



**MANAGEMENT'S DISCUSSION & ANALYSIS**

**FOR THE THREE MONTHS AND YEAR ENDED DECEMBER 31, 2017**



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

This Management's Discussion and Analysis of financial condition and results of operations ("MD&A") is based on information available to April 10, 2018 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, 2017 and the accompanying notes. This MD&A contains forward-looking information about the Company's current expectations, estimates, projections and assumptions. See the Advisory for information on the risk factors that could cause actual results to differ materially and the assumptions underlying the Company's forward-looking information. Madalena's management prepared the MD&A, while the Audit Committee of the Madalena Board of Directors (the "Board") reviewed and recommended its approval by the Board. Additional information relevant to the Company's activities contained in its continuous disclosure documents, including 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](http://www.sedar.com) and on the Company's website at [www.madalenaenergy.com](http://www.madalenaenergy.com).

**Basis of Presentation**

This MD&A and the 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. As discussed elsewhere in the MD&A, the Company disposed of its Canadian operations during 2016, which has been reported as discontinued operations.

### **2018 Developments**

- Madalena announced that Pan American Energy LLC ("PAE") has successfully commenced completion operations of the second horizontal multi-frac well CAS.x-14 in the Vaca Muerta Shale Formation at the Coiron Amargo Sur Este ("CASE") block in Argentina. A cement bond log has been run and 60 hydraulic fracs in 25 stages have been performed with approximately 10,300 klb of proppant.
- None core Assets  
Vinalar Block: Salta province granted a block extension to file an investment plan, which expired on November 11, 2017. The Company notified the province of Salta that it is not interested in a contract extension. Vinalar facilities and wells have been mothballed.

### **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 2017**

Madalena has successfully completed its strategic alternatives process which it initiated in June 2016. On May 8, 2017, Madalena entered into a series of agreements (the "Transactions") with Hispania Petroleum S.A., ("Hispania") a private, family-owned Spanish energy company, which provide for a package of debt and mezzanine financing of up to \$23 million which are expected to alleviate Madalena's liquidity challenges through a working capital loan of up to \$6.5 million (the "Working Capital Loan") and provide the Company access to growth capital for drilling and investment activities (the "Capex Loan") of up to \$16.5 million

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

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



## 2017 Activity

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

Madalena closed the Coirón Amargo-Sur Este ("CASE") transaction in January 2017, providing the Company with cash payments of \$10 million, \$3 million of which was received in December 2016 and the balance on closing.

Pursuant to the Pan American Energy LLC, Sucursal Argentina ("PAE") transaction in Q1 2017, the 2017 work program at Coirón Amargo – Sur Este ("CASE"), pursuant to which the Company has a maximum of \$5.6 million carry and has been carried for \$5.1 million in capital costs in the CAS.x-15 and CAS.x-14 wells. The CAS.x-15 well was successfully re-entered and drilled horizontally for approximately 1,000 metres in the Vaca Muerta unconventional oil resource play at a vertical depth of approximately 3,200 metres. The well tested an average of 430 barrels of oil per day through 3mm choke during the first 3 weeks of production. In March 2018 PAE has successfully commenced completion operations of the second horizontal multi-frac well CAS.x-14 in the Vaca Muerta Shale Formation.

- ***Argentina Credit facilities repayment***

Madalena repaid its \$1.6 million Argentine debt facility in full in February 2017.

- ***Sale of Canadian Assets***

Madalena sold all of the remaining 1.6 million free-trading common shares of Point Loma Resources Ltd. ("Point Loma") in January 2017 for net proceeds of \$0.5 million; and sold 4.7 million escrowed common shares in Point Loma in April 2017 for gross cash proceeds of \$0.8 million.

- ***Changes in board of directors***

On September 13, 2017, Messrs. Ruben Etcheverry, Ralph Gillcrist and Leonardo Madcur have each joined the board of directors of the Company (the "Board") as independent directors. The aforementioned directors have replaced Messrs. Keith MacDonald, Jay Reid and Ving Woo who each elected not to stand for reelection to the Board.

- ***Coirón Amargo-Norte ("CA-Norte")***

On December 28, 2017 Madalena signed with their partners in Coirón Amargo-Norte ("CA-Norte"), Gas y Petroleo de Neuquén S.A. ("GyP") and Apco Oil & Gas International Inc. Sucursal Argentina ("Apco"), the implementation of "Carry petrolero". With effective date, September 1, 2017 the contributions to be realized on behalf of GyP will be recognized as higher assets and/or expenses as appropriate by Madalena and Apco. Madalena and Apco acquired the assets and liabilities that GyP had as of September 1, 2017 (10% interest), at 38.89% and 61.11% respectively, in exchange of the GyP receivable, 2 million and 3.1 million respectively. Madalena will carry GyP account receivable out of books since the recovery of contributions is contingent on the existence of oil production in the area.

- ***Madalena Ventures International Holding Company Inc. (Barbados) in dissolution process***

Madalena Ventures International Holding Company Inc. (Barbados) sold, assigned and transferred unto Madalena Energy Inc. 8,329,825 common shares without nominal or par value in the capital of Madalena Ventures International Inc. (Barbados). On December 29, 2017 Madalena filed the certificate of intent to dissolve its subsidiary Madalena Ventures International Holding Company Inc. (Barbados).

- ***El Vinalar***

Vinalar facilities and wells have been mothballed.



