



Pengrowth Energy Corporation

Management's Discussion and Analysis

Three and Twelve Months Ended December 31, 2018

SUMMARY OF FINANCIAL & OPERATING RESULTS

(\$ millions except per boe and per share amounts)	Three months ended			Twelve months ended		
	Dec 31, 2018	Dec 31, 2017	% Change	Dec 31, 2018	Dec 31, 2017	% Change
PRODUCTION						
Average daily production (boe/d)	24,104	24,702	(2)	22,025	40,428	(46)
FINANCIAL						
Oil and gas sales	111.2	130.5	(15)	532.2	673.4	(21)
Capital expenditures	9.1	28.2	(68)	65.4	117.9	(45)
Net cash proceeds from dispositions	5.3	118.3	(96)	22.8	910.1	(97)
Interest and financing charges	13.8	12.4	11	49.8	70.7	(30)
Adjusted funds flow ⁽¹⁾	(2.3)	13.5	(117)	30.6	69.4	(56)
Weighted average number of shares outstanding (000's)	556,117	552,246	1	555,279	551,193	1
Adjusted funds flow per share ⁽¹⁾	—	0.02	(100)	0.06	0.13	(54)
OPERATIONAL						
Produced petroleum revenue per boe ⁽¹⁾	24.80	37.14	(33)	38.24	32.96	16
Operating expenses per boe	9.56	13.24	(28)	9.89	14.74	(33)
Adjusted operating expenses per boe ⁽¹⁾	10.87	12.28	(11)	10.54	13.45	(22)
Royalty expenses per boe	1.67	3.52	(53)	3.01	3.10	(3)
Operating netback before realized commodity risk management per boe ⁽¹⁾	9.24	18.96	(51)	21.87	14.57	50
Cash G&A expenses per boe ⁽¹⁾	1.89	5.54	(66)	3.72	3.84	(3)
STATEMENT OF INCOME (LOSS)						
Net income (loss)	(503.0)	(210.4)	139	(559.3)	(683.8)	(18)
Net income (loss) per share	(0.91)	(0.38)	139	(1.01)	(1.24)	(19)
DEBT						
Total debt before working capital ⁽²⁾				714.6	610.5	17
PROVED PLUS PROBABLE RESERVES						
Light oil (Mbbbls)				1,475	2,712	(46)
Bitumen (Mbbbls)				311,395	317,057	(2)
Natural gas liquids (Mbbbls)				87	171	(49)
Natural gas (Bcf)				802	760	6
Total oil equivalent (Mboe)				446,568	446,632	—

⁽¹⁾ See definition under section "Non-GAAP Financial Measures".

⁽²⁾ Includes Credit Facility, as defined in the Management's Discussion and Analysis, current and long term portions of term notes, as applicable, and bank indebtedness. Excludes letters of credit and finance leases.

Note regarding currency: all figures contained within this report are quoted in Canadian dollars unless otherwise indicated.

MANAGEMENT'S DISCUSSION AND ANALYSIS

The following Management's Discussion and Analysis ("MD&A") of financial results should be read in conjunction with the audited Consolidated Financial Statements for the year ended December 31, 2018 of Pengrowth Energy Corporation ("Pengrowth" or the "Corporation"). This MD&A is based on information available to March 5, 2019. All amounts are stated in Canadian dollars unless otherwise specified.

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FORWARD-LOOKING STATEMENTS

This MD&A contains forward-looking statements within the meaning of securities laws, including the "safe harbour" provisions of Canadian securities legislation and the United States Private Securities Litigation Reform Act of 1995. Please see the Business Risks section for more information on factors that could cause actual results to differ materially as well as the Advisory Regarding Forward-Looking Statements for an expanded discussion on this topic.

NON-GAAP FINANCIAL MEASURES

This MD&A refers to certain financial measures that are not determined in accordance with IFRS. These measures do not have standardized meanings and may not be comparable to similar measures presented by other oil and gas companies. These metrics are trailing twelve months earnings before interest, taxes, DD&A, accretion ("EBITDA"), impairment, gain (loss) on disposition of properties, change in fair value of commodity risk management contracts, unrealized foreign exchange gain (loss), non-cash share based compensation expense, restructuring costs and EBITDA related to material divestments ("Adjusted EBITDA"); Adjusted EBITDA to Interest and Financing Charges ratio (the "Interest Coverage" ratio); Total debt before working capital to the trailing twelve months Adjusted EBITDA; Total debt before working capital as a percentage of total book capitalization ("Debt to Book Capitalization"); Adjusted net income (loss); Adjusted funds flow; Free funds flow; Produced petroleum revenue; Adjusted operating expenses; Royalty expenses as a percent of produced petroleum revenue; Operating netback before realized commodity risk management; and Cash G&A expenses. For more information please see the Non-GAAP Financial Measures section of the MD&A.

OVERVIEW OF PENGROWTH

Pengrowth is a conventional resource developer of Canadian oil and natural gas assets currently focused on growing bitumen production from the Lloydminster formation at the Lindbergh thermal oil project through steam assisted gravity drainage ("**SAGD**"). The project encompasses 32.5 sections of land with regulatory approval for 40,000 bbl/d. As one of the southernmost SAGD projects in Alberta, Lindbergh has natural advantages in terms of location and oil quality that allows flexibility in accessing markets.

Pengrowth's 100 percent owned Groundbirch property in the Montney fairway encompasses 19 sections of land. This project fulfills the Lindbergh project's natural gas needs. Dry natural gas from the Montney formation is produced using horizontal wells and multi-stage fracture technology with drilling potential of up to 360 unrisks net locations. The Corporation operates a 30 MMcf/d facility to process and deliver natural gas onto major pipelines.

RESULTS OF OPERATIONS

All volumes, wells and spending amounts stated below reflect Pengrowth's net working interest for both operated and non-operated properties unless otherwise stated. The financial and operating results from divested properties are included in Pengrowth's results up to the month-end nearest the date of closing for each disposition.

KEY HIGHLIGHTS

(\$ millions except per boe amounts)	Three months ended		Twelve months ended	
	Dec 31, 2018	Dec 31, 2017	Dec 31, 2018	Dec 31, 2017
Average production (boe/d)	24,104	24,702	22,025	40,428
Capital expenditures	9.1	28.2	65.4	117.9
Cash flow from operating activities	9.4	28.4	31.7	142.4
Adjusted funds flow ⁽¹⁾	(2.3)	13.5	30.6	69.4
Operating netback before realized commodity risk management (\$/boe) ⁽¹⁾	9.24	18.96	21.87	14.57
Adjusted net income (loss) ⁽¹⁾	(155.0)	(217.1)	(228.2)	(745.6)
Net income (loss)	(503.0)	(210.4)	(559.3)	(683.8)
Total debt before working capital ⁽²⁾	714.6	610.5	714.6	610.5

⁽¹⁾ See definition under section "Non-GAAP Financial Measures".

⁽²⁾ Includes Credit Facility, current and long term portions of term notes, as applicable, and bank indebtedness. Excludes letters of credit and finance leases.

Cash Flow from Operating Activities

Cash flow from operating activities decreased \$19.0 million in the fourth quarter of 2018 compared to the fourth quarter of 2017 driven by significant widening of WCS differentials and higher expenditures on remediation. Full year 2018 cash flow from operating activities decreased \$110.7 million compared to last year mainly due to 2017 property divestments, changes in working capital and higher remediation spending.

Adjusted Funds Flow

Fourth quarter of 2018 negative adjusted funds flow of \$2.3 million decreased \$15.8 million from adjusted funds flow of \$13.5 million in the same period last year. This was primarily due to lower realized bitumen prices as a result of wider WCS differentials coupled with higher cost of diluent and impact of lower volumes related to property divestments. These decreases were largely offset by the favourable impact of Pengrowth's WCS physical delivery fixed price differential contracts, higher bitumen production, lower G&A and absence of adjusted operating expenses and royalties related to divested properties.

Full year 2018 adjusted funds flow of \$30.6 million decreased \$38.8 million compared to last year primarily due to the impact of property divestments, higher realized commodity risk management losses and higher cost of diluent. Partly offsetting these decreases were higher overall realized bitumen prices due to a favourable impact of Pengrowth's WCS physical delivery fixed price differential contracts combined with higher bitumen production in 2018, lower cash G&A and lower interest and financing charges.

Net Income (Loss)

Pengrowth reported a net loss of \$503.0 million in the fourth quarter of 2018 compared to a net loss of \$210.4 million in the same period last year. The net loss increased primarily due to recording of deferred non-cash tax expense in the fourth quarter as a result of derecognition of a \$355.4 million deferred tax asset, combined with lower adjusted funds flow. These were partly offset by an unrealized gain on commodity risk management compared to a loss in the same period last year, absence of loss on debt retirement and lower impairment charges.

Full year 2018 net loss was \$559.3 million compared to a net loss of \$683.8 million in 2017. The net loss decreased due to lower impairment charges in 2018, absence of losses on both property dispositions and debt retirement combined with lower DD&A expenses. These were mainly offset by deferred non-cash tax expense, as discussed above, together with lower adjusted funds flow.

Adjusted Net Income (Loss)

Pengrowth posted an adjusted net loss of \$155.0 million in the fourth quarter of 2018 compared to an adjusted net loss of \$217.1 million in the same period last year. The \$62.1 million decrease in adjusted net loss was primarily due to absence of loss on debt retirement and lower impairment charges, partially offset by higher DD&A expenses.

Full year 2018 adjusted net loss of \$228.2 million was \$517.4 million lower compared to 2017 primarily due to significant decrease in impairment charges year over year.

FUTURE OPERATIONS

Through 2018, Pengrowth has had discussions with the lead banks in its syndicate regarding a new credit agreement that will permit Pengrowth to access the high yield debt market to refinance substantially all of its existing term notes as further described in Note 7 to the December 31, 2018 audited Consolidated Financial Statements. Pengrowth is also exploring alternative financing arrangements including third party debt providers to refinance its entire debt portfolio. These discussions, if successful, may result in an offer for replacement debt at a higher cost than the current outstanding debt.

Pengrowth engaged Perella Weinberg Partners LP and Tudor, Pickering, Holt & Co ("**PWP/TPH**") as advisers to assist in exploring financing alternatives. On March 5, 2019, the Board of Directors commenced a formal process with PWP/TPH to explore and develop strategic alternatives (the "**Strategic Review**") with a view to strengthening the Corporation's balance sheet and maximizing enterprise value. The Strategic Review is intended to explore a comprehensive range of strategic and transaction alternatives, including a sale, merger or other business combination; a disposition of all or certain assets of the Corporation; recapitalization and refinancing opportunities; sourcing new financing and equity capital; and other alternatives to improve the Corporation's financial position and maximize value. In addition to Pengrowth's long-life, low-decline assets, the Corporation also has potentially attractive tax attributes that complement its strong base operations. Pengrowth and its advisers expect to actively explore market interest in potential transactions and strategic initiatives with a range of interested parties and capital market participants. There can be no guarantees as to whether the Strategic Review will result in a transaction or the terms or timing of any resulting transaction. Various industry risk factors, including a prolonged or significant decrease in WTI or WCS pricing, could impact the outcome of the Strategic Review Process, Pengrowth's cash flow, and its ability to address its upcoming debt maturities.

Furthermore, the Corporation is in discussions with the lending syndicate under its \$330 million revolving credit facility (the "**Credit Facility**") on arrangements to extend the maturity date of the Credit Facility through September 30, 2019 to support the Strategic Review. The Corporation's objective is to finalize the extension agreement as soon as possible, and in advance of the current March 31, 2019 maturity date, however, there can be no assurance or guarantee that an extension will be obtained by the Corporation or on what terms.

Due to the rapid deterioration of commodity prices, uncertainty around improvements in global prices, and uncertainty around timing of refinancing of Pengrowth's debt portfolio, there remains a risk around Pengrowth's ability to stay in compliance with its debt covenants at the end of 2019.

As a result, there is significant uncertainty related to these events and conditions that raise substantial doubt about whether the Corporation will continue as a going concern, and therefore, whether it will realize its assets and settle its liabilities in the normal course of business and at the amounts stated in the financial statements. However, management believes that the Corporation will be successful in obtaining alternative debt financing and amending its financial covenants as outlined in Note 8 to the December 31, 2018 audited Consolidated Financial Statements in a timely manner and, accordingly, has prepared the financial statements on a going concern basis.

Accordingly, no adjustments have been made to the financial statements relating to the recoverability and classification of the asset carrying amounts or the amount and classification of liabilities that may be necessary should the consolidated entity not continue as a going concern. At this time, management believes that no asset is likely to be realized for an amount less than the amount at which it is recorded in financial statements as at December 31, 2018.

Pengrowth continues to generate sufficient cash flow to meet its obligations including interest payments, capital spending and abandonment and remediation expenses and plans to settle the October 2019 term notes with internally generated cash flow.

2018 ACTUAL RESULTS VS. 2018 GUIDANCE

The following table provides a summary of full year 2018 Guidance and actual results for the twelve months ended December 31, 2018:

	2018 Actual Results	2018 Guidance ⁽¹⁾
Average production (boe/d)	22,025	22,500 - 23,500
Capital expenditures (\$ millions)	65.4	65
Royalty expenses (% of produced petroleum revenue) ^{(2) (3)}	7.9	8.5 ⁽⁴⁾
Adjusted operating expenses (\$/boe) ⁽²⁾	10.54	10.50 - 11.50
Cash G&A expenses (\$/boe) ⁽²⁾	3.72	3.50 - 3.85 ⁽⁴⁾

⁽¹⁾ Per boe estimates based on high and low ends of production Guidance.

⁽²⁾ See definition under section "Non-GAAP Financial Measures".

⁽³⁾ Excludes financial commodity risk management activities.

⁽⁴⁾ Guidance revised in the second quarter of 2018.

2018 actual daily production of 22,025 was slightly below the low end of 2018 Guidance due to an unplanned power outage at Lindbergh in December. Lindbergh production, however, exited 2018 at 19,120 bbl/d following resolution of the power outage.

2018 actual capital expenditures, royalty expenses as a percent of produced petroleum revenue, adjusted operating expenses and cash G&A expenses were all within 2018 Guidance.

2019 GUIDANCE

The following table provides Pengrowth's 2019 Guidance:

	2019 Guidance ⁽¹⁾
Average production (boe/d)	22,500 - 23,500
Capital expenditures (\$ millions)	45
Royalty expenses (% of produced petroleum revenue) ^{(2) (3)}	7.0 - 8.0
Adjusted operating expenses (\$/boe) ⁽²⁾	9.25 - 10.00
Cash G&A expenses (\$/boe) ⁽²⁾	2.50 - 2.75

⁽¹⁾ Per boe estimates based on high and low ends of production Guidance.

⁽²⁾ See definition under section "Non-GAAP Financial Measures".

⁽³⁾ Excludes financial commodity risk management activities.

2019 Capital Program

Until Pengrowth refinances its term debt and renews its Credit Facility, capital spending will not exceed \$21 million. Pengrowth's initial 2019 Budget calls for a capital spending plan of \$45 million, with 76 percent of this capital allocated to Lindbergh. Pengrowth allocated approximately \$34 million towards the continued development and maintenance activities at Lindbergh with approximately \$22 million focused on continued optimization activities, including drilling of 3 well pairs. Pengrowth will continue to assess timing for commencement of the development program which is anticipated to be no sooner than the second half of 2019. The remaining \$11 million of capital is related to maintenance and integrity activities to support the existing operations, including approximately \$3 million to finalize the development program from 2018 at Groundbirch, and approximately \$8 million of maintenance and integrity capital that has been allocated to the remaining operated assets as well as for general corporate purposes.

MULTI-YEAR DEVELOPMENT PLAN

In June 2018, Pengrowth launched its multi-year development plan to incrementally increase bitumen production at Lindbergh in bite sized steps rather than in one large phase.

Expansion at Lindbergh will be achieved in incremental steps aligning capital spending with Pengrowth's expected cash flow, shifting the development methodology away from the previously contemplated large single phase approach. Development capital is expected to be focused on drilling new well pairs, additional infill wells, as well as, adding incremental facilities for fluid handling capacity. The Corporation expects to implement the use of Non-Condensable Gas ("**NCG**") to further enhance production and lower SORs. Regulatory approval for the application of NCG injection

at Lindbergh was received in June of 2018. Capital to be committed to Lindbergh in 2020 and onwards will be dependent on the prevailing commodity prices. In addition, Pengrowth continues to assess additional co-generation capacity options at Lindbergh to provide steam and power sufficient enough to support further efficient production expansions to reach approximately 35,000 bbl/d.

