29 August 2019

LOG INTERPRETATION CONFIRMS HYDROCARBON PAY ZONES Iecea Mica-1 Well – Results Update

ADX Energy Ltd (ASX Code: ADX), is pleased to report the following additional analysis of results from the lecea Mica-1 (IMIC-1) well located in the lecea Mare production license onshore Western Romania.

Further to the ASX release dated 26 August 2019, ADX can report that the preliminary petrophysical analysis of wireline log data from the 8 1/2" hole intersection has further confirmed ADX's interpretation of the presence of a number of potential hydrocarbon pay zones already indicated from mudlog data observed while drilling. These pay zones represent confirmation of previously identified appraisal potential (Contingent Resources) such as the Pannonian (PA) IV sand as well as zones previously assessed as exploration in nature (Prospective Resources).

A summary of the interpreted pay zones is listed below:

- PA III Interval (pre drill assessment was exploration potential) In line with the previously reported gas peaks at 1863 meters MD (drilling depth) within the PA III stratigraphic interval two separated sandstone reservoir zones at 1851 and 1861 meters MD (logging depth), respectively have been identified on logs. The pay thickness for each sand is in the order of 2 to 2.5 meters with porosities in the order of 25% and interpreted permeabilities in excess of 100 MD. The pay thicknesses and porosities have the potential to add to the potential gas resources from this well.
- 2. PA IV Interval (predrill assessment was appraisal potential based on historic well results) As expected the previously successfully tested PA IV sandstone at a depth of 2030 meters MD (logging depth) has resulted in pay containing dry methane (C1) in a gross reservoir interval of 8 meters based on logs. The porosities are in the order of 20% with interpreted permeabilities up to 100 mD. The interpreted porosity and permeabilities analysed on modern logs are at the upper range of expectation.
- 3. PA V Interval (pre drill assessment was exploration potential) The stratified sandstone and siltstone section from 2140 to 2165 meters MD (25 meters gross thickness, logging depth) has shown a number of potential reservoirs in the PA V stratigraphic interval with heavier gas condensate shows (C1, C2 & C3) and fluorescence observed while drilling. Encountering potential pay at this interval is encouraging because the log signature encountered in the IMIC-1 well is very similar to a downdip (60 meters approx.) well which is 2.5 kilometres to the north and has produced at an oil at a rate on test of 126



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bbls oil/day. The conventional quick look petrophysical analysis only shows a total of approximately 4 meters of pay zones with porosities of 15% or less. The zone is interpreted as multiple thin pay zones containing very finely laminated sandstone intervals which cannot be resolved with the standard logs alone. In order to assess the productive potential of this zone a detailed cuttings analysis is underway to design an optimal testing and production completion program. *Based on the results in the IMIC-1 well together with offset well data the PA V interval can be interpreted as a condensate zone based on the mud log data or the gas cap up dip of downdip oil discoveries that have been confirmed to be productive.*

4. PA VI Interval (pre drill assessment was exploration potential) The PA VI zone starting at 2160 meters MD did not show any significant gas peaks and the preliminary log evaluation has confirmed that this is mainly due to a generally tight formation with little free flow reservoir potential. No water zones have been interpreted but a thin 1.5 meter sandstone around 2170 meters MD shows porosity and hydrocarbon pay. The pay thicknesses and porosities are considered modest and are not expected to contribute to the potential gas resources.

Additional Comments and Observations

When pulling out of hole with the drill string to prepare for the running of 7" casing significant trip gas (gas inflow into well) amounts of up to 13% were observed, which is in line with a large total hydrocarbon column with no free water zones. It should be noted that no CO2 has been observed in the well to date which was a concern pre drill due to poor sampling techniques and instrumentation available on historic wells.

Once the entire well has been drilled and logged, ADX will undertake a more comprehensive and regionally integrated well log analysis and update the possible impact of the well results compared to predrill resource estimates. While no significant change is expected in the assessment of reservoir quality and pay thickness other than in the highly laminated PA V zone, there is still the need to further evaluate gas saturation within the pay zones based on regional data, since no well developed water bearing reservoir zone was encountered within the Lower PA III to PA VI Pannonian section and no reservoir water sample was taken.

