MANAGEMENT'S DISCUSSION & ANALYSIS

FOR THE THREE MONTHS AND YEAR ENDED DECEMBER 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 April 9, 2019 and should be read in conjunction with Madalena Energy Inc.'s ("Madalena" or the "Company") audited consolidated financial statements ("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 the consolidated financial statements and the Annual Information Form ("AIF"), is available on the System for Electronic Document Analysis and Retrieval ("Sedar") under the Company's profile at www.sedar.com and on the Company's website at www.madalenaenergy.com.

Basis of Presentation
This MD&A and the consolidated financial statements and comparative information have been prepared in United States dollars ("USD"), except where another currency has been indicated, and have been prepared in accordance with International Financial Reporting Standards ("IFRS" or "GAAP") as issued by the International Accounting Standards Board ("IASB"). 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 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 Operating Activities and Funds Flow from Continuing Operations sections of this MD&A.

Funds flow from 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 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 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.

2019 Developments

- ***Rinconada Puesto Morales***

  The company hold negotiations with Rio Negro Province during both 2017 and 2018 with respect to extending the outstanding commitments of $24.7 million as of December 31, 2018. On January 4, 2019, the Secretary of Energy approved a re-schedule and conversion of the remaining commitments and updated the exploration and development plan. For 2019, a vertical exploratory well with an approximate cost of $ 2 million is to be drilled during the second half of the year. The remaining commitments have been re-scheduled for 2020 and 2021.

- ***Palmar Largo and El Surubí***

  A workover is planned for the Proa-3 light oil well (Surubí, 85% operated interest) in Q1/19. Synergies with the recently acquired adjacent Palmar Largo block (100% operated) are under evaluation, with the possibility the same rig may perform two workovers in this block following the Proa-3 workover.

- ***Coirón Amargo Sur-Este ("CASE")***

  Purchase and Service Contracts awarding is ongoing in preparation to spud the first Vaca Muerta horizontal multifrac well of phase 1 (five wells) of the eight well Pilot Plan.

- ***Coirón Amargo Norte (CAN)***

  A drilling location of one Lotena Gas Well is under discussion among partners in order to obtain drilling permits in time to drill it.

- ***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.

- ***Hispania and KD Energy – 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 International Capital Limited ("KD Energy") and Hispania Petroleum S.A. ("Hispania") and 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 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.

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")

- On September 18, 2018 Coirón Amargo Sur Este ("CASE") block in Neuquen, Argentina, was converted in an unconventional exploitation concession with a 35-year term. The concession was awarded after the CASE block successfully completed the evaluation phase. The operating partner of the CASE block, Pan American Energy LLC ("PAE"), holds a 55% stake. Madalena and Gas y Petroleo del Neuquen S.A. (GyP) hold stakes of 35% and 10% respectively. As part of the terms and conditions for the award of an Unconventional Exploitation Concession, the Company has agreed, together with its partners, to invest: USD 74 million (USD 25.9 million net to Madalena) to carry out a pilot plan over a two-year period (the "Pilot Plan"). The Pilot Plan includes two phases. Phase I includes the drilling of five horizontal multifrac wells targeting the Vaca Muerta, the construction of early production facilities, investment for infrastructure improvement and social responsibility commitments. Contingent on Phase I results, three additional wells will be drilled over the following two-year period (Phase II) for an estimated amount of USD 50 million (USD 17.5 million net to Madalena). Madalena's portion of the Pilot Plan investment will be funded by drawing on its existing credit facilities.

Palmar Largo

- The company has signed an operation agreement with Recursos y Energía Formosa SA ("REFSA"), an oil company belonging to the Province of Formosa (the "Province"), over the Palmar Largo Concession in Formosa, Argentina, effective December 1, 2018 (the "Operation Agreement"). Madalena operates 100% of the Palmar Largo Concession and has to pay the existing 12% royalty on production revenues to the Province and an additional 5.32% of production revenues is to be paid to REFSA.

2018 Activity

- ***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.

- ***Madalena Petroleum (Americas) Limited Argentina (MPAL) and Madalena Petroleum Limited Argentina (MPL) transference of business unit to Madalena Energy Argentina S.R.L.***

  With effective date April 1, 2018 the company transferred both Argentina branches business units, Madalena Petroleum (Americas) Limited Argentina (MPAL) and Madalena Petroleum Limited Argentina (MPL) to Madalena Energy Argentina S.R.L (MEA).

- ***El Vinalar***

  In December, 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. Once Salta province approves the agreement, Madalena will be able to write off liabilities related to decommissioning obligations.

Foreign Exchange Fluctuations

The table below provides various exchange rates that illustrate the foreign exchange fluctuations between the USD, the Argentine Peso ("ARS"), and the Canadian dollar ("CAD"). The table illustrates the impact of both the ARS and CAD changes relative to the USD in the three and twelve months ended December 31, 2018 compared to the three and twelve months ended December 31, 2017. During 2018, ARS and CAD continued to depreciate against the USD. Foreign exchange changes in ARS and CAD impact the unrealized foreign exchange gains and losses recorded in the consolidated statements of loss.

