



MANAGEMENT'S DISCUSSION & ANALYSIS

FOR THE THREE MONTHS ENDED MARCH 31, 2019



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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 15, 2019 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, 2019 and the accompanying notes as well as the audited consolidated financial statements for the year ended December 31, 2018 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 and on the Company's website at 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, working capital 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 company focus on Argentine upstream oil and gas company with operations in four provinces of Argentina where it is focused on the delineation of unconventional resources in the Vaca Muerta shale, Lower Agrio shale and Loma Montosa oil plays. The Company is implementing horizontal drilling and completions technology to develop both its conventional and resource plays.

Madalena trades on the TSX Venture Exchange ("TSXV") 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 2019

Hispania Services Agreement

On February 26, 2018, the Corporation announced that the Services Agreement entered into between the Corporation and Hispania on May 8, 2017 (the "Services Agreement") would terminate on March 31, 2019. The Services Agreement was initially extended in accordance with its terms following its expiration, and then for a further period to allow it be phased out with minimal impact to Madalena's operations.

Amended Loan Agreements

On April 7, 2019 the Company entered into an amended and restated convertible loan agreement (the "Amended and Restated Loan Agreement") with KD Energy and Hispania, and has extended the term of the Working Capital Loan agreement (the "Working Capital Loan Agreement"). Key amendments include an extension of the expiry date from May 8, 2020 to May 8, 2023, a change in the conversion price and exercise price of the Warrants (as defined below) to CAD 0.225 (subject to standard adjustments) the right of KD Energy to designate Jose David Penafiel and one additional representative to the board of directors during the term of the Amended and Restated Loan Agreement, and an expansion to the purposes for which the Company can draw on the loan to include acquisitions of oil and gas assets, subject to consent of KD Energy. The expiry date of the Working Capital Loan Agreement which is in the aggregate amount of \$6.5 million and carries an interest rate of 7% per annum has also been extended to May 8, 2023. The Amended and Restated Loan Agreement remains subject to approval by the TSX Venture Exchange, and, as it constitutes a "related party transaction" under Multilateral Instrument 61-101 – Protection of Minority Security Holders in Special Transactions, the Company's shareholders. The Company has called a special meeting of shareholder to approve the Amended and Restated Convertible Loan Agreement.

Management appointment

On April 17, 2019, the Company announced that Alejandro Augusto Penafiel was been appointed Vice President Growth and Capital effective April 1, 2019.

Coirón Amargo Sur Este (CASE); 35% non-operated

Madalena has been informed by the operator of the CASE block that a drilling rig was mobilized and has commenced drilling of the CASE-101h well, the first of a planned four-well drilling program during the first week of May. Madalena understands the plan is for this rig to complete the vertical section of each of the planned four wells in succession, following which a separate rig is expected to be used to drill the horizontal well sections of all



four wells, prior to completion operations being carried out.

Investor Relations and Capital Markets Advisory Services

On January 24, 2019 the Company has retained the services of Storyboard Communications Corp. ("Storyboard") and Hoot Research Inc. ("Hoot"), leading investor relations and capital markets advisory firms servicing Canadian small cap companies across the North American markets.

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, 2019 compared to the three months ended March 31, 2018. 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 March 31		% Change ⁽¹⁾
	2019	2018	
Average CAD to USD	0.752	0.791	4.9%
Average ARS to USD	0.026	0.051	49.5%
Period end CAD to USD	0.748	0.776	3.5%
Period end ARS to USD	0.023	0.050	53.5%

(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	
	2019	2018
Crude oil and NGLs (bbls/d)	1,585	1,646
Natural gas (mcf/d)	1,547	1,603
Total daily sales (boe/d)	1,843	1,914
% oil	86%	86%

Madalena's primary producing concessions are at Surubi, Puesto Morales and Palmar Largo. Other producing concessions include Coirón Amargo-Norte ("CA-Norte") Coirón Amargo Sur Este ("CASE") and El Chivil. All concessions produce oil and Puesto Morales and CA-Norte also produce natural gas. Approximately 82% of Madalena's current production comes from Surubi, Puesto Morales, and Palmar Largo.

