



PHOENIX SURVEYS, INC.
HIGH RESOLUTION INDUCTION

Company
Noble Energy Inc.

Well
DF Ranch 1161-8-14

Field
Wattenberg

County
Weld

State/Province
Colorado

Location
1980' FNL & 660' FEL

Sec - 8, Twp - 11N, Rge - 61W

SE NE
Elevation 5296

Other Services
Density
Neutron
Microlog

Log Measure From
KB

Log Measure To
KB

Date
January 25, 2012

Run Number
1760

Depth Casing
1768

Bottom Log Material
Casing

Casing Driller
1104

Casing Logger
1104

Bit Size
7-7/8"

Type Fluid in Hole
Open Gel

Fluid Density
7.0 g/cc

Source of Sample
Flowing

Rm @ Mass Temp
3.30 @ 79 F

Rm @ Mass Temp
2.10 @ 79 F

Source of Rm / Rmcs
Messura / Calc

Rm @ Bulkson Storage
0.88 @ 212 F

Time Log on Bottom
2115

Maximum Recorded Temperature
212 F

Equipment Number
52

Location
Brighton, CO

Recorded By
Randy Conley

Witnessed By
Lori Howell

Company	Well	Field	County	State/Province	Location	Sec - 8, Twp - 11N, Rge - 61W	SE NE	Elevation	Log Measure From	Log Measure To	Date	Run Number	Depth Casing	Bottom Log Material	Casing Driller	Casing Logger	Bit Size	Type Fluid in Hole	Fluid Density	Source of Sample	Rm @ Mass Temp	Rm @ Mass Temp	Source of Rm / Rmcs	Rm @ Bulkson Storage	Time Log on Bottom	Maximum Recorded Temperature	Equipment Number	Location	Recorded By	Witnessed By
Noble Energy Inc.	DF Ranch 1161-8-14	Wattenberg	Weld	Colorado	1980' FNL & 660' FEL	Sec - 8, Twp - 11N, Rge - 61W	SE NE	5296	KB	KB	January 25, 2012	1760	1768	Casing	1104	1104	7-7/8"	Open Gel	7.0 g/cc	Flowing	3.30 @ 79 F	2.10 @ 79 F	Messura / Calc	0.88 @ 212 F	2115	212 F	52	Brighton, CO	Randy Conley	Lori Howell

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, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

Comments

Annular volume calculated for 4.5" casing
Cade Drilling Rig 21
Thank you for using Phoenix Surveys!!
API #: 05-123-31105-00

Database File: 12571.db
Dataset Pathname: final
Presentation Format: pdc
Dataset Creation: Wed Jan 25 23:22:14 2012
Charted by: Depth in Feet scaled 1:240

