NEWS RELEASE **FEBRUARY 22, 2024**

CARDINAL ENERGY LTD. ANNOUNCES 2023 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, 2023. One hundred percent of Cardinal's year-end 2023 reserves were evaluated by independent reserves evaluator GLJ Ltd. ("GLJ") with an effective date of December 31, 2023 (the "2023 Reserve Report"). The 2023 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 2023 year-end reserves reflect the quality, predictability, and sustainability of our low decline asset base.

RESERVE REPORT HIGHLIGHTS

All reserves information contained in this news release are based on the 2023 Reserve Report.

- Utilizing less than 50% of adjusted funds flow, Cardinal replaced production in the Proved Developed Producing ("PDP") reserves category, replaced Total Proved ("TP") reserves and Total Proved plus Probable ("TPP") reserves at 1.4x and 1.7x of 2023 annual production, respectively.

- Cardinal's efficient 2023 capital program resulted in adding PDP reserves at Finding, Development and Acquisition ("FD&A") costs(1) of $15.65/boe PDP, $13.83/boe TP and $12.08/boe TPP (including the change in Future Development Capital ("FDC")).

- Profitability and predictability of Cardinal's assets continue to be demonstrated, with 2023 recycle ratios(1) of 2.2x for PDP, 2.5x for TP and 2.9x for TPP. 2023 recycle ratios are based on a 2023 operating netback(1) per boe of $34.90 and FD&A costs (including the change in FDC).

- Before tax Net Present Value ("NPV") discounted at 10% ("NPV10") of the TPP reserves was $1.8 billion, a 1% increase from the prior year.

- Cardinal maintained a very high percentage of producing reserves, with Proved Plus Probable Producing ("P+PDP") reserves accounting for 84% of the Company's TPP reserves.

- 90% of Cardinal's TPP reserves consist of light, medium and heavy crude oil and natural gas liquids ("NGL's").

- No reserves were assigned to Cardinal's Saskatchewan thermal assets as at December 31, 2023.

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 23 mboe (6 mbbl of heavy crude oil; 15 mbbl of light and medium crude oil and 12 mmcf of natural gas).
(3) 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")(1) of 10 years PDP and 12 years P+PDP based on fourth quarter 2023 production of 22,164 boe/d(2) which reflects the low risk and predictable nature of our asset base, which continues to demonstrate a low decline profile of 10% per year.

- We effect a measured approach to developing and booking our reserves. There are 87 gross (81 net) undeveloped drilling locations booked(3) 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 2023 Reserve Report encompasses 100% of Cardinal's conventional 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 2023 Reserve Report uses the price forecast of the three consultant's average (GLJ, McDaniel & Associates Consultants Ltd. and Sproule Associates Ltd. (collectively, the "**Consultants**")). The success of Cardinal's 2023 drilling program, continued optimization of our enhanced recovery schemes and strategic acquisitions have added 8.8 million boe of P+PDP reserves in 2023.

In the 2023 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 [(1)(3)]

The following tables summarize certain information contained in the 2023 Reserve Report. Reserves included below are the Company's estimated gross reserves as at December 31, 2023, as evaluated in the 2023 Reserve Report.

Reserves Category	Light and Medium Oil (Mbbl)	Heavy Oil (Mbbl)	Natural Gas Liquids (Mbbl)	Conventional Natural Gas[(2)] (MMcf)	Total BOE (Mboe)
Proved Developed Producing	44,878	23,069	2,487	41,534	77,356
Proved Developed Non-Producing	1,149	174	110	1,928	1,755
Proved Undeveloped	5,162	2,597	340	7,795	9,399
Total Proved	**51,189**	**25,840**	**2,937**	**51,256**	**88,509**
Probable	16,961	8,766	1,139	19,331	30,088
Total Proved Plus Probable	**68,151**	**34,606**	**4,076**	**70,588**	**118,598**

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 188 Mboe TPP royalty interest reserves comprised of 150 Mbbl light and medium crude oil, 20 Mbbl of heavy crude oil, 2 Mbbl of natural gas liquids and 94 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, 2023[(1)(2)(3)]

	Discounted at:				
Reserves Category	**0.0% (MM$)**	**5.0% (MM$)**	**10.0% (MM$)**	**15.0% (MM$)**	**20.0% (MM$)**
Proved Developed Producing	2,245	1,638	1,264	1,032	878
Proved Developed Non-Producing[(4)]	(167)	(68)	(40)	(28)	(21)
Proved Undeveloped	351	249	188	147	118
Total Proved	**2,429**	**1,820**	**1,412**	**1,151**	**975**
Probable	1,252	623	394	281	216
Total Proved Plus Probable	**3,680**	**2,443**	**1,805**	**1,433**	**1,191**

Notes:
(1) Total values may not add due to rounding.
(2) Based on three Consultant's average, as defined below, December 31, 2023 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 $28.5 million. Full ADR costs are included in the Total Proved reserves case.

Reconciliation of Changes in Reserves[1]

The following table sets out a reconciliation of the changes in the Corporation's gross reserves as at December 31, 2023 against such reserves at December 31, 2022 based on forecast prices and cost assumptions in effect at the applicable reserve evaluation date.

