

CALGARY, Feb. 16, 2016 /CNW/ - [Madalena Energy Inc.](#) ("Madalena" or the "Company") (TSXV: MVN and OTCQX: MDLNF) is pleased to announce the initial results of its completion and testing of the Lower Agrio shale formation on its 90% working interest operated block at Curamhuele in Argentina.

Highlights

- Successfully completed the vertical exploration well (Yapai.x-1001) with four hydraulic fractures at depths of 3,731, 3,647, 3,566 and 3,457 metres, the upper three intervals being within the Lower Agrio shale and the lowest interval containing both the Lower Agrio shale and Mulichinco tight sand formations;
- All four frac intervals are believed to have penetrated the primary target in the Lower Agrio shale;
- Pumped an aggregate of approximately 430,000 pounds of sand and 13,700 barrels of frac water over four days;
- Flowed back on controlled choke settings (3 mm to 8 mm) over eight days a total of 1,609 Bbls of oil and 5,444 Bbls of water;
- Flowed at 408 Boe/d over last 24 hours on a 9.5 mm choke, comprised of 350 Bbls/d oil, 389 Bbl/d water (47% oil cut) and 350 mcf/d of gas at a flowing pressure of 1,050 psi;
- The oil is light sweet oil with a field estimated gravity of 40 API;
- Recovered approximately 40% of the hydraulic fracture fluid to date; and
- Continued to record an increase in the oil cut and a corresponding decrease in the water percentage throughout the test.

Kevin Shaw, President and CEO, commented:

"We are extremely pleased with the results from this vertical exploration well at Curamhuele and oil discovery in the Lower Agrio shale. Ultimately this Lower Agrio shale play, like the Vaca Muerta shale, will be developed with Horizontal Multi frac wells which are expected to yield considerably more than a typical vertical well."

Curamhuele Block (90% Working Interest ("WI") Neuquen Basin, Argentina)

Madalena has a 90% WI and is the operator in the 56,216 (50,595 net) acre exploration concession at Curamhuele. On November 9, 2015, the Company successfully deepened the Yapai.x-1001 well to evaluate the Lower Agrio shale and the Mulichinco tight sand formations. The Company drilled approximately 550 metres of the Lower Agrio formation with the bottom 270 metres having strong and steady oil and gas shows. The well required heavy weight mud (40% over normal) to control the flow while drilling. The wireline log analysis of the Lower Agrio shale estimates a zone of interest of greater than 164 metres with an average porosity of 7.7% and confirmation of brittle shale with minimal clay content.

On January 26, 2016, Madalena initiated completion operations on the Yapai.x-1001 well and finished the fourth hydraulic fracture treatment on February 4, 2016. Flow-back commenced on a controlled 3 mm choke for the first four days after which the choke was gradually increased to test the potential of the well. The well continued to clean up with an increasing oil cut and a corresponding decrease in the percentage of water during the testing period. The Company estimates that the water being recovered is a mixture of water based load fluid and formation water.

Due to the high reservoir or pore pressure in the Lower Agrio, the well continued to flow up 5" casing at strong fluid rates during the testing period. The Company is in the process of installing facilities for a long term test. Production will be trucked and processed with oil sales being recognized at the current Argentina Medanito price of US\$ 67.50/bbl and solution gas will be flared at this time.

The Company cautions that although the initial test results are very encouraging, they are preliminary and may not necessarily be indicative of the long term performance or of ultimate recovery from the well. The relatively low gas rates throughout the test suggest that the Mulichinco tight sand formation is not yet contributing significant rates of gas and condensate and the oil volumes being produced are believed to be coming solely from the Lower Agrio shale. This could be in part due to the lower reservoir pressure of the Mulichinco which would delay the production response or a less effective hydraulic fracture treatment in that zone. The Company intends to continue additional testing operations, fluid sampling and production well logging to evaluate the opportunity to optimize the deliverability of the well.

Curamhuele Block - Reserves and Resources

There were no reserves assigned to the 2014 year end reserve report for the Lower Agrio shale or Mulichinco tight sand formation and since the production test occurred after December 31, 2015, there will be no reserves in the pending 2015 year end reserve report which will be released later this month.

