



NEWS RELEASE

FEBRUARY 27, 2023

### CARDINAL ENERGY LTD. ANNOUNCES 2022 YEAR-END RESERVES

Calgary, Alberta – Cardinal Energy Ltd. ("**Cardinal**" or the "**Company**") (TSX: CJ) is pleased to present the results of its independent reserve report effective December 31, 2022. One hundred percent of Cardinal's year-end 2022 reserves were evaluated by independent reserves evaluator GLJ Ltd. ("GLJ") with an effective date of December 31, 2022 (the "2022 Reserve Report"). The 2022 financial information in this news release is unaudited and accordingly, such financial information is subject to change based on the results of the Company's year-end audit.

Cardinal's 2022 year-end reserves reflect the quality and sustainability of our low decline asset base. In 2022, Cardinal's focus was to reduce financial risk and improve on the long term sustainability of our assets.

#### RESERVE REPORT HIGHLIGHTS

All reserves information contained in this news release are based on the 2022 Reserve Report.

- Cardinal's efficient capital program and commitment to reduce debt resulted in PDP reserves per diluted share<sup>(2)</sup> increasing by 8%, and the associated PDP NPV10 per diluted share<sup>(2)</sup> increasing by 34%.
- Cardinal's Proved Developed Producing ("PDP") reserves increased to 78 mmbœ, representing a 4% increase year over year, through the addition of 11 mmbœ, replacing 1.4x 2022 annual production.
- PDP reserves were added at Finding, Development and Acquisition ("FD&A") costs<sup>(1)</sup> of \$12.03/bœ, resulting in a recycle ratio<sup>(1)</sup> of 4.1 times. PDP Finding and Development ("F&D") costs<sup>(1)</sup> were \$11.73/bœ, resulting in a recycle ratio<sup>(1)</sup> of 4.2 times.
- The before tax Net Present Value ("NPV"), discounted at 10% ("NPV10") of our reserves increased 29% to \$1,353 million, and 29% to \$1,574 million for our PDP and Proved Plus Probable Producing ("P+PDP") reserves respectively.
- The debt adjusted, NPV10 of the Company's PDP reserves was \$8.25 per basic share<sup>(3)(4)</sup>, a 51% increase over 2021 and PDP reserves increased 22% on a debt adjusted basic per share basis<sup>(3)(4)</sup>.
- On a Proved plus Probable ("TPP") basis, Cardinal's reserves increased to 113 mmbœ, a 2% increase year over year, an addition of 10.5 mmbœ at a FD&A cost<sup>(1)</sup> of \$11.40/bœ.
- NPV10 of TPP reserves increased 30% to \$1,784 million, a 25% increase on an NPV10 per basic share basis<sup>(2)</sup> and a 52% change on a debt adjusted basic per share basis<sup>(3)(4)</sup>.

- Cardinal maintains a high percentage of reserves as producing with the P+PDP reserves accounting for 88% of the Company's TPP reserves.
- 91% of Cardinal's TPP reserves are associated with oil and natural gas liquids.

*Notes:*

- (1) FD&A costs, F&D costs and recycle ratios are non-GAAP financial ratios. Operating netback, development costs and net acquisition costs are non-GAAP financial measures and are used as components of the non-GAAP financial ratio. See "*Oil and Gas Metrics*" and "*Non-GAAP and Other Financial Measures*" in this news release for information relating to these non-GAAP financial ratios and measures.
- (2) Company interest reserves were utilized in the calculation of FD&A and F&D costs. This included the consideration of royalty interest volumes produced of 20 mboe (3 mbbl of heavy oil; 15 mbbl of light and medium crude oil and 11 mmcf of natural gas).
- (3) At year-end 2022 there were 155.8 million basic outstanding shares and 159.4 million diluted shares outstanding.
- (4) Debt adjusted basic outstanding shares of 164.0 million were calculated by dividing the unaudited year-end net debt of approximately \$63 million by the closing price of our common shares on the Toronto Stock Exchange at December 31, 2022 of \$7.62/share and adding this to the basic outstanding shares.
- (5) Debt adjusted basic reserves per share is a non-GAAP financial ratio that is not a standardized financial measure under IFRS and may not be comparable to similar financial measures disclosed by other issuers. Net debt, a non-GAAP financial measure, is used as a component of this non-GAAP financial ratio. See "*Non-GAAP and Other Financial Measures*" in this news release for information relating to this non-GAAP financial ratio.
- (6) See also "*Note Regarding Forward Looking Statements*", "*Reserves Advisories*" and "*Reserve Definitions*".

