Zephyr Energy plc

Zephyr has provided an update on its State 36-2 well, along with details of a farm-in agreement in the proven Salt Wash Field in Grand County, Utah. Further to January's well control incident, recent operations at State 36-2 have not resulted in what the Board considers to be sufficient recoveries of damaged tubing to justify continuation of the ongoing well work costs versus those estimated to instead redrill. Having already considered such an outcome, discussions had commenced with its insurer some weeks back to assess the multiple alternative options for realising the significant potential productivity of the reservoir at this location. Following a detailed review, management has now elected to proceed with a 'twinned' well from an adjacent location on the same drilling pad. Importantly, Zephyr has a pre-existing approved permit for such work, which will be amended to target the same natural fracture network; it also retains full well control insurance coverage through which it expects to recover substantially all costs associated with the well control incident, including those related to the redrill. With preparations underway, focus will be on maximising efficiencies and leveraging knowledge gleaned from the State 36-2 well. Recognising that the goal of securing recurring revenues from Paradox has now slipped into the New Year, a redrill target date of Q1 2024 suggests revenues could still be delivered by early summer. In conjunction with this, the Group's new farm-in (the 'Farm-in') to the Salt Wash Field, for which it has long studied the potential to redevelop its proven reserves, further increases its footprint across its primary play close to existing operations.

Potential to open up the next prolific onshore US oil & gas play

Although timing of the redrill will be dependent upon securing an appropriate rig contract (along with other ancillary services), Zephyr's Board remains confident that its operations team will be able to deliver an effective twin well during Q1 2024. Using the same rig contract and funded through the corporate cash flows expected to be generated by the Williston Basin portfolio, Zephyr also plans to drill a second well in the Salt Wash Field in the first half of 2024. This will form part of the New Year's continuing work to transform the Paradox project into a consistent revenue generating development, which will include export of natural gas volumes through Dominion Energy's recently completed pipeline which ties Zephyr's acreage to the multi-state Williams Northwest Gas Pipeline system. Recognising the considerable productivity and hydrocarbon potential of 36-2's wellbore, along with the demonstrated potential of the previously drilled State 16-2 LN-CC well and recently restarted 28-11 well, the scale of the overall project is increasingly clear. In order to ensure its pace of development continues to accelerate while seeking to seize the ultimate goal of opening up the next prolific onshore US oil and gas play, the Board continues to explore various alternatives, including partnerships, joint-ventures ('JV') and farm-in structures, in order to deliver the highest, timely returns for its shareholders.

Salt Wash Farm-in – Unlocking further Paradox potential

Zephyr's Board has long studied the potential to redevelop the reserves in the Salt Wash Field ('the Field'), which lies three miles to the south of the Group's

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Stock Data

Share Price:	2.80p
Market Cap.:	£47.22m
Shares in issue:	1,686.50m
52 week high/low:	7.49p/2.53p

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

5-year share price performance

Source: *LSE*

Past performance is not an indication of future performance.

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White Sands Unit. It has now agreed to farm-in to a minimum 75% working interest of the Field's 1,047-acre leasehold position. This enables Zephyr to increase its footprint across its primary play (the Paradox Formation Cane Creek reservoir) in a location in close proximity to existing operations. It also grants access to the burgeoning and increasingly active helium play that spans south-east Utah, northern Arizona and western Colorado, which can supply the growing US industrial need for helium.

Having first produced in 1961, the Field has a thin (c.4.5 metre) oil rim which was the target for most historic development drilling activity and subsequent output. Above the oil rim is an inert gas cap (c.150 metre gas column) consisting of nitrogen (72%) with approximately 22% hydrocarbon gases and 1.4% to 1.7% helium content. It was subsequently shut-in only partly developed, as the oil rim was produced and the market for helium and natural gas was not supportive of further development at the time.

