



Cathedral Energy Services
1949 North Pyrite Road
Casper, Wyoming 82604

145255

5":100' - TVD

9/19/2014 2:15:58 PM

CATHEDRAL

Oper. Company: Encana Oil & Gas (USA) Inc.

Country: U.S.A.

State / Province: Colorado

County / Parish: Weld

Started: 08/06/2014 09:30 AM

API/UWI: 05-123-39216-00

Field: Wattenberg (Niobrara)

Well: Mumby State 4F-36H-P266

Rig: Helmerich & Payne 522

Ended: 08/12/2014 09:00 PM

Gamma Ray
Section Plane: 0.00
Magnetic North: 8.46
Gamma Averaging: 7%

Personnel

Day Hand: J. Nichols

Night Hand: T. Kapsch

Comp. Emp: Kevin Bergeron

Location

Latitude: 40.090826

Longitude: -104.719516

Elev. GL: 5018

Elev. DF:

Elev. KB: 5048

Log and Survey Depths Relative to Kelly Bushing (KB) Depth

Hole Data

Size	From	To
12-1/4	0	1121
8-3/4	1121	7623
6-1/8	7623	11819

Casing Data

Size	From	To
9-5/8	0	1108
7	0	7611
4-1/2	0	11809

Bit Sizes

Size	From	To
12-1/4	0	1121
8-3/4	1121	7623
6-1/8	7623	11819

Mud Data

Type	Weight	Density	Viscosity	Rm	Rmf	Rmc	From	To
------	--------	---------	-----------	----	-----	-----	------	----

Tool Run Data

Serial Number	Gamma Offset	Resist. Offset	Start Time	Start Depth	End Time	End Depth
199	35.29	0	8/6/2014 9:30:41 AM	5000	8/7/2014 2:00:41 AM	7623
199	38.75	0	8/10/2014 10:00:20 PM	7623	8/11/2014 10:30:20 PM	10160
331	37.98	0	8/12/2014 12:30:24 AM	10160	8/13/2014 11:21:24 AM	11819

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.

0.00 Gamma Ray (API) 150.00 TVD 0.00 ROP (FT/HR) 600.00
150.00 2 300.00 FT