### **Going Concern and Capital Commitments**

The financial statements have been prepared in accordance with IFRS applicable to a going concern, which contemplate the realization of assets and the settlement of liabilities in the normal course of business as they become due. Continuing as a going concern is dependent upon the Company's ability to amend capital commitments outlined in Note 21, which is expected to be achieved through negotiations with the provincial authorities. Failure to amend the commitments could result in insufficient sources to fund anticipated capital commitments. The Company's ability to continue as a going concern and discharge its obligations would be dependent on obtaining alternative equity, debt financing, and/or proceeds from asset sales which could be challenging.

### **Foreign Exchange Fluctuations**

The table below provides various exchange rates that illustrate the 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, 2017 compared to the three and twelve months ended December 31, 2016. During 2017, ARS continued to depreciate against the USD. CAD appreciated in the first three quarters, and then depreciated in the last quarter of the year, resulting in a net appreciation of 6.6% during the year. Foreign exchange changes in ARS impact the unrealized foreign exchange gains and losses recorded in the consolidated statements of loss. Foreign exchange changes in CAD are reflected through the foreign currency translation adjustment in accumulated other comprehensive loss, as shown in shareholders' equity and in the consolidated statements of comprehensive loss.

USD	Three months ended			Year ended		
	December 31 2017	2016	% Change <sup>(1)</sup>	December 31 2017	2016	% Change <sup>(1)</sup>
Average CAD to USD	<b>0.787</b>	0.749	-5.0%	<b>0.770</b>	0.755	-2.1%
Average ARS to USD	<b>0.057</b>	0.063	9.7%	<b>0.060</b>	0.067	10.3%
Period end CAD to USD	<b>0.797</b>	0.745	-7.0%	<b>0.797</b>	0.745	-7.0%
Period end ARS to USD	<b>0.054</b>	0.063	14.8%	<b>0.054</b>	0.063	14.8%

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

### **Continuing Argentine Operations and Corporate Segments**

#### **Sales Volumes**

	Three months ended		Year ended	
	December 31 2017	2016	December 31 2017	2016
Crude oil and NGLs (bbls/d)	<b>1,588</b>	1,947	<b>1,782</b>	2,072
Natural gas (mcf/d)	<b>1,702</b>	2,303	<b>1,894</b>	2,569
Total daily sales (boe/d)	<b>1,872</b>	2,330	<b>2,098</b>	2,500
% oil	<b>85%</b>	84%	<b>85%</b>	83%

Madalena's primary producing concessions are at Surubi, Puesto Morales and Coirón Amargo-Norte ("CA-Norte"). Other producing concessions include El Chivil, El Vinalar and Palmar Largo. All concessions produce oil and Puesto Morales and CA-Norte also produce natural gas. Approximately 87% of Madalena's current production comes from Surubi, Puesto Morales, and CA-Norte.



Crude oil and NGL sales volumes for the three months ended December 31, 2017 ("the Quarter" or "Q4-2017") decreased to 1,588 bbl/d from 1,947 bbl/d for the three months ended December 31, 2016 ("Q4-2016"). The change compared to Q4-2016, can be attributed to production declines at CA-Norte, Puesto Morales and Surubi. Natural gas sales volumes for the Quarter of 1,702 mcf/d decreased compared to 2,303 mcf/d for Q4-2016 due to lower production at Puesto Morales and CA-Norte.

For the year ended December 31, 2017 ("YTD"), crude oil and NGL sales volumes decreased to 1,782 bbl/d from 2,072 bbl/d for the year ended December 31, 2016 ("YTD-2016"), primarily due to production declines at Surubi and operations downtime at both CA-Norte and Puesto Morales. Natural gas sales volumes YTD decreased to 1,894 mcf/d from 2,569 mcf/d due to production declines at Puesto Morales and CA-Norte.

While the decrease at Puesto Morales was from natural declines, the Surubi and CA-Norte decline was from natural declines and a function of the delay in remedial work.

Madalena expects Q1-2018 sales volumes to average approximately 1,983 boe/d (86% oil and NGLs).

#### Average Realized Prices

USD	Three months ended December 31		Year ended December 31	
	2017	2016	2017	2016
Crude oil and NGLs - \$/bbl	<b>53.41</b>	53.59	<b>52.79</b>	60.09
Natural gas - \$/mcf	<b>5.09</b>	4.47	<b>5.57</b>	4.87
Total - \$/boe	<b>49.95</b>	49.18	<b>49.88</b>	54.81

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 \$52.79 per barrel for the year ended December 31, 2017 (2016 - \$60.09), official Medanito crude oil averaged \$52.22 per barrel for the year ended December 31, 2017 (2016 - \$67.50). In January 2017, Madalena was advised that a majority of producers and refiners in Argentina, at the request of the government, have signed a 2017 Medanito crude oil pricing agreement (the "Agreement") allowing for convergence with international Brent pricing over the coming months. Such agreement stated that in case international Brent pricing reached and remained above the monthly Medanito floor price for 10 consecutive days, the Agreement would be suspended. And, in case international Brent pricing fell below \$45.00 for 10 consecutive days, the Agreement would be reviewed. On September 13, 2017 the above suspension condition was reached and the agreement finalized in October, 2017. As from October, market prices were agreed upon between refiners and producers considering the international Brent price as a reference.

The average price the Company received for oil for the Quarter was \$53.41/bbl, lower than the \$53.59/bbl realized in Q4-2016 mainly as a result of the lower Medanito pricing.

The average price received for oil YTD was \$52.79/bbl, lower than the \$60.09/bbl realized YTD-2016 for the same reasons as noted for the Quarter.

