



NEWS RELEASE

FEBRUARY 24, 2022

### CARDINAL ENERGY LTD. ANNOUNCES 2021 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, 2021. One hundred percent of Cardinal's year-end 2021 reserves were evaluated by independent reserves evaluator GLJ Ltd. ("GLJ") with an effective date of December 31, 2021 (the "2021 Reserve Report"). The 2021 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 2021 year-end reserves reflect the resilience, quality and sustainability of our low decline asset base. In 2021, Cardinal's focus was to preserve financial liquidity, capture cost savings while keeping our operations safe and maintaining and improving on the long term value of our assets.

#### RESERVE REPORT HIGHLIGHTS

All reserves information contained in this news release are gross reserves and are based on the 2021 Reserve Report.

- Cardinal's Proved Developed Producing ("PDP") reserves increased to 74 mmboe, representing a 16% increase year over year, through the addition of 17 mmboe, replacing 2.5x production.
- PDP reserves were added at Finding, Development and Acquisition ("FD&A") costs<sup>(1)</sup> of \$5.66/boe, resulting in a recycle ratio<sup>(1)</sup> of 5.2 times. PDP Finding and Development ("F&D") costs<sup>(1)</sup> were \$4.54/boe, resulting in a recycle ratio<sup>(1)</sup> of 6.5 times.
- The before tax Net Present Value ("NPV"), discounted at 10% ("NPV10") of our reserves increased 75% to \$1,050 million, and 71% to \$1,217 million for our PDP and Proved Plus Probable Producing ("P+PDP") reserves respectively.
- PDP reserves per diluted share<sup>(2)</sup> increased by 9%, and the associated PDP NPV10 per diluted share<sup>(2)</sup> increased by 66%.
- The debt adjusted, NPV10 of the Company's PDP reserves was \$5.48 per basic share<sup>(3)(4)</sup>, a 254% increase over 2020 and PDP reserves increased 134% on a debt adjusted basic per share basis<sup>(3)(4)</sup>.
- On a Proved plus Probable ("TPP") basis, Cardinal's reserves increased to 110 mmboe, an 11% increase year over year, an addition of 18 mmboe at a FD&A cost<sup>(1)</sup> of \$5.17/boe.
- NPV10 of TPP reserves increased 70% to \$1,376 million, a 37% increase on an NPV10 per basic share basis<sup>(2)</sup> and a 243% 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 87% of the Company's total reserves.
- 90% 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 a 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) At year-end 2021 there were 150.4 million basic outstanding shares and 165.8 million diluted shares outstanding
- (3) Debt adjusted basic outstanding shares of 191.7 million were calculated by dividing the unaudited year-end net debt of approximately \$178 million by the closing price of our common shares on the Toronto Stock Exchange at December 31, 2021 of \$4.32/share and adding this to the basic outstanding shares.
- (4) Debt adjusted 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 ratio, 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.
- (5) 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 9.9 years PDP and 12.7 years P+PDP based on fourth quarter 2021 production of 20,525 boe/d<sup>(2)</sup> which reflects the low decline, low risk, predictable nature of our asset base.
- Cardinal's three year average of FD&A costs<sup>(3)</sup> for PDP reserves is \$8.78/boe, reflecting the success of strategically acquiring, optimizing and developing long life, oil focused assets.
- We effect a measured approach to developing our reserves. Our undeveloped drilling locations are booked (72 net)<sup>(4)</sup> based on a five year inventory. These locations only represent a small percentage of our overall economic drilling inventory, 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) FD&A costs is a non-GAAP financial ratio. Operating netback, development costs and net acquisition costs are non-GAAP financial measures are used as a components of this non-GAAP financial ratio. See "*Oil and Gas Metrics*" and "*Non-GAAP and Other Financial Measures*" in this news release for information relating to this non-GAAP financial ratio and measure.
- (4) See "*Drilling Locations*".
- (5) See also "*Note Regarding Forward Looking Statements*", "*Reserves Advisories*" and "*Reserve Definitions*".

## OPERATIONAL UPDATE

Cardinal produced 20,525 boe/d in the fourth quarter of 2021, averaging 19,090 boe/d for the year<sup>(1)</sup>. The Company drilled ten wells in 2021 consisting of eight producing wells and two injection wells. In aggregate the eight producing wells have delivered production at rates above expectation with average capital efficiency based upon the first 90 days of production ("IP90") of under \$8,500/boe per day<sup>(2)</sup>. At current commodity prices, the entire 2021 drilling program is forecast to pay out in the second quarter of this year. Wells of note include a three leg multilateral Ellerslie oil well at our Southern Alberta Tide Lake property which averaged 428 boe/d<sup>(1)</sup> (IP90) and a nine leg horizontal at our legacy Central Alberta Chauvin property which averaged 386 bbls/d<sup>(1)</sup> (IP90). The two injectors were drilled at Midale, Saskatchewan further optimizing our CO<sub>2</sub> flood with offsetting incremental oil production being realized ahead of schedule, at rates above expectation.

