

Pushing Boundaries

Hibernia South extension taps into new trend in exploration and development – increasing the productivity, profitability and longevity of offshore oil production

By Rayanne Brennan



The Grand Banks have yielded significant returns for oil and gas investors over the past 30 years. Consider that in this short timeframe, four of the 15 largest crude discoveries (non oil-sands) in North America were made off the shores of Newfoundland and Labrador. Three of those fields – Hibernia, Terra Nova and White Rose - have started production in the past decade. The next project to go on stream is Hebron, a reserve expected to trigger a spin-off bonanza worth \$20-billion over its 25-year lifespan.

Newfoundland and Labrador's black gold rush is far from over. In fact, as technology evolves, commercial explorers are going further and deeper to mine the province's vast vein of ocean riches. The Hibernia South Extension is part of this exciting new trend in oil field exploration. Drills are going where none have gone before. New frontiers are opening up. New discoveries are being made. And new, smaller fields are being developed.

It's a trend that is helping Newfoundland and Labrador harness the full potential of its rich energy resources. The expansion of its reserves is made possible in part by subsea tiebacks. Subsea tiebacks are a proven technology which connects new

field developments to existing infrastructure. Deployment of subsea technology comes at a critical time when many of the world's major offshore oil and gas fields are reaching maturity. New discoveries are getting smaller and therefore more challenging to produce. Subsea tiebacks are a more economical method of resource recovery that can turn marginal reservoirs into money-making assets and rigs and platforms into higher production facilities. In other words, operators can produce more oil at a lower cost, over long distances and deeper waters.

The Hibernia South Extension is a good example of this efficient and cost-effective way of pumping oil from existing platforms. Located approximately 320 kilometres east-southeast of St. John's, Newfoundland, the property has a recoverable potential of approximately 223-million barrels and builds on the equipment of a mature field.

During his opening address at this year's Newfoundland and Labrador Oil and Gas Industries Association (NOIA) conference, Premier Danny Williams delivered the highly anticipated news that a tentative agreement had been reached to develop the Hibernia South field.

Through its crown corporation, Nalcor Energy, the Province has negotiated a 10 per cent equity stake in the project, a stake with an estimated royalty/tax value of \$10-billion. To put it in perspective, the Premier noted that Hibernia South will deliver more revenue to the Province than the Hibernia, Terra Nova and White Rose oil fields combined.

The agreement will help extend the life of the Hibernia project to well past 2020.

Originally, Hibernia reserves were estimated at 525-million barrels of recoverable crude. Today, those reserves are pegged at 1.2-billion barrels, with the potential to reach as high as 1.9-billion, including the extension at Hibernia South.

The Hibernia South field has a projected lifespan of between 10 and 15 years and contains two principal reservoirs that are linked to the Hibernia gravity base structure: the Hibernia and Ben Nevis-Avalon formations.

Up to six subsea developments may be required to tap the field's identified and potential resources through the life of the Hibernia production facility, according to the project description submitted to the Canada-Newfoundland and Labrador Offshore Petroleum Board (CNLOPB) in

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2008 for regulatory consent. The Hibernia South Extension drill centre is the first planned subsea tie-back to the Hibernia GBS, with glory hole installation tentatively scheduled for 2011, depending on project approval timing and dredging vessel availability.

Hibernia South is comparatively small to other reserves (25 per cent of the size of Hibernia) but “small is beautiful” to the 480 industry stakeholders who belong to the Newfoundland & Labrador Oil & Gas Industries Association (NOIA).

“It’s absolutely positive and great news,” enthuses NOIA Board chairman Geoff Cunningham. “There’s a lot of reason to be optimistic. There’s a lot of reason to invest in your business.”

Cunningham is manager of Offshore Operations for A. Harvey & Company Ltd., a marine base and logistics operations firm, based in St. John’s. “For us, it will ramp Hibernia up to the level of activity it was at and probably a bit higher than it was before.”

Cunningham predicts NOIA’s membership will enjoy “huge spin-offs” from the development of Hibernia South. “The supply and service community will see the benefits, as all consumables trickle through the system.”

In Cunningham’s opinion, the most significant outcome of this latest project is the confidence it creates among investors and the ripple effect this has on the entire economy of Newfoundland and Labrador.

“No matter what business you are in, if you have economic optimism, you have people who will invest. There’s no question that (NOIA) members who are on the cusp of investing in their businesses, will invest (as a result of Hibernia South) and that fuels further growth.”

Paul Barnes, Atlantic Canada manager for the Canadian Association of Petroleum Producers (CAPP), agrees. He believes the significance of the project is much greater than the 223-million barrels of oil it is expected to produce; even greater than the jobs it will create or the revenue it will generate.

To him, Hibernia South represents the future promise of Atlantic Canada’s oil and gas industry. The development of this field,

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and others like it, means increased profitability, productivity and longevity of offshore oil production in Canada’s east coast, he says. “Anytime you can produce another field it means a lot of industry growth.”

Asked to describe the region’s oil patch, 20 years from now, Barnes replies: “I see new discoveries in oil basins that are not discovered yet. I see new production from fields that are not commercialized at the moment. And I see production facilities whose life span has been extended because of subsea tiebacks.”

Cunningham says his members have benefited from the slow, steady growth of

Newfoundland and Labrador’s oil sector. It has allowed the industry’s goods and service providers to build their capacities to the point that the Province is now recognized around the globe as a world-class centre for service and supply excellence. That means NOIA members are poised to take full advantage of new offshore developments like Hibernia South. “We know what opportunities are there and we know the right time to invest.”

Cunningham is equally certain that the province has the ability to keep pace with continued expansion of its oil patch both in terms of machinery and manpower. “There

are lots of Newfoundlanders and Labradorians all over the country who are looking for an opportunity to come home to work.”

Barnes concurs, adding that the long-term nature of projects like Hibernia South is an incentive to return. “You can’t just stop that overnight.”

And thanks to advancements in technology and a better understanding of the size and scope of reserves, smaller oil and gas accumulations that were discovered in the early days of East Coast Canada exploration are now being extracted. Plumbing the depths of the ocean just keeps getting better for Newfoundland and Labrador. •



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