



Quebec's Leader in Oil Exploration

Management discussion



**Promising** Future

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## **2010** Building the foundation for lasting success

For Pétrolia, controlling its development, building alliances with the community, and entering into partnerships that protect the environment where its activities take place promote acceptance and maximize the long-term benefits of developing this resource.

Since its beginnings, the Company has devoted itself to extending its expertise, maintaining relations with the community and seeking out partners who share its vision for developing the Company and its resources. This is why Pétrolia believes it can contribute to building an industry that will benefit us all.

Pétrolia has been guided by its desire to build the foundations for lasting success in its decisions and actions this year.



I think it's better to use local resources than to import them. Knowing there's a possibility of producing such an important resource in Quebec and that we could bring work to people by producing something we import is very exciting. I would love to be able to run an oil company to develop our potential and contribute to improving society.



# A word from the President

Oil and gas exploration activities have received a great deal of media attention, both internationally and nationally.

First, on the international scene, the accident at the Deepwater Horizon platform and the resulting environmental disaster in the Gulf of Mexico attracted the world's attention. People everywhere are questioning industry practices, looking at the legal framework governing these activities, and questioning our dependence on oil.

Closer to home, in the wake of questions raised by the disaster, the potential development of shale gas grabbed the Quebec media's attention and emerged as a major news story. Enthusiasm gave way to fear. Opposition to its development became so vocal that the Government of Quebec delayed tabling a law on hydrocarbons, set in motion public BAPE hearings, and reviewed requirements for issuing authorizations for certain work, in particular for fracturing operations.

Alongside these questions, the World Energy Congress held in Montréal in September provided the opportunity to take stock of the magnitude of the energy challenges facing the world. The rapid development of emerging countries, particularly of the two most populous countries in the world, China and India, creates significant demand for energy, while alternative solutions to fossil fuels are not enough to meet this increased demand. Decried as a polluting form of energy, coal is on its way to becoming the leading source of energy worldwide. Although oil's relative weight is diminishing worldwide, oil will continue to meet a major share of energy needs, with its production increasing from around 84 million barrels a day in 2009 to more than 99 million barrels a day in 2035 according to the New Policies Scenario of the International Energy Agency.

While Pétrolia remained on the sidelines of these debates, the Company has nonetheless drawn lessons from them. The first lesson relates to the safety of work and the protection of the environment. The second relates to the importance of maintaining relations with the community where its activities take place. While the Company has always been concerned about safety, protecting the environment, and relations with the receiving environment, the events of recent months have prompted us to redouble our determination. As a result, we intend to devote even more energy to protecting the environment and communicating with the communities in which we operate. The territory belongs first and foremost to the community that lives in it, and it is our priority to protect its environment and lifestyle, as well as to respect its right to understand the nature of our work and to influence our activities. We recognize that our success is intimately linked to the community's acceptance of our activities, and we are determined to respectfully take its reality into consideration.



**André Proulx**, president of the Company

New perspectives opened up for Pétrolia during the year just ended. First of all, with regard to rights, the Company has consolidated its position by renewing all of its oil leases; it has also increased its interest in Haldimand and entered into an agreement with Investcan Energy (Québénergie Inc.). Furthermore, drilling work conducted during the year ending September 30 confirmed the presence of oil in the Haldimand structure, measured the importance of this discovery, demonstrated the exceptional characteristics of reservoirs on Anticosti Island, and opened new exploration programs both in the Gaspé region and on Anticosti.

Through the position it occupies in Eastern Quebec and the province's oil potential, Pétrolia is becoming a key player in the development of this potential in Quebec. This is why the Company decided to sell its interest in shale gas.

However, the Company does face major challenges. Developing oil potential under license on a largely underexplored territory requires major capital. To remain in charge of our development and our expertise, we need access to this capital without losing control of our leases or the resource. However, this challenge is not insurmountable, and we fully intend to find the means to tackle it.

We are confident that the objective of transforming Pétrolia into a fully-fledged oil company is not only a challenge that we can be passionate about, but also the path to maximizing shareholders' equity in the medium term while taking an active part in the economic development of Eastern Quebec. In its pursuit of this objective, Pétrolia will rely on its dedicated personnel, who are fully committed to the Company's vision. On behalf of the shareholders, I would like to sincerely thank all of our employees for the work they have already accomplished and for the commitment they exhibit every day.

The year 2011 will be an exciting one. The development of the Haldimand project and drilling for the Bourque project are likely to change perceptions about Pétrolia and Eastern Quebec. Pétrolia is heading into a year that could well be decisive, with the passion that has driven it since its foundation.



