

**Stock Data**

Share Price:	6.85p
Market Cap.:	£108.44m
Shares in issue:	1,583.02m
52 week high/low:	8.15p/3.75p

**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.

**Contact details**

Tel: 0203 657 0050  
Email: [info@turnerpope.com](mailto:info@turnerpope.com)  
Web: [www.turnerpope.com](http://www.turnerpope.com)

Andrew Thacker  
Corporate Broking and Sales

Barry Gibb  
Research Analyst

TPI acts as joint broker to Zephyr Energy plc.

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# Zephyr Energy plc

Zephyr yesterday provided an operational update on its State 36-2 LNW-CC well ('the Well') at the Group's flagship project in the Paradox Basin, Utah, USA, noting that substantial hydrocarbon flow had been encountered by intersecting an apparent major natural fracture network in the reservoir. As a result, the Board is now evaluating various revised completion options. These may include running production casing and completing the Well without drilling the remainder of the planned lateral, given the significant apparent volumes and that the hydraulic stimulation originally proposed is now unlikely to be required. While assessments remain at an early phase, this suggests potential improvement to Well economics via reduced completion costs, noting that historic Paradox wells that successfully intersect natural fractures have been prolific, enjoying high immediate production rates along with substantial ultimate oil recoveries. Given that the Group's recently acquired gas infrastructure is seen accepting sales volumes at some point in 2H 2023, while the current drilling programme remains amply funded through c.US\$18.5m of liquidity available as of 10 Nov 2022, projected medium term cash flows still appear sufficient to support exploitation of its existing inventory, which includes 2U potential of over 200 million boe across the Paradox. This of course remains key to Zephyr closing in on its ultimate goal of unlocking the next great unconventional onshore resource play in the US.

## Encouraging signs for an economic and productive well

Upon reaching the Cane Creek reservoir, the influx of naturally flowing hydrocarbons demonstrated three key facts: confirmation of the presence of movable hydrocarbons, continued evidence of significant over-pressure, and a highly permeable natural fracture network at a new location on the Group's federal unit. These facts bode well for both single well productivity and for the larger play overall. Having reached the Cane Creek reservoir at a depth of 9,598 feet true vertical depth ('TVD'), the Well soon experienced the significant influx which led to suspension of drilling operations while being stabilised. Caused by intersecting an apparent major natural fracture network in the reservoir, the resultant flow was diverted safely at surface through the drilling rig flare stack. The well was soon stabilized without incident.

As already advised, Zephyr's operations team had been forced to deal with an exceedingly challenging drilling environment over the past two months, which included mechanical issues and more recently significant weather impacts from the historic atmospheric river system flowing over and from California. But given that encountering a natural fracture network was both a recognised drilling risk as well as a feature that could significantly enhance the Well's overall productivity, all necessary procedures and precautions were in place in the event the Well encountered such an over-pressured situation.

## Now analysing all options for the Well's safe completion

The Paradox was historically developed as a natural fracture play, one which did not utilise hydraulic stimulation and which, to some extent, has been

overlooked in recent years during the US onshore fracking boom.

In the event this well is ultimately completed without the need for hydraulic stimulation, there may be potential for significant improvement to the Well economics via reduced completion costs. Note that on the basis of drilling expenditure in the range of US\$10–12m to recover, say, 1.2mmboe, this implies bottom-quartile capex as low as c.US\$10/boe. Historic Paradox wells that successfully intersected such natural fractures have been seen to be prolific, with high immediate production rates while delivering substantial ultimate oil recoveries. Possibly the best analogy is MDU Resources Group Inc. (NYSE: MDU), whose Cane Creek Unit #12-1 in Grand County, Utah, produced a choked down 1,500 barrels of oil per day for the first five months following completion in September 2012. To date, the Basin's northern zone has produced >10mmboe from the Paradox Formation (most of which has been from the Cane Creek reservoir).

State 36-2 LNW-CC itself was spudded on 21 November 2022, following which drilling had initially been estimated to take 30 days. Operations were subsequently slowed, however, due to already detailed rig commissioning and mechanical issues, following which it suffered from the widely reported weather impacts from the historic atmospheric river system flowing over and from California. As detailed on 9 December 2022, the Group was also awarded an additional US\$1 million in grant funding from the US Department of Energy to gather detailed reservoir data from the Cane Creek and overlying reservoirs, resulting in additional allotted time during ongoing drilling.

### **Prospective next steps for State 36-2 LNW-CC**

Zephyr's Board has not yet formally decided on the Well's next stages of development. These are expected to be considered over the next three or four weeks, whereupon the detail will be provided to shareholders. While potential volumes remain unknown, a 'significant kick' was witnessed upon reaching the Cane Creek reservoir. Subsequent 'wet' flaring indicates a range in the expected hydrocarbon mix (gas/oil/condensate).

The Board's most likely choice is expected to be to complete a standard natural fracture well, while still retaining the option to return to its originally proposed hydraulically stimulated lateral at a later stage depending on the underlying rate of decline. The alternative could be to keep with existing planning while seeking to manage pressure blowouts as they occur. Based on the more likely choice, the Well could be on schedule for a production test during Q1 2023.

Targeting first commercial gas sales by late-Q3/Q4 2023, ZPHR needs to complete the recommissioning of its recently acquired Powerline Road gas processing plant (with handling capacity yet to be determined). From that point, Zephyr will remain at the mercy of Dominion with regard to completing the refurbishment of their 16-inch infrastructure, and we understand positive discussions have taken place on this point.

Understanding that completion via fracking itself can account for almost half the total development expenditure of an unconventional well, the decision not to complete the originally proposed lateral potentially eliminates c.US\$5m from the budget; this will, however, be partially offset by the costs of extended drilling delays already incurred along with potential additional charges for retaining the rig and installation of production casing. Overall, however, TPI considers there is likely to be a modest net reduction in total costings.

### **Potential Contingent & Prospective Resources worth well in excess of US\$1 billion**

Zephyr's active land management strategy appears to be delivering a defensible and growing portfolio of development opportunities, something which is increasingly difficult to replicate in today's regulatory and political environment. Management's near-term focus is on recommencing production testing at the State 16-2 LN-CC, for which operational preparations are largely complete with long lead time items already in process, while also safely completing State 32-2 LN-CC followed by the recommissioning of a recently acquired processing plant before being tied-in to gas infrastructure. The former will allow for the sale of liquid volumes and, most critically, allow for data

generation which will help it evaluate the most effective options for infrastructure development, while the latter appears set to be generating first revenues well before the end of 2023.

Publication of the Group's Competent Person's Report ('CPR') 2022 on 26 April 2022, highlighted Zephyr's substantial remaining potential in the Paradox Basin. While the range of values illustrated in Sproule's report presently remain very wide, recognising also that there are still significant underlying technical/operational risks to be surmounted, Zephyr's management and exploration team have demonstrated a high level of intuition along with the capacity to meet and optimise such challenges through carefully calculated process. The fully funded drilling programme now underway will enable further delineation and increase overall understanding of the Paradox asset base. Management continues to assess potential upside and will shortly determine additional steps with a view to delivering increases in all reserve and resource classes during 2023.

Significantly in this respect, funding for the next major phase of development of the Paradox Project will be provided from the Group's Williston Basin non-operated assets. In November 2022, management also upgraded its previously released 2022 production and revenue guidance from an expected US\$35-40 million to an expected \$40-\$45 million in non-operated revenue, net to Zephyr, based on a forecast production range of 500,000 to 550,000 boe for the year. 2023 production and revenues are expected to be enhanced by the start-up of the Slawson wells in March 2023.

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