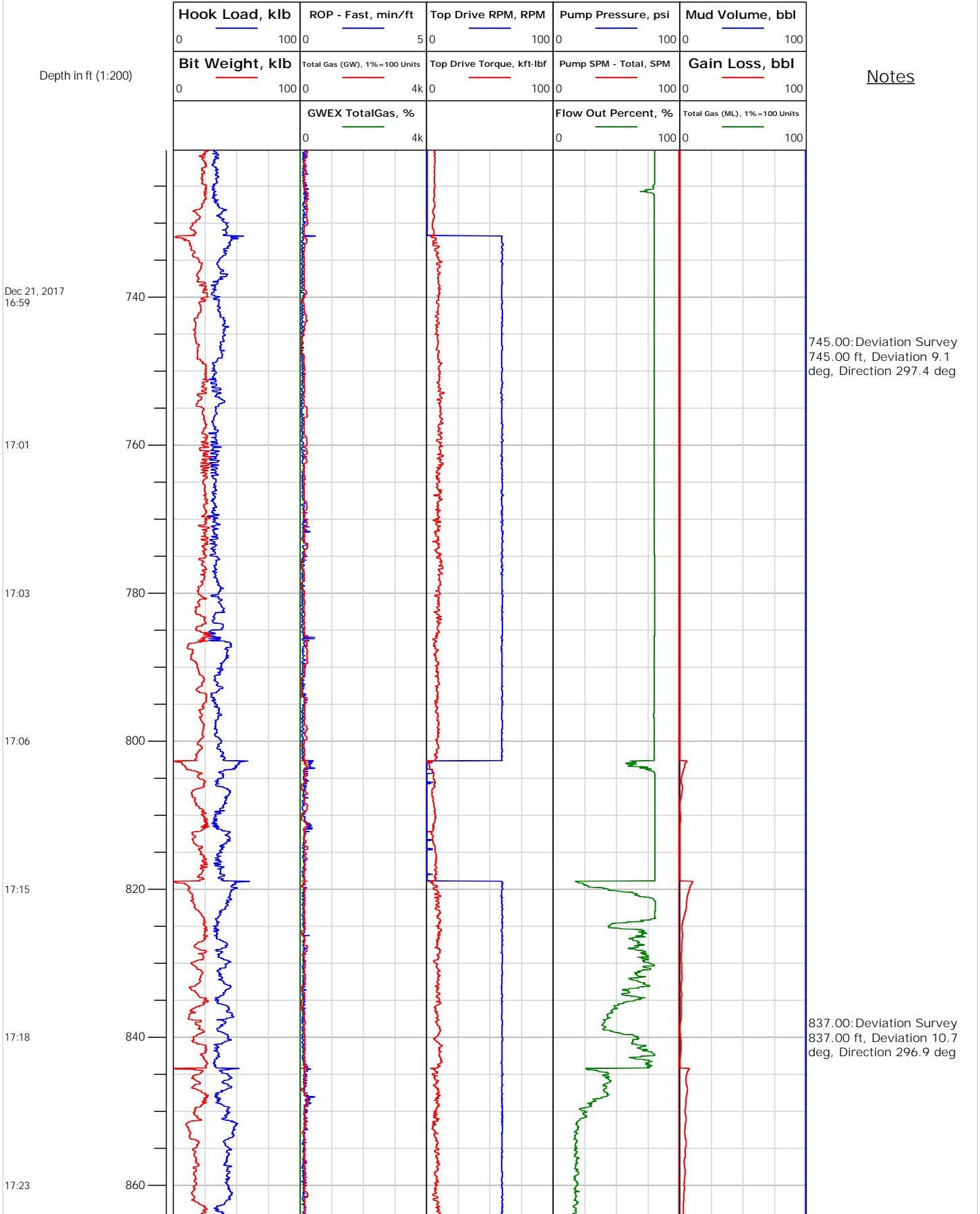
# Electronic Drilling Recorder

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

**Well Name:** Nichols 24-05W  
**Rig:** 290

**Location:**

## Notes





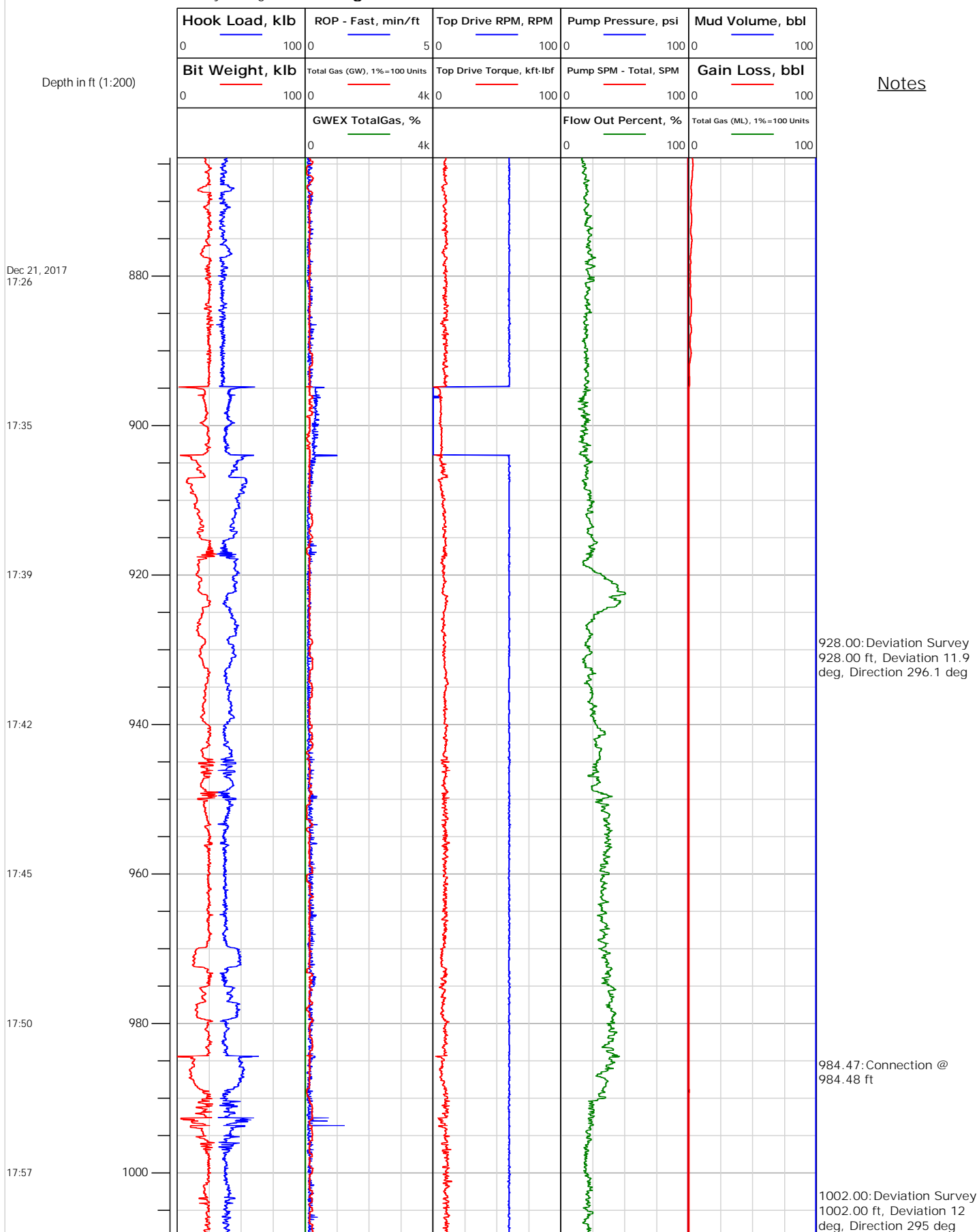
# Electronic Drilling Recorder

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

**Well Name:** Nichols 24-05W  
**Rig:** 290

**Location:**

Notes





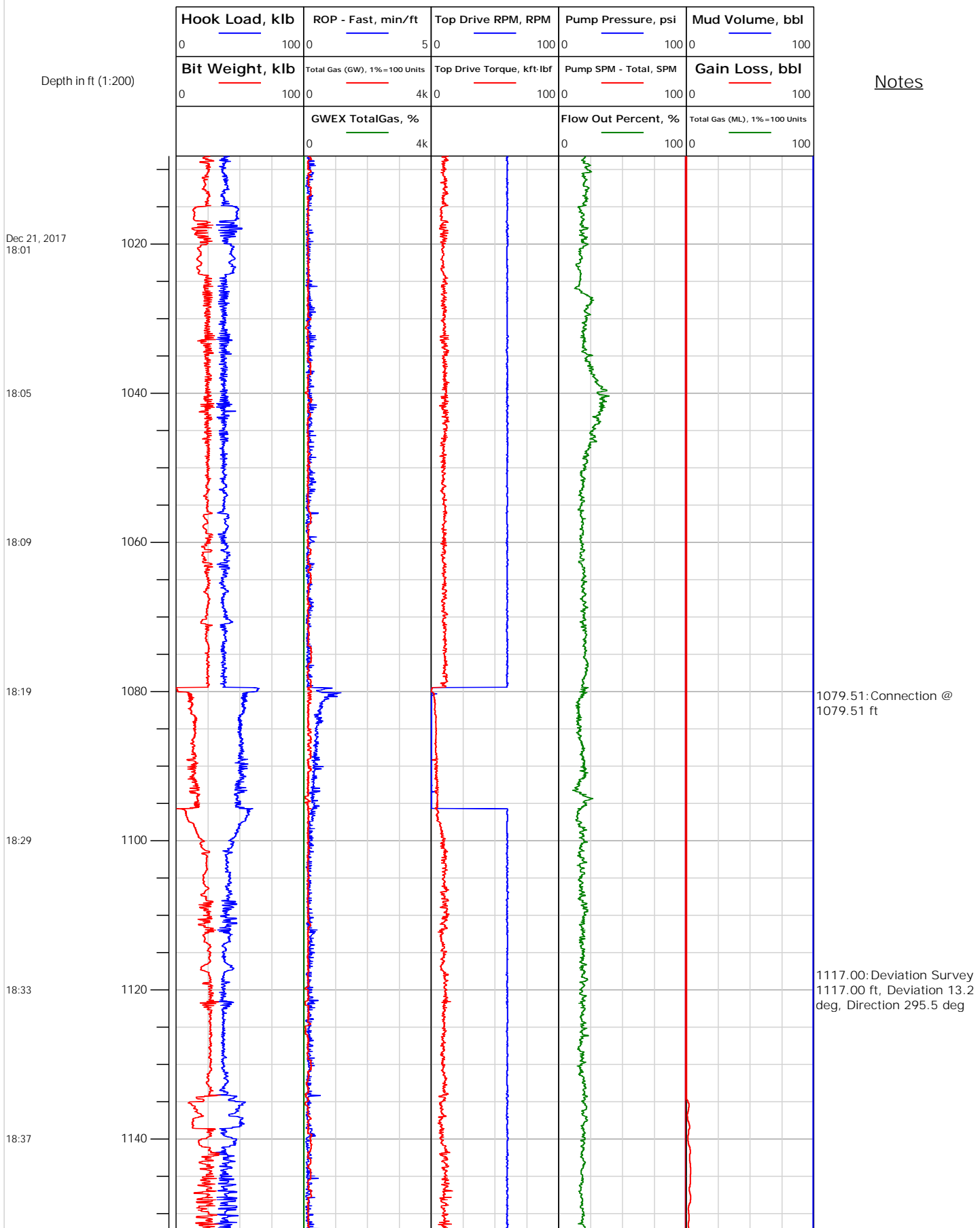
# Electronic Drilling Recorder

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

**Well Name:** Nichols 24-05W  
**Rig:** 290

**Location:**

Notes





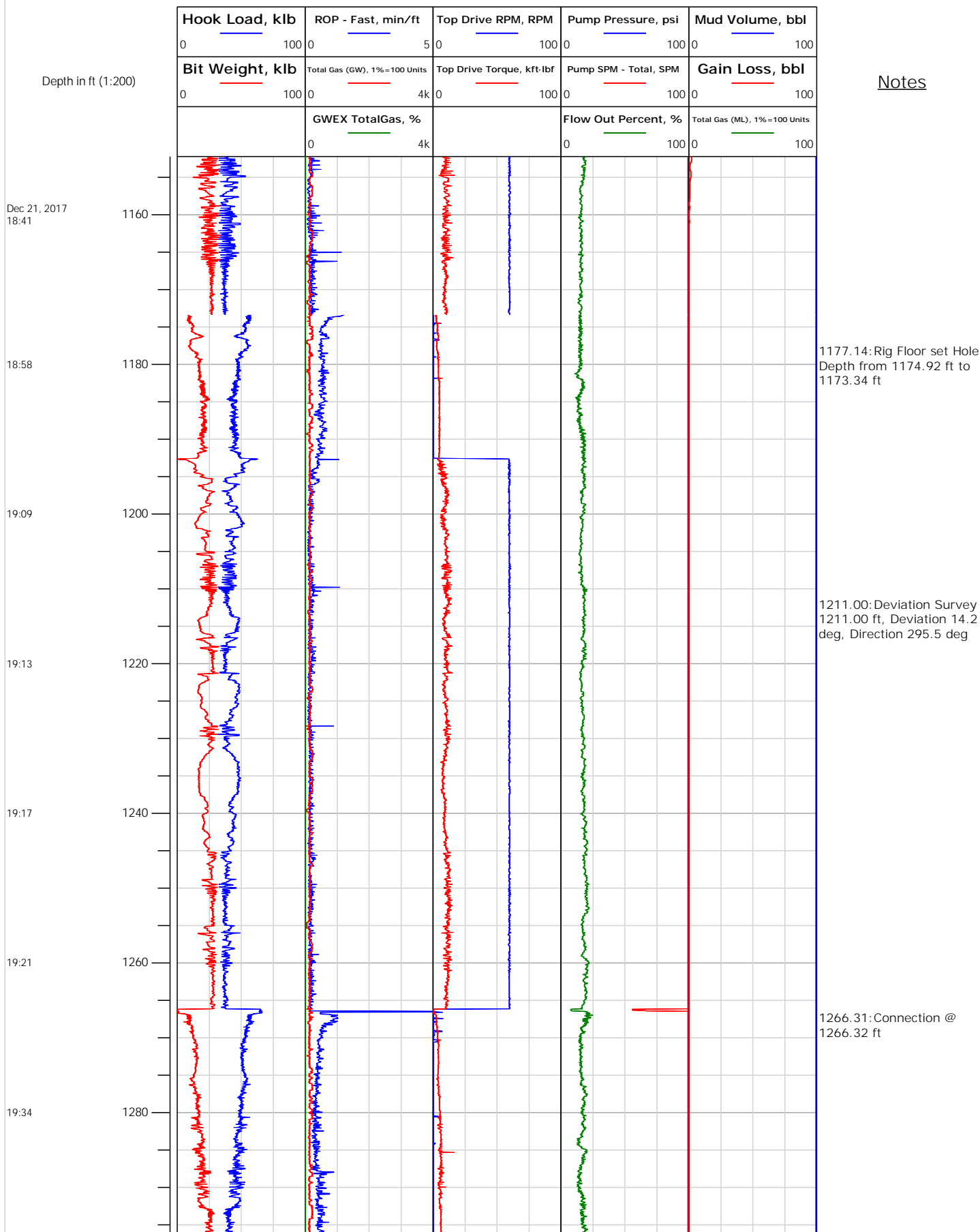
# Electronic Drilling Recorder

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

**Well Name:** Nichols 24-05W  
**Rig:** 290

**Location:**

## Notes





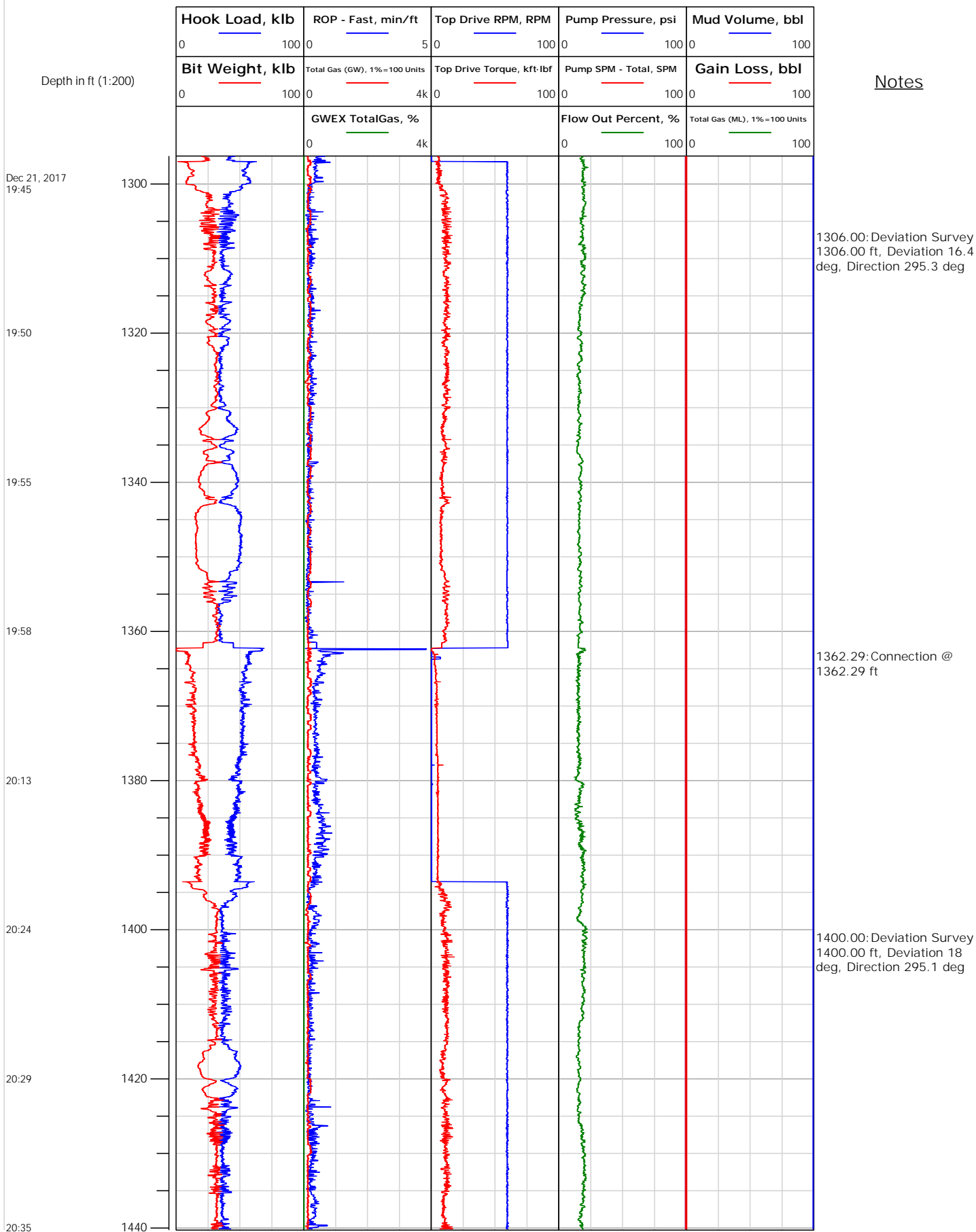
# Electronic Drilling Recorder

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

**Well Name:** Nichols 24-05W  
**Rig:** 290

**Location:**

## Notes







## Electronic Drilling Recorder

Operator: Laramie Energy  
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-05W  
Rig: 290

Location:

Depth in ft (1:200)