On November 4, 2015 the Company released independent third party best estimates (P50) effective September 30, 2015 (prior to the drilling of the Yapai.x-1001 well) for Contingent and Prospective Resources. The Company's interest best estimate in the Lower Agrio shale is Unrisked Prospective Resources of 365 MMBoe (or Risked Prospective Resources are 99.4 MMBoe). In addition to the Lower Agrio shale at Curamhuele, the Company's interest best estimate in the Vaca Muerta shale is Unrisked Prospective Resources of 1,157.1 MMBoe (or Risked Prospective Resources of 92.6 MMBoe). Please see the reader advisory at the end of this release for further information on Prospective Resources.

Curamhuele Block - Next Steps

Given the significant inventory of opportunities Madalena has at both Puesto Morales in the Loma Montosa light oil resource play and Coiron Amargo in the Vaca Muerta shale and Sierras Blancas light oil development, the Company intends to actively pursue a strategic partner to help further delineate the Lower Agrio shale and Vaca Muerta shale resources and further assess the Mulichinco tight sand formation on the Curamhuele property.

The Company has met its commitment to drill and complete the Yp.x-1001 well prior to September 2016 and will soon commence discussions with the Province of Neuquén and its 10% partner the provincial oil company, Gas y Petroleo del Neuquén S.A., to secure a new block contract allowing for further advancement of the property.

Coiron Amargo Block (35% WI, Neuquen Basin, Argentina) & Sierras Blancas Horizontal Development Update

Madalena and its partners have successfully drilled their seventh horizontal well in the conventional Sierras Blancas formation with a total lateral length of 763 metres. The first 478 metres (63%) has been completed and tested over a five day (120 hour) period. Average production was 596 Bopd and 350 mcf/d gas at 17% water-cut for a total 654 Boe/d. During the last nine hours, the choke was increased from 8 mm to 10 mm and the well produced at a rate of 729 Bopd and 330 mcf/d at 18% water-cut for a total of 784 Boe/d at a flowing pressure of 800 psi. The well has now been tied in to existing production facilities.

Five of the existing seven horizontal Sierras Blancas wells have additional net pay which will ultimately be completed for production. Madalena and its partners intend to recomplete two of these wells in 2016 and test the effectiveness of higher volume lift equipment.

About Madalena Energy

Madalena is an independent, Canadian-based Argentina focused, upstream oil and gas company.

Madalena holds over 950,000 net acres in four provinces of Argentina where it is focused on the delineation of large shale and unconventional resources in the Vaca Muerta shale, Lower Agrio shale, Loma Montosa oil play and the Mulichinco liquids-rich gas play. 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.

Reader Advisories

Forward Looking Information

The information in this news release contains certain forward-looking statements. These statements relate to future events or our future performance, in particular, with respect to the characteristics of the properties held by the Company, production levels, and operational, business development and financial plans, and opportunities and the ability of Madalena to execute on such plans and opportunities. All statements other than statements of historical fact may be forward-looking statements. Forward-looking statements are often, but not always, identified by the use of words such as "seek", "anticipate", "plan", "continue", "estimate", "approximate", "expect", "may", "will", "project", "predict", "potential", "targeting", "intend", "could", "might", "should", "believe", "would" and similar expressions. These statements involve substantial known and unknown risks and uncertainties, certain of which are beyond the Company's control, including: the impact of general economic conditions; industry conditions; changes in laws and regulations including the adoption of new environmental laws and regulations and changes in how they are interpreted and enforced; fluctuations in commodity prices and foreign exchange and interest rates; stock market volatility and market valuations; volatility in market prices for oil and natural gas; liabilities inherent in oil and natural gas operations; uncertainties associated with estimating oil and natural gas reserves; competition for, among other things, capital, acquisitions, of reserves, undeveloped lands and skilled personnel; incorrect assessments of the value of acquisitions; changes in income tax laws or changes in tax laws and incentive programs relating to the oil and gas industry; geological, technical, drilling and processing problems and other difficulties in producing petroleum reserves; and obtaining required approvals of regulatory authorities. The Company's actual results, performance or achievement could differ materially from those expressed in, or implied by, such forward-looking statements and, accordingly, no assurances can be given that any of the events anticipated by the forward-looking statements will transpire or occur or, if any of them do, what benefits the Company will derive from them. These statements are subject to certain risks and uncertainties and may be based on assumptions that could cause actual results to differ materially from those anticipated or implied in the forward-looking statements. The forward-looking statements in this news release are expressly qualified in their entirety by this cautionary statement. Except as required by law, the Company undertakes no obligation to publicly update or revise any forward-looking statements. Investors are encouraged to review and consider the additional risk factors set forth in the Company's Annual Information Form, which is available on SEDAR at www.sedar.com.