	Three months ended December 31		**%**	**Year ended December 31**		**%**
USD	**2018**	**2017**	**Change[1]**	**2018**	**2017**	**Change[1]**
Average CAD to USD	**0.757**	0.787	3.7%	**0.772**	**0.770**	(0.2%)
Average ARS to USD	**0.027**	0.057	52.7%	**0.036**	**0.060**	41.0%
Period end CAD to USD	**0.733**	0.797	8.0%	**0.733**	**0.797**	8.0%
Period end ARS to USD	**0.027**	0.054	50.5%	**0.027**	**0.054**	50.5%

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

Continuing Argentine Operations and Corporate Segments

Sales Volumes

	Three months ended December 31		**Year ended December 31**	
	2018	**2017**	**2018**	**2017**
Crude oil and NGLs (bbls/d)	**1,505**	1,588	**1,534**	1,782
Natural gas (mcf/d)	**1,478**	1,702	**1,436**	1,894
Total daily sales (boe/d)	**1,751**	1,872	**1,774**	2,098
% oil	**86%**	85%	**87%**	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 79% of Madalena's current production comes from Surubi, Puesto Morales, and CA-Norte.

Crude oil and NGL sales volumes for the three months ended December 31, 2018 ("the Quarter" or "Q4-2018") decreased to 1,505 bbl/d from 1,588 bbl/d for the three months ended December 31, 2017 ("Q4-2017"). The change compared to Q4-2017, can be attributed to production declines at CA-Norte, Puesto Morales and Surubi.

Natural gas sales volumes for the Quarter of 1,478 mcf/d decreased compared to 1,702 mcf/d for Q4-2017 due to lower production at Puesto Morales and CA-Norte.

For the year ended December 31, 2018 ("YTD"), crude oil and NGL sales volumes decreased to 1,534 bbl/d from 1,782 bbl/d for the year ended December 31, 2017 ("YTD-2017"), primarily due to production declines at Surubi and operations downtime at both CA-Norte and Puesto Morales. Natural gas sales volumes YTD decreased to 1,436 mcf/d from 1,894 mcf/d due to production declines at Puesto Morales and CA-Norte.

Average Realized Prices

	Three months ended December 31		**Year ended December 31**	
USD	**2018**	**2017**	**2018**	**2017**
Crude oil and NGLs - $/bbl	**56.50**	53.41	**59.52**	52.79
Natural gas - $/mcf	**4.90**	5.09	**5.41**	5.57
Total - $/boe	**52.69**	49.95	**55.87**	49.88

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 $56.50 per barrel for the three months ended December 31, 2018 (2017 - $53.41). 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 during this quarter and the possibility to increase the fuel to the final consumers.

The average price the Company received for oil for the Quarter was $56.50/bbl, higher than the $53.41/bbl realized in Q4-2017 mainly as a result of the higher oil pricing.

The average price received for oil YTD was $59.52/bbl, higher than the $52.79/bbl realized YTD-2017 for the same reasons as noted for the Quarter.

Gas prices in Argentina are subject to seasonal demand and are negotiated between the producer and the buyer. For the period May to September 2018, which is the Argentine winter, the price has been 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 $52.69/boe, higher than the $49.95/boe realized in Q4-2017 mainly as a result of the higher oil price.

Oil and Natural Gas Revenue

	Three months ended December 31	**Year ended December 31**

USD 000s, except boe	2018	2017	2018	2017
Crude oil	**7,822**	7,804	**33,337**	34,334
Natural gas	**667**	797	**2,834**	3,853
	8,489	8,601	**36,171**	38,187
$/boe	**52.69**	49.95	**55.87**	49.88

Oil and gas revenue was $8.5 million for the Quarter compared to $8.6 million for Q4-2017, a decline of 2% due to a 7% decline in sales volumes and a 5% increase in prices received per boe.

YTD oil and gas revenues decreased to $36.2 million compared to $38.2 million YTD-2017, a decline of 5% due to a 15% decline in sales volumes and a 10% increase in prices received per boe.

Royalties

	Three months ended December 31		Year ended December 31	
USD 000s, except boe	2018	2017	2018	2017
Royalties	**1,373**	1,358	**5,764**	6,332
As % of revenue	**16%**	16%	**16%**	17%
$/boe	**8.52**	7.89	**8.90**	8.27

Royalty and turnover taxes expenses were $1.4 million for the Quarter compared to $1.4 million in Q4-2017, with no variance. Royalty rates were the same in both periods, averaging 16%.

YTD, royalties and turnover taxes were $5.8 million compared to $6.4 million YTD-2017, and decreased due to lower sales volumes.

