

HOUSE OF REPRESENTATIVES
STANDING COMMITTEE ON INDUSTRY,
SCIENCE AND RESOURCES

31 JUL 2002

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House of Representatives Standing Committee
on Industry and Resources

Submission No: 57

Date Received: 31 JULY 2002

Secretary: B. Forbes



bhpbilliton

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26 July 2002

Ms Beverley Forbes
Committee Secretary
House of Representatives Standing Committee
on Industry and Resources
Parliament House
CANBERRA ACT 2600

Dear Ms Forbes

Please find enclosed a submission from BHP Billiton Petroleum Pty Ltd in response to the House of Representatives Standing Committee on Industry and Resources inquiry into resources exploration impediments.

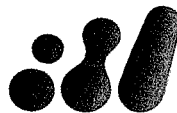
If you have any queries in relation to this submission, would you please contact Ms Victoria Mendes Da Costa from External Affairs who is located at Level 30, 600 Bourke Street, Melbourne 3000, or by telephone on (03) 9652 6209.

Yours sincerely

A handwritten signature in black ink, appearing to be 'P. Aiken'.

Philip Aiken
President & Chief Executive Officer
BHP Billiton Petroleum

HOUSE OF REPRESENTATIVES
STANDING COMMITTEE ON INDUSTRY,
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**House of Representatives
Standing Committee on Industry
and Resources**

**Inquiry into Resources
Exploration Impediments**

July 2002

Terms of Reference

Inquiry into Resources Exploration Impediments

On 24 May 2002 the Minister for Industry, Tourism and Resources, the Hon Ian Macfarlane MP, referred the following inquiry to the committee.

That the committee inquire into and report on any impediments to increasing investment in mineral and petroleum exploration in Australia, including:

- An assessment of Australia's resource endowment and the rates at which it is being drawn down;
- The structure of the industry and role of small companies in resource exploration in Australia;
- Impediments to accessing capital, particularly by small companies;
- Access to land including Native Title and Cultural Heritage issues;
- Environmental and other approval processes, including across jurisdictions;
- Public provision of geoscientific data;
- Relationships with indigenous communities; and
- Contributions to regional development.

Executive Summary

Scope

- This submission addresses the impediments to exploration for oil and gas in Australia's offshore frontier.

BHP Billiton

- BHP Billiton has a long history in the Australian oil and gas industry and would like to continue to build on this foundation. However BHP Billiton's exploration focus has become more international, principally as a result of the relative merits of the opportunities available.

Hydrocarbons in Australia and the Industry Response

- The petroleum exploration and production industry is a major contributor to the Australian economy.
- Australia's ability to meet its demand for petroleum liquids is steadily declining and the shortfall will be increasingly satisfied by the OPEC producers, with potential implications for balance of payments and security of supply.
- The current industry focus is principally on shallow water mature areas that are unlikely to yield material quantities of hydrocarbons.
- If there are remaining oil resources in Australia capable of slowing the decline in self-sufficiency, they are likely to be in the unexplored frontier and deepwater areas.

Exploration Investment in Australia

- Oil and gas companies allocate their exploration expenditure globally, in countries where there is an appropriate balance of prospectivity, fiscal terms and political risk, and where the exploration opportunity meets the company's materiality and strategic fit requirements.

Australia's Global Position

- In the global context, Australia is not an attractive exploration investment location, especially for frontier and deepwater exploration, where the fiscal rewards are not commensurate with the high cost and risk.

Recommendations to Stimulate Australia's Offshore Exploration

- There are a number of initiatives that may help stimulate offshore exploration in Australia and place the country in a more internationally competitive position.
- This could be achieved through Government initiatives that:
 - Introduce operating and fiscal conditions which actively encourage oil companies to undertake the initial reconnaissance exploration necessary in frontier areas to increase knowledge and help quantify risk in a more proactive and cost effective manner; and
 - Establish a fiscal regime that in the event of success rewards the company for accepting the increased risks and costs associated with finding and developing hydrocarbons in frontier areas.

