Québec
A Petroleum Region
To Be Discovered
This brochure was produced by the Communications Department of the ministère des Ressources naturelles.

Reference List


DYKSTRA, J.C.F., LONGMAN, M., (Avril 1995), Gas reservoir potential of the Lower Ordovician Beekmantown Group, Quebec, Canada, AAPG Bull. v. 79, No 4, p. 513-530.


Research and writing:

Claude Morin, Petroleum Geologist

Production:

Graphic design: RM communication design
Coordination: Anne-Marie Barthe

Government of Québec
Legal deposit – 2nd quarter 2001
Bibliothèque nationale du Québec
ISBN: 2-550-37379-0
N° de publication: 2001 - 4001
Version française disponible

Oil and Gas Branch
5700 Fourth Avenue West, Room A 412
Charlesbourg, (Québec) G1H 6R1
Telephone: (418) 627-6390
Fax: (418) 644-1445
QUÉBEC
A PETROLEUM REGION TO BE DISCOVERED

Hydrocarbons currently account for 57% of Quebec’s energy consumption, with oil accounting for 40.4% and natural gas, 16.7%. According to statistical studies, forecasted demand will remain relatively stable for the next decade.

Quebec has a total surface area of close to 1.7 million km². The greatest potential for hydrocarbon discovery is in its sedimentary zone, which covers 229,000 km², 57% of which is marine. This zone extends over the whole southern section of the province along the line of the St. Lawrence River, stretching from the border with Ontario to that with Newfoundland. These basins are part of a long sedimentary basin extending from Texas to Newfoundland, comprising an ancient coastline along which carbonates were deposited.

For more than 10 years now, based on these geological concepts, a series of discoveries ranging from 50 to 500 BCF have been made along this line of sedimentary basins. At present, two natural gas fields have been discovered in Quebec, the first being at Point-du-Lac and the second, at St-Flavien. The Quebec sub-surface is still largely unexplored in comparison to other sedimentary basins in Canada and the United States. Nonetheless, previous work has made it possible to target the geological zones with the best hydrocarbon potential.

The Appalachian geological province is to the south of the Precambrian Shield and is composed of deformed rocks dating from the Cambrian to the Carboniferous. In the Magdalen Islands, certain rocks even date from the Permian. Situated between the Shield and the Appalachians, the St. Lawrence Platform geological province (Cambro-Ordovician) is composed of rocks which are virtually undeformed within the triangle delimited by Quebec and the Ontario and American borders. Further east, Anticosti Island is composed of Ordovician and Silurian rocks, while the Mingan Archipelago is composed of Ordovician rocks. Ordovician rock in-layers can be found between Quebec and the Mingan Islands on the north shore of the St. Lawrence and in the Saguenay–Lac Saint-Jean region.

Québec has a total surface area of close to 1.7 million km². The greatest potential for hydrocarbon discovery is in its sedimentary zone, which covers 229,000 km², 57% of which is marine. This zone extends over the whole southern section of the province along the line of the St. Lawrence River, stretching from the border with Ontario to that with Newfoundland. These basins are part of a long sedimentary basin extending from Texas to Newfoundland, comprising an ancient coastline along which carbonates were deposited.

For more than 10 years now, based on these geological concepts, a series of discoveries ranging from 50 to 500 BCF have been made along this line of sedimentary basins. At present, two natural gas fields have been discovered in Quebec, the first being at Point-du-Lac and the second, at St-Flavien. The Quebec sub-surface is still largely unexplored in comparison to other sedimentary basins in Canada and the United States. Nonetheless, previous work has made it possible to target the geological zones with the best hydrocarbon potential.

The Appalachian geological province is to the south of the Precambrian Shield and is composed of deformed rocks dating from the Cambrian to the Carboniferous. In the Magdalen Islands, certain rocks even date from the Permian. Situated between the Shield and the Appalachians, the St. Lawrence Platform geological province (Cambro-Ordovician) is composed of rocks which are virtually undeformed within the triangle delimited by Quebec and the Ontario and American borders. Further east, Anticosti Island is composed of Ordovician and Silurian rocks, while the Mingan Archipelago is composed of Ordovician rocks. Ordovician rock in-layers can be found between Quebec and the Mingan Islands on the north shore of the St. Lawrence and in the Saguenay–Lac Saint-Jean region.