Notes

Dec 21, 2017  
20:48

20:59

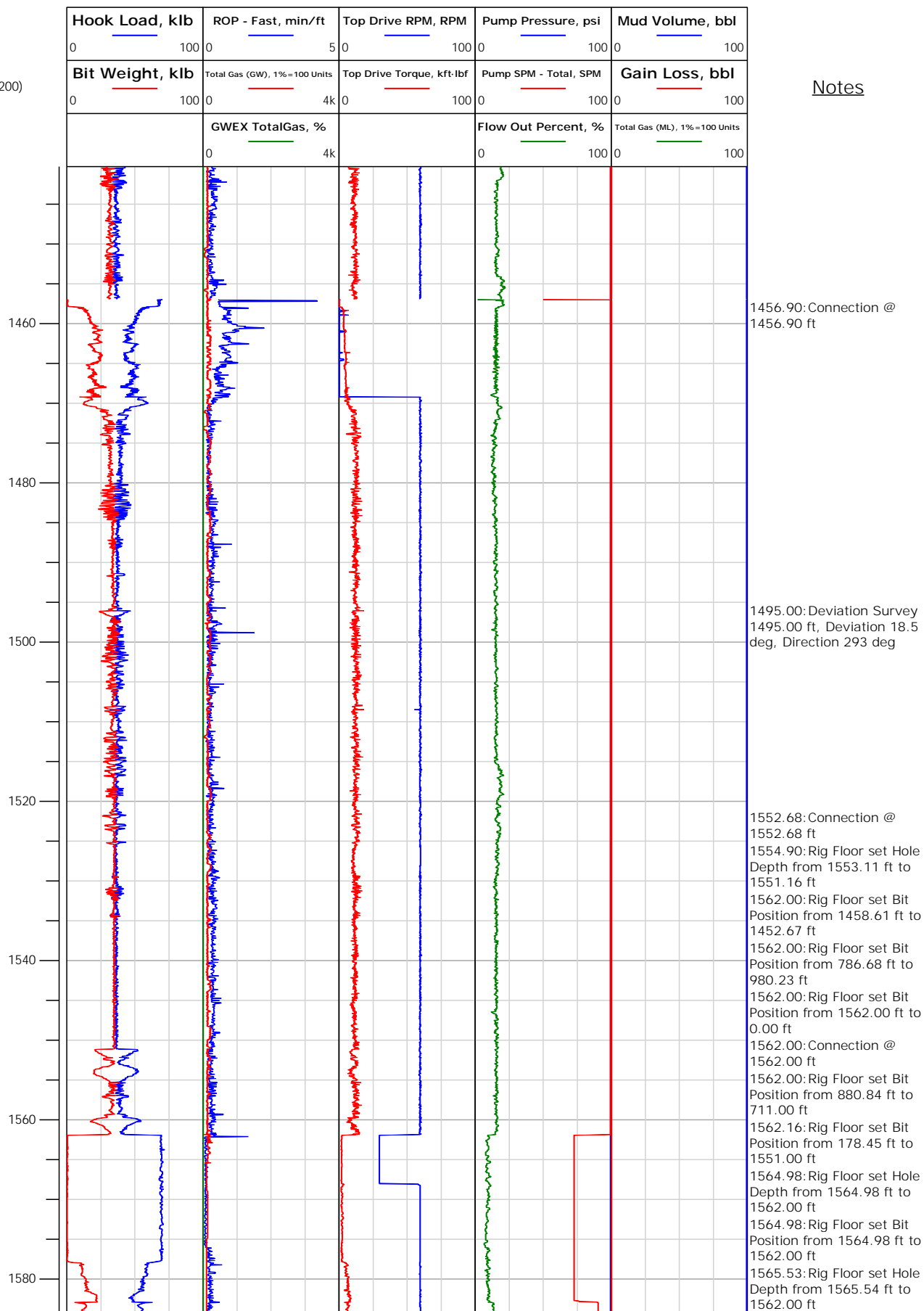
21:06

21:11

21:18

21:29

Dec 22, 2017  
12:47





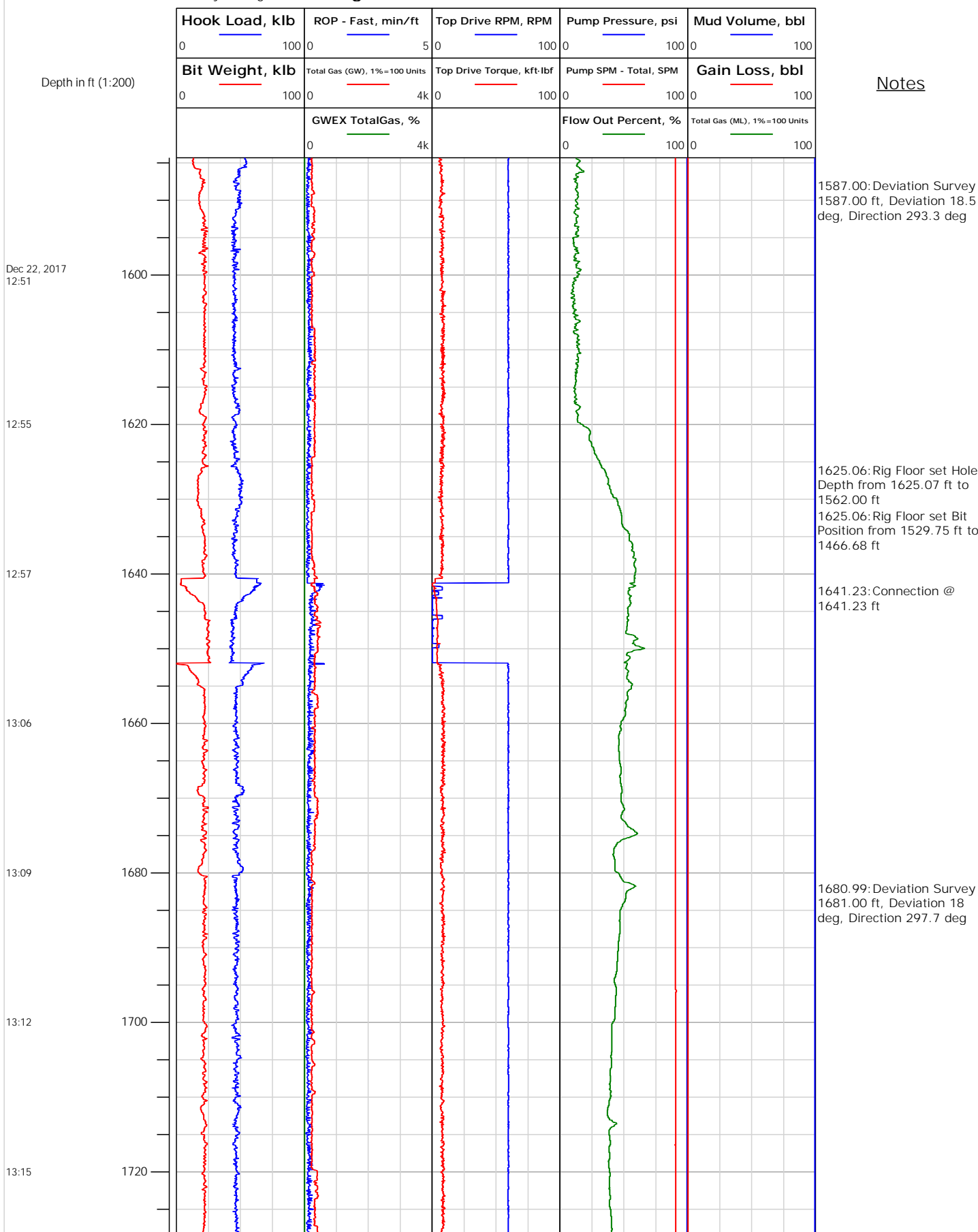
# Electronic Drilling Recorder

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

**Well Name:** Nichols 24-05W  
**Rig:** 290

**Location:**

## Notes





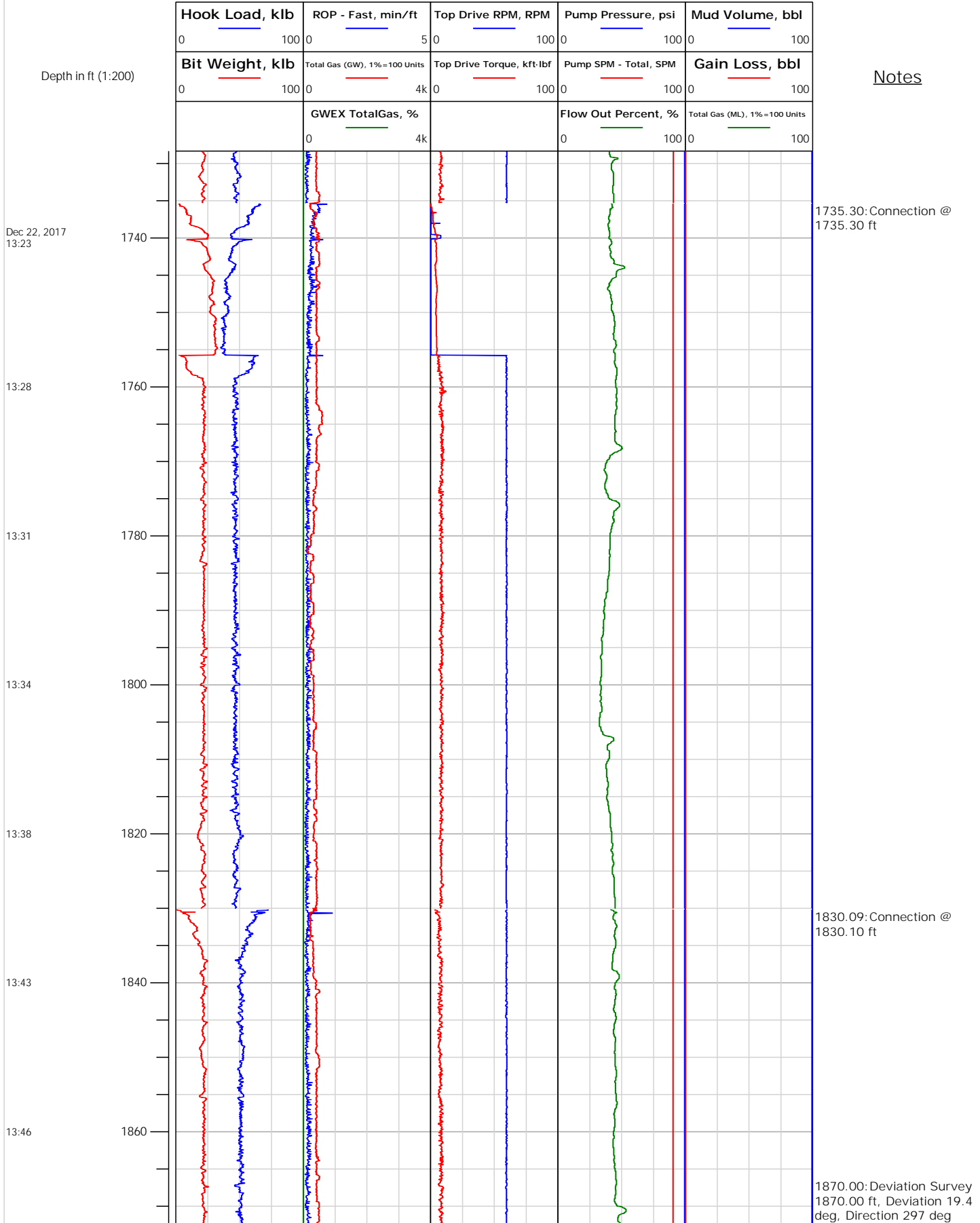
# Electronic Drilling Recorder

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

**Well Name:** Nichols 24-05W  
**Rig:** 290

**Location:**

## Notes





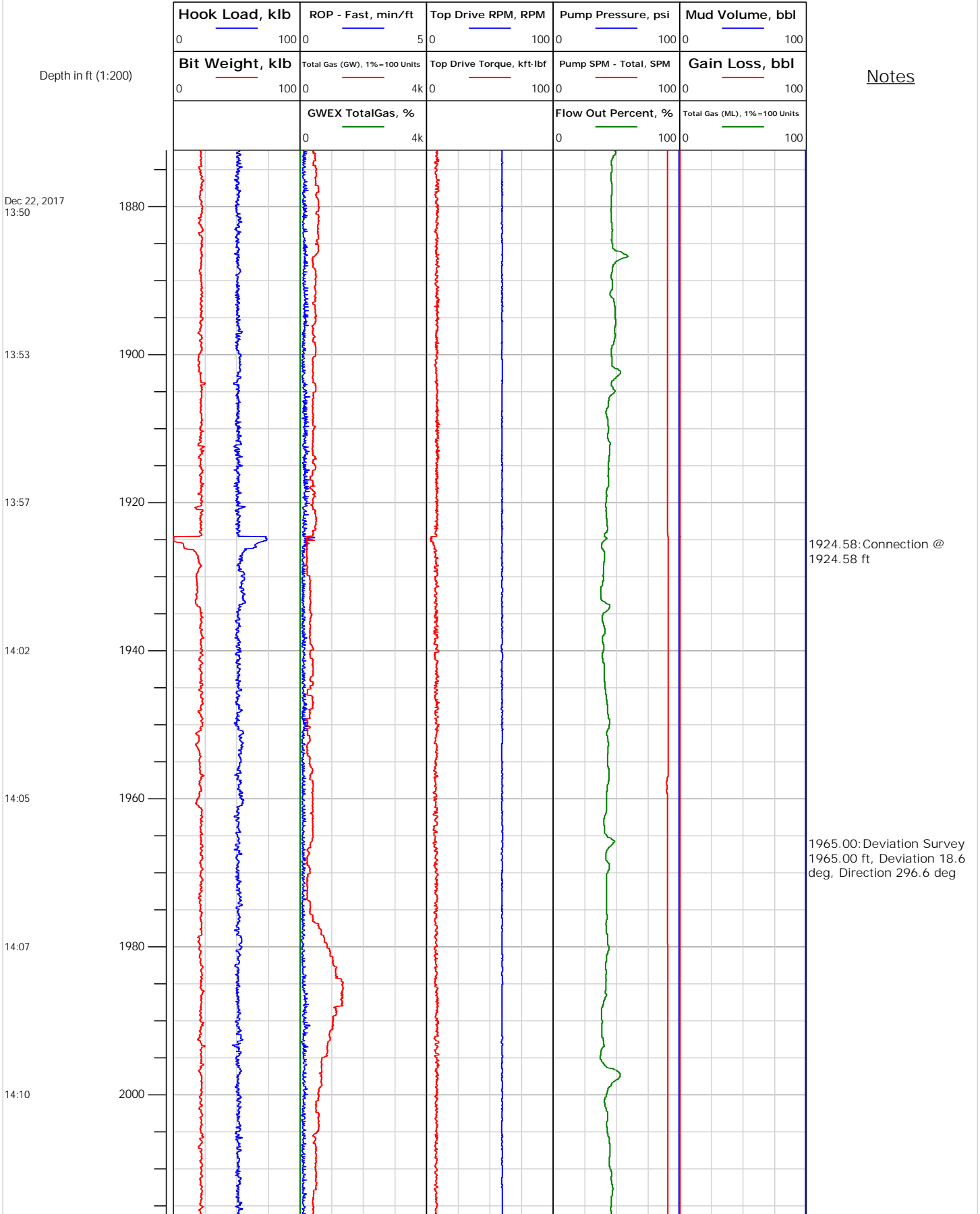
# Electronic Drilling Recorder

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

**Well Name:** Nichols 24-05W  
**Rig:** 290

**Location:**

Notes





## Electronic Drilling Recorder

Operator: Laramie Energy  
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-05W  
Rig: 290

Location:

Depth in ft (1:200)

Notes

Dec 22, 2017  
14:16

14:22

14:26

14:28

14:31

14:37

14:40

14:44

2020

2040

2060

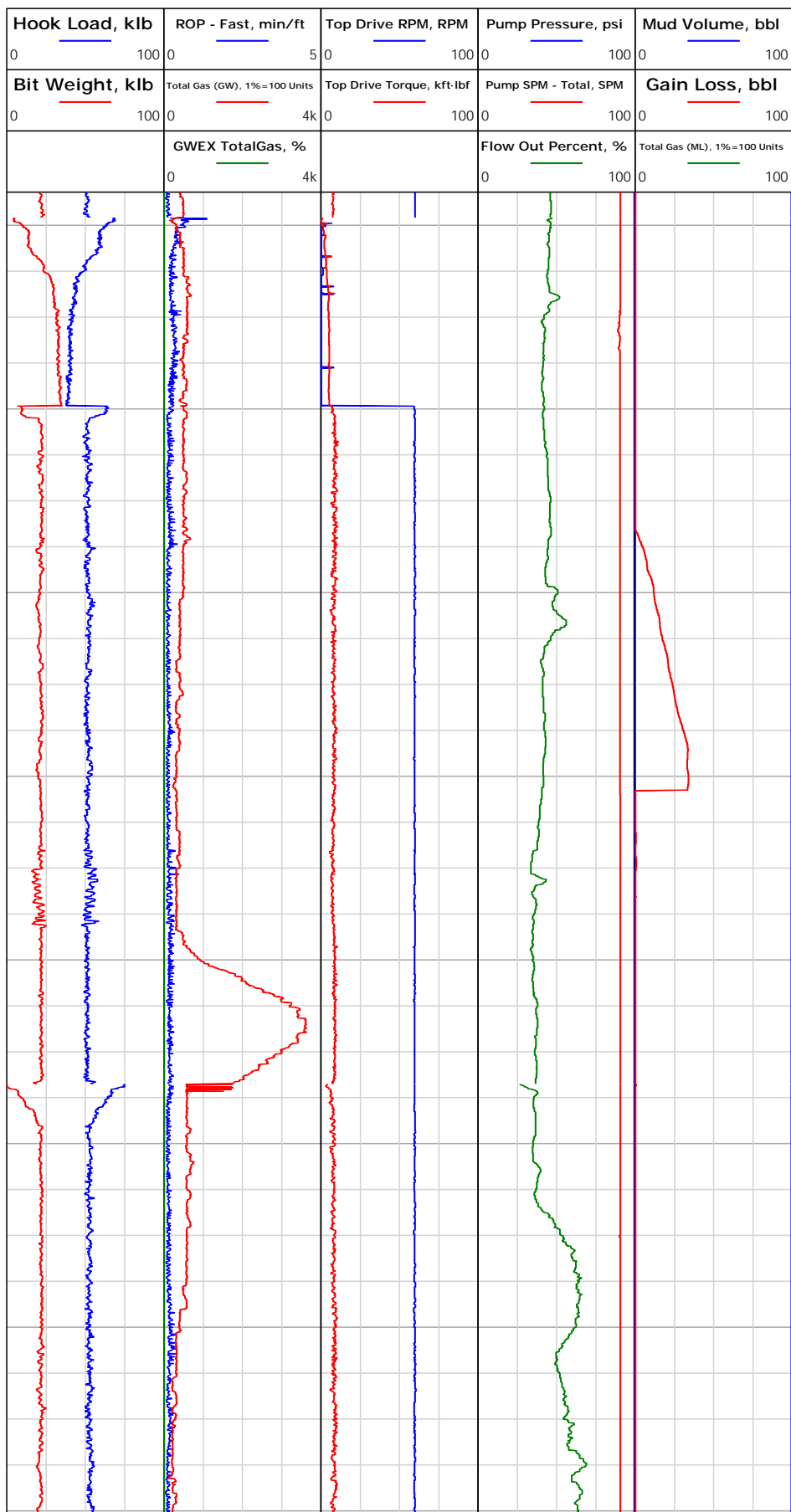
2080

2100

2120

2140

2160



2019.13: Connection @  
2019.13 ft

2059.00: Deviation Survey  
2059.00 ft, Deviation 20.1  
deg, Direction 301.3 deg

2113.57: Connection @  
2113.57 ft

2154.00: Deviation Survey  
2154.00 ft, Deviation 19.6  
deg, Direction 299.3 deg