Conclusion

- Australia has a growing shortfall in liquids production and more exploration is required to achieve hydrocarbon self-sufficiency and stave off the rapid growth forecast for crude oil imports.
- Australia is competing for exploration dollars in a global environment and therefore needs to look at ways to encourage exploration funds to be invested in Australia.
- The Australian frontier and deepwater areas offer the greatest potential but are also high risk. Therefore any approach to encourage investment must recognize this.

Submission to the Standing Committee on Industry and Resources Inquiry into Resources Exploration Impediments

Scope

This submission addresses the impediments to offshore deepwater oil and gas exploration in frontier basins.

BHP Billiton

BHP had a long history in Australia, being incorporated in 1885. In June 2001, BHP merged with the mining company Billiton.

BHP Billiton is a leading international diversified resources company with a market capitalisation of US\$31 billion. It is headquartered in Melbourne, Australia. BHP Billiton has operations and offices around the globe, with a major focus on operations in the resource regions of Australia, Latin America and Southern Africa, as well as a presence in the markets of North America, Europe and Asia.

BHP Billiton Petroleum ('Petroleum') is one of the main customer sector groups of BHP Billiton. In the 2001 financial year, Petroleum generated US\$1.47 billion in Earnings before Interest and Tax.

Petroleum is a significant international oil and gas producer and explorer that started producing oil and gas in Australia in 1969. It remains the country's largest oil and gas production company.

Petroleum's production for the 2001 financial year was 131 million barrels of oil equivalent, comprising 87 million barrels of liquids and 44 million barrels of oil equivalent of gas. Seventy-six per cent of this production was sourced from Australia. Seventy-five per cent of our proved reserves base is in Australia.

Bass Strait is the largest asset in which Petroleum has equity (50% non-operated interest). It accounts for around 40% of Australia's petroleum liquids production and around 90% of Victoria's natural gas requirements.

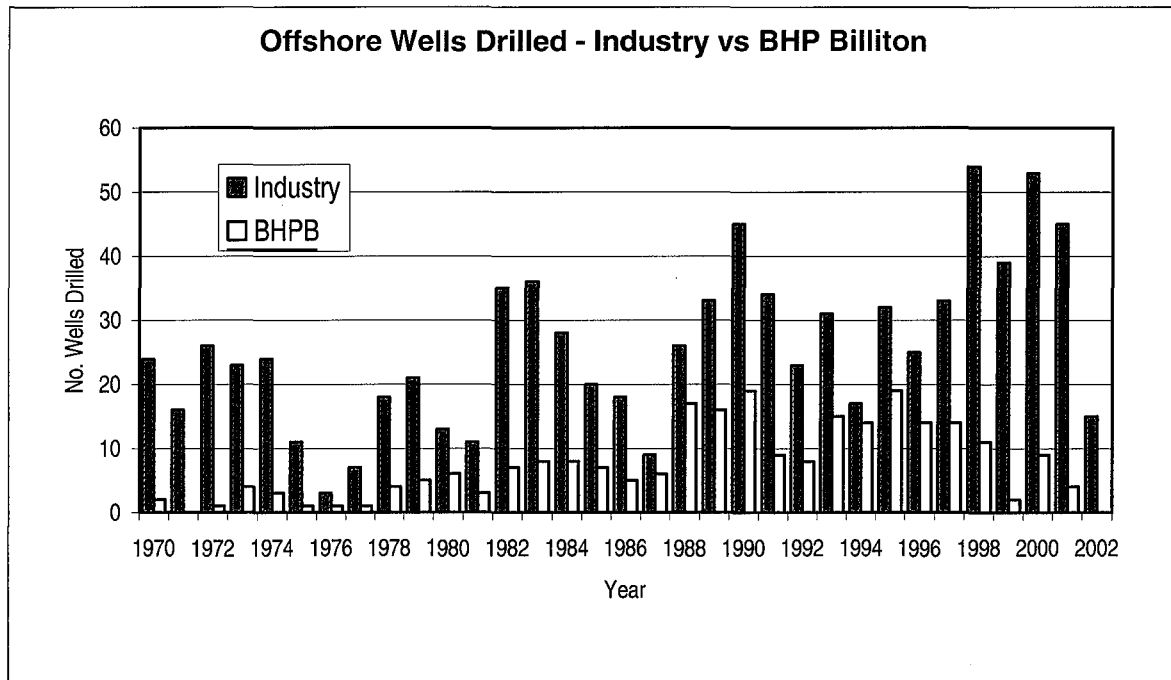
We are hoping to grow our Australian oil and gas activities through our significant exploration program based on the offshore Beagle and Browse, Carnarvon and Gippsland basins.

