



**MANAGEMENT'S DISCUSSION & ANALYSIS**

**FOR THE THREE MONTHS ENDED MARCH 31, 2018**



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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 May 24, 2018 and should be read in conjunction with Madalena Energy Inc.'s ("Madalena" or the "Company") unaudited condensed interim consolidated financial statements for the three months ended March 31, 2018 and the accompanying notes as well as the audited consolidated financial statements for the year ended December 31, 2017 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 Vaca Muerta shale, Lower Agrio 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.

## Outlook

The company intends to actively pursue the acquisition of producing assets with development upside both in Argentina and the wider Latam Region. Madalena will execute a two pronged strategy targeting unconventional and conventional assets.

## Highlights in 2018

### Coirón Amargo Sur-Este (“CASE”)

Pan American Energy LLC (“PAE”) has successfully completed and tested the second horizontal multi-frac well CAS.x-14 in the Vaca Muerta Shale Formation at the Coiron Amargo Sur Este (“CASE”) block in Neuquen, Argentina. CAS.x-14 well reached a peak production of 880 barrels of oil per day through 3mm choke with 5235 psi and a 30 day average production of 600 barrels of oil per day.

### Going Concern and Capital Commitments

The financial statements have been prepared in accordance with IFRS applicable to a going concern, which contemplate the realization of assets and the settlement of liabilities in the normal course of business as they become due. Continuing as a going concern is dependent upon the Company’s ability to amend capital commitments outlined in Note 15, which is expected to be achieved through negotiations with the provincial authorities. Failure to amend the commitments could result in insufficient sources to fund anticipated capital commitments. The Company’s ability to continue as a going concern and discharge its obligations would be dependent on obtaining alternative equity, debt financing, and/or proceeds from asset sales which could be challenging.

### 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 months ended March 31, 2018 compared to the three months ended March 31, 2017. Foreign exchange changes in CAD and ARS impact the unrealized foreign exchange gains and losses recorded in the condensed interim consolidated statements of income (loss).

USD	Three months ended		% Change <sup>(1)</sup>
	March 31 2018	2017	
Average CAD to USD	0.791	0.755	(4.7%)
Average ARS to USD	0.051	0.064	20.4%
Period end CAD to USD	0.776	0.752	(3.1%)



Period end ARS to USD	<b>0.050</b>	0.065	23.6%
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(1) Differences calculated from the numbers within the table are due to rounding.

## Continuing Argentine Operations and Corporate Segments

### Sales Volumes

	Three months ended March 31	
	2018	2017
Crude oil and NGLs (bbls/d)	<b>1,646</b>	1,899
Natural gas (mcf/d)	<b>1,603</b>	2,005
Total daily sales (boe/d)	<b>1,914</b>	2,233
% oil	<b>86%</b>	85%

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 87% of Madalena's current production comes from Surubi, Puesto Morales, and CA-Norte.

Crude oil and NGL sales volumes for the three months ended March 31, 2018 ("the Quarter" or "Q1-2018") decreased to 1,646 bbls/d from 1,899 bbls/d for the three months ended March 31, 2017 ("Q1-2017"). The change compared to Q1-2017, can be attributed to production declines at CA-Norte, Puesto Morales and Surubi. Natural gas sales volumes for the Quarter of 1,603 mcf/d decreased compared to 2,005 mcf/d for Q1-2017 due to lower production at Puesto Morales and CA-Norte.

Madalena expects Q2-2018 sales volumes to average approximately 1.966 boe/d (88% oil).

### Average Realized Prices

USD	Three months ended March 31	
	2018	2017
Crude oil and NGLs - \$/bbl	<b>59.88</b>	55.70
Natural gas - \$/mcf	<b>5.12</b>	4.53
Total - \$/boe	<b>55.81</b>	51.43

