



NEWS RELEASE

PERPETUAL ENERGY INC. REPORTS FOURTH QUARTER AND YEAR-END 2019 FINANCIAL AND OPERATING RESULTS AND RESERVES

Calgary, Alberta – March 18, 2020 (TSX:PMT) – Perpetual Energy Inc. (“Perpetual”, or the “Company”) is pleased to release its fourth quarter and year-end 2019 financial and operating results and a summary of the Company’s year-end 2019 reserves as reported by the independent engineering firm McDaniel and Associates Consultants Ltd. (“McDaniel”). A complete copy of Perpetual’s audited consolidated financial statements, Management’s Discussion and Analysis (“MD&A”) and Annual Information Form for the year ended December 31, 2019 are available through the Company’s website at www.perpetualenergyinc.com and SEDAR at www.sedar.com.

FOURTH QUARTER 2019 HIGHLIGHTS

Capital Spending, Production and Operations

- Fourth quarter exploration and development expenditures of \$2.0 million were directed towards the Eastern Alberta core area, and included acquisition of additional undeveloped crown lands focused on the Clearwater play and initial costs to drill two (2.0 net) multi-lateral horizontal heavy oil wells targeting the Clearwater formation at Ukalta that were spud in late December. These two wells were brought on production in late January, with an additional two (2.0 net) wells drilled, completed, and put on production in late-February.
- Preliminary results to date for the Ukalta Clearwater play are positive. Heavy oil production for the four (4.0 net) first quarter 2020 drills has been ramping up, and is currently averaging an aggregate of 540 bbl/d. Combined with the Company’s two (2.0 net) initial Clearwater discovery wells drilled in the third quarter of 2019, the Ukalta Clearwater play is currently contributing approximately 730 bbl/d to the Company’s heavy oil sales volumes.
- Production averaged 7,991 boe/d (24% oil and natural gas liquids (“NGL”)) in the fourth quarter, down 392 boe/d, or 5%, from the prior quarter (Q3 2019 – 8,383 boe/d; 24% oil and NGL) due to natural declines at East Edson. Production at the Company’s Panny property in Eastern Alberta of 1.8 MMcf/d (300 boe/d) was shut-in during the third quarter and is expected to remain offline indefinitely, or until excessive property tax assessments are reduced.

Financial Highlights

- Realized revenue was \$14.3 million in the fourth quarter, down 37% from the prior year period, due to a 16% decrease in production combined with a 25% decrease in realized revenue per boe related to lower NYMEX natural gas prices and hedging losses.
- The net loss for the fourth quarter of 2019 was \$32.5 million (\$0.54/share) compared to \$0.3 million (\$0.01/share) in the prior year period. Net loss was impacted by impairment charges of \$24.5 million recognized during the fourth quarter of 2019.
- Net cash flows used in operating activities were \$1.3 million, compared to \$5.2 million of cash flows from operating activities in the prior year period. The decrease was due to the 16% decrease in production combined with realized natural gas prices which were 54% lower than the prior year.
- In December 2019, Perpetual sold 656,773 shares of Tourmaline Oil Corp. (“TOU”) at a weighted average price of \$14.78 per share and used the proceeds of \$9.7 million to partially repay the TOU share margin demand loan. The Company’s remaining 1.0 million TOU shares were sold in January 2020 for additional proceeds of \$14.3 million.

YEAR-END 2019 FINANCIAL AND OPERATING RESULTS

Capital Spending, Production and Operations

- Perpetual's 2019 exploration and development capital program of \$12.9 million was funded from adjusted funds flow, with investment weighted to heavy oil drilling in Eastern Alberta.
 - Spending in Eastern Alberta in 2019 was \$11.7 million, and consisted primarily of a five well (5.0 net) heavy oil horizontal drilling program. At Mannville, three (3.0 net) wells were drilled in the second quarter of 2019, along with a re-entry to add two additional laterals to an existing oil well. Capital was also directed towards the Ukalta area of Eastern Alberta, where two (2.0 net) exploratory multi-lateral wells were drilled targeting the Clearwater formation. Positive results were followed up by the four (4.0 net) well drilling program initiated late in the fourth quarter. Exploration and development expenditures also included funds to acquire additional undeveloped crown lands focused on the Clearwater play in its Eastern Alberta core area.
 - In response to low natural gas prices, spending in West Central in 2019 was just \$1.2 million, and was primarily directed towards the installation of field compression equipment and a sweetening tower to restore several higher liquids ratio natural gas wells back to production.
- For the year ended December 31, 2019, Perpetual spent \$1.7 million (2018 – \$2.0 million) on abandonment and reclamation projects under the AER's area-based closure approach and has received 20 reclamation certificates to date (2018 – 18 reclamation certificates). Asset retirement obligation expenditures of \$1.5 million are forecast in 2020, focused in Eastern Alberta.
- Production in 2019 averaged 8,988 boe/d (22% oil and NGL), a decrease of 15% from 10,594 boe/d (17% oil and NGL) in 2018. Production peaked during the first quarter of 2019 and then declined for the remainder of the year, as drilling activity at East Edson was deferred pending higher natural gas prices. With capital spending focused on heavy oil drilling activities in Eastern Alberta, heavy oil production grew 17% to average 1,224 bbl/d in 2019 (2018 - 1,050 bbl/d).
- Perpetual's operating netback of \$37.7 million (\$11.50/boe) decreased 29% from \$53.3 million (\$13.79/boe) in 2018. The decrease was due to a 15% decline in production combined with the 18% decrease in realized revenue, which was the result of lower realized natural gas and NGL prices of 9% and 23%, respectively.

