JW DRILLING INC. Oil Well Drilling Contractor

Post Office Box 160 Artesia, New Mexico 88211-0160 Office (575) 748-8704 Fax (575) 748-8719

March 10, 2011

30-025-39617

COG Operating, LLC
500 W. Texas, Suite 1300
Midland, Texas 79710

Attn: John Coffman

Re: JC Federal # 46 Unit H
Sec. 22, T-17-S, R-32-E
Lea County, New Mexico
2310/N & 330/E

The following is a Deviation Survey on the referenced well in Lea County, New Mexico:

388' - 1°	6364' - 0.25°
857' - 2°	6860' - 1°
1339' - 0.5°	7079' - 1°
1794' - 1°	
2105' - 1.5°	
2151' - 1.5°	
2649' - 0.75°	
3147' - 0.75°	
3584' - 1°	
4021' - 1°	
4457' - 1°	
4923' - 1°	
5395' - 1.25°	
5865' - 1°	

RECEIVED
MAR 16 2011
HOBBSOCD

Sincerely,

Gary W. Chappell
Contracts Manager

STATE OF NEW MEXICO)
)
COUNTY OF EDDY)

The foregoing was acknowledged before me this 10th day of March, 2011 by Gary W. Chappell.

MY COMMISSION EXPIRES

Cheryl A Bartlett
NOTARY PUBLIC

OFFICIAL SEAL
CHERYL A. BARTLETT
NOTARY PUBLIC-STATE OF NEW MEXICO
My commission expires: 4-29-12

KZ

MAR 22 2011