

Shale Gas In Australia – Drivers And Road Blocks

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During the past 20 years or so, the gas industry in the US has been undergoing a slow but dramatic change. The US has been gradually morphing from a voracious user of others' natural gas to drive its industry and commerce to a voracious user of its own natural gas. This has not been a result of a fall in demand but rather the development of the technology and experience to enable that country to unlock the gas and liquids held in the many mature shales in the basins present there.

We are now seeing a number of companies attempting to replicate this success in the shales within onshore Australian basins. So, what is driving them to attempt this difficult and potentially expensive task, and what are the road blocks which will need to be overcome to ensure that the plans reach fruition?

Drivers

There are four main technical drivers:

- 1) The size of the resource;
- 2) The presence of existing infrastructure;
- 3) The gas price; and
- 4) The US experience.

Resource size varies from basin to basin but in the dozen or so onshore basins in Australia which are the most prospective, the size of the prize in terms of recoverable gas is greater than 15 Tcf per basin, and most have areas of significant potential liquids recovery as well. Some of the basins have a potential resource of much greater than 15 Tcf.

In some of these basins there is already existing infrastructure which includes roads, gas plants and oil and gas pipelines to the major markets (Figure 1). There are several existing and planned LNG plants at the end of the pipelines covering some of the basins and so as long as the LNG market remains strong the gas price should remain strong for them as well.

The US experience has seen the development of shale gas to the point where the top seven basins are expected to produce around 700 Tcf between them. Shale gas production is expected to be more than 35% of daily production within 10 years. The US is now looking to become a net exporter of gas rather than the importer it has been for the past 30 years.

Road Blocks

There are a number of potential road blocks, some of which are more general in nature, and others which are relevant for only some of the basins.

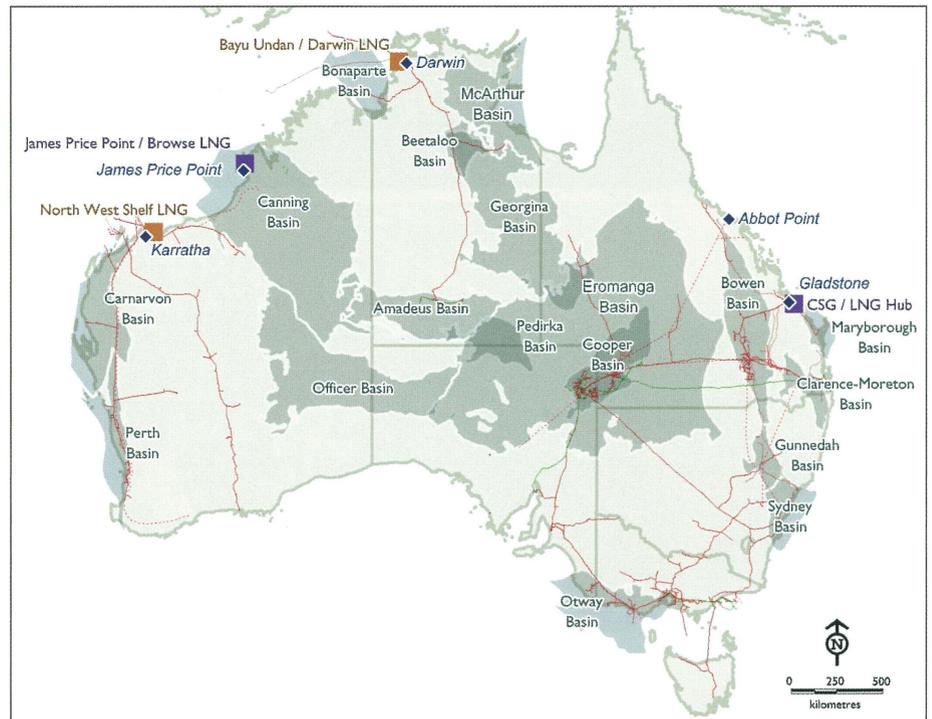


Fig. 1. Existing infrastructure.



Fig. 2. Fracturing getting underway in the USA.

The general road blocks include:

- Costs of drilling and fracturing the wells;
- Access to drilling and fracturing technology;
- Access to investment funds (smaller companies in particular);
- Investment patience;
- Tax certainty; and
- Environmental issues.

In some of the basins (see Figure 1), lack of access to infrastructure will be an issue.

All of these issues are solvable, although lack of access to infrastructure would have a potentially

deleterious economic effect on a project. It will be necessary for companies to organise getting drilling and fracturing infrastructure (Figure 2) into this country as there is currently insufficient infrastructure for the task at hand. Environmental issues will only be resolved by proactive and sustained communication with all stakeholders.

The break-down of the drivers and road blocks for each individual field will determine which are commercial and the order they are exploited. However, there is no doubt that the first in, best dressed factor will also play its part. Who will be the first past the post? Let's watch that unfold. ■