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

The average total price received for the Quarter was \$49.95/boe, higher than the \$49.18/boe realized in Q4-2016 mainly as a result of the higher gas price.



The Company anticipates Argentina prices to average approximately \$52.53 per boe during Q1-2018.

#### ***Oil and Natural Gas Revenue***

USD 000s, except boe	Three months ended December 31		Year ended December 31	
	2017	2016	2017	2016
Crude oil	<b>7,804</b>	9,596	<b>34,334</b>	45,572
Natural gas	<b>797</b>	947	<b>3,853</b>	4,581
	<b>8,601</b>	10,543	<b>38,187</b>	50,152
\$/boe	<b>49.95</b>	49.18	<b>49.88</b>	54.81

Oil and gas revenue was \$8.6 million for the Quarter compared to \$10.5 million for Q4-2016, a decline of 18% due to a 20% decline in sales volumes and a 2% increase in prices received per boe.

YTD oil and gas revenues decreased to \$38.1 million compared to \$50.1 million YTD-2016, a decline of 24% due to a 15% decline in sales volumes and a 9% decrease in prices received per boe.

#### ***Royalties***

USD 000s, except boe	Three months ended December 31		Year ended December 31	
	2017	2016	2017	2016
Royalties	<b>1,358</b>	1,784	<b>6,332</b>	8,039
As % of revenue	<b>16%</b>	17%	<b>17%</b>	16%
\$/boe	<b>7.89</b>	8.32	<b>8.27</b>	8.78

Royalty and turnover taxes expenses were \$1.4 million for the Quarter compared to \$1.8 million in Q4-2016, with the decrease due to lower production volumes. Royalty rates were the same in both periods, averaging 17%.

YTD, royalties and turnover taxes were \$6.4 million compared to \$8 million YTD-2016, and decreased due to lower sales volumes.

The Company expects royalty rates for Q1-2018 to be consistent with this Quarter.

#### ***Other Income***

Other income of \$78 thousand YTD-2017 related primarily to oil reception services in CA-Norte rendered to two Joint ventures operated by O&G Developments Ltd S.A..



**Operating Costs**

USD 000s, except boe	Three months ended December 31		Year ended December 31	
	2017	2016	2017	2016
Compensation costs	1,325	1,079	4,419	4,067
Transportation and processing	2,016	2,011	7,910	7,474
Maintenance, workovers and other	2,877	3,267	12,049	12,026
	6,218	6,357	24,378	23,567
\$/boe	36.11	29.65	31.84	25.75

Operating costs during the Quarter decreased 2% to \$6.2 million from \$6.4 million in Q4–2016 mainly as a result of lower workovers and pulling activities. On a per boe basis, operating costs for the Quarter increased 18% to \$36.11/boe from \$29.65/boe in Q4-2016 due to lower production.

Operating costs YTD were \$24.4 million compared to \$23.6 million YTD-2016. The increase was mainly due to severance over contractors \$0.3 million. On a per boe basis, YTD costs were \$31.84 per boe, increased from \$25.75 per boe YTD-2016.

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

USD/boe	Three months ended December 31		Year ended December 31	
	2017	2016	2017	2016
Oil and gas revenue	49.95	49.18	49.88	54.81
Royalties	(7.89)	(8.32)	(8.27)	(8.78)
Operating expenses	(36.11)	(29.65)	(31.84)	(25.75)
Netbacks	5.95	11.20	9.77	20.27

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



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

USD 000s	Three months ended December 31		Year ended December 31	
	2017	2016	2017	2016
<b>Argentina</b>				
Gross G&A				
Compensation costs	<b>580</b>	622	<b>2,621</b>	3,297
Other	<b>767</b>	706	<b>2,876</b>	2,614
	<b>1,347</b>	1,328	<b>5,497</b>	5,911
Capitalized	(159)	(219)	(687)	(1,005)
	<b>1,188</b>	1,109	<b>4,810</b>	4,906
<b>Corporate</b>				
Gross G&A				
Compensation costs	<b>53</b>	194	<b>643</b>	1,190
Onerous contracts	-	927	-	927
Other	<b>791</b>	585	<b>3,498</b>	2,443
	<b>844</b>	1,706	<b>4,141</b>	4,560
Capitalized	-	-	-	(342)
	<b>844</b>	1,706	<b>4,141</b>	4,218
<b>Consolidated</b>				
Net G&A total	<b>2,032</b>	2,815	<b>8,951</b>	9,124

*Argentina*

Gross G&A expenses for the Quarter were comparable to Q4-2016. During the Quarter, the company received retroactive charges from the non-operated field CASE, \$0.3 million (Q4-2016 – nil).

During the Quarter, \$0.2 million (Q4-2016 - \$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 \$0.4 million to \$5.5 million due to lower compensation costs as a result of lower staff \$0.7 million, partially offset by retroactive charges from the non-operated field CASE, \$0.3 million. The Company currently employs 19 office employees in Argentina, a reduction of 15 since Q4-2016. The Company continues to optimize in areas where efficiencies can be realized.

YTD, amounts capitalized were \$0.7 million compared to \$1 million YTD-2016.

*Corporate*

Gross G&A expenses for the Quarter decreased \$0.9 million compared to \$1.7 million in Q4-2016. The decrease was mainly due to the Q4-2016 non-cash onerous contract costs of \$0.9 million relating to the Company's former office space in Canada.

On YTD basis, Gross G&A expenses decreased by \$0.5 million to \$4.1 million compared to YTD-2016. The decrease was due to the same reasons noted for the Quarter partially offset by higher consultant charges of \$0.4 million.