With the current commodity price uncertainty, Pengrowth is budgeting for a modest capital program of \$45 million in 2019, however, until Pengrowth refinances its term debt and renews its Credit Facility, capital spending will not exceed \$21 million.

Lindbergh full year average production volumes are expected to average between 17,750 to 18,250 bbl/d in 2019 with total corporate volumes expected to be between 22,500 to 23,500 boe/d. Pengrowth intends to redirect the free funds flow towards debt repayment and any future expansion will depend on stability and improvement of commodity prices and differentials.

Groundbirch has a low cost structure which supports growth in production and cash flow under a stronger natural gas pricing environment. Capital investment in Groundbirch beyond 2018 will be curtailed until natural gas pricing improves.

CAPITAL INVESTMENTS

(\$ millions)	Three months ended		Twelve months ended	
	Dec 31, 2018	Dec 31, 2017	Dec 31, 2018	Dec 31, 2017
Drilling, completions and facilities				
Lindbergh	2.2	12.1	34.1	79.5
Groundbirch and conventional assets	—	15.4	19.9	22.0
Maintenance and other development capital	6.3	0.6	10.7	15.7
Development capital	8.5	28.1	64.7	117.2
Other capital	0.6	0.1	0.7	0.7
Capital expenditures	9.1	28.2	65.4	117.9

Fourth quarter of 2018 capital expenditures of \$9.1 million were primarily focused on the finalization of the tie-in activities related to the 2018 Lindbergh infill drilling program, well optimization activities and purchase of equipment for 2019 development program. Production from the 2018 Lindbergh infill drilling program was brought on stream through the fourth quarter of 2018 resulting in production exiting the year at 19,120 bbl/d.

Full year 2018 capital expenditures were \$65.4 million, with \$43.5 million spent at Lindbergh mostly related to conversion of wells drilled in 2017 to SAGD production and drilling and completion of the 2018 infill drilling program. The capital investment of \$19.9 million at Groundbirch included completion and tie-in of 3 wells drilled in late 2017 and finalization of the compression project that enabled Pengrowth to shift transportation of natural gas production from Groundbirch away from Station Two delivery system and onto the Nova Gas Transmission Limited ("NGTL") system. The remaining capital was spent at Pengrowth's conventional properties.

PRODUCTION

Daily production	Three months ended				Twelve months ended			
	Dec 31, 2018	% of total	Dec 31, 2017	% of total	Dec 31, 2018	% of total	Dec 31, 2017	% of total
Bitumen (bbl/d)	17,866	74	14,430	58	16,325	74	13,754	34
Natural gas (Mcf/d)	33,024	23	42,251	29	28,716	22	91,367	38
Light oil (bbl/d)	476	2	2,094	8	675	3	6,872	17
Natural gas liquids (NGL) (bbl/d)	258	1	1,136	5	239	1	4,574	11
Total boe/d	24,104		24,702		22,025		40,428	

Fourth quarter of 2018 total average daily production decreased 2 percent compared to the same period in 2017 due to the absence of approximately 5,250 boe/d of production related to properties divested in 2017. Mostly offsetting this impact was the 24 percent increase in bitumen production in the fourth quarter of 2018 compared to the same period in 2017 as the production growth from the Lindbergh infill wells drilled in 2018 outpaced natural declines. In addition, average production at Groundbirch increased 135 percent in the fourth quarter of 2018 compared to the same period last year driven by production ramp up from the three new wells drilled in the fourth quarter of 2017 which commenced

flow on the NGTL system on April 1, 2018 and the fourth well which commenced flow in the fourth quarter of 2018. The previously curtailed gas production at Groundbirch due to low natural gas prices was brought back on stream in the fourth quarter of 2018.

The gas production from Groundbirch provides a supply of natural gas for Pengrowth's requirements to generate steam at Lindbergh.

Fourth quarter of 2018 natural gas, light oil and NGL production decreased 22 percent, 77 percent and 77 percent, respectively, compared to the fourth quarter of 2017 due to property divestments.

Full year 2018 total average daily production decreased 46 percent compared to 2017 mainly due to the absence of approximately 21,400 boe/d of production related to 2017 divestments. This was offset by a 19 percent and 68 percent increase in Lindbergh and Groundbirch production, respectively, compared to 2017, as described above.

OIL AND GAS RESERVES

Reserves - Company Interest at Forecast Prices

Reserves Summary ⁽¹⁾ (MMboe except as noted)	2018	2017
Proved Reserves		
Additions + revisions for the year	9.7	27.7
Net dispositions for the year	(0.7)	(106.0)
Total proved reserves at period end	193.7	192.7
Proved reserve future development costs (\$ millions)	1,871	1,932
Proved plus Probable Reserves (P+P)		
Additions + revisions for the year	8.9	3.0
Net dispositions for the year	(0.9)	(150.1)
Total proved plus probable reserves at period end	446.5	446.6
P+P reserve future development costs (\$ millions)	4,635	4,941
Total production (MMboe)	8.0	14.8

⁽¹⁾ Based on January 1, 2019 GLJ pricing and prepared in accordance with NI 51-101.

Pengrowth's 2018 total proved reserves and total proved plus probable reserves remained flat compared to 2017 as reserve additions offset the impact of production. The reserve additions from development activity and technical revisions were 9.7 MMboe for total proved reserves and 8.9 MMboe for total proved plus probable reserves. The reserve additions were primarily related to reserves additions at Groundbirch from development activity over the last 12 months, as well as infill wells drilled at Lindbergh. There were positive technical revisions for both Lindbergh and Groundbirch as a result of capital efficiencies captured for undeveloped reserves.

Details of Pengrowth's 2018 year end reserves are provided in its AIF which is filed on SEDAR (www.sedar.com) or the annual report on Form 40-F filed on EDGAR (www.sec.gov).

OPERATING NETBACKS

Pengrowth's operating netbacks are defined as produced petroleum revenue, less royalties, less adjusted operating expenses and less transportation expenses divided by production for the period. Operating netbacks may not be comparable to similar measures presented by other companies, as there are no standardized measures.

Operating Netbacks (\$/boe) ⁽¹⁾	Three months ended		Twelve months ended	
	Dec 31, 2018	Dec 31, 2017	Dec 31, 2018	Dec 31, 2017
Produced petroleum revenue ⁽¹⁾	24.80	37.14	38.24	32.96
Royalties	(1.67)	(3.52)	(3.01)	(3.10)
Adjusted operating expenses ⁽¹⁾	(10.87)	(12.28)	(10.54)	(13.45)
Transportation expenses	(3.02)	(2.38)	(2.82)	(1.84)
Operating netbacks before realized commodity risk management ⁽¹⁾	9.24	18.96	21.87	14.57
Realized commodity risk management	(4.69)	(2.90)	(8.40)	(1.34)
Operating netbacks (\$/boe)	4.55	16.06	13.47	13.23

⁽¹⁾ See definition under section "Non-GAAP Financial Measures".

Fourth quarter of 2018 operating netback, before realized commodity risk management, decreased 51 percent compared to the same period in 2017 primarily due to a significant decrease in commodity prices, with WTI and WCS seeing lower prices in the fourth quarter of 2018 compared to the rest of the year. Full year 2018 operating netback, before realized commodity risk management, increased 50 percent compared to 2017 due to improved realized commodity prices year over year coupled with lower adjusted operating expenses.

Fourth quarter of 2018 operating netbacks, after realized commodity risk management, decreased 72 percent compared to the same period in 2017 mainly due to a decrease in realized prices coupled with higher per boe realized commodity risk management losses in 2018. Full year 2018 operating netbacks, after realized commodity risk management, increased 2 percent as higher realized prices in 2018 and lower adjusted operating expenses more than offset higher per boe realized commodity risk management losses.

COMMODITY PRICES

Pengrowth's revenues are substantially derived from the sale of diluted bitumen, light oil, natural gas and natural gas liquids and are dependent on commodity prices the Corporation receives. The following table shows industry benchmark prices and foreign exchange rates to assist in understanding the impact of commodity prices, price differentials and foreign exchange rates on Pengrowth's financial results:

Benchmark Prices and Differentials

	Three months ended		Twelve months ended	
	Dec 31, 2018	Dec 31, 2017	Dec 31, 2018	Dec 31, 2017
Average Commodity Prices				
Crude Oil:				
WTI oil (U.S.\$/bbl)	58.83	55.39	64.79	50.93
WTI oil (Cdn\$/bbl)	77.41	70.45	84.14	66.09
WCS differential to WTI (U.S.\$/bbl)	(39.38)	(12.28)	(26.60)	(11.96)
WCS oil (U.S.\$/bbl)	19.45	43.11	38.19	38.97
WCS oil (Cdn\$/bbl)	25.59	54.83	49.60	50.53
Condensate:				
Condensate at Edmonton (Cdn\$/bbl)	59.68	73.74	78.95	66.45
WCS differential to Condensate (Cdn\$/bbl)	(34.09)	(18.91)	(29.35)	(15.92)
Natural Gas:				
AECO monthly gas (Cdn\$/MMBtu)	1.90	1.98	1.53	2.43
Average Exchange Rate				
Cdn\$1=U.S.\$	0.76	0.79	0.77	0.77

Crude Oil Benchmark Prices and Differentials

The WTI price, which is an important benchmark reflecting the inland North American crude oil price, averaged U.S. \$58.83/bbl during the fourth quarter of 2018, reflecting a 6 percent increase compared to the same period in 2017. Full year 2018 WTI price averaged U.S.\$64.79/bbl, an increase of 27 percent from 2017.

Despite the increase in WTI, Alberta heavy and light oil producers were subjected to a larger discount for their production. Exchange rates, location, quality differentials and transportation bottlenecks are all factors that impact the price received for Canadian crude oil. WCS is a blend of heavy oil consisting of conventional heavy oil and diluted bitumen and the benchmark price represents the Canadian heavy oil price at Hardisty, Alberta.

The differential between WCS and WTI widened significantly in the fourth quarter of 2018 averaging U.S.\$39.38/bbl compared to U.S.\$12.28/bbl in the same period in 2017. The unprecedented widening in the differential was the result of new crude oil production coming onstream in Western Canada, rising inventory and refinery turnarounds in the U.S. which temporarily reduced demand. The industry continues to work toward alleviating transportation bottlenecks through crude by rail, existing pipeline optimization and temporary mandated production curtailments in the province of Alberta.

As a result of substantive differentials to WTI, fourth quarter of 2018 average U.S. dollar WCS oil price was 55 percent lower compared to the fourth quarter of 2017. Average full year 2018 U.S. dollar WCS price was 2 percent lower compared to 2017.

Condensate Benchmark Prices and Differentials

In order to meet pipeline specifications and facilitate delivery on pipeline systems, bitumen production is blended with condensate which is used as a diluent to reduce viscosity. Pengrowth's blending ratio which reflects diluent volumes as a percentage of total blended volumes remained unchanged at approximately 30 percent during 2018 as compared to 2017. The WCS to Condensate differential reflects the amount of condensate costs that are not recoverable when selling a barrel of diluted bitumen. The narrower the WCS to Condensate differential, the more condensate costs are recovered. When the demand for condensate in Alberta exceeds the supply available, Edmonton condensate prices may be driven by U.S. Gulf Coast condensate prices plus the cost to transport the condensate to Edmonton. Condensate prices, at Edmonton, decreased in the fourth quarter of 2018 to an average of Cdn\$59.68/bbl compared to Cdn\$73.74/

bbl in the same period in 2017 due to decreasing overall global prices beginning in the fourth quarter of 2018. Condensate prices for full year 2018 increased to an average of Cdn\$78.95/bbl compared to Cdn\$66.45/bbl in 2017, primarily due to higher demand for diluent in Alberta.

Natural Gas Benchmark Prices and Differentials

The average AECO natural gas prices decreased 4 percent and 37 percent in the fourth quarter of 2018 and full year 2018, respectively, compared to the same periods in 2017 primarily due to an oversupply of Canadian natural gas and transportation constraints.

Average Realizations

(Cdn\$)	Three months ended		Twelve months ended	
	Dec 31, 2018	Dec 31, 2017	Dec 31, 2018	Dec 31, 2017
Average Sales Price ⁽¹⁾				
Diluted bitumen (Cdn\$/bbl) ⁽²⁾⁽³⁾	42.23	50.96	56.47	46.17
Diluent cost and transportation (Cdn\$/bbl)	(14.73)	(9.68)	(12.15)	(10.00)
Bitumen (Cdn\$/bbl) ⁽⁴⁾	27.50	41.28	44.32	36.17
Natural gas sold to third party (Cdn\$/Mcf) ⁽⁵⁾	1.25	3.22	1.58	2.96
Deemed natural gas sales used in operations (Cdn\$/Mcf) ⁽⁵⁾⁽⁶⁾	1.12	—	0.69	—
Total natural gas (Cdn\$/Mcf) ⁽⁵⁾	2.37	3.22	2.27	2.96
Light oil (Cdn\$/bbl)	25.12	61.25	60.07	59.52
Natural gas liquids (Cdn\$/bbl)	63.20	50.71	53.88	33.96

⁽¹⁾ Excluding realized financial risk management contracts.

⁽²⁾ Calculated based on diluted bitumen sales volumes.

⁽³⁾ During 2018, Pengrowth managed WCS differential with fixed price differential physical delivery contracts of 17,000 bbl/d at approximately U.S.\$16.82/bbl of diluted bitumen.

⁽⁴⁾ Calculated based on bitumen sales volumes and excludes diluent sold.

⁽⁵⁾ Average sales prices are recorded in Mcf to reflect the volumetric reporting standard for Pengrowth's natural gas.

⁽⁶⁾ Starting April 1, 2018, a portion of natural gas sales from Groundbirch is used for operational requirements and recorded at AECO/NIT 7A monthly index prices.

Diluted Bitumen and Bitumen Realizations

Pengrowth uses physical delivery contracts to ensure access to markets, protect against pipeline apportionment, and limit credit risk and exposure to widening WCS differentials. Fourth quarter and full year 2018 diluted bitumen sales averaged 25,886 bbl/d and 23,452 bbl/d, respectively, of which 17,000 bbl/d was subject to physical delivery fixed price WCS differential contracts averaging approximately U.S.\$16.82/bbl discount to WTI. This resulted in fourth quarter and full year 2018 average diluted bitumen realized prices of Cdn\$42.23/bbl and Cdn\$56.47/bbl, respectively, exceeding WCS benchmarks in both periods.

Pengrowth's average bitumen sales price represents the price received for bitumen production from Lindbergh, prior to blending of the product with diluent. Fourth quarter of 2018 bitumen realization was 33 percent lower compared to the same period in 2017 primarily due to the decrease in WCS in the fourth quarter of 2018 coupled with higher condensate costs. The impact of sharp decline in WCS in the fourth quarter, however, was substantially muted by Pengrowth's fixed price differential physical delivery contracts of 17,000 bbl/d at approximately U.S.\$16.82/bbl of diluted bitumen. Full year 2018 bitumen realization increased 23 percent compared to 2017, in spite of WCS remaining flat year over year, driven by the favourable impact of the WCS physical delivery fixed price differential contracts in 2018.

Natural Gas, Light Oil and NGL Realizations

Realized pricing for light oil moved in line with the underlying Canadian benchmarks which also experienced wider discounts to global prices. The increase in NGL pricing year over year reflects movements in the underlying benchmark and a more favourable pricing environment for component products.

The price realized by the Corporation for natural gas production from Western Canada is primarily determined by the AECO benchmark and based on Canadian fundamentals. During 2018, Pengrowth also sold its natural gas from SOEP at other sales points including Algonquin City Gate in the Northeast U.S., which resulted in significant variances between Pengrowth's realized natural gas prices and the AECO benchmark prices in 2018.

Pengrowth's fourth quarter and full year 2018 average sales price for natural gas decreased 26 percent and 23 percent, respectively, compared to the same periods in 2017. The lower realized prices correspond to the decrease in AECO benchmark price as noted above, partially offset by the higher Algonquin benchmark price.

