

18 April 2023

## Giant Welchau Gas Prospect – Progress Update

***“Independent experts review further confirms exceptional resource potential, permitting progressing towards operations commencement in Q3 2023, drilling materials and rig secured”***

### Key points:

- ADX is pleased to advise that an independent third-party resource review by highly reputed, international energy consultants Gaffney Cline & Associates Limited (GaffneyCline) commissioned by ADX’ partner in the Welchau prospect area, MCF Energy Ltd (MCF), confirms ADX geotechnical interpretation and is in line with the prospective resource estimates previously announced by ADX (see resource comparison in table 1 in this release).
- Drilling application documents relating to environmental and nature protection requirements for the Welchau-1 well in the ADX-AT-II exploration license in Upper Austria, were recently submitted following consultation with a number of environmental experts recognised by government authorities in order to ensure an efficient approval process.
- ADX has finalised the Welchau-1 drilling program for submission to regulatory authorities, having taken account of recently obtained shallow borehole data and confirmed the well’s optimal drilling location on the Welchau anticline following further detailed structural modelling by industry experts that supports and enhances ADX geotechnical interpretation.
- The Welchau prospect is operationally drill ready in terms of geological and engineering work, as well as the procurement of long lead materials and services such as casing, well heads and drilling services. Drilling operations are expected to commence in September 2023 and last approximately 6 to 8 weeks.
- The Welchau well is an important, high impact well that has attracted industry, government and media attention. Given the level of attention ADX has maintained a high level of stakeholder and community engagement which has reinforced political and regulatory support for gas exploration in Austria at a time when security of energy supply is critical in Europe.

**ADX Executive Chairman, Mr Ian Tchacos, said,** *“The Board of ADX is very encouraged by the independent assessment of Welchau’s resource potential from a highly credible and respected international energy group such as GaffneyCline. The well has been slightly delayed by the need to engage an inhouse permitting team, complete an environmental impact assessment and undertake further technical studies to optimise the well program. As a result of these initiatives, we are better placed now to progress the permitting process, engage with stakeholders and be on track to commence drilling operations in Q3 2023. Welchau is a very high impact well that has attracted substantial local interest. Our local management team has engaged with key decision makers and relevant government representatives where there is clear support for the development of natural gas which is recognised as an important transition fuel by the EU and critical for Austria’s energy security. During the permitting process and subsequent drilling operations, ADX intends to continue to conduct open engagement with the local community based on factual information in relation to the project’s environmental impact, relevant safeguards deployed and the potential economic benefits if the well is successful.*

ADX Energy Ltd (**ASX Code: ADX**) is pleased to advise the results of an independent expert's review (IER) undertaken by international energy consultants Gaffney Cline & Associates Limited (GaffneyCline) for the Welchau-1 prospect in ADX-AT-II exploration license in Upper Austria. The IER was commissioned by ADX' partner in the Welchau prospect area MCF Energy Ltd (MCF) and has been provided to ADX to enable the disclosure of the GaffneyCline results. The results of the IER tabulated below are compared to the resource estimates previously disclosed by ADX for the various resource classifications. ADX further advises that the Welchau-1 well is drill ready from an operational perspective and drilling application documents relating to environmental and nature protection requirements for the well have been submitted, initiating a permitting and drilling approval process that is expected to enable the commencement of drilling operations during September 2023.

***GaffneyCline Independent Resources Review***

An independent expert's review undertaken by GaffneyCline was commissioned by ADX' partner MCF and has been made available to ADX. The detailed report confirms the structural model used by ADX as reasonable and highly likely. The resulting range of prospective gas resources are in line with previously announced estimates by ADX thereby independently confirming the large resource potential of the Welchau prospect. (The original Resources Reporting Date for Welchau prospective resources was on 16 May 2022, the estimates were further revised on 20 June 2022).

The GaffneyCline prospective resources estimates for the Welchau prospect reported by MCF are shown in Table 1. ADX has disclosed the GaffneyCline estimates for the sake of consistent disclosure between ADX and MCF but will continue to maintain and update its own resource estimates in line with ongoing technical studies by ADX outlined in this release.

**Table 1: GaffneyCline Unrisked Prospective Resources Reported by MCF Energy Ltd**

**Welchau Prospect Gross (100%) Prospective Resource as at 31<sup>st</sup> December 2022**

Hydrocarbon Type	Unit	1U	2U	3U
Gas	BCF	332	584	1,018
Condensate	MMBC	5.5	10.1	18.4

1. Source: Resources Audit Report Welchau Prospect, ADX-AT-II Concession, Austria, Prepared for Pinedale Energy Limited by Gaffney, Cline & Associates Limited December 2022
2. 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.
3. The Prospect extends outside of the ADX-AT-II license into open acreage, under application. The volumes presented here represent the total structure.
4. 1U is a PRMS equivalent to the low (minimum) case, 2U to the best technical case and 3U to the high (maximum) or upside case.

