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Phased Coalbed Methane Prospect Assessment Process

Coalbed methane (CBM) gas production has grown dramatically in the past 15 years and is expected to continue to do so over the next decade. Although a number of companies are currently engaged in CBM exploration both domestically and internationally, CBM opportunity identification and evaluation has generally taken place in an *ad hoc*, almost happenstance manner, using only a loosely defined model for exploration and evaluation. The aim of this paper is to outline a phased prospect assessment process of initial screening, reconnaissance, pilot testing, and appraisal which

- allows one to gain local knowledge early at low cost;
- defines and attempts to fill knowledge gaps that represent great risk and uncertainty;
- progressively acquires appropriate data systematically to assess the geological situation and reservoir conditions, and;
- increasingly helps one understand the distributions of key parameters that control reserves, deliverability, and risked expected value.

The basic premises are to isolate technically attractive CBM prospects consistently using both technical and commercial considerations, to identify potential prospect-killing factors as soon as possible, to build an understanding of a prospect's potential risks and rewards before committing to great expense, to stage expenditures of capital and manpower resources, and to provide multiple decision points throughout the process. Such a phased, sequential process acquires data efficiently so as to eliminate weak prospects early and collect needed physical samples gathered fresh from *in situ* conditions before committing to a relatively expensive multi-well pilot test or initial development.