Cardinal Energy Ltd. Announces 2018 Year-End Reserves

CALGARY, Alberta, March 05, 2019 -- Cardinal Energy Ltd. ("**Cardinal**" or the "**Company**") (TSX:CJ) is pleased to present its 2018 year end reserves which reinforce our successful 2018 drilling program and the low decline nature of our asset base.

RESERVE HIGHLIGHTS [(1)]

- Proved Developed Producing ("PDP") reserve additions of 10.7 mmboe replaced 2018 production by 1.4x, predominantly through organic growth and Total Proved plus Probable ("TPP") reserve additions of 12.7 mmboe replaced 2018 production 1.7x.
- PDP Finding Development and Acquisition Costs ("FD&A") including the change in future development costs ("FDC") was $4.12/boe with a recycle ratio of 5x, primarily through a combination of positive technical revisions at Bantry, Midale and Wainwright due to performance exceeding the prior year projections and positive 2018 drilling results.
- Achieved a TPP FD&A of $7.99/boe including the change in FDC with a recycle ratio of 2.6x on TPP reserves.
- Increased our PDP Reserve Life Index ("RLI") to 10 years and our TPP RLI to 14.8 years.
- PDP Net Present Value (before tax) discounted at 10% ("NPV10") increased 9% to $8.73 per share and TPP net asset value increased 8% to $11.81 per share.
- PDP NPV10 increased 15% over 2017.
- 86% of Cardinal's reserves are producing (proved plus probable producing) which reflects the low risk predictable nature of our asset base.
- 73% of the TPP reserve additions are producing.
- Top Quartile reserve results in our peer group in 2018 for: % PDP of TPP reserves; TPP Recycle Ratio; FD&A; FDC/2019 adjusted funds flow; PDP RLI.

1. See Oil and Gas Metrics

In an era of production curtailments and volatile oil pricing, Cardinal's low decline separates our business model from other conventional oil producers as it requires minimal drilling capital to sustain production.

The ability to generate organic reserve growth is evident as our positive technical revisions contribute to our year over year reserve growth demonstrating both our staff's technical aptitude in managing these assets and the quality of the assets themselves. In 2018, Cardinal acquired additional working interest reserves (net of dispositions) which accounted for 13% of the PDP and TPP reserve additions. Cardinal specifically targeted the acquisition of each of the assets it owns for their predictable low decline profile.

2018 RESERVES INFORMATION

Cardinal's year-end 2018 reserves were evaluated by independent reserves evaluator GLJ Petroleum Consultants ("GLJ") as at December 31, 2018. This evaluation of all of the Company's oil and gas properties was done in accordance with the definitions, standards and procedures contained in the Canadian Oil and Gas Evaluation Handbook ("COGE Handbook") and National Instrument 51-101 – Standards of Disclosure for Oil and Gas Activities ("NI 51-101"). Additional reserve information as required under NI 51-101 will be included in Cardinal's Annual Information Form which will be filed on SEDAR on or before March 29, 2019. Reserves included are Company share reserves which are the Company's total working interest reserves before deduction of any royalties and include any royalty interests payable to the Company. The numbers in the tables below may not add due to rounding.

Reserves Summary

At December 31	2018 Equivalents (Mboe)	2017 Equivalents (Mboe)	% Change
Proved developed producing	74,085	71,023	4%
Proved developed non-producing	2,583	3,264	-21%
Proved undeveloped	7,034	4,495	56%
Total proved	**83,702**	**78,781**	**6%**
Probable additional	26,150	25,933	1%
Total proved and probable	**109,852**	**104,714**	**5%**

PDP RLI, (yrs) (1)(2)	10.0	9.3	7%
Proved RLI, (yrs) (1)(2)	11.2	10.3	9%
Proved and probable RLI, (yrs) (1)(2)	14.8	13.8	7%
Proved plus probable producing RLI, (yrs) (1)(2)	12.7	12.2	4%
Proved and Probable producing reserves % of Total	86%	89%	

1. RLI based on Q4 2018 production of 20,365 boed.
2. RLI based on Q4 2017 production of 20,770 boed.

At December 31, 2018	2018 NPV10 (1) (MM$)	2017 NPV10 (2) (MM$)	% Change
Proved developed producing	1,014.7	885.7	15%
Proved developed non-producing	22.2	30.7	-28%
Proved undeveloped	77.4	51.3	51%
Total Proved	**1,114.4**	**967.7**	**15%**
Probable additional	258.0	246.9	4%
Total Proved and Probable	**1,372.4**	**1,214.6**	**13%**

NPV per share (NPV10 per share/basic) (3)	2018	2017	% Change
Proved developed producing	$ 8.73	$ 7.99	9%
Total proved	$ 9.59	$ 8.73	10%
Proved plus probable	$ 11.81	$ 10.96	8%

1. Based on Consultant's Average December 31, 2018 price forecast and GLJ reserves evaluation effective December 31, 2018.
2. Based on Consultant's Average December 31, 2017 price forecast and GLJ reserves evaluation effective December 31, 2017.
3. Basic shares as at December 31, 2017 of 110, 838,321 and 2018 of 116,197,095.

