

# WARRO UPDATE

15 March 2016

## Warro-5 & 6 Testing Continues

## Warro-4 Re-testing to Go Ahead

Transerv Energy (ASX: TSV) is pleased to announce that both Warro-5 and 6 continue to flow naturally and that Warro-4 will be re-tested.

Transerv have prepared the attached review of the well results to date.

### Warro-5 and 6

Warro-5 gas flow rate is presently averaging 0.5 mmcf/d with an accompanying water rate of 220 bwpd.

Warro-6 gas flow rate is presently averaging 0.59 mmcf/d with an accompanying water rate of 225 bwpd.

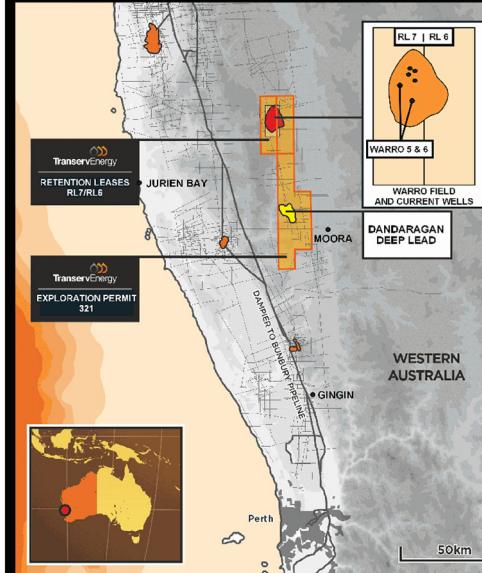
### Warro-4 Retesting

The attached note sets out the rationale for re-testing Warro-4. In summary, the results of Warro-5 and 6 have shown the original testing programme was too short and valuable information can be obtained about the potential of the upper reservoir section by retesting the well.

For and on behalf of the Board.



STEPHEN KEENIHAN  
Managing Director



Permit	RL-7
Well Location – Warro-5	30°12'24.55"S, 115°43'43.44"E
Well Location – Warro-6	30°10'53.70"S, 115°43'08.57"E
Transerv Energy's Interest	56%
Field Name	Warro Gas Field
Depth to Reservoir	~4100m RT
Geological Formation	Yarragadee Sandstone

ASX : TSV

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## HIGHLIGHTS

1. Warro 5 & 6 have established natural flow
2. The water production can be managed
3. Future wells and frac programs do not need to try and avoid fractures
4. Warro 4 to be retested in upper zone from Warro-5 & 6

Production testing of Warro-5 and 6 has now been proceeding for over a month. During that time we have learnt much about the reservoir performance and the capability of the wells to produce gas.

Warro-5 and 6 penetrated the main reservoir section 160m downdip from previous wells and showed that the Warro Gas accumulation has a very substantial gas column height (over 440m) and the bottom of the accumulations is yet to be reached (i.e. it is below the TD of Warro-6 at 4520m). The wells, Warro-3, 4, 5 and 6 have each evaluated different parts of the gas column with varying degrees of success (see Figure 1). It is the combined results of these wells and zones which now need to be synthesised to understand the flow capacity of the field. This work is ongoing.