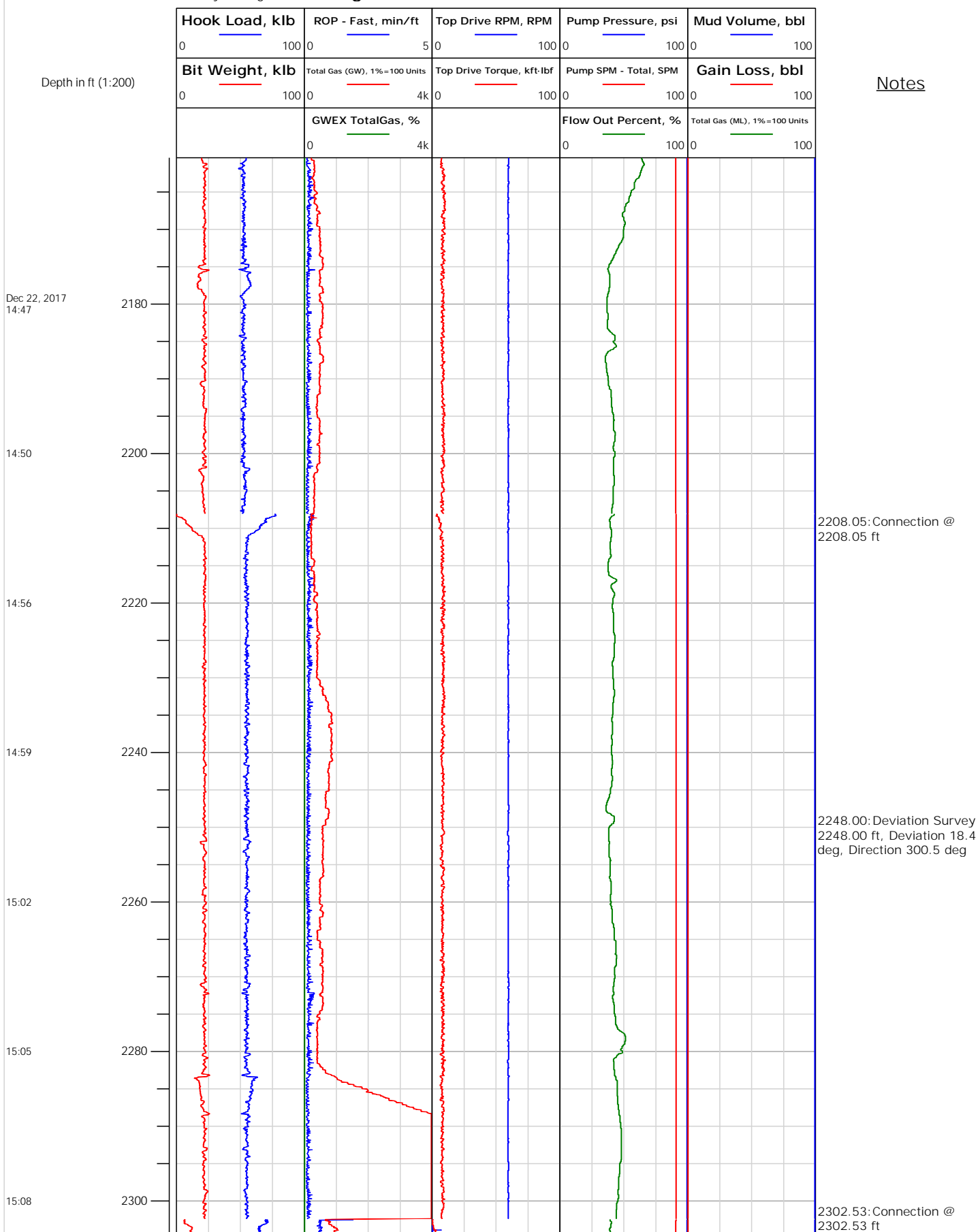
# Electronic Drilling Recorder

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

**Well Name:** Nichols 24-05W  
**Rig:** 290

**Location:**

Notes





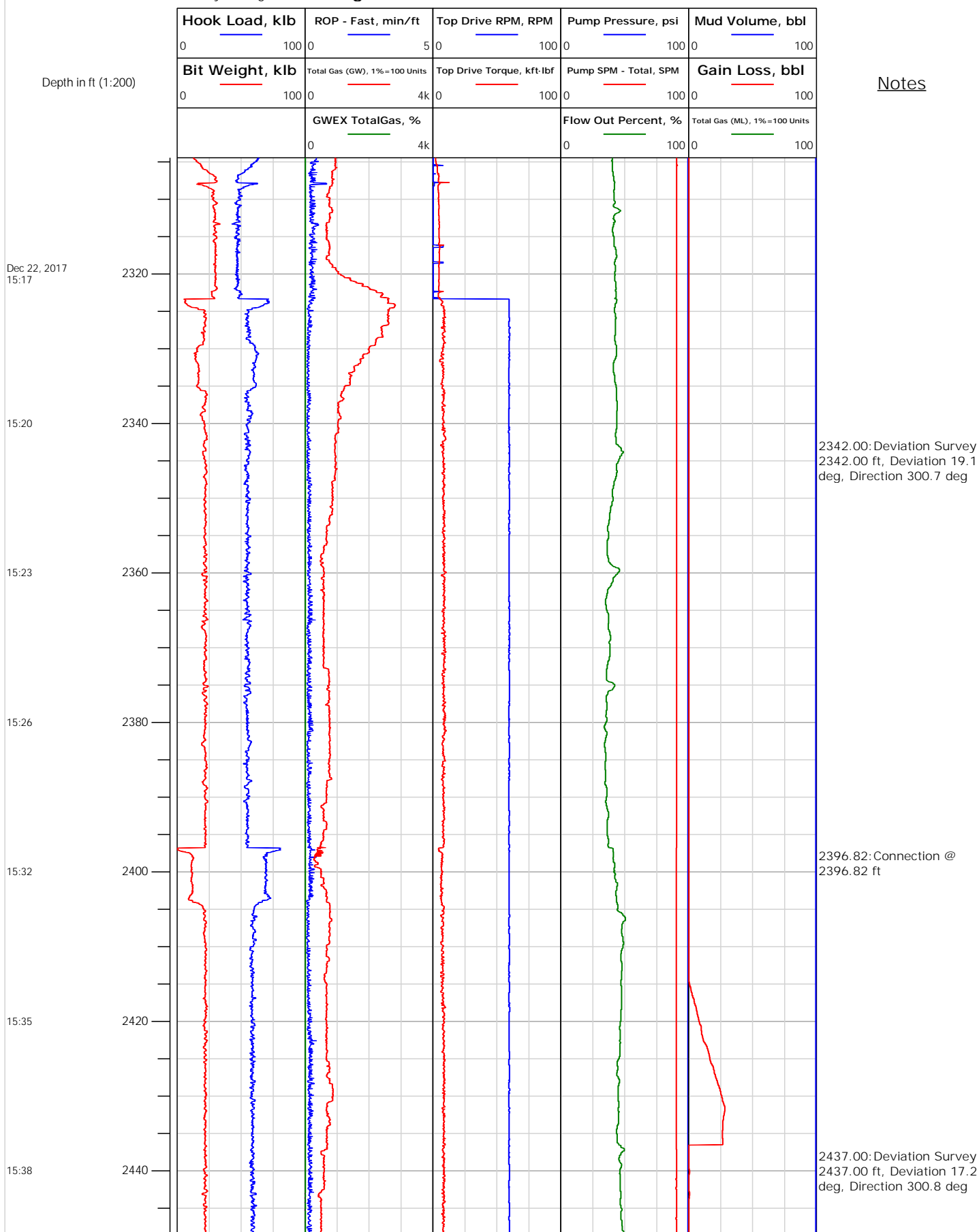
# Electronic Drilling Recorder

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

**Well Name:** Nichols 24-05W  
**Rig:** 290

**Location:**

## Notes





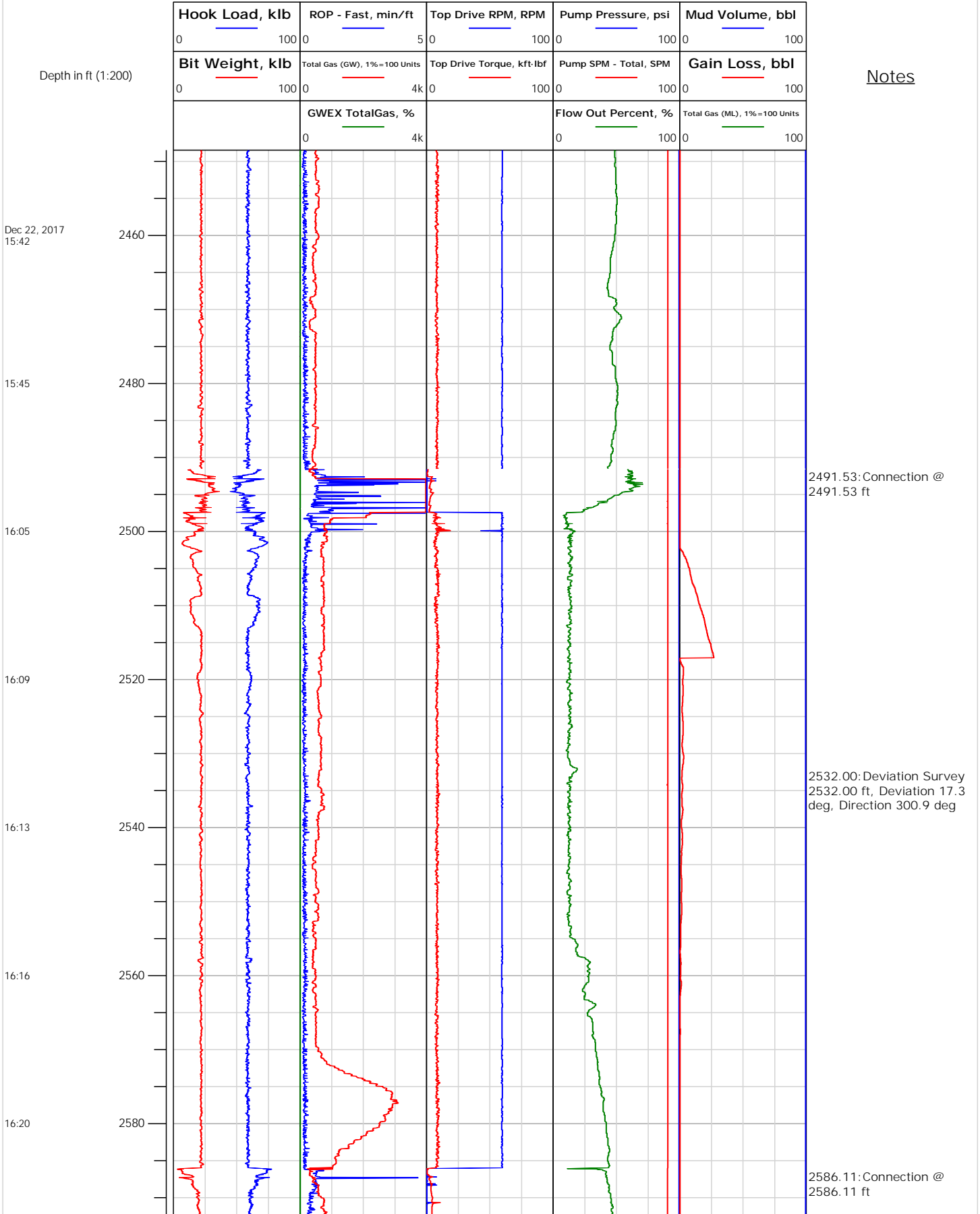
# Electronic Drilling Recorder

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

**Well Name:** Nichols 24-05W  
**Rig:** 290

**Location:**

Notes







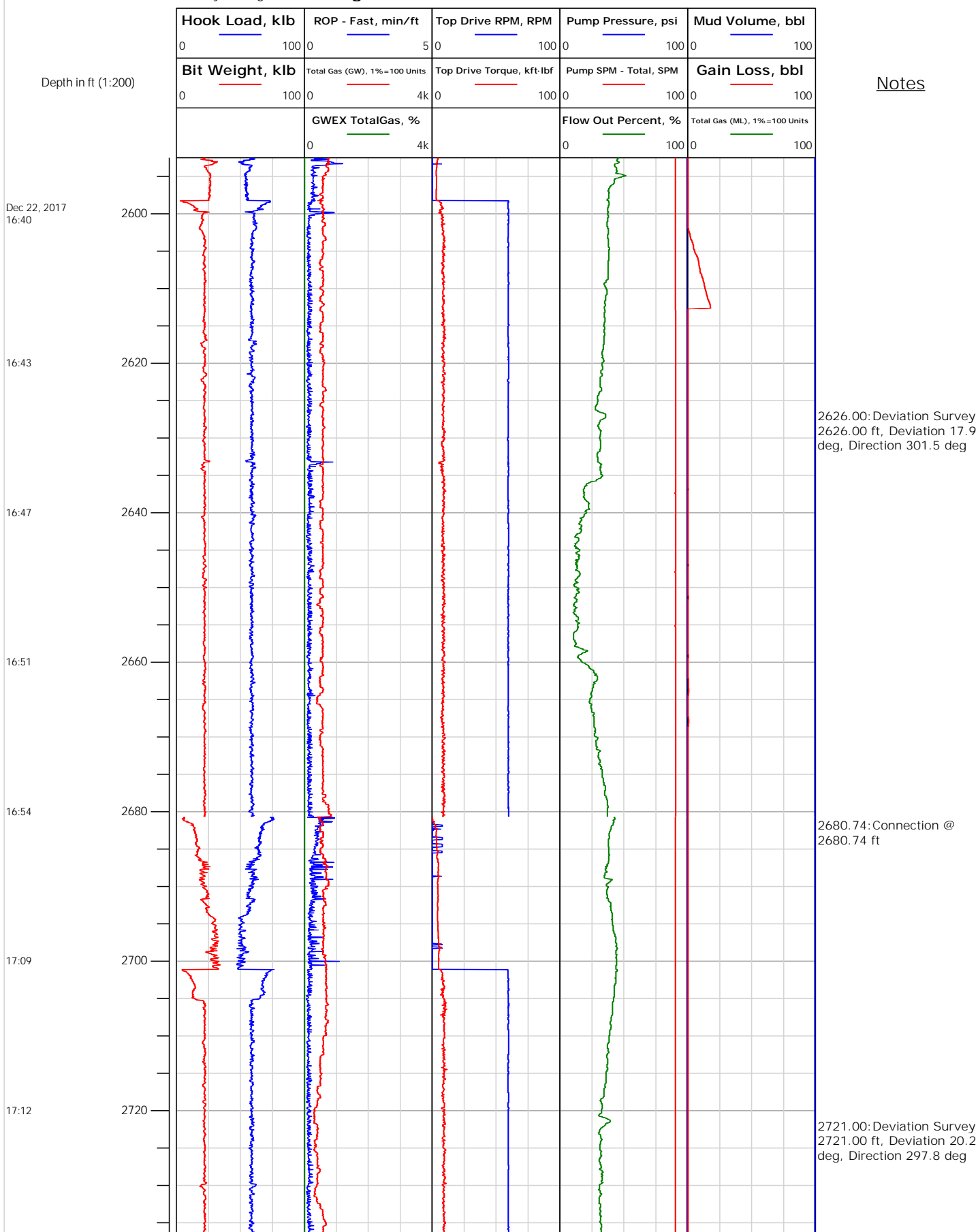
# Electronic Drilling Recorder

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

**Well Name:** Nichols 24-05W  
**Rig:** 290

**Location:**

## Notes





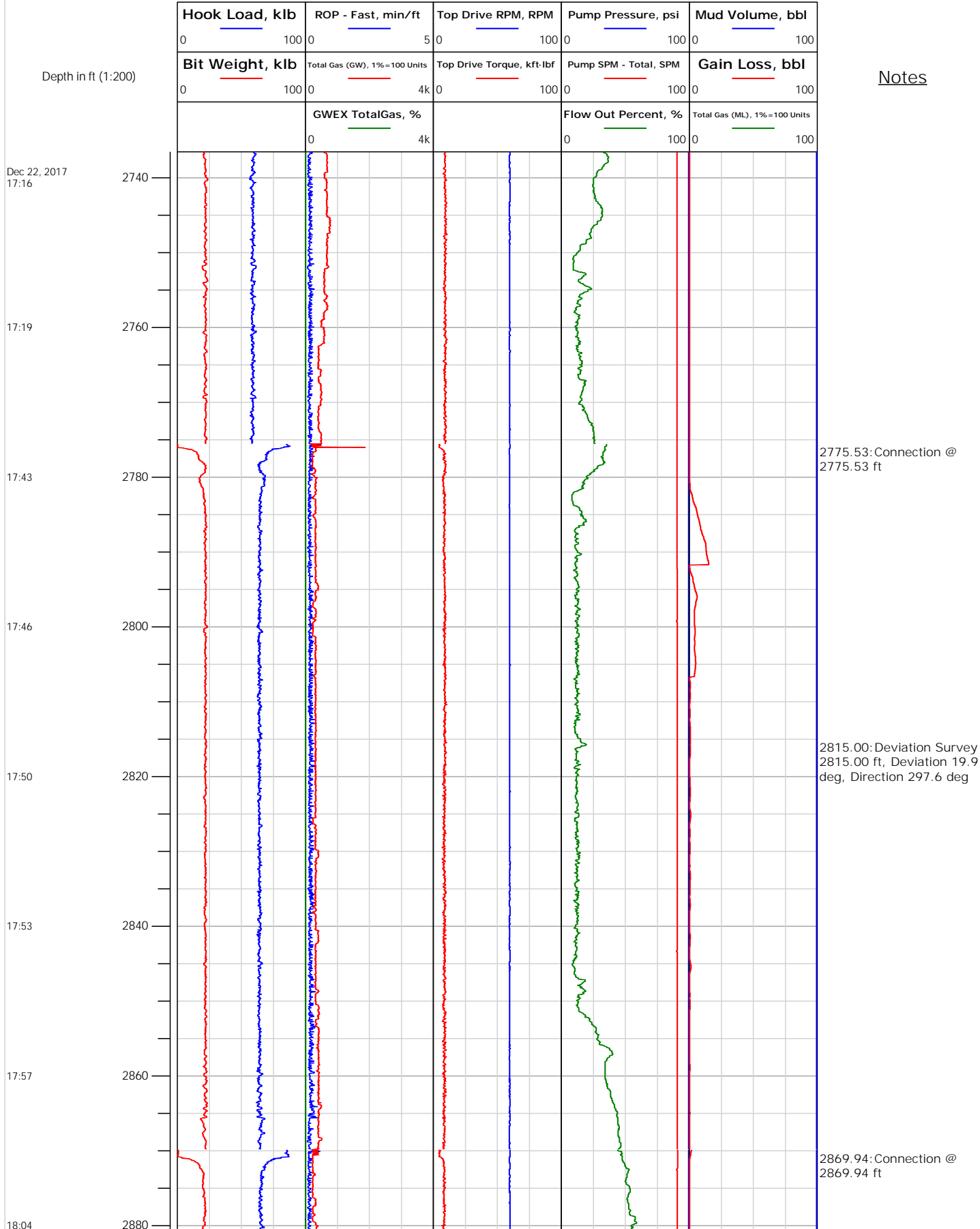
# Electronic Drilling Recorder

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

**Well Name:** Nichols 24-05W  
**Rig:** 290

**Location:**

Notes





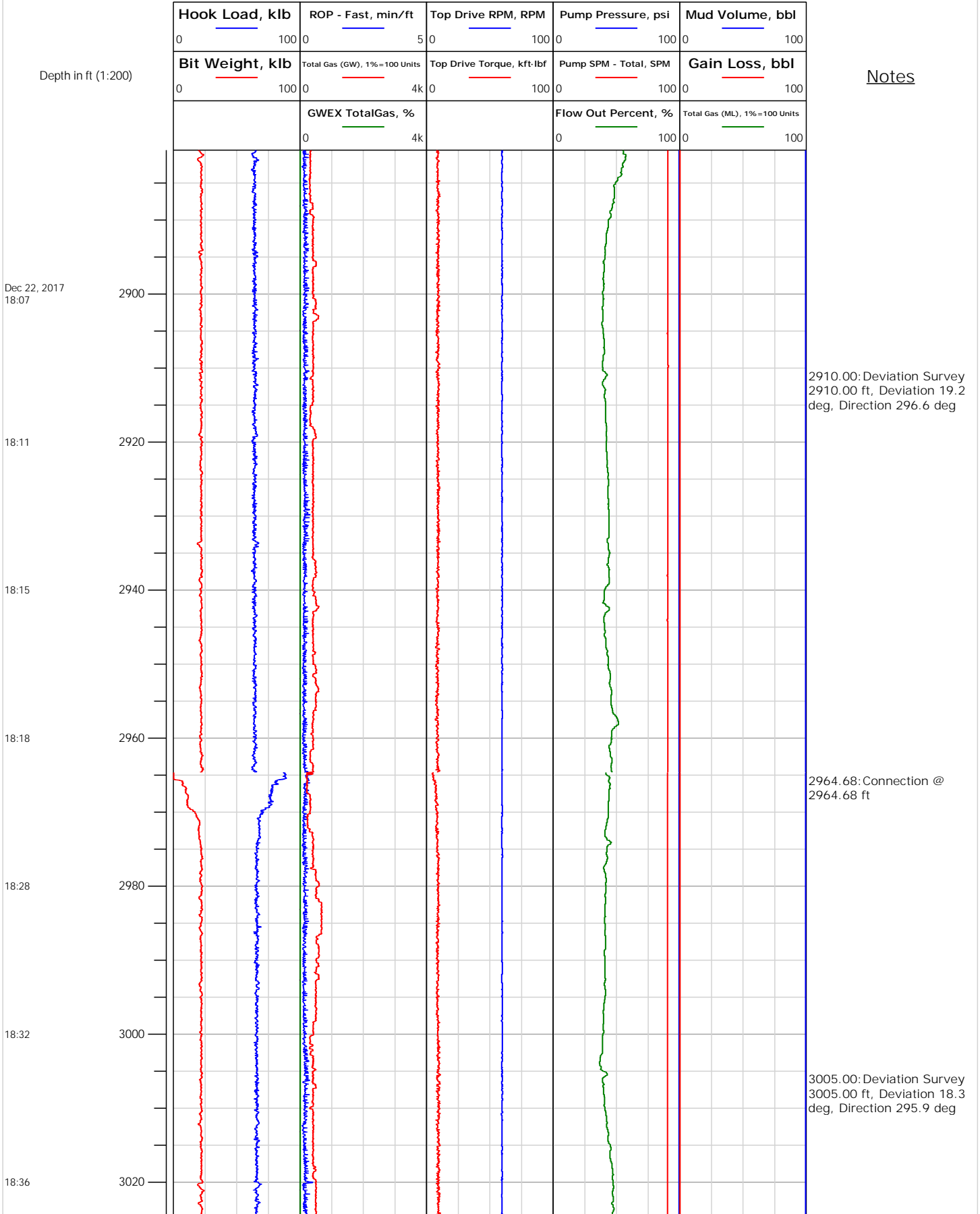
# Electronic Drilling Recorder

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

**Well Name:** Nichols 24-05W  
**Rig:** 290

**Location:**

## Notes





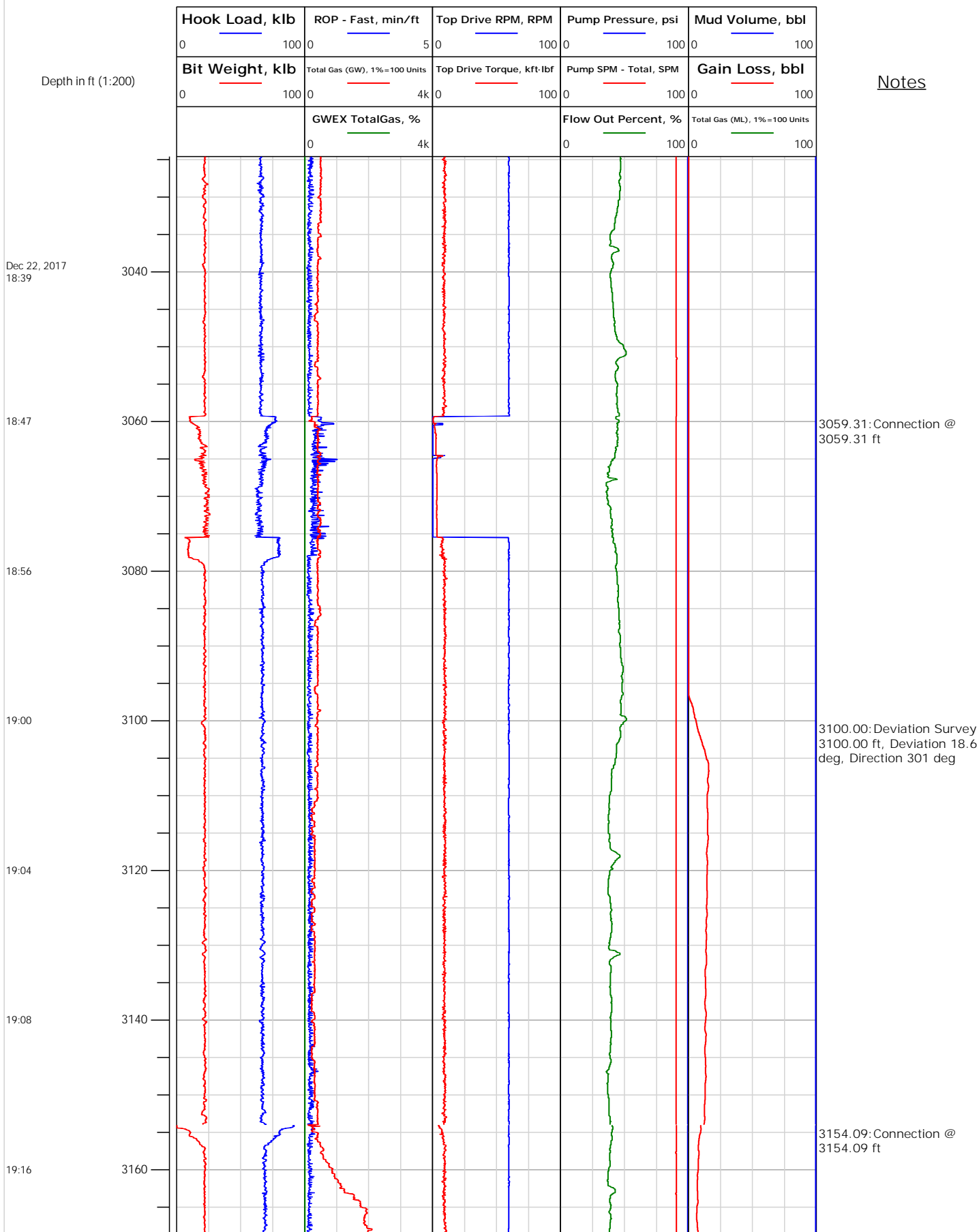
# Electronic Drilling Recorder

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

**Well Name:** Nichols 24-05W  
**Rig:** 290

**Location:**

## Notes





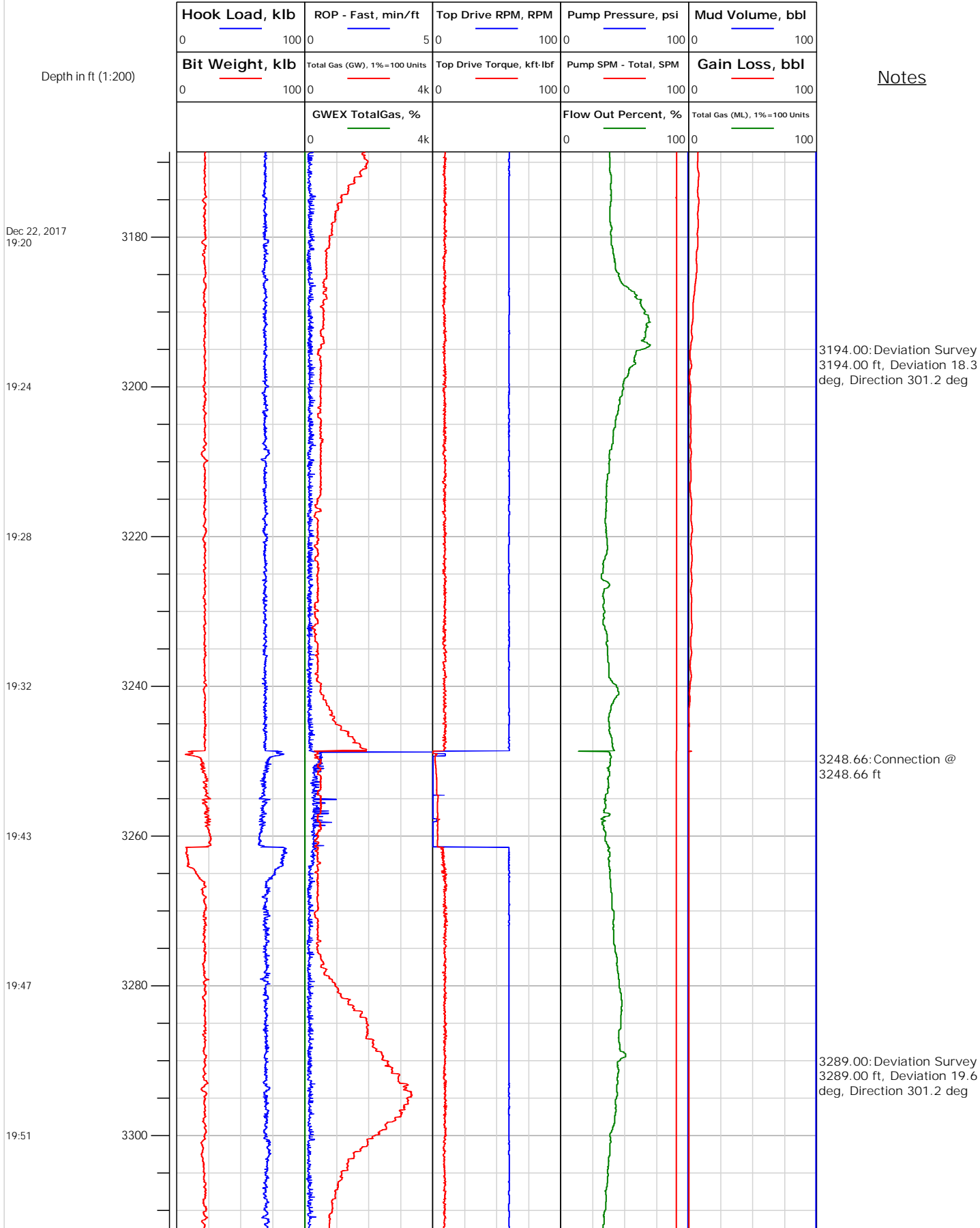
# Electronic Drilling Recorder

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

**Well Name:** Nichols 24-05W  
**Rig:** 290

**Location:**

## Notes





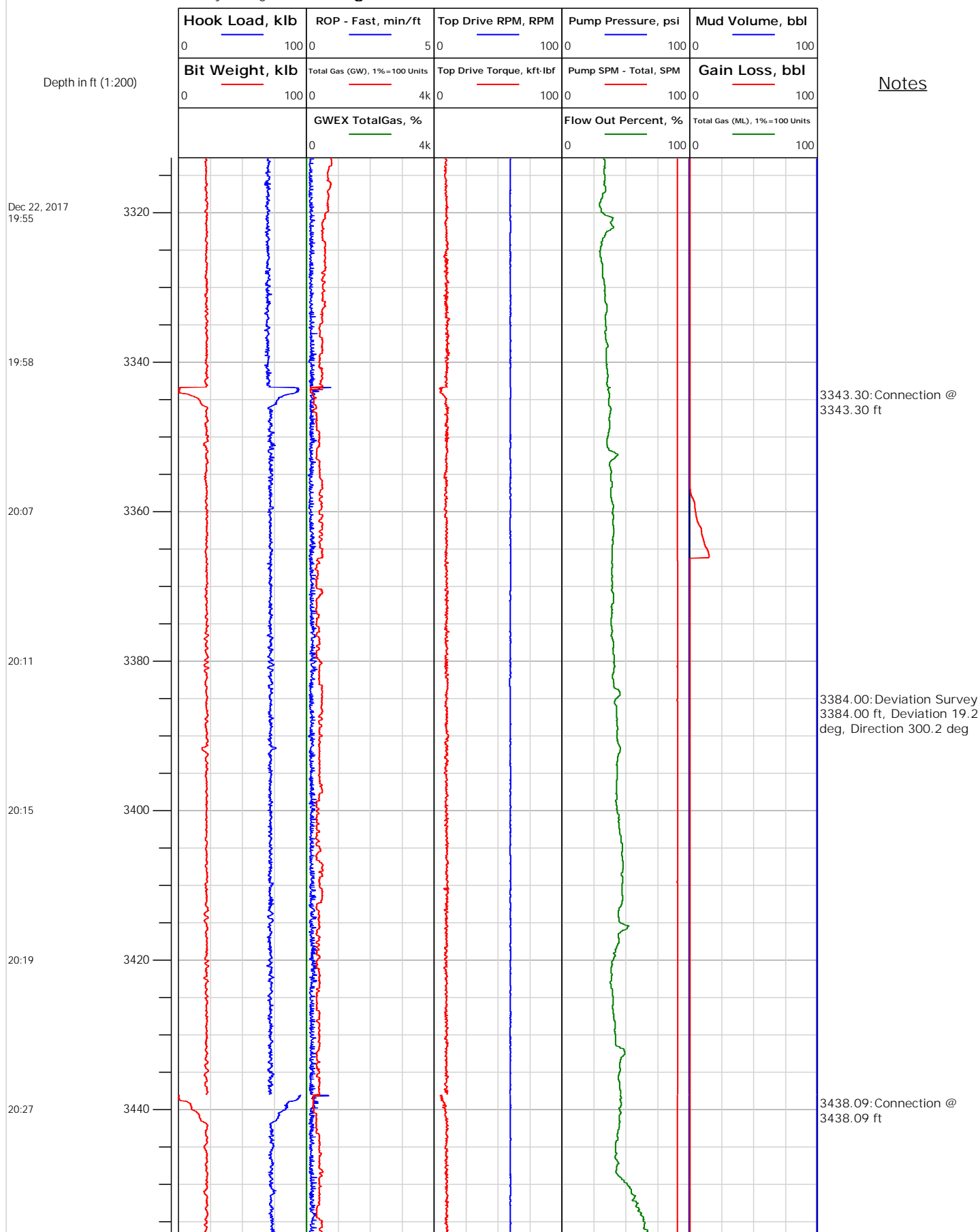
## Electronic Drilling Recorder

Operator: Laramie Energy  
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-05W  
Rig: 290