Other Income

Other income of $0.5 million YTD-2018 related primarily to oil reception services in CA-Norte rendered to three Joint ventures operated by O&G Developments Ltd S.A.. (2017 - $78 thousand).

Operating Costs

	Three months ended December 31		Year ended December 31	
USD 000s, except boe	2018	2017	2018	2017
Compensation costs	**1,094**	1,325	**4,020**	4,419
Transportation and processing	**1,508**	2,016	**5,234**	7,910
Maintenance, workovers and other	**3,129**	2,877	**10,489**	12,049
	5,731	6,218	**19,743**	24,378
$/boe	**35.57**	36.11	**30.49**	31.84

Operating costs during the Quarter decreased 8% to $5.7 million from $6.2 million in Q4–2017 mainly as a result of lower processing expenses ($0.5 million) and due to the devaluation of the Argentine peso. On a per boe basis, operating costs for the Quarter decreased 1% to $35.57/boe from $36.11/boe in Q4-2017 for the same reasons as noted above.

Operating costs YTD were $19.7 million compared to $24.4 million YTD-2017. The decrease was mainly due to lower processing expenses ($2.7 million) and lower maintenance, workovers and other ($2 million). On a per boe basis, YTD costs were $30.49 per boe, decreased from $31.84 per boe YTD-2017.

Netbacks [(1)]

	Three months ended December 31		Year ended December 31	
USD/boe	**2018**	**2017**	**2018**	**2017**
Oil and gas revenue	**52.69**	49.95	**55.87**	49.88
Royalties	**(8.52)**	(7.89)	**(8.90)**	(8.27)
Operating expenses	**(35.57)**	(36.11)	**(30.49)**	(31.84)
Netbacks	**8.59**	5.95	**16.47**	9.77

(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 December 31		Year ended December 31	
USD 000s	**2018**	**2017**	**2018**	**2017**
Argentina				
Gross G&A				
Compensation costs	**367**	580	**1,386**	2,621
Other	**458**	767	**1,555**	2,876
	825	1,347	**2,941**	5,497
Capitalized	**(108)**	(159)	**(424)**	(687)
	717	1,188	**2,517**	4,810
Corporate				
Gross G&A				
Compensation costs	**55**	53	**225**	643
Onerous contracts	**-**	-	**-**	-
Other	**975**	791	**3,585**	3,498
	1,030	844	**3,810**	4,141
Capitalized	**-**	-	**-**	-
	1,030	844	**3,810**	4,141
Consolidated				
Net G&A total	**1,747**	2,032	**6,328**	8,951

Argentina

Gross G&A expenses for the Quarter decreased by $0.5 million to $0.8 million due to lower other costs $0.3 million and lower compensation costs $0.2 million compared to Q4-2017.

During the Quarter, $0.1 million (Q4-2017 - $0.2 million) of directly attributable G&A costs in Argentina were capitalized to property, plant and equipment.

YTD, gross G&A costs decreased by $2.6 million to $2.9 million due to lower other costs of $1.3 million and lower compensation costs $1.3 million. The Company currently employs 20 office employees in Argentina, an increase of 1 since Q4-2017. The Company continues to optimize in areas where efficiencies can be realized.
YTD, amounts capitalized were $0.4 million compared to $0.7 million YTD-2017.

Corporate
Gross G&A expenses for the Quarter increased to $1 million compared to $0.8 million in Q4-2017. The increase was mainly due to higher consultant charges of $0.2 million.

On YTD basis, Gross G&A expenses decreased by $0.3 million to $3.8 million compared to YTD-2017. The decrease was due to the lower compensation costs $0.4 million, partially offset by higher office expenses of $0.1 million.

During the Quarter and YTD, there were no directly attributable G&A costs in Corporate capitalized to property, plant and equipment in Argentina (Q4-2017 - nil, YTD-2017 - nil).

Restructuring

	Three months ended December 31		**Year ended December 31**	
USD 000s	**2018**	**2017**	**2018**	**2017**
Argentina	-	-	-	1,402
Corporate	-	64	-	831
Consolidated	-	64	-	2,233

Argentina
No restructuring expenses were paid during 2018. (YTD-2017 – $1.4 million).

Corporate
No restructuring expenses were paid during 2018. (YTD-2017 – $0.8 million).