Financial Highlights

- Realized revenue was \$73.6 million, down 18% from the prior year as a result of the 15% decrease in production combined with a 3% decrease in realized revenue per boe. The market diversification contract added \$0.64/Mcf (2018 - \$1.02/Mcf) on the relative strength of daily index prices at the five downstream markets compared to the AECO Daily Index. In response to TC Energy's changes to maintenance operating protocols that were implemented early in the fourth quarter, Perpetual modified its market diversification contract to shift the pricing point back to AECO for the December 2019 to October 2020 period, and recorded a realized gain of \$2.7 million (\$0.17/Mcf). For the year ended December 31, 2019, Perpetual recorded \$0.8 million of realized losses on derivatives, comprised of \$3.4 million of gains on natural gas hedges which were more than offset by losses of \$4.2 million from crude oil and NGL hedges.
- Net loss for 2019 was \$94.0 million (\$1.56/share), up from \$20.4 million in 2018 (\$0.34/share). The net loss was negatively impacted by the \$21.9 million unrealized loss on derivatives (2018 – unrealized gain of \$5.7 million) in addition to impairment losses of \$47.1 million which were recognized in 2019 (2018 - \$7.2 million), reflecting the decrease in forward natural gas pricing during 2019. These changes were partially offset by an unrealized loss of \$3.2 million recognized in 2019 related to the change in fair value of the TOU share investment, compared to an unrealized loss of \$9.6 million recognized in the prior year.
- Net cash flow from operating activities was \$17.8 million compared to \$31.5 million in 2018. The decrease was driven by lower production of 15%, as total Company realized revenue per boe of \$22.43/boe was only 3% lower than the prior year (2018 - \$23.07/boe) with the increased weighting of oil and NGL in the production mix.
- For the year ended December 31, 2019, adjusted funds flow was \$14.5 million (\$0.24/share), down \$15.6 million (52%) from \$30.2 million (\$0.50/share) in 2018 as the impact of the 15% year-over-year decrease in production combined with lower natural gas and NGL prices outweighed the 2% decrease in cash costs and increased heavy oil production.
- At December 31, 2019, Perpetual had total net debt of \$118.1 million, up \$5.5 million (5%) from December 31, 2018. The increase was due primarily to a \$3.2 million decrease in the fair value of the TOU share investment

during 2019, combined with an incremental \$1.1 million of 2022 Senior Notes that were issued in connection with the early redemption of the 2019 Senior Notes in the second quarter. Revolving bank debt increased by \$5.0 million during 2019 to \$47.6 million at December 31, 2019 due to a \$5.0 million repayment of the TOU share margin demand loan during the year.

SEQUOIA LITIGATION

The Court of Queen's Bench issued its decision related to the Statement of Claim filed on August 3, 2018 against Perpetual and its President and Chief Executive Officer ("CEO") with respect to the Company's disposition of shallow gas assets in Eastern Alberta to an unrelated third party on October 1, 2016 (the "Sequoia Litigation"). The decision dismissed and struck all claims against the Company's CEO and all but one of the claims filed by PwC in its capacity as trustee in bankruptcy (the "Trustee") against Perpetual. The Court did not find that the test for summary dismissal relating to whether the transaction was an arm's length transfer for purposes of section 96(1) of the Bankruptcy and Insolvency Act (the "BIA") was met, on the balance of probabilities. Accordingly, the BIA claim was not dismissed or struck and only that part of the claim can continue against Perpetual. The Trustee filed a notice of appeal with the Court of Appeal of Alberta, contesting the decision, and Perpetual filed a similar notice of appeal contesting the BIA claim portion of the decision. The appeal proceedings are scheduled to be heard in December 2020.

On January 28, 2020, the Court of Appeal issued its decision with respect to Perpetual's application for security for costs, requiring the Trustee to post security with the Court of Appeal in the amount of \$0.2 million. Applications have been filed by the Trustee to appeal the security for costs decision and alter the reasons for the decision. The Court of Appeal is scheduled to hear these applications in June 2020.

On February 25, 2020, Perpetual filed a new application to strike and summarily dismiss the BIA claim on the basis that there was no transfer at undervalue, and Sequoia was not insolvent at the time of the transaction nor caused to be insolvent by the transaction. The Court is scheduled to hear this application in June 2020.

Management expects that the Company is more likely than not to be successful in defending against the Sequoia Litigation such that no damages will be awarded against it, and therefore, no amounts have been accrued as a liability in Perpetual's financial statements.

