



**CARDINAL**  
ENERGY LTD.



**Q3 2018**

**MANAGEMENT DISCUSSION & ANALYSIS**

## MANAGEMENT'S DISCUSSION AND ANALYSIS

This management's discussion and analysis ("MD&A") is a review of operations, financial position and outlook for Cardinal Energy Ltd. ("Cardinal" or the "Company") for the three and nine months ended September 30, 2018 and is dated November 1, 2018. The MD&A should be read in conjunction with Cardinal's unaudited interim condensed financial statements as at and for the three and nine months ended September 30, 2018 and the audited financial statements for the years ended December 31, 2017 and 2016. Financial data presented has been prepared in accordance with International Financial Reporting Standards ("IFRS" or, alternatively, "GAAP"), unless otherwise indicated.

*All figures in tables are stated in thousands of Canadian dollars (except operational and per share amounts or as noted).*

### Description of the Business

Cardinal is engaged in the acquisition, development, optimization and production of crude oil and natural gas in the provinces of Alberta and Saskatchewan. We are focused on providing sustainable monthly dividends and growth through a combination of accretive oil-based acquisitions and organic development.

### Non-GAAP Measures

The terms "funds flow", "adjusted funds flow", "adjusted funds flow per share", "adjusted funds flow per diluted share", "development capital expenditures", "free cash flow", "funds flow", "netback", "net debt", "net debt to adjusted funds flow", "net bank debt", "net bank debt to annualized adjusted funds flow", "simple payout ratio" and "total payout ratio" in this MD&A are not recognized under GAAP. Management believes that in addition to earnings and cash flow from operating activities as defined by GAAP, these terms are useful supplemental measures to evaluate operating performance. Users are cautioned however, that these measures should not be construed as an alternative to earnings or cash flow from operating activities determined in accordance with GAAP as an indication of Cardinal's performance and may not be comparable with the calculation of similar measurements by other entities.

Management utilizes "adjusted funds flow" as a key measure to assess the ability of the Company to generate the funds necessary to finance operating activities, capital expenditures and dividends. Adjusted funds flow excludes the change in non-cash working capital, decommissioning expenditures, and transaction costs since Cardinal believes the timing of collection, 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, availability of adjusted funds flow and are viewed as part of the Company's capital budgeting process. Funds flow excludes the change in non-cash operating working capital. Funds flow and adjusted funds flow are not intended to represent net cash provided by (used in) operating activities calculated in accordance with IFRS. The following table reconciles cash flow from operating activities to funds flow and adjusted funds flow:

	Three months ended			Nine months ended		
	Sep 30, 2018	Sep 30, 2017	Change %	Sep 30, 2018	Sep 30, 2017	Change %
Cash flow from operating activities	28,074	23,719	18	81,799	52,088	57
Change in non-cash working capital	(2,130)	(2,502)	(15)	(7,693)	(1,387)	n/m
<b>Funds flow</b>	<b>25,944</b>	21,217	22	<b>74,106</b>	50,701	46
Decommissioning expenditures	1,128	1,983	(43)	5,243	2,866	83
Transaction costs	-	321	(100)	359	1,684	(79)
<b>Adjusted funds flow</b>	<b>27,072</b>	23,521	15	<b>79,708</b>	55,251	44

"Adjusted funds flow per share" is calculated using adjusted funds flow divided by the number of weighted average basic shares outstanding.

"Adjusted funds flow per diluted share" is calculated using adjusted funds flow divided by the number of weighted average diluted shares outstanding.

"Development capital expenditures" represent expenditures on property, plant and equipment (excluding capitalized G&A, other assets and acquisitions) as shown in the *Capital Expenditures* table below.

"Free cash flow" represents adjusted funds flow less dividends declared, net of participation in the Dividend Reinvestment Program ("DRIP") and Stock Dividend Program ("SDP"), and less development capital expenditures.

"Netback" is calculated on a boe basis and is determined by deducting royalties and operating expenses from petroleum and natural gas revenue in accordance with the Canadian Oil and Gas Evaluation ("COGE") Handbook. Netback is utilized by Cardinal to better analyze the operating performance of its petroleum and natural gas assets against prior periods.

The term "net debt" is not recognized under GAAP and is calculated as bank debt plus the principal amount of convertible unsecured subordinated debentures ("convertible debentures") and current liabilities less current assets (adjusted for the fair value of financial instruments and the current portion of the decommissioning obligation). Net debt is used by management to analyze the financial position, liquidity and leverage of Cardinal.

"Net debt to adjusted funds flow" is calculated as net debt divided by adjusted funds flow for the trailing twelve month period. The ratio of net debt to adjusted funds flow is used 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 dividend levels.

"Net bank debt" is calculated as net debt less the principal amount of convertible debentures.

"Simple payout ratio" represents the ratio of the amount of dividends declared (net of participation in the DRIP and SDP), divided by adjusted funds flow. "Total payout ratio" represents the ratio of the sum of dividends declared (net of participation in the DRIP and SDP) plus development capital expenditures divided by adjusted funds flow. Simple payout ratio and total payout ratio are other key measures to assess Cardinal's ability to finance operating activities, capital expenditures and dividends.

#### **51-101 Advisory**

In accordance with *Standards for Disclosure of Oil and Gas Activities* ("NI 51-101"), natural gas volumes have been converted to barrels of oil equivalent using a conversion rate of six thousand cubic feet of natural gas to one barrel of oil. This ratio is based on an energy equivalency conversion method primarily applicable at the burner tip and does not represent a value equivalency at the wellhead. The term "boe" may be misleading, particularly if used in isolation.

## **HIGHLIGHTS**

Production for the first nine months of 2018 average 21,024 boe/d, a 17% increase compared to the same period in 2017.

During the third quarter of 2018, cash flow from operating activities and adjusted funds flow increased 18% and 15%, respectively, over the same period in 2017.

Adjusted funds flow per share increased 14% to \$0.24 per share in the third quarter of 2018 as compared to \$0.21 per share in the same period in 2017.

Revenue increased 32% in the third quarter of 2018 compared to the same period in 2017 which included 46% and 25% increases in light oil and medium/heavy oil pricing, respectively.

Despite an increasing regulatory cost environment, during the third quarter Cardinal reduced operating costs per boe by 1% over the same period in 2017 and by 3% over the second quarter of 2018.