## CARDINAL'S TOP TIER RESERVE LIFE ASSETS

- Cardinal continues to maintain a long producing reserve life index ("RLI")<sup>(1)</sup> of 10 years PDP and 12.7 years P+PDP based on fourth quarter 2022 production of 21,281 boe/d<sup>(2)</sup> which reflects the low decline, low risk, predictable nature of our asset base.
- We effect a measured approach to developing and booking our reserves. There are 66 gross undeveloped drilling locations booked<sup>(3)</sup> which represents approximately four years of forecast drilling plans. These locations only represent a small percentage of our overall economic drilling inventory of more than 600 net locations, leaving substantial room for future reserve additions within our existing asset base.

*Notes:*

- (1) See "*Oil and Gas Metrics*".
- (2) See "*Supplemental Information Regarding Product Types*".
- (3) See "*Drilling Locations*".
- (4) See also "*Note Regarding Forward Looking Statements*", "*Reserves Advisories*" and "*Reserve Definitions*".

## OIL AND GAS RESERVES

The 2022 Reserve Report encompasses 100% of Cardinal's oil and gas properties and was prepared in accordance with definitions, standards and procedures contained in the Canadian Oil and Gas Evaluation Handbook ("COGEH") and National Instrument 51-101 - *Standards of Disclosure for Oil and Gas Activities* ("NI 51-101"). Please also refer to "*Note Regarding Forward Looking Statements*", "*Reserves Advisories*" and "*Reserve Definitions*" in this news release.

### Reserves Detail

Our 2022 Reserve Report uses the price forecast of the three consultant's average (GLJ, McDaniel & Associates Consultants Ltd. and Sproule Associates Ltd. (collectively, the "**Consultants**")) used by GLJ. The forecast crude oil reference prices are higher as compared to the 2021 Reserve Report forecast. Improvement in pricing along with our 2022 successful drilling program and continued optimization of our enhanced recovery schemes have added 11.5 million boe of P+PDP reserves.

In the 2022 Reserve Report, Cardinal has included all abandonment, decommissioning and reclamation ("ADR") costs for active and inactive wells, pipelines and facilities. The ADR costs for the active assets are considered in the PDP reserves category. Full inclusion of all ADR costs is recommended by COGEH.

Cardinal's full inclusion of costs exceeds the NI 51-101 minimum requirement of ADR for only those assets assigned reserves.

Consistent with prior years and in accordance with COGEH recommendations, Cardinal has included all operating costs for active and inactive assets. The Company also includes the consideration of future maintenance costs which is included as part of the operating costs or as future development capital ("FDC").

### Summary of Oil and Gas Reserves <sup>(1)(3)</sup>

The following tables summarize certain information contained in the 2022 Reserve Report. Reserves included below are the Company's estimated gross reserves as at December 31, 2022, as evaluated in the 2022 Reserve Report.

Reserves Category	Light and Medium Oil (Mbbl)	Heavy Oil (Mbbl)	Natural Gas Liquids (Mbbl)	Conventional Natural Gas <sup>(2)</sup> (MMcf)	Total BOE (Mboe)
Proved Developed Producing	43,715	24,579	2,703	39,421	77,566
Proved Developed Non-Producing	838	194	61	1,859	1,403
Proved Undeveloped	4,650	1,178	191	1,795	6,319
<b>Total Proved</b>	<b>49,203</b>	<b>25,951</b>	<b>2,955</b>	<b>43,075</b>	<b>85,288</b>
Probable	16,027	7,976	1,019	16,324	27,742
<b>Total Proved Plus Probable</b>	<b>65,230</b>	<b>33,927</b>	<b>3,974</b>	<b>59,399</b>	<b>113,031</b>

*Notes:*

- (1) Total values may not add due to rounding.
- (2) Includes non-associated gas, associated gas and solution gas.
- (3) In addition to the gross reserves indicated in the above table, the Company has 186 Mboe TPP royalty interest reserves comprised of 155 Mbbl light and medium crude oil, 10 Mbbl of heavy crude oil, 2 Mbbl of natural gas liquids and 111 MMcf of conventional natural gas.

