Australia in the Global Exploration and Production Framework

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APPEA Conference
Adelaide 2002

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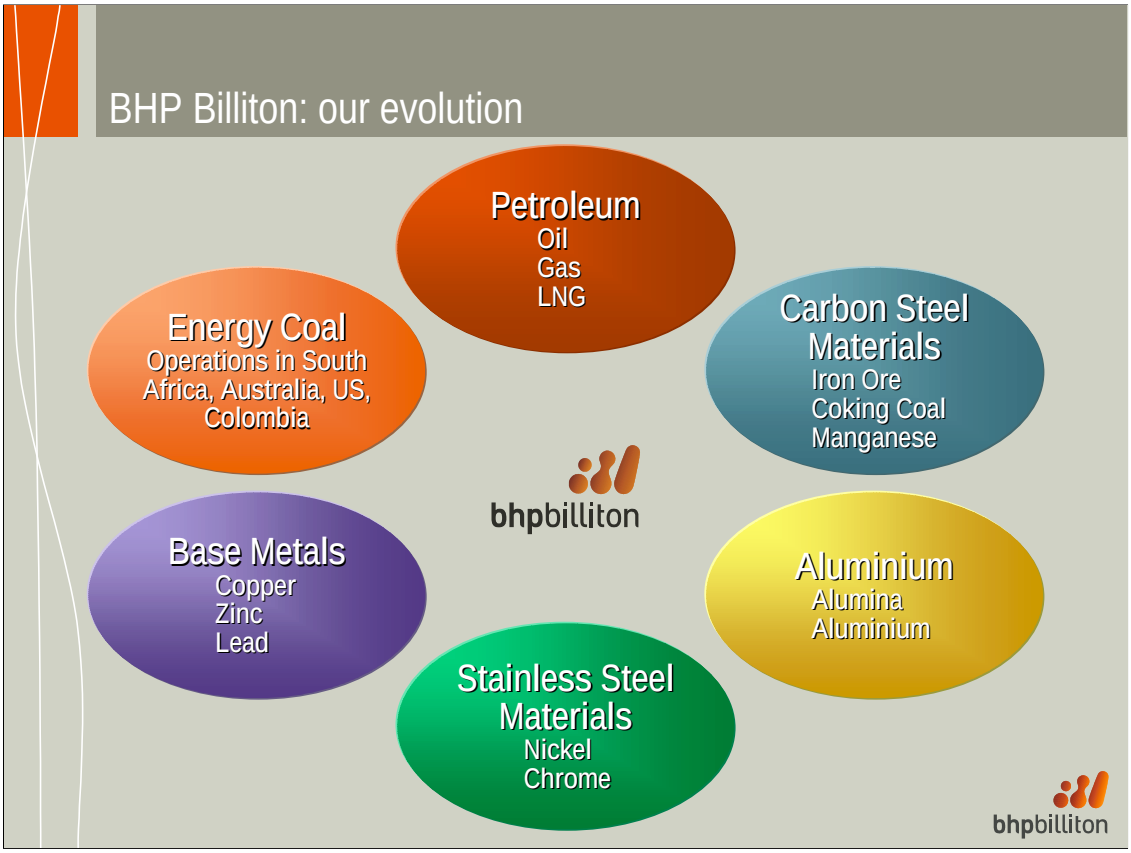
Good morning – distinguished guests and colleagues.

It is an honour and pleasure to be invited to give this address to the Australian Petroleum Production and Exploration Association Conference.

For those of you who do not know me, I joined BHP Billiton Petroleum in May last year in the position of President Deepwater Discovery and Appraisal. In this role I am responsible for generating and managing worldwide new ventures, exploration, appraisal and delineation efforts.

Today I want to share with you my insights about Australia and its future in the global exploration and production environment.

But first, given the relatively recent merger of BHP and Billiton, I would like to say a little about the overall BHP Billiton Group and the role of Petroleum in that Group.



As you are all aware, BHP has a long history in Australia.

In June last year, BHP merged with the London based Billiton to bring together two complementary portfolios of quality, low-cost resource assets.

BHP Billiton has operations and offices around the globe, with a major focus on operations in the resource regions of Australia, Latin America, Southern Africa as well as a presence in the markets of North America, Europe and Asia.

BHP Billiton is now a global leader in the natural resources industry with a market capitalisation of about US$31 billion.

BHP Billiton is broken into seven Customer Sector Groups, with each responsible for clear operating and financial objectives.

The Petroleum business is an important contributor to the Group, having generated EBIT of US$1.4 billion last financial year.

The foundation for BHP's involvement in the oil and gas industry was based on successful exploration in Australia in the late 1960s – primarily in the offshore waters of Bass Strait in Victoria.

From our success in Bass Strait and then the North West Shelf, we moved into a phase of more diverse exploration – not only to the north of Australia but with a strong international focus.

The aim was to focus our exploration activity on areas where we could exploit industry discontinuities and use our particular skills and competencies, such as in the deepwater Gulf of Mexico.

BHP Billiton's offshore engineering capabilities have provided the technical support for the opening of the ultra deepwater provinces of the prolific Western Atwater Foldbelt in the Gulf of Mexico.

Our early entry with BP has been highly successful and contributed to the discoveries at Mad Dog and Atlantis. These fields will become new legacy assets for BHP Billiton.

In developing a more globally focused exploration strategy, the company has reviewed the way it allocates exploration expenditure. This is now globally driven as areas have to compete for funds rather than funds being allocated by region.

We have also adopted a more globally focused organisational and management model, with truly global processes.

We have worked hard as an organisation to develop optimal global capabilities and work practices, including global planning, best practice sharing, total portfolio management and global resource allocation

In doing so, we have developed a culture that recognises the importance of working globally rather than regionally, and where individuals and teams work together productively and flexibly regardless of their physical location.

In concert with this, our management team has global rather than local responsibilities.

We have also developed a number of processes across the company to ensure we achieve high capital efficiency and improved levels of success. Our integrated risk management process is central to these outcomes and involves a combination of tollgating, peer reviews, capital project reviews, commercial assurance reviews and post-implementation reviews.

When it comes to the industry in which we operate, oil and gas companies today have a great deal of choice in where they spend their scarce exploration dollars. While there appears to be abundant choice in picking new areas to explore, in reality there are a number of constraints that require each company to deploy prudently their limited financial and human resources.