Finance (Income) and Expenses

USD 000s	Three months ended December 31 2018	Three months ended December 31 2017	Year ended December 31 2018	Year ended December 31 2017
Argentina				
Bank charges and fees	**136**	296	**787**	1,089
Foreign exchange (gain) loss - unrealized	**1,097**	(29)	**1,739**	450
Accretion of decommissioning liabilities	**546**	437	**590**	575
Interest (income) and other expenses	**(122)**	(1,942)	**(207)**	(2,504)
	1,656	(1,238)	**2,910**	(390)
Corporate				
Bank charges and fees	**15**	-	**15**	-
Foreign exchange loss - realized	**-**	-	**-**	(2)
Foreign exchange (gain) loss - unrealized	**(198)**	-	**(280)**	381
Accretion of debt component of convertible debentures issued	**17**	17	**67**	69
Interest and other expenses	**36**	12	**84**	45
Fair value change on assets held for sale	**-**	-	**-**	150
	(130)	29	**(115)**	643
Consolidated	**1,526**	(1,209)	**2,795**	253

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 $0.1 million (Q4-2017 - $0.3 million).

YTD, bank charges and fees were $0.8 million compared to $1.1 million YTD-2017. The decrease was due to reduced transaction activity.

Foreign exchange loss –unrealized

During the Quarter the Company recorded an unrealized foreign exchange loss of $1.1 million compared to an unrealized gain of $29 thousand in Q4-2017. YTD, the Company recorded a $1.7 million loss compared to a $0.5 million loss in YTD-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.

Accretion of decommissioning liabilities

Accretion expense was $0.5 million for the Quarter (Q4-2017– $0.4 million), and $0.6 million YTD and YTD-2017.

Interest (Income) and other expenses

Interest (income) and other expenses during the quarter relate primarily to the reversal of an accrual for professional services of $0.2 million. In Q4-2017, Interest (income) and other expenses relate primarily to the reversal of provision against GyP receivable as a result of the implementation of “Carry Petrolero” in Coirón Amargo-Norte (“CA-Norte”), previously written-off amounting to $1.9 million.

YTD, Interest (Income) and other expenses relates primarily to the reversal of an accrual for professional services of $0.2 million. YTD-2017, Interest (Income) and other expenses relates primarily to the recovery of GyP receivable as a result of the implementation of "Carry Petrolero" in Coirón Amargo-Norte ("CA-Norte"), previously written-off amounting to $1.9 million, common investments funds $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 and YTD, the Company has not recorded any realized foreign exchange (Q4-2017 nil and YTD-2017 gain $2 thousand).

During the Quarter the Company recorded an unrealized foreign exchange gain of $0.2 million (Q4-2017 nil). YTD the Company recorded an unrealized foreign exchange gain of $0.3 million compared to an unrealized loss of $0.4 million in Q4-2017

The USD:CAD foreign exchange rate depreciated by 8.7% since December 31, 2017 (Q4-2017 – 6.6% rate appreciation since December 31, 2016).

Accretion of debt component of convertible debentures issued

Accretion expense was $17 thousand for the Quarter and $67 thousand YTD (Q4-2017– $17 thousand and YTD-2017 – $69 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

Stock options

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 no options were granted to directors, officers and employees. YTD, 11.4 million options were granted at an exercise price of CAD $0.22 per share (YTD-2017 – 3 million).

Share based compensation expense was $0.1 million the Quarter compared to an expense of $41 thousand for Q4-2017. No share-based compensation expense was capitalized during the Quarter (Q4-2017 – nil).

On a YTD basis, share based compensation expense was $0.9 million (recovery YTD-2017 - $0.6 million). No share-based compensation expense was capitalized (YTD-2017 - nil).

Share-based compensation recovery arising from the forfeitures of stock options recognized for the year ended December 31, 2018 was $12 thousand (2017 – 0.7 million).

Long-term incentive units

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 $32 thousand in the Quarter (Q4-2017 recovery $28 thousand).

On a YTD basis, the LTIP recovery arising from the forfeitures of units net of LTIP expense, recorded as part of share-based and long-term incentive compensation expense in the consolidated statements of loss for the year ended December 31, 2017 was $24 thousand (2017 – expense of $20 thousand) and is revalued at the end of each reporting period.

Depletion and Depreciation ("D&D")

USD 000s, except boe	Three months ended December 31 2018	2017	Year ended December 31 2018	2017
Argentina	**757**	3,203	**5,727**	14,807
$/boe	**4.70**	18.60	**8.85**	19.34
Corporate	**-**	97	**-**	124
Consolidated	**757**	3,301	**5,727**	14,931

Argentina

D&D decreased to $0.8 million in the Quarter compared to $3.2 million in Q3-2017 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 $4.70/boe from $18.60/boe in Q4-2017 primarily due to the same reasons as noted above.

YTD, D&D decreased by $5.7 million from $14.8 million in 2017 and per boe costs went from $19.34/boe to $8.85/boe for the same reasons noted for the Quarter.

Corporate

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

Property Plant and Equipment ("PPE") Impairment

At December 31, 2018, Madalena determined that indicators of impairment existed in each of its Argentine CGUs. These indicators of impairment were a result of fluctuation in interest rate.

