



**MANAGEMENT'S DISCUSSION & ANALYSIS**

**FOR THE THREE AND NINE MONTHS ENDED SEPTEMBER 30, 2017**



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*(Unless otherwise indicated, all dollar amounts are in United States dollars ("USD"))*

*This Management's Discussion and Analysis of financial condition and results of operations ("MD&A") is based on information available to September 30, 2017 and should be read in conjunction with Madalena Energy Inc.'s ("Madalena" or the "Company") unaudited condensed interim consolidated financial statements for the three and nine months ended September 30, 2017 and the accompanying notes as well as the audited consolidated financial statements for the year ended December 31, 2016 and the accompanying notes. This MD&A contains forward-looking information about the Company's current expectations, estimates, projections and assumptions. See the Advisory for information on the risk factors that could cause actual results to differ materially and the assumptions underlying the Company's forward-looking information. Madalena's Management prepared the MD&A, while the Audit Committee of the Madalena Board of Directors (the "Board") reviewed and recommended its approval by the Board. Additional information relevant to the Company's activities contained in its continuous disclosure documents, including quarterly condensed interim consolidated financial statements and the Annual Information Form ("AIF"), is available on SEDAR at [www.sedar.com](http://www.sedar.com) and on the Company's website at [www.madalenaenergy.com](http://www.madalenaenergy.com).*

**Basis of Presentation**

*This MD&A and the unaudited condensed interim consolidated financial statements and comparative information have been prepared in accordance with International Financial Reporting Standards ("IFRS" or "GAAP") as issued by the International Accounting Standards Board applying IAS 34. Unless otherwise indicated, all dollar amounts are in United States dollars ("USD"). Sales volumes are presented on a before royalties basis.*

**Non-GAAP Measures**

*Certain financial measures in this document do not have a standardized meaning as prescribed by IFRS, such as funds flow from (used in) operations and netbacks and therefore are considered non-GAAP measures. These measures may not be comparable to similar measures presented by other issuers. These measures have been described and presented in order to provide shareholders and potential investors with additional measures for analyzing the Company's ability to generate funds to finance its operations and information regarding its liquidity. The additional information should not be considered in isolation or as a substitute for measures prepared in accordance with IFRS. The definition and/or reconciliation of each non-GAAP measure is presented in the Netbacks and Reconciliation of Cash Flow from (used in) Operating Activities and Funds Flow from (used in) Continuing Operations sections of this MD&A.*

*Funds flow from (used in) continuing operations per share is calculated using the same basic and diluted weighted average number of shares for the period, consistent with the calculations of loss per share.*

*The term barrels of oil equivalent ("boe") may be misleading, particularly if used in isolation. Per boe amounts have been calculated using a conversion rate of six thousand cubic feet of natural gas to one barrel of oil. This equivalence is based on an energy equivalency conversion method primarily applicable at the burner tip and does not represent a value equivalency at the wellhead.*



## Introduction

Madalena is an independent, Canadian headquartered, Argentine focused upstream oil and gas company with operations in four provinces of Argentina where it is focused on delineation of unconventional resources in the VacaMuerta shale, Lower Agrío shale and Loma Montosa tight oil plays. The Company is implementing horizontal drilling and completions technology to develop both its conventional and unconventional resource plays.

Madalena trades on the TSX Venture Exchange under the symbol MVN and on the OTCQX under the symbol MDLNF. Madalena's Argentine upstream oil and gas operations as well as the corporate segment are discussed in the "Continuing Argentine Operations and Corporate Segments" section of this MD&A. Unless specifically noted, all current and comparative reporting periods' operating and financial disclosures and discussion are in reference to the continuing Argentine operations and corporate segments. As discussed elsewhere in the MD&A, the Company disposed of its Canadian operations during 2016, which has been reported as discontinued operations.

## Outlook

Madalena has successfully completed its strategic alternatives process which it initiated in June 2016.

On May 8, 2017, Madalena entered into a series of agreements (the "Transactions") with Hispania Petroleum S.A., ("Hispania") a private, family-owned Spanish energy company, which provide for a package of debt and mezzanine financing of up to \$23 million which, are expected to alleviate Madalena's liquidity challenges through a working capital loan of up to \$6.5 million (the "Working Capital Loan") and permits the Company access to growth capital for drilling and investment activities (the "Capex Loan") of up to \$16.5 million.

Jose David Peñafiel, Hispania's CEO, has been appointed CEO of Madalena and Alejandro Augusto Peñafiel has been appointed the interim CFO of Madalena, with both joining Madalena's Board of Directors. In order for new management to successfully transition and streamline operations, the companies have entered into a services agreement (the "Services Agreement") whereby Hispania's personnel in Argentina and elsewhere will be made available to Madalena.

On June 28, 2017, Madalena announced the appointment of Mr. Ezequiel Martinez Ariet as permanent Chief Financial Officer of the Company, effective as of July 1, 2017. Mr. Martinez replaces Madalena Director Alejandro Augusto Penafiel, who assumed an Interim CFO role on May 31, 2017, following the transfer of executive management functions from Canada to Argentina.

On September 13, 2017, the shareholders of the Company passed an ordinary resolution approving KD Energy International Capital Limited as a new "Control Person" (as such term is defined in the TSX Venture Exchange Corporate Finance Manual) of the Company. In connection therewith, the convertible loan agreement dated May 8, 2017 for an amount up to USD \$16.5 million is now available to be drawn upon by the Company in accordance with the terms thereof.

This transaction provides Madalena with sophisticated leadership and committed growth capital. With leadership concentrated in Argentina, the Company can implement cost controls and can achieve meaningful efficiencies. This marks a new chapter for Madalena, with a renewed focus on operational efficiency and growth.

## Other 2017 Highlights

- Pursuant to the Pan American Energy LLC, Sucursal Argentina ("PAE") transaction in Q1 2017, the 2017 work program at Coirón Amargo – Sur Este ("CASE"), pursuant to which the Company has a maximum of \$5.6 million carry and has been carried for \$3.6 million in capital costs in the CAS.x-15 well. The CAS.x-15 well was successfully re-entered and drilled horizontally for approximately 1,000 metres in the Vaca Muerta unconventional oil resource play at a vertical depth of approximately 3,200 metres; The well tested an average of 430 barrels of oil per day through 3mm choke during the first 3 weeks of production. The results of the last production test on CAS.X-15 yielded 125 boe per day through 3mm choke with 680



psi; Cum Oil Production of 29,200 barrels. Preliminary interpretations of the well results indicate that the well has stabilized at approximately 125 boe per day without artificial lift

- Argentine oil prices are forecast to converge to international Brent pricing over the coming months;
- On September 13, 2017, Messrs. Ruben Etcheverry, Ralph Gillcrist and Leonardo Madcur have each joined the board of directors of the Company (the "Board") as independent directors. The aforementioned directors have replaced Messrs. Keith MacDonald, Jay Reid and Ving Woo who each elected not to stand for reelection to the Board.

