

ROYAL BANK OF CANADA  
 Form FWP  
 January 16, 2018

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January 2018  
 MSELN-319-C

Registration Statement No. 333-208507

Dated January 16, 2018

Filed Pursuant to Rule 433

STRUCTURED INVESTMENTS

Opportunities in U.S. Equities

Trigger PLUS Based on the Performance of the SPDR® S&P® Oil & Gas Exploration & Production ETF, due August 5, 2019

Trigger Performance Leveraged Upside Securities<sup>SM</sup>

Principal at Risk Securities

The Trigger PLUS are senior unsecured obligations of Royal Bank of Canada, do not pay interest, do not guarantee any return of principal at maturity and have the terms described in the accompanying prospectus supplement and prospectus, as supplemented or modified by this document. At maturity, if the price of the underlying shares has increased, investors will receive the stated principal amount of their investment plus a return reflecting the leveraged upside performance of the underlying shares, subject to the maximum payment at maturity. At maturity, if the price of the underlying shares does not change or has depreciated, (i) if the price of the underlying shares is greater than or equal to the trigger price, investors will receive the stated principal amount of their investment, or (ii) if the price of the underlying shares is less than the trigger price, investors will lose 1% for every 1% decline in the underlying shares from the pricing date to the valuation date. The Trigger PLUS are for investors who seek an equity-based return and who are willing to risk their principal and forgo current income and upside above the maximum payment at maturity in exchange for the upside leverage feature, which applies to a limited range of positive performance of the underlying shares. Investors may lose their entire initial investment in the Trigger PLUS. The Trigger PLUS are senior notes issued as part of Royal Bank of Canada's Global Medium-Term Notes, Series G program. All payments on the Trigger PLUS are subject to the credit risk of Royal Bank of Canada.

**SUMMARY TERMS**

|                             |   |
|-----------------------------|---|
| Issuer:                     | Royal Bank of Canada  |
| Underlying shares:          | Shares of the SPDR® S&P® Oil & Gas Exploration & Production ETF (Bloomberg symbol: "XOP") (the "Fund")  |
| Aggregate principal amount: | \$  |
| Stated principal amount:    | \$10 per Trigger PLUS   |
| Issue price:                | \$10 per Trigger PLUS   |
| Pricing date:               | January 31, 2018  |
| Issue date:                 | February 5, 2018 (three business days after the pricing date)   |
| Maturity date:              | August 5, 2019, subject to adjustment as described in "Additional Terms of the Trigger PLUS" below.   |
| Payment at maturity:        | If the final share price is greater than the initial share price:<br>$\$10 + (\$10 \times \text{leverage factor} \times \text{fund return})$<br>However, in no event will payment at maturity exceed the maximum payment at maturity.<br>If the final share price is less than or equal to the initial share price but is greater than or equal to the trigger price:<br>\$10 |

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|                              |   |                       |        |
|------------------------------|---|-----------------------|--------|
|                              | If the final share price is less than the trigger price:<br>\$10 + (\$10 × fund return)   |                       |        |
|                              | Under this circumstance, the payment at maturity will be less than \$8 per \$10 stated principal amount. You will lose some or all of the principal amount if the final share price is less than the trigger price. |                       |        |
| Maximum payment at maturity: | \$12.205 per Trigger PLUS (122.05% of the stated principal amount).   |                       |        |
| Leverage factor:             | 300%  |                       |        |
| Fund return:                 | (final share price – initial share price) / initial share price   |                       |        |
| Trigger price:               | \$ , which is 80% of the initial share price  |                       |        |
| Initial share price:         | \$ , which is the closing price of one underlying share on the pricing date   |                       |        |
| Final share price:           | The closing price of one underlying share on the valuation date times the adjustment factor on that date  |                       |        |
| Valuation date:              | July 31, 2019, subject to adjustment for non-trading days and certain market disruption events  |                       |        |
| Adjustment factor:           | 1.0, subject to adjustment in the event of certain events affecting the underlying shares, see “Additional Terms of the Trigger PLUS—Adjustment factor” below.  |                       |        |
| CUSIP/ ISIN:                 | 78013Q269 / US78013Q2690  |                       |        |
| Listing:                     | The Trigger PLUS will not be listed on any securities exchange.   |                       |        |
| Agent:                       | RBC Capital Markets, LLC (“RBCCM”). See “Supplemental Information Regarding Plan of Distribution; Conflicts of Interest.”   |                       |        |
| Commissions and issue price: | Price to public Agent’s commissions Proceeds to issuer  |                       |        |
| Per Trigger PLUS             | \$10.00   | \$0.20 <sup>(1)</sup> |        |
|                              |   | \$0.05 <sup>(2)</sup> | \$9.75 |
| Total                        | \$  | \$                    | \$     |

RBCCM, acting as agent for Royal Bank of Canada, will receive a fee of \$0.25 per \$10 stated principal amount and (1) will pay to Morgan Stanley Wealth Management (“MSWM”) a fixed sales commission of \$0.20 for each Trigger PLUS that MSWM sells. See “Supplemental Information Regarding Plan of Distribution; Conflicts of Interest.”

(2) Of the amount per \$10 stated principal amount received by RBCCM, acting as agent for Royal Bank of Canada, RBCCM will pay MSWM a structuring fee of \$0.05 for each Trigger PLUS.

The pricing date, issue date and other dates set forth above are subject to change, and will be set forth in the pricing supplement relating to the Trigger PLUS.

The initial estimated value of the Trigger PLUS as of the date of this document is \$9.6722 per \$10 Trigger PLUS, which is less than the price to public. The pricing supplement relating to the Trigger PLUS will set forth our estimate of the initial value of the Trigger PLUS as of the pricing date, which will not be more than \$0.30 less than this amount. The market value of the Trigger PLUS at any time will reflect many factors, cannot be predicted with accuracy, and may be less than this amount.

An investment in the Trigger PLUS involves certain risks. See “Risk Factors” beginning on page 7 of this document, beginning on page S-1 of the accompanying prospectus supplement, and beginning on page 1 of the prospectus. You should read this document together with the related prospectus supplement and prospectus, each of which can be accessed via the hyperlinks below, before you decide to invest. Please also see “Additional Terms of the Trigger PLUS” in this document.

Prospectus Supplement dated January 8, 2016

Prospectus dated January 8, 2016

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None of the Securities and Exchange Commission, any state securities commission or any other regulatory body has approved or disapproved of the Trigger PLUS or passed upon the adequacy or accuracy of this document. Any representation to the contrary is a criminal offense. The Trigger PLUS will not constitute deposits insured by the Canada Deposit Insurance Corporation, the U.S. Federal Deposit Insurance Corporation or any other Canadian or U.S. government agency or instrumentality.

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Trigger PLUS Based on the Performance of the SPDR<sup>®</sup> S&P<sup>®</sup> Oil & Gas Exploration & Production ETF due August 5, 2019

Trigger Performance Leveraged Upside Securities<sup>SM</sup>

Principal at Risk Securities

Investment Summary

Trigger Performance Leveraged Upside Securities

Principal at Risk Securities

The Trigger PLUS Based on the Performance of the SPDR<sup>®</sup> S&P<sup>®</sup> Oil & Gas Exploration & Production ETF due August 5, 2019 (the “Trigger PLUS”) can be used:

§ As an alternative to direct exposure to the underlying shares that enhances returns for a certain range of positive performance of the underlying shares, subject to the maximum payment at maturity.

§ To enhance returns and potentially outperform the underlying shares in a moderately bullish scenario.

§ To achieve similar levels of upside exposure to the underlying shares as a direct investment, subject to the maximum payment at maturity, while using fewer dollars by taking advantage of the leverage factor.

§ To avoid loss in the event of a decline of the underlying shares as of the valuation date, but only if the final share price is greater than or equal to the trigger price.

The Trigger PLUS are exposed on a 1:1 basis to the full negative performance of the underlying shares if the final share price is less than the trigger price.

Maturity: Approximately 1.5 years

Leverage factor: 300% (applicable only if the final share price is greater than the initial share price)

Trigger price: 80% of the initial share price

Maximum payment at maturity: \$12.205 per Trigger PLUS (122.05% of the stated principal amount).

Minimum payment at maturity: None. Investors may lose their entire initial investment in the Trigger PLUS.

Coupon: None

Trigger PLUS Based on the Performance of the SPDR® S&P® Oil & Gas Exploration & Production ETF  
due August 5, 2019

Trigger Performance Leveraged Upside Securities<sup>SM</sup>

Principal at Risk Securities

Key Investment Rationale

These Trigger PLUS offer leveraged exposure to the performance of the underlying shares. In exchange for enhanced performance of 300% of the appreciation of the underlying shares, investors forego performance above the maximum payment at maturity of \$12.205 per Trigger PLUS and are exposed to the risk of loss of all or a significant portion of their investment. At maturity, if the price of the underlying shares has increased, investors will receive the stated principal amount of their investment plus a return reflecting the leveraged upside performance of the underlying shares, subject to the maximum payment at maturity. However, at maturity, if the price of the underlying shares does not change or has depreciated, (i) if the price of the underlying shares is greater than or equal to the trigger price, investors will receive the stated principal amount of their investment, or (ii) if the price of the underlying shares is less than the trigger price, investors will lose 1% for every 1% decline in the underlying shares from the pricing date to the valuation date. Accordingly, you may lose your entire initial investment.

Leveraged

Upside

Performance

The Trigger PLUS offer investors an opportunity to capture enhanced returns relative to a direct investment in the underlying shares, subject to the maximum payment at maturity.

