



NEWS RELEASE

JULY 28, 2022

**CARDINAL ENERGY LTD. ANNOUNCES RECORD SECOND QUARTER 2022
OPERATING AND FINANCIAL RESULTS**

Calgary, Alberta – Cardinal Energy Ltd. ("**Cardinal**" or the "**Company**") (TSX: CJ) announces its record operating and financial results for the second quarter ended June 30, 2022.

Selected financial and operating information is shown below and should be read in conjunction with Cardinal's unaudited condensed interim financial statements and related Management's Discussion and Analysis for the three and six month periods ended June 30, 2022 which are available at www.sedar.com and on our website at www.cardinalenergy.ca.

FINANCIAL AND OPERATING HIGHLIGHTS FROM THE SECOND QUARTER OF 2022

- Strong drilling results coupled with lower than forecasted base decline rates increased second quarter production by 8% over the first quarter of 2022 to a Cardinal record of 22,280 boe/d;
- Higher production and strong commodity prices increased petroleum and natural gas revenue for the second quarter of 2022 by 31% over the first quarter of 2022;
- Adjusted funds flow⁽¹⁾ increased to a Cardinal record of \$128.3 million (\$0.82/diluted share), a 48% increase over the previous corporate record in the first quarter of 2022;
- Second quarter free cash flow⁽¹⁾ increased to \$103.3 million which enabled the Company to significantly reduce net debt⁽¹⁾, resume the monthly dividend and increase shareholder returns through our normal course issuer bid ("NCIB") and trust share purchases;
- Net debt⁽¹⁾ decreased by \$85.2 million to \$62.0 million, a 58% decrease over the balance at March 31, 2022. In 2022, Cardinal has reduced our net debt by \$116.2 million or 65%;
- Second quarter netback⁽¹⁾ increased to \$66.51/boe and the adjusted funds flow per boe⁽¹⁾ was \$63.31/boe;

⁽¹⁾ See non-GAAP and other financial measures

The following table summarizes our second quarter financial and operating highlights:

(\$000's except shares, per share and operating amounts)	Three months ended June 30			Six months ended June 30		
	2022	2021	% Chg	2022	2021	% Chg
Financial						
Petroleum and natural gas revenue	228,917	99,106	131	403,255	184,653	118
Cash flow from operating activities	120,210	22,463	435	170,253	35,738	376
Adjusted funds flow ⁽¹⁾	128,337	25,300	407	214,888	41,449	418
per share - basic	\$ 0.84	\$ 0.18	367	\$ 1.42	\$ 0.30	373
per share - diluted	\$ 0.82	\$ 0.16	413	\$ 1.38	\$ 0.30	360
Earnings / (Loss)	98,586	9,095	984	155,826	(16,866)	n/m
per share - basic	\$ 0.64	\$ 0.06	967	\$ 1.03	\$ (0.14)	n/m
per share - diluted	\$ 0.63	\$ 0.06	950	\$ 1.00	\$ (0.14)	n/m
Development capital expenditures ⁽¹⁾	25,018	10,028	149	59,965	15,935	276
Other capital expenditures ⁽¹⁾	520	277	88	1,369	571	140
Property acquisitions, net	-	8	(100)	-	3,334	(100)
Total capital expenditures	25,538	10,313	148	61,334	19,840	209
Common shares, net of treasury shares (000s)	159,143	144,172	10	159,143	144,172	10
Dividends declared	8,161	-	n/m	8,161	-	n/m
Per share	0.05	-	n/m	0.05	-	n/m
Bank debt				66,956	178,239	(62)
Adjusted working capital (surplus)/deficiency ⁽¹⁾				(4,994)	10,662	(147)
Net bank debt ⁽¹⁾				61,962	188,901	(67)
Secured notes				-	17,429	(100)
Net debt ⁽¹⁾				61,962	206,330	(70)
Net debt to H1 annualized adjusted fund flow ratio ⁽¹⁾				0.1	2.5	(96)
Operating						
Average daily production						
Light oil (bbl/d)	8,252	7,129	16	7,917	7,086	12
Medium/heavy oil (bbl/d)	10,515	7,638	38	10,209	7,688	33
NGL (bbl/d)	928	986	(6)	866	1,097	(21)
Natural gas (mcf/d)	15,511	13,173	18	14,704	13,765	7
Total (boe/d)	22,280	17,949	24	21,443	18,166	18
Netback (\$/boe) ⁽¹⁾						
Petroleum and natural gas revenue	112.91	60.68	86	103.90	56.16	85
Royalties	(22.84)	(10.54)	117	(20.82)	(9.18)	127
Net operating expenses ⁽¹⁾	(22.69)	(21.56)	5	(23.49)	(21.47)	9
Transportation expenses	(0.87)	(0.30)	190	(0.75)	(0.30)	150
Netback ⁽¹⁾	66.51	28.28	135	58.84	25.21	133
Realized loss on commodity contracts	-	(8.40)	(100)	-	(8.37)	(100)
Interest and other	(0.95)	(2.07)	(54)	(1.03)	(2.15)	(52)
G&A	(2.25)	(2.32)	(3)	(2.44)	(2.08)	17
Adjusted funds flow ⁽¹⁾	63.31	15.49	309	55.37	12.61	339