Location:

Notes





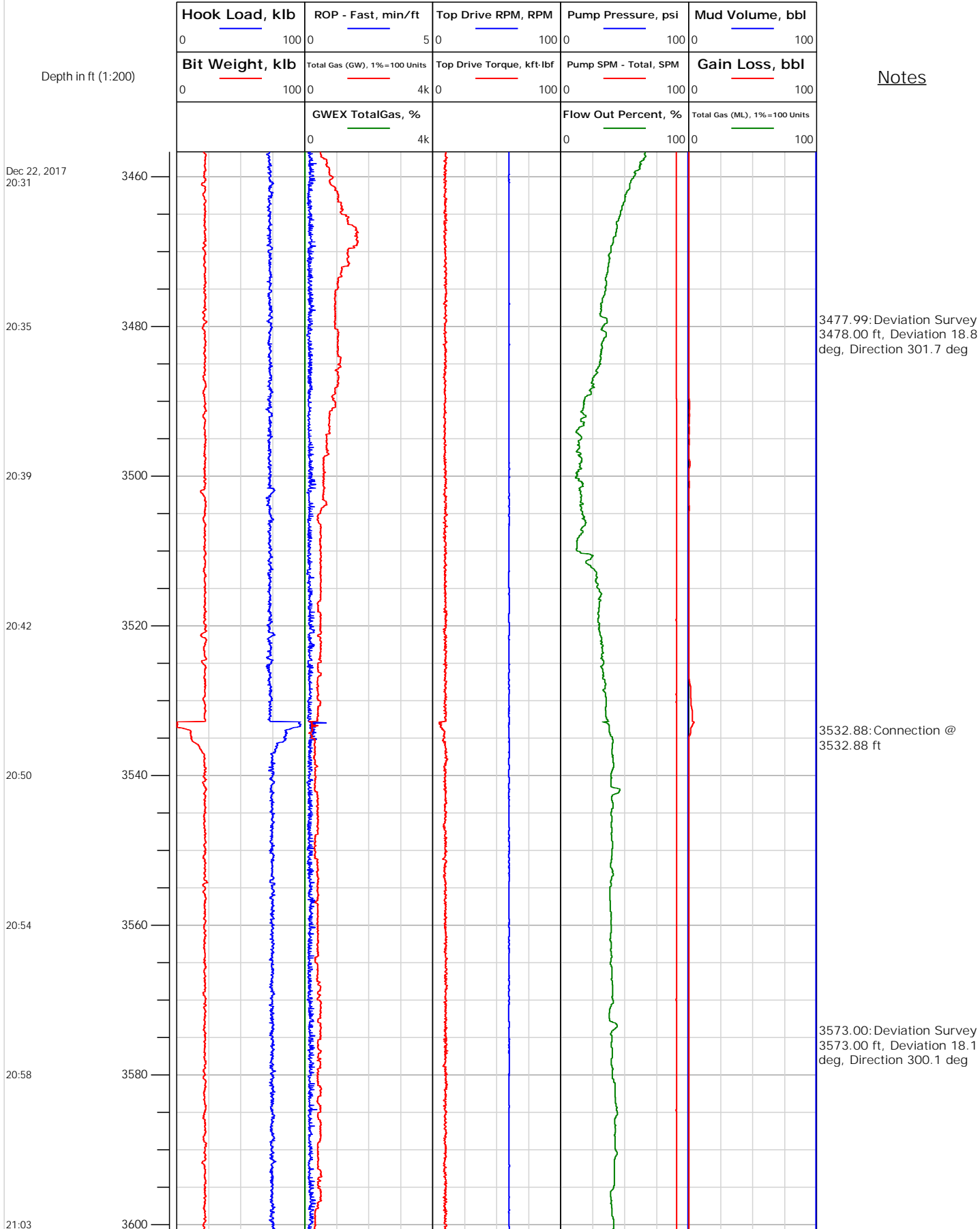
# Electronic Drilling Recorder

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

**Well Name:** Nichols 24-05W  
**Rig:** 290

**Location:**

## Notes





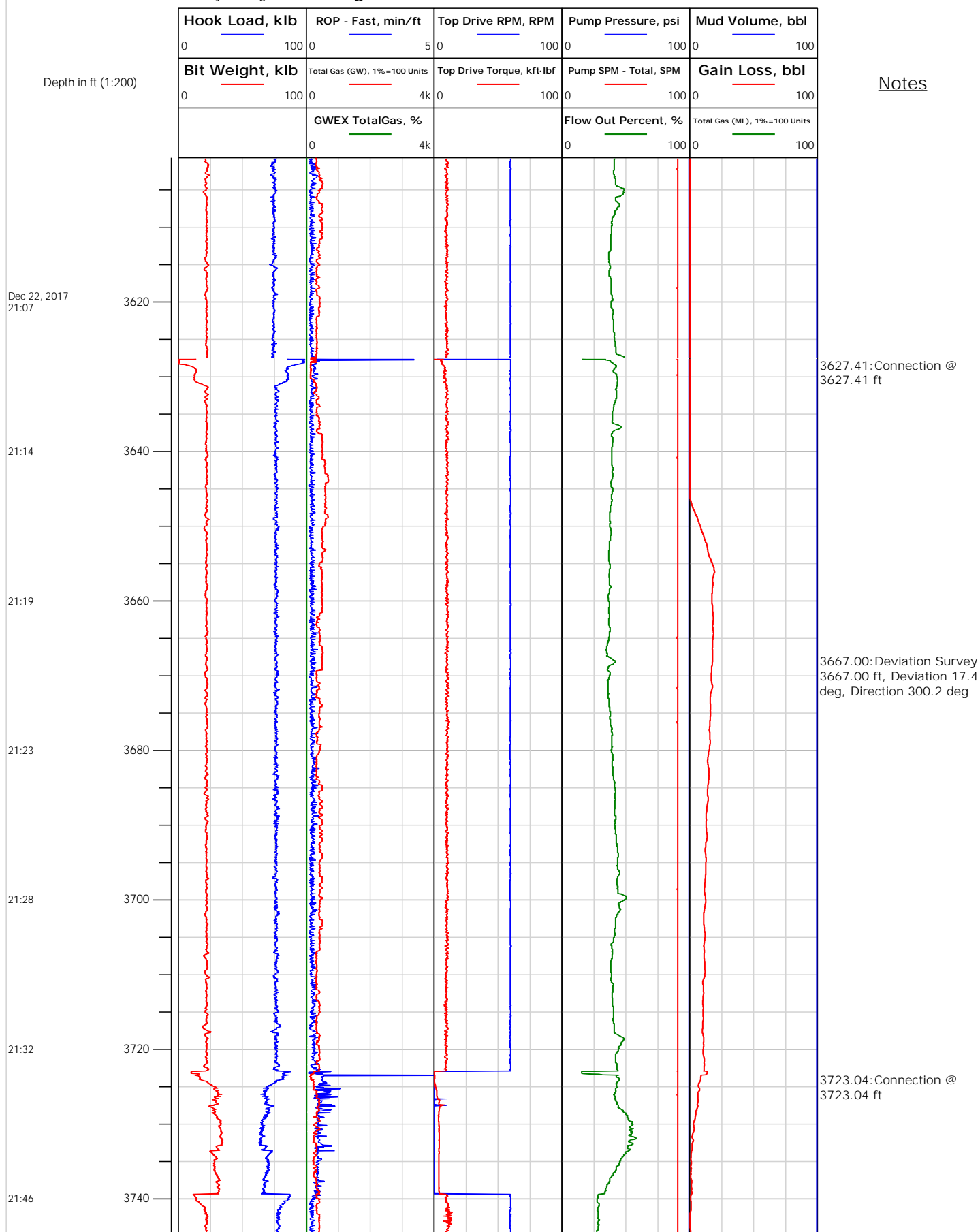
## Electronic Drilling Recorder

Operator: Laramie Energy  
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-05W  
Rig: 290

Location:

Notes







# Electronic Drilling Recorder

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

**Well Name:** Nichols 24-05W  
**Rig:** 290

**Location:**

Depth in ft (1:200)

Notes

Dec 22, 2017  
21:50

21:56

22:02

22:14

22:26

22:36

22:41

3760

3780

3800

3820

3840

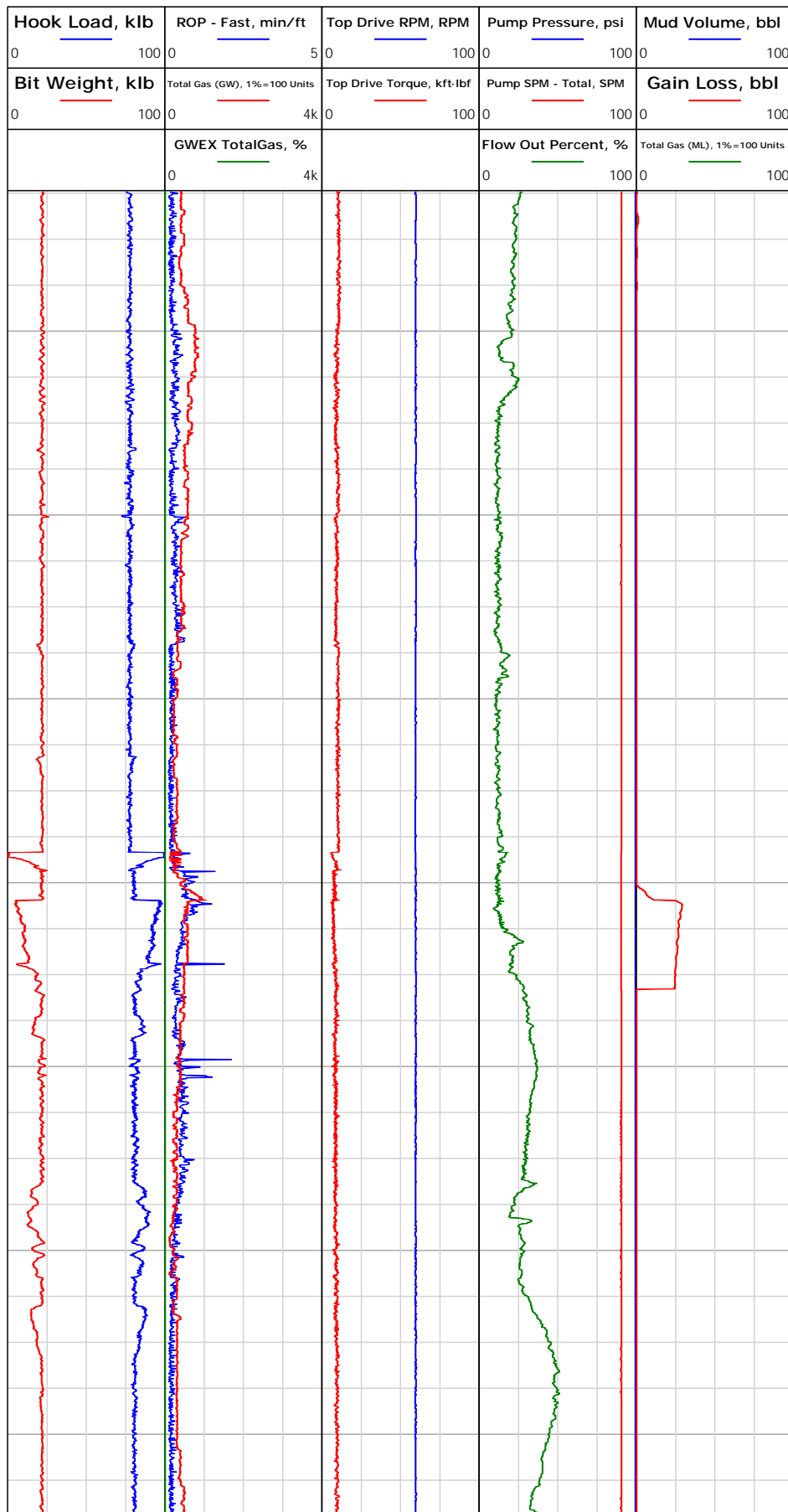
3860

3880

3762.00: Deviation Survey  
3762.00 ft, Deviation 19  
deg, Direction 300.8 deg

3816.72: Connection @  
3816.72 ft

3857.00: Deviation Survey  
3857.00 ft, Deviation 18.8  
deg, Direction 299.7 deg





