

## Tumbes Basin TEA Technical Update

### Highlights

- Identification and interpretation of historical data has identified more than 20 potential leads in the TEA area.
- Work programme commenced to develop, rank and 'high-grade' these leads and define new prospective features.
- The next milestone will be to select areas for 3D seismic reprocessing with a view to the deployment of new Quantitative Interpretation and Artificial Intelligence based interpretation methodologies.

Global Oil and Gas Limited (ASX: GLV) (**Global or Company**) is pleased to provide an update on its Tumbes Basin Technical Evaluation Agreement ("TEA") offshore Peru (Figure 1). In August 2023, the Company executed TEA LXXXVI with PeruPetro, the Government department responsible for the administration and promotion of oil and gas exploration in Peru. The 4,858km<sup>2</sup> TEA incorporates almost all of the offshore Tumbes Basin, in moderate water depths of between 100m and 1,500m. The block is surrounded by, and includes, multiple historic and currently producing oil and gas fields.



Figure 1 – Tumbes Basin TEA area in northern Peru.

The Company has now collected and curated a significant quantity of geophysical and geological data over the TEA and the wider Tumbes Basin and interpretation work is underway.

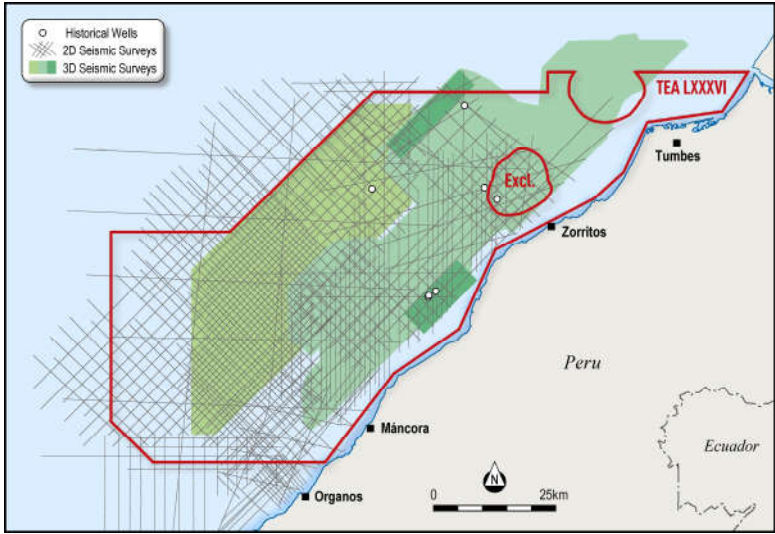


Figure 2 - TEA geophysical data

There are several oil and gas discoveries in the Tumbes Basin itself, with the southerly adjacent Talara Basin representing the most prolific offshore hydrocarbon basin in Peru. The majority of existing discoveries and prospective targets in the Tumbes Basin are within the Miocene Zorritos Formation, with hydrocarbons sourced from the Oligo-Miocene Heath Formation (Figure 3).

