Unique Challenges for Small Field Development

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INTRODUCTION

'Small' fields make up a high proportion of fields in any mature oil and gas basin. They are the lowest risk targets and many more are likely to be found in Australia. Field size distributions show small and stripper wells make up a high proportion by number of fields.

industry. In contrast, technical evaluation of the resource at exploration and production levels relies upon techniques common to the industry in general. Small fields – means low cost structures needed (capex and opex) to develop the resources – means cost effective standards and management techniques – means small companies typically. **The problem is circular**

The number of companies in size groupings versus capitalisation shows that the distribution of companies does not follow a typical reserve distribution. In Australia this shows a dearth of companies in the $10-50 million range – all are concentrated at either the small

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Discovery, finding and development of small fields in Australia are important to closing the looming supply-demand gaps for gas and oil and to provide security of supply. They are the lowest risk targets in that many more are likely to be found in Australia, particularly onshore given that reserves distribution vs probability shows most fields will be 'small' in any given basin. Effective utilisation of this 'resource' demands that unique challenges be overcome.

The key fundamentals of the challenges to unlocking the value of the resource are:

- commercial;
- financial; and
- economic.

By definition, the size of the resource poses cost, financing and management challenges unique in the industry. In contrast, technical evaluation of the resource at exploration and production levels relies upon techniques common to the industry in general. Small fields – means low cost structures needed (capex and opex) to develop the resources – means cost effective standards and management techniques – means small companies typically.

To be commercial, the typical small field cost structure should have low operating and capital costs (in $ terms not $/bbl) to be viable for both oil and for gas:

- Oil returns are immediately marketable (transportation costs permitting) and the principal risk to margins and viability is in pricing, as many of the small field costs are fixed; and
- Gas is longer term, and must utilise all the market opportunities available to minimise the largest of the commercial risks, that of market capture. That means targeting both small and local markets to maximise near term cash flow and large, long term markets to ensure value growth and maximising total reserve value.

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or the big end.

The limited depth of small/medium
capital market constraints, constrains
activity and development of the sector,
are not developed effectively, and neit
Conventional logic designed for the h
more established exploration and field p
is not appropriate.

A healthy demand outlook, as is cu
has encouraged capital investment (co
number of small companies now versu
That investment encourages small fiel
which in turn encourages better diversit
The end result promotes a better overall
providing (a better market) through
management opportunities for 'big oil
encourages a better supply outlook.

THE CHALLENGE

The challenge is to ensure their sur
medium sized enterprise and their on
capital, so that they prosper to make the
speculative exploration players to via
production companies, and to ensure
effectively to the ongoing developmen

This may be achieved by mana
commercial and financial oppor
maintaining a lateral approach to both .T
a team consisting of a tightly focussed
multi-skilled and flexible in approach t
downstream issues. Use of appropriate r
using short term productive asse
sustainable cash flow with some upside
pursuing higher risk, higher reward, lo
(e.g., gas).

Consideration should be given to
(technical and governance), regulation
acreage management) and econo
licensing) of the entities. All issues w
exploration and development should
separately to those that apply to the 'bi