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6 September 2024

Zephyr Energy plc
("Zephyr" or the "Company")

Successful result of State 36-2R well second phase production test

Zephyr Energy plc (AIM: ZPHR) (OTCQB: ZPHRF), the Rocky Mountain oil and gas company focused on responsible resource development and carbon-neutral operations, is pleased to provide an update on operations on the State 36-2R LN-CC well (the "well") at the Company's flagship project in the Paradox Basin, Utah, U.S. (the "Paradox project").

The Company has completed the second phase of the production test on the well (the "second test"), as announced on 23 July 2024, and is pleased to report the following key observations:

- Peak production rates achieved during the second test were over 2,100 barrels of oil equivalent per day ("boepd"), a very significant production rate for an onshore U.S. well with only 130 feet of completed reservoir interval.
- The acidisation operation successfully removed any remaining near-wellbore formation damage and generated very high reservoir deliverability, with a notable improvement to near-wellbore reservoir permeability after each acid treatment. As such, the operation not only removed damage but also enhanced reservoir productivity.
- This is the first known example of acidisation stimulation in the Paradox Basin, and the result is highly positive for the development of the play, with the potential for substantially reduced reservoir risk and removal of the need for costly hydraulic stimulation as used in other U.S. onshore resource plays.
- Variable liquid-yields were observed over the second test, all of which are higher than that at the Company's State 16-2 LN-CC well (the "State 16-2 well") in the northern part of Zephyr's Paradox project acreage. At the peak production rates in the second test, condensate/light volatile oil represented approximately 510 boepd, and these liquid yields were on an increasing trend at the conclusion of the test.
 - The elevated liquid yield has the potential to be a significant driver of improved economics and may increase recoverable liquid volumes across the Company's Paradox project acreage.
 - A detailed fluid laboratory analysis is currently underway, and the results will help the Company further characterise the field's fluid fill and composition.
- Continued evidence of almost zero water production, another potential boost to the well's economics by material reducing the need for expensive water disposal.
- Given the highly positive observations, Zephyr has commenced the process of discussing potential well and wider Paradox Project development opportunities with U.S. based industry partners in an effort to accelerate additional appraisal and development of the Paradox project.

Additional detail and next steps

In addition to cleaning up any remaining formation damage, the acidisation operation appears to have had the unanticipated benefit of significantly enhancing near-wellbore reservoir quality (by dissolving calcite and dolomite minerals known to exist in the reservoir, creating higher porosity and permeability where those minerals have been dissolved away). The Company has previously observed widespread minor fracturing in the reservoir cores of the State 16-2 well and other Cane Creek wells. Zephyr's initial analysis suggests that acidisation could materially enhance the permeability of the overall reservoir matrix, including the minor fracturing (which may be present across the Company's entire Paradox project acreage position) as well as any major fracture networks encountered.

This implies that acidisation, when utilised across a longer lateral, may offer a cost-effective completion technique compared to the hydraulic stimulation operation used in other U.S. resource plays. This alternative completion technique could also offer a broader and lower risk method for the long-term development of the Paradox project versus solely targeting major natural fracture networks (the historical development approach in this part of the Paradox Basin).

Given the positive implications for the Paradox project, Zephyr's board of directors (the "Board") has launched an immediate process to identify an industry or asset-level financial partner to accelerate further appraisal and field wide development. This could come in the form of a farm-in with an industry operator, a joint venture with a non-operator investor, or asset level funding. The Board now believes that the data generated from drilling the State 16-2, State 36-2 and State 36-2R wells, combined with the significant technical analysis developed from the Paradox project over the past four years (including extensive 3D seismic, core samples, log data, stimulation data and the recent production test results) provides a robust dataset for prospective partners to evaluate.

Now that the second test has been completed, the well has been temporarily shut in as per standard operations while Zephyr's operations team evaluates the new data. A key consideration is whether to produce the well in the short term, or to defer production temporarily in order to extend the wellbore and increase overall hydrocarbon recovery potential. While the well is capable of considerable production rates in its current form, it would be doing so from only a 130-foot completed interval which could make it more difficult to extend the well in the future by causing depletion in the near well bore area.

The well is permitted for up to a 10,000-foot lateral extension, and any future lateral extension would be expected to benefit both from greater connected volumes and the material positive impact acidisation could have on the high deliverability of this play.

In addition, with the new data generated from the second test and that from the Company's other Paradox wells, Zephyr will move as quickly as possible to produce an updated Competent Persons Report.

Colin Harrington, Zephyr's Chief Executive, said:

"This is a highly significant milestone for the Company in its development of the White Sands Unit and its wider Paradox project acreage. This is the first known use of acidisation stimulation in the Paradox Basin and the results have been extremely

encouraging - the well's deliverability and permeability are particularly notable, leading to the strong peak production rates witnessed.

By materially reducing completion costs and increasing chances of high productivity without having to target only major natural fracture zones or deploy higher cost hydraulic stimulation, the results from the latest well test could have significant positive implications for the future value of the Paradox project.

"The Board is now considering all options, including producing from the State 36-2R and the potential to materially increase the drained area of the well via the extension of the current lateral. Safe operations and capital efficiency will be taken into consideration when evaluating the next steps for the Paradox project. In parallel, and given these highly positive results, we have commenced discussions around asset-level partnership opportunities with U.S.-based industry partners.

"In all, the findings from the two production tests have considerably advanced our understanding of the Paradox Basin and have opened up a highly effective new development alternative. We believe this could be meaningful as we seek to unlock significant additional value for our shareholders."

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Qualified Person

Dr Gregor Maxwell, BSc Hons. Geology and Petroleum Geology, PhD, Technical Adviser to the Board of Zephyr Energy plc, who meets the criteria of a qualified person under the AIM Note for Mining and Oil & Gas Companies - June 2009, has reviewed and approved the technical information contained within this announcement.

Notes to Editors

Zephyr Energy plc (AIM: ZPHR) (OTCQB: ZPHRF) is a technology-led oil and gas company focused on responsible resource development from carbon-neutral operations in the Rocky Mountain region of the United States. The Company's mission is rooted in two core values: to be responsible stewards of its investors' capital, and to be responsible stewards of the environment in which it works.

Zephyr's flagship asset is an operated 46,000-acre leaseholding located in the Paradox Basin, Utah, 25,000 acres of which has been assessed to hold, net to Zephyr, 2P reserves of 2.6 million barrels of oil equivalent ("mmboe"), 2C resources of 34 mmboe and 2U resources 270 mmboe.

In addition to its operated assets, the Company owns working interests in a broad portfolio of non-operated producing wells across the Williston Basin in North Dakota and Montana. Cash flow from the Williston production will be used to fund the planned Paradox Basin development. In addition, the Board will consider further opportunistic value-accretive acquisitions.

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