Trigger

Feature

At maturity, even if the price of the underlying shares has declined over the term of the Trigger PLUS, you will receive your stated principal amount, but only if the final share price is greater than or equal to the trigger price.

Upside

Scenario

The price of the underlying shares increases and, at maturity, we will pay the stated principal amount of \$10 plus 300% of the return of the underlying shares, subject to the maximum payment at maturity of \$12.205 per Trigger PLUS (122.05% of the stated principal amount).

Par Scenario

The final share price is less than or equal to the initial share price but is greater than or equal to the trigger price, which is 80% of the initial share price. In this case, you will receive the stated principal amount of \$10 per Trigger PLUS.

Downside

Scenario

The price of the underlying shares declines and the final share price is less than the trigger price and, at maturity, we will pay less than the stated principal amount by an amount that is proportionate to the percentage decrease in the price of the underlying shares from the initial share price. There is no minimum payment at maturity.

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Additional Information

You should read this document together with the prospectus dated January 8, 2016, as supplemented by the prospectus supplement dated January 8, 2016, relating to our Senior Global Medium-Term Notes, Series G, of which the Trigger PLUS are a part. This document, together with these documents, contains the terms of the Trigger PLUS and supersedes all other prior or contemporaneous oral statements as well as any other written materials, including preliminary or indicative pricing terms, correspondence, trade ideas, structures for implementation, sample structures, brochures or other educational materials of ours.

You should rely only on the information provided or incorporated by reference in this document, the prospectus and the prospectus supplement. We have not authorized anyone else to provide you with different information, and we take no responsibility for any other information that others may give you. We and Morgan Stanley Wealth Management are offering to sell the Trigger PLUS and seeking offers to buy the Trigger PLUS only in jurisdictions where it is lawful to do so. The information contained in this document and the accompanying prospectus supplement and prospectus is current only as of their respective dates.

If the information in this document differs from the information contained in the prospectus supplement or the prospectus, you should rely on the information in this document.

You should carefully consider, among other things, the matters set forth in “Risk Factors” in this document and the accompanying prospectus supplement, as the Trigger PLUS involve risks not associated with conventional debt securities. We urge you to consult your investment, legal, tax, accounting and other advisers before you invest in the Trigger PLUS.

You may access these documents on the SEC website at [www.sec.gov](http://www.sec.gov) as follows (or if such address has changed, by reviewing our filings for the relevant date on the SEC website):

·Prospectus dated January 8, 2016:

<http://www.sec.gov/Archives/edgar/data/1000275/000121465916008810/j18160424b3.htm>

·Prospectus Supplement dated January 8, 2016:

<http://www.sec.gov/Archives/edgar/data/1000275/000121465916008811/p14150424b3.htm>

Our Central Index Key, or CIK, on the SEC website is 1000275.

Please see the section “Documents Incorporated by Reference” on page i of the above prospectus for a description of our filings with the SEC that are incorporated by reference therein.

The issuer has filed a registration statement (including a prospectus) with the SEC for the offering to which this communication relates. Before you invest, you should read the prospectus in that registration statement and other documents the issuer has filed with the SEC for more complete information about the issuer and this offering. You may get these documents for free by visiting EDGAR on the SEC website at [www.sec.gov](http://www.sec.gov). Alternatively, the issuer, any underwriter or any dealer participating in this offering will arrange to send you the prospectus if you request it by calling toll-free 1-800-584-6837.

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Principal at Risk Securities

How the Trigger PLUS Work

Payoff Diagram

The payoff diagram below illustrates the payment at maturity on the Trigger PLUS for a range of hypothetical percentage changes in the closing price of the underlying shares. The graph is based on the following terms:

Stated principal amount: \$10 per Trigger PLUS

Leverage factor: 300% (applicable only if the final share price is greater than the initial share price)

Trigger price: 80% of the initial share price

Maximum payment at maturity: \$12.205 per Trigger PLUS (122.05% of the stated principal amount).

Minimum payment at maturity: None

#### Trigger PLUS Payoff Diagram

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How it works

Upside Scenario. If the final share price is greater than the initial share price, then investors would receive the \$10 stated principal amount plus a return reflecting 300% of the appreciation of the underlying shares over the term of the Trigger PLUS, subject to the maximum payment at maturity. Under the terms of the Trigger PLUS, an investor would realize the maximum payment at maturity at a final share price of 107.35% of the initial share price.

§ If the underlying shares appreciate 3%, the investor would receive a 9% return, or \$10.90 per Trigger PLUS, or § 109.00% of the stated principal amount.

§ If the underlying shares appreciate 7.35% or more, the investor would receive only the maximum payment at § maturity of \$12.205 per Trigger PLUS, or 122.05% of the stated principal amount.

Par Scenario. If the final share price is less than or equal to the initial share price but is greater than or equal to the § trigger price of 80% of the initial share price, the investor would receive an amount equal to the stated principal amount.

Downside Scenario. If the final share price is less than the trigger price, the investor would receive an amount that is § less than the \$10 stated principal amount, based on a 1% loss of principal for each 1% decline in the underlying § shares. Under these circumstances, the payment at maturity will be less than the stated principal amount per Trigger PLUS. There is no minimum payment at maturity on the Trigger PLUS.

§ If the underlying shares depreciate 30%, the investor would lose 30% of the investor's principal and receive only § \$7.00 per Trigger PLUS at maturity, or 70% of the stated principal amount.

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Risk Factors

An investment in the Trigger PLUS is subject to the risks described below, as well as the risks described under “Risk Factors” in the accompanying prospectus supplement and prospectus. Investors in the Trigger PLUS are also exposed to further risks related to the issuer of the Trigger PLUS, Royal Bank of Canada, which are described in Royal Bank of Canada’s annual report on Form 40-F for its most recently completed fiscal year, filed with the SEC and incorporated by reference herein. See the categories of risks, identified and disclosed in the management’s discussion and analysis of financial condition and results of operations included in the annual report on Form 40-F. This section (and the management’s discussion and analysis section of the annual report on Form 40-F) describes the most significant risks relating to the Trigger PLUS. You should carefully consider whether the Trigger PLUS are suited to your particular circumstances.

The Trigger PLUS do not pay interest or guarantee return of principal. The terms of the Trigger PLUS differ from those of ordinary debt securities in that the Trigger PLUS do not pay interest or guarantee payment of the principal amount at maturity. If the final share price is less than the trigger price, you will lose some or all of your investment. § Under these circumstances, the payout at maturity will be an amount in cash that is less than the \$10 stated principal amount of each Trigger PLUS by an amount proportionate to the percentage decrease in the price of the underlying shares from the initial share price to the final share price. There is no minimum payment at maturity on the Trigger PLUS, and, accordingly, you could lose your entire initial investment.

The appreciation potential of the Trigger PLUS is limited by the maximum payment at maturity. The appreciation potential of the Trigger PLUS is limited by the maximum payment at maturity of \$12.205 per Trigger PLUS, or § 122.05% of the stated principal amount. Although the leverage factor provides 300% exposure to any increase in the price of the underlying shares as of the valuation date above the initial share price, because the payment at maturity will be limited to 122.05% of the stated principal amount, any increase in the final share price over the initial share price by more than 7.35% will not further increase the return on the Trigger PLUS.

The market price of the Trigger PLUS will be influenced by many unpredictable factors. Many factors will § influence the value of the Trigger PLUS in the secondary market and the price at which RBCCM may be willing to purchase or sell the Trigger PLUS in the secondary market, including:

§ the trading price and volatility (frequency and magnitude of changes in value) of the underlying shares;  
§ dividend yields on the underlying shares and on the securities represented by the S&P® Oil & Gas Exploration & § Production Select Industry® Index (the “underlying index”);

§ market interest rates;

§ our creditworthiness, as represented by our credit ratings or as otherwise perceived in the market;

§ time remaining to maturity; and

§ geopolitical conditions and economic, financial, political, regulatory or judicial events that affect the underlying § shares.

The price of the underlying shares may be volatile, and you should not take the historical prices of the underlying shares as an indication of future performance. See “Information About the SPDR® S&P® Oil & Gas Exploration & Production ETF” below. You may receive less, and possibly significantly less, than the stated principal amount per Trigger PLUS if you sell your Trigger PLUS prior to maturity.

The Trigger PLUS are subject to the credit risk of Royal Bank of Canada, and any actual or anticipated changes to its credit ratings or credit spreads may adversely affect the market value of the Trigger PLUS. You are dependent on Royal Bank of Canada’s ability to pay all amounts due on the Trigger PLUS at maturity and therefore you are subject to the credit risk of Royal Bank of Canada. If Royal Bank of Canada defaults on its obligations under the Trigger § PLUS, your investment would be at risk and you could lose some or all of your investment. As a result, the market value of the Trigger PLUS prior to maturity will be affected by changes in the market’s view of Royal Bank of Canada’s creditworthiness. Any actual or anticipated decline in Royal Bank of Canada’s credit ratings or increase in the credit spreads charged by the market for taking Royal Bank of Canada credit risk is likely to adversely affect the market value of the Trigger PLUS.