Argentina's Government has realigned local oil prices with international references since October 2017. The Government of Argentina sets the benchmark (Medanito) price for oil. Although the Argentine refiners used by the Company have paid an average unofficial crude oil price of \$62.70 per barrel for the three months ended March 31, 2018 (2017 - \$57.80), official Medanito crude oil averaged \$64.79 per barrel for the three months ended March 31, 2018 (2017 - \$51.71). In January 2017, Madalena was advised that a majority of producers and refiners in Argentina, at the request of the government, have signed a 2017 Medanito crude oil pricing agreement (the "Agreement") allowing for convergence with international Brent pricing over the coming months. Such agreement stated that in case international Brent pricing reached and remained above the monthly Medanito floor price for 10 consecutive days, the Agreement would be suspended. And, in case international Brent pricing fell below \$45.00 for 10 consecutive days, the Agreement would be reviewed. On September 13, 2017 the above suspension condition was reached and the agreement finalized in October, 2017. As from October, market prices were agreed



upon between refiners and producers considering the international Brent price as a reference.

The average price the Company received for oil for the Quarter was \$59.88/bbl, higher than the \$55.70/bbl realized in Q1-2017 mainly as a result of the higher Medanito pricing.

Gas prices in Argentina are subject to seasonal demand and are negotiated between the producer and the buyer. For the period May to September 2018, which is the Argentine winter, the price was set at \$5.30/mmbtu. Winter prices in 2017 were \$5.40/mmbtu. Summer pricing for the period from October 2018 to April 2019 has been set at \$4.10/mmbtu (October 2017 - April 2018 - \$4.31/mmbtu).

The average total price received for the Quarter was \$55.81/boe, higher than the \$51.43/boe realized in Q1-2017.

The Company anticipates Argentina prices to average approximately \$57.97 per boe during Q2-2018.

#### Oil and Natural Gas Revenue

USD 000s, except boe	Three months ended March 31	
	2018	2017
Crude oil	8,872	9,518
Natural gas	739	818
	9,612	10,336
\$/boe	55.81	51.43

Oil and gas revenue was \$9.6 million for the Quarter compared to \$10.3 million for Q1-2017, a decline of 7% due to a 14% decline in sales volumes and a 9% increase in prices received per boe.

#### Royalties

USD 000s, except boe	Three months ended March 31	
	2018	2017
Royalties	1,484	1,631
As % of revenue	15%	16%
\$/boe	8.62	8.12

Royalty expenses were \$1.5 million for the Quarter compared to \$1.6 million in Q1-2017, with the decrease due to lower production volumes. The Royalty rate was 15% for the Quarter compared to 16% in Q1-2017.

The Company expects royalty rates for Q2-2018 to be consistent with this Quarter.

#### Operating Costs

USD 000s, except boe	Three months ended March 31	
	2018	2017
Compensation costs	856	1,005
Transportation and processing	1,708	1,987
Maintenance, workovers and other	2,907	2,522



	<b>5,471</b>	5,514
\$/boe	<b>31.77</b>	27.44

Operating costs during the Quarter was \$5.5 million, the same as Q1-2017 mainly as a result of lower sales volumes, offset by higher costs per boe. On a per boe basis, operating costs for the Quarter increased 16% to \$31.77/boe from \$27.44/boe in Q1-2017 due to high fixed costs, particularly at Puesto Morales.

Management expects operating costs to average approximately \$31.73 per boe in Q2-2018.

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

USD/boe	Three months ended March 31	
	2018	2017
Oil and gas revenue	<b>55.81</b>	51.43
Royalties	<b>(8.62)</b>	(8.12)
Operating expenses	<b>(31.77)</b>	(27.44)
<b>Netbacks</b>	<b>15.42</b>	15.87

(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 March 31	
	2018	2017
<b>Argentina</b>		
Gross G&A		
Compensation costs	<b>417</b>	1,027
Other	<b>388</b>	560
	<b>805</b>	1,587
Capitalized	<b>(132)</b>	(244)
	<b>673</b>	1,343
<b>Corporate</b>		
Gross G&A		
Compensation costs	<b>52</b>	230
Other	<b>796</b>	398
	<b>848</b>	628
<b>Consolidated</b>		
Net G&A total	<b>1,521</b>	1,971

#### Argentina

Gross G&A expenses for the Quarter decreased by \$0.8 million to \$0.8 million due to lower compensation costs as a result of lower staff. The Company currently employs 20 office employees in Argentina, a reduction of 14 since Q1-2017. The Company continues to optimize in areas where efficiencies can be realized.

