



Precision Directional Services, Inc.

27610 Commerce Oaks Drive
Oak Ridge North, TX 77385
713-805-4436

DL1687

5":100' - TVD

5/30/2013 2:50:28 PM

Oper. Company: Carrizo Oil & Gas, Inc

Country: USA

State / Province: Colorado

County / Parish: Weld

Started: 05/24/2013 12:00 AM

API/UWI: 05-123-36068

Field: Niobrara CONZ'83

Well: Bringelson 2-20-11-9-58

Rig: Xtreme 19

Ended: 05/30/2013 02:30 PM

Personnel

Day Hand: Paul Brown

Night Hand: Neil LaRubbio

Comp. Emp: Gabe Vela

Location

Latitude: 40 44'25.450N

Longitude: 103 53'48.086W

Elev. GL: 4867'

Elev. DF: 4884'

Elev. KB: 17'

Hole Data

| Size | From | To |
|--------|------|-------|
| 12 1/4 | 0 | 1432 |
| 8 3/4 | 1432 | 6118 |
| 6 1/8 | 6118 | 10290 |

Casing Data

| Size | From | To |
|-------|------|-------|
| 9 5/8 | 0 | 1411 |
| 7 | 0 | 6098 |
| 4.5 | 6098 | 10290 |

Bit Sizes

| Size | From | To |
|--------|------|-------|
| 12 1/4 | 0 | 1432 |
| 8 3/4 | 1432 | 6118 |
| 6 1/8 | 6118 | 10290 |

