



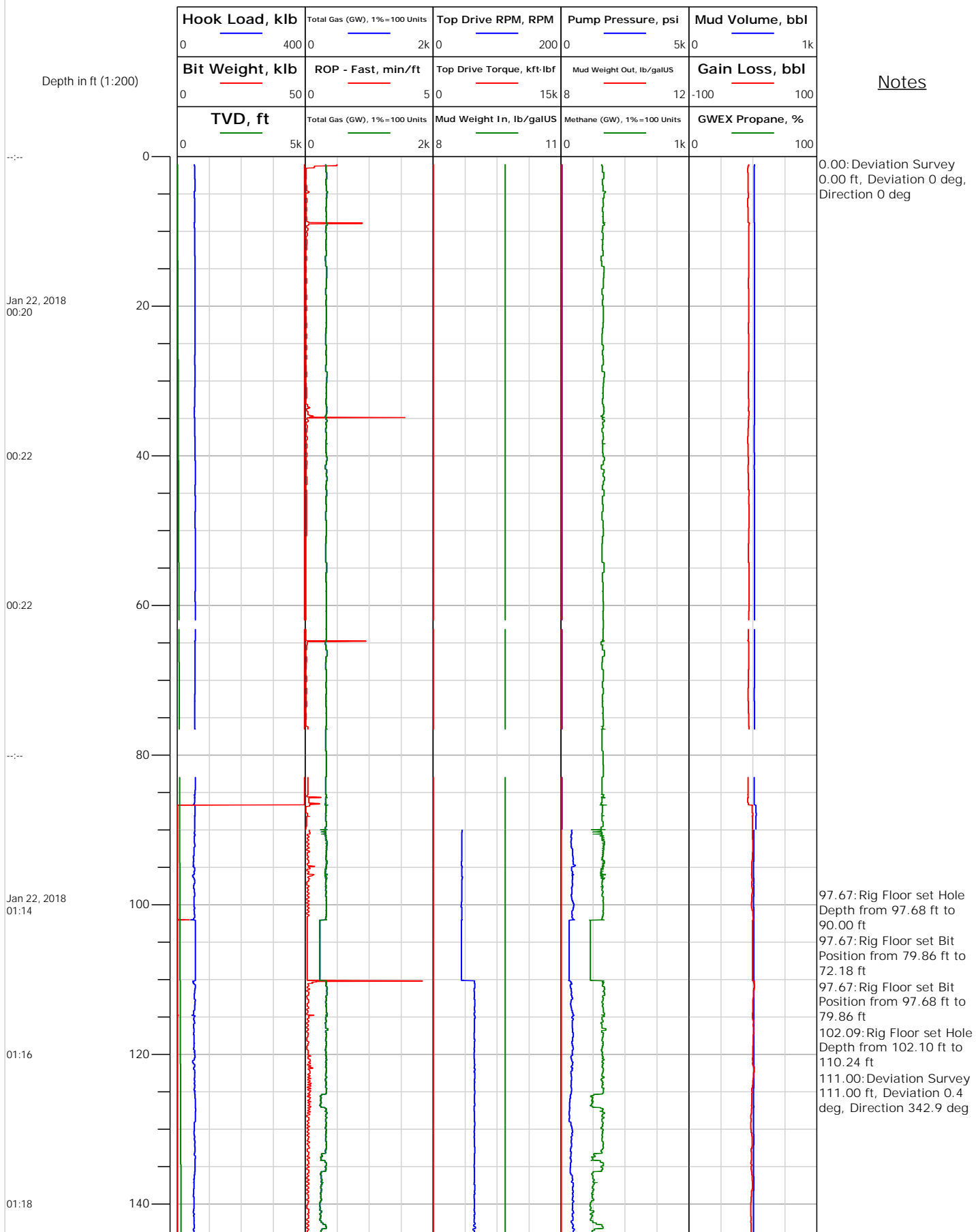
## Electronic Drilling Recorder

Operator: Laramie Energy  
Contractor: Helmerich & Payne Drlg Co

Well Name: BRUTON FEDERAL 30-19W  
Rig: 522

Location:

## Notes





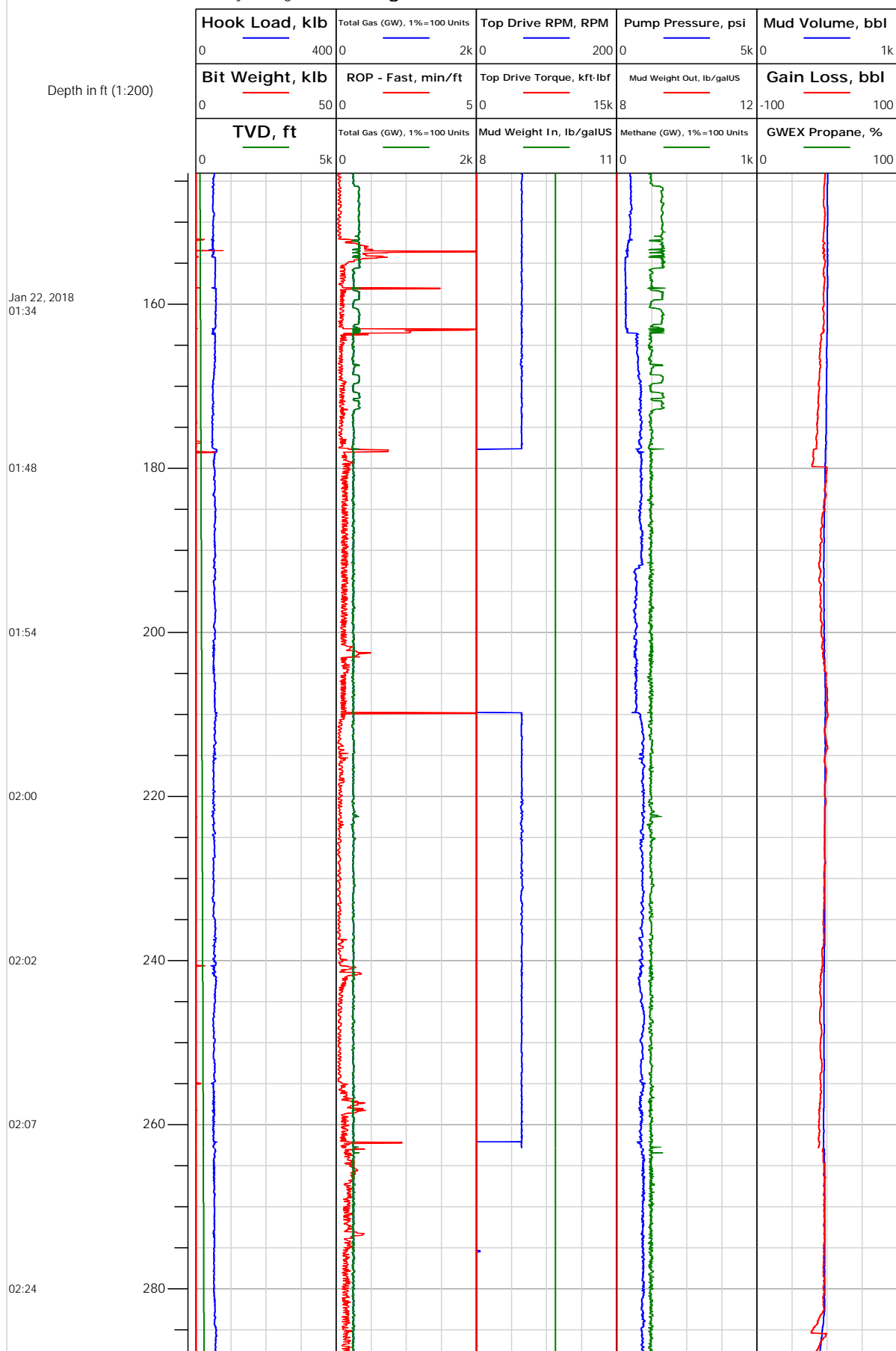
## Electronic Drilling Recorder

Operator: Laramie Energy  
Contractor: Helmerich & Payne Drlg Co

Well Name: BRUTON FEDERAL 30-19W  
Rig: 522

Location:

Notes







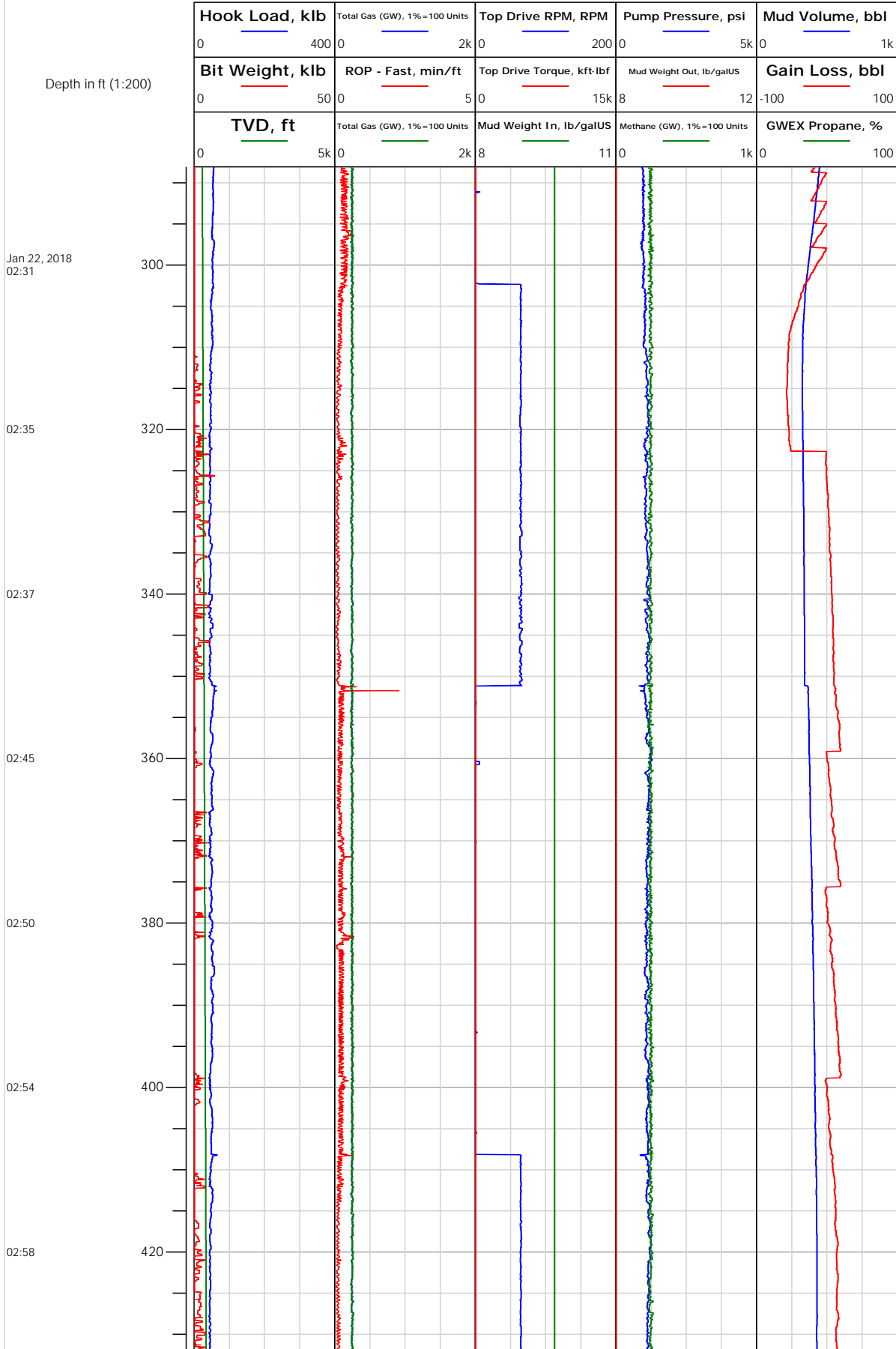
# Electronic Drilling Recorder

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

**Well Name:** BRUTON FEDERAL 30-19W  
**Rig:** 522

**Location:**

## Notes



293.00: Deviation Survey  
293.00 ft, Deviation 3.3 deg, Direction 229.2 deg

382.74: Rig Floor set Hole  
Depth from 379.20 ft to 383.23 ft  
384.00: Deviation Survey  
384.00 ft, Deviation 7.2 deg, Direction 225.8 deg



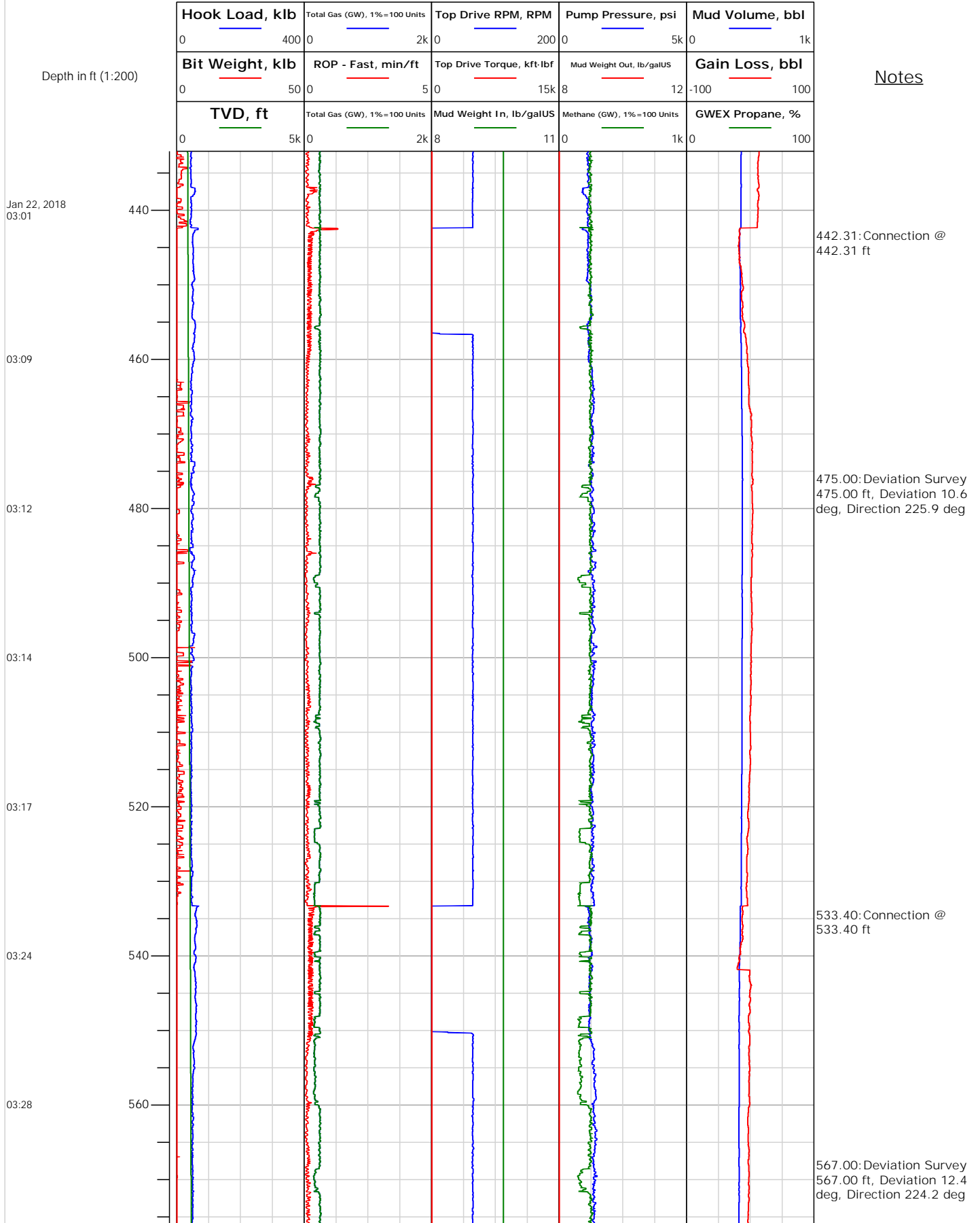
# Electronic Drilling Recorder

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

**Well Name:** BRUTON FEDERAL 30-19W  
**Rig:** 522

**Location:**

## Notes





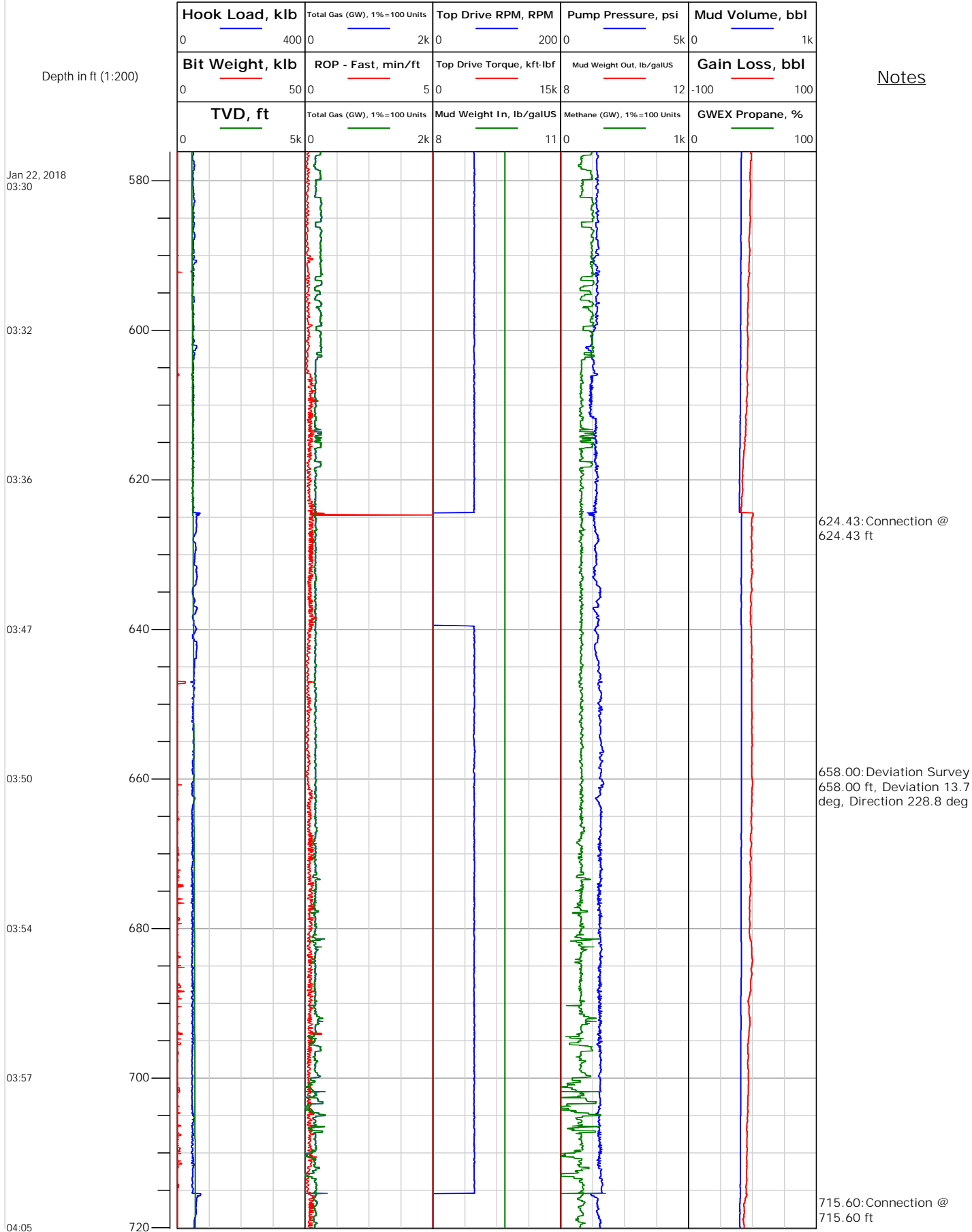
# Electronic Drilling Recorder

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

**Well Name:** BRUTON FEDERAL 30-19W  
**Rig:** 522

**Location:**

Notes





# Electronic Drilling Recorder

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

**Well Name:** BRUTON FEDERAL 30-19W  
**Rig:** 522

**Location:**

Notes

Depth in ft (1:200)

Hook Load, klb	Total Gas (GW), 1%=100 Units	Top Drive RPM, RPM	Pump Pressure, psi	Mud Volume, bbl
0 400	0 2k	0 200	0 5k	0 1k
Bit Weight, klb	ROP - Fast, min/ft	Top Drive Torque, kft-lbf	Mud Weight Out, lb/galUS	Gain Loss, bbl
0 50	0 5	0 15k	8 12	-100 100
TVD, ft	Total Gas (GW), 1%=100 Units	Mud Weight In, lb/galUS	Methane (GW), 1%=100 Units	GWEX Propane, %
0 5k	0 2k	8 11	0 1k	0 100

Jan 22, 2018  
04:09

04:14

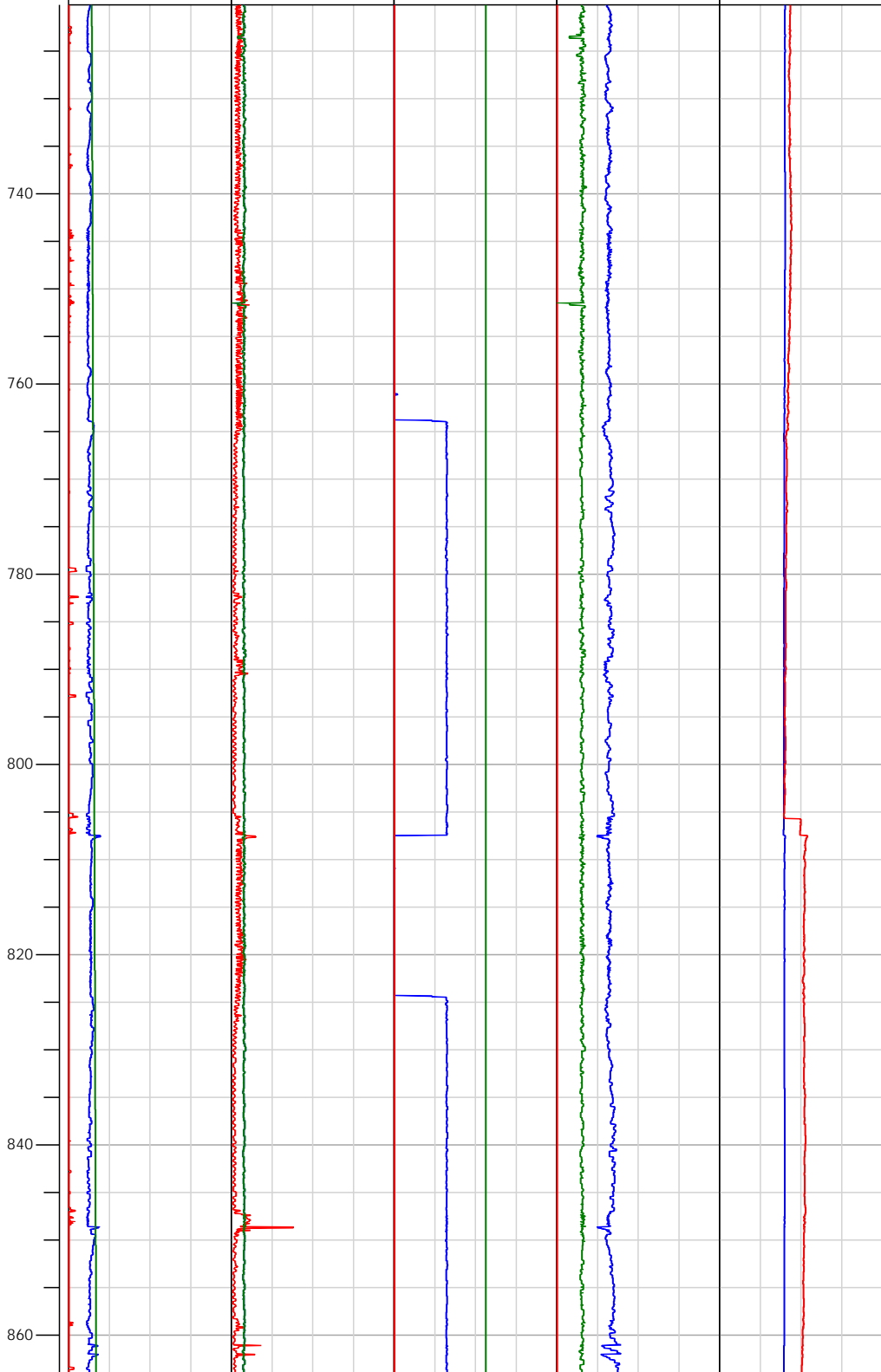
04:17

04:19

04:27

04:30

04:33



749.00: Deviation Survey  
749.00 ft, Deviation 17.7 deg, Direction 228.5 deg

807.54: Connection @  
807.54 ft

840.00: Deviation Survey  
840.00 ft, Deviation 20.6 deg, Direction 223.6 deg



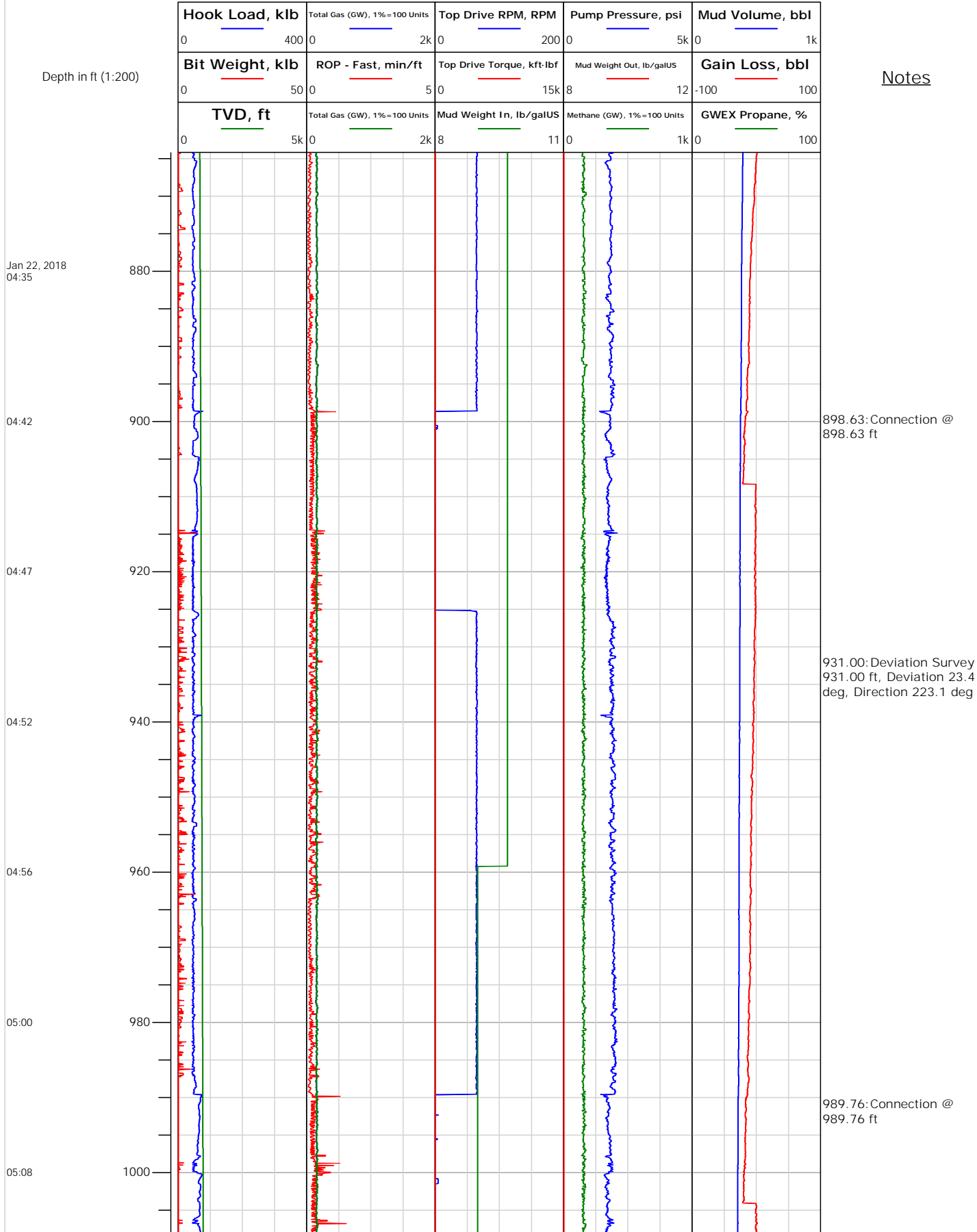
# Electronic Drilling Recorder

Operator: Laramie Energy  
Contractor: Helmerich & Payne Drlg Co

Well Name: BRUTON FEDERAL 30-19W  
Rig: 522

Location:

