

RNS Drilling/Production Report

Proposed drilling of Topaz Prospect

EMPYREAN ENERGY PLC

Released 07:33:35 04 May 2022

RNS Number : 2515K
Empyrean Energy PLC
04 May 2022

This announcement contains inside information

Empyrean Energy Plc / Index: AIM / Epic: EME / Sector: Oil & Gas

Empyrean Energy plc

Block 29/11, China - Proposed drilling of Topaz Prospect following Jade well results

4 May 2022

Empyrean Energy plc ("**Empyrean**" or the "**Company**"), the oil and gas development company with interests in China, Indonesia and the United States, provides the following update on Block 29/11 offshore China.

Empyrean is the operator of Block 29/11 in China and has a 100% working interest during the exploration phase. In the event of a commercial discovery, its partner CNOOC, may assume a 51% participating interest in the development and production phase.

Based upon the preliminary assessments of the Jade well results and the ongoing agreement with its partner, China National Offshore Oil Company ("**CNOOC**"), to further cooperate with regards to follow up post well analysis, it is Empyrean's current intention to proceed with the second phase of exploration at Block 29/11 and to participate in the drilling of the Topaz prospect.

Jade Well results - Preliminary interpretation

Final logs have been run with demobilisation of the China Oilfield Services Limited ("**COSL**") owned NH9 rig to take place over the next few days.

The final log data confirmed several elements of the pre-drill prognosis:

- 292 metres of excellent quality reservoir was intersected;
- more than 2330 metres of regional marine clay seal formation; and
- validity of the trap confirmed by intersecting the reservoir top within the anticipated depth

Pre-drill, Jade was chosen over Topaz to drill first because it was a 4-way dip trap with less structural risk, had a slightly higher geological chance of success and was situated closer to the proven Baiyun Sag East source rock in the basin. Effective hydrocarbon charge was recognised as a key geological risk of the Jade prospect. As a result, comprehensive "gas cloud" analysis of Empyrean's 3D seismic data as well as that of CNOOC oil discoveries and dry wells was conducted to help assess the potential for hydrocarbon charge to the Jade prospect. The drilling of Jade has proven that there was no oil migration into the Jade trap, yet oil migration has effectively charged the four CNOOC light oil discoveries to the immediate west and south-west of Empyrean's permit. Empyrean has immediately teamed with CNOOC to analyse and assess the reasons for this and the implications that all of the data, including the positives and negatives, now have for the prospectivity at the Topaz prospect, in particular oil migration pathways.

The Jade (LH 17-2-1) well recorded elevated gas (C1) from 1550 metres to 1800 metres MD which was interpreted pre-drill to be a "gas cloud" zone. Post-drill analysis of 3D seismic data in light of the results of the Jade well indicates the presence of gas clouds over the Jade trap was potentially a result of gas migrating from the Baiyun Sag East kitchen vertically via a large basinal fault followed by lateral migration through coarser clays in the 1550 metres to 1800 metres MD zone. Preliminary post-Jade assessment of the gas clouds over the nearby CNOOC discoveries indicates that there is no linkage to the basinal faults for those CNOOC discovery gas clouds. The Topaz prospect has a similar structural setup to the CNOOC discoveries with no apparent linkage to basinal faults.

Implications for the Topaz Prospect

The 2017 seismic data analysis matured two prospects - Jade and Topaz - along the western block boundary. Pre-Jade drilling, comprehensive analysis confirmed Topaz as a large and genuine exploration target in Block 29/11, with Gaffney Cline independently assessing a target in place oil estimate of 506 mmbbls (Mean case) of oil and an upside of 891 mmbbls (P10 case) with a 30% Geological Chance of Success ("**GCoS**").

The Jade well data has validated Post Stack Acoustic Impedance conclusions for reservoir and seal facies at the Topaz prospect. At the same time, the penetration of reservoir top within the pre-drill depth prognosis confirms the reliability of the depth conversion approach Empyrean used and confirms the trap definition of the Topaz prospect. As a result, the Jade well results have helped provide confidence in Reservoir, Trap and Seal of the Topaz prospect.

Similar to Jade, effective hydrocarbon charge has been recognised as a key remaining geological risk for the Topaz prospect.