2020 GUIDANCE

The Company's Board of Directors approved a capital spending program of \$6 million for the first quarter of 2020 to drill four (4.0 net) multi-lateral horizontal wells at Ukalta. Perpetual's reserve-based credit facility is currently undergoing its borrowing limit redetermination which is likely to reduce the current \$45 million borrowing limit effective March 31, 2020 due to reductions in bank lending commodity price forecasts. Any reductions in the credit facility borrowing limit will reduce the Company's available liquidity. To preserve liquidity, the Company will defer further capital spending until the credit facility borrowing limit redetermination has been completed. The Company will issue its 2020 Guidance once the borrowing limit redetermination is known and capital spending plans have been determined.

YEAR-END 2019 RESERVES

To preserve value during the low natural gas price environment in 2019, Perpetual limited capital spending on natural gas assets, executing a capital program funded through 2019 adjusted funds flow with investment weighted to heavy oil drilling and waterflood activities. Strong performance of the base assets resulted in 4% growth in proved and probable reserves year-over-year excluding production. Proved and probable reserves in the Company's Eastern Alberta Heavy Oil properties grew 10% excluding production, while East Edson natural gas and NGL reserves grew 2% excluding production bringing Perpetual's year-end reserves just one percent lower to 67.1 MMboe, comprised of 17% oil and NGL (2018 – 67.9 MMboe, 15% oil and NGL).

The quality of Perpetual's assets and positive momentum to drive operational and execution excellence in its core operating areas are demonstrated by the highlights below:

- Total proved plus probable reserves were 67.1 MMboe at December 31, 2019, adding proved plus probable reserves of 2.4 MMboe to replace 74% of 2019 production of 3.3 MMboe with total net capital spending of \$12.9 million. The increase in proved plus probable reserves was driven by strong well performance at East Edson combined with positive waterflood response and additions from successful heavy oil drilling programs.
- Total proved producing reserves were 16.0 MMboe at December 31, 2019, down 7% from year-end 2018 and proved plus probable producing reserves were 19.8 MMboe at December 31, 2019, down 9% from year-end 2018

and represented 30% of total proved plus probable reserves. Proved reserves represented 60% of the Company's total proved plus probable reserves.

- East Edson represents 89% (2018 – 90%) of total proved plus probable reserves at year-end 2019. The drilling program at East Edson was suspended in 2019 due to low forward natural gas prices at AECO, however, technical reserve additions related to stronger than forecast well performance and improved liquids recovery drove reserve additions that partially offset production.
- Drilling of 2.0 net exploratory wells in the new Ukalta area resulted in additions of 549 Mboe on a total proved basis and 736 Mboe on a total proved plus probable basis.
- Production from heavy oil wells at Mannville of 0.45 MMboe was offset by increases of 0.45 MMboe to proved plus probable reserves mainly related to the positive results of development drilling in 2019. While Mannville heavy oil reserves account for just 7% of the Company's total proved plus probable reserves, these higher netback reserves at forecast commodity prices represent 18% of the NPV10 value of Perpetual's proved plus probable reserves.
- Exploration and development capital spending of \$12.9 million in 2019, largely focused on heavy oil projects, resulted in finding and development ("F&D") costs of \$10.54/boe on a proved plus probable basis, including changes in future development capital ("FDC").
- Based on an equal weighting of three consultant average price (McDaniel, GLJ, Sproule) forecasts (the "Consultant Average Price Forecast") used by McDaniel, the net present value ("NPV") of Perpetual's total proved plus probable reserves (discounted at 10%) before income tax, was \$297.3 million (2018 – \$361.3 million). The decrease related primarily to a decrease in the independent reserve evaluators' forecast for natural gas prices at year-end 2019 as compared to the prior year. The inclusion this year of all abandonment, decommissioning and reclamation obligations had an impact of reducing value by \$11.9 million, which reflects the additional obligations for non-reserve well costs and facility and pipeline costs that had not been included in the reserve report in prior years.
- Based on the Consultant Average Price Forecast, Perpetual's reserve-based net asset value ("NAV") (discounted at 10%) at year-end 2019 is estimated at \$200.5 million (\$3.27 per share) as compared to \$276.6 million (\$4.59 per share) at year-end 2018, primarily due to lower forecast natural gas prices.

Reserves Disclosure

Working interest reserves included herein refer to working interest reserves before royalty deductions. Reserves information is based on an independent reserves evaluation report prepared by McDaniel with an effective date of December 31, 2019 (the "McDaniel Report"), and has been prepared in accordance with National Instrument 51-101 ("NI 51-101") using the Consultant Average Price Forecast. Complete NI 51-101 reserves disclosure including after-tax reserve values, reserves by major property and abandonment costs will be included in Perpetual's Annual Information Form ("AIF"), which, when filed, will be available on the Company's website at www.perpetualenergyinc.com and SEDAR at www.sedar.com. Perpetual's reserves at December 31, 2019 are summarized below:

Working Interest Reserves at December 31, 2019⁽¹⁾

	Light and Medium Crude Oil (Mbbbl)	Heavy Oil (Mbbbl)	Conventional Natural Gas (MMcf)	Natural Gas Liquids (Mbbbl)	Oil Equivalent (Mboe)
Proved Producing	16	2,177	75,183	1,324	16,047
Proved Non-Producing	–	106	2,035	8	453
Proved Undeveloped	–	1,177	124,331	1,898	23,797
Total Proved	16	3,460	201,549	3,230	40,298
Probable Producing	4	586	17,219	305	3,765
Probable Non-Producing	–	21	6,838	83	1,244
Probable Undeveloped	–	1,046	109,652	2,429	21,750
Total Probable	4	1,653	133,710	2,817	26,759
Total Proved plus Probable	21	5,113	335,259	6,047	67,057

⁽¹⁾ May not add due to rounding.

