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ON THE COVER: Hebron GBS under tow to its offshore installation location in June 2017. Photo courtesy of ExxonMobil Canada.



Learning from the past. Focused on the future.





Relevant, Untapped and Resilient:

Speakers weigh-in on conference theme

Conference themes typically make a clear and dynamic statement about the hosting organization or the industry in which it operates.

This year, Noia's Oil & Gas Conference theme, Relevant, Untapped and Resilient, gave pause and generated discussion among delegates and presenters alike.

The theme was designed to be less of a statement than a springboard for dialogue about where our industry has been, where we currently are, and most importantly, where we are going. It was intended to provoke thought and stimulate debate.

In opening remarks, Noia leaders talked of reasons for pride and optimism in our oil & gas industry but also the need to address challenges and overcome obstacles. It was emphasized that our local industry must be vigilant and strategic as it charts its course for the future and not settle into self-satisfied complacency.

A number of conference speakers were asked to offer opinions on how the Newfoundland and Labrador oil & gas industry is relevant, untapped or resilient. Most of the comments below are from interviews while others have been extracted from conference presentations.

RELEVANT

Julie Wilson Research Director – Global Exploration Wood Mackenzie

In the recent period of declining industry expenditure, particularly 2015 and 2016, the industry was committing to spend a lot of money in Newfoundland when elsewhere they were cutting back on well expenditure. At the same







Brian Rogers

time, when you look around the world at acreage that was being accessed at that time, companies were really trying to avoid monetary commitments that must be fulfilled within short time frames. I think the Newfoundland licensing rounds really stuck out in that respect. They did attract those bids with good, strong commitments to move forward with activity. Some of those new entrants to your region are real industry heavyweights. Also, I would say the way Nalcor is leading frontier exploration in Newfoundland is pretty unique. It does happen in other jurisdictions. For example, in Mexico, there was a lot of data made available, but the companies who are interested in the area have to pay to see the data. On the other hand, Nalcor spends money – a pre-investment in the area – and makes it freely available. This de-risks the play for companies interested in entering. Then the return on that pre-investment comes in the form of exploration drilling and hopefully new discoveries. It's been a very successful strategy for Nalcor, to attract companies and new players to a frontier area.

Dwight Ball Premier of Newfoundland and Labrador

We have developed a vibrant oil & gas industry. The industry is important not only to our local economy, but indeed to the Canadian economy. Our industry is global in scale and has impacted everything from energy to fuel supply to product development to advanced R&D. So what is happening right here in Newfoundland and Labrador remains of great interest to a host of international players and we should be very proud as we continue to punch above our weight class on the global stage.

UNTAPPED

Jim Keating **Executive Vice President** Offshore Development and Corporate Services **Nalcor Energy**

We are investing in geoscience data to unlock the next areas of our offshore. By getting involved in the early stages of exploration, Nalcor is reducing uncertainty and increasing scientific knowledge of each basin. These insights are shared with the global oil & gas industry. Each year we add 20 to 25,000 line kilometres of 2D data and even 3D data as required... We have formed a data set which pointed to identification of new play trends and, in particular, one deepwater prospect called Cape Freels. This prospect is 80 kilometres in length and 30 kilometres wide and is one of the largest undrilled prospects in the world today. In the one-insix chance that this is a hydrocarbon-bearing prospect, you could see between four to five billion barrels of oil just in that prospect.

John Henley **Vice-President Technical** Cahill Group

We do have a wonderful resource that we need to manage very carefully, but "untapped" can be interpreted two ways, and I will interpret it another way. What is really untapped is our human resource. One goal of Noia's Redefining Oil strategy is to get government to develop a long-term strategy on how Newfoundland companies will participate in the oil & gas industry. We can't invest as companies and get people educated and find that there are long gaps between projects... We need work going on more consistently in the province. What we haven't done as a province – and should learn from Norway – is that we haven't developed the industry in such a way that we can sell products to the rest of the world. R&D money needs to be invested by oil & gas companies in conjunction with government to get the brains of our next generation focused on developing companies and products that we sell to the global industry, so we are

not just waiting for a chance to bid on the next project. We really need, as a province, to stop being tactical and start getting strategic on what we want from the offshore. Our province has not focused on our human capacity - our greatest untapped resource.

Julie Wilson Research Director - Global Exploration Wood Mackenzie

There is much more to be discovered and developed in Newfoundland. Jeanne d'Arc is definitely not untapped, but Flemish Pass, Orphan Basin and Labrador are most definitely untapped. I would add that delivering value could be really difficult, particularly in deepwater because of high costs coupled with low oil prices... So it's not particularly a low-cost area to do business. One thing that really struck me during the Noia 2017 conference was, given those challenges of cost, there was a lot of talk about innovation and working together, and it felt to me like the local industry is really up for that challenge. They really want to rise to it. And that's what you need - a local industry that will work hand in hand with operators to make a success of the region.



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Richard Pratt Vice-President, Atlantic Region Developments Husky Energy

I think "untapped" speaks to the relative immaturity of this basin... Consider the Newfoundland and Labrador industry as compared to the United Kingdom, for example. There have been nearly 7,000 development wells drilled in the UK; in Newfoundland and Labrador, that number is just over 200. Large discoveries, like Hibernia and Hebron, aren't the norm in our industry. While they can open up a basin, as they have done here, they are rare. I think we're seeing that locally, with operators leveraging existing infrastructure to develop smaller fields... There is future potential for the region. We need to be innovative, collaborative and competitive to continue to develop the industry.

RESILIENT

Dwight Ball Premier of Newfoundland and Labrador

Our offshore industry, like the people of Newfoundland and Labrador, is resilient. We have weathered the wave of low commodity prices over the last three years and we are making a comeback. The comeback will be stronger than ever. We have been dedicated to creating a climate where the business of oil & gas can thrive. Partnership and collaboration have been key to our success and we look forward to continuing to work with our current partners and building future relationships with new ones. We know this industry. And by working with our academic, supply and industry partners, we are changing how to explore and operate in what are demanding cold ocean environments.