As a result of the transferr of MPAL and MPL business units to MEA, management determined a change is justified. In 2017 CGUs were defined by legal entity. In 2018 the CGUs were redefined by management into MEA North and MEA South as a result of D&P concessions which are similar due to geography basin, prices, and oil quality.

As a result, impairment tests were performed over each CGU and one of them, MEA North, was deemed to be impaired as it´s estimated recoverable amount was lower than the carrying amount by $0.8 million. For MEA South the recoverable amount was higher than it carrying amount by $1.7 million. The combined recoverable amounts, calculated as $22.5 million, resulted in pre-tax impairment recovery of $0.9 million (2017 - $22.2 million).

The impaired CGU's recoverable values were estimated using value in use calculations based on future net cash flows expected to be derived from the CGU's proven plus probable reserves from the externally prepared December 31, 2018 reserve report using a discount rate of 17.1% for MEA North and of 19% for MEA South, and the following forecast benchmark commodity price estimates:

Year	Brent Oil Price [(1)] (USD/bbl)	Argentina Domestic Gas Price [(1)] (USD/mmbtu)
2019	65.92	4.90
2020	69.47	4.90
2021	71.65	5.00
2022	73.72	5.10
2023	75.58	5.20
2024	77.39	5.30
2025	79.27	5.41
2026	81.27	5.52
2027	82.88	5.63
2028	84.54	5.74
2028+	+2%/yr	+2%/yr

(1) The forecast benchmark commodity prices listed above are adjusted for quality differentials, heat content, distance to market and other factors in performing our impairment tests.

Had the discount rate used been 1% higher for the range of discount rates used, additional impairment charges of $1.9 million would have resulted for the year ended December 31, 2018.

An additional $1 decrease in the price deck would have resulted in further impairment charges of $3.3 million for the year ended December 31, 2018.

At December 31, 2017, Madalena determined that indicators of impairment existed in each of its Argentine CGUs. These indicators of impairment were a result of lower netbacks in these CGUs. CGUs at December 31, 2016 were defined at the legal entity level and aggregated up to the concession level for the Argentine branches of Madalena Petroleum Ltd. (Canada) ("MPL") and Madalena Petroleum Americas Limited (Barbados) ("MPAL").

However, effective January 1, 2017 Madalena amalgamated legal entities MEA and MASA into one legal entity. In fiscal 2016 these two legal entities were considered their own CGUs. Because these two legal entities hold concessions in different parts of the country, where independent cash flows exist due to different economic circumstances and different processing arrangements, management concludes that the concessions in the North (originally MEA) and the concessions in the South (originally MASA) will continue to maintain their own CGU.

As a result, impairment tests were performed over each CGU and all of them were deemed to be impaired as their estimated recoverable amounts were lower than their carrying amounts. The recoverable amounts, calculated as $20.3 million, resulted in pre-tax impairment charges of $22.2 million.

The impaired CGU's recoverable amounts were estimated using value in use calculations based on future net cash flows expected to be derived from the CGU's proven plus probable reserves from the externally prepared December 31, 2017 reserve report using a discount rate of 17% and the forecast benchmark commodity price estimates ranging from $62.33/bbl - $82.75/bbl for oil and $4.40 - $5.16/mmbtu for natural gas.

Exploration & Evaluation ("E&E") Impairment

At December 31, 2018, Madalena determined that no impairment triggers existed relating to its Argentine E&E assets.

At December 31, 2017, Madalena determined that no impairment triggers existed relating to its Argentine E&E assets.

Income Tax Expense (Recovery)

	Three months ended December 31		Year ended December 31	
USD 000s	**2018**	**2017**	**2018**	**2017**
Current	**(139)**	(1,089)	**-**	(52)
Deferred	**(4,785)**	(5,343)	**(1,005)**	(7,039)
Total	**(4,924)**	(6,432)	**(1,005)**	(7,091)

Madalena has one legal entity in Argentina which had taxable income in the Quarter and YTD. The income tax rate in Argentina is 30% for 2018 and 2019, and 25% for subsequent years. Current income tax recovery (including minimum tax) for the Quarter was $0.1 million compared to a recovery of $1.1 million for Q4-2017. On a YTD basis, current income tax expense was nil (YTD-2017 recovery – $52 thousand).

The Company recorded a deferred income tax recovery of $4.8 million during the Quarter (Q4-2017 – deferred income tax recovery - $5.3 million). YTD, the Company booked a deferred income tax recovery of $1 million (YTD-2017 – deferred income tax recovery - $7 million).

Reconciliation of Cash Flow from Operating Activities and Funds Flow from Continuing Operations

As detailed previously in this MD&A, funds flow from operations is a term that does not have any standardized meaning under GAAP. Madalena's method of calculating funds flow from 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 continuing operating activities before changes in non-cash working capital and change in other long-term assets.