## Objective:

**5%** Pétrolia has set itself the mission of meeting 5% of the demand in Quebec. This demand is currently met in its entirety through imports, more than 90% of which coming from overseas. The goal is not to promote the increased use of this non-renewable resource, but rather to take advantage of domestic demand for oil to help create wealth through the development of a natural resource. While the quest for greater energy efficiency and the better use of energy (oil in particular) is a noble one and should be encouraged, the fact remains that Quebec will continue to consume oil for a few decades yet. This is why Pétrolia believes it is preferable to produce the resource locally rather than to count exclusively on imports to meet the needs of Quebecers.



I like to work with my hands and make things you can touch. I also like team sports where everyone has a part to play in winning the game. When I'm an adult, I would like to be an oil driller and drill wells that will produce a resource that we all need. Doing that in Quebec would be great.



## 2010: Building the foundation for lasting success

The first oil drilling in Canada occurred on the Gaspé Peninsula during the second half of the nineteenth century. Attracted by the natural oil seepage that had always been apparent, the first explorers came up against a geology not terribly inclined to yield oil. The technologies of the day did not allow for the extraction of the resource from the substratum or for the location of reservoirs that would have allowed oil exploration to continue.

The evolution of technology has made it possible to envisage tapping into reservoirs with a porosity and permeability that led the first explorers to abandon the territory. Additionally, technological advances in geophysics now make it possible to identify potential pitfalls that could not be identified at the time.

### Objectives and strategy

Pétrolia's mission is to discover oil accumulations in Quebec and bring them into production as soon as possible, in order to increase its autonomy and allow it to control its development in the long term. As a result, the Company's strategy is a long-term one, and its objective is to position itself as a fully-fledged oil company with the technical and financial resources to successfully accomplish every aspect of its projects.

By relying on advanced technologies for the detection of potential pitfalls and the development of unconventional reservoirs, Pétrolia has set itself the mission of meeting 5% of the demand in Quebec. This demand is currently met in its entirety through imports, more than 90% of which coming from overseas. The goal is not to promote the increased use of this non-renewable resource, but rather to take advantage of domestic demand for oil to help create wealth through the development of a natural resource. While the quest for greater energy efficiency and the better use of energy (oil in particular) is a noble one and should be encouraged, the fact remains that Quebec will continue to consume oil for a few decades yet. This is why Pétrolia believes it is preferable to produce the resource locally rather than to count exclusively on imports to meet the needs of Quebecers.

For Pétrolia, controlling its development, building alliances with the community, and entering into partnerships that protect the environment where its activities take place promote acceptance and maximize the long-term benefits of developing this resource. Since its beginnings, the Company has devoted itself to extending its expertise, maintaining relations with the community and seeking out partners who share its vision for developing the Company and its resources. This is why Pétrolia believes it can contribute to building an industry that will benefit us all.

Pétrolia has been guided by its desire to build the foundations for lasting success in its decisions and actions this year.



**Oil is everywhere in our world. It's not used only to power vehicles. There's petroleum in our clothes, in computers, even in chewing gum. We're obviously going to be using it for a long time to come but we have to do it in a responsible way, because it's a scarce resource and it has an impact on the environment. Eventually, I'd like to become an engineer to work on better ways of using this resource.**



# Highlights for the year ended September 30, 2010

## **The Haldimand project**

Since the Haldimand discovery, Pétrolia has believed that the development of the project and the potential of the York River Formation require strong, determined leadership. The Company saw its efforts pay off during the 2010 fiscal year, while acquiring the assurance to stay in control of its leases and the resource.

### **A strategic choice**

The partnership with Québénergie is in keeping with Pétrolia's desire to ensure its lasting development. Pétrolia chose Québénergie's partnership proposal over all the proposals received, its enterprise culture being in accordance with that of the Company. Both partners share a common vision for the project, which must proceed with significant consideration given to the local environmental and social context. Québénergie's decision to establish in Quebec demonstrates its long-term commitment and will contribute to improving synergies with Pétrolia. In addition to contributing the resources necessary to advance the project, the proposal was in line with Pétrolia's desire to play a major role in the operations and decision making for developing the oilfield and the territory. This agreement makes Pétrolia the oilfield operator with regard to exploration, grants it resources to pursue its activities, and gives it a key role in decision making, because the agreement establishes interest parity between the partners.