Reserves Reconciliation

	Company Share Reserves Reconciliation		
	PDP (Mboe)	Proved (Mboe)	Proved and Probable (Mboe)
December 31, 2017	**71,023**	**78,781**	**104,714**
Extensions, Improved Recovery & Infills	4,969	7,362	8,409
Technical Revisions (1)	4,333	3,809	2,613
Acquisitions (2)	1,357	1,347	1,713
Production	(7,596)	(7,596)	(7,596)
December 31, 2018	**74,085**	**83,702**	**109,852**
2018 Production Replacement	**1.4x**	**1.6x**	**1.7x**

1. Includes any revisions for economic factors.
2. In accordance with the requirements of NI 51-101, the reserve estimates for acquisitions are the reserves as of December 31, 2018 plus production from the date of acquisition (net of dispositions).

Reserve Performance Ratios

The following tables highlight the Finding and Development Costs ("F&D), and FD&A of our Company share reserves and the associated recycle ratios.

TPP FD&A was supported by incremental undeveloped reserve bookings offsetting the Company's successful 2018 drilling programs.

Finding and development Costs (1)(2)

	F&D, $/boe	Recycle Ratio
PDP	$5.96	3.5x
TP	$8.37	2.5x
TPP	$9.64	2.1x

Finding, Development and Acquisition Costs (1)(2)

	FD&A, $/boe	Recycle Ratio
PDP	$4.12	5.0x
TP	$6.86	3.0x
TPP	$7.99	2.6x

1. Includes changes in future development costs and includes consideration of any royalty interest dispositions.
2. Recycle ratio is calculated using Cardinal's average 2018 operating netback of $20.65 per BOE (unaudited) divided by the finding and development or finding, development and acquisition costs per boe. Excludes consideration of hedging in the netback.

Future Development Costs

FDC reflects the best estimate of the capital cost required to produce the reserves. The FDC associated with the TPP reserves at yearend 2018 is $219 million undiscounted ($143 million discounted at 10%) of which 40%, or $88 million undiscounted ($39 million discounted at 10%) is attributed to the CO_2 purchases for our southeast Saskatchewan enhanced oil recovery project.

millions $	Total Proved	Total Proved plus Probable
Total FDC, Undiscounted	171.7	218.7
Total FDC, Discounted at 10%	115.0	143.6

Our ratio of undiscounted TPP FDC to 2019 budgeted adjusted funds flow is 2.3x with 60 net future locations included in the 2018 reserve report. Excluding CO_2 purchases for enhanced oil recovery, our 2019 budgeted adjusted funds flow multiple to undiscounted TPP FDC is 1.4x.

OPERATIONAL HIGHLIGHTS

In 2018, Cardinal focused on the improvement and advancement of its core assets through both the drilling of new wells and the continuing optimization of enhanced recovery operations within our existing production base. Cardinal invested $21.4 million in drilling, completing, equipping and tying in 17 (10.6 net) wells on its Alberta and Saskatchewan asset base. In addition, the Company drilled 15 stratigraphic test wells which served to further delineate our Ellerslie and Glauc channel locations in the Bantry area of Alberta.

In southern Alberta, we proved up the economic and operational viability of our horizontal multi-leg, open hole Ellerslie concept with three successful new drills. In aggregate, these three wells are currently producing over 800 boe/d and have been producing for an average of five months. Cardinal believes that the success of these initial Ellerslie wells proves up a large inventory of locations for future development.

Also in southern Alberta, Cardinal continued with its successful development of Glauc channels via horizontal drilling with three successful wells. In aggregate, these three wells are currently producing more than 550 boe/d after seven months of production. Furthermore, with our modernized wellbore and completion design, Cardinal realized an all-in cost reduction for these three wells of more than 13%, when compared to our costs for previous Glauc channel wells drilled in this area.

Major oil producing assets under enhanced recovery continued to be optimized, with injection volumes being directed toward areas expected to respond most significantly. At Midale, our initiative to increase injected CO_2 volumes, and to direct those volumes to the most appropriate locations within the reservoir have resulted in a distinct shallowing of the production decline. Throughout the Company, the effects of these efforts is best illustrated by positive revisions to our proved developed producing reserves.

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 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 press release speak only as of the date thereof and are expressly qualified by this cautionary statement.

Specifically, this press release contains forward-looking statements relating to: our business strategies, plans and objectives, future production and production decline rates, improved recovery factors, Cardinal's asset base and its future potential and opportunities, drilling locations and inventory, level of drilling capital required to sustain production, planned capital expenditures and the allocation thereof, and the anticipated results therefrom. 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, 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, 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; 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.