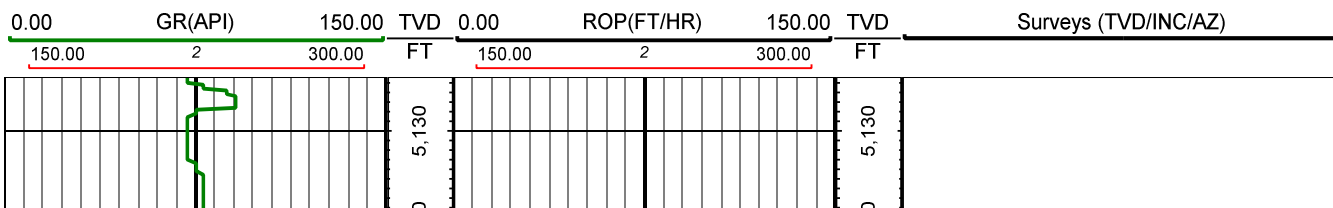
Mud Data

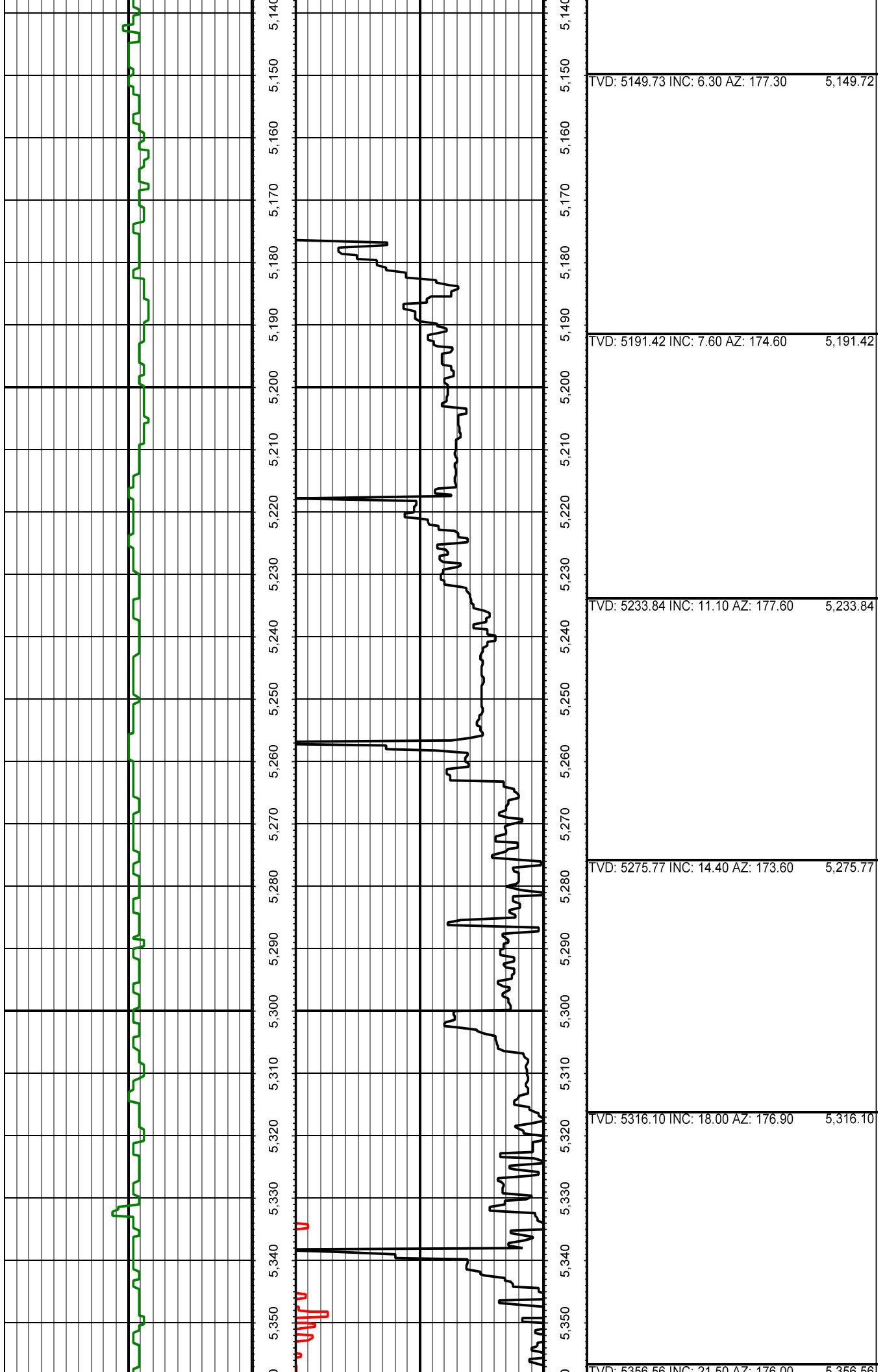
| Type | Weight | Density | Viscosity | Rm | Rmf | Rmc | From | To |
|------|---------|---------|-----------|-----|-----|-----|------|-------|
| WBM | 8.4 | 8.4 | 28 | N/A | N/A | N/A | 0 | 1432 |
| WBM | 8.4 | 8.4 | 28-30 | N/A | N/A | N/A | 1432 | 3500 |
| WBM | 9.0-9.6 | 9.0-9.6 | 30-40 | N/A | N/A | N/A | 3500 | 6118 |
| WBM | 9.5-9.6 | 9.5-9.6 | 40-41 | N/A | N/A | N/A | 6118 | 10290 |