⁽¹⁾ See non-GAAP and other financial measures
n/m Not meaningful or not calculable

SECOND QUARTER OVERVIEW

In the second quarter of 2022, global oil prices continued to rise with the West Texas Intermediate ("WTI") benchmark oil price averaging over US\$108/bbl. In addition, Western Canadian Select ("WCS") and Edmonton Light ("MSW") benchmark differentials narrowed in comparison to the first quarter of 2022. Cardinal remained unhedged on all commodities during the second quarter and was able to fully take advantage of the increased prices. Cardinal's successful first half of 2022 drilling program led to an 8% increase in production over the first quarter of 2022 with production averaging 22,280 boe/d. Net operating expenses decreased quarter over quarter despite inflationary pressures impacting the industry. The higher commodity prices combined with increased production elevated the Company's adjusted funds flow by 48% over Cardinal's previous record in the first quarter of 2022 to a new corporate record of \$128.3 million or \$0.82 per diluted share.

Increased adjusted funds flow combined with our disciplined capital program enhanced our free cash flow during the quarter to \$103.3 million, more than doubling our first quarter free cash flow of \$51.6 million. The significant free cash flow allowed Cardinal to accelerate our net debt reduction strategy reducing our net debt by \$85.2 million in the second quarter of 2022. The Company has reduced our net debt by \$116.2 million in 2022 to \$62.0 million at June 30. Significantly lower debt levels have reduced bank fees and decreased our second quarter 2022 interest charges per boe by 54% as compared to the same period in 2021.

Cardinal achieved our phase one net debt target of \$100 million in May and accelerated our shareholder returns by resuming our corporate dividend at \$0.05 per common share in June and implementing an NCIB. Since the implementation of the NCIB, the Company has bought back 3,000,000 shares for cancellation at an average cost of \$7.09 per share. During the second quarter, the Company also purchased through its independent trust 1.7 million shares to be used for the potential settlement of restricted and performance awards.

The Company's low decline crude oil focus has increased our second quarter 2022 netback per boe to \$66.51/boe, up 135% over the same period in 2021, while the adjusted funds flow per boe has increased to a record \$63.31/boe.

The Company has an estimated \$1.4 billion of high quality tax pools at June 30, 2022 to be applied against future income for tax purposes.

During the second quarter, the Company spent a total of \$25.0 million on development capital expenditures which included the drilling of seven (6.3 net) wells and completion of five (4.7 net) wells. Two (1.6 net) wells were completed in July. In addition, Cardinal spent \$8.1 million to construct new facilities and upgrade existing infrastructure across our asset base and continued with the enhanced oil recovery program ("EOR") with CO₂ injection at Midale, Saskatchewan. The Company also continued with its well reactivation program spending \$3.1 million on recompletions and workovers throughout its operating areas.

OPERATIONS

In the second quarter, continued strong operational results confirm the quality of the Company's existing asset base and development drilling inventory. Production in the quarter averaged 22,280 boe/d, which is approximately 1,900 boe/d above our internal budget forecast. As in the first quarter, base decline continued to be lower than forecasted and was complemented with better than forecasted production from our 2021-2022 drill program.