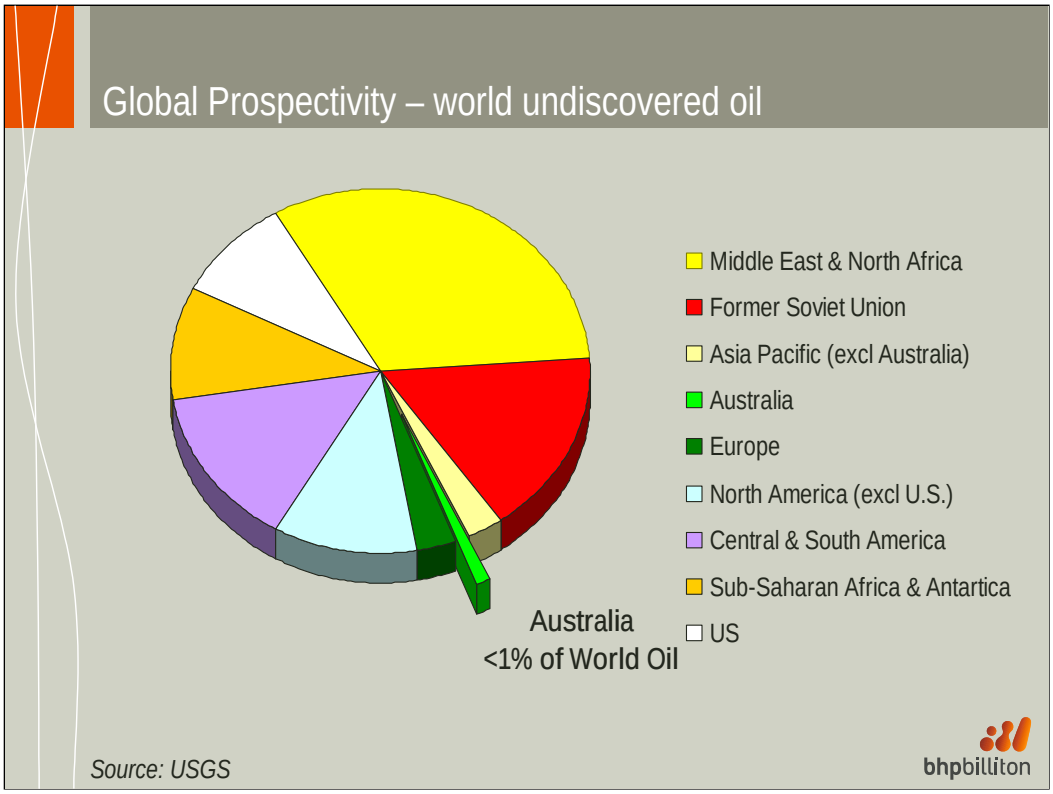
Despite the fact that oil prices have been firm for some time, exploration budgets in general have not risen to the extent they have in other previous price cycles. Reasons for this are varied but one major factor is the difficulty in finding top quality opportunities that meet the required materiality, commercial and technical hurdles. These hurdles are necessary to meet acceptable performance metrics that the investment community and our share holders demand. Despite the many different geographic and geologic environments we could explore in, we are required to focus down to a manageable number that potentially meet these acceptable criteria.

In BHP Billiton, we assess new opportunities against three main criteria:

- Prospectivity
- Fiscal terms; and
- Political risk

If opportunities meet our requirements on the above criteria, then they are assessed in terms of their **materiality and strategic fit**.

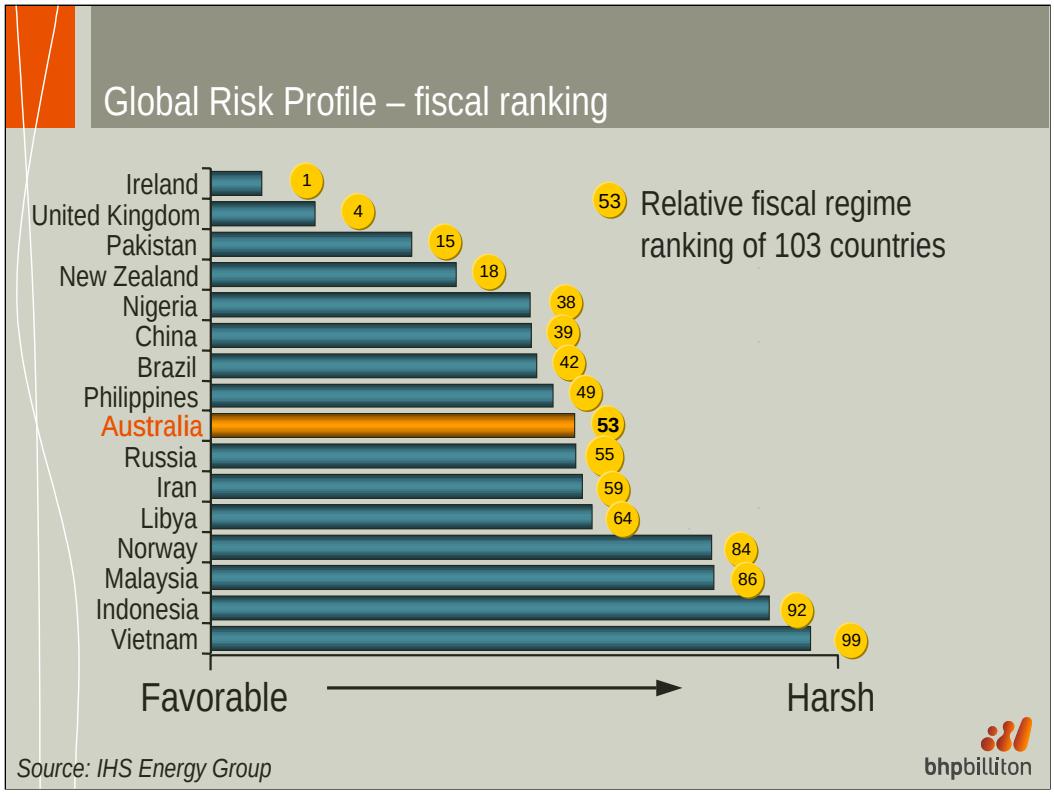
Let us look at each of these criteria in turn.



In observing a global view of country prospectivity, you can see that the the vast majority of today's undiscovered resources are located in the North Africa / Middle East region, and in South America.

Based on discovered resources and estimates of remaining potential, Australia ranks well down the list in terms of prospectivity. It is disappointing to note that sources such as United States Geological Survey estimate that Australia holds less than 1% of the world's remaining undiscovered oil reserves.

But of course, prospectivity is only one consideration.



Equally important is the fiscal regime of the country in which the exploration opportunity exists.

While Australia is considered to have a well tested secondary fiscal regime for shallow waters, it still only ranks in the middle of the pack.