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 press release contains a number of additional oil and gas metrics, including finding and development costs, finding, development and acquisition costs, reserve life index and recycle ratio, which do not have standardized meanings or standard methods of calculation and therefore such measures may not be comparable to similar measures used by other companies. Such metrics have been calculated by management and included herein to provide readers with additional measures to evaluate Cardinal's performance; however, such measures are not reliable indicators of the future performance of Cardinal and future performance may not compare to the performance in previous periods.

Finding and developments costs and finding, development and acquisition costs are used as a measure of capital efficiency. Finding and development costs are calculated on a per boe basis by dividing the aggregate of the change in future development costs from the prior year for the particular reserve category and the costs incurred on development and exploration activities in the year by the change in reserves (including royalty interest reserves) from the prior year for the reserve category. Development and exploration expenditures include costs of land and seismic, but exclude capitalized general and administration costs. The aggregate of the exploration and 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. Finding development and acquisition costs are calculated on a per boe basis by dividing the aggregate of the change in future development costs from the prior year for the particular reserve category and the costs incurred on development and exploration activities and property acquisitions (net of dispositions) in the year by the change in reserves (including royalty interest reserves) from the year for the reserve category. Acquisition costs include the announced purchase price of acquisitions rather than the amounts allocated to property, plant and equipment and exploration and evaluation assets for accounting purposes. The acquired cost per boe included all company interest reserves, including royalty interest reserves. Recycle ratio is calculated by dividing operating netback per boe (without realized gains on commodity contracts on a boe basis) by the finding, development and acquisition costs for the relevant reserve category for the year. Reserve life index is calculated based on the amount for the relevant reserve category divided by fourth quarter average daily company interest production.

Certain financial and operating information included in this press release for the year ended December 31, 2018, including F&D, FD&A costs and operating netbacks are based on estimated unaudited financial results for the year then ended, and are subject to the same limitations as discussed under Forward Looking Statements set out above. These estimated amounts may change upon the completion of audited financial statements for the year ended December 31, 2018 and changes could be material.

Reserves Advisories

Unless otherwise indicated, all reserves reported in this press release are Company share reserves which represent Cardinal's total working interest reserves prior to the deduction of royalties payable and include any royalty interests payable to the Company.

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 abandonment and reclamation costs for those wells assigned reserves. It should not be assumed that the future net revenues undiscounted and discounted at 10% included in this press release represent the fair market value of the reserves.

The estimates of reserves and future net revenue for individual properties may not reflect the same confidence level as estimates of reserves and future net revenue for all properties due to the effects of aggregation.

Drilling Locations

This news release discloses Cardinal's 60 net booked drilling locations which are derived from the report prepared by GLJ evaluating Cardinal's reserves as of December 31, 2018. There is additional reference in the Operational Highlights to locations, these are unbooked locations. There is no certainty that we will drill all drilling locations and if drilled there is no certainty that such locations will result in additional oil and gas production. The drilling locations on which we actually drill wells will ultimately depend upon the availability of capital, regulatory approvals, seasonal restrictions, oil and natural gas prices, costs, actual drilling results, additional reservoir information that is obtained and other factors. While certain of the unbooked drilling locations have been de-risked by drilling existing wells in relative close proximity to such unbooked drilling locations, other unbooked drilling locations are farther away from existing wells where management has less information about the characteristics of the reservoir and therefore these 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 measures

This press release may contain the terms "development capital expenditures", "adjusted funds flow", "adjusted funds flow per share", "total payout ratio", "net bank debt" and "net bank debt to adjusted funds flow" which do not have a standardized meaning prescribed by International Financial Reporting Standards ("IFRS" or, alternatively, "GAAP") and therefore may not be comparable with the calculation of similar measures by other companies. Cardinal uses adjusted funds flow, free cash flow and total payout ratio to analyze operating performance. Cardinal feels these benchmarks are key measures of profitability and overall sustainability for the Company. Adjusted funds flow is not intended to represent operating profits nor should it be viewed as an alternative to cash flow provided by operating activities, net earnings or other measures of performance calculated in accordance with GAAP. Adjusted funds flow is calculated as cash flow from operating activities adjusted for changes in non-cash working capital and decommissioning expenditures. "Development capital expenditures" represent expenditures on property, plant and equipment (excluding corporate and other assets and acquisitions) to maintain and grow the Company's base production. "Total payout ratio" represents the ratio of the sum of dividends declared plus development capital expenditures divided by adjusted funds flow. Total payout ratio is a key measure to assess our ability to finance operating activities, capital expenditures and dividends.

About Cardinal Energy Ltd.

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

For further information:
M. Scott Ratushny, CEO or Shawn Van Spankeren, CFO or Laurence Broos, VP Finance
Email: info@cardinalenergy.ca
Phone: (403) 234-8681
Website: www.cardinalenergy.ca
Address: 600, 400 – 3rd Avenue SW, Calgary, AB, T2P 4H2