

MANAGEMENT'S DISCUSSION AND ANALYSIS

The following is management's discussion and analysis ("MD&A") of Perpetual Energy Inc.'s ("Perpetual", the "Company" or the "Corporation") operating and financial results for the three and six months ended June 30, 2020 as well as information and estimates concerning the Corporation's future outlook based on currently available information. This discussion should be read in conjunction with the Corporation's unaudited condensed interim consolidated financial statements and accompanying notes for the three and six months ended June 30, 2020 as well as the audited consolidated financial statements and accompanying notes for the years ended December 31, 2019 and 2018. The MD&A should be read in conjunction with the Corporation's MD&A for the year ended December 31, 2019, as disclosure which is unchanged from the December 31, 2019 MD&A has not been duplicated herein. The Corporation's consolidated financial statements are prepared in accordance with Canadian generally accepted accounting principles ("GAAP") which require publicly accountable enterprises to prepare their financial statements using International Financial Reporting Standards ("IFRS"). Readers are referred to the advisories for additional information regarding forecasts, assumptions and other forward-looking information contained in the "Forward Looking Information and Statements" section of this MD&A. The date of this MD&A is July 31, 2020.

NATURE OF BUSINESS: Perpetual is an oil and natural gas exploration, production and marketing company headquartered in Calgary, Alberta. Perpetual owns a diversified asset portfolio, including liquids-rich natural gas assets in the deep basin of west central Alberta, heavy oil and shallow natural gas in eastern Alberta and undeveloped oil sands leases in northern Alberta. Additional information on Perpetual, including the most recently filed Annual Information Form ("AIF"), can be accessed at www.sedar.com or from the Corporation's website at www.perpetualenergyinc.com.

ADVISORIES

NON-GAAP MEASURES: The terms "adjusted funds flow", "adjusted funds flow per share", "adjusted funds flow per boe", "available liquidity", "cash costs", "gas over bitumen revenue, net of payments", "net working capital deficiency", "net debt", "net bank debt", "net debt to adjusted funds flow ratio", "operating netback", "realized revenue", and "enterprise value" used in this MD&A are not recognized under GAAP. Management believes that in addition to net income (loss) and net cash flows from (used in) operating activities as defined by GAAP, these terms are useful supplemental measures to evaluate performance. Users are cautioned however that these measures should not be construed as an alternative to net income (loss) or net cash flows from (used in) 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: 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 added back non-cash oil and natural gas revenue in-kind, equal to retained East Edson royalty obligation payments taken in-kind, to present the equivalent amount of cash revenue generated. The Company has also deducted payments of the 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 payments of restructuring costs associated with employee downsizing costs, which management considers to not be related to cash flow from operating activities. 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 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.

The following table reconciles net cash flows from (used in) operating activities to adjusted funds flow:

(\$ thousands, except per share and per boe amounts)	Three months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
Net cash flows from (used in) operating activities	(2,777)	4,295	(5,891)	13,587
Change in non-cash working capital	(1,383)	(716)	(2,318)	(3,557)
Decommissioning obligations settled	3	360	177	666
Oil and natural gas revenue in-kind	650	–	650	–
Payments of gas over bitumen royalty financing	(152)	(290)	(356)	(685)
Payments of restructuring costs	331	–	809	–
Adjusted funds flow	(3,328)	3,649	(6,929)	10,011
Adjusted funds flow per share	(0.05)	0.06	(0.11)	0.17
Adjusted funds flow per boe	(9.99)	4.28	(6.84)	5.64

Available Liquidity: Available Liquidity is defined as Perpetual's reserve-based credit facility (the "Credit Facility") borrowing limit (the "Borrowing Limit"), less borrowings and letters of credit issued under the Credit Facility. 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.

(\$ thousands, except per boe amounts)	Three months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
Royalties	794	2,464	3,177	5,640
Production and operating	1,834	4,911	6,002	10,231
Transportation	782	1,635	2,052	3,166
General and administrative	1,995	3,177	4,220	6,648
Cash finance expense	1,902	2,250	4,472	4,560
Cash costs	7,307	14,437	19,923	30,245
Cash costs per boe	21.93	16.93	19.65	17.05

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. Realized revenue is used by management to calculate the Corporation’s net realized commodity prices, taking into account the 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 price.

Gas over bitumen revenue, net of payments: Gas over bitumen revenue, net of payments, includes gas over bitumen royalty credits less payments of the gas over bitumen royalty financing. This is used by management to calculate the Corporation’s net realized gas over bitumen revenue to reflect the substantive monetization of the future gas over bitumen royalty credits.

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: Net working capital deficiency includes total current assets and current liabilities excluding short-term derivative assets and liabilities related to the Corporation’s risk management activities, Tourmaline Oil Corp. (“TOU”) share investment, TOU share margin demand loan, revolving bank debt, term loan, current portion of royalty obligations, 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. 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 mark-to-market 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.

VOLUME CONVERSIONS: Barrel of oil equivalent (“boe”) may be misleading, particularly if used in isolation. In accordance with National Instrument 51-101 (“NI 51-101”), a conversion ratio for natural gas of 6 Mcf:1 bbl has been used, which is based on an energy equivalency conversion method primarily applicable at the burner tip and does not represent a value equivalency at the wellhead. In addition, utilizing a conversion on a 6 Mcf:1 bbl basis may be misleading as an indicator of value as the value ratio between natural gas and crude oil, based on the current prices of natural gas and crude oil, differ significantly from the energy equivalency of 6 Mcf:1 bbl.

SECOND QUARTER 2020 HIGHLIGHTS

On April 1, 2020, the Company sold a 50% working interest in its East Edson property in West Central Alberta to a third-party (the “Purchaser”) for consideration including a cash payment of \$35 million and the carried interest funding of the drill, complete and tie-in costs for an eight-well drilling program (the “East Edson Transaction”). A minimum of two horizontal wells targeting development of the Wilrich formation are required to be drilled, completed and tied-in during the third quarter of 2020. The Purchaser is required to complete the eight-well horizontal drilling program by April 1, 2022. The cash proceeds from the East Edson Transaction were used to repay bank debt. The eight-well development capital carry at East Edson is anticipated to restore gross production levels to more fully utilize the existing processing capacity, improve operating netbacks given the largely fixed operating cost base, and result in improved capital spending efficiency.

In response to the significant decline in global oil prices which began in late-March, all capital investment for the second quarter of 2020 was deferred, resulting in nominal exploration and development capital spending. Expenditures on decommissioning obligations were also reduced, enabled by the Alberta Energy Regulator’s (“AER”) cancellation of area-based closure expenditure requirements for 2020.

Second quarter production averaged 3,662 boe/d, down 61% from 9,370 boe/d in the comparative period of 2019, due primarily to the temporary suspension of heavy oil production in response to low oil prices, and the sale of a 50% working interest in the East Edson property in West Central Alberta, effective April 1, 2020. Compared to the first quarter of 2020, production declined by 51% or 3,817 boe/d. The closing of the East Edson Transaction on April 1, 2020, combined with natural declines at East Edson of 6%, reduced West Central production by 3,062 boe/d or 80% of the total production decline from the first quarter. The shut-in of Eastern Alberta heavy oil production due to low oil prices contributed the remaining 755 boe/d decrease. As Western Canadian Select prices improved materially from their April lows, the Company began reactivating certain low-cost heavy oil production in mid-May 2020, and has continued to ramp up production as oil prices recover. By mid-July, Perpetual had restarted all heavy oil production with the exception of approximately 250 bbl/d of higher cost production in certain pools at Mannville.

Realized revenue was \$13.15/boe in the second quarter of 2020, 38% lower than the comparative period of 2019 (\$21.26/boe). The decrease was due largely to the 88% decrease in Perpetual’s realized natural gas price to \$0.28/Mcf, combined with a 66% decline in realized NGL prices. Compared to the prior year period, lower realized natural gas prices were the result of \$1.6 million in realized hedging losses on AECO-NYMEX

basis differential contracts, as NYMEX prices weakened relative to AECO prices during the quarter. In the third quarter of 2019, the Company's 40,000 MMBtu/d market diversification contract was monetized for the period of December 2019 to October 2020 and did not impact second quarter 2020 revenue, but added \$0.84/Mcf in the second quarter of 2019 on the relative strength of daily index prices at the five downstream markets compared to the AECO Daily Index. Realized gains on financial oil hedging contracts of \$2.3 million or \$44.32/bbl (Q2 2019 – realized loss of \$1.2 million or \$11.30/bbl) were recorded during the quarter, contributing to the second quarter realized oil price of \$67.56/bbl.

Cash costs were down 49% to \$7.3 million (Q2 2019 - \$14.4 million), but up 30% on a unit-of-production basis to \$21.93/boe (Q2 2019 - \$16.93/boe) due to the impact of a 61% decrease in production. Cash costs decreased by \$7.1 million from the prior year period and \$5.3 million from the first quarter of 2020 due to the temporary shut-in of heavy oil production from late-March to mid-May, the closing of the East Edson Transaction on April 1, 2020, the reduction in employee compensation and work hours to 80% effective April 15, 2020, and payments received from the Canada Emergency Wage Subsidy ("CEWS") program. Managing through the COVID-19 pandemic saw Perpetual's corporate staff working remotely in the second quarter before transitioning back to a hybrid office protocol in late June. Field employees have continued to work on site, following strict social distancing and other health and safety measures.

The net loss for the second quarter of 2020 was \$8.8 million (\$0.15/share), compared to a net loss of \$36.3 million (\$0.60/share) in the comparative period of 2019. The decrease in net loss from the prior year period was due primarily to an impairment charge of \$22.6 million and the \$6.6 million decrease in the fair value of the TOU share investment recognized during the second quarter of 2019.