### Going Concern and Capital Commitments

As at September 30, 2017, the Company has incurred year-to-date loss of \$14 million, had working capital of approximately \$0.4 million and has significant future capital commitments to develop its properties. It is currently anticipated that currently available resources in addition to forecasted cash flow from operating activities will not be sufficient to fund the 2017 and 2018 anticipated capital commitments. As a result, the Company continues to include a note of going concern uncertainty in the September 30, 2017 condensed interim consolidated financial statements.

### Foreign Exchange Fluctuations

The table below provides various exchange rates that illustrate the quarterly foreign exchange fluctuations between the USD, the Argentine Peso ("ARS"), and the Canadian dollar ("CAD"). The table illustrates the impact of both the ARS and CAD changes relative to the USD in the three and nine months ended September 30, 2017 compared to the three and nine months ended September 30, 2016. Foreign exchange changes in ARS impact the unrealized foreign exchange gains and losses recorded in the condensed interim consolidated statements of loss. Foreign exchange changes in CAD are reflected through the foreign currency translation adjustment in accumulated other comprehensive loss, as shown in shareholders' equity and on the condensed interim consolidated statements of comprehensive loss.

USD	Three months ended			Nine months ended		
	September 30		%	September 30		%
	2017	2016	Change <sup>(1)</sup>	2017	2016	Change <sup>(1)</sup>
Average CAD to USD	<b>0.798</b>	0.767	<b>-4,2%</b>	<b>0.765</b>	0.757	<b>-1,1%</b>
Average ARS to USD	<b>0.058</b>	0.067	<b>13,5%</b>	<b>0.062</b>	0.069	<b>10,5%</b>
Period end CAD to USD	<b>0.801</b>	0.762	<b>-5,1%</b>	<b>0.801</b>	0.762	<b>-5,1%</b>
Period end ARS to USD	<b>0.058</b>	0.065	<b>11,6%</b>	<b>0.058</b>	0.065	<b>11,6%</b>

(1) Differences calculated from the numbers within the table are due to rounding.

### Continuing Argentine Operations and Corporate Segments

#### Sales Volumes

	Three months ended		Nine months ended	
	September 30		September 30	
	2017	2016	2017	2016
Crude oil and NGLs (bbls/d)	<b>1,930</b>	1,853	<b>1,849</b>	2,114
Natural gas (mcf/d)	<b>1,824</b>	2,368	<b>1,959</b>	2,659
Total daily sales (boe/d)	<b>2,234</b>	2,247	<b>2,176</b>	2,557
% oil	<b>86%</b>	82%	<b>85%</b>	83%



Madalena’s primary producing concessions are at Surubi, Puesto Morales and Coirón Amargo-Norte (“CA-Norte”). Other producing concessions include El Chivil, El Vinalar and Palmar Largo. All concessions produce oil and Puesto Morales and CA-Norte also produce natural gas. Approximately 88% of Madalena’s current production comes from Surubi, Puesto Morales, and CA-Norte.

Crude oil and NGL sales volumes for the three months ended September 30, 2017 (“the Quarter” or “Q3-2017”) increased to 1,930 bbls/d from 1,853 bbls/d for the three months ended September 30, 2016 (“Q3-2016”). The change compared to Q3-2016, can be attributed to the re-entry CAS.x-15 well starting production at Coirón Amargo – Sur Este (“CASE”), 111 bbls/d. Natural gas sales volumes for the Quarter decreased to 1,824 mcf/d from 2,368 mcf/d for Q3-2016 due to natural production declines at Puesto Morales and CA-Norte.

For the nine months ended September 30, 2017 (“YTD”), crude oil and NGL sales volumes decreased to 1,849 boe/d from 2,114 boe/d for the nine months ended September 30, 2016 (“YTD-2016”) primary due to natural production declines at all producing concessions. Natural gas sales volumes for the Quarter of 1,959 mcf/d, decreased compared to 2,659 mcf/d due to natural production declines at Puesto Morales and CA-Norte.

Madalena expects Q4-2017 sales volumes to average approximately 1,810 bbls/d (100% oil).

#### Average Realized Prices

USD	Three months ended September 30		Nine months ended September 30	
	2017	2016	2017	2016
Crude oil and NGLs - \$/bbl	<b>49.85</b>	61.65	<b>52.55</b>	62.10
Natural gas - \$/mcf	<b>6.20</b>	5.60	<b>5.71</b>	4.99
Total - \$/boe	<b>48.14</b>	56.72	<b>49.81</b>	56.53

The Government of Argentina sets the benchmark (Medanito) price for oil. The Medanito crude quality oil posting averaged \$55/bbl for the Quarter (Q3-2016 - \$67.50/bbl). In early January, the majority of producers and refiners in Argentina, at the request of the government, signed a 2017 Medanito crude oil pricing agreement (the “Agreement”) allowing for the expected convergence with international Brent pricing over the coming months. The 2017 Medanito pricing is expected to decline from \$59.40/bbl in January 2017 to \$55.00/bbl from July 2017 to December 2017. Should international Brent pricing be reached and remain higher than \$1.00 above the monthly Medanito floor price for 10 consecutive days, the Agreement will be suspended and international Brent pricing adopted. Should international Brent pricing fall below \$45.00 for 10 consecutive days and/or the ARS exchange rate exceed or fall below the range of 15.5 to 20.0 ARS:USD for 10 consecutive days, the Agreement will be reviewed.

The average price the Company received for oil for the Quarter was \$49.85/bbl, lower than the \$61.65/bbl realized in Q3-2016 mainly as a result of the lower Medanito pricing.

The average price received for oil YTD was \$52.55/bbl, lower than the \$62.10/bbl realized YTD-2016 for the same reasons as noted for the Quarter.

Gas prices in Argentina are subject to seasonal demand and are negotiated between the producer and the buyer. For the period May to September 2017, which is the Argentine winter, the price has been set at \$5.40/mmbtu. Winter prices in 2016 were \$5.35/mmbtu. Summer pricing for the period from October 2017 to April 2018 has been set at \$4.31/mmbtu (October 2016 - April 2017 - \$4.30/mmbtu).