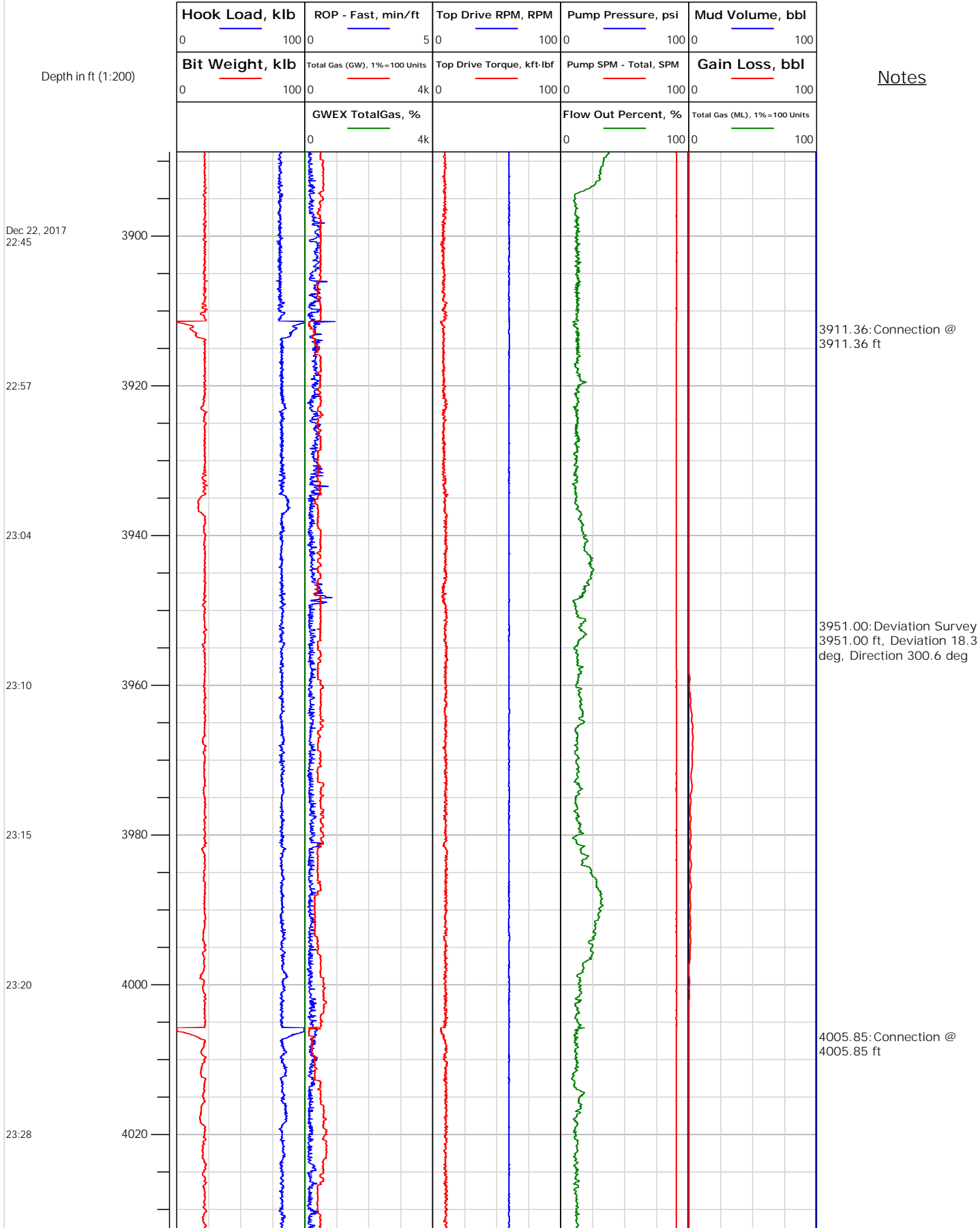
# Electronic Drilling Recorder

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

**Well Name:** Nichols 24-05W  
**Rig:** 290

**Location:**

Notes





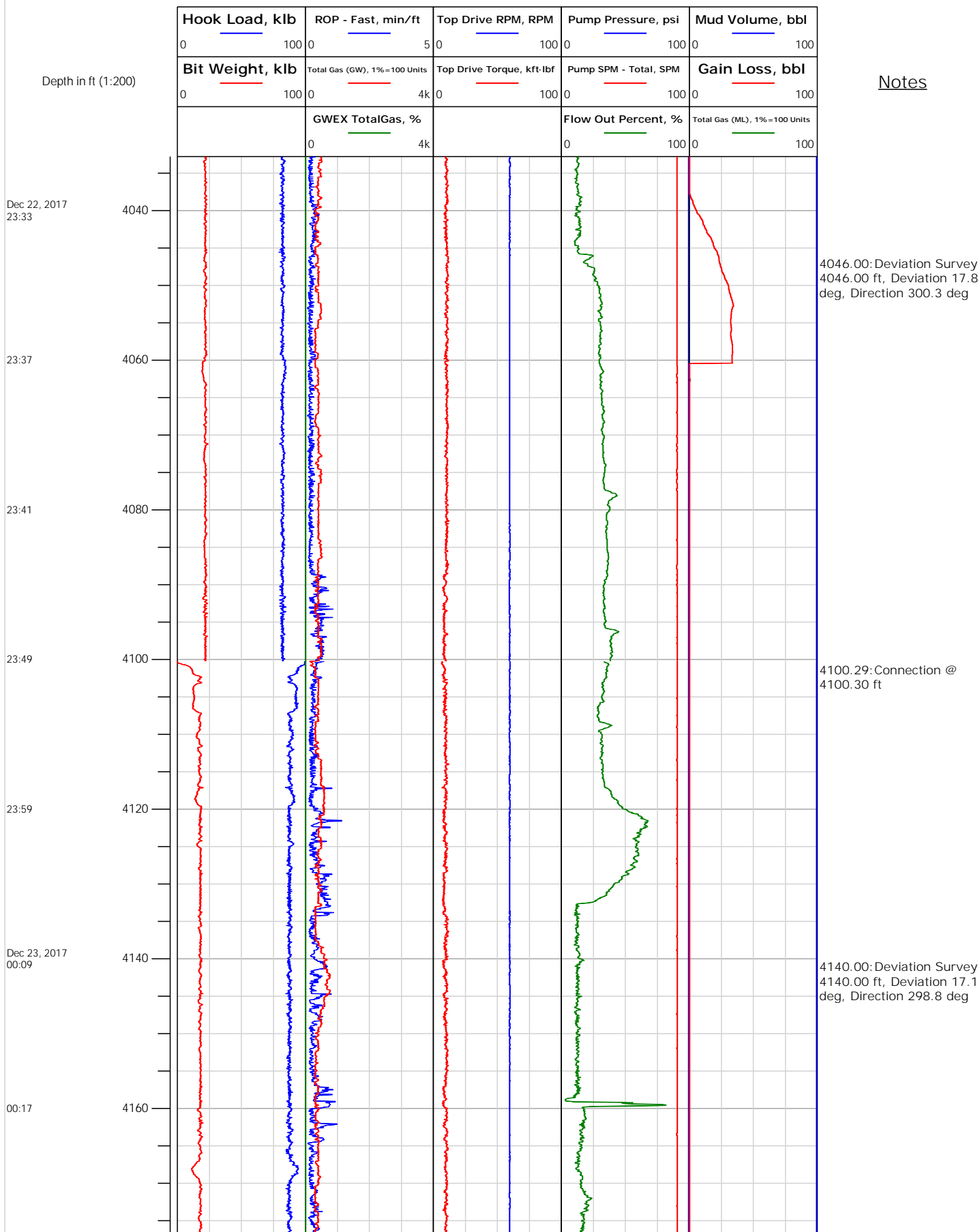
# Electronic Drilling Recorder

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

**Well Name:** Nichols 24-05W  
**Rig:** 290

**Location:**

## Notes





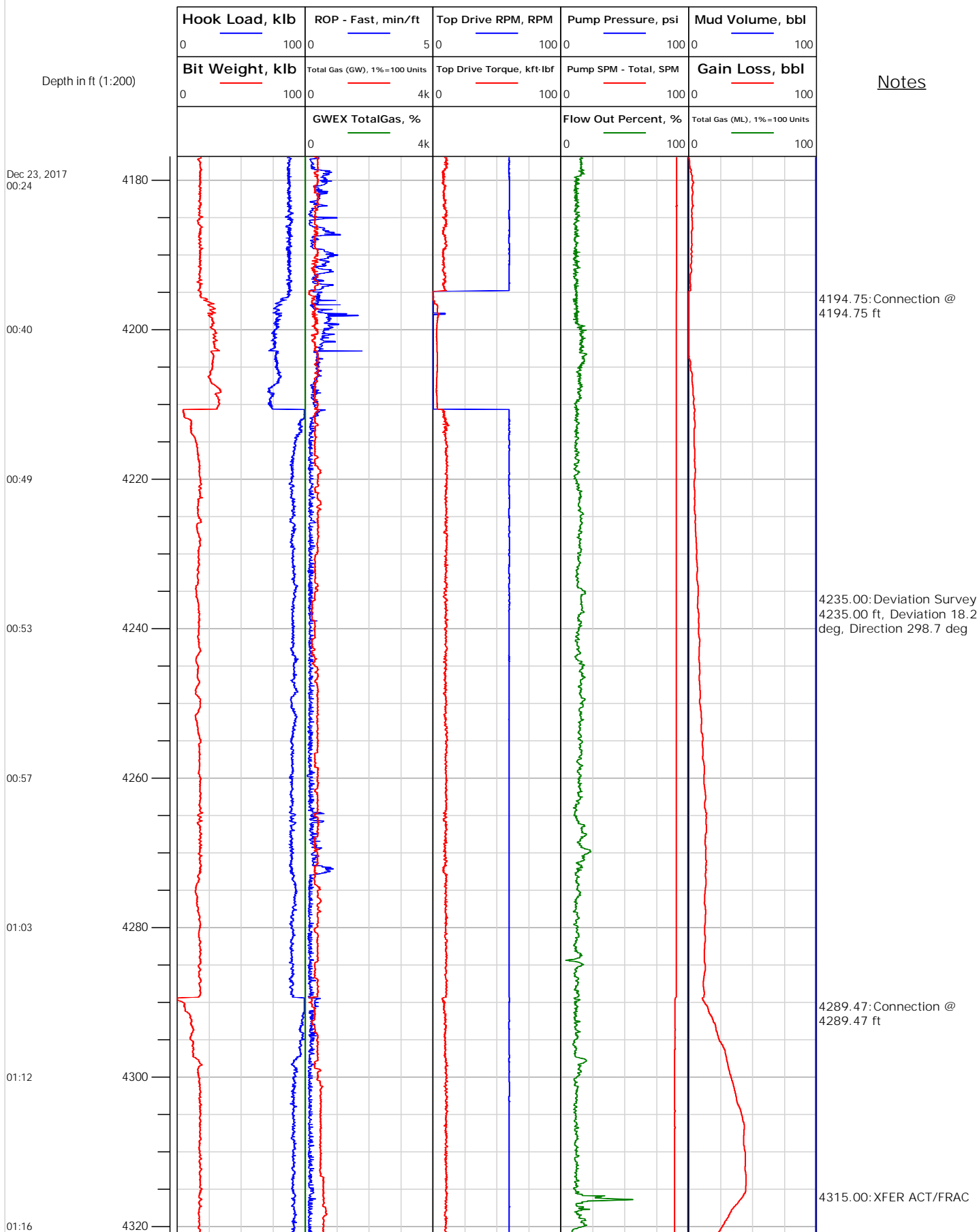
# Electronic Drilling Recorder

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

**Well Name:** Nichols 24-05W  
**Rig:** 290

**Location:**

## Notes





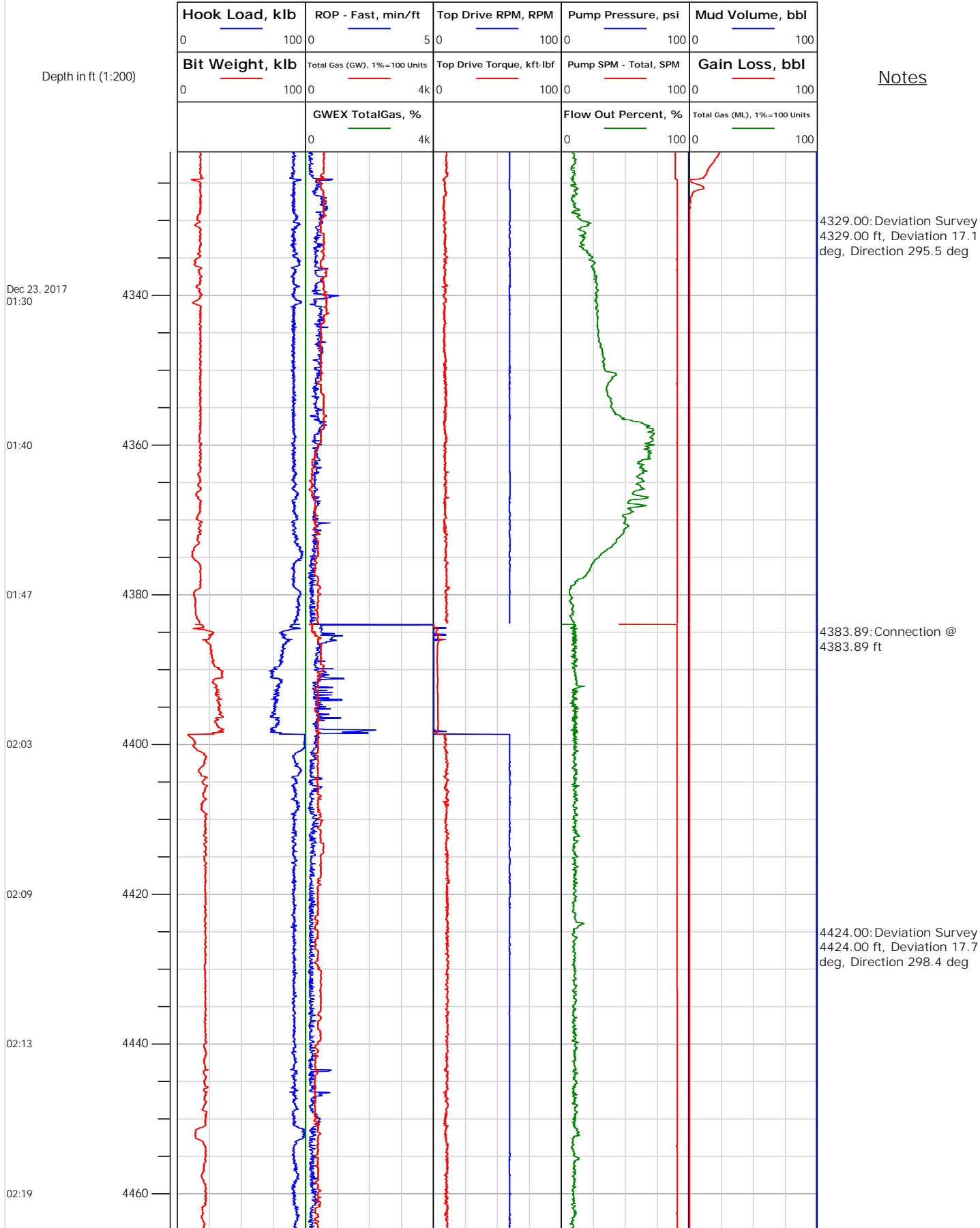
# Electronic Drilling Recorder

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

**Well Name:** Nichols 24-05W  
**Rig:** 290

**Location:**

## Notes





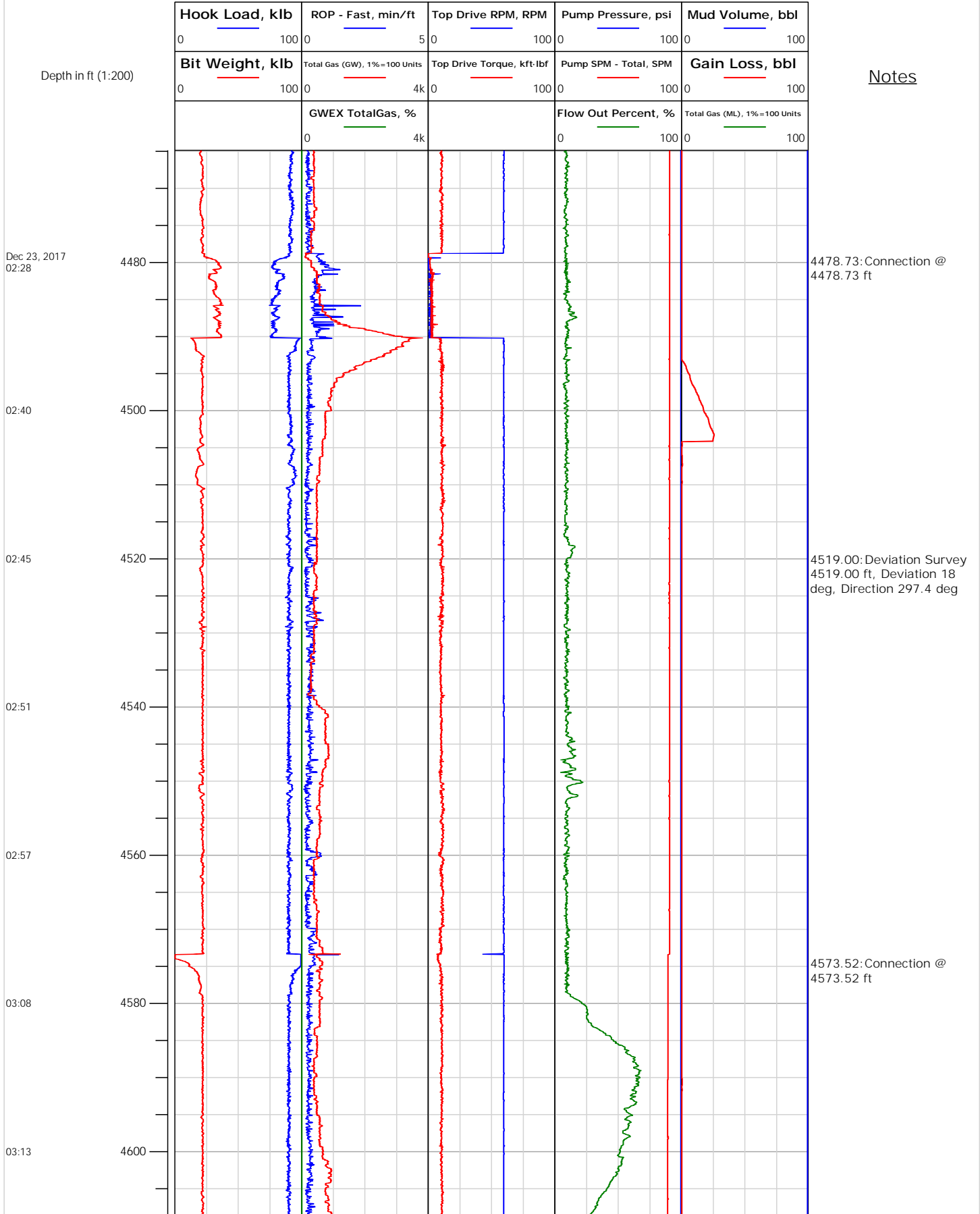
# Electronic Drilling Recorder

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

**Well Name:** Nichols 24-05W  
**Rig:** 290

**Location:**

## Notes





# Electronic Drilling Recorder

Operator: Laramie Energy  
Contractor: Helmerich & Payne Drlg Co

Well Name: Nichols 24-05W  
Rig: 290

Location:

Depth in ft (1:200)