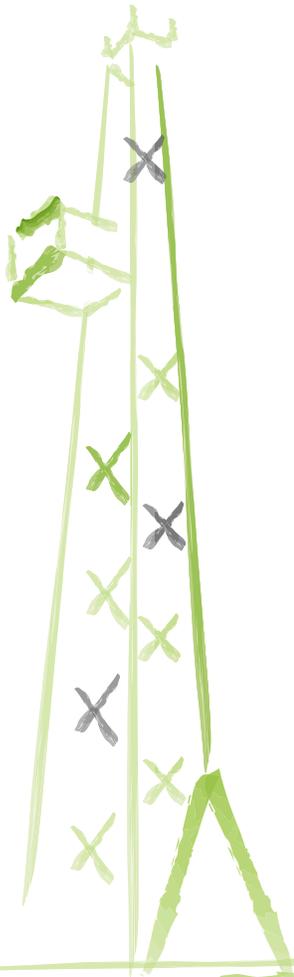
### **Informed and vigorous direction**

Before entering into this agreement, the purpose of which being to speed up the development of the Haldimand project and part of the territory under lease, Pétrolia undertook a number of important and necessary efforts over the past year:

- Pétrolia became the oilfield operator for the Haldimand project during the second round of drilling on the discovery structure. Through agreements entered into with Junex (July 30, 2009) and Gastem (October 19, 2009), Pétrolia increased its interest from 45% to 64% in the 9-km<sup>2</sup> discovery territory.
- Pétrolia has acquired all of the interests in the 150-km<sup>2</sup> territory surrounding the discovery through an agreement with Junex (June 9, 2010). This agreement allowed Pétrolia to extend its control over a territory covered by the Haldimand structure.
- The mandate assigned to the independent firm of experts Sproule Associates Limited confirmed estimates of 7.7 million barrels of oil as the recoverable portion of the Haldimand oil in place.

### **New horizons**

- The drilling at Haldimand No. 2 and Tar Point not only confirms the presence of oil in the York River Formation, but also makes it possible to envisage commercial development of the Indian Cove Formation.
- This work was also decisive in understanding the unconventional nature of the reservoir discovered in the York River Formation. It helps orient the search for a technical approach to production suited to the nature of the reservoir.



### **Moving toward production**

On June 30, 2010, Pétrolia launched new production tests on the Haldimand No. 1 well. The well naturally and consistently delivers around ten barrels of oil per day.

This production is modest compared with Pétrolia's objective of producing 20,000 barrels per day by 2014. The expanse of the York River Formation (over 1,500 km<sup>2</sup>), the prospect of the Indian Cove Formation, and the potential of the Bourque and Anticosti projects suggest that the objective is realistic and worth pursuing. The reefal structures of the West Point (Bourque) and those found on Anticosti Island could well lead to world-class discoveries.

### **The Anticosti project**

Unlike in 2009, when unfavourable economic conditions forced Pétrolia and its partner to delay their planned drilling program, the context of 2010 was favourable for both partners. Since Pétrolia had suspended some activities on the Haldimand project while seeking and negotiating the terms of an agreement with a partner, 2010 provided an opportunity to carry out the work planned and to see progress on the Anticosti project.

### **A strategic advance**

The presence of recognized oil potential, well defined and documented targets, and an experienced partner to share the risk provided Pétrolia with the opportunity to implement the planned drilling program.

While the program did not lead to a discovery, it demonstrated the existence of a reservoir with remarkable characteristics, once again showing that Anticosti Island has all the attributes of a petroleum system.

The 2010 program gave the partners the opportunity to remove a core from the McCasty Formation, which could be a new and potentially very promising exploration environment. The McCasty Formation, made up of oil-saturated shale, covers almost the entire Anticosti territory, and its expanse is already generating a great deal of interest in the industry. Studies currently under way will allow Pétrolia and its partner to determine the potential of these shales. This type of analysis requires several months of analysis, the results should be known within a few months.

### **A partnership with the community**

Since it began operations, Pétrolia has known that its success is intimately tied to the community's acceptance of its activities. Regardless of the rights and privileges conferred upon Pétrolia by the Mining Act, the fact remains that the Company's operations occur in an environment where many activities are already taking place. Pétrolia's operations have to blend harmoniously into the environment so that they can contribute to the region's economic and social progress. Respect, receptiveness, information and transparency are all fundamental factors that guide the Company's activities. The past year has been no exception to this.

The Company's activities have included:

- an open house day during the Tar Point drilling, which gave over 300 Gaspésians the opportunity to witness and understand different aspects of this type of operation;
- a number of press conferences in Gaspé and press releases to update the public about the progress of the Company's work;
- regular field visits by Company executives and meetings with local authorities, which were an opportunity to share information about Pétrolia's activities and better identify community concerns;
- the publication of a series of columns in local weeklies to provide information about the territory's geology, the stages of exploration, the nature of the work, the techniques used, etc.;
- the production of a number of videos to illustrate the stages of drilling, from transport to the operations themselves, to foster a better understanding of the oil industry. These videos are available in the production section of the website ([www.petroliagaz.com/en/production](http://www.petroliagaz.com/en/production)).

Over the course of the coming year, Pétrolia intends to pursue and step up similar initiatives.

