

IMPERIAL OIL LTD  
Form 10-K  
February 23, 2017  
Table of Contents

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

**FORM 10-K**

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15 (d) OF THE

SECURITIES EXCHANGE ACT OF 1934

**For the fiscal year-ended December 31, 2016**

**Commission file number:  
0-12014**

IMPERIAL OIL LIMITED

**(Exact name of registrant as specified in its charter)**

CANADA

98-0017682

**(State or other jurisdiction of  
incorporation or organization)**

**(I.R.S. Employer  
Identification No.)**

505 QUARRY PARK BOULEVARD S.E., CALGARY, AB, CANADA

T2C 5N1

**(Address of principal executive offices)**

**(Postal Code)**

**Registrant's telephone number, including area code:**

1-800-567-3776

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Name of each exchange on which registered
None	None

Securities registered pursuant to Section 12(g) of the Act:

Common Shares (without par value)

**(Title of Class)**

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Indicate by check mark if the registrant is a well-known seasoned issuer (as defined in Rule 405 of the Securities Act).

Yes No.....

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934.

Yes .....No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes No.....

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).

Yes No.....

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Yes No.....

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company (see the definitions of large accelerated filer, accelerated filer and smaller reporting company in Rule 12b-2 of the Securities Exchange Act of 1934).

Large accelerated filer Accelerated filer..... Non-accelerated filer..... Smaller reporting company.....

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12 b-2 of the Securities Exchange Act of 1934).

Yes .....No

As of the last business day of the 2016 second fiscal quarter, the aggregate market value of the voting stock held by non-affiliates of the registrant was Canadian \$10,533,578,543 based upon the reported last sale price of such stock on the Toronto Stock Exchange on that date.

The number of common shares outstanding, as of February 8, 2017, was 847,599,011.

**Table of Contents**

<b>Table of contents</b>		<b>Page</b>
<b>PART I</b>		<b>3</b>
Item 1.	<u>Business</u>	3
	<u>Upstream</u>	4
	<u>Disclosure of reserves</u>	4
	<u>Proved undeveloped reserves</u>	5
	<u>Oil and gas production, production prices and production costs</u>	6
	<u>Drilling and other exploratory and development activities</u>	8
	<u>Present activities</u>	10
	<u>Delivery commitments</u>	11
	<u>Oil and gas properties, wells, operations and acreage</u>	11
	<u>Downstream</u>	13
	<u>Supply</u>	13
	<u>Transportation</u>	13
	<u>Refining</u>	13
	<u>Distribution</u>	13
	<u>Marketing</u>	14
	<u>Chemical</u>	14
	<u>Research</u>	14
	<u>Environmental protection</u>	15
	<u>Human resources</u>	15
	<u>Competition</u>	15
	<u>Government regulation</u>	15
	<u>The company online</u>	17
Item 1A.	<u>Risk factors</u>	17
Item 1B.	<u>Unresolved staff comments</u>	20
Item 2.	<u>Properties</u>	20
Item 3.	<u>Legal proceedings</u>	20
Item 4.	<u>Mine safety disclosures</u>	20
<b>PART II</b>		<b>21</b>
Item 5.	<u>Market for registrant's common equity, related stockholder matters and issuer purchases of equity securities</u>	21
Item 6.	<u>Selected financial data</u>	22
Item 7.	<u>Management's discussion and analysis of financial condition and results of operations</u>	22
Item 7A.	<u>Quantitative and qualitative disclosures about market risk</u>	22
Item 8.	<u>Financial statements and supplementary data</u>	23
Item 9.	<u>Changes in and disagreements with accountants on accounting and financial disclosure</u>	23
Item 9A.	<u>Controls and procedures</u>	23
Item 9B.	<u>Other information</u>	23
<b>PART III</b>		<b>24</b>
Item 10.	<u>Directors, executive officers and corporate governance</u>	24
Item 11.	<u>Executive compensation</u>	24
Item 12.	<u>Security ownership of certain beneficial owners and management and related stockholder matters</u>	25
Item 13.	<u>Certain relationships and related transactions, and director independence</u>	25
Item 14.	<u>Principal accountant fees and services</u>	26
<b>PART IV</b>		<b>27</b>
Item 15.	<u>Exhibits, financial statement schedules</u>	27
Item 16.	<u>Form 10-K summary</u>	28

**SIGNATURES****29**Financial section

30

Proxy information section

86

**All dollar amounts set forth in this report are in Canadian dollars, except where otherwise indicated.****Note that numbers may not add due to rounding.**

The following table sets forth (i) the rates of exchange for the Canadian dollar, expressed in United States (U.S.) dollars, in effect at the end of each of the periods indicated, (ii) the average of exchange rates in effect on the last day of each month during such periods, and (iii) the high and low exchange rates during such periods, in each case based on the noon buying rate in New York City for wire transfers in Canadian dollars as certified for customs purposes by the Federal Reserve Bank of New York.

dollars	<b>2016</b>	2015	2014	2013	2012
Rate at end of period	<b>0.7448</b>	0.7226	0.8620	0.9401	1.0042
Average rate during period	<b>0.7559</b>	0.7748	0.9023	0.9665	1.0006
High	<b>0.7972</b>	0.8529	0.9423	1.0164	1.0299
Low	<b>0.6853</b>	0.7148	0.8588	0.9348	0.9600

On February 8, 2017, the noon buying rate in New York City for wire transfers in Canadian dollars as certified for customs purposes by the Federal Reserve Bank of New York was \$0.7601 U.S. = \$1.00 Canadian.

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**Table of Contents**

**Forward-looking statements**

Statements of future events or conditions in this report, including projections, targets, expectations, estimates, and business plans are forward-looking statements. Actual future financial and operating results, including demand growth and energy source mix; production growth and mix; project plans, dates, costs and capacities; production rates; production life and resource recoveries; cost savings; product sales; financing sources; and capital and environmental expenditures could differ materially depending on a number of factors, such as changes in the supply of and demand for crude oil, natural gas, and petroleum and petrochemical products and resulting price and margin impacts; limitations on transportation for accessing markets; political or regulatory events, including changes in law or government policy, applicable royalty rates and tax laws; the receipt, in a timely manner, of regulatory and third-party approvals; third party opposition to operations and projects; environmental risks inherent in oil and gas exploration and production activities; environmental regulation, including climate change and greenhouse gas restrictions; currency exchange rates; availability and allocation of capital; performance of third party service providers; unanticipated operational disruptions; management effectiveness; commercial negotiations; project management and schedules; response to unexpected technological developments; operational hazards and risks; disaster response preparedness; the ability to develop or acquire additional reserves; and other factors discussed in Item 1A of this annual report on Form 10-K and in the management's discussion and analysis of financial condition and results of operations contained in Item 7. Forward-looking statements are not guarantees of future performance and involve a number of risks and uncertainties, some that are similar to other oil and gas companies and some that are unique to Imperial Oil Limited. Imperial Oil Limited's actual results may differ materially from those expressed or implied by its forward-looking statements and readers are cautioned not to place undue reliance on them. Imperial Oil Limited undertakes no obligation to update any forward-looking statements contained herein, except as required by applicable law.

The term "project" as used in this report can refer to a variety of different activities and does not necessarily have the same meaning as in any government payment transparency reports.

**PART I**

**Item 1. Business**

Imperial Oil Limited was incorporated under the laws of Canada in 1880 and was continued under the Canada Business Corporations Act (the "CBCA") by certificate of continuance dated April 24, 1978. The head and principal office of the company is located at 505 Quarry Park Boulevard S.E. Calgary, Alberta, Canada T2C 5N1. Exxon Mobil Corporation (ExxonMobil) owns approximately 69.6 percent of the outstanding shares of the company. In this report, unless the context otherwise indicates, reference to "the company" or "Imperial" includes Imperial Oil Limited and its subsidiaries.

The company is one of Canada's largest integrated oil companies. It is active in all phases of the petroleum industry in Canada, including the exploration for, and production and sale of, crude oil and natural gas. In Canada, it is a major producer of crude oil, natural gas and the largest petroleum refiner and a leading marketer of petroleum products. It is also a major producer of petrochemicals.

The company's operations are conducted in three main segments: Upstream, Downstream and Chemical. Upstream operations include the exploration for, and production of, crude oil, natural gas, synthetic oil and bitumen. Downstream operations consist of the transportation and refining of crude oil, blending of refined products and the distribution and marketing of those products. Chemical operations consist of the manufacturing and marketing of various petrochemicals.

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Financial information about segments and geographic areas for the company is contained in the Financial section of this report under note 2 to the consolidated financial statements: Business segments .

**Table of Contents****Upstream****Disclosure of reserves***Summary of oil and gas reserves at year-end*

The table below summarizes the net proved reserves for the company, as at December 31, 2016, as detailed in the Supplemental information on oil and gas exploration and production activities part of the Financial section, starting on page 30 of this report.

All of the company's reported reserves are located in Canada. The company has reported proved reserves based on the average of the first-day-of-the-month price for each month during the last 12-month period ending December 31. Natural gas is converted to an oil-equivalent basis at six million cubic feet per one thousand barrels. No major discovery or other favourable or adverse event has occurred since December 31, 2016 that would cause a significant change in the estimated proved reserves as of that date.

	Liquids (a)	Natural gas	Synthetic oil	Bitumen	Total oil-equivalent basis
	millions of barrels	billions of cubic feet	millions of barrels	millions of barrels	millions of barrels
Net proved reserves:					
Developed	<b>19</b>	<b>263</b>	<b>564</b>	<b>436</b>	<b>1,063</b>
Undeveloped	<b>16</b>	<b>232</b>	<b>-</b>	<b>265</b>	<b>319</b>
Total net proved	<b>35</b>	<b>495</b>	<b>564</b>	<b>701</b>	<b>1,382</b>

(a) Liquids include crude oil, condensate and natural gas liquids (NGLs). NGL proved reserves are not material and are therefore included under liquids.

The estimation of proved reserves, which is based on the requirement of reasonable certainty, is an ongoing process based on rigorous technical evaluations, commercial and market assessments and detailed analysis of well information such as flow rates and reservoir pressures. Furthermore, the company only records proved reserves for projects which have received significant funding commitments by management made toward the development of the reserves.

Although the company is reasonably certain that proved reserves will be produced, the timing and amount recovered can be affected by a number of factors, including completion of development projects, reservoir performance, regulatory approvals, royalty framework and significant changes in projections of long-term oil and gas price levels. In addition, proved reserves could be affected by an extended period of low prices which could reduce the level of the company's capital spending and also impact its partners' capacity to fund their share of joint projects.