Cardinal's debt reduction strategy continued by decreasing third quarter 2018 closing net bank debt 18% over the same period in 2017 which resulted in a decrease of the net debt to adjusted funds flow ratio from 4.2x to 2.3x.

## OPERATIONS

### PRODUCTION

	Three months ended			Nine months ended		
	Sep 30, 2018	Sep 30, 2017	Change %	Sep 30, 2018	Sep 30, 2017	Change %
Light oil (bbl/d)	<b>8,580</b>	8,174	5	<b>8,835</b>	4,713	87
Medium / heavy oil (bbl/d)	<b>8,842</b>	9,469	(7)	<b>8,718</b>	9,794	(11)
Crude oil (bbl/d)	<b>17,422</b>	17,643	(1)	<b>17,553</b>	14,507	21
Natural gas (mcf/d)	<b>16,718</b>	18,650	(10)	<b>16,619</b>	17,228	(4)
NGL (bbl/d)	<b>741</b>	712	4	<b>701</b>	573	22
<b>boe/d</b>	<b>20,949</b>	21,463	(2)	<b>21,024</b>	17,951	17
<b>% Crude oil and NGL production</b>	<b>87%</b>	86%	1	<b>87%</b>	84%	3

Production in the third quarter of 2018 decreased 2% over the same period in 2017 due to declines in the Company's medium oil production in its Southern and Central Alberta areas as the Company has focused its capital expenditures on increasing light oil production over the past year. In addition, planned facility turnarounds throughout the Company's operating areas negatively impacted production by approximately 200 boe/d during the third quarter of 2018.

Production for the first nine months of 2018 increased 17% over the same period in 2017 due to acquisitions that closed in 2017. In June 2017, Cardinal acquired approximately 5,600 boe/d of low decline light oil production at House Mountain, Alberta and Midale, Saskatchewan ("House Mountain/Midale Acquisition"). In March 2017, an acquisition of approximately 1,600 boe/d of production in the North Alberta core area at Grande Prairie ("Grande Prairie Acquisition") positively impacted light oil production. The effect of these acquisitions was partially offset by the previously mentioned declines in medium oil production in Southern and Central Alberta.

### REVENUE

	Three months ended			Nine months ended		
	Sep 30, 2018	Sep 30, 2017	Change %	Sep 30, 2018	Sep 30, 2017	Change %
Light oil	<b>60,653</b>	39,713	53	<b>174,663</b>	71,151	145
Medium / heavy oil	<b>49,131</b>	42,119	17	<b>133,132</b>	130,034	2
Crude oil	<b>109,784</b>	81,832	34	<b>307,795</b>	201,185	53
NGL	<b>2,537</b>	1,866	36	<b>7,451</b>	4,438	68
Natural gas	<b>1,230</b>	2,324	(47)	<b>4,931</b>	10,575	(53)
<b>Petroleum and natural gas revenue</b>	<b>113,551</b>	86,022	32	<b>320,177</b>	216,198	48
<b>Cardinal average prices</b>						
Light oil (\$/bbl)	<b>76.84</b>	52.81	46	<b>72.42</b>	55.30	31
Medium / heavy oil (\$/bbl)	<b>60.40</b>	48.35	25	<b>55.94</b>	48.63	15
Natural gas (\$/mcf)	<b>0.80</b>	1.35	(41)	<b>1.09</b>	2.25	(52)
<b>Equivalent (\$/boe)</b>	<b>58.92</b>	43.56	35	<b>55.79</b>	44.12	26
<b>Benchmark prices</b>						
Crude oil - WTI (US \$/bbl)	<b>69.50</b>	48.20	44	<b>66.75</b>	49.47	35
Crude oil - Edmonton light (Cdn \$/bbl)	<b>81.91</b>	56.62	45	<b>78.24</b>	60.78	29
Crude oil - WCS (Cdn \$/bbl)	<b>61.78</b>	47.90	29	<b>57.79</b>	49.09	18
Natural gas - AECO Spot (Cdn \$/gj)	<b>1.13</b>	1.38	(18)	<b>1.41</b>	2.19	(36)
Exchange rate - (US/Cdn)	<b>0.77</b>	0.80	(4)	<b>0.78</b>	0.77	1

Revenue increased 32% in the third quarter of 2018 as compared to the same period in 2017 due to a 35% increase in commodity pricing partially offset by a 2% decrease in production. During the third quarter, the Company's light oil price increased 46% over the same period in 2017, comparable with the Edmonton light benchmark increase of 45%. Cardinal's third quarter 2018 medium/heavy oil price increased 25% over the same period in 2017 compared with a 29% increase in the WCS benchmark as third party pipeline apportionment caused the Company to sell a limited amount of medium oil production on the spot market which was lower than the index price for the period.

For the first nine months of 2018, revenue increased 48% due to the 17% increase in production combined with a 26% increase in commodity pricing. The Company's light and medium/heavy oil prices increased proportionately with their respective Edmonton light and WCS benchmarks. The WCS price differential to WTI has decreased throughout the first part of 2018; however, the differential significantly widened in September to approximately US\$30 due to the continuing pipeline bottlenecks, increased supply of Canadian medium and heavy oil and refinery maintenance outages experienced throughout North America.

## FINANCIAL INSTRUMENTS

	Three months ended			Nine months ended		
	Sep 30, 2018	Sep 30, 2017	Change %	Sep 30, 2018	Sep 30, 2017	Change %
Average crude oil volumes hedged (bbl/d)	<b>13,000</b>	6,333	105	<b>13,444</b>	6,278	114
Realized loss - commodity contracts	<b>(19,197)</b>	(2,631)	n/m	<b>(42,802)</b>	(9,749)	n/m
Unrealized gain (loss) - commodity	<b>14,121</b>	(3,955)	n/m	<b>(30,907)</b>	31,289	(199)

Managing the variability in funds flow and adjusted funds flow is an integral component of Cardinal's business strategy. Changing business conditions are monitored regularly and reviewed with our Board of Directors to establish risk management guidelines used by management in carrying out the Company's risk management program. The risk exposure inherent in movements in the price of crude oil and natural gas are proactively managed by Cardinal through the use of derivatives with investment-grade counterparties. The Company considers these derivative contracts to be an effective means to manage funds flow and adjusted funds flow.