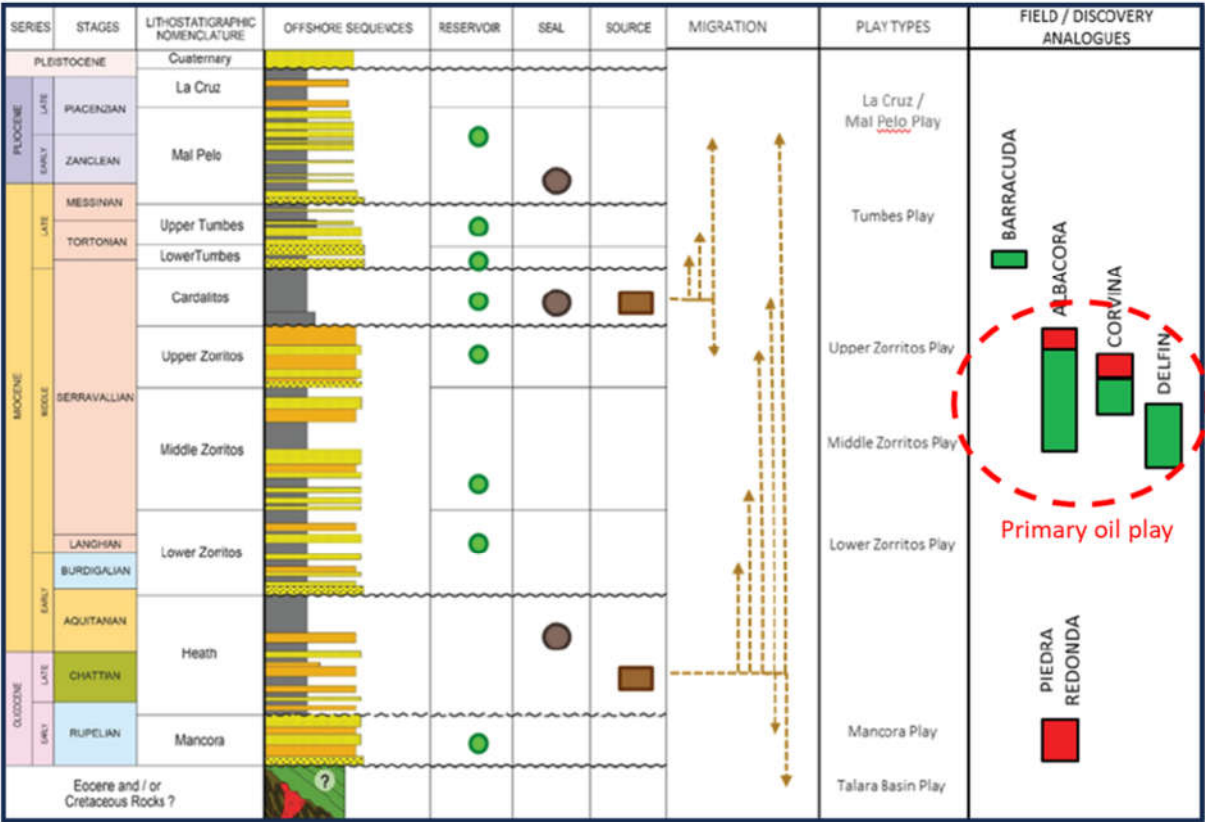


Figure 3 – Tumbes Basin stratigraphy. Primary reservoir objectives are in the Miocene Zorritos Formation with secondary objectives in the Miocene Tumbes Formation and Pliocene Mal Pelo Formation. The primary source rock is the Oligo-Miocene Heath Formation with secondary potential in the Miocene Cardalitos Formation where it is buried deep enough to reach maturity.