As a result of low prices during 2016, under the U.S. Securities and Exchange Commission definition of proved reserves, certain quantities of bitumen that qualified as proved reserves in prior years did not qualify as proved reserves at year-end 2016. Amounts no longer qualifying as proved reserves include the entire 2.5 billion barrels of bitumen at Kearl and approximately 0.2 billion barrels of bitumen at Cold Lake. Among the factors that would result

in these amounts being recognized again as proved reserves at some point in the future are a recovery in average price levels, a further decline in costs, and / or operating efficiencies. Under the terms of certain contractual arrangements or government royalty regimes, lower prices can also increase proved reserves attributable to Imperial. The company does not expect the downward revision of reported proved reserves under the U.S. Securities and Exchange Commission definitions to affect the operation of the underlying projects or to alter its outlook for future production volumes.

*Technologies used in establishing proved reserves estimates*

Imperial's proved reserves in 2016 were based on estimates generated through the integration of available and appropriate geological, engineering and production data, utilizing well established technologies that have been demonstrated in the field to yield repeatable and consistent results.

Data used in these integrated assessments included information obtained directly from the subsurface via wellbores, such as well logs, reservoir core samples, fluid samples, static and dynamic pressure information, production test data, and surveillance and performance information. The data utilized also included subsurface information obtained through indirect measurements, including high-quality 3-D and 4-D seismic data, calibrated with available well control information. The tools used to interpret the data included proprietary seismic processing software, proprietary reservoir modeling and simulation software and commercially available data analysis packages.



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## **Table of Contents**

In some circumstances, where appropriate analog reservoirs were available, reservoir parameters from these analogs were used to increase the quality of and confidence in the reserves estimates.

### *Preparation of reserves estimates*

Imperial has a dedicated reserves management group that is separate from the base operating organization. Primary responsibilities of this group include oversight of the reserves estimation process for compliance with the U.S. Securities and Exchange Commission (SEC) rules and regulations, review of annual changes in reserves estimates and the reporting of Imperial's proved reserves. This group also maintains the official company reserves estimates for Imperial's proved reserves. In addition, this group provides training to personnel involved in the reserve estimation and reporting processes within Imperial.

The reserves management group maintains a central database containing the official company reserves estimates. Appropriate controls, including limitations on database access and update capabilities, are in place to ensure data integrity within this central database. An annual review of the system's controls is performed by internal audit. Key components of the reserves estimation process include technical evaluations and analysis of well and field performance and a rigorous peer review. No changes may be made to reserves estimates in the central database, including the addition of any new initial reserves estimates or subsequent revisions, unless those changes have been thoroughly reviewed and evaluated by duly authorized personnel within the base operating organization. In addition, changes to reserves estimates that exceed certain thresholds require further review and endorsement by the operating organization and the reserves management group, culminating in reviews with and approval by senior management and the company's board of directors.

The internal qualified reserves evaluator is a professional engineer registered in Alberta, Canada and has over 30 years of petroleum industry experience, including 23 years of reserves related experience. The position provides leadership to the internal reserves management group and is responsible for filing a reserves report with the Canadian securities regulatory authorities. The company's internal reserves evaluation staff consists of 39 persons with an average of 15 years of relevant technical experience in evaluating reserves, of whom 24 persons are qualified reserves evaluators for purposes of Canadian securities regulatory requirements. The company's internal reserves evaluation management team is made up of 19 persons with an average of 14 years of relevant experience in evaluating and managing the evaluation of reserves. No independent qualified reserves evaluator or auditor was involved in the preparation of the company's reserves data.

### **Proved undeveloped reserves**

As at December 31, 2016, approximately 23 percent of the company's proved reserves were proved undeveloped reserves reflecting volumes of 319 million oil-equivalent barrels. Most of the undeveloped reserves are associated with the Cold Lake field. This compared to 513 million oil-equivalent barrels of proved undeveloped reserves reported at the end of 2015. Proved undeveloped reserves decreased by 177 million oil-equivalent barrels in 2016 associated with end of field life truncation as a result of low oil and natural gas prices. Migration of proved undeveloped reserves into proved developed was not material in 2016.

Proved undeveloped reserves that have remained undeveloped for five years or more represent about 22 percent (71 million oil-equivalent barrels) of proved undeveloped reserves and are primarily associated with Cold Lake's ongoing drilling program. These undeveloped reserves are planned to be developed in a staged approach to align with operational capacity and efficient capital spending commitment over the life of the field. The company is reasonably certain that these proved reserves will be produced; however the timing and amount recovered can be affected by a number of factors including completion of development projects, reservoir performance, and significant changes in

long-term oil prices.

One of the company's requirements to report resources as proved reserves is that management has made significant funding commitments towards the development of the reserves. The company has a disciplined investment strategy and many major fields require a long lead-time in order to be developed. The company made investments of about \$105 million during the year to progress the development of reported proved undeveloped reserves in the Montney and Duvernay formations, and at Cold Lake. These investments represented about 12 percent of the \$896 million in total reported Upstream capital and exploration expenditures. Investments made by the company to develop quantities which no longer meet the SEC definition of proved reserves due to 2016 average prices are included in the \$896 million of Upstream capital and exploration expenditures.

**Table of Contents****Oil and gas production, production prices and production costs**

Reference is made to the portion of the Financial section entitled Management's discussion and analysis of financial condition and results of operations on page 34 of this report for a narrative discussion on the material changes.

*Average daily production of oil*

The company's average daily oil production by final products sold during the three years ended December 31, 2016 was as follows. All reported production volumes were from Canada.

thousands of barrels per day (a)		<b>2016</b>	2015	2014
<b>Bitumen:</b>				
Cold Lake:	- gross (b)	<b>161</b>	158	146
	- net (c)	<b>138</b>	139	114
Kearl:	- gross (b)	<b>120</b>	108	51
	- net (c)	<b>118</b>	106	47
<b>Total bitumen:</b>				
	- gross (b)	<b>281</b>	266	197
	- net (c)	<b>256</b>	245	161
<b>Synthetic oil</b>				
(d):	- gross (b)	<b>68</b>	62	64
	- net (c)	<b>67</b>	58	60
Liquids:	- gross (b)	<b>15</b>	16	21
	- net (c)	<b>13</b>	15	16
<b>Total:</b>				
	- gross (b)	<b>364</b>	344	282
	- net (c)	<b>336</b>	318	237

(a) Barrels per day metric is calculated by dividing the volume for the period by the number of calendar days in the period.

(b) Gross production is the company's share of production (excluding purchases) before deduction of the mineral owners' or governments' share or both.

(c) Net production is gross production less the mineral owners' or governments' share or both.

(d) The company's synthetic oil production volumes were from the company's share of production volumes in the Syncrude joint venture.

*Average daily production and production available for sale of natural gas*

The company's average daily production and production available for sale of natural gas during the three years ended December 31, 2016 are set forth below. All reported production volumes were from Canada. All gas volumes in this

report are calculated at a pressure base of 14.73 pounds per square inch absolute at 60 degrees Fahrenheit. Reference is made to the portion of the Financial section entitled Management's discussion and analysis of financial condition and results of operations on page 34 of this report for a narrative discussion on the material changes.

millions of cubic feet per day (a)	<b>2016</b>	2015	2014
Gross production (b) (c)	<b>129</b>	130	168
Net production (c) (d) (e)	<b>122</b>	125	156
Net production available for sale (f)	<b>87</b>	94	124

- (a) Cubic feet per day metric is calculated by dividing the volume for the period by the number of calendar days in the period.
- (b) Gross production is the company's share of production (excluding purchases) before deduction of the mineral owners' or governments' share or both.
- (c) Production of natural gas includes amounts used for internal consumption with the exception of the amounts reinjected.
- (d) Net production is gross production less the mineral owners' or governments' share or both.
- (e) Net production reported in the above table is consistent with production quantities in the net proved reserves disclosure.
- (f) Includes sales of the company's share of net production and excludes amounts used for internal consumption.

**Table of Contents***Total average daily oil-equivalent basis production*

The company's total average daily production expressed in oil-equivalent basis is set forth below, with natural gas converted to an oil-equivalent basis at six million cubic feet per one thousand barrels.

thousands of barrels per day (a)	2016	2015	2014
Total production oil-equivalent basis:			
- gross (b)	<b>386</b>	366	310
- net (c)	<b>356</b>	339	263

- (a) Barrels per day metric is calculated by dividing the volume for the period by the number of calendar days in the period.
- (b) Gross production is the company's share of production (excluding purchases) before deduction of the mineral owners' or governments' share or both.
- (c) Net production is gross production less the mineral owners' or governments' share or both.

*Average unit sales price*

The company's average unit sales price and average unit production costs by product type for the three years ended December 31, 2016 were as follows.

Canadian dollars per barrel	2016	2015	2014
Bitumen	<b>26.52</b>	32.48	67.20
Synthetic oil	<b>57.12</b>	61.33	99.58
Liquids	<b>28.01</b>	30.62	67.82
dollars per thousand cubic feet			
Natural gas	<b>2.41</b>	2.78	4.54

In 2016, Imperial's average Canadian dollar realizations for bitumen and synthetic crudes declined essentially in line with the North American benchmarks, adjusted for changes in the exchange rate and transportation costs.

Unit sales prices decreased in 2015, primarily driven by the decline in the global crude oil and natural gas price environment.

*Average unit production costs*

Canadian dollars per barrel	2016	2015	2014
Bitumen	<b>24.24</b>	25.16	34.87
Synthetic oil	<b>46.24</b>	54.81	62.14

Total oil-equivalent basis (a)	<b>28.52</b>	30.60	41.02
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(a) Includes liquids, bitumen, synthetic oil and natural gas.

In 2016, synthetic oil unit production costs were lower, primarily driven by increased volumes and cost management.

Bitumen unit production costs were lower in 2015, primarily driven by Kearl expansion project start-up and cost management.

Synthetic oil unit production costs were lower in 2015, primarily driven by cost management.

**Table of Contents****Drilling and other exploratory and development activities**

The company has been involved in the exploration for and development of crude oil and natural gas in Canada only.

*Wells drilled*

The following table sets forth the net exploratory and development wells that were drilled or participated in by the company during the three years ended December 31, 2016.

wells	2016	2015	2014
Net productive exploratory	-	-	-
Net dry exploratory	-	-	-
Net productive development	6	46	111
Net dry development	-	-	-
<b>Total</b>	<b>6</b>	<b>46</b>	<b>111</b>

In 2015, the following wells were drilled to add productive capacity: 41 development wells at Cold Lake, of which 36 development wells relate to the Cold Lake Nabiye expansion project and five net other wells.