The average total price received for the Quarter was \$48.14/boe, lower than the \$56.72/boe realized in Q3-2016 mainly as a result of the Medanito oil price reduction.



The Company anticipates Argentina prices to average approximately \$49.96 per boe during Q4-2017.

#### Oil and Natural Gas Revenue

USD 000s, except boe	Three months ended September 30		Nine months ended September 30	
	2017	2016	2017	2016
Crude oil	8,852	10,508	26,531	35,975
Natural gas	1,041	1,220	3,056	3,634
	9,893	11,728	29,587	39,609
\$/boe	48.14	56.72	49.81	56.53

Oil and gas revenue was \$9.9 million for the Quarter compared to \$11.7 million for Q3-2016, a decline of 16% due to a 1% decline in sales volumes and a 15% decrease in prices received per boe.

YTD oil and gas revenues decreased to \$29.6 million compared to \$39.6 million YTD-2016, a decline of 26% due to a 14% decline in sales volumes and a 12% decrease in prices received per boe.

#### Royalties and Turnover taxes

USD 000s, except boe	Three months ended September 30		Nine months ended September 30	
	2017	2016	2017	2016
Royalties and Turnover taxes	1,667	1,938	4,974	6,254
As % of revenue	17%	17%	17%	16%
\$/boe	8.11	9.37	8.37	8.93

Royalty and turnover taxes expenses were \$1.7 million for the Quarter compared to \$1.9 million in Q3-2016, with the decrease due to lower production volumes. Royalty rates were the same in both periods, averaging 17%.

YTD, royalties and turnover taxes were \$4.9 million compared to \$6.3 million YTD-2016, and decreased due to lower sales volumes.

The Company expects royalty rates for Q4-2017 to be consistent with this Quarter.

#### Operating Costs

USD 000s, exceptboe	Three months ended September 30		Nine months ended September 30	
	2017	2016	2017	2016
Compensation costs	1,049	1,103	3,094	2,988
Transportation and processing	1,949	2,107	5,893	5,463
Maintenance, workovers and other	3,457	3,019	9,172	8,760
	6,455	6,229	18,159	17,211
\$/boe	31.41	30.12	30.57	24.56



Operating costs during the Quarter increased 3% to \$6.5 million from \$6.2 million in Q3-2016 mainly as a result of higher costs per boe. On a per boe basis, operating costs for the Quarter increased 4% to \$31.42/boe from \$30.12/boe in Q3-2016.

Operating costs YTD were \$18.1 million compared to \$17.2 million YTD-2016. The increase was mainly due to lower sales volumes. On a per boe basis, YTD costs were \$30.57 per boe, increased from \$24.56 per boe YTD-2016.

Management expects operating costs to average approximately \$29.90 per boe in Q4-2017.

#### Netbacks <sup>(1)</sup>

USD/boe	Three months ended September 30		Nine months ended September 30	
	2017	2016	2017	2016
Oil and gas revenue	48.14	56.72	49.81	56.53
Royalties	(8.11)	(9.37)	(8.37)	(8.93)
Operating expenses	(31.41)	(30.12)	(30.57)	(24.56)
<b>Netbacks</b>	<b>8.62</b>	<b>17.23</b>	<b>10.87</b>	<b>23.04</b>

(1) The term "netback" is a non-GAAP measure and may not be comparable with the calculation of other entities. Netback is calculated as the average unit sales price, less royalties and operating expenses and represents the cash margin for every barrel of oil equivalent sold. The Company uses this measure to analyze operating performance and considers netback a key measure as it demonstrates its profitability relative to current commodity prices.

#### General and Administration ("G&A") Expenses

USD 000s	Three months ended September 30		Nine months ended September 30	
	2017	2016	2017	2016
<b>Argentina</b>				
Gross G&A				
Compensation costs	543	1,035	2,042	2,675
Other	760	696	2,108	1,909
	<b>1,303</b>	<b>1,731</b>	<b>4,150</b>	<b>4,584</b>
Capitalized	(157)	(344)	(527)	(786)
	<b>1,146</b>	<b>1,387</b>	<b>3,623</b>	<b>3,798</b>
<b>Corporate</b>				
Gross G&A				
Compensation costs	60	308	590	1,730
Other	790	507	2,706	1,856
	<b>850</b>	<b>815</b>	<b>3,296</b>	<b>3,586</b>
Capitalized	-	(43)	-	(343)
	<b>850</b>	<b>772</b>	<b>3,296</b>	<b>3,243</b>
<b>Consolidated</b>				
Net G&A total	<b>1,996</b>	<b>2,159</b>	<b>6,919</b>	<b>7,041</b>

#### Argentina

Gross G&A expenses for the Quarter decreased by \$0.4 million to \$1.3 million due primarily to lower compensation of costs \$0.5 million, as a result of lower staff. The Company currently employs 19 office employees in Argentina, a reduction of 16 since Q3-2016. The Company continues to optimize in areas where efficiencies can be realized.



During the Quarter, \$0.2 million (Q3-2016 - \$0.3 million) of directly attributable G&A costs in Argentina were capitalized to property, plant and equipment.

YTD, gross G&A costs decreased by \$0.5 million to \$4.1 million mainly due to lower compensation costs. YTD, amounts capitalized were \$0.5 million compared to \$0.8 million YTD-2016.

#### Corporate

Gross G&A expenses for the Quarter increased \$34 thousand compared to \$815 thousand in Q3-2016. The increase was mainly due to incremental Services Agreement fees incurred due to the Hispania agreement of \$0.3 million, offset by a 80% reduction in compensation costs.

On YTD basis, Gross G&A expenses decreased by \$0.3 million to \$3.3 million compared to YTD-2016. The decrease is due to lower compensation costs of \$1.1 million partially offset by higher consultant charges of \$0.8 million.

During the Quarter and YTD, there were no directly attributable G&A costs in Canada capitalized to property, plant and equipment in Argentina (Q3-2016 - \$43 thousand, YTD-2016 - \$0.3 million).

#### Restructuring

USD 000s	Three months ended September 30		Nine months ended September 30	
	2017	2016	2017	2016
Argentina	(28)	-	1,402	-
Corporate	(5)	-	767	-
Consolidated	(33)	-	2,169	0

#### Argentina

Severances of \$1.4 million, paid to management and employees that were terminated during the Q2. (Q3 and YTD-2016 – nil).