Cash flow used in operating activities in the second quarter of 2020 was \$2.8 million (\$0.05/share), down \$7.1 million from the prior year period (Q2 2019 – cash flow from operating activities of \$4.3 million and \$0.07/share) due to the combined impact of the 38% decrease in realized revenue per boe and the 61% decrease in production caused by heavy oil shut-ins and the sale of East Edson production.

Adjusted funds flow in the second quarter of 2020 was negative \$3.3 million (\$0.05/share), down \$7.0 million (191%) from the prior year period of \$3.6 million (\$0.06/share) due primarily to lower cash flow from operating activities. Compared to the first quarter of 2020, adjusted funds flow improved by \$0.3 million, due to higher cash flows from operating activities.

FUTURE OPERATIONS

Perpetual has a first lien, reserve-based credit facility (the "Credit Facility"). On December 24, 2019, Perpetual's syndicate of lenders completed their semi-annual borrowing base redetermination, reducing the Credit Facility borrowing limit (the "Borrowing Limit") from \$55 million to \$45 million effective January 22, 2020.

In January 2020, the Company sold its remaining 1,000,000 TOU shares for net cash proceeds of \$14.3 million (the "TOU Share Proceeds"). Net proceeds were used to repay the outstanding TOU share margin demand loan of \$0.1 million, with the balance used to repay a portion of the Credit Facility. On April 1, 2020, the Company sold a 50% working interest in its East Edson property in West Central Alberta to a third party purchaser for consideration including a cash payment of \$35 million and the carried interest funding of the drill, complete and tie-in costs for an eight well drilling program (the "East Edson Transaction"). Net proceeds were used to repay a portion of the Credit Facility. Effective April 1, 2020, Perpetual's syndicate of Credit Facility lenders completed their borrowing base redetermination, incorporating the impact of the East Edson Transaction. The Borrowing Limit was reduced from \$45 million to \$20 million. The Credit Facility will continue to revolve until the next scheduled borrowing base redetermination on July 31, 2020. The July 31, 2020 redetermination date has been extended to August 10, 2020 to provide the lenders additional time to complete their review. If not extended, the Credit Facility will cease to revolve, and all outstanding advances will be repayable on November 30, 2020. The further extension of the Credit Facility repayment term is dependent on the Company's ability to repay or extend the term of the \$45 million second lien term loan (the "Term Loan") that matures and requires repayment on March 14, 2021. The Company also has \$33.6 million of unsecured senior notes that mature on January 23, 2022. Although the TOU Share Proceeds and the East Edson Transaction cash consideration have reduced the Company's revolving bank debt borrowed under its Credit Facility, the Company remains dependent on the support of its lenders to the Credit Facility which has a current maturity of November 30, 2020, in addition to the \$45 million Term Loan maturing March 14, 2021.

During the six months ended June 30, 2020, cash flows used in operations were \$5.9 million which contributed to a working capital deficiency of \$8.9 million as at June 30, 2020. Perpetual continues to forecast a use of cash in operations for the next twelve-month period and potentially beyond. The Company will require additional financing to fund the working capital deficiency and future operations, and to refinance the upcoming Credit Facility and term loan maturities as the available liquidity and operating cash flows are not anticipated to be sufficient. Perpetual is considering options including the sale or monetization of additional assets, the extension of existing debt maturity dates, or alternative financing.

Due to the facts and circumstances detailed above, coupled with considerable economic instability and uncertainty in the oil and gas industry which negatively impacts operating cash flows and lender and investor sentiment, there remains considerable risk around the Company's ability to address its liquidity shortfalls and upcoming maturities. In addition, there continues to be some uncertainty regarding the Sequoia Litigation which may restrict the Company's ability to manage its capital structure. As a result, there is material uncertainty surrounding the Company's ability to continue as a going concern that creates significant doubt as to the ability of the Company to meet its obligations as they come due. Therefore, the Company may be unable to realize its assets and discharge its liabilities in the normal course of business.

Perpetual's financial statements have been prepared in accordance with generally accepted accounting principles applicable to a going concern, which assumes that the Corporation will be able to realize its assets and discharge its liabilities in the normal course of business. These financial statements do not reflect adjustments that would be necessary if the going concern assumption were not appropriate. If the going concern basis were not appropriate for these financial statements, then adjustments would be necessary in the carrying value of the assets and liabilities, the reported revenues and expenses, and the balance sheet classifications used. These adjustments could be material.

SEQUOIA LITIGATION UPDATE

On January 13, 2020, the Court of Queen's Bench (the "Court") issued its written 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 PricewaterhouseCoopers Inc. LIT 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, challenging the entire decision, and Perpetual and its CEO 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 September 24, 2019, Perpetual filed an application for security for costs of the appeal. On January 28, 2020, the Court of Appeal issued its decision with respect to Perpetual's security for costs application, requiring the Trustee to post security with the Court of Appeal in the amount of \$0.2 million. Applications filed by the Trustee to appeal the security for costs decision and alter the reasons for the decision were dismissed at a hearing held on June 18, 2020. Costs of \$0.1 million were awarded by the Court of Appeal in favor of Perpetual on July 21, 2020.

On February 25, 2020, Perpetual filed a second 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. Applications for security for costs for future litigation were also filed at that time. In July 2020, the Orphan Well Association ("OWA"), certain oil and gas companies, and six municipalities applied to intervene in the second BIA dismissal application proceedings. The OWA and certain oil and gas companies will be permitted to intervene in the proceedings which will take place on October 1st and 2nd, 2020.

Management expects that the Company is more likely than not to be completely 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.

OUTLOOK

Perpetual currently anticipates that five wells of the eight-well carried interest drilling program at the 50% owned East Edson property will be drilled in the second half of 2020, with two wells tied-in to production late in the third quarter followed by three wells commencing production early in the first quarter of 2021. While oil prices have recovered from their second quarter lows, capital expenditures for the remainder of 2020 in Eastern Alberta have been deferred, pending a sustained recovery of WTI oil prices to the US\$45.00/bbl level.

With the reactivation of shut-in heavy oil production and the contribution from the first two carried interest wells at East Edson in late-September, production is forecast to increase in the third quarter to 4,500 to 4,700 boe/d (32% liquids). Fourth quarter production is anticipated to increase to 5,200 to 5,400 boe/d (28% liquids) with the full impact of the two East Edson wells. An additional 250 bbl/d of heavy oil production could be re-started if WTI oil prices increase above the US\$45.00/bbl level.

Abandonment and reclamation expenditures will also remain suspended for the second half of the year, enabled by the AER's cancellation of area-based closure expenditure requirements for 2020. We are optimistic that funding from the Alberta Site Rehabilitation program may facilitate the advancement of abandonment and reclamation projects previously planned for 2020, with \$0.3 million of applications approved to date.

Minimization of operating and corporate costs will remain a priority, as will ensuring employees remain safe and healthy amid the COVID-19 pandemic.

SECOND QUARTER FINANCIAL AND OPERATING RESULTS

Capital expenditures

(\$ thousands)	Three months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
Exploration and development	30	5,170	5,260	6,380
Corporate assets	(41)	30	(38)	58
Capital expenditures	(11)	5,200	5,222	6,438
Acquisitions	89	–	89	–
Net proceeds on dispositions	(34,750)	–	(34,750)	–
Total	(34,672)	5,200	(29,439)	6,438

Exploration and development spending by area

(\$ thousands)	Three months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
West Central	(200)	445	(67)	1,113
Eastern Alberta	230	4,725	5,327	5,267
Total	30	5,170	5,260	6,380

Wells drilled by area

<i>(gross/net)</i>	Three months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
West Central	-/-	-/-	-/-	-/-
Eastern Alberta	-/-	3/3.0 ⁽¹⁾	4/4.0	3/3.0 ⁽¹⁾
Total	-/-	3/3.0 ⁽¹⁾	4/4.0	3/3.0 ⁽¹⁾

⁽¹⁾ Excludes the re-entry of one existing well bore in Mannville.

Perpetual's exploration and development spending in the second quarter of 2020 was nominal, consistent with guidance released on May 4, 2020 with the Company's first quarter results.

For the six months ended June 30, 2020, spending was directed entirely to Eastern Alberta, where four (4.0 net) multi-lateral heavy oil wells were drilled, completed and tied-in at Ukalta targeting the Clearwater formation. Two of the four wells were returned to production in the second quarter and are performing above expected type curve levels. The start-up of the additional two well pad was delayed due to extreme wet weather conditions but has now resumed production. The four new wells are back on production at a combined rate of 560 bbl/d, bringing total Ukalta production to more than 700/bbl/d as of July 31, 2020.

Acquisitions and Dispositions

On April 1, 2020, the Company sold a 50% working interest in its East Edson property in West Central Alberta to the Purchaser for consideration including a cash payment of \$35 million and the carried interest funding of the drill, complete and tie-in costs for an eight-well drilling program (the "East Edson Transaction"). A minimum of two horizontal wells targeting development of the Wilrich formation are required to be drilled, completed and tied-in during the third quarter of 2020. The Purchaser is required to complete the eight-well horizontal drilling program by April 1, 2022.