And in terms of deepwater opportunities, Australia does not rank very favourably at all. A recent study of the fiscal regimes applying to deepwater exploration opportunities (conducted by Wood Mackenzie) found that Australia rates poorly, particularly in relation to the smaller field sizes that are more typical in Australia.

And this raises the question whether Australia should have more favourable fiscal terms for deepwater as do a number of other countries such as in the United States. We have all seen the phenomenal growth this has stimulated in the Gulf of Mexico.

Obviously, the more attractive a fiscal package is, the more incentive there is to explore for and develop even the smaller fields.

Certainly a greater risk tolerance can be achieved if the potential rewards are higher.

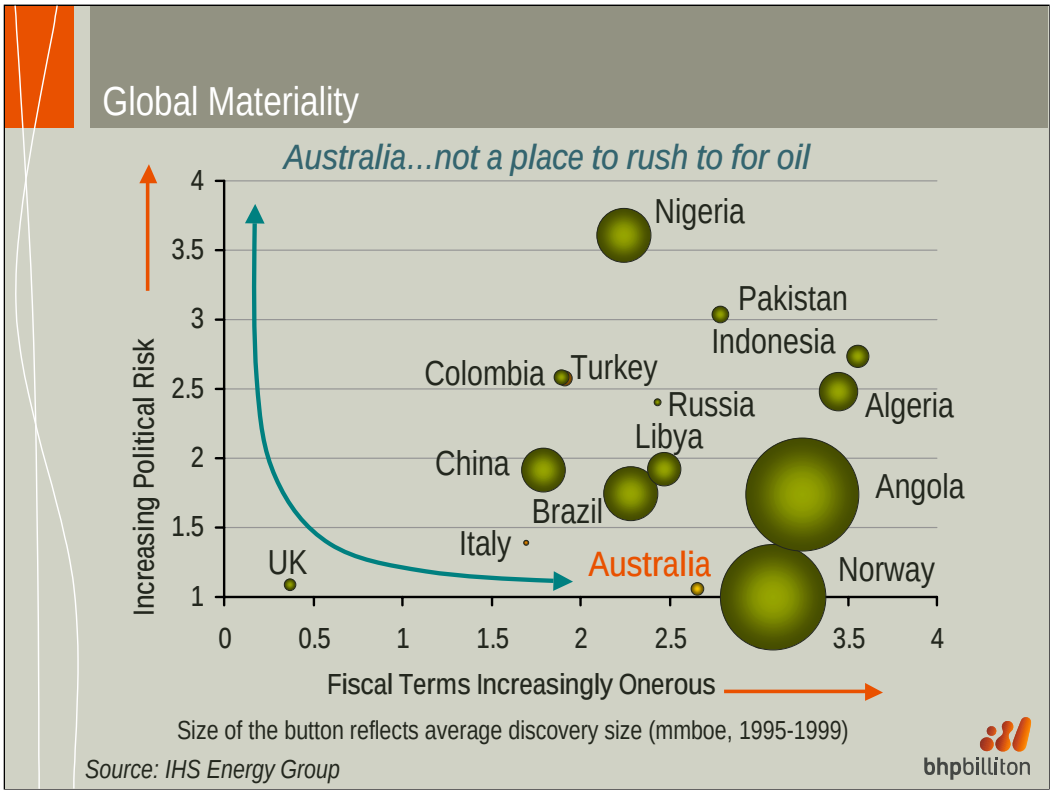
If increased exploration effort is desired in under-explored frontier areas (in particular), there must be an attractive fiscal regime to compensate for the increased technical risks and additional costs.

Generally speaking it is the countries with the lower exploration risks that have the harshest terms.

Apart from prospectivity and fiscal considerations, the other key aspect of exploration development is political risk.

Clearly Australia features well here, although perhaps not as highly as some of us might have thought.

It is also interesting to note who some of our peers are on this chart.

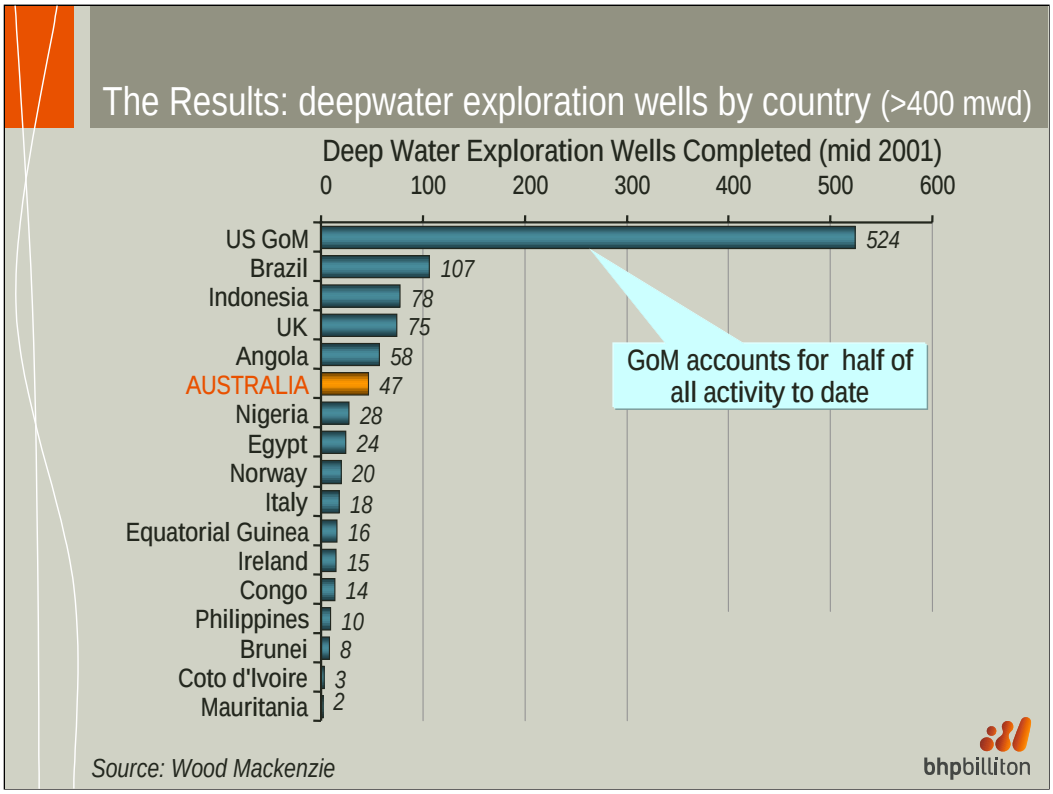


When you combine these three factors of prospectivity, fiscal terms and risk profile, you can see where Australia sits relative to the other investment destinations.