Rob Crosbie Chairman and CEO Crosbie Group Limited

Resilient to me is all about remodeling your business in order to compete in what we call "the new normal" – a lower price oil price market, because it doesn't seem like it will be coming back to \$100 oil anytime soon. Resilient is about being able to survive in a tough market... We have always had plenty of challenges to overcome. The only way for the industry to keep growing and developing in this low-cost environment is to up our game, become cost effective, and work toward a stronger regulatory system that encourages industry development without compromising safety or the environment.



Premier Dwight Ball

Richard Pratt Vice-President, Atlantic Region Developments **Husky Energy**

Not only in this province, but globally, industry has had to be resilient. Often, that means doing more with less. But it also means encouraging creative and collaborative thinking. It means trying to find innovative solutions to expensive problems. We've seen that locally; the supplier community coming to the table with creative solutions to problems. It's a clear way to build our competitive advantage and to position this province for success when the current slump eventually ends.

Brian Rogers Operations & Engineering Manager Subsea 7 Canada

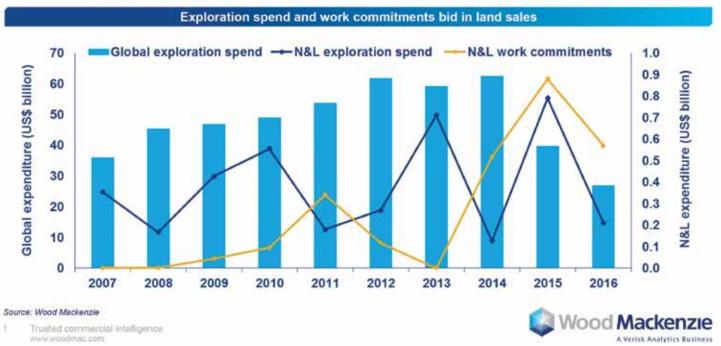
In my view, resilience is not a statement of fact, it's a statement of this is how I roll - forever. As a local industry we have been tremendously successful in addressing the challenges of logistics, harsh weather and ice management - indeed, we are world leaders in many of these areas. As such, I am convinced that if we accept the challenge in front of us, focus on doubling

down on efficiency, cost savings, value and regional collaboration, we will succeed and thrive in the new reality. This challenge is resident in every offshore jurisdiction in the world - it is not unique to us - and so we need to confront that rather aggressively. This is the reality.

Julie Wilson Research Director - Global Exploration Wood Mackenzie

The low-price oil environment is testing the resilience of all industry players, as it is elsewhere in the world. Something special is required from the local industry to overcome that natural cost disadvantage, which is driven by Newfoundland's geography. If companies work together and plan together earlier in the design phases, that would really help to minimize waste and really strip down all the processes... Redundancies and waste that just got built in are now getting stripped out, from big operators to the big contractors all the way down to the rope, soap and dope guys who supply the most basic stuff. It's all coming together in that leaner, more efficient approach. To weather this challenge, resilience will be required from all industry participants.

Recent large work commitments will translate into future exploration spend



Newfoundland and Labrador: A bright spot in a global context of declining spend

Newfoundland and Labrador exploration in a global context

Newfoundland and Labrador's offshore exploration prospects were front and center at this year's Noia Oil & Gas Conference during a session focused on offshore Newfoundland and Labrador in a global context.

Julie Wilson, research director, global exploration, with Wood Mackenzie, opened the session with a look at exploration trends over the last 10 years. She said that tight oil has changed the industry and forced deepwater developments to strive for greater value by seeking high impact discoveries and controlling capital expenditures.

Although many operators are focusing on near field, smaller opportunities for near-term returns on investments, she explained that high risk frontier areas such as offshore Newfoundland and Labrador provide the best opportunities for future large-scale legacy projects. It's also important to be one of the first entrants to a new play.

Wilson said that Newfoundland and Labrador is a bright spot when it comes to exploration, with record commitment bids for the last two years and the entrance of several new players.

"It says a lot about what the operators think about prospectivity and it also says a lot about what they think

INSIDE CONFERENCE | Newfoundland and Labrador exploration in a global context

about the above ground risk when compared to other regions of the world."

Navitas Petroleum enters the province's offshore

Peter Mikkelsen, exploration manager for new entrant Navitas Petroleum, told conference delegates that the privately-owned, North American focused oil & gas partnership was established in 2012 as a subsidiary of Delek Group. With offices in Israel, Houston and London, Mikkelsen noted that it has focused primarily on the Gulf of Mexico, with Canada "hopefully as our upside company maker."

Navitas entered the Newfoundland and Labrador offshore in November 2016 as a 30 per cent partner with DKL Investments (Delek Group) in the successful bid on parcel seven in the West Orphan Basin.

Referencing Delek's deepwater experience with the Tamar field in Israel, Mikkelsen said Navitas is focusing on the Atlantic Ocean as it goes about trying to find "the next Tamar."

"These frontier basins seem to have the best material size DHI/AVO response that I've seen in the world," Mikkelsen explained. "So the geology seems to be top rank and that's the most important thing. It's relatively simple and straightforward."

He said the West Orphan Basin is also attractive due to reasonable water depths, a stable and welcoming government, a reasonable fiscal policy, excellent regional infrastructure, good quality, available data and detailed metocean studies. He said that the province's scheduled land tenure system is an additional asset.

"The process is very transparent, unlike other jurisdictions in the world, so smaller companies like ours can compete."

The company knew that it couldn't compete for a bid on Cape Freels, so it focused on the Piccadilly Prospect in block seven, which also shows potential.

"This is very early days. All we have is the 10x10 2D grid from PGS/TGS and we're dying to get 3D to see more," Mikkelsen said.



The company is hoping to do just that next summer, with plans to acquire 3D over the block.

Nexen progresses NL exploration plan

Nexen Energy is another newcomer to Newfoundland waters, entering the region by securing two 100 per cent positions in the Flemish Pass – one in the 2015 land sale and a second in 2016 (EL 1144 and 1150).

Nexen Energy, a Canadian company, was taken over by China National Offshore Oil Corp. (CNOOC) in 2013. CNOOC is one of the largest oil & gas producers in the world.