The consideration received, and calculation of the gain (loss) recorded on disposition is summarized below:

<i>(\$ thousands)</i>	
Cash proceeds from disposition (a)	34,750
Drilling program rights received (b)	18,000
Retained East Edson royalty obligation (c)	(6,996)
Carrying amount of assets held for sale disposed (d)	(52,803)
Carrying amount of decommissioning obligations held for sale disposed (e)	7,049
Gain (loss) on disposition	—

- | | | |
|----|---|---|
| a) | Cash proceeds from disposition | \$35.0 million of cash received on closing, net of \$0.2 million of transaction costs and closing adjustments. In order to reflect the nature of the proceeds received, cash proceeds from disposition have been allocated on the condensed interim consolidated statements of cash flows to financing and investing activities in the amount of \$7.0 million and \$27.8 million, respectively. |
| b) | Drilling program rights received | \$18.0 million of drilling program rights, comprised of the carried interest funding of the drill, complete, and tie-in costs for an eight-well drilling program. A minimum of two horizontal wells targeting development of the Wilrich formation are required to be completed and tied-in commencing in the third quarter of 2020. The Purchaser is required to fulfill its entire commitment by April 1, 2022 and will be obligated to pay Perpetual \$2.25 million for each commitment well not completed and tied-in by this time. |
| c) | Retained East Edson royalty obligation | \$7.0 million that Perpetual will retain until December 31, 2022 on behalf of the Purchaser, comprising the Purchaser's 50% working interest in the existing gross overriding royalty on the East Edson property equivalent to 2.8 MMcf/d of natural gas and associated NGL production. This obligation has been recorded in the condensed interim consolidated statement of financial position under the heading "Royalty obligations". |
| d) | Carrying amount of assets held for sale disposed | \$52.8 million of oil and gas properties (\$50.4 million) and exploration and evaluation assets (\$2.4 million). |
| e) | Carrying amount of decommissioning obligations held for sale disposed | \$7.0 million of decommissioning obligations associated with oil and gas properties disposed. |

Expenditures on decommissioning obligations

During the three months ended June 30, 2020, Perpetual deferred spending on abandonment and reclamation projects, enabled by the AER's cancellation of area-based closure expenditure requirements for 2020. For the six months ended June 30, 2020, Perpetual spent \$0.2 million (2019 – \$0.7 million) on abandonment and reclamation projects, and received nine reclamation certificates from the AER during the same period (2019 – eight reclamation certificates) which will result in the cessation of associated property tax and surface lease expenses. The Company's aggregate AER Licensee Liability Rating ("LLR") was 4.0 at June 30, 2020 (June 30, 2019 – 4.5) and is anticipated to decrease to 1.6 upon completion of the AER's transfer of operatorship of the East Edson property to the Purchaser.

Operating netbacks

The following table highlights Perpetual's operating netbacks for the three and six months ended June 30, 2020 and 2019:

(\$ thousands)	Three months ended June 30, 2020			Three months ended June 30, 2019		
	West Central	Eastern	Total	West Central	Eastern	Total
Total petroleum and natural gas revenue ⁽¹⁾	2,162	1,560	3,722	11,640	7,595	19,235
Realized gains (losses) on derivatives ⁽²⁾	–	–	661	–	–	(1,110)
Royalties	(695)	(99)	(794)	(1,423)	(1,041)	(2,464)
Production and operating expenses	(688)	(1,146)	(1,834)	(2,003)	(2,908)	(4,911)
Transportation costs	(501)	(281)	(782)	(1,097)	(538)	(1,635)
Total operating netback	278	34	973	7,117	3,108	9,115

(\$ thousands)	Six months ended June 30, 2020			Six months ended June 30, 2019		
	West Central	Eastern	Total	West Central	Eastern	Total
Total petroleum and natural gas revenue ⁽¹⁾	9,201	5,018	14,219	27,834	13,600	41,434
Realized gains (losses) on derivatives ⁽²⁾	–	–	(389)	–	–	(968)
Royalties	(2,628)	(549)	(3,177)	(4,025)	(1,615)	(5,640)
Production and operating expenses	(2,362)	(3,640)	(6,002)	(3,998)	(6,233)	(10,231)
Transportation costs	(1,411)	(641)	(2,052)	(2,181)	(985)	(3,166)
Total operating netback	2,800	188	2,599	17,630	4,767	21,429

(\$/boe)	Three months ended June 30, 2020			Three months ended June 30, 2019		
	West Central	Eastern	Total	West Central	Eastern	Total
Boe operating netback						
Production (boe/d)	2,709	953	3,662	7,432	1,938	9,370
Total petroleum and natural gas revenue ⁽¹⁾	8.77	17.99	11.17	17.21	43.07	22.56
Realized gains (losses) on derivatives ⁽²⁾	–	–	1.98	–	–	(1.30)
Royalties	(2.82)	(1.14)	(2.38)	(2.10)	(5.90)	(2.89)
Production and operating expenses	(2.79)	(13.22)	(5.50)	(2.96)	(16.49)	(5.76)
Transportation costs	(2.03)	(3.24)	(2.35)	(1.62)	(3.05)	(1.92)
Total operating netback	1.13	0.39	2.92	10.53	17.63	10.69

(\$/boe)	Six months ended June 30, 2020			Six months ended June 30, 2019		
	West Central	Eastern	Total	West Central	Eastern	Total
Boe operating netback						
Production (boe/d)	4,240	1,330	5,570	7,984	1,819	9,803
Total petroleum and natural gas revenue ⁽¹⁾	11.92	20.73	14.03	19.26	41.32	23.35
Realized gains (losses) on derivatives ⁽²⁾	–	–	(0.39)	–	–	(0.54)
Royalties	(3.41)	(2.27)	(3.13)	(2.79)	(4.91)	(3.18)
Production and operating expenses	(3.06)	(15.04)	(5.92)	(2.77)	(18.94)	(5.77)
Transportation costs	(1.83)	(2.65)	(2.02)	(1.51)	(2.99)	(1.78)
Total operating netback	3.62	0.77	2.57	12.19	14.48	12.08

⁽¹⁾ Includes revenues related to the natural gas market diversification contract and physical forward sales contracts which settled during the period.

⁽²⁾ Includes realized gains and losses on financial derivatives and financial prompt month price optimization contracts. Realized gains and losses on financial derivatives are not allocated to the Company's core areas.

Perpetual's operating netback of \$1.0 million (\$2.92/boe) in the second quarter of 2020 decreased 89% from \$9.1 million (\$10.69/boe) in the comparative period of 2019. This decrease was due to the 38% drop in realized revenue per boe combined with average production that was 61% lower than the prior year period. The significant decrease in production was the result of the East Edson Transaction which closed on April 1, 2020, natural declines resulting from limited capital investment on the Company's natural gas assets, and the temporary shut-in of heavy oil production for much of the second quarter in response to the significant decline in global oil prices. Lower realized revenue per boe was due to natural gas basis hedging losses recorded in the second quarter of 2020 as a result of the relative strengthening of AECO natural gas prices compared to NYMEX. Additionally, realized NGL prices were significantly lower in the quarter, tracking the sharp decline in oil prices. Lower realized natural gas and NGL prices were partially offset by the 35% increase in realized oil prices, due to realized financial hedging gains of \$2.3 million (Q2 2019 – realized loss of \$1.2 million).

For the second quarter of 2020, royalties, production and operating expense, and transportation costs were significantly lower than the comparative period of 2019, in step with the reduction in production volumes.

Perpetual's operating netback of \$2.6 million (\$2.57/boe) for the six months ended June 30, 2020 decreased 88% from \$21.4 million (\$12.08/boe) in the comparative period of 2019. The decrease was due to the 43% decrease in total Company production combined with the 40% decrease in realized revenue per boe.

Production

	Three months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
Natural gas (MMcf/d)				
Eastern Alberta	2.3	4.5	2.4	4.0
West Central	14.6	40.0	22.8	43.2
Total natural gas ⁽¹⁾	16.9	44.5	25.2	47.2
Crude oil (bbl/d)				
Eastern Alberta ⁽²⁾	570	1,194	938	1,154
West Central	3	13	8	10
Total crude oil	573	1,207	946	1,164
Total NGL (bbl/d) ⁽³⁾	268	754	437	770
Total production (boe/d)	3,662	9,370	5,570	9,803

⁽¹⁾ Natural gas production yielded a heat content of 1.17 GJ/Mcf for the three months ended June 30, 2020 (Q2 2019 – 1.17). See “Commodity Prices” – Average Perpetual prices for selling price premium to AECO Daily Index.

⁽²⁾ Primarily heavy oil.

⁽³⁾ Primarily West Central liquids-rich gas.

Second quarter production averaged 3,662 boe/d, down 61% from 9,370 boe/d in the comparative period of 2019 due primarily to the temporary suspension of heavy oil production in response to low oil prices, and the sale of a 50% working interest in the East Edson property in West Central Alberta, effective April 1, 2020. Compared to the first quarter of 2020, production declined by 51% or 3,817 boe/d. The closing of the East Edson Transaction on April 1, 2020, combined with natural declines at East Edson of 6%, reduced West Central production by 3,062 boe/d or 80% of the total production decline from the first quarter. The shut-in of Eastern Alberta heavy oil production due to low oil prices contributed the remaining 755 boe/d decrease. In the second quarter of 2020, the production mix increased to 23% oil and NGL (Q2 2019 – 21% oil and NGL).

Second quarter natural gas production averaged 14.6 MMcf/d at West Central, down 64% from 40.0 MMcf/d in the comparative period of 2019. Natural gas production was impacted by the sale of a 50% working interest in the East Edson property, combined with the continued deferral of capital investment for drilling and completions in West Central in response to low AECO natural gas prices.

For the three months ended June 30, 2020, NGL production was 268 bbl/d, 64% lower than the comparative period of 2019, tracking lower natural gas production from East Edson. NGL yields at East Edson were 18.4 bbls per MMcf in the second quarter of 2020, consistent with 18.9 bbls per MMcf in the comparative period of 2019. Perpetual’s average NGL sales composition for the second quarter of 2020 consisted of 66% condensate, comparable to the prior year period.

Crude oil production in Eastern Alberta was 52% lower than the second quarter of 2019, reflecting temporary shut-ins of heavy oil production in response to the significant decline in global oil prices. The Company began reactivating certain low-cost heavy production in mid-May 2020 and has continued to ramp up production as oil prices recover. Production from two new wells at Ukalta remained offline until mid-July due to extremely wet field conditions, and approximately 250 bbl/d of higher cost production at Mannville remains shut-in awaiting stronger oil prices. The shut-in of heavy oil production in late-March reduced second quarter 2020 production by approximately 850 boe/d.