Total proved reserves at December 31, 2019 account for 60% (2018 – 63%) of total proved plus probable reserves. Proved producing reserves of 16.0 MMboe comprise 40% (2018 – 41%) of total proved reserves. Proved plus probable producing reserves of 19.8 MMboe represent 30% (2018 – 32%) of total proved plus probable reserves.

Reserves Reconciliation

Working Interest Reserves⁽¹⁾

Barrels of Oil Equivalent (Mboe)	Proved	Probable	Proved and Probable
Opening Balance, December 31, 2018	42,461	25,439	67,899
Extensions and Improved Recovery	191	392	584
Discoveries	550	187	737
Technical Revisions	707	801	1,508
Acquisitions	–	–	–
Dispositions	–	–	–
Production	(3,277)	–	(3,277)
Economic Factors	(334)	(60)	(394)
Closing Balance, December 31, 2019	40,298	26,759	67,057

⁽¹⁾ May not add due to rounding.

McDaniel recorded net positive technical revisions of 1.5 MMboe related to performance on a proved plus probable basis in 2019. Positive technical revisions of 1.1 MMboe were attributed to improved performance of existing wells in both West Central and Eastern areas and 0.4 MMboe were related to increases in reserve assignments relating to drilling locations in the East Edson area.

The table below summarizes the FDC estimated by McDaniel by play type to bring non-producing and undeveloped reserves to production.

Future Development Capital⁽¹⁾

(\$ millions)	2020	2021	2022	2023	2024	Remainder	Total
Eastern Alberta Shallow Gas	–	0.5	0.7	–	–	–	1.1
Mannville Heavy Oil	5.3	4.5	6.6	5.8	0	–	22.3
Ukalta	6.7	–	–	–	–	–	6.7
East Edson Wilrich	22.9	44.3	33.8	38.8	37.4	151.5	328.6
Total	34.9	49.3	41.1	44.6	37.4	151.5	358.8

⁽¹⁾ May not add due to rounding.

McDaniel estimates the FDC required to convert proved plus probable non-producing and undeveloped reserves to proved producing reserves, to be \$358.8 million at December 31, 2019, up \$12.8 million from year-end 2018. On a proved plus probable basis, FDC decreased by \$0.8 million related to the future development of reserves at East Edson and increased \$7.0 million in the Mannville heavy oil area and by \$6.7 million in the new Ukalta area. The East Edson development plan has 66 (63.3 net) undeveloped locations (2018 – 63.3 net locations) in the total proved plus probable eight-year development plan. The Mannville Heavy Oil area has 19 (19.0 net) undeveloped locations in the total proved plus probable category, an increase of 3 from year-end 2018. The Ukalta Oil area has 5 (5.0 net) undeveloped locations

in the total proved plus probable category. The projects are forecast by McDaniel to generate annual operating cash flow in excess of the annual FDC, making the projects self-funding.

RESERVE LIFE INDEX

Perpetual's proved plus probable reserves to production ratio, also referred to as reserve life index ("RLI"), was 21.5 years at year-end 2019, while the proved RLI was 13.5 years, based upon the 2020 production estimates in the McDaniel Report. The following table summarizes Perpetual's historical calculated RLI.

Reserve Life Index⁽¹⁾

Year-end	2019	2018	2017	2016	2015
Total Proved	13.4	13.1	9.1	9.3	7.3
Total Proved plus Probable	21.5	19.9	13.2	15.1	11.9

⁽¹⁾ Calculated as year-end reserves divided by year one production estimate from the McDaniel Report.

NET PRESENT VALUE OF RESERVES SUMMARY

Perpetual's oil, natural gas and NGL reserves were evaluated by McDaniel using the Consultant Average Price Forecast effective January 1, 2020 and include the forecast impact of the Company's market diversification contract, but prior to provision for financial oil and natural gas price hedges, foreign exchange contracts, income taxes, interest, debt service charges and general and administrative expenses. The following table summarizes the NPV of future revenue from reserves at January 1, 2020, assuming various discount rates:

NPV of Reserves, before income tax⁽¹⁾⁽²⁾

(\$ millions except as noted)	Undiscounted	5%	10%	15%	Discounted at 20%	Unit Value Discounted at 10%/Year (\$/boe) ⁽³⁾
Proved Producing	81	82	75	68	62	6.92
Proved Non-Producing	2	2	2	1	1	3.96
Proved Undeveloped	231	148	98	67	47	4.55
Total Proved	314	231	175	137	110	5.32
Probable Producing	58	39	28	21	17	8.26
Probable Non-Producing	9	6	4	3	2	3.43
Probable Undeveloped	290	156	91	57	38	4.61
Total Probable	358	201	123	81	56	5.07
Total Proved plus Probable	671	432	297	217	167	5.22

⁽¹⁾ January 1, 2020 Consultant Average price forecast and including market diversification contract.