#### **Taking advantage of market conditions to finance exploration activities**

At the end of 2009, prevailing stock market conditions were favourable to Pétrolia. On December 4, 2009, the Company issued close to eight million shares in exchange for \$7.13 million. In addition to contributing to its working capital, these funds have largely been allocated to executing the year's work.

The agreement with Québénergie, signed on December 20, 2010, provides Pétrolia payment in the amount of \$6.7 million. Québénergie is also committed to handling expenditures for the work in the amount of \$8.5 million for a maximum of two years. The financial contribution resulting from the signature of this agreement as well as commitments from its partner provides Pétrolia with the security necessary to be able to meet its commitments and obligations and to pursue the development of its projects.

# Management discussion and analysis for the year ended September 30, 2010

This annual management report is an addition and supplement to the audited financial statements for the fiscal years ended September 30, 2010 and 2009, and should be read in conjunction with those statements, which were prepared in accordance with Canada's generally accepted accounting principles (GAAP). This management report presents the views of management on current Company activities and on the annual financial results, as well as a preview of activities during the coming fiscal year.

## Date

This annual management report for the fiscal year ended September 30, 2010 is dated December 20, 2010.

## Nature of activities

The Company is incorporated under Part 1A of the Quebec Companies Act. The Company has been listed on the TSX Venture Stock Exchange since February 16, 2005. The Company's primary activities are the exploration and development of its oil and gas properties. In addition, to achieve its objectives, the Company has entered into various partnership agreements characteristic of the oil and gas industry.

## Forward-looking statements

This report contains statements which should be considered forward-looking statements. The said statements relate to future events or to Pétrolia's future economic results and involve risks, uncertainties, and other factors, both known and unknown, that could significantly affect the results, performance, and achievements indicated or implied by Pétrolia's statements. Actual events and results could be very different. Accordingly, a decision to invest in Pétrolia's securities should in no circumstance be based on these forward-looking statements. Pétrolia has neither the intention nor the obligation to update these forward-looking statements.

## Nature and activity

Pétrolia is a junior exploration company that is concentrating its efforts on the search for oil. It focuses on territories where the chances for success are higher in order to provide short-term returns, and innovates by working with new exploration programs that offer very high potential for discovery. Its activities take place primarily in the Gaspé region and on Anticosti Island, where the main oil potential in Quebec is located.

## Strategy and outlook

To accomplish its mission, Pétrolia holds promising leases in territories where oil is likely to be discovered. It uses advanced technologies and associates with partners with the technical and financial resources to support the development of the oil potential of Eastern Quebec. Pétrolia is actively searching for partners, with the aim of entering into agreements that allow it to control its development and progress toward becoming a fully-fledged oil company.

Pétrolia knows that its success is closely linked to the community's acceptance of its activities. It is therefore careful to maintain ongoing relations with local stakeholders. Its relations with the community are based on full, accessible and transparent information. Pétrolia is aware that the territory in which it operates is first and foremost a living environment, so it seeks to ensure that its operations blend harmoniously into this environment and that it be perceived as a source of economic and social progress.

The Company's development and the context of its operations require that Management pay particular attention to recruiting. Management is guided in its choice of employees by a quest for balance between technical expertise, sensitivity to the physical and human environment, as well as experience and the need to plan for the future.

For more isolated needs, the Company calls on outside expertise. A firm's proven experience and reputation are among the criteria the Company uses to choose the services that will fill out the expertise necessary for developing its projects.

**In a resource-rich region, commercializing the natural heritage is the main tool for developing the community that wants to earn lasting benefits. If these activities are to be accepted, citizens must be informed, consulted, and involved so people can fully master the stakes.**