The Appalachian geological province is to the south of the Precambrian Shield and is composed of deformed rocks dating from the Cambrian to the Carboniferous. In the Magdalen Islands, certain rocks even date from the Permian. Situated between the Shield and the Appalachians, the St. Lawrence Platform geological province (Cambro-Ordovician) is composed of rocks which are virtually undeformed within the triangle delimited by Quebec and the Ontario and American borders. Further east, Anticosti Island is composed of Ordovician and Silurian rocks, while the Mingan Archipelago is composed of Ordovician rocks. Ordovician rock in-layers can be found between Quebec and the Mingan Islands on the north shore of the St. Lawrence and in the Saguenay–Lac Saint-Jean region.

A simplified north-west–south-east cross-section (AB and CDEFG) shows the main elements of the St. Lawrence Platform – Appalachian pair (see above figure). The autochthonous layers of the St. Lawrence Platform geological province (blue) are unconformable with their basement, namely the one-billion-year-old metamorphic rocks of the Grenville province (red) of the Precambrian Shield. Along a Montréal-Eastern Townships cross-section (AB), the Platform rocks date back to the Cambrian and Ordovician periods. On the other hand, a Mingan – Anticosti – Gaspé Peninsula cross-section (CDE) shows formations that date from the Ordovician to the Silurian, and probably even to the Devonian under the Gulf waters.

The highly deformed rocks of the Appalachian province comprise numerous folds and faults. These rocks overlap layers of the St. Lawrence Platform and the Grenville due to the Logan Fault (LF), a major fault with a slight inclination. The Appalachians is composed of three major types of rocks. The first group...
QUÉBEC, a Petroleum Region to Be Discovered

Hydrocarbons currently account for 57% of Québec’s energy consumption, with oil accounting for 40.4% and natural gas, 16.7%. According to statistical studies, forecasted demand will remain relatively stable for the next decade. Québec has a total surface area of close to 1.7 million km². The greatest potential for hydrocarbon discovery is in its sedimentary zone, which covers 225,000 km², 57% of which is marine. This zone extends over the whole southern section of the province along the line of the St. Lawrence River, stretching from the border with Ontario to that with Newfoundland. These basins are part of long sedimentary basins extending from Texas to Newfoundland, comprising an ancient coastline along which carbonates were deposited. For more than 10 years now, based on these geological concepts, a series of discoveries ranging from 50 to 500 BCF have been made along this line of sedimentary basins. At present, two natural gas fields have been discovered in Québec, the first being at Point-du-Lac and the second, at St-Flavien. The Québec sub-surface is still largely unexplored in comparison to other sedimentary basins in Canada and the United States. Nonetheless, previous work has made it possible to target the geological zones with the best hydrocarbon potential.

A simplified north-west – south-east cross-section (AB and CDEFG) shows the main elements of the St. Lawrence Platform – Appalachian pair (see above figure). The autochthonous layers of the St. Lawrence Platform geological province (blue) are unconformable with their basement, namely the one-billion-year-old metamorphic rocks of the Grenville due to the Logan Fault (LF), a major fault with a slight inclination. The Appalachians is composed of several major types of rocks. The first group delimited by Québec and the Ontario and American borders. Farther east, Anticosti Island is composed of Ordovician and Silurian rocks, while the Mingan Archipelago is composed of Ordovician rocks. Ordovician rock in-layers can be found between Québec and the Mingan Islands on the north shore of the St. Lawrence and in the Saguenay – Lac Saint-Jean region.

A critical area is the relation between the Appalachian geological province and the sedimentary basins. The Appalachian geological province is to the south of the Precambrian Shield and is composed of deformed rocks dating from the Cambrian to the Carboniferous. In the Magdalen Islands, certain rocks even date from the Permian. Situated between the Shield and the Appalachians, the St. Lawrence Platform geological province (Cambro-Ordovician) is composed of rocks which are virtually undeformed within the triangle delimited by Québec and the Magdalen Islands, the Appalachian geological province, and the Canadian Shield. Farther east, Anticosti Island is composed of Ordovician and Silurian rocks. Ordovician rock in-layers can be found between Québec and the Mingan Islands on the north shore of the St. Lawrence and in the Saguenay – Lac Saint-Jean region.