During the Quarter and YTD, there were no directly attributable G&A costs in Canada capitalized to property, plant and equipment in Argentina (Q4-2016 - nil, YTD-2016 - \$0.3 million).



### Restructuring

USD 000s	Three months ended December 31		Year ended December 31	
	2017	2016	2017	2016
Argentina	-	-	1,402	-
Corporate	64	-	831	734
Consolidated	64	-	2,168	-

*Argentina*

Severances of \$1.4 million, paid to management and employees that were terminated during the Q2. (Q4 and YTD-2016 – nil).

*Corporate*

Severances of \$0.8 million, paid to management and employees that were terminated during the Q2. (Q4-2016 - nil and YTD-2016 – \$0.7 million).

### Finance (Income) and Expenses

USD 000s	Three months ended December 31		Year ended December 31	
	2017	2016	2017	2016
<b>Argentina</b>				
Bank charges and fees	296	268	1,089	1,229
Foreign exchange (gain) loss - unrealized	(29)	(499)	450	(795)
Accretion of decommissioning liabilities	437	43	575	203
Interest (income) and other expenses	(1,942)	(364)	(2,504)	925
Available for sale securities	-	-	-	68
	(1,238)	(552)	(390)	1,630
<b>Corporate</b>				
Foreign exchange loss - realized	-	-	(2)	16
Foreign exchange (gain) loss - unrealized	-	(400)	381	634
Accretion of debt component of convertible debentures issued	17	15	69	29
Interest and other expenses	12	19	45	23
Equity loss pick up	-	614	-	614
Fair value change on convertible debentures held	-	(142)	-	190
Fair value change on assets held for sale	-	(14)	150	(14)
	29	92	643	1,493
<b>Consolidated</b>	(1,209)	(460)	253	3,123



#### *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 comparable to Q4-2016.

YTD, bank charges and fees were \$1.1 million compared to \$1.2 million YTD-2016. The decrease was due to reduced transaction activity.

##### Foreign exchange loss –unrealized

During the Quarter the Company recorded an unrealized foreign exchange gain of \$29 thousand compared to an unrealized gain of \$0.5 million in Q4-2016. YTD, the Company recorded a \$0.5 million loss compared to a \$0.8 million gain in YTD-2016. Quarterly fluctuations in unrealized gains and losses are a result of changing foreign exchange rates and underlying movements in the net assets of the Argentine subsidiaries.

##### Accretion of decommissioning liabilities

Accretion expense was \$0.4 million for the Quarter (Q4-2016– \$43 thousand), and \$0.6 million YTD compared to \$203 thousand YTD-2016.

##### Interest (Income) and other expenses

Interest (income) and other expenses during the quarter 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. In Q4-2016, Interest (income) and other expenses relate primarily to interest expense on the Argentine Industrial and Commercial Bank of China S.A. (“ICBC”) loan offset by interest expense adjustments of \$0.4 million, as well as \$0.1 million relating to interest adjustments on turnover taxes from previous years.

YTD, 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”). YTD-2016, interest expense on the ICBC loan amounted to \$1.7 million, offset by gains on the Petroleo Plus bonds of \$0.4 million and interest expense adjustments of \$0.4 million relating to CA-Norte.

##### Corporate

##### Foreign exchange (gain) loss

During the Quarter, the Company has not recorded any unrealized foreign exchange (Q4-2016 gain of \$0.4 million). The USD:CAD foreign exchange rate appreciated by 6.6% since December 31, 2016 (Q4-2016 – 3% rate appreciation since December 31, 2015).

##### Accretion of debt component of convertible debentures issued

Accretion expense was \$17 thousand for the Quarter and \$69 thousand YTD (Q4-2016– \$15 thousand and YTD-2016 – \$29 thousand). This accretes the liability component up to its principal value over the period of time to maturity.

##### Equity loss pick up

In 2017, there were no equity loss pick up compared to a \$0.6 million recorded YTD-2016 relates to the equity loss pick up on the Point Loma common shares held up to the time that it was determined that the common shares would be reclassified to assets held for sale.



*Fair value change on convertible debentures held*

In 2017, there were no gain or loss compared to a \$0.1 million gain and \$0.2 million loss recorded in Q4-2016 and YTD-2016 respectively. This calculation is dependent on the changes in the share price of the underlying Point Loma common shares.

*Fair value change on assets held for sale*

On December 31, 2016, the Point Loma common shares were reclassified to assets held for sale and a fair value change of \$14 thousand was recorded at December 31, 2016. Subsequent to December 31, 2016, the Company sold 1.6 million common shares of Point Loma for proceeds of approximately \$0.5 million. In addition, and pursuant to a purchase and sale agreement dated April 21, 2017 with an arms-length third party, the Company sold 4.7 million escrowed common shares in Point Loma for gross cash proceeds of \$0.8 million, which resulted in a loss on sale of \$0.1 million. These common shares were acquired by Madalena pursuant to the sale of the Company's Canadian oil and gas assets in June 2016.

***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 and Q4-2016 no options were granted to directors, officers and employees and YTD, 3 million options were granted to certain employees of the Company, at an exercise price of CAD \$0.17 per share (YTD-2016 – 8.7 million).

Share based compensation expense was \$41 thousand in the Quarter compared to an expense of \$0.2 million for Q4-2016. No share-based compensation expense was capitalized during the Quarter (Q4-2016 – nil).