Cardinal utilizes a variety of derivatives including swaps and collars to protect against downward commodity price movements and avoids entering into more complex derivative structures. Contracts settled in the period result in realized gains or losses based on the market price compared to the contract price. Changes in the fair value of the contracts, as measured at the balance sheet date, are reported as unrealized gains or losses in the period as the forward markets for commodities and currencies fluctuate and as new contracts are executed. For commodities, Cardinal's risk management program allows for hedging a forward profile of three years, of up to 75% of gross average forward 12 months production and up to 50% and 30% of the following 12 and 24 months, respectively.

As of the date of this MD&A Cardinal had the following commodity derivatives, referenced to WTI, WCS and AECO outstanding:

Commodity Derivative Traded	Period	Average Volume	Average Strike Price
<b>Crude Oil</b>			
CDN WTI Swap	Oct - Dec 2018	8,500 bbl/d	\$ 71.20
CDN WTI Swap	Jan - Dec 2019	1,162 bbl/d	\$ 83.34
CDN WTI Collar	Oct - Dec 2018	3,500 bbl/d	Put \$ 67.86 Call \$ 78.86
CDN WTI Collar	Jan - Dec 2019	1,244 bbl/d	Put \$ 74.00 Call \$ 86.04
CDN WCS Differential	Oct - Dec 2018	1,000 bbl/d	\$ 18.48
CDN WCS Swap	Jan - Dec 2019	1,000 bbl/d	\$ 57.50
<b>Natural Gas</b>			
AECO Swap	Oct - Dec 2018	7,674 gj/d	\$ 2.11
	Jan - Mar 2019	2,000 gj/d	\$ 1.74
AECO Collar	Jul - Dec 2018	2,000 gj/d	Put \$ 2.00 Call \$ 3.00

In connection with certain of the contracts summarized above Cardinal has also granted certain counterparties call options on 1,000 bbl/d for each month of fiscal 2018 at \$70 Cdn WTI and 2,000 bbl/d for fiscal 2019 at a weighted average price of \$68.50 Cdn WTI.

## ROYALTIES

	Three months ended			Nine months ended		
	Sep 30, 2018	Sep 30, 2017	Change %	Sep 30, 2018	Sep 30, 2017	Change %
Royalties	<b>21,084</b>	12,597	67	<b>56,179</b>	30,704	83
Percent of revenue	<b>18.4%</b>	14.6%	26	<b>17.5%</b>	14.2%	23
\$/boe	<b>10.94</b>	6.38	71	<b>9.79</b>	6.27	56

Royalties are either paid or taken in kind and are owed to land and mineral rights owners and to provincial governments. The terms of the land and mineral rights owner agreements and provincial royalty regimes impact Cardinal's overall corporate royalty rate.

Royalties and royalties as a percentage of revenue increased during the third quarter of 2018 as compared to the same period in 2017 due to increased commodity prices and the sale of an overriding royalty on certain production within the Company's Wainwright property in the fourth quarter of 2017 and Mitsue property in the first quarter of 2018.

For the first nine months of 2018, royalties and royalties as a percentage of revenue increased over the same period in 2017 due to increased commodity prices and the Grande Prairie and House Mountain/Midale Acquisitions as the acquired properties have a higher royalty rate on light oil properties combined with the sale of the Wainwright and Mitsue overriding royalties.

## OPERATING EXPENSES

	Three months ended			Nine months ended		
	Sep 30, 2018	Sep 30, 2017	Change %	Sep 30, 2018	Sep 30, 2017	Change %
Operating expenses	<b>39,004</b>	40,239	(3)	<b>118,582</b>	103,699	14
\$/boe	<b>20.24</b>	20.38	(1)	<b>20.66</b>	21.16	(2)

For the third quarter of 2018, operating expenses and operating expenses per boe decreased over the third quarter of 2017 due to increased production of lower cost light oil in the Company's Grande Prairie, Alberta area. This decrease in operating costs was partially offset by additional regulatory and power costs experienced within the Company's Alberta properties where reduced power supply and the effect of the Alberta carbon tax increased electricity costs per boe by over 50% as compared to the same period in 2017. Despite these cost increases, the Company's total operating costs per boe decreased 1% due to operating efficiencies in the Company's major areas.

For the first nine months of 2018, despite higher regulatory and power costs, operating costs per boe decreased 2% due to field operating efficiencies and the Grande Prairie and House Mountain/Midale Acquisitions which have lower operating costs per boe compared to Cardinal's previous corporate average.

## NETBACK

	Three months ended			Nine months ended		
	Sep 30, 2018	Sep 30, 2017	Change %	Sep 30, 2018	Sep 30, 2017	Change %
Petroleum and natural gas revenue	<b>58.92</b>	43.56	35	<b>55.79</b>	44.12	26
Royalties	<b>10.94</b>	6.38	71	<b>9.79</b>	6.27	56
Operating expenses	<b>20.24</b>	20.38	(1)	<b>20.66</b>	21.16	(2)
Netback <sup>(1)</sup>	<b>27.74</b>	16.80	65	<b>25.34</b>	16.69	52

(1) See non-GAAP measures.

Cardinal's netback increased by 65% to average \$27.74/boe in the third quarter of 2018 compared to \$16.80/boe in the third quarter of 2017 primarily due to significantly increased oil prices partially offset by increased price sensitive royalties.

For the first nine months of 2018, increased oil prices combined with lower operating costs partially offset by higher royalties strengthened the Company's netback by 52%, over the same period in 2017.

## GENERAL AND ADMINISTRATIVE ("G&A")

	Three months ended			Nine months ended		
	Sep 30, 2018	Sep 30, 2017	Change %	Sep 30, 2018	Sep 30, 2017	Change %
Gross G&A	<b>5,501</b>	4,992	10	<b>17,875</b>	12,685	41
Capitalized G&A and overhead recoveries	<b>(1,376)</b>	(851)	62	<b>(3,991)</b>	(1,657)	141
G&A	<b>4,125</b>	4,141	(0)	<b>13,884</b>	11,028	26
\$/boe	<b>2.14</b>	2.10	2	<b>2.42</b>	2.25	8

In the third quarter and first nine months of 2018, gross G&A and G&A costs per boe increased over the same periods in 2017 due to additional staff and related compensation to manage the operations of the Grande Prairie Acquisition and the House Mountain/Midale Acquisition.