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The initial estimated value of the Trigger PLUS will be less than the price to the public. The initial estimated value that is set forth on the cover page of this document, and that will be set forth in the pricing supplement for the Trigger PLUS, does not represent a minimum price at which we, RBCCM or any of our affiliates would be willing to purchase the Trigger PLUS in any secondary market (if any exists) at any time. If you attempt to sell the Trigger PLUS prior to maturity, their market value may be lower than the price you paid for them and the initial estimated value. This is due to, among other things, changes in the price of the underlying shares, the borrowing rate we pay to issue securities of this kind, and the inclusion in the price to the public of the agent's commissions and the estimated costs relating to our hedging of the Trigger PLUS. These factors, together with various credit, market and economic factors over the term of

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the Trigger PLUS, are expected to reduce the price at which you may be able to sell the Trigger PLUS in any secondary market and will affect the value of the Trigger PLUS in complex and unpredictable ways. Assuming no change in market conditions or any other relevant factors, the price, if any, at which you may be able to sell your Trigger PLUS prior to maturity may be less than your original purchase price, as any such sale price would not be expected to include the agent's commissions and the hedging costs relating to the Trigger PLUS. In addition to bid-ask spreads, the value of the Trigger PLUS determined for any secondary market price is expected to be based on the secondary rate rather than the internal funding rate used to price the Trigger PLUS and determine the initial estimated value. As a result, the secondary price will be less than if the internal funding rate was used. The Trigger PLUS are not designed to be short-term trading instruments. Accordingly, you should be able and willing to hold your Trigger PLUS to maturity.

Our initial estimated value of the Trigger PLUS is an estimate only, calculated as of the time the terms of the Trigger PLUS are set. The initial estimated value of the Trigger PLUS is based on the value of our obligation to make the payments on the Trigger PLUS, together with the mid-market value of the derivative embedded in the terms of the Trigger PLUS. See "Structuring the Trigger PLUS" below. Our estimate is based on a variety of assumptions, including our credit spreads, expectations as to dividends, interest rates and volatility, and the expected term of the Trigger PLUS. These assumptions are based on certain forecasts about future events, which may prove to be incorrect. Other entities may value the Trigger PLUS or similar securities at a price that is significantly different than we do.

The value of the Trigger PLUS at any time after the pricing date will vary based on many factors, including changes in market conditions, and cannot be predicted with accuracy. As a result, the actual value you would receive if you sold the Trigger PLUS in any secondary market, if any, should be expected to differ materially from the initial estimated value of your Trigger PLUS.

The Trigger PLUS will not be listed on any securities exchange and secondary trading may be limited.

The Trigger PLUS will not be listed on any securities exchange. Therefore, there may be little or no secondary market for the Trigger PLUS. RBCCM may, but is not obligated to, make a market in the Trigger PLUS, and, if it chooses to do so at any time, it may cease doing so. When it does make a market, it will generally do so for transactions of routine secondary market size at prices based on its estimated of the current value of the Trigger PLUS, taking into account its bid/offer spread, our credit spreads, market volatility, the notional size of the proposed sale, the cost of unwinding any related hedging positions, the time remaining to maturity and the likelihood that it will be able to resell the Trigger PLUS. Even if there is a secondary market, it may not provide enough liquidity to allow you to trade or sell the Trigger PLUS easily. Because we do not expect that other broker-dealers will participate significantly in the secondary market for the Trigger PLUS, the price at which you may be able to trade your Trigger PLUS is likely to depend on the price, if any, at which RBCCM is willing to transact. If, at any time, RBCCM were not to make a market in the Trigger PLUS, it is likely that there would be no secondary market for the Trigger PLUS. Accordingly, you should be willing to hold your Trigger PLUS to maturity.

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§ The amount payable on the Trigger PLUS is not linked to the price of the underlying shares at any time other than the valuation date. The final share price will be based on the closing price of the underlying shares on the valuation

date, subject to adjustment for non-business days and certain market disruption events. Even if the price of the underlying shares appreciates, or decreases by no more than 20%, prior to the valuation date but then decreases on the valuation date to a price that is less than the trigger price, the payment at maturity will be less, and may be significantly less than it would have been had the payment at maturity been linked to the price of the underlying shares prior to that decrease. Although the actual price of the underlying shares on the maturity date or at other times during the term of the Trigger PLUS may be higher than the final share price, the payment at maturity will be based solely on the closing price of the underlying shares on the valuation date.

An investment in the Fund is subject to risks associated with the oil and gas exploration and production sector. All of the stocks held by the Fund are issued by companies in the oil and gas exploration and production sector. As a result, § the stocks that will determine the performance of the Fund are concentrated in one sector. Although an investment in the Trigger PLUS will not

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give holders any ownership or other direct interests in the stocks held by the Fund, the return on the Trigger PLUS will be subject to certain risks associated with a direct equity investment in companies in the oil and gas exploration and production sector.

In addition, the stocks of companies in the oil and gas sector are subject to swift price fluctuations. The issuers of the stocks held by the Fund develop and produce, among other things, crude oil and natural gas, and provide, among other things, drilling services and other services related to oil and gas production and distribution. Stock prices for these types of companies are affected by supply and demand both for their specific product or service and for oil and gas products in general. The price of oil and gas, exploration and production spending, government regulation, world events and economic conditions will likewise affect the performance of these companies. Correspondingly, the stocks of companies in this sector are subject to swift price fluctuations caused by events relating to international politics, energy conservation, the success of exploration projects and tax and other governmental regulatory policies. Weak demand for the companies' products or services or for oil and gas products and services in general, as well as negative developments in these other areas, would adversely impact the prices of the stocks held by the Fund, the market price of the Fund, and the value of the Trigger PLUS.

Adjustments to the Fund could adversely affect the Trigger PLUS. The investment advisor of the Fund is responsible for calculating and maintaining the Fund. The investment advisor can add, delete or substitute the stocks comprising the Fund. The investment advisor may make other methodological changes that could change the price of the § underlying shares at any time. If one or more of these events occurs, the calculation of the amount payable at maturity may be adjusted to reflect such event or events. Consequently, any of these actions could adversely affect the amount payable at maturity and/or the market value of the Trigger PLUS.

We have no affiliation with the sponsor of the underlying index and will not be responsible for any actions taken by the index sponsor. The index sponsor is not an affiliate of ours and will not be involved in the offering of the Trigger PLUS in any way. Consequently, we have no control over the actions of the index sponsor, including any actions of § the type that would require the calculation agent to adjust the payment to you at maturity. The index sponsor has no obligation of any sort with respect to the Trigger PLUS. Thus, the index sponsor has no obligation to take your interests into consideration for any reason, including in taking any actions that might affect the value of the Trigger PLUS. None of our proceeds from the issuance of the Trigger PLUS will be delivered to the index sponsor.

We and our affiliates do not have any affiliation with the Fund's investment advisor and are not responsible for its public disclosure of information. We and our affiliates are not affiliated with the investment advisor in any way and have no ability to control or predict its actions, including any errors in or discontinuance of disclosure regarding its methods or policies relating to the Fund. The investment advisor is not involved in the offering of the Trigger PLUS § in any way and has no obligation to consider your interests as an owner of the Trigger PLUS in taking any actions relating to the underlying shares that might affect the value of the Trigger PLUS. Neither we nor any of our affiliates has independently verified the adequacy or accuracy of the information about the investment advisor or the Fund contained in any public disclosure of information. You, as an investor in the Trigger PLUS, should make your own investigation into the underlying shares.

Investing in the Trigger PLUS is not equivalent to investing in the underlying shares. Investing in the Trigger PLUS § is not equivalent to investing in the Fund or its component securities. Investors in the Trigger PLUS will not have voting rights or rights to receive dividends or other distributions or any other rights with respect to the underlying shares or the securities that constitute the Fund.

§ The underlying shares and the underlying index are different and the performance of the underlying shares may not correlate with that of the underlying index. The performance of the underlying shares may not exactly replicate the performance of the underlying index because the underlying shares will reflect transaction costs and fees that are not included in the calculation of the underlying index. It is also possible that the underlying shares may not fully replicate or may in certain circumstances diverge significantly from the performance of the underlying index due to the temporary unavailability of certain securities in the secondary market, the performance of any derivative instruments contained in this Fund, differences in trading hours between the underlying shares and the underlying

index or due to other circumstances.

The Fund is subject to management risks. The Fund is not managed according to traditional methods of “active” investment management, which involve the buying and selling of securities based on economic, financial and market analysis and investment judgment. Instead, the Fund, utilizing a “passive” or indexing investment approach, attempts § to approximate the investment performance of its underlying index by investing in a portfolio of securities that generally replicates its underlying index. Therefore, unless a specific security is removed from its underlying index, the Fund generally would not sell a security because the security’s

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issuer was in financial trouble. In addition, the Fund is subject to the risk that the investment strategy of its investment advisor may not produce the intended results.

Historical prices of the underlying shares should not be taken as an indication of their future prices during the term of the Trigger PLUS. The trading prices of the equity securities comprising the Fund will determine the price of the § underlying shares at any given time. As a result, it is impossible to predict whether the price of the underlying shares will rise or fall. Trading prices of the equity securities comprising the Fund will be influenced by complex and interrelated political, economic, financial and other factors.

Hedging and trading activity by us and our subsidiaries could potentially adversely affect the value of the Trigger PLUS. One or more of our subsidiaries and/or third party dealers expect to carry out hedging activities related to the Trigger PLUS (and possibly to other instruments linked to the Fund or its component securities), including trading in those securities as well as in other related instruments. Some of our subsidiaries also trade those securities and other financial instruments related to the Fund on a regular basis as part of their general broker-dealer and other § businesses. Any of these hedging or trading activities on or prior to the pricing date could potentially increase the initial share price and, therefore, could increase the price at or above which the underlying shares must close on the valuation date so that investors do not suffer a loss on their initial investment in the Trigger PLUS. Additionally, such hedging or trading activities during the term of the Trigger PLUS, including on the valuation date, could adversely affect the closing price of the underlying shares on the valuation date and, accordingly, the amount of cash an investor will receive at maturity, if any.