For the six months ended June 30, 2020, production decreased 43% to 5,570 boe/d compared to 9,803 boe/d in the prior year period. Production levels decreased through 2019 and the first half of 2020 with restricted capital spending in response to low and volatile Alberta natural gas prices. The 50% working interest disposition of the East Edson property and shut-ins responding to the significant decline in crude oil demand and oil prices driven by the COVID-19 pandemic, have further reduced production in 2020.

Commodity Prices

	Three months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
Reference prices				
NYMEX Daily Index (US\$/MMBtu)	1.72	2.64	1.83	2.89
AECO Daily Index (\$/GJ)	1.89	0.98	1.91	1.73
AECO Daily Index (\$/Mcf) ⁽¹⁾	1.99	1.03	2.02	1.83
Alberta Gas Reference Price (\$/GJ) ⁽²⁾	1.62	0.89	1.72	1.39
West Texas Intermediate ("WTI") light oil (US\$/bbl)	27.85	59.81	37.01	57.36
Western Canadian Select ("WCS") differential (US\$/bbl)	(11.47)	(10.68)	(16.00)	(11.48)
WCS average (Cdn\$/bbl) ⁽³⁾	22.77	65.83	28.78	61.02
Average Perpetual prices				
Natural gas (\$/Mcf) ⁽¹⁾				
AECO Daily Index	1.99	1.03	2.02	1.83
Heat content premium ⁽⁴⁾	0.21	0.11	0.21	0.20
Market diversification contract	–	0.84	–	0.80
Realized gains (losses) on financial and physical gas derivatives	(2.03)	0.28	(1.37)	0.11
Realized gains (losses) on prompt month price optimization	0.11	(0.01)	–	(0.01)
Realized natural gas price (\$/Mcf) ⁽⁵⁾	0.28	2.25	0.86	2.93
Percent of AECO Daily Index	14%	218%	43%	160%
Realized oil price (\$/bbl) ⁽⁵⁾	67.56	50.01	43.18	45.76
Realized NGL price (\$/bbl) ⁽⁵⁾	17.35	51.34	30.62	41.61

⁽¹⁾ Converted from \$/GJ using a standard energy conversion rate of 1.06 GJ:1 Mcf.

⁽²⁾ Alberta Gas Reference Price is the price used to calculate Alberta Crown royalties.

⁽³⁾ Derived internally using the Bank of Canada average foreign exchange rate of US\$1.00 = Cdn\$1.39 for the three months ended June 30, 2020 (Q2 2019 – \$1.34) and \$1.37 for the six months ended June 30, 2020 (2019 – \$1.33).

⁽⁴⁾ Realized natural gas prices are at a premium to the AECO Daily Index due to higher average heat content of 1.17 GJ/Mcf. For the three and six months ended June 30, 2020, Perpetual received an 11% premium to the AECO Daily Index (three and six months ended June 30, 2019 – 11%) related to its higher average heat content.

⁽⁵⁾ Realized natural gas, oil and NGL prices include physical forward sales contracts for which delivery was made during the reporting period, along with realized gains and losses on financial derivatives and foreign exchange contracts.

A significantly warmer than normal winter resulted in a year-over-year surplus in natural gas inventories in the United States ("US") of 856 Bcf at the beginning of the second quarter of 2020. At the same time, higher than normal natural gas inventories in Europe and Asia exiting the winter, combined with the significantly lower global gas demand during Q2 2020 as a result of COVID-19 stay in place orders, resulted in US LNG exports averaging only 6.3 Bcf/d for the period as compared to capacity of 10.5 Bcf/d. These factors led NYMEX natural gas prices to decrease 35% from US\$2.64/MMBtu for the second quarter of 2019 to US\$1.72/MMBtu in the second quarter of 2020. In comparison, the average AECO Daily Index price increased 93% from \$0.98/GJ for the second quarter of 2019 to \$1.89/GJ for the second quarter of 2020. The increase in AECO pricing was due to the significantly lower level of Western Canadian storage inventories as compared to the US, combined with the implementation of the Temporary Service Protocol by TC Energy for the April 1, 2020 through October 31, 2020 period, which has allowed prioritization of storage injections over firm receipt transportation contracts to help balance the system during maintenance periods, resulting in more stable prices.

The decrease in the average WTI price to US\$27.85/bbl for the second quarter of 2020 from US\$59.81/bbl in the comparative period of 2019 was related to significantly lower global demand driven by the economic contraction caused by the COVID-19 pandemic. The second quarter of 2020 will be remembered as the time in which the WTI contract settled at an astonishing price of negative US\$37.63/bbl on April 20th, as concerns of brimming storage levels combined with financial contract rolls to create a perfect storm for prices to plunge. WTI moved higher during the rest of the quarter due to the OPEC+ supply restriction agreement, as well as shut-ins of production from producers around the world which helped to balance supply and demand fundamentals.

The WCS differential widened from an average US\$10.68/bbl in the second quarter of 2019 to US\$11.47/bbl in the same period of 2020, due to increasing inventories of crude oil in Alberta, in addition to limited pipeline capacity to export product out of the province. As WTI prices dropped in mid-March, Western Canadian producers shut-in heavy oil production, alleviating pipeline capacity issues, and causing WCS differentials to tighten.

Perpetual's realized natural gas price, including derivatives, decreased 88% to \$0.28/Mcf for the second quarter of 2020 from \$2.25/Mcf in the comparative period of 2019, and represented only 14% of the AECO Daily Index price compared to 218% in the prior year period. Lower realized natural gas prices were the result of AECO-NYMEX basis hedging losses which have occurred as NYMEX prices weakened relative to AECO prices during the second quarter. During the second quarter of 2020, the remaining AECO-NYMEX basis hedge positions were closed out by entering into offsetting hedge arrangements for the remainder of 2020 (\$5.1 million unrealized loss) and 2021 (\$3.4 million unrealized loss).

In the third quarter of 2019, the Company's 40,000 MMBtu/d market diversification contract was monetized for the period of December 2019 to October 2020 and did not contribute to 2020 second quarter revenue, but added \$0.84/Mcf in the second quarter of 2019 on the relative strength of daily index prices at the five downstream markets compared to the AECO Daily Index. Pricing is based on daily index prices at pricing hubs outside of Alberta (Chicago, Malin, Dawn, Michcon, Empress and Emerson) that generally track North American NYMEX prices. See "Natural Gas Sales Obligations" on page 16 of this MD&A for sales volume obligations by price hub. Realized losses on financial and physical gas derivatives, combined with prompt month price optimization operations decreased the realized price in the second quarter of 2020 by \$1.92/Mcf (Q2 2019 – increased the realized price by \$0.27/Mcf). During the second quarter of 2020, the average heat content conversion ratio for Perpetual's natural gas production was 1.17 GJ:1 Mcf, consistent with the comparative period of 2019. Natural gas production from East Edson yields higher heat content gas compared to Perpetual's other production areas.

Perpetual's realized oil price of \$67.56/bbl was 35% higher than the second quarter of 2019, and included realized hedging gains on crude oil derivative contracts of \$2.3 million or \$44.32/bbl (Q2 2019 – realized hedging losses of \$1.2 million or \$11.30/bbl) on second quarter production. Excluding realized hedging gains and losses, Perpetual's realized oil price was \$23.24/bbl in the second quarter of 2020, down 62% from \$61.31/bbl in the prior year period. During the second quarter of 2020, WTI and WCS hedge positions for the remainder of 2020 were substantially offset by similar arrangements, resulting in a \$6.5 million unrealized gain as at June 30, 2020. WTI-WCS differential hedges remain in place for the remainder of 2020 on an average of 567 bbl/d at a fixed differential of US\$19.50/bbl.

Perpetual's realized NGL price for the second quarter of 2020 was \$17.35/bbl, down 66% from the second quarter of 2019, reflecting a decrease in all NGL component prices which moved lower in concert with lower WTI light oil prices. Realized prices in the second quarter of 2020 were also impacted by realized hedging losses of \$1.15/bbl (Q2 2019 – realized losses of \$0.15/bbl) on Perpetual's 350 bbl/d basis differential hedge between WTI and Edmonton condensate pricing that expired on June 30, 2020.

Revenue

<i>(\$ thousands, except as noted)</i>	Three months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
Petroleum and natural gas ("P&NG") revenue				
Natural gas ⁽¹⁾	2,060	8,968	7,382	23,856
Oil	1,212	6,733	4,230	11,771
NGL	450	3,534	2,607	5,807
Total petroleum and natural gas revenue	3,722	19,235	14,219	41,434
Realized gains (losses) on derivatives ⁽²⁾	661	(1,110)	(389)	(968)
Realized revenue	4,383	18,125	13,830	40,466
Unrealized gains (losses) on derivatives	(1,611)	(1,791)	10,532	(9,342)
Total revenue	2,772	16,334	24,362	31,124
Realized revenue <i>(\$/boe)</i>	13.15	21.26	13.64	22.81
Total revenue <i>(\$/boe)</i>	8.32	19.16	24.03	17.54

⁽¹⁾ Includes revenues related to the market diversification contract and physical forward sales contracts which settled during the period.

⁽²⁾ Includes realized gains and losses on financial derivatives and certain financial prompt month price optimization contracts.

Perpetual's petroleum and natural gas ("P&NG") revenue, before financial derivatives, for the three months ended June 30, 2020 of \$3.7 million decreased 81% from the second quarter of 2019, due to the 61% decrease in average daily production combined with the impact of physical hedging losses on natural gas AECO-NYMEX basis contracts. For the six-month period ended June 30, 2020, P&NG revenue decreased 66% compared to the prior year period, following the 43% decrease in average daily production.