Cardinal has the lowest corporate base decline rate in our peer group at less than 10% annually. Successful waterflood and miscible CO₂ flood management, along with ongoing optimization of wells and infrastructure within

our legacy assets are the foundation of this low base decline. Cardinal will continue to focus on prudent management of its long life assets throughout the organization.

Building on our first quarter drilling success, Cardinal's second quarter drilling program continued to exhibit positive results as follows:

- Two (2.0 net) single-leg Ellerslie horizontal wells in the Tide Lake/Bantry areas which tested at rates exceeding budget forecast, however are currently shut in awaiting infrastructure expansion expected to be completed in the third quarter.
- Two (2.0 net) horizontal Glauconitic channel wells in the Tide Lake/Bantry area, one of which came on stream in May and continues to produce at approximately 300 bbls/d of oil, again exceeding our projections. The second of these is shut in pending the same infrastructure project referenced above.
- Three (2.3 net) horizontal wells were drilled at Midale, Saskatchewan, consisting of two new producers and one new water/CO₂ injection well. This injection well is to commence operations within a week, while the two producers came on stream in July at initial combined net oil rates of approximately 300 bbl/d, well above expectations.

At Tide Lake in Southern Alberta, based upon the continued success of our Ellerslie multilateral development, Cardinal increased our prospective land position in the second quarter and is in the process of expanding the capacity of our infrastructure, as the size and productivity of the Ellerslie development continues to expand beyond our initial expectations.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE ("ESG")

Cardinal's strong corporate emissions performance has continued in 2022 with ongoing CO₂ sequestration in Saskatchewan and implementation of various emissions reduction projects across Alberta. Through our world class Carbon Capture and Sequestration ("CCS") EOR operation at Midale, the Company sequestered approximately 157,000 tonnes of CO₂ equivalent during the first six months of 2022. This amount of carbon sequestration far exceeds the emissions directly related to the Company's operations. To date, the Midale CCS EOR project has sequestered over five million tonnes of CO₂ and has reduced oil production decline rates from this project to approximately 3% to 5%.

Cardinal's safety record continues to be in the top tier of the industry, as is our regulatory compliance approval level.

Since 2020, Cardinal has continued to actively participate in various government programs focused on site closure, including abandonments, decommissioning and reclamation. To date Cardinal has spent approximately 90% of the nearly \$30 million in allocated funding. In addition, Cardinal's 2022 asset retirement obligation ("ARO") budget has been increased to \$19 million, four times the required regulatory spend requirements, demonstrating Cardinal's commitment to reducing our environmental footprint.

INCREASE TO CAPITAL BUDGET

The Board of Directors has approved a \$30 million increase to Cardinal's 2022 capital budget. Cardinal has decided to increase its development capital budget this year to take advantage of opportunities and to account for inflationary pressures on our existing capital budget.

The increased capital budget will be used as follows:

- \$6.0 million to account for inflationary cost increases to our existing capital program.

- \$13.0 million to construct a new pipeline and related facility infrastructure to transport and process our oil and natural gas from the recent drilling success with our Ellerslie oil wells in the Tide Lake area of Southern Alberta. Production in the area is currently curtailed due to lack of pipeline capacity in the area. We anticipate this project will reduce area operating costs, provide the ability to produce shut in volumes and allow Cardinal to further develop the area efficiently.
- \$10.0 million to fund a five well Ellerslie drilling program in Tide Lake. Cardinal was able to acquire an additional 11.25 sections of land which we believe are highly prospective to additional Ellerslie oil wells. A condition of acquiring the lands was that Cardinal will drill five wells prior to year end 2022. We anticipate that all of these wells, if successful will commence production through our new facilities prior to year end.
- \$1.0 million to participate in one (0.75 net) non-operated well with a third party in a Clearwater development opportunity.

OUTLOOK

As outlined in January of 2022, we have embarked on a plan to substantially de-risk Cardinal's business and directly reward our shareholders through debt reduction and direct payments to shareholders with dividends. We have now paid our first re-instated dividend payment of \$0.05/common share on July 15th and reduced our net debt to \$62.0 million as at June 30th. On June 27, 2022 we announced the implementation of an NCIB as part of our shareholder return strategy.