On a YTD basis, share based compensation recovery was \$0.6 million (expense YTD-2016 - \$1.5 million). No share-based compensation expense was capitalized (YTD-2016 - \$40 thousand).

Share-based compensation recovery arising from the forfeitures of stock options recognized for the year ended December 31, 2017 was \$0.7 million (2016 - nil).

*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 \$28 thousand in the Quarter (Q4-2016 expense \$64 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 \$20 thousand (2016 – expense of \$64 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		Year ended December 31	
	2017	2016	2017	2016
<b>Argentina</b>	<b>3,203</b>	<b>3,747</b>	<b>14,807</b>	<b>19,574</b>
\$/boe	<b>18.60</b>	<b>17.48</b>	<b>19.34</b>	<b>21.39</b>
<b>Corporate</b>	<b>97</b>	<b>59</b>	<b>124</b>	<b>231</b>
<b>Consolidated</b>	<b>3,301</b>	<b>3,806</b>	<b>14,931</b>	<b>19,805</b>



#### Argentina

D&D decreased to \$0.5 million in the Quarter compared to \$3.7 million in Q4-2016 due to a reduced depletable base caused by a combination of impairment charges, minimal capital spending and lower production. On a per boe basis, D&D for the Quarter decreased to \$18.60/boe from \$17.48/boe in Q4-2016 due to the same reasons as noted above.

YTD, D&D decreased by \$4.8 million from \$19.6 million in 2016 and per boe costs went from \$21.39/boe to \$19.34/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, 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 there 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 (2016 - \$18.2 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, 2017 reserve report using a discount rate of 17% and the following forecast benchmark commodity price estimates:

Year	Brent Oil Price <sup>(1)</sup>	Argentina Domestic Gas Price <sup>(1)</sup>
	(USD/bbl)	(USD/mmbtu)
2018	62.33	4.40
2019	63.93	4.40
2020	66.13	4.49
2021	70.37	4.58
2022	73.23	4.67
2023	75.21	4.76
2024	77.23	4.86
2025	79.26	4.96
2026	81.15	5.05
2027	82.75	5.16
2027+	+2.0%/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 \$1.3 million would have resulted for the year ended December 31, 2017.

An additional \$1 decrease in the price deck would have resulted in further impairment charges of \$1.1 million for the year ended December 31, 2017.

At December 31, 2016, Madalena determined that indicators of impairment existed in each of its Argentine CGUs due to pricing reductions associated with Argentine oil benchmarks moving toward world prices. CGUs at December 31, 2016 and 2015 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"). As a result, impairment tests were performed over each CGU and two (Madalena Austral S.A. (Argentina) ("MASA") and the Argentine branches of MPL/MPAL) were deemed to be impaired as their estimated recoverable amounts were lower than their carrying amounts. The recoverable amounts, calculated as \$12.8 million and \$5.0 million, resulted in pre-tax impairment charges of \$3 million and \$3.2 million for the two CGUs, respectively, for the Quarter (Q4-2015 - \$8.4 million) and \$17.4 million YTD (YTD-2015 - \$8.4 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, 2016 reserve report using a pre-tax discount rate ranging from 22% to 28% depending on the category of reserves and the following forecast benchmark commodity price estimates ranging from \$57.00/bbl - \$89.64/bbl for oil and \$4.95 - \$5.80/mmbtu for natural gas.

#### ***Exploration & Evaluation ("E&E") Impairment***

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

At December 31, 2016, Madalena determined that no impairment triggers existed relating to its Argentine E&E assets. The Cortadera concession was officially relinquished to the Province of Neuquén in October 2016, prior to the release of the Company's Q3-16 results. Accordingly, the net book value of the Cortadera E&E assets of \$2.7 million was written off and recorded as part of Impairment in the consolidated statements of loss during Q3-16, and is included in Impairment for the year ended December 31, 2016.

#### ***Income Tax Expense (Recovery)***

USD 000s	Three months ended December 31		Year ended December 31	
	2017	2016	2017	2016
Current	(1,089)	842	(52)	2,203
Deferred	(5,343)	480	(7,039)	(1,512)
<b>Total</b>	<b>(6,432)</b>	<b>1,322</b>	<b>(7,091)</b>	<b>691</b>

Madalena has three legal entities in Argentina, one of which had taxable income in the Quarter and YTD. The income tax rate in Argentina is 35%. The two entities that do not have taxable income are subject to minimum taxes, which are generally taxed at 1% of net assets. Current income tax recovery (including minimum tax) for the Quarter was \$1.1 million compared to an expense of \$0.8 million for Q4-2016. On an YTD basis, current income tax recovery was \$52 thousand (YTD-2016 expense - \$2.2 million). The decrease in current tax expense incurred in the Quarter is primarily a result of the tax impact on the January, 2017 Coirón Amargo Sur Este transaction described under "2017 Activity". The YTD decrease in current tax expense is primarily a result of the same reasons noted for the Quarter.



The Company recorded a deferred income tax recovery of \$5.3 million during the Quarter (Q4-2016 – deferred income tax expense - \$0.5 million). YTD, the Company booked a deferred income tax recovery of \$7 million (YTD-2016 – deferred income tax recovery - \$1.5 million).

The YTD recovery is primarily a result of the impairment charges recorded during the year and the corresponding impact to the temporary differences between tax and accounting values.