#### Corporate

Severances of \$0.8 million, paid to management and employees that were terminated during the Q2. (Q3 and YTD-2016 – nil).

#### Finance (Income) and Expenses

USD 000s	Three months ended September 30		Nine months ended September 30	
	2017	2016	2017	2016
<b>Argentina</b>				
Bank charges and fees	248	284	789	960
Foreign exchange (gain) loss – unrealized	427	396	483	(296)
Accretion of decommissioning obligations	23	39	137	160
Interest (income) and other expenses	(304)	453	(562)	1,358
	394	1,172	847	2,182
<b>Corporate</b>				
Foreign exchange gain – realized	-	16	(2)	16





Foreign exchange loss – unrealized	-	(222)	381	1,034
Accretion of debt component of convertible debentures issued	17	14	52	14
Interest (Income) and other expenses	15	4	43	4
Fair value adjustment on held for sale shares	-	333	140	333
	32	145	614	1,401
<b>Consolidated</b>	<b>426</b>	<b>1,317</b>	<b>1,461</b>	<b>3,583</b>

*Argentina*

Bank Charges and Fees

Bank charges and fees relate to various forms of taxation in Argentina outside of royalties and income taxes. Bank charges and fees for the Quarter were \$0.2 million and decreased from \$0.3 million in Q3-2016 as a result of lower transaction activity compared to Q3-2016.

YTD, bank charges and fees were \$0.8 million compared to \$1 million YTD-2016. The decrease was also due to reduced transaction activity.

Foreign exchange loss –unrealized

During the Quarter the Company recorded an unrealized foreign exchange loss of \$0.4 million compared to an unrealized loss of \$0.4 million in Q3-2016. YTD, the Company recorded a \$0.5 million loss compared to a \$0.3 million gain in YTD-2016. Quarterly fluctuations in unrealized gains and losses are a result of changing foreign exchange rates and underlying movements in the net assets of the Argentine subsidiaries.

Interest (Income) and other expenses

Interest (income) and other expenses during the quarter relates primarily a recovery of receivables previously written-off amounting to \$0.3 million. In Q3-2016, the Company incurred interest expense of \$0.4 million relating to the Argentine Industrial and Commercial Bank of China (Argentina) S.A. (“ICBC”) loan.

YTD, Interest (Income) and other expenses relates primarily to a recovery of receivables previously written-off amounting to \$0.5 million, common investments funds \$0.1 million, offset by interest expense on the Argentine Industrial and Commercial Bank of China (Argentina) S.A. (“ICBC”) loan (see heading “Credit Facilities”). YTD-2016, interest expense on the ICBC loan amounted to \$1.7 million, offset by gains on the Petroleo Plus bonds of \$0.4 million.

*Corporate*

Foreign exchange (gain) loss

During the Quarter, the Company has not recorded any unrealized foreign exchange (Q3-2016 gain of \$0.2 million). The USD:CAD foreign exchange rate appreciated by 7.1% since December 31, 2016 (Q3-2016 – 1.1% rate appreciation since December 31, 2015).

**Share-based and Long-term Incentive Compensation**

Share-based Compensation

The Company has issued stock options as incentive programs that allow officers, directors, consultants and certain employees to purchase shares in the Company. During the Quarter and YTD, 3 million options were granted to certain employees of the Company, at an exercise price of CAD \$0.17 per share. No options were granted in Q3-2016. Share based compensation recovery was \$0.1 million in the Quarter compared to an expense of \$0.4 million for Q3-2016. No share-based compensation expense was capitalized during the Quarter (Q3-2016 – nil).

On a YTD basis, share based compensation recovery was \$0.6 million (expense YTD-2016 - \$1.3 million). No share-based compensation expense was capitalized (YTD-2016 - \$39 thousand).

Long-term Incentive Compensation

During 2016, the Company issued Long-term incentive units under a Long-term incentive plan (“LTIP”) that allow



employees to benefit as a result of appreciation of the trading price of Madalena’s common shares from the issue date, through the payment of cash upon vesting. LTIP compensation recovery was \$25 thousand in the Quarter (Q3-2016 expense \$22 thousand).

#### Depletion and Depreciation (“D&D”)

USD 000s	Three months ended September 30		Nine months ended September 30	
	2017	2016	2017	2016
<b>Argentina</b>	<b>4,202</b>	4,664	<b>11,603</b>	15,827
\$/boe	<b>20.44</b>	22.56	<b>19.53</b>	22.59
<b>Corporate</b>	<b>9</b>	59	<b>27</b>	172
<b>Consolidated</b>	<b>4,211</b>	4,723	<b>11,630</b>	15,999

#### Argentina

D&D decreased to \$4.2 million in the Quarter compared to \$4.7 million in Q3-2016 due to a reduced depletable base caused by the combination of impairment charges, reduced future development costs, minimal capital spending and lower production. On a per boe basis, D&D for the Quarter decreased to \$20.44/boe from \$22.56/boe in Q3-2016 primarily due to the same reasons as noted above.

YTD, D&D decreased to \$11.6 million from \$16 million due to lower production and per boe costs went from \$22.59/boe to \$19.53/boe due to primarily due to the same reasons as noted above.

#### Corporate

D&D expenses for corporate relate only to depreciation on office equipment.

#### Impairment

At September 30, 2017 and 2016, Madalena determined there were no triggers for impairment for any of its Cash Generating Units or for its Exploration and evaluation assets.

#### Income Tax Expense (Recovery)

USD 000s	Three months ended September 30		Nine months ended September 30	
	2017	2016	2017	2016
Current	<b>(161)</b>	222	<b>1,040</b>	1,362
Deferred	<b>707</b>	(4,133)	<b>(1,698)</b>	(1,992)
<b>Total</b>	<b>546</b>	(3,911)	<b>(658)</b>	(630)

Madalena has three legal entities in Argentina, one of which had taxable income in the Quarter. The income tax rate in Argentina is 35%. The two entities that do not have taxable income are subject to minimum taxes, which is generally taxed at 1% of net assets.

Current income tax recovery (including minimum tax) for the Quarter was \$0.2 million compared to an expense of \$0.2 million for Q3-2016.

On a YTD basis, current income tax expense was \$1.1 million (YTD-2016 - \$1.4 million).



The Company booked a deferred income tax expense of \$0.7 million during the Quarter (Q3-2016– deferred income tax recovery of \$4.1 million).

YTD, the Company booked a deferred income tax recovery of \$1.7 million (YTD-2016 - \$2 million).