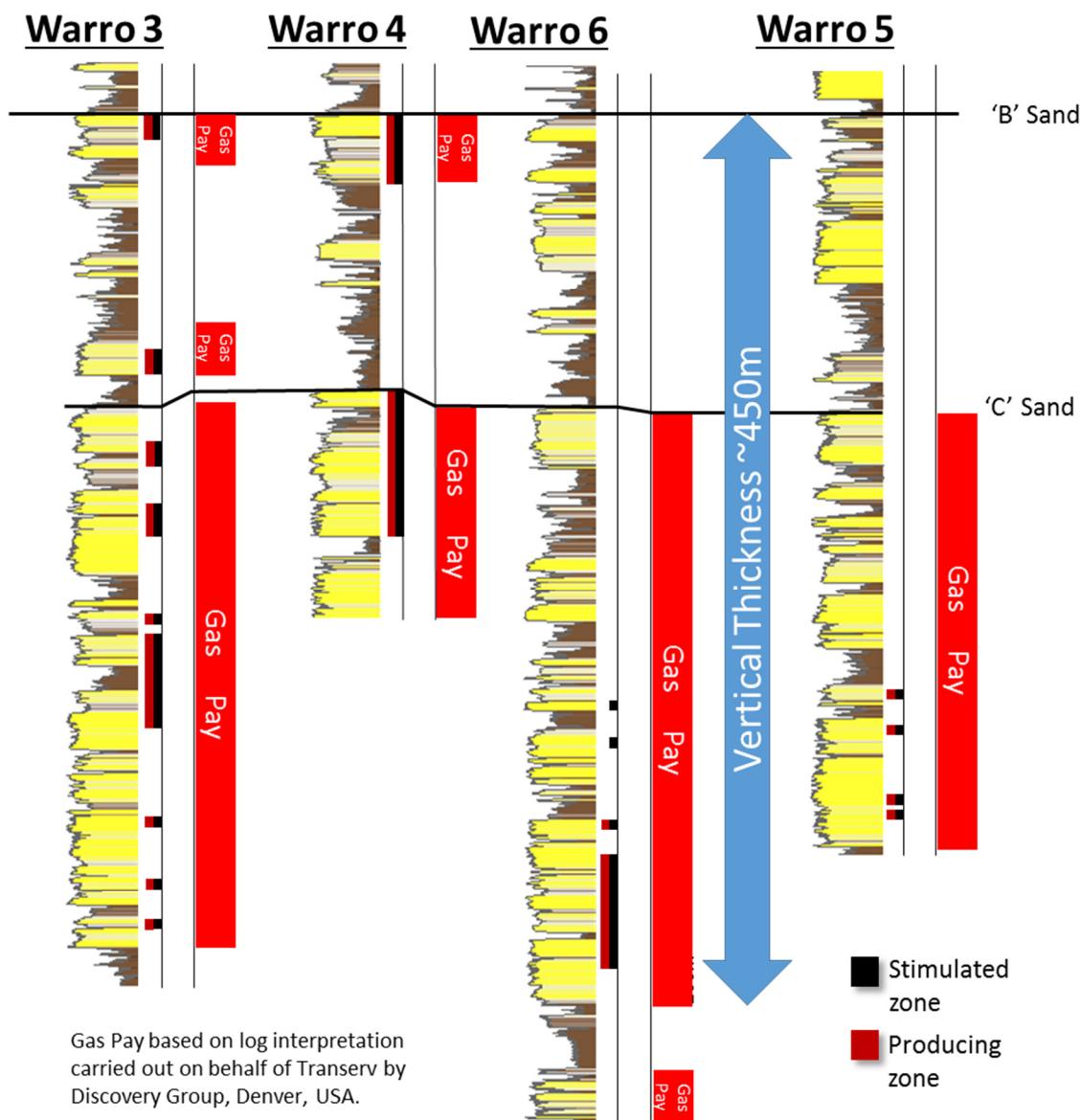


Figure 1 – Warro Gas Field Correlation

## Background

Based on expert advice, the Joint Venture determined that a cautious approach to the fracture stimulation programme at Warro-5 and 6 was the best approach. It was thought important to constrain the height and length of the fracs to lessen the likelihood of encountering any faults or fractures which, although not identified on the 3D seismic, could still be present. "Short and stubby" fracs were chosen in the hope they would remain precisely in zone and be of limited length. It was also recommended that only part of the reservoir be stimulated and to target the lower portion of the reservoir section present in both wells to avoid the potential for water ingress from above. Post frac logging showed all the fracs were placed according to plan and stayed within their target zones. This means that future frac work can target the entire pay zone with confidence.

The lesson from this and the subsequent testing is that there is a pervasive small scale fracture network throughout the whole Warro gas accumulation and the wells will flow water with the gas. The higher permeability natural fractures will act as a conduit for reservoir water and should also provide a good network through which gas can be produced. As the structure appears to be fractured naturally, the original interpretation that the source of water was deep-seated faulting is likely incorrect or at least only part of the explanation. This means that the fracture stimulation approach no longer needs to be constrained to structurally "quiet" areas, at least as interpreted on seismic, thereby providing many more drilling locations and the potential to use larger scale fracture stimulation techniques throughout the entire section.