	Total Proved				
	Light and Medium Crude Oil (Mbbl)	**Heavy Crude Oil (Mbbl)**	**Conventional Natural Gas (MMcf)**	**Natural Gas Liquids (Mbbl)**	**MBOE (Mboe)**
December 31, 2022	49,203	25,951	43,075	2,955	85,288
Discoveries	-	85	57	-	95
Extensions and Infill Drilling	1,987	1,547	5,694	66	4,549
Dispositions	(1,146)	(295)	(1,702)	(31)	(1,756)
Acquisitions	2,819	1,267	2,457	310	4,806
Technical Revisions (1)	2,112	12	7,540	(60)	3,321
Economic Factors (2)	89	32	(77)	(7)	101
Production	(3,875)	(2,759)	(5,789)	(296)	(7,896)
December 31, 2023	**51,189**	**25,840**	**51,256**	**2,937**	**88,509**

	Total Proved Plus Probable				
	Light and Medium Crude Oil (Mbbl)	**Heavy Crude Oil (Mbbl)**	**Conventional Natural Gas (MMcf)**	**Natural Gas Liquids (Mbbl)**	**MBOE (Mboe)**
December 31, 2022	65,230	33,927	59,399	3,974	113,031
Discoveries	-	108	72	-	120
Extensions and Infill Drilling	2,245	2,425	7,110	90	5,945
Dispositions	(1,561)	(400)	(2,665)	(44)	(2,450)
Acquisitions	4,033	2,152	3,465	443	7,207
Technical Revisions (1)	1,951	(888)	9,017	(83)	2,483
Economic Factors (2)	129	41	(22)	(8)	158
Production	(3,875)	(2,759)	(5,789)	(296)	(7,896)
December 31, 2023	**68,151**	**34,606**	**70,588**	**4,076**	**118,598**

Notes:

(1) Total values may not add due to rounding.

(2) Positive or negative revisions are due to variations in performance versus previous forecasts.

(3) Economic factors have been calculated as the difference in reserves using the 2023 Reserve Report price forecast with the 2022 reserve report price forecasts. There is no consideration of changes in operating costs or price offset changes that occurred in 2023.

Price Forecast

The following table summarizes Consultant's average commodity price forecast and foreign exchange rate assumptions as at December 31, 2023, as applied in the 2023 Reserve Report, for the next five years.

Consultants Average Price Forecast(1)

Year	Exchange Rate ($C/$US)	WTI @ Cushing ($US/bbl)	Canadian Light Sweet 40° API ($C/bbl)	Western Canada Select 20.9° API $C/bbl)	Medium at Cromer 29° API ($C/bbl)	Natural gas AECO – C spot ($C/MMbtu)
2024	0.752	73.67	92.91	76.74	88.90	2.20
2025	0.752	74.98	95.04	79.77	90.95	3.37
2026	0.755	76.14	96.07	81.12	91.91	4.05
2027	0.755	77.66	97.99	82.88	93.75	4.13
2028	0.755	79.22	99.95	85.04	95.63	4.21

Note:
(1) Inflation is accounted for at nil 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 is believed to exist beyond those locations and the associated reserves currently booked. Cardinal has identified over 600 net unbooked potential locations(1) 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 2023 is $273 million undiscounted ($190 million discounted at 10%).

millions $	PDP	Total Proved	Total Proved plus Probable
Total FDC, Undiscounted	88	221	273
Total FDC, Discounted at 10%	46	158	190

FDC included at year-end 2023 for CO_2 purchases, maintenance and facility capital in PDP, TP and TPP were $88 million, $95 million and $168 million, respectively. This represents 62% of Cardinal's TPP FDC of $273 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 "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.

"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. Costs associated with exploration and evaluation assets have been excluded from this calculation. See "*Non-GAAP Financial Measures*".

"Net Acquisition costs" means the total consideration paid for 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. Costs associated with exploration and evaluation assets have been excluded from this calculation.

"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. Costs associated with exploration and evaluation assets have been excluded from this calculation.

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

"Recycle ratio" is calculated by dividing an unaudited operating netback per boe for 2023 of $34.90 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 2023 fourth quarter production of 22,164 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, 2023 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, 2023 and changes could be material.

Supplemental Information Regarding Product Types

This news release includes references to 2023 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 2023	50%	34%	4%	12%	22,164

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 reserve’s classification (proved, probable, possible) to which they are assigned.

Drilling Locations

This news release discloses Cardinal's inventory of approximately 681 net drilling locations, of which 62 net locations are booked proved undeveloped, 19 net are booked probable undeveloped locations and 600 net are unbooked. The booked locations are derived from the 2023 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 earnings (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 property acquisitions less the proceeds from property dispositions.

"Operating Netback per boe" is determined by deducting royalties, net operating expenses, and transportation expenses from petroleum and natural gas revenue. 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 per boe (all figures unaudited):

$/boe	**2023**
Petroleum and natural gas revenue	$74.43
Royalties	($14.22)
Net operating expenses	($24.31)
Transportation expenses	($1.00)
Operating Netback	$34.90

Non-GAAP Financial Ratios

"Development capital", "F&D costs", "FD&A costs", "Recycle ratio" 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.

About Cardinal Energy Ltd.

Cardinal is a Canadian oil and natural gas company with operations focused on low decline oil in Western Canada. Cardinal differentiates itself from its peers by having the lowest decline conventional asset base in Western Canada. Cardinal has recently announced the commencement of its first thermal SAGD oil development project which will further increase the long-term sustainability of the Company. Cardinal works to continually improve its Environmental, Social and Governance profile and operates its assets in a responsible and environmentally sensitive manner.

For further information:

Shawn Van Spankeren, CFO, Laurence Broos, VP Finance or Jay Bachman, Investor Relations

Email: info@cardinalenergy.ca
Phone: (403) 234-8681
Website: www.cardinalenergy.ca