



**NEWS RELEASE**

**JULY 27, 2023**

**CARDINAL ENERGY LTD. ANNOUNCES SECOND QUARTER 2023  
OPERATING AND FINANCIAL RESULTS**

Calgary, Alberta – Cardinal Energy Ltd. ("Cardinal" or the "Company") (TSX: CJ) is pleased to announce its operating and financial results for the second quarter ended June 30, 2023.

**FINANCIAL AND OPERATING HIGHLIGHTS FROM THE SECOND QUARTER OF 2023**

- Average production volumes of 21,047 boe/d were negatively impacted by approximately 700 boe/d due to short-term shut-in production associated with forest fires in northern Alberta in the second quarter. All shut-in volumes are now back online with current production at approximately 22,000 boe/d;
- Adjusted funds flow<sup>(1)</sup> increased 7% over the first quarter of 2023 due to narrower Western Canadian Select ("WCS") differentials;
- Decreased net debt<sup>(1)</sup> by 2% over the prior quarter leading to a net debt to adjusted funds flow ratio<sup>(1)</sup> of 0.3x;
- Closed the disposition of non-core undeveloped land with minimal production and associated asset retirement obligations ("ARO") for proceeds of \$10 million;
- Brought onstream our four Nipisi Clearwater wells that were drilled in the first quarter of 2023 with combined current rates over 975 boe/d, approximately 30% higher than our offsetting 2022 pad initial production rates;
- Drilled six (4.6 net) successful wells in our Midale, Saskatchewan area and one (1.0 net) well in southern Alberta which are expected to start producing early in the third quarter.

<sup>(1)</sup> 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		
	2023	2022	% Chg	2023	2022	% Chg
<b>Financial</b>						
Petroleum and natural gas revenue	137,053	228,917	(40)	272,030	403,255	(33)
Cash flow from operating activities	61,220	120,210	(49)	102,309	170,253	(40)
Adjusted funds flow	56,190	128,337	(56)	108,500	214,888	(50)
per share - basic	0.35	0.84	(58)	0.69	1.42	(51)
per share - diluted	0.35	0.82	(57)	0.68	1.38	(51)
Earnings	27,719	98,586	(72)	44,040	155,826	(72)
per share - basic	0.18	0.64	(72)	0.28	1.03	(73)
per share - diluted	0.17	0.63	(73)	0.28	1.00	(72)
Development capital expenditures <sup>(1)</sup>	29,867	25,018	19	53,354	59,965	(11)
Other capital expenditures <sup>(1)</sup>	490	520	(6)	1,458	1,369	7
Acquisitions, net	(10,000)	-	n/m	(9,128)	-	n/m
Capital expenditures <sup>(1)</sup>	20,357	25,538	(20)	45,684	61,334	(26)
Common shares, net of treasury shares (000s)	158,513	159,143	-	158,513	159,143	-
Dividends declared	29,058	8,161	256	57,800	8,161	608
Per share	0.18	0.05	260	0.36	0.05	620
Total Payout ratio <sup>(1)</sup>	105%	26%		102%	32%	
Bank debt				53,158	66,956	(21)
Adjusted working capital deficiency / (surplus) <sup>(1)</sup>				23,111	(4,994)	n/m
Net debt <sup>(1)</sup>				76,269	61,962	23
Net debt to adjusted fund flow ratio				0.3	0.2	
<b>Operating</b>						
Average daily production						
Light oil (bbl/d)	7,651	8,252	(7)	7,736	7,917	(2)
Medium/heavy oil (bbl/d)	10,034	10,515	(5)	10,206	10,209	-
NGL (bbl/d)	689	928	(26)	775	866	(11)
Natural gas (mcf/d)	16,038	15,511	3	16,009	14,704	9
Total (boe/d)	21,047	22,280	(6)	21,385	21,443	-
Netback (\$/boe) <sup>(1)</sup>						
Petroleum and natural gas revenue	71.56	112.91	(37)	70.28	103.90	(32)
Royalties	(13.35)	(22.84)	(42)	(13.26)	(20.82)	(36)
Net operating expenses <sup>(1)</sup>	(24.63)	(22.69)	9	(25.02)	(23.49)	7
Transportation expenses	(1.07)	(0.87)	23	(0.99)	(0.75)	32
Netback <sup>(1)</sup>	32.51	66.51	(51)	31.01	58.84	(47)
Realized gain on commodity contracts	-	-	-	0.39	-	n/m
Interest and other	(0.82)	(0.95)	(14)	(0.74)	(1.03)	(28)
G&A	(2.35)	(2.25)	4	(2.63)	(2.44)	8
Adjusted funds flow <sup>(1)</sup>	29.34	63.31	(54)	28.03	55.37	(49)