Siegfried Joiner, Nexen vice president - exploration and appraisal, Americas said the company's global exploration strategy is focused on creating basin mastery.

"Nexen has confidence in the continued long-term viability of the offshore petroleum business and this is primarily due to our view on the presence of world-class reservoir and a proven petroleum system in the Flemish Pass."

He said Atlantic Canada is a strategic fit.

"There exists here reputable infrastructure and an experienced supply chain. Our operated acreage holdings in the Atlantic region prove that we are confident in this area and its potential for the future."

The company is in the final stages of processing 3D seismic acquired over EL 1144, with seismic acquisition planned this summer for EL 1150. Seismic completion is targeted for the summer of 2018. There are currently plans for a three-well drilling program that could begin in as few as 24 months, depending on regulatory approvals.

"We are excited by the petroleum geology on our block and the opportunity potential for multiple tests in several structures," Joiner stated. "Once we've fully assessed the resource potential on the block later this year we'll be able to solicit farm-in partners for our future exploration drilling campaign."

Nexen has opened a local exploration office in St. John's and has already established relationships with local suppliers, government, regulators and stakeholders as it progresses its exploration program.





Malcolm Maclean provides details on Husky Energy's West White Rose Project at Noia's annual conference.

Conference speakers provide offshore project updates

Senior personnel from the companies which operate oil & gas projects offshore Newfoundland and Labrador were once again on the agenda at this year's Noia Oil & Gas Conference. And like previous years, delegates showed up in full force to hear the latest updates on Hibernia, Terra Nova, White Rose and Hebron.

White Rose

Malcolm Maclean, Husky Energy's Senior Vice President, Atlantic Region provided what was perhaps the most anticipated update. With the announcement only weeks before that the West White Rose project would proceed after more than a two-year delay, delegates listened closely as he detailed plans for this newest extension to the White Rose field.

Maclean explained that the project deferral had allowed for better definition of the work scope. The concrete base structure (CGS) will be taller and wider than initially envisaged and this will result in increased engineering and construction work within the province. It is expected that more than 10-million person hours of work will be done locally and 700-800 people will be employed during peak construction at the Argentia graving dock. Once in operation, approximately 250 new permanent platform jobs will be created and an additional 1500 people will be indirectly employed.

It's anticipated that work on the CGS will start next spring, and preparations for the work will begin this fall. First oil is scheduled for 2022.

The wellhead platform is new technology for this province's industry but is a proven concept in other oil & gas jurisdictions. It provides an innovative way to develop smaller fields or outlying areas of large fields. It enables improved drilling efficiency and has the potential to discover twice as much oil as a subsea development.

Maclean said advancing this project, at a time when few projects of this size are moving forward anywhere in the world, is possible to a large extent because of the SeaRose FPSO, as the wellhead platform will leverage its infrastructure.

Several major contract awards had been made as of Maclean's conference presentation:

- ARUP had been awarded the CGS engineering work
- detailed engineering for the topsides had gone to Wood Group.
- Pioneering Spirit, currently the world's largest construction vessel, will perform the offshore mating of the topsides and CGS during the summer of 2021

Other awards announced since Noia's conference include:

- Construction of the CGS SNC-Lavalin-Dragados-Pennecon General Partnership
- Fabrication of the living quarters Kiewit Offshore Services in Marystown
- Topsides fabrication & construction Kiewit Offshore Services, Texas

- Transportation of the completed topsides from Texas
 Boskalis subsidiary Dockwise
- EPCI for the supply and installation of subsea equipment to connect the CGS to SeaRose – TechnipFMC

Maclean said that fabrication of other components – such as the lifeboat stations, flare boom and helideck – will be completed in-province.

Once the main contracts are awarded, supplier development activities will start in earnest, including supplier development forums to introduce the local supply community to the major contractors and help identify opportunities.

Maclean also addressed Husky's general White Rose development strategy.

"Our White Rose development strategy is all about stepping-out and stepping-down," he said. "We continue to step out from the main White Rose field with satellite tiebacks from North Amethyst and the South White Rose Extension. More recently we started to step down, targeting the deeper Hibernia formation. It underlies the Ben Nevis formation where most of production has come from, to date."

Gross production from the North Amethyst-Hibernia well that came onstream last September has already exceeded 1.5 billion barrels, which bodes well for other Hibernia formation wells.





Also in line with the stepping-out strategy was Husky's November 2016 acquisition of two exploration licences in the White Rose area and the recently announced discovery of oil in an exploration well about 12 kilometres northwest of *SeaRose*. This light oil column of about 100 metres in size is currently being assessed.

Maclean said his company is seeing significant increases in drilling efficiency.

The Henry Goodrich, which is currently on a two-year contract with Husky, has given some of the best drilling performance they have seen to date. This has meant earlier delivery of production on reduced well costs.

"Using two of last year's production wells as an example, drilling efficiencies meant that we added 67 operational days to our production wells, nearly double what was expected. We also shaved 90 days off our drilling program," said Maclean.

He named a number of factors which contributed to this, including the quality of the periodic survey work done in the shipyard, their investment in a reliability assurance team to keep maintenance issues in focus and the return to some tried-and-true measures such as batch drilling.

The arrival of newly built multi-purpose platform support vessel *Scandi Vinland* was expected in early July. The vessel is under charter to Husky for 10 years to perform subsea inspection, maintenance and repair work, as well as installation activities.

Terra Nova

Steve Hogan, Suncor Energy's vice president, east coast operations, told conference delegates his company is focused on ensuring its current operations at Terra Nova are solid. They've seen some good improvements, he told conference delegates.

"Our Terra Nova production increased by 10 per cent, production efficiency increased 15 per cent ... [and] operating costs are down 13 per cent."

Hogan also outlined work planned for Terra Nova for the rest of this year.

A drilling campaign that will take about 15 months will kick off over the summer. Four new wells will be drilled and four workovers – some gas lift valve change outs and integrity work in the sub-surface. A turn-around scheduled for the



ExxonMobil's Geoff Parker talks about the Hebron Project's excellent safety record and the employment opportunities it provided to the province.

fall will see a simulated disconnect, the installation of a new flare ignition system and a significant amount of subsea scope work to prepare for conversion of the gas flood to a water flood. As well, a dive support vessel is coming to the basin for six weeks.