In 2014, the following wells were drilled to add productive capacity: 90 development wells at Cold Lake, of which 74 development wells relate to the Cold Lake Nabiye expansion project, eight net tight gas wells and 13 net other wells.

*Wells drilling*

At December 31, 2016, the company was participating in the drilling of the following exploratory and development wells. All wells were located in Canada.

wells	2016	
	Gross	Net
<b>Total</b>	<b>13</b>	<b>6</b>

*Exploratory and development activities regarding oil and gas resources**Cold Lake*

To maintain production at Cold Lake, capital expenditures for additional production wells and associated facilities are required periodically. Additional wells were drilled on existing phases in 2015. No wells were drilled in 2016.

The company also conducts experimental pilot operations to improve recovery of bitumen from wells by means of new drilling, production and recovery techniques.

*Aspen, Cold Lake expansion and other oil sands activities*

The company filed a regulatory application for a new in-situ oil sands project at Aspen in December 2013, using steam-assisted gravity drainage (SAGD) technology to develop the project in three phases producing about 45,000 barrels per day before royalties, per phase.

In 2015, the company amended the regulatory application to develop the Aspen project using solvent-assisted, steam-assisted gravity drainage (SA-SAGD) technology. The technology significantly improves capital efficiency and lowers greenhouse gas intensity versus the existing SAGD technologies. The project is proposed to be executed in two phases producing about 75,000 barrels per day before royalties, per phase. Development timing is subject to regulatory approvals and market conditions. No final investment decision has been made.

In March 2016, Imperial filed a regulatory application for the Cold Lake Expansion project to develop the Grand Rapids interval using SA-SAGD technology. The project is proposed to produce 50,000 barrels per day, before royalties. Development timing is subject to regulatory approval and market conditions. No final investment decision has been made.

Work continues on technical evaluations to support potential Corner and Clyden in-situ development regulatory applications.



## **Table of Contents**

The company also has interests in other oil sands leases in the Athabasca and Peace River areas of northern Alberta. Evaluation wells completed on these leased areas established the presence of bitumen. The company continues to evaluate these leases to determine their potential for future development.

### *Other activities*

The company is continuing to evaluate other undeveloped natural gas resources in the Montney and Duvernay formations in the western provinces.

### *Mackenzie Delta*

In 1999, the company and three other companies entered into an agreement to study the feasibility of developing Mackenzie Delta gas, anchored by three large onshore natural gas fields. The company retains a 100 percent interest in the largest of these fields.

In late 2010, the National Energy Board (NEB) announced its approval of plans to build and operate the project subject to 264 conditions in areas such as engineering, safety and environmental protection. Federal cabinet approved the project in early 2011.

The commercial viability of these natural gas resources, and the pipeline required to transport this natural gas to markets, is dependent on a number of factors. These factors include natural gas markets, continued support from northern parties, fiscal framework and the cost of constructing, operating and abandoning the field production and pipeline facilities.

In 2016, the Federal Government of Canada approved the extension of the pipeline and gathering system construction permits to December 31, 2022. No final investment decision has been made.

### *Beaufort Sea*

In 2007, the company acquired a 50 percent interest in an exploration licence in the Beaufort Sea. As part of the evaluation, a 3-D seismic survey was conducted in 2008 and the company has since carried out data collection programs to support environmental studies and safe exploration drilling operations.

In 2010, the company executed an agreement to cross-convey interests with another company to acquire a 25 percent interest in an additional Beaufort Sea exploration licence. As a result of that agreement, the company operates both licences and its interest in the original licence was reduced to 25 percent. The exploration licences are held through 2019 and 2020, respectively.

In 2013, the company and its joint venture partners filed a project description, initiating the formal regulatory review of the project.

In December 2016, the Federal Government of Canada declared Arctic waters off limits to new offshore oil and gas licences for five years subject to review at the end of that period. Existing licences will not be impacted. The government has indicated they will undertake a one year consultation process to discuss the interests of existing leaseholders, including Imperial. Current activities continue to focus on data gathering and community consultation. Imperial is seeking extended terms for the Beaufort Sea exploration licences with the Federal Government of Canada. No final investment decision has been made.

*Liquefied natural gas (LNG) activity*

WCC LNG Ltd., jointly owned by the company (20 percent) and ExxonMobil Canada Ltd. (80 percent), was granted an export licence in 2013 for up to 30 million tonnes of LNG per year for a period of 25 years. In 2016, the licence period was extended to 40 years. The project is proceeding through the pre-application phase in a British Columbia environmental assessment process. No final investment decision has been made.

*Exploratory and development activities regarding oil and gas resources extracted by mining methods*

The company continues to evaluate other undeveloped, mineable oil sands acreage in the Athabasca region.

## **Table of Contents**

### **Present activities**

#### *Review of principal ongoing activities*

##### *Cold Lake*

Cold Lake is an in-situ heavy oil bitumen operation. The product, a blend of bitumen and diluent, is shipped to certain of the company's refineries, Exxon Mobil Corporation refineries and to other third parties. Diluent is natural gas condensate or other light hydrocarbons added to the crude bitumen to facilitate transportation by pipeline and rail.

The Province of Alberta, in its capacity as lessor of Cold Lake oil sands leases, is entitled to a royalty on production at Cold Lake. Royalties are subject to the oil sands royalty regulations which are based upon a sliding scale determined largely by the price of crude oil.

During 2016, net production at Cold Lake was about 138,000 barrels per day and gross production was about 161,000 barrels per day.

As a result of low prices during 2016, under the SEC definition of proved reserves, approximately 0.2 billion barrels of bitumen at Cold Lake no longer qualified as proved reserves at year-end 2016. The company does not expect the downward revision of reported proved reserves under SEC definitions to affect the Cold Lake operation or to alter Imperial's outlook for future production volumes. Among the factors that would result in these amounts being recognized again as proved reserves at some point in the future are a recovery in average price levels, a further decline in costs, and / or operating efficiencies.

##### *Kearl*

Kearl is a joint venture established to recover shallow deposits of oil sands using open-pit mining methods to extract the crude bitumen, which is processed through extraction and froth treatment trains. The company holds a 70.96 percent participating interest in the joint venture and ExxonMobil Canada Properties holds the other 29.04 percent. The product, a blend of bitumen and diluent, is shipped to certain of the company's refineries, Exxon Mobil Corporation refineries and to other third parties.

The Province of Alberta, in its capacity as lessor of Kearl oil sands leases, is entitled to a royalty on production at Kearl. Royalties are subject to the oil sands royalty regulations which are based upon a sliding scale determined largely by the price of crude oil.

During 2016, the company's share of Kearl's net bitumen production was about 118,000 barrels per day and gross production was about 120,000 barrels per day. Increased production in the year was due to the start-up of the expansion project.

Potential future debottlenecking of the Kearl operation would increase output to reach the regulatory capacity of 345,000 barrels of bitumen per day, of which the company's share would be about 245,000 barrels per day. Such debottlenecking remains under evaluation.

As a result of low prices during 2016, under the SEC definition of proved reserves, the entire 2.5 billion barrels of bitumen at Kearl no longer qualified as proved reserves at year-end 2016. The company does not expect the downward revision of reported proved reserves under SEC definitions to affect the Kearl operation or to alter Imperial's outlook for future production volumes. Among the factors that would result in these amounts being

recognized again as proved reserves at some point in the future are a recovery in average price levels, a further decline in costs, and / or operating efficiencies.

*Syncrude*

Syncrude is a joint venture established to recover shallow deposits of oil sands using open-pit mining methods to extract crude bitumen, and then upgrade it to produce a high-quality, light (32 degrees API), sweet, synthetic crude oil. The company holds a 25 percent participating interest in the joint venture. The produced synthetic crude oil is shipped to certain of the company's refineries, Exxon Mobil Corporation refineries and to other third parties.

The Province of Alberta, in its capacity as lessor of Syncrude oil sands leases, is entitled to a royalty on production at Syncrude. In 2016, Syncrude transitioned to the new generic oil sands royalty regulations which are based on a sliding scale determined largely by the price of crude oil. Syncrude's royalties are based on bitumen value with upgrading costs and revenues excluded from the calculation.

**Table of Contents**

In 2016, the company's share of Syncrude's net production of synthetic crude oil was about 67,000 barrels per day and gross production was about 68,000 barrels per day.

**Delivery commitments**

The company has no material commitments to provide a fixed and determinable quantity of oil or gas under existing contracts and agreements.

**Oil and gas properties, wells, operations and acreage***Production wells*

The company's production of liquids, bitumen and natural gas is derived from wells located exclusively in Canada. The total number of wells capable of production, in which the company had interests at December 31, 2016 and December 31, 2015, is set forth in the following table. The statistics in the table are determined in part from information received from other operators.

wells	Year ended December 31, 2016				Year ended December 31, 2015			
	Crude oil		Natural gas		Crude oil		Natural gas	
	Gross (a)	Net (b)	Gross (a)	Net (b)	Gross (a)	Net (b)	Gross (a)	Net (b)
Total (c)	<b>4,752</b>	<b>4,647</b>	<b>3,546</b>	<b>1,188</b>	4,731	4,592	3,611	1,199

- (a) Gross wells are wells in which the company owns a working interest.  
 (b) Net wells are the sum of the fractional working interests owned by the company in gross wells, rounded to the nearest whole number.  
 (c) Multiple completion wells are permanently equipped to produce separately from two or more distinctly different geological formations. At year-end 2016, the company had an interest in 16 gross wells with multiple completions (2015 - 26 gross wells).