Current production based on field estimates is 20,500 boe/d<sup>(2)</sup>. Optimization efforts through the first quarter across our asset base have continued to reduce Cardinal's already top decile base decline rate. Year to date,

as part of our 18 well 2022 budget, Cardinal has drilled and completed four six-leg Clearwater oil wells at Nipisi, two development Dunvegan light oil wells at Elmworth and a follow-up three leg multilateral Ellerslie oil well at Tide Lake. Each of these wells are expected to be on-stream prior to the end of the first quarter with the first wells beginning production this week.

*Notes:*

- (1) See "*Supplemental Information Regarding Product Types*".
- (2) See "*Oil and Gas Metrics*".

## **OIL AND GAS RESERVES**

The 2021 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 2021 Reserve Report uses the price forecast of the three consultant's average (GLJ, McDaniel & Associates Consultants Ltd. and Sproule Associates Ltd.) used by GLJ. The forecast crude oil reference prices are higher as compared to the 2020 Reserve Report forecast. Improvement in pricing along with our 2021 acquisitions, successful drilling program and continued optimization of our enhanced recovery schemes have added 18 million boe of TPP reserves.

In the 2021 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. At year-end 2021, the 2021 Reserve Report included TPP ADR costs discounted at 10% of \$85 million.

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 FDC.

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

The following tables summarize certain information contained in the 2021 Reserve Report. Reserves included below are the Company's estimated gross reserves as at December 31, 2021, as evaluated in the 2021 Reserve Report.

<b>Reserves Category</b>	<b>Light and Medium Oil (Mbbl)</b>	<b>Heavy Oil (Mbbl)</b>	<b>Natural Gas Liquids (Mbbl)</b>	<b>Conventional Natural Gas<sup>(2)</sup> (MMcf)</b>	<b>Total BOE (Mboe)</b>
Proved Developed Producing	41,227	23,719	2,934	39,325	74,434
Proved Developed Non-Producing	820	105	49	4,611	1,743
Proved Undeveloped	5,032	1,604	195	2,184	7,196
<b>Total Proved</b>	<b>47,080</b>	<b>25,427</b>	<b>3,178</b>	<b>46,120</b>	<b>83,372</b>
Probable	16,484	6,690	1,068	16,665	27,019
<b>Total Proved Plus Probable</b>	<b>63,563</b>	<b>32,117</b>	<b>4,246</b>	<b>62,785</b>	<b>110,391</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 162 Mboe TPP royalty interest reserves comprised of 143 Mbbl light and medium crude oil and 109 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, 2021 <sup>(1)(2)(3)</sup>

<b>Reserves Category</b>	<b>Discounted at:</b>				
	<b>0.0% (M\$)</b>	<b>5.0% (M\$)</b>	<b>10.0% (M\$)</b>	<b>15.0% (M\$)</b>	<b>20.0% (M\$)</b>
Proved Developed Producing	1,767,568	1,344,496	1,049,772	865,183	741,952
Proved Developed Non-Producing <sup>(4)</sup>	(143,410)	(65,374)	(38,976)	(27,140)	(20,907)
Proved Undeveloped	225,428	140,807	98,946	73,344	56,027
<b>Total Proved</b>	<b>1,849,585</b>	<b>1,419,929</b>	<b>1,109,742</b>	<b>911,388</b>	<b>777,072</b>
Probable	1,000,553	449,302	266,079	182,723	136,747
<b>Total Proved Plus Probable</b>	<b>2,850,138</b>	<b>1,869,231</b>	<b>1,375,820</b>	<b>1,094,111</b>	<b>913,819</b>

Notes:

- (1) Total values may not add due to rounding.
- (2) Based on three consultant's average, as defined below, December 31, 2021 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 \$21.9 million. Full ADR costs are included in the Total Proved reserves case.

## Reconciliations of Changes in Reserves

The following table sets out a reconciliation of the changes in the Corporation's gross reserves as at December 31, 2021 against such reserves at December 31, 2020 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, 2020	42,069	21,790	46,963	3,389	75,074
Technical Revisions <sup>(1)</sup>	1,874	170	(1,635)	165	1,937
Extensions and Infill Drilling	268	250	297	9	575
Dispositions	(71)	-	(3,716)	(358)	(1,048)
Acquisitions	4,614	2,293	6,059	105	8,022
Economic Factors <sup>(2)</sup>	2,066	2,962	3,338	168	5,752
Production	(3,738)	(2,037)	(5,186)	(301)	(6,940)
December 31, 2021	<b>47,080</b>	<b>25,427</b>	<b>46,120</b>	<b>3,178</b>	<b>83,372</b>

	<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, 2020	56,249	28,141	62,420	4,465	99,258
Technical Revisions <sup>(1)</sup>	2,055	(296)	(2,666)	133	1,448
Extensions and Infill Drilling	439	321	395	11	838
Dispositions	(89)	-	(4,485)	(432)	(1,269)
Acquisitions	6,154	2,930	7,819	153	10,541
Economic Factors <sup>(2)</sup>	2,494	3,057	4,488	216	6,515
Production	(3,738)	(2,037)	(5,186)	(301)	(6,940)
December 31, 2021	<b>63,563</b>	<b>32,117</b>	<b>62,785</b>	<b>4,246</b>	<b>110,391</b>

*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 2021 Reserve Report price forecast with the 2020 Reserve Report reserve forecasts. There is no consideration of changes in operating costs or price offset changes that occurred in 2021.