A big decision facing Suncor and its Terra Nova partners over the coming couple of years is the feasibility of extending Terra Nova past its initial 20-year life expectancy. Production began in 2002, so the asset has been in operation for 15 years.

"The big decision in front of us is can we economically justify extending the runway of Terra Nova... what is the scope, what is the cost, what is the schedule, what's the benefit. Is there a business case to spend money on Terra Nova to produce it for five or 10 more years," Hogan said.

Although it's estimated there are 80 million barrels of oil remaining in the ground, it may be less or it may be more.

"I don't know if it's 80 million barrels. It might be 60. It might be 100...There's a lot of resource in the ground after 2020," Hogan said. "The challenge for us is whether we can convert that resource into a reserve. Can it become 'economic.'"

Terra Nova partners have experience dealing with asset life extension in other operations around the world, and Hogan said he will collaborate with those operators.

"We are going to collaborate on this because it's a complex problem."

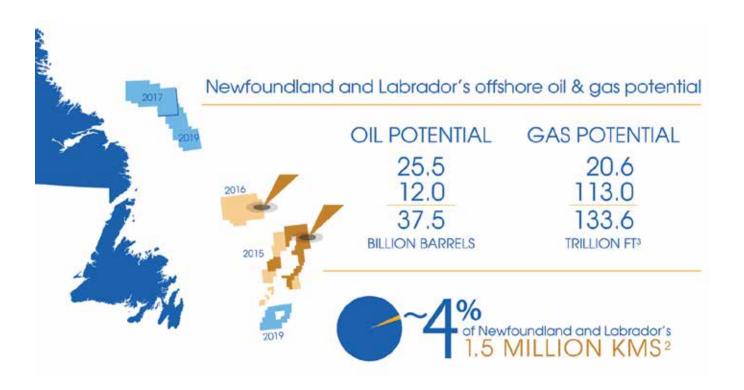
Hibernia and Hebron

This year, Hibernia production is averaging more than 150,000 barrels per day, up from 116,000 in 2014, said Geoff Parker, senior project manager for the Hebron project and vice-president for ExxonMobil Canada Properties during his Day One conference presentation.

Parker talked at length about Hebron completion and installation milestones and showed time-lapse videos of the topsides integration and installation onto its concrete base. He told conference delegates that installing the 50,000-tonne topsides had set a new industry record for the heaviest marine float-over and mating operation.

The platform had been set down on the seabed the week previous to the conference, after a 12-day towout to the offshore field. It was anticipated that drilling would begin later the summer and first oil was still on schedule for later in the year.

At peak in September 2014, the Hebron project employed more than 7500 people, with over 5000 at Bull Arm. Forty million hours of work were completed without any lost-time injuries.



The 2015 and 2016 independent resource assessments covered less than five per cent of offshore NL. The province's third assessment – this time for the Labrador South Region - will be released this fall in advance of that region's land sale.

Province prepares for upcoming licensing rounds

Since 2011, Nalcor and its partners have acquired a wealth of geoscientific data over many frontier areas to gain an accurate picture of the geology in those areas. The work has been taking place in advance of resource assessments that precede the annual offshore licensing rounds. The two resource assessments completed to date have identified a total in-place potential of 37.5 billion barrels of oil and 133.6 trillion cubic feet of gas. These assessments cover less than five per cent of offshore Newfoundland and Labrador.

Nalcor Energy and the provincial Department of Natural Resources are now in the final stages of a third independent resource assessment with Beicep Franlab, this time for the Labrador South license

round area. This assessment is scheduled for release to the public and industry in the third quarter of this year, prior to the November land sale bid deadline.

Labrador South

Richard Wright, Nalcor Energy's exploration manager, focused his presentation at this year's Noia Oil & Gas conference on work to assess the resource potential in the upcoming Labrador South licensing round area. Nalcor has invested with TGS and PGS over several years in over 14,000 line kilometres of new 5 x 5 kilometre seismic coverage over the license round area. While there has been 4 trillion cubic feet found in five gas discoveries on the Labrador Shelf, findings also point to the potential for oil.

"A key focus in our technical evaluation of this area is to address the fundamental question: are there hydrocarbons present in this Labrador deepwater license round area? And if there are, do the indications favour gas presence, oil presence or both," Wright said.

This license round is focused on a delta created over the last 60 million years by river systems, including the ancient Churchill River. The shape is consistent with other delta systems around the world where significant sediment has been deposited over millions of years. The sand and shale that's deposited can, under the right conditions, create source rocks, reservoirs, traps and seals.

Furthermore, seismic reveals that a number of geologic play types of interest have been formed, including rotated fault blocks similar to Bay du Nord-Mizzen, rollover anticlines similar to Hibernia and deepwater fans similar to Cape Freels fans in the West Orphan, as well as toe thrusts.

Wright said the area's rock properties have some similarities to the West Orphan Basin and existing research relating to the West Orphan's rock properties is helping to understand offshore Labrador's hydrocarbon potential.

A multibeam seabed coring survey targeting the Labrador South licensing round area was also conducted in the summer of 2016. 85 seabed core samples were analyzed and 7 samples were flagged by an international geochemical laboratory to contain signatures consistent

with thermogenic oil prone character. Further analysis of the cores is ongoing.

As well, recent geochemical analysis has compared the fluid chemical composition from wells in the Labrador Shelf to known source rocks offshore both Greenland and Baffin Island. It has found consistent signatures in the Labrador condensates to the Cenomonian-Turonian aged Itilli oil from West Greenland. Cenomonian-Turonian is a proven globally significant source rock.

As a result, Nalcor will be examining regional seismic for evidence of potential Cenomonian-Turonian source rock intervals extending along Newfoundland and Labrador's eastern margin. The impact of this could be material, not only to offshore Labrador's prospectivity, but also further south into the Orphan and Carson Basins.

Eastern Newfoundland Region

To prepare for the 2018 Eastern Newfoundland resource assessment, which will kick off later this year, Nalcor is investing with TGS and PGS in a 9000 square kilometre 3D seismic program targeting the East Orphan/West Flemish area.