## SHARE-BASED COMPENSATION ("SBC")

	Three months ended			Nine months ended		
	Sep 30, 2018	Sep 30, 2017	Change %	Sep 30, 2018	Sep 30, 2017	Change %
Gross SBC	2,658	2,727	(3)	6,402	8,122	(21)
Capitalized SBC	(366)	(286)	28	(1,038)	(801)	30
SBC	2,292	2,441	(6)	5,364	7,321	(27)
\$/boe	1.19	1.24	(4)	0.93	1.49	(38)

SBC expense decreased in the third quarter and first nine months of 2018 compared to the same periods in 2017 due to a decline in the fair value of 2018 issued restricted bonus awards ("RAs") resulting from a lower share price. In addition, all previously outstanding warrants and stock options were fully expensed in 2017.

As at September 30, 2018, Cardinal had 3.5 million RAs outstanding.

## FINANCE

	Three months ended			Nine months ended		
	Sep 30, 2018	Sep 30, 2017	Change %	Sep 30, 2018	Sep 30, 2017	Change %
Interest - bank debt	2,152	2,051	5	6,364	3,313	92
Other finance charges, net	227	152	49	593	389	52
Interest - convertible debentures	690	690	-	2,065	2,065	-
Accretion	2,524	2,697	(6)	7,472	7,132	5
Finance	5,593	5,590	0	16,494	12,899	28
\$/boe	2.90	2.83	2	2.87	2.63	9
Average bank debt	208,450	241,615	(14)	215,277	141,844	52
Interest rate - bank debt	4.1%	3.4%	21	4.0%	3.1%	29

Finance expense for the third quarter was consistent with the same period in 2017 as increased interest costs due to higher interest rates were offset by lower average debt levels and lower accretion costs.

Finance costs for the first nine months of 2018 increased over the same period in 2017 due to the higher interest rates and increased average debt levels resulting from the House Mountain/Midale acquisitions.

## DEPLETION AND DEPRECIATION ("D&D")

	Three months ended			Nine months ended		
	Sep 30, 2018	Sep 30, 2017	Change %	Sep 30, 2018	Sep 30, 2017	Change %
Depletion and depreciation	23,068	28,958	(20)	67,877	70,217	(3)
\$/boe	11.97	14.67	(18)	11.83	14.33	(17)

Depletion is calculated based upon capital expenditures incurred since inception of the Company, future development costs associated with proved plus probable reserves, production rates, and proved plus probable reserves. In addition to depletion, Cardinal records depreciation on other capital equipment not directly associated with proved plus probable reserves.

D&D costs per boe decreased in the third quarter of 2018 as compared to the same period in 2017 due to increased 2017 year-end proved plus probable reserve bookings combined with the Company recording an impairment of certain cash generating units ("CGU") in the fourth quarter of 2017 which reduced the depletable base and future depletion costs of the Alberta South and Jenner CGUs.



For the first nine months of 2018, depletion costs and depletion costs per boe decreased due to the aforementioned increased year end reserve bookings, the decrease in the depletable base due to the year-end impairment writedowns combined with the acquisition of lower depletion rate properties from the House Mountain/Midale Acquisition.

## DEFERRED TAXES

At September 30, 2018, the Company recorded a deferred tax asset of \$146.1 million (2017 – \$138.9 million). The deferred tax asset was recognized as management considers it probable that there will be sufficient future taxable income to utilize the benefits.

The Company has approximately \$1.45 billion of tax pools (\$1.34 billion are unrestricted) available to be applied against future income for tax purposes. Based on available pools and current commodity prices, Cardinal does not expect to pay current income taxes until 2022 or beyond. Any potential taxes payable beyond 2022 would be affected by commodity prices, capital expenditures and production.

## EARNINGS (LOSS), CASH FLOW FROM OPERATING ACTIVITIES, ADJUSTED FUNDS FLOW AND PAYOUT RATIOS

	Three months ended			Nine months ended		
	Sep 30, 2018	Sep 30, 2017	Change %	Sep 30, 2018	Sep 30, 2017	Change %
Earnings (loss) \$/share	<b>9,068</b>	(12,070)	n/m	<b>(24,216)</b>	(3,290)	n/m
Basic and diluted	<b>0.08</b>	(0.11)	n/m	<b>(0.21)</b>	(0.04)	n/m
Cash flow from operating activities	<b>28,074</b>	23,719	18	<b>81,799</b>	52,088	57
Adjusted funds flow \$/share	<b>27,072</b>	23,521	15	<b>79,708</b>	55,251	44
Basic	<b>0.24</b>	0.21	14	<b>0.70</b>	0.60	17
Diluted	<b>0.23</b>	0.21	10	<b>0.70</b>	0.60	17
Total payout ratio	<b>125%</b>	109%	15	<b>107%</b>	143%	(25)
Simple payout ratio	<b>46%</b>	49%	(6)	<b>47%</b>	51%	(8)

For the third quarter of 2018, the Company had earnings of \$9.1 million compared to a loss of \$12.1 million in the third quarter of 2017 due to increased revenue and unrealized gains on commodity contracts partially offset by increased realized losses on commodity contracts. The increases in cash flow from operating activities and adjusted funds flow during the third quarter of 2018 predominantly related to increased oil production and pricing.

The increase in Cardinal's total payout ratio for the third quarter of 2018 over the third quarter of 2017 is mainly due to the increase in development capital expenditures partially offset by an increase in adjusted funds flow.

For the first nine months of 2018, the Company had a \$24.2 million loss compared to a \$3.3 million loss in the same period in 2017 due to increased realized and unrealized losses on commodity contracts in 2018. The increase in cash flow from operating activities and adjusted funds flow is the result of increased oil pricing. The decrease in the Company's total payout ratio and simple payout ratio is the result of increased adjusted funds flow combined with a decrease in development capital expenditures.

## CAPITAL EXPENDITURES

### Property Acquisitions/Dispositions

On January 12, 2018, Cardinal closed a consolidating acquisition increasing the Company's working interest in the Midale Unit from 68.8% to 77.2%. Subsequent to a right of first refusal being exercised by a third party, total consideration provided was \$18.5 million consisting of \$7.3 million in cash and the issuance of 2,314,815 common shares valued at \$4.86 per share.

On March 7, 2018, the Company closed a disposition of fee title lands in the Weyburn area of Saskatchewan and a new gross overriding royalty on the Mitsue Gilwood Unit for net proceeds of \$24 million plus additional working interests in certain producing wells in the Wainwright area.

In May 2018, the Company disposed of non-core properties in the Wainwright area which included approximately 50 boe/d of production and \$1.1 million of future asset retirement obligations for \$1.0 million.