### Summary of Net Present Values of Future Net Revenue (Before Tax)

(Based on forecast price and costs)

As at December 31, 2022<sup>(1)(2)(3)</sup>

Reserves Category	Discounted at:				
	0.0% (MMS)	5.0% (MMS)	10.0% (MMS)	15.0% (MMS)	20.0% (MMS)
Proved Developed Producing	2,577	1,784	1,353	1,101	937
Proved Developed Non-Producing <sup>(4)</sup>	(114)	(51)	(31)	(22)	(18)
Proved Undeveloped	246	156	111	83	64
<b>Total Proved</b>	<b>2,709</b>	<b>1,890</b>	<b>1,434</b>	<b>1,162</b>	<b>983</b>
Probable	1,250	581	351	244	184
<b>Total Proved Plus Probable</b>	<b>3,959</b>	<b>2,471</b>	<b>1,784</b>	<b>1,406</b>	<b>1,167</b>

*Notes:*

- (1) Total values may not add due to rounding.
- (2) Based on three Consultant's average, as defined below, December 31, 2022 forecast prices and costs. See below for "Price Forecast".
- (3) Future net revenue has been reduced for future abandonment costs and estimated capital for future development associated with the reserves.
- (4) The Proved Developed Non-Producing NPV includes the consideration of the inactive ADR costs of the Company. Excluding these costs the NPV10 of these reserves would be \$22.1 million. Full ADR costs are included in the Total Proved reserves case.

## Reconciliation of Changes in Reserves

The following table sets out a reconciliation of the changes in the Corporation's gross reserves as at December 31, 2022 against such reserves at December 31, 2021 based on forecast prices and cost assumptions in effect at the applicable reserve evaluation date.

	<b>Total Proved</b>				
	<b>Light and Medium Crude Oil (Mbbl)</b>	<b>Heavy Crude Oil (Mbbl)</b>	<b>Conventional Natural Gas (MMcf)</b>	<b>Natural Gas Liquids (Mbbl)</b>	<b>MBOE (Mboe)</b>
December 31, 2021	47,080	25,427	46,120	3,178	83,372
Extensions and Infill Drilling	2,210	1,046	2,545	43	3,724
Dispositions	-	(322)	(27)	-	(327)
Acquisitions	213	-	6	2	217
Technical Revisions <sup>(1)</sup>	1,764	1,296	(3,577)	(32)	2,432
Economic Factors <sup>(2)</sup>	1,823	1,216	3,443	79	3,692
Production	(3,888)	(2,711)	(5,434)	(317)	(7,821)
December 31, 2022	49,203	25,951	43,075	2,955	85,288

	<b>Total Proved Plus Probable</b>				
	<b>Light and Medium Crude Oil (Mbbl)</b>	<b>Heavy Crude Oil (Mbbl)</b>	<b>Conventional Natural Gas (MMcf)</b>	<b>Natural Gas Liquids (Mbbl)</b>	<b>MBOE (Mboe)</b>
December 31, 2021	63,563	32,117	62,785	4,246	110,391
Extensions and Infill Drilling	2,702	1,944	2,606	45	5,125
Dispositions	-	(393)	(33)	-	(399)
Acquisitions	248	-	8	3	253
Technical Revisions <sup>(1)</sup>	480	1,444	(4,636)	(111)	1,040
Economic Factors <sup>(2)</sup>	2,125	1,526	4,103	107	4,442
Production	(3,888)	(2,711)	(5,434)	(317)	(7,821)
December 31, 2022	65,230	33,927	59,399	3,974	113,031

*Notes:*

- (1) Positive or negative revisions are due to variations in performance versus previous forecasts.
- (2) Economic factors have been calculated as the difference in reserves using the 2022 Reserve Report price forecast with the 2021 reserve report price forecasts. There is no consideration of changes in operating costs or price offset changes that occurred in 2022.

