





#### MANAGEMENT'S REPORT

Management is responsible for the preparation of the accompanying financial statements. The financial statements have been prepared in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board and include certain estimates that reflect management's best estimates and judgments. Management has determined such amounts on a reasonable basis in order to determine that the financial statements are presented fairly in all material respects.

Management is responsible for the integrity of the financial information. Internal control systems are designed and maintained to provide reasonable assurance that assets are safeguarded from loss or unauthorized use and to produce reliable accounting records for financial reporting purposes.

KPMG LLP has audited the financial statements. Their examination included such tests and procedures, as they considered necessary, to provide reasonable assurance that the financial statements are presented fairly in accordance with International Financial Reporting Standards.

The Board of Directors is responsible for ensuring that management fulfills its responsibilities for financial reporting and internal control. The Board exercises this responsibility through the Audit Committee, with assistance from the Reserves Committee in connection with the annual evaluation of our petroleum and natural gas reserves. The Audit Committee meets regularly with management and the independent auditors to ensure that management's responsibilities are properly discharged, to review the financial statements and recommend that the financial statements be presented to the Board of Directors for approval. The Audit Committee also considers the independence of the external auditors and reviews their fees.

The Board of Directors has approved the information contained in the financial statements based on the recommendation of the Audit Committee.

signed "M. Scott Ratushny"
M. Scott Ratushny
Chief Executive Officer

signed "Douglas Smith" Douglas Smith Chief Financial Officer

March 13, 2017



KPMG LLP 205 5th Avenue SW Suite 3100 Calgary AB T2P 4B9 Telephone (403) 691-8000 Fax (403) 691-8008 www.kpmg.ca

# **INDEPENDENT AUDITORS' REPORT**

To the Shareholders of Cardinal Energy Ltd.

We have audited the accompanying financial statements of Cardinal Energy Ltd., which comprise the balance sheets as at December 31, 2016 and December 31, 2015, the statements of loss and comprehensive loss, changes in shareholders' equity and cash flows for the years then ended, and notes, comprising a summary of significant accounting policies and other explanatory information.

## Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with International Financial Reporting Standards, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

#### Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained in our audits is sufficient and appropriate to provide a basis for our audit opinion.



## Opinion

In our opinion, the financial statements present fairly, in all material respects, the financial position of Cardinal Energy Ltd. as at December 31, 2016 and December 31, 2015, and its financial performance and its cash flows for the years then ended in accordance with International Financial Reporting Standards.

KPMGLLP

**Chartered Professional Accountants** 

March 13, 2017 Calgary, Canada

As at (thousands)  ASSETS  Current assets  Trade and other receivables Deposits and prepaid expenses Fair value of financial instruments  Non-current assets Fair value of financial instruments Exploration and evaluation assets Property, plant and equipment Deferred taxes  Total Assets  LIABILITIES  Current liabilities Trade and other payables Dividends payable Decommissioning obligation Fair value of financial instruments  Non-current liabilities Deferred flow-through share premium Bank debt Fair value of financial instruments Liability component of convertible debentures Decommissioning obligation  Total Liabilities  SHAREHOLDERS' EQUITY	15 15 6 7 14	\$ 27,569 1,265 5,301 34,135 - 1,557 795,465 115,080 912,102 946,237	25,372 1,271 23,590 50,233 4,797 3,680 819,450 86,173 914,100 964,333
ASSETS Current assets Trade and other receivables Deposits and prepaid expenses Fair value of financial instruments  Non-current assets Fair value of financial instruments Exploration and evaluation assets Property, plant and equipment Deferred taxes  Total Assets  LIABILITIES Current liabilities Trade and other payables Dividends payable Decommissioning obligation Fair value of financial instruments  Non-current liabilities Deferred flow-through share premium Bank debt Fair value of financial instruments Liability component of convertible debentures Decommissioning obligation Total Liabilities	15 6 7 14	\$ 27,569 1,265 5,301 34,135 - 1,557 795,465 115,080 912,102 946,237	\$ 25,372 1,271 23,590 50,233 4,797 3,680 819,450 86,173 914,100 964,333
Current assets Trade and other receivables Deposits and prepaid expenses Fair value of financial instruments  Non-current assets Fair value of financial instruments Exploration and evaluation assets Property, plant and equipment Deferred taxes  Total Assets  LIABILITIES Current liabilities Trade and other payables Dividends payable Decommissioning obligation Fair value of financial instruments  Non-current liabilities Deferred flow-through share premium Bank debt Fair value of financial instruments Liability component of convertible debentures Decommissioning obligation	15 6 7 14	\$ 1,265 5,301 34,135 - 1,557 795,465 115,080 912,102 946,237	\$ 1,271 23,590 50,233 4,797 3,680 819,450 86,173 914,100 964,333
Trade and other receivables Deposits and prepaid expenses Fair value of financial instruments  Non-current assets Fair value of financial instruments Exploration and evaluation assets Property, plant and equipment Deferred taxes  Total Assets  LIABILITIES Current liabilities Trade and other payables Dividends payable Decommissioning obligation Fair value of financial instruments  Non-current liabilities Deferred flow-through share premium Bank debt Fair value of financial instruments Liability component of convertible debentures Decommissioning obligation Total Liabilities	15 6 7 14	\$ 1,265 5,301 34,135 - 1,557 795,465 115,080 912,102 946,237	\$ 1,271 23,590 50,233 4,797 3,680 819,450 86,173 914,100 964,333
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Non-current assets Fair value of financial instruments Exploration and evaluation assets Property, plant and equipment Deferred taxes  Total Assets  LIABILITIES Current liabilities Trade and other payables Dividends payable Decommissioning obligation Fair value of financial instruments  Non-current liabilities Deferred flow-through share premium Bank debt Fair value of financial instruments Liability component of convertible debentures Decommissioning obligation Total Liabilities	15 6 7 14	5,301 34,135 - 1,557 795,465 115,080 912,102 946,237	23,590 50,233 4,797 3,680 819,450 86,173 914,100 964,333
Non-current assets Fair value of financial instruments Exploration and evaluation assets Property, plant and equipment Deferred taxes  Total Assets  LIABILITIES Current liabilities Trade and other payables Dividends payable Decommissioning obligation Fair value of financial instruments  Non-current liabilities Deferred flow-through share premium Bank debt Fair value of financial instruments Liability component of convertible debentures Decommissioning obligation	15 6 7 14	34,135 - 1,557 795,465 115,080 912,102 946,237 35,267 2,595	50,233 4,797 3,680 819,450 86,173 914,100 964,333
Fair value of financial instruments Exploration and evaluation assets Property, plant and equipment Deferred taxes  Total Assets  LIABILITIES Current liabilities Trade and other payables Dividends payable Decommissioning obligation Fair value of financial instruments  Non-current liabilities Deferred flow-through share premium Bank debt Fair value of financial instruments Liability component of convertible debentures Decommissioning obligation	12 10	1,557 795,465 115,080 912,102 946,237	4,797 3,680 819,450 86,173 914,100 964,333
Exploration and evaluation assets Property, plant and equipment Deferred taxes  Total Assets  LIABILITIES Current liabilities     Trade and other payables     Dividends payable     Decommissioning obligation     Fair value of financial instruments  Non-current liabilities     Deferred flow-through share premium     Bank debt     Fair value of financial instruments Liability component of convertible debentures     Decommissioning obligation	12 10	795,465 115,080 912,102 946,237 35,267 2,595	3,680 819,450 86,173 914,100 964,333
Property, plant and equipment Deferred taxes  Total Assets  LIABILITIES Current liabilities     Trade and other payables     Dividends payable     Decommissioning obligation     Fair value of financial instruments  Non-current liabilities     Deferred flow-through share premium     Bank debt     Fair value of financial instruments Liability component of convertible debentures     Decommissioning obligation  Total Liabilities	7 14 12 10	795,465 115,080 912,102 946,237 35,267 2,595	3,680 819,450 86,173 914,100 964,333
Property, plant and equipment Deferred taxes  Total Assets  LIABILITIES Current liabilities     Trade and other payables     Dividends payable     Decommissioning obligation     Fair value of financial instruments  Non-current liabilities     Deferred flow-through share premium     Bank debt     Fair value of financial instruments Liability component of convertible debentures     Decommissioning obligation  Total Liabilities	14 12 10	795,465 115,080 912,102 946,237 35,267 2,595	819,450 86,173 914,100 964,333
Total Assets  LIABILITIES  Current liabilities  Trade and other payables Dividends payable Decommissioning obligation Fair value of financial instruments  Non-current liabilities Deferred flow-through share premium Bank debt Fair value of financial instruments  Liability component of convertible debentures Decommissioning obligation	12 10	912,102 946,237 35,267 2,595	914,100 964,333 26,452
LIABILITIES  Current liabilities  Trade and other payables Dividends payable Decommissioning obligation Fair value of financial instruments  Non-current liabilities Deferred flow-through share premium Bank debt Fair value of financial instruments Liability component of convertible debentures Decommissioning obligation	10	946,237 35,267 2,595	964,333 26,452
LIABILITIES  Current liabilities  Trade and other payables Dividends payable Decommissioning obligation Fair value of financial instruments  Non-current liabilities Deferred flow-through share premium Bank debt Fair value of financial instruments Liability component of convertible debentures Decommissioning obligation	10	35,267 2,595	26,452
Current liabilities     Trade and other payables     Dividends payable     Decommissioning obligation     Fair value of financial instruments  Non-current liabilities     Deferred flow-through share premium     Bank debt     Fair value of financial instruments     Liability component of convertible debentures     Decommissioning obligation	10	\$ 2,595	\$ •
Trade and other payables Dividends payable Decommissioning obligation Fair value of financial instruments  Non-current liabilities Deferred flow-through share premium Bank debt Fair value of financial instruments Liability component of convertible debentures Decommissioning obligation	10	\$ 2,595	\$ •
Dividends payable Decommissioning obligation Fair value of financial instruments  Non-current liabilities Deferred flow-through share premium Bank debt Fair value of financial instruments Liability component of convertible debentures Decommissioning obligation	10	\$ 2,595	\$ •
Decommissioning obligation Fair value of financial instruments  Non-current liabilities Deferred flow-through share premium Bank debt Fair value of financial instruments Liability component of convertible debentures Decommissioning obligation	10	· ·	1550
Non-current liabilities Deferred flow-through share premium Bank debt Fair value of financial instruments Liability component of convertible debentures Decommissioning obligation  Total Liabilities			4,333
Non-current liabilities  Deferred flow-through share premium Bank debt Fair value of financial instruments Liability component of convertible debentures Decommissioning obligation  Total Liabilities	15	875	950
Deferred flow-through share premium Bank debt Fair value of financial instruments Liability component of convertible debentures Decommissioning obligation  Total Liabilities	13	27,983	481
Deferred flow-through share premium Bank debt Fair value of financial instruments Liability component of convertible debentures Decommissioning obligation  Total Liabilities		66,720	32,442
Bank debt Fair value of financial instruments Liability component of convertible debentures Decommissioning obligation  Total Liabilities			
Fair value of financial instruments Liability component of convertible debentures Decommissioning obligation  Total Liabilities		127	721
Liability component of convertible debentures  Decommissioning obligation  Total Liabilities	8	61,272	91,817
Decommissioning obligation  Total Liabilities	15	9,685	304
Total Liabilities	9	46,361	45,493
	10	110,992 228,437	113,110 251,445
SHAREHOLDERS' EQUITY		295,157	283,887
Share capital	11	839,626	756,998
Warrants	11	1,420	1,456
Equity component of convertible debentures	9	1,729	1,729
Contributed surplus	13	18,424	13,476
Deficit Total Shareholders' Equity		 (210,119)	 (93,213)
Total Shareholders' Equity		651,080	680,446
Total Liabilities and Shareholders' Equity			
Commitments and contractual obligations		\$ 946,237	\$ 964,333

Commitments and contractual obligations 17
Subsequent events 21

The accompanying notes are an integral part of these financial statements.