Notes





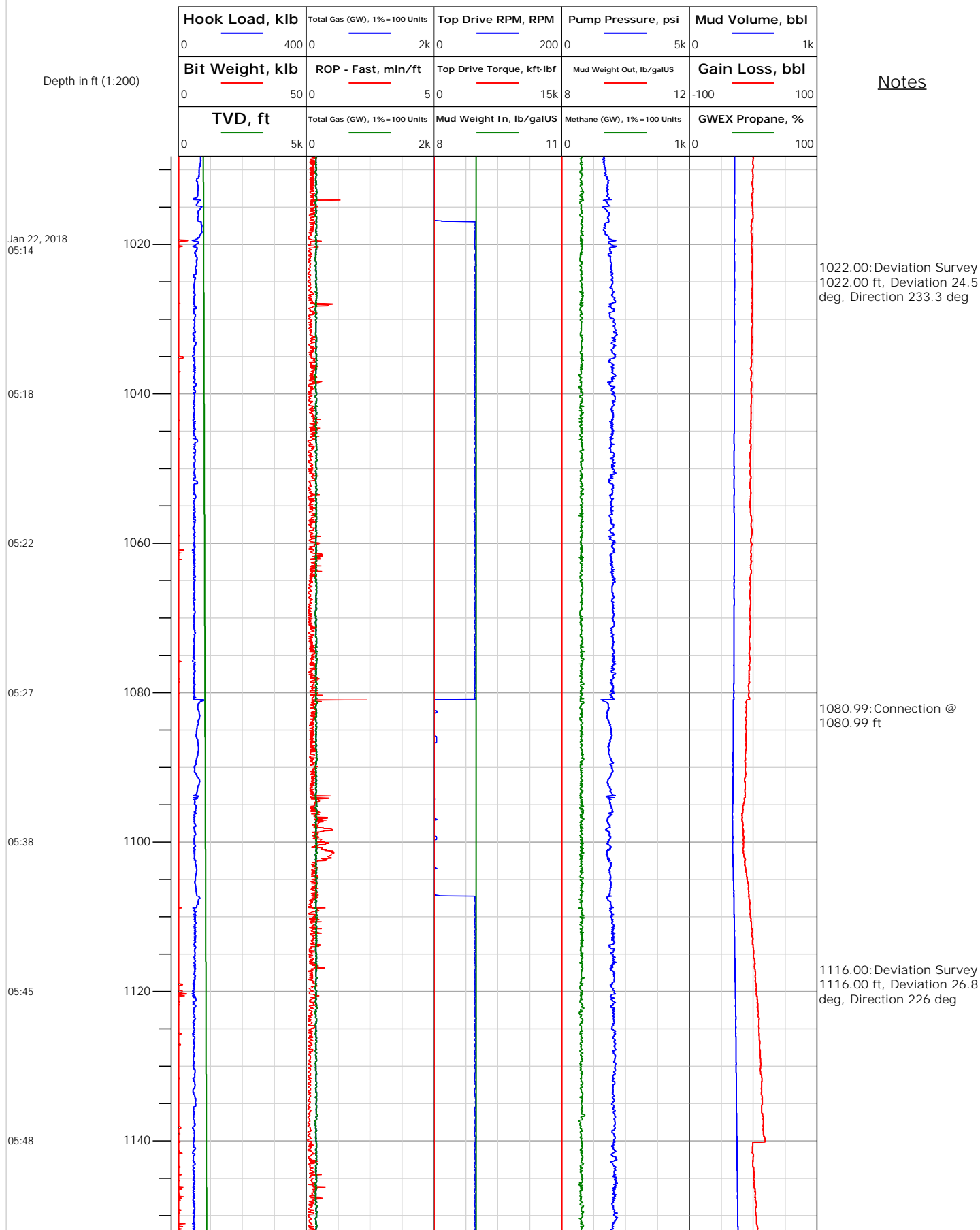
## Electronic Drilling Recorder

Operator: Laramie Energy  
Contractor: Helmerich & Payne Drlg Co

Well Name: BRUTON FEDERAL 30-19W  
Rig: 522

Location:

### Notes





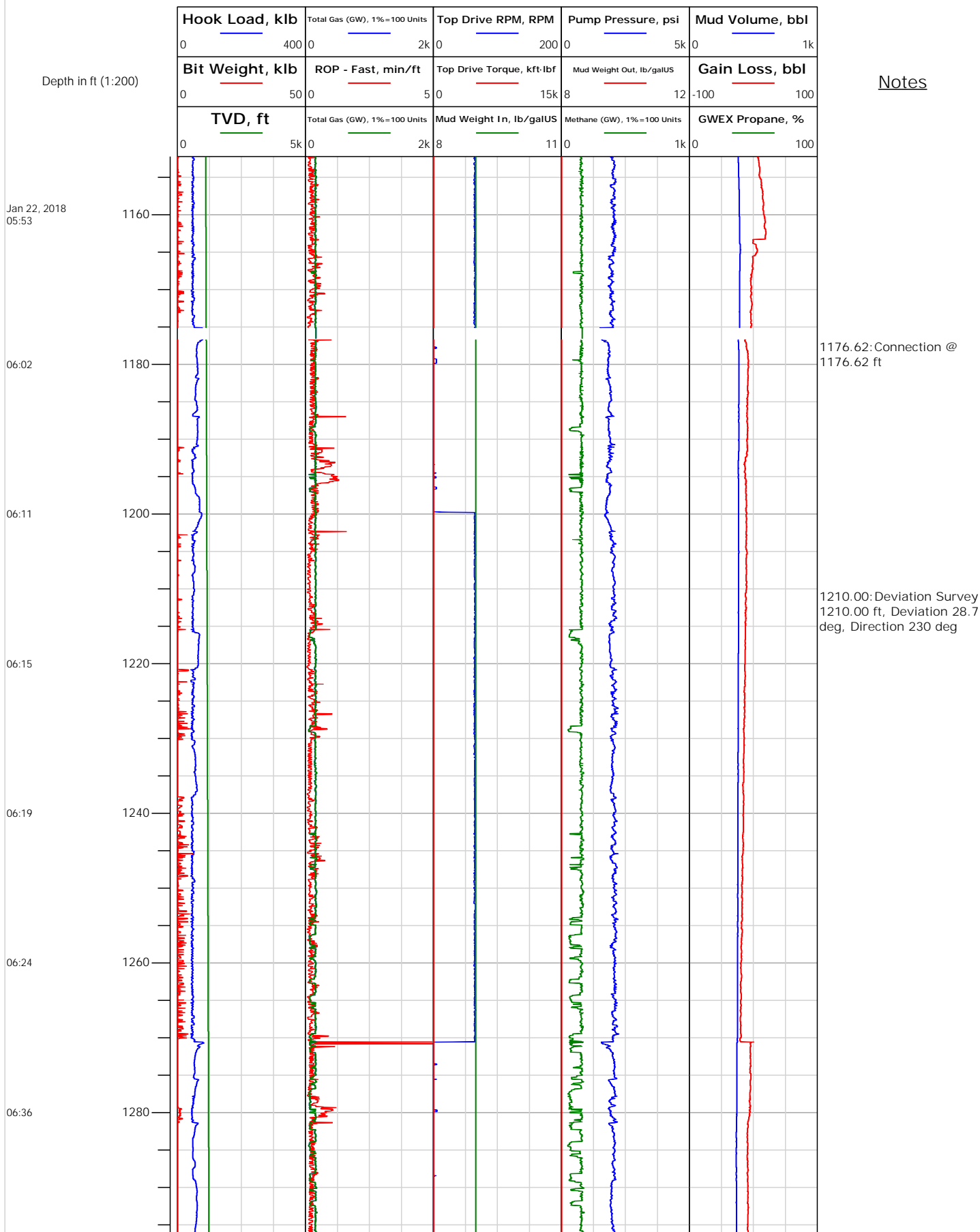
# Electronic Drilling Recorder

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

**Well Name:** BRUTON FEDERAL 30-19W  
**Rig:** 522

**Location:**

## Notes





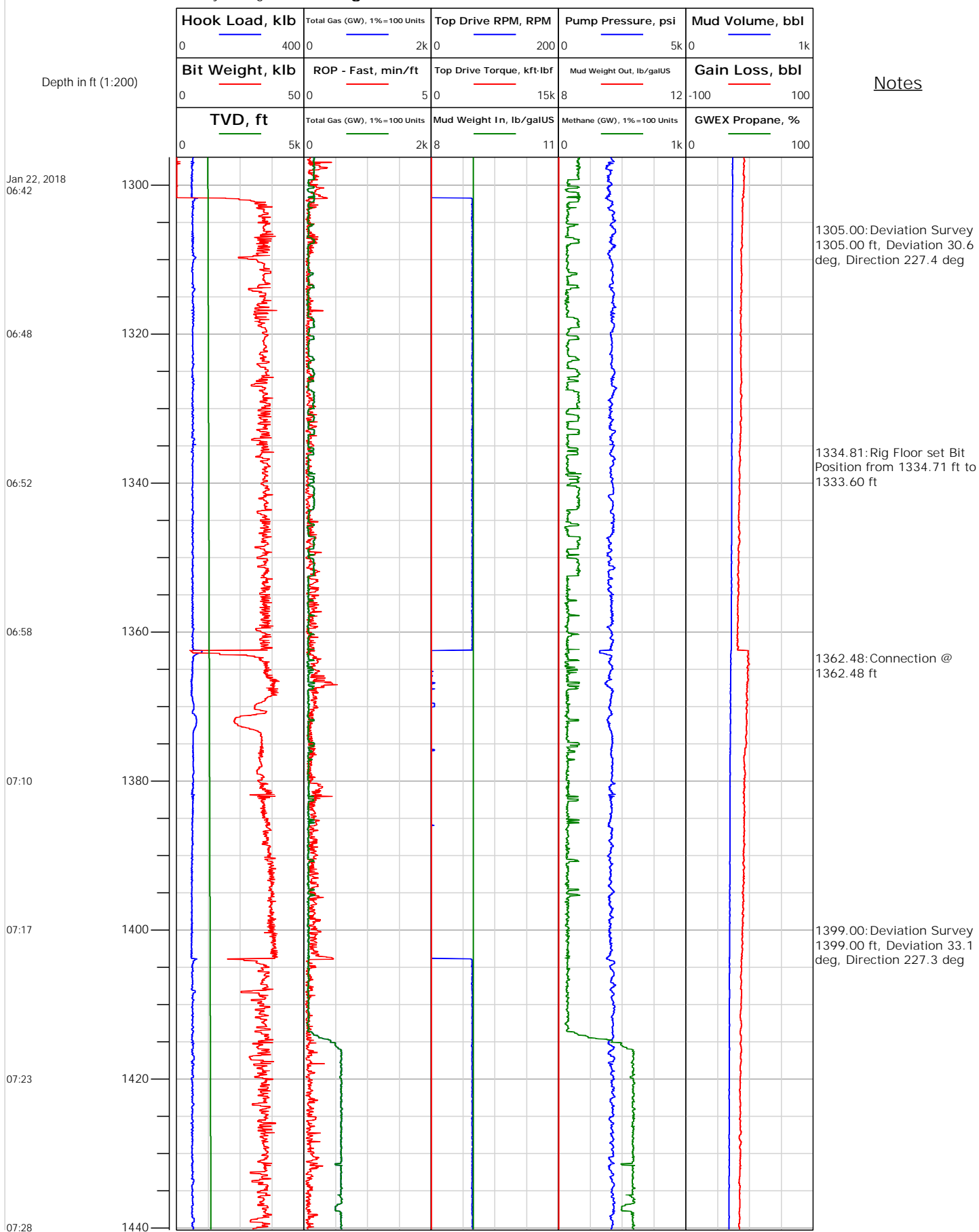
# Electronic Drilling Recorder

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

**Well Name:** BRUTON FEDERAL 30-19W  
**Rig:** 522

**Location:**

## Notes







# Electronic Drilling Recorder

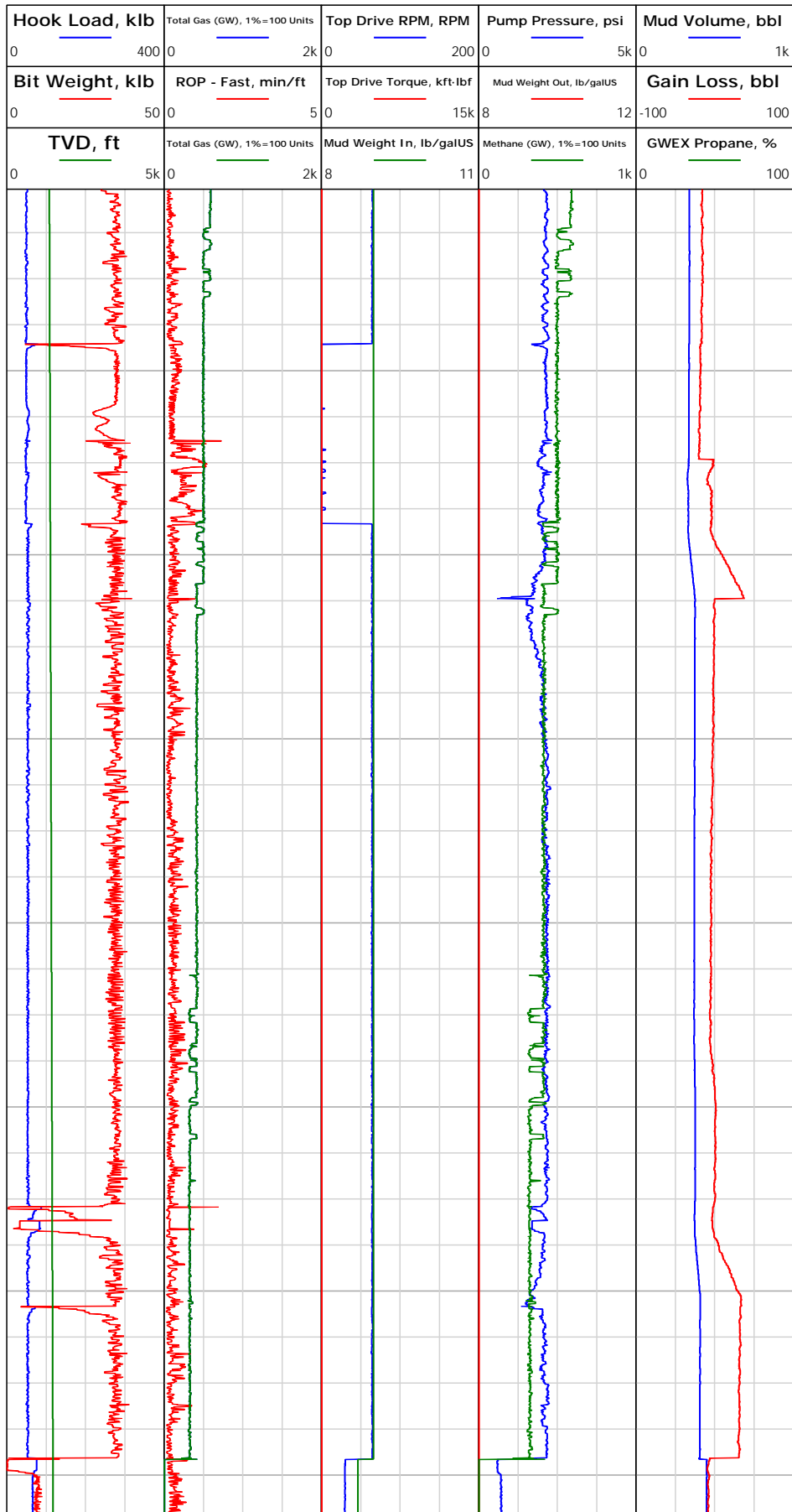
**Operator:** Laramie Energy  
**Contractor:** Helmerich & Payne Drlg Co

**Well Name:** BRUTON FEDERAL 30-19W  
**Rig:** 522

**Location:**

## Notes

Depth in ft (1:200)



Jan 22, 2018  
07:38

07:49

07:54

07:59

08:05

08:15

Jan 23, 2018  
06:29

1457.07: Connection @  
1457.07 ft

1493.00: Deviation Survey  
1493.00 ft, Deviation 34.4  
deg, Direction 229.2 deg

1518.00: Deviation Survey  
1518.00 ft, Deviation 34.2  
deg, Direction 229.9 deg

1551.00: Connection @  
1551.00 ft  
1552.45: Rig Floor set Bit  
Position from 1552.46 ft to  
1553.30 ft  
1578.48: Rig Floor set Bit  
Position from 59.81 ft to  
1568.00 ft  
1578.48: Rig Floor set Bit  
Position from 1478.60 ft to  
1481.26 ft  
1578.48: Rig Floor set Bit  
Position from 1568.00 ft to  
75.00 ft  
1578.48: Rig Floor set Bit  
Position from 606.84 ft to  
634.34 ft  
1578.48: Rig Floor set Bit  
Position from 1553.07 ft to  
1490.00 ft  
1578.49: Connection @  
1578.49 ft  
1578.49: Connection @  
1578.49 ft