In September 2018, Cardinal closed an acquisition in the Mitsue area for a consideration of \$1.1 million, before closing adjustments, with an associated decommissioning obligation of \$0.1 million.

On September 14, 2018, Cardinal sold a royalty interest on its Midale properties for gross proceeds of \$12.5 million.

### Capital Expenditures

In the third quarter of 2018, Cardinal drilled, completed and tied-in three (2.9 net) wells which included two (1.9 net) wells in the Company's Elsworth, Alberta area and one (1.0 net) well in the Bantry area. In addition, the Company drilled two (2.0 net) stratigraphic test wells in the Bantry area. Cardinal continued to invest in infrastructure and upgrade its pipelines and facilities spending \$11.1 million throughout its core areas.

	Three months ended			Nine months ended		
	Sep 30, 2018	Sep 30, 2017	Change %	Sep 30, 2018	Sep 30, 2017	Change %
Land	1,266	2,735	(54)	1,401	3,255	(57)
Geological and geophysical	3	50	(94)	(2)	439	(100)
Drilling and completion	8,906	4,321	106	21,366	26,715	(20)
Equipment, facilities and pipelines	11,105	6,942	60	25,374	20,143	26
Total development capital expenditures <sup>(1)</sup>	21,280	14,048	51	48,139	50,552	(5)
Capitalized G&A	408	302	35	1,329	711	87
Other assets	41	371	(89)	153	881	(83)
Acquisitions, net	(10,928)	(437)	n/m	(28,170)	300,678	n/m
Total cash capital expenditures	10,801	14,284	(24)	21,451	352,822	(94)
Non-cash expenditures <sup>(2)</sup>	-	-	-	11,250	28,174	(60)
Total capital expenditures <sup>(3)</sup>	10,801	14,284	(24)	32,701	380,996	(91)

(1) Represents the total of exploration and evaluation and property, plant and equipment expenditures from the statements of cash flows less amounts recorded for capitalized G&A and other assets (included in the table of expenditures above).

(2) Represents share consideration associated with the 2018 Midale consolidating working interest acquisition and the Grande Prairie Acquisition in 2017.

(3) Expenditures exclude non-cash expenditures for the decommissioning obligation and capitalized share-based compensation.

## DECOMMISSIONING OBLIGATION

The decommissioning obligation increased in the third quarter of 2018 as the Company settled \$1.1 million of liabilities, incurred \$0.1 million of future liabilities and added \$2.3 million of accretion. In addition, Cardinal disposed of \$0.2 million of asset retirement obligations during the third quarter of 2018.

## LIQUIDITY AND CAPITAL RESOURCES

Capitalization table	As at		
	Sep 30, 2018	Dec 31, 2017	Change %
Net bank debt <sup>(1)</sup>	200,728	225,967	(11)
Convertible debentures	50,000	50,000	-
Shares outstanding	116,039,200	110,838,321	5
Market price at end of period (\$ per share)	\$ 5.33	\$ 5.09	5
Market capitalization	618,489	564,167	10
Total capitalization	869,217	840,134	3

(1) See non-GAAP measures.

### CAPITAL FUNDING

The Company has a reserved based credit facility of \$325 million which is comprised of a \$295 million syndicated term credit facility and a \$30 million non-syndicated operating term credit facility (the "Facilities"). The Facilities are available on a revolving basis until May 24, 2019 and may be extended for a further 364 day period, subject to approval by the syndicate. If not extended, the Facilities will cease to revolve, the applicable margins will increase by 0.5% and all outstanding advances will be repayable on May 23, 2020. There are no financial or other restrictive covenants related to the Facilities provided that Cardinal is not in default of the terms of the Facilities. Cardinal was in compliance with the terms of the Facilities at September 30, 2018.

The borrowing base of the Facilities is primarily based on reserves and commodity prices estimated by the syndicate and is subject to review and redetermination on a semi-annual basis. The next scheduled review of the borrowing base is to be completed on or before November 30, 2018. As the available lending limit of the Facilities is based on the syndicate's interpretation of the Company's reserves and future commodity prices and costs, there can be no assurance that the amount of the Facilities will not decrease at the next scheduled review.

Advances under the Facilities are available by way of either prime rate loans, which bear interest at the banks' prime lending rate plus 0.5 to 2.5%, and bankers' acceptances and/or LIBOR loans, which are subject to fees and margins ranging from 1.5 to 3.5%. Interest and standby fees on the undrawn amounts of the Facilities depend upon certain ratios. The Facilities are secured by a general security agreement over all of the Company's assets.

Cardinal has \$50 million of convertible debentures which have a maturity date of December 31, 2020. The convertible debentures have a conversion price of \$10.50 per common share and bear interest at 5.5% per annum, payable semi-annually on June 30 and December 31 each year. The convertible debentures are redeemable by the Company after January 1, 2019 subject to certain conditions.

### CAPITAL STRUCTURE

Cardinal manages its capital to provide a flexible structure to support production maintenance, capital programs, stability of dividends and other operational strategies. Maintaining a strong financial position enables the capture of business opportunities and supports Cardinal's strategy of providing shareholder return through growth of the business and dividend payments.

The key measures that the Company utilizes in evaluating its capital structure are the credit available from the syndicate in relation to the Company's budgeted capital expenditure program and the ratio of net debt to adjusted funds flow (see non-GAAP measures).

To manage its capital structure, Cardinal considers its net debt to adjusted funds flow ratio, its capital expenditures program, the current level of credit available from the Facilities, the level of credit that may be attainable due to increases in petroleum and natural gas reserves and new equity if available on favourable terms. The Company prepares an annual capital expenditure budget, which is monitored quarterly and updated as necessary.

	Twelve months ended	
	Sep 30, 2018	Dec 31, 2017
Bank debt	\$ 184,524	\$ 218,905
Principal amount of Convertible Debentures	50,000	50,000
Working capital deficiency <sup>(1)</sup>	16,204	7,062
Net debt	\$ 250,728	\$ 275,967
Cash flow from operating activities	\$ 106,241	\$ 76,530
Change in non-cash working capital	(4,781)	1,525
Funds flow	\$ 101,460	\$ 78,055
Decommissioning obligation expenditures	6,310	3,933
Transaction costs	359	1,684
Adjusted funds flow	108,129	83,672
Net debt to adjusted funds flow	2.3	3.3

(1) Excludes the fair value of commodity contracts and the current portion of the decommissioning obligation

Cardinal's ratio of net debt to adjusted funds flow for the preceding 12 month period at September 30, 2018 was 2.3 to 1, slightly above the Company's target of less than 2 to 1 due to additional debt incurred for the House Mountain/Midale Acquisition. Although the ratio is above Cardinal's target, the Company has reduced this ratio over the past four quarters from a high of 4.5 to 1 in the second quarter of 2017. During the third quarter of 2018, Cardinal completed further non-core asset dispositions and reduced its net debt by approximately \$12.4 million over the prior quarter. The Company will continue to evaluate further non-core asset dispositions or may consider other forms of financing to reduce its debt to within its targeted range.