In summary, based on the results to date, it is expected that the PA IV appraisal target reservoir section is likely to meet pre-drill expectations. The additionally discovered PA III and PA V hydrocarbon bearing zones were not part of the pre-drill resource assessment and exceed pre drill expectations. These zones will require further ongoing assessment prior to an update on potential additional resources potential. The Pa VI exploration target is likely to be a tight interval with reservoir properties below pre drill expectations.



Current Well Operations

At 3.00 PM 28th of August 2019 Eastern European Summer Time (EESC) the 7" casing had been run and cemented in the well to a depth of 2335 meters MD. Future operations are the installation of the well head and blow out preventer before deepening the well. A routine Operational Update will be provided on the 2nd of September 2019

ADX holds a 63% shareholding in Danube Petroleum Limited (Danube). The remaining shareholding in Danube is held by Reabold Resources Plc. Danube via its' Romanian subsidiary, ADX Panonia, holds a 100% interest in the Parta Exploration license (including a 100% interest in the Parta Appraisal Sole Risk Project) and a 100% interest in the lecea Mare Production license.

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IECEA MICA-1 PRE-DRILL WELL SUMMARY

Key Points

- The upper 2350 metres of lecea Mica-1 (IM-1) appraisal well is effectively a redrill of a historic discovery well drilled in the 1980's.
- IM-1 will evaluate multiple gas zones mapped on 3D seismic including a flow tested gas zone and a deeper uncontrolled gas flow in the historic discovery well.
- The Contingent Resources based on an Independent Experts Report of well data with recently acquired 3D seismic is 6.1 Bcf 2C and Prospective Gas Resources are 13 Bcf Best Estimate. Note 1

Prospective Resources are those estimated quantities of petroleum that may potentially be recovered by the application of a future development project(s) related to undiscovered accumulations. These estimates have both an associated risk of discovery and a risk of development. Further explorations appraisal and evaluation is required to determine the existence of a significant quantity of potentially moveable hydrocarbons.

- The well will be deepened to a depth of 2600 meters to evaluate larger untested exploration potential which is a proven Oil play in other fields in the basin ("Basement Play").
- The *Best Case Prospective Resource* for the deeper exploration upside potential accessible by the well is 16 *Bcf (for a gas success case) and 2 MMBBLS (for an oil success case)*^{*Note 1*}.
- If the deeper exploration target is successful it is expected to de-risk several follow up prospects with good upside potential which ADX has identified both on 3D and 2D seismic.
- The well has the additional benefit of being proximal to infrastructure for both gas, oil and electricity enabling low cost, highly profitable commercialisation.

Note 1: Refer to ASX announcement 20/3/2019, ADX confirms that it is not aware of any new information or data that materially affects the information included in that market announcement and that all the material assumptions and technical parameters underpinning the estimates in that market announcement continue to apply and have not materially changed.

Well Overview

ADX together with Danube's 37% shareholder, Reabold have elected IM-1 as the first drilling candidate for the two well Parta Appraisal Program. IM-1 is located in the lecea Mare Production License which is within the Parta Exploration License in the Panonian Basin, onshore Romania.





Location Map – Showing IM-1 Well location, lecea Mare Production License and Parta License Well Prognosis and Resource Potential

IM-1 is a structural trap targeting multiple (Pliocene to Miocene) pay zones including established appraisal potential from historic wells drilled in the 1980's that were tested but never produced as well as deeper not tested exploration potential defined on recently acquired 3D seismic. The independently assessed contingent and prospective resource potential of IM-1 is summarised in the following table extracted from the ERC Equipoise Independent Report (ERCE). This evaluation excludes deeper exploration potential which can be accessed by the IM-1 well. The first proven, previously flow tested gas reservoir section is the Pa IV sand in the IM-1 well. That zone is expected to be encountered at a depth of ca. 1940 meters TVDSS.