Natural gas revenue, before financial derivatives, of \$2.1 million in the second quarter of 2020 comprised 55% (Q2 2019 – 47%) of total P&NG revenue while natural gas production was 77% (Q2 2019 – 79%) of total production. Natural gas revenue decreased 77% from \$9.0 million in the second quarter of 2019, reflecting the impact of the 62% decrease in natural gas production volumes driven by the East Edson Transaction. In the third quarter of 2019, the Company's 40,000 MMBtu/d market diversification contract was monetized for the period of December 2019 to October 2020 and did not impact second quarter 2020 revenue, but added \$0.84/Mcf in the second quarter of 2019 on the relative strength of daily index prices at the five downstream markets compared to the AECO Daily Index.

Oil revenue of \$1.2 million represented 33% (Q2 2019 – 35%) of total P&NG revenue while oil production was 16% (Q2 2019 – 13%) of total production. Oil revenue was 82% lower than the same period in 2019, due to the 53% decrease in crude oil production triggered by the temporary shut-ins of heavy oil production in response to extremely low oil prices. The 65% decrease in the WCS average price was mainly due to the 53% decrease in WTI light oil prices to US\$27.85/bbl, combined with wider WCS differentials of US\$11.47/bbl compared to US\$10.68/bbl in the prior year period. For the six months ended June 30, 2020, oil revenue decreased 64% compared to the prior year period, due primarily to the 53% decrease in the WCS average price to \$28.78/bbl (Q2 2019 – \$61.02/bbl) and temporary production shut-ins.

NGL revenue for the second quarter of 2020 was \$0.4 million, representing 12% (Q2 2019 – 18%) of total P&NG revenue while NGL production was just 7% (Q2 2019 – 8%) of total Company production. NGL revenue decreased by 87% from the prior year period while NGL production decreased 64%, reflecting the decrease in all NGL component prices compared to the prior year period.

Realized gains on derivatives totaled \$0.7 million for the second quarter of 2020, compared to losses of \$1.1 million for the same period of 2019. The realized gain in the current period was comprised of \$2.3 million of gains from oil derivatives (Q2 2019 – \$1.2 million loss), partially offset by a \$1.6 million loss on natural gas derivatives (Q2 2019 – \$0.1 million gain).

For the second quarter of 2020, Perpetual recorded an unrealized loss on derivatives of \$1.6 million (Q2 2019 – \$1.8 million unrealized loss) attributable to the impact of wider AECO-NYMEX basis differentials compared to Perpetual's natural gas derivative positions. Unrealized gains and losses represent the change in mark-to-market value of derivative contracts as forward commodity prices and foreign exchange rates change. Unrealized gains and losses on derivatives are excluded from the Corporation's calculation of cash flow from operating activities as they are non-cash. Derivative gains and losses vary depending on the nature and extent of derivative contracts in place, which in turn, vary with the Corporation's assessment of commodity price risk, committed capital spending and other factors.

Royalties

(\$ thousands, except as noted)	Three months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
Crown	24	425	456	938
Freehold and overriding ⁽¹⁾	770	2,039	2,721	4,702
Total	794	2,464	3,177	5,640
Crown (% of P&NG revenue)	0.6	2.2	3.2	2.3
Freehold and overriding (% of P&NG revenue)	20.7	10.6	19.1	11.3
Total (% of P&NG revenue)	21.3	12.8	22.3	13.6
\$/boe	2.38	2.89	3.13	3.18

⁽¹⁾ Includes \$0.6 million in gross overriding royalty payments at East Edson for the three months ended June 30, 2020 (Q2 2019 – \$1.1 million) and \$2.2 million for the six months ended June 30, 2020 (2019 – \$2.9 million).

Royalty expenses for the second quarter of 2020 were \$0.8 million, 68% lower than the comparative period of 2019 due to both lower production and P&NG revenue. The combined average royalty rate on P&NG revenue increased from 12.8% in the second quarter of 2019 to 21.3% in 2020 due to the impact of the fixed volume East Edson gross overriding royalty on lower production. For the six months ended June 30, 2020, royalties were \$3.2 million (2019 – \$5.6 million), 44% lower than the prior year period. The decrease reflects lower P&NG revenue of 66%, partially offset by higher Alberta Gas Reference prices and AECO Daily Index prices which are used to calculate crown and freehold natural gas royalties, respectively.

Freehold and overriding royalties have decreased 62% from the second quarter of 2019, due to the impact of the East Edson Transaction which closed on April 1, 2020. As part of the East Edson Transaction, Perpetual agreed to retain the Purchaser's 50% working interest in the existing gross overriding royalty obligation on the property, equivalent to 2.8 MMcf/d of natural gas and associated NGL production for the period April 1, 2020 to December 31, 2022. This obligation has been recorded in the condensed interim consolidated statement of financial position under the heading "Royalty obligations". The retained East Edson royalty obligation is paid in-kind, and settled through non-cash delivery of contractual natural gas and NGL volumes to the royalty holder.

For the six months ended June 30, 2020, crown royalties decreased 51% compared to the prior year period. This decrease reflects the impact of lower production (43% decrease) and lower WTI light oil prices (35% decrease), partially offset by higher Alberta Gas Reference Prices (24% increase) compared to the prior year period.

Production and operating expenses

(\$ thousands, except as noted)	Three months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
Production and operating expenses	1,834	4,911	6,002	10,231
\$/boe	5.50	5.76	5.92	5.77

Total production and operating expenses were down 5% on a unit-of-production basis to \$5.50/boe for the second quarter of 2020, compared to \$5.76/boe for the comparable period of 2019. On an absolute dollar basis, production and operating costs were down by \$3.1 million (63%) due to the temporary shut-in of heavy oil production, the East Edson Transaction, and cost mitigation initiatives. The reduction of employee compensation costs and payments received from the CEWS program reduced second quarter operating costs by \$0.2 million.

West Central production and operating costs per boe decreased by 6% to \$2.79/boe in the second quarter of 2020 (Q2 2019 – \$2.96/boe), while Eastern Alberta operating costs decreased 20% to \$13.22/boe over the same period (Q2 2019 – \$16.49/boe) as a result of the temporary shut-in of higher cost heavy oil production.

Transportation costs

(\$ thousands, except as noted)	Three months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
Transportation costs	782	1,635	2,052	3,166
\$/boe	2.35	1.92	2.02	1.78

Transportation costs include clean oil trucking and NGL transportation, as well as costs to transport natural gas from the plant gate to commercial sales points. Transportation costs in the second quarter of 2020 were \$0.8 million, down 52% from the prior year period of \$1.6 million. On a unit-of-production basis, company-wide transportation costs increased by 22% from \$1.92/boe in the second quarter of 2019 to \$2.35/boe in the same period of 2020, due to the impact of unutilized demand charges from firm natural gas pipeline capacity at East Edson. Transportation costs averaged \$2.03/boe at West Central compared to \$3.24/boe for production from Eastern Alberta.

Exploration and evaluation ("E&E") expenses

(\$ thousands)	Three months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
Lease rentals ⁽¹⁾	35	(113)	55	51
Geological and geophysical costs	–	8	22	8
Lease expiries (non-cash)	29	61	65	61
Total E&E expense	64	(44)	142	120

⁽¹⁾ Commencing in the second quarter of 2019, developed mineral lease rentals have been classified as production and operating expenses.

Exploration and evaluation expenses include lease rentals on undeveloped acreage, geological and geophysical costs, and the write-down of carrying costs related to lease expiries. During the six month period ended June 30, 2020, the Company recorded \$0.1 million of non-cash write-downs (2019 – \$0.1 million) associated with certain P&NG leases deemed to no longer be part of Perpetual’s future development plans.

General and administrative (“G&A”) expenses

<i>(\$ thousands, except as noted)</i>	Three months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
Cash G&A expense	2,101	3,563	4,575	7,250
Overhead recoveries	(106)	(386)	(355)	(602)
Total G&A expense	1,995	3,177	4,220	6,648
\$/boe	5.99	3.73	4.16	3.75

During the second quarter of 2020, cash G&A expense was \$2.1 million, down 41% from the prior year period of \$3.6 million due to the 25% reduction in Perpetual’s corporate employee head count that was implemented in the third quarter of 2019, combined with the reduction in employee compensation and work hours to 80% effective April 1, 2020. Perpetual also received payments of \$0.4 million from the CEWS program in the second quarter of 2020 that reduced G&A expense.

Overhead recoveries decreased by 73% over the same period, due to reduced cash G&A expense and decreased capital expenditures associated with the Company’s decision to defer all future capital spending until oil prices recover and stabilize.

On a unit-of-production basis, total G&A expense of \$5.99/boe for the second quarter of 2020 was up 61% from the prior year period, due to the impact of reduced production. For the six months ended June 30, 2020, cash G&A expense was \$4.6 million, 37% lower than the prior year period of \$7.3 million for the same reasons noted above.

Share-based payments

<i>(\$ thousands, except as noted)</i>	Three months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
Share-based payments (non-cash)	135	616	315	1,324
Share-based payments (cash)	361	–	722	–
Total share-based payments	496	616	1,037	1,324

Share-based payments expense for the three months ended June 30, 2020 was \$0.5 million, down 19% from the same period in 2019 due to a reduction in the value of outstanding share-based payment awards. During the second quarter of 2020, the Company granted new awards to employees and Directors, comprised of 0.9 million share options, 1.7 million performance share rights, and 3.3 million compensation awards. For the six months ended June 30, 2020, share-based payments expense was \$1.0 million, 22% lower than the prior year period for the same reasons noted above.