During the Quarter, \$0.1 million (Q1-2017 - \$0.2 million) of directly attributable G&A costs in Argentina were



capitalized to property, plant and equipment.

*Corporate*

Gross G&A expenses for the Quarter increased to \$0.8 million compared to \$0.6 million in Q1-2017. The increase was mainly due to higher consultant fees of \$0.4 million related to the service agreement with Hispania, partially offset by lower compensation costs of \$0.2 million.

During the Quarter, there were no directly attributable G&A costs in Canada capitalized to property, plant and equipment in Argentina (Q1-2017 - nil).

**Finance (Income) and Expenses**

USD 000s	Three months ended March 31	
	2018	2017
<b>Argentina</b>		
Bank charges and fees	173	304
Foreign exchange loss - unrealized	180	35
Accretion of decommissioning obligations	19	64
Interest (income) and other expenses	(23)	(118)
	<b>349</b>	<b>285</b>
<b>Corporate</b>		
Foreign exchange gain - realized	-	(2)
Foreign exchange loss - unrealized	(77)	191
Accretion of debt component of convertible debentures issued	17	19
Interest (Income) and other expenses	16	13
Fair value adjustment on held for sale shares	-	140
	<b>(44)</b>	<b>361</b>
<b>Consolidated</b>	<b>305</b>	<b>646</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 was \$0.2 million (Q1-2017 - \$0.3 million).

Bank charges for Q2-2018 are estimated at approximately \$0.2 million.

Accretion of decommissioning liabilities

Accretion expense was \$19 thousand for the Quarter (Q1-2017– \$64 thousand).

Foreign exchange loss – unrealized

During the Quarter the Company recorded an unrealized foreign exchange loss of \$0.2 million compared to an unrealized loss of \$35 thousand in Q1-2017. 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 relates primarily to a reversal of interests over a labor contingency of \$38



thousand. In Q1-2017 Interest (income) and other expenses relates primarily to a recovery of receivables previously written-off amounting to \$0.2 million, offset by interest expense on the Argentine Industrial and Commercial Bank of China (Argentina) S.A. (“ICBC”) loan (see heading “Credit Facilities”).

*Corporate*

Foreign exchange (gain) loss

During the Quarter, the Company recorded an unrealized foreign exchange gain of \$77 thousand (Q1-2017 loss of \$0.2 million). The USD:CAD foreign exchange rate appreciated by 2.8% since December 31, 2017 (Q1-2017 – 1% rate depreciation since December 31, 2016).

Accretion of debt component of convertible debentures issued

Accretion expense was \$17 thousand for the Quarter (Q1-2017– \$19 thousand). This accretes the liability component up to its principal value over the period of time to maturity.

**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, 11,400,000 (2017 – nil) options were granted to directors, officers, and employees of the Company, at an exercise price of CAD \$0.22 per share.

Share based compensation expense was \$75 thousand in the Quarter compared to an expense of \$0.2 million for Q1-2017. No share-based compensation expense was capitalized during the Quarter (Q1-2017 - nil).

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. On August 26, 2016, 6.5 million Units were issued to certain employees at an exercise price of CAD \$0.145 per common share. LTIP compensation expense was \$47 thousand in the Quarter (Q1-2017 \$53 thousand).

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

USD 000s	Three months ended March 31	
	2018	2017
<b>Argentina</b>	<b>1,665</b>	3,752
\$/boe	<b>9.67</b>	18.67
<b>Corporate</b>	-	9
<b>Consolidated</b>	<b>1,665</b>	3,761

*Argentina*

D&D decreased to \$1.7 million in the Quarter compared to \$3.8 million in Q1-2017 due to a reduced depletable base caused by the combination of reduced future development costs, the change performed by the company in the basis of reserves used for depletion since Q1-2018 from proved and probable reserves to proved producing and developed non-producing reserves, minimal capital spending and lower production. On a per boe basis, D&D for the Quarter decreased to \$9.67/boe from \$18.67/boe in Q1-2017 primarily due to the same reasons as noted above.