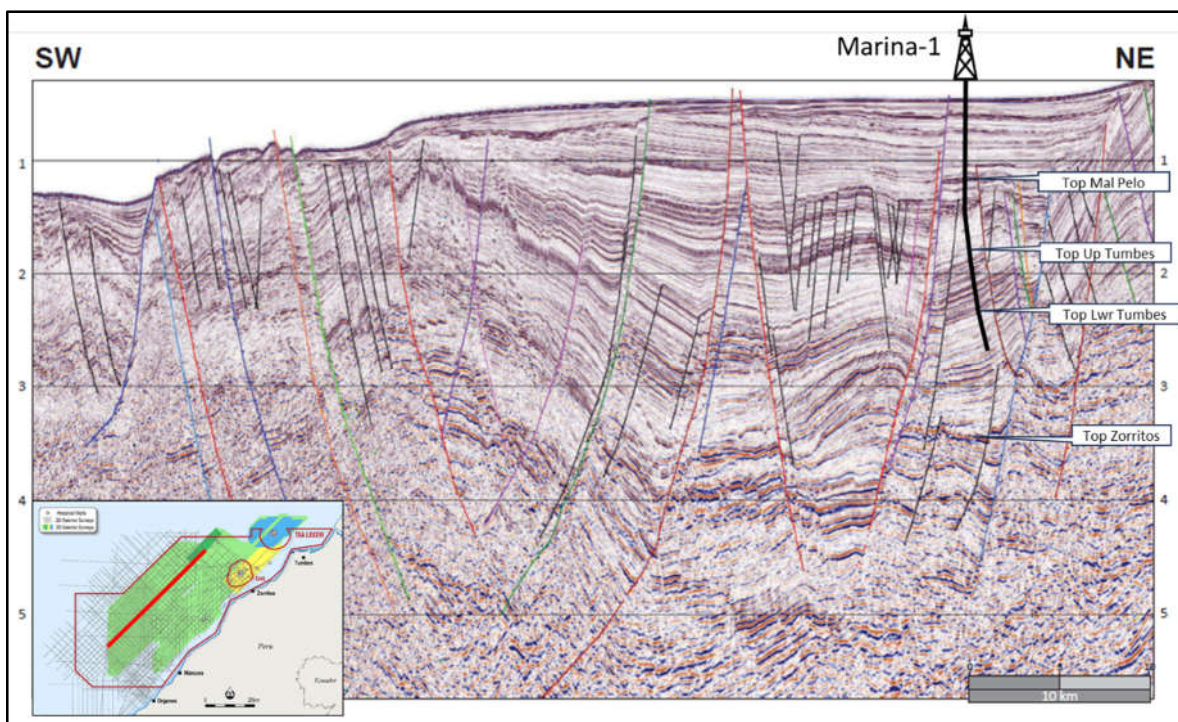
For personal use only

The Tumbes Basin has a complex geological history related to the Pacific Plate colliding with, and being subducted beneath, the South American Plate. The basin is heavily faulted (Figure 4) creating a multitude of structural trapping styles.

Despite the presence of several discoveries within and adjacent to the TEA area, only one well, Marina-1, has been drilled to test an exploration prospect informed by 3D seismic data. Marina-1 was drilled in 2020 and encountered some hydrocarbon shows in shallow Pliocene reservoirs, however the anticipated reservoirs in the Tumbes Formation were not well developed. The well did not reach the Zorritos Formation which is the primary reservoir target in the basin.

Marina-1 was a commitment well drilled in the early period of the COVID pandemic when oil prices had dropped significantly due to global uncertainty.

The results of the Marina-1 are to be reviewed in detail and will be of value in determining where the Tumbes reservoir might be better developed. There are over 3,800 km<sup>2</sup> of 3D seismic data within the TEA area and, as noted above, Marina-1 is the only exploration well to have been drilled since these data were acquired.