## LIQUIDITY

The Company relies on cash flow from operating activities, the unused portion of the Facilities and equity issuances to fund its capital requirements and provide liquidity. As at September 30, 2018, Cardinal had a working capital deficiency of \$16.2 million and unused capacity of \$138.5 million on its Facilities.

The Company believes that it is well positioned to take advantage of its internally developed opportunities funded through its available Facilities combined with anticipated cash flow from operating activities. Present sources of capital are anticipated to be sufficient to satisfy the Company's capital program and dividend payments for the 2018 fiscal year.

## DIVIDENDS

	Three months ended			Nine months ended		
	Sep 30, 2018	Sep 30, 2017	Change %	Sep 30, 2018	Sep 30, 2017	Change %
Dividends declared	12,467	11,584	8	37,107	29,008	28
Reinvested dividends (DRIP and SDP)	-	-	-	-	(756)	(100)
Cash dividends	12,467	11,584	8	37,107	28,252	31
Dividends declared per share	\$ 0.105	\$ 0.105	-	\$ 0.315	\$ 0.315	-

During the three months ended September 30, 2018, \$12.5 million (2017 – \$11.6 million) of dividends were declared of which \$8.1 million (2017 - \$7.7 million) was paid in cash and \$4.4 million (2017 - \$3.9 million) was recognized as a liability at September 30, 2018. The dividend payable was settled in cash on October 15, 2018.

## SHARE CAPITAL

On January 12, 2018, the Company issued 2,314,815 common shares valued at \$4.86 per share as partial consideration for the consolidating acquisition increasing the Company's working interest in the Midale Unit from 68.8% to 77.2%.

During the first nine months of 2018, Cardinal granted 2.0 million RAs to officers, directors and employees pursuant to the Company's restricted bonus award plan.

On December 14, 2017, Cardinal issued 475,000 flow-through common shares pursuant to a private placement at \$6.00 per common share for gross proceeds of \$2.9 million. The Company recorded a deferred liability for the related premium in the amount of \$0.6 million. The Company is committed to incur qualifying Canadian Exploration Expenditures prior to December 31, 2018. Cardinal has incurred all of the eligible expenditures under this agreement.

Between August 30, 2018 and September 5, 2018, Cardinal issued an aggregate of 1,024,000 flow-through common shares pursuant to a private placement at \$5.65 per common share for gross proceeds of \$5.8 million. The Company recorded a deferred liability for the related premium in the amount of \$0.4 million and is committed to incur qualifying Canadian Development Expenditures prior to December 30, 2018.

On August 30, 2018, Cardinal issued 640,000 flow-through common shares pursuant to a private placement at \$6.25 per common share for gross proceeds of \$4.0 million. The Company recorded a deferred liability for the related premium in the amount of \$0.5 million and is committed to incur qualifying Canadian Exploration Expenditures prior to December 31, 2019.

Equity Instruments as at	November 1, 2018	September 30, 2018	Dec 31, 2017
Common shares	116,087,095	116,039,200	110,838,321
Convertible debentures (\$50.0 million convertible at \$10.50)	4,761,905	4,761,905	4,761,905
RAs	3,618,831	3,545,589	3,008,987
Stock options	61,393	62,226	108,337

## OFF BALANCE SHEET ARRANGEMENTS

Cardinal does not have any special purpose entities nor is it a party to any arrangements that would be excluded from the balance-sheet, other than the operating leases summarized in *Commitments and Contractual Obligations*.

## COMMITMENTS AND CONTRACTUAL OBLIGATIONS

At September 30, 2018, the Company had contractual obligations and commitments as follows:

	2018	2019	2020	2021	2022	Thereafter
Head office lease	359	1,436	1,436	1,475	1,475	1,475
Field office lease	33	130	22	-	-	-
Trade and other payables	64,389	-	-	-	-	-
Dividends payable	4,438	-	-	-	-	-
Bank debt	-	-	184,524	-	-	-
Capital commitments	6,162	5,500	-	-	-	-
Convertible debentures	688	2,750	52,750	-	-	-
	\$ 76,069	\$ 9,816	\$ 238,732	\$ 1,475	\$ 1,475	\$ 1,475

## SUBSEQUENT EVENTS

On **October 12, 2018**, the Company confirmed that a dividend of \$0.035 per common share would be paid on November 15, 2018 to shareholders of record on October 31, 2018.

## ADDITIONAL INFORMATION

### CRITICAL ACCOUNTING ESTIMATES

There have been no changes in Cardinal's critical accounting estimates in the nine months ended September 30, 2018. Further information on the Company's critical accounting policies and estimates can be found in the notes to the annual financial statements and MD&A for the year ended December 31, 2017.

### INTERNAL CONTROLS UPDATE

Cardinal is required to comply with National Instrument 52-109 "Certification of Disclosure on Issuers' Annual and Interim Filings". The certificate requires that Cardinal disclose in the interim MD&A any change in the Company's internal control over financial reporting ("ICOFR") that occurred during the period that have materially affected, or are reasonably likely to materially affect Cardinal's ICOFR. As of the date of this MD&A Cardinal confirms that there have been no such changes in Cardinal's ICOFR during the third quarter of 2018.

### ENVIRONMENTAL RISKS

The oil and gas industry has a number of environmental risks and hazards and is subject to regulation by all levels of government. Environmental legislation includes, but is not limited to, operational controls, site restoration requirements and restrictions on emissions of various substances produced in association with oil and natural gas operations. Compliance with such legislation could require additional expenditures and a failure to comply may result in fines and penalties which could, in the aggregate and under certain unlikely assumptions, become material.

Operations are continuously monitored to minimize the environmental impact and capital is allocated to reclamation and other activities to mitigate the impact on the areas in which we operate.

