

Buru Energy places Rafael field under 3D spotlight



By Andrew Duffy 2 DAYS AGO

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ANNOUNCEMENTS



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A Buru Energy geologist interpreting seismic data.

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Management says its high-resolution survey will assist it de-risking reservoir factors in a bid to progress its commercial case for its potentially large-scale discovery. Those factors include the hydrocarbon column height and reservoir permeability.

Buru will use the data to map and plan appraisal drilling reservoir penetration points and it will also allow it a peak into adjacent ground.

The acquisition of the 3D survey will be completed by Queensland-based company [Terrex Seismic](#) – an experienced operator in the Kimberley region, with more than 35 years of seismic operations in Australia.

The company says Terrex will take about two months to prepare the ground and record the survey, saving enormous amounts of sound reflection data that will then be processed and delivered to Buru as a useable cube ready for analysis.

Seismic processing is a specialised and time-consuming computing task, as no two datasets are the same and each of them require a specific subjective workflow to fully exploit the information. And Buru will not be sitting on its hands waiting for the final product.

To feed time-sensitive decisions regarding next year's fieldwork program, the company has arranged for a fast-tracked seismic volume to be delivered in the fourth quarter this year.

The dataset interpretation is expected to be completed by the end of the year. It is expected to be closely followed by the delivery of a refined high-definition final volume, processed specifically to image detailed subsurface structure, that will allow better estimation of reservoir properties.

The company says its acquisition program will also include four seismic lines extending south into an adjacent exploration permit owned and operated by Buru in a joint venture with east-coast based [Rey Resources](#), providing an idea of exploration potential further afield.

Buru Energy chief executive officer [Thomas Nador](#) said: "Terrex is a company with a strong track record of seismic operations in Australia, experience in the Canning Basin and experience with Buru on previous survey campaigns. Acquiring 3D seismic data over the Rafael structure is the highest impact, highest value, and most cost-effective activity we can do today to de-risk the subsurface, inform our 2024 appraisal drilling program, underpin our ongoing project development work, and create new partnership opportunities for the Rafael development."

Earlier this month, Buru received approval from the government for its declaration of Rafael as a gas-condensate discovery, giving the company the green light to pursue a production licence at the site.

One of the main subsurface uncertainties affecting gas volume estimation at Rafael is the height of the gas column within the structure. Appraisal drilling to encounter a gas-water contact and de-risking column height uncertainty will be a major point of focus for Buru as it moves to appraise hydrocarbon volumes.

Appraisal drilling is planned to kick-off in the second half of next year and will allow the company to assess commercial opportunities with increased resource confidence.

The uncertainty surrounding the gas column stems from Buru's discovery well Rafael-1, which encountered gas-on-rock. That means the reservoir was packed full of gas at the point of well penetration and no gas-water contact was found, leaving the base of the column open.

Management has conservatively modelled the base of the column at the lowest gas intersected at Rafael-1, providing a theoretical column height of 165m. It used that number to feed its low estimate of gross 1C contingent resources at 59 billion cubic feet of recoverable gas plus 1.2 million barrels of condensate.

The company says reservoir pressures at Rafael-1 suggest it may be charged with a column of up to 700m, which is generally coincident with structural closure mapped on existing 2D seismic data, but may be refined with the new seismic volume.

The 3C high-side resource is constrained by a column height of 634m and gives a gas volume of 1024 billion cubic feet. Some reservoir pressures at Rafael-1 suggest a gas column of up to 900m.

The company believes that as part of the long-term power strategy for the Kimberley, the current low-case contingent resource for Rafael alone could be sufficient enough to provide a lower-emissions solution for the existing power generation systems that are currently serviced by trucked LNG sourced from offshore fields on the North West Shelf.

With its 100 per cent interest in Rafael and 50 per cent operating interest in the nearby Ungani oilfield, Buru has taken an aggressive position in the onshore Canning Basin and continues to be an active explorer. The company now holds a net 22,500sq km in the basin, making it the dominant net-acreage holder and operator.