***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.

USD 000s	Three months ended December 31		Year ended December 31	
	2017	2016	2017	2016
Cash flow from operating activities	1,969	3,255	(4,922)	12,854
Cash flow from operating activities – discontinued operations	-	-	-	41
Change in non-cash working capital	(339)	(1,112)	3,301	(8,178)
Change in non-cash working capital – discontinued operations	-	-	-	59
Change in other long-term assets	-	(2,468)	(475)	718
Funds flow (used in) from continuing operations	1,630	(325)	(2,096)	5,494

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

USD 000s	Three months ended December 31		Year ended December 31	
	2017	2016	2017	2016
Funds flow from (used in) continuing operations	1,630	(325)	(2,096)	5,494
Per share – basic & diluted	-	-	-	0.01
Net loss - continuing operations	(19,386)	(9,402)	(33,796)	(32,100)
Per share – basic & diluted	(0.03)	(0.02)	(0.06)	(0.06)
Comprehensive loss – continuing operations	(19,420)	(9,830)	(33,860)	(31,348)

Madalena's funds flow from continuing operations for the Quarter decreased by \$1.9 million from Q4-2016.

On an YTD basis, funds flow from continuing operations decreased by \$7.6 million from YTD-2016.

The net loss from continuing operations for the Quarter was \$19.4 million (Q4-2016 - loss of \$9.4 million), primarily due to lower oil and natural gas revenues as a result of lower production.



The net loss from continuing operations YTD was \$33.8 million (YTD-2016 – loss of \$32.1 million), with the decrease due to the same reasons outlined for the Quarter and lower realized commodity prices.

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		Year ended December 31	
	201	2016	2017	2016
Foreign currency translation gain (loss)	(34)	(428)	216	820

During the Quarter, the Company recorded a foreign currency translation loss of \$34 thousand (Q4-2016 – loss of \$0.4 million). During the quarter the USD depreciated by 0.5% against the CAD (Q4-2016 – depreciated by 2.4%).

On an YTD basis, the Company recorded a foreign currency translation loss of \$0.4 million (YTD-2016 – gain of \$0.8 million). During the period the USD appreciated by 6.6% against the CAD (Q4-2016 – appreciated by 3%).

#### ***Capital Expenditures***

USD 000s	Three months ended December 31		Year ended December 31	
	2017	2016	2017	2016
<b>Argentina</b>				
Land and associated renewal fees	1,598	-	1,598	20
Geological and geophysical	89	249	248	307
Drilling and completions	-	-	1	4,057
Well equipment and facilities	431	-	564	1,124
Other	483	82	1,338	831
Argentina total	2,601	331	3,749	6,339
<b>Corporate</b>				
Other	-	-	-	-
Corporate total	-	-	-	-
<b>Consolidated</b>	<b>2,601</b>	<b>331</b>	<b>3,749</b>	<b>6,339</b>

#### ***Argentina***

Capital expenditures for the Quarter and YTD 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.

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

Not included in the total expenditures above, is a non-cash addition of \$5.1 million associated with the 55% WI of CASE by PAE. The agreement with PAE included a work program whereby PAE would carry \$5.6 million of Madalena’s share of the associated capital costs. During the Quarter \$1.2 million and to December 31, 2017 \$5.1 million of these costs have been incurred and carried on Madalena’s behalf.

As at December 31, 2017, the net book value of the PP&E assets was \$32.2 million (2016 - \$53.5 million) and the net book value of the E&E assets were \$39.9 million (2016 - \$49.3 million). The December 31, 2017 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 \$65.7 million (2016 - \$121.9 million). This includes \$13.8 million (2016 - \$29.4 million) associated with the Company's unconventional assets in the Vaca Muerta shale recorded in E&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, 2017, the Company incurred fees of \$0.3 million (2016 - \$0.8 million) from this firm for legal services, of which \$0.8 million (2016 – \$0.8 million) is included in trade and other payables at December 31, 2017. 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 \$1.1 million during the year ended December 31, 2017 (2016 – nil).

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, 2017, there were no disbursements.

A director of two of the Company's subsidiaries provides professional services to the Company. During the year ended December 31, 2017, the Company did not incur fees (2016 - \$45 thousand), for professional fees. The \$45 thousand was included in trade and other payables at December 31, 2016.

Of the convertible debentures issued by Madalena in July 2016, 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.

***Discontinued Canadian Operations***

The operating results for the discontinued Canadian operations are shown in the following table for the noted periods:

There was no resulting impact relating to discontinued operations for the three or twelve month period ended December 31, 2017. For Q4-2016, there was no resulting impact relating to discontinued operations, and for YTD-2016, a loss of \$4.5 million was realized (basic and diluted loss per share of \$0.01 for YTD-2016).



## Financial Position, Liquidity and Capital Resources

### Liquidity risk

	December 31 2017	December 31 2016
USD 000s		
Working capital (deficit) surplus		
Argentina	538	(3,422)
Canada	(1,582)	(991)
	<b>(1,043)</b>	<b>(4,413)</b>
Convertible debentures	1,274	1,143
Shareholders' equity	36,999	70,258

The Company's liquidity risk is highlighted in the Outlook section, above, which also outlines that during 2017, the Company entered into a series of agreements that are expected to substantially alleviate this risk.

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

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

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

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

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

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

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



At December 31, 2017, the consolidated working capital deficit of the Company was \$1 million (December 31, 2016 - \$4.4 million deficit), consisting of positive working capital of \$0.6 million (December 31, 2016 - working capital deficiency of \$3.4 million) in Argentina and a working capital deficiency of \$1.6 million (December 31, 2016- \$1 million) in Canada.

At December 31, 2017, \$1.1 million, or 92%, of Madalena's cash and cash equivalents was deposited with banks in Argentina (December 31, 2016 - \$4.1 million, 100%), and is held in ARS.