Table 2 shows ADX reported prospective resources estimates for the Welchau prospect and a comparison of with the GaffneyCline estimates where GaffneyCline's condensate resource estimates have been converted to a gas equivalent basis and a gas equivalent total calculated.

**Table 2: Comparison of GaffneyCline Prospective Resources to ADX Estimates**

<b>ADX Gross Prospective Resource Estimates (Reported 20 June 2022)</b>				
Hydrocarbon Type	Unit	Minimum	Best Technical	Maximum
Gas	BCF	171	651	1315
Condensate	MMBL	6.8	26	52.6
<b>Total (Gas Equivalent) <sup>1</sup></b>	<b>BCFE</b>	<b>212</b>	<b>807</b>	<b>1631</b>

<b>GaffneyCline Gross Prospective Resource Estimates - Calculated on gas equivalent basis.</b>				
	Unit	1U	2U	3U
<b>Total (Gas Equivalent) <sup>1</sup></b>	<b>BCFE</b>	<b>365</b>	<b>645</b>	<b>1128</b>

<b>Gaffney Cline to ADX Comparison</b>				
Variance	BCFE	72%	-20%	-31%

Note 1: Gas to condensate conversion used is 6 mcf of gas = 1 barrel of oil.

*The Prospective Resource estimates in this release are classified and reported in accordance with the PRMS – SPE Guidelines for the exploration licenses ADX-AT-I and ADX-AT-II, in the Molasse Basin, Austria. Refer to the end of this release for an explanation of prospective resource classifications used and the basis on which the prospective resources were estimated. 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*

While the “Best Technical” and “High” case Prospective Resources estimates by GaffneyCline are lower than ADX estimates, the “Low” case assessed by GaffneyCline is substantially higher than the ADX estimates. The most significant difference in the technical assessments is the condensate ratio assumed for Welchau gas. ADX has used a condensate ratio equivalent to gas recovered during testing of the down dip Molln-1.

ADX has undertaken ongoing structural modelling of the Welchau anticline by industry experts incorporating the results of the nearby Molln-1 well. These studies further support and enhance ADX geotechnical interpretation of the Welchau prospect, in particular in relation to the Low and Best Technical Case assessment of Welchau's Prospective Resource potential.

It should be noted that even the minimum case assessment represents a potentially highly valuable resource if successful for an onshore gas prospect located in central Europe which is proximal to existing gas pipeline networks.

### ***Permitting and Drilling Approval Process***

ADX has completed an environment impact assessment for the Welchau-1 well that was required for the submission of an application for drilling permission made during the last week in March. The well location is outside of and a long distance away from the National Park “Kalkalpen” and also outside of a nearby natural protection area. ADX will undertake a site survey by environmental and natural habitat experts which is to be completed by end of June 2023. The site survey is necessary for the grant of the final environmental approval by the Upper Austrian Government and determine if any additional measures to protect the environment are necessary, such as noise abatement or rig lighting reduction. It is important to note that these possible measures are not intended to prevent the approval of drilling activities, but to determine if any further environmental measures are required to further protect the environment prior to final submission for final granting of the drilling permission to the relevant regulatory Authority.

The approval of the Welchau-1 well program from a technical and safety perspective will be assessed by the Mining Authority. The Mining Authority documentation will be submitted in the coming weeks and the resulting drilling permits are expected to be granted in July 2023.

### ***Operational Readiness***

ADX has purchased all the necessary long lead items to drill the Welchau-1 well. The drilling of the well will be under an existing rig services contract with RED Drilling and Services (RED). The RED drilling rig successfully drilled Anshof-3, ADX’ first exploration well without any lost time safety incidents and within budget. The drilling services and other contracted services will be almost exclusively provided by highly trained staff from Upper Austria as was the case for the Anshof-3 well. ADX has endeavoured to maximise local content especially where there is an excellent past record regarding safety, environmental protection and reliable project execution. ADX intends to finalise a drilling rig slot with RED following the abovementioned granting of drilling permits.