Depletion and depreciation

<i>(\$ thousands, except as noted)</i>	Three months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
Depletion and depreciation	2,901	8,171	9,180	16,730
\$/boe	8.71	9.58	9.06	9.43

Perpetual recorded \$2.9 million of depletion and depreciation expense for the three months ended June 30, 2020, a decrease of 64% from \$8.2 million recorded in the prior year period. The decrease reflects the 61% decline in production volumes compared to the prior year period. On a unit-of-production basis, depletion and depreciation expense decreased by 9% to \$8.71/boe (Q2 2019 – \$9.58/boe) due to non-cash impairments recognized between the second quarter of 2019 and the first quarter of 2020 (Q2 2019 – \$22.6 million; Q4 2019 – \$24.5 million; Q1 2020 – \$50.3 million).

Impairment

In accordance with IFRS, an impairment test is performed if the Company identifies an indicator of impairment. For the quarter ended June 30, 2020, the Company conducted an assessment of impairment indicators for the Company’s cash-generating units (“CGUs”). There were no triggers identified and therefore, no impairments or impairment reversals recognized during the second quarter of 2020.

In performing the review at March 31, 2020, management determined that the significant decline in global oil and natural gas prices, coupled with the considerable economic instability and uncertainty in the oil and natural gas markets which negatively impacts operating cash flows, justified calculation of the recoverable amount of the liquids-rich natural gas assets and heavy oil assets which comprise the West Central CGU and Eastern Alberta CGU, respectively. The recoverable amounts of the CGUs were determined using value-in-use (“VIU”) based on the net present value of cash flows from natural gas, oil, and NGL reserves using estimates of total proved plus probable reserves evaluated or reviewed by the Company’s independent reserves evaluators and updated internally by management, along with commodity price estimates based on an average of three independent reserve evaluators, and an estimate of market discount rates between 12% and 25% to consider risks specific to the asset.

At March 31, 2020, the Company determined that the carrying amounts of the West Central CGU and Eastern Alberta CGU exceeded the estimated recoverable amounts and accordingly, a non-cash impairment charge of \$50.3 million was included in net loss.

E&E assets are tested for impairment both at the time of any triggering facts and circumstances as well as upon their eventual reclassification to oil and natural gas properties in property, plant and equipment. For the three months ended June 30, 2020, the Company conducted an assessment of impairment indicators for the Company's E&E assets. There were no triggers identified and therefore, no impairments or impairment reversals recognized during the second quarter of 2020.

In the first quarter of 2020, management determined that the significant decline in global oil and natural gas prices, coupled with the considerable economic instability and uncertainty in the oil and natural gas industry, justified calculation of the recoverable amount of certain undeveloped lands classified as E&E. As a result, the carrying value of the undeveloped lands was written down to the estimated recoverable amount, resulting in a non-cash impairment charge of \$10.2 million.

Finance expenses

(\$ thousands)	Three months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
Cash finance expense				
Interest on revolving bank debt	220	657	1,099	1,340
Interest on TOU share margin demand loan	—	115	—	236
Interest on term loan	902	887	1,813	1,798
Interest on senior notes	735	741	1,470	1,452
Interest on lease liabilities	45	48	90	98
Dividend income from TOU share investment	—	(198)	—	(364)
Total cash finance expense	1,902	2,250	4,472	4,560
Non-cash finance expense				
Amortization of debt issue costs	395	266	742	538
Accretion on decommissioning obligations	100	196	266	411
Change in fair value of royalty obligations	484	(47)	536	361
Total non-cash finance expense	979	415	1,544	1,310
Finance expenses recognized in net loss	2,881	2,665	6,016	5,870

Total cash finance expense of \$1.9 million for the three months ended June 30, 2020 was 15% lower than the prior year period (Q2 2019 – \$2.3 million), due to decreased interest expense on the reserve-based Credit Facility associated with lower average borrowings and lower floating interest rates.

In January 2020, the Company sold its remaining 1,000,000 TOU shares and used the net cash proceeds of \$14.3 million to repay the remaining \$0.1 million TOU share margin demand loan, with the balance used to repay a portion of the Credit Facility. Accordingly, the Company no longer receives dividend income from its TOU share investment or incurs interest expense on the TOU share margin demand loan.

Total non-cash finance expense for the three months ended June 30, 2020 was \$1.0 million (Q2 2019 – \$0.4 million). An increase in the fair value of the royalty obligations of \$0.5 million was recorded in the second quarter of 2020 due to higher AECO future natural gas prices, resulting in a fair value at June 30, 2020 of \$7.4 million.

LIQUIDITY AND CAPITAL RESOURCES

Perpetual's strategy targets the maintenance of a strong capital base to retain investor, creditor and market confidence to support the execution of its business plans. The Company manages its capital structure and adjusts its capital spending in light of changes in economic conditions such as depressed commodity prices, available liquidity, and the risk characteristics of its underlying oil and natural gas assets. The Company considers its capital structure to include share capital, senior notes, the term loan, revolving bank debt, and net working capital. To manage its capital structure and available liquidity, the Company may from time to time issue equity or debt securities, sell assets, and adjust its capital spending to manage current and projected debt levels. The Company will continue to regularly assess changes to its capital structure and repayment alternatives, with considerations for both short-term liquidity and long-term financial sustainability.

Capital management

(\$ thousands, except as noted)	June 30, 2020	December 31, 2019
Revolving bank debt	11,080	47,552
Term loan, principal amount	45,000	45,000
TOU share margin demand loan, principal amount	—	100
Senior notes, principal amount	33,580	33,580
TOU share investment ⁽¹⁾	—	(15,220)
Net working capital deficiency ⁽²⁾	8,873	7,068
Net debt ⁽²⁾	98,533	118,080
Shares outstanding at end of period (thousands) ⁽³⁾	60,894	60,513
Market price at end of period (\$/share)	0.10	0.07
Market value of shares	6,089	4,236
Enterprise value ⁽²⁾	104,622	122,316
Net debt as a percentage of enterprise value (%)	94	97
Trailing twelve-months adjusted funds flow ⁽²⁾	(3,056)	14,534
Net debt to trailing twelve-months adjusted funds flow (times)	N/A	8.1

⁽¹⁾ The TOU share investment is valued based on the December 31, 2019 closing price per the Toronto Stock Exchange (\$15.22 per share) and 1.0 million TOU shares held.

⁽²⁾ See "Non-GAAP measures" in this MD&A.

⁽³⁾ Shares outstanding are presented net of shares held in trust.

At June 30, 2020, Perpetual had total net debt of \$98.5 million, down \$30.1 million (23%) from March 31, 2020 and \$19.5 million (17%) from December 31, 2019. The decrease in net debt was attributable to the closing of the East Edson Transaction on April 1, 2020 for consideration including a cash payment of \$35 million. The cash proceeds from the East Edson Transaction were used to repay bank debt.

As at June 30, 2020, 34% of net debt outstanding was repayable in 2022.

Perpetual had available liquidity at June 30, 2020 of \$6.6 million, comprised of the \$20 million Credit Facility Borrowing Limit, less current borrowings and letters of credit of \$11.1 million and \$2.3 million, respectively. Subsequent to quarter end, Perpetual has reduced its outstanding letters of credit to \$1.3 million.

Revolving bank debt

As at June 30, 2020, the Company's reserve-based Credit Facility had a Borrowing Limit of \$20.0 million (December 31, 2019 – \$55.0 million) under which \$11.1 million was drawn (December 31, 2019 – \$47.6 million) and \$2.3 million of letters of credit had been issued (December 31, 2019 – \$2.3 million). Borrowings under the Credit Facility bear interest at its lenders' prime rate or Banker's Acceptance rates, plus applicable margins and standby fees. The applicable Banker's Acceptance margins range between 3.0% and 5.5%. The effective interest rate on the Credit Facility at June 30, 2020 was 6.0%. For the period ended June 30, 2020, if interest rates changed by 1% with all other variables held constant, the impact on annual cash finance expense and net loss would be \$0.1 million.

Effective April 1, 2020, Perpetual's syndicate of Credit Facility lenders completed their borrowing base redetermination, incorporating the impact of the East Edson Transaction. The Borrowing Limit was reduced from \$45 million to \$20 million, with the next Borrowing Limit redetermination scheduled on or prior to July 31, 2020. The July 31, 2020 redetermination date has been extended to August 10, 2020 to provide the lenders additional time to complete their review. If not extended, the credit facility will cease to revolve, and all outstanding advances will be repayable on November 30, 2020. As a result, revolving bank debt has been presented as a current liability on the condensed interim consolidated statements of financial position as at June 30, 2020. Previously, on December 24, 2019, Perpetual's syndicate of Credit Facility lenders completed their semi-annual borrowing base redetermination, reducing the Borrowing Limit from \$55 million to \$45 million on January 22, 2020.

The Credit Facility is secured by general, first lien security agreements covering all present and future property of the Company and its subsidiaries, with the exception of certain lands pledged to the gas over bitumen royalty financing counterparty. The Credit Facility also contains provisions which restrict the Company's ability to repay second lien and unsecured debt and to pay dividends on or repurchase its common shares.

At June 30, 2019, the Credit Facility was not subject to any financial covenants and the Company was in compliance with all customary non-financial covenants.

Term loan

	Maturity date	Interest rate	June 30, 2020		December 31, 2019	
			Principal	Carrying Amount	Principal	Carrying amount
Term loan	March 14, 2021	8.1%	\$ 45,000	\$ 44,567	\$ 45,000	\$ 44,274

The term loan bears a fixed interest rate of 8.1% with semi-annual interest payments due June 30 and December 31 of each year. Amounts borrowed under the term loan that are repaid are not available for re-borrowing. The Company may repay the term loan at any time without penalty. The term loan matures and is repayable on March 14, 2021 and has been presented as a current liability on the condensed interim consolidated statement of financial position as at June 30, 2020.