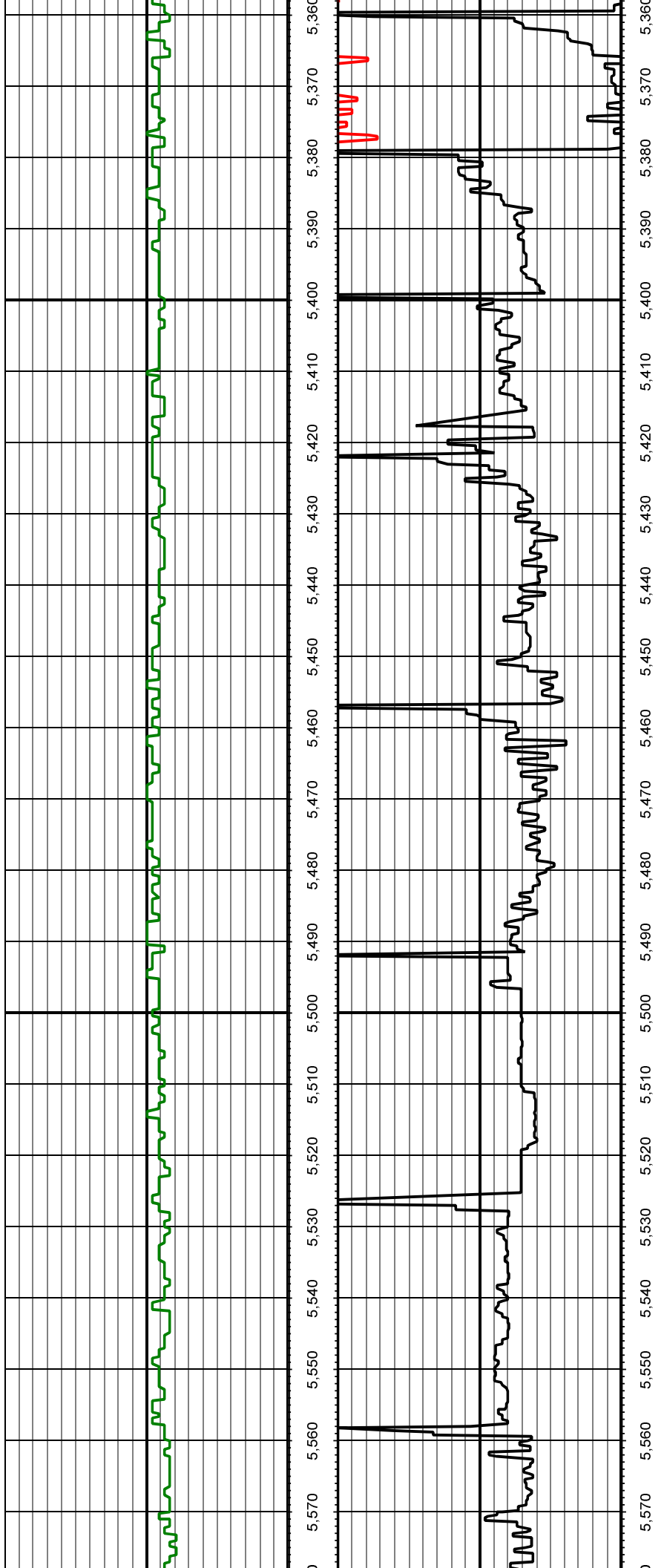
Tool Run Data

| Serial Number | Gamma Offset | Resist. Offset | Start Time | Start Depth | End Time | End Depth |
|---------------|--------------|----------------|----------------------|-------------|-----------------------|-----------|
| G2034 | 52 | 0 | 5/25/2013 6:30:40 AM | 5216 | 5/24/2013 9:30:40 PM | 5555 |
| G2034 | 52 | 0 | 5/24/2013 9:30:27 PM | 5555 | 5/25/2013 8:40:27 PM | 6118 |
| G2034 | 52 | 0 | 5/26/2013 1:30:02 PM | 6118 | 5/28/2013 11:03:02 AM | 10290 |

All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not except in the case of gross or willful negligence on our part, be liable or responsible for any loss, cost damages or expenses incurred or sustained by anyone resulting from an interpretation made by any of our officers, agents, or employees.







| | |
|------------------------------------|----------|
| TVD: 5350.50 INC: 21.50 AZ: 170.00 | 5,350.50 |
| TVD: 5395.13 INC: 25.10 AZ: 171.80 | 5,395.13 |
| TVD: 5433.73 INC: 27.20 AZ: 173.60 | 5,433.73 |
| TVD: 5470.41 INC: 31.10 AZ: 172.20 | 5,470.41 |
| TVD: 5506.34 INC: 35.50 AZ: 169.70 | 5,506.34 |
| TVD: 5539.66 INC: 39.50 AZ: 164.40 | 5,539.66 |
| TVD: 5572.10 INC: 42.60 AZ: 156.90 | 5,572.10 |