Crude oil and NGL sales volumes for the three months ended March 31, 2019 ("the Quarter" or "Q1-2019") decreased to 1,585 bbls/d from 1,646 bbls/d for the three months ended March 31, 2018 ("Q1-2018"). The change compared to Q1-2018, can be attributed to stock in tanks increase in the North due to weather conditions that not allowed deliver the oil to the refinery. Natural gas sales volumes for the Quarter of 1,547 mcf/d decreased compared to 1,603 mcf/d for Q1-2018 due to lower production at Puesto Morales and CA-Norte.



Average Realized Prices

USD	Three months ended March 31	
	2019	2018
Crude oil and NGLs - \$/bbl	48.35	59.88
Natural gas - \$/mcf	4.31	5.12
Total - \$/boe	45.21	55.81

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 \$48.35 per barrel for the three months ended March 31, 2019 (2018 - \$59.88). 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. Since August 2018, due to the Argentinean peso devaluation, domestic price is agreed upon between refiners and producers. Such a price considers the impact of the export withholding imposed by the government in Q4-2018 and the possibility to increase the fuel to the final consumers.

The average price the Company received for oil for the Quarter was \$48.35/bbl, lower than the \$59.88/bbl realized in Q1-2018 mainly as a result of the lower oil 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 2019, which is the Argentine winter, the price was set at \$3.70/mmbtu (Winter prices in 2018 were \$5.30/mmbtu). Summer pricing for the period from October 2019 to April 2020 has been set at \$2/mmbtu (October 2018 - April 2019 - \$4.10/mmbtu).

The average total price received for the Quarter was \$45.21/boe, lower than the \$55.81/boe realized in Q1-2018.

Oil and Natural Gas Revenue

USD 000s, except boe	Three months ended March 31	
	2019	2018
Crude oil	6,898	8,872
Natural gas	600	739
	7,498	9,611
\$/boe	45.21	55.81

Oil and gas revenue was \$7.5 million for the Quarter compared to \$9.6 million for Q1-2018, a decline of 22% due to a 4% decline in sales volumes and a 18% decrease in prices received per boe.



Royalties

USD 000s, except boe	Three months ended March 31	
	2019	2018
Royalties	1,329	1,484
As % of revenue	18%	15%
\$/boe	8.01	8.62

Royalty expenses were \$1.3 million for the Quarter compared to \$1.5 million in Q1-2018, with the decrease due to lower prices. The Royalty rate was 18% for the Quarter compared to 15% in Q1-2018.

Operating Costs

USD 000s, except boe	Three months ended March 31	
	2019	2018
Compensation costs	977	856
Transportation and processing	1,533	1,708
Maintenance, workovers and other	3,055	2,907
\$/boe	5,565	5,471
	33.55	31.77

Operating costs during the Quarter was \$5.6 million compared to \$5.5 in Q1-2018 mainly as a result of a workover performed in February in Proa-3 well in El Surubí of \$0.6 million. On a per boe basis, operating costs for the Quarter increased 5% to \$33.55/boe from \$31.77/boe in Q1-2019 for the same reasons as noted above.

Netbacks ⁽¹⁾

USD/boe	Three months ended March 31	
	2019	2018
Oil and gas revenue	45.21	55.81
Royalties	(8.01)	(8.62)
Operating expenses	(33.55)	(31.77)
Netbacks	3.65	15.42

(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

	Three months ended March 31	
USD 000s	2019	2018
Argentina		
Gross G&A		
Compensation costs	565	417
Other	324	389
	889	806
Capitalized	(126)	(133)
	763	673
Corporate		
Gross G&A		
Compensation costs	40	52
Other	1,082	796
	1,122	848
Consolidated		
Net G&A total	1,885	1,521

Argentina

Gross G&A expenses for the Quarter increased by \$0.1 million to \$0.9 million due to a severance paid.

