NEWS RELEASE

PERPETUAL ENERGY INC. REPORTS SECOND QUARTER 2021 FINANCIAL AND OPERATING RESULTS AND 2021 OUTLOOK

Calgary, Alberta – August 12, 2021 (TSX:PMT) – Perpetual Energy Inc. ("Perpetual", or the "Company") is pleased to release its second quarter 2021 financial and operating results. Select financial and operational information is outlined below, and should be read in conjunction with Perpetual's unaudited condensed interim consolidated financial statements and related Management's Discussion and Analysis ("MD&A") for the three and six months ended June 30, 2021, which are available through the Company's website at www.perpetualenergyinc.com and SEDAR at www.sedar.com.

SECOND QUARTER 2021 HIGHLIGHTS

- Production of 5,099 boe/d (73% conventional natural gas), at the high end of second quarter guidance and down 2% from the first quarter of 2021 as no new wells were placed on production during the quarter. Perpetual had previously disposed of a 50% working interest in the East Edson liquids-rich natural gas property in West Central Alberta, effective April 1, 2020 for consideration which included a 50% working interest carry to drill, complete and tie-in eight wells. Production averaged 3,662 boe/d in the second quarter of 2020, representing the starting point from which Perpetual has grown production. Relative to Q2 2020, second quarter 2021 production is up 39% year over year, reflecting the commencement of production from seven (3.5 net) new carried interest wells at East Edson and the restart of heavy crude oil production which was shut-in late in the first quarter of 2020 in response to extremely low oil prices.
- Adjusted funds flow of $2.3 million ($0.04 per share), a dramatic turnaround from the negative $3.3 million adjusted funds flow from the same quarter a year prior.
- Net income of $27.0 million ($0.43/share), up from the $2.7 million net loss reported in the first quarter of 2021. The increase was primarily driven by the non-cash impairment reversal of $30.1 million recognized in the second quarter.
- Cash flows from operating activities of $2.9 million, up $1.2 million from the first quarter of 2021, reflecting higher realized natural gas and oil prices.
- Cash costs of $9.0 million ($19.34/boe), up $1.7 million from the first quarter of 2021 ($15.41/boe) and $1.7 million from the second quarter of 2020 ($21.93/boe). Increased cash costs reflect higher royalties and production and operating expenses following the improvement in commodity prices and the continued reactivation of heavy crude oil production.
- Operating netbacks increased to $10.71/boe from $8.65/boe in Q1 2021, reflecting the continued strengthening of Western Canadian Select ("WCS") benchmark oil prices. Compared to the second quarter of 2020, operating netbacks increased approximately three times from $2.92/boe.
- Exploration and development spending of $1.6 million, with the commencement of drilling of the first of two (1.0 net) wells at Marten Hills which spud on June 15, 2021. The two wells, each completed with eight horizontal lateral legs, were placed on stream after the end of the quarter and are currently recovering oil-based drilling fluids at rates over 400 bbl/d and no water. Oil sales are expected to commence later in August.
- Perpetual continued its active abandonment and reclamation program, executing $0.8 million of abandonment and reclamation projects and receiving $0.5 million of funding from Alberta's Site Rehabilitation Program ("SRP").
- Net debt of $110.0 million, up slightly from net debt levels at the end of the first quarter of $107.4 million.

- Perpetual had available liquidity at June 30, 2021 of $3.8 million, comprised of the $20 million credit facility borrowing limit, less current borrowings and letters of credit of $15.2 million and $1.0 million, respectively.

2021 OUTLOOK

On July 16, 2021, Perpetual announced the creation of Rubellite Energy Inc., approximately $73 million in equity financings, the settlement of the majority of its second lien term loan (the "Second Lien Loan Settlement") and new credit facilities (the "Rubellite Transactions"). The management information circular (the "Information Circular") with respect to the Plan of Arrangement involving Rubellite has been filed on SEDAR at www.sedar.com. The Special Meeting of Shareholders to consider the Plan of Arrangement is scheduled to be held on August 31, 2021. Perpetual shareholders are encouraged to carefully review the Information Circular as it contains important deadlines and information with respect to the exercise of warrants to be received by Perpetual shareholders in connection with the Plan of Arrangement and for Perpetual shareholders to participate in the equity financings.

Perpetual shareholders who have questions or require assistance in voting for the Plan of Arrangement or in exercising their Rubellite Warrants to subscribe for Rubellite Common Shares can contact the strategic shareholder advisor and proxy solicitation agent, Kingsdale Advisors, by telephone toll-free at 1-877-659-1819 (416-867-2272 for collect calls outside North America) or by email at contactus@kingsdaleadvisors.com.