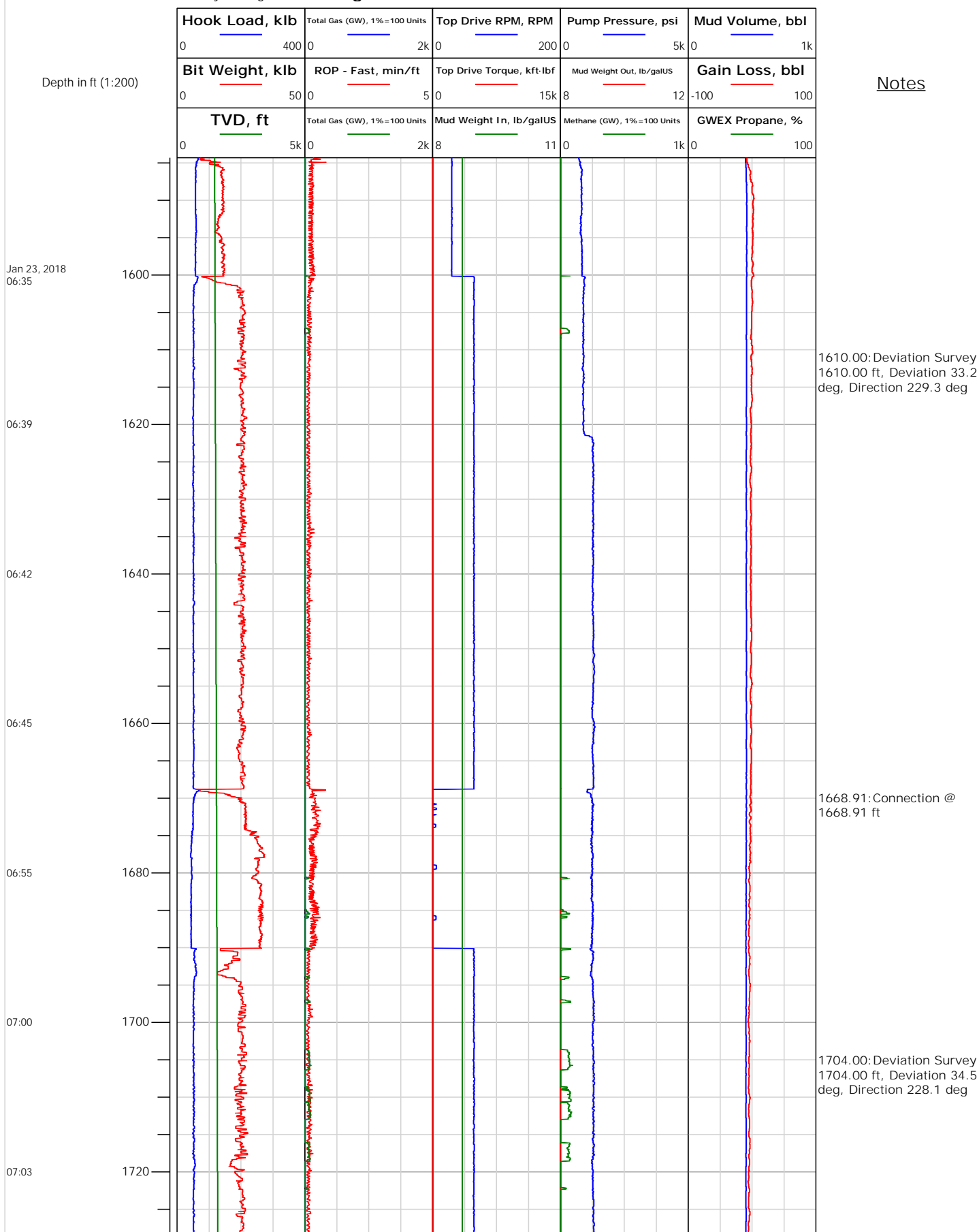
# Electronic Drilling Recorder

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

**Well Name:** BRUTON FEDERAL 30-19W  
**Rig:** 522

**Location:**

## Notes





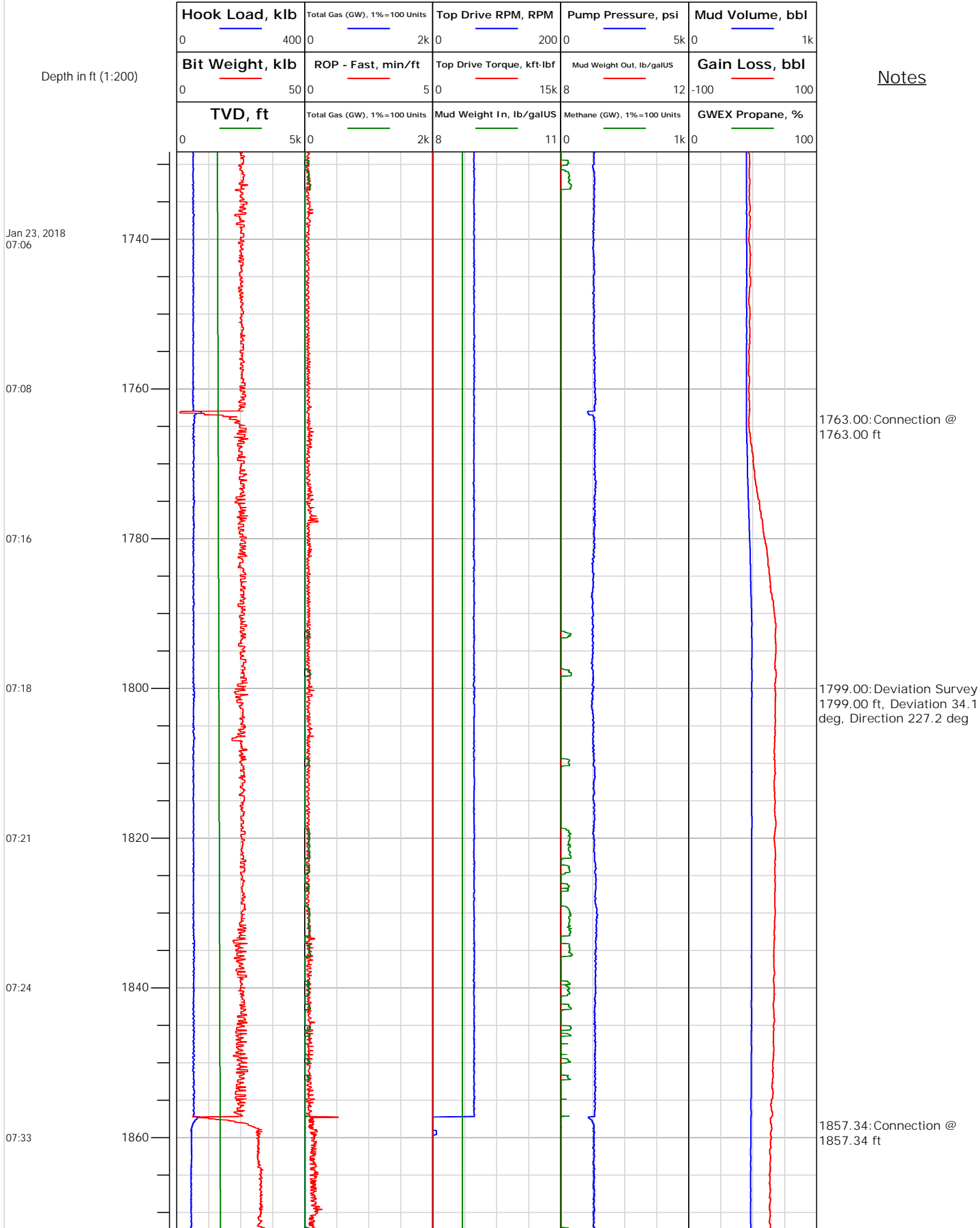
# Electronic Drilling Recorder

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

**Well Name:** BRUTON FEDERAL 30-19W  
**Rig:** 522

**Location:**

Notes





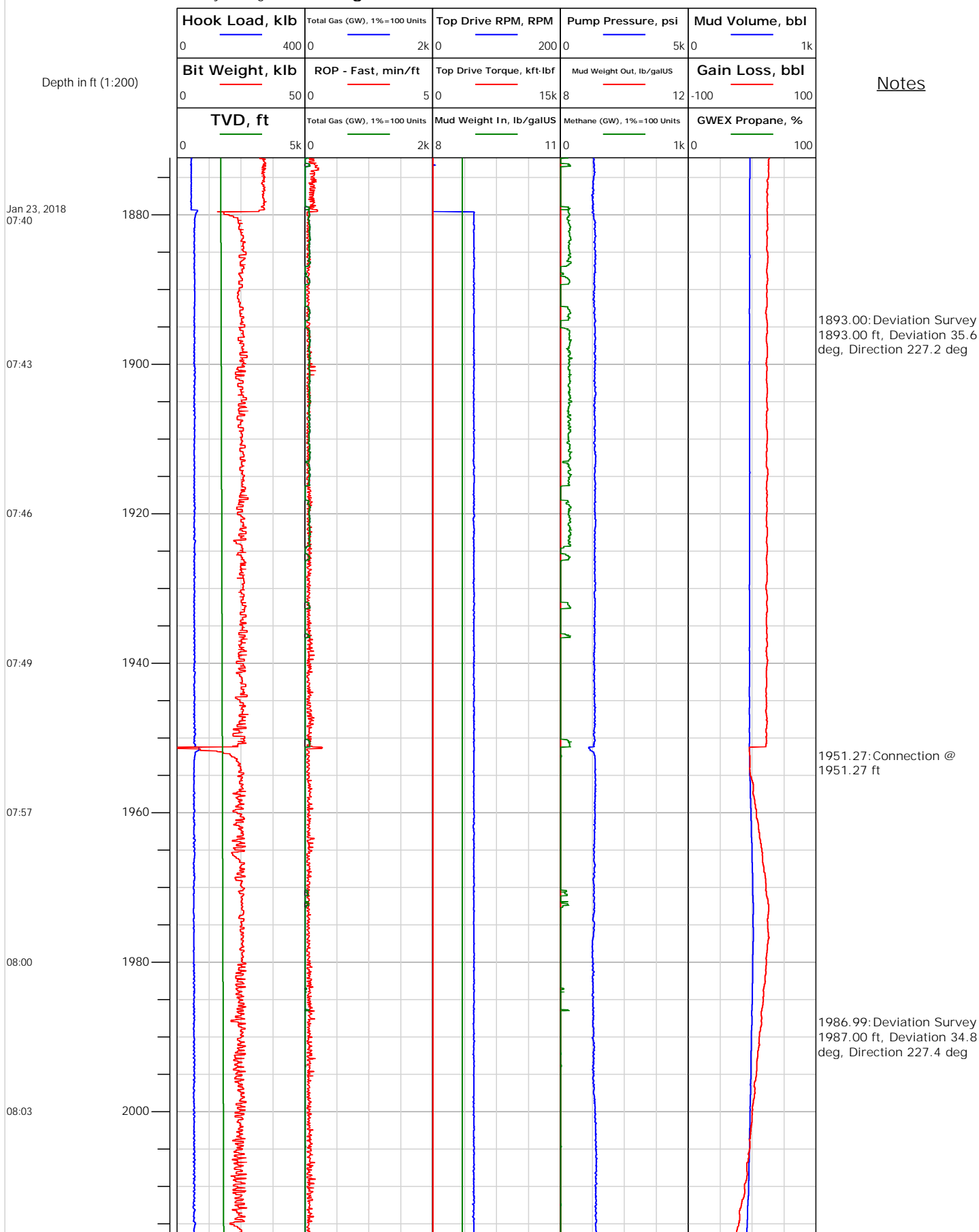
# Electronic Drilling Recorder

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

**Well Name:** BRUTON FEDERAL 30-19W  
**Rig:** 522

**Location:**

## Notes





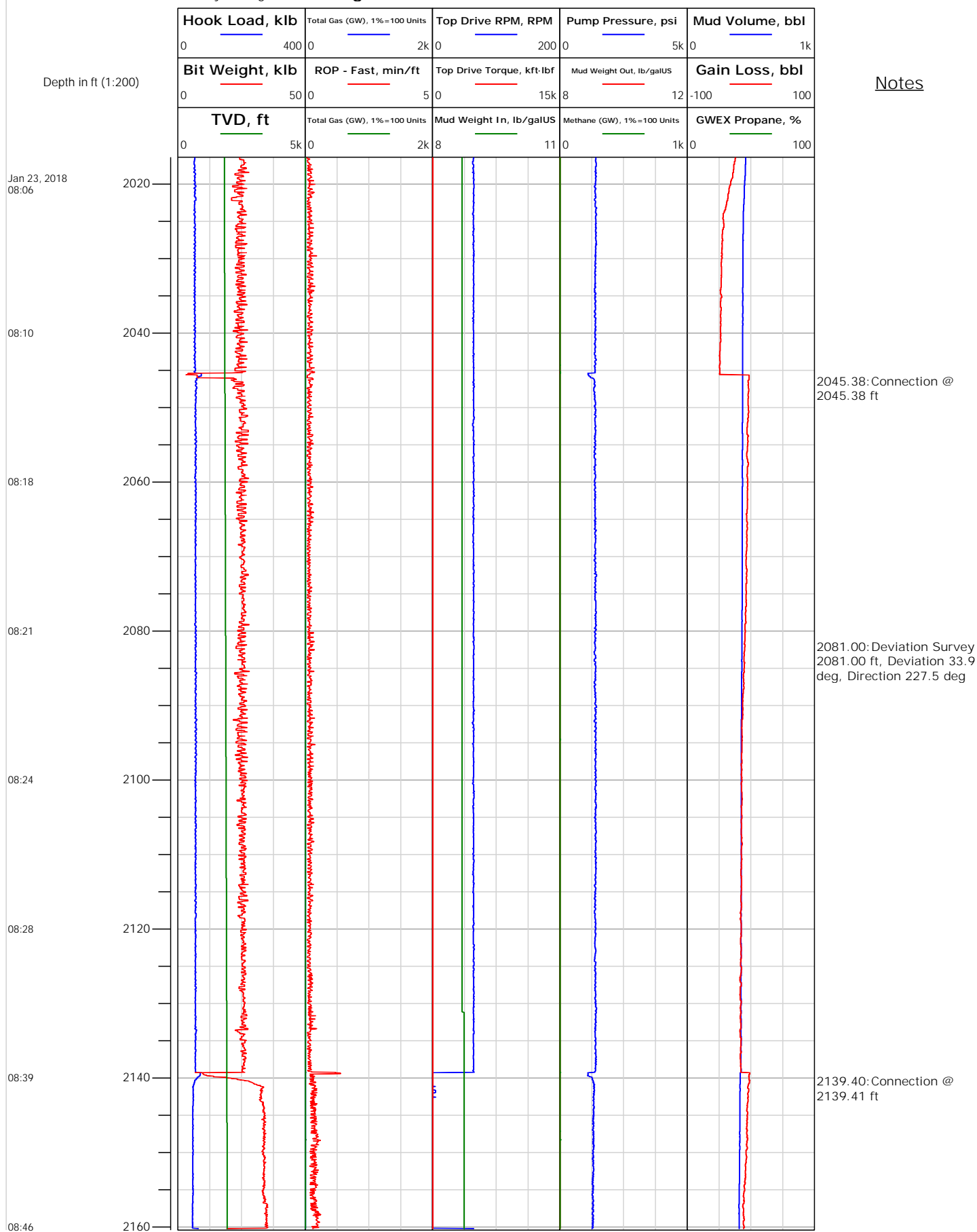
# Electronic Drilling Recorder

Operator: Laramie Energy  
Contractor: Helmerich & Payne Drlg Co

Well Name: BRUTON FEDERAL 30-19W  
Rig: 522

Location:

## Notes





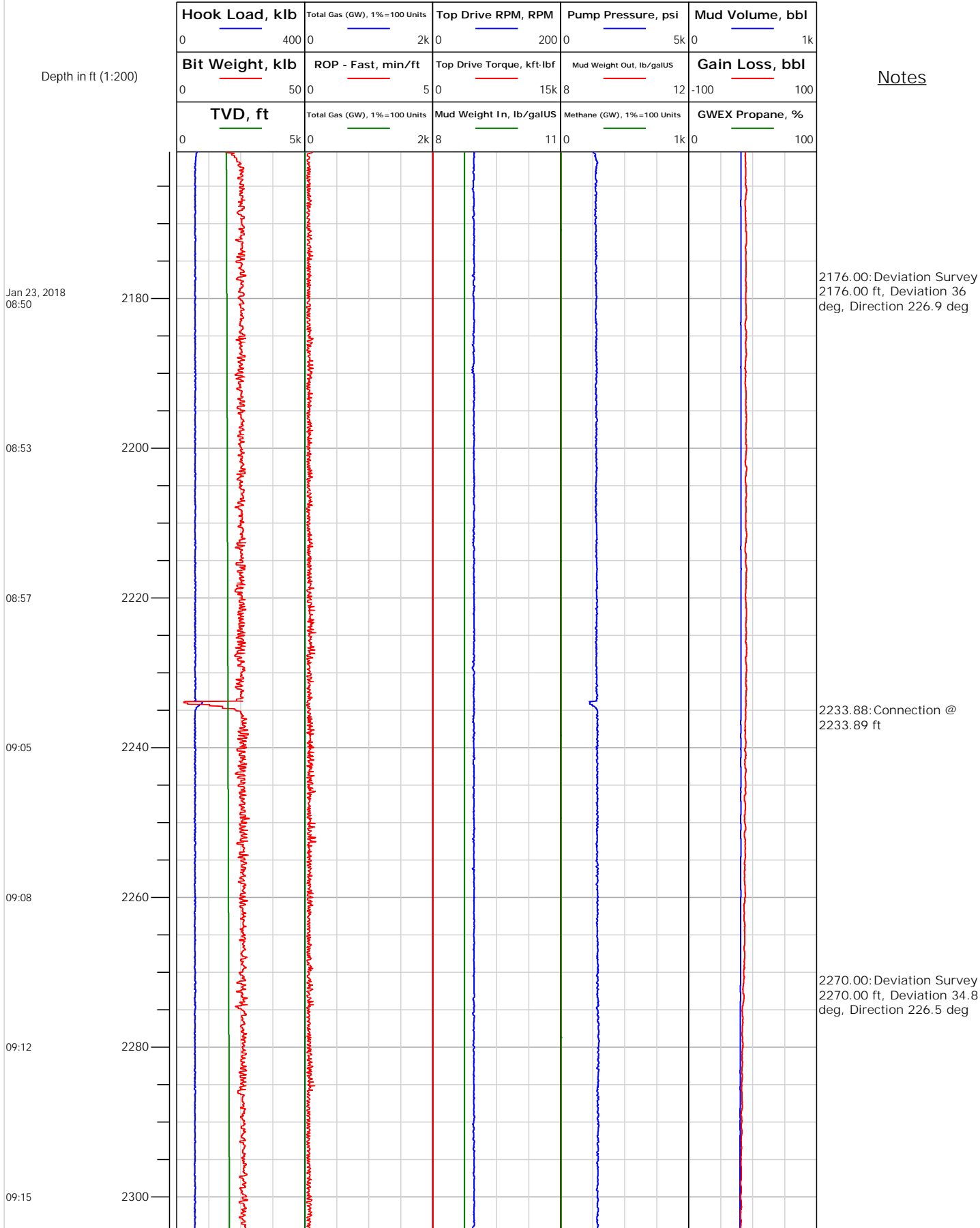
# Electronic Drilling Recorder

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

**Well Name:** BRUTON FEDERAL 30-19W  
**Rig:** 522

**Location:**

## Notes





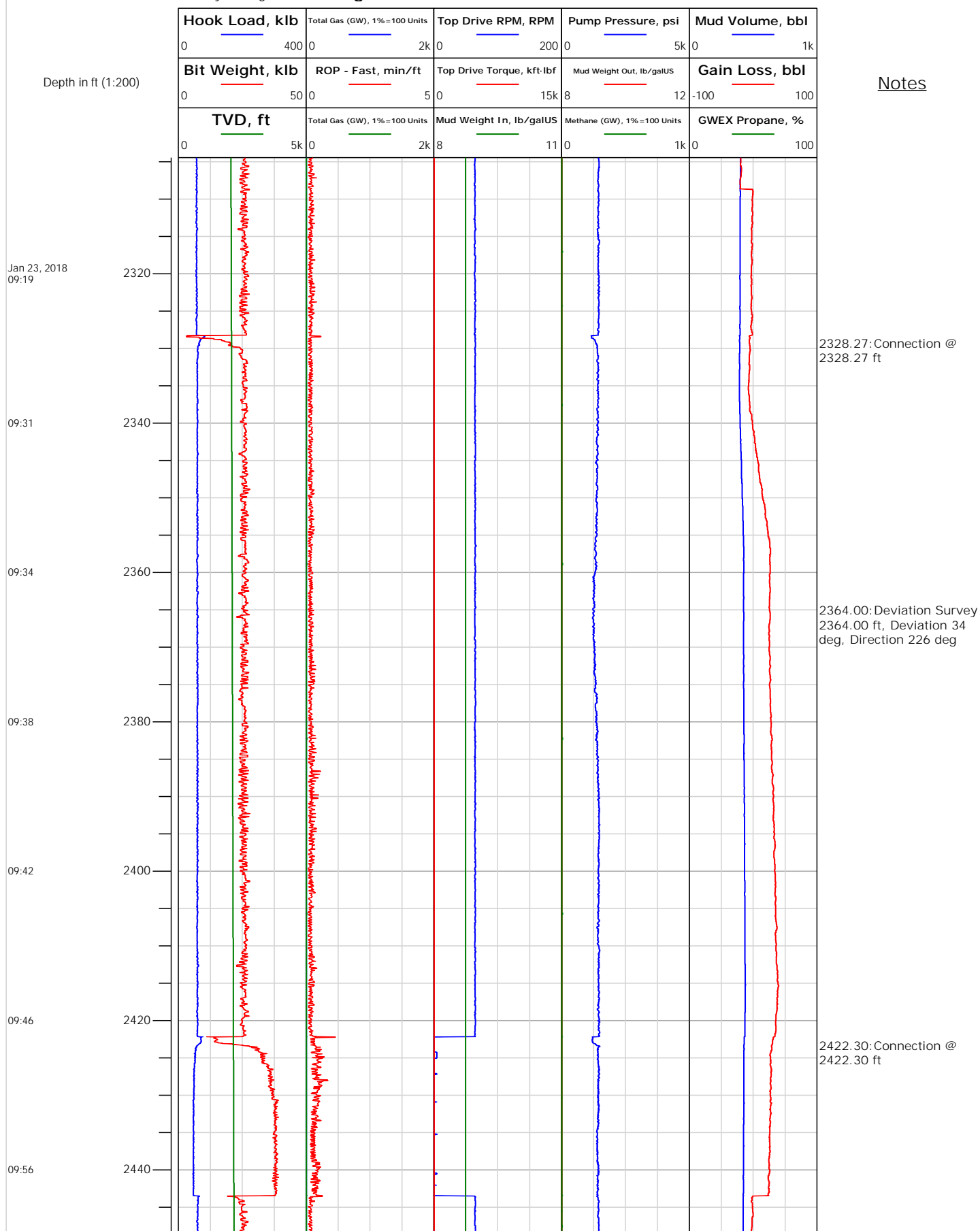
## Electronic Drilling Recorder

Operator: Laramie Energy  
Contractor: Helmerich & Payne Drlg Co

Well Name: BRUTON FEDERAL 30-19W  
Rig: 522

Location:

### Notes





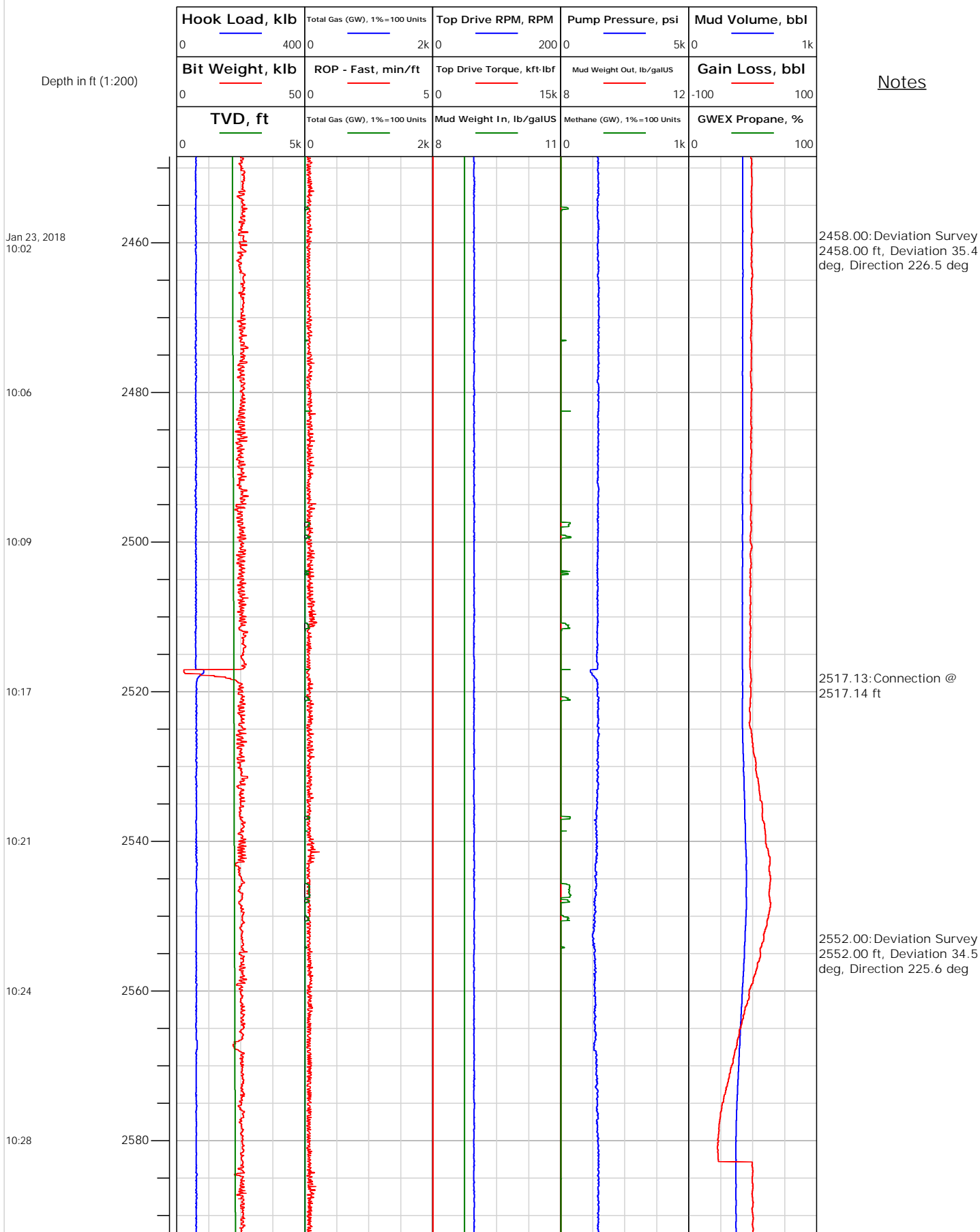
# Electronic Drilling Recorder

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

**Well Name:** BRUTON FEDERAL 30-19W  
**Rig:** 522

**Location:**

## Notes







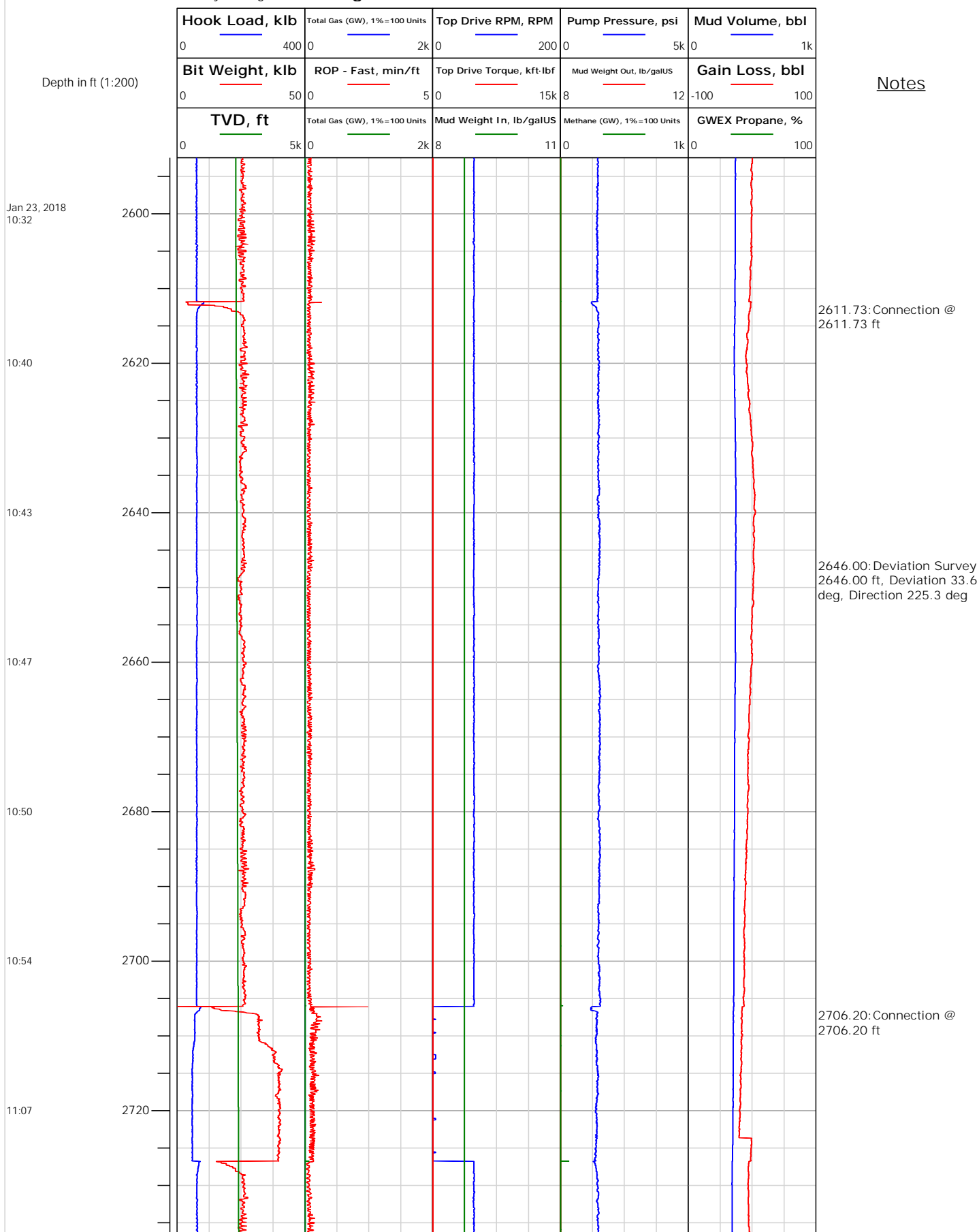
## Electronic Drilling Recorder

Operator: Laramie Energy  
Contractor: Helmerich & Payne Drlg Co

Well Name: BRUTON FEDERAL 30-19W  
Rig: 522

Location:

### Notes





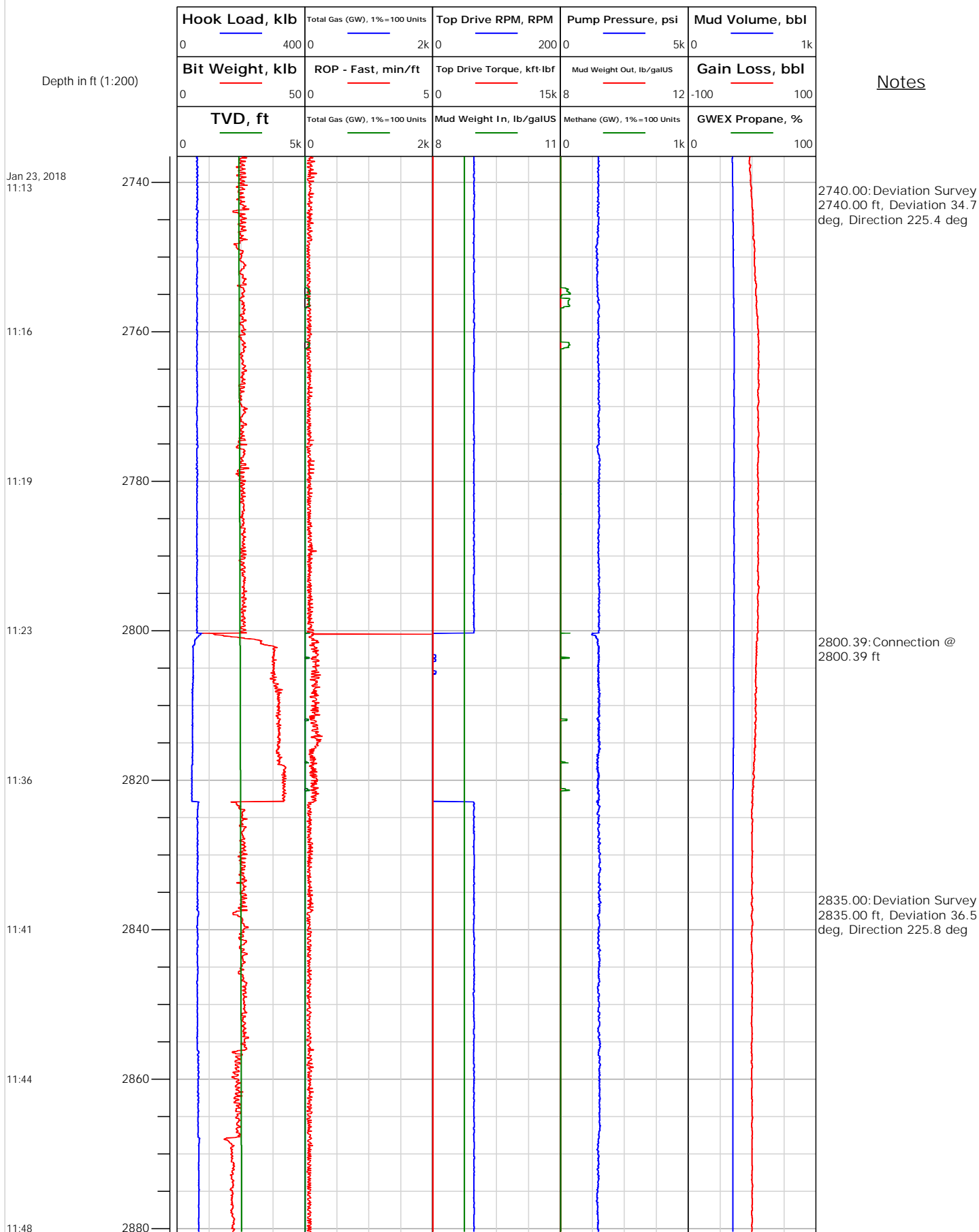
# Electronic Drilling Recorder

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

**Well Name:** BRUTON FEDERAL 30-19W  
**Rig:** 522

**Location:**

## Notes





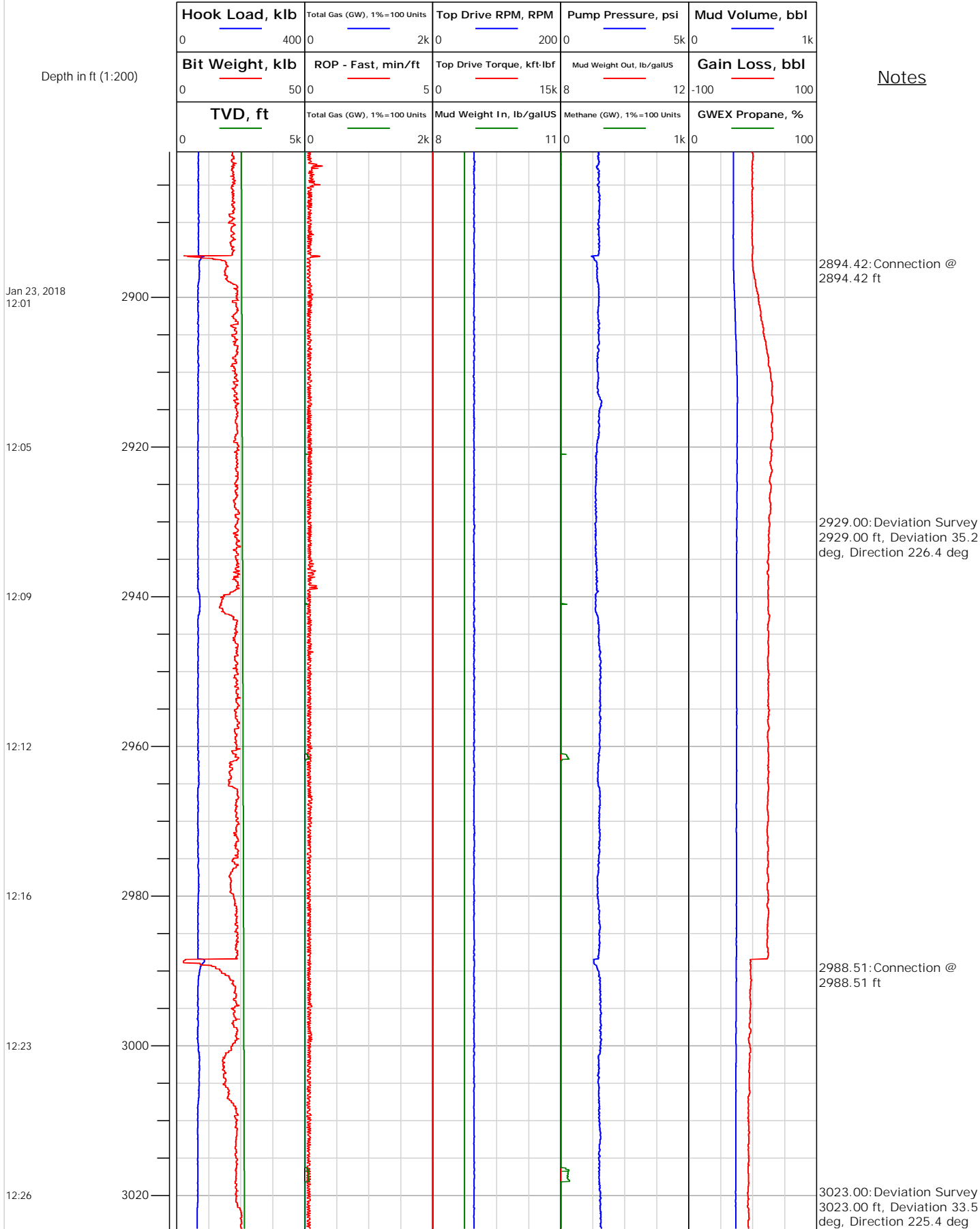
# Electronic Drilling Recorder

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

**Well Name:** BRUTON FEDERAL 30-19W  
**Rig:** 522

**Location:**

## Notes





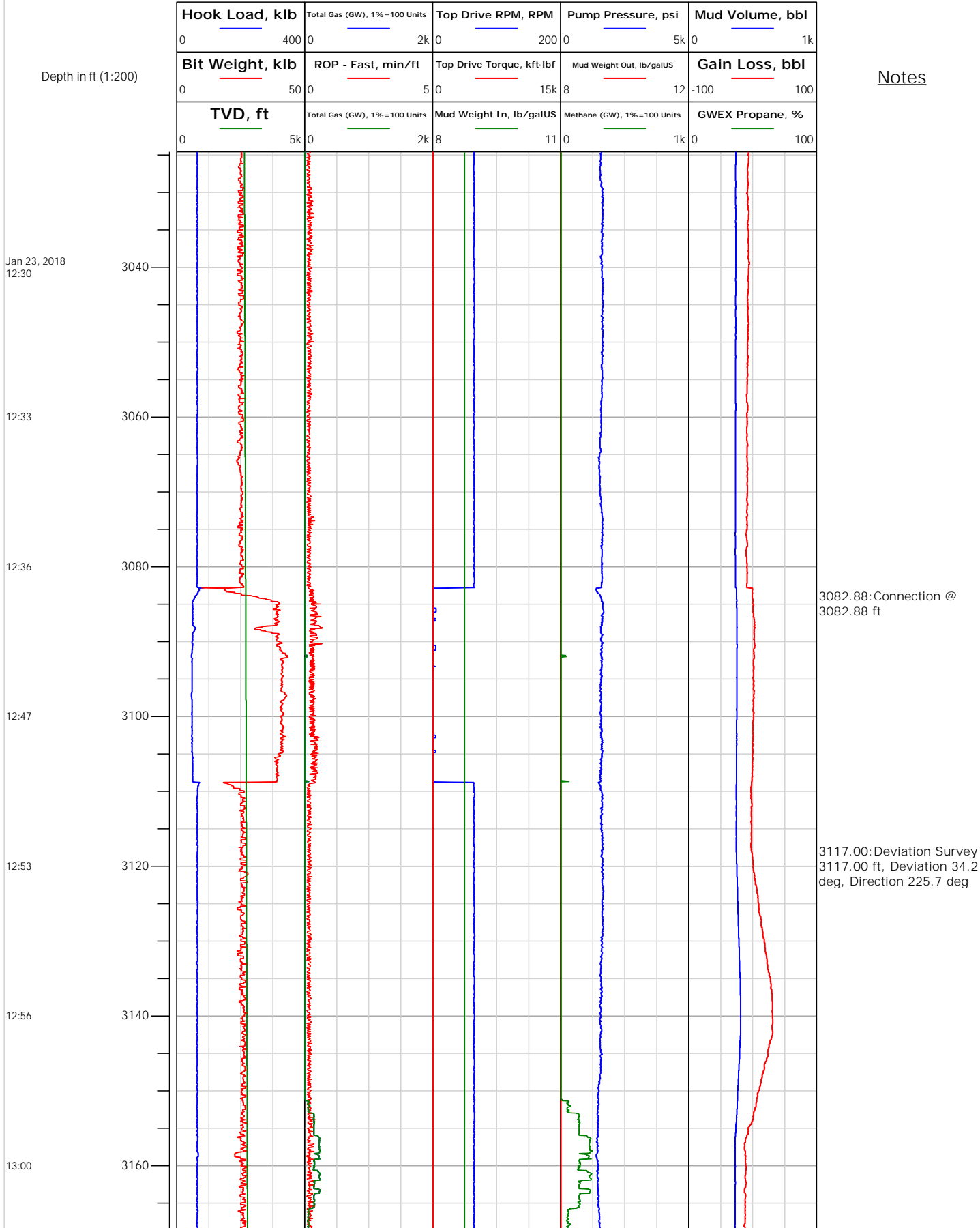
# Electronic Drilling Recorder

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

**Well Name:** BRUTON FEDERAL 30-19W  
**Rig:** 522

**Location:**

Notes





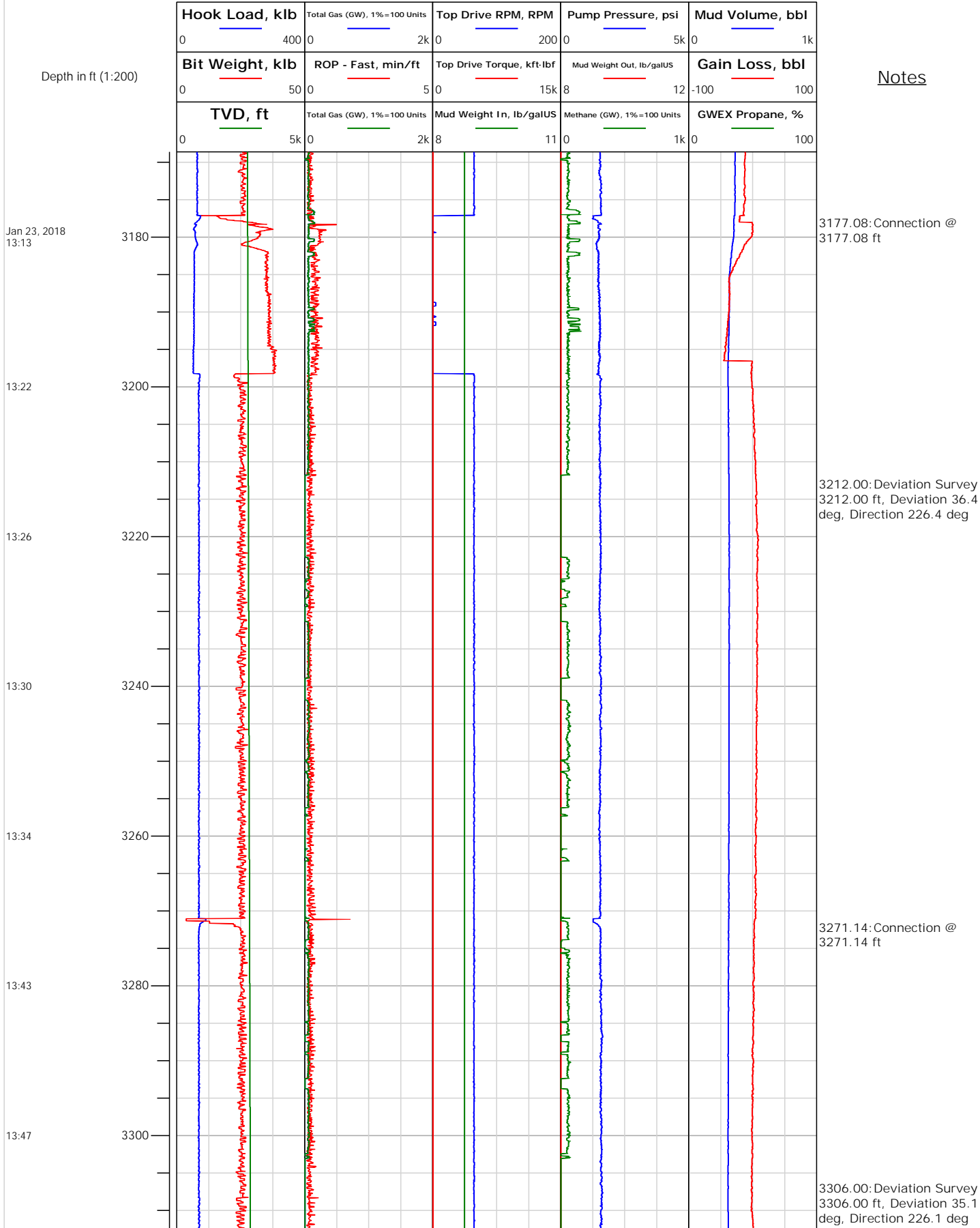
# Electronic Drilling Recorder

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

**Well Name:** BRUTON FEDERAL 30-19W  
**Rig:** 522

**Location:**

## Notes





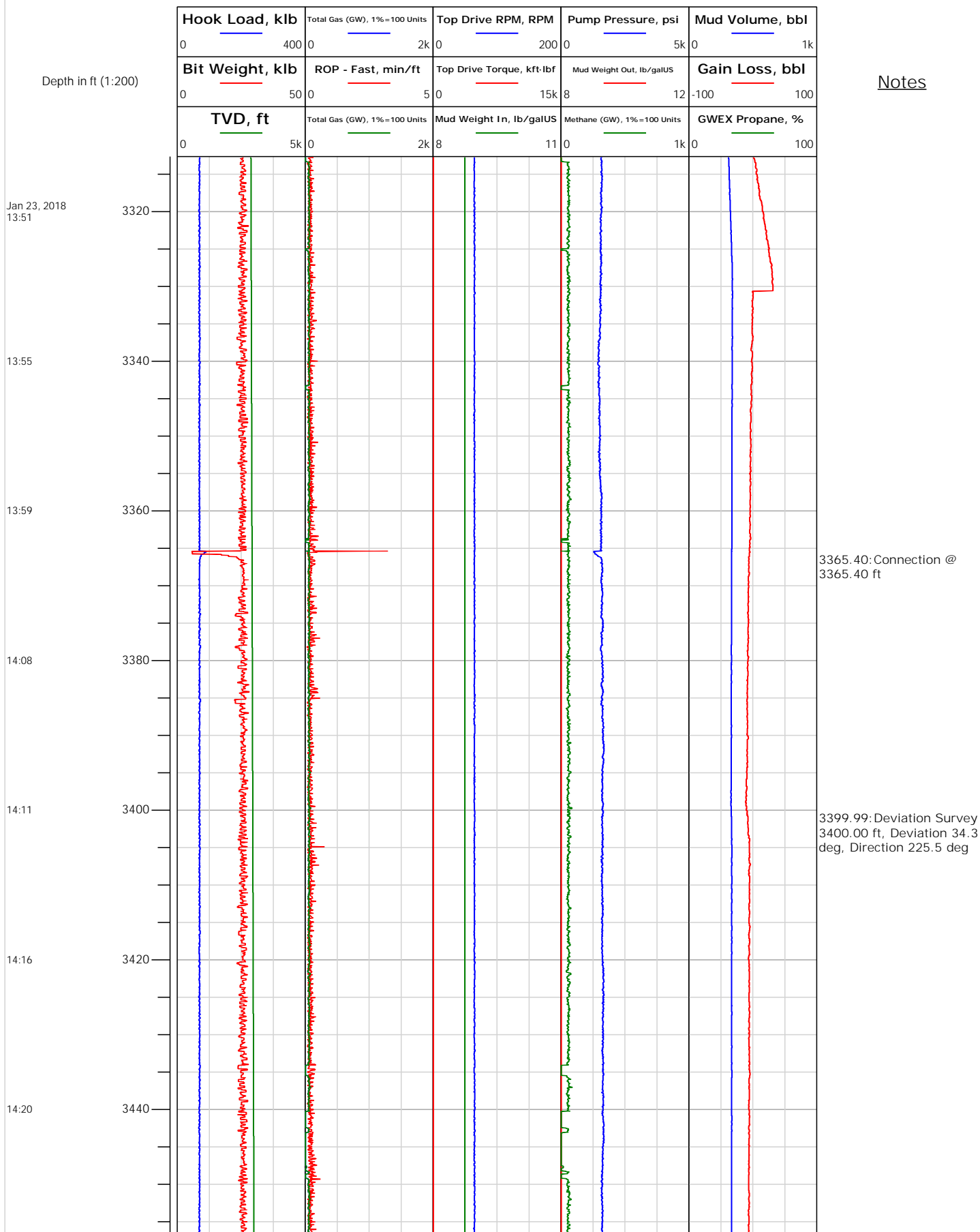
# Electronic Drilling Recorder

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

**Well Name:** BRUTON FEDERAL 30-19W  
**Rig:** 522

**Location:**

Notes





# Electronic Drilling Recorder

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

**Well Name:** BRUTON FEDERAL 30-19W  
**Rig:** 522

**Location:**

## Notes





# Electronic Drilling Recorder

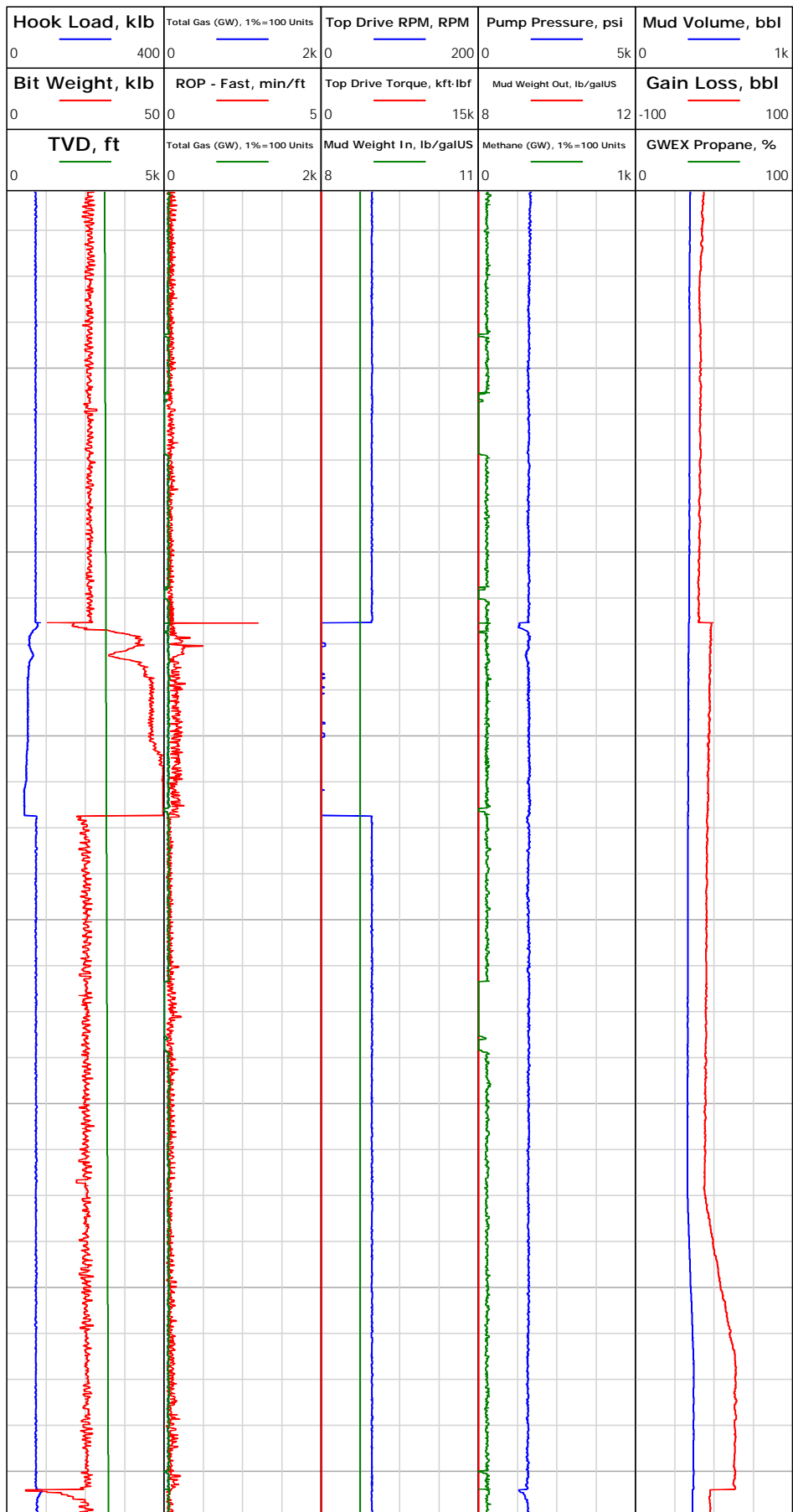
**Operator:** Laramie Energy  
**Contractor:** Helmerich & Payne Drlg Co

**Well Name:** BRUTON FEDERAL 30-19W  
**Rig:** 522

**Location:**

Notes

Depth in ft (1:200)