BHP Billiton's Exploration History in Australia

The foundation for BHP Billiton's involvement in the oil and gas industry was based on successful exploration in Australia in the late 1960s. While this was initially focused on Bass Strait, it soon moved to the North West Shelf, and in more recent years has involved the offshore Beagle and Browse, Carnarvon and Gippsland basins.

Today BHP Billiton holds an equity interest in 61 federal offshore oil and gas licences and is Australia's largest licence holder. Of the 61 licences, 33 are production licences, 18 are exploration licences and 10 are retention leases.

Since 1964 BHP Billiton has drilled more wells in offshore Australia than any other exploration and production company. It has participated in the drilling of 260 wells (30% of all exploration wells drilled) and has operated 126 of these wells. However, in more recent years Petroleum's exploration has had a more international focus, and there has been a decline in the number of wells being drilled by the company in Australia.



Hydrocarbons in Australia

The petroleum exploration and production industry is a major contributor to the Australian economy.

In the 2000/2001 financial year alone, the Australian oil and gas industry:

- Exported more than \$14 billion worth of crude oil and petroleum products;
- Contributed over \$3.3 billion in secondary taxation (mainly in petroleum resource rent tax and petroleum royalties);
- Contributed \$2.5 billion in company tax payments.

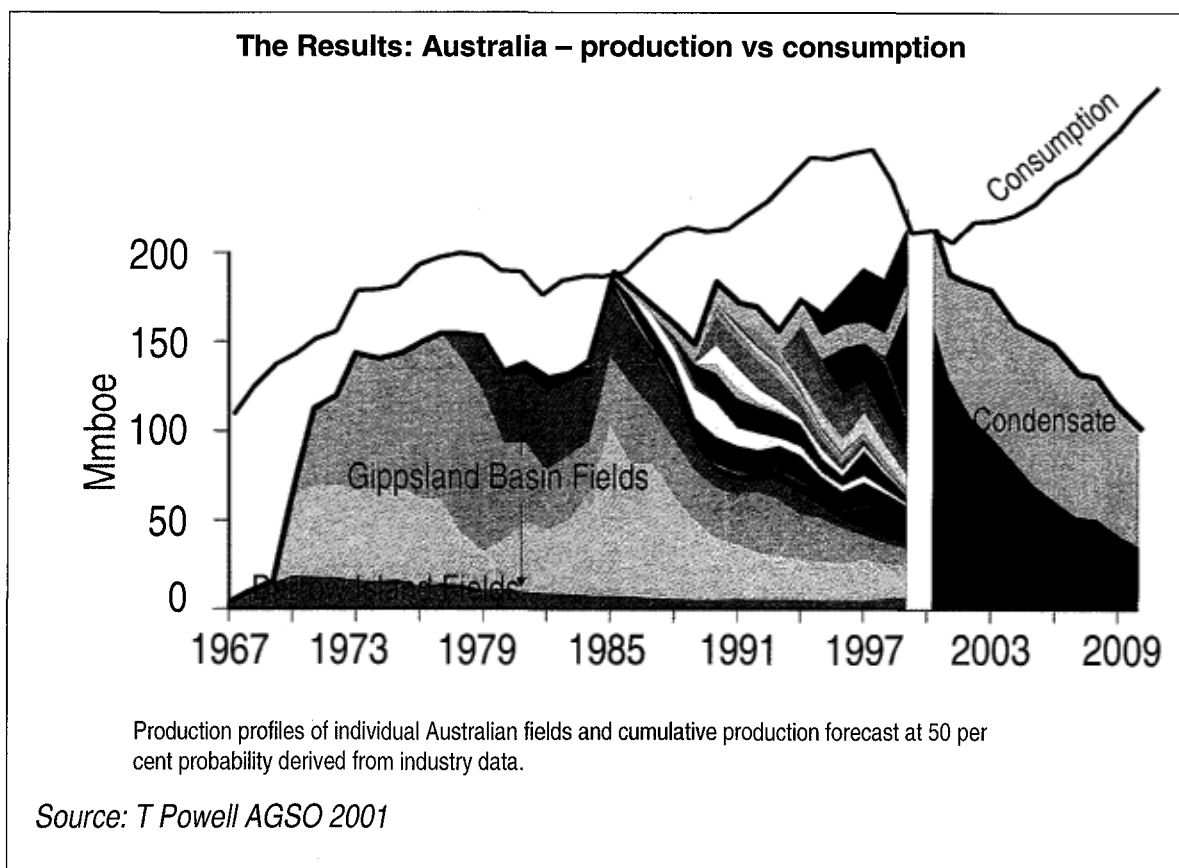
It also provides significant economy-wide benefits such as employment (both directly and indirectly), and support to a multitude of other industries, such as the construction and metal industries.