Approved on behalf of the Board of Directors,

signed "*M. Scott Ratushny*" M. Scott Ratushny Director signed "James C. Smith" James C. Smith Director

**2016 FINANCIAL STATEMENTS** 

STATEMENTS OF LOSS AND COMPREHENSIVE LOSS			
		_	
For the years ended		December 31,	December 31,
(thousands except per share amounts)	Note	2016	2015
Revenue			
Petroleum and natural gas revenue		<b>\$ 195,942</b> \$	178,100
Royalties		(24,639)	(22,433)
Realized gain on commodity contracts	15	16,405	50,093
Unrealized loss on commodity contracts		(60,411)	
Officerized foss off confindutty contracts	15	• • • • • • • • • • • • • • • • • • • •	(13,021)
		127,297	192,739
Expenses			
Operating		113,509	96,898
Unrealized gain on power contracts	15	(442)	(33)
General and administrative		10,588	10,837
Share-based compensation	13	10,388	9,249
Finance	18	14,049	9,462
Transaction costs		74	319
Depletion and depreciation	7	83,041	85,993
Impairment	6,7	12,839	156,913
Gain on acquisitions and other	5,7	(950)	(32,801)
		243,096	336,837
Loss before deferred tax		(115,799)	(144,098)
Deferred tax	14	(28,477)	(48,200)
Loss and comprehensive loss for the year		\$ (87,322) \$	(95,898)
Loss per share	11		
Basic and diluted		<b>\$</b> (1.25) \$	(1.63)

 $\label{thm:companying} \textit{notes are an integral part of these financial statements}.$ 

# STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY

	Number of Common				Equity mponent of Convertible	c	ontributed		Retained Earnings	Sha	Total reholders'
(thousands except number of common shares)	Shares	Sh	are Capital	Warrants	 Debentures		Surplus		(Deficit)		Equity
			(note 11)	(note 11)	(note 9)		(note 13)				
January 1, 2015	56,819,301	\$	686,288	\$ 1,308	\$ -	\$	7,736	\$	52,596	\$	747,928
Issue of common shares	6,627,500		55,008	-	-		-		-		55,008
Common shares issued in connection											
with acquisition (note 5)	669,936		5,821	-	-		-		-		5,821
Issue of convertible debentures	-		-	-	1,729		-		-		1,729
Issue of flow-through common shares	200,000		3,020	-	-		-		-		3,020
Exercise of options and warrants	126,877		827	(196)	-		(141)		-		490
Dividends (\$0.84 per share)	-		-	-	-		-		(49,911)		(49,911)
Issued pursuant to SDP and DRIP $^{ ext{(1)}}$	307,575		3,713	-	-		-		-		3,713
Settlement of RAs (2)	337,946		3,837	-	-		(3,837)		-		-
Settlement of SARs <sup>(3)</sup>	35,074		315	-	-		(315)		-		-
Share-based compensation	-		-	344	-		10,033		-		10,377
Share issue costs, net of											
deferred tax of \$678	-		(1,831)	-	-		-		-		(1,831)
Loss for the year				 	 				(95,898)		(95,898)
December 31, 2015	65,124,209	\$	756,998	\$ 1,456	\$ 1,729	\$	13,476	\$	(93,213)	\$	680,446
January 1, 2016	65,124,209	\$	756,998	\$ 1,456	\$ 1,729	\$	13,476	\$	(93,213)	\$	680,446
Issue of common shares	7,150,000		66,853	-	-		-		-		66,853
Common shares issued in connection											
with acquisition (note 5)	500,000		4,840	-	-		-		-		4,840
Issue of flow-through common shares	350,000		3,224	-	-		-		-		3,224
Exercise of options and warrants	106,716		562	(200)	-		(39)		-		323
Dividends (\$0.42 per share)	-		-	-	-		-		(29,584)		(29,584)
Issued pursuant to SDP and DRIP (1)	216,799		1,826	-	-		-		-		1,826
Settlement of RAs <sup>(2)</sup>	667,504		7,219	-	-		(7,219)		-		-
Settlement of SARs <sup>(3)</sup>	36,491		318	-	-		(318)		-		-
Share-based compensation	-		-	164	-		11,481		-		11,645
Tax on excess value of RAs	-		-	-	-		1,043		-		1,043
Share issue costs, net of			(2.244)								(2.244)
deferred tax of \$820 Loss for the year	-		(2,214)	-	-		-		- (87,322)		(2,214) (87,322)
December 31, 2016	74,151,719	\$	839,626	\$ 1,420	\$ 1,729	_	18,424	_	(210,119)	_	651,080

<sup>(1)</sup> Stock Dividend Program ("SDP") and Dividend Reinvestment Plan ("DRIP")

 $\label{thm:companying} \textit{ notes are an integral part of these financial statements}.$ 

<sup>(2)</sup> Restricted Bonus Awards ("RAs")

<sup>(3)</sup> Stock Appreciation Rights ("SARs")

STATEMENTS OF CASH FLOWS			
For the years ended		December 31,	December 31,
(thousands)	Note	2016	2015
7			
Cash provided by (used in)			
Operating activities			
Loss for the year	\$	<b>(87,322)</b> \$	(95,898)
Adjustments for			
Share-based compensation	13	10,388	9,249
Depletion and depreciation	7	83,041	85 <i>,</i> 993
Impairment	6,7	12,839	156,913
Unrealized loss on commodity contracts	15	60,411	13,021
Unrealized gain on power contracts	15	(442)	(33)
Deferred tax	14	(28,477)	(48,200)
Accretion	18	9,145	6,402
Gain on acquisitions	5,7	(479)	(32,801)
Decommissioning obligation settled	10	(2,727)	(1,250)
Change in non-cash working capital	19	4,585	(6,661)
		60,962	86,735
Investing activities			
Exploration and evaluation expenditures		(3,716)	(1,459)
Property, plant and equipment expenditures		(38,307)	(35,880)
Property acquisitions	5	(28,738)	(143,794)
Corporate acquisitions	5	-	(25,499)
Proceeds from property dispositions	5	-	12,750
Change in non-cash working capital	19	671	3,989
		(70,090)	(189,893)
Financing activities			
Issue of common shares	11	66,853	55,008
Issue of convertible debentures, net of issue costs	9	-	47,660
Issue of flow-through common shares	11	3,885	3,800
Share issue costs	11	(3,034)	(2,509)
Options and warrants exercised	11	323	490
Dividends	12	(27,758)	(46,198)
Increase (decrease) in bank debt		(30,545)	44,082
Change in non-cash working capital	19	(596)	647
		9,128	102,980
Change in cash and cash equivalents		-	(178)
Cash and cash equivalents, beginning of year		-	178
Cash and cash equivalents, end of year	\$	- \$	

 $\label{thm:companying} \textit{The accompanying notes are an integral part of these financial statements}.$ 

#### **NOTES TO FINANCIAL STATEMENTS**

For the years ended December 31, 2016 and 2015

(Thousands of dollars, except per share amounts or unless otherwise stated)

## 1 REPORTING ENTITY

Cardinal Energy Ltd. ("Cardinal" or the "Company") was incorporated pursuant to the Business Corporations Act (Alberta) on December 21, 2010 and commenced activity on May 30, 2012. The Company's principal business activity is the acquisition, exploration and production of petroleum and natural gas in the provinces of Alberta and Saskatchewan. Cardinal's principal place of business is located at 600, 400 – 3<sup>rd</sup> Avenue SW, Calgary, Alberta, Canada, T2P 4H2.

## **2** BASIS OF PREPARATION

These financial statements ("financial statements") have been prepared in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board. A summary of the significant accounting policies and method of computation is presented in note 3.

The financial statements have been prepared on the historical cost basis. The methods used to measure fair values are discussed in note 4.

The financial statements are presented in Canadian dollars, which is the Company's functional currency.

Operating expenses in the statement of earnings or loss are presented as a combination of function and nature in conformity with industry practice. Depletion and depreciation is presented on a separate line by its nature while general and administrative expense is presented on a functional basis. Significant expenses such as salaries and share-based compensation are presented by their nature in the notes to the financial statements.

The financial statements were authorized for issue by the Board of Directors on March 13, 2017.

## 3 SIGNIFICANT ACCOUNTING POLICIES

The following accounting policies have been applied consistently to all periods presented in these financial statements.

## (a) Business combinations

The purchase method of accounting is used to account for acquisitions of subsidiaries and assets that meet the definition of a business under IFRS. Subsidiaries are entities controlled by the Company. Control exists when the Company has the power to govern the financial and operating policies of an entity to obtain benefits from its activities. The financial statements of subsidiaries are included in the financial statements from the date that control commences until the date that control ceases.

The cost of an acquisition is measured as the fair value of the assets acquired, equity instruments issued and liabilities incurred or assumed at the date of exchange. Identifiable assets acquired and liabilities and contingent liabilities assumed in a business combination are measured at fair value at the acquisition date, except for deferred income taxes. The excess of the cost of an acquisition over the fair value of the identifiable assets and liabilities acquired is recorded as goodwill. If the cost of an acquisition is less than the fair value of the net assets acquired, the difference is recognized immediately in earnings or loss. Acquisition costs incurred by the Company are expensed in earnings or loss in the period incurred.