*Land holdings*

At December 31, 2016 and 2015, the company held the following oil and gas rights, and bitumen and synthetic oil leases, all of which are located in Canada, specifically in the western provinces, in the Canada lands and in the Atlantic offshore.

thousands of acres		Developed		Undeveloped		Total	
		2016	2015	2016	2015	2016	2015
<b>Western provinces (a):</b>							
Liquids and gas	- gross (b)	<b>1,464</b>	1,400	<b>876</b>	1,016	<b>2,340</b>	2,416
	- net (c)	<b>703</b>	686	<b>482</b>	528	<b>1,185</b>	1,214
Bitumen	- gross (b)	<b>197</b>	193	<b>674</b>	673	<b>871</b>	866
	- net (c)	<b>182</b>	181	<b>319</b>	319	<b>501</b>	500
Synthetic oil	- gross (b)	<b>118</b>	118	<b>136</b>	136	<b>254</b>	254

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	- net (c)	<b>29</b>	29	<b>34</b>	34	<b>63</b>	63
Canada lands (d):							
Liquids and gas	- gross (b)	<b>4</b>	4	<b>1,831</b>	2,274	<b>1,835</b>	2,278
	- net (c)	<b>2</b>	2	<b>498</b>	720	<b>500</b>	722
Atlantic offshore:							
Liquids and gas	- gross (b)	<b>65</b>	65	<b>288</b>	288	<b>353</b>	353
	- net (c)	<b>6</b>	6	<b>46</b>	46	<b>52</b>	52
Total (e):							
	- gross (b)	<b>1,848</b>	1,780	<b>3,805</b>	4,387	<b>5,653</b>	6,167
	- net (c)	<b>922</b>	904	<b>1,379</b>	1,647	<b>2,301</b>	2,551

- (a) Western provinces include British Columbia, Alberta and Saskatchewan.
- (b) Gross acres include the interests of others.
- (c) Net acres exclude the interests of others.
- (d) Canada lands include the Arctic Islands, Beaufort Sea / Mackenzie Delta, and other Northwest Territories, Nunavut and Yukon regions.
- (e) Certain land holdings are subject to modification under agreements whereby others may earn interests in the company's holdings by performing certain exploratory work (farm-out) and whereby the company may earn interests in others' holdings by performing certain exploratory work (farm-in).

## **Table of Contents**

### *Western provinces*

The company's bitumen leases include about 194,000 net acres of oil sands leases near Cold Lake and an area of about 34,000 net acres at Kearl. The company also has about 80,000 net acres of undeveloped, mineable oil sands acreage in the Athabasca region. In addition, the company has interests in other bitumen oil sands leases in the Athabasca areas totalling about 193,000 net acres, which include about 62,000 net acres of oil sands leases in the Clyden area, about 34,000 net acres of oil sands in the Aspen area and about 30,000 net acres of oil sands in the Corner area. These 193,000 net acres are amenable to in-situ recovery techniques.

The company's share of Syncrude joint venture leases covering about 63,000 net acres accounts for the entire synthetic oil acreage.

Oil sands leases have an exploration period of fifteen years and are continued beyond that point by meeting the minimum level of evaluation, by payment of escalating rentals, or by production. The majority of the acreage in Cold Lake, Kearl and Syncrude is continued by production.

The company holds interests in an additional 1,185,000 net acres of developed and undeveloped land in the western provinces related to crude oil and natural gas.

Petroleum and natural gas leases and licences from the western provinces have exploration periods ranging from two to 15 years and are continued beyond that point by proven production capability.

### *Canada lands*

Land holdings in Canada lands primarily include exploration licence (EL) acreage in the Beaufort Sea of about 252,000 net acres and significant discovery licence (SDL) acreage in the Mackenzie Delta and Beaufort Sea areas of about 183,000 net acres. In 2016, the company surrendered its interest in the Summit Creek area of central Mackenzie Valley totalling about 222,000 net acres.

Exploration licences on Canada lands and Atlantic offshore have a finite term. If a significant discovery is made, a SDL may be granted that holds the acreage under the SDL indefinitely, subject to certain conditions.

The company's net acreage in Canada lands is either continued by production or held through ELs and SDLs.

### *Atlantic offshore*

The Atlantic offshore acreage is continued by production or held by SDLs.

**Table of Contents****Downstream****Supply**

The company supplements its own production of crude oil, condensate and petroleum products with substantial purchases from a number of other sources at negotiated market prices. Purchases are made under both spot and term contracts from domestic and foreign sources, including ExxonMobil.

**Transportation**

Imperial currently transports the company's crude oil production and third party crude oil required to supply refineries by contracted pipelines, common carrier pipelines and rail. To mitigate uncertainty associated with the timing of industry pipeline projects and pipeline capacity constraints, the company has developed rail infrastructure. The Edmonton rail terminal commenced operation in the second quarter of 2015 and has total capacity to ship up to 210,000 barrels per day of crude oil.

**Refining**

The company owns and operates three refineries, which process predominantly Canadian crude oil. The Strathcona refinery operates lubricating oil production facilities. In addition to crude oil, the company purchases finished products to supplement its refinery production.

In 2016, capital expenditures of about \$95 million were made at the company's refineries. Capital expenditures focused mainly on refinery projects to improve reliability, feedstock flexibility, energy efficiency and environmental performance.

The approximate average daily volumes of refinery throughput during the three years ended December 31, 2016, and the daily rated capacities of the refineries as at December 31, 2016 were as follows.

thousands of barrels per day	Refinery throughput (a)			Rated capacities (b)
	Year ended December 31			at December 31
	2016	2015	2014	2016
Strathcona, Alberta	168	181	182	191
Sarnia, Ontario	108	103	109	119
Nanticoke, Ontario	86	102	103	113
Total	362	386	394	423

- (a) Refinery throughput is the volume of crude oil and feedstocks that is processed in the refinery atmospheric distillation units.
- (b) Rated capacities are based on definite specifications as to types of crude oil and feedstocks that are processed in the refinery atmospheric distillation units, the products to be obtained and the refinery process, adjusted to include an estimated allowance for normal maintenance shutdowns. Accordingly, actual capacities may be higher



or lower than rated capacities due to changes in refinery operation and the type of crude oil available for processing.

Refinery throughput averaged 362,000 barrels per day in 2016, compared to 386,000 barrels per day in 2015. Capacity utilization decreased to 86 percent from 92 percent in 2015, reflecting the more significant scope of turnaround maintenance activity in the current year.

In 2015, refinery throughput was 92 percent of capacity, 2 percent lower than the previous year. The lower rate was primarily a result of planned maintenance.

### **Distribution**

The company maintains a nationwide distribution system, to handle bulk and packaged petroleum products moving from refineries to market by pipeline, tanker, rail and road transport. The company owns and operates natural gas liquids and products pipelines in Alberta, Manitoba and Ontario and has interests in the capital stock of one crude oil and two products pipeline companies.

**Table of Contents****Marketing**

The company markets petroleum products throughout Canada under well-known brand names, most notably Esso and Mobil, to all types of customers.

The company supplies petroleum products to the motoring public through Esso-branded retail sites and independent marketers. In 2016, the company completed the sale of its remaining company-owned Esso-branded retail sites completing the conversion to a branded wholesaler operating model. On average during the year, there were more than 1,700 retail sites, which by the end of 2016 were all operating under a branded wholesaler model whereby Imperial supplies fuel to independent third parties who own and operate retail sites in alignment with Esso brand standards.

Imperial sells petroleum products to large industrial and transportation customers, independent marketers, resellers as well as other refiners. The company serves agriculture, residential heating and commercial markets through branded resellers.

The approximate daily volumes of net petroleum products (excluding purchases / sales contracts with the same counterparty) sold during the three years ended December 31, 2016, are set out in the following table.

thousands of barrels per day	2016	2015	2014
Gasolines	261	247	244
Heating, diesel and jet fuels	170	170	179
Heavy fuel oils	16	16	22
Lube oils and other products	37	45	40
Net petroleum product sales	484	478	485

Total Downstream capital expenditures were \$190 million in 2016.

**Chemical**

The company's Chemical operations manufacture and market benzene, aromatic and aliphatic solvents, plasticizer intermediates and polyethylene resin. Its petrochemical and polyethylene manufacturing operations are located in Sarnia, Ontario, adjacent to the company's petroleum refinery.

The company's total sales volumes of petrochemicals during the three years ended December 31, 2016, were as follows.

thousands of tonnes	2016	2015	2014
Total sales of petrochemicals	908	945	953

Lower sales volumes in 2016 were primarily due to higher plant maintenance and feedstock availability.

Total Chemical capital expenditures were \$26 million in 2016.

## Research

The approximate total gross research expenditures, before credits, during the three years ended December 31, 2016, were as follows.

millions of Canadian dollars	2016	2015	2014
Gross research expenditures, before credits	195	195	175

Research expenditures are mainly for developing technologies to improve bitumen recovery, reduce costs and reduce the environmental impact of upstream operations, supporting environmental and process improvements in the refineries, as well as accessing ExxonMobil's research worldwide.

The company has scientific research agreements with affiliates of ExxonMobil, which provide

for technical and engineering work to be performed by all parties, the exchange of technical information and the assignment and licensing of patents and patent rights. These agreements provide mutual access to scientific and operating data related to nearly every phase of the petroleum and petrochemical operations of the parties.

## **Table of Contents**

In 2016, Imperial completed its Calgary Research Centre in Quarry Park, a state-of-the-art facility focused on oil sands innovation and technology.

### **Environmental protection**

The company regards protecting the environment in connection with its various operations a priority. The company works in cooperation with government agencies, industry associations and communities to address existing, and to anticipate potential, environmental protection issues. In the past five years, the company has made capital and operating expenditures of about \$6.1 billion on environmental protection and facilities. In 2016, the company's environmental capital and operating expenditures totalled approximately \$0.7 billion, which was spent primarily on water treatment, tailings treatment and emission reductions at company-owned facilities and Syncrude; and on remediation of idled facilities and operations. Capital and operating expenditures relating to environmental protection are expected to be about \$0.7 billion in 2017.

### **Human resources**

career employees (a)

	<b>2016</b>	2015	2014
<b>Total</b>	<b>5,600</b>	5,700	5,500

(a) Rounded. Career employees are defined as active executive, management, professional, technical, administrative and wage employees who work full time or part time for the company and are covered by the company's benefit plans.

About 7 percent of the company's employees are members of unions.

### **Competition**

The Canadian petroleum, natural gas and chemical industries are highly competitive. Competition exists in the search for and development of new sources of supply, the construction and operation of crude oil, natural gas and refined products pipelines and facilities and the refining, distribution and marketing of petroleum products and chemicals. The petroleum industry also competes with other industries in supplying energy, fuel and other needs of consumers.

### **Government regulation**

#### **Petroleum and natural gas rights**

Most of the company's petroleum and natural gas rights were acquired from governments, either federal or provincial. These rights, in the form of leases or licences, are generally acquired for cash or work commitments. A lease or licence entitles the holder to explore for petroleum and/or natural gas on the leased lands for a specified period.