*Corporate*



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

#### Impairment

At March 31, 2018 and 2017, 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 March 31	
	2018	2017
Current	-	4,032
Deferred	(624)	(4,461)
<b>Total</b>	<b>(624)</b>	<b>(429)</b>

Madalena has three legal entities in Argentina. The income tax rate in Argentina is 30%. The entities that do not have taxable income are subject to minimum taxes, which are generally taxed at 1% of net assets. Current income tax recovery (including minimum tax) for the Quarter was nil compared to an expense of \$4.0 million for Q1-2017. The decrease in current tax expense incurred in the Quarter is primarily a result of the tax impact on the January, 2017 Coirón Amargo Sur Este transaction.

The Company recorded a deferred income tax recovery of \$0.6 million during the Quarter (Q1-2017 – deferred income tax recovery - \$4.5 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 March 31	
	2018	2017
Cash flow from (used in) operating activities	227	(1,484)
Change in non-cash working capital	845	2,500
Change in other long-term assets	-	(314)
Change in other long-term liabilities	-	(3,700)
<b>Funds flow from (used in) continuing operations</b>	<b>1,072</b>	<b>(2,998)</b>

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

Three months ended	
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USD 000s	March 31	
	2018	2017
Funds flow from (used in) continuing operations	1,072	(2,998)
Per share – basic and diluted	0.00	(0.01)
Net income (loss) - continuing operations	(622)	(3,267)
Per share – basic and diluted	(0.00)	(0.01)
Comprehensive income (loss) – continuing operations	(622)	(3,104)

Madalena's funds flow from continuing operations for the Quarter increased by \$4 million from Q1-2017.

The net loss from continuing operations for the Quarter was \$1.2 million (Q1-2017 - loss of \$3.3 million), primarily due to lower oil and natural gas revenues as a result of lower production.

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

USD 000s	Three months ended March 31	
	2018	2017
Foreign currency translation gain	-	163

During the Quarter, the Company didn't record any foreign currency translation (Q1-2017 – gain of \$0.2 million). During the period the USD appreciated by 2.8% against the CAD (Q1-2017 – depreciated by 1%).

#### Capital Expenditures

USD 000s	Three months ended March 31	
	2018	2017
<b>Argentina</b>		
Land and associated renewal fees	(23)	-
Geological and geophysical	181	148
Drilling and completions	-	1
Well equipment and facilities	304	79
Other	151	437
Argentina total	613	665
<b>Corporate</b>		
Other	-	-
Corporate total	-	-
<b>Consolidated</b>	<b>613</b>	<b>665</b>

#### Argentina

Capital expenditures for the Quarter were primarily related to well equipment and facilities of \$0.3 million at Coirón Amargo-Sur Este ("CASE") for CAS.x-14 well.



## FINANCIAL POSITION, LIQUIDITY AND CAPITAL RESOURCES

### Liquidity risk

USD 000s	March 31 2018	December 31 2017
Working capital (deficit) surplus		
Argentina	746	538
Canada	(1,737)	(1,582)
	(991)	(1,043)
Convertible debentures	1,217	1,274
Shareholders' equity	36,870	36,999

The Company's liquidity risk is highlighted in the Outlook section, above, which also outlines that during 2017, 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 continue to receive monthly service fees of up to \$150 thousand, and Madalena issued Warrants to Hispania in six consecutive monthly tranches of 4,758,333 Warrants, with the last tranche being issued on November 8, 2017. 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 March 31, 2018, the consolidated working capital deficit of the Company was \$1 million (December 31, 2017 -\$1 million deficit), consisting of positive working capital of \$0.8 million (December 31, 2017 - working capital positive of \$0.6 million) in Argentina and a working capital deficit of \$1.7 million (December 31, 2017- \$1.6 million deficit) in Canada.

At March 31, 2018, \$0.7 million, or 88%, of Madalena's cash and cash equivalents was deposited with banks in Argentina (December 31, 2017 - \$5.7 million, 100%), and is held in ARS.

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

Funds are required to enable the Company to maintain compliance its manage the regulatory, reporting, audit, legal and tax requirements of a TSX-V listed company.

During the Quarter, \$0.7 million was repatriated from Argentina (Q1-2017 – \$1.7 million)

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

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

200 thousand common shares were issued during the Quarter and YTD, pursuant to the exercise of convertible debenture option of \$40 thousand (Q1-2017 – nil).