Intercompany balances and transactions, and any unrealized income and expenses arising from intercompany transactions with subsidiaries, are eliminated in preparing the financial statements.

#### (b) Jointly owned assets

Many of the Company's crude oil and natural gas activities involve jointly owned assets. The financial statements include the Company's share of these jointly owned assets and a proportionate share of the relevant revenue and related costs.

(c) Exploration and evaluation assets "E&E" and Property, plant and equipment "PP&E"

i) Recognition and measurement

E&E

Pre-license costs are expensed in the statement of earnings or loss as incurred. E&E costs including the costs of acquiring licenses are capitalized as E&E. Costs are accumulated in cost centres by well, field or exploration area pending determination of technical feasibility and commercial viability.

E&E are assessed for impairment if (i) sufficient data exists to determine technical feasibility and commercial viability, and (ii) facts and circumstances suggest that the carrying amount exceeds the recoverable amount. For purposes of impairment testing, E&E are allocated to their related cash generating unit ("CGU").

The technical feasibility and commercial viability of extracting a mineral resource is considered to be determinable when proved and/or probable reserves are determined to exist. A review of each exploration license or field is carried out at least annually to ascertain whether proved and/or probable reserves have been discovered. Upon determination of proved and/or probable reserves, E&E attributable to those reserves are first tested for impairment and then reclassified from E&E to PP&E or expensed in earnings or loss to the extent of any impairment.

#### PP&E

Items of PP&E, including development or production assets, are measured at cost less accumulated depletion and depreciation and accumulated impairment losses and are grouped into CGU's for impairment testing. When significant parts of an item of PP&E, including petroleum and natural gas interests, have different useful lives, they are accounted for as separate items (major components).

Gains and losses on disposal of an item of PP&E, including petroleum and natural gas interests, are determined by comparing the proceeds from disposal with the carrying amount of PP&E and are recognized in earnings or loss.

#### *ii)* Subsequent costs

Costs incurred subsequent to the determination of technical feasibility and commercial viability and the costs of replacing parts of PP&E are recognized as petroleum and natural gas interests only when they increase the future economic benefits embodied in the specific asset to which they relate. All other expenditures are recognized in earnings or loss as incurred. Such capitalized petroleum and natural gas interests generally represent costs incurred in developing proved and/or probable reserves and bringing in or enhancing production from such reserves, and are accumulated on a field or geotechnical area basis.

## iii) Depletion and depreciation

The net carrying value of development or production assets is depleted using the unit of production method by reference to the ratio of production to the related proved plus probable reserves. Natural gas volumes are converted to equivalent crude oil volumes based upon the relative energy content of six thousand cubic feet of natural gas to one barrel of crude oil. In determining its depletion base, Cardinal includes the estimated future development costs necessary to develop proved plus probable reserves. These estimates are reviewed by independent reserve engineers at least annually.

Depreciation of other assets is recognized in earnings or loss on a straight-line basis or declining balance over their estimated useful life. Depreciation methods, useful life and residual values are reviewed at each reporting date.

#### iv) Derecognition

The carrying amount of an item of PP&E is derecognized when no future economic benefits are expected from its use or upon sale to a third party. The gain or loss arising from derecognition is included in earnings or loss and is measured as the difference between the net proceeds, if any, and the carrying amount of the asset.

## v) Major maintenance and repairs

Ongoing costs to maintain properties are generally expensed as incurred. The costs of material replacement parts, turnarounds and major inspections are capitalized provided it is probable that future economic benefits in excess of cost will be realized and such benefits are expected to extend beyond the current operating period. The carrying amount of a replaced part is derecognized in accordance with our derecognition policy.

## (d) Financial instruments

#### i) Non-derivative financial instruments

Non-derivative financial instruments comprise cash and cash equivalents, trade and other receivables, trade and other payables, dividends payable, bank debt and convertible debentures. Non-derivative financial instruments are recognized initially at fair value plus, for instruments not at fair value through earnings or loss, any directly attributable transaction costs.

Cash and cash equivalents comprise cash on hand and term deposits held with banks with original maturities of three months or less and are measured at amortized cost.

Other non-derivative financial instruments, such as trade and other receivables, trade and other payables, dividends payable and bank debt are measured at amortized cost using the effective interest method, less any impairment losses.

Financial assets and liabilities are offset and the net amount presented on the balance sheet if, and only if, the Company has a legal right to offset the amounts and intends either to settle on a net basis or to realize the asset and settle the liability simultaneously.

Convertible debentures are separated into liability and equity components. The liability component is recognized initially at the fair value of a similar liability that does not have an equity conversion option and the equity component is recognized as the difference between the fair value of the convertible debenture as a whole and the fair value of the liability component net of any deferred taxes. Any transaction costs are allocated to the liability and equity components in proportion to their initial carrying amounts. Subsequent to initial recognition, the liability component of convertible debentures is measured at amortized cost and is accreted to the original principal balance using the effective interest method. The equity component is not remeasured subsequent to initial recognition. Convertible debentures can be converted to share capital at the option of the holder and the number of shares to be issued does not vary with changes in fair value. The equity component and the accreted liability component will be reclassified to share capital upon conversion. Any balance in the equity component of convertible debentures that remains after the settlement of the liability will be transferred to contributed surplus.

#### (ii) Derivative financial instruments

The Company enters into certain financial derivative contracts in order to manage the exposure to market risks from fluctuations in commodity prices, power costs, interest rates and the exchange rate between Canadian and United States dollars. These instruments are not used for trading or speculative purposes. The Company has not designated its financial derivative contracts as effective accounting hedges, and thus has not applied hedge accounting, even though the Company considers all financial derivative contracts to be economic hedges.

All financial derivative contracts are classified at fair value through earnings or loss and are recorded on the balance sheet at fair value. Transaction costs are recognized in earnings or loss when incurred.

#### iii) Share capital

Common shares are classified as shareholders' equity. Incremental costs directly attributable to the issue of common shares, net of any tax effects, are recognized as a deduction from shareholders' equity.

#### (e) Impairment

#### i) Financial assets

A financial asset is assessed at each reporting date to determine whether there is any objective evidence that it is impaired. A financial asset is considered to be impaired if objective evidence indicates that one or more events have had a negative effect on the estimated future cash flows of that asset.

An impairment loss in respect of a financial asset measured at amortized cost is calculated as the difference between its carrying amount and the present value of the estimated future cash flows discounted at the original effective interest rate. Individually significant financial assets are tested for impairment on an individual basis. The remaining financial assets are assessed collectively in groups that share similar credit risk characteristics. All impairment losses are recognized in earnings or loss.

An impairment loss is reversed if the reversal can be related objectively to an event occurring after the impairment loss was recognized. For financial assets measured at amortized cost the reversal is recognized in earnings or loss.

#### ii) Non-financial assets

The carrying amounts of the Company's non-financial assets, other than E&E assets and deferred tax assets, are reviewed at each reporting date to determine whether there is any indication of impairment. If any such indication exists, then the asset's recoverable amount is estimated. E&E assets are assessed for impairment when they are reclassified to PP&E as petroleum and natural gas interests, and also if facts and circumstances suggest that the carrying amount exceeds the recoverable amount.

For the purpose of impairment testing, assets are grouped together into the smallest group of assets that generates cash inflows from continuing use that are largely independent of the cash inflows of other assets or groups of assets (the CGU). The recoverable amount of an asset or a CGU is the greater of its value in use and its fair value less costs to sell.

In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. Value in use is generally computed by reference to the present value of the future cash flows expected to be derived from production of proven and probable reserves.

For the purpose of impairment testing, the goodwill acquired in a business combination is allocated to the CGU's that are expected to benefit from the synergies of the combination. E&E are allocated to the related CGU when they are assessed for impairment, both at the time of any triggering facts and circumstances as well as the reclassification to producing assets (petroleum and natural gas interests in PP&E).

An impairment loss is recognized if the carrying amount of an asset or its CGU exceeds its estimated recoverable amount. Impairment losses are recognized in earnings or loss. Impairment losses recognized in respect of CGU's are allocated first to reduce the carrying amount of any goodwill allocated to the units and then to reduce the carrying amounts of the other assets in the unit or group of units on a pro rata basis.

An impairment loss in respect of PP&E and E&E recognized in prior periods is assessed at each reporting date for any indications that the loss has decreased or no longer exists. An impairment loss is reversed if there has been a change in the estimates used to determine the recoverable amount. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depletion and depreciation, if no impairment loss had been recognized. An impairment loss in respect of goodwill is not reversed.

## (f) Leased assets

Operating leases are not recognized on the Company's balance sheet. Payments made under operating leases are recognized in earnings or loss on a straight-line basis over the term of the lease. Lease incentives received are recognized as an integral part of the total lease expense over the term of the lease.

## (g) Share-based compensation

The grant date fair value of options and other dilutive equity instruments granted to employees is recognized as compensation expense, with a corresponding increase in contributed surplus or warrants, over the vesting period. A forfeiture rate is estimated on the grant date and is adjusted to reflect the actual number of instruments that vest.

## (h) Provisions

A provision is recognized if, as a result of a past event, the Company has a present legal or constructive obligation that can be estimated reliably, and it is probable that an outflow of economic benefits will be required to settle the obligation. Provisions are determined by discounting the expected future cash flows at a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the liability. Provisions are not recognized for future operating losses.

The Company's activities give rise to dismantling, decommissioning and site disturbance remediation activities. Provisions are made for the estimated cost of site restoration and capitalized in the relevant asset category.

The decommissioning obligation recognized is the present value of management's best estimate of future expenditures required to settle the obligation using a credit-adjusted rate. Subsequent to the initial measurement, the obligation is adjusted at the end of each period to reflect the passage of time and changes in the estimated future cash flows underlying the obligation. The increase in the provision due to the passage of time is recognized as a finance expense in earnings or loss whereas increases or decreases due to changes in the estimated future cash flows are capitalized. Actual costs incurred upon settlement of the decommissioning obligation are charged against the provision to the extent the provision was established.

#### (i) Revenue

Revenue from the sale of petroleum and natural gas is recorded when the significant risks and rewards of ownership of the product are transferred to the buyer which is usually when legal title passes to the external party and when collection is reasonably assured. This is generally at the time product enters the pipeline.

#### (j) Finance income and expenses

Finance expense comprises interest expense on borrowings, accretion of the discount on decommissioning obligation, other finance expenses and impairment losses recognized on financial assets.

Borrowing costs and interest income are recognized in earnings or loss using the effective interest method.