Although Australia has low political risk, the fiscal terms and prospectivity it offers are at best, moderate.

Australia has simply not had enough globally significant oil discoveries in recent years to rate well in terms of prospectivity.

Regrettably, this does not make Australia a tremendous investment destination.



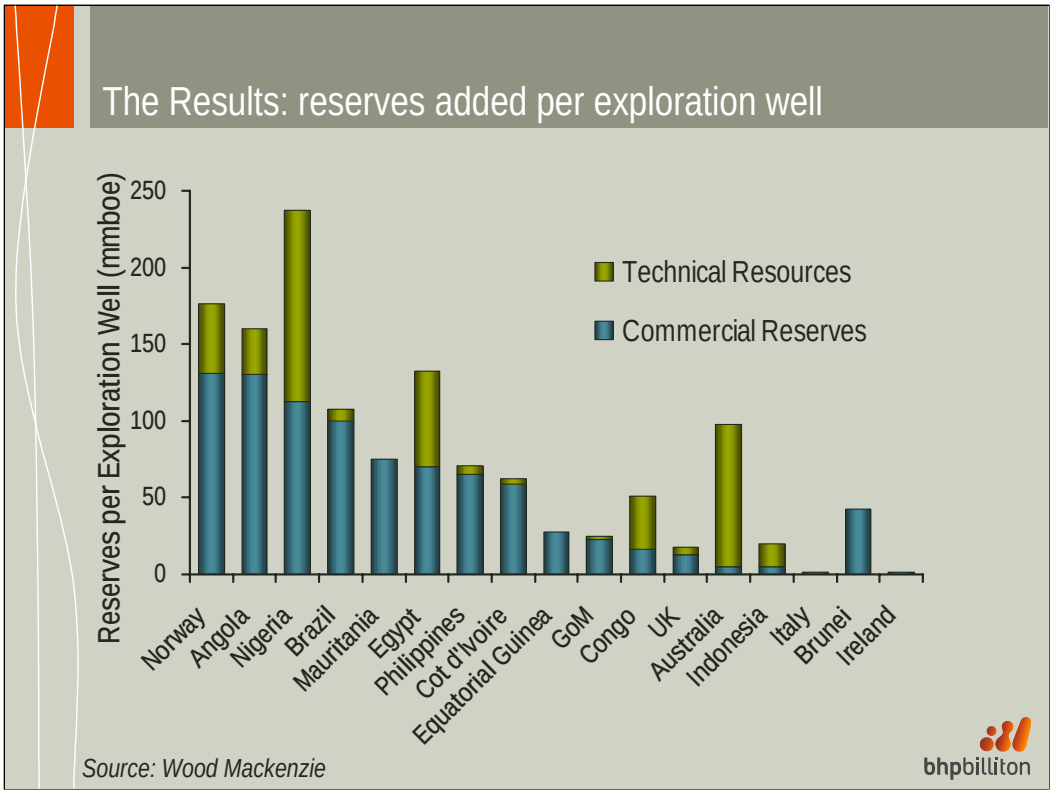
The investment destinations which attract the major expenditure are those places which offer an appropriate balance of prospectivity, fiscal terms and political risk. This combination in the deepwater Gulf of Mexico has resulted in a disproportionate number of deep water wells drilled in the Gulf of Mexico compared anywhere else.

The Gulf of Mexico is a highly prolific hydrocarbon province where giant fields are still being discovered, such as BP's Thunder Horse, Atlantis & Mad Dog (in which BHP Billiton has a stake), and most recently the Chevron Tahiti discovery. The fiscal regime in the GoM is simple and profitable, and the leasing system allows competitors of all sizes to participate. Fiscal incentives like royalty free periods were introduced to help commercialise the smaller deep water finds. The infrastructure in the form of pipelines and platforms is extensive, and there is a buoyant and assessable gas market. There are also abundant play types as a result of the style of deposition and salt tectonics.

It is obvious that when the fiscal and regulatory systems in place encourage the drilling of wells, that more wells will then be drilled, and the more wells you drill, the chances of finding more fields are statistically greatly enhanced.

It is difficult for other countries to compete with the GoM, as few offer low political risk in combination with easy access to markets, relatively low technical risks and competitive fiscal regimes. However for those countries without access to markets, and more modest resources, a more flexible, competitive and co-operative approach must be taken to lure the exploration dollars away from the small number of demonstrably attractive areas.

In the case of BHP Billiton, we have been drawn to the GoM where we spend over half of our exploration budget.

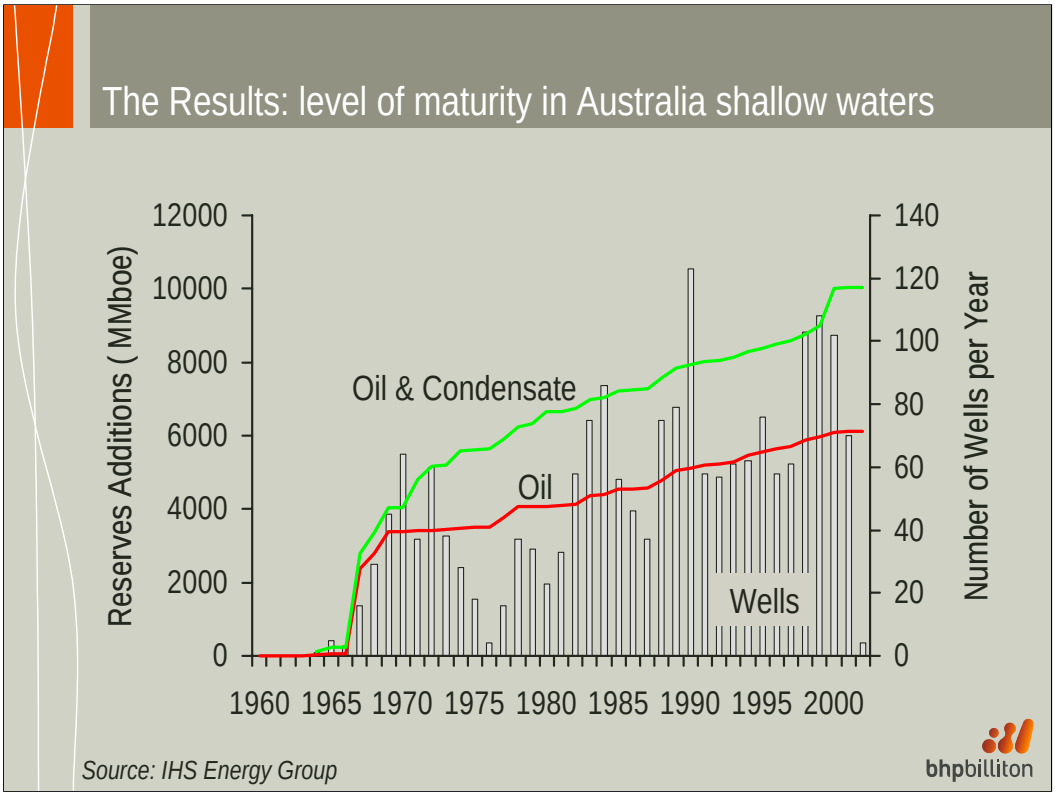


Australia on the other hand, struggles to attract a significant proportion of the world-wide exploration spend.