No options were granted in Q1-2018 (Q1-2017 – nil).

As at May 24, 2018, the Company had 544.1 million shares, 17.4 million options and 28.5 million warrants 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 March 31, 2018, an inflation rate of 2.4% was used (December 31, 2017 – 2.1%). The risk free rate used to discount the liability at March 31, 2018 was 2.85% (December 31, 2017 – 2.65%). The impact of the change in the risk free rate and inflation rate amounted to a \$0.3 million decrease to the decommissioning obligations during the three month period ended March 31, 2018.



**Commitments and Contingencies**

*Development and Exploration Commitments*

Coirón Amargo Norte (“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. Currently, exploitation and development phases are contained in CA-Norte, in the northern portion of CA, for which there are no current work commitments. .

Coirón Amargo Sur Este (CASE - 35% WI)

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. There was a loan draw down of \$260 and a repayment of \$73 as of March 31 2018.

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

USD 000s	2018	2019 <sup>(1)</sup>
Concession commitments at CASE	-	1,787 <sup>(2)</sup>

<sup>(1)</sup> Committed values are reflected at Madalena’s 35% WI at March 31, 2018 plus Madalena’s proportionate share of GyP’s carry.

On November 13, 2017 the company received the provincial approval due to the re-entry of well Cas.x-15 for \$2.1 million.

<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)

USD 000s	2018	2019
Concession commitments	-	8,225

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

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 under the Evaluation Lot Period. On May 5<sup>th</sup>, 2017, by means of Resolution 119/17, the Province finally notified the approval to enter into the Evaluation Lot Period. Once this commitment is completed, the company has the option to extend this period for another 2 years or to enter into the Exploitation Period.

Puesto Morales Block (100% WI-operated)

USD 000s	2018	2019	Beyond
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Concession commitments	24,700	7,000	600
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The Company is in discussions with the provincial authority for a re-schedule and conversion of the present commitments in a new exploration plan.

Santa Victoria Block (100% WI - operated)

The contract 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. On November, 2017 an application has been submitted and negotiations continue and are currently ongoing with the province of Salta for reconversion of the Exploration Area into a non-conventional exploration permit.

El Chivil Block (100% WI – operated)

The concession’s one year extension expiry occurred on September 7, 2016 and during the Quarter, the province of Formosa granted a further six month extension to negotiate a 10-year development period extension, which expired on May 1, 2017. The Company is 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**

USD 000s, unless otherwise noted	Q1 2018	Q4 2017	Q3 2017	Q2 2017
Oil and natural gas revenues	9,612	8,601	9,893	9,357
Net income (loss)	(622)	(19,386)	(5,702)	(5,449)
Shares outstanding – millions	544.0	543.8	543.8	543.8
Net income (loss) per share – basic and diluted	(0.00)	(0.04)	(0.01)	(0.01)

USD 000s, unless otherwise noted	Q1 2017	Q4 2016	Q3 2016	Q2 2016
Oil and natural gas revenues	10,336	10,543	11,728	13,070
Net income (loss)	(3,267)	(9,402)	(12,715)	(3,491)
Shares outstanding – millions	543.8	543.8	543.8	542.1
Net income (loss) per share – basic and diluted	(0.01)	(0.02)	(0.02)	(0.01)

The Company’s increase in oil and gas revenues during the Q1-2018, Q3-2017 and decrease during the Q4-2017, Q2-2017, Q1-2017, Q4-2016, Q3-2016, can be primarily attributed to lower sales volumes at Puesto Morales and Surubi. The Company also experienced commodity price declines in the second half and in 2016.

The Company recorded pre-tax impairment charges of \$22.2 million in Q4-2017, \$6.2 million in Q4-2016, \$12.0 million in Q3-2016.

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

For more details regarding the Company’s critical accounting judgments, estimates and accounting policies the Madalena Energy Inc.



following should be read in conjunction with the Company's consolidated financial statements for the year ended December 31, 2017.

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, 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, 2017. 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, 2017.

#### **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, 2017.

#### **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, 2017.

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, 2017. 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, 2017.

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, 2017.

#### **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 Vaca Muerta 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**

bbl      barrel  
bbls/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