Despite the contribution of the petroleum exploration and production industry to the Australian economy, Australian demand for petroleum liquids already exceeds supply, with up to 30% of the nation's requirements currently being imported. It is anticipated that this supply/demand gap will increase steadily as both the Australian population and the economy grow, and as domestic production declines.

Both ABARE and industry consultants such as Wood Mackenzie predict that offshore liquids production will drop dramatically between now and 2009 and that it will not be arrested by occasional small, near-shore discoveries.

The reasons for this projected decline in liquids production include:

- Reserves additions in the mature hydrocarbon provinces have reached a plateau - the big fields have mostly been found;
- There have been no recent large oil discoveries;
- The shallower water basins have been thoroughly explored and it is unlikely that they will yield major new reserves.



As the gap between Australia's domestic production and consumption has grown, condensate has become a more important contributor to Australia's liquids production. It is forecast that it will comprise half of the country's production by the middle of this decade. However, this growth in condensate cannot make up for the decline in crude production.

Australia currently imports crude oil from the Middle East, Vietnam, PNG, Indonesia and New Zealand. Unless Australian domestic production increases dramatically, the country will become increasingly dependent on crude oil imports.

The world is becoming increasingly dependent on OPEC production to satisfy its demand for liquids. While the OPEC market share in 2001 was 38%, it is estimated that it will be 50% by 2020.

The major risks of using increased volumes of imports to meet the supply/demand gap include: threats to the continuing security of supply, an increase in the balance of payments, loss of export income and a loss of taxation revenue.

The Industry Response

While it has been possible to forecast the rapidly declining level of self-sufficiency, the exploration and production industry has not been sufficiently encouraged to redress the shortfall.

Activity in the industry has remained static in recent years. While oil prices have been firm for some time, generally exploration budgets have not risen to the extent they did in previous price cycles. The level of expenditure in Australia has been fairly constant since 1996.

The main areas of activity for the exploration and production industry remain the mature areas of the Carnarvon Basin/North West Shelf and the Gippsland Basin. While there have been a number of oil discoveries in these areas, they have tended to be small and do not materially change the country's supply situation. There have also been a number of large gas discoveries outside the mature basins. However, these are unlikely to be commercialised in the foreseeable future.

While discovery rates of greater than 30% have been mentioned in Australian government literature, the reality is that the majority of recent discoveries have been gas discoveries, or oil discoveries that are too small to be developed and therefore do not add to our reserves. In the last five years only 200 million barrels of oil reserves have been added through exploration, despite the drilling of more than 200 wells at a total exploration cost A\$2.7 billion. This translates to a commercial success rate of approximately 5%. During this period Australia consumed in excess of one billion barrels of oil.

In general, the rate of exploration of the country's frontier deepwater areas has been slow.

Preservation of the industry status quo will do little to address Australia's increasing liquids shortfall, so the question remains: what, if anything, can be done to redress the situation?

Exploration Investment in Australia

In order to have any chance of redressing the situation, Australia needs to attract greater exploration activity and ensure that exploration takes place in the areas with the greatest potential for yielding material oil discoveries.

As an investment destination, Australia has to compete globally for exploration funds. Most oil and gas companies take a global perspective in considering how and where they deploy their limited financial and human resources. 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 shareholders demand. Despite the many different geographic and geologic environments for exploration, companies are required to focus on a manageable number of exploration opportunities that potentially meet their criteria.