Texas to Newfoundland, comprising an ancient coastline along which carbonates were deposited. For more than 10 years now, based on these geological concepts, a series of discoveries ranging from 50 to 500 BCF have been made along this line of sedimentary basins. At present, two natural gas fields have been discovered in Québec, the first being at Point-du-Lac and the second, at St-Flavien. The Québec sub-surface is still largely unexplored in comparison to other sedimentary basins in Canada and the United States. Nonetheless, previous work has made it possible to target the geological zones with the best hydrocarbon potential.

A simplified north-west – south-east cross-section (AB and CDEFG) shows the main elements of the St. Lawrence Platform – Appalachian pair (see above figure). The autochthonous layers of the St. Lawrence Platform geological province (blue) are unconformable with their basement, namely the one-billion-year-old metamorphic rocks of the Grenville due to the Logan Fault (LF), a major fault with a slight inclination. The Appalachians is composed of several major types of rocks. The first group delimited by Québec and the Ontario and American borders. Farther east, Anticosti Island is composed of Ordovician and Silurian rocks, while the Mingan Archipelago is composed of Ordovician rocks. Ordovician rock in-layers can be found between Québec and the Mingan Islands on the north shore of the St. Lawrence and in the Saguenay – Lac Saint-Jean region.
QUÉBEC, A PETROLEUM REGION TO BE DISCOVERED

The St. Lawrence Lowlands and, to a lesser degree, the eastern Gaspé Peninsula are the two regions that have seen the most active exploration. The 381 wells in the sedimentary basins of Québec have been drilled over a 140-year period. However, the first 100 years saw little drilling activity. Indeed, before the 1950s, 112 wells were drilled and almost all of them were drilled in the eastern Gaspé Peninsula on visually discovered oil seepage lying on the ground.

Exploration began in earnest after the eruption, in 1955, of a “handyman’s” well drilled by the Brothers of a religious order at Pointe-du-Lac. It was then that exploration moved from the Gaspé Peninsula to the St. Lawrence Lowlands. The drilling was conducted on the shallow, carbonate platform. The figure below provides a list of modern hydrocarbon exploration as well as the related palingenetic cycles.

There is a wedge (pale yellow) constituting a parautochthonous segment between the autochthonous St. Lawrence Platform and the allochthonous Appalachian. Québec geologists include this thin wedge in the autochthonous mass since the composition of the wedge rocks is similar to the sedimentary sequence of the St. Lawrence Platform. The wells drilled in each of these basins have revealed the presence of hydrocarbons in the form of oil or natural gas. In all, the search for oil, natural gas and underground reservoirs has led to 381 wells being drilled in the Palaeozoic sediments of Québec since 1860. Moreover, it is well known that there are Quaternary unconsolidated deposits in the St. Lawrence Lowlands basin that contain relatively sizeable quantities of natural gas. One such example is the Pointe-du-Lac gas field (3.2 BCF), which has now been converted into an underground reservoir. Since the beginning of hydrocarbon exploration in Québec, this limited activity in the unconsolidated deposits of the St. Lawrence Lowlands has involved the drilling and recording of 302 shallow wells (< 150 m) in the Répertoire des puits pour la recherche de pétrole et de gaz naturel au Québec, section Sol non consolidé.

The St. Lawrence Lowlands and, to a lesser degree, the eastern Gaspé Peninsula are the two regions that have seen the most active exploration. The 381 wells in the sedimentary basins of Québec have been drilled over a 140-year period. However, the first 100 years saw little drilling activity. Indeed, before the 1950s, 112 wells were drilled and almost all of them were drilled in the eastern Gaspé Peninsula on visually discovered oil seepage lying on the ground.
The St. Lawrence Lowlands and, to a lesser degree, the eastern Gaspé Peninsula are the two regions that have seen the most active exploration. The 381 wells in the sedimentary basins of Québec have been drilled over a 140-year period. However, the first 100 years saw little drilling activity. Indeed, before the 1950s, 112 wells were drilled and almost all of them were drilled in the eastern Gaspé Peninsula on visually discovered oil seepage lying on the ground.