#### Reconciliation of Cash Flow from (used in) Operating Activities and Funds Flow from (used in) Continuing Operations

As detailed previously in this MD&A, funds flow from (used in) operations is a term that does not have any standardized meaning under GAAP. Madalena’s method of calculating funds flow from (used in) continuing operations may differ from that of other companies, and accordingly, may not be comparable to measures used by other companies. Funds flow from (used in) continuing operations is calculated as cash flow from (used in) continuing operating activities before change in non-cash working capital, and change in other long-term assets and liabilities.

USD 000s	Three months ended September 30		Nine months ended September 30	
	2017	2016	2017	2016
Cash flow from (used in) operating activities	(757)	173	(6,902)	9,600
Cash flow from operating activities – discontinued operations	-	-	-	41
Change in non-cash working capital	798	1,013	3,640	(7,064)
Change in non-cash working capital – discontinued operations	-	-	-	59
Change in other long-term assets	-	(346)	(479)	3,185
Funds flow from (used in) continuing operations	41	840	(3,741)	5,821

#### Funds flow from (used in) Continuing Operations, Net Loss and Comprehensive Loss from Continuing Operations

USD 000s	Three months ended September 30		Nine months ended September 30	
	2017	2016	2017	2016
Funds flow from (used in) continuing operations	41	840	(3,741)	5,821
Per share – basic and diluted	(0.00)	0.00	(0.00)	0.01
Net loss - continuing operations	(5,702)	(12,715)	(14,423)	(22,697)
Per share – basic and diluted	(0.01)	(0.02)	(0.02)	(0.04)
Comprehensive loss – continuing operations	(5,684)	(12,981)	(14,187)	(21,518)

Madalena's funds flow from continuing operations for the Quarter was \$41 thousand compared to funds flow from continuing operations in Q3-2016 of \$0.8 million. This was principally due to lower sales volumes, lower realized commodity prices and restructuring charges.

On a YTD basis, funds flow used in continuing operations was \$3.7 million compared to funds flow from continuing operations in YTD-2016 \$5.8 million due to due to the same reasons noted above.



The net loss from continuing operations for the Quarter was \$5.7 million (Q3-2016 - loss of \$12.7 million), decreased from Q3-2016 predominantly due to the impairment of \$12 million recorded for the three and nine month period ended September 30, 2016.

YTD, the net loss from continuing operations was \$14 million (YTD-2016 - \$22.7 million), with the decrease due primarily to the impairment of \$12 million recorded in prior Year.

A summary of the foreign exchange impact as it relates to the foreign currency translation adjustment is as follows:

USD 000s	Three months ended September 30		Nine months ended September 30	
	2017	2016	2017	2016
Foreign currency translation gain	18	(266)	236	1,247

During the Quarter, the Company recorded a foreign currency translation gain of \$18 thousand (Q3-2016 –loss of \$0.3 million). During the period the USD depreciated by 3.8% against the CAD (Q3-2016 – appreciated by 1.5%).

#### Capital Expenditures

USD 000s	Three months ended September 30		Nine months ended September 30	
	2017	2016	2017	2016
<b>Argentina</b>				
Land and associated renewal fees	-	-	-	20
Geological and geophysical	-	-	159	58
Drilling and completions	-	-	1	4,057
Well equipment and facilities	(1)	267	133	1,124
Other	310	355	853	749
<b>Argentina total</b>	<b>309</b>	622	<b>1,146</b>	6,008
<b>Corporate</b>				
Other	-	-	-	-
<b>Corporate total</b>	<b>-</b>	-	<b>-</b>	-
<b>Consolidated</b>	<b>309</b>	622	<b>1,146</b>	6,008

#### Argentina

During the Q3-2017 and Q3-2016, the Company had minimal capital spending.

On a YTD basis, the Company had minimal capital spending. YTD-2016, the Company completed both the vertical exploration well at Curamhuele (Yapai 1001) and completed and placed on stream the horizontal well at Coirón Amargo-Norte (CAN-6).

Not included in the total expenditures above, is a non-cash addition of \$3.6 million associated with the 55% WI of CASE by PAE. The agreement with PAE included a work program whereby PAE would carry \$5.6 million of Madalena's share of the associated capital costs. During the Quarter \$0.9 million and to September 30, 2017 \$3.6 million of these costs have been incurred and carried on Madalena's behalf.



### Discontinued Canadian Operations

There was no resulting impact relating to discontinued operations for the three or nine month period ended September 30, 2017. For Q3-2016, there was no resulting impact relating to discontinued operations, and for YTD-2016, a loss of \$0.3 million was realized (basic and diluted loss per share of \$0.01 for both Q3-2016 and YTD-2016).

### FINANCIAL POSITION, LIQUIDITY AND CAPITAL RESOURCES

#### Liquidity risk

USD 000s	September 30 2017	December 31 2016
Working capital (deficit) surplus		
Argentina	2,047	(3,422)
Canada	(1,676)	(991)
	371	(4,413)
Convertible debentures	1,279	1,143
Shareholders' equity	56,376	70,258

The Company's liquidity risk is highlighted in the Outlook section, above, which also outlines that during the Quarter, the Company entered into a series of agreements that are expected to substantially alleviate this risk.

The Working Capital Loan is a multi-drawdown facility, which shall be used for general working capital purposes. Interest accrues at 7% per annum. Principal and interest on each drawdown is repayable thirty-six months after an advance of funds.

The Capex Loan is a multi-drawdown convertible loan. The loan similarly accrues interest at 7% per annum, with each drawdown and accrued interest repayable thirty-six months after drawdown. The Capex Loan is convertible into units of the Company ("Units") with each Unit comprised of one common share ("Common Share") and 0.22 of a Common Share purchase warrant ("Warrant"), with each Warrant entitling the holder to purchase an additional Common Share. The Capex Loan is convertible based on a conversion price equal to a 5% premium to the 20-day volume weighted average price ("VWAP") of the Common Shares on the last trading date prior to a particular drawdown ("Conversion Price") in respect of the Common Shares comprising the Units. The exercise price of the Warrants issued upon conversion is also at a 5% premium to that 20-day VWAP. These Warrants expire 18 months after the date of issuance. Both Hispania and Madalena have the right to convert the whole or part of the principal and interest owing hereunder into Units on or before repayment, although Madalena's right to compel conversion is limited in some circumstances.

Both loans are secured, limited to the Company's interests in the Rinconada-Puesto Morales concession.