## (k) Income tax

Income tax expense consists of current and deferred tax. Income tax expense is recognized in earnings or loss except to the extent that it relates to items recognized directly in equity.

Current tax is the expected tax payable on taxable income for the year, using tax rates enacted or substantively enacted at the reporting date, and any adjustment to tax payable in respect of previous years.

Deferred tax is recognized using the balance sheet method, providing for temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes.

Deferred tax is not recognized on the initial recognition of assets or liabilities in a transaction that is not a business combination and that does not affect either accounting or taxable income or loss. In addition, deferred tax is not recognized for taxable temporary differences arising on the initial recognition of goodwill. Deferred tax is measured at the tax rates that are expected to be applied to temporary differences when they reverse, based on the laws that have been enacted or substantively enacted at the reporting date.

Deferred tax assets and liabilities are offset if there is a legally enforceable right to offset, and they relate to income taxes levied by the same tax authority on the same taxable entity, or on different tax entities, but they intend to settle current tax liabilities and assets on a net basis or their tax assets and liabilities will be realized simultaneously.

A deferred tax asset is recognized to the extent that it is probable that future taxable income will be available against which the temporary difference can be utilized. Deferred tax assets are reviewed at each reporting date and are reduced to the extent that it is no longer probable that the related tax benefit will be realized.

## (I) Flow-through shares

The resource expenditure deductions for income tax purposes related to exploration and development activities funded by flow-through share arrangements are renounced to investors in accordance with tax legislation. On issuance, the premium received on the flow-through shares, being the difference in price over a common share with no tax attributes, is recognized on the balance sheet. As expenditures are incurred, the deferred tax liability associated with the renounced tax deductions is recognized through earnings and loss along with a pro-rata portion of the deferred premium.

## (m) Earnings per share

Basic earnings per share is calculated by dividing the earnings or loss attributable to common shareholders of the Company by the weighted average number of common shares outstanding during the period. Diluted earnings per share is determined by adjusting the earnings attributable to common shareholders and the weighted average number of common shares outstanding for the effects of dilutive instruments such as convertible debentures, options, warrants and other dilutive instruments granted to employees. The number of additional shares related to convertible debentures is calculated assuming the debentures are converted into common shares by dividing the face value of convertible debentures by the conversion price. Earnings are adjusted for interest or accretion, net of tax, related to the convertible debentures.

#### (n) Use of judgments and key sources of estimation uncertainty

The timely preparation of financial statements in conformity with IFRS requires management to make judgments, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets and liabilities, disclosure of any contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses for the period. These estimates are subject to measurement uncertainty and the effect on the financial statements of changes in these estimates could be material. Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimates are revised and in any future periods affected.

#### Critical Judgments

#### i) Identification of cash generating units

Cardinal's assets are aggregated into cash-generating units ("CGU" or "CGU's") for the purpose of calculating impairment. CGU's are based on an assessment of the unit's ability to generate largely independent cash inflows. The determination of these CGUs was based on management's judgment in regards to shared infrastructure, geographical proximity, petroleum type and similar exposure to market risk and materiality.

## ii) Impairment of property, plant and equipment

Judgments are required to assess when impairment indicators, or reversal indicators, exist and impairment testing is required. In determining the recoverable amount of PP&E, in the absence of quoted market prices, impairment tests are based on estimates of reserves, production rates, future petroleum and natural gas prices, future costs, discount rates, market value of land and other relevant assumptions.

#### iii) Exploration and evaluation assets

The application of the Company's accounting policy for E&E requires management to make certain judgments as to future events and circumstances as to whether economic quantities of reserves have been found in assessing economic and technical feasibility.

#### iv) Deferred income taxes

Judgments are made by management to determine the likelihood of whether deferred income tax assets at the end of the reporting period will be realized from future taxable income. To the extent that assumptions regarding future profitability change, there can be an increase or decrease in the amounts recognized in respect of deferred tax assets as well as the amounts recognized in earnings or loss in the period in which the change occurs.

#### **Key Sources of Estimation Uncertainty**

## i) Reserve estimates

Commercial petroleum reserves are determined based on estimates of petroleum-in-place, recovery factors and future petroleum and natural gas prices and costs. Cardinal engaged independent qualified reserve evaluators to evaluate the Company's petroleum and natural gas ("P&NG") reserves at December 31, 2016 and 2015. Reserve adjustments are made annually based on actual volumes produced, the results from capital expenditure programs, revisions to previous estimates, new discoveries and acquisitions and dispositions made during the year.

Proved reserves are those estimated quantities of petroleum and natural gas determined to be economically recoverable under existing economic and operating conditions with a high degree of certainty, of at least 90 percent, that those quantities will be equaled or exceeded. Proved plus probable reserves are those estimated quantities of petroleum and natural gas determined to be economically recoverable under existing economic and operating conditions with a moderate degree of certainty, of at least 50 percent, that those quantities will be equaled or exceeded. Cardinal reports production and reserve quantities in accordance with Canadian practices and specifically in accordance with Standards of Disclosures for Oil and Gas Activities ("NI 51-101").

Cardinal cautions users of this information that the process of estimating petroleum and natural gas reserves is subject to a level of uncertainty. The reserves are based on current and forecast economic and operating conditions; therefore, changes can be made to future assessments as a result of a number of factors, which can include commodity prices, new technology, changing economic conditions, future reservoir performance and development activity.

#### ii) PP&E

Development and production assets within PP&E are depleted using the unit of production method based on estimated proved plus probable reserves determined using estimated future prices and costs. The estimate of proved plus probable reserves is an essential part of the depletion calculation and the impairment test.

#### iii) Business combinations

In a business combination, management makes estimates of the fair value of assets acquired and liabilities assumed which includes assessing the value of petroleum and natural gas properties based upon the estimation of recoverable quantities of proven and probable reserves being acquired.

#### iv) Decommissioning obligation

Cardinal recognizes a provision for future abandonment activities in the financial statements equal to the net present value of the estimated future expenditures required to settle the estimated future obligation at the balance sheet date. The measurement of the decommissioning obligation involves the use of estimates and assumptions including the discount rate, the expected timing of future expenditures and the amount of future abandonment costs. The estimates were made by management and external consultants considering current costs, technology and enacted legislation.

#### v) Fair value calculation of share-based payments

The fair value of share-based payments for options and warrants is calculated using a Black Scholes or other option pricing model. There are a number of estimates used in the calculation such as the future forfeiture rate, expected option life and the future price volatility of the underlying security which can vary from actual future events. The factors applied in the calculation are management's best estimates based on historical information and future forecasts.

## vi) Taxation

The calculation of deferred income taxes is based on a number of assumptions including estimating the future periods in which temporary differences, tax losses and other tax credits will reverse, the use of substantively enacted tax rates at the balance sheet date and the likelihood of deferred tax assets being realized.

## (vii) Derivatives

The Company's estimate of the fair value of derivative financial instruments is dependent on estimated forward prices and the volatility in those prices.

## (o) Adoption of new accounting policies

There were no new or amended accounting standards and interpretations adopted during the year ended December 31, 2016.

## (p) New standards and interpretations not yet adopted

#### (i) Leases

On January 13, 2016, the IASB issued IFRS 16, "Leases" ("IFRS 16"), 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. Lessors will continue with a dual lease classification model. Classification will determine how and when a lessor will recognize lease revenue, and what assets would be recorded.

IFRS 16 is effective for years beginning on or after January 1, 2019, with early adoption permitted if IFRS 15 "Revenue From Contracts With Customers" has been adopted. The standard may be applied retrospectively or using a modified retrospective approach. The modified retrospective approach does not require restatement of prior period financial information as it recognizes the cumulative effect as an adjustment to opening retained earnings and applies the standard prospectively. It is anticipated that the adoption of IFRS 16 will not have a material impact on the Company's Balance Sheets as there are no material operating lease commitments as disclosed in Note 17. The Company plans to apply IFRS 16 initially on January 1, 2019; however, the transition approach on adoption has not yet been determined.

## (ii) Revenue Recognition

On May 28, 2014, the IASB issued IFRS 15, "Revenue From Contracts With Customers" ("IFRS 15") replacing International Accounting Standard 11, "Construction Contracts" ("IAS 11"), IAS 18, "Revenue" ("IAS 18"), and several revenue-related interpretations. IFRS 15 establishes a single revenue recognition framework that applies to contracts with customers. The standard requires an entity to recognize revenue to reflect the transfer of goods and services for the amount it expects to receive, when control is transferred to the purchaser. Disclosure requirements have also been expanded.

This new standard is effective for annual periods beginning on or after January 1, 2018, with earlier adoption permitted. The standard may be applied retrospectively or using a modified retrospective approach. The Company is currently evaluating the impact of adopting IFRS 15 on the financial statements and plans to adopt the standard for its year ended December 31, 2018.

#### (iii) Financial Instruments

On July 24, 2014, the IASB issued the final version of IFRS 9, "Financial Instruments" ("IFRS 9") to replace IAS 39, "Financial Instruments: Recognition and Measurement" ("IAS 39"). IFRS 9 introduces a single approach to determine whether a financial asset is measured at amortized cost or fair value and replaces the multiple rules in IAS 39. The approach is based on how an entity manages its financial instruments in the context of its business model and the contractual cash flow characteristics of the financial assets. For financial liabilities, IFRS 9 retains most of the IAS 39 requirements; however, where the fair value option is applied to financial liabilities, the change in fair value resulting from an entity's own credit risk is recorded in other comprehensive income rather than net earnings, unless this creates an accounting mismatch.

In addition, a new expected credit loss model for calculating impairment on financial assets replaces the incurred loss impairment model used in IAS 39. The new model will result in more timely recognition of expected credit losses. The Company does not expect the change in the impairment model will have a material impact on the financial statements.

IFRS 9 also includes a simplified hedge accounting model, aligning hedge accounting more closely with risk management. Cardinal does not currently apply hedge accounting.

IFRS 9 is effective for years beginning on or after January 1, 2018. Early adoption is permitted if IFRS 9 is adopted in its entirety at the beginning of a fiscal period. The Company plans to adopt the standard for its year ended December 31, 2018.

## 4 DETERMINATION OF FAIR VALUE

A number of the Company's accounting policies and disclosures require the determination of fair value. Fair value has been determined for measurement and/or disclosure purposes based on the following methods. When applicable, further information about the assumptions made in determining fair value is disclosed in the notes specific to that asset or liability.

The Company classifies the fair value of risk management assets and liabilities according to the following fair value hierarchy based on the amount of observable inputs used to value the instrument:

Level 1 - Fair value is based on unadjusted quoted prices in active markets for identical assets or liabilities as of the reporting date.