As of July 28th, Cardinal has purchased for cancellation 3,000,000 common shares at an average cost of \$7.09 per common share, 2% of our outstanding shares.

In addition, Cardinal acquires common shares for potential settlement of employee share-based compensation through open market share purchases with an independent trust. In the second quarter of 2022, \$14.0 million of share purchases through the independent trust were completed. Cardinal currently has over 2.5 million common shares held in the trust for the potential settlement of future share-based compensation. The advantage to this program for Cardinal's shareholders is that we currently do not issue any shares out of treasury for share-based compensation reducing the dilutive impact. We don't anticipate making any further purchases this year under this program.

There has been a tremendous amount of oil price volatility in the past few months and the Company's goal is to balance a long-term sustainable base dividend with opportunities to improve our business and provide shareholder returns with dividend increases and additional common share purchases under our NCIB. The Company will continue to reduce our external risk factors with a strategy of being debt free by the end of 2022.

We anticipate that our net debt will decrease to under \$50 million in the third quarter at which time we outlined that we would revisit our overall shareholder return strategy with an increase to the dividend rate. With the implementation of the NCIB we expect to balance dividend increases with opportunities to utilize the NCIB.

Note Regarding Forward-Looking Statements

This press release contains forward-looking statements and forward-looking information (collectively "forward-looking information") within the meaning of applicable securities laws relating to Cardinal's plans and other aspects of Cardinal's anticipated future operations, management focus, objectives, strategies, financial, operating and production results. Forward-looking information typically uses words such as "anticipate", "believe", "project", "expect", "goal", "plan", "intend", "may", "would", "could" or "will" or similar words suggesting future outcomes, events or performance. The forward-looking statements contained in this press release speak only as of the date thereof and are expressly qualified by this cautionary statement.

Specifically, this press release contains forward-looking statements relating to: our business strategies, plans and objectives, plans to continue with our debt reduction strategy, our 2022 capital program and spending plans, our drilling and completion plans, expectations with respect to ongoing new wells and our drilling inventory, the quality of our asset base and decline rates, our abandonment and reclamation program, our future ESG performance, plans to upgrade our drilling inventory, dividend plans, NCIB plans and strategies, plans to operate our assets in a responsible and environmentally sensitive manner, our plans to reduce risk and return capital to shareholders (including through dividends and share buybacks), strategies with respect to Cardinal's share based compensation programs, and our future forecasted debt levels.

Forward-looking statements regarding Cardinal are based on certain key expectations and assumptions of Cardinal concerning anticipated financial performance, business prospects, strategies, regulatory developments, current and future commodity prices and exchange rates, effects of inflation, applicable royalty rates, tax laws, industry conditions, availability of government subsidies and abandonment and reclamation programs, future well production rates and reserve volumes, future operating costs, the performance of existing and future wells, the success of our exploration and development activities, the sufficiency and timing of budgeted capital expenditures in carrying out planned activities, the timing and success of our cost cutting initiatives and power projects, the availability and cost of labor and services, the impact of competition, conditions in general economic and financial markets, availability of drilling and related equipment, effects of regulation by governmental agencies, the ability to obtain financing on acceptable terms which are subject to change based on commodity prices, market conditions and drilling success and potential timing delays.

These forward-looking statements are subject to numerous risks and uncertainties, certain of which are beyond Cardinal's control. Such risks and uncertainties include, without limitation: the impact of general economic conditions; volatility in market prices for crude oil and natural gas; industry conditions; currency fluctuations; imprecision of reserve estimates; liabilities inherent in crude oil and natural gas operations; environmental risks; incorrect assessments of the value of acquisitions and exploration and development programs; competition from other producers; the lack of availability of qualified personnel, drilling rigs or other services; changes in income tax laws or changes in royalty rates and incentive programs relating to the oil and gas industry including abandonment and reclamation programs; hazards such as fire, explosion, blowouts, and spills, each of which could result in substantial damage to wells, production facilities, other property and the environment or in personal injury; and ability to access sufficient capital from internal and external sources.

