

MCF Energy Provides Update on Welchau Exploration Well Testing Program

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VANCOUVER, BC, Sept. 26, 2024 /CNW/ - **MCF Energy Ltd.** (TSX.V: MCF; FRA: DC6; OTCQX: MCFNF) ("MCF", "MCF Energy" or the "Company") is pleased to announce the planned well testing program for the Welchau-1 discovery in the ADX-AT-II exploration licence in Upper Austria. MCF is a non-operator and holds a 25% economic interest in the Welchau Exploration Area and ADX Energy Ltd. ("ADX") is the operator.

Background

The Welchau-1 well targeted the reservoirs encountered in the nearby, downdip Molln-1 discovery well that tested condensate rich gas in 1989. The Welchau-1 well intersected three primary carbonate reservoirs that are considered promising for testing and ongoing appraisal. The well was suspended on the 28th of March 2024 for future well testing after running and cementing 7-inch casing down to the well total depth ("TD") at 1,733 metres measured depth (refer to figure 1).

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. At the conclusion of drilling hydrocarbon shows were still being encountered at the bottom of the well. Further exploration potential may be accessible by deepening the Welchau 1 well after testing.

Data recovered from the well included hydrocarbon shows, wellbore inflows during drilling, formation cuttings, petrophysical borehole log data, formation fluid sampling and formation coring. Pressurized formation fluid sample chambers run in the well recovered small amounts of liquid hydrocarbons (gas condensate to very light oil with 43.6° API gravity).

Detailed analysis of data recovered from the Welchau-1 well together with available data from the historic (1989) Molln-1 gas condensate well have been used to assess the potential of the Welchau discovery and design a suitable test program. The formations of interest and their thickness are Reifling (128 metres), Steinalm (118 metres) and Guttenstein (111 metres) of Triassic age (around 240 million years).

In preparation for testing the operator, ADX has undertaken the necessary planning, permitting, procurement and contracting to execute an extended testing program on Welchau-1. The target date to commence operations is 15 October 2024. The Welchau-1 well test program is designed to confirm the hydrocarbon characteristics, determine well productivity, the potential connected volumes and ultimately an estimate of recoverable resource volumes from future potential development wells.

Conclusions from Work to Date

Based on the data analysis to date, it is most likely that Welchau is a high API hydrocarbon liquid (or light oil) and associated gas discovery rather than a liquids rich gas discovery as was predicted prior to drilling.

Due to the uncertain nature of Welchau reservoir performance prior to testing MCF does not believe it is appropriate to provide a definitive resource range until the first tests are completed.

Economic Significance of Oil versus Gas

The predicted light oil (43.6° API) at Welchau-1 could be very valuable in commercial quantities given shallow drill depth and onshore setting which is proximal to infrastructure. The development cycle for oil is much shorter than gas. Any commercial discovery can be developed incrementally as it is appraised thereby minimising funding requirements as well as enhancing economics and payback time frames.

Austria has a state-of-the-art refinery located near Vienna. A significant light oil discovery is likely to provide an important economic contribution to the Austrian state given that Austria imports approximately 92% of its crude oil requirements (approx. 130,000 Bpd) and the refined product demand (approx. 170,000 Bpd) exceeds refinery production capacity by approximately 20%. A light oil such as that recovered from sampling at Welchau-1 is likely to be highly valued in Europe where condensates are scarce due to the high proportion of imported dry gas either by pipeline or LNG.

Data Analysis

MCF and the operator have analysed data recovered from the Welchau-1 well to determine the likely reservoir hydrocarbons present and characterise the reservoir in terms of storage capacity and flow capacity for each of the

potential reservoirs intersected in the well.

At this stage, the post-drill structure at Welchau remains largely unchanged. The Welchau-1 well is confirmed to be at or near the crest of an east-west trending, asymmetric anticline, in line with the pre-drill structural model. The slight change in the strike of the fold axis makes the structure less cylindrical than predicted (in the Eastern part of the Welchau anticline). Welchau-1 intersected four reservoirs including the main Steinalm formation. The reservoir intersection at Welchau-1 is significantly greater than in the Molln-1. Given that oil was recovered at Welchau-1 up dip of Molln-1 which tested gas and condensate, it is now interpreted that Molln-1 is in a separate accumulation to Welchau-1. Figure 4, cross section view below shows more details on the thrusting and faulting resulting in a potential boundary between Molln-1 and Welchau-1 wells, as shown in the figure below 2.

The Steinalm fluid sample recovered from a down hole sampling tool (Modular Dynamics Tester, MDT) was analysed at the OMV Petroleum Analysis Laboratories in Vienna. The analysis revealed a light oil was recovered with associated gas. The oil having an API gravity of 43.60 with a gas-to-oil ratio of 1,080 Scf/Bbl.