Level 2 - Fair value is based on inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (as prices) or indirectly (derived from prices).

Level 3 - Fair value is based on inputs for the asset or liability that are not based on observable market data.

## (a) PP&E and E&E

The fair value of PP&E and E&E recognized in a business combination is based on market value. The market value of PP&E and E&E is the estimated amount for which PP&E and E&E could be exchanged on the acquisition date between a willing buyer and a willing seller in an arm's length transaction after proper marketing wherein the parties had each acted knowledgeably, prudently and without compulsion. The market value of petroleum and natural gas interests (included in PP&E and E&E) is estimated with reference to the discounted cash flows expected to be derived from petroleum and natural gas production based on externally prepared reserve reports. The risk-adjusted discount rate is specific to the asset with reference to general market conditions.

(b) Cash and cash equivalents, trade and other receivables, trade and other payables and dividends payable. The fair value of cash and cash equivalents, trade and other receivables, trade and other payables and dividends payable is estimated as the present value of future cash flows, discounted at the market rate of interest at the reporting date. At December 31, 2016 and 2015, the fair value of these balances approximated their carrying value due to their short term to maturity.

## (c) Bank debt and convertible debentures

The fair value of bank debt approximates its carrying value as it bears a floating rate of interest and the margin charged by the lenders is indicative of current credit spreads. The convertible debentures bear interest at a fixed rate that the Company would expect to pay for similar financing transactions and accordingly the initial fair value approximated the carrying value. Subsequent to initial recognition, fair value is determined by trading in an active market.

## (d) Derivatives

Derivatives are recorded on the balance sheet at fair value at each reporting period with the change in fair value being recognized as an unrealized gain or loss in the statement of earnings or loss. The fair value of forward contracts and swaps is determined by discounting the difference between the contracted prices and published forward price curves as at the balance sheet date, using the remaining contracted volumes and a credit adjusted interest rate. The fair value of options and collars is based on option models that use published information with respect to volatility, prices and interest rates.

## (e) Share-based compensation

The fair value of warrants and stock options is measured using a Black Scholes or other option pricing model. Measurement inputs include share price on measurement date, exercise price of the instrument, expected volatility (based on publicly available information for similar companies), weighted average expected life of the instrument (based on expected general option or holder behaviour), expected dividends, and the risk-free interest rate (based on government bonds). The fair value of restricted bonus awards and stock appreciation rights are valued on the date of grant based on the value of the Company's common shares.

## **5** ACQUISITIONS & DISPOSITIONS

## 2016 Acquisitions

In the third quarter of 2016 Cardinal closed two minor acquisitions in Slave Lake for aggregate consideration of \$0.8 million before closing adjustments with an associated decommissioning obligation of \$0.2 million.

On **December 6, 2016**, Cardinal acquired petroleum and natural gas properties to expand its core area at Wainwright, Alberta. Total consideration provided was \$32.5 million, before closing adjustments, consisting of \$27.7 million in cash and 500,000 common shares valued at \$9.68 per share with an associated decommissioning obligation of \$3.6 million. This property acquisition has been accounted for as a business combination in accordance with IFRS 3.

The Wainwright acquisition has contributed petroleum and natural gas revenue of \$0.5 million and operating income (petroleum and natural gas revenue less royalties and operating expenses) of \$0.3 million since December 6, 2016.

Had the acquisition closed on January 1, 2016, the Company's estimated petroleum and natural gas revenue would have been \$202.3 million and estimated operating income would have been \$61.1 million for the year ended December 31, 2016. Pro forma information is not necessarily representative of future revenue and operations.

The preceding estimates of fair value were made by management at the time of the preparation of these financial statements based on information then available. Amendments may be made to these amounts as values subject to estimate are finalized.

## 2015 Acquisitions

On **April 15, 2015**, the Company acquired all of the issued and outstanding common shares of Pinecrest Energy Inc. ("Pinecrest") from Virginia Hills Oil Corp. ("Virginia Hills") for cash consideration of \$23.5 million. Pinecrest had developed light oil and natural gas properties located in the greater Slave Lake area of Alberta and Cardinal identified other light oil acquisition opportunities in the area that have the potential to diversify Cardinal's existing medium quality crude oil asset base.

The Company recorded a \$29.1 million gain on this corporate acquisition due to the deferred tax asset recognized which related to temporary differences in the carrying amount of the acquired properties and their tax bases. Pinecrest had no debt or outstanding liabilities to be assumed by Cardinal. This corporate acquisition has been accounted for as a business combination in accordance with IFRS 3.

Cardinal agreed to pay Virginia Hills additional cash consideration of \$5 million if at any point during the period from April 16, 2015 to April 26, 2016 the then 12 month forward price curve was equal to or greater than USD \$65 per barrel WTI, otherwise no payment would be required. At the date of acquisition Cardinal recorded a contingent liability of \$3.7 million based on the probabilities and volatility of expected price forecasts. At December 31, 2015, Cardinal determined the fair value of this obligation to be nil based on revised probabilities and volatility of expected price forecasts and accordingly an additional gain of \$3.7 million was recorded. This obligation expired on April 26, 2016 with no additional payment being required.

Net	assets	acq	uır	ea

Petroleum and natural gas properties	7,660
Decommissioning liability	(1,147)
Deferred tax asset	49,788
Gain on acquisition	(29,101)
	27,200
Consideration	
Cash consideration	23,500
Contingent liability	
Contingent liability	3,700

Pro-forma information in respect of this corporate acquisition is not material or readily determinable.

On **September 12, 2015**, Cardinal acquired all of the issued and outstanding common shares of a private oil and gas company ("PrivateCo") that had properties that complemented existing assets in Wainwright. Total consideration provided was \$7.8 million consisting of 669,936 common shares valued at \$8.69 per share and cash of \$2.0 million with an associated decommissioning obligation of \$0.2 million. The acquisition did not have full tax basis and the Company recorded a deferred tax liability of \$1.8 million. This corporate acquisition has been accounted for as a business combination in accordance with IFRS 3.

Pro-forma information in respect of this corporate acquisition is not material.

Net assets acquired	
Petroleum and natural gas properties	9,899
Working capital	115
Decommissioning liability	(220)
Deferred flow-through share premium	(200)
Deferred tax liability	(1,774)
	7,820
Consideration	
Cash consideration	1,999
Share consideration	5,821
	7,820

On **October 30, 2015**, Cardinal acquired light oil and natural gas properties in the Slave Lake area creating a new core operating area at Mitsue (the "Mitsue acquisition"). Total consideration provided was \$144.4 million in cash, before closing adjustments with an associated decommissioning obligation of \$28.0 million.

The Mitsue acquisition has contributed petroleum and natural gas revenue of \$8.1 million and operating income (petroleum and natural gas revenue less royalties and operating expenses) of \$0.8 million since October 30, 2015. Had the acquisition closed on January 1, 2015, Cardinal's estimated petroleum and natural gas revenue would have been \$224.4 million and estimated operating income would have been \$71.1 million for the year ended December 31, 2015. Pro forma information is not necessarily representative of future revenue and operations.

On **November 17, 2015**, Cardinal disposed of a gas plant and related facilities acquired in connection with the Mitsue acquisition for proceeds of \$12.8 million and an associated decommissioning obligation of \$0.1 million.

## **6** EXPLORATION AND EVALUATION ASSETS

	Exploration 8						
	Evaluation Asse						
At December 31, 2014	\$	7,160					
Additions		1,459					
Transferred to PP&E		(26)					
Impairment		(4,913)					
At December 31, 2015		3,680					
Additions		3,716					
Impairment		(5,839)					
At December 31, 2016	\$	1,557					

Cardinal's exploration and evaluation ("E&E") assets consist of undeveloped land and exploration projects which are pending technical feasibility and commercial viability. Additions represent costs incurred during the year to acquire additional E&E assets.

Management performed an impairment test at December 31, 2016 on certain E&E assets and concluded an impairment of \$5.8 million was required for the associated undeveloped land, drilling, and completion costs incurred for two exploration wells that were uneconomic.

For the year ended December 31, 2015 Cardinal recognized an impairment of \$4.9 million, principally comprised of land acquisition costs in a non-core area due to decreased commodity prices and no planned activities.

## 7 PROPERTY, PLANT AND EQUIPMENT

	Petroleum and			
	natural gas	(	Corporate	
	assets		assets	Total
Cost				
At January 1, 2015	\$ 914,832	\$	2,830	\$ 917,662
Additions	36,980		111	37,091
Acquisitions, net	176,482		-	176,482
Transfer from E&E	26		-	26
At December 31, 2015	1,128,320		2,941	1,131,261
Additions	27,994		38	28,032
Acquisitions, net	38,024		-	38,024
At December 31, 2016	\$ 1,194,338	\$	2,979	\$ 1,197,317
Accumulated depletion and depreciation				
At January 1, 2015	\$ (73,524)	\$	(294)	\$ (73,818)
Depletion and depreciation	(85,621)		(372)	(85,993)
Impairment	(152,000)		-	(152,000)
At December 31, 2015	(311,145)		(666)	(311,811)
Depletion and depreciation	(82,704)		(337)	(83,041)
Impairment	(7,000)		-	(7,000)
At December 31, 2016	\$ (400,849)	\$	(1,003)	\$ (401,852)
Net book value				
At December 31, 2015	\$ 817,175	\$	2,275	\$ 819,450
At December 31, 2016	\$ 793,489	\$	1,976	\$ 795,465

The calculation of depletion for the year ended December 31, 2016 includes estimated future development costs of \$64.9 million (2015 - \$44.0 million) associated with the development of the Company's proved plus probable reserves. For the year ended December 31, 2016, Cardinal capitalized \$0.6 million of general and administrative (2015 - \$0.7 million) and \$1.3 million (2015 - \$1.1 million) of share-based compensation.

During the year ended December 31, 2016 Cardinal entered into a farm-out agreement. The Farmee committed to drill and complete three vertical test wells in one of Cardinal's non-core operating area with a rolling option to earn additional lands. The three commitment wells were completed prior to the end of the year. In this non-monetary exchange the value of the royalties that Cardinal expects to receive of \$0.7 million was recorded as an acquisition of petroleum and natural gas properties with an after tax gain on the farm-out of \$0.5 million.

## **Impairment**

As at December 31, 2016 Cardinal determined that the carrying value of the Company's Jenner CGU exceeded the recoverable amount and recorded an impairment of \$7.0 million. The impairment recognized was the result of negative technical reserve revisions based on recent production performance and reinforced by market transactions. The recoverable amount for the Jenner CGU as at December 31, 2016 is \$20.8 million (2015 - \$34.1 million). The Company did not identify any further indicators of impairment or impairment reversals for its other CGU's.