# Exploration work for 2010

## A dominant position

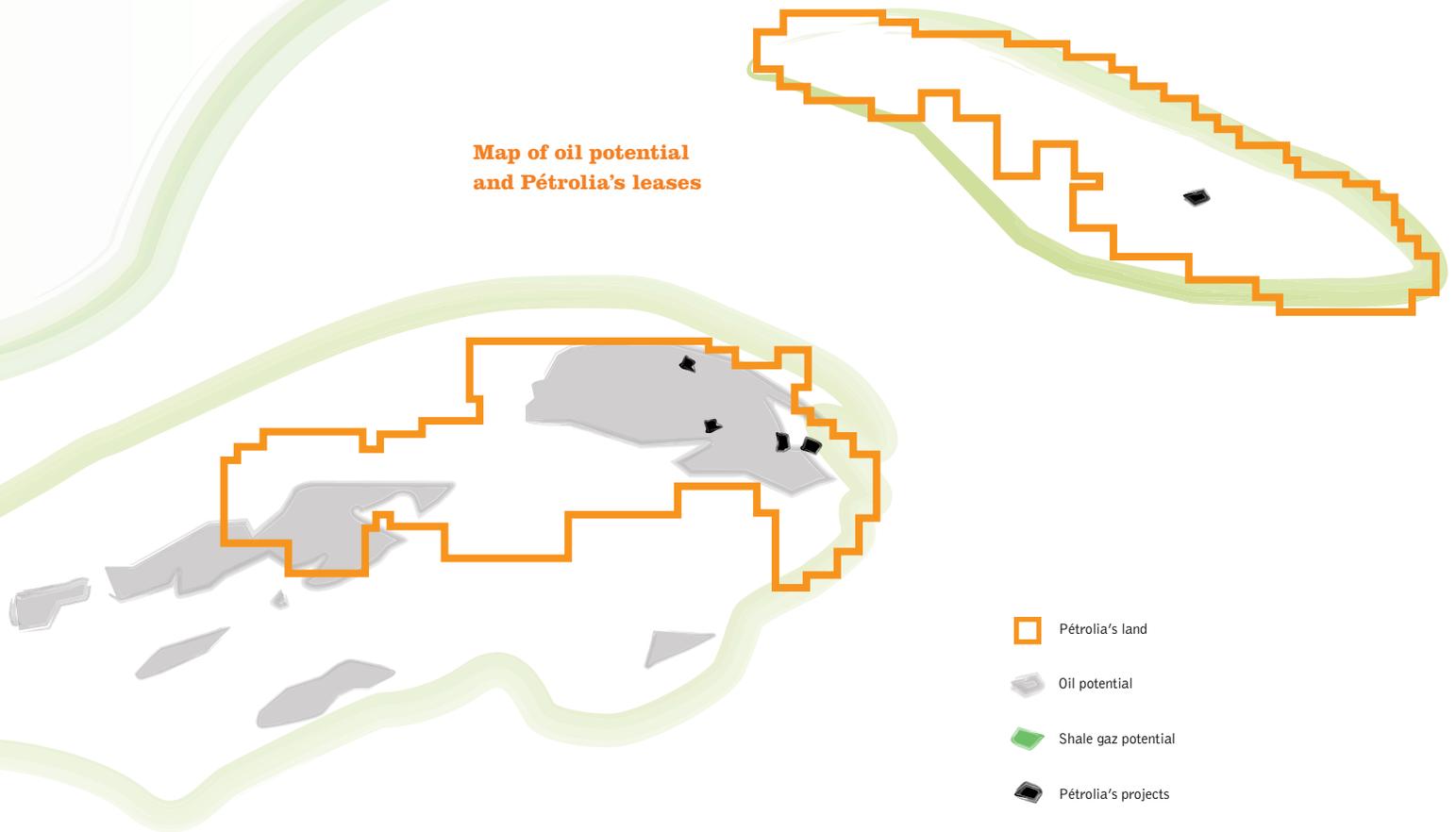
In Quebec, oil resources are found in the east of the province, in the Gaspé region, on Anticosti Island, and perhaps in the Gulf of St. Lawrence. Since it was founded in 2005, the Company has acquired leases that cover more than 15,000 km<sup>2</sup>, mainly in the Gaspé region and on Anticosti Island. These leases, essentially located in the Gaspé region and on Anticosti Island, cover more than 70% of Quebec's land petroleum potential.

In concentrating its efforts on searching for oil just as the industry was displaying its enthusiasm for shale gas, the Company may have appeared rash. The recent and foreseeable rise in the price of oil and natural gas has made the decision appear judicious in hindsight. The portion of the territory that has potential for oil controlled by Pétrolia makes it a dominant player in Quebec.

During the fiscal year ended September 30, 2010, certain changes occurred with respect to the leases the Company holds. Two of these are more significant:

- the first resulted in an agreement between Pétrolia and Junex pursuant to which Pétrolia acquired 100% of the interest in the territory surrounding the discovery;
- the second resulted from the partnership agreement with Québénergie pursuant to which Pétrolia transferred 50% of its interests in the Haldimand discovery and on 13 leases for a total around 2,500 km<sup>2</sup>.

### Map of oil potential and Pétrolia's leases



Since the beginning of its operations, Pétrolia has been interested in the potential of the York River Formation in the Gaspé region, where we found many signs of oil and the burial depth is not significant. The discovery of the Haldimand deposit and the Tar Point project have confirmed the potential of the formation.