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

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

During the Quarter, \$1.2 million was repatriated from Argentina (Q4-2016 – \$0.2 million). On a YTD basis, \$5.3 million was repatriated from Argentina (YTD-2016 – \$0.2 million).

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

80 thousand common shares were issued during the Quarter and YTD, pursuant to the exercise of convertible debenture option of \$20 thousand. During the Q4-2016 no common shares were issued and YTD-2016 1.7 million common shares were issued pursuant to the settlement of severance related costs which reduced the associated liability by \$0.2 million.

No options were granted during the Quarter and YTD, 3 million options were granted to certain employee of the Company, at an exercise price of CAD \$0.17 per share. No options were granted in Q4-2016. YTD-2016, 8,650,000 options were granted to certain employees and directors of the Company with exercise prices of CAD \$0.27 per share.

As a result of Hispania services agreement 9,516,666 warrants were issued during the Quarter, and 28,549,998 YTD.

As at April 10, 2018, the Company had 543.9 million shares and 6.3 million options outstanding.

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

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

#### ***Decommissioning Obligations***

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

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

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



At December 31, 2017, an inflation rate of 2.1% was used (December 31, 2016 – 1.5%). The risk free rate used to discount the liability at December 31, 2017 was 2.65% (December 31, 2016 – 2.8%). 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, 2017.

YTD, the risk free and inflation rate change increased the decommissioning obligations by \$1 million.

#### ***Commitments and Other Long-term Liabilities***

##### *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)

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

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

Concurrently, PAE agreed, subject to certain conditions, to provide Madalena with a loan of up to \$40 million, on a limited recourse basis, to be drawn-down as required to fund certain CASE capital expenditures. This limited recourse loan would bear interest at 7% per annum and is repayable in five years from the net revenue generated from the capital expenditure program. Transaction fees of \$0.5 million were incurred to complete this agreement. No draw down of the loan has occurred as of December 31 2017.

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

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

<sup>(1)</sup> Committed values are reflected at Madalena's 35% WI at December 31, 2017 plus Madalena's proportionate share of GyP's carry.

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

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



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

*Curamhuele Block (90% WI-operated)*

USD 000s	2018	2019
Concession commitments	-	8,225

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

In December 2015, Madalena ratified an extension of its second exploration and evaluation term with the Province of Neuquén to September 9, 2016, after which a further extension was available. During the first quarter of 2016, the remaining work commitment relating to the block concession agreement was fulfilled by completing the Yapai.x 1001 well in the Mulichinco and Lower Agrio shale. The 17.6 million performance bond submitted for such commitment was returned by the Provincial Authorities once the work commitment was certified by them.

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 Province finally notified the approval to enter into the Evaluation Lot Period. Once this commitment is completed, the company has the option to extend this period for another 2 years or to enter into the Exploitation Period. *Puesto Morales Block (100% WI-operated)*

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

The Company is in discussions with the provincial authority for a re-schedule and conversion of the present commitments in a new exploration plan.

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

The contract can contain up to three exploration and evaluation phases, of which the second expired in April 2015. The second phase required additional work commitments of \$4.0 million for which no qualifying expenditures have been made. A performance bond of \$3.6 million is in place over the commitments under this exploration and evaluation permit. On November, 2017 an application has been submitted and negotiations continue and are currently ongoing with the province of Salta for reconversion of the Exploration Area into a non-conventional exploration permit.

*EI Civil Block (100% WI – operated)*

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

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

Salta province granted a block extension to file an investment plan, which expired on November 11, 2016. On November 8, 2017 the Company notified the province of Salta that it is not interested in a contract extension.

*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 \$0.8 million, of which \$0.2 million is recorded as part of Trade and other payables and \$0.6 million is recorded as part of Other long-term liabilities in the consolidated statements of financial position at December 31, 2017.

#### *Other long-term liabilities*

A continuity relating to these liabilities is as follows:

	Year ended December 31,	
	2017	2016
Balance, beginning of year	2,138	1,575
Lease liability <sup>(1)</sup>	(120)	786
LTIP liability	(20)	64
New contingencies	-	19
Updated contingencies	156	-
Settled through negotiation	-	(29)
Effect of change in foreign exchange rates	(177)	(277)
Balance, end of year	1,977	2,138

(1) Relates to "Other Commitments"

#### **Annual and Quarterly Financial Results**

##### *Annual Financial Results – Continuing Operations*

As at December 31	2017	2016	2015
USD 000s, unless otherwise noted			
Oil and natural gas revenues	38,187	50,152	81,725
Other income	78	-	13,857
Net loss from continuing operations	(33,796)	(32,100)	(6,164)
Shares outstanding – millions	543.9	543.8	542.1
Net loss per share – basic and diluted- continuing operations	(0.06)	(0.06)	(0.01)
Total assets	73,248	123,228	155,186
Shareholders' equity	36,999	70,258	100,093

The decrease in oil and gas revenues in 2017 was a result of reduced production in Argentina due primarily to natural declines compared to 2016. 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. Other income of \$13.9 million was recorded in 2015 due to Petroleo Plus settlement bond income.



