



Modern Oil/Gas Development & Cost of Orphaned Wells

Data Types: Geology, production, economics

Challenge Details: Modern oil and gas development requires hundreds to thousands of wells to be drilled within a single tight gas or oil field and it may require tens of thousands of wells to fully develop a play. All wells are ultimately abandoned at the end of their productive lives. There is a potential risk of a well becoming “orphaned”, a condition of not having any legally accountable and/or financially able party to deal with responsible well abandonment and site reclamation.

Orphaned oil and gas wells have become a significant fiscal liability for some Canadian provinces, especially those that have long-established hydrocarbon extraction industries. Orphaned wells also leave a troubling legacy of environmental issues, including leakage pathways for fugitive emissions. For example, the Maskwacis Cree Communities, near Leduc, Alberta, are currently dealing with >200 orphaned wells on lands known as the Bonny Glen Field, through a partnership between Ermineskin Resources Development Ltd., and Imperial Oil.

One approach to management of orphan wells is to create an industry-supported abandonment fund to relieve taxpayers of the entire burden of abandonment and reclamation.

Questions:

- (1) In what ways does the issue of orphan wells differ across different oil and gas development regimes, considering varying industry practices for low-permeability hydrocarbons, conventional oil and gas pools and heavy oil?
- (2) In addition to fugitive emissions, what environmental issues are posed by orphan wells? What are the political factors at play?
- (3) What are the component costs of a realistic, per well, abandonment fund that policy-makers might recommend at the onset of a drilling project?
- (4) What analogies can be developed between regulatory and industry practices in Canadian and foreign jurisdictions? What innovations exist elsewhere that could be brought to bear in Canada?

THINK  TANK



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