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

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

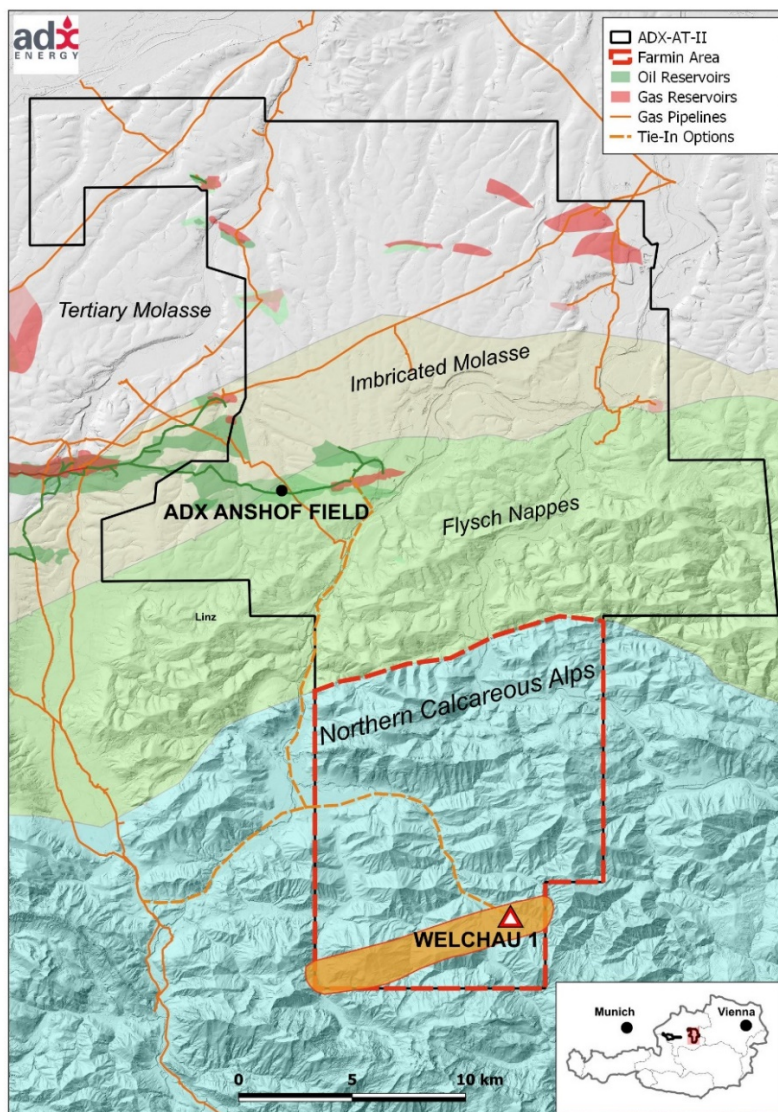
Pursuant to the requirements of the ASX Listing Rule 5.31, 5.41 and 5.42 the technical and Prospective Resources information relating to Austria contained in this release has been reviewed by Paul Fink as part of the due diligence process on behalf of ADX. Mr. Fink is Technical Director of ADX Energy Ltd is a qualified geophysicist with 25 years of technical, commercial and management experience in exploration for, appraisal and development of oil and gas resources. Mr. Fink has reviewed the results, procedures and data contained in this release and considers the resource estimates to be fairly represented. Mr. Fink has consented to the inclusion of this information in the form and context in which it appears. Mr. Fink is a member of the EAGE (European Association of Geoscientists & Engineers) and FIDIC (Federation of Consulting Engineers).