At a high level, the investment destinations which attract the major oil and gas exploration expenditure are those which offer a competitive balance of political risk,

prospectively and fiscal terms. At a company level, investment opportunities are also considered in the context of the additional criteria of materiality and strategic fit.

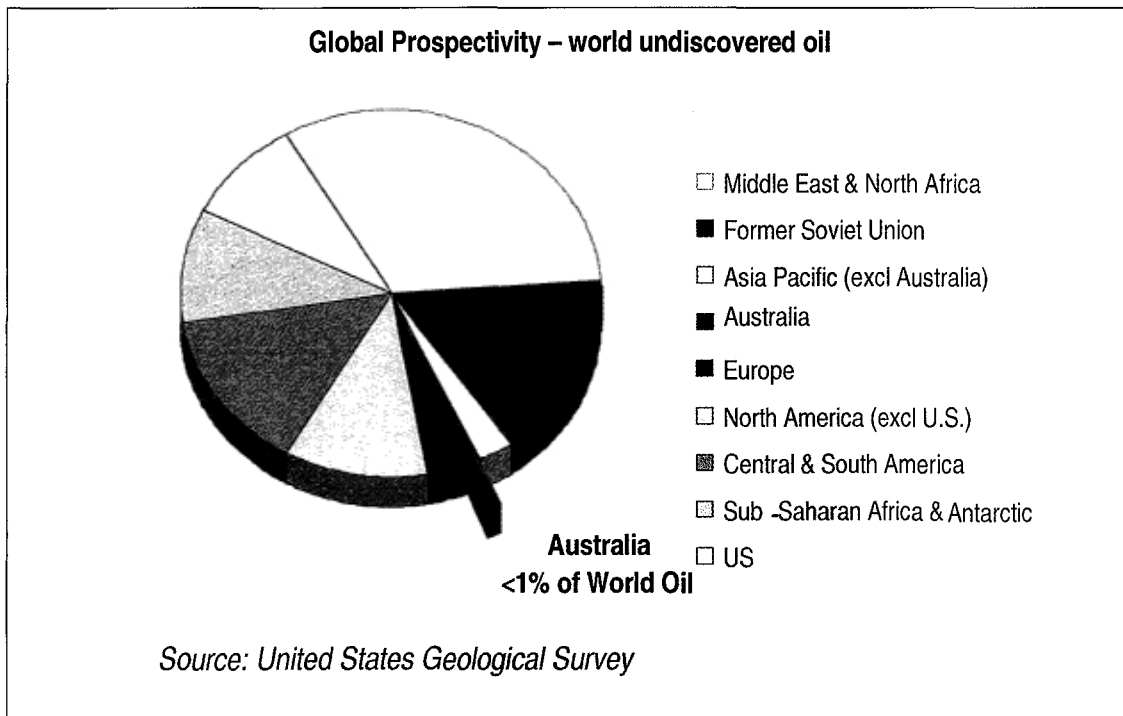
Australia's Global Position

From a political risk perspective, Australia rates favourably and there are minimal impediments to exploration. However, there are a number of other countries that rank above Australia in terms of political stability.

In terms of prospectivity, Australia ranks average at best. The international view is that Australia is principally a gas province with the potential to find small oil fields.