From a world “oil” prospectivity perspective, Australia has not generated a significant number of large discoveries in recent times to seriously divert funds from the countries where major deep-water oil has already been discovered.

Australia only attracts about 1% of the world-wide exploration spend. Although this is consistent with the Australia’s estimated proportion of undiscovered oil resources (which is also about 1%), we would like to attract a much larger share of the world-wide spend.

The level of expenditure in Australia has been fairly constant since 1996 and did not increase as a result of the increase in the oil price during 1999 and 2000. It could be concluded from this, that the level of investment is more strongly influenced by the perceived level of prospectivity.



Sooner or later the oil companies will look for and find the world's remaining oil resources. However, they will only do so when there are fewer, other opportunities around the globe.

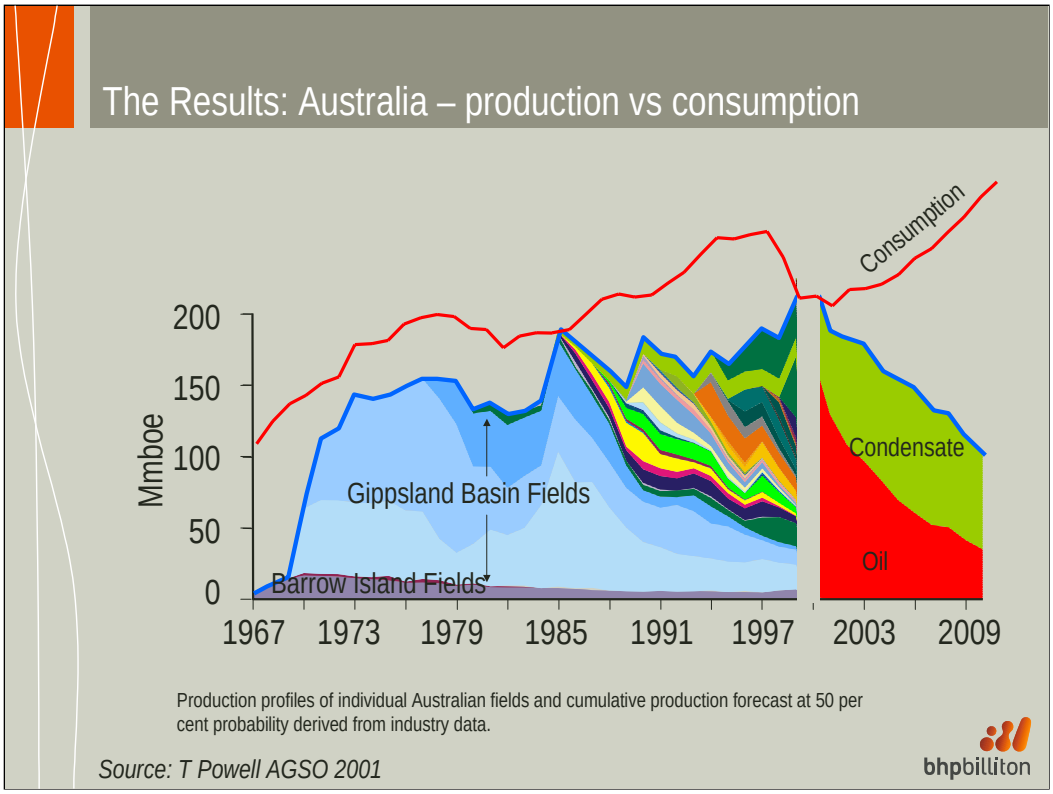
In my view, we cannot afford to wait and there needs to be a sense of urgency in the search for hyrdocarbons in Australia, particularly oil.

This need for a sense of urgency stems from a number of factors.

Firstly, in our mature areas, reserves additions have reached a plateau. The big fields have mostly been found.

Secondly, there have been no recent large oil discoveries to stop the forecast decline in production. What is clearly required is the discovery of a new basin or play fairway that gives a major increase similar to the initial discoveries in Bass Strait and Carnarvon.

And thirdly, the shallower water basins are now well explored and it is unlikely that they will yield major new reserves.



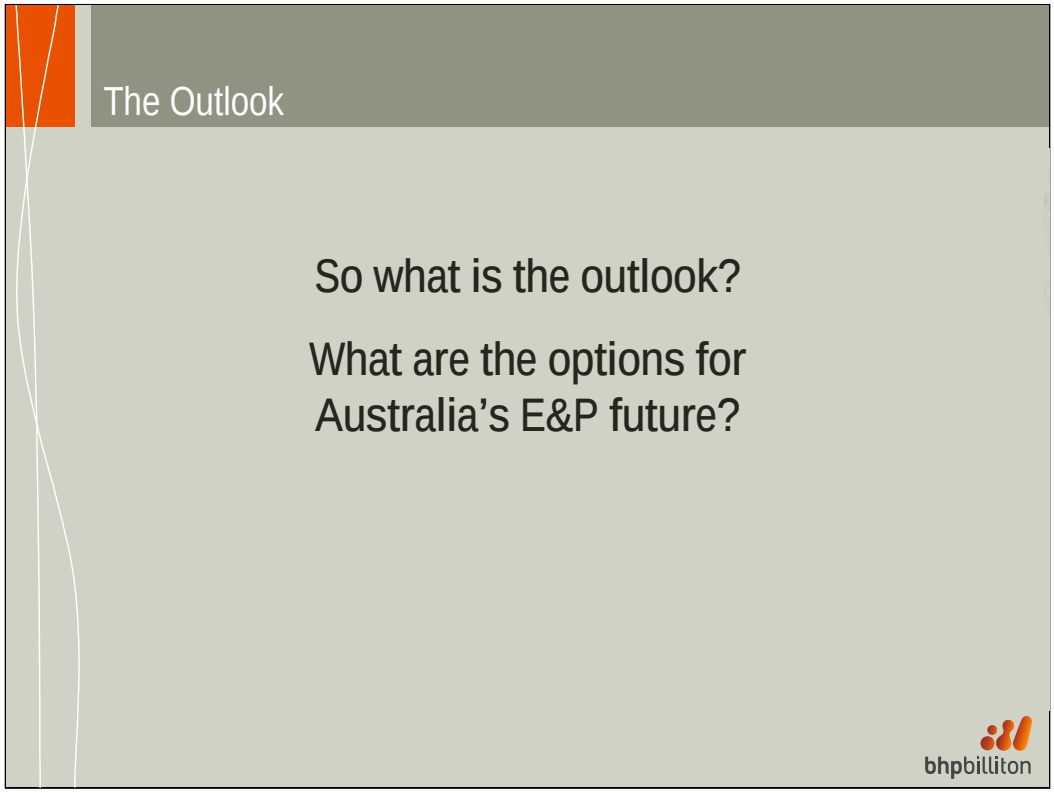
This declining discovery success also needs to be seen in the context of Australia's existing production and demand.

