

North Atlantic Pipeline Partners Vision for a Natural Gas Industry in Newfoundland

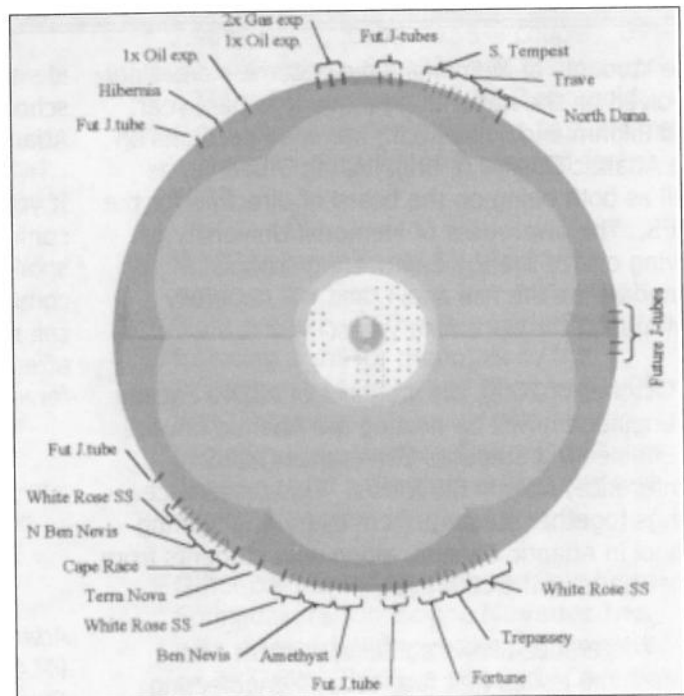
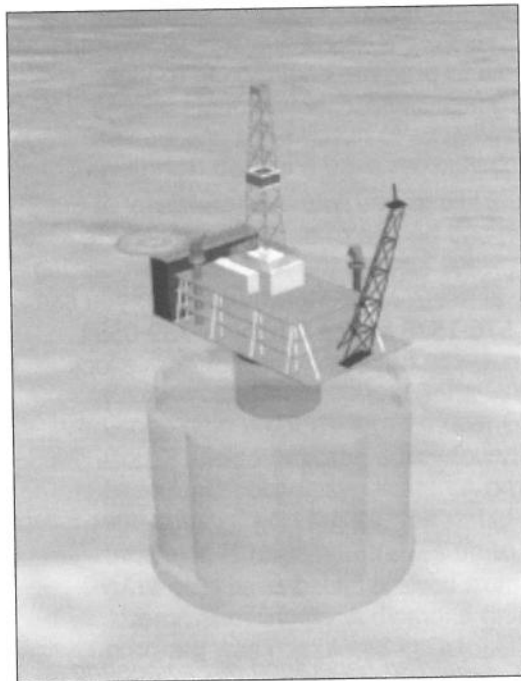
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North Atlantic Pipeline Partners is planning an offshore oil and gas gathering, storage and export hub and associated export pipeline for the Jeanne D'arc Basin. NAPP intends to own the facilities and operate them in accordance with producer agreements. A fixed concrete Gravity Base Structure (GBS) provides the permanent infrastructure hub essential for the development, storage and export of the natural gas reserves. The strategic placement of such a GBS within the Basin facilitates more efficient, economic and reliable recovery of oil and associated gas for many producers. This combined oil and gas hub strategy, tending to be oil dominant in the short term and gas dominant in the medium to long term provides a unique economic opportunity to enhance overall oil and gas recovery and simultaneously kick start the offshore Newfoundland natural gas industry.

The proposed GBS will provide for oil production drilling, oil stabilization and processing, the storage

reservoirs, collection of gas from outlying satellite gas fields and gas export by pipeline. The GBS or "Oil and Gas Hub" will be the critical piece of infrastructure within the Jeanne d'Arc Basin for the development of multi-pool accumulations and for the production, storage and export of natural gas.