In addition, a services agreement ("Services Agreement") was entered into for an initial term of one year, but may be extended. Pursuant to this agreement, Hispania's personnel will provide:

- technical, operational, strategic and financial advice, direction and assistance in relation to the operation of Madalena's oil and natural gas properties, undeveloped lands and related assets in Argentina;
- advice to Madalena's officers and the board of directors regarding the business of Madalena and such other services as requested by Madalena from time to time.

In association with the Services Agreement, Hispania will receive monthly service fees of up to \$150 thousand and Madalena will issue Warrants to Hispania in six consecutive monthly tranches of 4,758,333 Warrants. These Warrants will have an exercise price equal to the price of the Common Shares on the last trading day prior to issuance and will expire 18 months thereafter.



On September 13, 2017, the shareholders of the Company passed an ordinary resolution approving KD Energy International Capital Limited as a new "Control Person" (as such term is defined in the TSX Venture Exchange Corporate Finance Manual) of the Company. In connection therewith, the convertible loan agreement dated May 8, 2017 for an amount up to USD \$16.5 million is now available to be drawn upon by the Company in accordance with the terms thereof.

At September 30, 2017, the consolidated working capital of the Company was \$0.4 million (December 31, 2016- \$4.4 million deficit), consisting of working capital of \$2.1 million (December 31, 2016 -\$3.4 million) in Argentina and a working capital deficiency of \$1.7 million (December 31, 2016- \$1.0 million) in Canada.

At September 30, 2017, \$1.7 million, or 92%, of Madalena's cash and cash equivalents was deposited with banks in Argentina (December 31, 2016 - \$4.1 million, 100%), and is held in ARS.

#### **Repatriation of Funds to Canada**

Madalena's corporate office is in Canada. Funds are required to enable the Company to maintain its Canadian corporate office and manage the regulatory, reporting, audit, legal and tax requirements of a TSX-V listed company.

During the Quarter, \$1.5 million was repatriated from Argentina (Q3-2016 – 0.5). On a YTD basis, \$4.1 million was repatriated from Argentina (YTD-2016 – nil).

#### **Share Capital Issued, Options Granted and Long-term Incentive Plan**

##### **Outstanding Share Capital**

No common shares were issued in the Quarter, YTD-2017 nor in Q3-2016 or YTD-2016.

During the Quarter and YTD, 3 million options were granted to certain employees of the Company, at an exercise price of CAD \$0.17 per share. No options were granted in Q3-2016. YTD-2016, 8,650,000 options were granted to certain employees and directors of the Company with exercise prices of CAD \$0.27 per share.

As a result of Hispania services agreement 14,274,999 warrants were issued during the Quarter, and 19,033,332 YTD.

As at November 15, 2017, the Company had 543.8 million shares and 8.7 million options outstanding.

#### **Fair value of Financial Instruments**

The Company's financial instruments include cash and cash equivalents, trade and other receivables, certain items in other long-term assets and liabilities, current portion of long-term debt, trade and other payables, taxes payable, convertible debentures issued, the carrying values of which approximate their fair values due to their short-term nature with the exception of: (i) convertible debentures issued, which relates to the debt component of these instruments and are accreted up to their principal value over the term of the debenture using the effective interest rate method and (ii) certain other long-term assets and liabilities whose calculated fair value approximates its carrying value.

#### **Decommissioning Obligations**

Decommissioning obligations result from net ownership interests in property, plant and equipment and involve critical accounting estimates. There are significant uncertainties related to the estimated costs and the timing of settlement of decommissioning obligations, and the impact on the financial statements could be material. The main factors that can cause expected decommissioning obligations to change are changes to laws and regulations, construction of new facilities, changes in reserve estimates and life, changes in technology, and discount and/or inflation rates applied.

The Company expects the decommissioning obligations for its obligation to be invoiced in USD and settled in ARS.

Changes to Madalena's estimates of decommissioning, restoration and similar liabilities are recorded directly to



the related asset with a corresponding entry to the provision. Madalena's estimates are reviewed at the end of each reporting period for changes in estimated costs, timing of settlement, changes in laws, regulatory requirements, discount rates, and effects of inflation.

At September 30, 2017, an inflation rate of 2.2% was used (December 31, 2016 – 1.5%). The risk free rate used to discount the liability at September 30, 2017 was 2.6% (December 31, 2016 – 2.8%). The impact of the change in inflation rate amounted to a \$1.1 million increase to the decommissioning obligations during the three month period ended September 30, 2017.

YTD, the inflation rate change increased the decommissioning obligations by \$1.2 million.

### **Commitments and Contingencies**

#### *Development and Exploration Commitments*

##### *Coirón Amargo ("CA-Norte")*

Madalena and its partners at the CA concession in the province of Neuquén are responsible for paying 100% of the costs during the exploration and evaluation phase, with Gas y Petróleo del Neuquén S.A. ("GyP"), a provincial government entity, receiving a 10% carry whereby all other partners, including Madalena, are responsible for paying their proportionate share of GyP's WI. Currently, exploration and evaluation phases are contained in CA-Sur, in the southern portion of CA.

In an exploitation or development phase, GyP is responsible for its 10% interest of the incurred capital costs through an assignment of GyP's 10% interest in future production revenue streams to Madalena and its partners. The amounts due to Madalena from GyP are recorded as a receivable. Currently, exploitation and development phases are contained in CA-Norte, in the northern portion of CA, for which there are no current work commitments.

##### *CASE (35% WI – non-operated – see details below)*

Prior to July 11, 2016, Madalena held a 35% WI in the entire CA-Sur exploration and evaluation concession. Pursuant to a series of agreements dated July 11, 2016 and subject to government approvals and an Executive Decree, which were subsequently obtained in October 2016, CA-Sur was divided into two evaluation lots – CASE and CoirónAmargo-Sur Oeste ("CASO"). Madalena sold its' interest in CASO in return for an additional 55% WI in CASE and became operator.

On December 7, 2016, the Company entered into agreements with PAE relating to the Company's 90% WI at CASE, which closed on January 10, 2017. Pursuant to these agreements, Madalena received cash payments of an aggregate of \$10 million, \$3 million in December 2016 and \$7 million on closing and sold a 55% WI and operatorship to PAE, thereby retaining a 35% non-operated WI in CASE. A 2017 work program ("Work Program") will be comprised of two well re-entries, which will be undertaken by PAE as the new operator of CASE. Madalena will be carried for the first \$5.6 million in carried costs through this Work Program. GyP retains their 10% WI in CASE. To the extent that Madalena's share of the Work Program extends beyond \$5.6 million, Madalena will be required to fund this incremental amount.