### Exploration and production cycle



### Stage (progress of work)

Exploration work	Exploration expenditures as at Sept. 30, 2010	Forecast exploration expenditures for 2011	Exploration expenditures as at Sept. 30, 2010				Forecast exploration expenditures for 2011	
			Geology	Geophysics	Exploration drilling	Completion and production tests	Confirmation drilling	Production infrastructure
HALDIMAND	\$9,383,853	\$7,918,664	Accomplished before 2010	Accomplished before 2010	Accomplished before 2010	Accomplished before 2010	Accomplished before 2010	Accomplished before 2010
TAR POINT	\$4,699,028	\$1,555,594	Accomplished before 2010	Accomplished before 2010	Accomplished before 2010	Accomplished before 2010	Accomplished before 2010	Accomplished before 2010
BOURQUE	\$3,580,147	\$42,224	Accomplished before 2010	Accomplished before 2010	Accomplished before 2010	Accomplished before 2010	Accomplished before 2010	Accomplished before 2010
GASPÉSIA	\$3,531,433	\$93,000	Accomplished before 2010	Accomplished before 2010	Accomplished before 2010	Accomplished before 2010	Accomplished before 2010	Accomplished before 2010
GASTONGUAY	\$73,473	\$15,000	Accomplished before 2010	Accomplished before 2010	Accomplished before 2010	Accomplished before 2010	Accomplished before 2010	Accomplished before 2010
ANTICOSTI	\$5,305,277	\$380,000	Accomplished before 2010	Accomplished before 2010	Accomplished before 2010	Accomplished before 2010	Accomplished before 2010	Accomplished before 2010
DALHOUSIE	\$1,111,708	\$450,000	Accomplished before 2010	Accomplished before 2010	Accomplished before 2010	Accomplished before 2010	Accomplished before 2010	Accomplished before 2010

Legend:

- Accomplished before 2010
- Accomplished in 2010
- Projected for 2011
- Projected for 2011 (contingent to the participation of a partner)

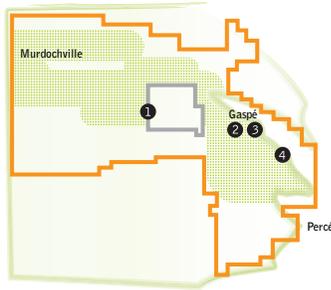
I was fascinated when I heard that the Gaspé area, where I live, used to be an ancient tropical sea hundreds of millions of years ago. When I go to college, I'm going to study earth science to learn how our environment developed ever since the origin of the Earth. As a geologist, I could work for the oil and gas industry, which offers a good outlook for jobs. Working near home—that would really be nice.



# Unconventional reservoir

## exploration projects

Since the beginning of its operations, Pétrolia has been interested in the potential of the York River Formation in the Gaspé region, where many signs of oil were found and the burial depth is not significant. The discovery of the Haldimand deposit and the Tar Point project have confirmed the potential of the formation.



- 1\_ Le Ber No. 1
- 2\_ Haldimand No. 2
- 3\_ Haldimand No. 1
- 4\_ Tar Point No. 1

-  Pétrolia's leases
-  York River Formation

### Haldimand project

Since the discovery in 2006, Pétrolia has been taking control of and increasing its interest in the project to accelerate development.

To this end, on May 6, 2008 Pétrolia signed an agreement with Junex pursuant to which it became the oilfield operator for the project, and it has been developing the deposit since it began drilling the Haldimand No. 2 well in September 2009. In addition to guaranteeing that it be the main contractor for the project, this agreement gives Pétrolia a larger interest in the 9-km<sup>2</sup> territory where the discovery occurred.

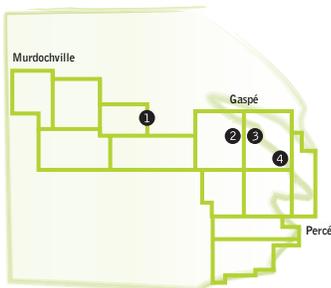
Pétrolia also signed another agreement with Gastem to acquire its interest in the discovery. These two agreements increased Pétrolia's participation in the 9-km<sup>2</sup> discovery territory from 45% to 64%.

The results of tests conducted on the two wells provided a better understanding of the Haldimand deposit. It is made up of a reservoir with low matrix porosity, cut by a network of open fractures whose role in the production mechanism remains to be clarified. The porosity and permeability encountered in the Haldimand reservoir make it somewhat similar to the Bakken program in the central northern United States, which produces large quantities of oil.

Previously impossible to exploit, this type of deposit has been generating a great deal of industry interest since the refinement of horizontal drilling and stimulation techniques. Some of these deposits need to be stimulated and then turn out to be very productive, quickly amortizing the cost of exploration and development.

Pétrolia also consolidated its position in the 150-km<sup>2</sup> territory surrounding the discovery by signing another agreement with Junex which increased its interest to 100%. According to the terms of this agreement, the two companies exchanged territories of equal size. Pétrolia thereby acquired a 100% interest in the lease surrounding the Haldimand discovery.