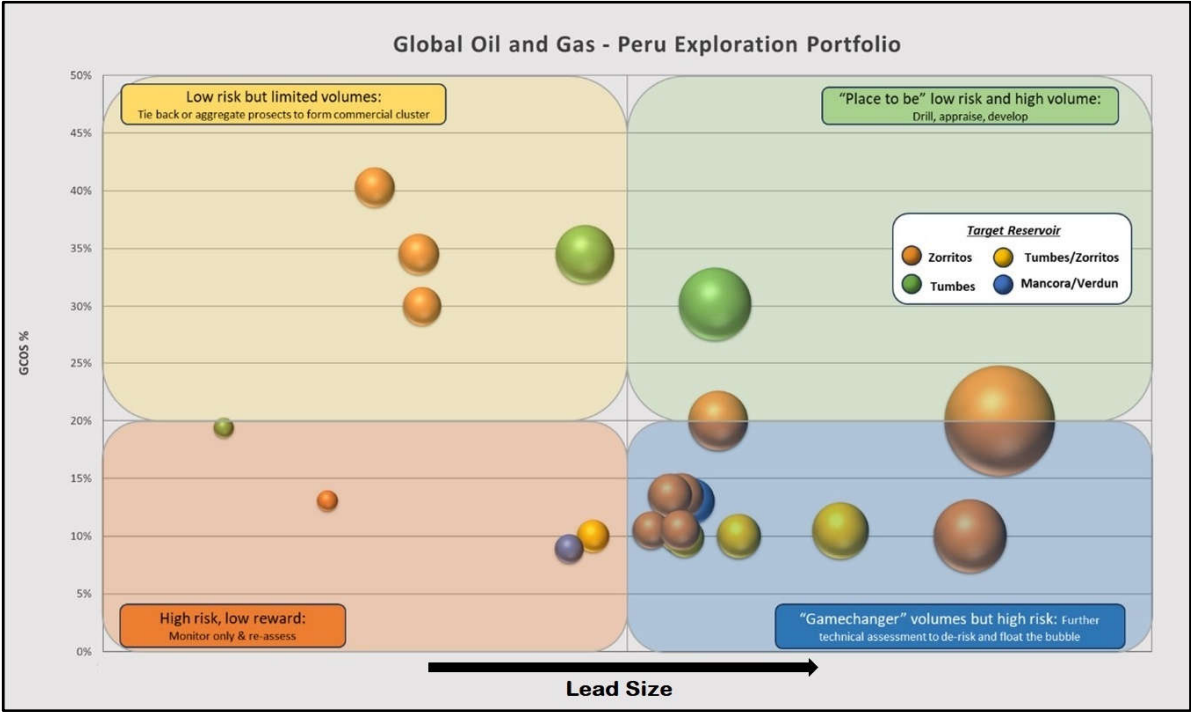
**Figure 4** – Seismic section in red on the insert map. The Marina-1 well is the only exploration well drilled in the basin using 3D seismic data. Minor shows were encountered in the Mal Pelo Formation and the Tumbes Formation reservoirs were poorly developed. The well did not test the Zorritos Formation which is the primary reservoir objective in the basin.

### **Ranking of leads**

As part of the collation and review of historical data produced by previous operators and PeruPetro, more than twenty leads have been identified. Global has initiated a review of these leads and will use a schematic plot to rank them (Figure 5). The current plot is an overall representation of the portfolio and at this stage is not a representation of the work done by the Company.

As work progresses on the identified leads, each of the features are reviewed, with a combination of new interpretation and new technology, the location and size of individual bubbles will change, or

some may be removed and new leads added. The objective is that several features, whether new or existing, will migrate into the top right quadrant of the bubble plot.



**Figure 5** – Tumbes TEA leads based on public domain data, information from previous Operators and PeruPetro. The schematic plot compares the potential size of the leads with the confidence of exploration success (GCOS%). The size of the bubble represents the potential risked volume (mean volume multiplied by the confidence of success).

**Future activity**

The next near-term milestone in the TEA work programme is to high-grade selected areas where reprocessing of the 3D seismic data using the latest geophysical technology will have the greatest impact on the definition of the historical leads. The processing algorithms being used are designed to optimise the impact of new Quantitative Interpretation and Artificial Intelligence methodologies that will be used as part of the prospect definition process.

Director Scott Macmillan commented:

*“We are delighted with the progress being made by the Jaguar and Havoc technical teams. We look forward to providing further information about the areas selected for 3D seismic reprocessing and in the evolution of the prospect and lead portfolio”.*

-- ends --

**Authorised by the Board of Global Oil & Gas Limited.**

**For further information please contact:**

Scott Macmillan – Director  
[info@globaloilandgas.com.au](mailto:info@globaloilandgas.com.au)

### **Competent Persons Statement**

The information in this report is based on information compiled or reviewed by Mr Alfonso Ortega, consulting geophysicist to Global Oil and Gas Limited. Mr Ortega is a qualified petroleum geophysicist with over 35 years of experience working for Petroleos Mexicanos (PEMEX) and Jaguar Exploration Inc in a varied number of capacities. He has extensive experience of petroleum exploration, seismic design and acquisition and the development of different technical aspects for oil and gas biddings. Mr Ortega has a BSc. in geophysics from The National University of Mexico and is a long-time member of the Mexican Association of Exploration Geophysicists (AMGE) and of the Society of Exploration Geophysicists (SEG).

For personal use only