During the Quarter, \$0.1 million (Q1-2018 - \$0.1 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 \$1.1 million compared to \$0.8 million in Q1-2018. The increase was mainly due to higher consultant and legal fees of \$0.3 million related to new business department.

During the Quarter, there were no directly attributable G&A costs in Canada capitalized to property, plant and equipment in Argentina (Q1-2018 – nil).

Finance (Income) and Expenses

	Three months ended March 31	
USD 000s	2019	2018
Argentina		
Bank charges and fees	98	173
Foreign exchange (gain) loss – unrealized	(696)	180
Accretion of decommissioning obligations	112	19
Accretion of lease liabilities	2	-
Interest (income) and other expenses	(448)	(23)
	(932)	349
Corporate		
Foreign exchange loss (gain) - unrealized	15	(77)



Accretion of debt component of convertible debentures issued	17	17
Interest (Income) and other expenses	1	16
	33	(44)
Consolidated	(899)	305

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 \$0.1 million (Q1-2018 - \$0.2 million).

Accretion of decommissioning liabilities

Accretion expense was \$0.1 million for the Quarter (Q1-2018– \$19 thousand).

Foreign exchange (gain) loss – unrealized

During the Quarter the Company recorded an unrealized foreign exchange gain of \$0.7 million compared to an unrealized loss of \$0.2 million in Q1-2018. 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.

Accretion of lease liabilities

Accretion expense was \$2 thousand for the Quarter (Q1-2018– nil).

Interest (Income) and other expenses

Interest (income) and other expenses relates primarily to the reversal of allowance for VAT credit of \$0.4 million, as a result of VAT position change to payable due to the higher sales from Palmar Largo during the quarter, when the company started to operate 100% of the concession. In Q1-2018 Interest (income) and other expenses relates primarily to a reversal of interests over a labor contingency of \$38 thousand.

Corporate

Foreign exchange loss (gain)

During the Quarter, the Company recorded an unrealized foreign exchange loss of \$15 thousand (Q1-2018 gain of \$77 thousand). The USD to CAD foreign exchange rate appreciated by 2% since December 31, 2018 (Q1-2018 – 2.8% rate depreciation since December 31, 2017).

Accretion of debt component of convertible debentures issued

Accretion expense was \$17 thousand for the Quarter (Q1-2018– \$17 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. No options were granted during the Quarter (2018 – 11,400,000).

Share based compensation expense was \$110 thousand in the Quarter compared to an expense of \$27 thousand for Q1-2018.

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 recovery was \$13 thousand in the Quarter (Q1-2018 expense of \$47 thousand).



Depletion and Depreciation ("D&D")

USD 000s	Three months ended March 31	
	2019	2018
Argentina	1,643	1,665
\$/boe	9.91	9.67
Consolidated	1,643	1,665

Argentina

D&D decreased to \$1.6 million in the Quarter compared to \$1.7 million in Q1-2018 mainly due to a higher reserve base. On a per boe basis, D&D for the Quarter increased to \$9.91/boe from \$9.67/boe in Q1-2018.

Impairment

At March 31, 2019 and 2018, 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	
	2019	2018
Current	(21)	-
Deferred	2,172	(624)
Total	2,151	(624)

Madalena has one legal entity 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 expense (including minimum tax) for the Quarter and Q1-2018 was nil.

The Company recorded a deferred income tax expense of \$2.2 million during the Quarter (Q1-2018 – deferred income tax recovery - \$0.6 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.

	Three months ended March 31	
USD 000s	2019	2018
Cash flow from (used in) operating activities	(256)	227
Change in non-cash working capital	(775)	845
Change in other long-term assets	-	-
Change in other long-term liabilities	-	-
Funds flow from (used in) continuing operations	(1,031)	1,072

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

	Three months ended March 31	
USD 000s	2019	2018
Funds flow from (used in) continuing operations	(1,031)	1,072
Per share – basic and diluted	(0.00)	0.00
Net income (loss) - continuing operations	(626)	(622)
Per share – basic and diluted	(0.00)	(0.00)
Comprehensive income (loss) – continuing operations	(626)	(622)

Madalena's funds flow from continuing operations for the Quarter decreased by \$2 million from Q1-2018, mainly due to lower prices, and non-recurrent expenses: El Surubi workover of \$0.6 million and Vinalar \$0.3 million for the assignment of the area.