### CHANGE IN ACCOUNTING POLICIES

#### IFRS 15 – Revenue from Contracts with Customers

Cardinal adopted IFRS 15 with a date of initial application of January 1, 2018 as detailed in note 13 of the September 30, 2018 interim unaudited financial statements. The Company used the modified retrospective method to adopt the new standard. Cardinal has performed a review of its revenue streams and sales contracts with customers using the IFRS 15 five step model and concluded that the adoption of IFRS 15 does not have a material impact on the Company's net income. Refer to note 13 of the September 30, 2018 interim unaudited financial statements for more information including additional disclosure as required under IFRS 15.

#### *Revenue Recognition*

Under IFRS 15, revenue from the sale of crude oil, natural gas and natural gas liquids is measured based on the consideration specified in contracts with customers and recognizes revenue when it transfers control of the product to the buyer. This is generally at the time the customer obtains legal title to the product and when it is physically transferred to the delivery mechanism agreed with the customer, often pipelines or other transportation methods.

Cardinal evaluates its arrangements with 3rd parties and partners to determine if the Company acts as the principal or as an agent. In making this evaluation, management considers if Cardinal obtains control of the product delivered, which is indicated by Cardinal having the primary responsibility for the delivery of the product, having the ability to establish prices or having inventory risk. If Cardinal acts in the capacity of an agent rather than as a principal in a transaction, then the revenue is recognized on a net-basis, only reflecting the fee, if any, realized by the entity from the transaction. Royalty income is recognized as it accrues in accordance with the terms of the overriding royalty agreements.

Cardinal has reviewed its revenue streams and major sales contracts with customers using the IFRS 15 five step model and concluded there are no material changes to the timing of revenue recognized and does not have an impact on the Company's net income.

### **IFRS 9 – Financial Instruments**

The Corporation adopted IFRS 9, "Financial Instruments" on January 1, 2018. The transition to IFRS 9 had no material effect on the Corporation's financial statements.

IFRS 9 contains three principal classification categories for financial assets: measured at amortized cost, fair value through other comprehensive income ("FVOCI"); or fair value through profit or loss ("FVTPL"). The classification of financial assets under IFRS 9 is generally based on the business model in which a financial asset is managed and its contractual cash flow characteristics. IFRS 9 eliminates the previous IFRS 39 categories of held to maturity, loans and receivables and available for sale. Under IFRS 9, derivatives embedded in contracts where the host is a financial asset in the scope of the standard are never separated. Instead, the hybrid financial instrument as a whole is assessed for classification.

Impairment of financial assets: IFRS 9 replaces the "incurred loss" model in IAS 39 with an "expected credit loss" model. The new impairment model applies to financial assets measured at amortized cost, and contract assets and debt investments at FVOCI. Under IFRS 9, credit losses are recognized earlier than under IAS 39. There was no impact on the Corporation's financial statements.

Cash and cash equivalents, if any, and trade and other receivables continue to be measured at amortized cost and are now classified as "amortized cost". The Corporation's financial liabilities previously classified as "other financial liabilities" being trade and other payables, dividends payable and bank debt continue to be measured at amortized cost and are now classified as "amortized cost". The Corporation has not designated any financial instruments as FVOCI or FVTPL, nor does the Corporation use hedge accounting.

### **IFRS 16 – Leases**

Cardinal is required to adopt IFRS 16 "Leases" by January 1, 2019 which requires entities to recognize lease assets and lease obligations on the balance sheet. For lessees, IFRS 16 removes the classification of leases as either operating leases or finance leases, effectively treating all leases as finance leases. Certain short-term leases (less than 12 months) and leases of low-value assets are exempt from the requirements, and may continue to be treated as operating leases.

On adoption, non-current assets, current liabilities, and non-current liabilities on Cardinal's balance sheet will increase. Interest expense will be recognized on the lease obligation and lease payments will be applied against the lease obligation. This is expected to result in a decrease to operating expense and general and administration expense and an increase to interest expense and cash flows from operations. Cardinal has gathered the majority of its contracts that may have an impact on the financial statements with the adoption of IFRS 16. The Company is in the assessment phase of the IFRS 16 project.

## **OUTLOOK**

The fourth quarter of 2018 has presented continued headwinds for the Canadian oil and gas industry with the effects of limited egress showing up in a drastic fashion. While the Company believes that the differentials for both Edmonton light and WCS differentials will improve in 2019, the effect of the wide differentials are expected to significantly impact fourth quarter adjusted funds flow. Current average forward fourth quarter pricing differentials have widened over the third quarter of 2018 by approximately US\$15/bbl for both Edmonton light and WCS oil.

In order to deal with the pricing uncertainty in the current environment, Cardinal is taking a proactive approach on multiple fronts to maintain our strong balance sheet. The Company is reducing workovers and non-essential services in order to reduce operating costs in the quarter and we are assessing and reducing discretionary capital spending in the quarter. On the pricing side, Cardinal is proactively increasing its netback by finding alternate routes to market through trucking both to receipt points that are not as heavily penalized with differentials and to areas where we can blend our oil into more attractive pricing streams.