Produced Petroleum Revenue Realizations

Produced petroleum revenue realizations are calculated based on bitumen, natural gas, light oil and natural gas liquids sales volumes and exclude processing income, diluent and other revenue.

(Cdn\$/boe)	Three months ended		Twelve months ended	
	Dec 31, 2018	Dec 31, 2017	Dec 31, 2018	Dec 31, 2017
Produced petroleum revenue ⁽¹⁾	24.80	37.14	38.24	32.96
Realized commodity risk management gain (loss)	(4.69)	(2.90)	(8.40)	(1.34)
Total including realized commodity risk management	20.11	34.24	29.84	31.62

⁽¹⁾ See definition under section "Non-GAAP Financial Measures".

Pengrowth's fourth quarter produced petroleum revenue realizations of \$24.80/boe decreased 33 percent compared to the same period in 2017 in line with widening of WCS differentials throughout the fourth quarter of 2018. Full year 2018 produced petroleum revenue realizations of \$38.24/boe increased 16 percent compared to the same period in 2017, primarily reflecting stronger bitumen realizations year over year.

Realized commodity risk management losses of \$4.69/boe and \$8.40/boe were recorded in the fourth quarter and full year 2018, respectively, due to WTI exceeding the fixed prices in WTI commodity risk management contracts, all of which expired at the end of 2018. At December 31, 2018, Pengrowth held financial WCS differential swaps for 5,000 bbl/d of dilbit at U.S.\$20.88/bbl for 2019.

Commodity Price Risk Management

Realized Commodity Risk Management Gains (Losses) from Financial Contracts

(\$ millions except per unit amounts)	Three months ended		Twelve months ended	
	Dec 31, 2018	Dec 31, 2017	Dec 31, 2018	Dec 31, 2017
Oil risk management gain (loss)	(10.4)	(9.0)	(67.5)	(25.8)
\$/bbl ⁽¹⁾	(6.16)	(5.92)	(10.88)	(3.43)
Natural gas risk management gain (loss)	—	2.4	—	6.0
\$/Mcf	—	0.62	—	0.18
Total realized commodity risk management gain (loss)	(10.4)	(6.6)	(67.5)	(19.8)
\$/boe	(4.69)	(2.90)	(8.40)	(1.34)

⁽¹⁾ Includes light oil and bitumen.

Pengrowth's commodity risk management program primarily uses forward price swaps and collars to manage the exposure to commodity price and differential fluctuations and provide a measure of stability and predictability to cash flows. Changes in the business environment are regularly monitored by management and the Board of Directors to ensure that Pengrowth's risk management program is adequate and aligned with the long term strategic goals of the Corporation.

Realized commodity risk management gains and losses vary from period to period and are a function of the volumes under risk management contracts, the fixed prices of those risk management contracts and the benchmark pricing for the commodities under risk management contracts at settlement. Realized losses result when the average fixed risk management contracted prices are lower than the benchmark prices, while realized gains are recorded when the average fixed risk management contracted prices are higher than the benchmark prices at settlement. Realized gains and losses directly impact cash flow for the period.

Realized commodity risk management losses of \$10.4 million and \$67.5 million were recorded in the fourth quarter and full year 2018, respectively, primarily due to WTI benchmark prices exceeding the fixed prices in WTI commodity risk management contracts, all of which expired at the end of 2018. At December 31, 2018, Pengrowth held financial WCS differential swaps for 5,000 bbl/d of dilbit at U.S.\$20.88/bbl for 2019.

Changes in Fair Value of Financial Commodity Risk Management Contracts

(\$ millions)	Three months ended		Twelve months ended	
	Dec 31, 2018	Dec 31, 2017	Dec 31, 2018	Dec 31, 2017
Fair value of commodity risk management assets (liabilities) at period end	(4.2)	(39.8)	(4.2)	(39.8)
Less: Fair value of commodity risk management assets (liabilities) at beginning of period	(26.4)	(6.5)	(39.8)	(54.0)
Change in fair value of commodity risk management contracts for the period	22.2	(33.3)	35.6	14.2

Changes in fair value of commodity risk management contracts vary period to period and are a function of the volumes under risk management contracts, actual settlements of risk management contracts during the period, the fixed prices of those risk management contracts and the forward curve pricing for the commodities under risk management contracts at the end of the period. A decrease in fair value of commodity risk management contracts occurs when the forward price curve moves higher in relation to the fixed price, with the magnitude of the change being proportional to the movement in the forward price curve. An increase in fair value of commodity risk management contracts occurs when the forward price curve moves lower in relation to the fixed price, with the magnitude of the change being proportional to the movement in the forward price curve. Changes in fair value of commodity risk management contracts are also affected by the change in volumes under risk management in the period. Changes in fair value of commodity risk management contracts are reported on the Consolidated Statements of Income (Loss) and do not impact cash flow for the period.

For the three months ended December 31 2018, Pengrowth recorded a change in the fair value of commodity risk management contracts of \$22.2 million as the fair value of commodity risk management liabilities at September 30, 2018 of \$26.4 million decreased to a liability of \$4.2 million at December 31, 2018. The decrease in liability was primarily the result of the settlement of contracts during the fourth quarter of 2018.

Pengrowth recorded a change in the fair value of commodity risk management contracts of \$35.6 million at December 31, 2018, an increase relative to December 31, 2017 also as a result of a decrease in fair value of commodity risk management liabilities from the settlement of contracts.

At December 31, 2018, Pengrowth had the following financial contracts outstanding:

Financial Crude Oil Contracts:

Swaps			
<i>Differentials</i>			
Reference point	Term	Volume of dilbit (bbl/d)	Price/bbl (U.S.\$)
Western Canada Select	2019	5,000	WTI less \$20.88

Financial Risk Management Contracts Sensitivity to Commodity Prices as at December 31, 2018

(\$ millions)	Cdn\$1 decrease in future oil differential	Cdn\$1 increase in future oil differential
Oil differentials		
Increase (decrease) to fair value of financial differential risk management contracts	(1.3)	1.3

The changes in fair value of the forward risk management contracts directly affect reported net income (loss) through the unrealized amounts recorded in the Consolidated Statements of Income (Loss) during the period. The effect on cash flow will be recognized separately only upon settlement of the risk management contracts, which could vary significantly from the unrealized amount recorded due to timing and prices when each contract is settled.

If each commodity risk management contract was to have settled at December 31, 2018, revenue and cash flow would have been \$4.2 million lower than if the risk management contracts were not in place based on the estimated fair value of the risk management contracts at period end. The \$4.2 million liability was related to risk management contracts expiring within one year.

Pengrowth has not designated any outstanding commodity risk management contracts as hedges for accounting purposes and therefore records these risk management contracts on the Consolidated Balance Sheets at their fair value and recognizes changes in fair value of commodity risk management contracts on the Consolidated Statements of Income (Loss). The volatility in net income (loss) will continue to the extent that the fair value of the commodity risk management contracts fluctuates. However, these non-cash amounts do not affect Pengrowth's cash flow until realized.

Realized commodity risk management gains (losses) on financial crude oil, natural gas and differential contracts are recorded separately on the Consolidated Statements of Income (Loss) and impact cash flow at that time.

Physical Delivery Risk Management Contracts

Physical delivery contracts are not considered financial instruments and therefore, no asset or liability has been recognized in the Consolidated Financial Statements related to these contracts. The impact of realized physical delivery contract prices is included in oil and gas sales, as per the Consolidated Statements of Income (Loss), and therefore in realized average sales prices.

At December 31, 2018, Pengrowth had the following apportionment protected physical delivery contracts outstanding:

WCS Differentials			
Physical Delivery Contracts			
Reference point	Term	Volume of dilbit (bbl/d)	Price/bbl (U.S.\$)
Western Canada Select	2019	2,500	WTI less \$17.95
Western Canada Select	2019	2,500	WTI less \$23.60 - \$26.35
Western Canada Select	2019	5,000	WTI less \$17.70 - \$20.45
Western Canada Select	Feb 1, 2019 - Feb 1, 2020	2,500	WTI less \$20.40 - \$23.40

Pengrowth has also entered into a secured term sale agreement at Hardisty for an additional 5,000 bbl/d of dilbit for 2019 that are 100 percent apportionment protected. Pengrowth will settle at the monthly WCS Index less an apportionment protection fee of U.S.\$2.00/bbl.

In the fourth quarter of 2018, Pengrowth produced an average of 17,866 bbl/d of bitumen and sold an average of 25,886 bbl/d of dilbit at Hardisty. Full year 2018 bitumen production averaged 16,325 bbl/d with an average of 23,452 bbl/d of dilbit sold at Hardisty.

See Note 16 to the December 31, 2018 audited Consolidated Financial Statements for more information.

FINANCIAL RESULTS

OIL AND GAS SALES

The following table shows the composition of oil and gas sales:

(\$ millions)	Three months ended		Twelve months ended	
	Dec 31, 2018	Dec 31, 2017	Dec 31, 2018	Dec 31, 2017
Bitumen	45.2	54.8	264.1	181.6
Natural gas ⁽¹⁾⁽²⁾	7.2	12.5	23.8	98.8
Light oil	1.1	11.8	14.8	149.3
Natural gas liquids	1.5	5.3	4.7	56.7
Produced petroleum revenue ⁽¹⁾	55.0	84.4	307.4	486.4
Sale of diluent and other	59.6	46.1	232.0	187.0
Less: deemed natural gas sales used in operations ⁽²⁾	(3.4)	—	(7.2)	—
Oil and gas sales ⁽³⁾	111.2	130.5	532.2	673.4

⁽¹⁾ See definition under section "Non-GAAP Financial Measures".

⁽²⁾ Starting April 1, 2018 incorporates a portion of natural gas sales from Groundbirch used for operational requirements and recorded at AECO/NIT 7A monthly index prices.

⁽³⁾ Excludes realized commodity risk management from financial contracts.

In order to reduce viscosity and meet pipeline specifications, bitumen requires blending with a diluent. The cost of diluent is mostly recovered when the blended product, also known as dilbit or diluted bitumen, is sold at Hardisty. This is reflected in diluent and other revenue together with processing income.

Price and Volume Analysis

Quarter ended December 31, 2018 versus Quarter ended December 31, 2017

The following table illustrates the effect of changes in prices and volumes on the components of produced petroleum revenue:

(\$ millions)	Bitumen	Natural gas ⁽²⁾	Light oil	NGLs	Produced petroleum revenue ⁽²⁾
Quarter ended December 31, 2017 ⁽¹⁾	54.8	12.5	11.8	5.3	84.4
Effect of change in product prices and differentials	(22.6)	(2.6)	(1.6)	0.3	(26.5)
Effect of change in sales volumes	13.0	(2.7)	(9.1)	(4.1)	(2.9)
Quarter ended December 31, 2018 ⁽¹⁾	45.2	7.2	1.1	1.5	55.0

⁽¹⁾ Excludes realized commodity risk management from financial contracts.

⁽²⁾ See definition under section "Non-GAAP Financial Measures".

Bitumen sales decreased by 18 percent in the fourth quarter of 2018 compared to the same period in 2017 mostly driven by the significant decline in WCS in the fourth quarter of 2018 largely offset by the favourable impact of physical delivery fixed price differential contracts combined with higher production volumes. Natural gas, light oil and NGL sales decreased 42 percent, 91 percent and 72 percent, respectively, compared to the fourth quarter of 2017 primarily due to decreases in sales volumes related to 2017 divestments combined with the decline in realized prices for light oil and natural gas.

Twelve Months Ended December 31, 2018 versus Twelve Months Ended December 31, 2017

The following table illustrates the effect of changes in prices and volumes on the components of produced petroleum revenue:

(\$ millions)	Bitumen	Natural gas ⁽²⁾	Light oil	NGLs	Produced petroleum revenue ⁽²⁾
Twelve months ended December 31, 2017 ⁽¹⁾	181.6	98.8	149.3	56.7	486.4
Effect of change in product prices and differentials	48.6	(7.3)	0.1	1.7	43.1
Effect of change in sales volumes	33.9	(67.7)	(134.6)	(53.7)	(222.1)
Twelve months ended December 31, 2018 ⁽¹⁾	264.1	23.8	14.8	4.7	307.4

⁽¹⁾ Excludes realized commodity risk management from financial contracts.

⁽²⁾ See definition under section "Non-GAAP Financial Measures".

Full year 2018 bitumen sales increased 45 percent compared to 2017 resulting from the favorable impact of physical delivery fixed price differential contracts combined with higher production volumes. Natural gas, light oil and NGL sales decreased 76 percent, 90 percent and 92 percent, respectively, compared to 2017 primarily due to the decrease in sales volumes related to 2017 divestments.

ROYALTIES

(\$ millions except per boe amounts and percentages)	Three months ended		Twelve months ended	
	Dec 31, 2018	Dec 31, 2017	Dec 31, 2018	Dec 31, 2017
Royalties, net of incentives	3.7	8.0	24.2	45.8
\$/boe	1.67	3.52	3.01	3.10
Royalties as a percent of produced petroleum revenue (%) ⁽¹⁾⁽²⁾	6.7	9.5	7.9	9.4

⁽¹⁾ Excludes realized commodity risk management from financial contracts.

⁽²⁾ See definition under section "Non-GAAP Financial Measures".

Royalties include Crown, freehold, overriding royalties, mineral taxes and GCA.

The Lindbergh Crown royalty rate is price sensitive and varies depending on whether the project is pre-payout or post-payout. Lindbergh is currently in pre-payout, and will reach payout when its cumulative revenues exceed its cumulative eligible costs. The Crown royalty rate applicable to pre-payout varies from 1 percent when the monthly Cdn\$ equivalent WTI price is less than or equal to \$55/bbl to 9 percent when the Cdn\$ equivalent WTI price is in excess of \$120/bbl. Lindbergh royalties also incorporate a 4.0 percent gross overriding royalty that is based on posted WCS benchmark prices.

Fourth quarter of 2018 royalties as a percent of produced petroleum revenue decreased to 6.7 percent from 9.5 percent in the fourth quarter of 2017. The overall decrease in the fourth quarter of 2018 royalty rate is primarily attributed to lower Lindbergh gross overriding royalties paid in the quarter as a result of a significant WCS benchmark price decrease compared to the same period last year. This was coupled with the absence of royalties related to divested properties of approximately \$3 million.

Full year 2018 royalties as a percent of produced petroleum revenue decreased to 7.9 percent from 9.4 percent in the same period last year driven by the absence of approximately \$27 million of royalties related to divested properties. This was partly offset by higher Lindbergh crown royalties year over year driven by an increase in WTI.

ADJUSTED OPERATING EXPENSES

(\$ millions except per boe amounts)	Three months ended		Twelve months ended	
	Dec 31, 2018	Dec 31, 2017	Dec 31, 2018	Dec 31, 2017
Operating expenses	21.2	30.1	79.5	217.5
Cost of natural gas used in internal operations ⁽¹⁾	3.4	—	7.2	—
Less: Processing income	(0.5)	(2.2)	(2.0)	(19.1)
Adjusted operating expenses ⁽¹⁾⁽²⁾	24.1	27.9	84.7	198.4
\$/boe	10.87	12.28	10.54	13.45

⁽¹⁾ Starting April 1, 2018, incorporates the cost of a portion of natural gas delivered from Groundbirch to the NGTL system and used in operations as energy costs calculated using AECO/NIT 7A monthly index prices.

⁽²⁾ See definition under section "Non-GAAP Financial Measures".

Fourth quarter of 2018 adjusted operating expenses decreased \$3.8 million or 14 percent compared to the same period in 2017 primarily due to the absence of approximately \$5 million of adjusted operating expenses associated with the divested properties. Adjusted operating expenses related to the remaining assets were relatively unchanged in the fourth quarter of 2018 compared to the fourth quarter of 2017.

Full year 2018 adjusted operating expenses decreased \$113.7 million or 57 percent compared to the same period in 2017 primarily due to the absence of approximately \$115 million of adjusted operating expenses associated with the divested properties.

On a per boe basis, fourth quarter and full year 2018 adjusted operating expenses decreased \$1.41/boe and \$2.91/boe, respectively, compared to the same periods last year driven by the impact of property dispositions mentioned above.