Liquid production in Australia is steadily declining and will not be arrested by occasional, small, near-shore discoveries.

The gap between our domestic production and consumption is growing steadily.

Condensate has become a more important contributor to Australia's liquids production and is forecast to comprise half of the production by the middle of this decade. However, the growth in condensate cannot make up for the decline in crude production.

However, while oil production is declining, gas production will significantly increase in Australia. Clearly gas is becoming more important, given the country's vast discovered gas resources. As we all know, this has led to APPEA pursuing a policy of 'find more oil', use more gas.



With this sombre picture as a backdrop, this brings me to the final segment of my presentation.

Time is clearly running out. Australia will be faced with large import requirements for crude oil which has obvious implications for our economy and balance of trade.

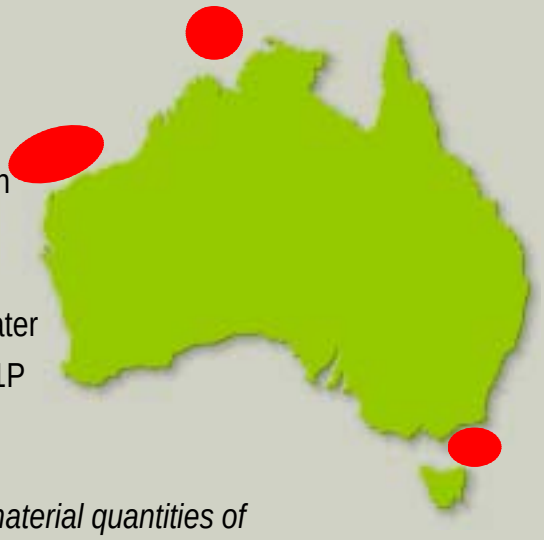
So what is the outlook?

What can we do to attempt to redress the situation?

To help stimulate more offshore exploration in Australia, I would like to canvass some options that may lead to more exploration activity in the deep water.

Preserve the Status Quo

- Shallow water basins are well explored
- Infill exploration close to infrastructure will continue
  - 'new' technology application (3D seismic)
  - incremental reserves
- New plays in existing shallow water
  - Eg. Enfield area in WA-271P



But these are unlikely to yield material quantities of hydrocarbons…

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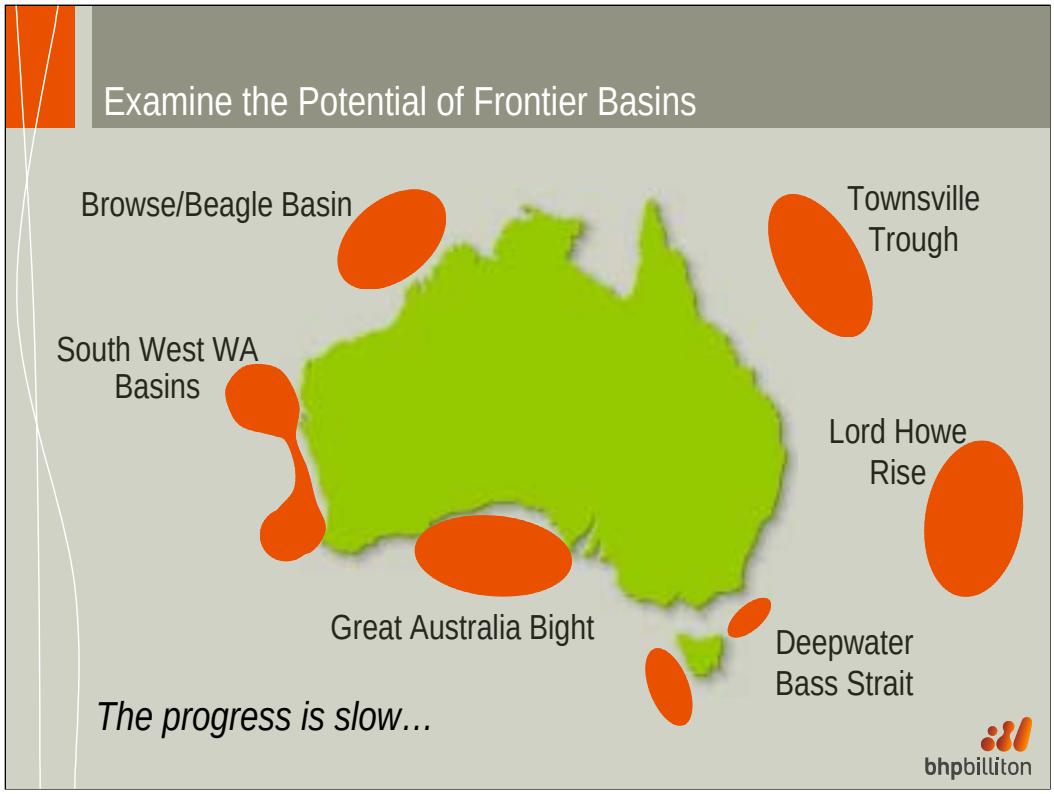
One option is to do nothing and to simply preserve the status quo.

We can continue to have an industry dominated by exploration in mature areas.

These areas are well explored, but with the help of new technology, new reserves and new plays will be found, such as those in the Enfield area in the southern Carnarvon Basin.

However, such discoveries are unlikely yield material quantities of oil.

At the very least, I believe that Australia should be introducing fiscal changes which will encourage companies to search for, find and commercialise small fields. This is especially important for Australia where our average field size is only 35 million barrels.



Another option is to put in place operating and fiscal conditions which actively encourage oil companies to go out and explore Australia's under-explored, and in some cases unexplored, frontier basins.

