

Newfoundland Deepwater Exploration Undeterred By Low Oil Prices; Most Shallow-Water Developments Continuing

From Daily Oil Bulletin

The following text was excerpted from the media outlet cited on April 21, 2015 and is provided to Noia members for information purposes only. Any opinion expressed therein is neither attributable to nor endorsed by Noia.



While low oil prices gutted capital budgets in Western Canada, offshore Newfoundland and Labrador has fared relatively well. Several wells and geophysical surveys are planned for deepwater areas — a big jump in activity from just a few years ago.

So far, the biggest impact of the oil price drop has been Husky Energy Inc.'s one-year deferral of a final investment decision on its proposed West White Rose oil project. Husky has been offsetting oil production declines at its White Rose field, which has been onstream since December 2005, by developing nearby "satellite" oilfields.

A decision on how to develop West White Rose had been pending, but in mid-December it was delayed for a year (DOB, Dec. 17, 2014). The key decision was the development mode — whether to use a skyscraper-size concrete platform or just a subsea tieback to the main White Rose production vessel.

However, Husky's offshore Newfoundland division will still have a busy year.

On the development side, the company is drilling the first two production wells for its South White Rose satellite field. Both are due to come online in the second quarter. South White Rose has forecast peak production of about 21,000 bbls a day.

At Husky's North Amethyst satellite field, a well targeting the deeper Hibernia formation is to be brought onstream this year as well. It is forecast to add about 7,000 bbls a day.

Husky will use Transocean Ltd.'s GSF Grand Banks rig for all three White Rose satellite development wells. (This doesn't include exploratory drilling, where Husky is a major deepwater player.)

Exploration may rise

The Newfoundland offshore is dominated by large companies that typically don't break out spending by project, so dollar amounts aren't available. But there doesn't seem to be much change in planned activity.

"If anything, my sense is that on the exploration front, the spending is going to modestly increase," said Jim Keating, vice-president of oil and gas at Nalcor Energy, the Newfoundland government's electric utility and oil company which owns a small stake in several fields.

"We've had probably in the last decade or so, not a lot of activity on the whole, maybe between one to three wells per year, as an average year. Now recently we've ticked up to six and eight," Keating told the Bulletin.

While this is tiny compared to Western Canada, each offshore well costs many times what it would on land. Offshore drilling is a major logistical effort involving support boats, onshore supply bases, helicopters and massive semi-submersible drilling rigs. And with exploration moving into water depths of 1,100 metres, costs — and challenges — are increasing.

For example, the Bay du Nord discovery well, one of the world's biggest oil discoveries in 2013, is about 469 kilometres east of St. John's. "It is at the maximum range of most helicopters from land — about a three-hour flight," said Jeff O'Keefe, director of resource management and chief conservation officer with the Canada-Newfoundland Labrador Offshore Petroleum Board (C-NLOPB).

Deepwater focus

The exploration focus — both drilling and geophysical — is now mainly on the deep water, meaning water depths exceeding 500 metres. That's a reversal from past decades when nearly all wells drilled off Canada's coasts were in the shallow waters of the continental shelf.

Interest in deepwater exploration shot up after Statoil ASA's September 2013 announcement that its Bay du Nord C-78 exploration well had discovered an estimated 300-600 million bbls of recoverable oil.

That was on top of an estimated 100–200 million bbls of recoverable oil discovered by Statoil's nearby 2009 Mizzen O-16 well and assessed by a 2011 appraisal well. An estimate for the size of another nearby deepwater discovery, Harpoon, is awaiting the drilling of an appraisal well.

Statoil is the operator and 65 per cent owner of the three discoveries. Husky has 35 per cent. For its part, Husky estimated the Bay du Nord and Mizzen recoverable oil at 530 million bbls.

Last November, Seadrill Limited's deepwater drilling rig West Hercules began an 18-month appraisal and exploration program in the Flemish Pass Basin. Husky, Chevron Corporation and Spanish major Repsol S.A. are partnered with Statoil on some wells expected to be drilled in that program.

"At this time, we anticipate drilling approximately seven wells by year-end 2015, including sidetracks," said Alex Collins, a Statoil spokeswoman. "We started the program with a series of appraisal wells related to the Bay du Nord discovery, and we will later move to select exploration prospects." She said the exact drilling schedule is still being confirmed for the later part of the program.