Meaning of Boe

The term "boe" or barrels of oil equivalent may be misleading, particularly if used in isolation. A boe conversion ratio of six thousand cubic feet of natural gas to one barrel of oil equivalent (6 Mcf: 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. Additionally, given that the value ratio based on the current price of crude oil, as compared to natural gas, is significantly different from the energy equivalency of 6:1; utilizing a conversion ratio of 6:1 may be misleading as an indication of value.

Analogous Information

Certain information in this news release 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 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.

Initial Production Rates

Any references in this document to test rates, flow rates, initial and/or final raw test or production rates, early production, 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, certain Madalena properties are unconventional resource plays which may be subject to high initial decline rates. Such rates may be estimated based on other third party estimates or limited data available at this time and are not determinative of the rates at which such wells will continue production and decline thereafter.

Curamhuele Block & Lower Agrio Shale Formation (Neuquén Basin, Argentina)

The Company has a 90% WI and is the operator in the 56,216 (50,595 net) acre exploration concession.

The Lower Agrio has been tested on the block with a conventional well completion and directly offsetting with a multi frac vertical well completion. Based on the limited information and results to date, the Lower Agrio has been classified as Undiscovered with the estimated recoverable portion classified as Prospective Resources. Given the Company is actively testing the prospect through a planned unconventional completion, the Prospective Resources have been sub-classified as a Prospect which has a higher degree of certainty than a Lead or a Play. The GLJ Report is summarized as follows:

	Madalena Company Interest		
	Low Estimate	Best Estimate	High Estimate
Undiscovered Petroleum Initially In Place (UPIIP) (MMBbls)	2,376.6	4,606.3	6,796.4
Unrisked Prospective Oil (MMBbls)	144.9	328.2	568.5
Unrisked Prospective Gas (Bcf)	73.9	223.2	483.2
Unrisked Prospective BOE 6:1 (MMBOE)	157.2	365.4	649.1
Risked Prospective Oil (MMBbls)	39.4	89.3	154.6
Risked Prospective Gas (Bcf)	20.1	60.7	131.4
Risked Prospective BOE 6:1 (MMBOE)			

Definition: "Prospective Resources" - Those quantities of petroleum estimated, as of a given date, to be potentially recoverable from undiscovered accumulations by application of future development projects. Prospective resources have both an associated chance of discovery and a chance of development.

Risks and Significant Positive and Negative Factors

As discussed, the Lower Agrio has been identified as Prospective Resources. The Chance of Discovery for this unconventional shale play has been defined as the product of the probability of source, maturity, trap or seal, and reservoir properties. The estimated numerical value for the Chance of Discovery is 68%. Based on the interpreted superior reservoir characteristics for the bottom section of the Lower Agrio, the Chance of Development is estimated at 40%. The Chance of Commerciality is the product of the Chance of Discovery and Chance of Development and therefore, the Prospective Resources have been multiplied by 27.2% to arrive at a Risked Prospective Resources estimate. At the time of the report Madalena anticipated first commercial production to occur mid-year 2016 following the successful completion of the Yapai.x-1001 well. The recovery method is based on Hz MF wells. Scoping economics were based Vaca Muerta type curves (assumed to be similar to Lower Agrio) with an estimated cost of US\$ 12 million per well. A scenario of 570 Hz MF wells was run.

Significant positive factors for these Prospective Resources estimate include:

1. Existing wellbore penetrations with oil shows and tests indicating a relatively thick shale with total organic carbon > 3% and porosity of 4-10%;
2. 3D seismic coverage across half of the block;
3. Significantly over pressured reservoir based on mud weights and bottom hole pressure tests; and,
4. Stacked development scenarios with two Hz MF wells per spacing unit improve capital efficiencies.