The recoverable amount is based on fair value less costs to sell ("FVLCS") using estimated discounted cash flows based on crude oil and natural gas proved plus probable reserves estimated by Cardinal's third party reserve evaluator discounted at 12% (Level 3). The recoverable amount is sensitive to commodity price, discount rate, production volumes, royalty rates, operating costs and future capital expenditures. The discount rate for FVLCS represents the rate a market participant would apply to the cash flows in a market transaction.

The following table outlines forecast benchmark prices and exchange rates used in the Company's impairment test as at December 31, 2016. The forecast commodity prices are based on those used by the Company's external reserve evaluators at December 31, 2016 and are a key assumption in assessing the recoverable amount.

	WTI		wcs		AECO	Exchange rate
	(US \$/bbl)		(CAD \$/bbl)	(CAI	) \$/mmbtu)	(US/CAD)
2017	\$ 55.00	\$	53.12	\$	3.44	0.78
2018	\$ 65.00	\$	61.85	\$	3.27	0.82
2019	\$ 70.00	\$	64.94	\$	3.22	0.85
2020	\$ 71.40	\$	66.93	\$	3.91	0.85
2021	\$ 72.83	\$	68.27	\$	4.00	0.85
Thereafter (inflation percentage and exchange rate)	2.0%		2.0%		2.0%	0.85

A one percent change in the discount rate or a five percent change in the forward price over the life of the reserves would result in changes in impairment for the Jenner CGU of \$0.4 million and \$3.4 million respectively.

The external reserve evaluators also assess many other financial assumptions regarding royalty rates, operating costs and future development costs along with several other non-financial assumptions that affect reserve volumes. Management considered these assumptions for the impairment test at December 31, 2016, however, it should be noted that all estimates are subject to uncertainty.

As at December 31, 2015 Cardinal determined that the carrying value of its Alberta Central, Alberta South and Jenner CGU's exceeded their recoverable amount and recorded an impairment of \$152.0 million. The impairment recognized was the result of sustained declines in forecast forward commodity prices.

## 8 BANK DEBT

The Company's credit facilities consist of a \$130 million syndicated revolving term credit facility and a \$20 million non-syndicated revolving operating term credit facility (the "Facilities") with a borrowing base of \$250 million. The Facilities are available on a revolving basis until May 26, 2017 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 25, 2018.

The available lending limits of the Facilities are reviewed semi-annually based on the syndicate's interpretation of the Company's reserves, future commodity prices and costs. 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 on or before May 26, 2017. Cardinal may request an increase in the Facilities up to the borrowing base.

Advances under the Facilities are available by way of either prime rate loans which bear interest at the banks' prime lending rate plus 0.7 to 2.0% and bankers' acceptances and/or LIBOR loans, which are subject to fees and margins ranging from 1.7 to 3.0%. 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. 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 December 31, 2016. For the year ended December 31, 2016 the effective interest rate on the Company's bank debt was 2.8% (2015 – 3.3%).

## 9 CONVERTIBLE DEBENTURES

	Number of			
	Convertible	Liability	Equity	
	Debentures		Component	Component
Balance at December 31, 2014	-	\$	-	\$ -
Issued	50,000		47,515	2,485
Issue costs	-		(2,224)	(116)
Deferred taxes	-		-	(640)
Accretion	-		202	
Balance at December 31, 2015	50,000	\$	45,493	\$ 1,729
Accretion	-		868	
Balance at December 31, 2016	50,000	\$	46,361	\$ 1,729

The Company has subordinated unsecured convertible debentures (the "convertible debentures") that bear interest at 5.5% payable semi-annually and have a maturity date of December 31, 2020. The convertible debentures are convertible into common shares of the Company at the option of the holder at a conversion price of \$10.50 per common share at any time prior to the maturity date. The convertible debentures are redeemable by the Company after January 1, 2019 subject to certain conditions.

The convertible debentures have been classified as a liability, net of issue costs and net of the fair value of the conversion feature at the date of issue which has been classified as shareholders' equity. The liability component will accrete up to the principal balance at maturity. The accretion of the liability component and interest payable are expensed on the statements of earnings and comprehensive earnings. If the convertible debentures are converted to common shares, a portion of the value of the conversion feature under shareholders' equity and the liability component will be reclassified to shareholders' equity along with the conversion price.

For the year ended December 31, 2016 Cardinal recognized \$2.8 million of interest (2015 - \$0.6 million) and \$0.9 million of accretion (2015 - \$0.2 million) related to the convertible debentures. At December 31, 2016, the fair value of the convertible debentures was \$59.25 million (2015 - \$51.5 million).

## 10 DECOMMISSIONING OBLIGATION

	ı	December 31,	December 31,
		2016	2015
Balance, beginning of year	\$	<b>114,060</b> \$	79,781
Liabilities incurred		129	84
Liabilities acquired		3,789	29,367
Liabilities divested		-	(122)
Change in estimates		(11,661)	-
Decommissioning expenditures		(2,727)	(1,250)
Accretion		8,277	6,200
Balance, end of year		111,867	114,060
Less current portion		(875)	(950)
	\$	<b>110,992</b> \$	113,110

The Company's decommissioning obligation results from its ownership interest in crude oil and natural gas assets including well sites, facilities and gathering systems. At December 31, 2016, the total estimated amount to settle Cardinal's decommissioning obligation was \$309 million (2015 - \$315 million) on an uninflated and undiscounted basis and \$543 million (2015 - \$555 million) on an inflated and undiscounted basis.

The decommissioning obligation was determined by applying an inflation factor of 2.0% (2015 - 2.0%) and discounting the inflated amount using Cardinal's credit-adjusted rate of 7.0% (2015 - 7.0%) over the expected useful life of the underlying assets of 20 to 50 years (2015 - 20 to 35 years). The change in estimates consists of a change in costs of \$3.9 million (2015 - nil) and a change in expected useful life of \$7.7 million (2015 - nil).

## 11 SHARE CAPITAL AND WARRANTS

At December 31, 2016, the Company was authorized to issue an unlimited number of common voting shares without nominal or par value. Holders of common shares are entitled to one vote per share.

	Year ended			Year ended			
	December	r <b>31,</b>	2016	December 31, 2015			
	Number of			Number of			
	shares		Amount	shares		Amount	
Common shares, beginning of year	65,124,209	\$	784,059	56,819,301	\$	711,518	
Issue of common shares	7,150,000		66,853	6,627,500		55,008	
Common shares issued in connection with acquisition	500,000		4,840	669,936		5,821	
Issue of flow-through common shares	350,000		3,224	200,000		3,020	
Settlement of SARs	36,491		318	35,074		315	
Settlement of RAs	667,504		7,219	337,946		3,837	
Issued pursuant to SDP and DRIP	216,799		1,826	307,575		3,713	
Exercise of options and warrants	106,716		562	126,877		827	
Common shares, end of year	74,151,719	\$	868,901	65,124,209	\$	784,059	
Cummulative share issue costs, net of tax	-		(29,275)	-		(27,061)	
Total shareholders' capital, end of year	74,151,719	\$	839,626	65,124,209	\$	756,998	

#### Warrants

In 2012 Cardinal issued 2,833,333 units consisting of one common share and one half warrant (1,416,654 warrants) at \$3.00 per unit. The warrants vest equally over five years, with the first vesting date on December 31, 2012 and on December 31 of each year thereafter and expire on July 30, 2017. The warrants are exercisable at \$3.00 per warrant subject to an adjustment for dividends declared which reduced the exercise price at December 31, 2016 to \$2.56 and increased the number of warrants then outstanding (see note 13).

## Flow-through shares

On May 25, 2016 and May 27, 2016, Cardinal issued an aggregate of 350,000 flow-through common shares pursuant to a private placement at \$11.10 per common share for gross proceeds of \$3.9 million. The Company recorded a deferred liability for the related premium in the amount of \$0.7 million. Insiders subscribed for 103,594 of the common shares issued. The Company is committed to incur qualifying Canadian Exploration Expenditures prior to December 31, 2017 (see note 17).

On May 25, 2015, Cardinal issued 200,000 flow-through common shares pursuant to a private placement at \$19.00 per common share for gross proceeds of \$3.8 million. The Company recorded a deferred liability for the related premium in the amount of \$0.8 million. The Company incurred the qualifying Canadian Exploration Expenditures prior to December 31, 2016.

#### Loss per share

	2016	2015
Loss for the year	\$ <b>(87,322)</b> \$	(95,898)
Weighted average number of common shares		
- Basic and diluted	70,096,881	58,852,044

For the year ended December 31, 2016, 2,688,723 RAs (2015 - 1,453,196), 4,761,905 (\$50.0 million at \$10.50) convertible debentures (2015 - 4,761,905), 727,800 warrants (2015 - 792,120), 184,726 options (2015 - 194,727), and nil SARs (2015 - 30,996) were excluded from the calculation of diluted loss per share as their effect was anti-dilutive.

## 12 DIVIDENDS

During the year ended December 31, 2016, \$29.6 million of dividends (\$0.42 per common share) were declared of which \$25.5 million was paid in cash, \$2.6 million was recognized as a liability at December 31, 2016 and \$1.5 million was settled on the issuance of 168,231 common shares pursuant to the Company's DRIP and SDP. The dividend payable was settled on **January 15, 2017** with cash of \$2.3 million and \$0.3 million was recognized on the issuance of 29,448 Cardinal common shares pursuant to the DRIP and SDP.

The Company has a dividend reinvestment plan ("DRIP") and a stock dividend program ("SDP") which enable shareholders to receive dividends in common shares rather than cash.

## 13 SHARE-BASED COMPENSATION

The maximum number of common shares issuable under the Company's stock option plan and restricted bonus award plan, in aggregate, cannot exceed five percent of the outstanding common shares. The Company's common shares traded at a weighted average share price of \$8.68 (2015 - \$12.16) for the year ended December 31, 2016.