The analysis of the downhole pressure data has highlighted the limitations in obtaining representative downhole pressures in permeable fractured carbonate reservoirs. This data was further compromised with mud loss invasion into the fracture system. The conclusions that can be made with certainty are the Steinalm reservoir is over-pressured and a light oil is present.

MCF and the operator were able to determine a range in potential oil-water-contact for the Welchau structure which were utilised in the estimate of Welchau Prospective Resources. The confirmation of the reservoir fluid type, the productivity and connectivity can only be assessed with the planned well test.

Detailed fracture and fault analysis was conducted using the Welchau-1 image log data, the core calibrated open hole log data, core analysis and core measurements, together with the dynamic drilling data (i.e. mud losses to the formation and gas shows from the formation). The Welchau carbonates are characterised as a tight matrix fracture enhanced reservoir¹. In Welchau-1 the fracture porosity has been solution-enhanced providing both increased storage capacity and better fluid flow pathways that can be expected to deliver high productivity.

¹Fractures and solution-enhanced fracture porosity provide both storage capacity and fluid-flow pathways. Karstification and hydrothermal dissolution are common diagenetic processes and serve to enlarge pre-existing fracture networks and create cavernous channel and breccia porosity. Fracture networks are generally extensive, consisting of both small-scale microfractures and larger scale intersections.

Other features identified with flow characteristics of permeable fractures are 'reactivated beddings' associated with folding of the rock which are also expected to contribute to well storage, flow and recovery.

While there may be some contribution from the matrix porosity into the higher permeability fractures, the fractures will provide the primary flow pathways through the reservoir to the well bore.

The frequency, extent and connectivity of the open fracture networks are at its most intense in the Steinalm Formation (See figure 3 below). It can be expected that these networks can be better connected at the Welchau-1 wellbore through selective acidization to maximise well productivity. It is also expected that the well test will provide some answers on the potential recovery per well, which is an important factor for onshore field commerciality.

In addition to the above, the flow characteristics of the reservoir have been analysed from down hole sampling tool (MDT) flow data to determine likely flow performance from fractures in the well. This data has been used to develop a suitable testing program for Welchau-1.

Testing Operations Overview

Testing operations at Welchau-1 are expected to commence in mid-October following the anticipated receipt of an environmental clearance for testing operations and the mobilisation of a workover rig required to run a test string which includes tubing and down hole packer system into the cased and suspended well.

The environmental clearance will allow for up to six months of continuous (24 hour) testing operations providing MCF and the operator with ample time to carry out an extensive testing program.

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

It is planned to test the two major reservoirs, starting with the deeper Steinalm and then the shallower Reifling. For each test a number of flow periods and shut in periods are planned to determine the pressure response with down hole pressure gauges. Well performance will be monitored to determine reservoir damage from drilling and cementing of the well. In each test the well may be acidized, if necessary, to optimise well performance. Data collection during testing will include flow measurement, surface and down hole pressure measurement as well as both surface and down hole fluid sampling.

The planned sequence of operations for testing for the Steinalm formation and expected testing program duration for the Steinalm formation is between 6 to 10 weeks.

MCF and the operator will ensure sufficient oil storage capacity is available on site in anticipation of oil flow. If good flow performance is achieved, the Steinalm test may be extended to obtain longer term flow data noting that under Austrian legislation it is permitted to produce up to 30,000 barrels from a long-term testing operation. The use of a workover rig for the Welchau-1 test program along with other operator synergies provides operational flexibility to vary the program without significantly increasing costs.

MCF and the operator will provide more detail on well testing operations nearer to the test commencement date, followed by regular updates throughout the testing program.

Follow-up Exploration Potential

The Welchau-1 well has confirmed a highly prospective hydrocarbon play. The well has confirmed the existence of hydrocarbon liquids and associated gas across multiple extensive carbonate reservoir intervals, trapped by a large hydrocarbon charged seal in a structural setting capable of containing large volumes of hydrocarbons.

MCF and the operator have already identified several follow up target structures in the same gross trend as Welchau. An example is the Rossberg lead which has similar anticline structure and shallow drill depths to Welchau (see figure 4 below). Rossberg is located approximately 6 km north-west of Welchau-1. The Rossberg structure has been identified from surface imaging, dynamic structural balancing techniques as well as surface geology mapping. As was the case with Welchau some 2D seismic may help to detail the closure. Additional detailed field work is being undertaken to mature this prospect as a potential follow up exploration well.

Based on current structural modelling there remains over 1,000 metres of exploration potential located below the current Welchau-1 well total depth. The opportunity to deepen the Welchau-1 well after testing the existing zones of interest is being assessed in conjunction with ongoing structural modelling of the Welchau-1 discovery.