In the supplement to its 2014 annual report, Chevron said: "In the Flemish Pass Basin, Chevron holds a 40 per cent non-operated working interest in two exploration blocks totalling [1,736 square kilometres]. A 3D seismic survey has been completed on these blocks and drilling is expected to commence in late 2015."

Collins said the licence where that well will be drilled is operated by Statoil (50 per cent) with partners Chevron (40 per cent) and Repsol (10 per cent).

Last year Husky said its Flemish Pass resource estimates already exceed the minimum needed for a commercial development, but further drilling would help the companies design a development concept. At an investor conference (DOB, Jan. 23, 2014), Husky said a couple of wells were planned to delineate Bay du Nord, another well is needed to quantify the Harpoon discovery and the partners also wanted to drill a couple of wells on Flemish Pass exploration prospects beyond Mizzen, Harpoon and Bay du Nord.

Flemish Pass heating up

In the southern portion of the Flemish Pass, meanwhile, Husky finished drilling its Aster C-93A exploration well in February, using Transocean's Henry Goodrich rig. Husky said the results are being evaluated.

Husky is the operator of the Aster well with 40 per cent working interest. Partners are Suncor Energy Inc. (40 per cent) and Repsol (20 per cent). According to its website, Repsol holds seven offshore Newfoundland exploration blocks.

Aster is roughly due east of the White Rose field, and in about 560 metres of water, making it a deepwater well.

Plans for record-bid parcel

Perhaps the strongest indication that Newfoundland deepwater exploration is undeterred is the fact that the biggest work commitment in the history of the province's oil and gas industry was made late last year in the face of plunging oil prices.

A 266,139-hectare parcel was awarded to Exxon Mobil Corporation (40 per cent), Suncor (30 per cent) and ConocoPhillips Company, after the companies jointly bid a record \$559 million in work commitments (DOB, Dec. 15, 2014).

Two months later ExxonMobil filed a project description outlining plans to record up to 5,000 square kilometres of 3D seismic data over the block, which is south of the Bay du Nord discovery in the Flemish Pass Basin.

"[We] will start with a seismic program this year and then move into the drilling phase over the next few years," Matt Fox, ConocoPhillips' executive vice-president of exploration and production, told an investor conference this month.

In a filing with the C-NLOPB in February, ExxonMobil said seismic data acquisition could start as early as mid-summer and run to the end of October, pending approvals.

Depending on the area selected, the survey could continue in 2016, the company said. Water depths over the block, EL-1135, range from 244 metres to 1,132 metres. What's notable about EL-1135, apart from the record bid, is the relatively short time between the licence round and the planned program start.

"In years past, [an oil] company would acquire the licence, maybe do some 2D the first season and look at that, and maybe the second or even third season go get 3D, and hope that they find a drilling target in Year 4 or 5 in the licence," said Nalcor's Keating. "If they're moving into 3D as early as seven or eight months after licence award, we find that that's good news because they've accelerated the cycles, the time it would take to understand the licence area."

To shorten the lead time, the Newfoundland government, via Nalcor, has been partially funding geophysical exploration over deepwater areas. In a partnership with two international geophysical firms, Nalcor has been acquiring 2D data well ahead of licence awards, reducing the cycle time between the licence award and drilling.

Impact of land tenure changes

In addition to providing data to industry, the province also hopes to spur exploration by increasing certainty and predictability in licence rounds. Last year the C-NLOPB brought in a new scheduled land tenure system that provides longer assessment periods between the request for nominations for lands and the close of the call for bids.

Now, if there is a call to nominate lands in areas where there has been little or no exploration activity — such as deepwater areas off Labrador — companies have up to four years to do a geoscience assessment.

Previously, the call for bids or nominations could happen in just nine months, which really didn't allow time for new bidders to prepare bids in frontier areas, said the C-NLOPB's O'Keefe. Meanwhile, in mature areas such as the Jeanne d'Arc Basin, which contains all the producing fields, bids can still close a year after the call for nominations.

WesternGeco to record 31,000 kilometres of 2D, 3D

Schlumberger Limited's WesternGeco subsidiary has filed project descriptions with the C-NLOPB for two large multi-client surveys during 2015. Pending regulatory approval, the first project planned for this year will acquire 21,000 line kilometres of 2D seismic data on the Southern Grand Banks area of the continental shelf, and also on the nearby slope and in deepwater areas.

WesternGeco said the 2D seismic survey line lengths are expected to range between 50 and 200 kilometres. The company expects to use the 91-metre WG Cook or a similar seismic acquisition vessel.