## Price Forecast

The following table summarizes Consultant's average commodity price forecast and foreign exchange rate assumptions as at December 31, 2022, as applied in the 2022 Reserve Report, for the next five years.

Consultants Average Price Forecast <sup>(1)</sup>						
Year	Exchange Rate (\$US/\$C)	WTI @ Cushing (\$US/bbl)	Canadian Light Sweet 40° API (\$C/bbl)	Western Canada Select 20.5° API (\$C/bbl)	Medium at Cromer 29° API (\$C/bbl)	Natural gas AECO – C spot (\$C/MMbtu)
2023	0.7450	80.33	103.77	76.54	99.97	4.23
2024	0.7650	78.50	97.74	77.75	94.17	4.40
2025	0.7683	76.95	95.27	77.54	91.78	4.21
2026	0.7717	77.61	95.58	80.07	92.10	4.27
2027	0.7750	79.16	97.07	81.89	93.53	4.34

Note:

(1) Inflation is accounted for at 0% for 2023, 2.3% for 2024, and 2% thereafter.

## Future Development Costs

Cardinal has conservatively booked undeveloped locations, reflecting our current drilling plans for the next three to four years. Significant potential drilling inventory exists beyond those locations and the associated reserves currently booked. Cardinal has identified over 600 net unbooked potential locations<sup>(1)</sup> which provide long term confidence in the sustainability of our production base and the potential to deliver future organic growth.

Note:

(1) See "Drilling Locations".

FDC reflects the best estimate of the capital costs required to produce the Company's reserves. The FDC associated with the TPP reserves at year-end 2022 is \$225 million undiscounted (\$150 million discounted at 10%).

millions \$	PDP	Total Proved	Total Proved plus Probable
Total FDC, Undiscounted	82	181	225
Total FDC, Discounted at 10%	42	122	150

FDC included at year-end 2022 for CO<sub>2</sub> purchases, maintenance and facility capital in PDP, TP and TPP were \$82 million, \$89 million and \$101 million, respectively. This represents 45% of Cardinal's TPP FDC of \$225 million.

## Note Regarding Forward Looking Statements

This news release contains forward-looking statements and forward-looking information (collectively "forward-looking information") within the meaning of applicable securities laws relating to the 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 news release speak only as of the date thereof and are expressly qualified by this cautionary statement.

Specifically, this news release contains forward-looking statements relating to: our business strategies, plans and objectives; production decline rates; future drilling locations and plans; the predictability and sustainability of our production base and the potential to deliver future organic growth; our asset base and its future potential and opportunities; the booking of undeveloped locations which reflect our current drilling plans for the next three to four years, our views that significant potential drilling inventory exists beyond those currently booked, our view on the confidence in the sustainability of our production base and the potential to deliver future organic growth and our plans to continually improve our environmental, safety and governance mandate and operate our assets in a responsible and environmentally sensitive manner.

In addition, information and statements relating to reserves are deemed to be forward-looking statements, as they involve implied assessment, based on certain estimates and assumptions, that the reserves described exist in quantities predicted or estimated, and that the reserves can be profitably produced in the future.

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, applicable royalty rates, tax laws, future well production rates and reserve volumes, future operating costs, inflation, the performance of existing and future wells, the success of its exploration and development activities, the sufficiency and timing of budgeted capital expenditures in carrying out planned activities, the availability and cost of labor and services, the impact of competition, conditions in general economic and financial markets, access to 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 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; 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 news 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 news 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.

### **Oil and Gas Metrics**

The term "boe" or barrels of oil equivalent 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 equivalent (6 Mcf: 1 bbl) is based on an energy equivalency conversion method primarily applicable at the burner tip and does not represent a value equivalency at the wellhead. Additionally, given that the value ratio based on the current price of crude oil, as compared to natural gas, is significantly different from the energy equivalency of 6:1; utilizing a conversion ratio of 6:1 may be misleading as an indication of value.