Exploration began in earnest after the eruption, in 1955, of a “handyman’s” well drilled by the Brothers of a religious order at Pointe-du-Lac. It was then that exploration moved from the Gaspé Peninsula to the St. Lawrence Lowlands. The drilling was conducted on the shallow, carbonate platform. The figure below provides a list of modern hydrocarbon exploration as well as the related palingenetic cycles.

There is a wedge (pale yellow) constituting a parautochthonous segment between the autochthonous St. Lawrence Platform and the allochthonous Appalachians. Québec geologists include this thin wedge in the autochthonous mass since the composition of the wedge rocks is similar to the sedimentary sequence of the St. Lawrence Platform.

The wells drilled in each of these basins have revealed the presence of hydrocarbons in the form of oil or natural gas. In all, the search for oil, natural gas and underground reservoirs has led to 381 wells being drilled in the Palaeozoic sediments of Québec since 1860. Moreover, it is well known that there are Quaternary unconsolidated deposits in the St. Lawrence Lowlands basin that contain relatively sizeable quantities of natural gas. One such example is the Pointe-du-Lac gas field (3.2 BCF), which has now been converted into an underground reservoir. Since the beginning of hydrocarbon exploration in Québec, this limited activity in the unconsolidated deposits of the St. Lawrence Lowlands has involved the drilling and recording of 302 shallow wells (< 150 m) in the Répertoire des puits for la recherche de pétrole et de gaz naturel au Québec, section Sol non consolidé.

The wells drilled in each of these basins have revealed the presence of hydrocarbons in the form of oil or natural gas. In all, the search for oil, natural gas and underground reservoirs has led to 381 wells being drilled in the Palaeozoic sediments of Québec since 1860. Moreover, it is well known that there are Quaternary unconsolidated deposits in the St. Lawrence Lowlands basin that contain relatively sizeable quantities of natural gas. One such example is the Pointe-du-Lac gas field (3.2 BCF), which has now been converted into an underground reservoir. Since the beginning of hydrocarbon exploration in Québec, this limited activity in the unconsolidated deposits of the St. Lawrence Lowlands has involved the drilling and recording of 302 shallow wells (< 150 m) in the Répertoire des puits for la recherche de pétrole et de gaz naturel au Québec, section Sol non consolidé.

The wells drilled in each of these basins have revealed the presence of hydrocarbons in the form of oil or natural gas. In all, the search for oil, natural gas and underground reservoirs has led to 381 wells being drilled in the Palaeozoic sediments of Québec since 1860. Moreover, it is well known that there are Quaternary unconsolidated deposits in the St. Lawrence Lowlands basin that contain relatively sizeable quantities of natural gas. One such example is the Pointe-du-Lac gas field (3.2 BCF), which has now been converted into an underground reservoir. Since the beginning of hydrocarbon exploration in Québec, this limited activity in the unconsolidated deposits of the St. Lawrence Lowlands has involved the drilling and recording of 302 shallow wells (< 150 m) in the Répertoire des puits for la recherche de pétrole et de gaz naturel au Québec, section Sol non consolidé.

The wells drilled in each of these basins have revealed the presence of hydrocarbons in the form of oil or natural gas. In all, the search for oil, natural gas and underground reservoirs has led to 381 wells being drilled in the Palaeozoic sediments of Québec since 1860. Moreover, it is well known that there are Quaternary unconsolidated deposits in the St. Lawrence Lowlands basin that contain relatively sizeable quantities of natural gas. One such example is the Pointe-du-Lac gas field (3.2 BCF), which has now been converted into an underground reservoir. Since the beginning of hydrocarbon exploration in Québec, this limited activity in the unconsolidated deposits of the St. Lawrence Lowlands has involved the drilling and recording of 302 shallow wells (< 150 m) in the Répertoire des puits for la recherche de pétrole et de gaz naturel au Québec, section Sol non consolidé.

The wells drilled in each of these basins have revealed the presence of hydrocarbons in the form of oil or natural gas. In all, the search for oil, natural gas and underground reservoirs has led to 381 wells being drilled in the Palaeozoic sediments of Québec since 1860. Moreover, it is well known that there are Quaternary unconsolidated deposits in the St. Lawrence Lowlands basin that contain relatively sizeable quantities of natural gas. One such example is the Pointe-du-Lac gas field (3.2 BCF), which has now been converted into an underground reservoir. Since the beginning of hydrocarbon exploration in Québec, this limited activity in the unconsolidated deposits of the St. Lawrence Lowlands has involved the drilling and recording of 302 shallow wells (< 150 m) in the Répertoire des puits for la recherche de pétrole et de gaz naturel au Québec, section Sol non consolidé.