***Quarterly Financial Results - Continuing Operations***

USD 000s, unless otherwise noted	Q4 2017	Q3 2017	Q2 2017	Q1 2017
Oil and natural gas revenues	<b>8,601</b>	9,893	9,357	10,336
Net income (loss)	<b>(19,386)</b>	(5,702)	(5,449)	320
Shares outstanding – millions	<b>543.8</b>	543.8	543.8	543.8
Net income (loss) per share – basic and diluted	<b>(0.04)</b>	(0.01)	(0.01)	0.00

USD 000s, unless otherwise noted	Q4 2016	Q3 2016	Q2 2016	Q1 2016
Oil and natural gas revenues	10,543	11,728	13,070	14,811
Net income (loss)	(9,402)	(12,715)	(3,491)	(6,492)
Shares outstanding – millions	543.8	543.8	542.1	542.1
Net income (loss) per share – basic and diluted	(0.02)	(0.02)	(0.01)	(0.01)

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

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

***Critical Accounting Judgments, Estimates and Accounting Policies***

For 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, 2017.

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

***Critical Accounting Judgments in Applying Accounting Policies***

Critical judgments are those judgments made by management in the process of applying accounting policies that have the most significant effect on the amounts recognized in the Company's consolidated financial statements and accompanying notes for the year ended December 31, 2017. Further information on management's critical accounting judgments in applying accounting policies can be found in the notes to the consolidated financial statements for the year ended December 31, 2017.

***Critical Accounting Estimates***

Critical accounting estimates are those estimates that require management to make particularly subjective or complex judgments about matters that are inherently uncertain. Estimates and underlying assumptions are reviewed on an ongoing basis and any revisions to accounting estimates are recognized in the period in which the estimates are revised. During the Quarter, there were no changes to the Company's key sources of estimation uncertainty. Further information on the Company's key sources of estimation uncertainty can be found in the notes to the consolidated financial statements for the year ended December 31, 2017.



### ***Future Accounting Pronouncements***

#### **IFRS 9 Financial Instruments**

In July 2014, the IASB issued the final version of IFRS 9 Financial Instruments that replaces IAS 39 Financial Instruments: Recognition and Measurement and all previous versions of IFRS 9.

IFRS 9 brings together all three aspects of the accounting for financial instruments project: classification and measurement, impairment and hedge accounting. IFRS 9 is effective for annual periods beginning on or after 1 January 2018, with early application permitted. Except for hedge accounting, retrospective application is required but providing comparative information is not compulsory. For hedge accounting, the requirements are generally applied prospectively, with some limited exceptions.

##### **(a) Classification and measurement**

The Company does not expect a significant impact on its balance sheet or equity on applying the classification and measurement requirements of IFRS 9. It expects to continue measuring at fair value all financial assets currently held at fair value.

##### **b) Impairment**

IFRS 9 requires the Company to record expected credit losses on all of its debt securities, loans and trade receivables, either on a 12-month or lifetime basis.

The Company will apply the simplified approach and record lifetime expected losses on all trade receivables.

##### **(c) Hedge accounting**

The Company does not expect any impact for hedge accounting under IFRS 9.

##### **(d) Other adjustments**

In addition to the adjustments described above, on adoption of IFRS 9, other items of the primary financial statements such as deferred taxes, assets held for sale and liabilities associated with them, investments in the associate and joint venture, will be adjusted as necessary. The exchange differences on translation of foreign operations will also be adjusted.

#### **IFRS 15 Revenue from Contracts with Customers**

IFRS 15 was issued in May 2014, and amended in April 2016, and establishes a five-step model to account for revenue arising from contracts with customers. Under IFRS 15, revenue is recognized at an amount that reflects the consideration to which an entity expects to be entitled in exchange for transferring goods or services to a customer.

The new revenue standard will supersede all current revenue recognition requirements under IFRS. Either a full retrospective application or a modified retrospective application is required for annual periods beginning on or after 1 January 2018. Early adoption is permitted.

#### **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, 2017.

The Company is exposed to a number of risks through the pursuit of its strategic objectives. Some of these risks impact the oil and gas industry as a whole and others are unique to its operations and its involvement in Argentina. Actively managing these risks improves the Company's ability to effectively execute its business strategy. The factors that impact the Company's exposure to liquidity risk, safety risk, capital project execution and operating risk, reserves replacement risk, environmental risk and regulatory risk has not changed substantially since December 31, 2015. For a further and more in-depth discussion of the Company's risk management see the Company's consolidated financial statements for the year ended December 31, 2017.

A description of the risk factors and uncertainties affecting the Company can be found in the Advisory and a full discussion of the material risk factors affecting the Company can be found in the Company's Annual Information Form for the year ended December 31, 2017.

### **Advisory**

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

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



approvals, delays resulting from inability to obtain drilling rigs and other services, labour supply risks, environmental risks, competition from other producers, imprecision of reserve estimates, changes in general economic conditions, ability to execute farm-in and farm-out opportunities, and other factors, all of which are more fully described from time to time in the reports and filings made by the Company with securities regulatory authorities.

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

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

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

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

#### ***Analogous Information***

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

#### ***Numerical Amounts***

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

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



The term “netback”, which is calculated as the average unit sales price, less royalties and operating expenses, represents the cash margin for every barrel of oil equivalent sold. The Company considers this a key measure as it demonstrates its profitability relative to current commodity prices. This term does not have any standardized meaning prescribed by GAAP and, therefore, might not be comparable with the calculation of a similar measure for other companies.

#### **Abbreviations**

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

<i>Oil and Natural Gas Liquids</i>	<i>Natural Gas</i>
bbl	barrel
bbls/d	barrels per day
NGLs	Natural gas liquids
boe	barrel of oil equivalent
boe/d	barrel of oil equivalent per day
	Mcf      thousand cubic feet
	mmbtu      million British Thermal Units