

Integration of geosciences for resource evaluation at Hibernia

John D. Evans, Iain Sinclair, Robert Stokes and Will DaSieg
Hibernia Management Development Company Ltd., St. John's, NF
<john.evans@hibernia.ca>

A primary goal of the geoscience team at Hibernia is to build accurate and robust models of the field. These models, derived through a process of integrating all our data, provide the basis for strategic and operational planning in order to optimize development of the resources. Detailed resource

estimates are one of the key products of these models. Currently we use with both traditional 2D surface based models and 3D statistical models for generating resource assessments. We also utilize probabilistic methods for characterizing the uncertainty in these resource estimates.

At Hibernia our two primary development objectives are the reserves in the lower Hibernia Formation and the Ben Nevis/Avalon formations. Each has different structural, stratigraphic, petrophysical and fluid uncertainties that we are currently addressing to improve our earth models and resource assessments. In the Hibernia Formation, we have drilled many of the larger fault blocks and are focussing our efforts on improving our understanding of subtler stratigraphic and structural complexities that impact the development of both these larger blocks and smaller blocks yet to be drilled. In the Ben Nevis/Avalon formations, we are just now drilling our

first development well and are updating our resource assessment on the basis of revised structural and stratigraphic interpretations following the reprocessing of our 1991 3D seismic data. For both reservoirs one of our key objectives is to better characterize the distribution of our resources relative to fault and stratigraphic discontinuities, with the ultimate goal of optimizing the recovery of these resources with the fewest number of wells.

Some of our current processes and technical work, with a focus on our resource evaluation issues, will be presented.