Jade had relied on relatively long-distance direct oil migration from **Baiyun Sag East** source rock that is located over 26 km to the south. The Topaz prospect relies on more local oil charging mechanisms. Firstly, it has the potential to be charged by the newly identified - **Baiyun Sag North** - located less than 6 km to the southeast of Topaz. The Baiyun Sag North kitchen was identified by Empyrean's own 3D seismic data, is entirely covered by this 3D and provides the mapping of direct migration pathways to the Topaz prospect. Secondly, cooperation between CNOOC and Empyrean on the respective data sets shows there is a potential migration pathway from the CNOOC LH16-2 discovery well spilling on to the Topaz prospect.

Drilling of the Topaz prospect

Under the PSC, Empyrean must elect to enter the second phase of exploration period by 12 June 2022. The second phase of exploration involves the commitment to drill the Topaz prospect before 12 June 2024.

Following the Jade well results, Empyrean has held several technical meetings, including with the CNOOC technical team in China, to review the well results and its implications for Block 29/11 prospectivity and, in particular, the pros and cons of the well results for the much larger Topaz prospect. In this regard, CNOOC has already been very cooperative in sharing its regional data and assisting by passing on a greater technical understanding of the basin.

Based upon these preliminary assessments of the Jade well results and the ongoing agreement with CNOOC to further cooperate with regards to follow up post well analysis, it is Empyrean's current intention to proceed with the second phase of exploration at Block 29/11 and to participate in the drilling of the Topaz prospect, subject to availability of financing.

Forward Plan

It is Empyrean's intention to maximise the value of its interest in the Mako Gas Discovery on the Duyung permit in Indonesia and position itself for participation in the drilling of the high impact Topaz prospect. Demand for oil and gas in the South East Asian region is strong and growing. Demand and prices for pipeline quality gas that the Mako Gas Discovery offers is strong into the Singapore energy hub.

China is the largest importer of oil in the world. Exploration throughout the region has gathered momentum and CNOOC is drilling a large number of domestic exploration wells. Empyrean is currently considering its alternatives to funding the Topaz prospect drill and is preparing a work program that it believes can see the Topaz well drilled within the next drilling weather window in the Pearl River Mouth Basin in 1H 2023. Topaz is a slightly shallower target depth. Given the very large target size at Topaz, Empyrean will also investigate potential risk share alternatives and farm out possibilities.

The information contained in this announcement has been reviewed by Empyrean's Executive Technical director, Gaz Bisht, who has over 31 years' experience as a hydrocarbon geologist and geoscientist.

Empyrean CEO, Tom Kelly, stated:

"Whilst we are extremely disappointed with the results of the Jade well, we have made significant investment of resources and time in systematically maturing the prospectivity of this large block. Empyrean's early assessment is that the much larger Topaz prospect remains a world class conventional light oil target that, based on existing understanding of available data, will be drilled."

Over the past 6 years, Empyrean has built a deep and strong relationship with CNOOC and has found an experienced team in CNOOC EnerTech that, together, has proven to be able to execute a safe drilling campaign in an offshore environment. The COSL team has been extremely professional and effective in managing various aspects of the drilling operations including a Covid-safe campaign. I would like to thank our partner and consultant teams for their support and we now look forward to their ongoing assistance with the proposed drilling of the Topaz prospect."

For further information please contact the following:

Empyrean Energy plc

Tom Kelly

Tel: +61 6146 5325

Centos Securities plc (Nominated Advisor and Broker)

Neil McDonald

Tel: +44 (0) 20 7297 8900

Pete Lynch

Pearl Kellie

First Equity (Join Broker)

Jason Robertson

Tel: +44 (0) 20 7330 1883

This information is provided by RNS, the news service of the London Stock Exchange. RNS is approved by the Financial Conduct Authority to act as a Primary Information Provider in the United Kingdom. Terms and conditions relating to the use and distribution of this information may apply. For further information, please contact rns@lse.com or visit www.rns.com.

RNS may use your IP address to confirm compliance with the terms and conditions, to analyse how you engage with the information contained in this communication, and to share such analysis on an anonymised basis with others as part of our commercial services. For further information about how RNS and the London Stock Exchange use the personal data you provide us, please see our [Privacy Policy](#).

END

DRLGLGDURDGDGDS

London Stock Exchange plc is not responsible for and does not check content on this Website. Website users are responsible for checking content. Any news item (including any prospectus) which is addressed solely to the persons and countries specified therein should not be relied upon other than by such persons and/or outside the specified countries. [Terms and conditions](#), including restrictions on use and distribution apply.