Notes

Dec 23, 2017  
03:20

03:25

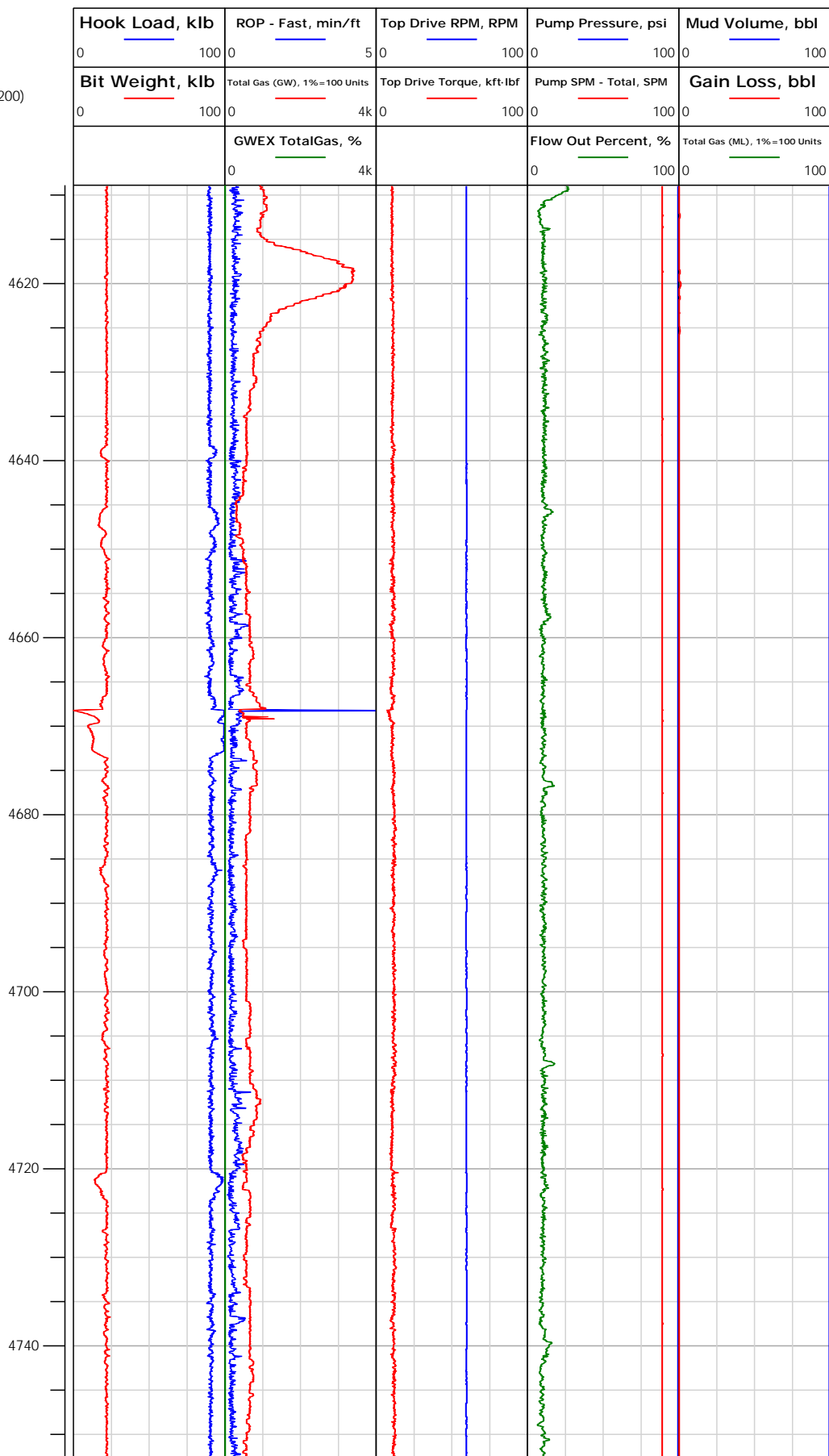
03:32

03:41

03:45

03:51

03:56





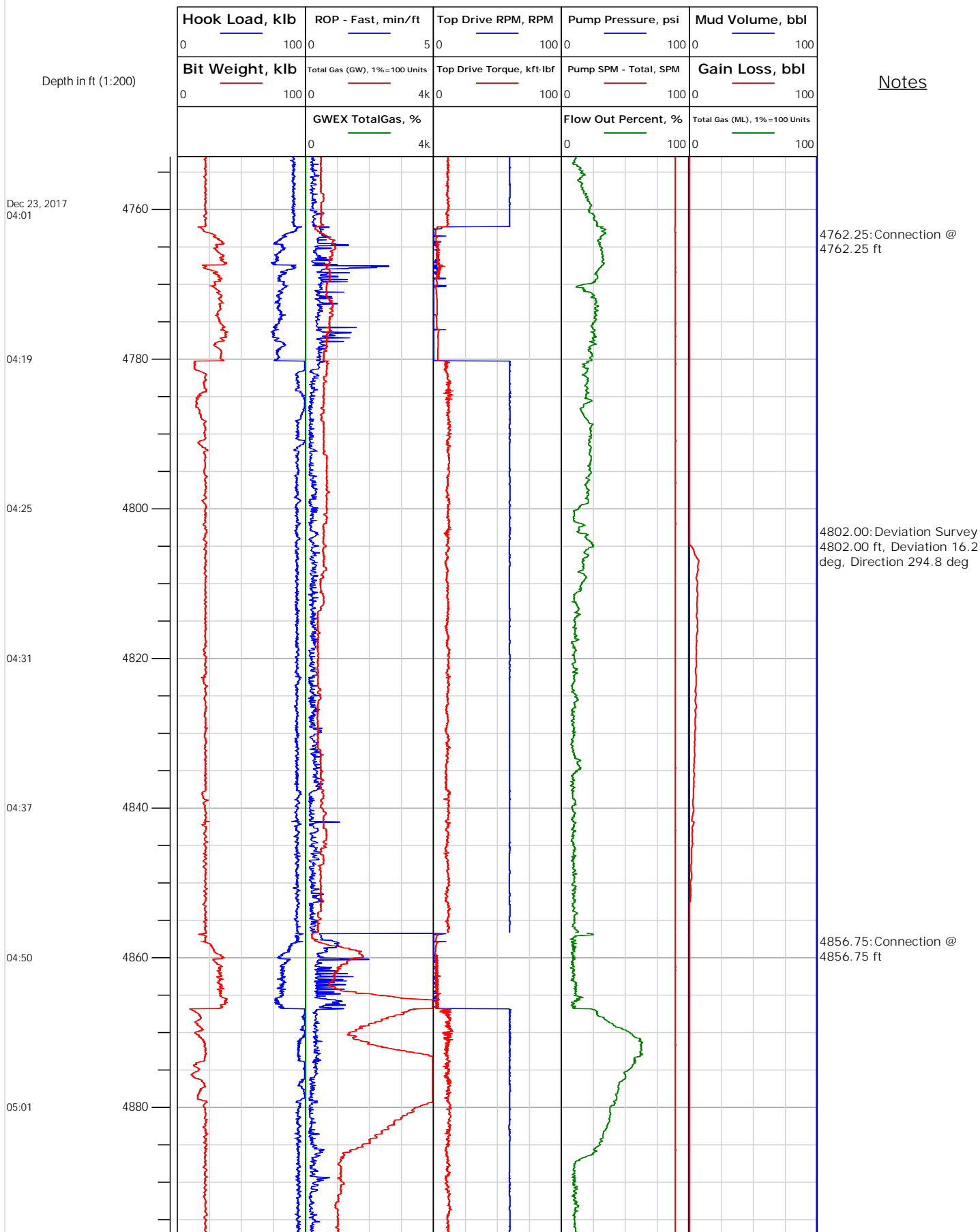
# Electronic Drilling Recorder

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

**Well Name:** Nichols 24-05W  
**Rig:** 290

**Location:**

## Notes







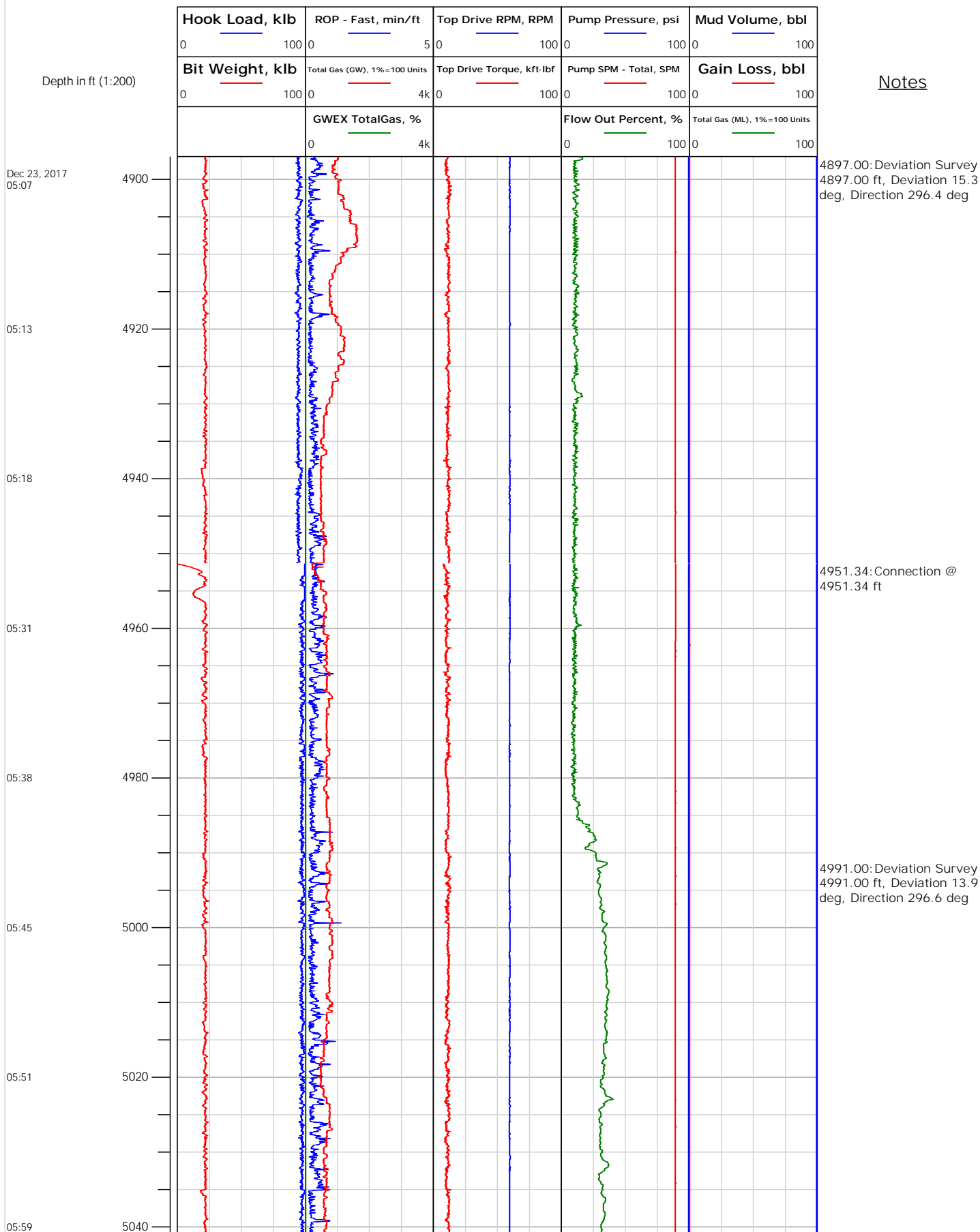
# Electronic Drilling Recorder

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

**Well Name:** Nichols 24-05W  
**Rig:** 290

**Location:**

## Notes





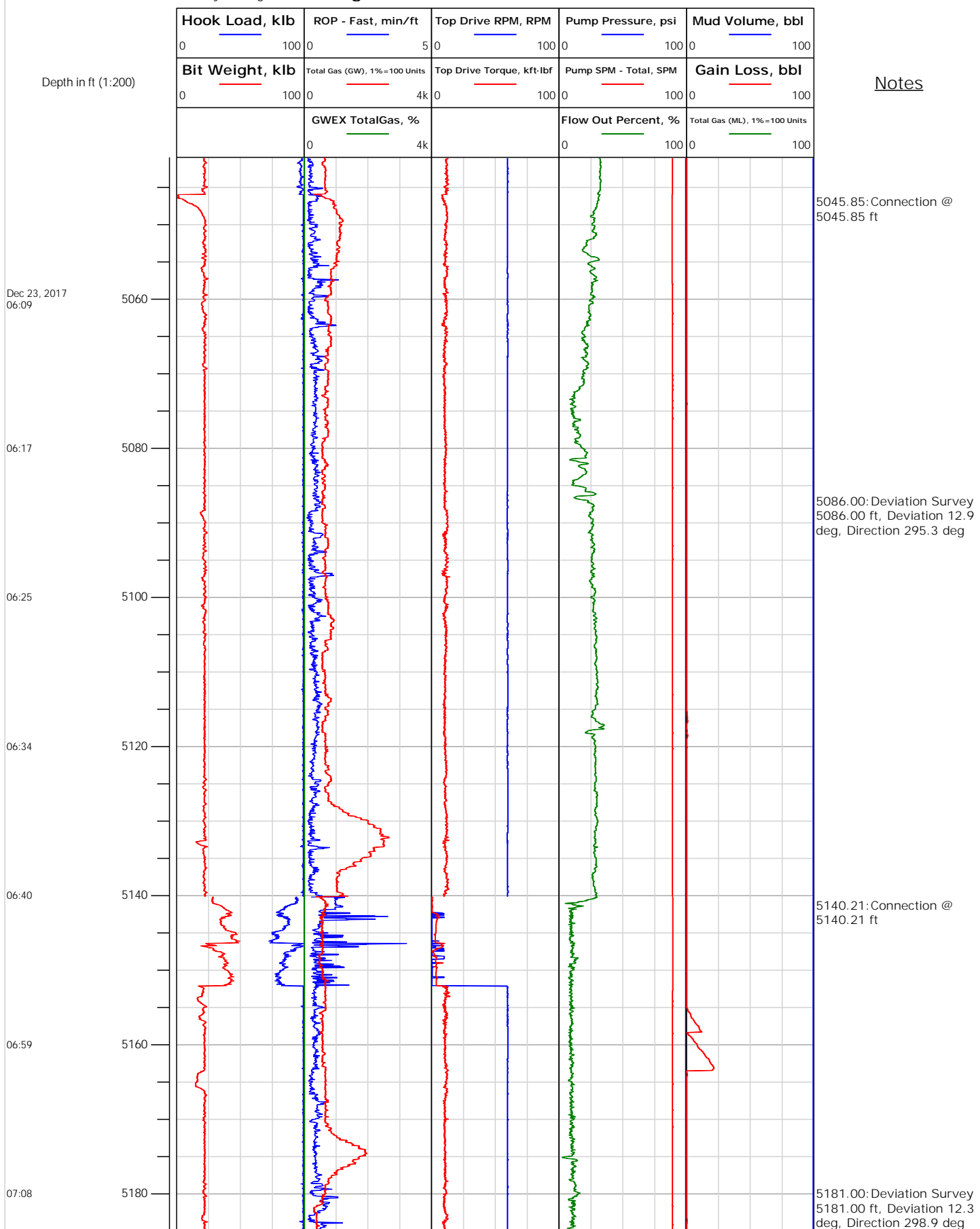
# Electronic Drilling Recorder

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

**Well Name:** Nichols 24-05W  
**Rig:** 290

**Location:**

## Notes





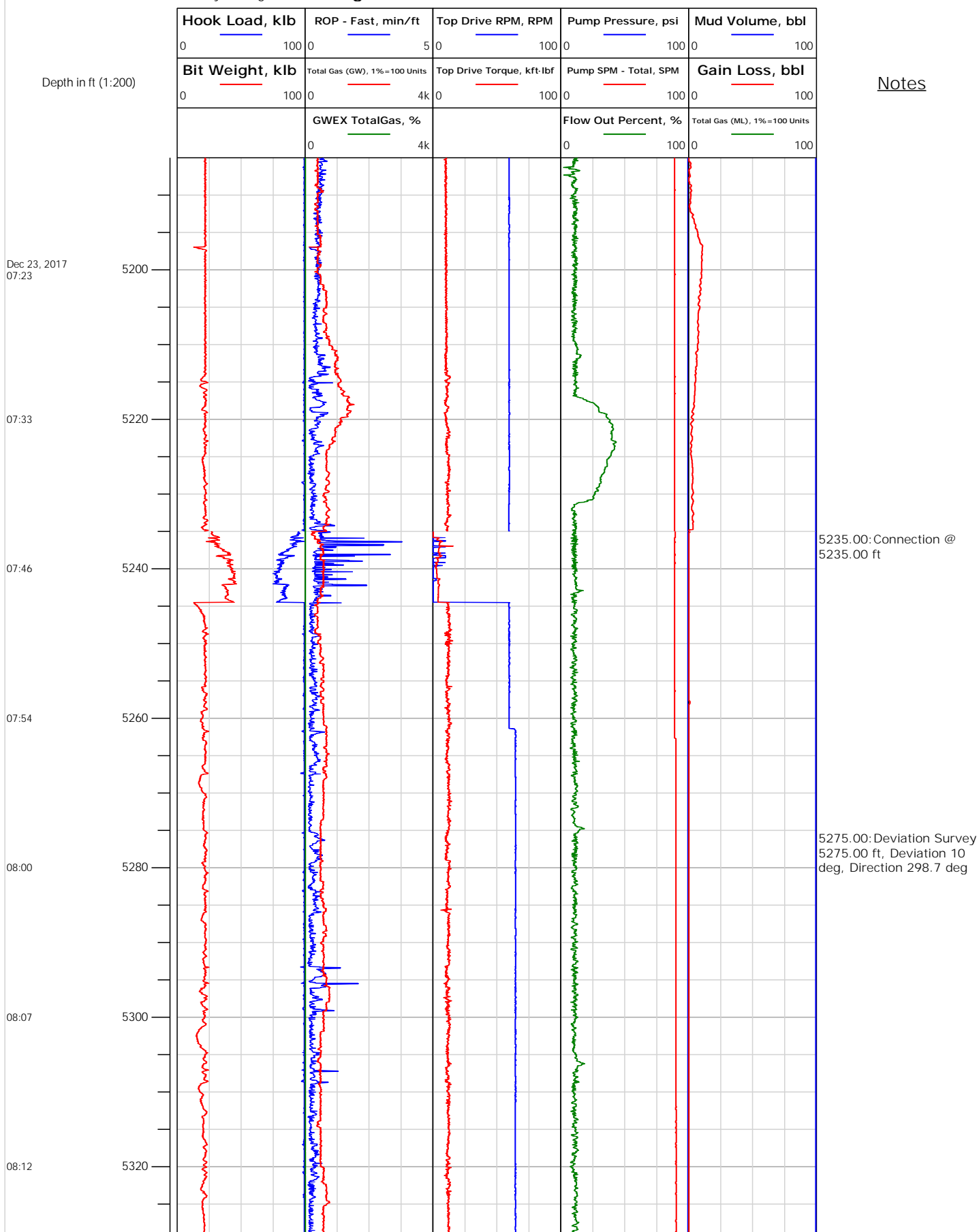
# Electronic Drilling Recorder

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

**Well Name:** Nichols 24-05W  
**Rig:** 290

**Location:**

Notes





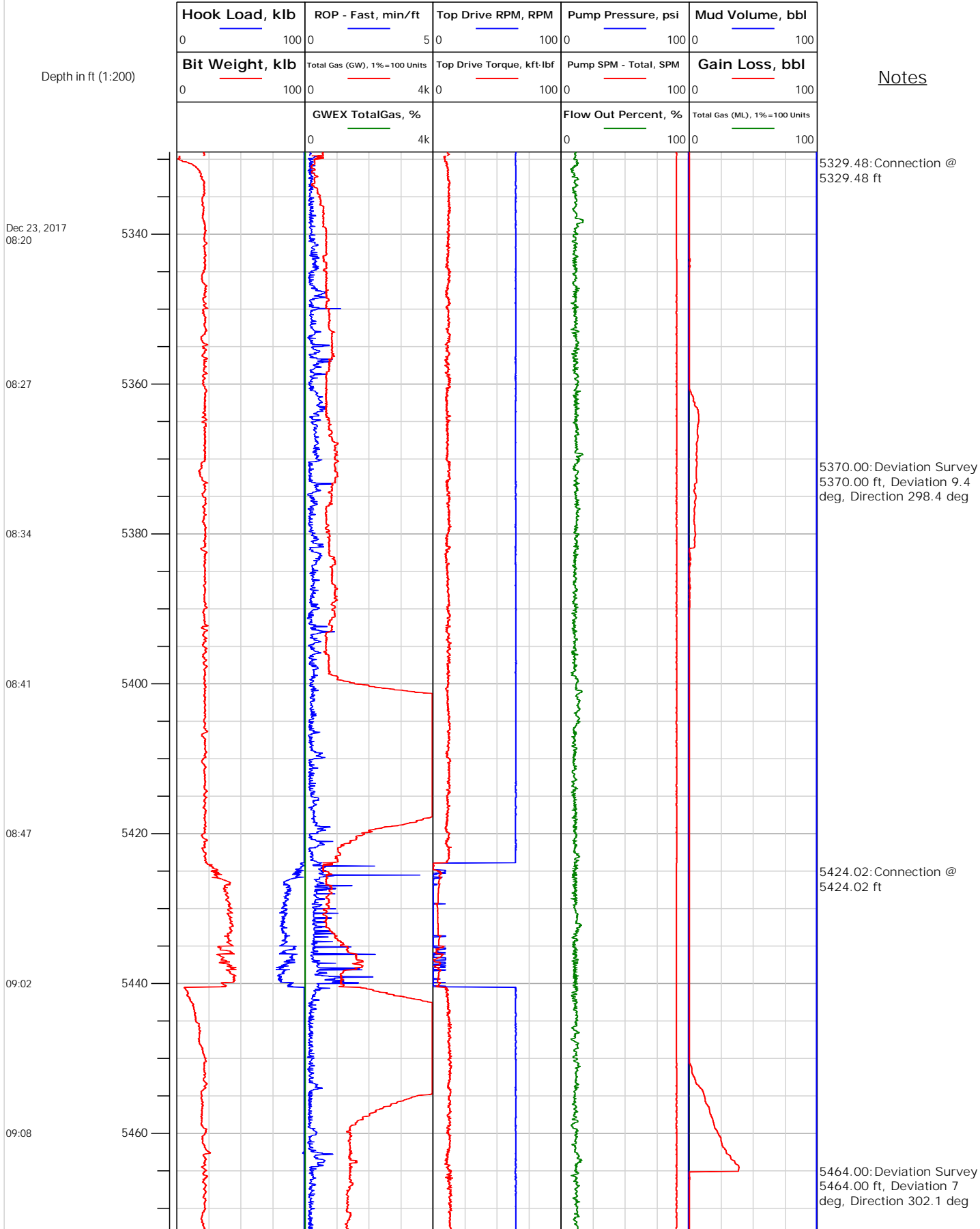
# Electronic Drilling Recorder

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

**Well Name:** Nichols 24-05W  
**Rig:** 290

**Location:**

## Notes





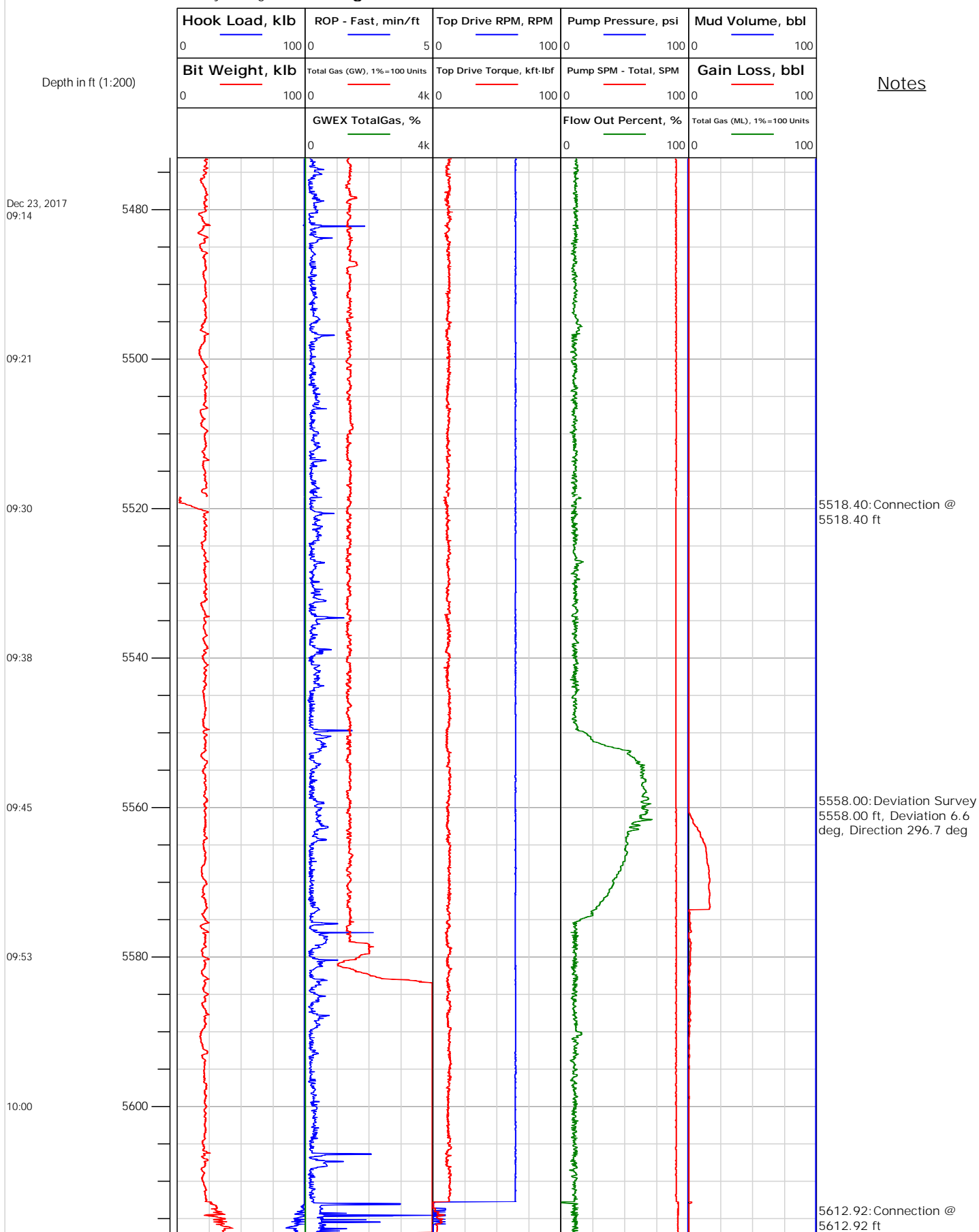
# Electronic Drilling Recorder

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

**Well Name:** Nichols 24-05W  
**Rig:** 290

**Location:**

Notes





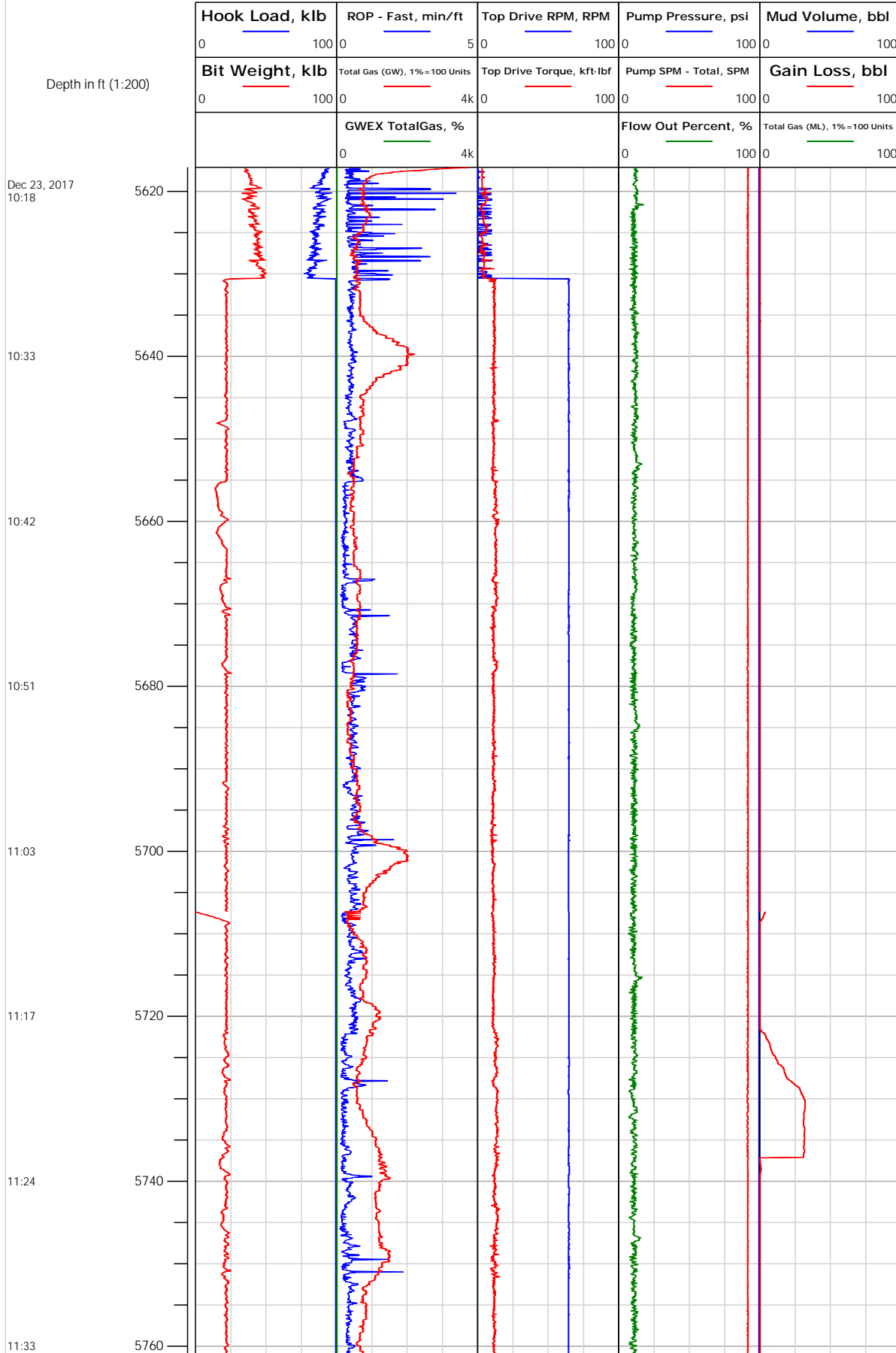
# Electronic Drilling Recorder

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

**Well Name:** Nichols 24-05W  
**Rig:** 290

**Location:**

## Notes





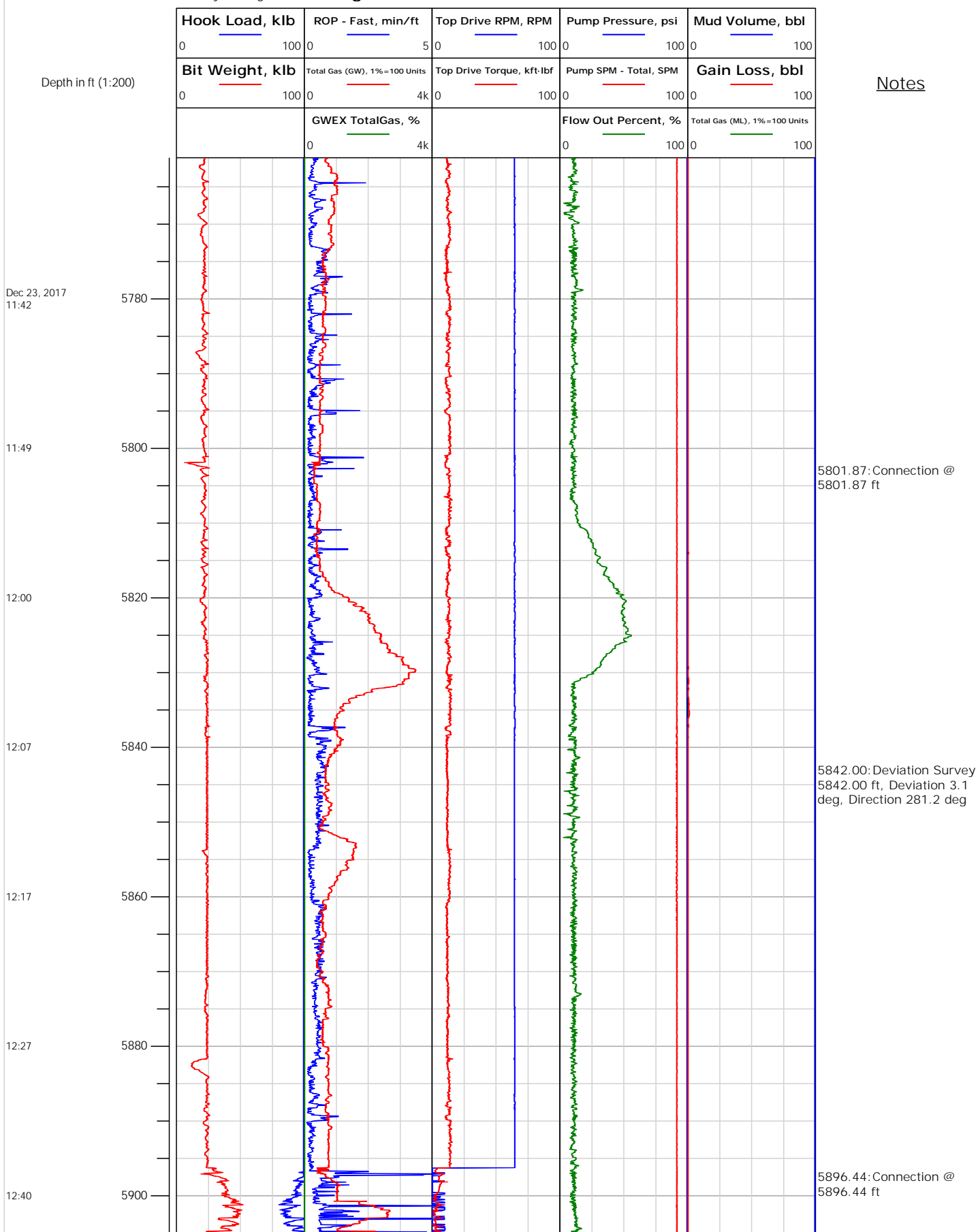
# Electronic Drilling Recorder

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

**Well Name:** Nichols 24-05W  
**Rig:** 290

**Location:**

Notes