<sup>(1)</sup> See non-GAAP and other financial measures.

n/m - Not meaningful or not calculable

## SECOND QUARTER OVERVIEW

During the second quarter of 2023, wildfires throughout northern Alberta impacted the Company's production and adjusted funds flow. Cardinal's priority was the safety of our employees, contractors and residents of the areas affected. We proactively shut-in production in those affected areas to allow staff to focus on the safety of their

families and homes, as well as to reduce risk within the field. Although there was no direct damage to our wells or facilities, power to many of our fields was affected by downed power poles and lines. We estimate that our second quarter average production was negatively impacted by approximately 700 boe/d.

Despite the lower production, adjusted funds flow of \$56.2 million was 7% higher than the prior quarter due to narrowing WCS differentials. In the second quarter, WCS differentials averaged almost US\$10/bbl less than the prior quarter. On a per diluted share basis, adjusted funds flow was \$0.35 per share while second quarter 2023 free cash flow<sup>(1)</sup> of \$26.3 million was utilized for shareholder returns through our \$0.06 per common share per month dividend.

Cardinal's net debt closed the second quarter of 2023 at \$76.3 million which was 2% lower than the prior quarter and included \$53.2 million of bank debt and \$23.1 million of adjusted working capital deficiency<sup>(1)</sup>. Cardinal's net debt to adjusted funds flow ratio remained low at 0.3x. During the second quarter, despite materially higher Canadian interest rates, Cardinal's low debt levels resulted in a 14% reduction in interest and other costs per boe over the same period in 2022.

In the second quarter of 2023, the Company spent \$20.4 million on capital expenditures which included the drilling and completion of six (4.6 net) wells at Midale and one (1.0 net) well in southern Alberta. The Company continued with its well reactivation program spending \$2.3 million on recompletions and workovers throughout its operating areas. Cardinal also constructed new facilities and upgraded existing infrastructure across our asset base and continued with the enhanced oil recovery program with CO<sub>2</sub> injection at Midale. Cardinal also closed the disposition of non-core undeveloped land and associated liabilities for proceeds of \$10 million in our northern Alberta area.

<sup>(1)</sup> See non-GAAP and other financial measures.

## **OPERATIONS**

Cardinal's second quarter production averaged 21,047 boe/d. The northern Alberta wildfires impacted our second quarter production as we experienced relatively minor shut-ins across some of our Mitsue and Grande Prairie assets during the second half of May. However, at our House Mountain field, just north of the town of Swan Hills, the fires and the power outage that resulted, caused production to be shut-in beginning on May 15<sup>th</sup>. Restart of the House Mountain field began on June 12<sup>th</sup> as power was slowly restored.

While this was an extremely difficult situation, Cardinal is very proud of the response shown by our personnel. We are also thankful for the efforts of the fire response teams, and other emergency responders who worked to protect nearby communities.

Our drilling program continues to deliver positive results. The Company has drilled three (2.3 net) producing wells and three (2.3 net) injector wells at Midale in the second quarter with initial production and injectivity from the first three inline with expectation, the remaining three wells are currently being brought on-stream.

At Wainwright, we spud the first of our four (4.0 net) well Rex multilateral delineation program. Planned to continue through August, we expect this activity will further de-risk this large oil resource. Last year's Rex multilateral discovery well continues to produce over 100 boe/d demonstrating the long-term potential of this play where we have identified up to 90 future drilling locations.

In Southern Alberta, we spud the first of our four (4.0 net) well Ellerslie multilateral well program in June. The first well came on stream in early July and is currently producing over 300 boe/d. We have recently finished drilling the second well with initial production rates of over 500 boe/d.

Our four Nipisi Clearwater wells drilled in the first quarter of 2023 continue to produce at rates approximately 30% higher than last year's very successful program with current production of approximately 975 boe/d.

