

BLACK RAVEN ENERGY

PROPOSED WELLBORE DIAGRAM

Date: 9/9/2011
Prepared by: David Kunovic
Lease Franson
Well Number 1-28
API 05-095-06091
Location NENE Section 28, T9N-R43W
BHL
Field Amherst
Unit
County Phillips
State Colorado
GL 3655
KB 3661
Spud Date 3/22/2005
Completion date 4/5/2005
First gas sales

WI
NRI
Surface fee
Mineral fee

SURVEYS:

Geological tops
 Surface
 Pierre Shale
 Sharron Springs 2335
 Niobrara Chalk 2371
 Beecher Island 2384
 Carlile 2834
TD 2924

A-sect Wellhead Inc LM-70 7 X 4 1/2 1500# Screw on mandrel
B-sect R&M LM-45 4 1/2 X 2 3/8 1500# Screw on mandrel
 Tree

Surface Cement
 Cement w/ 185 sk 50/50 Ooz w/3%CaCl, 25% flocele

Producing ZONE Niobrara

Hole Size 9 7/8
Surf Casing 7" 20#
Shoe 480.00

Hole Size 6 1/4
Prod csg 4 1/2 11.6 J-55

TOC 1,640

Cement Design
 85 sx 50/50 Poz w/3% CaCl, 25% Flocele

Stimulation Treatment

Frac Niobrara with 20# Delta Frac 140 System
 111,000# 16/30 sand, 55/quality - 23,142 gal N2

Comments

Date **Completion history**