## **Stock Options**

The Company has a stock option plan that entitles officers, directors and employees to purchase common shares in the Company. Stock options are granted at the market price of the common shares at the date of grant and vest equally over three years with each tranche expiring three years following the vesting date. The following tables summarize information about stock options outstanding at December 31, 2016:

		Weighted
	Number of	average
	stock options	exercise price
Balance at December 31, 2014	225,836 \$	7.54
Exercised	(31,109) \$	6.99
Balance at December 31, 2015	194,727 \$	7.62
Exercised	(9,445) \$	6.75
Forfeited	(556) \$	8.25
Balance at December 31, 2016	184,726 \$	7.66

		ns Outstanding		0	ptic	ons Exercisable			
				Weighted average	Weighted average			Weighted average	Weighted average
Exe	ercise price per share	Number of options		exercise price	remaining life (years)	Number of options		exercise price	remaining life (years)
\$	6.75	128,336	\$	6.75	1.6	128,336	\$	6.75	1.6
\$	8.25	18,890	\$	8.25	1.8	18,890	\$	8.25	1.8
\$	10.50	37,500	\$	10.50	1.8	37,500	\$	10.50	1.8
		184,726	\$	7.66	1.6	184,726	\$	7.66	1.6

#### Warrants

	Number of
	Warrants
Balance at December 31, 2014	834,690
Exercised	(90,888)
Adjustment for dividends declared	48,318_
Balance at December 31, 2015	792,120
Exercised	(97,271)
Adjustment for dividends declared	32,951_
Balance at December 31, 2016	727,800

At December 31, 2016, 727,800 warrants (adjusted for dividends) were exercisable at a price of \$2.56 per warrant and the weighted average remaining life of the warrants was 0.6 years.

## Restricted Bonus Awards ("RAs")

The Company has a restricted bonus award plan whereby awards may be granted to officers, directors and employees. Awards granted according to the plan vest equally over three years from the date of grant and expire on December 15<sup>th</sup> of the third year following the year in which the award was granted. Awards are adjusted for dividends declared and are to be settled with either cash, common shares or a combination thereof at the Company's discretion.

	Number of RAs
Balance at December 31, 2014	965,593
Granted	850,507
Settled	(337,946)
Adjustment for dividends declared	17,883
Forfeited	(42,841)
Balance at December 31, 2015	1,453,196
Granted	1,882,960
Settled	(667,504)
Adjustment for dividends declared	81,649
Forfeited	(61,578)
Balance at December 31, 2016	2,688,723

The fair value of the RAs was determined based on the value of the Company's common shares at the grant date. The weighted average market price of the Company's common shares used to value the RAs granted was \$6.87 (2015 - \$12.71).

## Stock Appreciation Rights ("SARs")

On November 1, 2013, the Company granted an aggregate of 102,000 SARs to certain directors, officers and employees of the Company. The SARs were standalone grants and were not issued under a formal stock appreciation rights plan. Each SAR entitles the holder to receive one common share for each SAR granted including an adjustment for dividends declared. SARs granted vest equally over three years from the grant date.

The fair value of the SARs was determined based on the value of the Company's common shares of \$10.50 per share at the grant date. During the year ended December 31, 2016, 667 SARs were forfeited (2015 – nil) and 30,329 SARs (excluding the adjustment for dividends declared) were settled (2015 – 30,008) for a total of nil (2015 – 30,996) SARs outstanding at December 31, 2016.

## **Share-based Compensation**

Share-based compensation for the year ended December 31, 2016 of \$10.4 million was expensed (2015 - \$9.2 million) and \$1.3 million (2015 - \$1.1 million) was capitalized.

## **14** DEFERRED TAXES

Reconciliation of effective tax reduction:

Years ended December 31	2016	2015
Loss before deferred tax	\$ <b>(115,799)</b> \$	(144,098)
Expected tax rate	27%	26%
Expected deferred taxes	(31,266)	(37,465)
Non-taxable gains on acquisitions	(130)	(8,528)
Share-based compensation	71	198
Flow-through shares, net	551	81
Change in unrecognized tax benefits	2,888	1,252
Change in statutory tax rates and other	(591)	(3,738)
Deferred tax	\$ <b>(28,477)</b> \$	(48,200)

The following tables provide a continuity of the deferred tax asset (liability):

	Balance January 1, 2015	Recognized in loss	Equity	Other <sup>(1)</sup>	Balance December 31, 2015
PP&E and E&E	\$ (44,612) \$	31,744	\$ -	\$ (1,272)	\$ (14,140)
Non-capital losses	17,630	3,755	-	48,009	69,394
Decommissioning obligation	19,948	10,502	-	346	30,796
Share issue costs	5,953	(1,158)	678	486	5,959
Deductible restricted bonus awards	1,410	325	-	-	1,735
Convertible debentures	-	(577)	(640)	-	(1,217)
Debt issue costs and other	-	912	-	186	1,098
Unrealized gain on power and					
commodity contracts	(10,149)	2,697	-	-	(7,452)
Total	\$ (9,820) \$	48,200	\$ 38	\$ 47,755	\$ 86,173

	Balance January 1,	Recognized		De	Balance cember 31,
	2016	inloss	Equity	Other <sup>(1)</sup>	2016
PP&E and E&E	\$ (14,140) \$	(5,188) \$	; - \$	(1,433) \$	(20,761)
Non-capital losses	69,394	18,181	-	-	87,575
Decommissioning obligation	30,796	(592)	-	-	30,204
Share issue costs	5,959	(2,198)	820	-	4,581
Deductible restricted bonus awards	1,735	2,063	1,043	-	4,841
Convertible debentures	(1,217)	234	-	-	(983)
Debt issue costs and other	1,098	(214)	-	-	884
Unrealized gain on power and					
commodity contracts	(7,452)	16,191	-	-	8,739
Total	\$ 86,173 \$	28,477 \$	1,863 \$	(1,433) \$	115,080

<sup>1)</sup> Includes the deferred tax on the corporate acquisitions of Pinecrest and PrivateCo (see note 5), the farm-out (see note 7) and the premium reversals on flow-through shares.

The approximate amount of tax pools available to Cardinal as at December 31, 2016 is \$1.2 billion (2015 - \$1.1 billion). The estimate of tax pools includes non-capital losses ("NCLs") of approximately \$324.4 million (2015 - \$257.0 million) that can be used to offset taxable income in future periods which expire as follows:

Total	\$ 324,350
2036	67,329
2035	12,743
2034	668
2033	46,540
2032	69,064
2031	53,437
2030	2,946
2029	32,996
2028	32,789
2027	\$ 5,838
NCL's by expiry	

A deferred tax asset was not recognized in respect of temporary differences of \$101.8 million (2015 – \$91.1 million) as there is not sufficient certainty regarding future utilization.

## 15 FINANCIAL RISK MANAGEMENT

Cardinal's financial assets and liabilities consist of trade and other receivables, trade and other payables, risk management assets and liabilities, dividends payable, bank debt and convertible debentures. Risk management assets and liabilities arise from the use of derivative financial instruments.

The Company classifies fair value according to the following fair value hierarchy based on the amount of observable inputs used to value the instrument:

- **Level 1** Fair value is based on unadjusted quoted prices in active markets for identical assets or liabilities as of the reporting date.
- **Level 2** Fair value is based on inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (as prices) or indirectly (derived from prices).
- Level 3 Fair value is based on inputs for the asset or liability that are not based on observable market data.

Derivatives are recorded on the balance sheet at fair value at each reporting period with the change in fair value being recognized as an unrealized gain or loss in the statement of earnings or loss. The fair value of forward contracts and swaps is determined by discounting the difference between the contracted prices and published forward price curves as at the balance sheet date, using the remaining contracted volumes and a credit adjusted interest rate. The fair value of options and collars is based on option models that use published information with respect to volatility, prices and interest rates.

The Company does not apply hedge accounting for these contracts. The Company's production is usually sold using "spot" or near term contracts, with prices fixed at the time of transfer of custody or on the basis of a monthly average market price. However, the Company may give consideration in certain circumstances to the appropriateness of entering into long term, fixed price marketing contracts. The Company does not enter into commodity contracts other than to meet the Company's expected sale requirements.

As at December 31, 2016 and 2015, the only assets or liabilities measured at fair value were the fair value of financial instruments which are classified as level 2 and the convertible debentures which are classified as Level 1.

#### Carrying amount and fair value of financial assets and liabilities

Trade and other receivables are classified as financial assets at amortized cost and are reported at amortized cost. Trade and other payables, dividends payable, liability component of the convertible debentures and bank debt are classified as financial liabilities at amortized cost and are reported at amortized cost.

The fair values of trade and other receivables, trade and other payables and dividends payable approximate their carrying amount due to the short-term maturity of these instruments. The fair value of bank debt approximates the carrying amount due to the floating rate of interest and the margin charged by the syndicate is indicative of current credit spreads. The fair value of convertible debentures was determined based on the trading value on the Toronto Stock Exchange at the reporting date.

#### Risk management

Cardinal is exposed to normal market risks inherent in the oil and natural gas business, including, but not limited to, commodity price risk, foreign currency rate risk, credit risk, liquidity risk and interest rate risk. The Company seeks to mitigate these risks through various business processes and management controls and from time to time by using various derivative financial instruments and physical delivery sales contracts.

## Commodity price risk

The Company is exposed to commodity price risk on petroleum and natural gas sales as well as power on electricity consumption. Commodity prices for crude oil and natural gas are impacted by not only the relationship between the Canadian and United States dollar, but also by world economic events that dictate the levels of supply and demand.

At December 31, 2016 Cardinal had the following commodity and power financial derivative contracts outstanding:

		Average	Avera	ige
Type of Instrument	Remaining Term	Quantity	Strike Pr	ice Fair Value
CAD WTI Swap	January 1, 2017 - June 30, 2017	250 bbl/d	\$ 79.0	00 194
CAD WTI Swap	January 1, 2017 - June 30, 2017	2,000 bbl/d	\$ 63.2	25 (4,136)
CAD WTI Swap	January 1, 2017 - July 31, 2017	500 bbl/d	\$ 54.0	00 (2,210)
CAD WTI Swap	January 1, 2017 - December 31, 2017	500 bbl/d	\$ 78.6	50 565
CAD WTI Swap	January 1, 2017 - December 31, 2017	2,500 bbl/d	\$ 59.9	94 (14,123)
CAD WTI Swap	January 1, 2017 - June 30, 2018	500 bbl/d	\$ 57.5	(4,885)
CAD WTI Swap	July 1, 2017 - June 30, 2018	1,000 bbl/d	\$ 66.2	25 (3,508)
CAD WTI Swap	January 1, 2018 - December 31, 2018	500 bbl/d	\$ 69.7	75 (993)
CAD WTI Call	January 1, 2018 - December 31, 2018 <sup>(1)</sup>	1,000 bbl/d	\$ 70.0	00 (4,401)
CAD WTI Collar	July 1, 2017 - June 30, 2018	1,500 bbl/d	\$ 65.6	67 (1,472)
			\$ 77.0	00
WCS Differential Swap	January 1, 2017 - August 31, 2017	1,000 bbl/d	\$ 18.5	50 674
WCS Differential Swap	January 1, 2017 - September 30, 2017	1,000 bbl/d	\$ 18.0	00 898
WCS Differential Swap	January 1, 2017 - December 31, 2017	3,000 bbl/d	\$ 18.6	57 2,970
AECO Swap	January 1, 2017 - June 30, 2017	1,000 gj/d	\$ 2.0	00 (225)
AECO Swap	January 1, 2017 - December 31, 2017	1,500 gj/d	\$ 2.4	40 (465)
AECO Swap	January 1, 2017 - April 30, 2018	1,000 gj/d	\$ 2.2	25 (495)
AECO Swap	January 1, 2017 - December 31, 2018	2,000 gj/d	\$ 2.6	65 (578)
AECO Swap	January 1, 2018 - December 31, 2018	1,000 gj/d	\$ 2.6	67 (60)
AECO Collar	January 1, 2017 - December 31, 2017	1,000 gj/d	\$ 2.8	30 (92)
			\$ 3.3	10
				(32,342)
Power Swap	January 1, 2017 - December 31, 2017	1.00 MW/hr	\$ 33.5	50 (25)
				(25)

(1) The CAD WTI call option is determined by the counterparty referencing the floating rate in CAD each month and will be settled monthly.

