



Cathedral Energy Services

1949 Pyrite Rd  
Casper Wy 82604**135413**

5":100' - TVD

3/13/2014 2:47:40 PM

**CATHEDRAL****Oper. Company:** Encana Oil & Gas (USA)**Country:** U.S.A.**State / Province:** Colorado**County / Parish:** Weld**Started:** 09/19/2013 01:30 AM**API/UWI:** 05-123-374370-000**Field:** DJ Basin**Well:** Marcus State 3E-36H**Rig:** Ensign Drilling 135**Ended:** 09/21/2013 03:30 AMGamma Ray  
Section Plane: 0.00  
Magnetic North: 8.52  
Gamma attenuation Factor: 3.49  
Gamma Averaging: 3%**Personnel****Day Hand:** J. Nichols**Night Hand:** B. Giannino**Comp. Emp:** M. Stiasny

Maximum Temperature: 307°F

**Location****Latitude:** 40.088280**Longitude:** -104.7300000**Elev. GL:** 5039**Elev. DF:****Elev. KB:** 5052

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

**Hole Data**

Size	From	To
8-3/4	1238	7734

**Casing Data**

Size	From	To
9-5/8	0	1230
7	0	7697

**Bit Sizes**

Size	From	To
8-3/4	1238	7734

**Mud Data**

Type	Weight	Density	Viscosity	Rm	Rmf	Rmc	From	To
LSND	8.5	8.5	28.0				1238	7734

**Tool Run Data**

Serial Number	Gamma Offset	Resist. Offset	Start Time	Start Depth	End Time	End Depth
1403	39.92	0	9/19/2013 1:30:28 AM	5000	9/21/2013 3:30:28 AM	7734

*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



