Concurrently, PAE agreed, subject to certain conditions, to provide Madalena with a loan of up to \$40 million, on a limited recourse basis, to be drawn-down as required to fund certain CASE capital expenditures. This limited recourse loan would bear interest at 7% per annum and is repayable in five years from the net revenue generated from the capital expenditure program. Transaction fees of \$0.5 million were incurred to complete this agreement. No draw down of the loan has occurred as of September 30 2017.

Pursuant to the new arrangements, Madalena work commitments at CASE were amended as follows:





USD 000s	2017 <sup>(1)</sup>	2018 <sup>(1)</sup>	Beyond
Concession commitments at CASE	1,950	-	1,950 <sup>(2)</sup>

<sup>(1)</sup> Committed values are reflected at Madalena's 35% WI at June 30, 2017 plus Madalena's proportionate share of GyP's carry.

The company expensed \$3,580 in the re-entry of well Cas.x-15 and is awaiting for the provincial approval.

<sup>(2)</sup> Subject to the results in 2017 to be completed, before November 8, 2019.

The new exploration and evaluation permit for CASE expires on November 8, 2019, following which Madalena will be eligible to enter into a development concession.

#### Curamhuele Block (90% WI-operated)

At Curamhuele, a concession in the province of Neuquén, the Company is responsible for paying 100% of the costs during the exploration phase of a concession to maintain its 90% WI.

In December 2015, Madalena ratified an extension of its second exploration and evaluation term with the Province of Neuquén to September 9, 2016, after which a further extension was available. During the first quarter of 2016, the remaining work commitment relating to the block concession agreement was fulfilled by completing the Yapai.x 1001 well in the Mulichinco and Lower Agrio shale. A performance bond of \$17.6 million relating to amounts committed under this exploration and evaluation permit is posted by the Company. The assets of MEA, a subsidiary of the Company, are held as security for the bond.

The Company has commenced discussions with the Province of Neuquén to obtain a four year extension of the exploration and evaluation block. The Company has proposed a horizontal multi-frac re-entry in CH.x-1 for \$8.2 million to be incurred by March 9, 2019, to obtain this extension.

The Company is waiting on a provincial certification that the \$17.6 million of work commitments have been fulfilled and a provincial decree on the new \$8.2 million of work commitments. Upon receipt of the provincial certification, the Company anticipates that the \$17.6 million performance bond will be cancelled and a new \$8.2 million performance bond posted.

#### Puesto Morales Block (100% WI-operated)

USD 000s	2017	2018	Beyond
Concession commitments	17,700	6,900	7,600

The Company is awaiting written provincial approval to transfer \$4.4 million of 2016 commitments to 2017 and has reflected this amount in the 2017 commitment.

#### Santa Victoria Block (100% WI - operated)

The contract can contain up to three exploration and evaluation phases, of which the second expired in April 2015. The second phase required additional work commitments of \$4.0 million for which no qualifying expenditures have been made. A performance bond of \$3.6 million is in place over the commitments under this exploration and evaluation permit. An application has been submitted and negotiations continue and are currently ongoing with the province of Salta to reach a multi-year extension agreement.

#### El Chivil Block (100% WI – operated)

The concession's one year extension expiry occurred on September 7, 2016. The province of Formosa granted a further six month extension to negotiate a 10-year development period extension, which expired on May 1, 2017. At November 2017, the Company remains in discussions with the province of Formosa.





*El Vinalar Block (100% WI – operated)*

Salta province granted a block extension to file an investment plan, which expired on November 11, 2016. The Company has requested a further extension from the province of Salta and the Company remains in discussions with the province of Salta.

**QUARTERLY FINANCIAL RESULTS**

**Continuing Operations**

	Q3	Q2	Q1	Q4
USD 000s, unless otherwise noted	2017	2017	2017	2016
Oil and natural gas revenues	9,893	9,357	10,336	10,543
Net income (loss)	(5,702)	(5,449)	(3,267)	(9,402)
Shares outstanding – millions	543.8	543.8	543.8	543.8
Net income (loss) per share – basic and diluted	(0.01)	(0.01)	(0.01)	(0.02)

	Q3	Q2	Q1	Q4
USD 000s, unless otherwise noted	2016	2016	2016	2015
Oil and natural gas revenues	11,728	13,070	14,811	17,902
Net income (loss)	(12,715)	(3,491)	(6,492)	(12,510)
Shares outstanding – millions	543.8	542.1	542.1	542.1
Net income (loss) per share – basic and diluted	(0.02)	(0.01)	(0.01)	(0.02)

The Company's increase in oil and gas revenues during the Q3-2017 and decrease during the Q2-2017, Q1-2016, Q4-2016, Q3-2016, Q2-2016, Q1-2016 and Q4-2015 can be primarily attributed to lower sales volumes at Puesto Morales and Surubi. The Company also experienced commodity price declines in the Quarter and in 2016.

The Company recorded pre-tax impairment charges of \$6.2 million in Q4-2016, \$12.0 million in Q3-2016 and \$8.4 million in Q4-2015.

**CRITICAL ACCOUNTING JUDGMENTS, ESTIMATES AND ACCOUNTING POLICIES**

For more details regarding the Company's critical accounting judgments, estimates and accounting policies the following should be read in conjunction with the Company's consolidated financial statements for the year ended December 31, 2016.

Management is required to make judgments, estimates and assumptions in the application of accounting policies that could have a significant impact on the Company's financial results. Actual results may differ from those estimates and those differences may be material. The estimates and assumptions used are subject to updates based on experience and the application of new information. The Company's critical accounting policies and estimates are reviewed annually by the Audit Committee of the Board. Further details on the basis of presentation and significant accounting policies can be found in the Company's notes to the consolidated financial statements for the year ended December 31, 2016 and in Note 5 of the Company's unaudited interim financial statements as at and for the three and nine-month periods ended September 30, 2017.

**Critical Accounting Judgments in Applying Accounting Policies**

Critical judgments are those judgments made by Management in the process of applying accounting policies that have the most significant effect on the amounts recognized in the Company's Consolidated Financial Statements and accompanying notes for the year ended December 31, 2016. Further information on Management's critical



accounting judgments in applying accounting policies can be found in the notes to the consolidated financial statements for the year ended December 31, 2016.

#### **Critical accounting estimates**

Critical accounting estimates are those estimates that require Management to make particularly subjective or complex judgments about matters that are inherently uncertain. Estimates and underlying assumptions are reviewed on an ongoing basis and any revisions to accounting estimates are recognized in the period in which the estimates are revised. During the Quarter, there were no changes to the Company's key sources of estimation uncertainty. Further information on the Company's key sources of estimation uncertainty can be found in the notes to the consolidated financial statements for the year ended December 31, 2016.