The term loan has a cross-default provision with the Credit Facility and contains substantially similar provisions and covenants as the Credit Facility. The term loan is secured by a general security agreement over all present and future property of the Company and its subsidiaries on a second priority basis, subordinate only to liens securing loans under the Credit Facility, and certain lands pledged to the gas over bitumen royalty financing counterparty.

At June 30, 2020, the term loan is presented net of \$0.4 million in issue costs which are amortized over the remaining term of the loan using a weighted average effective interest rate of 9.5%.

At June 30, 2020, the term loan was not subject to any financial covenants and the Company was in compliance with all customary non-financial covenants.

Senior notes

	Maturity date	Interest rate	June 30, 2020		December 31, 2019	
			Principal	Carrying Amount	Principal	Carrying amount
2022 Senior Notes	January 23, 2022	8.75%	\$ 33,580	\$ 32,549	\$ 33,580	\$ 32,255

The 2022 Senior Notes bear a fixed interest rate of 8.75% with semi-annual interest payments due January 23 and July 23 of each year. The senior notes are direct senior unsecured obligations of the Company, ranking pari passu with all other present and future unsecured and unsubordinated indebtedness of the Company. Prior to January 23, 2021, the Company may redeem up to 100% of the senior notes at 103.3% of the principal amount. Subsequent to January 23, 2021, the Company may redeem up to 100% of the senior notes at the principal amount.

At June 30, 2020, the 2022 Senior Notes are recorded at the present value of future cash flows, net of issue and principal discount costs which are amortized over the remaining term using a weighted average effective interest rate of 10.9%.

The senior notes have a cross-default provision with the Company's Credit Facility. In addition, the senior notes indenture contains restrictions

on certain payments including dividends, retirement of subordinated debt, and stock repurchases. At June 30, 2020, other than the restricted payment covenants noted above, the senior notes were not subject to any financial covenants and the Company was in compliance with all customary non-financial covenants.

Entities controlled by the Company's CEO hold \$14.6 million of the 2022 Senior Notes outstanding. An entity that is associated with the Company's CEO holds an additional \$9.1 million of the 2022 Senior Notes outstanding.

Equity

At June 30, 2020 there were 60.9 million common shares outstanding, net of 0.6 million shares held in trust to resource employee compensation programs. During the six months ended June 30, 2020, no shares were purchased by the independent trustee to be held in trust (2019 – 0.5 million shares). Basic and diluted weighted average shares outstanding for the three months ended June 30, 2020 were 60.8 million (Q2 2019 – 60.2 million) and 60.7 million for the six months ended June 30, 2020 (2019 – 60.1 million).

At July 31, 2020 there were 61.2 million common shares outstanding which is net of 0.6 million shares held in trust for employee compensation programs. In addition, the following potentially issuable common shares were outstanding as at the date of this MD&A:

<i>(millions)</i>	July 31, 2020
Compensation awards	7.8
Share options	5.5
Performance share rights	3.4
Total ⁽¹⁾	16.7

⁽¹⁾ 4.6 million compensation awards, 0.9 million share options, and 3.4 million performance share rights have an exercise price below the June 30, 2020 closing price of the Company's common shares of \$0.10 per share.

SUMMARY OF QUARTERLY RESULTS

<i>(\$ thousands, except as noted)</i>	Q2 2020	Q1 2020	Q4 2019	Q3 2019
Financial				
Oil and natural gas revenue	3,722	10,497	15,830	17,097
Net loss	(8,831)	(59,718)	(32,498)	(20,349)
Per share – basic and diluted	(0.15)	(0.98)	(0.54)	(0.34)
Cash flow from (used in) operating activities	(2,777)	(3,114)	(1,290)	5,509
Adjusted funds flow ⁽¹⁾	(3,328)	(3,601)	340	4,183
Per share – basic and diluted	(0.05)	(0.06)	0.01	0.07
Capital expenditures	(11)	5,233	1,995	4,506
Net proceeds on acquisitions and dispositions	(34,661)	–	–	–
Net capital expenditures	(34,672)	5,233	1,995	4,506
Common shares (thousands)				
Weighted average – basic and diluted	60,776	60,674	60,444	60,317
Operating				
Daily average production				
Natural gas (MMcf/d)	16.9	33.3	36.6	38.2
Oil (bbl/d)	573	1,320	1,275	1,292
NGL (bbl/d)	268	606	606	731
Total (boe/d)	3,662	7,479	7,991	8,383
Average prices				
Realized natural gas price (\$/Mcf) ⁽²⁾	0.28	1.16	2.00	3.13
Realized oil price (\$/bbl) ⁽²⁾	67.56	32.60	43.85	44.31
Realized NGL price (\$/bbl) ⁽²⁾	17.35	36.48	43.93	37.34

<i>(\$ thousands, except as noted)</i>	Q2 2019	Q1 2019	Q4 2018 ⁽³⁾	Q3 2018 ⁽³⁾
Financial				
Oil and natural gas revenues	19,235	22,199	21,510	20,504
Net loss	(36,276)	(4,892)	(331)	(12,259)
Per share – basic and diluted	(0.60)	(0.08)	(0.01)	(0.20)
Cash flow from operating activities	4,295	9,292	5,163	6,729
Adjusted funds flow ⁽¹⁾	3,649	6,362	8,052	5,155
Per share – basic and diluted	0.06	0.11	0.13	0.09
Capital expenditures	5,200	1,238	5,617	4,343
Net payments (proceeds) on acquisitions and dispositions	–	–	(1,285)	4,341
Net capital expenditures	5,200	1,238	4,332	8,684
Common shares (thousands)				
Weighted average – basic and diluted	60,154	60,111	60,448	60,468
Operating				
Daily average production				
Natural gas (MMcf/d)	44.5	50.0	44.9	46.9
Oil (bbl/d)	1,207	1,121	1,301	1,022
NGL (bbl/d)	754	785	715	730
Total (boe/d)	9,370	10,240	9,491	9,569
Average prices				
Realized natural gas price (\$/Mcf) ⁽²⁾	2.25	3.54	4.38	2.83
Realized oil price (\$/bbl) ⁽²⁾	50.01	41.12	19.83	48.57
Realized NGL price (\$/bbl)	51.34	32.16	35.73	56.02

⁽¹⁾ See "Non-GAAP measures" in this MD&A.

⁽²⁾ Realized natural gas, oil, and NGL prices include physical forward sales contracts for which delivery was made during the reporting period, along with realized gains and losses on financial derivatives and foreign exchange contracts.

⁽³⁾ IFRS 16 was adopted January 1, 2019 using the modified retrospective approach; therefore, comparative information has not been restated. Refer to the recently adopted accounting pronouncements section in this MD&A.

The Company's oil and natural gas revenue, net loss, cash flow from (used in) operating activities and adjusted funds flow are influenced by commodity prices and production levels. Natural gas production levels decreased during 2018 and 2019 due to natural declines and reduced capital expenditures in response to depressed AECO natural gas prices, and due to the shut-in of approximately 700 boe/d of production during the third and fourth quarters of 2018 at East Edson associated with the Sequoia bankruptcy. This production was restarted in mid-December 2018, causing natural gas production to increase temporarily in the first quarter of 2019. Oil-focused capital expenditures increased beginning in the second quarter of 2019, as improved oil prices and differentials supported investment. In response to the significant decline in global oil prices which began in March 2020, oil-focused capital expenditures and high-cost production have been temporarily suspended, pending a recovery of oil prices. Oil production was restarted mid-way through the second quarter, following the recovery of oil prices. The disposition of a 50% working interest in the East Edson property which closed on April 1, 2020 for net cash consideration of \$34.8 million, further reduced natural gas production in the second quarter of 2020.

Commodity price risk management and sales obligations

Perpetual's commodity price risk management strategy is focused on managing downside risk and increasing certainty in adjusted funds flow by mitigating the effect of commodity price volatility. Physical forward sales and financial derivatives are used to manage the balance sheet, to lock in economics on capital programs and to take advantage of perceived anomalies in commodity markets. Perpetual also utilizes foreign exchange derivatives and physical or financial derivatives related to the differential between natural gas prices at the AECO and NYMEX trading hubs and oil basis differentials between WTI and WCS in order to mitigate the effects of fluctuations in foreign exchange rates and basis differentials on the Corporation's realized revenue. Diversification of markets is a further risk management strategy employed by the Company.

During the second quarter of 2020, the Company entered into offsetting positions for several of its financial oil and natural gas commodity price risk management contracts to reduce exposure to future volatility in these commodity markets.

The following tables provide a summary of commodity price risk management contracts outstanding at July 31, 2020:

Crude Oil

The following table provides a summary of basis differential contracts between WTI and WCS:

Term	Volumes sold (bought) (bbl/d)	WTI-WCS differential (US\$/bbl)	Market prices (US\$/bbl) ⁽¹⁾	Type of contract
July 2020 – October 2020	100	(17.65)	(9.56)	Financial
July 2020 – December 2020	500	(19.75)	(11.23)	Financial
October 2020 – December 2020	(300)	(13.25)	(13.70)	Financial

⁽¹⁾ Market prices for July and August are based on settled WTI-WCS differential prices. Market prices for subsequent months are based on forward WTI-WCS differential prices as of market close on July 31, 2020.

Natural Gas Sales Obligations

In July 2020, the Company reduced its fixed volume obligations by 30,000 MMBtu/d for the period commencing November 1, 2020 and ending on October 31, 2021.

Natural gas volumes sold pursuant to the Company's market diversification contract are sold at fixed volume obligations and priced at daily index prices at each of the market price points, less transportation costs from AECO to each market price point as detailed below.