Management has included the forward-looking statements above and a summary of assumptions and risks related to forward-looking statements provided in this press release in order to provide readers with a more complete perspective on Cardinal's future operations and such information may not be appropriate for other purposes. Cardinal's actual results, performance or achievement could differ materially from those expressed in, or implied by, these forward-looking statements and, accordingly, no assurance can be given that any of the events anticipated by the forward-looking statements will transpire or occur, or if any of them do so, what benefits that Cardinal will derive there from. Readers are cautioned that the foregoing lists of factors are not exhaustive. These forward-looking statements are made as of the date of this press release and Cardinal disclaims any intent or obligation to update publicly any forward-looking statements, whether as a result of new information, future events or results or otherwise, other than as required by applicable securities laws.

This press release contains future-oriented financial information and financial outlook information (collectively, "FOFI") about our prospective results of operations, cash flows and components thereof, all of which are subject to the same assumptions, risk factors, limitations, and qualifications as set forth in the above paragraphs. FOFI contained in this press release were made as of the date hereof and is provided for the purpose of describing our anticipated future business operations. We disclaim any intention or obligation to update or revise any FOFI contained in this press release, whether as a result of new information, future events or otherwise, unless required pursuant to applicable law. Readers are cautioned that the FOFI contained in this press release should not be used for purposes other than for which it is disclosed herein.

Supplemental Information Regarding Product Types

This news release includes references to 2022 and 2021 production. The Company discloses crude oil production based on the pricing index that the oil is priced off of. The following table is intended to provide the product type composition as defined by NI 51-101.

	Light/Medium Crude Oil	Heavy Oil	NGL	Conventional Natural Gas	Total (boe/d)
Q2/22	53%	31%	4%	12%	22,280
Q2/21	56%	26%	6%	12%	17,949
H1/22	53%	32%	4%	11%	21,443
H1/21	55%	26%	6%	13%	18,166
Above budget	53%	32%	13%	2%	1,900

Advisory Regarding Oil and Gas Information

Where applicable, oil equivalent amounts have been calculated using a conversion rate of six thousand cubic feet of natural gas to one barrel of oil. Boes may be misleading, particularly if used in isolation. A boe conversion ratio of six thousand cubic feet of natural gas to one barrel of oil is based on an energy equivalency conversion method primarily applicable at the burner tip and does not represent a value equivalency at the wellhead. Utilizing a conversion ratio at 6 Mcf: 1 Bbl may be misleading as an indication of value.

References herein to short-term production rates are useful in confirming the presence of hydrocarbons, however such rates are not determinative of the rates at which such wells will commence production and decline thereafter and are not indicative of long term performance or of ultimate recovery. While encouraging, readers are cautioned not to place reliance on such rates in calculating aggregate production for us. A pressure transient analysis or well-test interpretation has not been carried out in respect of all wells. Accordingly, we caution that the test results should be considered to be preliminary.

Non-GAAP and Other Financial Measures

This news release contains certain specified measures consisting of non-GAAP financial measures, capital management measures, non-GAAP financial ratios, and supplementary financial measures. Since these specified financial measures may not have a standardized meaning, they must be clearly defined and, where required, reconciled with their nearest GAAP measure and may not be comparable with the calculation of similar financial measures disclosed by other entities.

Non-GAAP Measures

Net operating expenses

Net operating expenses is calculated as operating expense less processing and other revenue primarily generated by processing third party volumes at processing facilities where the Company has an ownership interest, and can be expressed on a per boe basis. As the Company's principal business is not that of a midstream entity, management

believes this is a useful supplemental measure to reflect the true cash outlay at its processing facilities by utilizing spare capacity to process third party volumes.