The success to date of these activities across our asset base is providing further confidence in the long-term breadth and depth of our identified drilling inventory, and the sustainability of our production base.

A key piece of new enhanced liquids recovery infrastructure was brought on stream in the quarter at Midale. Stripping out valuable liquids from gas produced associated with the CO<sub>2</sub> enhanced oil recovery program this new infrastructure is expected to further optimize one of our core producing assets.

## **ENVIRONMENTAL, SOCIAL AND GOVERNANCE ("ESG")**

Cardinal's strong corporate emissions performance has continued in 2023 with ongoing CO<sub>2</sub> sequestration in Saskatchewan and further implementation of projects aimed at reducing emissions from our operations across Alberta. Through our world class Carbon Capture and Sequestration ("CCS") enhanced oil recovery ("EOR") operation at Midale, the Company sequestered approximately 78,000 tonnes of CO<sub>2</sub> equivalent during the second quarter of 2023. This amount of carbon sequestration exceeds our Scope 1 emissions. To date, the Midale CCS EOR project has sequestered 5.6 million tonnes of CO<sub>2</sub> and has reduced oil production decline rates from this project to approximately 3%.

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

Cardinal will continue with our commitment to reduce our environmental footprint with \$23 million in our 2023 budget for asset retirement obligations ("ARO"), more than 2.5 times our required regulatory spend requirements. In the second quarter of 2023, Cardinal spent \$4.1 million of this budget bringing the total spend in the first half of 2023 to \$8.8 million.

## **OUTLOOK**

With the majority of our 2023 drilling program expected to come onstream during the third quarter, and assuming forecasted associated productivity, corporate production volumes are expected to move past 22,000 boe/d during the third quarter into the fourth quarter. Our first two wells in both Wainwright on the Rex play and in Southern Alberta on the Ellerslie development are finished drilling and look encouraging. In both areas we have two additional wells to drill as part of our 2023 program. Initial productivity from our first two producers at Midale is on forecast with the third well planned to come on stream in August.

Our base production remains predictable and low decline. We will continue to pursue projects and opportunities that increase our sustainability and decrease our corporate risk. In the past twelve months, we have disposed of approximately 400 boe/d of non-core production with approximately \$16 million of undiscounted ARO. We will continue to optimize our asset base.

On behalf of the Board of Directors, management and employees we would like to thank our shareholders for their ongoing support.

## **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: the Company's plans to continue operations at Wainwright through August, that the Company will resume its 2023 drilling program during the third quarter, with programs continuing in each of our Wainwright and Bantry, areas in the third quarter; that corporate production volumes are expected to move past 22,000 boe/d during the third quarter into the fourth quarter; that the Wainwright Rex drill program will further de-risk this large oil resource; Cardinal's intention to continue with its commitment to reduce its environmental footprint with \$23 million in our Midale infrastructure plan and results; 2023 budget for ARO, Cardinal's intention to continue to improve its sustainability and decrease corporate risk, our business strategies, plans and objectives, that the Company will continue to pursue projects and opportunities that increase our sustainability and decrease its corporate risk; our 2023 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, plans to upgrade our drilling inventory, plans to operate our assets in a responsible and environmentally sensitive manner.

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.

## Supplemental Information Regarding Product Types

This news release includes references to 2023 and 2022 production. The Company discloses crude oil production based on the pricing index that the oil is priced from. 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)
Q2/23	45%	39%	3%	13%	21,047
Q2/22	49%	35%	4%	12%	22,280
1H/23	46%	38%	4%	12%	21,385
1H/22	53%	32%	4%	11%	21,443
Wildfire impact	88%	-	9%	3%	700
Southern AB drill	93%	-	-	7%	+300
Southern AB second drill	93%	-	-	7%	+500
Nipisi 2023 current	-	93%	-	7%	975
Rex	-	80%	-	20%	100
Current	47%	38%	3%	12%	22,000
Disposed	19%	75%	2%	4%	400

## 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 Financial 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. The following table reconciles operating expenses to net operating expenses:

	Three months ended		Six months ended	
	June 30, 2023	June 30, 2022	June 30, 2023	June 30, 2022
Operating expenses	48,273	47,201	99,114	93,337
Less: Processing and other revenue	(1,095)	(1,191)	(2,272)	(2,189)
Net operating expenses	47,178	46,010	96,842	91,148