The wells drilled in each of these basins have revealed the presence of hydrocarbons in the form of oil or natural gas. In all, the search for oil, natural gas and underground reservoirs has led to 381 wells being drilled in the Palaeozoic sediments of Québec since 1860. Moreover, it is well known that there are Quaternary unconsolidated deposits in the St. Lawrence Lowlands basin that contain relatively sizeable quantities of natural gas. One such example is the Pointe-du-Lac gas field (3.2 BCF), which has now been converted into an underground reservoir. Since the beginning of hydrocarbon exploration in Québec, this limited activity in the unconsolidated deposits of the St. Lawrence Lowlands has involved the drilling and recording of 302 shallow wells (< 150 m) in the Répertoire des puits for la recherche de pétrole et de gaz naturel au Québec, section Sol non consolidé.

The wells drilled in each of these basins have revealed the presence of hydrocarbons in the form of oil or natural gas. In all, the search for oil, natural gas and underground reservoirs has led to 381 wells being drilled in the Palaeozoic sediments of Québec since 1860. Moreover, it is well known that there are Quaternary unconsolidated deposits in the St. Lawrence Lowlands basin that contain relatively sizeable quantities of natural gas. One such example is the Pointe-du-Lac gas field (3.2 BCF), which has now been converted into an underground reservoir. Since the beginning of hydrocarbon exploration in Québec, this limited activity in the unconsolidated deposits of the St. Lawrence Lowlands has involved the drilling and recording of 302 shallow wells (< 150 m) in the Répertoire des puits for la recherche de pétrole et de gaz naturel au Québec, section Sol non consolidé.

The wells drilled in each of these basins have revealed the presence of hydrocarbons in the form of oil or natural gas. In all, the search for oil, natural gas and underground reservoirs has led to 381 wells being drilled in the Palaeozoic sediments of Québec since 1860. Moreover, it is well known that there are Quaternary unconsolidated deposits in the St. Lawrence Lowlands basin that contain relatively sizeable quantities of natural gas. One such example is the Pointe-du-Lac gas field (3.2 BCF), which has now been converted into an underground reservoir. Since the beginning of hydrocarbon exploration in Québec, this limited activity in the unconsolidated deposits of the St. Lawrence Lowlands has involved the drilling and recording of 302 shallow wells (< 150 m) in the Répertoire des puits for la recherche de pétrole et de gaz naturel au Québec, section Sol non consolidé.

The wells drilled in each of these basins have revealed the presence of hydrocarbons in the form of oil or natural gas. In all, the search for oil, natural gas and underground reservoirs has led to 381 wells being drilled in the Palaeozoic sediments of Québec since 1860. Moreover, it is well known that there are Quaternary unconsolidated deposits in the St. Lawrence Lowlands basin that contain relatively sizeable quantities of natural gas. One such example is the Pointe-du-Lac gas field (3.2 BCF), which has now been converted into an underground reservoir. Since the beginning of hydrocarbon exploration in Québec, this limited activity in the unconsolidated deposits of the St. Lawrence Lowlands has involved the drilling and recording of 302 shallow wells (< 150 m) in the Répertoire des puits for la recherche de pétrole et de gaz naturel au Québec, section Sol non consolidé.

The wells drilled in each of these basins have revealed the presence of hydrocarbons in the form of oil or natural gas. In all, the search for oil, natural gas and underground reservoirs has led to 381 wells being drilled in the Palaeozoic sediments of Québec since 1860. Moreover, it is well known that there are Quaternary unconsolidated deposits in the St. Lawrence Lowlands basin that contain relatively sizeable quantities of natural gas. One such example is the Pointe-du-Lac gas field (3.2 BCF), which has now been converted into an underground reservoir. Since the beginning of hydrocarbon exploration in Québec, this limited activity in the unconsolidated deposits of the St. Lawrence Lowlands has involved the drilling and recording of 302 shallow wells (< 150 m) in the Répertoire des puits for la recherche de pétrole et de gaz naturel au Québec, section Sol non consolidé.