	Three months ended		Six months ended	
	June 30, 2022	June 30, 2021	June 30, 2022	June 30, 2021
Operating expenses	47,201	36,306	93,337	72,540
Less: Processing and other revenue	(1,191)	(1,088)	(2,189)	(1,936)
Net operating expenses	46,010	35,218	91,148	70,604

Netback

Cardinal utilizes netback, as key performance indicator and is utilized by Cardinal to better analyze the operating performance of its petroleum and natural gas assets against prior periods. Netback is calculated as petroleum and natural gas revenue deducting royalties, net operating expenses, and transportation expenses. The following table reconciles petroleum and natural gas revenue to netback:

	Three months ended		Six months ended	
	June 30, 2022	June 30, 2021	June 30, 2022	June 30, 2021
Petroleum and natural gas revenue	228,917	99,106	403,255	184,653
Royalties	(46,307)	(17,220)	(80,804)	(30,187)
Net operating expenses	(46,010)	(35,218)	(91,148)	(70,604)
Transportation expenses	(1,767)	(495)	(2,921)	(991)
Netback	134,833	46,173	223,382	82,871

Capital expenditures and development capital expenditures

Cardinal utilizes capital expenditures as a measure of capital investment on property, plant and equipment compared to the annual budgeted capital expenditure. Capital expenditures is calculated as cash flow from investing activities excluding change in non-cash working capital and corporate acquisition.

Cardinal utilizes development capital expenditures as a measure of capital investment on property, plant and equipment excluding capitalized G&A, other assets and net acquisitions and is compared to the annual budgeted capital expenditures. The following table reconciles cash flow from investing activities to total capital expenditures to total development capital expenditures.

	Three months ended		Six months ended	
	June 30, 2022	June 30, 2021	June 30, 2022	June 30, 2021
Cash flow from investing activities	37,194	10,208	62,680	16,540
Change in non-cash working capital	(11,656)	105	(1,346)	3,300
Capital expenditures	25,538	10,313	61,334	19,840
Less:				
Capitalized G&A	335	244	1,119	502
Other assets	185	33	250	69
Property acquisitions	-	8	-	3,334
Development capital expenditures	25,018	10,028	59,965	15,935

Capital Management Measures

Adjusted working capital

Management utilizes adjusted working capital to monitor its capital structure, liquidity, and its ability to fund current operations. Adjusted working capital is calculated as current liabilities less current assets (adjusted for the fair value

of financial instruments, current decommissioning obligation, and current lease liabilities). The following table reconciles working capital to adjusted working capital:

As at	June 30, 2022	June 30, 2021
Working capital (surplus)/deficiency	(74)	29,108
Lease liabilities	1,440	1,585
Decommissioning obligation	4,500	3,352
Fair value of financial instruments, net	(1,020)	13,509
Adjusted working capital (surplus)/deficiency	(4,994)	10,662

Net debt

Management utilizes net debt to analyze the financial position, liquidity and leverage of Cardinal. Net debt is calculated as bank debt plus secured notes and adjusted working capital.

Net bank debt

Management utilizes net bank debt to analyze the financial position, liquidity, leverage and borrowing capacity on Cardinal's bank line. Net bank debt is calculated as net debt less the secured notes.

The following table reconciles bank debt to net bank debt and net debt:

As at	June 30, 2022	June 30, 2021
Bank debt	66,956	178,239
Adjusted working capital (surplus)/deficiency	(4,994)	10,662
Net bank debt	61,962	188,901
Secured notes	-	17,429
Net debt	61,962	206,330

Funds flow

Management utilizes funds flow as a useful measure of Cardinal's ability to generate cash not subject to short-term movements in non-cash operating working capital. As shown below, funds flow is calculated as cash flow from operating activities excluding the change in non-cash working capital.

Adjusted funds flow

Management utilizes adjusted funds flow as a key measure to assess the ability of the Company to generate the funds necessary for financing activities, operating activities, capital expenditures and shareholder returns. As shown below, adjusted funds flow is calculated as funds flow excluding decommissioning expenditures since Cardinal believes the timing of payment or incurrence of these items involves a high degree of discretion and variability. Expenditures on decommissioning obligations vary from period to period depending on the maturity of the Company's operating areas and availability of adjusted funds flow and are viewed as part of the Company's capital budgeting process.

Free cash flow

Management utilizes free cash flow as a measure to assess Cardinal's ability to generate cash, after taking into account the development capital expenditures, to increase returns to shareholders, repay debt, or for other corporate purposes. As shown below, free cash flow is calculated as adjusted funds flow less development capital expenditures.