DILUENT AND OTHER PURCHASES

(\$ millions)	Three months ended		Twelve months ended	
	Dec 31, 2018	Dec 31, 2017	Dec 31, 2018	Dec 31, 2017
Diluent cost	55.4	41.4	219.3	147.2
Other product purchases	3.7	1.3	10.2	16.3
Diluent and other purchases	59.1	42.7	229.5	163.5

Diluent costs reflect the cost of condensate required for processing activities and blending with bitumen to reduce viscosity and meet pipeline specifications. The amount of condensate costs depends on the volume of diluent required for blending and the price of condensate.

Fourth quarter and full year 2018 diluent costs increased \$14.0 million and \$72.1 million, respectively, compared to the same periods last year as the increase in bitumen production in 2018 relative to 2017 required higher volume of purchased diluent. In addition, average condensate prices were stronger in 2018 compared with 2017 due to higher demand for diluent in Alberta further increasing the overall cost of purchased condensate. Pengrowth's blending ratio which reflects diluent volumes as a percentage of total blended volumes remained unchanged at approximately 30 percent throughout 2018 as compared to 2017.

Other product purchases include third party hydrocarbons purchased for resale. The reduction in other product purchases in 2018 was due to the impact of 2017 property divestments.

TRANSPORTATION EXPENSES

(\$ millions except per boe amounts)	Three months ended		Twelve months ended	
	Dec 31, 2018	Dec 31, 2017	Dec 31, 2018	Dec 31, 2017
Transportation expenses	6.7	5.4	22.7	27.1
\$/boe	3.02	2.38	2.82	1.84

Fourth quarter of 2018 transportation expenses increased \$1.3 million compared to the same period in 2017 due to incremental transportation expenses related to higher Lindbergh production.

Full year 2018 transportation expenses decreased \$4.4 million driven by the absence of transportation expenses related to divested properties of approximately \$8.0 million partly offset by incremental transportation expenses related to higher Lindbergh production.

On a per boe basis, the increase in the fourth quarter and full year 2018 relative to the same periods in 2017 resulted from Lindbergh representing a higher proportion of total production following the 2017 dispositions, with Lindbergh having a higher cost per boe than the sold properties.

GENERAL AND ADMINISTRATIVE EXPENSES

(\$ millions except per boe amounts)	Three months ended		Twelve months ended	
	Dec 31, 2018	Dec 31, 2017	Dec 31, 2018	Dec 31, 2017
Cash G&A expenses ⁽¹⁾⁽²⁾	4.2	12.6	29.9	56.6
\$/boe	1.89	5.54	3.72	3.84
Non-cash G&A expenses ⁽¹⁾	1.7	(1.3)	4.8	4.9
\$/boe	0.77	(0.57)	0.60	0.33
Total G&A ⁽¹⁾	5.9	11.3	34.7	61.5
\$/boe	2.66	4.97	4.32	4.17

⁽¹⁾ Net of recoveries and capitalization, as applicable.

⁽²⁾ See definition under section "Non-GAAP Financial Measures".

Fourth quarter and full year 2018 cash G&A expenses decreased \$8.4 million or 67 percent and \$26.7 million or 47 percent, respectively, compared to the same periods in 2017 primarily due to significantly lower staffing costs as well as lower office and IT expenditures. These decreases were driven by corporate restructuring following the 2017 asset divestments.

On a per boe basis, fourth quarter and full year 2018 cash G&A expenses decreased \$3.65/boe and \$0.12/boe, respectively, compared to the same periods in 2017 reflecting the decreases in cash G&A expenses as described above.

The non-cash component of G&A represents the compensation expenses associated with Pengrowth's share-settled LTIP (as defined below). See Note 12 to the December 31, 2018 audited Consolidated Financial Statements for additional information on Pengrowth's share-settled LTIP. The compensation costs associated with these plans are expensed over the applicable vesting periods.

Fourth quarter non-cash G&A expenses increased \$3.0 million compared to the same period in 2017 primarily due to the absence of forfeiture rate increase reflected in the fourth quarter of 2017 which was related to staff reductions. Fourth quarter of 2018 incorporated lower performance factors for 2018 performance year. Full year 2018 non-cash G&A expenses remained relatively unchanged compared to 2017 as the absence of increase in forfeiture rates in 2018 was offset by the introduction of the stock option plan in 2018.

During the twelve months ended December 31, 2018, \$1.7 million (December 31, 2017 - \$2.3 million) of directly attributable G&A costs were capitalized to Property, Plant and Equipment ("PP&E").

RESTRUCTURING COSTS

(\$ millions)	Three months ended		Twelve months ended	
	Dec 31, 2018	Dec 31, 2017	Dec 31, 2018	Dec 31, 2017
Severance costs	0.1	1.3	2.1	10.5
Onerous office lease contracts	—	18.5	(1.7)	26.5
Total restructuring costs	0.1	19.8	0.4	37.0

During 2017, Pengrowth completed a number of significant asset dispositions which led to a management decision to complete an operational restructuring. For more information about the restructuring costs refer to the December 31, 2017 annual report.

Full year 2018 restructuring costs contained an additional \$2.1 million expense relating to severance costs and a \$1.7 million reduction related to an estimate revision to the onerous office lease provision.

DEPLETION, DEPRECIATION, AMORTIZATION AND ACCRETION

(\$ millions except per boe amounts)	Three months ended		Twelve months ended	
	Dec 31, 2018	Dec 31, 2017	Dec 31, 2018	Dec 31, 2017
Depletion, depreciation and amortization	64.2	31.9	162.3	207.6
\$/boe	28.95	14.04	20.19	14.07
Accretion	1.8	1.3	7.0	11.4
\$/boe	0.81	0.57	0.87	0.77

Fourth quarter of 2018 DD&A expenses increased \$32.3 million compared to the same period in 2017 primarily due to approximately \$32 million of accelerated depletion on properties considered to be at the end of their economic life.

Full year 2018 DD&A expenses decreased \$45.3 million compared to 2017 due to the absence of approximately \$86 million of DD&A associated with the divested properties, partially offset by the accelerated depletion noted above and higher Lindbergh and Groundbirch DD&A driven by the production growth from the Lindbergh infill wells drilled in 2018 and increased production at Groundbirch.

Excluding accelerated depletion of approximately \$32 million, fourth quarter of 2018 DD&A per boe was \$14.52/boe remaining relatively unchanged from fourth quarter of 2017. Full year 2018 DD&A per boe, excluding the accelerated depletion of approximately \$32 million, was \$16.21/boe reflecting a \$2.14/boe increase due to higher unit of production compared to 2017.

Accretion includes ARO (as defined below) accretion expense as well as accretion related to the onerous lease provision. Fourth quarter 2018 accretion expense increased \$0.5 million compared to the same period last year related to accretion on the onerous lease provision. However, it decreased full year by \$4.4 million compared to 2017 primarily due to the absence of accretion related to the ARO liability associated with properties disposed of in 2017.

EXPLORATION AND EVALUATION ASSETS ("E&E")

Pengrowth's E&E assets consist of exploration and development projects which are pending the determination of technical feasibility and commercial viability.

E&E assets totaled \$82.6 million at December 31, 2018 and were primarily related to the Groundbirch gas property in north eastern British Columbia. After completion of Pengrowth's 2018 capital program and year end reserves evaluation, certain E&E costs were transferred to PP&E for the year ended December 31, 2018. See Note 6 to the December 31, 2018 audited Consolidated Financial Statements.

IMPAIRMENTS

(\$ millions)	Three months ended		Twelve months ended	
	Dec 31, 2018	Dec 31, 2017	Dec 31, 2018	Dec 31, 2017
PP&E impairments	—	—	—	504.4
E&E impairments	91.0	130.0	91.0	130.0
Total impairments	91.0	130.0	91.0	634.4

At December 31, 2017, PP&E impairment charges of \$504.4 million were recorded. Throughout 2017's asset dispositions, there were several instances where a purchase and sale agreement ("**PSA**") was signed subsequent to the respective quarter end for proceeds less than net book value therefore being an indicator of impairment. In these situations, where the sales price in a PSA was below the carrying amount, an impairment was recorded. In addition, remaining assets in the Southern and Northern Cash Generating Units ("**CGUs**") were impaired down to \$nil based on the nominal value received for similar asset transactions and the Company's focus on Lindbergh and Groundbirch properties. Refer to Note 5 to the December 31, 2018 audited Consolidated Financial Statements for additional information.

For the year ended December 31, 2018, Pengrowth evaluated the Groundbirch gas property for an impairment in conjunction with the Montney CGU due to the negative impact resulting from the significant downturn in the forward natural gas benchmark prices late in 2018. In accordance with Pengrowth's policy, the E&E assets are assessed in conjunction with the cash flow from the applicable PP&E CGU. It was determined that the recoverable amount of the CGU was below the carrying amount and a \$91.0 million impairment on the Groundbirch E&E asset was recorded in the fourth quarter of 2018.

The recoverable amount was computed with reference to the present value of the future cash flows expected to be derived from production of proved plus probable reserves and contingent resources. Changes in forward price estimates, production costs or recovery rates may change the economic status of contingent resources and may ultimately result in contingent resources being restated. The Groundbirch E&E impairment test was based on proved reserve values using a pre-tax discount rate of 10 percent, probable reserve values using a pre-tax discount rate of 12 percent, independent reserves evaluator January 1, 2019 forecast pricing and an inflation rate of 2 percent, and contingent resources using a pre-tax discount rate of 15 percent. The recoverable amount was determined using value in use. See Note 6 to the December 31, 2018 audited Consolidated Financial Statements for more information.

At December 31, 2017, Pengrowth evaluated the Groundbirch gas property in conjunction with the Montney CGU for an impairment. It was determined that the recoverable amount was below the carrying amount, resulting in a \$129.0 million impairment on the Groundbirch E&E asset in the fourth quarter of December 31, 2017. In addition, \$1.0 million impairment was recognized on other minor E&E projects as no further exploration or evaluation is intended on those projects.

INTEREST AND FINANCING CHARGES

(\$ millions)	Three months ended		Twelve months ended	
	Dec 31, 2018	Dec 31, 2017	Dec 31, 2018	Dec 31, 2017
Interest and financing charges	13.8	13.4	52.2	74.4
Capitalized interest	—	(1.0)	(2.4)	(3.7)
Total interest and financing charges	13.8	12.4	49.8	70.7

At December 31, 2018, Pengrowth had \$541.1 million in outstanding fixed rate debt and \$173.5 million of Credit Facility borrowings. Total fixed rate debt consists primarily of U.S. dollar denominated term notes at a weighted average interest rate of 6.6 percent and the Credit Facility had an average 7.4 percent interest rate.

Fourth quarter and full year 2018 interest and financing charges, before capitalized interest, increased \$0.4 million or 3 percent compared to the same period last year due to higher borrowings on the Credit Facility in 2018. Full year 2018 interest and financing charges, before capitalized interest, decreased \$22.2 million or 30 percent compared to 2017 reflecting the impact of the prepayments of term notes of approximately \$1 billion throughout 2017, the repayment of \$126.6 million of convertible debentures at maturity on March 31, 2017, partially offset by the incremental interest from increased borrowings on the Credit Facility in 2018.

Pengrowth ceased capitalization of interest during the third quarter of 2018 due to the change in the development plan for Lindbergh. During the twelve months ended December 31, 2018, \$2.4 million (December 31, 2017 - \$3.7 million) of interest was capitalized on the Lindbergh project to PP&E using Pengrowth's weighted average cost of debt of 6.5 percent (December 31, 2017 - 5.7 percent).

TAXES

Deferred income tax is a non-cash item relating to temporary differences between the accounting and tax basis of Pengrowth's assets and liabilities. As at December 31, 2018, Pengrowth was in a net unrecognized deferred tax asset position due to uncertainty of Pengrowth's ability to realize the tax assets in future years. This resulted in a non-cash deferred tax expense of \$342.2 million during the year ended December 31, 2018 related to the unrecognized deductible temporary differences in excess of taxable temporary differences of approximately \$1.8 billion.

The deferred tax recovery of \$223.8 million recognized during the year ended December 31, 2017 was primarily due to temporary differences related to PP&E impairment charges in 2017 and the change in fair value of commodity risk management contracts. See Note 10 to the December 31, 2018 audited Consolidated Financial Statements for more information.

Pengrowth has certain income tax filings from predecessor entities that are in dispute with tax authorities and has paid \$9.5 million and \$2.7 million to the Canada Revenue Agency and the Alberta Tax and Revenue Administration, respectively, to formally begin the process of challenging the particular taxation year. Pengrowth believes that its filings to-date are correct and that it is more likely than not to be successful in defending its positions. Therefore, no provision for any potential income tax liability was recorded and the \$12.2 million has been recorded as a long term receivable.

OTHER (INCOME) EXPENSE

Pengrowth recorded \$1.2 million of other expenses in 2018 which consisted of an onerous lease expense related to a construction camp at Lindbergh partly offset by investment income on remediation trust fund and a royalty credit carry-back related to SOEP abandonment spending. See the Asset Retirement Obligations section of this MD&A and Note 9 to the December 31, 2018 audited Consolidated Financial Statements for more information.

Full year 2017 other income of \$7.4 million included an insurance settlement, investment income on remediation trust funds and interest income.

FOREIGN CURRENCY GAINS (LOSSES)

(\$ millions)	Three months ended		Twelve months ended	
	Dec 31, 2018	Dec 31, 2017	Dec 31, 2018	Dec 31, 2017
Currency exchange rate (Cdn\$1 = U.S.\$) at beginning of period	0.77	0.80	0.80	0.74
Currency exchange rate (Cdn\$1 = U.S.\$) at period end	0.73	0.80	0.73	0.80
Unrealized foreign exchange gain (loss) from translation of foreign denominated debt	(27.7)	(5.2)	(39.8)	65.6
Unrealized gain (loss) on foreign exchange risk management contracts	18.9	36.2	24.9	(14.2)
Net unrealized foreign exchange gain (loss)	(8.8)	31.0	(14.9)	51.4
Net realized foreign exchange gain (loss)	0.4	(34.4)	0.8	(38.4)

As 73 percent of Pengrowth's total debt before working capital is denominated in foreign currencies at December 31, 2018, the majority of Pengrowth's unrealized foreign exchange gains and losses are attributable to the translation of this debt into Canadian dollars and changes in the fair value of the related foreign exchange swap contracts Pengrowth employs to manage this risk.

The gains or losses on foreign debt principal restatement each period are calculated by comparing the translated Canadian dollar balance of foreign currency denominated long term debt from one period to another. The magnitude of the gains and losses is proportionate to the magnitude of the exchange rate fluctuation between the opening and closing rates for the respective periods and the amount of debt denominated in a foreign currency.

Foreign Exchange Contracts Associated with U.S. Dollar Denominated Term Debt

Pengrowth holds a series of swap contracts which were transacted in order to fix the foreign exchange rate on a portion of principal for Pengrowth's U.S. dollar denominated term debt. The swaps partially offset foreign exchange gains/losses on U.S. dollar denominated debt. Each swap requires Pengrowth to buy U.S. dollars at a predetermined rate and time, based upon maturity dates of the U.S. dollar term debt.

At December 31, 2018, Pengrowth held a total of U.S.\$255 million in foreign exchange swap contracts at a weighted average rate of U.S.\$0.75 per Cdn\$1 as follows:

Principal amount (U.S.\$ millions)	Swapped amount (U.S.\$ millions)	% of principal swapped	Average fixed rate (Cdn\$1 = U.S.\$)
366.3	255.0	70%	0.75

At December 31, 2018, the fair value of these U.S. foreign exchange derivative contracts was an asset of Cdn\$5.8 million and has been included on the Consolidated Balance Sheets. Changes in the fair value of these contracts between Balance Sheet dates are reported on the Consolidated Statements of Income (Loss) as an unrealized foreign exchange (gain) loss.

Foreign Exchange Contracts Associated with U.K. Pound Sterling Denominated Term Debt

Pengrowth entered into foreign exchange risk management contracts when it issued the U.K. pound sterling denominated term debt. At December 31, 2018, Pengrowth held the following contract fixing the Canadian dollar to the U.K. pound sterling exchange rate on the interest and principal of the U.K. pound sterling denominated debt maturing in October 2019:

Principal amount (U.K. pound sterling millions)	Swapped amount (U.K. pound sterling millions)	% of principal swapped ⁽¹⁾	Fixed rate (Cdn\$1 = U.K. pound sterling)
12.1	15.0	124%	0.63

⁽¹⁾ Exceeds 100 percent as swaps were not liquidated when a portion of the principal amount of term note was early repaid in the fourth quarter of 2017.