⁽²⁾ May not add due to rounding.

⁽³⁾ The unit values are based on net reserve volumes.

McDaniel's NPV10 estimate of Perpetual's total proved plus probable reserves at year-end 2019 was \$ 297 million, down 18% from \$361.3 million at year-end 2018. The decrease in NPV10 reflected the impact of lower forecast commodity prices, offset by an increase in weighting to higher netback heavy oil reserves. At a 10% discount factor, total proved reserves account for 59% (2018 – 65%) of the proved plus probable value. Proved plus probable producing reserves represent 34% (2018 – 45%) of the total proved plus probable value (discounted at 10%).

FAIR MARKET VALUE OF UNDEVELOPED LAND

Perpetual's independent third-party estimate of the fair market value of its undeveloped acreage by region for purposes of the NAV calculation is based on past Crown land sale activity, adjusted for tenure and other considerations. In West Central Alberta, no undeveloped land value was assigned where proved and/or probable undeveloped reserves have been booked.

Fair Market Value of Undeveloped Land

	Net Acres	Value (\$ millions)	\$/Acre
Eastern and other	101,441	6.3	62.18
West Central	19,173	15.6	815.57
Oil Sands	96,640	14.0	145.27
Total	217,255	36.0	165.63

The fair market value of Perpetual's undeveloped land at year-end 2019, adjusted to remove the value of undeveloped lands with reserves assigned in West Central Alberta, is estimated by an external land consultant at \$36.0 million, a decrease of 9% from \$39.4 million relative to year-end 2018. The fair market value of undeveloped oil sands leases incorporates the absolute investment to date in the ongoing bitumen extraction pilot project at Panny, with the remaining undeveloped land valued by historical land sale activity, adjusted for tenure.

NET ASSET VALUE

The following NAV table shows what is normally referred to as a "produce-out" NAV calculation under which the Company's reserves would be produced at forecast future prices and costs. The value is a snapshot in time and is based on various assumptions including commodity prices and foreign exchange rates that vary over time. It should not be assumed that the NAV represents the fair market value of Perpetual's shares. The calculations below do not reflect the value of the Company's prospect inventory to the extent that the prospects are not recognized within the NI 51-101 compliant reserve assessment, except as they are valued through the estimate of the fair market value of undeveloped land.

Pre-tax NAV at December 31, 2019⁽¹⁾

(\$ millions, except as noted)	Discounted at			
	Undiscounted	5%	10%	15%
Total Proved plus Probable Reserves ⁽²⁾	671.4	432.0	297.3	217.3
TOU share investment ⁽³⁾	15.2	15.2	15.2	15.2
Fair market value of undeveloped land ⁽⁴⁾	36.0	36.0	36.0	36.0
Bank debt, net of working capital ⁽¹⁾	(54.6)	(54.6)	(54.6)	(54.6)
TOU share margin loan ⁽¹⁾⁽³⁾⁽⁵⁾	(0.1)	(0.1)	(0.1)	(0.1)
Term loan ⁽⁵⁾	(45.0)	(45.0)	(45.0)	(45.0)
Senior notes ⁽⁵⁾	(33.6)	(33.6)	(33.6)	(33.6)
Estimate of Additional Future Abandonment and Reclamation Costs ⁽⁶⁾	(0.0)	(0.0)	(0.0)	(0.0)
Derivatives ⁽⁷⁾	(14.7)	(14.7)	(14.7)	(14.7)
NAV	574.6	335.2	200.5	120.5
Common shares outstanding (million)	61.31	61.31	61.31	61.31
NAV per share (\$/share)	9.37	5.47	3.27	1.97

⁽¹⁾ Financial information is per Perpetual's 2019 audited consolidated financial statements.

⁽²⁾ Reserve values per McDaniel Report as at December 31, 2019.

⁽³⁾ Tourmaline Oil Corp. ("TOU") share value based on 1.0 million shares at December 31, 2019 closing price (\$15.22 per share).

⁽⁴⁾ Independent third-party estimate; excludes undeveloped land in West Central Alberta with reserves assigned.

⁽⁵⁾ Measured at principal amount.

⁽⁶⁾ All abandonment obligations including future abandonment and reclamation costs for pipelines and facilities and non-reserve wells are included in the McDaniel Report.

⁽⁷⁾ Value as at December 31, 2019, relative to the Consultant Average Price Forecast. Excludes market diversification contract which is included in total proved plus probable reserves.

The above evaluation includes FDC expectations required to bring undeveloped reserves on production, as recognized by McDaniel, that meet the criteria for booking under NI 51-101. The fair market value of undeveloped land does not reflect the value of the Company's extensive prospect inventory which is anticipated to be converted into reserves and production over time through future capital investment.

FINDING AND DEVELOPMENT COSTS

Under NI 51-101, the methodology to be used to calculate F&D costs includes incorporating changes in FDC required to bring the proved and probable undeveloped reserves to production. Changes in forecast FDC occur annually as a result of development activities, acquisitions and disposition activities, undeveloped reserve revisions and capital cost estimates that reflect the independent evaluator's best estimate of what it will cost to bring the proved plus probable undeveloped reserves on production.