Both Warro-5 and 6 were designed so that any water encountered could be extracted using a jet pump. This proved to be necessary and the jet pumps were very successful. After the initial flush of water, both wells have shown they are capable of natural flow. While the gas rates are lower than expected, both wells are flowing gas naturally, primarily from one zone, and early indications are that the water system is finite and water rates are likely to be manageable.

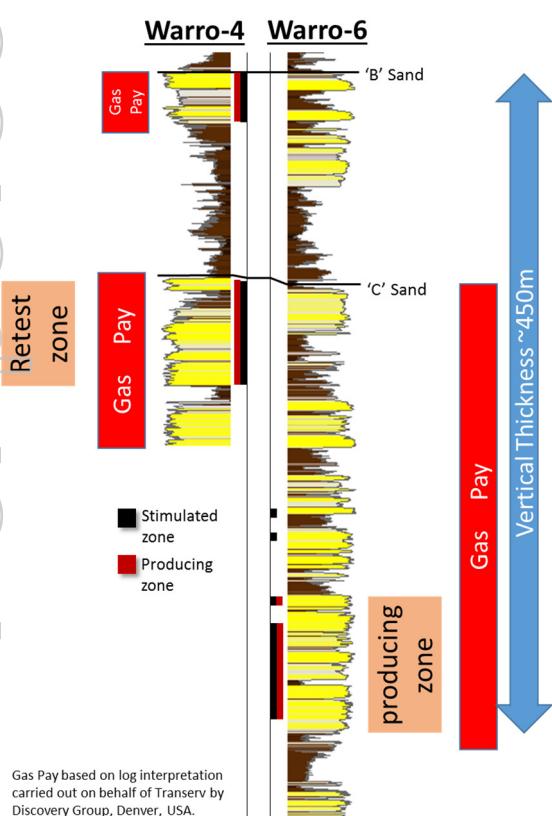


Figure 2 – Warro-4 & -6 Proving Zone

While the rates seen from the selected producing zones at Warro-5 and 6 are presently not high enough to be commercial in their own right, the wells have confirmed that producible gas is present in the lower part of the pay section. The previous wells, Warro-3 and 4, supplement the results of Warro-5 and 6 and altogether provide a fuller understanding of the potential of the entire pay section. For example, Warro-3 flowed approximately 2mmcf/d with similar water rates for over a week before attempts to close off the water were carried out. While not strictly additive, each well has established flow from a different reservoir level. By recognising this, and lifting the restraint imposed on the frac approach by the previous fault model, the Joint Venture has commenced a re-evaluation of the field.

An important step in this re-evaluation has been the realisation that the testing of Warro-4 was stopped prematurely. Warro-4 employed expensive nitrogen lift to "dewater" the wells rather than a jet pump. With the recent success of the jet pumps, Warro-4 will now be re-entered and retested. Warro-4 was

fracture stimulated in a part of the reservoir overlying the zones currently flowing in Warro-5 and 6 (see Figure 2). Warro-4 used larger scale fracs and should give a valuable indication of the long-term flow capacity of the upper sands. The well is configured so that this can be done very cost effectively and planning is underway to carry out the retesting programme in the coming weeks pending Government approvals. Previously, Warro-4 flowed each zone for two weeks at a combined rate of 0.6mmcf/d with approximately 650bwpd.

In conclusion, while the results from Warro-5 and 6 are still being gathered and analysed, the wells continue to make an important contribution to the understanding of the field and its true potential. The original testing programme was designed to run for up to six months and will continue while new and valuable information is being generated.

The retesting of the Warro-4 upper pay section, combined with the results of Warro-5 and 6 lower pay sections, will provide the Joint Venture with good guidance on the potential of the entire reservoir section and potentially provide a means to exploit the huge gas resources trapped underground.

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