In western provinces, the lease holder can produce the petroleum or natural gas discovered on the leased lands and retains the rights based on continued production. Oil sands leases are retained by meeting the minimum level of evaluation, payment of rentals, or by production.

The holder of a licence relating to Canada lands and the Atlantic offshore can apply for a SDL if a discovery is made. If granted, the SDL holds the lands indefinitely subject to certain conditions. The holder may then apply for a production licence in order to produce petroleum or natural gas from the licenced land.

### **Crude oil**

#### *Production*

The maximum allowable gross production of crude oil from wells in Canada is subject to limitation by various regulatory authorities on the basis of engineering and conservation principles.

#### *Exports*

Export contracts of more than one year for light crude oil and petroleum products and two years for heavy crude oil (including crude bitumen) require the prior approval of the NEB and the Government of Canada.

## **Table of Contents**

### **Natural gas**

#### *Production*

The maximum allowable gross production of natural gas from wells in Canada is subject to limitations by various regulatory authorities. These limitations are to ensure oil recovery is not adversely impacted by accelerated gas production practices. These limitations do not impact gas reserves, only the timing of production of the reserves and did not have a significant impact on 2016 gas production rates.

#### *Exports*

The Government of Canada has the authority to regulate the export price for natural gas and has a gas export pricing policy, which accommodates export prices for natural gas negotiated between Canadian exporters and U.S. importers.

Exports of natural gas from Canada require approval by the NEB and the Government of Canada. The Government of Canada allows the export of natural gas by NEB order without volume limitation for terms not exceeding 24 months.

### **Royalties**

The Government of Canada and the provinces in which the company produces crude oil and natural gas, impose royalties on production from lands where they own the mineral rights. Some producing provinces also receive revenue by imposing taxes on production from lands where they do not own the mineral rights.

Different royalties are imposed by the Government of Canada and each of the producing provinces. Royalties imposed on crude oil, natural gas and natural gas liquids vary depending on a number of parameters, including well production volumes, selling prices and recovery methods. For information with respect to royalties for Cold Lake, Syncrude and Kearl, see *Upstream* section under Item 1.

### **Investment Canada Act**

The Investment Canada Act requires Government of Canada approval, in certain cases, of the acquisition of control of a Canadian business by an entity that is not controlled by Canadians. The acquisition of natural resource properties may, in certain circumstances, be considered a transaction that constitutes an acquisition of control of a Canadian business requiring Government of Canada approval.

The Act also requires notification of the establishment of new unrelated businesses in Canada by entities not controlled by Canadians, but does not require Government of Canada approval except when the new business is related to Canada's cultural heritage or national identity. The Government of Canada is also authorized to take any measures that it considers advisable to protect national security, including the outright prohibition of a foreign investment in Canada. By virtue of the majority stock ownership of the company by ExxonMobil, the company is considered to be an entity which is not controlled by Canadians.

### **Competition Act**

The Competition Bureau ensures that Canadian businesses and consumers prosper in a competitive and innovative marketplace. The Competition Bureau is responsible for the administration and enforcement of the Competition Act (the Act). A merger transaction, whether or not notifiable, is subject to examination by the Commissioner of the Competition Bureau to determine whether the merger will have or is likely to have, the effect of preventing or

lessening substantially, competition in a definable market. The assessment of the competitive effects of a merger is made with reference to the factors identified under the Act.

An Advance Ruling Certificate (ARC) may be issued by the Commissioner to a party or parties to a proposed merger transaction who want to be assured that the transaction will not give rise to proceedings under section 92 of the Act. Section 102 of the Act provides that an ARC may be issued when the Commissioner is satisfied that there would not be sufficient grounds on which to apply to the Competition Tribunal for an order against a proposed merger. The issuance of an ARC is discretionary. An ARC cannot be issued for a transaction that has been completed, nor does an ARC ensure approval of the transaction by any agency other than the Competition Bureau.

## **Table of Contents**

### **The company online**

The company's website [www.imperialoil.ca](http://www.imperialoil.ca) contains a variety of corporate and investor information which is available free of charge, including the company's annual report on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K and amendments to these reports, as well as required interactive data filings. These reports are made available as soon as reasonably practicable after they are filed or furnished to the SEC.

The public may read and copy any materials the company files with the SEC at the SEC's Public Reference Room at 100 F Street, NE., Washington, DC 20549. The public may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC's website, [www.sec.gov](http://www.sec.gov), contains reports, proxy and information statements and other information regarding issuers that file electronically with the SEC.

### **Item 1A. Risk factors**

Imperial's financial and operating results are subject to a variety of risks inherent in oil, gas and petrochemical businesses. Many of these risk factors are not within Imperial's control and could adversely affect Imperial's business, financial and operating results, or financial position. These risk factors include:

#### **Volatility of commodity prices**

The company's operations and earnings may be significantly affected by changes in oil and gas prices and by changes in margins on refined products and petrochemicals. Crude oil, natural gas, petrochemical and product prices and margins depend on local, regional, and global events or conditions that affect supply and demand for the relevant commodity.

Demand related factors which could impact Imperial's results include economic conditions, where periods of low or negative economic growth will typically have an adverse impact on results; technological improvements in energy efficiency; seasonal weather patterns, which affect the demand for energy associated with heating and cooling; increased competitiveness of alternative energy sources; and changes in technology or consumer preferences that affect the market for petroleum products.

Commodity prices and margins also vary depending on a number of factors affecting supply. For example, increased supply from the development of new oil and gas supply sources and technologies to enhance recovery from existing sources tend to reduce commodity prices to the extent such supply increases are not offset by commensurate growth in demand. Similarly, increases in industry refining or petrochemical manufacturing capacity tend to reduce margins on affected products. World oil, gas and petrochemical supply levels can also be affected by factors that reduce available supplies, such as adherence by member countries to Organization of the Petroleum Exporting Countries (OPEC) production quotas and the occurrence of wars, hostile actions, natural disasters, disruptions in competitors' operations, or unexpected pipeline constraints that may disrupt supplies. Technological change can also alter the relative costs for competitors to find, produce, and refine oil and gas and to manufacture petrochemicals.

Commodity prices have been volatile, and the company expects that volatility to continue. Any material decline in crude oil prices could have a material adverse effect on Imperial's Upstream operations, financial position, proved reserves and the amount spent to develop reserves.

A significant portion of the company's production is bitumen, which is blended with diluent to create a marketable heavy crude oil. The market price for western Canadian heavy crude oil is typically lower than light and medium grades of oil principally due to the higher transportation and refining costs, and limited refining capacity capable of



processing heavy crude oil. Heavy crude oil may also be subject to limits on transportation capacity to markets to a larger extent than light crude oil. Future crude price differentials are uncertain and increases in the heavy crude oil discounts could have a material adverse effect on the company's business. Increases to diluent prices, relative to heavy crude oil prices, could also have an adverse effect on the company's business.

The company does not currently make use of derivative instruments to offset exposures associated with hydrocarbon prices, currency exchange rates and interest rates that arise from existing assets, liabilities and forecasted transactions. The company does not engage in speculative derivative activities nor does it use derivatives with leveraged features.

## **Table of Contents**

### **Government and political factors**

Imperial's results can be adversely impacted by political or regulatory developments affecting operations. Changes in government policy or regulations, or third party opposition to company or infrastructure projects could impact Imperial's existing operations and planned projects. For example, increases in taxes or government royalty rates (including retroactive claims); changes in environmental regulations or other laws that increase the cost of compliance or reduce or delay available business opportunities; and adoption of regulations mandating the use of alternative fuels or uncompetitive fuel components could affect the company's operations.

### **Environmental risks**

All phases of the Upstream, Downstream and Chemical businesses are subject to environmental regulation pursuant to a variety of Canadian federal, provincial, territorial and municipal laws and regulations, as well as international conventions (collectively, environmental legislation).

Environmental legislation imposes, among other things, restrictions, liabilities and obligations in connection with the generation, handling, storage, transportation, treatment and disposal of hazardous substances and waste and in connection with spills, releases and emissions of various substances to the environment. As well, environmental regulations are imposed on the qualities and compositions of the products sold and imported. Environmental legislation also requires that wells, facility sites and other properties associated with the company's operations be operated, maintained, monitored, abandoned and reclaimed to the satisfaction of applicable regulatory authorities. In addition, certain types of operations, including exploration and development projects and significant changes to certain existing projects, may require the submission and approval of environmental impact assessments. Compliance with environmental legislation can require significant expenditures and failure to comply with environmental legislation may result in the cessation of operations, imposition of fines and penalties and liability for clean-up costs and damages.

The costs of complying with environmental legislation in the future could have a material adverse effect on the company's financial condition or results of operations. The company anticipates that changes in environmental legislation may require, among other things, reductions in emissions from its operations to the air and water and may result in increased capital expenditures. Changes in environmental legislation (including, but not limited to, application of regulations related to air, water, land and biodiversity) may increase the cost of compliance or reduce or delay available business opportunities. Future changes in environmental legislation could occur and result in stricter standards and enforcement, larger fines and liability, and increased capital expenditures and operating costs, which could have a material adverse effect on the company's financial condition or results of operations.

There are operational risks inherent in oil and gas exploration and production activities, as well as the potential to incur substantial financial liabilities, if those risks are not effectively managed. The ability to insure such risks is limited by the capacity of the applicable insurance markets, which may not be sufficient to cover the likely cost of a major adverse operating event. Accordingly, the company's primary focus is on prevention, including through its rigorous operations integrity management system. The company's future results will depend on the continued effectiveness of these efforts.

### **Climate change and greenhouse gas restrictions**

Due to concern over the risk of climate change, a number of provinces and the Government of Canada have adopted, or are considering the adoption of, regulatory frameworks to reduce greenhouse gas (GHG) emissions. These include adoption of carbon emissions pricing, cap and trade regimes, carbon taxes, emissions limits, increased efficiency

standards, and incentives or mandates for renewable energy. These requirements could make Imperial's products more expensive, reduce or delay available business opportunities, reduce demand for hydrocarbons, and shift hydrocarbon demand toward lower GHG emission energy sources. Current and pending GHG regulations may also increase compliance and abatement costs, lengthen project implementation times, and affect operations.

### **Currency**

Prices for commodities produced by the company are commonly benchmarked in U.S. dollars. The majority of Imperial's sales and purchases are related to these industry U.S. dollar benchmarks. As the company records and reports its financial results in Canadian dollars, to the extent that the value of the Canadian dollar strengthens, the company's earnings will be negatively affected.

