

# Operations Update

## Welchau-1 Production Testing Program

***“Workover rig and testing equipment has been mobilised to prepare the Welchau-1 discovery well for production testing”***

### Key points:

- ADX holds an 75% economic interest in the Welchau-1 discovery and other emerging prospects in the Welchau Investment Area located in ADX' ADX-AT-II licence in Upper Austria (refer Figure 1).
- All necessary approvals have been received to commence flow testing operations on the Welchau-1 discovery well for the period commencing from the 30<sup>th</sup> of October 2024 until 31<sup>st</sup> of March 2025.
- A workover rig was mobilised to the Welchau-1 drill site to start well completion operations prior to well flow testing which is expected to commence during the second half of November 2024. The planned program is to test the two major Triassic – Mesozoic age reservoirs encountered by the Welchau-1 well, starting with the deeper Steinalm formation and then the shallower Reifling Formation.
- The Welchau-1 well encountered hydrocarbon shows over a 450-metre interval intersecting three primary carbonate reservoirs that are considered promising for testing and ongoing appraisal. Operations were suspended on 28<sup>th</sup> of March 2024 to comply with the conditions of environmental permits limiting drilling and testing operations to the Austrian winter months from 1<sup>st</sup> of October 2023 to 31<sup>st</sup> of March 2024.
- Data recovered from the well during drilling and the subsequent evaluation program has been used to assess the potential of the Welchau discovery and design the upcoming test program.
- The hydrocarbons discovered at Welchau are likely to be a high gravity (43.6° API) light oil with associated gas rather than a liquids-rich gas discovery as it was predicted prior to drilling.
- A revised range of Prospective Resources has been estimated using a probabilistic methodology for oil and associated gas in million of barrels of oil equivalent (MMBOE) (refer ASX reporting date 26 September 2024):

Welchau Prospective Resource Estimates <sup>1</sup>				
(100% Economic Interest)				
	Low	Best	Mean	High
<b>Oil and Associated Gas (MMBOE)</b>	<b>12</b>	<b>46</b>	<b>85</b>	<b>217</b>

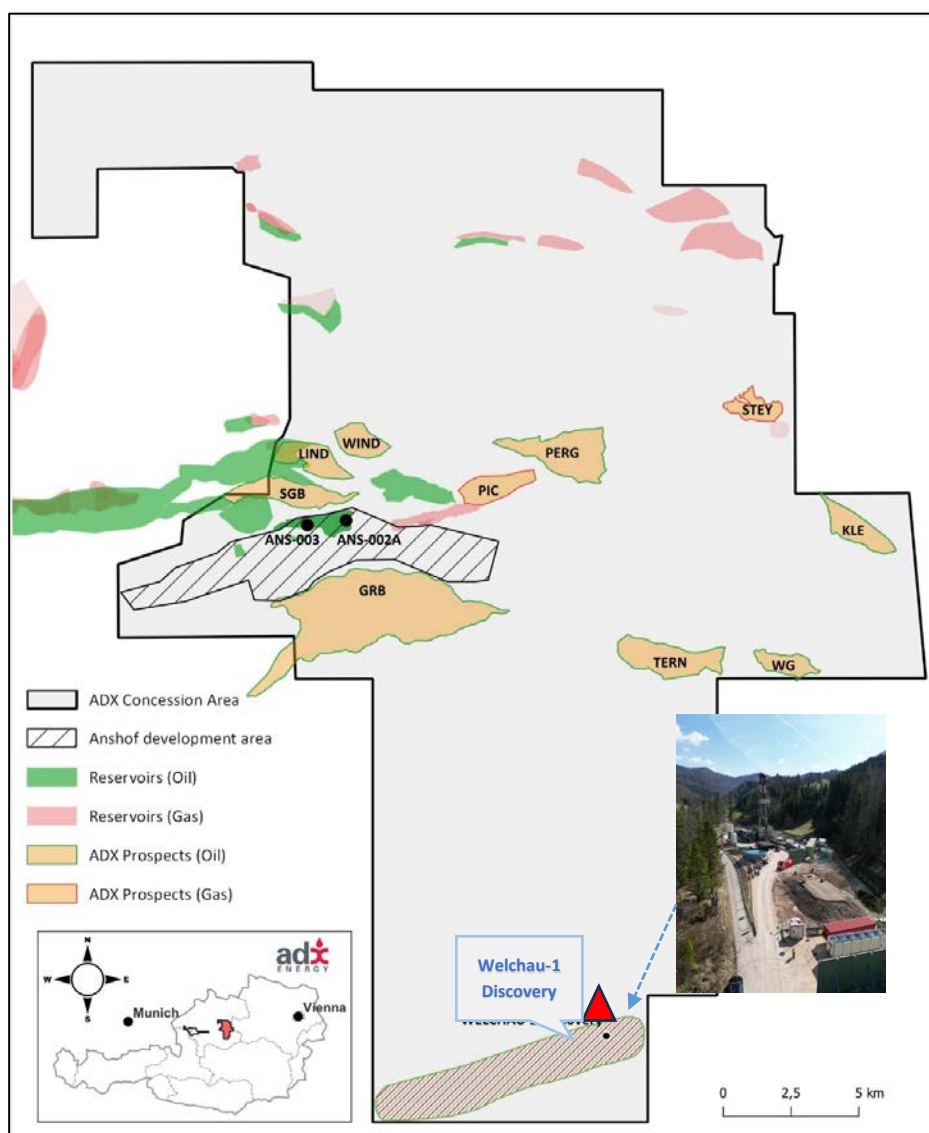
<sup>1</sup>Prospective Resources are those estimated quantities of petroleum that may potentially be recovered by the application of a future development project(s) related to undiscovered accumulations. These estimates have both an associated risk of discovery and a risk of development. Further exploration appraisal and evaluation is required to determine the existence of a significant quantity of potentially moveable hydrocarbons.