Our business activities may create conflicts of interest. We and our affiliates may engage in trading activities related to the underlying shares or the securities held by the Fund that are not for the account of holders of the Trigger PLUS § or on their behalf. These trading activities may present a conflict between the holders' interest in the Trigger PLUS and the interests we and our affiliates will have in proprietary accounts, in facilitating transactions, including options and other derivatives transactions, for our customers and in accounts under our management. These trading activities could be adverse to the interests of the holders of the Trigger PLUS.

We and our affiliates may presently or from time to time engage in business with one or more of the issuers of the securities held by the Fund. This business may include extending loans to, or making equity investments in, such companies or providing advisory services to such companies, including merger and acquisition advisory services. In the course of business, we and our affiliates may acquire non-public information relating to these companies, which we have no obligation to disclose to you, and, in addition, one or more of our affiliates may publish research reports about these companies. Neither we nor the agent have made any independent investigation regarding any matters whatsoever relating to the issuers of the securities held by the Fund.

Moreover, we and our affiliates may have published, and in the future expect to publish, research reports with respect to the underlying shares or the securities held by the Fund. This research is modified from time to time without notice and may express opinions or provide recommendations that are inconsistent with purchasing or holding the Trigger PLUS. Any of these activities by us or one or more of our affiliates may affect the price of the underlying shares and, therefore, the market value of the Trigger PLUS.

The calculation agent, which is a subsidiary of the issuer, will make determinations with respect to the Trigger PLUS, which may create a conflict of interest. Our wholly owned subsidiary, RBCCM, will serve as the calculation agent. As calculation agent, RBCCM will determine the initial share price, the trigger price, the final share price and the fund return, and calculate the amount of cash, if any, you will receive at maturity. Moreover, certain § determinations made by RBCCM, in its capacity as calculation agent, may require it to exercise discretion and make subjective judgments, such as with respect to the occurrence or non-occurrence of market disruption events and the selection of a successor fund or the calculation of the final share price in the event of a market disruption event or discontinuance of the Fund. These potentially subjective determinations may adversely affect the payout to you at maturity, if any. For further information regarding these types of determinations see "Additional Terms of the Trigger PLUS" below.

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The antidilution adjustments that the calculation agent is required to make do not cover every event that could affect the underlying shares. RBCCM, as calculation agent, will adjust the amount payable at maturity for certain events affecting the underlying shares. However, the calculation agent will not make an adjustment for every event that could affect the underlying shares. If an event occurs that does not require the calculation agent to adjust the amount payable at maturity, the market price of the Trigger PLUS may be materially and adversely affected.

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Significant aspects of the tax treatment of the Trigger PLUS are uncertain. The tax treatment of an investment in the Trigger PLUS is uncertain. We do not plan to request a ruling from the Internal Revenue Service or from the Canada Revenue Agency regarding the tax treatment of an investment in the Trigger PLUS, and the Internal Revenue Service, the Canada Revenue Agency or a court may not agree with the tax treatment described in this document. The Internal Revenue Service has issued a notice indicating that it and the U.S. Treasury Department are actively considering whether, among other issues, a holder should be required to accrue interest over the term of an instrument such as the Trigger PLUS even though that holder will not receive any payments with respect to the Trigger PLUS until maturity and whether all or part of the gain a holder may recognize upon sale, exchange or maturity of an instrument such as the Trigger PLUS should be treated as ordinary income. The outcome of this process is uncertain and could apply on a retroactive basis.

Please read carefully the sections entitled “Canadian Federal Income Tax Consequences” and “Supplemental Discussion of U.S. Federal Income Tax Consequences” in this document, the section entitled “Tax Consequences” in the accompanying prospectus and the section entitled “Certain Income Tax Consequences” in the accompanying prospectus supplement. You should consult your tax advisor about your own tax situation.

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Additional Terms of the Trigger PLUS

Please read this information in conjunction with the summary terms on the front cover of this document.

Additional Provisions

Adjustment factor: 1.0, subject to adjustment. If the underlying shares are subject to a stock split or reverse stock split, then once such split has become effective, the adjustment factor will be adjusted to equal the product of the prior adjustment factor and the number of shares issued in such stock split or reverse stock split with respect to one underlying share. No such adjustment to the adjustment factor will be required unless such adjustment would require a change of at least 0.1% in the amount being adjusted as then in effect. Any number so adjusted will be rounded to the nearest one hundred-thousandth with five one-millionths being rounded upward.

Closing price of the underlying shares: The closing price for one share of the underlying shares (or one unit of any other security for which a closing price must be determined) on any trading day means:

- if the underlying shares (or any such other security) are listed or admitted to trading on a national securities exchange, the last reported sale price, regular way, of the principal trading session on such day on the principal U.S. securities exchange registered under the Exchange Act on which the underlying shares (or any such other security) are listed or admitted to trading, or

- if the underlying shares (or any such other security) are not listed or admitted to trading on any national securities exchange but are included in the OTC Bulletin Board Service (the “OTC Bulletin Board”) operated by the Financial Industry Regulatory Authority (“FINRA”), the last reported sale price of the principal trading session on the OTC Bulletin Board on such day.

If the underlying shares (or any such other security) are listed or admitted to trading on any national securities exchange but the last reported sale price, as applicable, is not available pursuant to the preceding sentence, then the closing price for one share of the underlying shares (or one unit of any such other security) on any trading day will mean the last reported sale price of the principal trading session on the over-the-counter market or the OTC Bulletin Board on such day.

If the last reported sale price for the underlying shares (or any such other security) is not available pursuant to either of the two preceding sentences, then the closing price for any trading day will be the mean, as determined by the calculation agent, of the firm bid prices for the underlying shares (or any such other security) obtained from as many recognized dealers in such security, but not exceeding three, as will make such bid prices available to the calculation agent. Bids of the Issuer or any of its affiliates may be included in the calculation of such mean, but only to the extent that any such bid is the highest of the bids obtained. The term “OTC Bulletin Board” will include any successor service thereto.

Postponement of the valuation date: If the valuation date occurs on a day that is not a trading day or on a day on which the calculation agent has determined that a market disruption event (as defined below) has occurred or is continuing, then the valuation date will be postponed until the next succeeding trading day on which the calculation agent determines that a market disruption event does not occur or is not continuing; provided that in no event will the valuation date be postponed by more than five trading days. If the valuation date is postponed by five trading days, and a market disruption event occurs or is continuing on that fifth trading day, then the closing price of the underlying shares will nevertheless be determined as set forth above under “—Closing price of the underlying shares.” If the valuation date is postponed, then the maturity date will be postponed by an equal number of business days. No interest shall accrue or be payable as a result of such postponement.

Market disruption events: A market disruption event, as determined by the calculation agent in its sole discretion, means the occurrence or existence of any of the following events:



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- a suspension, absence or material limitation of trading in the underlying shares on their primary market for more than two hours of trading or during the one-half hour before the close of trading in that market, as determined by the calculation agent in its sole discretion;
- a suspension, absence or material limitation of trading in option or futures contracts relating to the underlying shares, if available, in the primary market for those contracts for more than two hours of trading or during the one-half hour before the close of trading in that market, as determined by the calculation agent in its sole discretion;
- the underlying shares do not trade on the NYSE Arca, the Nasdaq Global Market or what was the primary market for the underlying shares, as determined by the calculation agent in its sole discretion; or
- any other event, if the calculation agent determines in its sole discretion that the event materially interferes with our ability or the ability of any of our affiliates or hedge counterparties to unwind all or a material portion of a hedge with respect to the Trigger PLUS that such party or its respective hedge counterparties have effected or may effect as described below under “Use of Proceeds and Hedging.”

The following events will not be market disruption events:

- a limitation on the hours or number of days of trading in the underlying shares on their primary market, but only if the limitation results from an announced change in the regular business hours of the relevant market; and
- a decision to permanently discontinue trading in the option or futures contracts relating to the underlying shares.

For this purpose, a “suspension, absence or material limitation of trading” in the primary securities market on which option or futures contracts relating to the underlying shares, if available, are traded will not include any time when that market is itself closed for trading under ordinary circumstances.

In contrast, a suspension or limitation of trading in option or futures contracts relating to the underlying shares, if available, in the primary market for those contracts, by reason of any of:

- a price change exceeding limits set by that market;
- an imbalance of orders relating to those contracts; or
- a disparity in bid and asked quotes relating to those contracts;

will constitute a suspension or material limitation of trading in option or futures contracts, as the case may be, relating to the underlying shares in the primary market for those contracts.

If the Fund’s sponsor discontinues operation of the Fund and that sponsor or another entity establishes or designates a successor or substitute fund that the calculation agent determines, in its sole discretion, to be comparable to the Fund (the successor fund), then the calculation agent will substitute the successor fund for the Fund and determine the closing price of the underlying shares on the valuation date as described above under “—Closing price of the underlying shares.”