## **Table of Contents**

### **Other business risks**

Imperial is reliant on a number of key chemicals, catalysts and third party service providers, including input and output commodity transportation (pipelines, rail, trucking, marine) and utilities providing services, including electricity and water, to various company operations. The lack of availability and capacity, and proximity of pipeline facilities and railcars could negatively impact Imperial's ability to produce at capacity levels. Transportation disruptions could adversely affect the company's price realizations, refining operations and sales volumes, as well as potentially limit the ability to deliver production to market. A third party utilities outage could have an adverse impact on the company's operations and ability to produce.

### **Management effectiveness**

In addition to external economic and political factors, Imperial's future business results also depend on the company's ability to manage successfully those factors that are at least in part within its control. The extent to which Imperial manages these factors will impact its performance relative to competition. For projects in which the company is not the operator, Imperial depends on the management effectiveness of one or more co-venturers whom the company does not control.

### **Project management**

The company's results are affected by its ability to develop and operate projects and facilities as planned. The company's results will, therefore, be affected by events or conditions that affect the advancement, operation, cost or results of such projects or facilities. These risks include the company's ability to obtain the necessary environmental and other regulatory approvals; changes in resources and operating costs including the availability and cost of materials, equipment and qualified personnel; the impact of general economic, business and market conditions; and the occurrence of unforeseen technical difficulties.

### **Operational efficiency**

An important component of Imperial's competitive performance, especially given the commodity based nature of Imperial's business, is the ability to operate efficiently, including the company's ability to manage expenses and improve production yields on an ongoing basis. This requires continuous management focus, including technology improvements, cost control, productivity enhancements, regular reappraisal of the company's asset portfolio, and the recruitment, development and retention of high caliber employees.

### **Research and development**

Imperial relies upon the research and development organizations of the company and ExxonMobil, with whom the company conducts shared research. To maintain the company's competitive position, especially in light of the technological nature of Imperial's business and the need for continuous efficiency improvement, research and development organizations must be successful and able to adapt to a changing market and policy environment, including developing technologies to help reduce GHG emissions.

### **Safety, business controls and environmental risk management**

The scope and nature of the company's operations present a variety of significant hazards and risks, including operational hazards and risks such as explosions, fires, pipeline ruptures and crude oil spills. Imperial's operations are also subject to the additional hazards of pollution, releases of toxic gas and environmental hazards and risks, such as

severe weather, and geological events. The company's results depend on management's ability to minimize these inherent risks, to effectively control business activities and to minimize the potential for human error. Imperial applies rigorous management systems, including a combined program of effective operations integrity management, ongoing upgrades, key equipment replacements, and comprehensive inspection and surveillance. The company also maintains a disciplined framework of internal controls and applies a controls management system for monitoring compliance with this framework. Substantial liabilities and other adverse impacts could result if the company's management systems and controls do not function as intended.

Business risks also include the risk of cybersecurity breaches. If systems for protecting against cybersecurity risks prove insufficient, the company could be adversely affected such as by having its business systems compromised, its proprietary information altered, lost or stolen, or its business operations disrupted.

## **Table of Contents**

### **Reserves**

The company's future production and cash flows from bitumen, synthetic oil, liquids and natural gas reserves are highly dependent upon the company's success in exploiting its current reserve base. To maintain production and cash flows, the company must continue to replace produced reserves as they are depleted, which can be accomplished through exploration discovery of new resources, appraisal and investments in developing discovered resources, or acquisition of reserves. To the extent cash flows from operations are insufficient to fund capital expenditures and external sources of capital become limited or unavailable, the company's ability to make the necessary capital investments to maintain and expand oil and natural gas reserves will be adversely impacted. In addition, the company may be unable to find and develop or acquire additional reserves to replace oil and natural gas production at acceptable costs.

Estimates of economically recoverable oil and natural gas reserves and future net cash flows involve many uncertainties, including factors beyond the company's control. Key factors with uncertainty include: geological and engineering estimates; the assumed effects of regulation by government agencies including royalty frameworks; future commodity prices; and operating costs. Actual production, revenues, taxes, development costs, abandonment costs, and operating expenditures with respect to reserves will likely vary from such estimates, and such variances could be material.

### **Preparedness**

The company's operations may be disrupted by severe weather events, natural disasters, human error, and similar events. Imperial's ability to mitigate the adverse impacts of these events depends in part upon the effectiveness of its rigorous disaster preparedness and response planning, as well as business continuity planning.

### **Item 1B. Unresolved staff comments**

Not applicable.

### **Item 2. Properties**

Reference is made to Item 1 above.

### **Item 3. Legal proceedings**

Not applicable.

### **Item 4. Mine safety disclosures**

Not applicable.

**Table of Contents****PART II****Item 5. Market for registrant's common equity, related stockholder matters and issuer purchases of equity securities****Market information**

The company's common shares trade on the Toronto Stock Exchange and the NYSE MKT LLC. Reference is made to the Quarterly financial and stock trading data portion of the Financial section on page 85 of this report. The closing price for Imperial Oil Limited common shares on the Toronto Stock Exchange was \$42.30 as at February 8, 2017.

**Dividends**

The following table sets forth the frequency and amount of all cash dividends declared by the company on its outstanding common shares for the two most recent fiscal years.

Canadian dollars	2016				2015			
	Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1
Declared dividend per share	0.15	0.15	0.15	0.14	0.14	0.14	0.13	0.13

**Information for security holders outside Canada**

Cash dividends paid to shareholders resident in countries with which Canada has an income tax convention are usually subject to a Canadian non-resident withholding tax of 15 percent, but may vary from one tax convention to another.

The withholding tax is reduced to 5 percent on dividends paid to a corporation resident in the U.S. that owns at least 10 percent of the voting shares of the company.

The company is a qualified foreign corporation for purposes of the reduced U.S. capital gains tax rates, which are applicable to dividends paid by U.S. domestic corporations and qualified foreign corporations.

There is no Canadian tax on gains from selling shares or debt instruments owned by non-residents not carrying on business in Canada, as long as the shareholder does not, in any given 60 month period, own 25 percent or more of the shares of the company.

As of February 8, 2017 there were 11,238 holders of record of common shares of the company.

Between October 1, 2016 and December 31, 2016, pursuant to the company's restricted stock unit plan, 400 shares were issued to employees outside the U.S. in reliance on Regulation S under the Securities Act, and 650 shares were issued to a seconded employee in reliance on the section 4(a)(2) exemption under the Securities Act.

**Securities authorized for issuance under equity compensation plans**

Sections of the company's management proxy circular are contained in the Proxy information section, starting on page 86. The company's management proxy circular is prepared in accordance with Canadian securities regulations.

Reference is made to the section under the Company executives and executive compensation :

Entitled Performance graph within the Compensation discussion and analysis section on page 141 of this report; and

Entitled Equity compensation plan information , within the Compensation discussion and analysis , on page 146 of this report.



**Table of Contents****Issuer purchases of equity securities**

	Total number of shares purchased (Canadian dollars)	Average price paid per share (Canadian dollars)	Total number of shares purchased as part of publicly announced plans or programs	Maximum number of shares that may yet be purchased under the plans or programs (a)
October 2016	-	-	-	<b>1,000,000</b>
(October 1 - October 31)				
November 2016	-	-	-	<b>1,000,000</b>
(November 1 - November 30)				
December 2016	<b>1,050</b>	<b>48.09</b>	<b>1,050</b>	<b>998,950</b>
(December 1 - December 31)				

(a) On June 22, 2016, the company announced by news release that it had received final approval from the Toronto Stock Exchange for a new normal course issuer bid and will continue its share repurchase program. The new program enables the company to repurchase up to a maximum of 1,000,000 common shares during the period June 27, 2016 to June 26, 2017. The program will end when the company has purchased the maximum allowable number of shares, or on June 26, 2017.

**Item 6. Selected financial data**

millions of Canadian dollars	2016	2015	2014	2013	2012
Operating revenues	<b>25,049</b>	26,756	36,231	32,722	31,053
Net income (loss)	<b>2,165</b>	1,122	3,785	2,828	3,766
Total assets at year-end	<b>41,654</b>	43,170	40,830	37,218	29,364
Long-term debt at year-end	<b>5,032</b>	6,564	4,913	4,444	1,175
Total debt at year-end	<b>5,234</b>	8,516	6,891	6,287	1,647
Other long-term obligations at year-end	<b>3,656</b>	3,597	3,565	3,091	3,983
Canadian dollars					
Net income (loss) per share - basic	<b>2.55</b>	1.32	4.47	3.34	4.44
Net income (loss) per share - diluted	<b>2.55</b>	1.32	4.45	3.32	4.42
Dividends declared	<b>0.59</b>	0.54	0.52	0.49	0.48

Reference is made to the table setting forth exchange rates for the Canadian dollar, expressed in U.S. dollars, on page 2 of this report.

**Item 7. Management's discussion and analysis of financial condition and results of operations**

Reference is made to the section entitled "Management's discussion and analysis of financial condition and results of operations" in the Financial section, starting on page 34 of this report.

**Item 7A. Quantitative and qualitative disclosures about market risk**

Reference is made to the section entitled "Market risks and other uncertainties" in the Financial section, starting on page 44 of this report. All statements other than historical information incorporated in this Item 7A are forward-looking statements. The actual impact of future market changes could differ materially due to, among other things, factors discussed in this report.

**Table of Contents**

**Item 8. Financial statements and supplementary data**

Reference is made to the table of contents in the Financial section on page 30 of this report:

Consolidated financial statements, together with the report thereon of PricewaterhouseCoopers LLP (PwC) dated February 22, 2017 beginning with the section entitled Report of independent registered public accounting firm on page 52 and continuing through note 17, Other comprehensive income (loss) information on page 80;

Supplemental information on oil and gas exploration and production activities (unaudited) starting on page 81; and

Quarterly financial and stock trading data (unaudited) on page 85.

**Item 9. Changes in and disagreements with accountants on accounting and financial disclosure**

None.

**Item 9A. Controls and procedures**

As indicated in the certifications in Exhibit 31 of this report, the company's principal executive officer and principal financial officer have evaluated the company's disclosure controls and procedures as of December 31, 2016. Based on that evaluation, these officers have concluded that the company's disclosure controls and procedures are effective in ensuring that information required to be disclosed by the company in the reports that it files or submits under the Securities Exchange Act of 1934, as amended, is accumulated and communicated to them in a manner that allows for timely decisions regarding required disclosures and are effective in ensuring that such information is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms.