This news release contains metrics commonly used in the oil and natural gas industry which have been prepared by management, such as "capital efficiency", "development costs", "net acquisition costs", "F&D costs", "FD&A costs", "operating netback", "recycle ratio" and "reserve life index". These terms do not have a standardized meaning and may not be comparable to similar measures presented by other companies, and therefore should not be used to make such comparisons.

"Capital efficiency" means the development cost divided by the production added over a defined period of time.

"Development costs" means the aggregate exploration and development costs including land and seismic incurred in the financial year on reserves that are characterized as development but exclude capitalized general and administration costs. The aggregate of the development costs incurred in the most recent financial year and the change during that year in estimated future development costs generally will not reflect total finding and development costs related to reserves additions for that year. See "*Non-GAAP Financial Measures*".

"Net acquisition costs" means the total consideration paid for corporate acquisitions plus net debt acquired in the acquisition plus property acquisitions less the proceeds from property dispositions. See "*Non-GAAP Financial Measures*".

"F&D costs" are calculated as the sum of development costs plus the change in FDC for the period when appropriate, divided by the change in reserves within the applicable reserves category, excluding those reserves acquired or disposed.

"FD&A costs" are calculated as the sum of development costs plus net acquisition costs plus the change in FDC for the period when appropriate, divided by the change in reserves within the applicable reserves category, inclusive of changes due to acquisitions and dispositions.

"Operating netback" is a non-GAAP financial measure. See "*Non-GAAP Financial Measures*".

"Recycle ratio" is calculated by dividing an unaudited operating netback for 2022 of \$49.30/boe by F&D costs per boe or FD&A costs per boe for the year.

"Reserve life index" or "RLI" is calculated by dividing the applicable reserves by 2022 fourth quarter production of 21,281 boe/d.

Management uses these oil and gas metrics for its own performance measurements and to provide shareholders with measures to compare our operations over time. Readers are cautioned that the information provided by these metrics, or that can be derived from the metrics presented in this news release, should not be relied upon for investment or other purposes.

### Unaudited Financial Information

Certain financial and operating information included in this news release for the year ended December 31, 2022 are based on estimated unaudited financial results for the year then ended, and are subject to the same limitations as discussed under "*Note Regarding Forward Looking Statements*". These estimated amounts may change upon the completion of audited financial statements for the year ended December 31, 2022 and changes could be material.

### Supplemental Information Regarding Product Types

This news release includes references to 2022 production. 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)
Q4 2022	49%	35%	4%	12%	21,281

## Reserves Advisories

Unless otherwise indicated, all reserves reported in this news release are Company share gross reserves which represent Cardinal's total working interest reserves prior to the deduction of royalties payable.

Future net revenue is a forecast of revenue, estimated using forecast prices and costs arising from the anticipated development and production of resources, net of associated royalties, operating costs, development costs and all corporate abandonment and reclamation costs for all active and inactive wells, pipelines and facilities. It should not be assumed that the future net revenues undiscounted and discounted at 10% included in this news release represent the fair market value of the reserves.

## Reserve Definitions

"Proved" reserves are those reserves that can be estimated with a high degree of certainty to be recoverable. It is likely that the actual remaining quantities recovered will exceed the estimated proved reserves.

"Probable" reserves are those additional reserves that are less certain to be recovered than proved reserves. It is equally likely that the actual remaining quantities recovered will be greater or less than the sum of the estimated proved plus probable reserves.

"Developed" reserves are those reserves that are expected to be recovered from existing wells and installed facilities or, if facilities have not been installed, that would involve a low expenditure (e.g. when compared to the cost of drilling a well) to put the reserves on production.

"Developed Producing" reserves are those reserves that are expected to be recovered from completion intervals open at the time of the estimate. These reserves may be currently producing or, if shut-in, they must have previously been on production, and the date of resumption of production must be known with reasonable certainty.

"Developed Non-Producing" reserves are those reserves that either have not been on production, or have previously been on production, but are shut in, and the date of resumption of production is unknown.