	Three months ended December 31		Year ended December 31	
USD 000s	**2018**	**2017**	**2018**	**2017**
Cash flow from operating activities	**(45)**	1,969	**3,894**	(4,922)
Change in non-cash working capital	**(145)**	(339)	**158**	3,301
Change in other long-term assets	**-**	-	**-**	(475)
Funds flow (used in) from continuing operations	**(190)**	1,630	**4,052**	(2,096)

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

USD 000s	Three months ended December 31 2018	Three months ended December 31 2017	Year ended December 31 2018	Year ended December 31 2017
Funds flow from (used in) continuing operations	**(190)**	1,630	**4,052**	(2,096)
Per share – basic & diluted	**-**	-	**-**	-
Net income (loss) - continuing operations	**3,236**	(19,386)	**(3,172)**	(33,796)
Per share – basic & diluted	**0.01**	(0.03)	**(0.01)**	(0.06)
Comprehensive loss (gain) – continuing operations	**3,236**	(19,420)	**(3,172)**	(33,580)

Madalena's funds flow from continuing operations for the Quarter decreased by $1.8 million from Q4-2017.

On an YTD basis, funds flow from continuing operations increased by $6.1 million from YTD-2017.

The net income from continuing operations for the Quarter was $3.2 million (Q4-2017 - loss of $19.4 million), primarily due to impairment reversal, lower operating costs and general and administrative expenses.

The net loss from continuing operations YTD was $3.2 million (YTD-2017 – loss of $33.8 million), with the decrease due to the same reasons outlined for the Quarter.

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

USD 000s	Three months ended December 31 2018	Three months ended December 31 2017	Year ended December 31 2018	Year ended December 31 2017
Foreign currency translation gain (loss)	**-**	(34)	**-**	216

During the Quarter and YTD, the Company didn’t record any foreign currency translation (Q4-2017 –loss of $34 thousand and YTD-2017 – gain of $0.2 million).

During the quarter the USD appreciated by 5.4% against the CAD (Q4-2017 – appreciated by 0.5%). During the period the USD appreciated by 8.7% against the CAD (YTD-2017 – depreciated by 6.6%).

Capital Expenditures

USD 000s	Three months ended December 31 2018	Three months ended December 31 2017	Year ended December 31 2018	Year ended December 31 2017
Argentina				
Land and associated renewal fees	**-**	1,598	**1,516**	1,598
Geological and geophysical	**13**	89	**127**	248
Drilling and completions	**-**	-	**-**	1
Well equipment and facilities	**411**	431	**2,772**	564
Other	**256**	483	**1,102**	1,338
Argentina total	**680**	2,601	**5,517**	3,749
Corporate				
Other	**-**	-	**-**	-
Corporate total	**-**	-	**-**	-
Consolidated	**680**	2,601	**5,517**	3,749

Argentina

Capital expenditures for the Quarter were primarily related to well equipment and facilities of $0.4 million mainly related to Coirón Amargo-Sur Este (“CASE”) $0.2 million and to Coirón Amargo-Norte $0.1 million.

On a YTD basis, Capital expenditures were primarily related to well equipment and facilities of $2.6 million at Coirón Amargo-Sur Este (“CASE”) for CAS.x-14 well and related to land of $1.5 million for the bonus paid to Neuquén Province related to the unconventional exploitation concession with a 35-year term.

Quarter and YTD-2017, Capital expenditures were primarily related to land at Coirón Amargo-Norte as a result of the implementation of “Carry Petrolero” and well equipment and facilities at Coirón Amargo – Sur Este (“CASE”) for CAS.x-15 and CAS.x-14 wells.

As at December 31, 2018, the net book value of the PP&E assets was $22.4 million (2017 - $20.4 million) and the net book value of the E&E assets were $30.7 million (2017 - $39.9 million). The December 31, 2018 reserve report was prepared in accordance with the definitions, standards and procedures contained in NI 51-101 and the COGE Handbook by GLJ Petroleum Consultants ("GLJ Report"). In that report, the Company’s proved plus probable reserves, discounted before tax at 10%, was $83.4 million (2017 - $65.7 million). This includes $32.6 million (2017 - $13.8 million) associated with the Company's unconventional assets in the Vaca Muerta shale recorded in PP&E assets.

Transactions with Related Parties

An ex-director of the Company was a partner of a law firm that provided legal services to the Company. During the year ended December 31, 2018, the Company did not incur fees (2017 - $0.3 million of which $0.1 million was included in trade and other payables at December 31, 2017) from this firm for legal services. The costs were expensed in general and administrative costs in the consolidated statements of loss.

In association with the Services Agreement with Hispania, the Company incurred fees of $1.8 million during the year ended December 31, 2017 (2017 – 1.1 million).

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 December 31, 2018, there were no disbursements.

A director of the Company in Argentina provides professional services to the Company. During the year ended December 31, 2018, the Company incurred professional fees for $6 thousand (2017 - nil).