2019 F&D Costs⁽¹⁾

(\$ millions except as noted)	Proved	Proved & Probable
F&D Costs, including FDC		
Exploration and development capital expenditures ⁽²⁾	\$ 12.87	\$ 12.87
Total change in FDC	\$ (2.43)	\$ 12.78
Total F&D capital, including change in FDC	\$ 10.44	\$ 25.65
Reserve additions, including revisions (<i>MMboe</i>)	1.11	2.43
F&D Costs, including FDC (\$/boe)	\$ 9.37	\$ 10.54
FD&A Costs, including FDC		
Exploration and development capital expenditures ⁽²⁾	\$ 12.87	\$ 12.87
Proceeds on dispositions, net of acquisitions	\$ 0.0	\$ 0.0
Total change in FDC	\$ (2.43)	\$ 12.78
Total FD&A capital, including change in FDC	\$ 10.44	\$ 25.65
Reserve additions, including net acquisitions (<i>MMboe</i>)	1.11	2.43
FD&A Costs, including FDC (\$/boe)	\$ 9.37	\$ 10.54

⁽¹⁾ Financial information is per Perpetual's 2019 preliminary unaudited consolidated financial statements.

⁽²⁾ Excludes corporate assets and expenditures on decommissioning obligations.

Financial and Operating Highlights <i>((\$Cdn thousands, except volume and per share amounts)</i>	Three Months ended December 31			Year ended December 31		
	2019	2018	Change	2019	2018	Change
Financial						
Oil and natural gas revenue	15,830	21,510	(26%)	74,361	86,128	(14%)
Net loss	(32,498)	(331)	(9,718%)	(94,015)	(20,380)	(361%)
Per share – basic and diluted ⁽²⁾	(0.54)	(0.01)	(5,300%)	(1.56)	(0.34)	(359%)
Cash flow from (used in) operating activities	(1,290)	5,163	(125%)	17,806	31,525	(44%)
Per share ⁽¹⁾⁽²⁾	(0.02)	0.09	(122%)	0.30	0.53	(43%)
Adjusted funds flow ⁽¹⁾	340	8,052	(96%)	14,534	30,155	(52%)
Per share ⁽²⁾	0.01	0.13	(92%)	0.24	0.50	(52%)
Revolving bank debt	47,552	42,561	12%	47,552	42,561	12%
Senior notes, principal amount	33,580	32,490	3%	33,580	32,490	3%
Term loan, principal amount	45,000	45,000	–	45,000	45,000	–
TOU share margin demand loan, principal amount	100	14,144	(99%)	100	14,144	(99%)
TOU share investment	(15,220)	(28,132)	(46%)	(15,220)	(28,132)	(46%)
Net working capital deficiency ⁽¹⁾	7,068	6,543	8%	7,068	6,543	8%
Total net debt ⁽¹⁾	118,080	112,606	5%	118,080	112,606	5%
Net capital expenditures						
Capital expenditures	1,995	5,617	(64%)	12,939	26,888	(52%)
Net proceeds on acquisitions and dispositions	–	(1,285)	(100%)	–	(3,030)	(100%)
Net capital expenditures	1,995	4,332	(54%)	12,939	23,858	(46%)
Common shares outstanding (thousands)						
End of period ⁽³⁾	60,513	60,240	–	60,513	60,240	–
Weighted average – basic and diluted	60,444	60,448	–	60,258	60,039	–
Operating						
Average production						
Natural gas (MMcf/d)	36.6	44.9	(18%)	42.3	52.6	(20%)
Oil (bbl/d)	1,275	1,301	(2%)	1,224	1,050	17%
NGL (bbl/d)	606	715	(15%)	719	774	(7%)
Total (boe/d)	7,991	9,491	(16%)	8,988	10,594	(15%)
Average prices						
Realized natural gas price (\$/Mcf)	2.00	4.38	(54%)	2.77	3.05	(9%)
Realized oil price (\$/bbl)	43.85	19.83	121%	44.87	40.62	10%
Realized NGL price (\$/bbl)	43.93	35.73	23%	41.01	52.96	(23%)
Wells drilled						
Natural gas – gross (net)	– (–)	– (–)		– (–)	1 (1.0)	
Oil – gross (net)	– (–)	– (–)		5 (5.0)	6 (6.0)	
Total – gross (net)	– (–)	– (–)		5 (5.0)	7 (7.0)	

⁽¹⁾ These are non-GAAP measures. Please refer to "Non-GAAP Measures" at the end of this press release.

⁽²⁾ Based on weighted average basic common shares outstanding for the period.

⁽³⁾ All common shares are net of shares held in trust (2019 – 801; 2018 – 661). See "Note 17 to the Audited Consolidated Financial Statements".

