

## Welchau-1 Discovery Well temporarily Suspended but Data Analysis is Ongoing

*“The well has been cased and temporarily suspended in preparation for future flow testing.*

*Preliminary data analysis of recovered hydrocarbons from downhole sampling indicates condensate rich gas to light oil from the Steinalm formation.”*

### Key points:

- The Welchau-1 gas exploration well was spudded on the 24<sup>th</sup> of February using the RED Drilling & Services GmbH (RED) E200 drill rig in the ADX-AT-II exploration licence in Upper Austria.
- The RED E200 rig was released on 4.00 pm Central European Time (CET) on the 28<sup>th</sup> of March following temporary suspension of the Welchau-1 well. This is the final operational update for this phase of Welchau-1 operations. Further updates will be provided in relation data analysis and interpretation of the results of the Welchau-1 well, as well as planning for the future flow testing of the well.
- Progress since the last report on the 24<sup>th</sup> of March has been running and cementing 7-inch casing down to the well total depth prior to temporary suspension for future testing.
- A program to analyse the results including hydrocarbon shows, formation cuttings while drilling, logging, fluid sampling and coring has commenced. The results will be used to update the resource range for Welchau and design the testing program for the Welchau-1 well.
- Analysis of pressurised sample chambers run in the well contained small amounts of liquid hydrocarbons (gas condensate to light oil) together with predominantly drilling mud that was lost to the formation during drilling. As previously reported down hole sampling was limited due tool sticking which impacted the recoverability of samples, hence recovered hydrocarbons from the carbonate reservoir section provides a very valuable addition to the well data.
- A compositional analysis of a gas sample at ambient conditions shows 92 mole % methane, 4 mole % ethane with low CO<sub>2</sub> and no H<sub>2</sub>S. These results are indicative and will need to be further confirmed during flow testing.
- Special analysis work on the down hole pressurised fluid samples and the 7 metres of whole core recovered from the Steinalm formation is expected to take three weeks and sixteen weeks respectively to complete.

**ADX Executive Chairman, Mr Ian Tchacos, said,** *“The importance of successfully drilling, evaluating and temporarily suspending the Welchau-1 well for future testing ahead of schedule and below budget by our operations team cannot be underestimated. ADX has now commenced a programme of extensive analysis work that will culminate in post drill analysis of the resource potential for the Welchau discovery. Recovering hydrocarbons from the impaired down hole sampling programme provides further valuable data. We will continue to provide data analysis from the drilling of the Welchau-1 well, as we look forward to the flow testing of the exceptionally important discovery on behalf of the Republic of Austria.”*

ADX Energy Ltd (**ASX Code: ADX**) is pleased to advise the Welchau-1 well operations were concluded following release of the rig at 4.00 pm CET on the 28<sup>th</sup> of March 2024. The Welchau-1 well was drilled utilising the RED E200 drill rig in the ADX-AT-II exploration licence in Upper Austria.

Since the last report on the 24<sup>th</sup> of March 2024, the well has been successfully cased and temporarily suspended for future testing. The well was drilled ahead of schedule and below budget thereby minimising well costs while recovering an extensive data set that is required to assess the potential of the Welchau discovery.

A programme of extensive analysis has commenced on well data including hydrocarbon shows, formation cuttings recovered while drilling, petrophysical borehole log data, formation fluid samples and formation core. The analysis of pressurised sample chambers run in the well contained small quantities of liquid hydrocarbons (gas condensate to very light oil) which are detailed in the *Well Data Analysis* below. As previously reported down hole sampling was limited due to tool sticking which impacted the recoverability of samples.

The results of the well data analysis will be used to update the resource range for the Welchau discovery and design the testing program for the Welchau-1 well. Future testing of the well, and potential deepening if technically feasible, is expected to be undertaken with a cost-effective workover rig.

### ***Well Data Analysis***

The analysis work programme has already commenced from down hole pressurised fluid samples and the 7 metres of whole core recovered from the Steinalm formation of the Welchau-1 well. The core analysis work is expected to take sixteen weeks and the fluid sample work three weeks.

#### *Downhole fluid samples*

The analysis of downhole pressurised fluid samples recovered from the Welchau-1 well is being carried out at a specialised laboratory in Vienna. As reported previously the Modular Formation Dynamic Tester (MDT) tool was stuck in the well bore during sampling which limited the recoverability of samples. Despite these difficulties two sample bottles were recovered containing small amounts of liquid hydrocarbons (gas condensate to very light oil) although most of the fluid was drilling mud that had been lost into the formation during drilling.

The samples are not an ideal representation for PVT (pressure volume temperature) analysis given the amount of drilling mud contamination. However preliminary results indicate a similarity to the hydrocarbon system encountered and tested at in the down dip Molln-1 well drilled in 1989. Further analysis of the downhole fluid samples will continue, including viscosity, densities and if sample volumes permit, a full PVT analysis. The planned Welchau-1 production test in Q4 2024 is expected to confirm the characteristics of the hydrocarbon system across the hydrocarbon column.

#### *Core Analysis*

Work has commenced at a specialised laboratory in Vienna on the analysis of the 7 metres of core recovered from the Welchau-1 well.