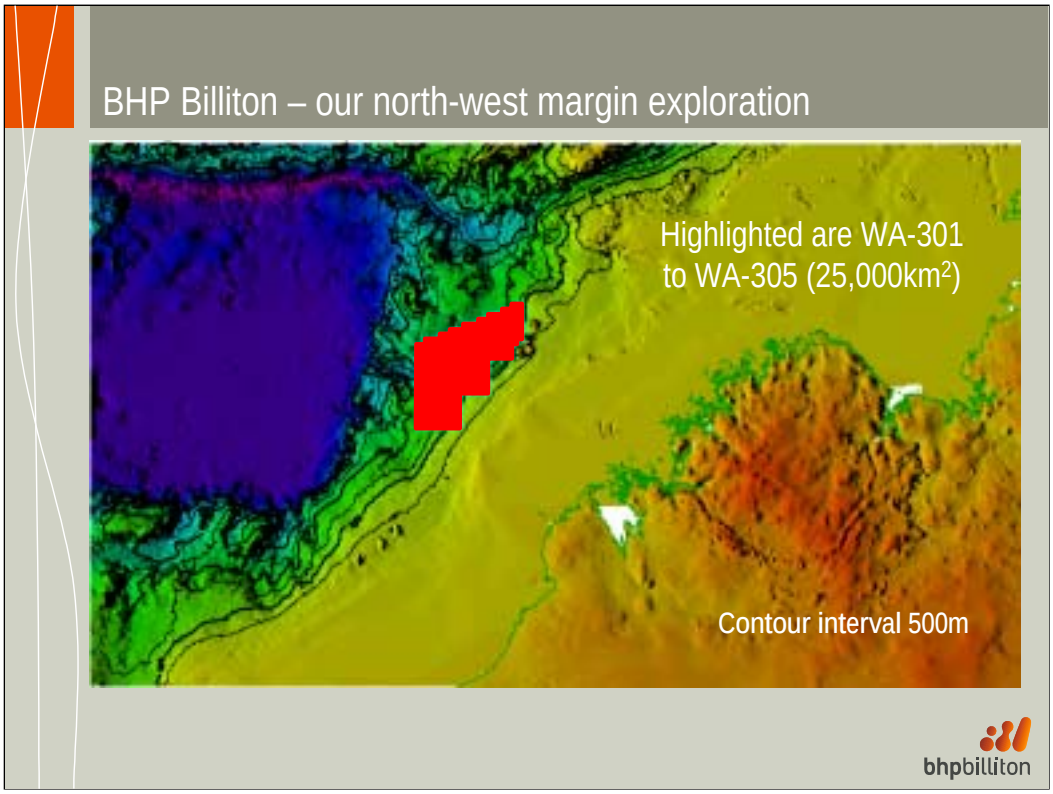
Conditions are needed which create a more attractive environment that will put deepwater Australia in a more internationally competitive position.

Of course, this needs to be done in a way which is environmentally responsible and takes proper account of community expectations.

If there is "big oil" left to find in Australia, it is likely to be found in the deepwater areas. And for this, we are going to need time to advance our understanding of the deepwater margins, and in the event of deepwater discoveries, time to appraise and develop these fields.

While some exploration is taking place in these areas, progress is slow.

I think you would all be familiar with the BHP Billiton-led exploration in the deepwater Outer Browse, and the Great Australian Bight exploration which is conducted by a Woodside lead group.

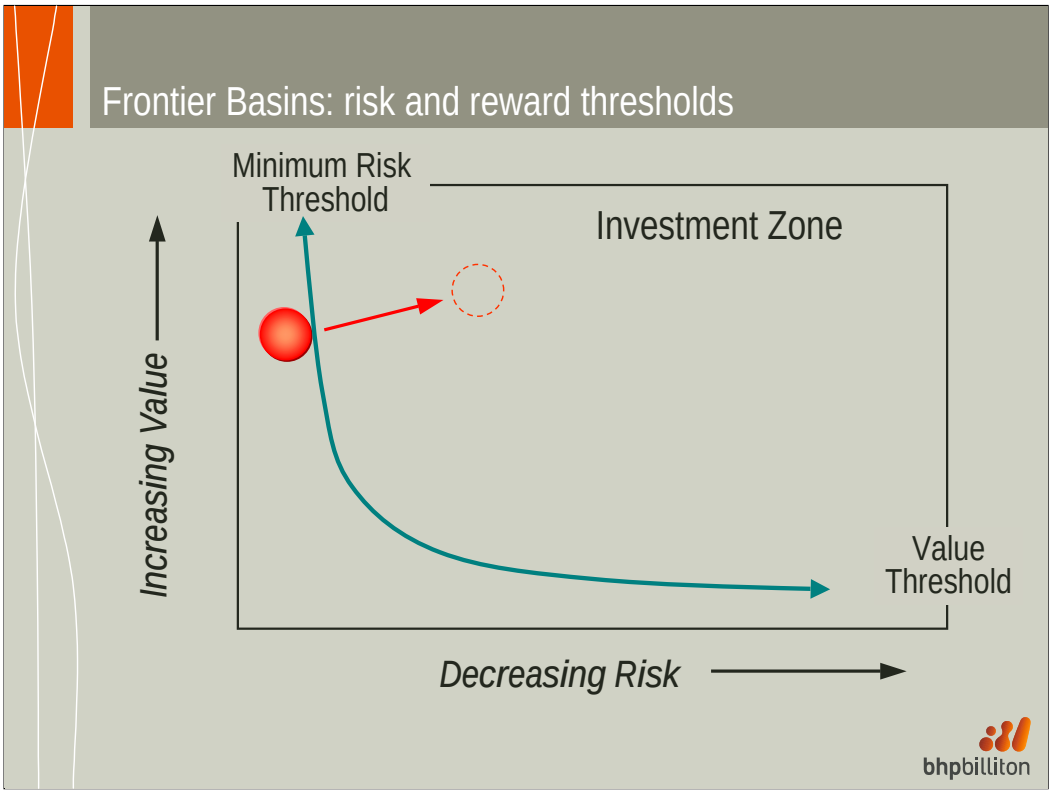


In the deepwater Outer Browse basin, BHP Billiton and its joint venture partners are conducting a massive seismic, airborne seep detection and seabed coring program that we hope will give us clues for the best place for our first exploration well. However, this represents a relatively small part of the overall Northern margin.

As you will appreciate, this is high risk exploration that requires significant funding, and time to collect and analyse the basic data needed to make an informed drilling decision. However, remote sensing alone cannot substitute for direct evidence to determine if the basic fundamentals of a working hydrocarbon system are present and functioning.