While co-mingled helium will be a new addition to the Group's resource exposure, many nearby Paradox Basin oil and gas operators have elected to target and produce helium in commercial quantities given the significant recent increase in helium prices. As such, an active local offtake market for produced helium has now been established. According to a 2023 report published by research group, Research and Markets, the global helium market will grow from US$4.45 billion in 2022 to US$5.03 billion in 2023, expanding to a value of US$6.48 billion in 2027 based on a CAGR of 6.6%. Heightening Industrial demand for helium (for use in semiconductor, LCD panel and fibre optic production, etc.) has recently resulted in prices rising to US$1,000/mscf.

As such, this Farm-in fits well with Zephyr's strategy in the area, capitalising on its regional basin knowledge and could ultimately transport volumes on recently acquired pipeline infrastructure. It may also open a series of potential future opportunities in a locality that is becoming increasingly active with drilling and M&A activity.

Potential to partner with helium industry participants

Zephyr states that although it does not seek for helium to become a primary focus, it does expect to partner with industry participants to help appraise and fund the potential of this resource, while also utilising its existing operations and asset platform. Zephyr's CEO, Colin Harrington, clearly states that funding for this initial well will not be provided through a future Zephyr equity raise. Zephyr has projected the current cost of the Commitment well to be in the range of c.US$6 million, and that the Group will target helium industry participants to jointly fund its drilling. Conversations with JV partners (including infrastructure and existing helium-focused companies) are underway. Alternative options include funding the Commitment well from Zephyr cash resources or not proceeding with the project.

Salt Wash Field highlights include:

- Demonstrable oil and gas potential in the Cane Creek reservoir (the same formation which underlies the WSU).
- Secondary oil and gas potential within the Upper Leadville Formation.
- Proven helium discovered resource with deep exploration prospective resource opportunities.
  - Net helium discovered resource potential: 0.07 to 0.19 billion cubic feet ('BCF') (Zephyr's estimate).
  - Net helium un-risked, prospective resource of a further 0.04 to 0.66BCF.
  - 1.4% to 1.7% helium content.
- Proximity to Zephyr's other Paradox lease holdings and surface infrastructure.
- Historical production of 1.65 million barrels of oil and 11.7BCF of gas in total (8.26BCF from the Lower Leadville reservoir) prior to being shut in.
- Drilling activity planned for the second quarter of 2024 with a dual-purpose Leadville Formation delineation well with deep exploration targets.

The key terms of the Farm-in are as follows:

- Initial payment of US$300,000 due within 30 days of the date of the transaction, , to be funded from the Company's existing resources.

- A second payment of US$300,00 due within 60 days of the date of the transaction, , also to be funded from the Company's existing resources.
- Zephyr to drill, log and case one vertical delineation well (the 'Commitment well'), with spudding in the first half of 2024 to top basement rock (circa 11,000ft measured depth) to obtain a 100% share in the leasehold.
- The incumbent leaseholder (the "seller") will have the option to back-in to the leaseholding at a 25% working interest, with no historic cost exposure, once the delineation well is drilled and a field development plan has been proposed by Zephyr. From that point forward, the seller would become a fully paying 25% working interest partner.
- Zephyr has begun the work to integrate the well planning for the Salt Wash well with its wider Paradox project development. The initial US$600,000 consideration will be funded from the Company's existing cash resources. Should the Group not meet its condition to drill the Commitment well in the first half of 2024 it could lose its rights to the leaseholding.

Greentown Federal 28-11 well – Production restarted

The past three months has seen, Zephyr restart production at the historic 28-11 well in order to reduce wellhead pressure (which had increased due to the natural recharge of the Cane Creek reservoir) and to produce oil volumes for sale. The liquid-rich well is now averaging c.50 barrels of oil per day, with a small amount of natural gas being flared. The operations team plans to utilise the workover rig currently at the State 36-2 well (once operations have ceased at that pad) to commence new well work at the site, which will include the installation of a new pump. Zephyr plans to continue to produce the well within mandated flaring limits (presently ten days production per month) until its natural gas processing infrastructure is ready to accept volumes. The well is already tied into Zephyr's pipeline infrastructure and is expected to produce at higher uptimes when gas processing facilities have been completed.