Nalcor is also investing with Fugro in a multibeam bathymetry and seabed coring survey over the same area. This high-quality data that will overlap with the area of the 3D seismic program will provide information on heat flow, geochemistry and insights on petroleum systems.





Former Newfoundland premier Brian Peckford delivered a passionate address to Noia conference delegates. He told delegates, "We need to remind ourselves about one critical concept that is embedded in the (Atlantic) Accord ... Section 2-c in the Accord: 'To recognize the RIGHT of Newfoundland and Labrador to be the principle beneficiary of the oil & gas resources off its shores, consistent with a strong and united Canada. No special opportunity, no 'some preference', but a RIGHT. That's written into the law of Canada and the law of Newfoundland through the parliament of Newfoundland and the parliament of Canada. We have a RIGHT."

Industry milestones that have shaped our oil & gas industry

As Noia celebrates 40 years of service to the oil & gas industry, it seems fitting to reflect on some of the many milestones that have shaped this storied sector. Noia spoke with several individuals about their memories of some of the events that have shaped the industry we know today.

This issue features Part 1 of a two-part series, and looks at the journey to First Oil. Watch for the second part of this feature in the final Noia News of 2017.

Early exploration

While Newfoundland and Labrador's petroleum history dates back to the 1800s when oil & gas were discovered at Parson's Pond in western Newfoundland, the offshore industry began in earnest with the drilling of two wells on the Grand Banks by Amoco Canada in 1966. Spurred by the federal government's Petroleum Incentive Program (PIP), explorers converged on the region eager to find the next big prize.

Lee Shinkle, business development leader with Stantec and a former president of Noia's Board of Directors, recalled the excitement of those early days. He and long-time Noia Board member and past-president, Rob Strong, even did a weekly CBC Radio broadcast to provide offshore updates to the public during that busy period.

"Suddenly, instead of just being one or two rigs and a couple of wells a year, now you had six rigs, 20 supply boats," Shinkle said. "This town was totally 100 per cent captivated by the concept of the offshore oil & gas industry."

Throughout this busy period of wildcat drilling, a small but dedicated group of visionaries decided that an industry association could better help the local business community learn about the oil & gas industry and their potential involvement. In 1977, Noia (then called the Newfoundland Ocean Industries Association) was born. As hope sometimes faltered that a large discovery would be made, Noia and its growing membership pressed on.

At the same time, the provincial government was preparing for the possibility of an oil & gas industry with the establishment of a petroleum directorate within the Department of Mines and Energy. Brian Peckford, then minister of mines and energy, said it was critical to put in place a highly qualified team so the province would be prepared to develop an industry. He said there was much to learn.

"I used to stay in overnight, I wouldn't sleep, to learn about the oil & gas industry, the language and terms," Peckford recalled. "It was brand new."

Hibernia discovery

In 1979, local optimism was rewarded when the 45th well drilled in the Grand Banks region (10th in the Jeanne

d'Arc Basin) was successful. The Hibernia P-15 discovery well heralded the beginning of the Newfoundland and Labrador offshore petroleum industry of today.

Rex Gibbons, who later became provincial mines and energy minister, was a geologist with the mining side of the department at the time of the Hibernia discovery. He clearly recalls the day the mines and energy minister, Leo Barry, walked in with a small bottle of Hibernia crude.

"I remember him saying, we've got this new discovery offshore. Everyone was excited and thinking, I hope this is a biggie. I hope this is big enough," Gibbons recounted.

Shinkle said the discovery came just in time.

"The program was coming to an end. People were not finding product. It was actually quite disappointing for the longest time. Then finally Chevron struck Hibernia and that got everybody worked up again."

As work continued to delineate and appraise the Hibernia field, the magnitude of the discovery became evident.

Wayne Chipman, now retired, began his career as a reservoir engineer with Gulf Oil in Calgary and was involved in some of the discovery well analysis before returning to Newfoundland in 1980 to work with the provincial government's newly-formed petroleum directorate.

"The production rates were beyond anything we had seen in western Canada. It was just tremendous at the time. It was very exciting to do and to be involved," Chipman said.

Continued exploration in the Jeanne d'Arc Basin soon led to additional finds, notably the Hebron field in 1980 and the Terra Nova and White Rose fields, both in 1984.





Prime Minister Brian Mulroney and Premier Brian Peckford signed the Atlantic Accord in a Hotel Newfoundland ballroom packed with jubilant Newfoundlanders on February 11, 1985. Shown here (front row, L-R) are Newfoundland Natural Resources Minister Bill Marshall, Peckford, Mulroney and federal Energy, Mines and Natural Resources Minister Patricia (Pat) Carney with government officials in the background. "There is no other document in existence, signed by Newfoundland, that has within it the ability to see this province truly grow and prosper," Peckford told the crowd following the signing.

The quest for the Atlantic Accord

But amidst this climate of exploration excitement and anticipation, controversy erupted surrounding who should have control over and be the principal beneficiary of Newfoundland and Labrador's offshore resources.

The federal government took the position that offshore resources fell under its jurisdiction. The provincial government contended that international law granted Newfoundland ownership of mineral resources on the continental shelf before 1949, which was not transferred to Canada upon Confederation. Brian Peckford, first as Newfoundland's minister of mines and energy (1976-1979) and then as premier (1979-1989), worked vigorously to protect the province's interests.

Peckford said it was a difficult time but he knew how important it was to maximize the benefits from this nonrenewable resource.

"I met with the oil companies to explain to them, here's where we are and you're quite likely going to have to live with two sets of regulations until this is solved by the

courts," Peckford explained. "They were very upset and the federal government was really upset because we were challenging their authority."

The Supreme Court was asked to settle the question in 1982, eventually ruling in favour of the federal government in March 1984. Chipman said that was a significant low point for the petroleum directorate.

"We had many ups and downs as a team and that was one of the downs. That's the day they wore the black armbands," Chipman recounted. "But we knew morally that we had rights and continued on. We picked ourselves up, and we did the work that was necessary."