**Appendix 1**

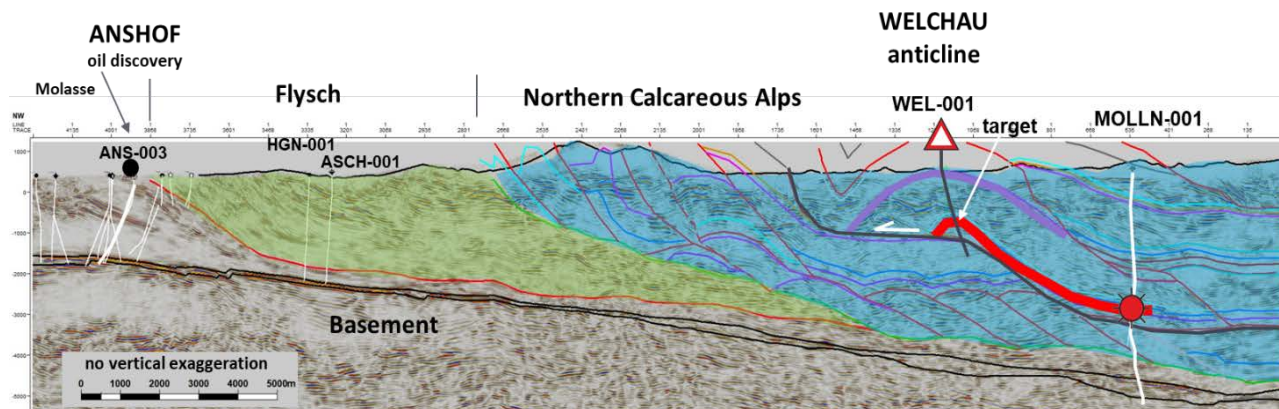
**Welchau Gas Prospect Summary**

The Welchau gas prospect has best technical Prospective Resources estimated by ADX at 807 BCFE (134 MMBOE) <sup>1</sup>. It is potentially connected to an accidental gas discovery at the Molln-1 well which was drilled and extensively tested in the late 1980's. The Molln-1 tested pipeline quality gas at a rate of up to 3.5 mmcfpd down dip from the Welchau proposed drilling location.



**Figure 1: Map showing ADX-AT-II license area, the Welchau Farmin Area (Red Dashed Border), the Welchau-1 drilling location in the Northern Calcareous Alps, as well as the recently discovered and now producing Anshof oil field to the north.**

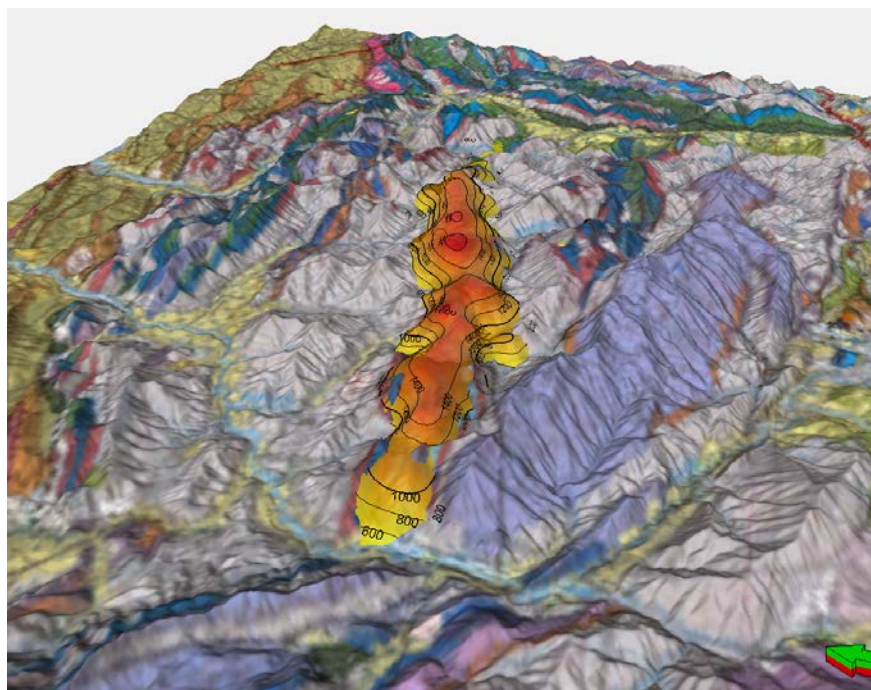
<sup>1</sup> The prospective resource estimates in this release are classified and reported in accordance with the PRMS – SPE Guidelines for the exploration licenses ADX-AT-I and ADX-AT-II, in the Molasse Basin, Austria. Refer to the end of this release for an explanation of prospective resource classifications used and the basis on which the prospective resources were estimated. 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.



**Figure 2: Geoseismic Cross Section showing the Molln-1 well in the south, the giant Welchau thrust anticline and the ADX Anshof-3 production well in the north. Note that the Molln-1 well was targeting an Anshof play type at ca. 5700 meters of depth but accidentally made a significant gas discovery (red highlight) much shallower within the thrust belts of the Northern Calcareous Alps which will be targeted at Welchau.**