At December 31, 2018, the fair value of the U.K. foreign exchange derivative contracts was an asset of \$2.2 million and has been included on the Consolidated Balance Sheets. Changes in the fair value of these contracts between Balance Sheet dates are reported on the Consolidated Statements of Income (Loss) as an unrealized foreign exchange (gain) loss.

Foreign Denominated Term Debt Sensitivity to Foreign Exchange Rate

The following table summarizes the sensitivity on a pre-tax basis, of a change in the foreign exchange rate related to the translation of the foreign denominated term debt and the offsetting change in the fair value of the foreign exchange risk management contracts relating to that debt, holding all other variables constant:

Foreign exchange sensitivity as at December 31, 2018 (\$ millions)	Cdn\$0.01 Exchange rate change	
	Cdn - U.S.	Cdn - U.K.
Unrealized foreign exchange gain or loss on foreign denominated debt	3.7	0.1
Unrealized foreign exchange risk management gain or loss	(2.6)	(0.1)
Net pre-tax impact on Consolidated Statements of Income (Loss)	1.1	—

ASSET RETIREMENT OBLIGATIONS - NET PRESENT VALUE

(\$ millions)	Dec 31, 2018	Dec 31, 2017	Change
ARO, beginning of year	236.7	652.3	(415.6)
Expenditures on remediation/provisions settled	(23.2)	(15.9)	(7.3)
ARO on disposed properties	(0.9)	(420.4)	419.5
Incurred during the period	1.4	5.4	(4.0)
Accretion	5.4	11.4	(6.0)
Other revisions	20.5	3.9	16.6
ARO, end of year ⁽¹⁾	239.9	236.7	3.2

⁽¹⁾ Expected to be funded from the SOEP remediation trust fund valued at \$98.0 million at December 31, 2018, with the remainder to be funded from future cash flows.

The total future ARO is based on management's estimate of costs to remediate, reclaim and abandon wells and facilities having regard for Pengrowth's working interest and the estimated timing of the costs to be incurred in future periods. Pengrowth has developed an internal process to calculate these estimates which considers applicable regulations, actual and anticipated costs, type and size of well or facility and the geographic location.

At December 31, 2018, the ARO liability increased \$3.2 million from December 31, 2017 primarily due to revisions to inflation, cost and timing estimates, offset by liability settlement of \$23.2 million.

Pengrowth has estimated the net present value of its total ARO to be \$239.9 million as at December 31, 2018 (December 31, 2017 – \$236.7 million), based on a total escalated future liability of \$491.7 million (December 31, 2017 – \$420.2 million). Pengrowth has been contributing to an externally managed trust fund established to fund certain abandonment and reclamation costs associated with its interest in the SOEP. The total balance of the SOEP remediation trust fund at December 31, 2018 was \$98.0 million (December 31, 2017 - \$111.6 million) and was included in Other Assets on the Consolidated Balance Sheets. The fund balance represents a pre-funding of Pengrowth's entire share of the estimated costs of the SOEP abandonment and remediation, but the fund is not considered in calculating the ARO balance above. The costs relating to SOEP abandonment and reclamation are expected to be incurred over the next 3 to 4 years. Abandonment and decommissioning expenditures of approximately \$17.9 million in 2018 were funded by the trust fund.

Pursuant to the Royalty Agreement with the Province of Nova Scotia and the Offshore Royalty Regulations, Pengrowth is entitled to deduct certain monies spent on abandonment and decommissioning activities from royalties previously paid. The deduction is claimed when the field ceases production and up to three years thereafter. The operator has established December 2018 as the "Month of Cessation" under the Royalty Agreement and the Regulations. Pengrowth's share of remaining abandonment and decommissioning spending from 2019 to 2021 is currently set at approximately \$81 million. It is estimated that the refundable royalties will be approximately 25 percent to 30 percent of this amount.

The majority of the abandonment and reclamation costs on other assets, not covered by a fund, are expected to be incurred between 2035 and 2085. A risk free discount rate of 2.3 percent per annum (December 31, 2017 - 2.3 percent) and an ARO specific inflation rate of 2.0 percent (December 31, 2017 - 1.5 percent) were used to calculate the net present value of the ARO at December 31, 2018.

REMEDATION TRUST FUNDS AND REMEDIATION AND ABANDONMENT EXPENSE

During 2018, Pengrowth contributed \$5.6 million (December 31, 2017 - \$17.1 million), into an externally managed trust funds established to fund certain abandonment and reclamation costs associated with SOEP. The total balance of the remediation trust funds was \$98.0 million at December 31, 2018 (December 31, 2017 - \$111.6 million).

Pengrowth had a contractual obligation to make contributions to a remediation trust fund that will be used to fund the ARO of the SOEP properties and facilities. In 2018, Pengrowth made monthly contributions to the fund at a rate of \$1.41/MMBtu of its share of natural gas production and \$2.42/bbl of its share of natural gas liquids production from SOEP. Starting in January 2019, there will no longer be contributions to the remediation trust fund as production has ceased and abandonment and decommissioning spending has begun and will continue for the next 3 to 4 years.

See Note 4 to the December 31, 2018 audited Consolidated Financial Statements for additional information.

Pengrowth takes a proactive approach to managing its well abandonment and site restoration obligations. There is an on-going program to abandon wells and reclaim well and facility sites. In 2018, Pengrowth spent \$23.2 million on abandonment and reclamation (2017 - \$15.9 million). Pengrowth expects to spend approximately \$34 million in 2019 on abandonment and reclamation activities, excluding orphan well levies from the Alberta Energy Regulator. Over 70 percent of the planned spending in 2019 relates to SOEP and will be recovered from the remediation trust fund.

CLIMATE CHANGE PROGRAMS

The Province of Alberta regulates Greenhouse Gas ("**GHG**") emissions under the Climate Change and Emissions Management Act. Under that Act, the Carbon Competitive Incentive Regulation ("**CCIR**") came into effect January 1, 2018 and imposes annual GHG emissions reporting requirements on all Alberta facilities that emit more than 100,000 tonnes of greenhouse gases per year.

In November 2015, the Government of Alberta announced its Climate Leadership Plan ("**CLP**") highlighting four key strategies that the government will implement to address climate change:

- the complete phase-out of coal-fired sources of electricity by 2030;
- an Alberta economy-wide price on GHG emissions of \$30/tonne;
- capping oil sands emissions to a province-wide total of 100 megatonnes per year, with certain exceptions for cogeneration power sources and new upgrading capacity; and
- reducing methane emissions from oil and gas activities by 45 percent by 2025.

In early 2018, the Government of Alberta announced its new Carbon Competitiveness Incentive Regulations ("**CCIR**"). Some highlights of CCIR are as follows:

- It replaces the current Specified Gas Emitters Regulation as of January 1, 2018;
- There will be a phase in period with transition exemptions for 2018 (50 percent) and 2019 (75 percent) - meaning that compliance payments will be adjusted by the respective percentages for these first 2 years of operation under the CCIR;
- A facility can only use 50 percent of existing Emission Performance Credits ("**EPCs**") in inventory to meet compliance. EPCs in inventory that were generated prior to 2014 will expire in 2021. EPC's generated between 2014 and 2016 will expire in 2022 and EPC's generated from 2017 and later will expire after 8 years;
- The CCIR will be based on industry sector emission performance benchmarks using emissions per unit of production type - Output Based Allocation ("**OBA**");
- The OBA benchmarks will be based on the average of 2013, 2014 and 2015 CO₂e emissions.

The new CCIR utilizes Oil and Gas industry benchmarks to determine compliance reporting and emissions payment. For 2018 and 2019 operations, the regulator has provided facility specific transitional benchmarks to reduce the initial impact of the newly implemented CCIR. These benchmarks are based on emissions per unit of production, and facilities will pay on the difference between the actual facility emissions per unit of production less the transitional benchmark provided by the regulator. Facilities can meet compliance in three ways: audited emission reductions in their operations to meet industry benchmarks, purchased Alberta-based offset carbon credits, or contributions to the Alberta Climate Change and Emissions Management Fund. In 2018, the cost of compliance was \$30/tonne.

The Lindbergh in-situ facility was subject to the CCIR for 2018 operations, and will be based on Lindbergh's emissions of CO₂ equivalent tonnes per m³ of bitumen relative to the in situ sector benchmark. In 2018, there was no compliance payment required for Lindbergh for 2017 operations. The estimated impact for 2018 operations relating to Lindbergh was estimated at \$1.4 million (payable March 31, 2019). The impact of the Climate Leadership Plan will continue to increase through 2023 as provincial and Federal climate change programs align.

Uncertainties exist related to the timing and effects of these emerging regulations and resulting requirements making it difficult to accurately determine the impacts and effects on the Corporation. The extent and magnitude of any adverse impacts of current or additional programs or regulations cannot be reliably or accurately estimated at this time, in part because specific legislative and regulatory requirements have not been finalized. Pengrowth is closely monitoring the ongoing development and implementation of the regulatory framework through which the federal and provincial governments are implementing their climate change and emissions reduction policies.

ACQUISITIONS AND DISPOSITIONS

(\$ millions)	Three months ended		Twelve months ended	
	Dec 31, 2018	Dec 31, 2017	Dec 31, 2018	Dec 31, 2017
Property acquisitions	(0.2)	(0.1)	(0.2)	(0.1)
Proceeds from property dispositions ⁽¹⁾	5.5	118.4	23.0	910.2
Net cash proceeds from dispositions	5.3	118.3	22.8	910.1

⁽¹⁾ Proceeds are net of transaction costs and closing adjustments. Where applicable, include deferred proceeds.

Fourth quarter and full year 2018 proceeds from property dispositions include collection of certain deferred proceeds and closing adjustments for dispositions completed in 2017.

Full year 2017 include proceeds from property dispositions from the sale of non-producing Montney lands at Bernadet in north eastern British Columbia, the sale of a 4.0 percent GORR interest on the Lindbergh thermal property and certain seismic assets, the sale of Olds/Garrington and Swan Hills area.

At December 31, 2018, Pengrowth's accounts receivable included approximately \$5 million of deferred proceeds relating to 2017 dispositions. These deferred proceeds are expected to be collected within the next 3 months.

ASSETS HELD FOR SALE

At December 31, 2018, Pengrowth presented \$16.0 million of certain Southern Alberta conventional assets as assets held for sale, classified as current assets on the Consolidated Balance Sheets. The related ARO of \$16.0 million was presented as liabilities associated with assets held for sale and classified as current liabilities on the Consolidated Balance Sheets. The disposition is expected to close in the first quarter of 2019. Cash proceeds on closing of the disposition were nominal.

FINANCIAL RESOURCES AND LIQUIDITY

Debt Maturities and Capital Resources

At December 31, 2018, Pengrowth had in place a secured \$330 million revolving committed term credit facility (the "**Credit Facility**") supported by a syndicate of 11 domestic and international banks with a maturity date of March 31, 2019. The available Credit Facility had drawings of \$173.5 million at December 31, 2018 (December 31, 2017 - \$109.0), and \$75.6 million of outstanding letters of credit (December 31, 2017 - \$69.4 million). In addition to the maturity of the Credit Facility in 2019 as described above, certain of the Corporation's term notes in the aggregate principal amount of Cdn\$59.4 million mature on October 18, 2019.

Pengrowth engaged Perella Weinberg Partners LP and Tudor, Pickering, Holt & Co ("**PWP/TPH**") as advisers to assist in exploring financing alternatives. On March 5, 2019, the Board of Directors commenced a formal process with PWP/TPH to explore and develop strategic alternatives (the "**Strategic Review**") with a view to strengthening the Corporation's balance sheet and maximizing enterprise value. The Strategic Review is intended to explore a comprehensive range of strategic and transaction alternatives, including a sale, merger or other business combination; a disposition of all or certain assets of the Corporation; recapitalization and refinancing opportunities; sourcing new financing and equity capital; and other alternatives to improve the Corporation's financial position and maximize value. In addition to Pengrowth's long-life, low-decline assets, the Corporation also has potentially attractive tax attributes that complement its strong base operations. Pengrowth and its advisers expect to actively explore market interest in potential transactions and strategic initiatives with a range of interested parties and capital market participants. There remains uncertainty and liquidity risk until such time as the Strategic Review Process is completed and Pengrowth implements a transaction, financing arrangement or other strategic alternative that addresses the pending maturities under the Credit Facility and the October 2019 term notes. Pengrowth plans to settle the October 2019 term notes with internally generated cash flow. There can be no guarantees as to whether the Strategic Review will result in a transaction or the terms or timing of any resulting transaction. Various industry risk factors, including a prolonged or significant decrease in WTI or WCS pricing, could impact the outcome of the Strategic Review Process, Pengrowth's cash flow, and its ability to address its upcoming debt maturities.

The Corporation is in discussions with the lending syndicate under its \$330 million revolving Credit Facility on arrangements to extend the maturity date of the Credit Facility through September 30, 2019 to support the Strategic Review. The Corporation's objective is to finalize the extension agreement as soon as possible, and in advance of the

current March 31, 2019 maturity date, however, there can be no assurance or guarantee that an extension will be obtained by the Corporation or on what terms.

Due to the rapid deterioration of commodity prices, uncertainty around improvements in global prices, and uncertainty around timing of refinancing of Pengrowth's debt portfolio, there remains a risk around Pengrowth's ability to stay in compliance with its debt covenants at the end of 2019.

Further information regarding the risk factors associated with Pengrowth's capital resources may be found under the headings "Advisory Regarding Forward-Looking Statements" and "Business Risks" herein and under "Risk Factors" in Pengrowth's most recent AIF and management information circular, quarterly reports, material change reports and news releases.

Financial Covenants

Pursuant to the debt amending agreements dated October 12, 2017, amendments to the existing financial covenants are effective through to and including the quarter ending September 30, 2019 in the case of the term notes (the "**Waiver Period**"). The only applicable covenant during the Waiver Period is the trailing 12 month Adjusted EBITDA to Interest and Financing Charges ratio (the "**Interest Coverage**" ratio). The Interest Coverage ratio changes each quarter until the fourth quarter of 2019 for term notes after which it remains at 4.0 times, as noted below. Any new or extended Credit Facility could contain new or different covenants and credit limits.

Also after the Waiver Period, the Debt to Adjusted EBITDA ratio covenant of 3.5 times, and the Debt to Book Capitalization ratio covenant of 55 percent will be applicable again.

During the Waiver Period:

- The Debt to Adjusted EBITDA ratio covenant and the Debt to Book Capitalization ratio covenants do not apply.
- The trailing 12 month Interest Coverage minimum ratio covenant is revised as follows:

Year	Q1	Q2	Q3	Q4
2018	—	—	—	1.01 times
2019	1.13 times	1.19 times	1.23 times	4.0 times

The calculation of the Interest Coverage ratio is based on specific definitions within the agreements and may contain adjustments, pursuant to the agreements, some of which cannot be readily replicated by referring to Pengrowth's Consolidated Financial Statements. Trailing 12 month EBITDA can be adjusted for certain one-time cash items, estimated EBITDA from material divested or acquired properties and non-cash items. Trailing 12 month interest and financing charges can be adjusted for the fees and interest expense related to debt repaid with asset divestment proceeds. See table below for more information.

Pengrowth was in compliance with its Interest Coverage ratio at 1.6 times at December 31, 2018, which was above the fourth quarter of 2018 minimum compliance covenant of 1.01 times. Due to the return of the Debt to EBITDA covenant and increase of the Interest Coverage ratio to 4.0 times there remains a risk around Pengrowth's ability to stay in compliance with its debt covenants at the end of 2019. See Note 1 to the December 31, 2018 audited Consolidated Financial Statements for additional information.

All loan agreements and amendments can be found on SEDAR at www.sedar.com filed under "Other" or "Material Document" and on EDGAR at www.sec.gov.