Market/Pricing Point	November 1, 2020 to October 31, 2021 Daily sales volume (MMBtu/d)	November 1, 2021 to October 31, 2022 Daily sales volume (MMBtu/d)	November 1, 2022 to October 31, 2024 Daily sales volume (MMBtu/d)
Chicago	4,000	12,200	–
Malin	–	10,800	15,000
Dawn	6,000	8,000	15,000
Michcon	–	5,200	–
Empress	–	3,800	–
Emerson	–	–	10,000
Total natural gas sales volume obligation	10,000	40,000	40,000

OFF BALANCE SHEET ARRANGEMENTS

Perpetual has no off balance sheet arrangements.

CHANGES IN ACCOUNTING POLICIES

Government grants

Government grants are recognized when there is reasonable assurance that the grant will be received, and all attached conditions will be complied with. When the grant relates to an expense item, it is recognized as an expense reduction in the period in which the costs are incurred. Where the grant relates to an asset, it is recognized as a reduction to the net book value of the related asset and then subsequently in net loss over the expected useful life of the related asset through lower charges to depletion, depreciation and impairment. During the three months ended June 30, 2020, the Company received government grants of \$0.5 million through the Canada Emergency Wage Subsidy. The grants were recognized as a reduction to general and administrative and production and operating expenses of \$0.4 million and \$0.1 million, respectively (Q2 2019 – nil).

ACCOUNTING PRONOUNCEMENTS

Amendments to IFRS 3 "Business Combinations"

On January 1, 2020, the Company adopted the amendments to the definition of a business in IFRS 3 Business Combinations. The amendments are intended to assist entities in determining whether a transaction should be accounted for as a business combination or as an asset acquisition. IFRS 3 continues to adopt a market participant's perspective to determine whether an acquired set of activities and assets is a business. The amendments clarify the minimum requirements for a business; remove the assessment of whether market participants are capable of replacing any missing elements; add guidance to help entities assess whether an acquired process is substantive; narrow the definitions of a business and of outputs; and introduce an optional fair value concentration test.

No business combinations were completed during the three and six-month periods ended June 30, 2020.

CORPORATE GOVERNANCE

The Corporation is committed to maintaining high standards of corporate governance. Each regulatory body, including the Toronto Stock Exchange and the Canadian provincial securities commissions, has a different set of rules pertaining to corporate governance. The Corporation fully conforms to the rules of the governing bodies under which it operates.

INTERNAL CONTROLS AND PROCEDURES

Evaluation of disclosure controls and procedures

There were no changes in the Corporation's internal control over financial reporting during the period beginning on April 1, 2020 and ended June 30, 2020 that have materially affected, or are reasonably likely to materially affect, internal control over financial reporting.

FORWARD-LOOKING INFORMATION AND STATEMENTS: Certain information and statements contained in this MD&A including management's assessment of future plans and operations, and including the information contained under the headings "Future Operations" and "Outlook" may constitute forward-looking information and statements within the meaning of applicable securities laws. This information and these statements relate to future events or to future performance. All statements other than statements of historical fact may be forward-looking information and statements. The use of any of the words "anticipate", "continue", "estimate", "expect", "may", "will", "project", "should", "believe", "outlook", "guidance", "objective", "plans", "intends", "targeting", "could", "potential", "strategy" and any similar expressions are intended to identify forward-looking information and statements.

In particular, but without limiting the foregoing, this MD&A contains forward-looking information and statements pertaining to the following: the potential outcome of the Sequoia Litigation, the ability to extend the Credit Facility or to refinance its term debt on favorable terms; the quantity and recoverability of Perpetual's reserves; the timing and amount of future production; future prices as well as supply and demand for natural gas, NGL and crude oil; the existence, operations and strategy of the commodity price risk management program; the approximate amount of forward sales and financial contracts to be employed, and the value of financial forward natural gas, oil and other risk management contracts; net income and adjusted funds flow sensitivities to commodity price, production, foreign exchange and interest rate changes; production and operating, general and administrative ("G&A"), and other expenses; the costs and timing of future abandonment and reclamation, asset retirement and environmental obligations; the use of exploration and development activity, prudent asset management, and acquisitions to sustain, replace or add to reserves and production or expand the Corporation's asset base; the Corporation's acquisition and disposition strategy and the existence of acquisition and disposition opportunities, the criteria to be considered in connection therewith and the benefits to be derived therefrom; Perpetual's ability to benefit from the combination of growth opportunities and the ability to grow through the capital expenditure program; expected compliance with credit facility and term loan covenants in 2020 and 2021; expected book value and related tax value of the Corporation's assets and prospect inventory and estimates of net asset value; adjusted funds flow; ability to fund exploration and development; the corporate strategy; expectations regarding Perpetual's access to capital to fund its acquisition, exploration and development activities; the effect of future accounting pronouncements and their impact on the Corporation's financial results; future income tax and its effect on adjusted funds flow; intentions with respect to preservation of tax pools and taxes payable by the Corporation; funding of and anticipated results from capital expenditure programs; renewal of and borrowing costs associated with the credit facility; future debt levels, financial capacity, liquidity and capital resources; future contractual commitments; drilling, completion, facilities, construction and waterflood plans, and the effect thereof; the impact of Canadian federal and provincial governmental regulation on the Corporation relative to other issuers; Crown royalty rates; Perpetual's treatment under governmental regulatory regimes; business strategies and plans of management including future changes in the structure of business operations and debt reduction initiatives; and the reliance on third parties in the industry to develop and expand Perpetual's assets and operations.

Various assumptions were used in drawing the conclusions or making the forecasts and projections in the forward-looking information contained in this MD&A, 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 known and unknown risks, including, without limitation, the impact of COVID-19 as further described below, 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 MD&A. In particular and without limitation of the foregoing, the recent outbreak of COVID-19 has had a negative impact on global financial conditions. Perpetual cannot accurately predict the impact COVID-19 will have on its ability to execute its business plans in response to government public health efforts to contain COVID-19 and to obtain financing or third parties' ability to meet their contractual obligations with Perpetual including due to uncertainties relating to the ultimate geographic spread of the virus, the severity of the disease, the duration of the outbreak, and the length of travel and quarantine restrictions imposed by governments of affected jurisdictions; and the current and future demand for oil and gas. In the event that the prevalence of COVID-19 continues to increase (or fears in respect of COVID-19 continue to increase), governments may increase regulations and restrictions regarding the flow of labour or products, and travel bans, and Perpetual's operations, service providers and customers, and ability to advance its business plan or carry out its top strategic priorities, could be adversely affected. In particular, should any

employees, consultants or other service providers of Perpetual become infected with COVID-19 or similar pathogens, it could have a material negative impact on Perpetual's operations, prospects, business, financial condition and results of operations. 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 herein and under "Risk Factors" in Perpetual's Annual Information Form and MD&A for the year ended December 31, 2019 and 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.

The forward-looking information and statements contained in this MD&A reflect several material factors, expectations and assumptions of the Corporation including, without limitation, that Perpetual will conduct its operations in a manner consistent with its expectations and, where applicable, consistent with past practice; the general continuance of current or, where applicable, assumed industry conditions; the continuance of existing, and in certain circumstances, the implementation of proposed tax, royalty and regulatory regimes; the ability of Perpetual to obtain equipment, services, and supplies in a timely manner to carry out its activities; the accuracy of the estimates of Perpetual's reserve and resource volumes; the timely receipt of required regulatory approvals; certain commodity price and other cost assumptions; the timing and costs of storage facility and pipeline construction and expansion and the ability to secure adequate product transportation; the continued availability of adequate debt and/or equity financing and adjusted funds flow to fund the Corporation's capital and operating requirements as needed; and the extent of Perpetual's liabilities.

The Corporation believes the material factors, expectations and assumptions reflected in the forward-looking information and statements are reasonable, but no assurance can be given that these factors, expectations and assumptions will prove to be correct. The forward-looking information and statements included in this MD&A are not guarantees of future performance and should not be unduly relied upon. Such information and statements involve known and unknown risks, uncertainties and other factors that may cause actual results or events to differ materially from those anticipated in such forward-looking information or statements including, without limitation: volatility in market prices for oil and natural gas products; supply and demand regarding Perpetual's products; risks inherent in Perpetual's operations, such as production declines, unexpected results, geological, technical, or drilling and process problems; unanticipated operating events that can reduce production or cause production to be shut-in or delayed; changes in exploration or development plans by Perpetual or by third party operators of Perpetual's properties; reliance on industry partners; uncertainties or inaccuracies associated with estimating reserves volumes; competition for, among other things; capital, acquisitions of reserves, undeveloped lands, skilled personnel, equipment for drilling, completions, facilities and pipeline construction and maintenance; increased costs; incorrect assessments of the value of acquisitions; increased debt levels or debt service requirements; industry conditions including fluctuations in the price of natural gas and related commodities; royalties payable in respect of Perpetual's production; governmental regulation of the oil and gas industry, including environmental regulation; fluctuation in foreign exchange or interest rates; the need to obtain required approvals from regulatory authorities; changes in laws applicable to the Corporation, royalty rates, or other regulatory matters; general economic conditions in Canada, the United States and globally; stock market volatility and market valuations; limited, unfavorable, or a lack of access to capital markets, and certain other risks detailed from time to time in Perpetual's public disclosure documents. In addition, defence costs of legal claims can be substantial, even with respect to claims that have no merit and due to the inherent uncertainty of the litigation process, the resolution of the legal proceedings to which the Company has become subject could have a material effect on the Company's financial position and results of operations. The foregoing list of risk factors should not be considered exhaustive.

The forward-looking information and statements contained in this MD&A speak only as of the date of this MD&A, and neither the Corporation nor any of its subsidiaries assumes any obligation to publicly update or revise them to reflect new events or circumstances, unless expressly required to do so by applicable securities laws.