### 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 deducted by 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, 2023	June 30, 2022	June 30, 2023	June 30, 2022
Petroleum and natural gas revenue	137,053	228,917	272,030	403,255
Royalties	(25,567)	(46,306)	(51,309)	(80,803)
Net operating expenses	(47,178)	(46,010)	(96,842)	(91,148)
Transportation expenses	(2,047)	(1,767)	(3,820)	(2,921)
Netback	62,261	134,834	120,059	228,383

### 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 exploration and evaluation expenditures ("E&E).

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

	Three months ended		Three months ended	
	June 30, 2023	June 30, 2023	June 30, 2022	June 30, 2023
Cash flow from investing activities	30,825	37,194	56,887	62,680
Change in non-cash working capital	(10,110)	(11,656)	(10,845)	(1,346)
E&E	(358)	-	(358)	-
Capital expenditures	20,357	25,538	45,684	61,334
Less:				
Other	490	520	1,458	1,369
Acquisitions, net	(10,000)	-	(9,128)	-
Development capital expenditures	29,867	25,018	53,354	59,965

### Adjusted working capital deficiency

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, 2023	June 30, 2022
Working capital deficiency / (surplus)	29,877	(74)
Lease liabilities	1,206	1,440
Decommissioning obligation	5,112	4,500
Fair value of financial instruments, net	448	(1,020)
Adjusted working capital deficiency / (surplus)	23,111	(4,994)

*Net debt*

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

The following table reconciles bank debt to net debt:

As at	June 30, 2023	June 30, 2022
Bank debt	53,158	66,956
Adjusted working capital deficiency / (surplus)	23,111	(4,994)
Net debt	76,269	61,962

*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, 2023	June 30, 2022	June 30, 2023	June 30, 2022
Cash flow from operating activities	61,220	120,210	102,309	170,253
Change in non-cash working capital	(9,102)	4,065	(2,640)	37,051
Funds flow	52,118	124,275	99,669	207,304
Decommissioning expenditures	4,072	4,062	8,831	7,584
Adjusted funds flow	56,190	128,337	108,500	214,888
Total development capital expenditures	(29,867)	(25,018)	(53,354)	(59,965)
Free cash flow	26,323	103,319	55,146	154,923



## Non-GAAP Financial Ratios

### *Netback per boe*

Cardinal utilizes operating netback per boe to assess the Company'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, 2023	June 30, 2022	June 30, 2023	June 30, 2023
Petroleum and natural gas revenue	71.56	112.91	70.28	103.90
Royalties	(13.35)	(22.84)	(13.26)	(20.82)
Net operating expenses	(24.63)	(22.69)	(25.02)	(23.49)
Transportation expenses	(1.07)	(0.87)	(0.99)	(0.75)
Netback per boe	32.51	66.51	31.01	58.84

### *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 the adjusted funds flow for the trailing twelve month period.

### *Total payout ratio*

Cardinal utilizes this ratio as key measure to assess the Company's ability to fund financing activities, operating activities, and capital expenditures. Total payout ratio is calculated as the sum of dividends declared plus development capital expenditures divided by adjusted funds flow trailing twelve month 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.

### **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.

### **Initial Production**

Any references in this news release to initial production rates are useful in confirming the presence of hydrocarbons, however, such rates are not determinative of the rates at which such wells will continue production and decline thereafter. Initial production rates may be estimated based on third party estimates or limited data available at the time. While encouraging, readers are cautioned not to place reliance on such rates in calculating the aggregate production for Cardinal. The aggregate over 300 boe/d production rate set forth herein as it relates to the Ellerslie multilateral well is based on reported production from July 5-22, 2023. The aggregate over 500 boe/d production rate set forth herein as it relates to the Ellerslie multilateral well is based on reported production from July 19-22, 2023.

### **Drilling Locations**

This news release discloses Cardinal's inventory of 90 potential locations Wainwright Central Alberta Rex of which in respect of Wainwright Central Alberta Rex, two locations are booked proved undeveloped, one net is booked probable undeveloped locations and 87 net are unbooked. The booked locations are derived from the Company's year-end 2022 reserves evaluation by GLJ Ltd. with an effective date of December 31, 2022 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.

**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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