## Price Forecast

The following table summarizes Consultant's average commodity price forecast and foreign exchange rate assumptions as at December 31, 2021, as applied in the 2021 Reserve Report, for the next five years.

### Consultants Average Price Forecast<sup>(1)</sup>

Year	Exchange Rate	WTI @ Cushing	Canadian Light Sweet 40° API	Western Canada Select 20.5° API	Medium at Cromer 29° API	Natural gas AECO – C spot
	(\$US/\$C)	(\$US/bbl)	(\$C/bbl)	(\$C/bbl)	(\$C/bbl)	(\$C/MMbtu)
2022	0.7967	72.83	86.82	74.43	83.94	3.56
2023	0.7967	68.78	80.73	69.17	78.06	3.20
2024	0.7967	66.76	78.01	66.54	75.43	3.05
2025	0.7967	68.09	79.57	67.87	76.94	3.10
2026	0.7967	69.45	81.16	69.23	78.48	3.17

Note:

- (1) Inflation is accounted for at 0% for 2022, 2.3% for 2023, and 2% thereafter.

### Future Development Costs

Cardinal has conservatively booked undeveloped locations, reflecting our current drilling plans for the next four to five years. Significant potential drilling inventory exists beyond those locations and the associated reserves currently booked. Cardinal has identified over 400 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. There are 72 net future locations<sup>(1)</sup> included in the 2021 Reserve Report (including future CO<sub>2</sub> injectors).

Note:

- (1) See "Drilling Locations".

FDC reflects the best estimate of the capital cost required to produce the reserves. The FDC associated with the TPP reserves at year-end 2021 is \$222 million undiscounted (\$152 million discounted at 10%).

millions \$	PDP	Total Proved	Total Proved plus Probable
Total FDC, Undiscounted	67.3	181.1	222.3
Total FDC, Discounted at 10%	35.2	126.7	152.3

FDC included at year-end 2021 for CO<sub>2</sub> purchases, maintenance and facility capital in PDP, TP and TPP were \$67 million, \$70 million and \$78 million, respectively. This represents 35% of Cardinal's TPP FDC of \$222 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; that our 2021 drilling program will pay out in the second quarter of 2022; production decline rates; our 2022 drilling budget and plans; expectations with respect to when certain wells will be on-stream and producing; future drilling locations; the sustainability of our production base and the potential to deliver future organic growth; our asset base and its future potential and opportunities; 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, 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.

### **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. While encouraging, readers are cautioned not to place reliance on such rates in calculating the aggregate production for Cardinal.

### **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", "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 2021 of \$29.68/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 2021 fourth quarter production of 20,525 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, 2021 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, 2021 and changes could be material.



### Supplemental Information Regarding Product Types

This news release includes references 2021 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)
Q4/21	51%	34%	4%	11%	20,525
2021 average	54%	29%	4%	13%	19,090
Current production	54%	29%	4%	13%	20,500
Ellerslie oil well at Tide Lake	89%	-	-	11%	428
Chauvin drill	-	100%	-	-	386

### 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 approximate 472 net drilling locations, of which 53 net locations are booked proved undeveloped, 19 net are booked probable undeveloped locations and 400 are unbooked. The booked locations are derived from the 2021 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 boed 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>2021</u>
Petroleum and natural gas revenue	63.88
Royalties	(11.49)
Net operating expenses	(22.22)
Transportation expenses	(0.49)
Netback	<u>29.68</u>

"Net debt" is calculated as bank debt plus the secured notes 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.

The following table sets forth a reconciliation of bank debt to net debt (all figures unaudited):

<b>\$ millions</b>	<b>2021</b>
Bank debt	142.4
Secured notes	12.5
Adjusted working capital deficiency	23.2
Net debt	178.2

### ***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.**

One of Cardinal's goals is to continually improve our Environmental, Safety and Governance mandate and operate our assets in a responsible and environmentally sensitive manner. As part of this mandate, Cardinal injects and conserves more carbon than it emits making us one of the few Canadian energy companies to have a negative carbon footprint.

Cardinal is a Canadian oil focused company built to provide investors with a stable platform for dividend income. Cardinal's operations are focused in low decline light and medium quality oil in Western Canada.

### **For further information:**

M. Scott Ratushny, CEO or Shawn Van Spankeren, CFO or Laurence Broos, VP Finance

Email: [info@cardinalenergy.ca](mailto:info@cardinalenergy.ca)

Phone: (403) 234-8681

Website: [www.cardinalenergy.ca](http://www.cardinalenergy.ca)