ADDITIONAL INFORMATION

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W. Mark Schweitzer Vice President Finance and Chief Financial Officer

Oil and Gas Advisories

The reserves estimates contained in this news release represent gross reserves as at December 31, 2019 as estimated by McDaniel and Associates Consultants Ltd. ("McDaniel") and are defined under National Instrument 51-101 as interest before deduction of royalties and without including any royalty interests. The recovery and reserves estimates of crude oil, NGL and natural gas reserves provided herein are estimates only and there is no guarantee that the estimated reserves will be recovered. Actual crude oil, natural gas and NGL reserves may be greater than or less than the estimates provided herein.

To provide a single unit-of-production for analytical purposes, natural gas production and reserves volumes are converted mathematically to equivalent barrels of oil (boe), using the industry-accepted standard conversion of six thousand cubic feet of natural gas to one barrel of oil (6 Mcf = 1 bbl). The 6:1 boe ratio is based on an energy equivalency conversion method primarily applicable at the burner tip. It does not represent a value equivalency at the wellhead and is not based on either energy content or current prices. While the boe ratio is useful for comparative measures and observing trends, it does not accurately reflect individual product values and might be misleading, particularly if used in isolation. As well, given that the value ratio, based on the current price of crude oil to natural gas, is significantly different from the 6:1 energy equivalency ratio, using a 6:1 conversion ratio may be misleading as an indication of value.

This news release contains metrics commonly used in the oil and natural gas industry, such as "finding and development" costs or "F&D" costs and "F&D recycle ratio". These oil and gas metrics have been prepared by management and do not have standardized meanings or standard methods of calculation and therefore, such measures may not be comparable to similar measures used by other companies and should not be used to make comparisons. Such metrics have been included in this news release to provide readers with additional measures to evaluate Perpetual's performance, however, such measures are not reliable indicators of Perpetual's future performance and future performance may not compare to Perpetual's performance in previous periods and therefore, such metrics should not be unduly relied upon. Management uses these oil and gas metrics for its own performance measurements and to provide shareholders and investors with measures to compare Perpetual's operations over time. Readers are cautioned that the information provided by these metrics, or that can be derived from the metrics presented in this news release, should not be relied upon for investment or other purposes.

F&D costs are calculated on a per boe basis by dividing the aggregate of the change in future development capital ("FDC") from the prior year for the particular reserve category and the costs incurred on development and exploration activities in the year by the change in reserves from the prior year for the reserve category. F&D costs take into account reserves revisions during the year on a per boe basis. The aggregate of the F&D costs incurred in the financial year and changes during that year in estimated FDC generally will not reflect total F&D costs related to reserves additions for that year.

F&D recycle ratio is calculated by dividing the operating netback for the period by the F&D costs per boe for the particular reserve category.

The following abbreviations used in this news release have the meanings set forth below:

<i>bbls</i>	<i>barrels</i>
<i>boe</i>	<i>barrels of oil equivalent</i>
<i>Mcf</i>	<i>thousand cubic feet</i>
<i>MMcf</i>	<i>million cubic feet</i>
<i>MMBtu</i>	<i>million British Thermal Units</i>
<i>GJ</i>	<i>gigajoules</i>

Forward-Looking Information

Certain information regarding Perpetual in this news release including management's assessment of future plans and operations may constitute forward-looking information or statements under applicable securities laws. The forward looking information includes, without limitation, anticipated amounts and allocation of capital spending; statements pertaining to adjusted funds flow levels, statements regarding estimated production and timing thereof; statements pertaining to type curves being exceeded, forecast average production; completions and development activities; infrastructure expansion and construction; estimated FDC required to convert proved plus probable non-producing and undeveloped reserves to proved producing reserves; prospective oil and natural gas liquids production capability; projected realized natural gas prices and adjusted funds flow; estimated decommissioning obligations;

commodity prices and foreign exchange rates; and commodity price management. Various assumptions were used in drawing the conclusions or making the forecasts and projections contained in the forward-looking information contained in this news release, which assumptions are based on management's analysis of historical trends, experience, current conditions and expected future developments pertaining to Perpetual and the industry in which it operates as well as certain assumptions regarding the matters outlined above. Forward-looking information is based on current expectations, estimates and projections that involve a number of risks, which could cause actual results to vary and in some instances to differ materially from those anticipated by Perpetual and described in the forward-looking information contained in this news release. Undue reliance should not be placed on forward-looking information, which is not a guarantee of performance and is subject to a number of risks or uncertainties, including without limitation those described under "Risk Factors" in Perpetual's Annual Information Form and MD&A for the year ended December 31, 2019 and those included in other reports on file with Canadian securities regulatory authorities which may be accessed through the SEDAR website (www.sedar.com) and at Perpetual's website (www.perpetualenergyinc.com). Readers are cautioned that the foregoing list of risk factors is not exhaustive. Forward-looking information is based on the estimates and opinions of Perpetual's management at the time the information is released, and Perpetual disclaims any intent or obligation to update publicly any such forward-looking information, whether as a result of new information, future events or otherwise, other than as expressly required by applicable securities law.