Premier Peckford shifted his efforts to gaining joint management and most of the revenues. He knew that he faced an uphill battle with public sentiment, even in his own province, waning as the battle dragged on.

"The opposition was saying every day, 'The Premier had oil on the brain.' I was going across the country fighting the fishery battles at the same time. I was fighting on all fronts," Peckford said. "There was a feeling that I had gone too far."

But Peckford said he was determined there wouldn't be another repeat of the Upper Churchill deal with Quebec or the fishery transfer to the federal government at the time of Confederation.

"I decided that I was going to go down with the ship. I wasn't going to give up and most people close to me knew I would. There was just no other way. There had to be some kind of a deal where we got something."

Things finally turned in the province's favour during the 1984 federal election campaign when Progressive Conservative leader, Brian Mulroney, made a written promise that, if elected, he would give the province equal say over offshore management and make it the "principal beneficiary" of the oil & gas industry. True to his word, the Canada-Newfoundland Atlantic Accord was signed on February 11, 1985.

The Accord granted the province significant decision-making powers and financial benefits. It made the federal and provincial governments equal partners in the management of offshore developments through the Canada-Newfoundland Offshore Petroleum Board

(now called the Canada-Newfoundland and Labrador Offshore Petroleum Board or C-NLOPB). The Accord also allowed the province to collect taxes and royalties from petroleum resources as if they were located on land.

A \$300-million offshore development fund (\$225 million contributed by Ottawa) was established to help prepare the province for industrial growth. The Accord ensured that residents of Newfoundland and Labrador would benefit from jobs and training opportunities, and that first priority would be given to local businesses able to provide the goods and services.

Peckford said it's important to reflect on what it means to be the principal beneficiary of the offshore.

"It's the right of Newfoundland to be the principal beneficiary, not a preference, not a special opportunity, it's a right. And the word right means a lot in the law," Peckford emphasized.

He added that the principles of the Accord must be defended, lest they be lost or diminished.









A number of Noia's early leaders, including (L-R) Harry Pride, Lee Shinkle and Rob Strong, reminisced about Noia's beginnings and the early days of our province's industry for this article and Noia's 40th anniversary video, which can be viewed on Noia's website. "There was tremendous energy as we saw the (industry) develop. In the early drilling days it was phenomenal," said Lee Shinkle. "You got the feeling that if they were missing a spare part they'd rent a 737 to go and get one because you just had to keep drilling, you had to keep 'turning to the right.'

"Having it there in the Accord is only as strong as those who come along later to enforce it. The fight must be just as hard on enforcement as it was for insertion."

Progress to first oil

With jurisdictional issues resolved, the way was clear for the Hibernia development to proceed. Hibernia was officially declared a significant discovery area on October 2, 1985. Even as the details of the Atlantic Accord were being finalized, the Development Plan Application (DPA) was submitted for Hibernia. Chipman was part of the technical committee reviewing the DPA as the newlyformed C-NOPB was being put in place in St. John's.

"We understood the importance of it because what we were approving was not for today but also for tomorrow," Chipman said.

Work to develop the industry from the ground up continued throughout the late eighties, as the Hibernia Benefits Plan and DPA were approved and the Hibernia Management and Development Company was established to act as the operating company for the project. The field was declared a commercial discovery in January 1990.

From there, work continued to finalize the fiscal agreement between the project partners (Mobil Oil 28 per cent; Petro-Canada 25 per cent; Chevron Canada 21 per cent; and Gulf Canada 25 per cent) and the provincial government. Rex Gibbons, then provincial minister of mines and energy, recalled the historic signing on September 14, 1990.

"All the company presidents were in town and the final word was given. These were exciting times. Now we had an oil industry," Gibbons said.

Work continued in earnest during the early nineties, including construction of the Bull Arm fabrication site and the establishment of numerous research, development and fabrication facilities throughout the province.

Gulf Canada pull out

With contracts in place, new enterprises springing up and international partnerships being formed, the industry hit another roadblock. Gibbons still clearly recalls the phone call he received on January 4, 1992.

"Chuck Schultz, president of Gulf Canada called me from Calgary. 'Mr. Minister I have some bad news,' basically

The Board of Directors of Petroleum Research Newfoundland and Labrador (PRNL) is pleased to announce the appointment of Alan Clarke as Chief Executive Officer.

Alan is a graduate from Memorial University with a B.Sc. in Earth Sciences. He spent many years as a field engineer for major service companies and five of those years working oilfield operations on the Grand Banks.

Alan spent over a decade working internationally in product development and executive management and has recently relocated back to Newfoundland and Labrador from Houston, Texas. He has published numerous papers within the industry and in 2011 he was selected by his peers as SPE distinguished lecturer on the topic of drilling vibration management.

As CEO of PRNL, he is responsible for managing research activities as well as facilitating local technologies and businesses on behalf of its members to further enhance solutions for our challenging offshore oil and gas industry.





is what he said. 'My board has decided that we can no longer take a chance on Hibernia."

Gibbons explained that oil prices had weakened and with big investments elsewhere in the world, Gulf's board decided that Hibernia was too big a risk. With Gulf's exit, the project ground to a halt for more than a year.

Lee Shinkle also remembers that day vividly. He had just convinced his brother to leave his government job to join him in a company servicing the offshore.

"Literally the first week on the job, our principal and only client closed its doors. So that was fairly eye opening," Shinkle mused.

He added that the next year was probably the worst for everybody as the government and oil companies tried to sell Gulf's 25 per cent share. While there was some interest as the project was marketed around the world, most deemed Hibernia to be too risky, considering that the reservoir was not well known and the environment featured ice challenges that many were unfamiliar with.

A partial solution was found when Murphy Oil, a small company from Arkansas, decided to take a 6.5 per cent share, while Chevron and Mobil each took 5 per cent more. With 8.5 per cent remaining, the project was still in ieopardy.

Rob Strong recalled the bitter battle that ensued as public sentiment across Canada was strongly opposed to the project proceeding with government support.

"The rest of Canada was dead set against Hibernia," Strong said. "People said it was a boondoggle and nobody wanted the Government of Canada to invest."

But Strong said the provincial government and industry were not ready to give up.