Reference is made to page 51 of this report for Management's report on internal control over financial reporting and page 52 for the Report of independent registered public accounting firm on the company's internal control over financial reporting as of December 31, 2016.

There has not been any change in the company's internal control over financial reporting during the last fiscal quarter that has materially affected, or is reasonably likely to materially affect, the company's internal control over financial reporting.

**Item 9B. Other information**

None.

**Table of Contents**

**PART III**

**Item 10. Directors, executive officers and corporate governance**

Sections of the company's management proxy circular are contained in the Proxy information section, starting on page 86. The company's management proxy circular is prepared in accordance with Canadian securities regulations.

The company currently has seven directors. The articles of the company require that the board have between five and fifteen directors. Each director is elected to hold office until the close of the next annual meeting. Each of the seven individuals listed in the section entitled "Director nominee information" on pages 87 to 95 of this report have been nominated for election at the annual meeting of shareholders to be held April 28, 2017. All of the nominees are directors and have been since the dates indicated.

Reference is made to the section under "Director nominee information" :

Director nominee tables , on pages 87 to 95 of this report;

Reference is made to the sections under "Corporate governance disclosure" :

Other public company directorships of our board nominees , on page 102 of this report.

The table entitled "Audit committee" under "Board and committee structure" , on page 106 of this report;

Ethical business conduct , starting on page 118 of this report; and

Largest shareholder , on page 120 of this report.

Reference is made to the sections under "Company executives and executive compensation" :

Named executive officers of the company and "Other executive officers of the company" , on pages 121 to 123 of this report.

**Item 11. Executive compensation**

Sections of the company's management proxy circular are contained in the Proxy information section, starting on page 86. The company's management proxy circular is prepared in accordance with Canadian securities regulations.

Reference is made to the sections under "Corporate governance disclosure" :

Board of director compensation , on pages 110 to 116 of this report; and

Share ownership guidelines of independent directors and chairman, president and chief executive officer , on page 117 of this report.

Reference is made to the following sections under Company executives and executive compensation :

Letter to Shareholders from the executive resources committee on executive compensation , starting on page 124 of this report; and

Compensation discussion and analysis , on pages 126 to 147 of this report.

**Table of Contents**

**Item 12. Security ownership of certain beneficial owners and management and related stockholder matters**

Sections of the company's management proxy circular are contained in the Proxy information section, starting on page 86. The company's management proxy circular is prepared in accordance with Canadian securities regulations.

Reference is made to the section under Company executives and executive compensation entitled Equity compensation plan information, within the Compensation discussion and analysis section, on page 146 of this report.

Reference is made to the section under Corporate governance disclosure entitled Largest shareholder, on page 120 of this report.

Reference is also made to the security ownership information for directors and executive officers of the company under the preceding Items 10 and 11. With respect to named executive officers who are not directors of the company, as of February 8, 2017, B.A. Babcock was the owner of 25,539 common shares of the company and held 111,500 restricted stock units of the company. B.P. Cahir held 32,400 restricted stock units of the company. W.J. Hartnett was the owner of 14,925 common shares of the company and held 96,800 restricted stock units of the company. T.B. Redburn was the owner of 3,215 common shares of the company and held 76,950 restricted stock units of the company.

The directors and the executive officers of the company, whose compensation for the year-ended December 31, 2016 is described in the sections under Director nominee information starting on page 87 and Company executives and executive compensation starting on page 121, consist of 18 persons, who, as a group, as of February 8, 2017, beneficially own 161,024 common shares of the company, being approximately 0.02 percent of the total number of outstanding shares of the company, and 457,483 shares of Exxon Mobil Corporation (including 398,050 restricted shares). This information not being within the knowledge of the company has been provided by the directors and the executive officers individually. As a group, the directors and executive officers of the company held restricted stock units to acquire 724,758 common shares of the company, as of February 8, 2017.

**Item 13. Certain relationships and related transactions, and director independence**

Sections of the company's management proxy circular are contained in the Proxy information section, starting on page 86. The company's management proxy circular is prepared in accordance with Canadian securities regulations.

Reference is made to the section under Corporate governance disclosure entitled Independence of our board nominees, on page 99 of this report.

Reference is made to the section under Corporate governance disclosure entitled Transactions with Exxon Mobil Corporation, on page 120 of this report.

D.G. (Jerry) Wascom is deemed a non-independent member of the board of directors and the executive resources committee, environmental, health and safety committee, nominations and corporate governance committee and contributions committee under the relevant standards. As an employee of ExxonMobil Refining & Supply Company, D.G. (Jerry) Wascom is independent of the company's management and is able to assist these committees by reflecting the perspective of the company's shareholders.



**Table of Contents****Item 14. Principal accountant fees and services  
Auditor information**

The audit committee of the board of directors recommends that PricewaterhouseCoopers LLP ( PwC ) be reappointed as the auditor of the company until the close of the next annual meeting. PwC have been the auditor of the company for more than five years and are located in Calgary, Alberta. PwC are a participating audit firm with the Canadian Public Accountability Board.

**Auditor fees**

The aggregate fees of PwC for professional services rendered for the audit of the company's financial statements and other services for the fiscal years ended December 31, 2016 and December 31, 2015 were as follows:

thousands of Canadian dollars	<b>2016</b>	2015
Audit fees	<b>1,500</b>	1,416
Audit-related fees	<b>104</b>	107
Tax fees	-	-
All other fees	-	-
<b>Total fees</b>	<b>1,604</b>	1,523

Audit fees included the audit of the company's annual financial statements, internal control over financial reporting, and a review of the first three quarterly financial statements in 2016. Audit-related fees consisted of other assurance services including the audit of the company's retirement plan and royalty statement audits for oil and gas producing entities. The company did not engage the auditor for any other services.

The audit committee formally and annually evaluates the performance of the external auditor, recommends the external auditor to be appointed by the shareholders, fixes their remuneration and oversees their work. The audit committee also approves the proposed current year audit program of the external auditor, assesses the results of the program after the end of the program period and approves in advance any non-audit services to be performed by the external auditor after considering the effect of such services on their independence.

All of the services rendered by the auditor to the company were approved by the audit committee.

**Auditor independence**

The audit committee continually discusses with PwC their independence from the company and from management. PwC have confirmed that they are independent with respect to the company within the meaning of the Rules of Professional Conduct of the Institute of Chartered Professional Accountants of Alberta and the rules of the U.S. Securities and Exchange Commission. The company has concluded that the auditor's independence has been maintained.





**Table of Contents**

**PART IV**

**Item 15. Exhibits, financial statement schedules**

Reference is made to the table of contents in the Financial section on page 30 of this report.

The following exhibits, numbered in accordance with Item 601 of Regulation S-K, are filed as part of this report:

- (3) (i) Restated certificate and articles of incorporation of the company (Incorporated herein by reference to Exhibit (3.1) to the company's Form 8-Q filed on May 3, 2006 (File No. 0-12014)).
- (ii) By-laws of the company (Incorporated herein by reference to Exhibit (3)(ii) to the company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2003 (File No. 0-12014)).
- (10) (ii) (1) Syncrude Ownership and Management Agreement, dated February 4, 1975 (Incorporated herein by reference to Exhibit 13(b) of the company's Registration Statement on Form S-1, as filed with the Securities and Exchange Commission on August 21, 1979 (File No. 2-65290)).
- (2) Letter Agreement, dated February 8, 1982, between the Government of Canada and Esso Resources Canada Limited, amending Schedule C to the Syncrude Ownership and Management Agreement filed as Exhibit (10)(ii)(2) (Incorporated herein by reference to Exhibit (20) of the company's Annual Report on Form 10-K for the year ended December 31, 1981 (File No. 2-9259)).
- (3) Alberta Cold Lake Crown Agreement, dated June 25, 1984, relating to the royalties payable and the assurances given in respect of the Cold Lake production project (Incorporated herein by reference to Exhibit (10)(ii)(11) of the company's Annual Report on Form 10-K for the year ended December 31, 1986 (File No. 0-12014)).
- (4) Amendment to Syncrude Ownership and Management Agreement, dated March 10, 1982 (Incorporated herein by reference to Exhibit (10)(ii)(14) of the company's Annual Report on Form 10-K for the year ended December 31, 1989 (File No. 0-12014)).
- (5) Alberta Cold Lake Transition Agreement, effective January 1, 2000, relating to the royalties payable in respect of the Cold Lake production project and terminating the Alberta Cold Lake Crown Agreement. (Incorporated herein by reference to Exhibit (10)(ii)(20) of the company's Annual Report on Form 10-K for the year ended December 31, 2001 (File No. 0-12014)).
- (6) Amendment to Syncrude Ownership and Management Agreement effective January 1, 2001 (Incorporated herein by reference to Exhibit (10)(ii)(22) of the company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2002 (File No. 0-12014)).
- (7) Amendment to Syncrude Ownership and Management Agreement effective September 16, 1994 (Incorporated herein by reference to Exhibit (10)(ii)(23) of the company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2002 (File No. 0-12014)).
- (8) Syncrude Bitumen Royalty Option Agreement, dated November 18, 2008, setting out the terms of the exercise by the Syncrude Joint Venture owners of the option contained in the existing Crown Agreement to convert to a royalty payable on the value of bitumen, effective January 1, 2009 (Incorporated herein by reference to Exhibit 1.01(10)(ii)(2) of the company's Form 8-K filed on November 19, 2008 (File No. 0-12014)).
- (iii)(A) (1)

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Form of Letter relating to Supplemental Retirement Income (Incorporated herein by reference to Exhibit (10)(c)(3) of the company's Annual Report on Form 10-K for the year ended December 31, 1980 (File No. 2-9259)).

- (2) Deferred Share Unit Plan for Nonemployee Directors. (Incorporated herein by reference to Exhibit (10)(iii)(A)(6) of the company's Annual Report on Form 10-K for the year ended December 31, 1998 (File No. 0-12014)).
- (3) Amended Restricted Stock Unit Plan with respect to Restricted Stock Units granted in 2008 and subsequent years, as amended effective November 20, 2008 (Incorporated herein by reference to Exhibit 9.01(c)[10(iii)(A)(5)] of the company's Form 8-K filed on November 25, 2008 (File No. 0-12014)).
- (4) Short Term Incentive Program for selected executives effective February 2, 2012 (Incorporated herein by reference to Exhibit 9.01(c)[10(iii)(A)(1)] of the company's Form 8-K filed on February 7, 2012 (File No. 0-12014)).