Finally, a report by Sproule Associates Limited, a firm that specializes in the valuation of recoverable resources, confirms Pétrolia's valuation. Based on information available on December 31, 2009, Sproule confirms Pétrolia's best estimate, which puts the level of original oil in place at 69.7 million barrels and the recoverable portion thereof, using existing or developing technologies, at 7.7 million barrels of oil. Sproule also notes that according to seismic data, the Haldimand structure extends beyond the 9-km<sup>2</sup> territory the estimate was performed on, so the recoverable oil could be higher (see press release dated July 6, 2010).



- 1\_ Le Ber No. 1
- 2\_ Haldimand No. 2
- 3\_ Haldimand No. 1
- 4\_ Tar Point No. 1

-  Partnership with Québénergie

### Agreement with Québénergie

The \$15.2-million agreement signed with Québénergie is the end result of Pétrolia's efforts to find a partner for developing the deposit. Québénergie meets Pétrolia's criteria: it is a partner that wants to exploit the deposit in a manner that respects both the surrounding environment and principles of sustainable development, while ensuring that Pétrolia will continue to play a major role in the development of the project and leases covered by the agreement.

The agreement makes Pétrolia the oilfield operator during the exploration activities. Québénergie will be the oilfield operator during the development phase, in which it has recognized expertise. The parity of interests (50/50) between the two partners ensures that Pétrolia will play a key role in the decisions to be made about the development of the project and the 13 leases covered by the agreement.

Since June 30, 2010, as part of a restricted rate production test, the Haldimand No. 1 well has naturally produced (without the assistance of a pump) around 10 barrels of oil per day. Production is transported by truck to the Ultramar refinery in Saint-Romuald. The Haldimand No. 2 well was suspended to determine the nature of the stimulation work needed.

Pétrolia and its partner are currently evaluating the best options for developing the deposit. The use of horizontal drilling and hydraulic stimulation are among the options being studied. Likewise, the results of geophysical work conducted at the end of summer 2010 (magnetotelluric survey) were sufficiently conclusive for the technique to be used to locate the most promising areas for a third round of drilling on the structure.

### Tar Point project

The Tar Point No. 1 well is located near a well drilled in the 1950s where signs of oil were found. Tar Point is also located in the unconventional reservoir petroleum system and is part of the Company's strategy of concentrating its efforts on the projects with the highest probability of success. The Tar Point project is also covered by the Québénergie agreement.

Located approximately 15 km southwest of the Haldimand wells, this well has reached a total depth of 2,434 m. It crosses the entire York River Formation over a thickness of 1,536 m, as well as part of the Indian Cove Formation over 619 m; after crossing a fault, it once again enters the Gaspé Sandstones over 150 m.

This well revealed the following:

- the upper portion of the York River Formation contains no oil, because burial is too limited;
- the lower portion contains limited signs of oil with porosity and permeability characteristics similar to those of Haldimand;
- in the Indian Cove Formation, two sections of open fractures, each around 100 m thick, revealed many signs of gas and oil. During a production test on one of these two zones, and in spite of the low permeability detected, the Formation delivered light crude.

In its annual report last year, Pétrolia announced its intention to determine the scope of the discovery at Indian Cove through a production test, and to assess the possibility of stimulating this reservoir. This is still its intention, although it has been delayed by efforts to find a partner. With the signing of the agreement between Pétrolia and Québénergie, this project will be assessed by the partners and could be included in the program of work under development.



# Conventional reservoir exploration projects

Pétrolia is pursuing two projects in this category. The Bourque project, in the Gaspé region, explores the system of reefs in the West Point Formation. The other project is on Anticosti Island and mainly targets the hydrothermal dolomitites of Trenton/Black River.

## The Bourque project

A 3-D seismic survey conducted by Pétrolia in 2008 clearly demonstrated the possibility of the presence of a reef complex in the West Point Formation, which is older than the York River Formation. Located approximately 70 km west of the town of Gaspé, this reef complex is reminiscent of the Leduc reefs in Alberta in which giant fields have been discovered—a turning point in that province's oil exploration.

The Company had an agreement with Pilatus Energy to drill the structure in 2009. However, the stock market crisis of 2008 and the ensuing recession in 2009 deprived the partner of the liquidity necessary to move ahead. Pilatus and Pétrolia agreed to terminate the partners' obligations. Pilatus retains a 5% interest in the project and remains a shareholder of the Company.

In 2010, the conditions were not right to drill the Bourque project. Working with CIBC World Markets, Pétrolia is pursuing its efforts to find a partner that meets its criteria. This project remains a priority for 2011, the year in which Pétrolia would like to perform two drills on this structure.

This project is very important for Pétrolia due to the discovery potential of this type of large oil trap. The presence of other similar structures, e.g. Corte Real, is also likely to stimulate the interest of potential investors and partners. However, in the Gaspé region, this type of structure carries a relatively high risk because of the cost of drilling; this is why Pétrolia would like to take on partners who have both the financial capacity and the technical expertise to invest and complete this project.

