



DDC

The Directional Drilling Company
3222 North 6th Mile Road
Casper WY 82604

RM-140657

1":100' - TVD

7/17/2014 2:44:24 PM

Oper. Company: Noble Energy Inc**Country:** USA**State / Province:** Colorado**County / Parish:** Weld**Started:** 07/12/2014 12:00 PM**API/UWI:** 05-123-38615**Field:** Wattenberg**Well:** Rainbow LC28-73-1HNA**Rig:** H&P 326**Ended:** 07/17/2014 02:00 PM**Personnel****Day Hand:** Bob Kubistek**Night Hand:** Chris Abbott**Comp. Emp:** Bob Kubistek**Location****Latitude:** 40° 42' 54.108 N**Longitude:** 103° 58' 36.588**Elev. GL:** 4863**Elev. DF:** 30**Elev. KB:** 4866**Hole Data**

Size	From	To
13 3/4	0	667
8 3/4	667	6390
6 1/8	6390	10322

Casing Data

Size	From	To
9 5/8	0	667
7	0	6380
4 1/2	0	10322

Bit Sizes

Size	From	To
13 3/4	0	667
8 3/4	667	6390
6 1/8	6390	10322

Mud Data

Type	Weight	Density	Viscosity	Rm	Rmf	Rmc	From	To
LSND	10	0	38				667	10322

Tool Run Data

Serial Number	Gamma Offset	Resist. Offset	Start Time	Start Depth	End Time	End Depth
426	36	0	7/12/2014 4:00:30 PM	667	7/12/2014 3:07:30 PM	5271
426	36	0	7/14/2014 4:00:39 AM	5271	7/14/2014 10:00:39 PM	6390
426	36	0	7/16/2014 6:00:44 AM	6390	7/17/2014 2:00:44 PM	10332

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.