- ADX will provide weekly operations updates to shareholders and testing results as they become available.

ADX Energy Ltd (**ASX Code: ADX**) is pleased to advise that operations have commenced in preparation for production testing the Welchau-1 discovery well located in the ADX-AT-II licence in Upper Austria. ADX holds an 75% economic interest in the Welchau Investment Area which contains the Welchau-1 discovery and other emerging prospects in the Northern Calcareous Alps (refer Figure 1).

An environmental clearance has been received from the Department of Nature Protection of the State Government of Upper Austria to undertake production testing operations on the Welchau-1 discovery well. The Environmental Clearance was the last regulatory requirement to commence continuous (24 hour) flow testing operations for a period commencing from 30 October 2024 until 31 March 2025.

Following the receipt of the Environmental Clearance, a workover rig was mobilised on the 4<sup>th</sup> of November which will be followed by well completion equipment and well testing equipment in preparation for well flow testing. Flow testing results are expected to be available during the second half of November 2024. The planned program is to test the two major reservoirs, starting with the deeper Steinalm formation and then the shallower Reifling Formation. For each test, a number of flow periods and shut in periods are planned to determine the reservoir pressure response over approximately a six-week period.



**Figure 1: Location of Welchau-1 Discovery in the Northern Calcareous Alps within the ADX AT-II license area, as well as the most recent Anshof oil discovery and production wells (ANS-3 and ANS-2A)**

**Background**

The Welchau-1 well encountered hydrocarbon shows over a 450-metre interval intersecting three primary carbonate reservoirs that are considered promising for testing and ongoing appraisal. The well was suspended for future evaluation on the 28<sup>th</sup> of March 2024 after running and cementing 7-inch casing. Operations were suspended to comply with the conditions of environmental permits limiting drilling and testing operations to the Austrian winter months from 1 October 2023 to 31 March 2024.

Data recovered from the well during the drilling and evaluation phase included hydrocarbon shows, wellbore inflows, drilling mud losses, formation cuttings, petrophysical borehole log data, formation fluid sampling and formation coring. This data has been used to assess the potential of the Welchau discovery and design the planned test program.

On 26 September 2024, ADX announced that the hydrocarbons discovered at Welchau are likely to be a high gravity (43.6° API) light oil with associated gas rather than a liquids-rich gas discovery as was predicted prior to drilling.

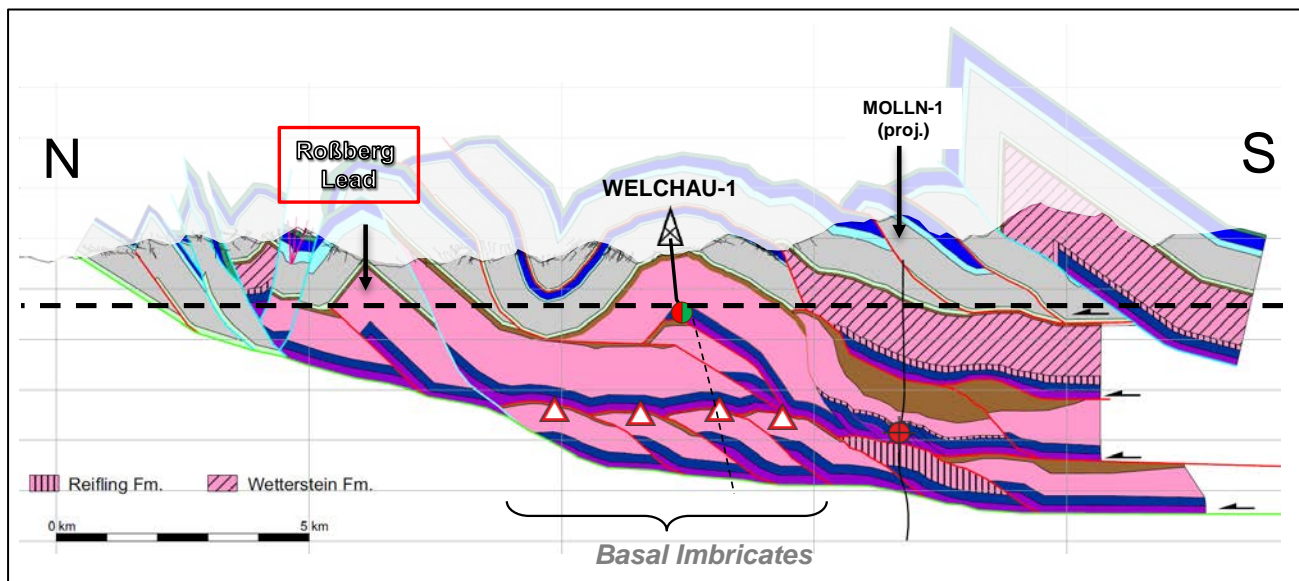
The range of Prospective Resources estimated using probabilistic methodology is shown in Figure 2 below. The resources estimate includes associated gas determined from the analysis of oil recovered from Welchau-1 and converted to barrels of oil equivalent (BOE) using a 5.6 MCF/BOE conversion factor. Refer to ASX reporting date 26<sup>th</sup> September 2024.