**Table of Contents**

- (5) Amended Restricted Stock Unit Plan with respect to Restricted Stock Units granted in 2011 and subsequent years, as amended effective November 14, 2011 (Incorporated herein by reference to Exhibit 9.01(c)[10(iii)(A)(1)] of the company's Form 8-K filed on February 23, 2012 (File No. 0-12014)).
- (6) Amended Restricted Stock Unit Plan with respect to Restricted Stock Units granted in 2016 and subsequent years, as amended effective October 26, 2016 (Incorporated herein by reference to Exhibit 9.01(c)[10(iii)(A)(1)] of the company's Form 8-K filed on October 31, 2016 (File No. 0-12014)).
- (7) Amended Short Term Incentive Program with respect to awards granted in 2016 and subsequent years, as amended effective October 26, 2016 (Incorporated herein by reference to Exhibit 9.01(c)[10(iii)(A)(1)] of the company's Form 8-K filed on October 31, 2016 (File No. 0-12014)).
- (21) Imperial Oil Resources Limited, McColl-Frontenac Petroleum ULC and Imperial Oil Resources Ventures Limited, all incorporated in Canada, are wholly-owned subsidiaries of the company. The names of all other subsidiaries of the company are omitted because, considered in the aggregate as a single subsidiary, they would not constitute a significant subsidiary as of December 31, 2016.
- (23) (ii) (A) Consent of Independent Registered Public Accounting Firm (PricewaterhouseCoopers LLP).
- (31.1) Certification by principal executive officer of Periodic Financial Report pursuant to Rule 13a-14(a).
- (31.2) Certification by principal financial officer of Periodic Financial Report pursuant to Rule 13a-14(a).
- (32.1) Certification by chief executive officer of Periodic Financial Report pursuant to Rule 13a-14(b) and 18 U.S.C. Section 1350.
- (32.2) Certification by chief financial officer of Periodic Financial Report pursuant to Rule 13a-14(b) and 18 U.S.C. Section 1350.

Copies of Exhibits may be acquired upon written request of any shareholder to the investor relations manager, Imperial Oil Limited, 505 Quarry Park Boulevard S.E., Calgary, Alberta T2C 5N1, and payment of processing and mailing costs.

**Item 16. Form 10-K summary**

Not applicable.

Table of Contents

**SIGNATURES**

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf on February 22, 2017 by the undersigned, thereunto duly authorized.

Imperial Oil Limited

by */s/ Richard M. Kruger*  
(Richard M. Kruger)  
Chairman, president and chief executive officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below on February 22, 2017 by the following persons on behalf of the registrant and in the capacities indicated.

Signature	Title
<i>/s/ Richard M. Kruger</i> (Richard M. Kruger)	Chairman, president and chief executive officer and director (Principal executive officer)
<i>/s/ Beverley A. Babcock</i> (Beverley A. Babcock)	Senior vice-president, finance and administration, and controller (Principal financial officer and principal accounting officer)
<i>/s/ Krystyna T. Hoeg</i> (Krystyna T. Hoeg)	Director
<i>/s/ Jack M. Mintz</i> (Jack M. Mintz)	Director
<i>/s/ David S. Sutherland</i> (David S. Sutherland)	Director
<i>/s/ D.G. (Jerry) Wascom</i> (D.G. (Jerry) Wascom)	Director
<i>/s/ Sheelagh D. Whittaker</i> (Sheelagh D. Whittaker)	Director

*/s/ Victor L. Young*  
(Victor L. Young)

Director

**Table of Contents****Financial section**

<b>Table of contents</b>	<b>Page</b>
<u>Financial information (U.S. GAAP)</u>	31
<u>Frequently used terms</u>	32
<u>Management's discussion and analysis of financial condition and results of operations</u>	34
<u>Overview</u>	34
<u>Business environment and risk assessment</u>	34
<u>Results of operations</u>	37
<u>Liquidity and capital resources</u>	41
<u>Capital and exploration expenditures</u>	44
<u>Market risks and other uncertainties</u>	44
<u>Critical accounting estimates</u>	46
<u>Recently issued accounting standards</u>	50
<u>Management's report on internal control over financial reporting</u>	51
<u>Report of independent registered public accounting firm</u>	52
<u>Consolidated statement of income (U.S. GAAP)</u>	53
<u>Consolidated statement of comprehensive income (U.S. GAAP)</u>	54
<u>Consolidated balance sheet (U.S. GAAP)</u>	55
<u>Consolidated statement of shareholders' equity (U.S. GAAP)</u>	56
<u>Consolidated statement of cash flows (U.S. GAAP)</u>	57
<u>Notes to consolidated financial statements</u>	58
<u>1. Summary of significant accounting policies</u>	58
<u>2. Business segments</u>	63
<u>3. Income taxes</u>	65
<u>4. Employee retirement benefits</u>	66
<u>5. Other long-term obligations</u>	72
<u>6. Derivatives and financial instruments</u>	72
<u>7. Share-based incentive compensation programs</u>	72
<u>8. Investment and other income</u>	74
<u>9. Litigation and other contingencies</u>	74
<u>10. Common shares</u>	75
<u>11. Miscellaneous financial information</u>	76
<u>12. Financing costs and additional notes and loans payable information</u>	76
<u>13. Leased facilities</u>	76
<u>14. Long-term debt</u>	77
<u>15. Accounting for suspended exploratory well costs</u>	78
<u>16. Transactions with related parties</u>	79
<u>17. Other comprehensive income (loss) information</u>	80
<u>Supplemental information on oil and gas exploration and production activities (unaudited)</u>	81
<u>Quarterly financial and stock trading data</u>	85

**Table of Contents****Financial information (U.S. GAAP)**

millions of Canadian dollars	<b>2016</b>	2015	2014	2013	2012
Operating revenues	<b>25,049</b>	26,756	36,231	32,722	31,053
Net income (loss) by segment:					
Upstream	<b>(661)</b>	(704)	2,059	1,712	1,888
Downstream	<b>2,754</b>	1,586	1,594	1,052	1,772
Chemical	<b>187</b>	287	229	162	165
Corporate and Other	<b>(115)</b>	(47)	(97)	(98)	(59)
Net income (loss)	<b>2,165</b>	1,122	3,785	2,828	3,766
Cash and cash equivalents at year-end	<b>391</b>	203	215	272	482
Total assets at year-end	<b>41,654</b>	43,170	40,830	37,218	29,364
Long-term debt at year-end	<b>5,032</b>	6,564	4,913	4,444	1,175
Total debt at year-end	<b>5,234</b>	8,516	6,891	6,287	1,647
Other long-term obligations at year-end	<b>3,656</b>	3,597	3,565	3,091	3,983
Shareholders' equity at year-end	<b>25,021</b>	23,425	22,530	19,524	16,377
Cash flow from operating activities	<b>2,015</b>	2,167	4,405	3,292	4,680
Per-share information (dollars)					
Net income (loss) per share - basic	<b>2.55</b>	1.32	4.47	3.34	4.44
Net income (loss) per share - diluted	<b>2.55</b>	1.32	4.45	3.32	4.42
Dividends declared	<b>0.59</b>	0.54	0.52	0.49	0.48



**Table of Contents****Frequently used terms**

Listed below are definitions of several of Imperial's key business and financial performance measures. The definitions are provided to facilitate understanding of the terms and how they are calculated.

**Capital employed**

Capital employed is a measure of net investment. When viewed from the perspective of how capital is used by the business, it includes the company's property, plant and equipment and other assets, less liabilities, excluding both short-term and long-term debt. When viewed from the perspective of the sources of capital employed in total for the company, it includes total debt and equity. Both of these views include the company's share of amounts applicable to equity companies, which the company believes should be included to provide a more comprehensive measurement of capital employed.

millions of Canadian dollars	2016	2015	2014
<b>Business uses: asset and liability perspective</b>			
Total assets	<b>41,654</b>	43,170	40,830
Less: total current liabilities excluding notes and loans payable	<b>(3,681)</b>	(3,441)	(4,003)
total long-term liabilities excluding long-term debt	<b>(7,718)</b>	(7,788)	(7,406)
Add: Imperial's share of equity company debt	<b>17</b>	18	19
<b>Total capital employed</b>	<b>30,272</b>	31,959	29,440
<b>Total company sources: debt and equity perspective</b>			
Notes and loans payable	<b>202</b>	1,952	1,978
Long-term debt	<b>5,032</b>	6,564	4,913
Shareholders' equity	<b>25,021</b>	23,425	22,530
Add: Imperial's share of equity company debt	<b>17</b>	18	19
<b>Total capital employed</b>	<b>30,272</b>	31,959	29,440

**Return on average capital employed (ROCE)**

ROCE is a financial performance ratio. From the perspective of the business segments, ROCE is annual business-segment net income divided by average business-segment capital employed (an average of the beginning and end-of-year amounts). Segment net income includes Imperial's share of segment net income of equity companies, consistent with the definition used for capital employed, and excludes the cost of financing. The company's total ROCE is net income excluding the after-tax cost of financing divided by total average capital employed. The company has consistently applied its ROCE definition for many years and views it as the best measure of historical capital productivity in a capital-intensive, long-term industry to both evaluate management's performance and demonstrate to shareholders that capital has been used wisely over the long term. Additional measures, which are more cash flow based, are used to make investment decisions.

millions of Canadian dollars	<b>2016</b>	2015	2014
Net income	<b>2,165</b>	1,122	3,785
Financing costs (after tax), including Imperial's share of equity companies	<b>53</b>	30	1
Net income excluding financing costs	<b>2,218</b>	1,152	3,786
Average capital employed	<b>31,116</b>	30,700	27,637
Return on average capital employed (percent) corporate total	<b>7.1</b>	3.8	13.7

**Table of Contents****Cash flow from operating activities and asset sales**

Cash flow from operating activities and asset sales is the sum of the net cash provided by operating activities and proceeds from asset sales reported in the consolidated statement of cash flows. This cash flow reflects the total sources of cash both from operating the company's assets and from the divesting of assets. The company employs a long-standing and regular disciplined review process to ensure that all assets are contributing to the company's strategic objectives. Assets are divested when they no longer meet these objectives or are worth considerably more to others. Because of the regular nature of this activity, the company believes it is useful for investors to consider sales proceeds together with cash provided by operating activities when evaluating cash available for investment in the business and financing activities, including shareholder distributions.

millions of Canadian dollars	<b>2016</b>	2015	2014
Cash from operating activities	<b>2,015</b>	2,167	4,405
Proceeds from asset sales	<b>3,021</b>		