Non-GAAP Measures

This news release contains the terms "adjusted funds flow", "adjusted funds flow per share", "adjusted funds flow per boe", "available liquidity", "cash costs", "net working capital deficiency (surplus)", "net debt", "net bank debt", "net debt to adjusted funds flow ratio", "operating netback", "realized revenue" and "enterprise value" which do not have standardized meanings prescribed by GAAP. Management believes that in addition to net income (loss) and net cash flows from operating activities as defined by GAAP, these terms are useful supplemental measures to evaluate operating performance. Users are cautioned however that these measures should not be construed as an alternative to net income (loss) or net cash flows from operating activities determined in accordance with GAAP as an indication of Perpetual's performance and may not be comparable with the calculation of similar measurements by other entities.

Adjusted funds flow: Management uses adjusted funds flow and adjusted funds flow per boe as key measures to assess the ability of the Company to generate the funds necessary to finance capital expenditures, expenditures on decommissioning obligations and meet its financial obligations. Adjusted funds flow is calculated based on cash flows from (used in) operating activities, excluding changes in non-cash working capital and expenditures on decommissioning obligations since Perpetual believes the timing of collection, payment or incurrence of these items is variable. Expenditures on decommissioning obligations may vary from period to period depending on capital programs and the maturity of the Company's operating areas. Expenditures on decommissioning obligations are managed through the capital budgeting process which considers available adjusted funds flow. The Company has also deducted the change in gas over bitumen royalty financing from adjusted funds flow to present these payments net of gas over bitumen royalty credits received. These payments are indexed to gas over bitumen royalty credits and are recorded as a reduction to the Corporation's gas over bitumen royalty financing obligation in accordance with IFRS. Additionally, the Company has excluded payment of restructuring costs associated with employee downsizing costs, which management considers to not be related to cash flow from operating activities.

Adjusted funds flow per share is calculated using the same weighted average number of shares outstanding used in calculating net income (loss) per share. Adjusted funds flow is not intended to represent net cash flows from (used in) operating activities calculated in accordance with IFRS.

Adjusted funds flow per boe is calculated as adjusted funds flow divided by total production sold in the period.

Available Liquidity: Available Liquidity is defined as Perpetual's reserve-based credit facility borrowing limit (the "Borrowing Limit"), plus the fair value of the Tourmaline Oil Corp. ("TOU") share investment, less borrowings and letters of credit issued under the reserve-based credit facility (the "Credit Facility") and the TOU share margin demand loan. Management uses available liquidity to assess the ability of the Company to finance capital expenditures and expenditures on decommissioning obligations, and to meet its financial obligations.

Cash costs: Cash costs are comprised of royalties, production and operating, transportation, general and administrative, and cash finance expense. Cash costs per boe is calculated by dividing cash costs by total production sold in the period. Management believes that cash costs assist management and investors in assessing Perpetual's efficiency and overall cost structure.

Realized revenue: Realized revenue is the sum of realized natural gas revenue, realized oil revenue and realized natural gas liquids ("NGL") revenue which includes realized gains (losses) on financial natural gas, crude oil, NGL and foreign exchange contracts but excludes any realized gains (losses) resulting from marketing contracts associated with the disposition of the shallow gas assets on October 1, 2016 (the "Shallow Gas Disposition") to Sequoia Resources Corp. ("Sequoia"). Realized revenue, including foreign exchange and the market diversification contract, is used by management to calculate the Corporation's net realized commodity prices, taking into account monthly settlements of financial crude oil and natural gas forward sales, collars, basis differentials, and forward foreign exchange sales. These contracts are put in place to protect Perpetual's adjusted funds flow from potential volatility in commodity prices and foreign exchange rates. Any related realized gains or losses are considered part of the Corporation's realized commodity price.

Operating netback: Operating netback is calculated by deducting royalties, production and operating expenses, and transportation costs from realized revenue. Operating netback is also calculated on a per boe basis using production sold for the period. Operating netback on a per boe basis can vary significantly for each of the Company's operating areas. Perpetual considers operating netback to be an important performance measure as it demonstrates its profitability relative to current commodity prices.

Net working capital deficiency (surplus): Net working capital deficiency (surplus) includes total current assets and current liabilities excluding short-term derivative assets and liabilities related to the Corporation's risk management activities, TOU share investment, TOU share margin demand loan, revolving bank debt, current portion of gas over bitumen royalty financing, current portion of lease liabilities, and current portion of provisions.

Net bank debt, net debt and net debt to adjusted funds flow ratio: Net bank debt is measured as current and long-term revolving bank debt including net working capital deficiency (surplus). Net debt includes the carrying value of net bank debt, the principal amount of the term loan, the principal amount of the TOU share margin demand loan and the principal amount of senior notes, reduced for the fair value of the TOU share investment. Net debt, net bank debt, and net debt to adjusted funds flow ratios are used by management to assess the Corporation's overall debt position and borrowing capacity. Net debt to adjusted funds flow ratios are calculated on a trailing twelve-month basis.

Enterprise value: Enterprise value is equal to net debt plus the market value of issued equity, and is used by management to analyze leverage. Enterprise value is not intended to represent the total funds from equity and debt received by the Corporation upon issuance.

For additional reader advisories in regards to non-GAAP financial measures, including Perpetual's method of calculation and reconciliation of these terms to their corresponding GAAP measures, see the section entitled "Non-GAAP Measures" within the Company's MD&A filed on SEDAR.