The following table reconciles cash flow from operating activities, funds flow, adjusted funds flow, and free cash flow:

	Three months ended		Six months ended	
	June 30, 2022	June 30, 2021	June 30, 2022	June 30, 2021
Cash flow from operating activities	120,210	22,463	170,253	35,738
Change in non-cash working capital	4,065	1,860	37,051	3,003
Funds flow	124,275	24,323	207,304	38,741
Decommissioning expenditures	4,062	977	7,584	2,705
Adjusted funds flow	128,337	25,300	214,888	41,449
Total development capital expenditures	(25,019)	(10,028)	(59,966)	(15,935)
Free cash flow	103,318	15,272	154,922	25,514

Non-GAAP Financial Ratios

Netback per boe

Cardinal utilizes operating netback per boe to assess Cardinal's operating performance of its petroleum and natural gas assets on a per unit of production basis. Netback per boe is calculated as netback divided by total production for the applicable period. The following table details the calculation of netback per boe:

	Three months ended		Six months ended	
	June 30, 2022	June 30, 2021	June 30, 2022	June 30, 2021
Petroleum and natural gas revenue	112.91	60.68	103.90	56.16
Royalties	(22.84)	(10.54)	(20.82)	(9.18)
Net operating expenses	(22.69)	(21.56)	(23.49)	(21.47)
Transportation expenses	(0.87)	(0.30)	(0.75)	(0.30)
Netback per boe	66.51	28.28	58.84	25.21

Net debt to adjusted funds flow ratio

Cardinal utilizes net debt to adjusted funds flow to measure the Company's overall debt position and to measure the strength of the Company's balance sheet. Cardinal monitors this ratio and uses this as a key measure in making decisions regarding financing, capital expenditures and shareholder returns. Net debt to adjusted funds flow is calculated as net debt divided by annualized adjusted funds flow for the applicable period.

Net operating expenses per boe

Cardinal utilizes net operating expenses per boe to assess Cardinal's operating efficiency of its petroleum and natural gas assets on a per unit of production basis. Net operating expense per boe is calculated as net operating expenses divided by total production for the applicable period.

Adjusted funds flow per boe

Cardinal utilizes adjusted funds flow per boe as a measure to assess the ability of the Company to generate the funds necessary for financing activities, operating activities, capital expenditures and shareholder returns on a per boe basis. Adjusted funds flow per boe is calculated using adjusted funds flow divided by total production for the applicable period.

Adjusted funds flow per basic share

Cardinal utilizes adjusted funds flow per share as a measure to assess the ability of the Company to generate the funds necessary for financing activities, operating activities, capital expenditures and shareholder returns on a per

basic share basis. Adjusted funds flow per basic share is calculated using adjusted funds flow divided by the weighted average basic shares outstanding.

Adjusted funds flow per diluted share

Cardinal utilizes adjusted funds flow per share as a measure to assess the ability of the Company to generate the funds necessary for financing activities, operating activities, capital expenditures and shareholder returns on a per diluted share basis. Adjusted funds flow per diluted share is calculated using adjusted funds flow divided by the weighted average diluted shares outstanding.

Supplementary Financial Measures

NI 52-112 defines a supplementary financial measure as a financial measure that: (i) is, or is intended to be, disclosed on a periodic basis to depict the historical or expected future financial performance, financial position or cash flow of an entity; (ii) is not disclosed in the financial statements of the entity; (iii) is not a non-GAAP financial measure; and (iv) is not a non-GAAP ratio. The supplementary financial measures used in this news release are either a per unit disclosure of a corresponding GAAP measure, or a component of a corresponding GAAP measure, presented in the financial statements. Supplementary financial measures that are disclosed on a per unit basis are calculated by dividing the aggregate GAAP measure (or component thereof) by the applicable unit for the period. Supplementary financial measures that are disclosed on a component basis of a corresponding GAAP measure are a granular representation of a financial statement line item and are determined in accordance with GAAP.

About Cardinal Energy Ltd.

Cardinal works to continually improve its Environmental, Social and Governance profile and operates its assets in a responsible and environmentally sensitive manner. As part of this mandate, Cardinal injects and conserves more carbon than it directly emits making us one of the few Canadian energy companies to have a negative carbon footprint.

Cardinal is a Canadian oil and natural gas company with operations focused on low decline oil in Western Canada.

For further information:

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