Paradox project expected to enter an inflection point in 2024

The coming months are expected to see the Paradox project enter a pivotal stage in its development. Two wells have been drilled to date, both identifying hydrocarbons and appearing capable of commercial production. Although the project still remains relatively early in its 'learning curve', its offering of two forms of development (natural fractures and hydraulically stimulated resource play) along with 8 overlying reservoirs, which suggests significant potential upside. Interestingly in this respect, now that the Group has decided to go down the redrill route, it will mean Zephyr will have two wellbores available from 36-2's pad; although it is unlikely that Cane Creek can now be targeted from the existing wellbore, it still may be possible to use it as a low-cost vertical host to test one of the overlying reservoirs, such as C9. This is obviously not going to be a near-term target for the Group, but could ultimately become one when seeking to ascertain Paradox's full potential.

With all key pieces, including acreage and infrastructure, for wider development having been assembled, it seems production test results from the redrill on State 36-2 well's pad could become an inflection point for Paradox as it moves from appraisal into development with both it and 16-2 coming online with flush production. Upcoming news flow for both the Group's operated and non-operated assets during this period could possibly include the following:

- Continued progress with insurance claims as it moves to redrill a 'twinned' well on the same pad following State 36-2 well control incident;
- Redrill well production test results;
- Updated CAPEX and drilling plans (dependent on redrilled well production test results);
- Potential discussions with third-party processing companies in preparation of Dominion's gas supply pipeline accepting initial volumes from the redrill in H1 2024;
- Updated Competent Persons Report;
- Details of mitigation solution and move to initial production for State 16-2;
- Salt Wash Field development planning and drilling test results from the Commitment well;

- Installation of workover rig at the Greentown Federal 28-11 well to commence new well work and infrastructure tie-in;
- Further acquisition opportunities and additional proposed 2024 drilling; and
- Initial production volumes from the Slawson wells.

Around the same time as Zephyr publishes initial production volumes from the Slawson acquisition, the Group is expected to release updated FY 2023 production guidance for its non-operated assets. Starting 1 April 2023, Zephyr had hedged 164,000 barrels of oil over the following 12 months at a weighted-average price of US$84.34 per barrel and will continue to evaluate its commodity price risk management strategy on a regular basis. Significantly, the Group is already achieving carbon net zero through an offsetting programme using Verified Emissions Reduction credits.

Although June's £3.15m (gross) fund-raising perhaps served to highlight the present sensitivity of Zephyr's balance sheet to any surprise additional costings and/or delays in anticipated receipts, it nevertheless underlined management's full commitment to the Paradox project's development. Despite the fact that the 2023 net average production guidance of 1,550 to 1,750 boepd provided by Zephyr back in December 2022 for its aggregate Williston Basin interests will need to be trimmed back somewhat as a result of slippage in Slawson's initial production, year-end run-rate should approach or exceed that total. And while the Paradox well tie-ins have clearly been delayed while awaiting resolution of the 36-2 operations and subsequent redrill production test, it's worth remembering that the vast majority of capex has already been spent drilling two productive wells, and those wells have the potential to significantly increase the overall production when ultimately tied in.

On this basis Zephyr's operations could start throwing off quite significant cash during 2024. Recognising the Group has identified c.150 additional locations across 9 reservoir targets to date, there clearly remains significant scope and scale to be unlocked over the coming years upon delineation and exploration success. Understanding that the Group is committed to accelerating the Paradox project drilling programme in the optimal way possible, it is actively exploring partnerships, joint-ventures and farm-in alternatives to support development of what could become the US's next prolific onshore oil & gas play. Any announcement on this front is still likely to be some time away, but scope for initial expressions of interest sometime during 2024 suggests Zephyr's shares have already become significantly oversold.

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. Following recent events, management's immediate focus remains on restarting State 36-2's production testing, followed by safely completing the well and the recommissioning of a recently acquired processing plant before being tied-in to gas infrastructure.

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 drilling programme now underway will enable further delineation and increase overall understanding of the Paradox asset base. Management continues to assess potential upside and is shortly expected to determine additional steps with a view to delivering increases in all reserve and resource classes before end-2023.

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