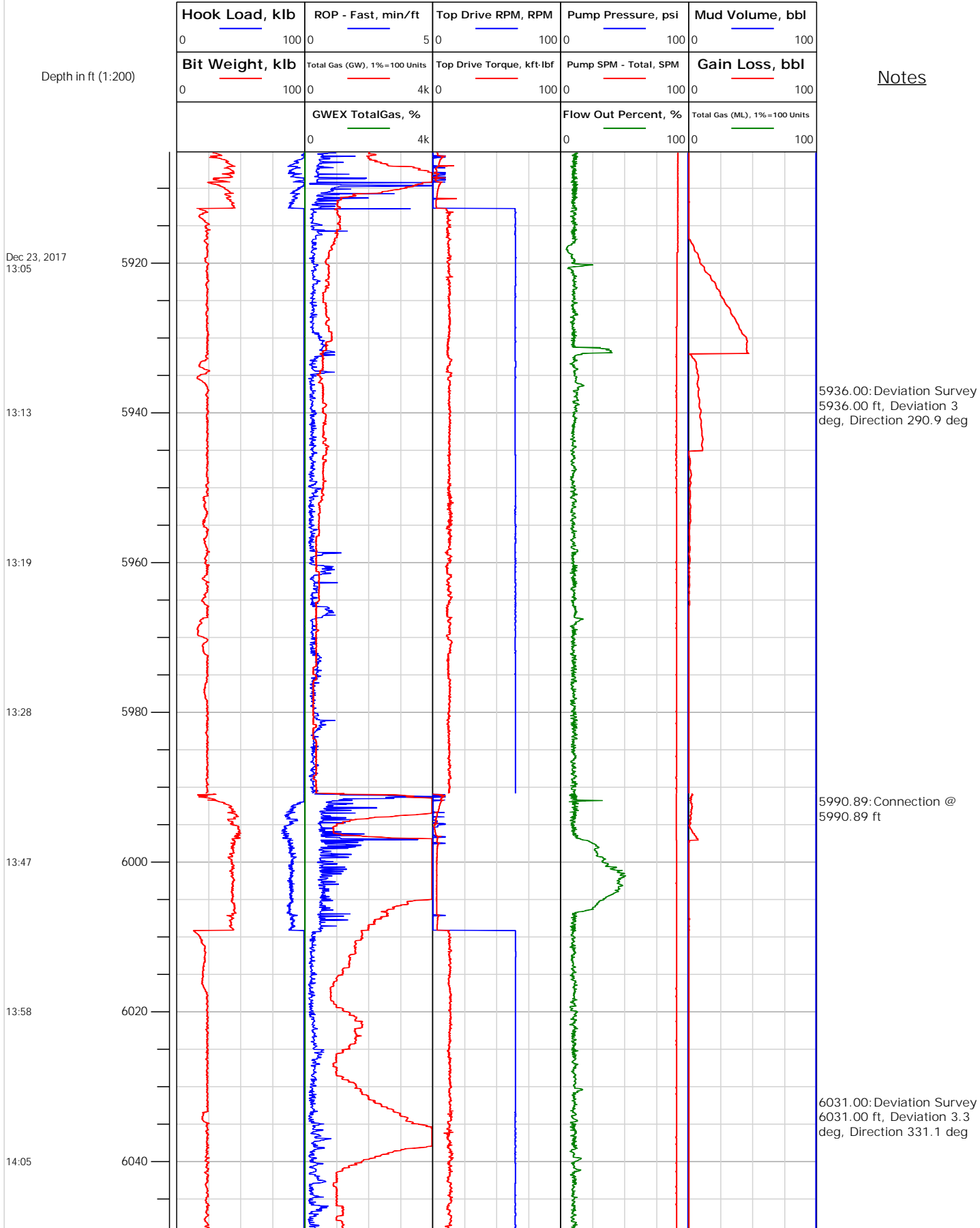
# Electronic Drilling Recorder

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

**Well Name:** Nichols 24-05W  
**Rig:** 290

**Location:**

## Notes







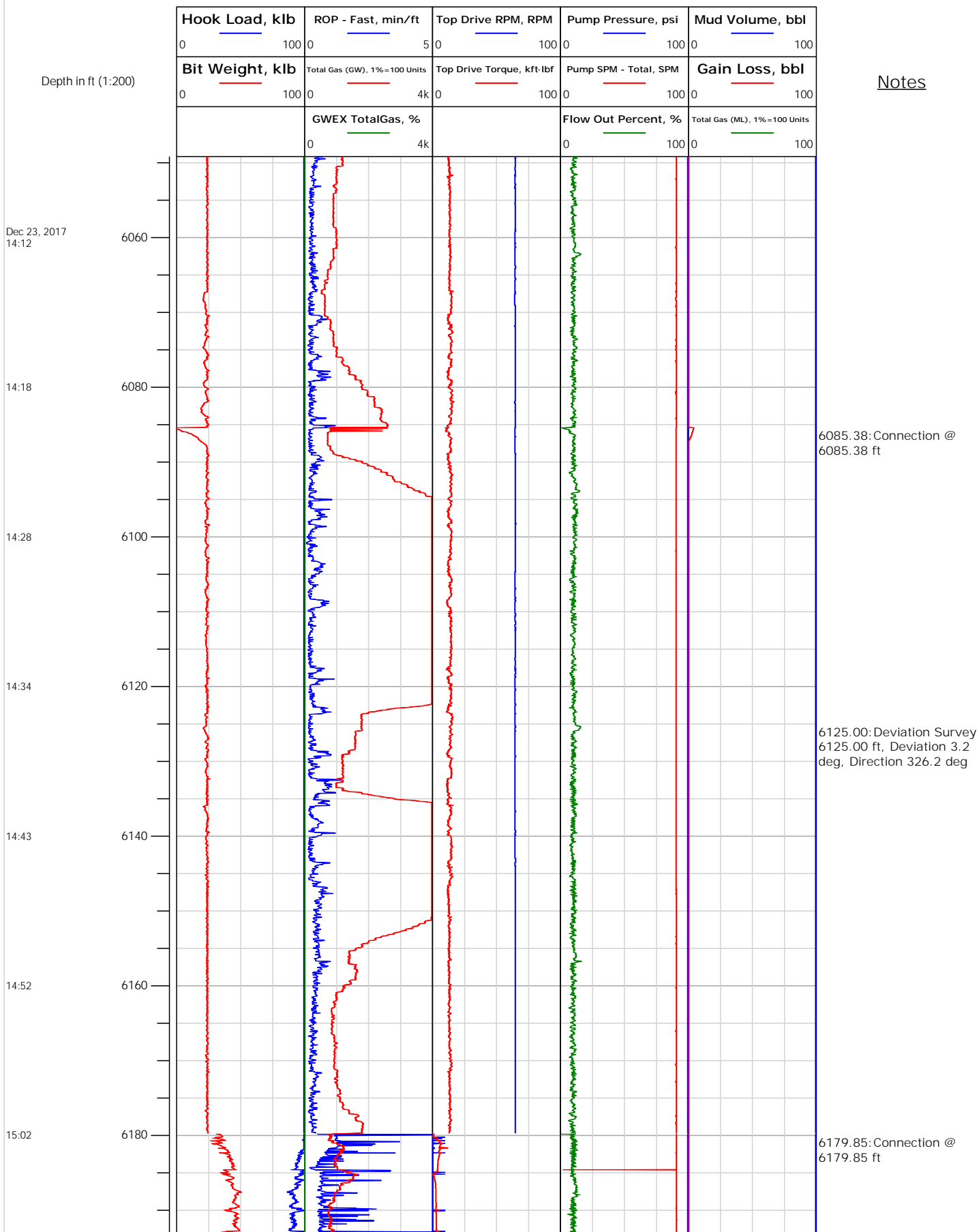
# Electronic Drilling Recorder

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

**Well Name:** Nichols 24-05W  
**Rig:** 290

**Location:**

Notes





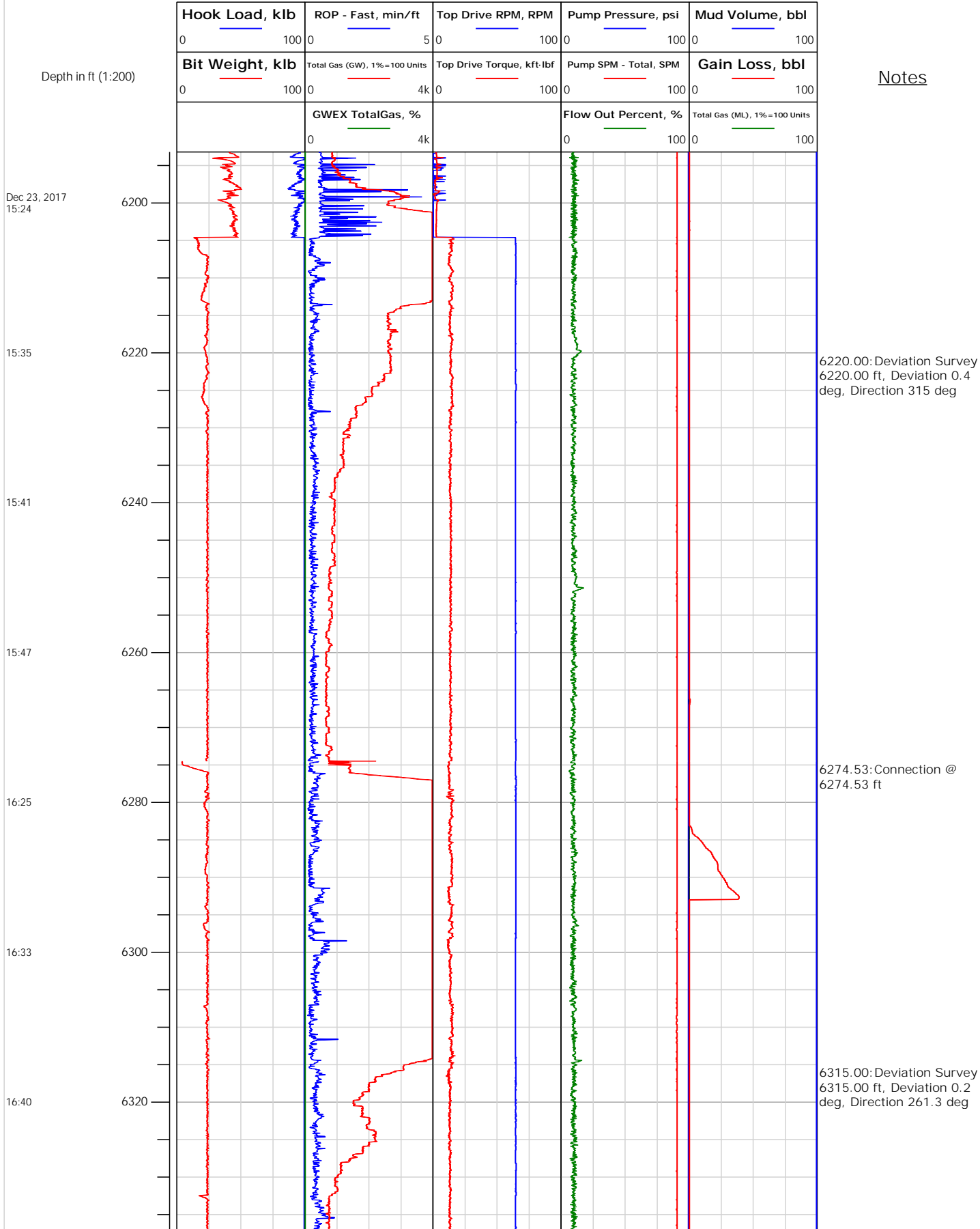
# Electronic Drilling Recorder

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

**Well Name:** Nichols 24-05W  
**Rig:** 290

**Location:**

## Notes





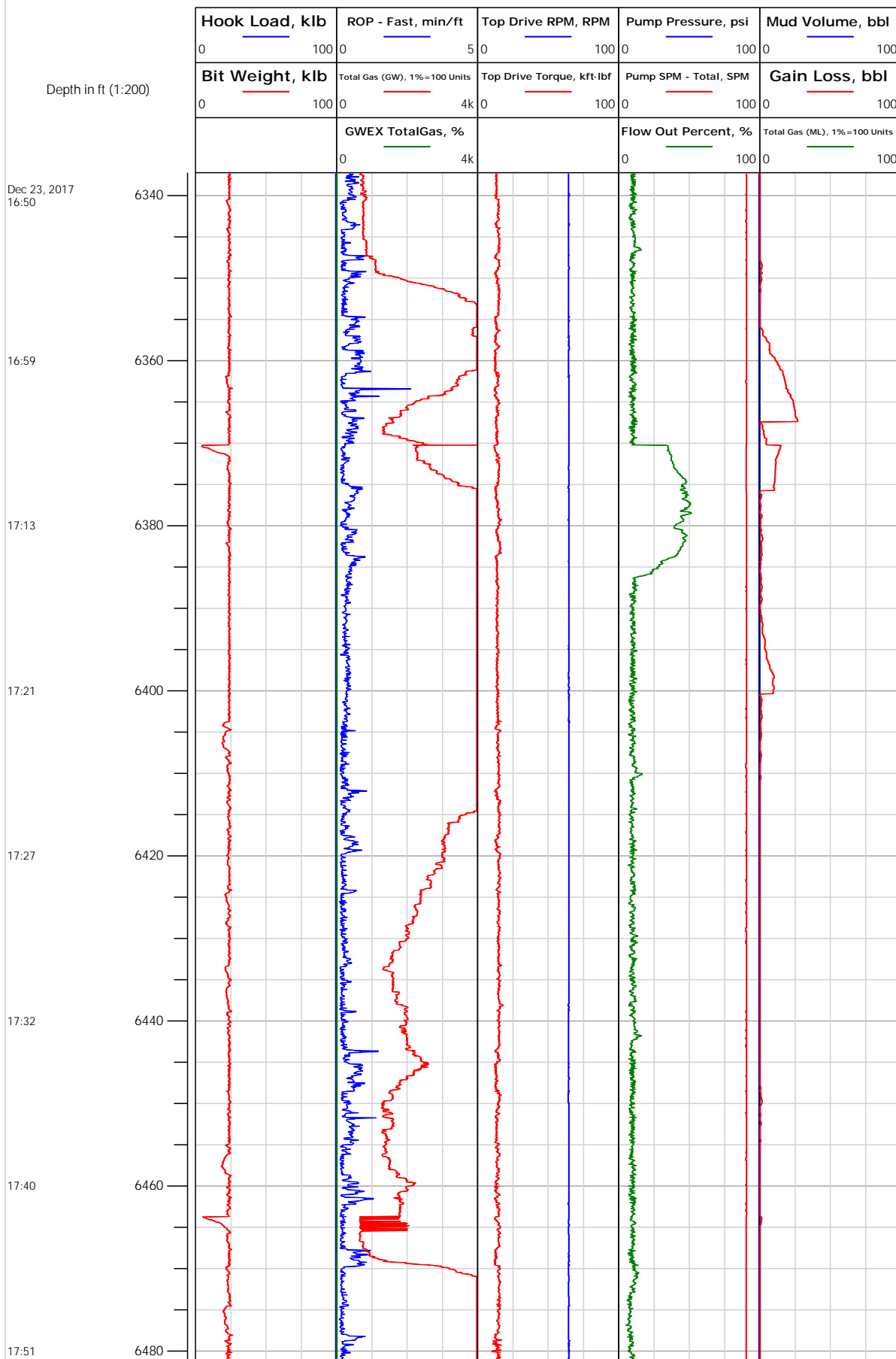
# Electronic Drilling Recorder

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

**Well Name:** Nichols 24-05W  
**Rig:** 290

**Location:**

Notes





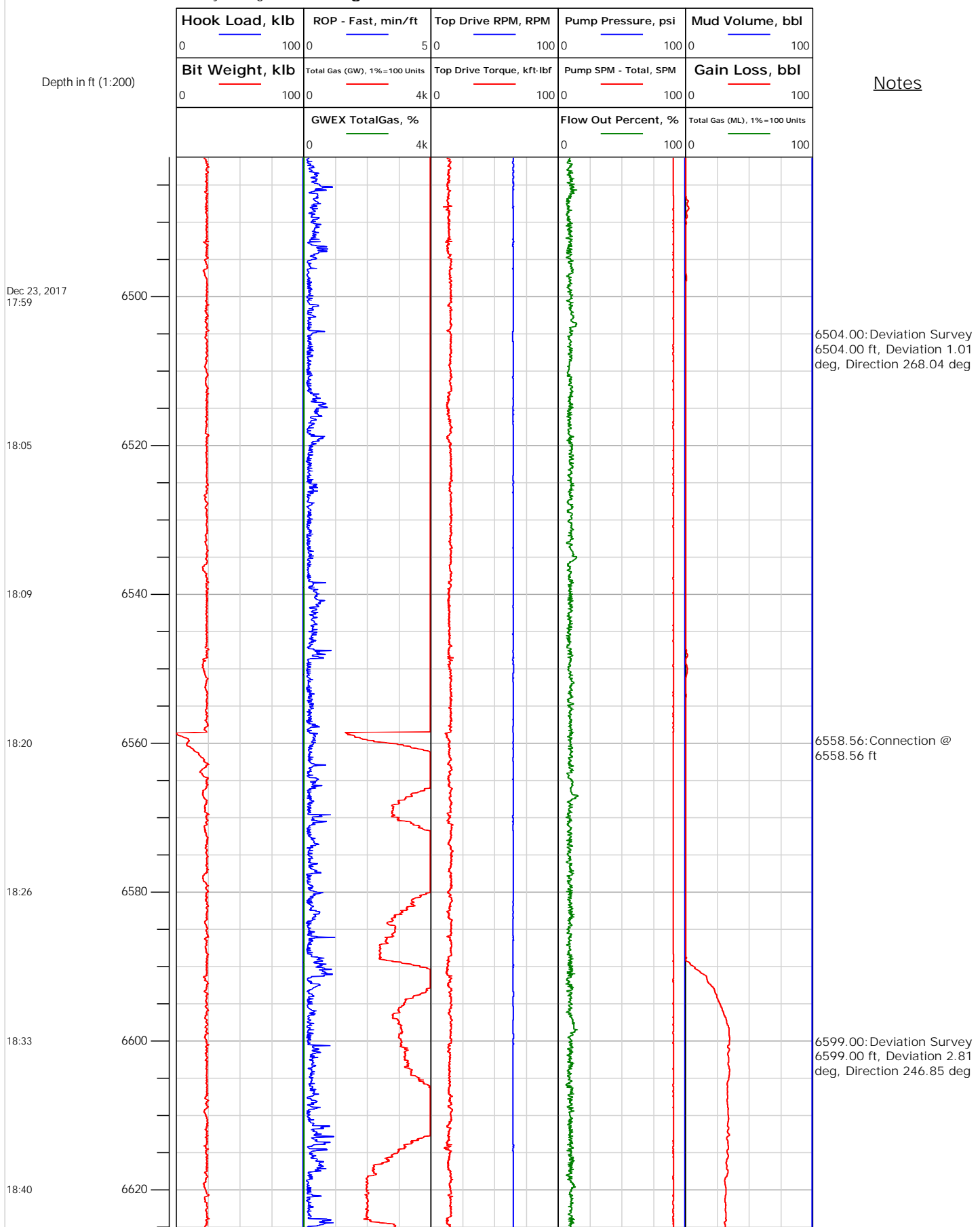
# Electronic Drilling Recorder

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

**Well Name:** Nichols 24-05W  
**Rig:** 290

**Location:**

## Notes





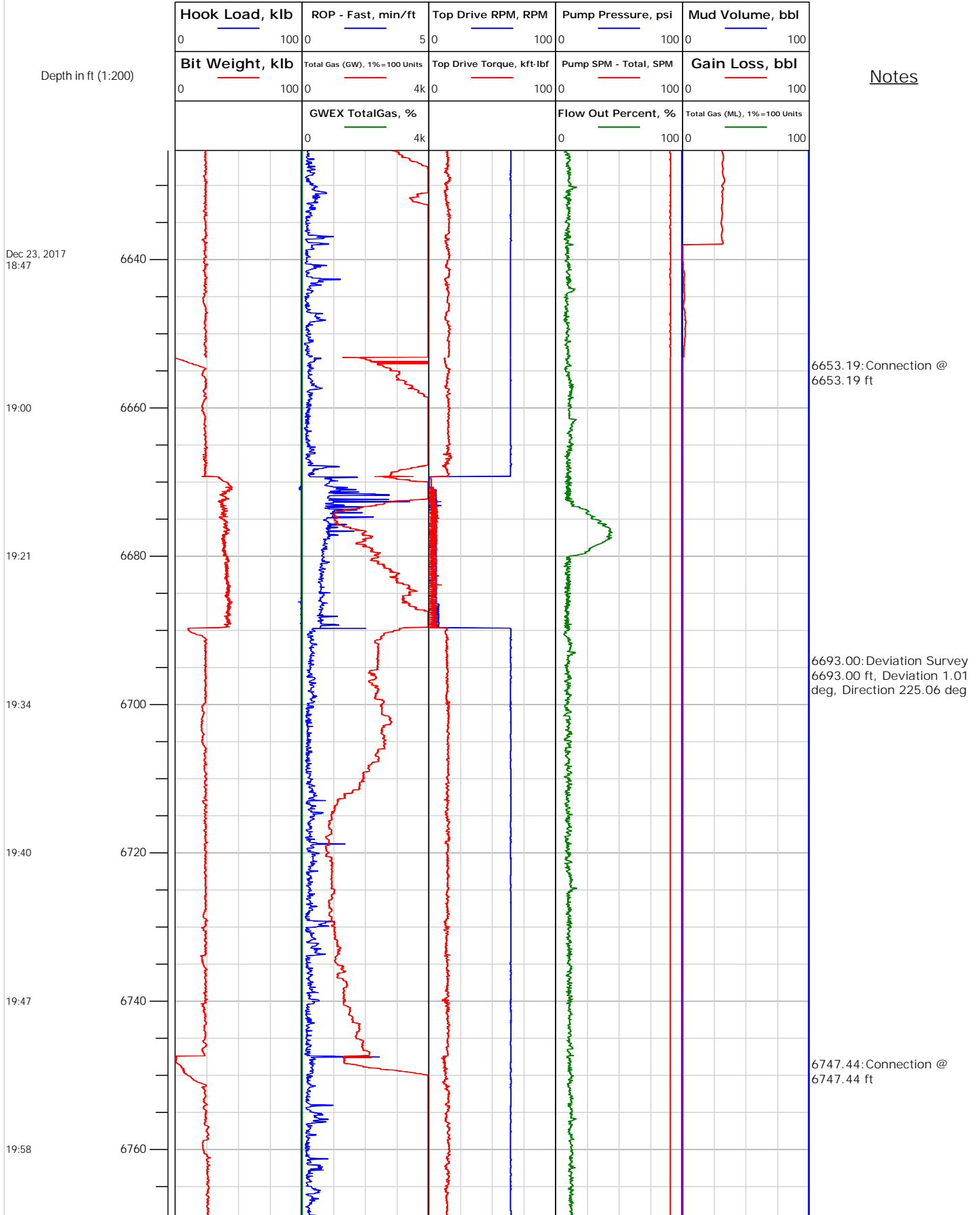
# Electronic Drilling Recorder

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

**Well Name:** Nichols 24-05W  
**Rig:** 290

**Location:**

Notes





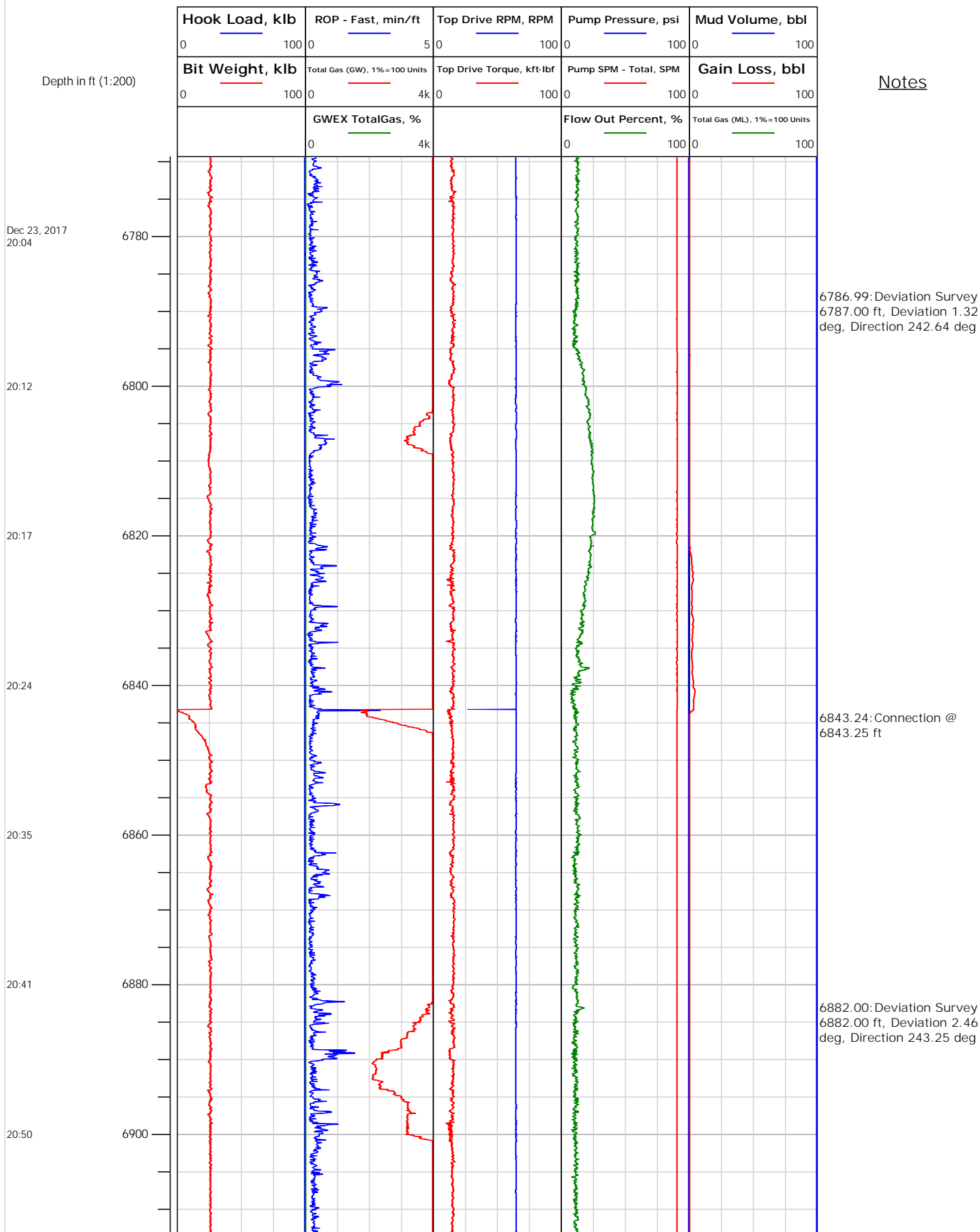
# Electronic Drilling Recorder

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

**Well Name:** Nichols 24-05W  
**Rig:** 290

**Location:**

## Notes





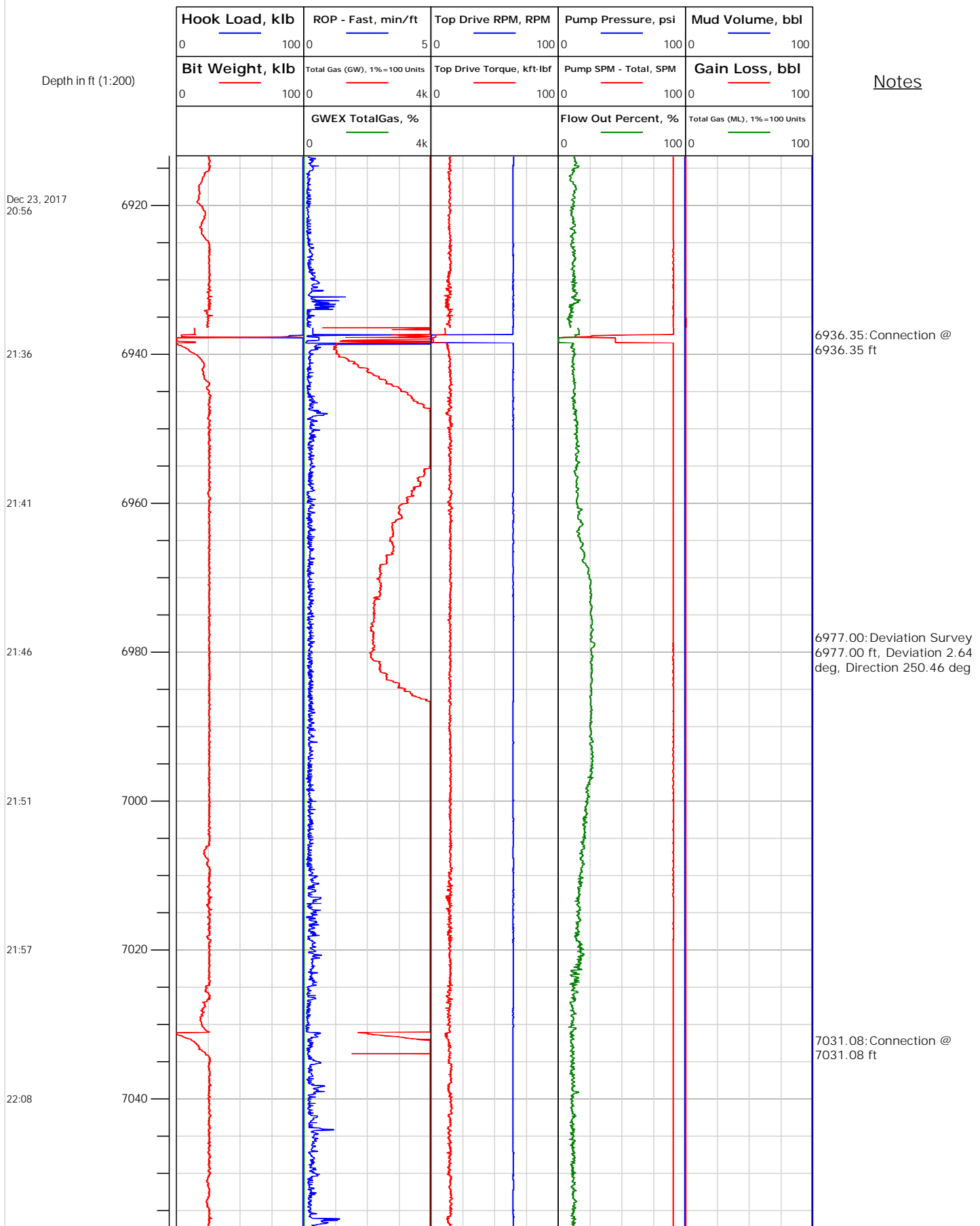
# Electronic Drilling Recorder

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

**Well Name:** Nichols 24-05W  
**Rig:** 290

**Location:**

## Notes





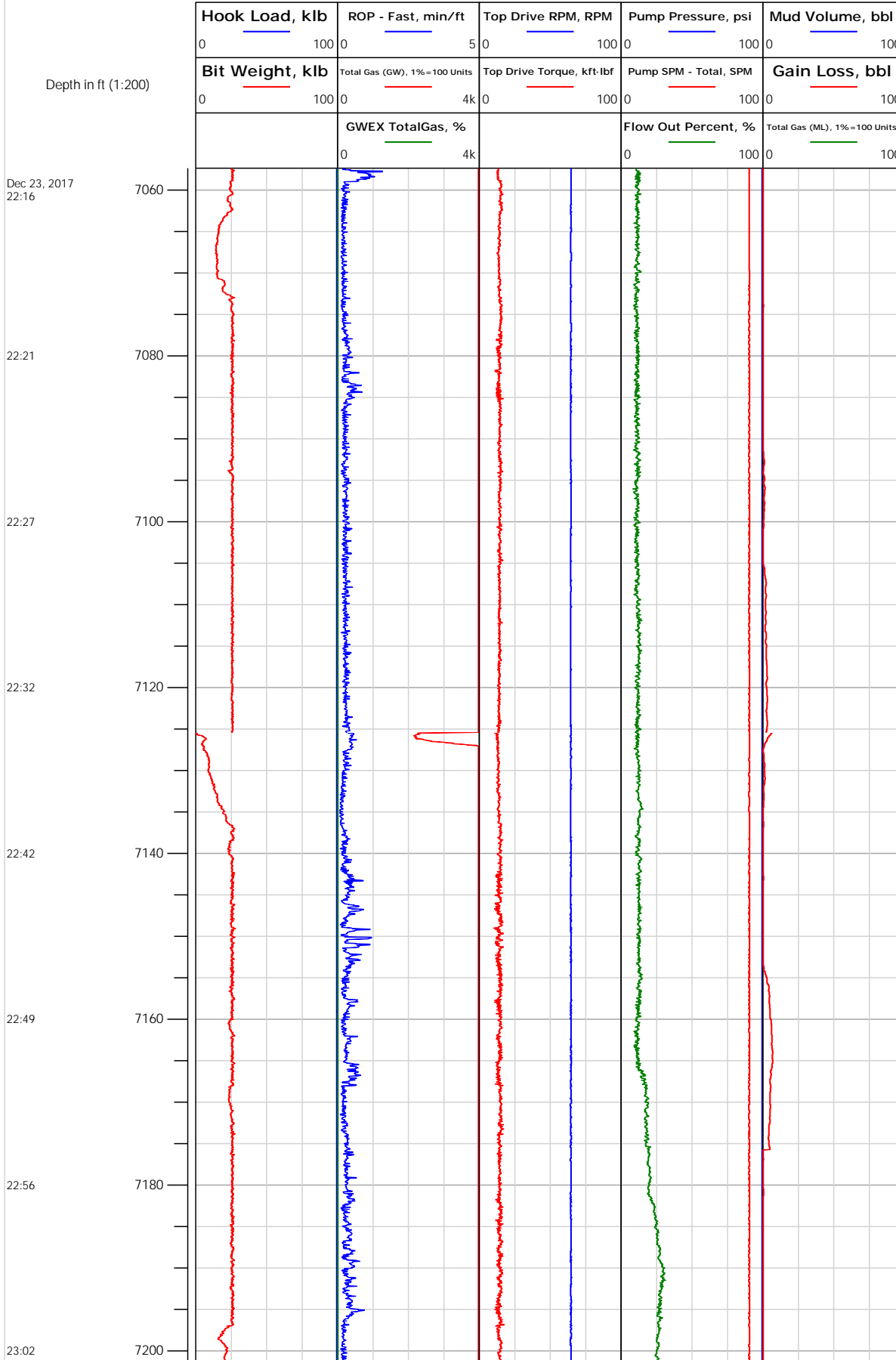
# Electronic Drilling Recorder

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