The net loss from continuing operations for the Quarter was \$0.6 million (Q1-2018 - loss of \$0.6 million) primarily due to the same reasons as noted above.

Capital Expenditures

	Three months ended March 31	
USD 000s	2019	2018
Argentina		
Land and associated renewal fees	-	(23)
Geological and geophysical	-	181
Drilling and completions	993	-
Well equipment and facilities	20	304
Other	132	151
Argentina total	1,145	613
Consolidated	1,145	613

Argentina

Capital expenditures for the Quarter were primarily related to Drilling and completions at Palmar Largo for PL-18 well workover of \$0.7 million and at Coirón Amargo-Sur Este ("CASE") \$0.3 million for Pilot program.



FINANCIAL POSITION, LIQUIDITY AND CAPITAL RESOURCES

Liquidity risk

USD 000s	March 31 2019	December 31 2018
Working capital (deficit) surplus		
Argentina	158	1,354
Canada	(2,221)	(2,045)
	(2,063)	(691)
Convertible debentures	-	-
Shareholders' equity	34,730	35,246

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. On August 11, 2017, Hispania assigned the Capex Loan Agreement to KD Energy International Capital Limited ("KD Energy"), a company wholly-owned by family trusts of Jose D. Penafiel and Alejandro Penafiel.

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.

On April 7, 2019 the Company has entered into the Amended and Restated Convertible Loan Agreement with KD Energy and Hispania, and extended the term of the working capital loan agreement. Key amendments include an extension of the expiry date from May 8, 2020 to May 8, 2023, a change in the conversion price to CAD 0.225 (subject to adjustment), the right of KD Energy to designate Jose David Penafiel and one additional representative to the board of directors during the term of the Amended and Restated Loan Agreement and an expansion to the purposes for which the Company can draw on the loan to include acquisitions of oil and gas assets, subject to consent of KD Energy. The expiry date of the Working Capital Loan Agreement which is in the aggregate amount of \$6.5 million and carries an interest rate of 7% per annum has also been extended to May 8, 2023. Amended and Restated Loan Agreement remains subject to approval by the TSX Venture Exchange, and, as it constitutes a



"related party transaction" under Multilateral Instrument 61-101 – *Protection of Minority Security Holders in Special Transactions*, the Company's shareholders. The Company has called a special meeting of shareholder to approve the Amended and Restated Convertible Loan Agreement.

In association with the Services Agreement, Hispania received monthly service fees of up to \$150 thousand until the Services Agreement was terminated on March 31, 2019, and as consideration for entering into the Services Agreement, 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. The Warrants 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. As of the date of this MD&A, all of the warrants have expired unexercised.

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, as amended by the Amended and Restated Loan Agreement.

At March 31, 2019, the consolidated working capital deficit of the Company was \$2.1 million (December 31, 2018 - \$0.7 million deficit), consisting of positive working capital of \$0.2 million (December 31, 2018 - working capital positive of \$1.4 million) in Argentina and a working capital deficit of \$2.2 million (December 31, 2018- \$2 million deficit) in Canada.

At March 31, 2019, \$0.4 million, or 87%, of Madalena's cash and cash equivalents was deposited with banks in Argentina (December 31, 2018 - \$0.6 million, 92%), and is held in ARS.

Repatriation of Funds to Canada

Funds are required to enable the Company to maintain compliance and manage the regulatory, reporting, audit, legal and tax requirements of a company listed on the TSXV.

During the Quarter, \$0.9 million was repatriated from Argentina (Q1-2018 – \$0.7 million)

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

No common shares were issued in the Quarter (Q1-2018 – 200 thousand common shares were issued).