The Rubellite Transactions offer a full capital solution for Perpetual by reducing Perpetual's net debt, normalizing the balance sheet leverage ratios and surfacing incremental value from the development of its assets. Perpetual believes that the Rubellite Transactions will materially improve its liquidity, ensure its ongoing solvency and significantly improve both its ability to operate as a going concern and meet its obligations as they become due, including the flexibility to make cash payments of second lien and third lien interest which has recently been paid in-kind. At the same time, completion of the Rubellite Transactions will enhance Perpetual's ability to capture the inherent value in its asset base by funding investment opportunities to grow and sustain production and adjusted funds flow.

Perpetual will realize net cash proceeds from the Rubellite Transactions of approximately $53.2 million which it will use to reduce net debt. The maturity of the Company's credit facility has been extended to May 31, 2023, subject to the completion of the Rubellite Transactions at which time Perpetual expects to be less than 25% drawn on the new $17 million credit facility. As part of the Second Lien Loan Settlement, the maturity of a new second lien term loan of approximately $2.7 million has been extended to December 31, 2024. Net debt is forecast to decline by 46% from $110 million at June 30, 2021 to approximately $59 million at closing of the Rubellite Transactions, inclusive of estimated capital spending at East Edson and other forecast corporate revenues and expenses during the third quarter of 2021. Interest cost savings alone will improve Perpetual's liquidity by approximately $4 million annually. The general and administrative cost recoveries under the management services agreement with Rubellite will further enhance Perpetual's liquidity by approximately $2 to $3 million annually.

Following completion of the Rubellite Transactions, Perpetual is expected to have sufficient liquidity to invest capital in its assets to grow production and adjusted funds flow and convert proved and probable undeveloped reserves to proved developed producing reserves which serves to support the Company's borrowing capacity, increases the fair market value of Perpetual's assets, and generally enhances the Company's ability to meet its obligations as they become due. In addition, with the committed extension to the first lien credit facility, Perpetual anticipates it will be better positioned to enter into risk management contracts to mitigate commodity price risk.

Operationally, Perpetual and Rubellite are both expected to have active capital programs over the balance of the year. At Perpetual's 50% working interest East Edson property, the last well of the 8-well carried interest commitment was spud on July 26, 2021, and our joint venture partner Tourmaline expects to keep that rig working with an additional six (3.0 net) wells drilled prior to year-end. At Rubellite's Figure Lake property, the first of four (4.0 net) wells was spud on July 21, 2021. This program is expected to be 100% financed by the GORR financing announced as part of the Rubellite Transactions. An additional eight Clearwater multi-lateral wells are expected to be drilled in the Ukalta area by Rubellite following the closing of the Rubellite Financings.

Subject to completion of the Rubellite Financings, Perpetual's Board of Directors has approved exploration and development capital spending for Perpetual's remaining assets for the second half of 2021 of $14 to $17 million to be funded from proceeds from the Rubellite Transactions and adjusted funds flow. The majority of the expenditures will be directed to the East Edson property in West Central Alberta to participate for Perpetual's 50% working interest share in the drilling, completion and tie-in of the six (3.0 net) wells developing liquids-rich conventional natural gas reserves in the Wilrich formation. The six well drilling program will follow immediately upon the completion of the drilling of the eighth and final carried interest well that formed part of the consideration when the Company sold a 50% working interest in the East Edson property in April 2020. The Company expects the final carried interest well to be completed and brought onstream late in the third quarter. The remaining six wells are expected to be extended reach horizontal wells and are forecast to come onstream in two tranches midway through the fourth quarter and late in the fourth quarter of 2021. The second half 2021 drilling program is targeting to fill the West Wolf gas plant to maximize natural gas and NGL sales through next winter. Activity in Mannville in Eastern Alberta will be focused on waterflood optimization and battery consolidation projects.

Total spending for the second half of 2021 on Rubellite's Clearwater Assets is forecast to be $18 to $20 million. The fully-funded four well Figure Lake drilling program is underway and a $12 to $14 million drilling program at Ukalta is expected to begin upon closing of the Rubellite Financings.

The table below summarizes anticipated capital spending and drilling activities for Perpetual and Rubellite for the first and second half of 2021.

