

#### Stock Data

Share Price:	4.15p
Market Cap.:	£72.65m
Shares in issue:	1,750.72m
52 week high/low:	6.00p/1.91p

#### Company Profile

Sector:	Oil & Gas
Ticker:	ZPHR
Exchange:	AIM

#### Activities

Zephyr Energy plc ('Zephyr', 'the Group') is an independent oil and gas E&P Group with a strategic focus on carbon-neutral hydrocarbon development projects in the Rocky Mountain region of the US.

[www.zephyrplc.com](http://www.zephyrplc.com)

#### 5-year share price performance



Source: [LSE](#)

Past performance is not an indication of future performance.

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TPI acts as joint broker to Zephyr Energy plc.

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## Zephyr Energy plc

Zephyr has completed the much anticipated second phase (the 'second test') of the production test on its State 36-2R well ('the Well'). The acidisation operation successfully removed near-wellbore formation damage and generated very high reservoir deliverability, with a notable improvement to near-wellbore reservoir permeability after each acid treatment. Peak production rates achieved during the second test were over 2,100 barrels of oil equivalent per day ('boepd'), up from the 1,350 boepd reported following the first test, which is a particularly high for an onshore US well with only 130 feet of completed reservoir interval. Elevated liquid-yields were observed along with continuing evidence of almost nil water production. Zephyr's Board also notes a further, important and unanticipated benefit from the acidisation operation, in that it appears to have significantly enhanced the near-wellbore reservoir quality. From this, it concludes that similar utilisation across a longer lateral may offer a cost-effective completion technique compared to the hydraulic stimulation operations used in other US resource plays. Given the positive implications this has for the broader Paradox project, Zephyr has decided to immediately launch a process to identify a suitable US industry or asset-level financial partner to accelerate further appraisal and field wide development.

### Positive key findings of the second test

- Peak production rates achieved during the second test were over 2,100 boepd, a very significant production rate for an onshore US 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 US onshore resource plays.
- Variable liquid-yields were observed over the second test, all of which are higher than that at the Group's State 16-2 LN-CC 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 Group's Paradox project acreage.
  - A detailed fluid laboratory analysis is currently underway, and the results will help Zephyr 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 materially 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 US based industry partners in an effort to accelerate its additional appraisal and development.

### **Acidisation operation appears to significantly enhance the near-wellbore reservoir quality**

The acidisation operation undertaken on the well had the effect of dissolving calcite and dolomite minerals known to exist in the reservoir, creating higher porosity and permeability in locations they previously occupied. During earlier drilling of the State 16-2 well and in other Cane Creek wells, Zephyr had already observed widespread minor fracturing in the reservoir cores. From this, it now concludes that acidisation could materially enhance the permeability of the overall reservoir matrix, including the minor fracturing (which may be present across the Group's entire Paradox project acreage position) as well as any major fracture networks encountered.

The implication is that acidisation, when utilised across a longer lateral, may offer a cost-effective completion technique to increase hydrocarbon recovery and decrease costs compared to the hydraulic stimulation operation used in other US resource plays. This potentially offers a transformative and lower risk method for the long-term development of the Paradox project, versus solely targeting major natural fracture networks (the development approach that is presently used elsewhere in the Basin). The Board believes this is the first modern acidisation operation used to improve overall well productivity in this part of Utah.

### **Next steps and broader considerations for the Paradox Basin**

Data generated from the two production tests have considerably advanced Zephyr's understanding not only of its existing wells, but also of the Paradox Basin itself. 36-2R has demonstrated quite exceptional deliverability and permeability, leading to the strong peak production rates witnessed while also opening opportunity for a new, highly effective alternative development process for the White Sands Unit and its wider Paradox acreage.

Given the positive implications, Zephyr's Board has begun an immediate search 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 and the recent production test results) provides a robust dataset for prospective counterparts to evaluate. Recognising the potential this presents to unlock significant additional value for shareholders, the Board is seeking to advance such discussions with some urgency.

### **Temporary shut-in of 36-2R while all options are considered**

36-2R has been temporarily shut in (as per standard operations) while Zephyr's operations team considers the new data produced and evaluates possible next steps. It now has sufficient information to know that State 36-2R is capable of considerable production rates in its current form, presenting opportunity to quite rapidly start monetising the Paradox asset. Doing so in its current form which only has a 130-foot completed interval, however, could make it more difficult to extend the Well in the future by causing depletion in the near well bore area. Before committing therefore, it is also reviewing the alternative option of deferring production to first extend the Well in expectation of increasing its overall hydrocarbon recovery potential. Being permitted for up to a 10,000-foot lateral extension, any such future play might be expected to benefit both from greater connected volumes and the material positive impact acidisation could have on its deliverability.

With Zephyr remaining adequately funded at this time, such a lateral could potentially be completed in the near term subject to service provider availability, making any such deferral a relatively short-term event, while not interfering with ongoing preparatory work for installation of processing plant to receive anticipated production or otherwise hindering completion of its tie-in to the nearby pipeline. The new data generated from the second test

together with that collected from the its other Paradox wells, will also enable it to quite quickly produce an updated Competent Persons Report ('CPR').

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