## QUARTERLY DATA

	Sep 30, 2018	Jun 30, 2018	Mar 31, 2018	Dec 31, 2017
<b>Production</b>				
Oil and NGL (bbl/d)	18,163	18,110	18,492	17,943
Natural gas (mcf/d)	16,718	16,632	16,505	18,032
Oil equivalent (boe/d)	20,949	20,882	21,243	20,949
<b>Financial</b>				
Revenue	113,551	111,847	94,779	97,646
Earnings (loss)	9,068	(19,970)	(13,314)	(54,308)
Basic per share (\$)	0.08	(0.17)	(0.12)	(0.49)
Diluted per share (\$)	0.08	(0.17)	(0.12)	(0.49)
Cash flow from operating activities	28,074	21,923	31,802	24,442
Adjusted funds flow <sup>(3)</sup>	27,072	27,085	25,551	28,421
Basic per share (\$)	0.24	0.24	0.23	0.26
Diluted per share (\$)	0.23	0.24	0.23	0.26
Working capital deficiency <sup>(1)</sup>	(16,204)	(12,488)	(12,505)	(7,062)
Total assets	1,198,150	1,216,642	1,216,075	1,228,596
Bank debt	184,524	200,645	200,836	218,905
Principal amount of convertible debentures	50,000	50,000	50,000	50,000
Total long-term liabilities <sup>(2)</sup>	365,083	380,961	380,859	397,980
Shareholders' equity	715,260	707,163	737,201	749,962
Weighted average shares - basic (000's)	114,823	114,190	113,397	110,446
Weighted average shares - diluted (000's)	116,411	114,190	113,397	110,446
Common shares outstanding (000's)	116,039	114,228	113,985	110,838
Diluted shares outstanding (000's)	124,409	122,536	122,758	118,718
	Sep 30, 2017	Jun 30, 2017	Mar 31, 2017	Dec 31, 2016
<b>Production</b>				
Oil and NGL (bbl/d)	18,355	13,817	13,009	12,586
Natural gas (mcf/d)	18,650	20,021	12,952	12,178
Oil equivalent (boe/d)	21,463	17,154	15,168	14,616
<b>Financial</b>				
Revenue	86,022	67,602	62,574	58,721
Earnings (loss)	(12,070)	1,218	7,562	(31,995)
Basic per share (\$)	(0.11)	0.02	0.10	(0.43)
Diluted per share (\$)	(0.11)	0.02	0.10	(0.43)
Cash flow from operating activities	23,719	12,986	15,383	9,728
Adjusted funds flow <sup>(3)</sup>	23,521	17,144	14,586	16,284
Basic per share (\$)	0.21	0.22	0.19	0.22
Diluted per share (\$)	0.21	0.21	0.19	0.22
Working capital deficiency <sup>(1)</sup>	(4,098)	(5,423)	(11,396)	(9,028)
Total assets	1,301,832	1,310,125	982,602	946,237
Bank debt	239,418	233,229	82,978	61,272
Principal amount of convertible debentures	50,000	50,000	50,000	50,000
Total long-term liabilities <sup>(2)</sup>	428,774	420,227	249,806	228,437
Shareholders' equity	813,407	834,532	675,505	651,080
Weighted average shares - basic (000's)	110,278	79,612	75,557	73,728
Weighted average shares - diluted (000's)	111,046	80,511	76,919	73,728
Common shares outstanding (000's)	110,324	110,184	79,262	74,152
Diluted shares outstanding (000's)	118,287	117,984	87,123	82,515

(1) – Excluding the fair value of financial instruments and the current portion of decommissioning obligation

(2) – Includes bank debt and the liability component of convertible debentures

(3) – See non-GAAP measures



Production increases in the first half of 2017 were due to the Grande Prairie Acquisition and drilling at Bantry and Mitsue and this was further increased and sustained in the third and fourth quarter of 2017 with the House Mountain/Midale Acquisition. Increases in production and commodity prices have resulted in increased revenue since 2016.

Adjusted funds flow in the first two quarters of 2017 was consistent with the fourth quarter of 2016 as increases in production and commodity prices were offset by realized losses on commodity contracts. Since the third quarter of 2017, adjusted funds flow and cash flow from operating activities have significantly increased due to increased production from the House Mountain/Midale acquisition.

Cardinal's quarterly earnings and losses have varied significantly due to non-cash gains and losses on unrealized risk management contracts which include an unrealized gain of \$19.9 million and \$15.3 million in the first and second quarters of 2017, respectively, compared to an unrealized loss of \$18.8 million and \$26.3 million in the first and second quarters of 2018, respectively. In the third quarter of 2017 as forward commodity prices increased, the Company incurred a \$4.0 million unrealized loss compared to a \$14.1 million unrealized gain for the same period in 2018. The Company's earnings can also fluctuate with non-cash impairment charges on its assets as shown with a fourth quarter 2016 impairment charge of \$12.8 million and an impairment charge of \$61.0 million in the fourth quarter of 2017.

## FORWARD LOOKING STATEMENTS

This MD&A contains certain forward-looking statements and forward-looking information (collectively referred to herein as "forward-looking statements") within the meaning of applicable Canadian securities laws. All statements other than statements of present or historical fact are forward-looking statements. Forward-looking information is often, but not always, identified by the use of words such as "anticipate", "believe", "plan", "intend", "objective", "continuous", "ongoing", "estimate", "expect", "may", "will", "project", "should", or similar words suggesting future outcomes. In particular, this MD&A contains forward-looking statements relating, but not limited to:

- Cardinal's acquisition, royalty disposition and growth plans and the source of funding;
- anticipated future production;
- estimated tax pools, future taxability and future taxable income;
- expectations to maintain the Facilities at \$325 million at the next scheduled review and the timing of this review;
- expectations with respect to payout ratios, adjusted funds flow, net debt to adjusted funds flow ratio and other financial results;
- Cardinal's business strategy, goals and management focus;
- Cardinal's dividend plans, the amount, timing and sources of funding of the payment of future dividends and the consistency of our dividend policy;
- plans to evaluate non-core asset dispositions or other forms of financing to reduce debt;
- plans to maintain a conservative leverage profile through a targeted net debt to adjusted funds flow ratio of less than 2.0 with proceeds of non-core asset dispositions;
- Cardinal's risk management strategy including the mitigation of our exposure to commodity price risk, medium crude oil differentials and the benefits to be obtained therefrom;
- sources of funds for the Company's operations, capital expenditures, decommissioning obligations and dividend payments;
- future liquidity and the Company's access to sufficient debt and equity capital;
- Cardinal's asset base and future prospects for development and growth therefrom;
- expectations regarding the business environment, industry conditions, future commodity prices and differentials;
- Cardinal's capital management strategies;
- treatment under governmental and other regulatory regimes and tax, environmental and other laws; and
- the impact of future accounting policies.

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 increasing 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 MD&A 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 MD&A 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.

### Frequently Used Terms

#### *Term or abbreviation*

"bbl"	Barrel(s)
"bbl/d"	Barrel(s) per day
"boe"	Barrel(s) of oil equivalent
"boe/d"	Barrel(s) of oil equivalent per day
"COGE Handbook"	Canadian Oil and Gas Evaluation Handbook
"DRIP"	Dividend reinvestment plan
"GJ"	Gigajoule
"gj/d"	Gigajoule(s) per day
"m" preceding a volumetric measure	1,000 units of the volumetric measure
"mcf"	Thousand cubic feet
"mcf/d"	Thousand cubic feet per day
"NGL"	Natural gas liquids
"n/m"	Not meaningful ie absolute value greater than 300 %
"SDP"	Stock dividend program
"US"	United States
"USD"	United States dollars
"WCS"	Western Canadian Select
"WTI"	West Texas Intermediate