Covenant Calculation

Twelve month trailing actual covenant ⁽¹⁾:

Interest Coverage ratio at December 31, 2018	1.6
Minimum Interest Coverage compliance ratio required at December 31, 2018	1.01

Twelve month trailing Interest Expense (\$ millions):

Dec 31, 2018

Interest and financing charges	49.8
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Twelve month trailing Adjusted EBITDA (\$ millions):

Net income (loss)	(559.3)
Add (deduct):	
Interest and financing charges	49.8
Deferred income tax expense (recovery)	342.2
Depletion, depreciation, amortization and accretion	169.3
Impairment	91.0
(Gain) loss on disposition of properties	1.0
Change in fair value of commodity risk management contracts	(35.6)
Unrealized foreign exchange (gain) loss	14.9
Non-cash share based compensation expense	4.8
Restructuring costs	0.4
Adjusted EBITDA	78.5

⁽¹⁾ Calculation of the financial covenant is based on specific definitions within the agreements and contains adjustments, pursuant to the agreements, some of which cannot be readily replicated by referring to Pengrowth's Consolidated Financial Statements.

Total Debt Before Working Capital

At December 31, 2018 total debt before working capital of \$714.6 million comprised \$541.1 million of term notes and \$173.5 million drawn on the Credit Facility. Compared to December 31, 2017, total debt increased by \$104.1 million at December 31, 2018 as drawings on the Credit Facility increased and weakening Canadian dollar negatively impacted the balance.

As of December 31, 2018, Pengrowth's foreign denominated term notes comprised 73 percent of the total debt before working capital. Each term note is governed by a Note Purchase Agreement. See Note 7 to the December 31, 2018 audited Consolidated Financial Statements for additional information.

Off-Balance Sheet Financing

Pengrowth does not have any off-balance sheet financing arrangements.

WORKING CAPITAL

Working capital surplus or deficiency is calculated as current assets less current liabilities per the Consolidated Balance Sheets. At December 31, 2018, Pengrowth had a working capital deficiency of \$268.8 million as current assets were exceeded by current liabilities mostly due to the Credit Facility balance and term notes maturing in 2019 and presented as a current portion of long term debt on the Consolidated Balance Sheet. See Note 7 to the December 31, 2018 audited Consolidated Financial Statements for further information.

FINANCIAL INSTRUMENTS

Pengrowth uses financial instruments to manage its exposure to commodity price fluctuations and foreign currency exposure. Pengrowth's policy is not to utilize financial instruments for trading or speculative purposes. See Note 2 to the December 31, 2018 audited Consolidated Financial Statements for a description of the accounting policies for financial instruments and Note 16 to the December 31, 2018 audited Consolidated Financial Statements for additional information regarding the fair value of the Corporation's financial instruments.

SUMMARY OF QUARTERLY RESULTS

	2018				2017			
	Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1
Oil and gas sales (\$ millions) ⁽¹⁾	111.2	147.2	147.4	126.4	130.5	125.1	197.9	219.9
Net income (loss) (\$ millions)	(503.0)	(1.6)	(27.5)	(27.2)	(210.4)	(144.7)	(242.4)	(86.3)
Net income (loss) per share (\$)	(0.91)	—	(0.05)	(0.05)	(0.38)	(0.26)	(0.44)	(0.16)
Net income (loss) per share - diluted (\$)	(0.91)	—	(0.05)	(0.05)	(0.38)	(0.26)	(0.44)	(0.16)
Cash flow from operating activities (\$ millions)	9.4	21.8	12.8	(12.3)	28.4	11.8	36.5	65.7
Adjusted funds flow (\$ millions) ⁽²⁾⁽³⁾⁽⁴⁾	(2.3)	15.6	10.1	7.2	13.5	(0.3)	29.3	26.9
Daily production (boe/d)	24,104	21,807	22,600	19,541	24,702	35,072	49,349	52,957
Produced petroleum revenue (\$/boe) ⁽¹⁾⁽⁴⁾	24.80	47.10	42.59	39.97	37.14	28.08	32.56	34.66
Operating netback (\$/boe) ⁽⁴⁾⁽⁵⁾	4.55	18.44	16.00	16.08	16.06	11.06	13.16	13.43

⁽¹⁾ Excludes realized commodity risk management from financial contracts.

⁽²⁾ Fourth quarter of 2017 adjusted funds flow excludes \$34.8 million loss related to the settlement of foreign exchange swap contracts as this was considered a financing activity.

⁽³⁾ First quarter of 2017 adjusted funds flow includes a \$12.7 million loss related to the early settlement of commodity risk management contracts.

⁽⁴⁾ See definition under section "Non-GAAP Financial Measures".

⁽⁵⁾ Includes realized commodity risk management.

Pengrowth recorded a net loss of \$503.0 million in the fourth quarter of 2018 primarily due to derecognition of the deferred tax asset of \$342.2 million related to uncertainty of Pengrowth's ability to realize the deferred tax assets in future years, combined with impairment charges of \$91.0 million and lower adjusted funds flow.

Fourth quarter of 2018 adjusted funds flow decreased from the preceding quarters primarily due to a significant widening of the WCS differential in the quarter coupled with higher cost of diluent. The widening of the WCS differential was mostly mitigated by Pengrowth's WCS physical delivery fixed price differential contracts combined with higher bitumen production in 2018.

Fourth quarter of 2018 produced petroleum revenue per boe decreased compared to all preceding quarters, as per the table above, due to 2017 property dispositions coupled with an unprecedented increase in the WCS to WTI differential in the fourth quarter of 2018.

Oil and gas sales in the fourth quarter of 2018 decreased from all preceding quarters, as per the table above, also due to decreases in benchmark prices and widening of the WCS differential in the fourth quarter of 2018. Compared to 2017, the decrease is also due to property dispositions. Fourth quarter of 2018 operating netbacks, after realized commodity risk management, decreased significantly compared to all preceding quarters of 2018 and 2017 due to a decrease in realized prices in the fourth quarter of 2018 coupled with higher per boe realized commodity risk management losses related to financial swap contracts.

2018 quarterly production was higher than all of the preceding quarters in 2018, but lower than 2017, as per the table above. The increase resulted primarily from increase in bitumen production in the fourth quarter of 2018 and higher production at Groundbirch. 2018 quarterly production was impacted by the absence of production related to properties divested in 2017 and natural declines related to capital spending curtailments.

Quarterly net income (loss), as per the table above, has also been affected by non-cash charges, in particular depletion, depreciation and amortization, impairment charges, accretion of ARO, changes in fair value of commodity risk management contracts, unrealized foreign exchange gains (losses), gains (losses) on property divestments, and deferred income taxes, as applicable. Adjusted funds flow was also impacted by changes in royalty expense, operating expenses and cash G&A costs.

SELECTED ANNUAL INFORMATION

The table below provides a summary of selected annual information for the years ended 2018, 2017 and 2016:

(\$ millions unless otherwise indicated)	Twelve months ended December 31		
	2018	2017	2016
Oil and gas sales ⁽¹⁾	532.2	673.4	566.2
Net income (loss)	(559.3)	(683.8)	(293.7)
Net income (loss) per share (\$)	(1.01)	(1.24)	(0.54)
Net income (loss) per share - diluted (\$)	(1.01)	(1.24)	(0.54)
Total assets	1,344.2	1,910.9	4,117.1
Long term debt ⁽²⁾	714.6	610.5	1,687.3
Shareholders' equity	251.9	806.2	1,485.0
Number of shares outstanding at year end (thousands)	556,117	552,246	547,709

⁽¹⁾ Excluding realized commodity risk management from financial contracts.

⁽²⁾ Includes current and long term portions of long term debt and convertible debentures, as applicable.

COMMITMENTS AND CONTRACTUAL OBLIGATIONS

At December 31, 2018, Pengrowth's commitments are as follows:

(\$ millions)	2019	2020	2021	2022	2023	Thereafter	Total
Operating leases	1.5	1.5	1.5	1.8	1.8	2.1	10.2
Onerous leases	5.1	5.3	5.2	6.0	4.9	5.8	32.3
Pipeline transportation	27.0	33.8	35.1	35.2	35.5	152.4	319.0
Power infrastructure and other	13.6	0.2	0.2	0.2	0.2	3.9	18.3
	47.2	40.8	42.0	43.2	42.4	164.2	379.8

At December 31, 2018, Pengrowth's current and non-current contractual cash flows related to financial liabilities are as follows:

(\$ millions)	Carrying amount	Contractual cash flows	Year 1	Year 2	Years 3-5	More than 5 years
Accounts payable	72.7	72.7	72.7	—	—	—
Commodity risk management contracts	4.2	4.2	4.2	—	—	—
Cdn dollar senior unsecured notes ⁽¹⁾	20.5	25.7	1.4	1.4	22.9	—
U.S. dollar denominated term notes ⁽²⁾	499.5	619.5	70.7	152.5	169.0	227.3
U.K. pound sterling denominated term notes ⁽²⁾	21.1	22.0	22.0	—	—	—
Cdn dollar term Credit Facility borrowings ⁽¹⁾	173.5	176.1	176.1	—	—	—
Finance leases	33.4	72.3	4.2	4.2	12.6	51.3
Other liabilities	1.7	1.7	0.1	0.1	—	1.5

⁽¹⁾ Contractual cash flows include future interest payments.

⁽²⁾ Contractual cash flows include future interest payments and term notes calculated at December 31, 2018 period end exchange rate.

BUSINESS RISKS

The following factors should not be considered exhaustive. Additional risks which should be considered are outlined in the Corporation's most recent Annual Information Form ("AIF") which is available on SEDAR at www.sedar.com and EDGAR at www.sec.gov.

The value of Pengrowth common shares is subject to numerous risk factors. Pengrowth's principal source of net cash flow is from Pengrowth's portfolio of producing oil and natural gas properties. Some of the principal risk factors that are associated with Pengrowth's business include, but are not limited to, the following:

Risks associated with Commodity Prices

- The prices of Pengrowth's products (crude oil, bitumen, natural gas and NGLs) fluctuate due to many factors including local and global market supply and demand, weather patterns, availability of pipeline and rail transportation capacity, availability of refining capacity, discount for Western Canadian light oil, bitumen and natural gas, and political and economic stability.
- Production could be shut-in at specific wells or fields in times of low commodity prices or lack of available shipping capacity.
- Substantial and sustained reductions in commodity prices or equity and debt markets, including Pengrowth's share price, in some circumstances could result in Pengrowth recording an impairment loss as well as affect Pengrowth's ability to spend capital, develop its properties, reinstate or maintain a dividend on its shares, service its debt and meet its other obligations. An impairment test is sensitive to lower realized commodity prices, which have been under significant downward pressure in recent years. Declines in commodity prices could result in impairment charges as the cushions in the CGU impairment tests have been eroded by commodity price decreases.

Risks associated with Liquidity

- Capital markets may restrict Pengrowth's access to capital and raise its cost of capital and borrowing costs. To the extent that external sources of capital become limited or cost prohibitive, Pengrowth's ability to fund future development and acquisition opportunities and to repay or refinance indebtedness when due may be impaired.
- Pengrowth is exposed to third party credit risk through its oil and gas sales, financial hedging transactions and joint venture activities. The failure of any counterparties to meet their contractual obligations could adversely impact Pengrowth.
- Changing interest rates influence borrowing costs and the availability of capital.
- Failing a financial covenant may result in one or more of Pengrowth's loans being in default. In most circumstances, being in default of one loan will result in other loans also being in default and restrict access to the Credit Facility. If an event a non-compliance occurs and cannot be remedied during an applicable remedy period, if any, Pengrowth would have to repay the relevant debt, refinance the debt or negotiate new terms with the debt holders. As a result, a significant uncertainty related to these events and conditions exists which raise substantial doubt about whether the Corporation will continue as a going concern, and therefore, whether it will realize its assets and settle its liabilities in the normal course of business and at the amounts stated in the financial statements.
- In event of default on Pengrowth's debt, the net proceeds of any foreclosure sale would be allocated to the repayment of the lenders, note holders and other creditors and only the remainder, if any, would be available for distribution to the shareholders.
- Uncertainty in international financial markets could lead to constrained capital markets, increased cost of capital and negative impact on economic activity and commodity prices.

Risks associated with Debt Portfolio

- Pengrowth is currently working towards an extension on its Credit Facility until September 30, 2019, which management expects to provide sufficient time to finalize the refinancing of Pengrowth's term notes due October 18, 2019. Pengrowth is in discussions with the lead banks in its syndicate to amend the existing Credit Facility to permit the refinancing of the existing term notes. Alternative financing arrangements for replacement debt will likely be at a higher cost than the current arrangements. There can be no assurance or guarantee that an extension will be obtained by the Corporation.
- Although Pengrowth plans to settle the term notes with internally generated cash flow, there remains material risk that Pengrowth will be unable to do so as a result of uncertainty related to rapid deterioration of commodity prices, uncertainty around improvements in global prices, and uncertainty around timing of refinancing of Pengrowth's debt portfolio. There also remains a risk around Pengrowth's ability to stay in compliance with its debt covenants at the end of 2019.
- Until such time that the term notes are refinanced, there is material uncertainty related to these events and conditions that may cast significant doubt whether the Corporation will continue as a going concern, and therefore, whether it will realize its assets and settle its liabilities in the normal course of business and at the amounts stated in the financial statements.

Risks associated with Legislation and Regulatory Changes

- Government royalties, income taxes, commodity and other taxes, levies, fees and any audits may have a significant economic impact on Pengrowth's financial results. Changes to federal and provincial legislation governing such royalties, taxes and fees could have a material impact on Pengrowth's financial results and the value of Pengrowth's common shares.
- Environmental laws and regulatory initiatives impact Pengrowth financially and operationally. The Corporation may incur substantial capital and operating expenses to comply with increasingly complex laws and regulations covering the protection of the environment and human health and safety. In particular, Pengrowth may be required to incur significant costs to comply with future regulations to reduce greenhouse gas and other emissions.
- Regulations surrounding the fracture stimulation of wells, including increasing disclosure and restrictions, differ and depend on the area of operation. Pengrowth may have to adjust its operational practices, increase compliance and incur additional costs as a result.
- Changes to accounting policies may result in significant adjustments to Pengrowth's financial results, which could negatively impact Pengrowth's business, including increasing the risk of failing a financial covenant contained within the Credit Facility or term debt.

Risks associated with Operations

- The marketability of Pengrowth's production depends in part upon the availability, proximity and capacity of gathering systems, pipelines, rail lines and processing facilities. Operational or economic factors may result in the inability to deliver the products to market.
- Competition for properties could drive the cost of acquisitions up and expected returns from the properties down.
- Timing of oil and gas operations is dependent on gaining timely access to lands. Consultations, that are mandated by governing authorities, with all stakeholders (including surface owners, First Nations and all interested parties) are becoming increasingly time consuming and complex, and have a direct impact on cycle times.
- Limitations on the availability of specialized equipment, goods and services, during periods of increased activity within the oil and gas sector, may adversely impact timing of operations.
- Oil and gas operations can be negatively impacted by certain weather conditions, including floods, forest fires and other natural events, which may restrict production and/or delay drilling activities.
- Some of Pengrowth's properties are operated by third parties whereby Pengrowth has less control over the pace of capital and operating expenditures. If these operators fail to perform their duties properly, or become insolvent, Pengrowth may experience interruptions in production and revenues from these properties or incur additional liabilities and expenses as a result of the default of these third party operators.
- Geological and operational risks affect the quantity and quality of reserves and the costs of recovering those reserves. Pengrowth's actual results will vary from the reserve estimates and those variations could be material.
- Oil and gas operations carry the risk of damaging the local environment in the event of equipment or operational failure. The cost to remediate any environmental damage could be significant.
- Delays in business operations could adversely affect the market price of the common shares.
- During periods of increased activity within the oil and gas sector, the cost of goods and services may increase substantially and it may be more difficult to hire and retain staff and the cost for skilled labour may increase substantially.
- Attacks against facilities, or the threat thereof, may have an adverse impact on Pengrowth and the implementation of security measures as a precaution against possible attacks would result in increased cost to Pengrowth's business.
- Actual production and reserves will vary from estimates, and those variations could be material and may negatively affect the market price of the common shares.
- Delays or failure to secure regulatory approvals for projects may result in capital being spent with reduced economics, reduced or no further reserves being booked, and reduced or no associated future production and cash flow.