#### **RISK MANAGEMENT**

For a full understanding of the risks that impact the Company, the following discussion should be read in conjunction with the Company's consolidated financial statements for the year ended December 31, 2016.

The Company is exposed to a number of risks through the pursuit of its strategic objectives. Some of these risks impact the oil and gas industry as a whole and others are unique to its operations and its involvement in Argentina. Actively managing these risks improves the Company's ability to effectively execute its business strategy. The factors that impact the Company's exposure to liquidity risk, safety risk, capital project execution and operating risk, reserves replacement risk, environmental risk and regulatory risk has not changed substantially since December 31, 2016. For a further and more in-depth discussion of the Company's risk management see the Company's Consolidated Financial Statements for the year ended December 31, 2016.

A description of the risk factors and uncertainties affecting the Company can be found in the Advisory and a full discussion of the material risk factors affecting the Company can be found in the Company's Annual Information Form for the year ended December 31, 2016.

#### **ADVISORY**

##### **Forward Looking Statements**

This MD&A may include forward-looking statements including opinions, assumptions, estimates and management's assessment of future plans and operations, expected depletion, depreciation and accretion expenses, expectations as to the taxability of the Company and planned capital expenditures and the timing and funding thereof. When used in this document, the words "anticipate," "believe," "estimate," "expect," "intent," "may," "project," "plan", "should" and similar expressions are intended to be among the statements that identify forward-looking statements. Forward-looking statements are subject to a wide range of risks and uncertainties, and although the Company believes that the expectations represented by such forward-looking statements are reasonable, there can be no assurance that such expectations will be realized. Any number of important factors could cause actual results to differ materially from those in the forward-looking statements including, but not limited to, the outcome of the strategic review process, risks associated with petroleum and natural gas exploration, development, exploitation, production, marketing and transportation, the volatility of petroleum and natural gas prices, currency fluctuations, the ability to implement corporate strategies, the ability to repatriate funds from Argentina, the state of domestic capital markets, the ability to obtain financing, incorrect assessment of the value of acquisitions, failure to realize the anticipated benefits of acquisitions, changes in petroleum and natural gas acquisition and drilling programs, delays resulting from inability to obtain required regulatory approvals, delays resulting from inability to obtain drilling rigs and other services, labour supply risks, environmental risks, competition from other producers, imprecision of reserve estimates, changes in general economic conditions, ability to execute farm-in and farm-out opportunities, and other factors, all of which are more fully described from time to time in the reports and filings made by the Company with securities regulatory



authorities.

Statements relating to “reserves” or “resources” are deemed to be forward looking statements, as they involve the implied assessment, based on certain estimates and assumptions, that the reserves and resources described can be profitably produced in the future.

The forward looking statements contained in this MD&A are expressly qualified by this cautionary statement. Readers are cautioned not to place undue reliance on forward-looking statements, as no assurances can be given as to future results, levels of activity or achievements. Except as required by applicable securities laws, the Company does not undertake any obligation to publicly update or revise any forward-looking statements.

### **Reserves and Other Oil and Gas Disclosure**

Any references in this MD&A to test rates, flow rates, initial and/or final raw test or production rates, early production, test volumes behind pipe and/or "flush" production rates are useful in confirming the presence of hydrocarbons, however, such rates are not necessarily indicative of long-term performance or of ultimate recovery. Such rates may also include recovered "load" fluids used in well completion stimulation. Readers are cautioned not to place reliance on such rates in calculating the aggregate production for Madalena. In addition, the VacaMuerta and Agrio shales are unconventional resource plays which may be subject to high initial decline rates.

### **Analogous Information**

Certain information in this MD&A may constitute "analogous information" as defined in National Instrument 51-101 - Standards of Disclosure for Oil and Gas Activities ("NI 51-101"), including, but not limited to, information relating to areas, assets, wells, industry activity and/or operations that are in geographical proximity to or believed to be on-trend with lands held by Madalena. Such information has been obtained from public sources, government sources, regulatory agencies or other industry participants. Management of Madalena believes the information may be relevant to help define the reservoir characteristics within lands on which Madalena holds an interest and such information has been presented to help demonstrate the basis for Madalena's business plans and strategies. However, management cannot confirm whether such analogous information has been prepared in accordance with NI 51-101 and the Canadian Oil and Gas Evaluation Handbook and Madalena is unable to confirm that the analogous information was prepared by a qualified reserves evaluator or auditor. Madalena has no way of verifying the accuracy of such information. There is no certainty that the results of the analogous information or inferred thereby will be achieved by Madalena and such information should not be construed as an estimate of future production levels or the actual characteristics and quality Madalena's assets. Such information is also not an estimate of the reserves or resources attributable to lands held or to be held by Madalena and there is no certainty that such information will prove to be analogous in the future. The reader is cautioned that the data relied upon by Madalena may be in error and/or may not be analogous to such lands to be held by Madalena.

### **Numerical Amounts**

The reporting and the measurement currency is the USD. Natural gas reserves and volumes are converted to barrels of oil equivalent (boe) on the basis of six thousand cubic feet (mcf) of gas to one barrel (bbl) of oil. Boe's may be misleading, particularly if used in isolation. A boe conversion ratio of 6 mcf to 1 bbl is based on an energy equivalency conversion method primarily applicable at the burner tip and does not represent a value equivalency at the wellhead.

This MD&A uses the term “netback” which is a term that does not have standardized meanings under GAAP and this non-GAAP measurement may not be comparable with the calculation of other entities. The Company uses this measure to analyze operating performance.

The term “netback”, which is calculated as the average unit sales price, less royalties and operating expenses,



represents the cash margin for every barrel of oil equivalent sold. The Company considers this a key measure as it demonstrates its profitability relative to current commodity prices. This term does not have any standardized meaning prescribed by GAAP and, therefore, might not be comparable with the calculation of a similar measure for other companies.

#### **ABBREVIATIONS**

The following is a summary of the abbreviations used in this MD&A:

##### **Oil and Natural Gas Liquids**

bbbl      barrel  
bbbls/d   barrels per day  
NGLs      Natural gas liquids  
boe      barrel of oil equivalent  
boe/d      barrel of oil equivalent per day

##### **Natural Gas**

Mcf      thousand cubic feet  
mmbtu   million British Thermal Units