The wells drilled in each of these basins have revealed the presence of hydrocarbons in the form of oil or natural gas. In all, the search for oil, natural gas and underground reservoirs has led to 381 wells being drilled in the Palaeozoic sediments of Québec since 1860. Moreover, it is well known that there are Quaternary unconsolidated deposits in the St. Lawrence Lowlands basin that contain relatively sizeable quantities of natural gas. One such example is the Pointe-du-Lac gas field (3.2 BCF), which has now been converted into an underground reservoir. Since the beginning of hydrocarbon exploration in Québec, this limited activity in the unconsolidated deposits of the St. Lawrence Lowlands has involved the drilling and recording of 302 shallow wells (< 150 m) in the Répertoire des puits for la recherche de pétrole et de gaz naturel au Québec, section Sol non consolidé.
Since the beginning of the 1960s, drilling has allowed us to target certain sedimentary zones and to deepen our geological and geophysical knowledge of Québec. Nonetheless, of the 381 wells drilled, only 78 were located using seismic reflection. Of these, 55 were located in the St. Lawrence Lowlands, 10 in the Gaspé Peninsula, 3 in the lower St. Lawrence, 2 in the St. Lawrence Gulf and 8 on Anticosti Island, including 5 recently in 1998-99. Despite the SOQUIP period, the arrival of seismic 2D and given the fact that few geological concepts were verified between 1950 and 1984, Québec’s sedimentary basins remain under-explored in comparison to other basins in Eastern Canada.

Since 1990, there has been a renewal of oil and gas exploration in Québec. During the last decade, the total amount spent by those participating in this exploration in Québec was close to $100 M. The drilling programs and seismic surveys, which totalled more than $50 M and which were undertaken from 1990 to 1996 by the BWI consortium in the St. Lawrence Lowlands and by Shell and Encal Energy on Anticosti Island, confirm this tendency. The total surface area of the province for which there are currently hydrocarbon exploration permits also bears witness to the growing interest.

Following the discovery of the Newfoundland field, the surface area under oil and gas exploration licences reached, in 1998, an amount that has not been seen since SOQUIP’s active period. Indeed, exploration licences have now been granted for 4.1 million hectares.

In addition to the very promising developments that have recently occurred in Eastern Canada, the renewal in interest for Québec’s hydrocarbon potential can in large part be attributed to the striking similarities between certain sedimentary zones in Québec and several prolific basins in the United States. One only has to think of the Arkoma basin and Wilberton field (600 BCF), the Black Warrior basin, the basins in northern and western Texas, the Appalachian basin, that of Illinois and Ohio, and, closer to us, that of western Newfoundland. Indeed, these sedimentary zones all date from the Ordovician period, have the same type of deposition (carbonate slope), and have fields situated along the Cambro-Ordovician paleoshore. This paleoshore stretches from Texas to Newfoundland and passes through Québec’s sedimentary basins.

**ANCIENT CAMBRO-ORDOVICIAN COASTLINE**
Since the beginning of the 1960s, drilling has allowed us to target certain sedimentary zones and to deepen our geological and geophysical knowledge of Québec. Nonetheless, of the 381 wells drilled, only 78 were located using seismic reflection. Of these, 55 were located in the St. Lawrence Lowlands, 10 in the Gaspé Peninsula, 3 in the lower St. Lawrence, 2 in the St. Lawrence Gulf and 8 on Anticosti Island, including 5 recently in 1998-99. Despite the SOQUIP period, the arrival of seismic 2D and given the fact that few geological concepts were verified between 1950 and 1984, Québec’s sedimentary basins remain under-explored in comparison to other basins in Eastern Canada.

Since 1990, there has been a renewal of oil and gas exploration in Québec. During the last decade, the total amount spent by those participating in this exploration in Québec was close to $100 M. The drilling programs and seismic surveys, which totalled more than $50 M and which were undertaken from 1990 to 1996 by the BWI consortium in the St. Lawrence Lowlands and by Shell and Encal Energy on Anticosti Island, confirm this tendency. The total surface area of the province for which there are currently hydrocarbon exploration permits also bears witness to the growing interest.