Operating expenses for the year ended December 31, 2016 include a realized loss on power contracts of \$1.9 million (2015 – \$1.1 million).

Cardinal limits its credit risk by executing counterparty risk procedures which include transacting only with members of the syndicate for our credit facilities or institutions with high credit ratings and by obtaining financial security in certain circumstances. Based on December 31, 2016 commodity prices, a \$1 per barrel change in the price of crude oil would have changed the unrealized loss by \$3.0 million (2015 – \$1.7 million) and a \$0.10 per gigajoule change in the price of natural gas would have changed the unrealized loss by \$0.1 million (2015 - \$nil).

#### Currency risk

Prices for oil are determined in global markets and are generally denominated in United States dollars. Natural gas prices obtained by the Company are influenced by North American supply and demand. The exchange rate effect is not quantified but generally a decrease in the value of the \$CAD as compared to the \$US will increase the prices received by the Company for its petroleum and natural gas revenue.

#### Credit risk

Credit risk is the risk of financial loss to the Company if a customer or counterparty to a financial instrument fails to meet its contractual obligations, and arises principally from Cardinal's receivables from petroleum and natural gas marketers, who comprised approximately 76% of the balance at December 31, 2016 (2015 – 54%), and joint venture partners. As at December 31, 2016, the Company's trade and other receivables balance was \$27.6 million and \$0.9 million was outstanding for greater than 90 days.

Receivables from petroleum and natural gas marketers are normally collected on the 25th day of the month following production and Cardinal has not experienced any material collection issues with its petroleum and natural gas marketers. The Company does not have an allowance for doubtful accounts. One of Cardinal's marketers comprised 30% of the revenue received for the year ended December 31, 2016 (2015 – 38%).

Cash and cash equivalents consist of cash bank balances and short-term deposits maturing in less than 90 days. The carrying amount of cash and cash equivalents, when outstanding, fair value of financial instruments assets, and trade and other receivables represent the maximum credit exposure.

#### Liquidity risk

Liquidity risk is the risk that the Company will not be able to meet its financial obligations as they come due. The financial liabilities on the balance sheet consist of trade and other payables, fair value of financial instruments, bank debt, and convertible debentures. Trade and other payables are considered due within one year. Bank debt (see note 8) and the fair value of financial instruments are considered due between one and two years and the convertible debentures are due in 2020 (see note 9). The Company anticipates it will continue to have adequate liquidity to fund its financial liabilities. The Company has had no defaults or breaches on its financial liabilities.

#### Interest rate risk

Interest rate risk is the risk that future cash flows will fluctuate as a result of changes in market interest rates. The interest charged on outstanding bank debt fluctuates with the interest rates posted by the lender. Had the interest rate been 25 basis points higher (or lower) throughout the year ended December 31, 2016, the loss before tax would have been affected by approximately \$0.1 million (2015 - \$0.1 million) based on the average bank debt outstanding.

## **16 CAPITAL MANAGEMENT**

The Company's capital structure includes shareholders' equity, bank debt, convertible debentures, the unused portion of the credit facilities and working capital (excluding the fair value of commodity contracts and the current portion of the decommissioning obligation).

	December 31,	December 31,
	2016	2015
Shareholders' equity	651,080	680,446
Bank debt	61,272	91,817
Convertible debentures (liability and equity component)	48,090	47,222
Undrawn component of bank credit facility	88,728	58,183
Working capital deficiency	(9,028)	(4,368)

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 expenditures program and the ratio of net debt to adjusted funds flow. This ratio is calculated as net debt, defined as bank debt plus the principal amount of convertible debentures plus working capital deficiency or minus working capital surplus (adjusted for the fair value of financial instruments and the current portion of the decommissioning obligation), divided by cash flow from operating activities before changes in non-cash working capital and decommissioning obligation expenditures for the prior 12 month period. Net debt and adjusted funds flow are non-GAAP measures.

In order 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 syndicate, the level of credit that may be attainable due to increases in petroleum and natural gas reserves and new common equity if available on favorable terms. The Company prepares an annual capital expenditure budget, which is monitored quarterly and updated as necessary.

Management's strategy is to maintain a net debt to adjusted funds flow ratio that is considered reasonable and prudent in the circumstances. Cardinal monitors this ratio and endeavors to maintain it at or below 2 to 1 in a normalized commodity price environment. This ratio may increase at certain times as a result of acquisitions or low commodity prices. As shown below, as at December 31, 2016, the Company's ratio of net debt to adjusted funds flow was at the top of its targeted range at 2.0 to 1 (2015 - 1.5 to 1) due to a reduction in adjusted funds flow associated with lower realized gains on commodity contracts in 2016 and the acquisition that closed on December 6, 2016.

	Twelve months ended				
		Dec 31, 2016		Dec 31, 2015	
Bank debt	\$	61,272	\$	91,817	
Principal amount of Convertible Debentures		50,000		50,000	
Working capital deficiency (surplus)		9,028		4,368	
Net debt	\$	120,300	\$	146,185	
Cash provided from operating activities	\$	60,962	\$	86,735	
Change in non-cash working capital		(4 <i>,</i> 585)		6,661	
Funds flow	\$	56,377	\$	93,396	
Decommissioning obligation expenditures		2,727		1,250	
Adjusted funds flow		59,104		94,646	
Net debt to adjusted funds flow		2.0		1.5	

The only change in Cardinal's approach to capital management during the year ended December 31, 2016 was to use the prior twelve months adjusted funds flow rather than the last quarter annualized adjusted funds flow to calculate the net debt to adjusted funds flow ratio. This change was made to reduce the volatility in the calculation from intra-period changes in commodity prices and differentials.

# 17 COMMITMENTS & CONTRACTUAL OBLIGATIONS

At December 31, 2016, the Company had contractual obligations and commitments as follows:

	2017	2018	2019	2020	2021	Т	<u>hereafter</u>
Head office lease	1,101	1,870	1,870	1,870	1,909		3,819
Field office lease	130	130	130	22	-		-
Trade and other payables	35,267	-	-	-	-		-
Dividends payable	2,595	-	-	-	-		-
Bank debt	-	61,272	-	-	-		-
Convertible debentures	2,750	2,750	2,750	52,750	-		
	\$ 41,843	\$ 66,022	\$ 4,750	\$ 54,642	\$ 1,909	\$	3,819

Cardinal is also committed to incur qualifying Canadian Exploration Expense of \$0.8 million prior to December 31, 2017.

# 18 FINANCE

Years ended December 31	2016	2015	
Interest - bank debt	\$ <b>1,587</b> \$	1,897	
Other finance expenses, net	567	515	
Interest - convertible debentures	2,750	648	
Accretion of convertible debentures	868	202	
Accretion of decommissioning obligation	8,277	6,200	
Finance expense	\$ <b>14,049</b> \$	9,462	

# 19 SUPPLEMENTAL CASH FLOW INFORMATION

Changes in non-cash working capital is comprised of:

Years ended December 31	2016	2015
Source (use) of cash		
Trade and other receivables	\$ (2,197)	\$ (4,923)
Deposits and prepaid expenses	6	(124)
Trade and other payables	8,815	2,440
Dividends payable	(1,964)	582
	\$ 4,660	\$ (2,025)
Allocated to operating activities	\$ 4,585	\$ (6,661)
Allocated to investing activities	671	3,989
Allocated to financing activities	(596)	647
	\$ 4,660	\$ (2,025)
Interest paid	\$ 2,958	\$ 2,545
Interest received	\$ 1	\$ 12

## **20** PERSONNEL EXPENSES

Cardinal's key management personnel consist of its directors and executive officers. In addition to director fees and salaries, bonuses and short-term benefits paid to the directors and executive officers, respectively, directors and executive officers participate in the share based compensation plans detailed in Note 13. The compensation relating to key management personnel for the year recorded as general and administrative expenses was \$1.5 million (2015 - \$1.5 million) and share based compensation costs were \$5.9 million (2015 - \$5.9 million).

## **21** SUBSEQUENT EVENTS

On **January 9, 2017**, 980,178 RAs were issued to Cardinal's officers, directors and employees. The market value of Cardinal's common shares at the grant date was \$10.50. During the period from January 1, 2017 to March 13, 2017 1,109,451 RA's (before the dividend adjustment) were settled.

On **January 13, 2017**, the Company confirmed that a dividend of \$0.035 per common share would be paid on February 15, 2017 to shareholders of record on January 31, 2017. The total amount of dividends declared at January 31, 2017 was \$2.6 million, of which \$2.4 million was paid in cash and the remaining balance participated in the Company's DRIP and SDP programs.

On **January 23, 2017**, the Company entered into a definitive agreement to acquire certain petroleum and natural gas properties (the "Acquisition") adjacent to Cardinal's Mitsue properties. Total consideration to be provided consists of approximately 4 million of the Company's common shares and \$4 million cash, before closing adjustments.

On **February 14, 2017**, the Company confirmed that a dividend of \$0.035 per common share would be paid on March 15, 2017 to shareholders of record on February 28, 2017. The total amount of dividends declared at February 28, 2017 was \$2.6 million, of which \$2.5 million was paid in cash and the remaining balance participated in the Company's DRIP and SDP programs.

On **March 13, 2017**, the Company confirmed that a dividend of \$0.035 per common share will be paid on April 17, 2017 to shareholders of record on March 31, 2017.