No options were granted in Q1-2019 (Q1-2018 – nil).

As at May 15, 2019, the Company had 544.1 million shares, 16.4 million options and no 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, 2019, an inflation rate of 1.9% was used (December 31, 2018 – 1.9%). The risk free rate used to discount the liability at March 31, 2019 was 2.63% (December 31, 2018 – 2.87%). The impact of the change in the risk free rate and inflation rate amounted to a \$0.3 million increase to the decommissioning obligations during the three month period ended March 31, 2019.

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 \$0.6 million and a repayment of \$0.2 million as of March 31 2019 (2018 - there was a loan draw down of \$2.5 million fully repaid as of December 31, 2018).

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

USD 000s	2019 ⁽²⁾	2020 ⁽²⁾	Beyond ⁽³⁾
Concession commitments at CASE ⁽¹⁾	21,778	5,445	19,445

(1) Committed values are reflected at Madalena's 35% WI at December 31, 2018 plus Madalena's proportionate share of GyP's carry.

(2) Phase I includes the drilling of five horizontal multistage wells targeting the Vaca Muerta, the construction of early production facilities, investment for infrastructure improvement and social responsibility commitments.

(3) Subject to the results on Phase I in 2019, three additional wells will be drilled over the following two-year period (Phase II).



Curamhuele Block (90% WI-operated)

The Company received approval for a 2 year extension on the Curamhuele concession based on its proposal to drill one vertical well in a new location to vertically test Vaca Muerta and Lower Agrio formations. The extension was initially applied for in December, 2018. The extension was initially applied for in December, 2018.

On May 13, 2019 the extension was approved by the Minister of Energy and Natural Resources for the province of Neuquen which granted an additional twenty four months expiring March 9th, 2021 for the exploratory period of the concession.

The Company continues to pursue a potential farm out of Curamhuele. In the event that acceptable terms are not achievable the Company plans to move forward to fulfill the commitment to drill the vertical well to test Vaca Muerta and Lower Agrio formations.

Pursuant to the Company's exploration permit in Curamhuele, the Company is responsible for paying 100% of the costs during the exploration phase to maintain its 90% WI.

Puesto Morales Block (100% WI-operated)

USD 000s	2019	2020	Beyond
Concession commitments	1,800	28,140	2,500

On January 4, 2019 the Company received the approval from the provincial authority for a re-schedule and conversion of the last commitments in a new exploration plan.

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 \$4.037 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. In November, 2017 an application was submitted and as at March 31, 2019 negotiations were continuing 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 has since been in discussions with the province of Formosa with respect to negotiating an extension.

El Vinalar Block (100% WI – operated)

On September 18, 2018 the Company signed an agreement assigning Madalena's entire interest in the non-core and non-producing El Vinalar concession to a private Argentine oil and gas company. In January 2019, the Company made a payment of \$0.3 million Madalena has derecognized the related to decommissioning obligations of \$3.8 million, resulting in a net gain of \$3.5 million.

QUARTERLY FINANCIAL RESULTS

Continuing Operations

	Q1	Q4	Q3	Q2
USD 000s, unless otherwise noted	2019	2018	2018	2018
Oil and natural gas revenues	7,498	8,488	8,269	9,802
Net income (loss)	(626)	3,236	(2,272)	(3,514)
Shares outstanding – millions	544.1	544.6	543.9	544.0
Net income (loss) per share – basic and diluted	(0.00)	0.01	(0.00)	(0.01)

	Q1	Q4	Q3	Q2
USD 000s, unless otherwise noted	2018	2017	2017	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)

The Company's increase in oil and gas revenues during the Q4-2018, Q2-2018, Q1-2018 and Q3-2017 and decrease during the Q1-2019, Q3-2018, Q4-2017 and Q2-2017, can be primarily attributed to lower sales volumes at Puesto Morales and Surubi.

The Company also experienced commodity price declines during Q1-2019, Q2-2017, Q3-2017, Q3-2018 and Q4-2018.