In addition to the very promising developments that have recently occurred in Eastern Canada, the renewal in interest for Québec’s hydrocarbon potential can in large part be attributed to the striking similarities between certain sedimentary zones in Québec and several prolific basins in the United States. One only has to think of the Arkoma basin and Wilberton field (600 BCF), the Black Warrior basin, the basins in northern and western Texas, the Appalachian basin, that of Illinois and Ohio, and, closer to us, that of western Newfoundland. Indeed, these sedimentary zones all date from the Ordovician period, have the same type of deposition (carbonate slope), and have fields situated along the Cambro-Ordovician paleoshore. This paleoshore stretches from Texas to Newfoundland and passes through Québec’s sedimentary basins.

Since 1990, there has been a renewal of oil and gas exploration in Québec. During the last decade, the total amount spent by those participating in this exploration in Québec was close to $100 M. The drilling programs and seismic surveys, which totalled more than $50 M and which were undertaken from 1990 to 1996 by the BWI consortium in the St. Lawrence Lowlands and by Shell and Encal Energy on Anticosti Island, confirm this tendency. The total surface area of the province for which there are currently hydrocarbon exploration permits also bears witness to the growing interest.

The potential of the sedimentary basins was not well understood until the discovery of the Port-au-Port field in 1995, which was the first production in the St. Lawrence Gulf. The discovery of the Port-au-Port field led to a renewed interest in the exploration of these basins. Since then, several new geological concepts have been developed, including the discovery of oil in the block of Anticosti Island in 1999. These discoveries have shown that these basins have significant hydrocarbon potential.

Since 1990, there has been a renewal of oil and gas exploration in Québec. During the last decade, the total amount spent by those participating in this exploration in Québec was close to $100 M. The drilling programs and seismic surveys, which totalled more than $50 M and which were undertaken from 1990 to 1996 by the BWI consortium in the St. Lawrence Lowlands and by Shell and Encal Energy on Anticosti Island, confirm this tendency. The total surface area of the province for which there are currently hydrocarbon exploration permits also bears witness to the growing interest. Following the discovery of the Newfoundland field, the surface area under oil and gas exploration licences reached, in 1998, an amount that has not been seen since SOQUIP’s active period. Indeed, exploration licences have now been granted for 4.1 million hectares.
The next decade could be very promising for the petroleum exploration industry in Quebec. The petroleum potential has only been partially evaluated. New geological concepts and technologies, distribution infrastructures and prospects for the natural gas market are essential factors in the pursuit of exploration activities in Quebec, which undoubtedly holds economical and profitable hydrocarbon accumulations.

Given recent petroleum discoveries made on the edge of the St. Lawrence Gulf and exploration programs that are underway, the discovery of sizeable hydrocarbon fields in Quebec can no longer be excluded. Consequently, the evaluation of the petroleum potential of Quebec’s Paleozoic sedimentary deposits must become one of the main priorities of the petroleum exploration industry. Permits for land-based oil and gas exploration can be obtained on a free mining basis without competitive bidding. However, in a marine environment such as the St. Lawrence Gulf, a public call for tenders is required.

N.B.

In order to make it easier to invest in oil and natural gas exploration in Quebec, the Government has introduced a refundable tax credit. This credit’s base rate is 20%. This rate is increased to 40% of admissible costs when a company is not operating any oil or natural gas wells.
The next decade could be very promising for the petroleum exploration industry in Quebec. The petroleum potential has only been partially evaluated. New geological concepts and technologies, distribution infrastructures and prospects for the natural gas market are essential factors in the pursuit of exploration activities in Quebec, which undoubtedly holds economic and profitable hydrocarbon accumulations.

Given recent petroleum discoveries made on the edge of the St. Lawrence Gulf and exploration programs that are underway, the discovery of sizeable hydrocarbon fields in Quebec can no longer be excluded. Consequently, the evaluation of the petroleum potential of Quebec’s Paleozoic sedimentary deposits must become one of the main priorities of the petroleum exploration industry.

Permits for land-based oil and gas exploration can be obtained on a free mining basis without competitive bidding. However, in a marine environment such as the St. Lawrence Gulf, a public call for tenders is required.

N.B.

In order to make it easier to invest in oil and natural gas exploration in Quebec, the Government has introduced a refundable tax credit. This credit’s base rate is 20%. This rate is increased to 40% of admissible costs when a company is not operating any oil or natural gas wells.