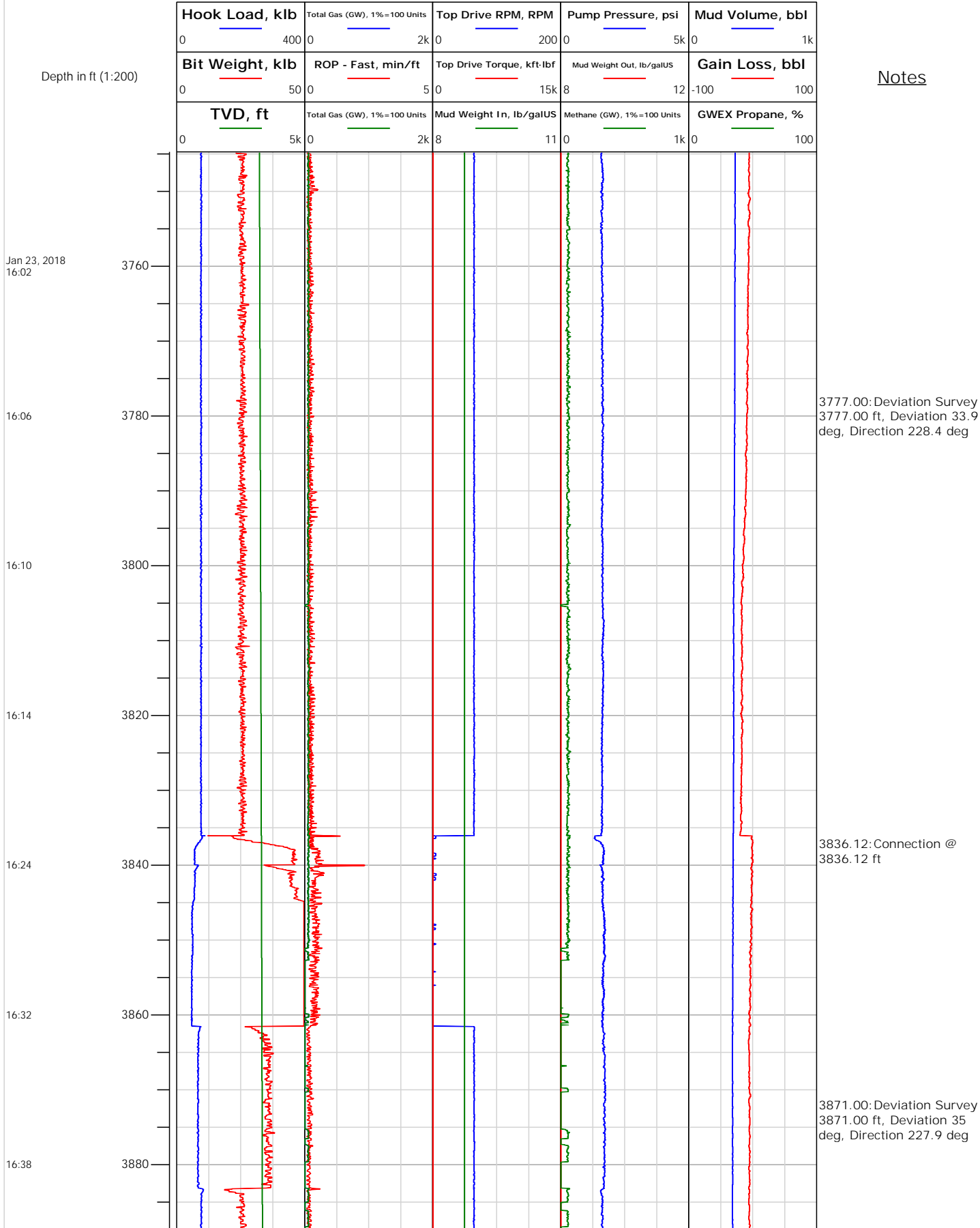
# Electronic Drilling Recorder

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

**Well Name:** BRUTON FEDERAL 30-19W  
**Rig:** 522

**Location:**

Notes





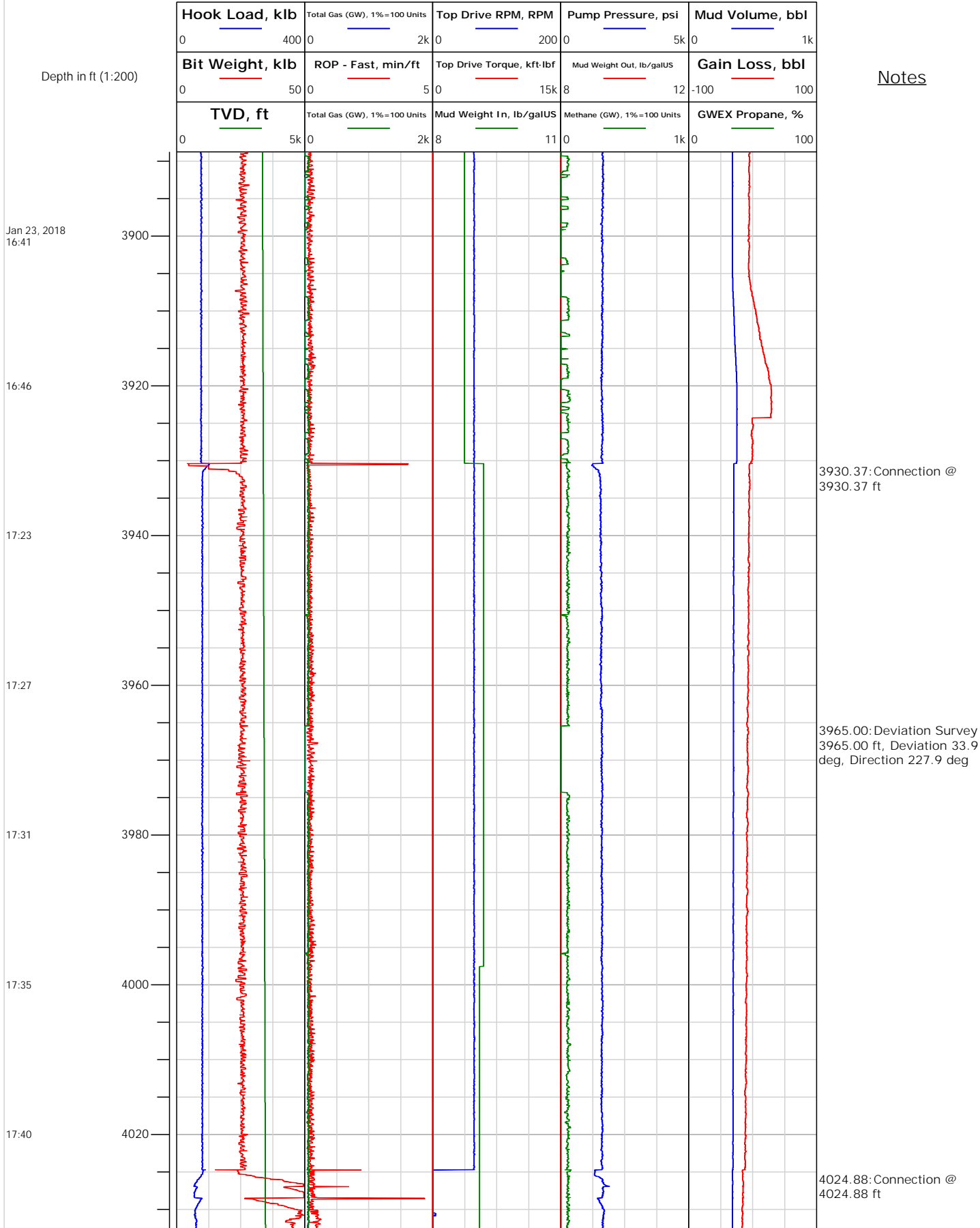
# Electronic Drilling Recorder

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

**Well Name:** BRUTON FEDERAL 30-19W  
**Rig:** 522

**Location:**

Notes





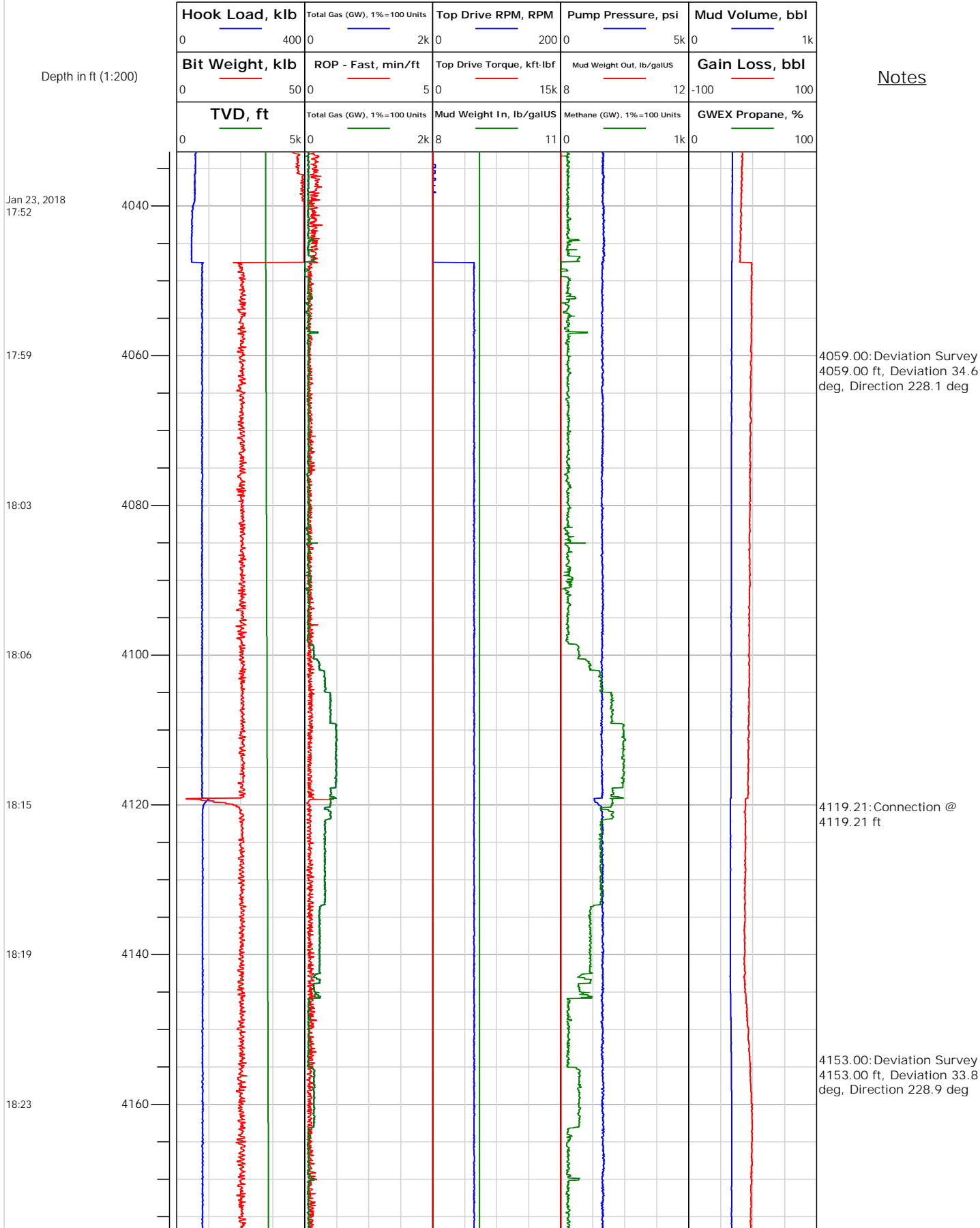
# Electronic Drilling Recorder

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

**Well Name:** BRUTON FEDERAL 30-19W  
**Rig:** 522

**Location:**

## Notes





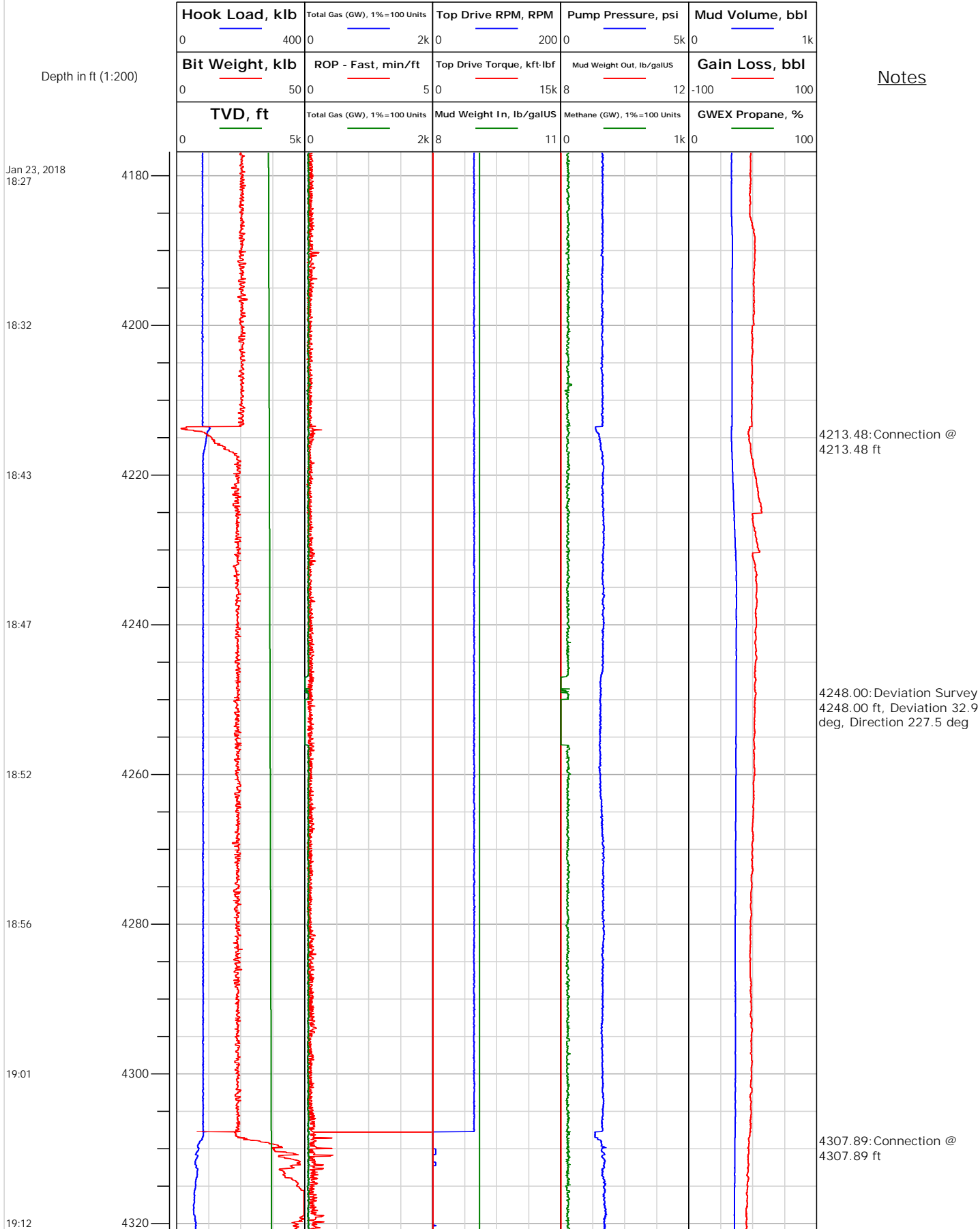
# Electronic Drilling Recorder

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

**Well Name:** BRUTON FEDERAL 30-19W  
**Rig:** 522

**Location:**

Notes





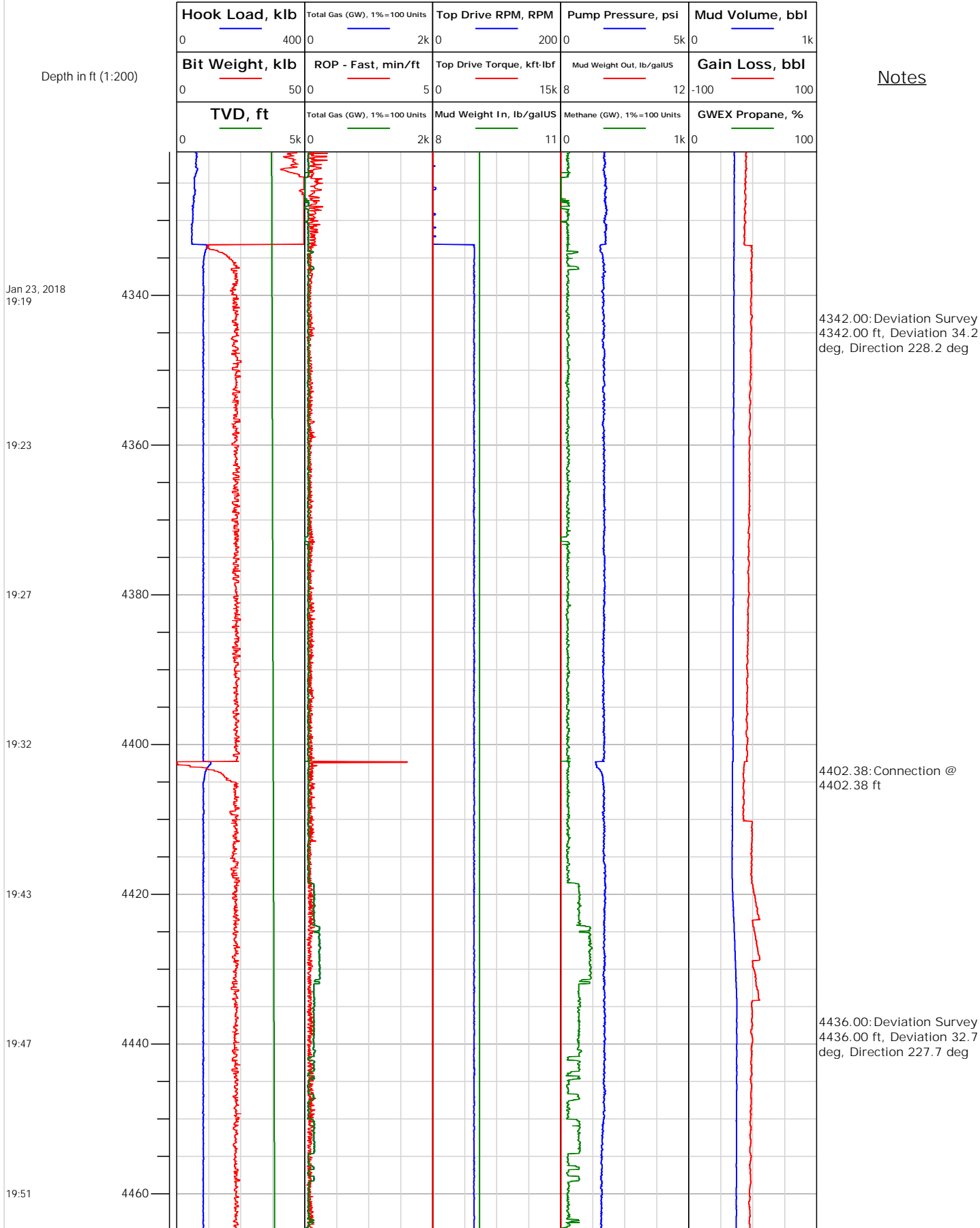
# Electronic Drilling Recorder

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

**Well Name:** BRUTON FEDERAL 30-19W  
**Rig:** 522

**Location:**

## Notes





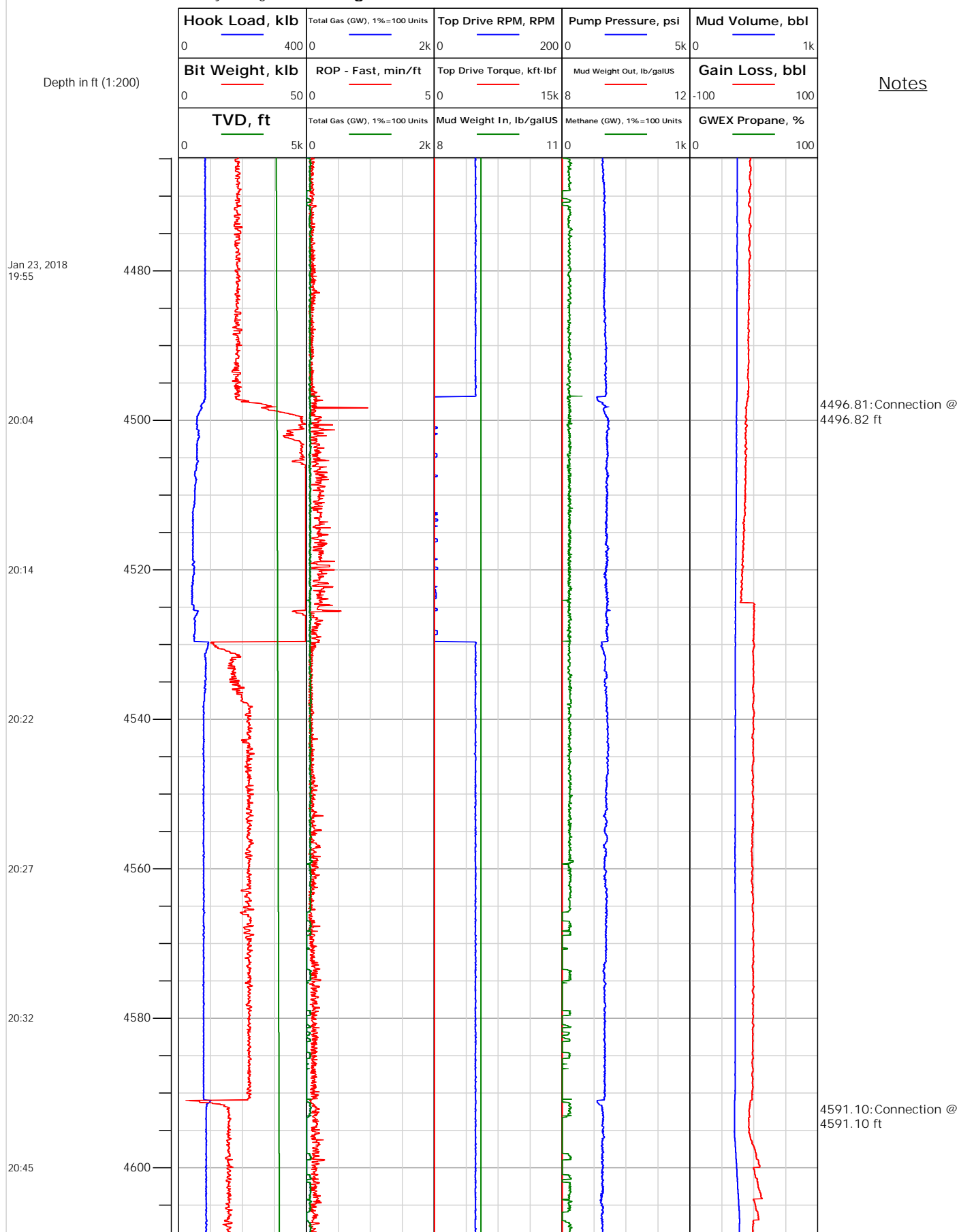
## Electronic Drilling Recorder

Operator: Laramie Energy  
Contractor: Helmerich & Payne Drlg Co

Well Name: BRUTON FEDERAL 30-19W  
Rig: 522

Location:

Notes





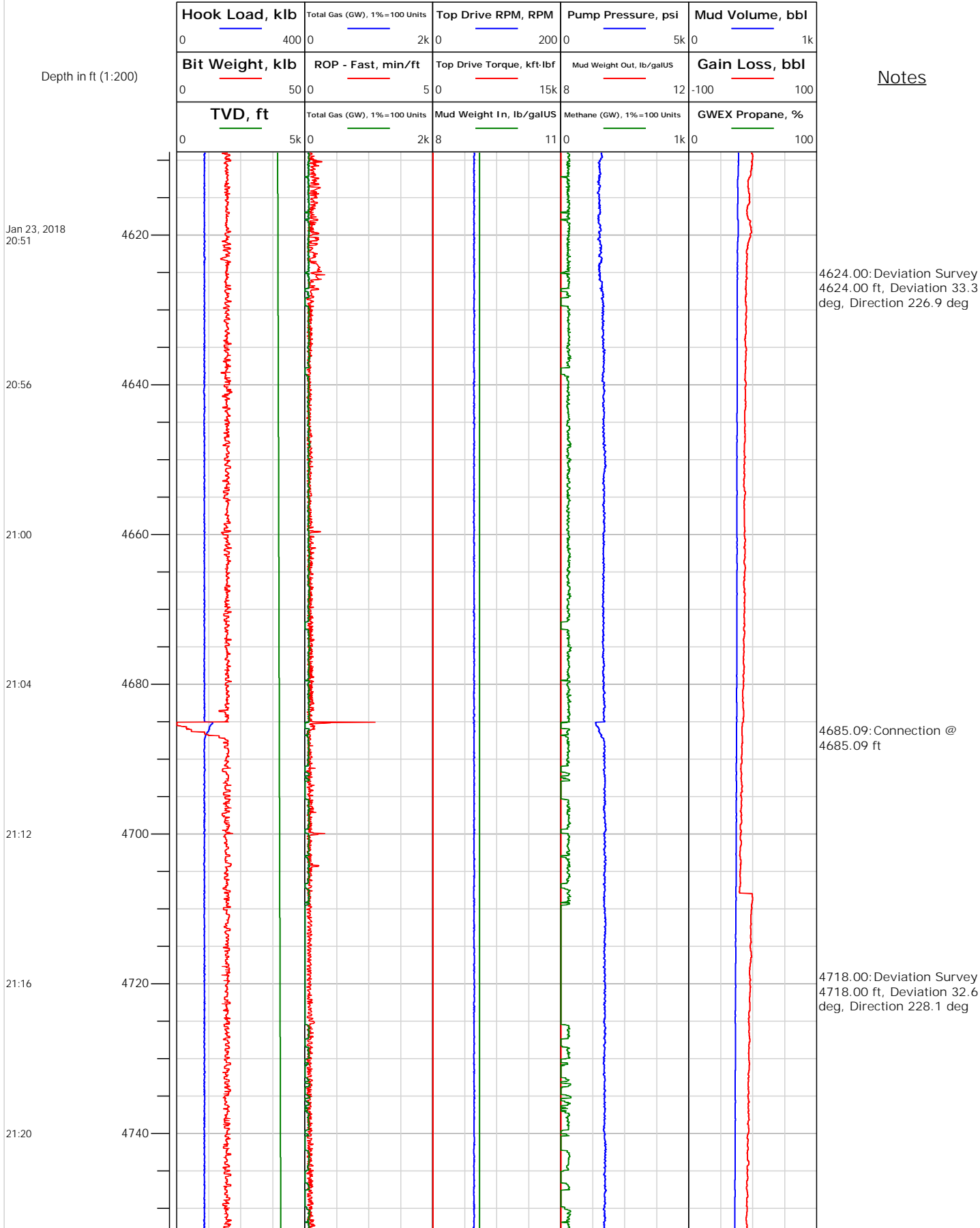
# Electronic Drilling Recorder

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

**Well Name:** BRUTON FEDERAL 30-19W  
**Rig:** 522

**Location:**

## Notes





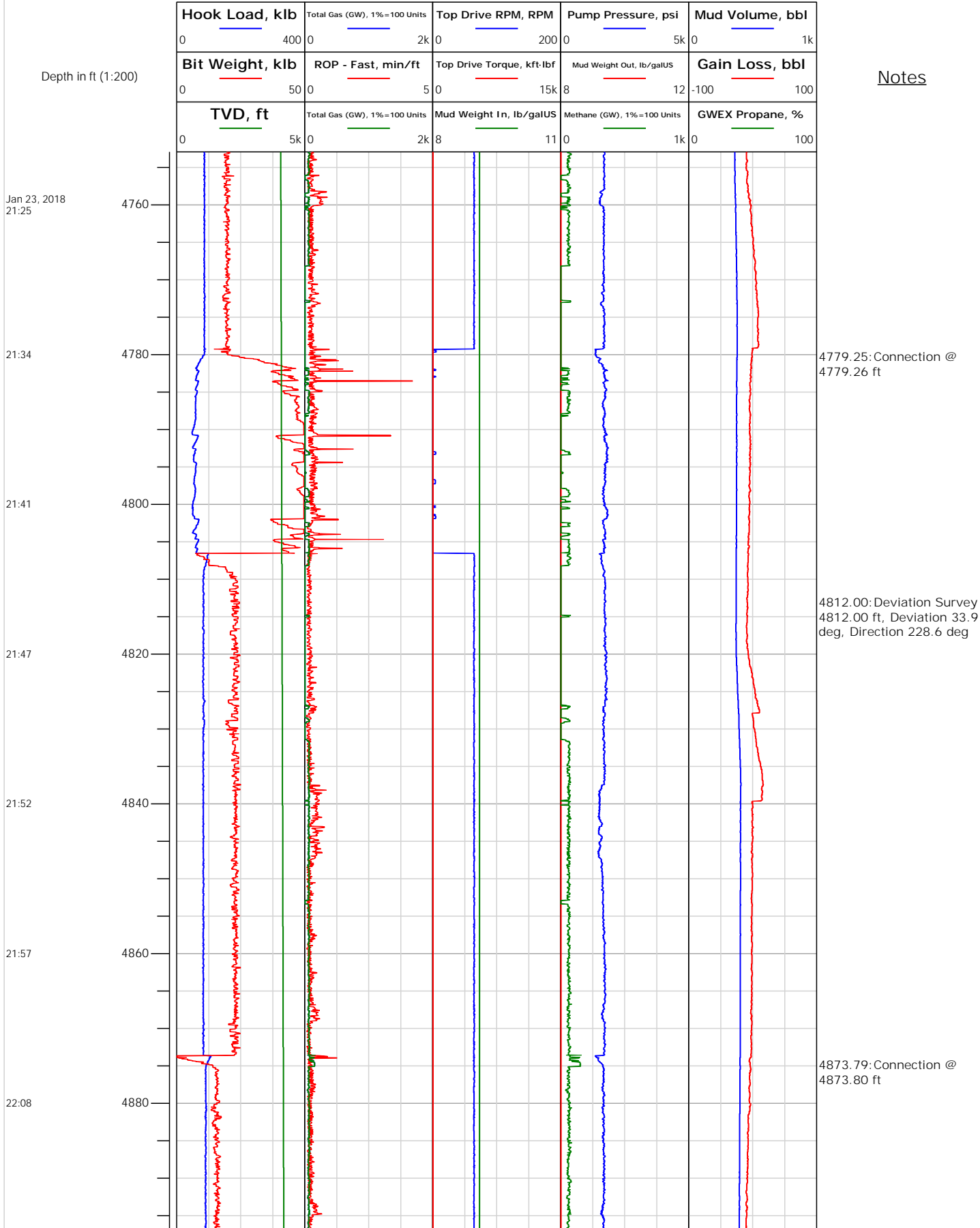
# Electronic Drilling Recorder

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

**Well Name:** BRUTON FEDERAL 30-19W  
**Rig:** 522

**Location:**

## Notes







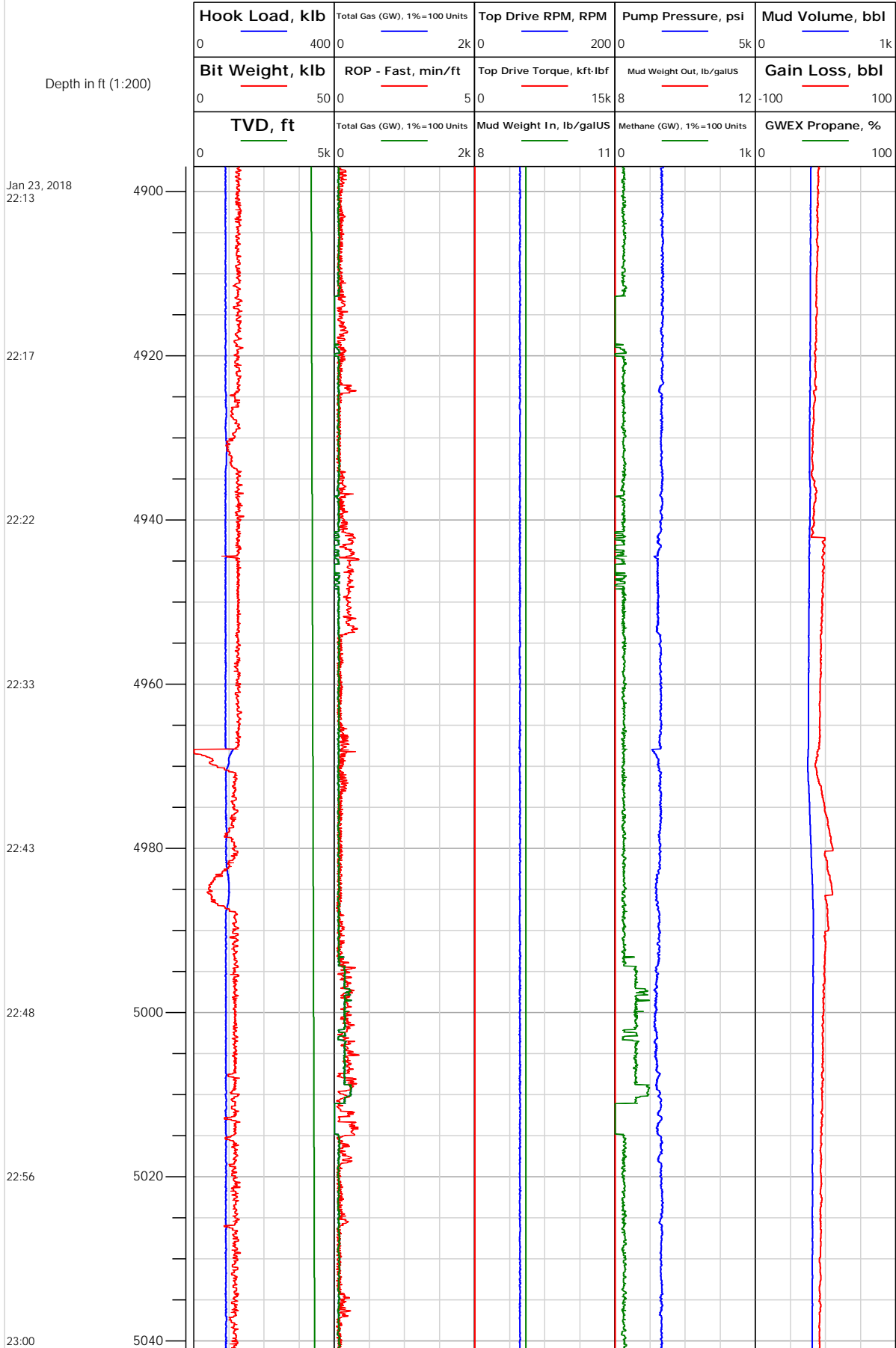
# Electronic Drilling Recorder

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

**Well Name:** BRUTON FEDERAL 30-19W  
**Rig:** 522

**Location:**

## Notes



4907.00: Deviation Survey  
4907.00 ft, Deviation 32.9  
deg, Direction 228.1 deg

4967.99: Connection @  
4967.99 ft

5001.00: Deviation Survey  
5001.00 ft, Deviation 32.1  
deg, Direction 226.1 deg