2021 Exploration and Development Forecast Capital Expenditures

	H1 2021 (*$ millions*)	**# of wells (*gross/net*)**	**H2 2021 (*$ millions*)**	**# of wells (*gross/net*)**
West Central[1]	0.7	2/1.0	$14 - $16	7/3.5
Eastern Alberta[2]	0.9	1/0.5	0 - $1	1/0.5
Rubellite Clearwater Assets	-	-	$18 - $20	12/12.0
Total[3]	**1.6**	**3/1.5**	**$32 - $37**	**20/16.0**

(1) Production from West Central is primarily liquids-rich conventional natural gas. The two (1.0 net) wells drilled in H1 2021 and the first well drilled in H2 2021 represent the final three wells of the eight well carried interest drilling commitment.

(2) Drilling in Eastern Alberta was at Marten Hills, with one (0.5 net) well rig released in H1 2021 and the second well rig released July 14, 2021. This activity was funded by Perpetual and the wells form part of the Rubellite Transactions. Production from Eastern Alberta is primarily heavy crude oil.

(3) Excludes budgeted abandonment and reclamation spending of $2.4 million ($1.2 million of which is expected to be funded by the SRP and recorded as other income).

Perpetual continues its ESG focus, with total abandonment and reclamation expenditures of up to $2.4 million planned in 2021, with up to $1.2 million to be funded through Alberta's SRP. The remaining $1.2 million will more than satisfy the Company's area-based closure spending requirements of $1.0 million.

Financial and Operating Highlights	**Three months ended June 30**			**Six months ended June 30**		
(Cdn$ thousands, except volume and per share amounts)	**2021**	2020	Change	**2021**	2020	Change
Financial						
Oil and natural gas revenue	**13,226**	3,722	255%	**24,762**	14,219	74%
Net income (loss)	**27,017**	(8,831)	(406%)	**24,311**	(68,549)	(135%)
Per share – basic[(2)]	**0.43**	(0.15)	(387%)	**0.39**	(1.13)	(135%)
Per share – diluted[(2)]	**0.38**	(0.15)	(353%)	**0.35**	(1.13)	(131%)
Cash flow from (used in) operating activities	**2,854**	(2,777)	(203%)	**4,536**	(5,891)	(177%)
Adjusted funds flow[(1)]	**2,302**	(3,328)	(169%)	**4,846**	(6,929)	(170%)
Per share – basic[(2)]	**0.04**	(0.05)	(180%)	**0.08**	(0.11)	(173%)
Per share –diluted[(2)]	**0.03**	(0.05)	(160%)	**0.07**	(0.11)	(164%)
Total assets	**164,936**	132,772	24%	**164,936**	132,772	24%
Revolving bank debt	**15,239**	11,080	38%	**15,239**	11,080	38%
Term loan, principal amount	**48,719**	45,000	8%	**48,719**	45,000	8%
Senior notes, principal amount	**36,403**	33,580	8%	**36,403**	33,580	8%
Net working capital deficiency[(1)]	**9,629**	8,873	9%	**9,629**	8,873	9%
Net debt[(1)]	**109,990**	98,533	12%	**109,990**	98,533	12%
Capital expenditures	**1,554**	(11)	(14,227%)	**1,557**	5,222	(70%)
Net proceeds on acquisitions and dispositions	**(46)**	(34,661)	(100%)	**423**	(34,661)	(101%)
Net capital expenditures	**1,508**	(34,672)	(104%)	**1,980**	(29,439)	(107%)
Common shares outstanding *(thousands)*[(3)]						
End of period	**62,591**	60,894	3%	**62,591**	60,894	3%
Weighted average – basic	**62,574**	60,776	3%	**62,091**	60,725	2%
Weighted average – diluted	**70,461**	60,776	16%	**69,324**	60,725	14%
Operating						
Daily average production						
Conventional natural gas *(MMcf/d)*	**22.2**	16.9	31%	**22.6**	25.2	(10%)
Heavy crude oil *(bbl/d)*	**1,074**	573	87%	**1,085**	946	15%
NGL *(bbl/d)*	**331**	268	24%	**313**	437	(28%)
Total *(boe/d)*[(5)]	**5,099**	3,662	39%	**5,155**	5,570	(7%)
Average prices						
Realized natural gas price *($/Mcf)*[(4)]	**2.25**	0.28	704%	**2.25**	0.86	162%
Realized oil price *($/bbl)*[(4)]	**55.75**	67.56	(17%)	**48.26**	43.18	12%
Realized NGL price *($/bbl)*[(4)]	**55.48**	17.35	220%	**55.74**	30.62	82%
Wells drilled – gross (net)						
Conventional natural gas	**– (–)**	– (–)		**2 (1.0)**	– (–)	
Heavy crude oil	**1 (0.5)**	– (–)		**1 (0.5)**	4 (4.0)	
Total	**1 (0.5)**	– (–)		**3 (1.5)**	4 (4.0)	