## The Anticosti project

Anticosti Island is a vast territory that is very promising but not well explored. The bedrock of the island is formed by rocks whose composition and age are similar to those of productive land in the northeastern United States. The rocks on the island are also similar to those of the Lower St. Lawrence. The analyses of the organic matter in the parent rock show that it produces large quantities of oil. Shell has already valued the quantity of oil produced by this parent rock in the history of this sedimentary basin at 30 billion barrels. Additionally, porous zones and signs of oil were found in the wells drilled to date. A number of structures have been identified by the seismic survey. These are favourable to hydrothermal dolomitization and are likely to have trapped a portion of the oil produced by this parent rock. This system was the main objective of the drilling program conducted during summer 2010.

This program of three drilling efforts was conducted on as many targets. Initially, the program was for four drilling efforts, but because of expenses largely attributable to the transport of equipment, the partners decided to limit the program to three.



### **Jupiter well**

This well, which is a re-entry to the Corridor/Hydro-Québec Jupiter No. 1 wells, was intended to find dolomitized and fractured carbonates in the Mingan and Romaine formations likely to be a reservoir. In spite of a few indications of oil in the Mingan Formation, no major reservoir was found, so the well drilled in 2010 was abandoned.

The data gathered during the drilling of this well provided a great deal of information about this play which is being studied by the partners. The Anticosti Island territory, particularly the western portion of the island, has many structures that are not part of this play and that continue to offer solid potential for discovery.

### **Chaloupe well**

The objective for this well was to discover a hydrothermal dolomite reservoir in the Trenton/Black River Formation. The well revealed only lightly dolomitized carbonates. There was no reservoir of any importance noted.

The partners also agreed to remove a 27-m core from the McCasty Formation shales. This core is currently being analyzed to confirm a new exploration play on Anticosti Island.

### **Saumon well**

The objective for this well was the same as for the Chaloupe well. While few dolomitized carbonates were found, the well revealed the presence of a very large reservoir in the fractured carbonates of Trenton/Black River. The volume of salt water produced, (27 m<sup>3</sup> or 170 barrels in 45 minutes) corresponds to a daily flow of 15,000 barrels/day. The absence of oil in this reservoir is undoubtedly disappointing. However, the existence of a reservoir of this quality confirms that Anticosti Island has all the elements of a petroleum system, specifically a productive parent rock, excellent reservoirs, and cover rock that could contain oil.

As for the Chaloupe well, the presence of salt water in the reservoir led the partners to abandon the lower portion of the well and to suspend exploration of the upper portion, where the presence of McCasty Formation shales was noted.



### **Unconventional reservoir**

According to the partners' information, the shales of the McCasty Formation, present everywhere on the island, could be saturated in oil over the entire northern portion of the territory.

As mentioned earlier, Corridor and Pétrolia recovered a core from the McCasty Formation in the Chaloupe well. If the tests on this core are positive, the partners will have defined a new exploration play for the Anticosti Island territory.

The objective of the studies under way is to determine the production potential of this formation. A number of major companies have already indicated their interest in this area, given the size of the territory covered by this shale.

### **Define an exploration program**

The drilling campaign for the year 2010 ended in the demonstration of the existence of an excellent reservoir on Anticosti Island and the launch of a new exploration play. For the latter, the presence of a partner experienced in the development of shale oil play is indispensable to the two partners. Pétrolia and Corridor had already started to promote this play, so far very well received by the industry.

In the coming months, Pétrolia and its partner will devote their energies to analyzing the data gathered in the drilling done in 2010. From these analyses, an exploration program will be established, which will include shale oil targets.



# Other exploration projects

## Dalhousie

The seismic survey conducted in 2008 and 2009 on the Dalhousie property in New Brunswick was sufficiently promising for Pétrolia to want to drill. As mentioned in last year's annual report, the project was put on hold, because the political and economic situation made the natural gas market less attractive in this province. The conditions have not changed during the year just ended, so the status of the project remains unchanged.

Pétrolia intends to closely follow the evolution of conditions in New Brunswick and to pursue its efforts to find a partner.

## Gaspésia, Gastonguay and Edgar

More information is needed from the Gaspésia, Gastonguay and Edgar properties to better evaluate the potential. The lack of complete information is why these territories have not been included in the Company's priorities to date. To better document the potential of these properties, Pétrolia has planned knowledge acquisition projects:

- thermal maturation and petroleum potential studies have begun in order to determine the most favourable areas for the conservation of hydrocarbons;
- a surface geochemical survey will also be performed. This survey will be conducted on the Gaspésia and Edgar properties. The goal of this project is to locate and characterize the hydrocarbon anomalies.

The results of these studies will be known in spring 2011.