Of the convertible debentures issued by Madalena in July 2016 (note 11), certain directors and officers of the Company subscribed to 18% of the total issuance.

The transactions arose during the normal course of business and have been recorded at the exchange amounts, which are the amounts agreed upon by the related parties. The terms and conditions of these transactions were no more favourable than those available, or which might reasonably be expected to be available in similar transactions with arm's length third parties.

Financial Position, Liquidity and Capital Resources

Liquidity risk

USD 000s	December 31 2018	December 31 2017
Working capital (deficit) surplus		
Argentina	**1,354**	538
Canada	**(2,045)**	(1,582)
	(691)	(1,043)
Convertible debentures	**-**	1,274
Shareholders' equity	**35,246**	36,999

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.

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, none of the Warrants have been exercised and 4,758,333 remain outstanding.

On September 13, 2017, the shareholders of the Company passed an ordinary resolution approving KD Energy 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 Convertible Loan Agreement.

At December 31, 2018, the consolidated working capital deficit of the Company was $0.7 million (December 31, 2017 -$1 million deficit), consisting of positive working capital of $1.4 million (December 31, 2017 – positive working capital of $0.6 million) in Argentina and a working capital deficiency of $2 million (December 31, 2017- $1.6 million) in Canada.

At December 31, 2018, $0.6 million, or 74%, of Madalena’s cash and cash equivalents was deposited with banks in Argentina (December 31, 2017 - $1.1 million, 92%), 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, $1.5 million was repatriated from Argentina (Q4-2017 – $1.2 million). On a YTD basis, $4.4 million was repatriated from Argentina (YTD-2017 – $5.3 million).

<u>Share Capital Issued, Options Granted and Long-term Incentive Plan</u>

No common shares were issued in the Quarter (Q4-2017 – 80 thousand common shares were issued).

On a YTD basis, 200 thousand common shares were issued pursuant to the exercise of convertible debenture option of $40 thousand (YTD-2017 – 80 thousand common shares were issued).

No options were granted during the Quarter (Q4-2017 – nil). YTD, 11,400,000 options were granted to certain employees and directors of the Company with exercise prices of CAD $0.22 per share (YTD-2017– 3 million).

As a result of Hispania services agreement no warrants were issued during the Quarter (Q4-2017– 9,5 million), and YTD (YTD-2017– 28.5 million).

As at April 11, 2019, the Company had 544.1 million shares and 16.9 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 December 31, 2018, an inflation rate of 1.9% was used (December 31, 2017 – 2.1%). The risk free rate used to discount the liability at December 31, 2018 was 2.87% (December 31, 2017 – 2.65%). The impact of the change in the risk free rate and inflation rate amounted to a $0.2 million decrease to the decommissioning obligations during the three month period ended December 31, 2018.

YTD, the risk free and inflation rate change increased the decommissioning obligations by $0.2 million.

Commitments and Other Long-term Liabilities

Consolidated undiscounted Commitments table

USD 000s	Under negotiations	2019	2020	2021	2022	2023	Thereafter	Total
Development and Exploration Commitments	4,515	31,803	33,585	10,238	10,238	-	1,470	91,848
Office lease	-	58	31	-	-	-	-	89
Total	**4,515**	**31,861**	**33,616**	**10,238**	**10,238**	**-**	**1,470**	**91,937**

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. The amounts due to Madalena from GyP are recorded on Madalena's books as a receivable. Currently, exploitation and development phases are contained in CA-Norte, the northern part of CA, for which there are no current ongoing 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 $2.5 million fully repaid as of December 31, 2018 (2017 no draw down of the loan has occurred).

On September 18, 2018 CASE block was converted in an unconventional exploitation concession with a 35-year term. The concession was awarded after the CASE block successfully completed the evaluation phase.

As part of the terms and conditions for the award of an Unconventional Exploitation Concession, 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 multifrac 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)

USD 000s	**2019**	**2020**
Concession commitments	8,703	-

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 5th, 2017, by means of Resolution 119/17, the provincial government notified the Company that it had been approved 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.

On December 14, 2018, the company proposed to GyP, in its character of concessioner of the block, a new program consisting in one vertical well in a new location. This new proposal was accepted and approved by GyP, and both parties, requested a 2 years extension of the evaluation period.

Puesto Morales Block (100% WI-operated)

USD 000s	**2018**	**2019**	**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 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 last quarter of 2016, the province of Formosa granted a further six month extension to negotiate a 10-year development period extension, which expired on May 1, 2017. The Company is in discussions with the province of Formosa.

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. The assignment was presented to Salta province on December 20, 2018, and the approval is still pending.

