

CURRENT WELL BORE DIAGRAM

Black Raven Energy, INC.  
**Glenn-Biddle A-4**

SWSW Section 32  
T2N R57W  
330 FSL x 990 FWL  
API No. 05-087-05490

**SURFACE CASING**

Hole size: 13 3/4  
Csg size: 10 3/4  
Weight: 32.75#  
Depth: 114'  
Cement top: Surf (calc)  
Cement: 75 sacks

**ELEVATION DATA**

GL: 4474  
DF:  
KB: 4484

**FORMATION TOPS**

Niobrara 4680  
D Sand 5500  
J Sand 5568

Top of cement=3869'  
(Calculated)

**PRODUCTION CASING**

Hole size: 9"  
Csg size: 5 1/2  
Weight: 15.5#  
Depth: 5630'  
Cement top: 4546' (calc)  
Cement: 250 sacks

**PERFORATION HISTORY**

Date	Top	Btm	Status
2/22/54	5586	5592	Below CIBP
10/4/11	5570	5575	Active
10/6/11	5575	5580	Active

J Sand Top: 5568' →  
Perfs 5570-5580'  
CIBP set at 5583'  
Perfs 5586-5592'  
Plugback Depth: 5630'  
Total Depth: 5636'