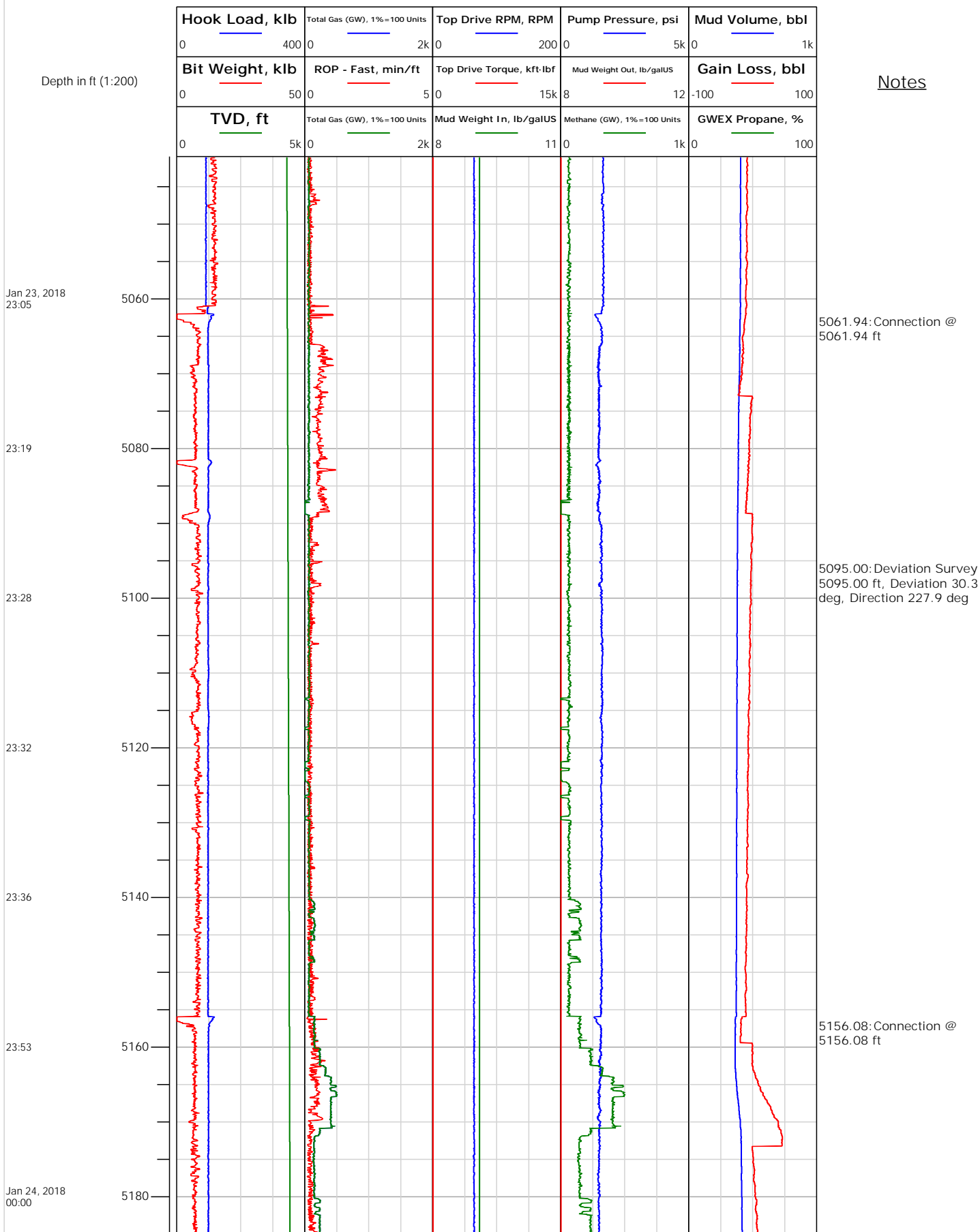
# Electronic Drilling Recorder

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

**Well Name:** BRUTON FEDERAL 30-19W  
**Rig:** 522

**Location:**

## Notes





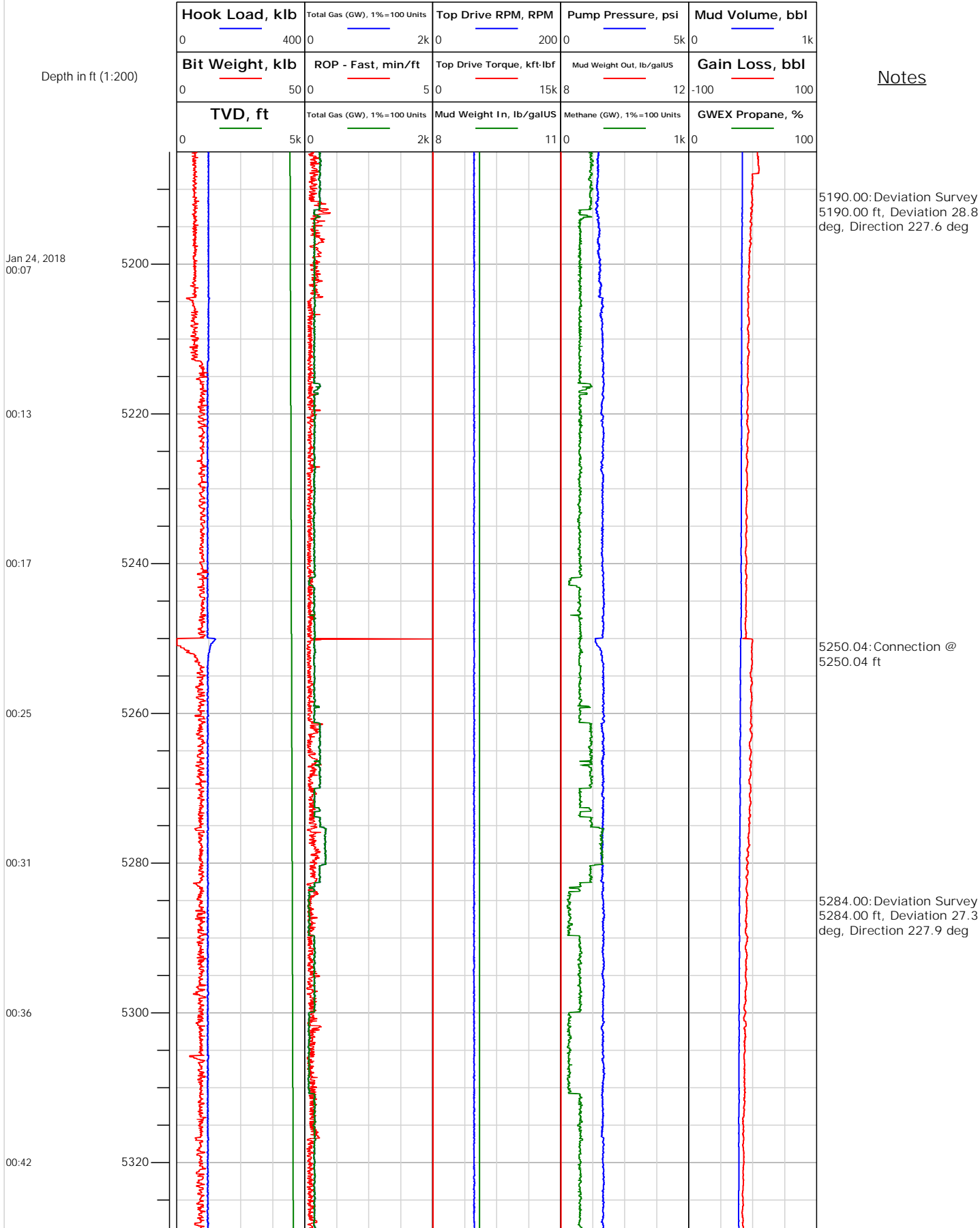
# Electronic Drilling Recorder

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

**Well Name:** BRUTON FEDERAL 30-19W  
**Rig:** 522

**Location:**

## Notes





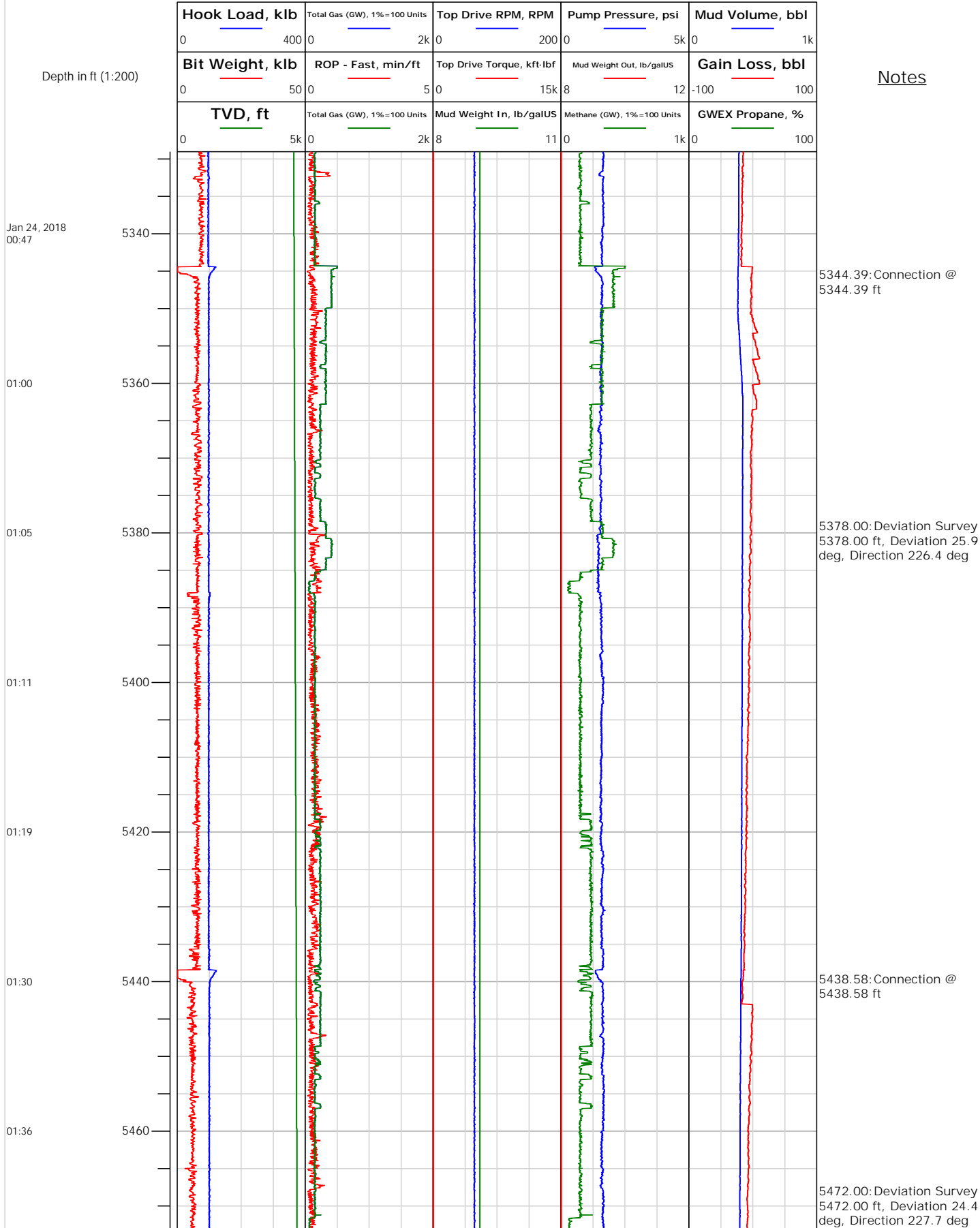
# Electronic Drilling Recorder

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

**Well Name:** BRUTON FEDERAL 30-19W  
**Rig:** 522

**Location:**

Notes





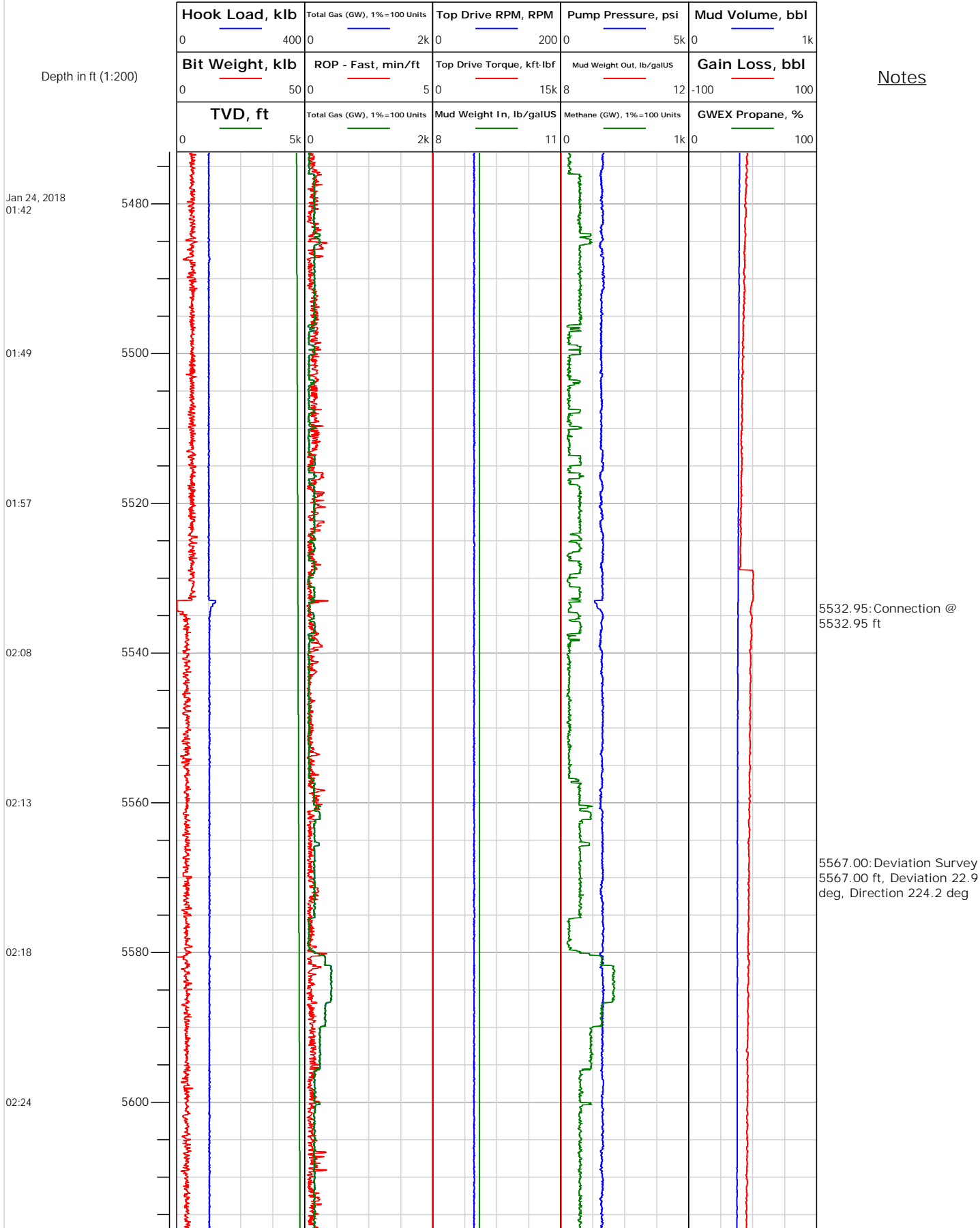
# Electronic Drilling Recorder

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

**Well Name:** BRUTON FEDERAL 30-19W  
**Rig:** 522

**Location:**

Notes





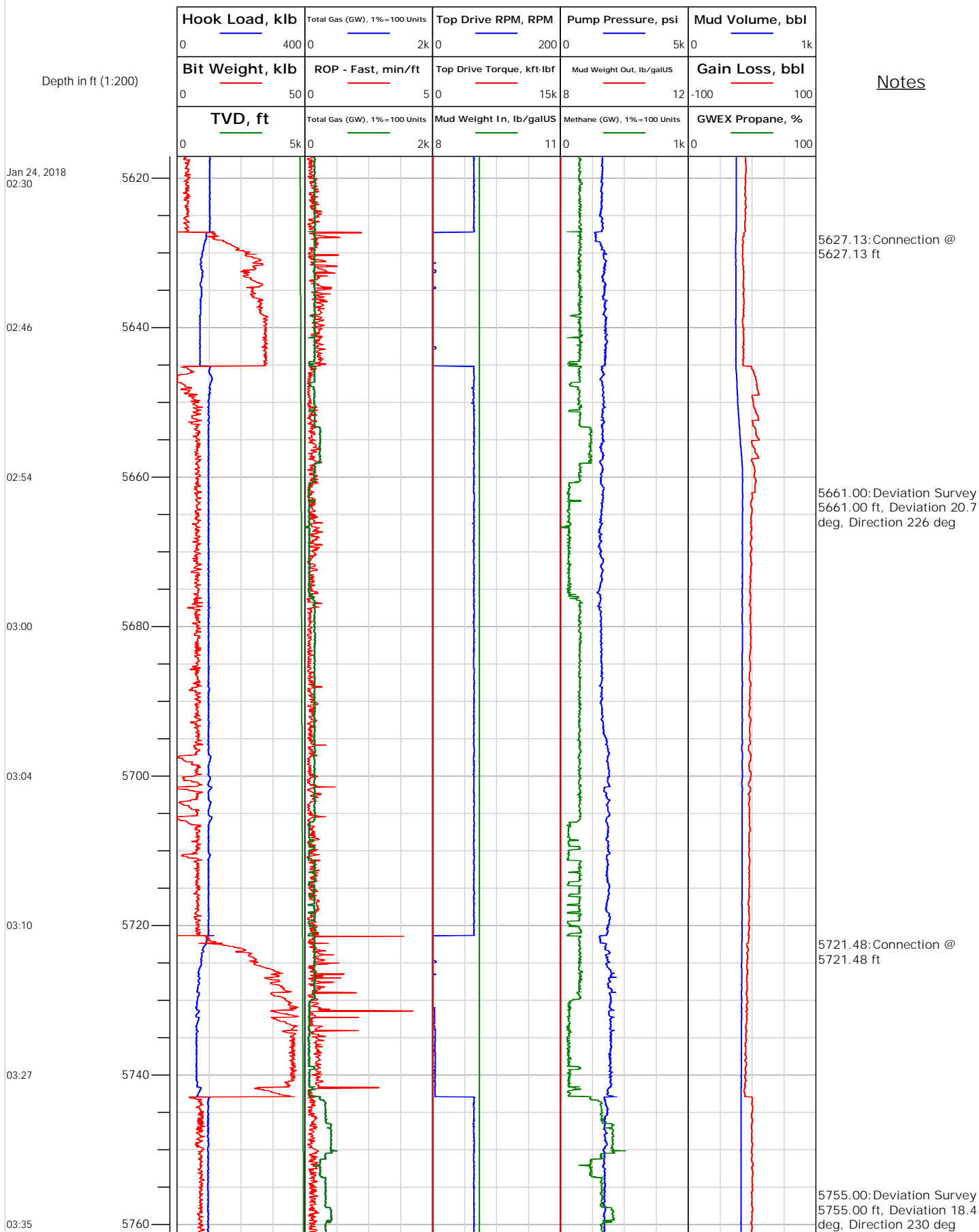
# Electronic Drilling Recorder

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

**Well Name:** BRUTON FEDERAL 30-19W  
**Rig:** 522

**Location:**

## Notes





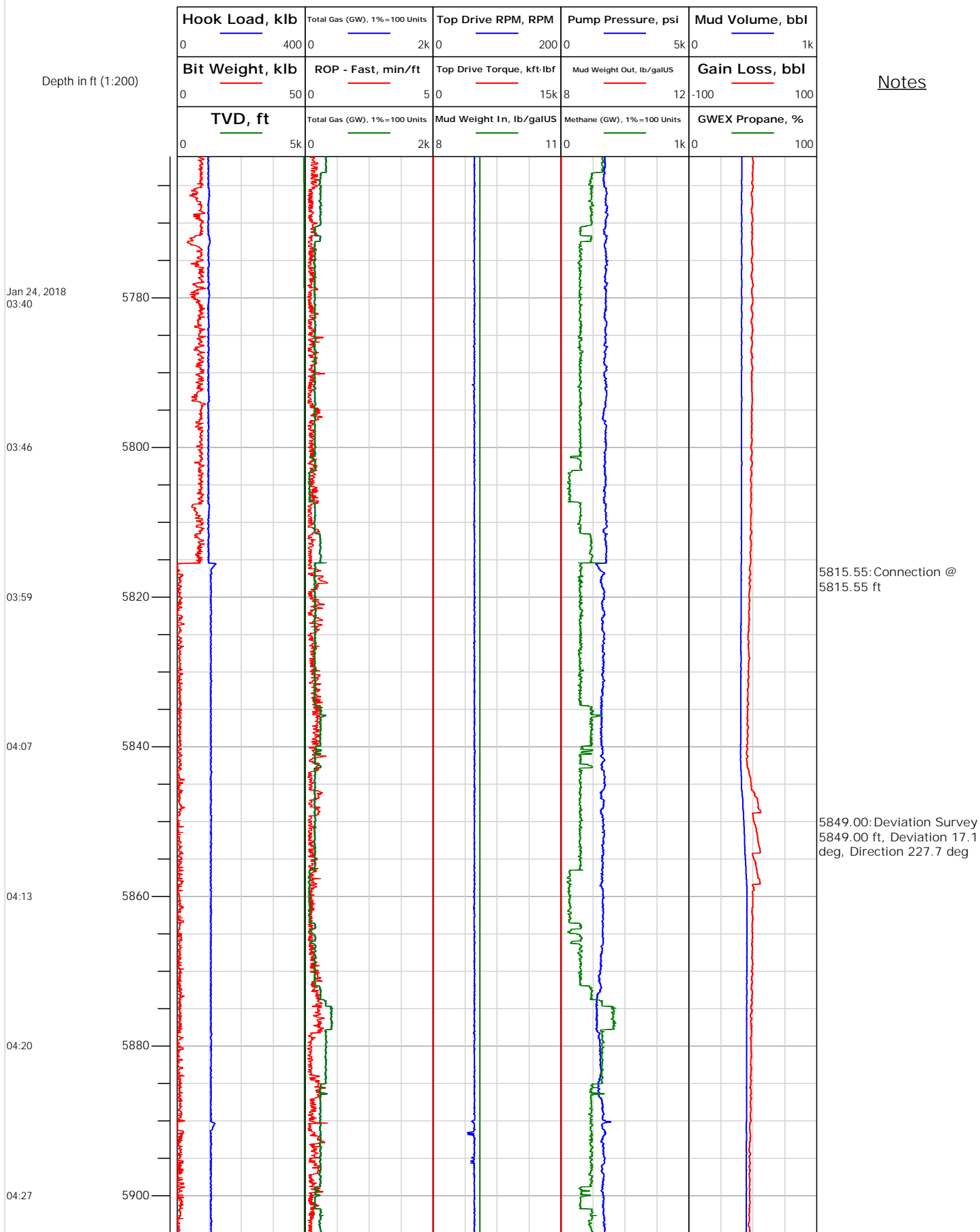
# Electronic Drilling Recorder

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

**Well Name:** BRUTON FEDERAL 30-19W  
**Rig:** 522

**Location:**

Notes





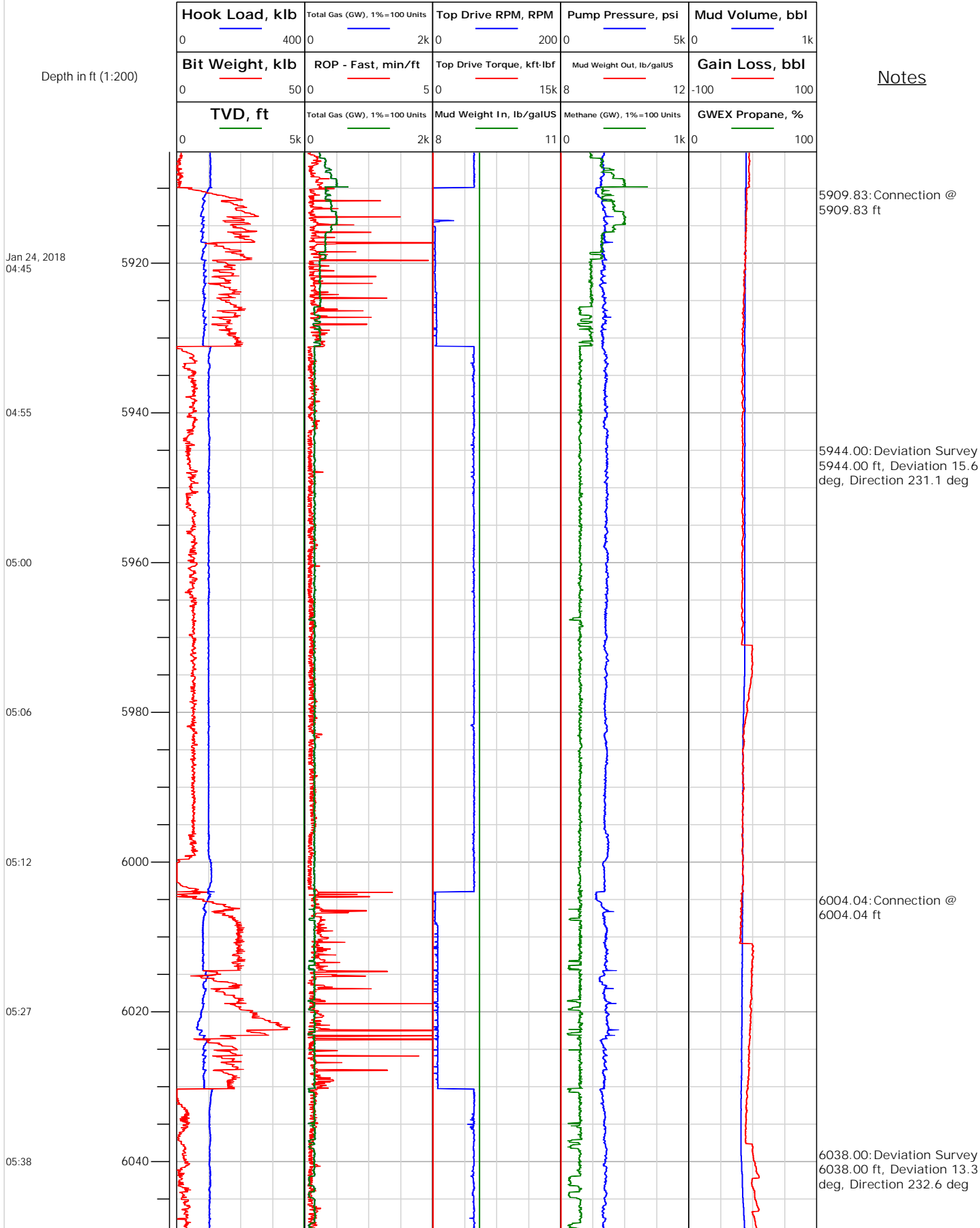
# Electronic Drilling Recorder

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

**Well Name:** BRUTON FEDERAL 30-19W  
**Rig:** 522

**Location:**

## Notes







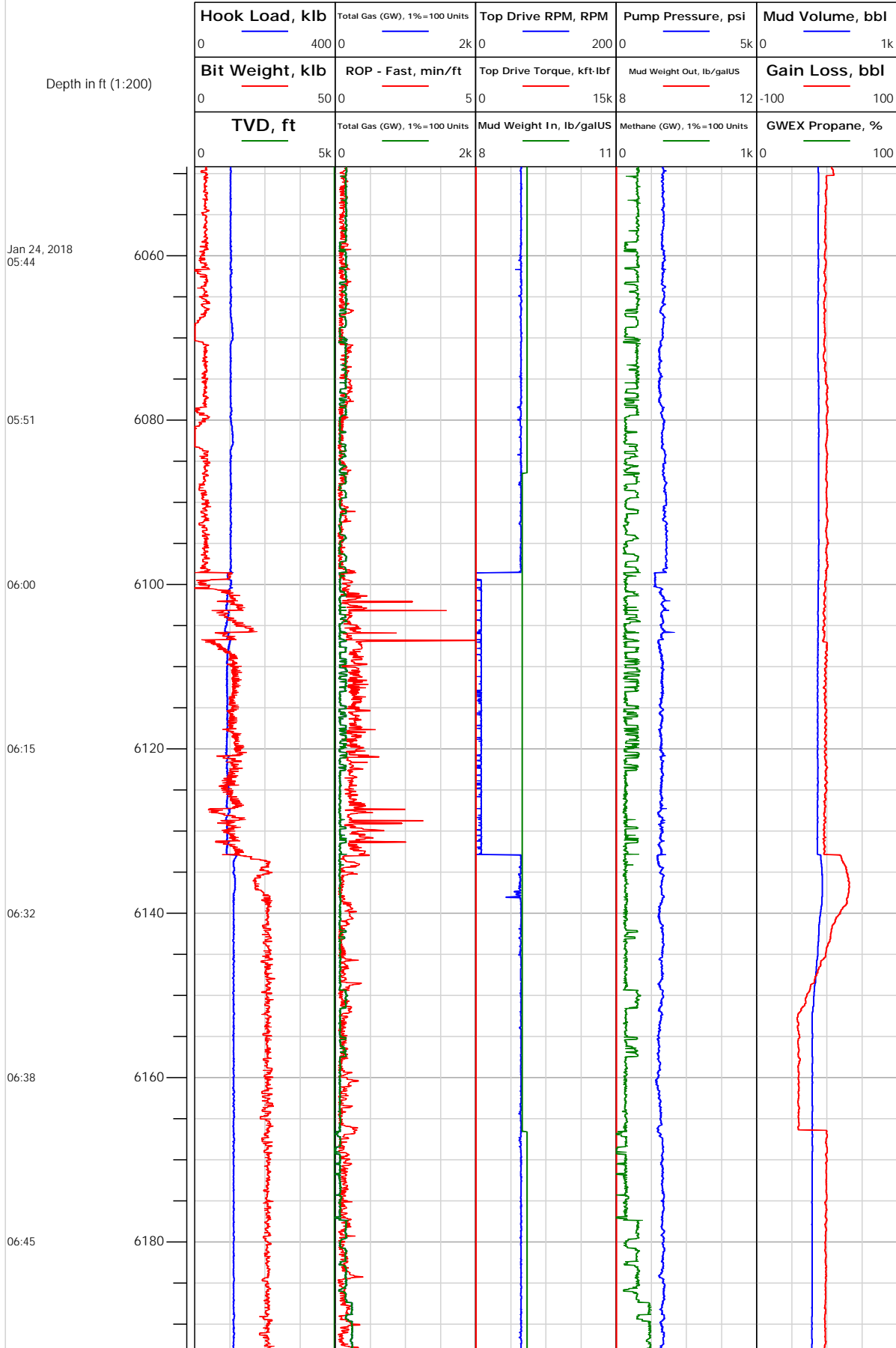
# Electronic Drilling Recorder

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

**Well Name:** BRUTON FEDERAL 30-19W  
**Rig:** 522

**Location:**

Notes





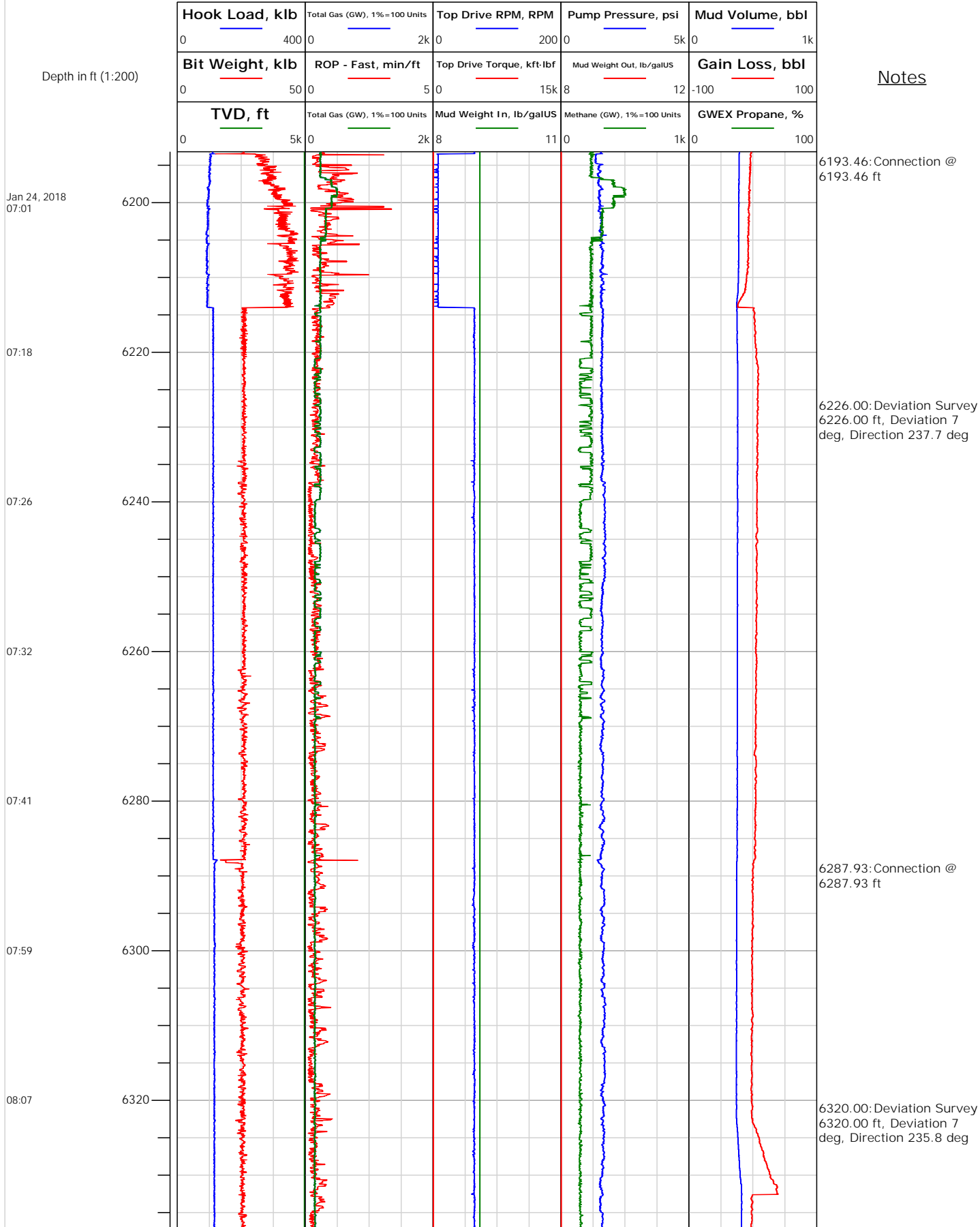