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, 2018.

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, 2018.

(a) Adoption of IFRS 16 Leases

Madalena applied IFRS 16 with an initial adoption date of January 1, 2019, resulting in a change to its accounting policy for lease contracts as detailed below. The Company applied IFRS 16 using the modified retrospective approach under which the cumulative effect of initial application is recognized in retained earnings at January 1, 2019. As a result, comparative information has not been restated and continues to be reported under IAS 17 and IFRIC 4.

As a lessee, the Company previously classified leases as operating or finance leases based on its assessment of whether the lease transferred significantly all of the risks and rewards incidental to ownership of the underlying asset to the Company. Under IFRS 16, the Company recognizes right-of-use assets in property, plant and equipment and lease liabilities for most leases.

At transition, lease liabilities were measured at the present value of the remaining lease payments, discounted at



the Company's incremental borrowing rate as at January 1, 2019. Right-of-use assets are measured at an amount equal to the lease liability, adjusted by the amount of any prepaid or accrued lease payments.

i) Practical expedients

The Company used the following practical expedients when applying IFRS 16 to leases previously classified as operating leases under IAS 17: - Applied the exemption to not recognize right-of-use assets and liabilities for leases with less than 12 months of lease term; and

- Applied the exemption to not recognize leases of low value assets on the consolidated balance sheet. Payments for these leases will be disclosed in the notes to the consolidated financial statements.

ii) January 1, 2019 impact

Upon adoption of IFRS 16, the Company identified a office lease in-scope under the standard. The Company recorded finance lease liabilities on contracts previously classified as operating lease under IAS 17. The lease liabilities were measured at the present value of the remaining lease payments, discounted using the Company's incremental borrowing rate at January 1, 2019. The incremental borrowing rate used in the calculation was 10.5 percent.

Madalena has elected not to recognize right-of-use assets and lease liabilities for short-term leases that have a lease term of 12 months or less and leases of low-value assets, which include information technology equipment and field equipment. The Company recognizes the lease payments associated with these leases as an expense on a straight-line basis over the lease term.

(b) Policy applicable after January 1, 2019

On transition to IFRS 16 and at inception of entering into a contract, the Company assesses whether a contract is, or contains a lease. A contract is, or contains a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. To assess whether a contract conveys the right to control the use of an identified asset, the Company considers the following:

- the contract involves the use of an identified asset;
- the Company has the right to obtain substantially all of the economic benefits from the use of the asset throughout the period of use; and
- the Company has the right to direct the use of the asset, which occurs if either:
 - the Company has the right to operate the asset; or
 - the Company designed the asset in a way that predetermines how and for what purpose it will be used.

Madalena recognizes a right-of-use asset and a lease liability at the commencement date of the lease. The right-of-use asset is initially measured at cost, which comprises the initial amount of the lease liability adjusted for any lease payments made at or before the commencement date.

The right-of-use asset is subsequently depreciated using the straight-line method from the commencement date to the earlier of the end of the useful life of the right-of-use asset or the end of the lease term. The estimated useful life of right-of-use assets are determined based on the length of the lease.

The lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted using the Company's incremental borrowing rate. The consideration used to measure the lease liability includes all fixed or variable lease payments under the arrangement. Subsequently, the lease liability is measured at amortized cost using the effective interest method and is re-measured when there is a change in future lease payments.



In-scope leases

Upon adoption of IFRS 16, the Company identified certain office leases in-scope under the standard. The Corporation's lease for the former Calgary office was not included under IFRS 16 due to contract disputes.

Madalena has elected not to recognize right-of-use assets and lease liabilities for short-term leases that have a lease term of 12 months or less and leases of low-value assets, which include information technology equipment and field equipment. The Company recognizes the lease payments associated with these leases as an expense on a straight-line basis over the lease term.

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, 2018. 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, 2018.

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, 2018.

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, 2018.

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, 2018. 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, 2018.

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, 2018.

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