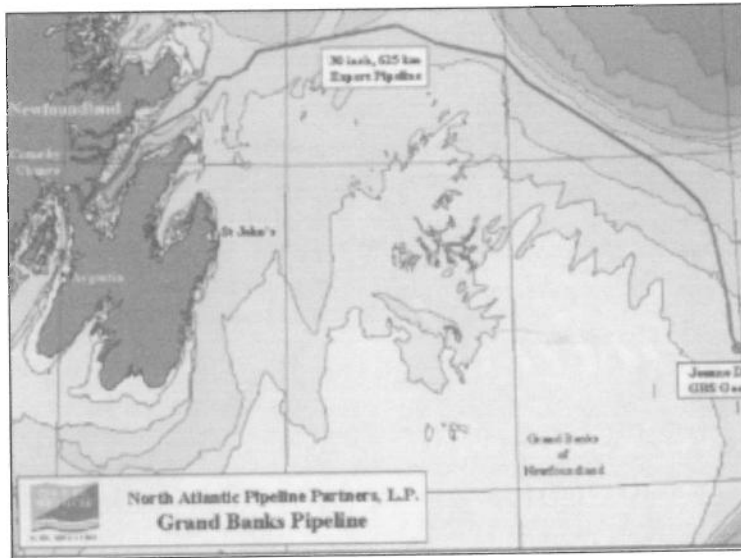
The GBS platform comprises two primary components; the Gravity Base Structure itself and the topsides facilities. The proposed GBS will be constructed in Newfoundland at the Bull Arm facility. Topside modules and mechanical outfitting will also be constructed in Newfoundland depending on available fabrication capacity and competitiveness. The GBS will be constructed with the maximum number of import and export risers and J-tubes preinstalled so as to provide maximum platform access for the hosting of subsea and satellite development projects. It is believed that commercial development of a number of small to moderate fields within the Jeanne d'Arc Basin will



of two million barrels of stabilized oil, collection of oil from outlying satellite fields, offloading of stabilized oil from the GBS by tanker, oil export by pipeline, seawater injection for reservoir maintenance, gas injection for reservoir maintenance, offshore gas injection to storage

not be possible without such a facility.

The second key piece of infrastructure is a large diameter export pipeline. The proposed 30-inch diameter multipurpose pipeline will commence at the fixed gravity base structure, arc towards the



North, enter Trinity Bay and will terminate at Come-by-Chance, Newfoundland for a total pipeline length of 625 km, including a short 11 km section of overland pipeline.

The pipeline will facilitate the transportation of offshore oil and gas to the island of Newfoundland. The pipeline will be designed to accommodate the full range of likely operational modes including live crude only, rich gas only and simultaneous transport of oil and gas in multiphase operation.

Comprehensive iceberg modeling has been performed by C-CORE under the direction of NAPP to investigate iceberg-pipeline interaction and to quantify and minimize the iceberg risk to the pipeline. As a consequence of the C-CORE effort, an optimal pipeline route has been established, which together with strategic trenching of portions of the pipeline reduces the risk of iceberg disruption to the same level as other common construction and operation risks.

The pipeline will be installed at an average water depth of 250 m along the majority of its length. This is a readily achievable installation depth which also permits diver access should it become necessary. Maximum water depth along the pipeline route is 300 m. Installation of the pipeline will be by conventional S-lay technique for which sufficient qualified construction contractors and equipment are available to ensure use of well proven technology and commercially competitive bids.

The key to the success of the oil and gas infrastructure project proposed by NAPP is flexibility. For example, if in the early stages of

operation the demand for gas on the Island of Newfoundland is small and seasonal the project remains highly attractive economically. Surplus produced gas may be stored via reinjection from the platform until the market demands it. The pipeline in the meantime carries crude safely and economically to the Island for transshipment.

At present Newfoundland could readily consume in the order of 110 to 130 million standard cubic feet of gas per day. This would involve the consumption of gas for power generation, oil refining and natural gas liquids production. However, it is the view of NAPP that the arrival of gas in Newfoundland will invariably create opportunities for industrial development which in time could push consumption up to 300-400 mmscfd and beyond.

Conservative analyses of the Northeast U.S. market for natural gas shows that a pipeline connection between Newfoundland and the grid is a highly attractive proposition. Gas for the region is presently supplied by the Gulf of Mexico and Western Canada both of which are considerably further away than the Grand Banks. In 1997 NAPP proposed to put in place a pipeline network stretching from the Grand Banks to New England. NAPP argued that installing a much larger system than that proposed by the proponents of the Sable Offshore Energy Project would address the needs of the Sable producers but in addition would provide market access for the remainder of the region including Newfoundland. NAPP was unsuccessful in its application and today, the installed capacity of the Maritimes and Northeast pipeline has been shown to be inadequate for the market it was intended to serve and provides for no expansion possibilities into the Newfoundland reserve base.

NAPP believes that the opportunity for Newfoundland to take control of and maximize the value of its natural gas development is contingent on the expeditious installation of the aforementioned infrastructure. The proposed platform and pipeline provide the market access and readiness Newfoundland requires to secure key long term contracts, with which we will become a major player in the supply of energy to the North American marketplace.