# Electronic Drilling Recorder

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

**Well Name:** BRUTON FEDERAL 30-19W  
**Rig:** 522

**Location:**

## Notes





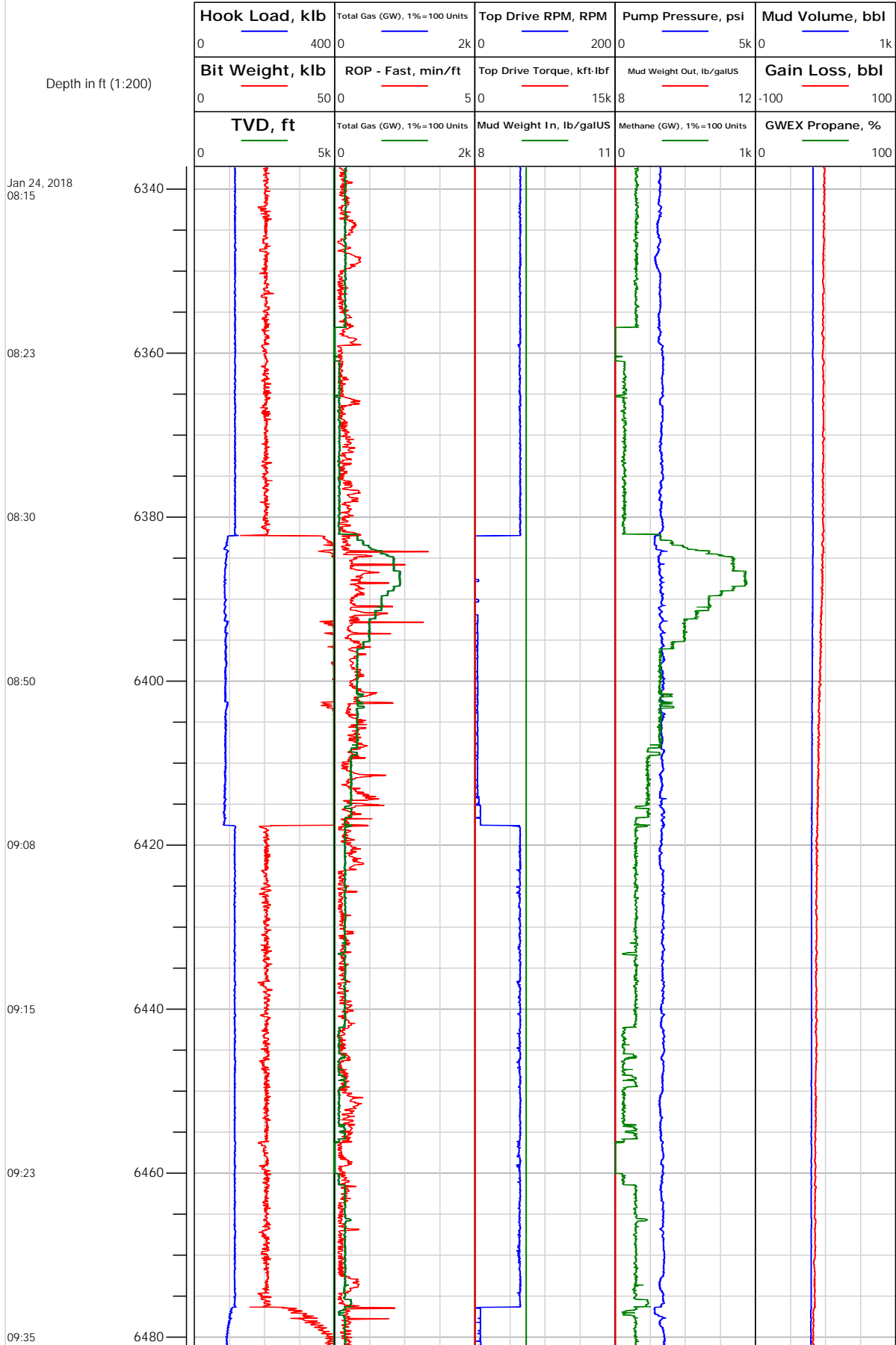
# Electronic Drilling Recorder

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

**Well Name:** BRUTON FEDERAL 30-19W  
**Rig:** 522

**Location:**

Notes





# Electronic Drilling Recorder

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

**Well Name:** BRUTON FEDERAL 30-19W  
**Rig:** 522

**Location:**

Notes

Depth in ft (1:200)

Jan 24, 2018  
09:49

10:01

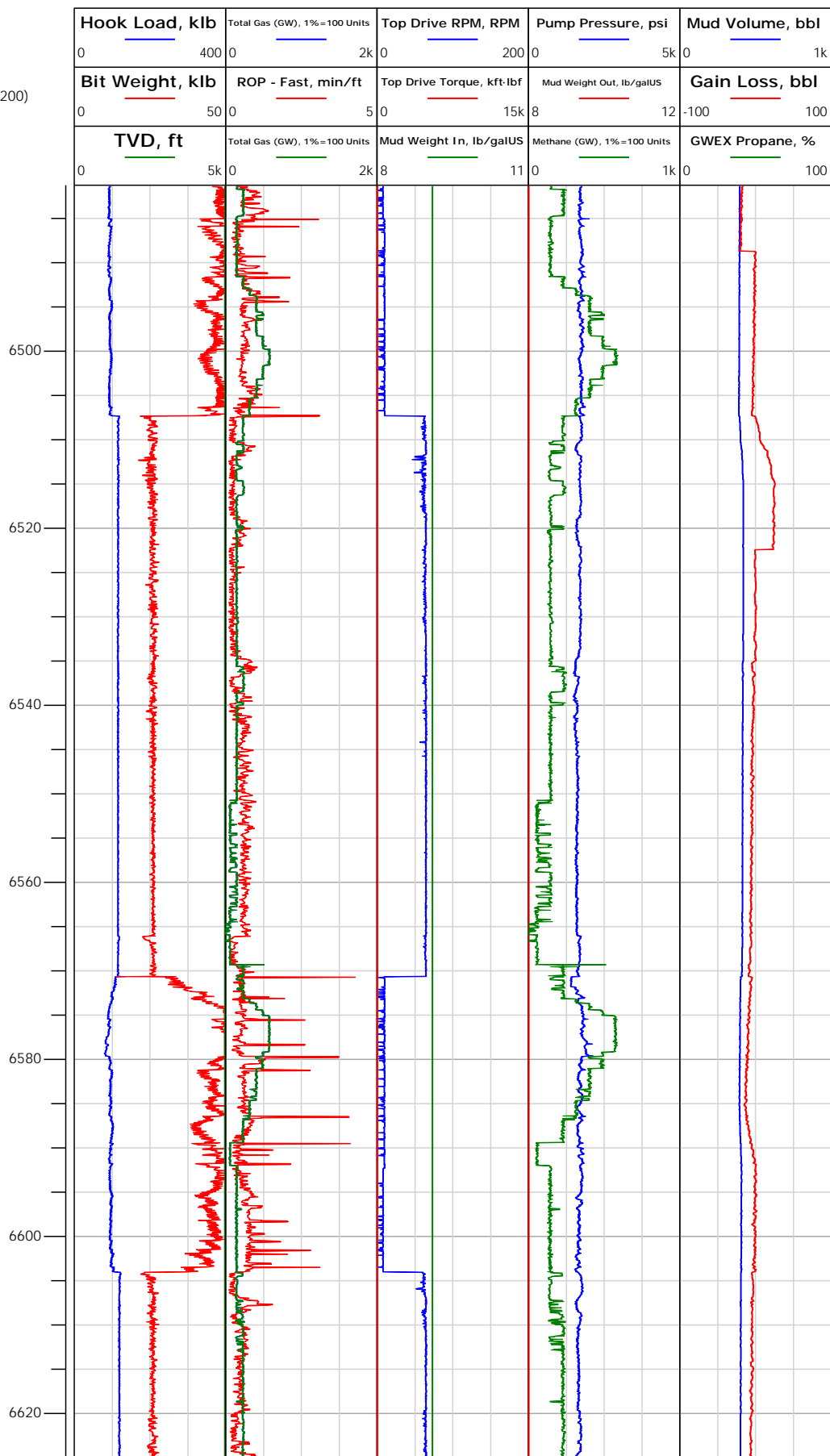
10:08

10:19

10:40

10:54

11:09





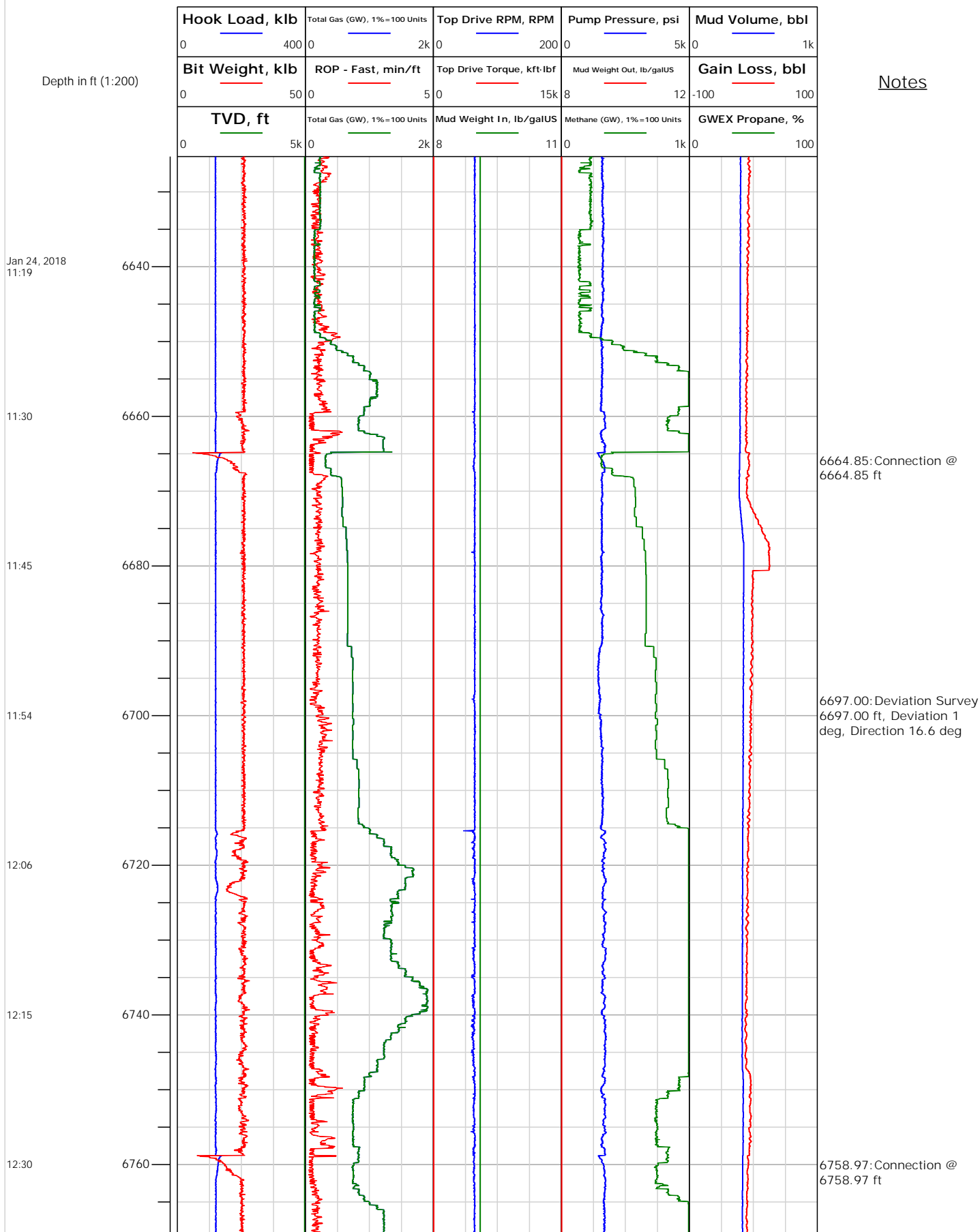
## Electronic Drilling Recorder

Operator: Laramie Energy  
Contractor: Helmerich & Payne Drlg Co

Well Name: BRUTON FEDERAL 30-19W  
Rig: 522

Location:

Notes





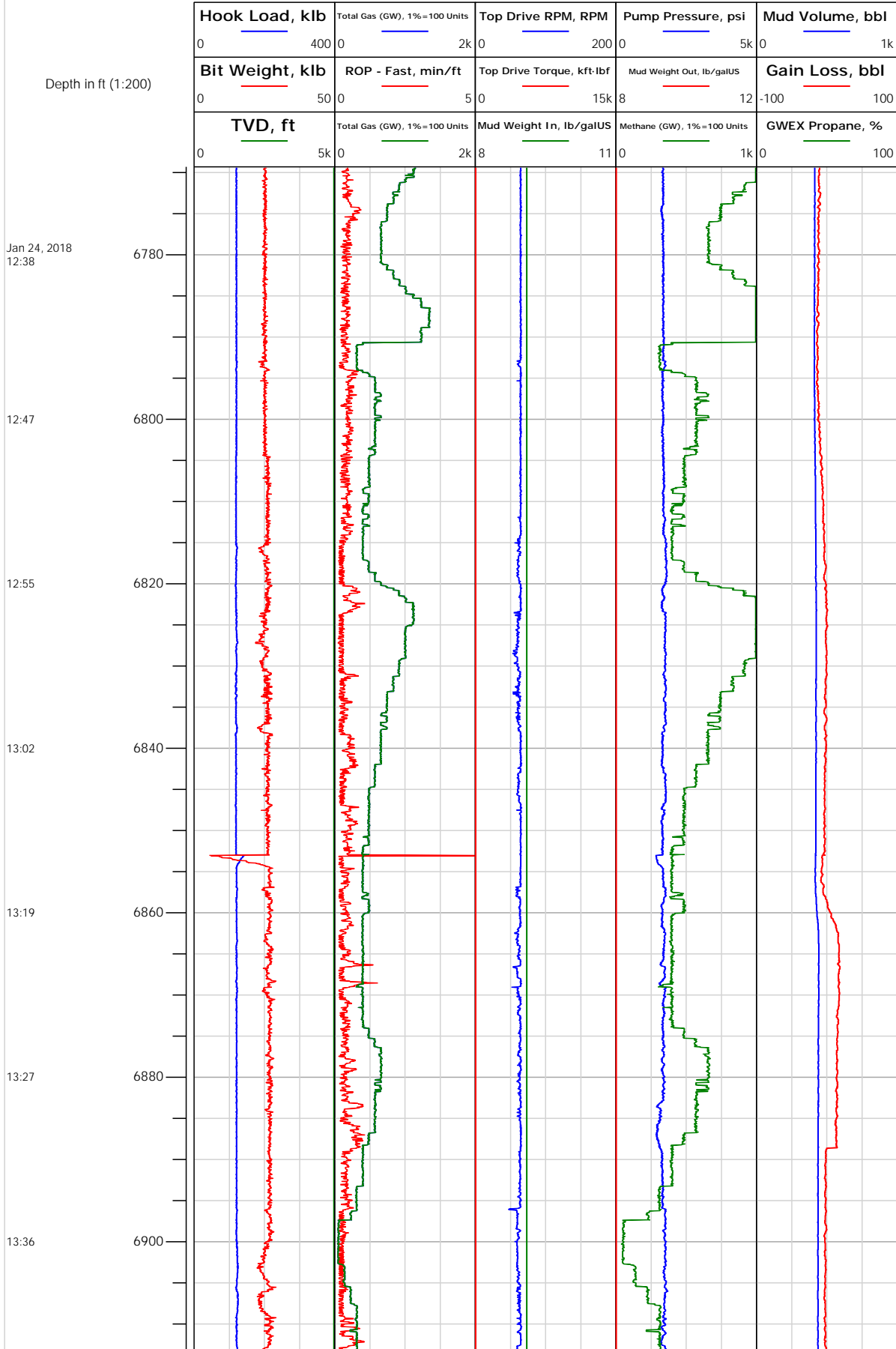
# Electronic Drilling Recorder

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

**Well Name:** BRUTON FEDERAL 30-19W  
**Rig:** 522

**Location:**

## Notes





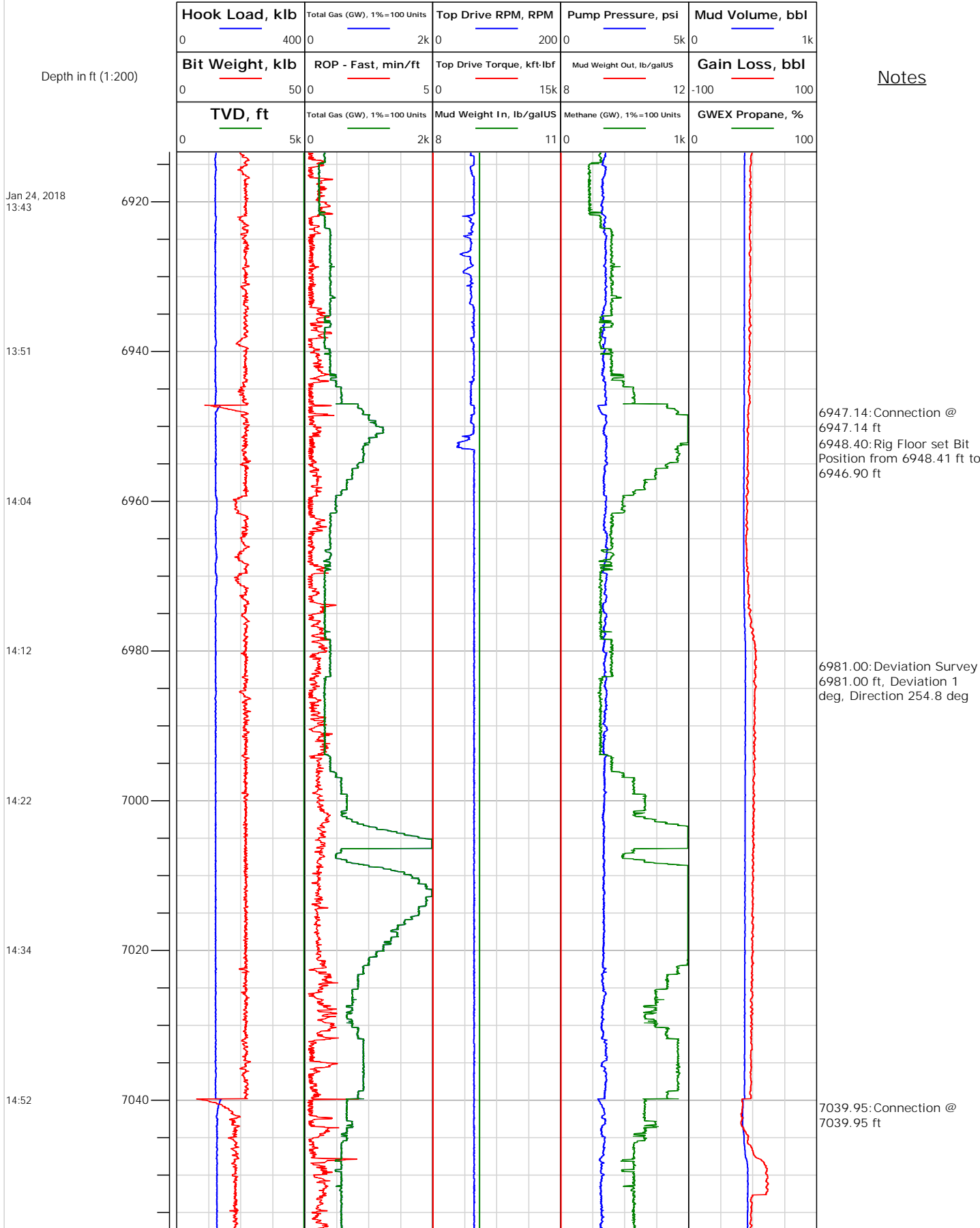
# Electronic Drilling Recorder

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**Contractor:** Helmerich & Payne Drlg Co

**Well Name:** BRUTON FEDERAL 30-19W  
**Rig:** 522

**Location:**

## Notes





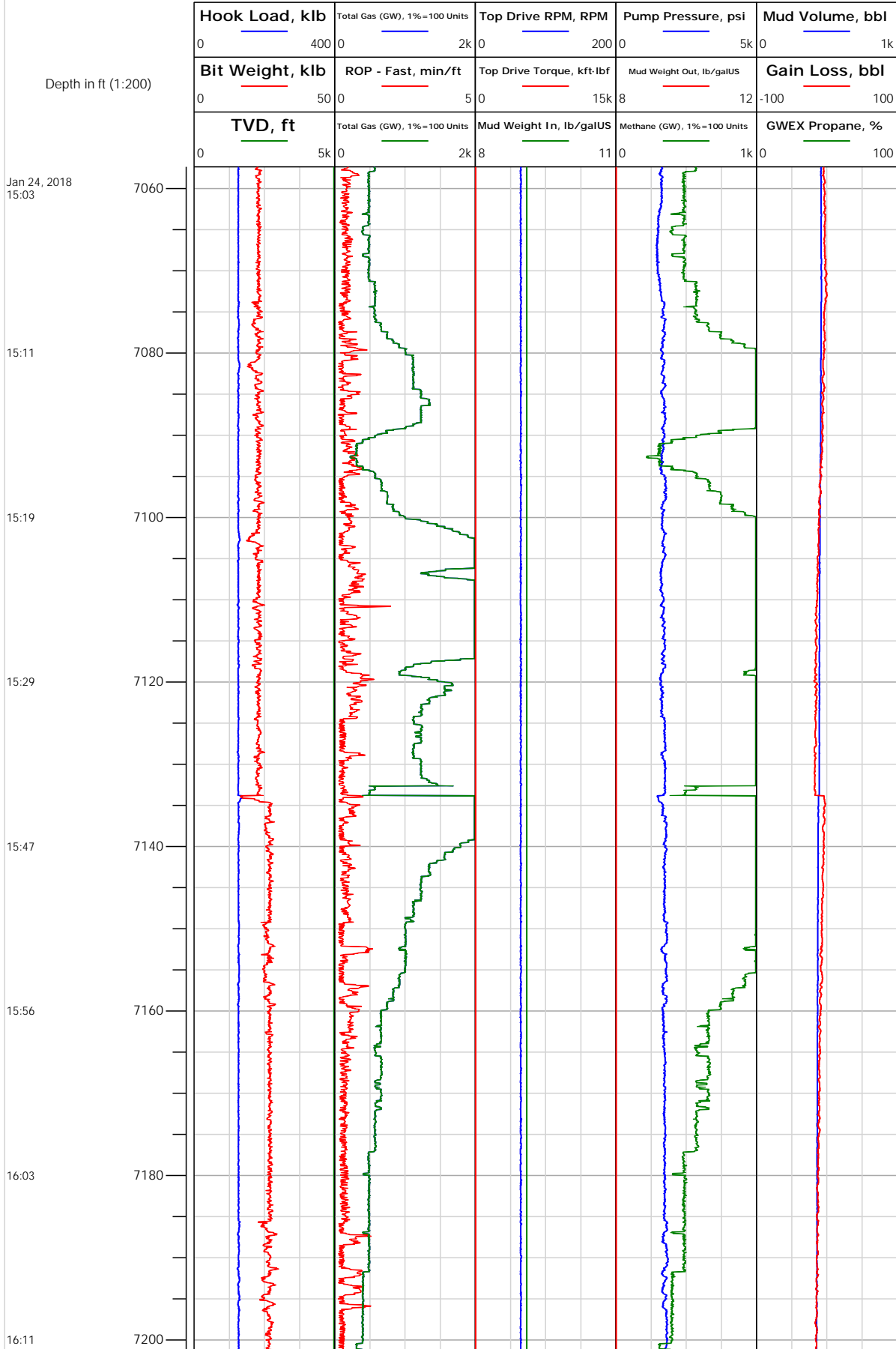
# Electronic Drilling Recorder

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

**Well Name:** BRUTON FEDERAL 30-19W  
**Rig:** 522

**Location:**

## Notes







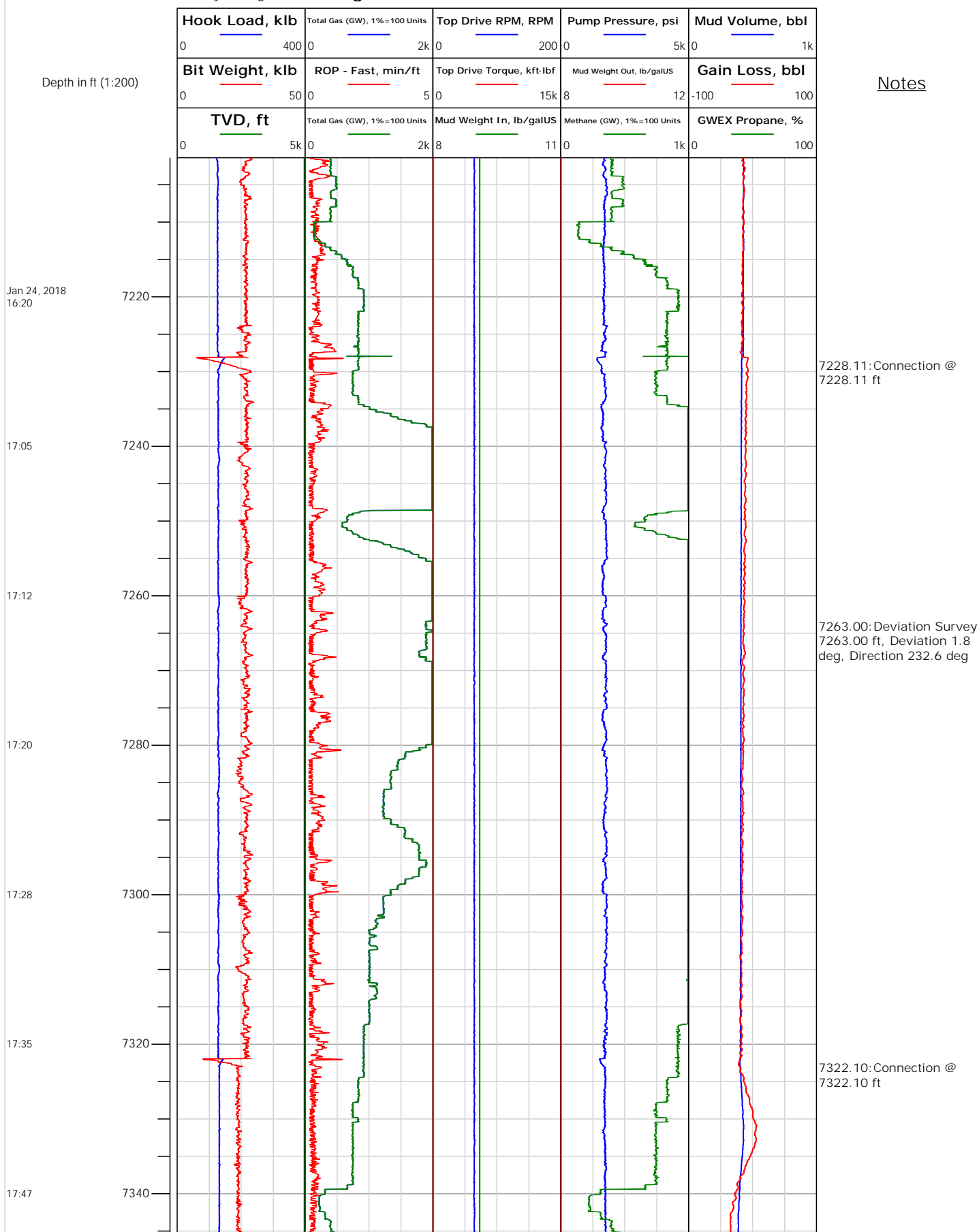
## Electronic Drilling Recorder

Operator: Laramie Energy  
Contractor: Helmerich & Payne Drlg Co

Well Name: BRUTON FEDERAL 30-19W  
Rig: 522

Location:

Notes





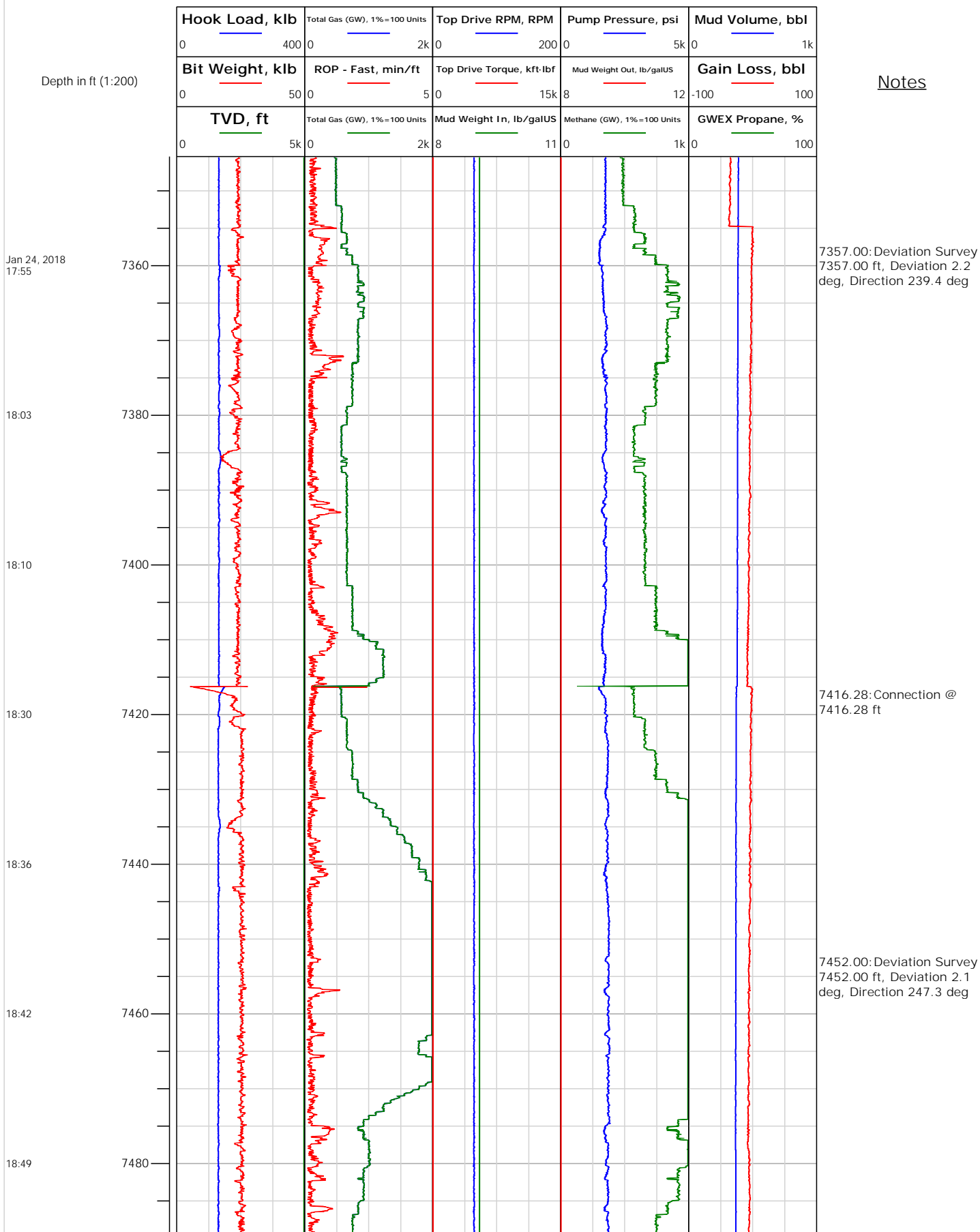
# Electronic Drilling Recorder

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

**Well Name:** BRUTON FEDERAL 30-19W  
**Rig:** 522

**Location:**

## Notes





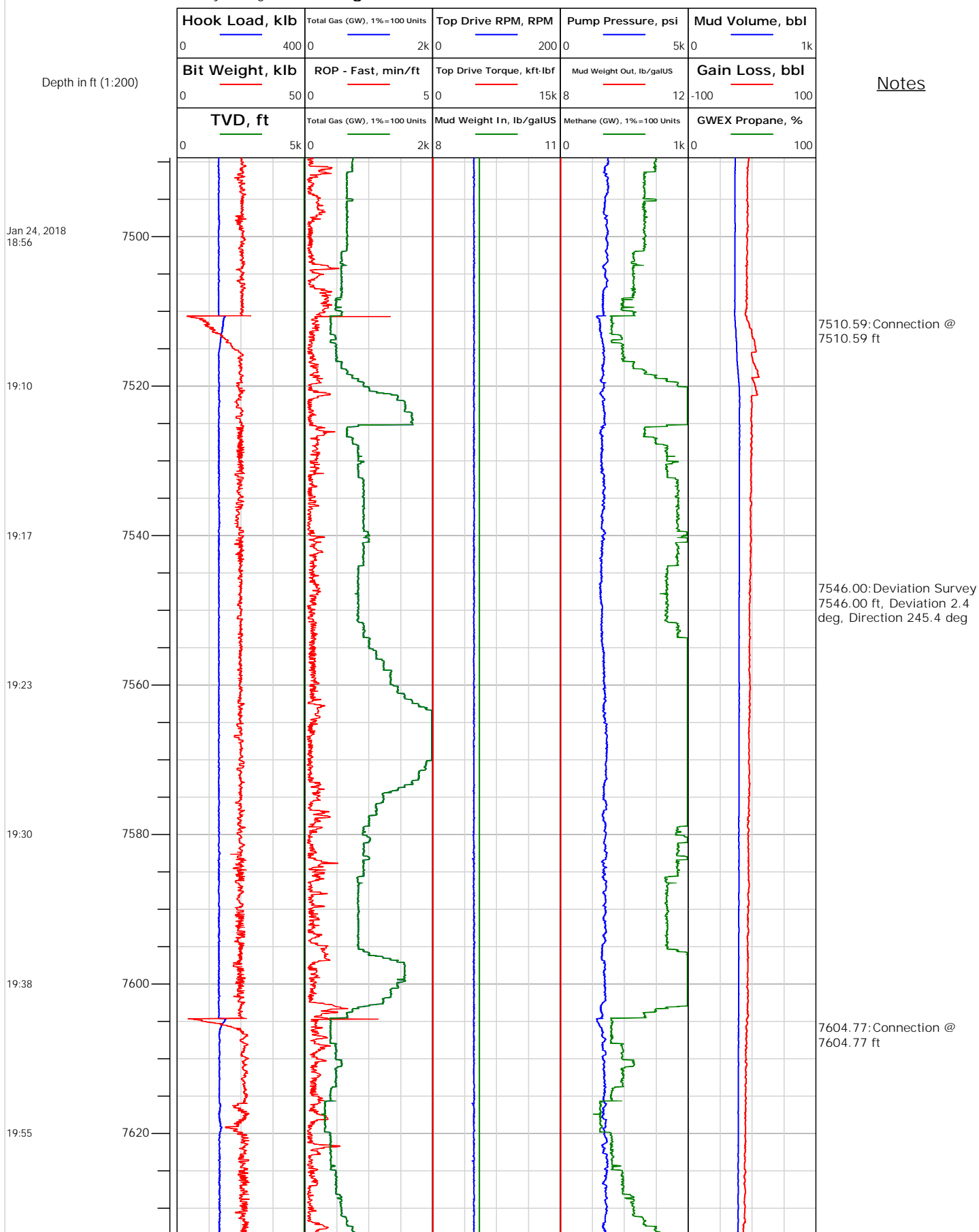
# Electronic Drilling Recorder

Operator: Laramie Energy  
Contractor: Helmerich & Payne Drlg Co

Well Name: BRUTON FEDERAL 30-19W  
Rig: 522

Location:

Notes





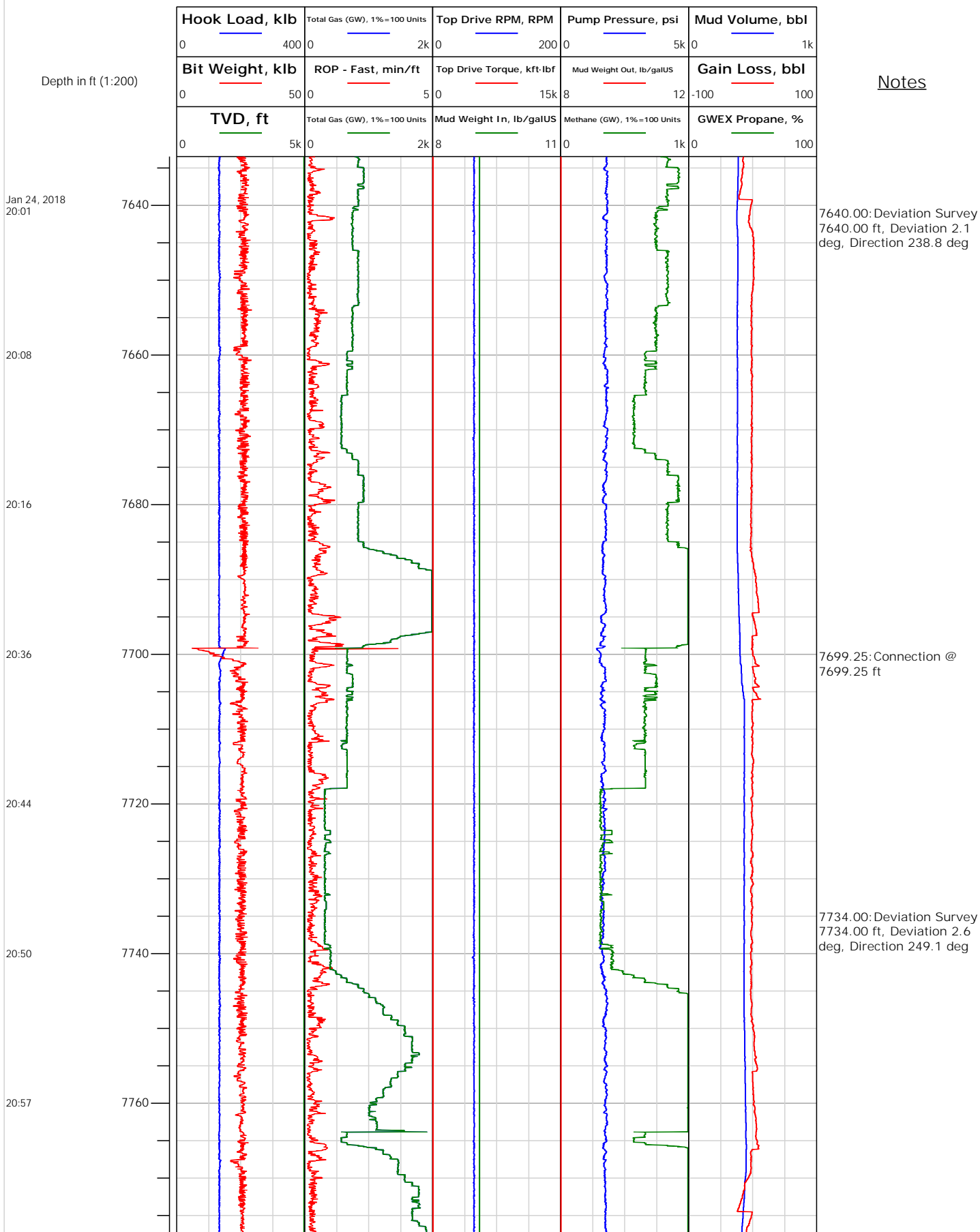
# Electronic Drilling Recorder

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

**Well Name:** BRUTON FEDERAL 30-19W  
**Rig:** 522

**Location:**

## Notes





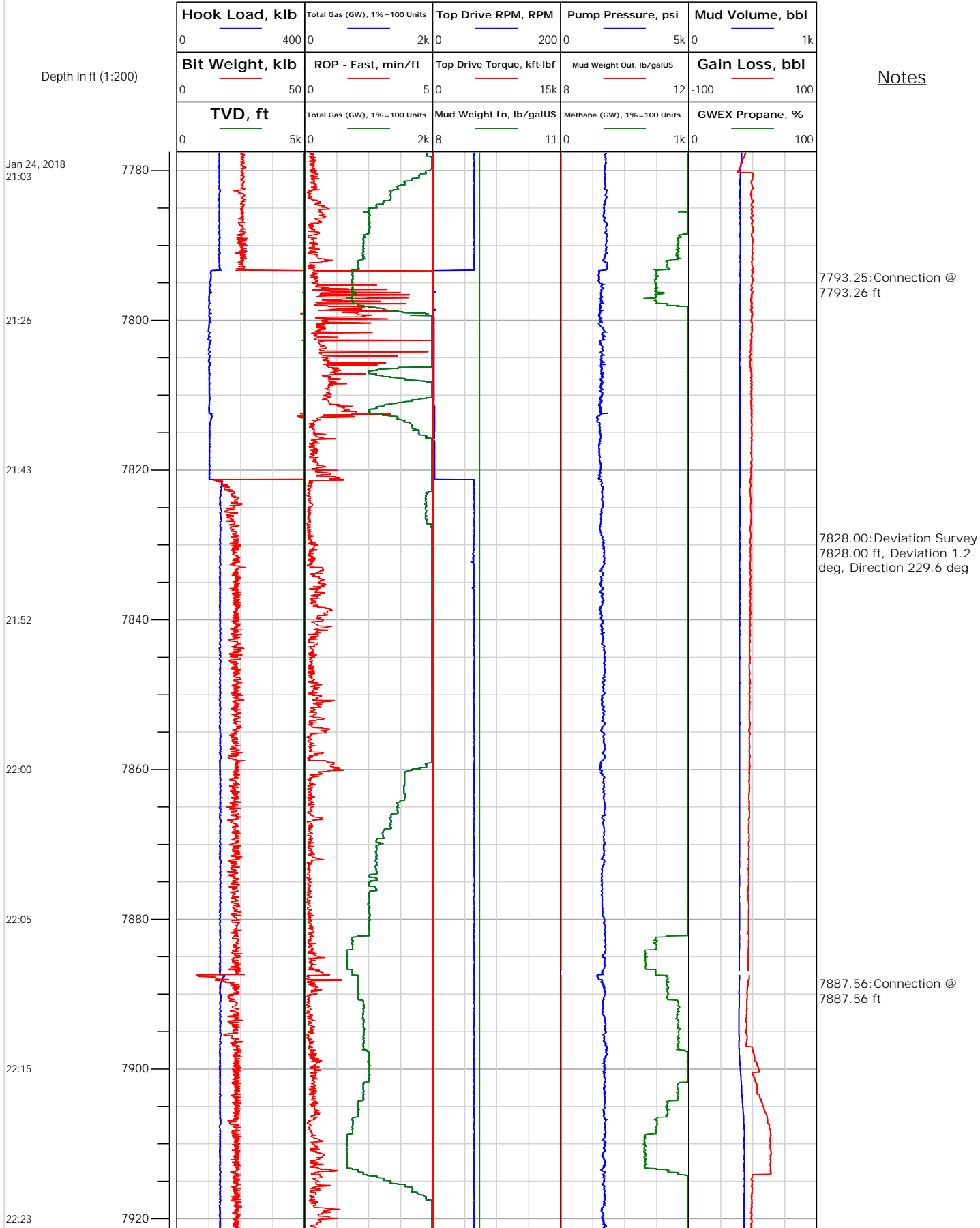
# Electronic Drilling Recorder

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

**Well Name:** BRUTON FEDERAL 30-19W  
**Rig:** 522

**Location:**

## Notes





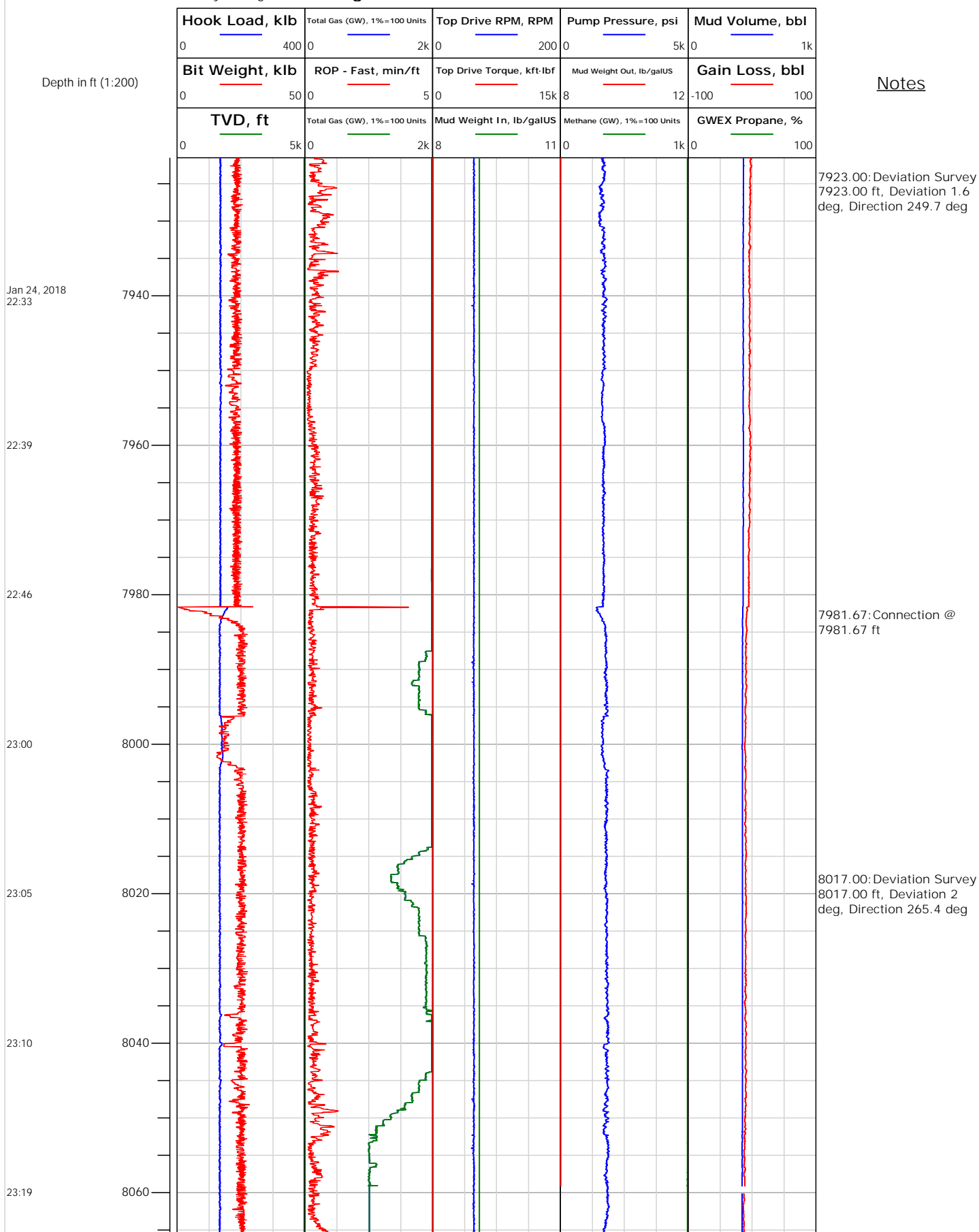
# Electronic Drilling Recorder

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

**Well Name:** BRUTON FEDERAL 30-19W  
**Rig:** 522

**Location:**

## Notes





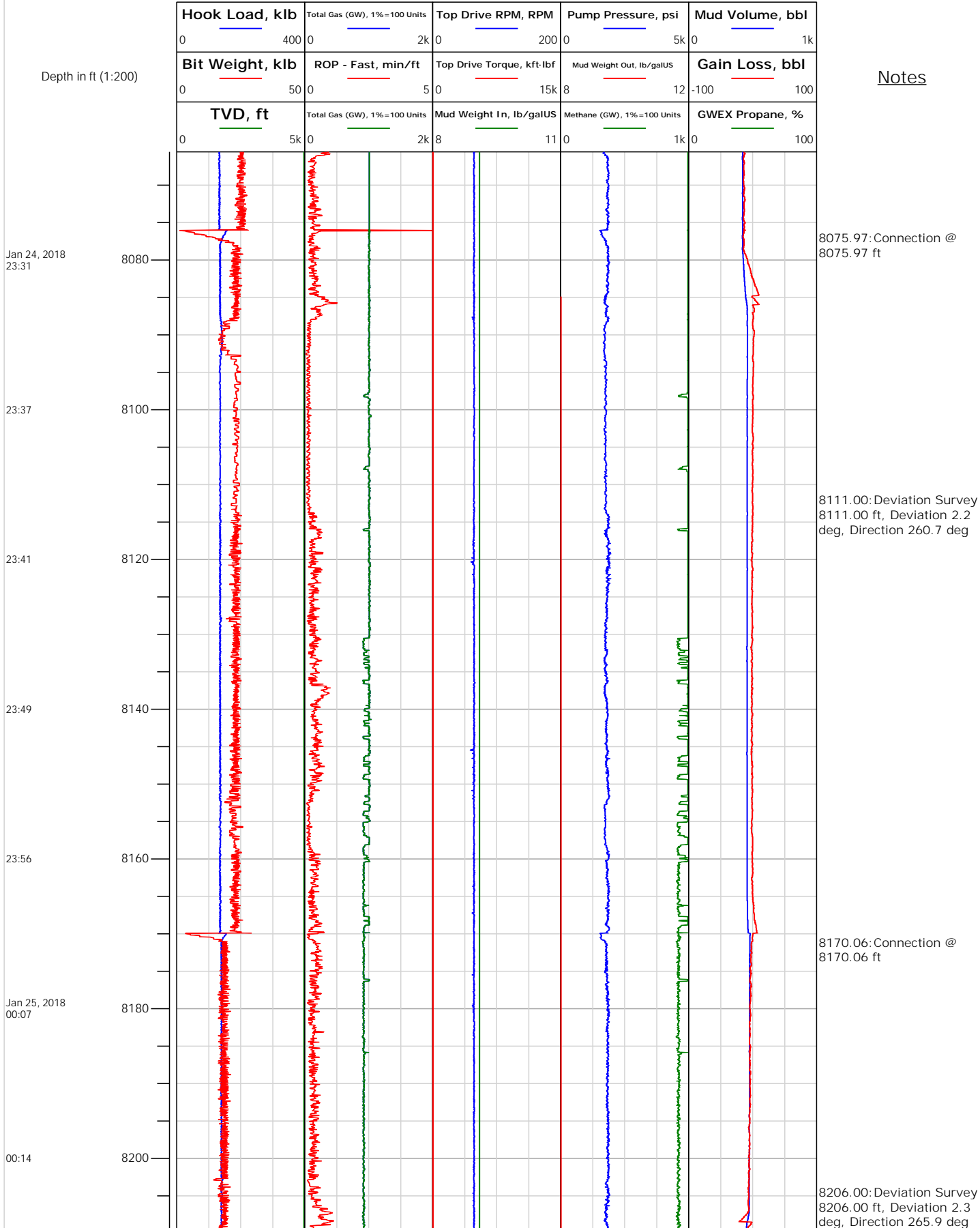
# Electronic Drilling Recorder

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

**Well Name:** BRUTON FEDERAL 30-19W  
**Rig:** 522

**Location:**

## Notes





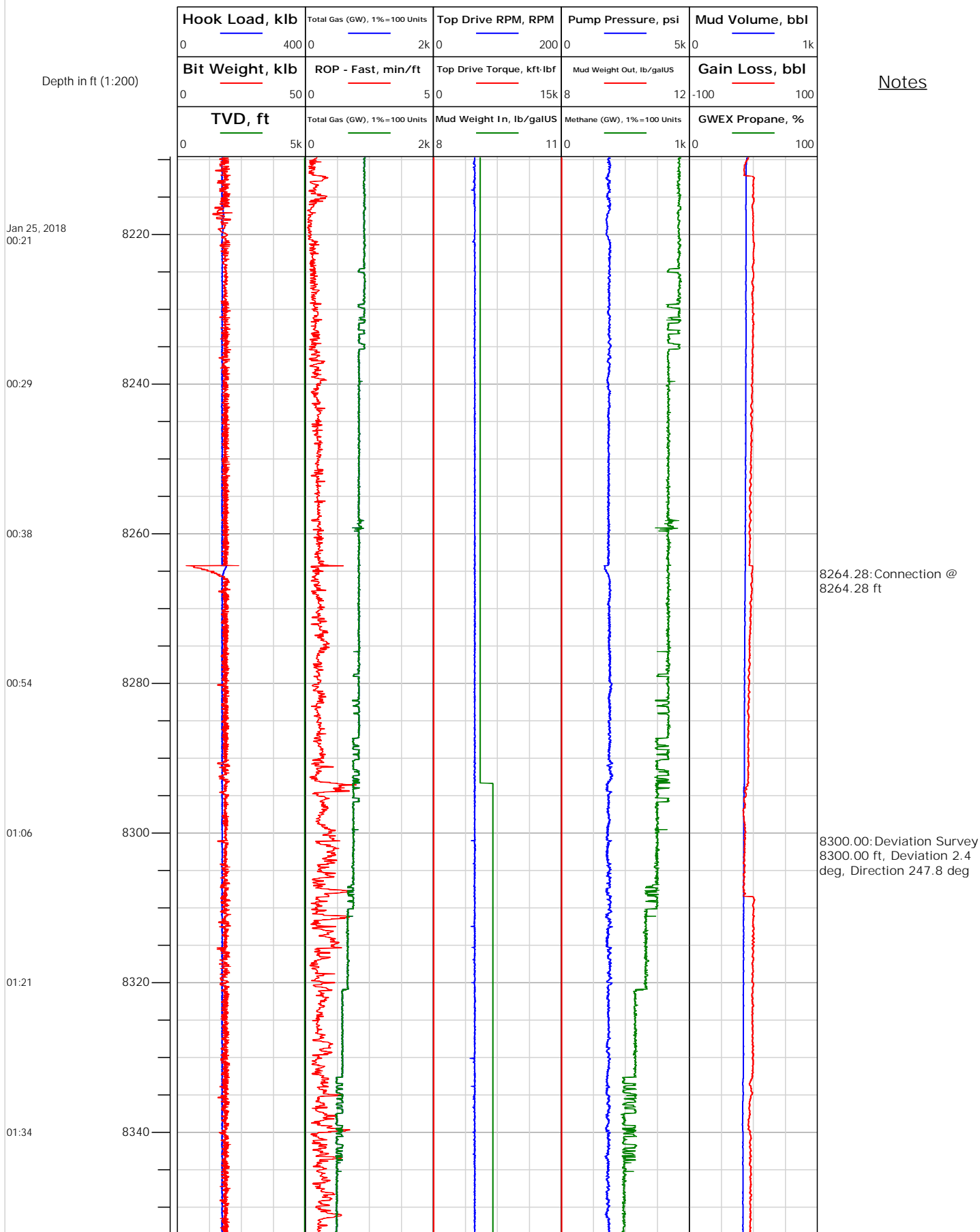
# Electronic Drilling Recorder

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

**Well Name:** BRUTON FEDERAL 30-19W  
**Rig:** 522

**Location:**

Notes







# Electronic Drilling Recorder

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

**Well Name:** BRUTON FEDERAL 30-19W  
**Rig:** 522

**Location:**

## Notes