Preliminary assessment of the core using computerised tomography images (CT scan) confirms that the reservoir is a carbonate with low matrix porosity (which is common for a reservoir of this nature) with vuggy porosity and an extensive vertical fracture network. This triple-porosity system (including matrix, vugs and fractures) is also evident from available borehole log data. The extent of vertical fractures within the core, which by their orientation are not readily seen in the borehole, is encouraging and can be expected to be very favourable for reservoir connectivity and production performance. It should also be noted that the indicative permeable events observed in the borehole (predominantly vugs and fractures), tabulated in the previous ASX announcement, is only a subset of the net rock at the borehole and does not account for the low porosity matrix or the vertical fractures.

Carbonate reservoirs by their nature have the capacity to store hydrocarbons in all their pore space (matrix porosity). The net pay volumes for a fractured carbonate such as Welchau is determined by the interconnection of matrix porosity consisting with the higher permeability vugs and the fractures thereby enhancing the relatively

low permeability of the matrix. It should be noted that the fractures provide the primary flow pathways through the reservoir to the well bore.

Core analysis measurements including porosity and permeability of the matrix, the vuggy rock and fractures will be carried out during data analysis. The Welchau-1 well test data will be instrumental for the volumetric analysis of the 'triple-porosity' reservoir system (including matrix, vugs and fractures) and flow performance modelling.

The planned Welchau-1 well test will seek to confirm the hydrocarbon characteristics, determine the well productivity, the potential connected volumes to the well and ultimately an estimate of recoverable resource volumes from future potential development wells .

### ***Economic Participation in the Welchau Investment Area***

ADX has executed an Energy Investment Agreement with MCF Energy Ltd. via its subsidiary MCF Energy GmbH (MCF) to fund 50% of Welchau-1 well costs up to a well cost cap of EUR 5.1 million to earn a 25% economic interest in the Welchau Investment Area which is part of ADX's ADX-AT-II licence in Upper Austria. The Welchau Investment Area contains the Welchau Gas Prospect and other emerging oil and gas prospects. Upon completion of MCF's funding obligations ADX will hold a 75% economic interest in the Welchau Investment Area. ADX holds a 100% economic interest in the remainder of the ADX-AT-II license other than the Anshof Discovery Area.

### **For further details please contact:**

Ian Tchacos

Executive Chairman

+61 (08) 9381 4266

[ian.tchacos@adxenergy.com.au](mailto:ian.tchacos@adxenergy.com.au)

### **Authorised for lodgement by Ian Tchacos, Executive Chairman**

### **Persons compiling information about Hydrocarbons:**

Pursuant to the requirements of the ASX Listing Rule 5.41 the technical and reserves information relating to Austria contained in this release has been reviewed by Paul Fink as part of the due diligence process on behalf of ADX. Mr Fink is Technical Director of ADX Energy Ltd is a qualified geophysicist with 30 years of technical, commercial and management experience in exploration for, appraisal and development of oil and gas resources. Mr Fink is a member of the EAGE (European Association of Geoscientists & Engineers) and FIDIC (Federation of Consulting Engineers).

### **Previous Estimates of Reserves and Resources:**

ADX confirms that it is not aware of any new information or data that may materially affect the information included in the relevant market announcements for reserves or resources and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed.

### **Reporting Standards for Resource Estimation**

Reserves and resources are reported in accordance with the definitions of reserves, contingent resources and prospective resources and guidelines set out in the Petroleum Resources Management System (PRMS) prepared by the Oil and Gas Reserves Committee of the Society of Petroleum Engineers (SPE) and reviewed and jointly sponsored by the American Association of Petroleum Geologists (AAPG), World Petroleum Council (WPC), Society of Petroleum Evaluation Engineers (SPEE), Society of Exploration Geophysicists (SEG), Society of

Petrophysicists and Well Log Analysts (SPWLA) and European Association of Geoscientists and Engineers (EAGE), revised June 2018.

## **Prospective Resource Classifications**

**Low Estimate** scenario of Prospective Resources - denotes a conservative estimate of the quantity that will actually be recovered from an accumulation by an oil and gas project. When probabilistic methods are used, there should be at least a 90% probability (P90) that the quantities actually recovered will equal or exceed the low estimate.

**Best Estimate** scenario of Prospective Resources - denotes the best estimate of the quantity that will actually be recovered from an accumulation by an oil and gas project. It is the most realistic assessment of recoverable quantities if only a single result were reported. When probabilistic methods are used, there should be at least a 50% probability (P50) that the quantities actually recovered will equal or exceed the best estimate.

**High Estimate** scenario of Prospective Resources - denotes an optimistic scenario of the quantity that will actually be recovered from an accumulation by an oil and gas project. When probabilistic methods are used, there should be at least a 10% probability that the quantities actually recovered will be equal or exceed the high estimate.

## **Nomenclature and conversions used in this release**

*BBL* means US barrel

*MMBLS* means million US barrels

*MCF* means thousand cubic feet

*MMCF* means million cubic feet

*BCF* means billion cubic feet

*TCF* means trillion cubic feet

*BOE* means barrel of oil equivalent

*MMBOE* means million barrels of oil equivalent

*MMSCFPD* means million standard cubic feet per day

**End of this Release**