**Well Name:** Nichols 24-05W  
**Rig:** 290

**Location:**

## Notes







# Electronic Drilling Recorder

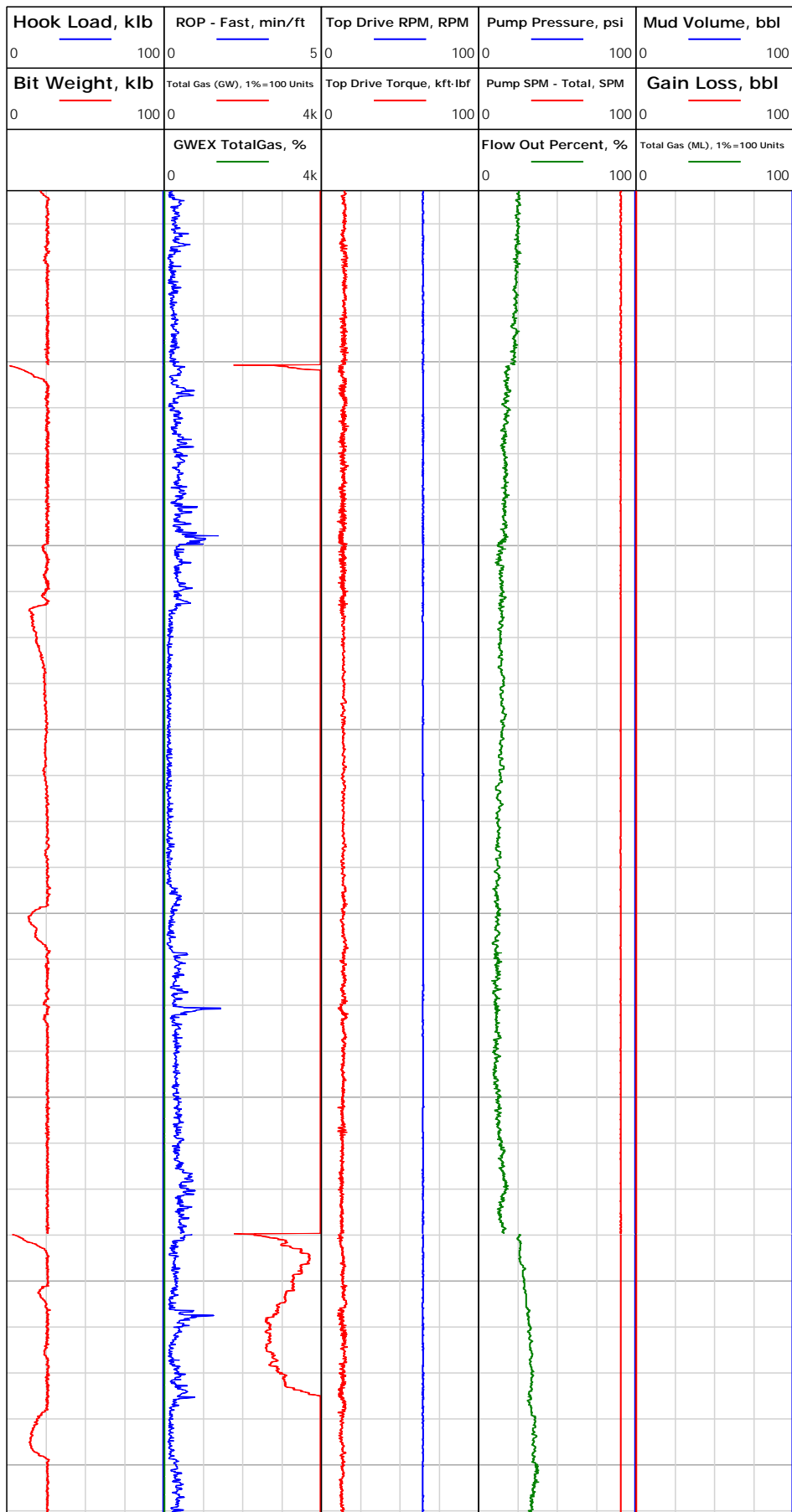
**Operator:** Laramie Energy  
**Contractor:** Helmerich & Payne Drlg Co

**Well Name:** Nichols 24-05W  
**Rig:** 290

**Location:**

Notes

Depth in ft (1:200)



Dec 23, 2017  
23:09

23:24

23:30

23:33

23:41

23:56

Dec 24, 2017  
00:02

7220.36: Connection @  
7220.36 ft

7259.99: Deviation Survey  
7260.00 ft, Deviation 3.21  
deg, Direction 274.1 deg

7314.95: Connection @  
7314.95 ft



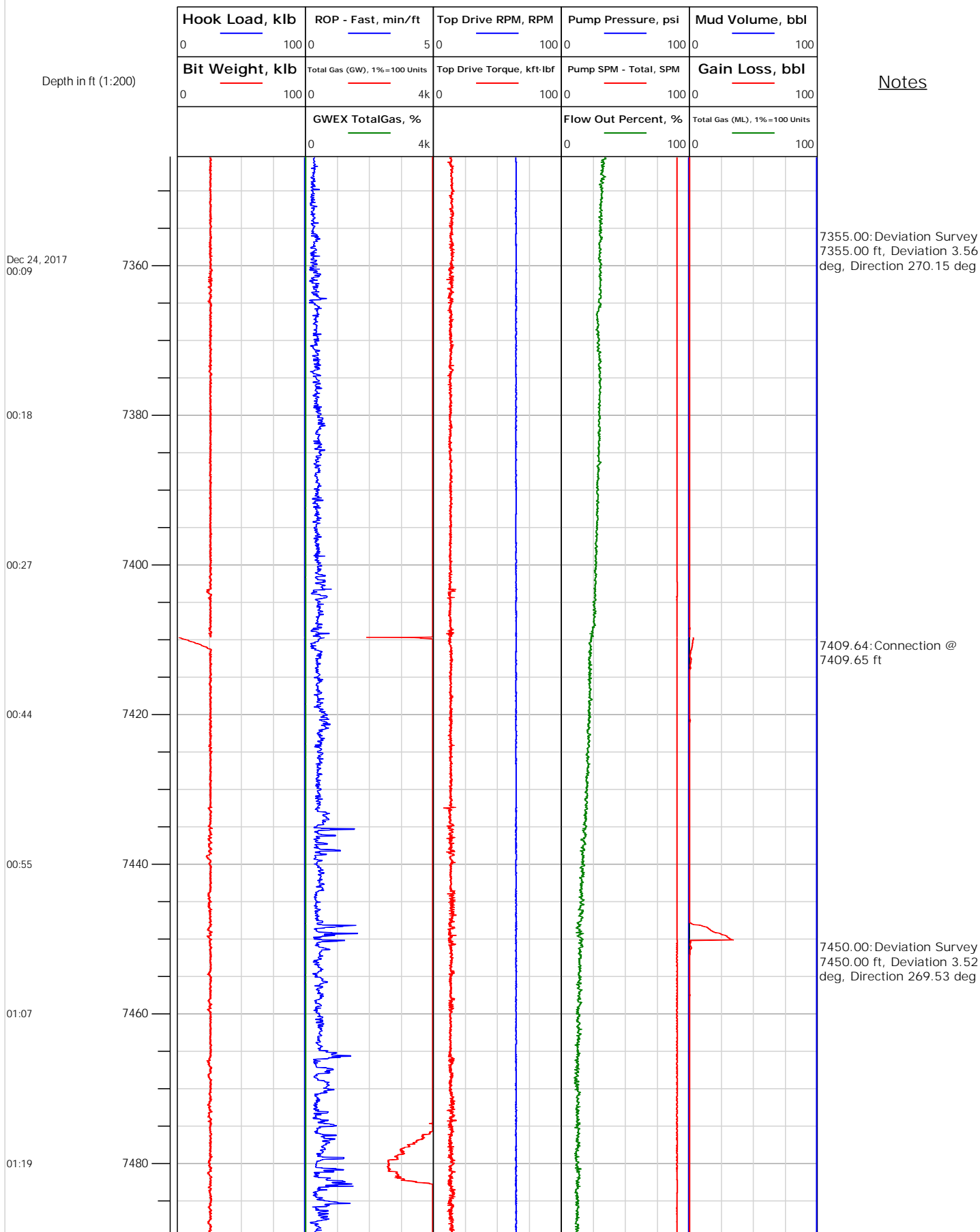
# Electronic Drilling Recorder

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

**Well Name:** Nichols 24-05W  
**Rig:** 290

**Location:**

## Notes





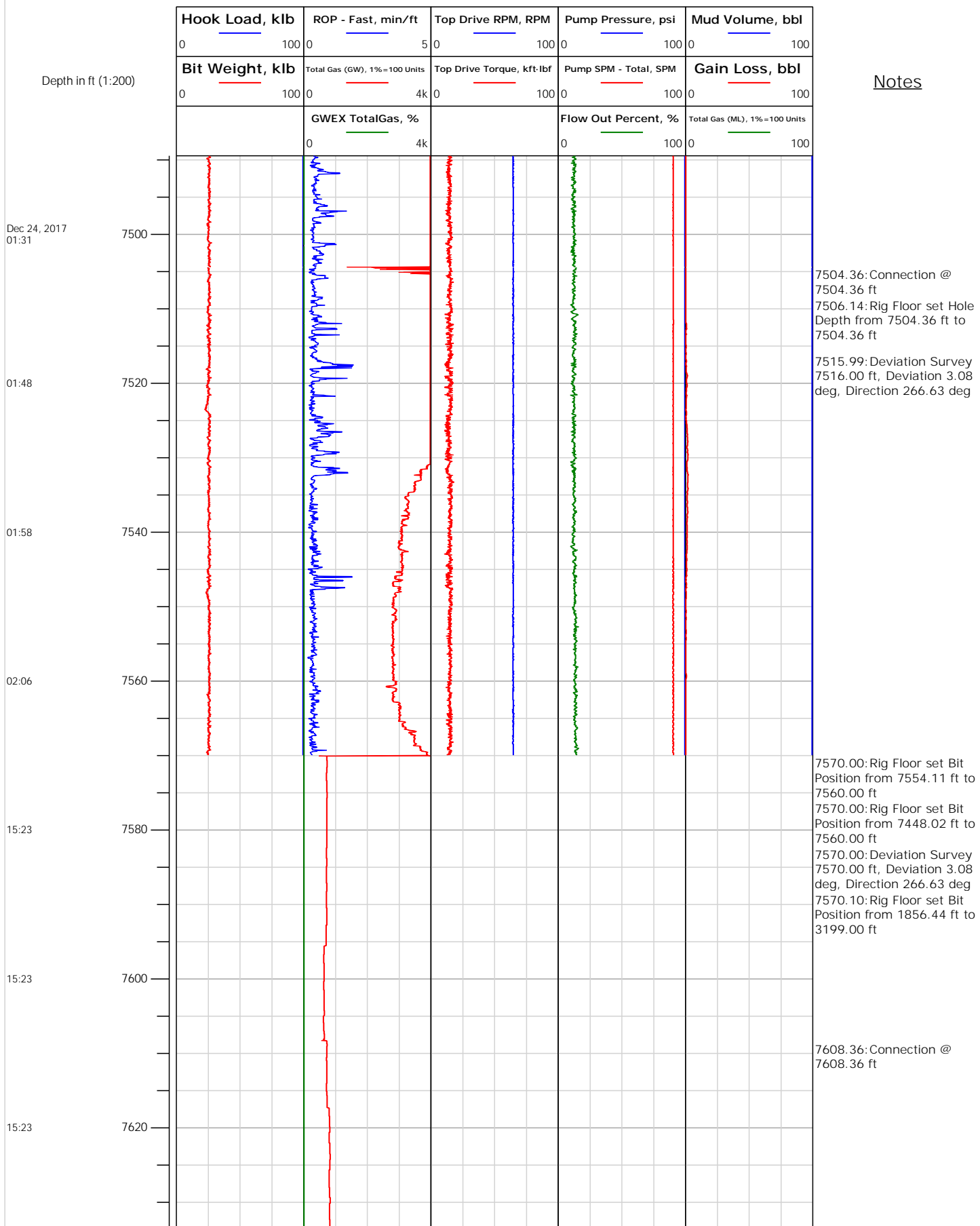
# Electronic Drilling Recorder

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

**Well Name:** Nichols 24-05W  
**Rig:** 290

**Location:**

## Notes





# Electronic Drilling Recorder

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

**Well Name:** Nichols 24-05W  
**Rig:** 290

**Location:**

Notes

Depth in ft (1:200)

Hook Load, klb	ROP - Fast, min/ft	Top Drive RPM, RPM	Pump Pressure, psi	Mud Volume, bbl
0 100	0 5	0 100	0 100	0 100
Bit Weight, klb	Total Gas (GW), 1%=100 Units	Top Drive Torque, kft-lbf	Pump SPM - Total, SPM	Gain Loss, bbl
0 100	0 4k	0 100	0 100	0 100
	GWEX TotalGas, %		Flow Out Percent, %	Total Gas (ML), 1%=100 Units
	0 4k		0 100	0 100
7640				
7660				
7680				
7700				

7647.48: Connection @  
7647.48 ft

7681.98: Rig Floor set Bit  
Position from 7560.00 ft to  
7448.02 ft  
7681.98: Rig Floor set Bit  
Position from 7681.98 ft to  
7560.00 ft  
7681.98: Rig Floor set Hole  
Depth from 7681.98 ft to  
7570.00 ft