If the Fund’s sponsor discontinues operation of the Fund and:

- the calculation agent does not select a successor fund, or
  - the successor fund is no longer traded or listed on any of the relevant trading days,
- the calculation agent will compute a substitute price for the underlying shares in accordance with the procedures last used to calculate the price of the underlying shares before any discontinuation but using only those securities that were held by the applicable fund prior to such discontinuation. If a successor fund is selected or the calculation agent calculates a price as a substitute for the underlying shares as described below, the successor fund or price will

Discontinuation  
of the Fund:

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be used as a substitute for the underlying shares for all purposes going forward, including for purposes of determining whether a market disruption event exists, even if the Fund's sponsor elects to re-establish the Fund, unless the calculation agent in its sole discretion decides to use the re-established Fund.

If the Fund's sponsor discontinues operation of the Fund before the valuation date and the calculation agent determines that no successor fund is available at that time, then on each trading day until the earlier to occur of:

- the determination of the final share price, or
- a determination by the calculation agent that a successor fund is available,

the calculation agent will determine the price that would be used in computing the closing price of the underlying shares as described in the preceding paragraph as if that day were a trading day. The calculation agent will cause notice of each price to be published not less often than once each month in *The Wall Street Journal*, another newspaper of general circulation or a website or webpage available to holders of the Trigger PLUS, and arrange for information with respect to these prices to be made available by telephone.

Notwithstanding these alternative arrangements, discontinuation of the operation of the Fund would be expected to adversely affect the value of, liquidity of and trading in the Trigger PLUS.

Business day: A business day means a Monday, Tuesday, Wednesday, Thursday or Friday that is not a day on which banking institutions in The City of New York generally are authorized or obligated by law, regulation or executive order to close.

A trading day means any day on which the exchange and each related exchange are scheduled to be open for their respective regular trading sessions.

Trading day: The exchange means the primary organized exchange or quotation system for trading the underlying shares, any successor to such exchange or quotation system or any substitute exchange or quotation system to which trading in such shares has temporarily relocated (provided that the calculation agent has determined that there is comparable liquidity relative to such shares on such temporary substitute exchange or quotation system as on the original exchange).

A related exchange means each exchange or quotation system on which futures or options contracts relating to the underlying shares are traded, any successor to such exchange or quotation system or any substitute exchange or quotation system to which trading in the futures or options contracts relating to the underlying shares has temporarily relocated (provided that the calculation agent has determined that there is comparable liquidity relative to the futures or options contracts relating to the underlying shares on that temporary substitute exchange or quotation system as on the original related exchange).

Default interest upon acceleration: In the event we fail to make a payment on the maturity date, any overdue payment in respect of such payment on the Trigger PLUS will bear interest until the date upon which all sums due are received by or on behalf of the relevant holder, at a rate per annum which is the rate for deposits in U.S. dollars for a period of three months which appears on the Reuters Screen LIBOR page as of 11:00 a.m.

(London time) on the first business day following such failure to pay. Such rate shall be determined by the calculation agent. If interest is required to be calculated for a period of less than one year, it will be calculated on the basis of a 360-day year consisting of the actual number of days in the period.

Events of default and acceleration: If the maturity of the Trigger PLUS is accelerated upon an event of default under the Indenture, the amount payable upon acceleration will be determined by the calculation agent. Such amount will be calculated as if the date of declaration of acceleration were the valuation date.

Minimum ticketing size: \$1,000 / 100 Trigger PLUS



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Additional amounts: We will pay any amounts to be paid by us on the Trigger PLUS without deduction or withholding for, or on account of, any and all present or future income, stamp and other taxes, levies, imposts, duties, charges, fees, deductions or withholdings (“taxes”) now or hereafter imposed, levied, collected, withheld or assessed by or on behalf of Canada or any Canadian political subdivision or authority that has the power to tax, unless the deduction or withholding is required by law or by the interpretation or administration thereof by the relevant governmental authority. At any time a Canadian taxing jurisdiction requires us to deduct or withhold for or on account of taxes from any payment made under or in respect of the Trigger PLUS, we will pay such additional amounts (“Additional Amounts”) as may be necessary so that the net amounts received by each holder (including Additional Amounts), after such deduction or withholding, shall not be less than the amount the holder would have received had no such deduction or withholding been required. However, no Additional Amounts will be payable with respect to a payment made to a holder of the Trigger PLUS or of a right to receive payments in respect thereto (a “Payment Recipient”), which we refer to as an “Excluded Holder,” in respect of any taxes imposed because the beneficial owner or Payment Recipient:

- (i) with whom we do not deal at arm’s length (within the meaning of the Income Tax Act (Canada)) at the time of making such payment;
- (ii) who is subject to such taxes by reason of its being connected presently or formerly with Canada or any province or territory thereof otherwise than by reason of the holder’s activity in connection with purchasing the Trigger PLUS, the holding of the Trigger PLUS or the receipt of payments thereunder;
- (iii) who is, or who does not deal at arm’s length with a person who is, a “specified shareholder” (within the meaning of subsection 18(5) of the Income Tax Act (Canada)) of Royal Bank of Canada (generally a person will be a “specified shareholder” for this purpose if that person, either alone or together with persons with whom the person does not deal at arm’s length, owns 25% or more of (a) our voting shares, or (b) the fair market value of all of our issued and outstanding shares);
- (iv) who presents such security for payment (where presentation is required) more than 30 days after the relevant date (except to the extent that the holder thereof would have been entitled to such Additional Amounts on presenting a security for payment on the last day of such 30 day period); for this purpose, the “relevant date” in relation to any payments on any security means:
  - a. the due date for payment thereof, or
  - b. if the full amount of the monies payable on such date has not been received by the trustee on or prior to such due date, the date on which the full amount of such monies has been received and notice to that effect is given to holders of the Trigger PLUS in accordance with the Indenture;
- (v) who could lawfully avoid (but has not so avoided) such withholding or deduction by complying, or requiring that any agent comply with, any statutory requirements necessary to establish qualification for an exemption from withholding or by making, or requiring that any agent make, a declaration of non-residence or other similar claim for exemption to any relevant tax authority; or
- (vi) who is subject to deduction or withholding on account of any tax, assessment, or other governmental charge that is imposed or withheld by reason of the application of Section 1471 through 1474 of the United States Internal Revenue Code of 1986, as amended (the “Code”) (or any successor provisions), any regulation, pronouncement, or agreement thereunder, official interpretations thereof, or any law implementing an intergovernmental approach thereto, whether currently in effect or as published and amended from time to time.

For the avoidance of doubt, we will not have any obligation to pay any holders Additional Amounts on any tax which is payable otherwise than by deduction or withholding from payments made under or in respect of the Trigger PLUS.

We will also make such withholding or deduction and remit the full amount deducted or withheld to the relevant authority in accordance with applicable law. We will furnish to the trustee, within 30 days after

the date the payment of any taxes is due pursuant to applicable law, certified copies of tax receipts evidencing that such payment has been made or other evidence of such payment satisfactory to the trustee. We will indemnify and hold harmless each holder of the Trigger PLUS (other than an Excluded Holder) and upon written request reimburse each such holder for the amount of (x) any taxes so levied or imposed and paid by such holder as a result of payments made under or with respect to the Trigger PLUS, and (y) any taxes levied or imposed and paid by such holder with respect to any reimbursement under (x) above, but excluding any such taxes on such holder's net income or capital. For additional information, see the section entitled "Tax Consequences—Canadian Taxation" in the accompanying prospectus.



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Form of the  
Trigger PLUS: Book-entry

Trustee: The Bank of New York Mellon

Calculation agent: RBCCM. The calculation agent will make all determinations regarding the Trigger PLUS. Absent manifest error, all determinations of the calculation agent will be final and binding on you and us, without any liability on the part of the calculation agent. You will not be entitled to any compensation from us for any loss suffered as a result of any of the above determinations or confirmations by the calculation agent.

Contact: Morgan Stanley Wealth Management clients may contact their local Morgan Stanley Wealth Management branch office or our principal executive offices at 1585 Broadway, New York, New York 10036 (telephone number 1-(866)-477-4776). All other clients may contact their local brokerage representative. Third-party distributors may contact Morgan Stanley Structured Investment Sales at 1-(800)-233-1087.

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Information About the SPDR S&P<sup>®</sup> Oil & Gas Exploration and Production ETF

We have derived the following information from publicly available documents. We have not independently verified the accuracy or completeness of the following information. We are not affiliated with the Fund, and the Fund will have no obligations with respect to the Trigger PLUS.

The Fund is an investment portfolio maintained and managed by SSFM. The Fund trades on the NYSE Arca under the ticker symbol "XOP." The inception date of the Fund is June 19, 2006. Prior to January 8, 2007, the Fund was known as the SPDR<sup>®</sup> Oil & Gas Exploration & Production ETF. The Fund is subject to the reporting requirements of the SEC. Periodic reports and other documents relating to the Fund may be found on the SEC website: [www.sec.gov](http://www.sec.gov). None of those documents are included or incorporated by reference.

The Fund seeks to provide investment results that correspond generally to the price and yield performance, before fees and expenses, of the underlying index. The underlying index represents the oil and gas exploration and production sub-industry portion of the S&P Total Market Index ("S&P TMI"), an index that measures the performance of the U.S. equity market. The Underlying is composed of companies that are in the oil and gas sector exploration and production. The Fund utilizes a "replication" investment approach in attempting to track the performance of the underlying index. The Underlying typically invests in substantially all of the securities which comprise the underlying index in approximately the same proportions as the underlying index. The Fund will normally invest at least 80% of its total assets in common stocks that comprise the underlying index.

The information above was compiled from the SPDR<sup>®</sup> website. We have not independently investigated the accuracy of that information. Information contained in the SPDR<sup>®</sup> website is not incorporated by reference in, and should not be considered a part of, this document.