(1) These are non-GAAP measures. Please refer to "Non-GAAP Measures" below.
(2) Based on weighted average basic and diluted common shares outstanding for the period.
(3) All common shares are net of shares held in trust (June 30, 2021 – 0.5 million; June 30, 2020 – 0.6 million). See "Note 14 to the condensed interim consolidated financial statements".
(4) 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.
(5) Please refer to "Boe volume conversions" below.

ADDITIONAL INFORMATION

About Perpetual

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 conventional natural gas assets in the deep basin of West Central Alberta, heavy crude oil and shallow conventional natural gas in Eastern Alberta, undeveloped bitumen leases in Northern Alberta and prospective undeveloped acreage in the emerging Clearwater play fairway through its wholly owned subsidiary, Rubellite Energy Inc. Additional information on Perpetual can be accessed at www.sedar.com or from the Company's website at www.perpetualenergyinc.com.

The Toronto Stock Exchange has neither approved nor disapproved the information contained herein.

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Susan L. Riddell Rose	President and Chief Executive Officer
Ryan A. Shay	Vice President Finance and Chief Financial Officer

BOE VOLUME CONVERSIONS: *Barrel of oil equivalent ("boe") may be misleading, particularly if used in isolation. In accordance with National Instrument 51-101, a conversion ratio for conventional 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 conventional natural gas and heavy crude oil, based on the current prices of natural gas and crude oil, differ significantly from the energy equivalency of 6 Mcf:1 bbl. A conversion ratio of 1 bbl of heavy crude oil to 1 bbl of NGL has also been used throughout this news release.*

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

bbls	*barrels*
boe	*barrels of oil equivalent*
Mcf	*thousand cubic feet*
MMcf	*million cubic feet*

Non-GAAP Measures

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

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

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

Available Liquidity: Available Liquidity is defined as Perpetual's reserve-based credit facility (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.

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 Company'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 Company's realized price.

Operating netback: Operating netback is calculated by deducting royalties, production and operating expenses, and transportation costs from realized revenue. Operating netback is also calculated on a per boe basis using production sold in 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 Company's risk management activities, revolving bank debt, second lien term loan (the "Term Loan"), current portion of royalty obligations, current portion of lease liabilities, and current portion of decommissioning obligations.

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 the net working capital deficiency. Net debt includes the carrying value of net bank debt, the principal amount of the Term Loan, and the principal amount of senior notes. Net debt, net bank debt, and net debt to adjusted funds flow ratios are used by management to assess the Company's overall debt position and borrowing capacity. Net debt to adjusted funds flow ratios are calculated on a trailing twelve-month basis.

Forward-Looking Information and Statements

Certain information and statements contained in this news release including management's assessment of future plans and operations, and including the information contained under the headings "2021 Outlook" and "2021 Exploration and Development Forecast Capital Expenditures" and the statements relating to the timing for the upcoming special meeting and the completion of, and the anticipated benefits to be derived from, the Rubellite Transactions 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.

Various assumptions were used in drawing the conclusions or making the forecasts and projections in the forward-looking information contained in this news release, which assumptions are based on management's analysis of historical trends, experience, current conditions and expected future developments pertaining to Perpetual and Rubellite, the completion of the Rubellite Transactions and the receipt of all required approvals in connection therewith, 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 ability to continue to operate on a going concern basis if the Rubellite Transactions are not completed in a timely manner or at all, 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 news release. In particular and without limitation of the foregoing, the outbreak of COVID-19 has had a negative impact on global financial conditions. Perpetual cannot accurately predict the impact that 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 increases (or fears in respect of COVID-19 increase), governments may increase regulations and restrictions regarding the flow of labour or products, 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, 2020 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).*

The forward-looking information and statements contained in this news release reflect several material factors, expectations and assumptions of the Company and Rubellite including, without limitation, that each of Perpetual and Rubellite 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 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; certain commodity price and other cost assumptions; the continued availability of adequate debt and/or equity financing and adjusted funds flow to fund the Company's capital and operating requirements as needed; and the extent of Perpetual's liabilities. The Company 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.

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.