Economic Participation in the Welchau Investment Area

MCF has executed an Energy Investment Agreement (EIA) with ADX 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 discovery well and other emerging oil and gas prospects. MCF has met its funding and earning obligations to ADX and it holds MCF's 25% economic interest in the Welchau Investment Area with MCF obliged to pay 25% of ongoing well costs.

James Hill, CEO and Director of MCF Energy, stated, "After months of engineering work and planning, I am very excited to begin testing on the Welchau-1 well in Austria. This project could make a major contribution to the

energy stability of the country. I am grateful for the continued support of our shareholders while the Company strives to enhance value and meet our operational objectives. The fourth quarter of 2024 will be busy and impactful for the Company, and we expect to be providing many updates in the coming months as these projects proceed."

About MCF Energy

MCF Energy was established in 2022 by leading energy executives to strengthen Europe's energy security through responsible exploration and development of natural gas resources within the region. The Company has secured interests in several significant natural gas exploration projects in Austria and Germany with additional concession applications pending. MCF Energy is also evaluating additional opportunities throughout Europe. The Company's leaders have extensive experience in the European energy sector and are working to develop a cleaner, cheaper, and more secure natural gas industry as a transition to renewable energy sources. MCF Energy is a publicly traded company (TSX.V: MCF; FRA: DC6; OTCQX: MCFNF) and headquartered in Vancouver, British Columbia. For further information, please visit: www.mcfenergy.com.

Additional information on the Company is available at www.sedarplus.ca under the Company's profile.

Cautionary Statements:

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Advisories:

Forward-Looking Information

This press release contains forward-looking statements and forward-looking information (collectively "forward-looking information") within the meaning of applicable securities laws relating to the Company's plans and other aspects of our anticipated future operations, management focus, strategies, financial, operating and production results, industry conditions, commodity prices and business opportunities. In addition, and without limiting the generality of the foregoing, this press release contains forward-looking information regarding the anticipated timing of development plans and resource potential with respect to the Company's right to assets in Austria. Forward-looking information typically uses words such as "anticipate", "believe", "project", "expect", "goal", "plan", "intend" or similar words suggesting future outcomes, statements that actions, events or conditions "may", "would", "could" or "will" be taken or occur in the future.

The forward-looking information is based on certain key expectations and assumptions made by MCF Energy's management, including expectations and assumptions noted subsequently in this press release under oil and gas advisories, and in addition with respect to prevailing commodity prices which may differ materially from the price forecasts applicable at the time of the respective Resource Audits conducted by GCA, and differentials, exchange rates, interest rates, applicable royalty rates and tax laws; future production rates and estimates of operating costs; performance of future wells; resource volumes; anticipated timing and results of capital expenditures; the success obtained in drilling new wells; the sufficiency of budgeted capital expenditures in carrying out planned activities; the timing, location and extent of future drilling operations; the state of the economy and the exploration and production business; results of operations; performance; business prospects and opportunities; the availability and cost of financing, labour and services; the impact of increasing competition; the ability to efficiently integrate assets and employees acquired through acquisitions, the ability to market natural gas successfully and MCF's ability to access capital. Although the Company believes that the expectations and assumptions on which such forward-looking information is based are reasonable, undue reliance should not be placed on the forward-looking information because MCF Energy can give no assurance that they will prove to be correct. Since forward-looking information addresses future events and conditions, by its very nature they involve inherent risks and uncertainties. MCF Energy's actual results, performance or achievement could differ materially from those expressed in, or implied by, the forward-looking information and, accordingly, no assurance can be given that any of the events anticipated by the forward-looking information will transpire or occur, or if any of them do so, what benefits that we will derive therefrom. Management has included the above summary of assumptions and risks related to forward-looking information provided in this press release in order to provide securityholders with a more complete perspective on future operations and such information may not be appropriate for other purposes.

Readers are cautioned that the foregoing lists of factors are not exhaustive. These forward-looking statements are made as of the date of this press release and we disclaim any intent or obligation to update publicly any forward-looking information, whether as a result of new information, future events or results or otherwise, other than as required by applicable securities laws.

Oil & Gas Advisories

Abbreviations:

Bcf	billion cubic feet
Bcfe	billion cubic feet of natural gas equivalent
Bbl	barrels
Boe	barrels of oil equivalent
M	thousand
MM	million
MMbbls	million barrels of oil
MMBOE	million barrels of oil equivalent

MMBC	million barrels of condensate
MMcf	million cubic feet of natural gas
Mcfe	thousand cubic feet of natural gas equivalent
MMcfe/d	million cubic feet equivalent per day
Scf	standard cubic feet
Tcf	trillion cubic feet
Km2	square kilometres
€	Euros

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