"About 20 of us locked ourselves away in somebody's boardroom in downtown St. John's. We strategized and we worked the phones and we put a full page in the Globe and Mail," he recounted. "And we talked about the significant impact that Hibernia would have, not only on the Newfoundland business community, but the Canadian business community."

Gibbons credits the tenacity of the local business community as well as the unwavering support of Newfoundland's federal cabinet minister, John Crosbie and the federal energy minister, Jake Epp, with convincing Prime Minister Mulroney to take the final 8.5 per cent share.

John Crosbie described the scenario in an interview with Noia in 2007.

"I remember flying to Ottawa for the final and fatal meeting of the special cabinet committee. We had done everything possible. We had to persuade this committee to recommend to the government to take the other 8.5 per cent. So you can imagine the tension at that meeting," Crosbie explained. "Finally there was a consensus and all members present concurred that we would recommend to the Prime Minister and cabinet that we go ahead and become the partners in the Hibernia project."

Once the project was re-launched early in 1993, it was full steam ahead to first oil.

* Watch for the fourth quarter issue of Noia News in December for the second part of this two-part series on major milestones that have shaped the Newfoundland and Labrador oil & gas industry so far.





Transocean Barents arrives offshore Newfoundland

The Transocean Barents, a sixth generation harshenvironment ultra-deepwater drilling rig, arrived offshore Newfoundland over the summer and commenced the 15-month drilling program announced by Transocean last fall.

Working on the Terra Nova field for Suncor Energy and its project partners, the semi-submersible is conducting a drilling campaign including four new wells and four workovers - some gas lift valve change outs and some integrity work in the sub-surface - according to Steve Hogan, Suncor's east coast vice president, speaking at Noia's June conference.

Jeff O'Keefe, the C-NLOPB's director of resource management and chief conservation officer, told Noia conference delegates the rig "can drill to 9800 feet of water to a maximum depth of 35,000 feet."

According to owner Transocean, the Barents entered service in 2009 and can accommodate 140 – 160 people. The rig, which had operated in the Norwegian sector, had been idle for more than a year at the time of the contract announcement last fall. It has been reported that Suncor will pay a dayrate of \$260,000 USD and the total contract is estimated to value \$119 million.



Speak up against potential legislative changes that will cripple NL's offshore oil and gas industry.

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Noia challenges proposed environmental assessment and regulatory changes

In late July, Noia launched an online campaign, Support Canada's Offshore Oil & Gas Industry, which called on all Canadians to speak up against the federal government's series of system-wide changes related to the country's environmental assessment and regulatory processes.

This campaign was in response to the discussion paper, Environmental and Regulatory Reviews: Proposed Approach, released by the Government of Canada on June 30 detailing the possible changes and seeking feedback over the summer months.

"For the past several months Noia has been strongly advocating for a renewed environmental assessment process that avoids adding unnecessary duplication or additional approval time to an already effective process," said Andrew Bell, Chair of Noia's Board of Directors. "Many of the proposed changes will have a far-reaching negative impact on offshore exploration and development, including deterring investment, delaying development, increasing uncertainty and adding a layer of duplication to the already robust process without improving environmental oversight."

The Newfoundland and Labrador oil & gas industry is now at a place where all the groundwork is in place – extensive geoscience de-risking exploration and the certainty of scheduled land sales. We have incredible prospectivity that points to a nation-building resource comparable to Norway's, yet we cannot provide the certainty that investors require. The EA or IA processes need to be efficient, effective and predictable – which it has been for more than 30 years and can continue to be with the C-NLOPB designated as Responsible Authority.

INSIDE NOIA | Noia challenges proposed environmental assessment and regulatory changes

"Investors require predictability and stability with regard to regulatory approval processes and timelines in order to make significant investment decisions," said Bell. "Noia is encouraging all Canadians to send a clear message to Ottawa that we will not stand by and let the offshore oil & gas industry be crippled by regulatory changes that are meant for major pipeline projects as opposed to offshore resource development."

Specifically, the campaign encouraged Canadians to support the industry by asking the federal government to:

- Recognize the legitimate role of experienced offshore regulators, the C-NLOPB and C-NSOPB in particular,
- Not impede exploration by requiring an environmental assessment for the first well in a new area,
- Recognize that oil exploration and production are critical to the economy of Canada - the Atlantic Region in particular, and
- Most importantly, recognize that the exploration, development and production of our offshore resources is in the public interest and must be supported.

Over the course of the campaign, Noia encouraged its members, stakeholders and the general public, to join in

the effort by signing a petition at www.supportoffshore. ca to inform the federal government that we will not stand by and see our industry crippled by unnecessary legislative changes.

Board chair Andrew Bell appeared on CBC Radio's Fisheries Broadcast and VOCM's Open Line and had a letter to the editor published in The Telegram. Noia ran spots on a local radio station to encourage participation in the campaign and used its social media channels to spread the word that Newfoundland and Labrador will not stand by and allow Ottawa to take back what they gave us through the Atlantic Accord in the early 1980s, which is a hand in the development of our offshore.

The formal window to provide feedback to the federal government closed August 28. However, Newfoundlanders and Labradorians are encouraged to continue to voice their opinions by sending an automated email via www.supportoffshore.ca to Prime Minister Trudeau, Environment and Climate Change Minister Catherine McKenna, Natural Resources Minister James Carr and Members of Parliament.





LeGrow's Atlantic Place office

LeGrow's Travel marks

30 years of Noia membership

LeGrow's Travel (A Maritime Travel Co.) is recognized this year for its long-standing Noia membership and service to the oil & gas industry. Established in Newfoundland and Labrador by Curtis LeGrow in 1949, the company has maintained its local roots while growing and evolving to meet industry needs. It now operates as part of a national travel company with over 115 branches nationwide (17 in Newfoundland and Labrador). Through its partnership with ATP International Network, it also provides worldwide coverage in 130 countries.

Janet Scott-Smith, Director of Business Travel Management, said the company's vast experience and leading technologies have enabled it to meet the evolving needs of leisure and business travellers alike. She added that LeGrow's is proud to have received many awards for consistency and commitment to providing the best travel service, including being recognized as a Top 50 Employer and Top 50 Best Managed company.