S&P<sup>®</sup> Oil & Gas Exploration & Production Select Industry<sup>®</sup> Index

We have derived all information contained in this document regarding the underlying index, including, without limitation, its make-up, method of calculation and changes in its components, from publicly available information. Such information reflects the policies of, and is subject to change by, S&P.

The underlying index is an equal-weighted index that is designed to measure the performance of the oil and gas exploration and production sub-industry portion of the S&P TMI. The S&P TMI includes all U.S. common equities listed on the NYSE (including NYSE Arca), the NYSE American, the Nasdaq Global Select Market, and the Nasdaq Capital Market. Each of the component stocks in the underlying index is a constituent company within the oil and gas exploration and production sub-industry portion of the S&P TMI.

To be eligible for inclusion in the underlying index, companies must be in the S&P TMI and must be included in the relevant Global Industry Classification Standard (GICS) sub-industry. The GICS was developed to establish a global standard for categorizing companies into sectors and industries. In addition to the above, companies must satisfy one of the two following combined size and liquidity criteria:

- float-adjusted market capitalization above US\$500 million and float-adjusted liquidity ratio above 90%; or
- float-adjusted market capitalization above US\$400 million and float-adjusted liquidity ratio above 150%.

All U.S. companies satisfying these requirements are included in the underlying index. The total number of companies in the underlying index should be at least 35. If there are fewer than 35 stocks, stocks from a supplementary list of highly correlated sub-industries that meet the market capitalization and liquidity thresholds above are included in order of their float-adjusted market capitalization to reach 35 constituents. Minimum market capitalization requirements may be relaxed to ensure there are at least 22 companies in the underlying index as of each rebalancing effective date.

Eligibility factors include:

Market Capitalization: Float-adjusted market capitalization should be at least US\$400 million for inclusion in the underlying index. Existing index components must have a float-adjusted market capitalization of US\$300 million to remain in the underlying index at each rebalancing.

Liquidity: The liquidity measurement used is a liquidity ratio, defined as dollar value traded over the previous 12-months divided by the float-adjusted market capitalization as of the underlying index rebalancing reference date. Stocks having a float-adjusted market capitalization above US\$500 million must have a liquidity ratio greater than 90% to be eligible for addition to the underlying index. Stocks having a float-adjusted market capitalization between US\$400 and US\$500 million must have a liquidity ratio greater than 150% to be eligible for addition to the underlying index. Existing index constituents must have a liquidity ratio greater than 50% to remain in the underlying index at the quarterly rebalancing.

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The length of time to evaluate liquidity is reduced to the available trading period for IPOs or spin-offs that do not have 12 months of trading history.

Takeover Restrictions: At the discretion of S&P, constituents with shareholder ownership restrictions defined in company bylaws may be deemed ineligible for inclusion in the underlying index. Ownership restrictions preventing entities from replicating the index weight of a company may be excluded from the eligible universe or removed from the underlying index.

Turnover: S&P believes turnover in index membership should be avoided when possible. At times, a company may appear to temporarily violate one or more of the addition criteria. However, the addition criteria are for addition to the underlying index, not for continued membership. As a result, an index constituent that appears to violate the criteria for addition to the underlying index will not be deleted unless ongoing conditions warrant a change in the composition of the underlying index.

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Historical Information

The table below sets forth the published high and low closing prices of the underlying shares for each quarter in the period from January 1, 2013 through January 10, 2018. The graph below sets forth the daily closing prices of the underlying shares from January 1, 2013 through January 10, 2018. We obtained the information in the table and graph below from Bloomberg Financial Markets, without independent verification. You should not take the historical performance of the underlying shares as an indication of its future performance, and no assurance can be given as to the price of the underlying shares on the valuation date.

SPDR® S&P® Oil & Gas Exploration & Production ETF

Information as of market close on January 10, 2018:

Bloomberg Ticker Symbol: XOP 52 Weeks Ago: \$40.60

Current Price: \$38.48 52 Week High (on 1/26/2017): \$41.80

52 Week Low (on 8/21/2017): \$29.09

SPDR® S&P® Oil & Gas Exploration & Production ETF High(\$)  
Low(\$)

2013

First Quarter 62.10 55.10

Second Quarter 62.61 54.71

Third Quarter 66.47 58.62

Fourth Quarter 72.74 65.02

2014

First Quarter 71.83 64.04

Second Quarter 83.45 71.19

Third Quarter 82.08 68.83

Fourth Quarter 66.84 42.75

2015

First Quarter 53.94 42.55

Second Quarter 55.63 46.43

Third Quarter 45.22 31.71

Fourth Quarter 40.53 28.64

2016

First Quarter 30.96 23.60

Second Quarter 37.50 29.23

Third Quarter 39.12 32.75

Fourth Quarter 43.42 34.73

2017

First Quarter 42.21 35.17

Second Quarter 37.89 30.17

Third Quarter 34.37 29.09

Fourth Quarter 37.64 32.25

2018

First Quarter (through January 10, 2018) 38.79 38.22

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SPDR<sup>®</sup> S&P<sup>®</sup> Oil & Gas Exploration & Production ETF – Historical Closing Prices

January 1, 2013 to January 10, 2018

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Canadian Federal Income Tax Consequences

An investor should read carefully the description of material Canadian federal income tax considerations relevant to a Non-resident Holder owning debt securities under “Tax Consequences—Canadian Taxation” in the accompanying prospectus.

Supplemental Discussion of U.S. Federal Income Tax Consequences

The following, together with the discussion of U.S. federal income taxation in the accompanying prospectus and prospectus supplement, is a general description of the material U.S. tax considerations relating to the Trigger PLUS. It does not purport to be a complete analysis of all tax considerations relating to the Trigger PLUS. Prospective purchasers of the Trigger PLUS should consult their tax advisors as to the consequences under the tax laws of the country of which they are resident for tax purposes and the tax laws of Canada and the U.S. of acquiring, holding and disposing of the Trigger PLUS and receiving payments under the Trigger PLUS. This summary is based upon the law as in effect on the date of this document and is subject to any change in law that may take effect after such date.

Supplemental U.S. Tax Considerations

The following section supplements the discussion of U.S. federal income taxation in the accompanying prospectus and prospectus supplement. It applies only to those initial holders who are not excluded from the discussion of U.S. federal income taxation in the accompanying prospectus.

**NO STATUTORY, JUDICIAL OR ADMINISTRATIVE AUTHORITY DIRECTLY DISCUSSES HOW THE TRIGGER PLUS SHOULD BE TREATED FOR U.S. FEDERAL INCOME TAX PURPOSES. AS A RESULT, THE U.S. FEDERAL INCOME TAX CONSEQUENCES OF AN INVESTMENT IN THE TRIGGER PLUS ARE UNCERTAIN. BECAUSE OF THE UNCERTAINTY, YOU SHOULD CONSULT YOUR TAX ADVISOR IN DETERMINING THE U.S. FEDERAL INCOME TAX AND OTHER TAX CONSEQUENCES OF YOUR INVESTMENT IN THE TRIGGER PLUS, INCLUDING THE APPLICATION OF STATE, LOCAL OR OTHER TAX LAWS AND THE POSSIBLE EFFECTS OF CHANGES IN FEDERAL OR OTHER TAX LAWS.**

We will not attempt to ascertain whether the Fund or any of the entities whose stock is included in the Fund would be treated as a “passive foreign investment company” within the meaning of Section 1297 of the Internal Revenue Code of 1986, as amended (the “Code”), or a “U.S. real property holding corporation” within the meaning of Section 897 of the Code. If the Fund or any of the entities whose stock is included in the Fund were so treated, certain adverse U.S. federal income tax consequences could possibly apply to U.S. and non-U.S. holders, respectively. You should refer to any available information filed with the SEC and other authorities by the Fund or the entities whose stock is included in the Fund and consult your tax advisor regarding the possible consequences to you in this regard.

In the opinion of our counsel, Morrison & Foerster LLP, it would generally be reasonable to treat a Trigger PLUS as a pre-paid cash-settled derivative contract in respect of the Fund for U.S. federal income tax purposes, and the terms of the Trigger PLUS require a holder and us (in the absence of a change in law or an administrative or judicial ruling to the contrary) to treat the Trigger PLUS for all tax purposes in accordance with such characterization. If the Trigger PLUS are so treated, subject to the potential application of the “constructive ownership” rules under Section 1260 of the Code, a U.S. holder should generally recognize capital gain or loss upon the sale, exchange or maturity of the Trigger PLUS in an amount equal to the difference between the amount a holder receives at such time and the holder’s tax basis in the Trigger PLUS. In general, a U.S. holder’s tax basis in the Trigger PLUS will be equal to the price the holder paid for the Trigger PLUS. Capital gain recognized by an individual U.S. holder is generally taxed at preferential rates where the property is held for more than one year and is generally taxed at ordinary income rates where the property is held for one year or less. The deductibility of capital losses is subject to limitations.