- The Corporation has substantial future asset retirement obligations. There is a risk that the magnitude of these payments may be larger than expected and that the timing of such payments may accelerate. Either of these factors could increase financial costs for the Corporation.
- The performance and results of a thermal project such as Lindbergh is dependent on the ability of the steam to access the reservoir and efficiently move additional bitumen that would otherwise remain trapped within the reservoir rock. The amount and cost of steam required, the additional oil recovered, the quality of the oil produced, the ability to recycle produced water into steam and the ability to manage costs will determine the economic viability for a thermal project.
- The success of a thermal project such as Lindbergh will depend, in part, on Pengrowth's ability to sell the production at a desirable price. Current transportation and refining constraints have resulted in a volatile price environment with a substantial discount (differential) being paid for bitumen.

Risks associated with Strategy

- Capital re-investment on Pengrowth's existing assets may not yield the expected benefits and related value creation. Drilling opportunities may prove to be more costly or less productive than anticipated.
- Pengrowth's oil and gas reserves will be depleted over time and the level of cash flow from operations and the value of Pengrowth's common shares could materially decrease if reserves and production are not replaced. The ability to replace production depends on the amount of capital invested and success in developing existing reserves, acquiring new reserves and financing this development and acquisition activity within the context of the capital markets.
- Incorrect assessments of value at the time of acquisitions could adversely affect the value of Pengrowth's common shares.
- The market price of the common shares could be adversely affected by unforeseen title defects.

Asset Concentration Risks

- With the sale of over \$2.3 billion of assets since 2012, in part to fund the first commercial phase of Lindbergh, Pengrowth's assets have become less diversified and increasingly concentrated in one project (Lindbergh), product type (bitumen) and one area/formation (the Lloydminster formation). A failure to execute at Lindbergh (whether as a result of capital constraints, operational issues or otherwise) or any of the Corporation's remaining core properties could have a significant adverse effect on Pengrowth.

Foreign Currency Risk

- Pengrowth has substantial exposure to the U.S. dollar. Any decrease in the Canadian dollar relative to the U.S. dollar results in an increase in the Canadian dollar equivalent of Pengrowth's U.S. dollar denominated term debt as Pengrowth reports and prepares its covenant calculations in Canadian dollars. A significant decrease in the value of the Canadian dollar relative to the U.S. dollar could cause Pengrowth to be in violation of its debt covenants resulting in Pengrowth being in default under its borrowing agreements.

General Business Risks

- Investors' interest in the oil and gas sector change over time which affects the availability of capital and the value of Pengrowth common shares.
- Pengrowth is subject to a variety of information technology and system risks, including potential breakdown, invasion, virus, cyber-attack, cyber-fraud, security breach, and destruction or interruption of our information technology systems by third parties or insiders which could lead to corruption or exposure of confidential, fiduciary or proprietary information, interruption to communications or operations or disruption to our business activities or our competitive position. It could also result in material financial loss, regulatory action and sanctions, reputational harm and/or legal liability, which, in turn, could materially adversely affect our business, financial condition or profitability.
- Inflation may result in escalating costs, which could impact the value of Pengrowth's common shares.
- Canadian / U.S. exchange rates influence revenues and, to a lesser extent, operating and capital costs. Pengrowth is also exposed to foreign currency fluctuations on the U.S. dollar denominated term debt for both interest and principal payments.

- Failure to receive regulatory approval or the expiry of the rights to explore for E&E assets could lead to the impairment of E&E assets.

These factors should not be considered exhaustive. Additional risks are outlined in the AIF of the Corporation which is available on SEDAR at www.sedar.com and EDGAR at www.sec.gov.

CRITICAL ACCOUNTING ESTIMATES

The audited Consolidated Financial Statements are prepared in accordance with IFRS. The preparation of these Consolidated Financial Statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingencies at the date of the audited Consolidated Financial Statements and revenues and expenses during the reporting period. Actual results could differ from those estimated.

In particular, information about significant areas of estimation uncertainty and critical judgments in applying accounting policies that have the most significant effect on the amounts recognized in the audited Consolidated Financial Statements is described below:

Estimating oil and gas reserves and contingent resources

Pengrowth engages a qualified, independent oil and gas reserves evaluator to perform an estimation of the Corporation's oil and gas reserves at least annually and contingent resources on an ad hoc basis. Reserves form the basis for the calculation of depletion charges, while oil and gas reserves and contingent resources are used in the assessment of impairment of oil and gas assets. Reserves and contingent resources are estimated using the reserve definitions and guidelines prescribed by National Instrument 51-101 ("**NI 51-101**") and the Canadian Oil and Gas Evaluation Handbook ("**COGEH**").

Proved plus probable reserves are defined as the "best estimate" of quantities of oil, natural gas and related substances estimated to be commercially recoverable from known accumulations, from a given date forward, based on drilling, geological, geophysical and engineering data, the use of established technology and specified economic conditions. It is equally likely that the actual remaining quantities recovered will be greater than or less than the sum of the estimated proved plus probable reserves. The estimates are made using all available geological and reservoir data as well as historical production data. Estimates are reviewed and revised as appropriate. Revisions occur as a result of changes in prices, costs, fiscal regimes and reservoir performance or a change in Pengrowth's plans with respect to future development or operating practices.

Contingent resources are those quantities of petroleum estimated, as of a given date, to be potentially recoverable from known accumulations using established technology or technology under development, but which are not currently considered to be commercially recoverable due to one or more contingencies. Contingencies may include factors such as economic, legal, environmental, political and regulatory matters or a lack of markets. Contingent resources do not constitute, and should not be confused with, reserves.

Determination of Cash Generating Units ("CGUs")

CGUs are the smallest group of assets that generate cash inflows from continuing use that are largely independent of the cash inflows of other assets or groups of assets. The recoverability of development and production asset carrying values are assessed at the CGU level. Determination of what constitutes a CGU is subject to management's judgment. The asset composition of a CGU can directly impact the recoverability of the assets included therein. In assessing the recoverability of oil and gas properties, each CGU's carrying value is compared to its recoverable amount, defined as the greater of fair value less costs to sell and value in use.

Asset Retirement Obligations

Pengrowth estimates obligations under environmental regulations in respect of decommissioning and site restoration. These obligations are determined based on the expected present value of expenses required in the process of plugging and abandoning wells, dismantling of wellheads, production and transportation facilities and restoration of producing areas in accordance with relevant legislation, discounted from the date when expenses are expected to be incurred. Most of the abandonment of Pengrowth's wells is estimated to take place far in the future. Therefore, changes in estimated timing of future expenses, estimated logistics of performing abandonment work, the inflation assumption, and the discount rate used to present value future expenses could have a significant effect on the carrying amount of the decommissioning provision. Pengrowth uses the 30 year Canadian Government long term bond rate to estimate its ARO discount rate.

Pengrowth's ARO risk free discount rate and ARO specific inflation rate was 2.3 percent and 2.0 percent, respectively, at December 31, 2018.

Impairment testing

CGUs without associated goodwill are tested when there is an indication of impairment. The test is based on estimates of proved plus probable reserves, production rates, oil and natural gas prices, future costs, discount rate and other relevant assumptions. Undeveloped land, contingent resources and infrastructure may also be considered, if applicable. By their nature, these estimates are subject to measurement uncertainty and may impact the Consolidated Financial Statements of future periods.

Fair value of risk management contracts

Pengrowth records risk management contracts at fair value with changes in fair value recognized in the Consolidated Statements of Income (Loss). The fair values are determined using observable market data and external counterparty information.

COMPARATIVE FIGURES

Certain prior years' comparative figures have been reclassified to conform to presentation in the current year.

ACCOUNTING PRONOUNCEMENTS ADOPTED

IFRS 9 Financial Instruments

On January 1, 2018, Pengrowth adopted all of the requirements of IFRS 9 (2014), Financial Instruments ("**IFRS 9**"). This standard replaces IAS 39 - Financial Instruments: recognition and measurement ("**IAS 39**") and introduces new requirements for the classification and measurement of financial assets and liabilities. It introduces a new general hedge accounting standard, which aligns hedge accounting more closely with risk management. It also modifies the existing impairment model by introducing a new 'expected credit loss' model for calculating impairment. This new standard also increases required disclosures about an entity's risk management strategy, cash flows from hedging activities and the impact of hedge accounting on the consolidated financial statements. Pengrowth has applied IFRS 9 retrospectively in accordance with transition requirements with no impact to opening retained earnings or comparative periods.

IFRS 9 uses a single approach to determine whether a financial asset is measured at amortized cost or fair value, replacing the multiple rules in IAS 39. The approach is based on how an entity manages its financial instruments and the contractual cash flow characteristics of the financial assets. Most of the requirements in IAS 39 for classification and measurement of financial liabilities have been carried forward in IFRS 9.

The adoption of IFRS 9 did not result in any measurement adjustments to Pengrowth's financial assets or financial liabilities. The impact of the change in the impairment model was not significant as the credit-impaired financial assets are not significant.

The adoption of IFRS 9 did not result in any changes in the eligibility of existing hedge relationships. Pengrowth currently has no intentions of designating any of its financial instruments as hedges, or using hedge accounting.

ACCOUNTING PRONOUNCEMENTS NOT YET ADOPTED

IFRS 16 Leases

In January 2016, the IASB issued IFRS 16 Leases ("**IFRS 16**") which replaces IAS 17, Leases. The effective date of IFRS 16 is for annual periods beginning on or after January 1, 2019 and early adoption is permitted. Under IFRS 16, a single recognition and measurement model will apply for lessees which will require recognition of assets and liabilities for most leases. Pengrowth is in the final stages of analyzing identified contracts, developing business and accounting processes, making applicable changes to the Corporation's internal controls and calculating the impact that the adoption of this standard will have on its financial statements. Pengrowth has elected to use the modified retrospective approach upon adoption and elected to apply the optional exemptions for short-term and low-value leases. The actual full impact of adoption will depend on the Corporation's incremental borrowing rate, lease portfolio and practical expedients applied. However, Pengrowth anticipates that the most significant impact of adopting IFRS 16 will be the recognition of the lease liabilities on its leases for head office space and the right of use ("**ROU**") assets, as applicable.

Upon adoption of IFRS 16, the Corporation will recognize lease liabilities and ROU assets for all leases identified except for optional exemptions taken. The lease liability will be measured at the present value of the remaining lease payments, discounted using Pengrowth's incremental borrowing rate as at January 1, 2019. The ROU asset will be measured at the amount equal to the lease liability on January 1, 2019 with no impact on retained earnings.

Adoption of IFRS 16 will also result in an increase to Depletion, Depreciation and Amortization due to the recognition of the ROU assets, increase in interest and financing charges, and a decrease to G&A and operating expenses, as applicable. Cash flow from operating activities will increase as a result of the decrease in G&A and operating expenses, as applicable. Cash flow from financing activities will decrease due to the deduction of the interest portion of the principal payments for former operating leases.

OPERATIONAL MEASURES

The reserves and production in this MD&A refer to company-interest reserves or production that is Pengrowth's working interest share of production or reserves prior to the deduction of Crown and other royalties plus any Pengrowth-owned royalty interest in production or reserves at the wellhead, in accordance with Canadian industry practice. Company-interest is more fully described in the AIF.

When converting natural gas to equivalent barrels of oil within this MD&A, Pengrowth uses the industry standard of six Mcf to one boe. Barrels of oil equivalent may be misleading, particularly if used in isolation; a conversion ratio of six Mcf of natural gas to one boe is based on an energy equivalency conversion method primarily applicable to the burner tip and does not represent a value equivalency at the wellhead.

Steam Oil Ratio measures the rate of steam required to produce a barrel of bitumen. This can be expressed either as an average or at a point in time.

These measures do not have standardized meanings and may not be comparable to similar measures presented by other oil and gas companies.

NON-GAAP FINANCIAL MEASURES

This MD&A refers to certain financial measures that are not determined in accordance with IFRS. These measures do not have standardized meanings and may not be comparable to similar measures presented by other oil and gas companies.

Management monitors Pengrowth's capital structure and covenant compliance using non-GAAP financial metrics some of which are discussed in the Financial Resources and Liquidity section of this MD&A. These metrics are:

- trailing twelve months earnings before interest, taxes, DD&A, accretion ("**EBITDA**"), impairment, gain (loss) on disposition of properties, change in fair value of commodity risk management contracts, unrealized foreign exchange gain (loss), non-cash share based compensation expense, restructuring costs and EBITDA related to material divestments ("**Adjusted EBITDA**");
- Adjusted EBITDA to Interest and Financing Charges (the "**Interest Coverage**" ratio);
- Total debt before working capital to the trailing twelve months Adjusted EBITDA; and
- Total debt before working capital as a percentage of total book capitalization ("**Debt to Book Capitalization**").

In calculating certain covenants, letters of credit and finance leases are incorporated in total debt before working capital for covenant purposes. Trailing 12 month interest and financing charges can be adjusted for the fees and interest expense related to debt repaid with asset divestment proceeds. Total book capitalization is the sum of total debt before working capital for covenant purposes and shareholders' equity.

Management believes that, in addition to net income (loss), adjusted net income (loss) is a useful supplemental measure as it reflects the underlying performance of Pengrowth's core business activities. Net income (loss) may significantly be impacted by non-cash changes in fair value of commodity risk management contracts and unrealized foreign exchange gains and losses while adjusted net income (loss) excludes the after-tax effect of items which do not represent Pengrowth's core business activities.

Management considers adjusted funds flow to be a key measure of performance as it demonstrates Pengrowth's ability to generate the necessary funds for sustaining capital, future growth through capital investment, and to repay debt. Management believes that such a measure provides an insightful assessment of Pengrowth's operations on a continuing basis by eliminating changes in non-cash operating working capital and actual settlements of ARO which substantially

relate to SOEP and are pre funded by an externally managed trust fund. Adjusted funds flow per share is calculated by dividing adjusted funds flow and the weighted average number of shares outstanding.

Free funds flow is defined as adjusted funds flow less capital expenditures. Management believes this is a useful supplemental measure as it reflects funds available for debt repayment.

Produced petroleum revenue is a useful measure of revenue as it only includes the revenue from company interest production, by excluding processing income and revenue from purchased products, such as diluent and other third party volumes. Produced petroleum revenue reflects natural gas sales related to a portion of natural gas delivered from Groundbirch onto the NGTL system and used in other operations as energy costs. This measure can be expressed on a per boe basis.

Adjusted operating expenses are calculated as operating expenses less processing income primarily generated by processing third party volumes at processing facilities where Pengrowth has an ownership interest, and can be expressed on a per boe basis. Adjusted operating expenses include the cost of a portion of natural gas delivered from the NGTL system and used in operations as energy costs. Management believes this is a useful supplemental measure as it reflects the cash outlay at its processing facilities, being after cost recoveries earned by utilizing spare capacity through processing third party volumes.

Royalty expenses as a percent of produced petroleum revenue is a useful measure as it reflects overall royalty percentage related to revenues which are subject to royalties.

Pengrowth's operating netbacks are defined as produced petroleum revenue, less royalties, less adjusted operating expenses and less transportation expenses divided by production for the period. Operating netbacks can be expressed either before or after realized commodity risk management. Operating netbacks may not be comparable to similar measures presented by other companies, as there are no standardized measures.

Management believes that segregating G&A expenses into cash and non-cash expenses is useful to the reader, as non-cash expenses only affect net income (loss) but not adjusted funds flow. Cash and non-cash G&A expenses per boe are calculated by dividing cash and non-cash G&A expenses by production for the period.