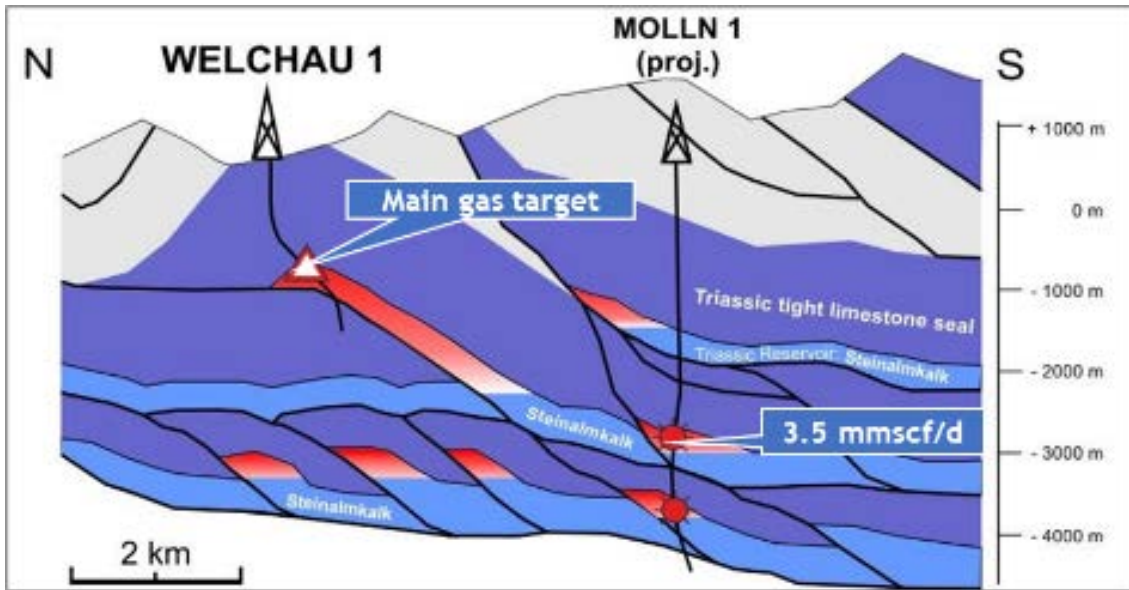
The gas prospect is located in the foothills of the Austrian Alps and is analogous to the large anticline structures discovered in Kurdistan and the Italian Apennines. Welchau is a relatively shallow prospect (approx. 1120 m TVD). There is excellent access to the planned drilling location via roads and a short tie-in distance to the national gas pipeline network (approx. 18 km).

The main target at Welchau is the Triassic Steinalm Formation, a fractured carbonate reservoir trapped in a trending ramp anticline with more than 20 km lateral extent and 100 km<sup>2</sup> maximum closure area. The structure is defined by extensive outcrop mapping and balanced 2D cross sections along a profile parallel to the shortening direction.



**Figure 3: Surface expression of the Welchau anticline with 23 km lateral extension and 100 km<sup>2</sup> area.**





*Figure 4: Schematic cross section of the Welchau gas prospect and the Molln-1 gas discovery. (Most likely scenario)*



*Figure 5: Molln-1 well gas test in 1989*

ADX Prospective Resource estimates for the Welchau prospect are summarised below.

<b>Welchau Gas Prospect</b>				
<b>Prospective Recoverable Resources Estimates</b>				
		<b>Minimum</b>	<b>Best Technical</b>	<b>Maximum</b>
Gas	BCF	171	651	1315
<i>Oil equivalent</i>	<i>BOE</i>	<i>29</i>	<i>108</i>	<i>219</i>
Condensate	BBlS	6.8	26	52.6
<b>Total Oil Equivalent</b>	<b>BOE</b>	<b>35</b>	<b>134</b>	<b>272</b>
<b>Total Gas Equivalent</b>	<b>BCFE</b>	<b>212</b>	<b>807</b>	<b>1631</b>
<i>Mcf per BBl conversion used</i>		<i>6</i>		

The original Resources Reporting Date for Welchau prospective resources was on 16 May 2022, the estimates were further revised on 20 June 2022.

The Molln-1 well located down dip of Welchau was drilled and tested in 1989. The results from this nearby well have significantly reduced risk in the following areas;

- Gas quality and gas charge has been demonstrated by gas flows during testing that also confirmed a high condensate yield (40 barrels per mmcf);
- Reservoir productivity of Triassic Steinalm Formation which was tested at 3.5 mmcfpd; and
- The quality of the top seal to hold a large gas column (900 meters interpreted from pressure and well test data, minimum 400 meters).

### **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 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.



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**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 millions of US barrels.

*MCF* means thousand cubic feet

*MMCF* means million cubic feet

*BCF* means billion cubic feet

*TCF* means trillion cubic feet

*BOE* means barrels of oil equivalent

*MMBOE* means millions of barrels of oil equivalent

*Oil to gas energy equivalent conversion: 1 BBL = 6 MCF*

**End of this Release**