While the matter is not entirely clear, there exists a substantial risk that an investment in the Trigger PLUS is a “constructive ownership transaction” to which Section 1260 of the Code applies. If Section 1260 of the Code applies, all or a portion of any long-term capital gain recognized by a U.S. holder in respect of the Trigger PLUS will be recharacterized as ordinary income (the “Excess Gain”). In addition, an interest charge will also apply to any deemed underpayment of tax in respect of any Excess Gain to the extent such gain would have resulted in gross income inclusion for the U.S. holder in taxable years prior to the taxable year of the sale, exchange or maturity (assuming such



income accrued at a constant rate equal to the applicable federal rate as of the date of sale, exchange or maturity). To the extent any gain is treated as long-term capital gain after application of the recharacterization rules of Section 1260 of the Code, such gain would be subject to U.S. federal income tax at the rates that would

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have been applicable to the net underlying long-term capital gain. Unless otherwise established by clear and convincing evidence, the net underlying long term capital gain is treated as zero. U.S. holders should consult their tax advisors regarding the potential application of Section 1260 of the Code to an investment in the Trigger PLUS.

**Alternative Treatments.** Alternative tax treatments of the Trigger PLUS are also possible and the Internal Revenue Service might assert that a treatment other than that described above is more appropriate. For example, it is possible to treat the Trigger PLUS, and the Internal Revenue Service might assert that a Trigger PLUS should be treated, as a single debt instrument. Pursuant to such characterization, since the Trigger PLUS have a term that exceeds one year, such a debt instrument would be subject to the special tax rules governing contingent payment debt instruments. If the Trigger PLUS are so treated, a holder would generally be required to accrue interest income over the term of the Trigger PLUS based upon the yield at which we would issue a non-contingent fixed-rate debt instrument with other terms and conditions similar to the Trigger PLUS. In addition, any gain a holder might recognize upon the sale, exchange or maturity of the Trigger PLUS would generally be ordinary income and any loss recognized by a holder at such time would generally be ordinary loss to the extent of interest that same holder included in income in the current or previous taxable years in respect of the Trigger PLUS, and thereafter, would be capital loss.

Because of the absence of authority regarding the appropriate tax characterization of the Trigger PLUS, it is also possible that the Internal Revenue Service could seek to characterize the Trigger PLUS in a manner that results in tax consequences that are different from those described above. For example, the Internal Revenue Service could possibly assert that any gain or loss that a holder may recognize upon the sale, exchange or maturity of the Trigger PLUS should be treated as ordinary gain or loss.

The Internal Revenue Service has released a notice that may affect the taxation of holders of the Trigger PLUS. According to the notice, the Internal Revenue Service and the U.S. Treasury Department are actively considering whether the holder of an instrument such as the Trigger PLUS should be required to accrue ordinary income on a current basis. It is not possible to determine what guidance they will ultimately issue, if any. It is possible, however, that under such guidance, holders of the Trigger PLUS will ultimately be required to accrue income currently and this could be applied on a retroactive basis. The Internal Revenue Service and the U.S. Treasury Department are also considering other relevant issues, including whether additional gain or loss from such instruments should be treated as ordinary or capital and whether the constructive ownership rules of Section 1260 of the Code (as discussed above) might be applied to such instruments. Holders are urged to consult their tax advisors concerning the significance, and the potential impact, of the above considerations. We intend to treat the Trigger PLUS for U.S. federal income tax purposes in accordance with the treatment described in this document unless and until such time as the U.S. Treasury Department and Internal Revenue Service determine that some other treatment is more appropriate.

**Backup Withholding and Information Reporting.** Please see the discussion under “Tax Consequences—United States Taxation—Information Reporting and Backup Withholding” in the accompanying prospectus for a description of the applicability of the backup withholding and information reporting rules to payments made on the Trigger PLUS.

**Non-U.S. Holders.** The following discussion applies to non-U.S. holders of the Trigger PLUS. A non-U.S. holder is a beneficial owner of a Trigger PLUS that, for U.S. federal income tax purposes, is a non-resident alien individual, a foreign corporation, or a foreign estate or trust.

Except as described below, a non-U.S. holder will generally not be subject to U.S. federal income or withholding tax for amounts paid in respect of the Trigger PLUS, provided that (i) the holder complies with any applicable certification requirements, (ii) the payment is not effectively connected with the conduct by the holder of a U.S. trade or business, and (iii) if the holder is a non-resident alien individual, such holder is not present in the U.S. for 183 days or more during the taxable year of the sale, exchange or maturity of the Trigger PLUS. In the case of (ii) above, the holder generally would be subject to U.S. federal income tax with respect to any income or gain in the same manner as if the holder were a U.S. holder and, in the case of a holder that is a corporation, the holder may also be subject to a branch profits tax equal to 30% (or such lower rate provided by an applicable U.S. income tax treaty) of a portion of its earnings and profits for the taxable year that are effectively connected with its conduct of a U.S. trade or business, subject to certain adjustments. Payments made to a non-U.S. holder may be subject to information reporting and to

backup withholding unless the holder complies with applicable certification and identification requirements as to its foreign status.

Under Section 871(m) of the Code, a “dividend equivalent” payment is treated as a dividend from sources within the United States. Such payments generally would be subject to a 30% U.S. withholding tax if paid to a non-U.S. holder. Under U.S. Treasury Department regulations, payments (including deemed payments) with respect to equity-linked instruments (“ELIs”) that are

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“specified ELIs” may be treated as dividend equivalents if such specified ELIs reference an interest in an “underlying security,” which is generally any interest in an entity taxable as a corporation for U.S. federal income tax purposes if a payment with respect to such interest could give rise to a U.S. source dividend. However, the Internal Revenue Service has issued guidance that states that the U.S. Treasury Department and the Internal Revenue Service intend to amend the effective dates of the U.S. Treasury Department regulations to provide that withholding on dividend equivalent payments will not apply to specified ELIs that are not delta-one instruments and that are issued before January 1, 2019. Based on our determination that the Trigger PLUS are not delta-one instruments, non-U.S. holders should not be subject to withholding on dividend equivalent payments, if any, under the Trigger PLUS. However, it is possible that the Trigger PLUS could be treated as deemed reissued for U.S. federal income tax purposes upon the occurrence of certain events affecting the Fund or the Trigger PLUS, and following such occurrence the Trigger PLUS could be treated as subject to withholding on dividend equivalent payments. Non-U.S. holders that enter, or have entered, into other transactions in respect of the Fund or the Trigger PLUS should consult their tax advisors as to the application of the dividend equivalent withholding tax in the context of the Trigger PLUS and their other transactions. If any payments are treated as dividend equivalents subject to withholding, we (or the applicable withholding agent) would be entitled to withhold taxes without being required to pay any additional amounts with respect to amounts so withheld.

As discussed above, alternative characterizations of the Trigger PLUS for U.S. federal income tax purposes are possible. Should an alternative characterization, by reason of change or clarification of the law, by regulation or otherwise, cause payments as to the Trigger PLUS to become subject to withholding tax, we will withhold tax at the applicable statutory rate. The Internal Revenue Service has also indicated that it is considering whether income in respect of instruments such as the Trigger PLUS should be subject to withholding tax. We will not be required to pay any additional amounts in respect of such withholding. Prospective investors should consult their own tax advisors in this regard.

Foreign Account Tax Compliance Act. The Foreign Account Tax Compliance Act (“FATCA”) imposes a 30% U.S. withholding tax on certain U.S. source payments, including interest (and OID), dividends, other fixed or determinable annual or periodical gain, profits, and income, and on the gross proceeds from a disposition of property of a type which can produce U.S. source interest or dividends (“Withholdable Payments”), if paid to a foreign financial institution (including amounts paid to a foreign financial institution on behalf of a holder), unless such institution enters into an agreement with the U.S. Treasury Department to collect and provide to the U.S. Treasury Department certain information regarding U.S. financial account holders, including certain account holders that are foreign entities with U.S. owners, with such institution or otherwise complies with FATCA. In addition, the Trigger PLUS may constitute a “financial account” for these purposes and thus, be subject to information reporting requirements pursuant to FATCA. FATCA also generally imposes a withholding tax of 30% on Withholdable Payments made to a non-financial foreign entity unless such entity provides the withholding agent with a certification that it does not have any substantial U.S. owners or a certification identifying the direct and indirect substantial U.S. owners of the entity. Under certain circumstances, a holder may be eligible for refunds or credits of such taxes.

The U.S. Treasury Department and the IRS have announced that withholding on payments of gross proceeds from a sale or redemption of the Trigger PLUS will only apply to payments made after December 31, 2018. If we determine withholding is appropriate with respect to the Trigger PLUS, we will withhold tax at the applicable statutory rate, and we will not pay any additional amounts in respect of such withholding. Therefore, if such withholding applies, any payments on the Trigger PLUS will be significantly less than what you would have otherwise received. Depending on your circumstances, these amounts withheld may be creditable or refundable to you. Foreign financial institutions and non-financial foreign entities located in jurisdictions that have an intergovernmental agreement with the United States governing FATCA may be subject to different rules. Prospective investors are urged to consult with their own tax advisors regarding the possible implications of FATCA on their investment in the Trigger PLUS.



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Use of Proceeds and Hedging

The net proceeds from the sale of the Trigger PLUS will be used as described under “Use of Proceeds” in the accompanying prospectus supplement and prospectus and to hedge market risks of Royal Bank of Canada associated with its obligation to make the payment at maturity on the Trigger PLUS. The initial public offering price of the Trigger PLUS includes the underwriting discount and commission and the estimated cost of hedging our obligations under the Trigger PLUS.

Supplemental Information Regarding Plan of Distribution; Conflicts of Interest

Pursuant to the terms of a distribution agreement, RBCCM, an affiliate of Royal Bank of Canada, will purchase the Trigger PLUS from Royal Bank of Canada for distribution to Morgan Stanley Wealth Management. RBCCM will act as agent for the Trigger PLUS and will receive a fee of \$0.25 per \$10 stated principal amount and will pay to Morgan Stanley Wealth Management a fixed sales commission of \$0.20 for each of the Trigger PLUS they sell. Of the amount per \$10 stated principal amount received by RBCCM, RBCCM will pay Morgan Stanley Wealth Management a structuring fee of \$0.05 for each Trigger PLUS.