Adjusted Funds Flow

The following table provides a reconciliation of cash flow from operating activities to adjusted funds flow:

(\$ millions)	Three months ended		Twelve months ended	
	Dec 31, 2018	Dec 31, 2017	Dec 31, 2018	Dec 31, 2017
Cash flow from operating activities	9.4	28.4	31.7	142.4
Add (deduct):				
Interest and financing charges	(13.8)	(12.4)	(49.8)	(70.7)
Expenditures on remediation	9.1	2.8	23.2	15.9
Change in non-cash operating working capital	(7.0)	(5.3)	25.5	(18.2)
Total	(11.7)	(14.9)	(1.1)	(73.0)
Adjusted funds flow	(2.3)	13.5	30.6	69.4

The following table represents a continuity of adjusted funds flow:

(\$ millions)	Q4/17 vs. Q4/18		2017 vs. 2018	
	Q4/17	13.5	2017	69.4
Adjusted funds flow for comparative period				
Increase (decrease) due to:				
Volumes		(2.9)		(222.1)
Prices including differentials		(26.5)		43.1
Realized commodity risk management		(3.8)		(47.7)
Royalties		4.3		21.6
Expenses:				
Adjusted operating		3.8		113.7
Cash G&A		8.4		26.7
Interest & financing		(1.4)		20.9
Onerous office lease payments		(0.6)		(4.9)
Restructuring costs - severance		1.2		8.4
Other - including transportation		1.7		1.5
Net change		(15.8)		(38.8)
Adjusted funds flow	Q4/18	(2.3)	2018	30.6

Adjusted Net Income (Loss)

The following table provides a reconciliation of net income (loss) to adjusted net income (loss):

(\$ millions)	Three months ended		Twelve months ended	
	Dec 31, 2018	Dec 31, 2017	Dec 31, 2018	Dec 31, 2017
Net income (loss)	(503.0)	(210.4)	(559.3)	(683.8)
Exclude non-cash items from net income (loss):				
Change in fair value of commodity risk management contracts	22.2	(33.3)	35.6	14.2
Unrealized foreign exchange gain (loss) ⁽¹⁾	(8.8)	31.0	(14.9)	51.4
Tax effect on non-cash items above	(6.0)	9.0	(9.6)	(3.8)
Tax adjustment	(355.4)	—	(342.2)	—
Total excluded	(348.0)	6.7	(331.1)	61.8
Adjusted net income (loss) ⁽²⁾	(155.0)	(217.1)	(228.2)	(745.6)

⁽¹⁾ Relates to the foreign denominated debt net of associated foreign exchange risk management contracts.

⁽²⁾ Fourth quarter of 2018 adjusted net loss incorporated \$91.0 million of impairment charges and \$32.0 million of depletion related to properties at the end of useful life. Fourth quarter of 2017 adjusted net loss incorporated \$130.0 million of impairment charges.

The following table represents a continuity of adjusted net income (loss):

(\$ millions)	Q4/17 vs. Q4/18		2017 vs. 2018	
	Q4/17	(217.1)	2017	(745.6)
Adjusted net income (loss) for comparative period				
Adjusted funds flow increase (decrease)		(15.8)		(38.8)
DD&A and accretion expense (increase) decrease		(32.8)		49.7
Impairment charges (increase) decrease		39.0		543.4
Realized foreign exchange gain (loss) on derivative settlements		34.8		37.6
Loss on property dispositions (increase) decrease		15.9		61.6
Onerous lease contracts		18.5		22.9
Onerous office lease payments		0.6		4.9
Loss on extinguishment of debt		49.2		56.7
Other		(4.7)		(2.6)
Change in tax		(42.6)		(218.0)
Net change		62.1		517.4
Adjusted net income (loss)	Q4/18	(155.0)	2018	(228.2)

Sensitivity of Adjusted Funds Flow to Commodity Prices

The following table illustrates the sensitivity of adjusted funds flow to increases in commodity prices and differentials after taking into account Pengrowth's commodity risk management contracts and outlook on oil differentials. See Note 16 to the December 31, 2018 audited Consolidated Financial Statements for more information on Pengrowth's risk management contracts. The calculated impact on revenue/cash flow is only applicable within a limited range of the change indicated and is based on production guidance levels contained herein.

COMMODITY PRICE ENVIRONMENT ⁽¹⁾		Assumption	Change	Estimated Impact on 12 Month Adjusted Funds Flow (Cdn\$ millions)
West Texas Intermediate Oil ⁽²⁾		U.S.\$/bbl	\$53.69	\$1.00
	Bitumen			8.1
	Light oil			0.2
Net impact of U.S.\$1/bbl increase in WTI				8.3
Oil differentials ⁽²⁾				
	Bitumen	U.S.\$/bbl	\$16.62	\$1.00
	Light oil	U.S.\$/bbl	\$7.74	\$1.00
	Physical oil differential risk management ⁽³⁾			8.4
Net impact of U.S.\$1/bbl increase in differentials				0.1
AECO Natural Gas ⁽²⁾		Cdn\$/Mcf	\$1.67	\$0.10
	Natural gas			1.0
Net impact of Cdn\$0.10/Mcf increase in AECO				1.0

⁽¹⁾ Calculations are performed independently and are not indicative of actual results when multiple variables change at the same time. The exchange rate of Cdn \$1 = U.S.\$0.76 was used for the 12 month period.

⁽²⁾ Commodity price is based on an estimation of the 12 month forward price curve at January 14, 2019 and does not include the impact of commodity risk management contracts.

⁽³⁾ Reflects 2019 physical delivery contracts for 12,500 bbl/d of dilbit and financial swaps for 5,000 bbl/d of dilbit. See Commodity Prices section of this MD&A for more information.

DISCLOSURE AND INTERNAL CONTROLS

As a Canadian reporting issuer with securities listed on the TSX and an SEC registrant, Pengrowth is required to comply with Multilateral Instrument 52-109 - Certification of Disclosure in Issuers' Annual and Interim Filings, as well as the Sarbanes Oxley Act ("SOX") enacted in the United States. Both the Canadian and U.S. certification rules include similar requirements where both the Chief Executive Officer ("CEO") and the Chief Financial Officer ("CFO") must assess and certify as to the effectiveness of the disclosure controls and procedures as defined in Canada by Multilateral Instrument 52-109 - Certification of Disclosure in Issuers' Annual and Interim Filings and in the United States by Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended.

Management, with the participation of the CEO, Peter Sametz, and the CFO, Christopher Webster, evaluated the effectiveness of Pengrowth's disclosure controls and procedures for the year ending December 31, 2018. This evaluation considered the functions performed by its Disclosure Committee, the review and oversight of all executive officers and the Board, as well as the process and systems in place for filing regulatory and public information. Pengrowth's established review process and disclosure controls are designed to provide reasonable assurance that all required information, reports and filings required under Canadian securities legislation and United States securities laws are properly submitted and recorded in accordance with those requirements.

Based on that evaluation, the CEO and CFO concluded that the design and operation of Pengrowth's disclosure controls and procedures were effective at the reasonable assurance level as at December 31, 2018, to ensure that information required to be disclosed by us in reports that we file under Canadian and U.S. securities laws is gathered, recorded, processed, summarized and reported within the time periods specified under Canadian and U.S. securities laws and is accumulated and communicated to the management of Pengrowth Energy Corporation, including the CEO and CFO, to allow timely decisions regarding required disclosure as required under Canadian and U.S. securities laws.

It should be noted that while Pengrowth's CEO and CFO believe that Pengrowth's disclosure controls and procedures provide a reasonable level of assurance that they are effective, they do not expect that Pengrowth's disclosure controls and procedures or internal control over financial reporting will prevent all errors and fraud. A control system, no matter how well conceived or operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met.

INTERNAL CONTROL OVER FINANCIAL REPORTING

Pengrowth's management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Act of 1934, as amended and in Canada as defined in Multilateral Instrument 52-109 - Certification of Disclosure in Issuers' Annual and Interim Filings. Pengrowth's internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of Pengrowth's financial reporting and the preparation of Pengrowth's Consolidated Financial Statements for external purposes in accordance with IFRS. Pengrowth's internal control over financial reporting includes those policies and procedures that: pertain to the maintenance of records that in reasonable detail accurately and fairly reflect Pengrowth's transactions and disposition of the assets; provide reasonable assurance that transactions are recorded as necessary to permit preparation of Pengrowth's Consolidated Financial Statements in accordance with IFRS and that receipts and expenditures of Pengrowth's assets are being made only in accordance with authorizations of Pengrowth's management and directors; and provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of Pengrowth's assets that could have a material effect on Pengrowth's Consolidated Financial Statements. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Pengrowth's management, with the participation of Pengrowth's principal executive officer and principal financial officer, evaluated the effectiveness of Pengrowth's internal control over financial reporting as of December 31, 2018. In making this evaluation, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission ("**COSO**") in Internal Control-Integrated Framework (2013).

Based on Pengrowth's evaluation, management concluded that Pengrowth's internal control over financial reporting was effective as at December 31, 2018.

The effectiveness of internal control over financial reporting as at December 31, 2018 was audited by KPMG LLP, an independent registered public accounting firm, as stated in their attestation report, which is included with Pengrowth's audited Consolidated Financial Statements for the year ended December 31, 2018. No changes were made to Pengrowth's internal control over financial reporting during the year ending December 31, 2018 that have materially affected, or are reasonably likely to materially affect, the internal controls over financial reporting.

ADVISORY REGARDING FORWARD-LOOKING STATEMENTS

This MD&A contains forward-looking statements within the meaning of securities laws, including the "safe harbour" provisions of Canadian securities legislation and applicable U.S. securities legislation including the United States Private Securities Litigation Reform Act of 1995. Forward-looking information is often, but not always, identified by the use of words such as "anticipate", "believe", "expect", "plan", "intend", "forecast", "target", "project", "guidance", "may", "will", "should", "could", "estimate", "predict" or similar words suggesting future outcomes or language suggesting an outlook.

Forward-looking statements in this MD&A include, but are not limited to, statements with respect to: reserves, production, asset carrying amounts, amount and classification of liabilities, the proportion of production of each product type, Pengrowth's 2019 guidance, production additions from Pengrowth's development program, Pengrowth's business plan, the geological characteristics of Pengrowth's properties, royalty expenses, operating expenses, tax horizon, deferred income taxes, management's expectations as to tax and royalty receivables, ARO, remediation, reclamation and abandonment expenses, clean-up and remediation costs, impact of Climate Leadership Plan; adoption of new accounting pronouncements, capital expenditures, development activities, cash G&A, onerous office lease contracts, Lindbergh expansion plans, flexibility of Pengrowth to change its capital spending plans, production capacity, anticipated benefits from the disposal of properties and timing thereof, ability of management to manage exposure to commodity price fluctuations, the availability and cost of capital, the ability of Pengrowth to pay its current and future debt obligations and stay in compliance with its current and future debt covenants, the ability of Pengrowth to obtain alternative debt financing and amend its financial covenants, anticipated free funds flow and use of free funds flow to pay down debt, the ability of Pengrowth to finalize the refinancing of the term notes, the ability of Pengrowth to realize its assets and settle its liabilities in the normal course of business and at the amounts stated in the financial statements, the ability of Pengrowth's Groundbirch property to fulfill Lindbergh's natural gas needs, management's ability to mitigate impact of Alberta's curtailment program, the continued assessment of co-generation capacity at Lindbergh, the anticipated impact of the implementation of NCG to enhance production and lower SORs, and the ability of Pengrowth to remain a going concern. Statements relating to "reserves" are forward-looking statements, as they involve the implied assessment, based on certain estimates and assumptions that the reserves described exist in the quantities predicted or estimated and can profitably be produced in the future.

Forward-looking statements and information are based on Pengrowth's current beliefs as well as assumptions made by, and information currently available to, Pengrowth concerning general economic and financial market conditions, anticipated financial performance, business prospects, strategies, regulatory developments, including in respect of taxation, royalty rates and environmental protection, future capital expenditures and the timing thereof, future oil and natural gas commodity prices and differentials between light oil and bitumen prices, future oil and natural gas production levels, future exchange rates and interest rates, the amount of future cash dividends paid by Pengrowth or the lack thereof, the cost of expanding our property holdings, our ability to obtain labour and equipment in a timely manner to carry out development activities, our ability to market our oil and natural gas successfully to current and new customers including transportation availability, the impact of increasing competition, our ability to obtain financing on acceptable terms and meet financial covenants, our ability to add production and reserves through our development, exploitation and exploration activities, our ability to pay our current and future debt obligations and stay in compliance with our current and future debt covenants, our ability to obtain alternative debt financing and amend our financial covenants, and our ability to remain a going concern. Although management considers these assumptions to be reasonable based on information currently available to it, they may prove to be incorrect.

By their very nature, forward-looking statements involve inherent risks and uncertainties, both general and specific, and risks that predictions, forecasts, projections and other forward-looking statements will not be achieved. We caution readers not to place undue reliance on these statements as a number of important factors could cause the actual results to differ materially from the beliefs, plans, objectives, expectations and anticipations, estimates and intentions expressed in such forward-looking statements. These factors include, but are not limited to: the risks associated with the oil and gas industry in general; volatility of oil and gas prices; Canadian light oil and bitumen differentials; production and development costs and capital expenditures; the imprecision of reserve estimates and estimates of recoverable quantities of oil, natural gas and liquids; Pengrowth's ability to replace and expand oil and gas reserves, ability to produce those reserves; production may be impacted by unforeseen events such as equipment and transportation failures and weather related issues; environmental claims and liabilities; incorrect assessments of value when making acquisitions; increases in debt service charges; the loss of key personnel; the marketability of production; defaults by third party operators; unforeseen title defects; fluctuations in foreign currency and exchange rates; inadequate insurance coverage; counterparty risk; compliance with environmental laws and regulations; actions by government authorities,

including the imposition or reassessment of taxes including changes in income taxes and royalty laws; Pengrowth's ability to access external sources of debt and equity capital; Pengrowth's inability to refinance term notes and /or existing Credit Facility; new IFRS and the impact on Pengrowth's financial statements; and the implementation of greenhouse gas emissions legislation and the impact of carbon taxes; and Pengrowth's ability to remain a going concern. Further information regarding these factors may be found under the heading "Business Risks" herein and under "Risk Factors" in Pengrowth's most recent AIF, and in Pengrowth's most recent audited annual Consolidated Financial Statements, management information circular, quarterly reports, material change reports and news releases. Copies of Pengrowth's public filings are available on SEDAR at www.sedar.com and EDGAR at www.sec.gov.

Pengrowth cautions that the foregoing list of factors that may affect future results is not exhaustive. When relying on our forward-looking statements to make decisions with respect to Pengrowth, investors and others should carefully consider the foregoing factors and other uncertainties and potential events. Furthermore, the forward-looking statements contained in this MD&A are made as of the date of this MD&A and Pengrowth does not undertake any obligation to update publicly or to revise any of the included forward-looking statements, except as required by law. The forward-looking statements in this document are provided for the limited purpose of enabling current and potential investors to evaluate an investment in Pengrowth. Readers are cautioned that such statements may not be appropriate, and should not be used for other purposes.

The forward-looking statements contained in this MD&A are expressly qualified by this cautionary statement.

GLOSSARY AND ABBREVIATIONS

Pengrowth uses the following frequently recurring industry terms and abbreviations in this MD&A:

"bbl"	barrel	"ARO"	asset retirement obligations
"bbl/d"	barrels per day	"G&A"	general and administrative expenses
"Mbbbl"	thousand barrels	"LTIP"	long term incentive plan
"MMbbbls"	million barrels	"DD&A"	depletion, depreciation and amortization
"boe"	barrel of oil equivalent ⁽¹⁾	"IFRS"	International Financial Reporting Standards
"boe/d"	barrels of oil equivalent per day ⁽¹⁾	"AIF"	Annual Information Form
"Mboe"	thousand boe ⁽¹⁾	"WTI"	West Texas Intermediate crude oil price
"MMboe"	million boe ⁽¹⁾	"WCS"	Western Canadian Select crude oil price
"Mcf"	thousand cubic feet	"AECO"	Alberta natural gas price point
"Mcf/d"	thousand cubic feet per day	"NYMEX"	New York Mercantile Exchange
"MMcf"	million cubic feet	"SOEP"	Sable Offshore Energy Project
"MMcf/d"	million cubic feet per day	"GCA"	Gas Cost Allowance
"Bcf"	billion cubic feet	"NCG"	Non-Condensable Gas
		"NGTL"	Nova Gas Transmission Limited
"EPEA"	Environmental Protection and Enhancement Act		
"CO2"	carbon dioxide which is a gas at room temperature and pressure		
"SAGD"	steam assisted gravity drainage		
"diluent"	hydrocarbon based diluting agent required to facilitate the transportation of bitumen		
"dilbit" or "diluted bitumen"	bitumen blended with diluent		
"SOR"	steam oil ratio		
"CSOR"	cumulative steam oil ratio		

⁽¹⁾ Disclosure provided herein in respect of a boe may be misleading, particularly if used in isolation. A boe conversion ratio of six Mcf of natural gas to one barrel of crude oil equivalent is based on an energy equivalency conversion method primarily applicable at the burner tip and does not represent a value equivalency at the wellhead.