Other Commitments

In November 2016, Madalena sub-leased its former corporate office premises to the end of 2018, with the expectation of further renewals or alternative sub-lease arrangements to the end of the head lease term of September 2022. The difference between the head lease payments under the existing contract and the sub-lease contract income expected over the period of the lease term, results in an onerous contract and a liability has been recognized of approximately $0.7 million (2017 - $0.8 million), of which $0.2 million (2017 - $0.2 million) is recorded as part of Trade and other payables and $0.5 million (2017 - $0.6 million) is recorded as part of Other long-term liabilities in the consolidated statements of financial position at December 31, 2018.

Other long-term liabilities

A continuity relating to these liabilities is as follows:

	Year ended December 31, 2018	2017
Balance, beginning of year	**1,977**	**2,138**
Lease liability(1)	**(164)**	**(120)**
LTIP liability	**24**	**(20)**
New contingencies	**71**	**-**
Updated contingencies	**(43)**	**156**
Settled through negotiation	**-**	**-**
Effect of change in foreign exchange rates	**(683)**	**(177)**
Balance, end of year	**1,182**	**1,977**

(1) Relates to "Other Commitments"

Annual and Quarterly Financial Results

Annual Financial Results – Continuing Operations

As at December 31 USD 000s, unless otherwise noted	2018	2017	2016
Oil and natural gas revenues	**36,171**	38,187	50,152
Other income	**480**	78	-
Net loss from continuing operations	**(3,172)**	(33,796)	(32,100)
Shares outstanding – millions	**544.1**	543.9	543.8
Net loss per share – basic and diluted-continuing operations	**(0.01)**	(0.06)	(0.06)
Total assets	**61,721**	73,248	123,228
Shareholders' equity	**35,246**	36,999	70,258

The decrease in oil and gas revenues in 2018 was a result of reduced production in Argentina due primarily to natural declines compared to 2017.

The Company recorded a pre-tax impairment recovery in 2018 of $0.9 million. The Company recorded a pre-tax impairment charge in 2017 of $22.2 and $18.2 million in 2016, respectively, impacting the net loss recognized.

Quarterly Financial Results - Continuing Operations

USD 000s, unless otherwise noted	Q4 2018	Q3 2018	Q2 2018	Q1 2018
Oil and natural gas revenues	**8,488**	8,269	9,802	9,612
Net income (loss)	**3,236**	(2,272)	(3,514)	(622)
Shares outstanding – millions	**544.6**	543.9	544.0	544.0
Net income (loss) per share – basic and diluted	**0.01**	(0.00)	(0.01)	(0.00)

USD 000s, unless otherwise noted	Q4 2017	Q3 2017	Q2 2017	Q1 2017
Oil and natural gas revenues	**8,601**	9,893	9,357	10,336
Net income (loss)	**(19,386)**	(5,702)	(5,449)	(3,267)
Shares outstanding – millions	**543.8**	543.8	543.8	543.8
Net income (loss) per share – basic and diluted	**(0.04)**	(0.01)	(0.01)	0.00

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

The Company recorded pre-tax impairment recovery of $0.9 million in Q4-2018 and a pre-tax impairment charges of $22.2 million in Q4-2017.

Critical Accounting Judgments, Estimates and Accounting Policies

For further 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.

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.

Future Accounting Pronouncements

IFRS 16 Leases

IFRS 16 was issued in January 2016 and it replaces IAS 17 Leases, IFRIC 4 Determining whether an Arrangement contains a Lease, SIC-15 Operating Leases-Incentives and SIC-27 Evaluating the Substance of Transactions Involving the Legal Form of a Lease. IFRS 16 sets out the principles for the recognition, measurement, presentation and disclosure of leases and requires lessees to account for all leases under a single on-balance sheet model similar to the accounting for finance leases under IAS 17. The standard includes two recognition exemptions for lessees – leases of 'low-value' assets (e.g., personal computers) and short-term leases (i.e., leases with a lease term of 12 months or less). At the commencement date of a lease, a lessee will recognise a liability to make lease payments (i.e., the lease liability) and an asset representing the right to use the underlying asset during the lease term (i.e., the right-of-use asset). Lessees will be required to separately recognise the interest expense on the lease liability and the depreciation expense on the right-of-use asset.

Lessees will be also required to remeasure the lease liability upon the occurrence of certain events (e.g., a change in the lease term, a change in future lease payments resulting from a change in an index or rate used to determine those payments). The lessee will generally recognise the amount of the remeasurement of the lease liability as an adjustment to the right-of-use asset.

Lessor accounting under IFRS 16 is substantially unchanged from today's accounting under IAS 17. Lessors will continue to classify all leases using the same classification principle as in IAS 17 and distinguish between two types of leases: operating and finance leases.

IFRS 16 also requires lessees and lessors to make more extensive disclosures than under IAS 17.

IFRS 16 is effective for annual periods beginning on or after 1 January 2019. Early application is permitted, but not before an entity applies IFRS 15. A lessee can choose to apply the standard using either a full retrospective or a modified retrospective approach. The standard's transition provisions permit certain reliefs.

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, 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, 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