<b>Welchau Prospective Resource Estimates <sup>1</sup></b>				
<i>(100% Economic Interest)</i>				
	<b>Low</b>	<b>Best</b>	<b>Mean</b>	<b>High</b>
<b>Oil and Associated Gas (MMBOE)</b>	<b>12</b>	<b>46</b>	<b>85</b>	<b>217</b>

**Figure 2: Welchau Prospective Resources Estimates. MMBOE means million of barrels of oil equivalent**

<sup>1</sup>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 exploration appraisal and evaluation is required to determine the existence of a significant quantity of potentially moveable hydrocarbons.

ADX intends to revise Welchau resource estimates following the testing program, subsequent analysis of test results and further ongoing mapping work. ADX will also provide an update on the follow up exploration potential at the nearby and further north Rossberg lead, as well as the deeper potential at Welchau in reservoirs below the 7” casing at the well’s total depth (TD) (1733 metres) that have yet to be drilled. Figure 3 shows a corresponding geological cross section.



**Figure 3: Structural Cross Section showing Welchau-1 and Molln-1 discoveries as well as identified follow-up exploration potential**

### ***Welchau Production Testing Operations Overview***

Operations at the Welchau-1 drill site have commenced with the mobilisation of the workover rig and associated testing equipment following the receipt of the Environmental Clearance. The workover rig will be used to run a test string, which includes tubing, a down hole packer and perforating system into the cased and suspended well.

The Environmental Clearance is for continuous (24-hour) flow testing operations up to the 31<sup>st</sup> of March 2025. This provides ADX with time to carry out an extensive testing program. This detailed flow testing is key and typical industry wide method for determining reservoir porosities and permeabilities in carbonate reservoirs which are often highly dependent on fractures.

A testing program has been developed focussing on the following objectives:

- Determine reservoir fluid type present in key reservoirs;
- Determine the flow capacity in key reservoirs; and
- Determine the reserves potential of the reservoirs.

The planned program includes the testing of the two major reservoirs of a total of four, starting with the deeper Steinalm formation and then the shallower Reifling Formation. For each test, a number of flow periods and shut in periods are planned to determine the pressure response with down hole gauges. Well performance will be monitored to determine the potential reservoir damage from drilling and cementing of the well 7-inch casing. In each test the well may be stimulated, if necessary, to enhance well performance. Data collection during testing will include flow measurement, surface and down hole pressure measurement as well as both surface and down hole sampling. The expected testing program duration for the Steinalm Formation alone is between 6 to 10 weeks.

If good flow performance is achieved, the Steinalm test may be extended to obtain longer term flow data. The work over rig used for the Welchau-1 test program was previously utilised at ADX' Vienna Basin Fields and then for the completion of the successful oil Anshof-2A oil appraisal well. Together with other synergies for equipment and personnel, continued access to the work over rig gives ADX the operational flexibility to vary the program without a significant increase in costs.

### **ADX Economic Participation in Projects**

ADX has executed an Energy Investment Agreement (EIA) 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' ADX-AT-II licence in Upper Austria. The Welchau Investment Area contains the Welchau discovery well and other emerging oil and gas prospects. MCF has met its earn in funding obligations in accordance with the EIA to earn a 25% economic interest. ADX holds a 75% economic interest in the Welchau Investment Area. MCF is obliged to pay 25% of ongoing well costs as well as exploration and appraisal expenditures. ADX holds a 100% economic interest in the remainder of the ADX-AT-II licence other than the Anshof Discovery Area.

**ADX Executive Chairman, Mr Ian Tchacos, said,** *“ADX is looking forward to the production testing of the large hydrocarbon column encountered at Welchau-1. After completion of an extensive period of data analysis, preparation for testing operations and a permitting process that was focussed on meeting the environmental conditions as well as community expectations, we are now ready to commence operations.*

*“The successful testing of Welchau will have significant implications for ADX, our partner MCF and the Republic of Austria which is located in the heart of energy starved Europe. The expected light oil (43.6° API) at Welchau could be very valuable in commercial quantities given shallow drill depth and onshore setting which is proximal to infrastructure. In this onshore setting, a commercial oil project can be developed incrementally as it is appraised, thereby minimising funding requirements as well as enhancing economics and payback time frames”.*

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

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**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 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 other than where specifically noted elsewhere in this report.

### **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

*MMBBL* 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**