In the event of negative drilling results occurring, it can often severely downgrade a large surrounding area, as the perception is that a lack of source or functioning kitchen degrades the whole area. To illustrate my point, if the Jabiru-2 well was drilled before Jabiru-1, the discovery would probably have never been made.

One wonders how many potential oil fields are still sitting undiscovered adjacent to dry holes?



What are the impediments? Why is progress into the frontier areas slow?

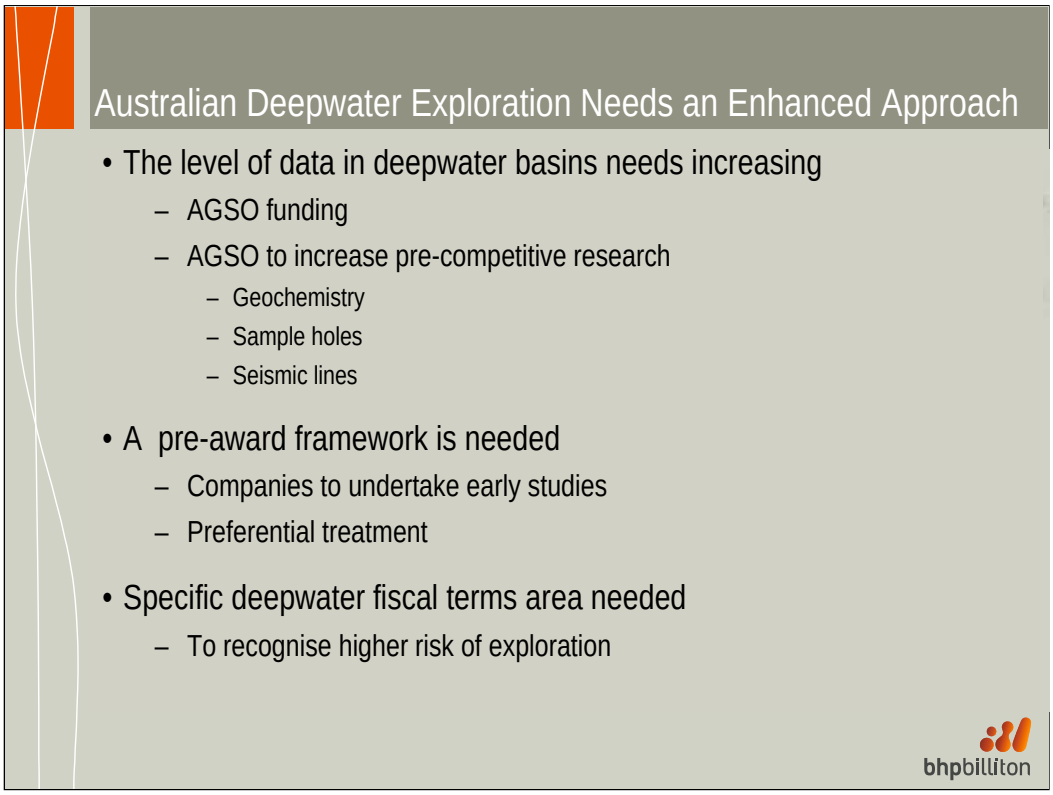
I am not going to stand up here an say that fiscal reform will cure all problems, rather I believe that an enhanced approach at a number or levels will improve Australia's exploration attractiveness.

This slide illustrates the current position of the Australian frontier basins from an investment perspective. Basically, the risks associated with such exploration struggle to justify the expenditure. By risk in this context, I mean a number of factors which added together act as a significant impediment, such as:

- •Risks associated with the discovery of gas
- •Risks associated with the cost of bringing in a deepwater rig (currently the cost associated with mobilizing a drilling rig with deepwater drilling capability from the USA or Africa into Australia is prohibitive for a single company)
- •Risks associated with simple absence of data. Many of Australia's frontier areas have minimal seismic and no wells
- •Simple technical risk
- •Risks associated with the fact that return from any discovery is at best moderate, especially if the discovery is small.

Clearly what we need to do is to find ways to ways to move our deepwater opportunities across the risk threshold and turn them into viable investment opportunities.

Given the high probability of finding gas, the industry in partnership with government needs to continue to search for innovative ways to encourage the commercialisation of our gas, both for domestic and export use. Most companies would be much more enthusiastic about deepwater exploration in Australia if there was either more compelling evidence for deep-water oil accumulations, or they were more confident in the commercial viability of any gas discovery.



I would like expand on the need for an enhanced approach by providing some options that would more actively encourage exploration in frontier areas.

Clearly, there is a need for more data. And to encourage exploration in these areas, pre-competitive work needs to be carried out to reduce the uncertainty - particularly on the presence of source rock. BHP Billiton certainly supports the work carried out by Geoscience Australia. The pre-competitive work undertaken by Geoscience Australia in both the Great Australian Bight and the Outer Browse was instrumental in encouraging companies to bid on this acreage.

Another approach is to encourage early company-led reconnaissance work, where an exclusive licence to an area is granted to conduct remote sensing (and in some cases shallow drilling), ahead of being able to convert the licence into an exploration permit. Countries where this concept has been successfully introduced are New Zealand, Turkey and the Philippines. There is no reason why Australia could not adopt a similar approach.

All costs in frontier prospecting licences could be considered as research and development and deductible against Petroleum Resource Rent Tax (PRRT) and other taxes. This would be a further encouragement.

For new entrants that are not eligible for PRRT, other incentives could be established to make exploration more attractive.

Finally the Australian Government needs to give more serious consideration to offering "frontier or deepwater" terms if Australia is to be competitive with the other deepwater areas worldwide. This is particularly needed for the smaller fields that are typically discovered.

As you are aware APPEA has been lobbying the Australian Government on this issue but to date there is no indication that more favourable terms will be offered.

By way of conclusion, I would like to finish with the following observations.

Australia clearly has a growing shortfall in oil production and more exploration is required to assist in hydrocarbon self sufficiency to stave off the rapid growth forecast for crude oil imports.

The main producing areas such as the Carnarvon and Gippsland Basins are now mature and exploration in these areas is only likely to add incremental reserves.

Australia is competing for exploration dollars in a competitive global environment and therefore needs to look at further ways to encourage those exploration dollars to be invested in Australia - as opposed to somewhere with a greater perceived prospectivity.

The frontier areas offer the greatest potential but are also high risk and therefore any approach to encourage investment must recognise this.

Pre-competitive work is required and fiscal terms should reflect the added risk and high cost of exploring in these areas.

Thank you.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