Significant negative factors for these Prospective Resources estimate include:

1. Depth (3,600-3,800 m) and complexity of drilling operations;
2. Surface topography being in the foothills of the Andes and more remote to the oil and gas service industry; and
3. No immediately proximate analogs.

Curamhuele Block – Vaca Muerta Shale Formation (Neuquén Basin, Argentina)

In addition to the Lower Agrio as discussed above, Curamhuele is prospective for the Vaca Muerta. Although there are no Vaca Muerta penetrations on the block there are offsetting wells with indicated hydrocarbons. Based on these logs and geological mapping using 3D seismic along with the basin wide knowledge on the Vaca Muerta reservoir, Ryder Scott Report estimated UPIIP and correspondingly estimated Prospective Resources being the recoverable portion of the UPIIP. Due to the limited information and the early stage exploration efforts the Prospective Resources have been further sub-classified as a Lead.

A summary of the Prospective Resources from the Ryder Scott Report is presented in the following table:

	Madalena Company Interest		
	Low Estimate	Best Estimate	High Estimate
Undiscovered Petroleum Initially In Place (UPIIP) (MMBbls)	7,884.0	9,642.6	11,762.1
Unrisked Prospective Oil (MMBbls)	174.6	666.9	1,207.8
Unrisked Prospective Gas (MMcf)	662.4	2,941.2	8,095.5
Unrisked Prospective BOE 6:1 (MMBOE)	285.0	1,157.1	2,557.1
Risked Prospective Oil (MMBbls)	14.0	53.4	96.6
Risked Prospective Gas (MMcf)	53.0	235.3	647.6
Risked Prospective BOE 6:1 (MMBOE)	22.8	92.6	204.6

1. There is no certainty that any portion of the resources will be discovered. If discovered, there is no certainty that it will be commercially viable to produce any portion of the resources referred to in the table above.

2. The portion of the estimate of UPIIP that is not classified as Prospective Resources is currently classified as Undiscovered Unrecoverable Petroleum Initially In Place.
3. Tables may not add due to rounding.
4. The Prospective Resources have been sub-classified as a Lead.
5. Risks are based on Chance of Discovery 32%, Chance of Development 25% for an aggregate risk of 8%.

Risks and Significant Positive and Negative Factors

As discussed, the Vaca Muerta has been identified as Undiscovered Resources at Curamhuele. The geological chance of success in a shale play is based on risk factors that are different than the four risk factors used in conventional reservoir (timing and migration, source rock, reservoir and trap or seal). In the shale play the shale is the source, reservoir and trap. The risk in a shale play is generally defined as presence of shale, significant organic content, thermal maturity, producibility and continuity. Therefore, the Chance of Discovery is the product of these five independent risks. For the Vaca Muerta at Curamhuele, the estimated numerical value for the Chance of Discovery is 32%. The Ryder Scott Report currently estimates the Chance of Development at 25%. Additional well information and test data along with a better understanding of infrastructure issues will be required to improve the Chance of Development. The Chance of Commerciality is the product of the Chance of Discovery and Chance of Development and therefore, the Prospective Resources have been multiplied by 8% to arrive at a Risked Prospective Resource estimate. The recovery method is based on established technology of Hz MF wells. Scoping economics were based on Vaca Muerta type curves with an estimated cost of US\$ 13.5 million per well. A scenario of 150 Hz MF wells was run. Commercial production could be achieved with one well however, the Company has not yet scheduled a well for the Vaca Muerta as it is focusing on the Lower Agrio at this time.

Significant positive factors for these Prospective Resources estimate include:

1. 3D seismic coverage across half of the block;
2. Significant gross thickness at 700 – 800 m;
3. Stacked development scenarios with two to four Hz MF wells per spacing unit improve capital efficiencies; and
4. Basin wide development of the Vaca Muerta.

Significant negative factors for these Prospective Resources estimate include:

1. Depth (4,000+ m) and complexity of drilling operations;
2. Surface topography being in the foothills of the Andes and more remote to the oil and gas service industry; and
3. No offsetting commercial analogs.

Neither the TSX Venture Exchange nor its Regulation Service Provider (as that term is defined in the policies of the TSX Venture Exchange) accepts responsibility for the adequacy or accuracy of this release.

SOURCE [Madalena Energy Inc.](#)

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