"Undeveloped" reserves are those reserves expected to be recovered from known accumulations where a significant expenditure (for example, when compared to the cost of drilling a well) is required to render them capable of production. They must fully meet the requirements of the reserves classification (proved, probable, possible) to which they are assigned.

## Drilling Locations

This news release discloses Cardinal's inventory of approximately 660 net drilling locations, of which 42 net locations are booked proved undeveloped, 18 net are booked probable undeveloped locations and 600 net are unbooked. The booked locations are derived from the 2022 Reserve Report and account for drilling locations that have associated proved and/or probable reserves, as applicable. Unbooked locations are internal estimates based on the Company's prospective acreage and an assumption as to the number of wells that can be drilled per section based on industry practice and internal review. Unbooked locations do not have attributed reserves. Unbooked locations have been identified by management as an estimation of the Company's multi-year drilling activities based on evaluation of applicable geologic, seismic, engineering, production and reserves information. There is no certainty that the Company will drill all unbooked drilling locations and if drilled there is no certainty that such locations will result in additional oil and gas reserves, resources or production. The drilling locations on which the Company will actually drill wells, including the number and timing thereof is ultimately dependent upon the availability of funding, regulatory approvals, seasonal restrictions, oil and natural gas prices, costs, actual drilling results, additional reservoir information that is obtained and other factors. While a certain number of the unbooked drilling locations have been derisked by drilling existing wells in relative close proximity to such unbooked drilling locations, the majority of other unbooked drilling locations are farther away from existing wells where management has less information about the characteristics of the reservoir and therefore there is more uncertainty whether wells will be drilled in such locations and if drilled there is more uncertainty that such wells will result in additional oil and gas reserves, resources or production.



## Non-GAAP and Other Financial Measures

Throughout this news release and in other materials disclosed by the Company, Cardinal employs certain measures to analyze its financial performance, financial position, and cash flow. These non-GAAP and other financial measures are not standardized financial measures under International Financial Reporting Standards ("IFRS" or, alternatively, "GAAP") and may not be comparable to similar financial measures disclosed by other issuers. The non-GAAP and other financial measures should not be considered to be more meaningful than generally accepted accounting principles ("GAAP") measures which are determined in accordance with IFRS, such as net income (loss) and cash flow from operating activities as indicators of Cardinal's performance.

### *Non-GAAP Financial Measures*

"Development costs" means the aggregate property, property plant and equipment expenditures including land and seismic incurred in the financial year on reserves that are characterized as development but exclude capitalized general and administration costs.

"Net acquisition costs" means the total consideration paid for corporate acquisitions plus net debt acquired in the acquisition plus property acquisitions less the proceeds from property dispositions.

"Operating netback" is determined by deducting royalties, net operating expenses, and transportation expenses from petroleum and natural gas revenue. Operating netback is a per boe measure utilized by Cardinal to better analyze the operating performance of its petroleum and natural gas assets against prior periods.

The following table sets forth a reconciliation of petroleum and natural gas revenues to operating netback on a per boe basis (all figures unaudited):

<u>\$/boe</u>	<u>2022</u>
Petroleum and natural gas revenue	\$ 94.12
Royalties	(19.14)
Net operating expenses	(24.88)
Transportation expenses	<u>(0.80)</u>
Netback	\$ 49.30

"Net debt" is calculated as bank debt and adjusted working capital deficiency which is current liabilities less current assets (adjusted for the fair value of financial instruments, the current portion of lease liabilities and the current portion of the decommissioning obligation). Net debt is used by management to analyze the financial position, liquidity and leverage of Cardinal.

***Non-GAAP Financial Ratios***

"Development capital", "F&D costs", "FD&A costs", "Recycle ratio", "debt adjusted reserves per share" are non-GAAP financial ratios. See "*Oil and Gas Advisories*". Management uses F&D costs as a measure of capital efficiency for organic reserves development. Management uses FD&A costs as a measure of capital efficiency for organic and acquired reserves development. Management uses recycle ratio to relate the cost of adding reserves to the expected cash flows to be generated. Management uses debt adjusted reserves per share as a metric to compare reserve valuation when taking into account changes in share price, outstanding shares and ending net debt levels.

**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.

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