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Review of the Canada Nova Scotia Offshore Petroleum Board's Digital Data Management Centre

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Abstract

This paper will review the planning and implementation steps undertaken by the Canada Nova Scotia Offshore Petroleum Board (CNSOPB) in establishing a digital Data Management Centre (DMC) for Nova Scotia offshore exploration and production data. Since April, 2005 the CNSOPB has been working toward the development of the DMC and it is anticipated that the facility will be operational by early 4th quarter 2007. Significant effort has been expended in researching available technology, reviewing existing exploration and production databases, obtaining government budgetary approval and in developing a balanced data disclosure policy.

The DMC is designed to provide easy and efficient access, to Nova Scotia offshore petroleum data, using an internet based Geographic Information Systems (GIS) front-end. Initially, the DMC will manage and distribute the following digital petroleum data: well data (i.e. logs & reports), seismic image files (e.g. TIFF, JPG), GIS and production data. In future, the DMC could be expanded to include: operational, safety, environmental, fisheries data etc.

The DMC should promote activity and investment in the region by allowing new explorers to rapidly review all available digital exploration and production data thereby lowering exploration risk. The DMC will also prevent the loss of data, reduce data storage costs and facilitate scientific research by the regulatory Boards, industry, governments, universities etc. The DMC is also intended to act as a "pilot project" in the establishment of a National Data Centre (NDC) for digital petroleum data,

which in time may link several regulatory Boards and government departments across Canada.

Exploration activities in the Nova Scotia offshore area have been occurring for over 45 years while production of oil and gas is a relatively recent activity. Prior to the development of the DMC, the CNSOPB did not have an effective and efficient system for managing the growing volume of digital petroleum data due to the lack of appropriate personnel and facilities. A good data management system is crucial to effectively manage oil and gas resources, particularly in a high cost environment such as offshore eastern Canada.

Background

Oil and gas exploration has been occurring off the coast of Nova Scotia since 1960. Canada's first significant offshore production began in 1992 with the development of the Cohasset/Panuke oil field, off the coast of Nova Scotia. This field produced over 44 million barrels of oil from 1992 – 1999. In 1999 the partners of the Sable Offshore Energy Project (SOEP) began a multi-field natural gas development project offshore Nova Scotia. Over 1.1 Tcf of natural gas has been produced, to date, from the SOEP fields and production is ongoing.

Since 1960, when exploration began offshore Nova Scotia, a large volume of valuable petroleum data has been acquired at significant cost. This data is needed by the regulator, industry, governments, research and educational institutions and the public. In addition, modern exploration and development activities are generating progressively larger volumes of data. The CNSOPB requires an effective and efficient system for managing this growing volume of digital petroleum data. A good digital data management system is crucial to effectively managing oil and gas resources, particularly in a high cost environment such as offshore Nova Scotia.

The CNSOPB is the independent joint agency of the Governments of Canada and Nova Scotia responsible for the regulation of petroleum activities in the Nova Scotia Offshore Area (figure 1 & 2), including:

- health and safety for offshore workers,