The second project planned for 2015 is to acquire 10,000 square kilometres of 3D seismic data in the general area of the deepwater Flemish Pass basin where the Statoil and Husky oil discoveries were made. WesternGeco said the 3D Flemish Pass area survey would use the 95-metre Eagle or a similar seismic acquisition vessel.

Nalcor's Keating said the multi-client interest is good news for the province "because part of the strategy to move towards the scheduled licence system was in hopes to attract seismic companies to invest with some greater degree of certainty that oil companies would be interested in their data."

Nalcor, partners acquiring 18,000 kilometres of 2D

Meanwhile, in its joint venture with the two seismic firms, Nalcor plans to acquire about 18,000 kilometres of 2D data over the deepwater slope south of Newfoundland this year. Part of this year's program will go back into previously announced licence-round areas to do infill seismic — making the grids smaller by shooting lines in between existing lines.

First pre-licence 3D survey

Offshore Labrador, Nalcor is working with two global seismic acquisition firms to finalize plans for a potential 6,000-square-kilometre 3D seismic survey in previously announced areas of interest for the 2017 licence round.

The survey is tentatively scheduled for the coming summer. Keating said this will be the first time Nalcor has helped fund a 3D acquisition and the first time 3D data will be acquired ahead of the bidding for exploration licences. By acquiring 3D data a couple of years ahead of a licence round, Nalcor hopes to encourage or accelerate the drilling of a well, potentially in the first or second year after a licence is awarded, he said.

A portion of the proposed 3D survey would be over the Eastern Newfoundland region, the rest over the Labrador South region. This will be the first licence round for the Labrador South region, which is east of the Churchill River / Lake Melville area. The precise location of the proposed 3D survey hasn't been finalized, but Nalcor said it will be within Canada's 200-mile zone. No deepwater wells have been drilled off Labrador, but several wells were drilled on the shelf in the 1970s and 1980s.

"We're focusing this summer to get some high-quality 3D data in that area, so we can make it available through 2016, so companies as they enter 2017 can bid competitively in a de-risked [area]," Keating said.

Hebron megaproject construction continues

On the development side, work on the \$14 billion Hebron oil project varies with the seasons.

At the Bull Arm fabrication site, the current workforce is roughly 1,200, but that climbs to 3,000–3,500 in the summer during slip-forming, a method of continuously pouring concrete for tall structures. In relatively deep water not far from the shore, the concrete GBS will be slip-formed to a height of 120 metres. (That height is before installation of the steel topsides modules, which include a hotel, production equipment and a deep drilling rig.)

Those employment figures don't include fabrication of steel topsides modules — for example, roughly 300–400 workers fabricating the 3,200–tonne drilling support module at Kiewit Offshore Services in Marystown, or other sites around the province, each with up to a few dozen employees fabricating components such as the helideck, lifeboat stations and flare boom.

According to ExxonMobil's annual industrial benefits report, 4,918 Newfoundlanders worked on the project in 2014, likely the peak employment year. That compares with 384 workers from other Canadian provinces and 2,917 non-Canadians. (Major topsides components are being built in South Korea.)

Hebron, with a design capacity of 150,000 bbls a day, remains on track for first oil around the end of 2017. The owners are ExxonMobil, Chevron, Suncor, Statoil and Nalcor.

Hibernia South

Also on the development front, work on another significant — but low-profile — project will be completed this year as water-injection well are drilled and tied in. Oil from the Hibernia Southern Extension field will be produced via subsea tieback to the existing Hibernia gravity-based structure.

Production from the Hibernia Southern Extension is expected to ramp up sharply in the fourth quarter to about 25,000 bbls a day by year's end with pressure support from the water injection, said Nalcor's Keating. Nalcor has a 10 per cent stake in the Hibernia Southern Extension.

As more wells are added, Hibernia Southern Extension production is expected to reach 50,000–60,000 bbls of oil a day in the third quarter of 2016, Nalcor said.

Production from the extension field, together with continued drilling by the two rigs on the main Hibernia structure, will help offset declines at the main field. Hibernia is still producing about 110,000–120,000 bbls a day — more than 17 years after it flowed first oil and marked the start of Newfoundland offshore oil production.

Sean Fleming

Marine Agent / Logistics Coordinator

Phone 709-738-5661 / Fax 709-726-7590

www.pfcollins.com / sfleming@pfcollins.com

PF Collins International Trade Solutions Trusted. Preferred. Experienced.