"We're well known for our leading technologies in corporate travel," Scott-Smith said. "We've developed a lot of technology on the feedback of our corporate clients. We'll customize their whole program to suit their needs for budgeting purposes, for tracking purposes, for scheduling purposes. We're like an extension of their company, their travel department per se."

For example, the company offers an online client account reconciliation program for business travel management, enabling companies to better monitor and manage travel programs and crew movements. There are also several programs to help protect travelling employees. Where are my Travellers reports are produced every 24 hours for travel managers, while a Red Alert program provides immediate notification of unrest in any country to agents and senior executives who then contact clients. Travellers themselves can also receive an e-travel alert directly from the Canadian Consulate if there are issues in an area they're travelling to, from or through.

INSIDE NOIA | LeGrow's Travel marks 30 years of Noia membership

"Companies are monitoring their expenditures, keeping their costs down and also exercising duty of care to make sure their travellers are taken care of," Scott-Smith explained.

Monthly management information reports are another important service to help corporate clients manage their travel programs. Furthermore, an online booking tool is available for clients who wish to avail of that service, in addition to personal contact with agents. LeGrow's are proud of their in house 24-hour service.

"When somebody's in trouble, dealing with flight delays, cancellations, etc., they can call or use our mobile app. Agents have the company profile in front of them, the policy and the traveller profile, so they can just help them get on their way. There's no waiting in lines at the airport."

An unused ticket program also stores credits which individual travellers may forget they have, and alerts them and their travel managers three months before expiry so they can be used.

Scott-Smith said a lot of the company's involvement in the oil & gas industry came locally with the birth of the industry in Newfoundland and Labrador. Some of its clients from the early days of providing crewing services kept working with the company long after their rigs left Newfoundland waters because of the service they had received.

She added that the Atlantic Accord helped secure opportunities for local companies in the early days of the industry and, as clients enjoyed the level of service they were receiving, the business continued to grow. The company's global reach means that it offers travel services to oil & gas companies and suppliers all over the world.

LeGrow's feels their company's Noia membership has been an important partnership.

"Mr. LeGrow saw a vision for the industry and the province and really felt that you have to support local industry," she said. "There have been so many opportunities through the networking sessions and face-to-face meetings to arow the business."

She said that Noia offers valuable opportunities to meet with industry members to learn about their travel needs.

"We save them a lot of time and money and, in this business, that's everything. They get to focus on what's important to them in their business and allow us to do the travel management for them."

Scott-Smith added that she has appreciated how welcoming Noia has been to a company like hers, which plays a supporting and less visible role in the oil & gas industry.

"Through Noia News, conferences, etc., we're learning about the industry, about how we can service the industry better and also seeing how Noia is going to government to advocate for local businesses. It's important for us to be a part of that." ■





Noia leads mission to explore Guyana oil & gas

The Newfoundland and Labrador Oil & Gas Industries Association (Noia), in partnership with the Atlantic Canada Opportunities Agency (ACOA) and the Department of Tourism, Culture, Industry and Innovation, led a trade mission to Guyana September 11-15, 2017.

"Guyana is a frontier area for oil & gas exploration and development and may pose a substantial export opportunity for companies currently active in the Newfoundland and Labrador supply and service sector," said Andrew Bell, Chair of Noia's Board of Directors. "This mission is an excellent example of how Noia strives to fulfill an important aspect of our mandate which is to facilitate members' participation in the global oil & gas industry."

ACOA provided \$102,300 to Noia to assist with market research, information sessions, matching local companies with opportunities in Guyana and in-market events.

Rob Strong & Associates and Caron Hawco Group were contracted for consultancy services related to the project.

A team from the Guyana Oil & Gas Association (GOGA) attended Noia's 2017 Oil & Gas Conference in June. While here, they met with more than 15 companies interested in partnering with their country's private sector. Speaking with OilNOW, GOGA's e-newsletter, their association president and CEO, Bobby Gossai Jr., said a key benefit from these potential partnerships will be the transfer of knowledge and expertise.

"These partnerships can serve to build business relationships, transfer technology, and skills development in the offshore industry," he said.

The Liza oil field, offshore Guyana, is one of the world's largest oil discoveries of the past decade. In June, ExxonMobil announced it would proceed with phase one of field development, with plans to invest over \$4.4 billion to develop approximately 450 billion barrels of oil. First oil is anticipated by 2020 with initial production of 120,000 barrels of oil per day using a subsea production system and FPSO. ■

InnovateNL replaces RDC

The provincial government announced July 20 that the Research & Development Corporation (RDC) of Newfoundland and Labrador would be replaced by InnovateNL, a single entity for the delivery of provincial innovation programs and services.

"InnovateNL will accelerate business growth in Newfoundland and Labrador. It will result in improved service delivery, better alignment of programs and services and increased collaboration and greater opportunity to leverage funding from federal and industry partners," said Christopher Mitchelmore, provincial minister of tourism, culture, industry and innovation.

The entity will operate under the auspices of Mitchelmore's department and will government's approach to working smarter and more collaboratively. All RDC funding programs and services will be integrated into the department without change to program funding allocations.

The impetus for the new body came from an engagement process held last fall for government's new business

innovation agenda. During the sessions, stakeholders identified a need for one-stop coordinated advice, integrated service delivery and routing matched with employer needs, as well as better linkages to various sources of capital required.

A board of directors, to be known as the NL Innovation Council and chaired by Mark Dobbin, will guide the priorities of InnovateNL. Dobbin is founder and president of Killick Capital, an Atlantic Canadian private equity firm headquartered in St. John's and focused on venture, aerospace and Newfoundland and Labrador businesses.

Ted Lomond has been named acting chief executive officer and will serve in this role while continuing his duties as deputy minister for the Department of Tourism, Culture, Industry and Innovation.

Other individuals named to the council include Adam Anderson, Carey Bonnell, Charlene Brophy, Lynn Morrissey, Gena Pecore, Ron Taylor, Andy Turnbull, Josh Quinton, Jacqueline Walsh and Mandy Woodland. ■





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