Morgan Stanley Wealth Management may reclaim selling concessions allowed to individual brokers within Morgan Stanley Wealth Management in connection with the offering if, within 30 days of the offering, Royal Bank of Canada repurchases the Trigger PLUS distributed by such brokers.

We expect that delivery of the Trigger PLUS will be made against payment for the Trigger PLUS on or about February 5, 2018, which is the third business day following the pricing date (this settlement cycle being referred to as “T+3”). Under Rule 15c6-1 of the Exchange Act, trades in the secondary market generally are required to settle in two business days, unless the securities parties to any such trade expressly agree otherwise. Accordingly, purchasers who wish to trade the Trigger PLUS more than two business days prior to the original issue date will be required to specify alternative settlement arrangements to prevent a failed settlement.

In addition, RBCCM or another of its affiliates or agents may use this document in market-making transactions after the initial sale of the Trigger PLUS, but is under no obligation to do so and may discontinue any market-making activities at any time without notice.

For additional information as to the relationship between us and RBCCM, please see the section “Plan of Distribution—Conflicts of Interest” in the accompanying prospectus.

The value of the Trigger PLUS shown on your account statement may be based on RBCCM’s estimate of the value of the Trigger PLUS if RBCCM or another of our affiliates were to make a market in the Trigger PLUS (which it is not obligated to do). That estimate will be based on the price that RBCCM may pay for the Trigger PLUS in light of then prevailing market conditions, our creditworthiness and transaction costs. For an initial period of approximately nine months, the value of the Trigger PLUS that may be shown on your account statement is expected to be higher than RBCCM’s estimated value of the Trigger PLUS at that time. This is because the estimated value of the Trigger PLUS will not include the agent’s commission and our hedging costs and profits; however, the value of the Trigger PLUS shown on your account statement during that period is initially expected to be a higher amount, reflecting the addition of the agent’s commission and our estimated costs and profits from hedging the Trigger PLUS. This excess is expected to decrease over time until the end of this period, and we reserve the right to shorten this period. After this period, if RBCCM repurchases your Trigger PLUS, it expects to do so at prices that reflect its estimated value.

No Prospectus (as defined in Directive 2003/71/EC (as amended, the “Prospectus Directive”)) will be prepared in connection with the Trigger PLUS. Accordingly, the Trigger PLUS may not be offered to the public in any member state of the European Economic Area (the “EEA”), and any purchaser of the Trigger PLUS who subsequently sells any of the Trigger PLUS in any EEA member state must do so only in accordance with the requirements of the Prospectus Directive, as implemented in that member state.

The Trigger PLUS are not intended to be offered, sold or otherwise made available to, and should not be offered, sold or otherwise made available to, any retail investor in the EEA. For these purposes, the expression “offer” includes the communication in any form and by any means of sufficient information on the terms of the offer and the Trigger PLUS to be offered so as to enable an investor to decide to purchase or subscribe the Trigger PLUS, and a “retail

investor” means a person who is one (or more) of: (a) a

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retail client, as defined in point (11) of Article 4(1) of Directive 2014/65/EU (as amended, “MiFID II”); or (b) a customer, within the meaning of Insurance Distribution Directive 2016/97/EU, as amended, where that customer would not qualify as a professional client as defined in point (10) of Article 4(1) of MiFID II; or (c) not a qualified investor as defined in the Prospectus Directive. Consequently, no key information document required by Regulation (EU) No 1286/2014 (as amended, the “PRIIPs Regulation”) for offering or selling the Trigger PLUS or otherwise making them available to retail investors in the EEA has been prepared, and therefore, offering or selling the Trigger PLUS or otherwise making them available to any retail investor in the EEA may be unlawful under the PRIIPs Regulation.

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Structuring the Trigger PLUS

The Trigger PLUS are our debt securities, the return on which is linked to the performance of the underlying shares. As is the case for all of our debt securities, including our structured notes, the economic terms of the Trigger PLUS reflect our actual or perceived creditworthiness at the time of pricing. In addition, because structured notes result in increased operational, funding and liability management costs to us, we typically borrow the funds under these securities at a rate that is more favorable to us than the rate that we might pay for a conventional fixed or floating rate debt security of comparable maturity. Using this relatively lower implied borrowing rate, rather than the secondary market rate, along with the fees and expenses associated with structured notes, typically reduces the initial estimated value of the Trigger PLUS at the time their terms are set. Unlike the estimated value included in this document, any value of the Trigger PLUS determined for purposes of a secondary market transaction may be based on a different funding rate, which may result in a lower value for the Trigger PLUS than if our initial internal funding rate were used.

In order to satisfy our payment obligations under the Trigger PLUS, we may choose to enter into certain hedging arrangements (which may include call options, put options or other derivatives) on the issue date with RBCCM or one of our other subsidiaries. The terms of these hedging arrangements take into account a number of factors, including our creditworthiness, interest rate movements, the volatility of the underlying shares, and the tenor of the Trigger PLUS. The economic terms of the Trigger PLUS and their initial estimated value depend in part on the terms of these hedging arrangements.

The lower implied borrowing rate, the underwriting commission and the hedging-related costs relating to the Trigger PLUS reduce the economic terms of the Trigger PLUS to you and result in the initial estimated value for the Trigger PLUS on the pricing date being less than their public offering price. See “Risk Factors—The initial estimated value of the Trigger PLUS will be less than the price to the public” above.

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Employee Retirement Income Security Act

This section is only relevant to you if you are an insurance company or the fiduciary of a pension plan or an employee benefit plan (including a governmental plan, an IRA or a Keogh Plan) proposing to invest in the Trigger PLUS.

The Employee Retirement Income Security Act of 1974, as amended (“ERISA”), imposes certain requirements on “employee benefit plans” (as defined in Section 3(3) of ERISA) subject to ERISA, including entities such as collective investment funds and separate accounts whose underlying assets include the assets of such plans (collectively, “ERISA Plans”) and on those persons who are fiduciaries with respect to ERISA Plans. Each fiduciary of an ERISA Plan should consider the fiduciary standards of ERISA in the context of the ERISA Plan’s particular circumstances before authorizing an investment in the Trigger PLUS. Accordingly, among other factors, the fiduciary should consider whether the investment would satisfy the prudence and diversification requirements of ERISA and would be consistent with the documents and instruments governing the ERISA Plan.

In addition, Section 406 of ERISA and Section 4975 of the Internal Revenue Code prohibit certain transactions involving the assets of an ERISA Plan, as well as those plans that are not subject to ERISA but which are subject to Section 4975 of the Internal Revenue Code, such as individual retirement accounts, including entities whose underlying assets include the assets of such plans (together with ERISA Plans, “Plans”) and certain persons (referred to as “parties in interest” or “disqualified persons”) having certain relationships to such Plans, unless a statutory or administrative exemption is applicable to the transaction. Governmental plans may be subject to similar prohibitions. Therefore, a plan fiduciary considering purchasing Trigger PLUS should consider whether the purchase or holding of such instruments might constitute a “prohibited transaction.”

Royal Bank of Canada and certain of its affiliates each may be considered a “party in interest” or a “disqualified person” with respect to many employee benefit plans by reason of, for example, Royal Bank of Canada (or its affiliate) providing services to such plans. Prohibited transactions within the meaning of ERISA or the Internal Revenue Code may arise, for example, if Trigger PLUS are acquired by or with the assets of a Plan, and with respect to which Royal Bank of Canada or any of its affiliates is a “party in interest” or a “disqualified person,” unless those Trigger PLUS are acquired under an exemption for transactions effected on behalf of that Plan by a “qualified professional asset manager” or an “in-house asset manager,” for transactions involving insurance company general accounts, for transactions involving insurance company pooled separate accounts, for transactions involving bank collective investment funds, or under another available exemption. Section 408(b)(17) provides an additional exemption for the purchase and sale of securities and related lending transactions where neither the issuer of the securities nor any of its affiliates have or exercise any discretionary authority or control or render any investment advice with respect to the assets of any Plan involved in the transaction and the Plan pays no more than “adequate consideration” in connection with the transaction. The person making the decision on behalf of a Plan or a governmental plan shall be deemed, on behalf of itself and any such plan, by purchasing and holding the Trigger PLUS, or exercising any rights related thereto, to represent that (a) such purchase, holding and exercise of the Trigger PLUS will not result in a non-exempt prohibited transaction under ERISA or the Internal Revenue Code (or, with respect to a governmental plan, under any similar applicable law or regulation) and (b) neither Royal Bank of Canada nor any of its affiliates is a “fiduciary” (within the meaning of Section 3(21) of ERISA) with respect to the purchaser or holder in connection with such person’s acquisition, disposition or holding of the Trigger PLUS, or any exercise related thereto or as a result of any exercise by Royal Bank of Canada or any of its affiliates of any rights in connection with the Trigger PLUS, and no advice provided by Royal Bank of Canada or any of its affiliates has formed a primary basis for any investment decision by or on behalf of such purchaser or holder in connection with the Trigger PLUS and the transactions contemplated with respect to the Trigger PLUS.

If you are an insurance company or the fiduciary of a pension plan or an employee benefit plan, and propose to invest in the Trigger PLUS, you should consult your legal counsel.