Recoverable Hydrocarbon Volumes		ERCE Estimates			
Prospect	Target	PRMS	P90	P50	P10
	Reservoir	Category	(bscf)	(bscf)	(bscf)
IM-1	Pa IV	Contingent ¹	2.0	6.1	16
IM-1	Pa VI	Prospective ²	2.4	4.4	7.3
IM-1	Pa VIII inf.	Prospective	2.7	8.3	21.3
IM-2	PsB4.3	Prospective	5.4	15.6	39.1
IM-2	Pa IV	Contingent	4.8	15.5	43
Total Program Contin		Contingent	6.8	21.6	59.0
Total Program	n	Prospective	10.5	28.3	67.7

ERCE Independent Resource Estimates* for Parta Appraisal Program

* Refer to ASX announcement 11 July 2018, ADX confirms that it is not aware of any new information or data that materially affects the information included in that market announcement and that all the material assumptions and technical parameters underpinning the estimates in that market announcement continue to apply and have not materially changed.

- 1. **Contingent Resources** are those quantities of petroleum estimated, as at a given date, to be potentially recoverable from known accumulations but, for which the applied project(s) are not yet considered mature enough for commercial development due to one or more contingencies. 1C, 2C, 3C Estimates: in a probabilistic resource size distribution these are the estimates that have a respectively 90% (P90), 50% (P50) and 10% (P10) probability that the quantities actually recovered will be exceeded
- 2. **Prospective Resources** are those estimated quantities of petroleum that may potentially be recovered by the application of a future development project(s) related to undiscovered accumulations. These estimates have both an associated risk of discovery and a risk of development. Further explorations appraisal and evaluation is required to determine the existence of a significant quantity of potentially moveable hydrocarbons.





A Simplified Stratigraphic X section through IM-1 and IM-2 showing the potential deeper Badenian (Miocene) build up carbonate play or the alternate fractured basement play.

In addition to the ERCE independently assessed Contingent and Prospective Resource volumes shown in the previous table, IM-1 offers a larger deeper exploration potential which was not included in ERCE's estimates that can be reached within the current planned 2500 meters TD of the IM-1 well. It is predicted that the well will test a Badenian (Miocene) calcareous sandstone and/or a proven fractured basement play which has been successful in the Satchinez and Calacea fields 12km to the north of IM-1 well location. The Miocene Badenian age carbonate build up play is proven by gas discoveries to the East. Either one of, both of, or none of the deeper upside exploration plays may be present.

The Pa IV (Pannonian – Pliocene) horizon intersected in the original exploration discovery well tested at a rate of 1 MMSCFPD in 1989. It is expected the IM-1 well, with modern drilling and completion practices, will achieve significantly higher rates from this zone. Depending on which hydrocarbon charge model is assumed for the previously undrilled, deeper exploration plays there is also potential for an oil discovery at basement level. It should be noted that the previous lecea Mare production license operator assessed the potential of the for the basement play to be in excess of 2 mmbbls of recoverable oil. ADX estimates 16 bscf for a best case recoverable prospective gas resource, assuming the intersection of a Miocene Badenian age (Miocene) calcareous sandstone is encountered as a gas bearing reservoir in a deeper exploration play success case. Based on nearby well data the intersection of potential basement reservoir is considered the most likely outcome.





IM-1 Map and 3D Seismic Section through IM-1 well location

The above 3D seismic section through the IM-1 well location highlights the various currently identified reservoir targets and their respective depths. Note that the original exploration well only had electric logs down to the Pa VIII reservoir. The well was deepened further but experienced a major kick and overpressure around 2400 meters TVD that was not able to be tested. This is described as an uncontrolled flow in some old well reports for the discovery well.

Well Design

Due to expected overpressure starting around 2400 meters ("the historic well blow out reservoir") 7" casing is programmed to be run to a depth of 2350 meters TVDSS. The well will then be drilled through the overpressure zone in a smaller 6 $\frac{1}{2}$ " hole size and will reach TD around 2600 meters.



The most likely well cost estimate for the well is approximately US\$3 million, including evaluation, logging and running casing. The above mentioned cost estimate does but not include well testing operations



which are planned to be undertaken with a much smaller and cheaper work over unit. Included in the well cost estimate is a well head and production tubing which has already been purchased.

The IM-1 well is designed to enable the evaluation of an over pressured zone encountered in the original discovery well as well as highly prospective and potentially material deeper exploration targets not reached previously. These deeper exploration targets which are now mapped on 3D seismic are particularly exciting due to their materiality and the fact they can potentially be reached at minimal incremental cost.

End of Release