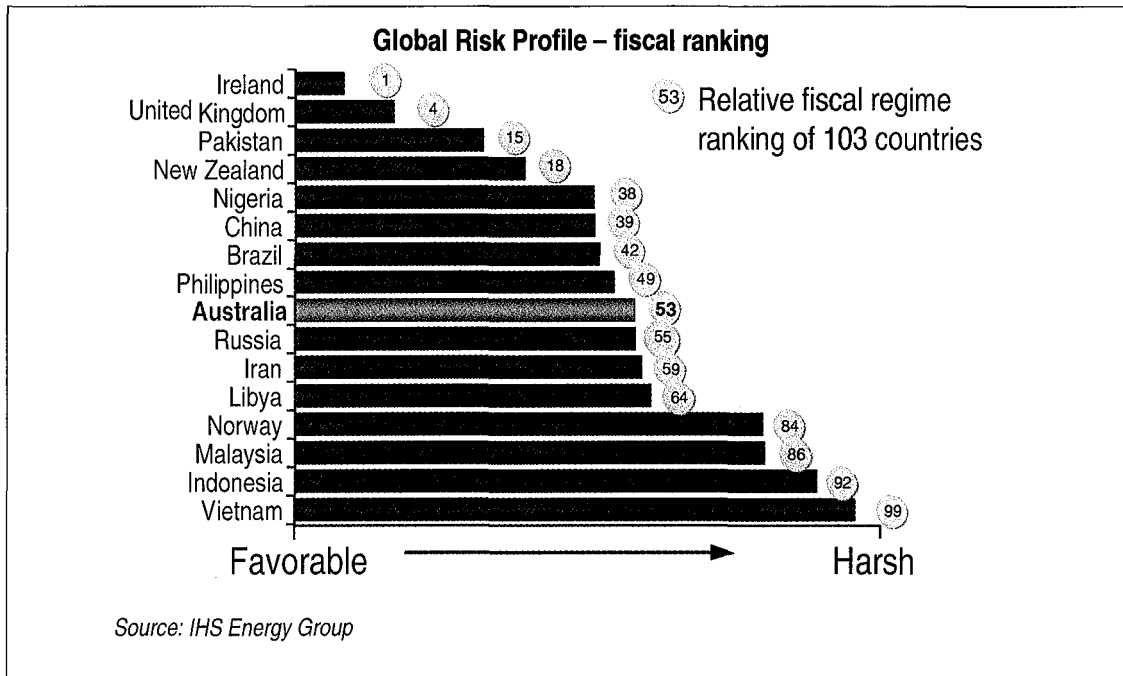
On a global view of prospectivity, the vast majority of undiscovered resources are assessed to be in the North Africa, Middle East and South American regions.

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



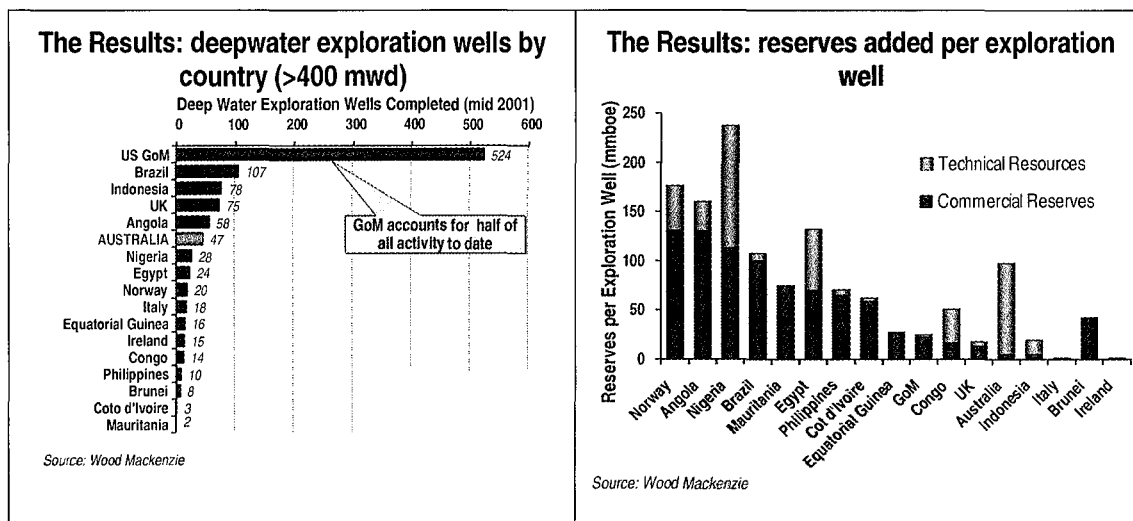
Recent history would seem to reflect this view. While a significant volume of gas has been discovered in recent years, little of it can be classified as commercial, and there have not been enough globally significant oil discoveries in recent years to allow Australia to rate well in terms of prospectivity.

In terms of the fiscal regime applying to Australian exploration, the country is only placed in the middle of the world ranking, despite having a well-tested secondary fiscal regime for shallow waters.



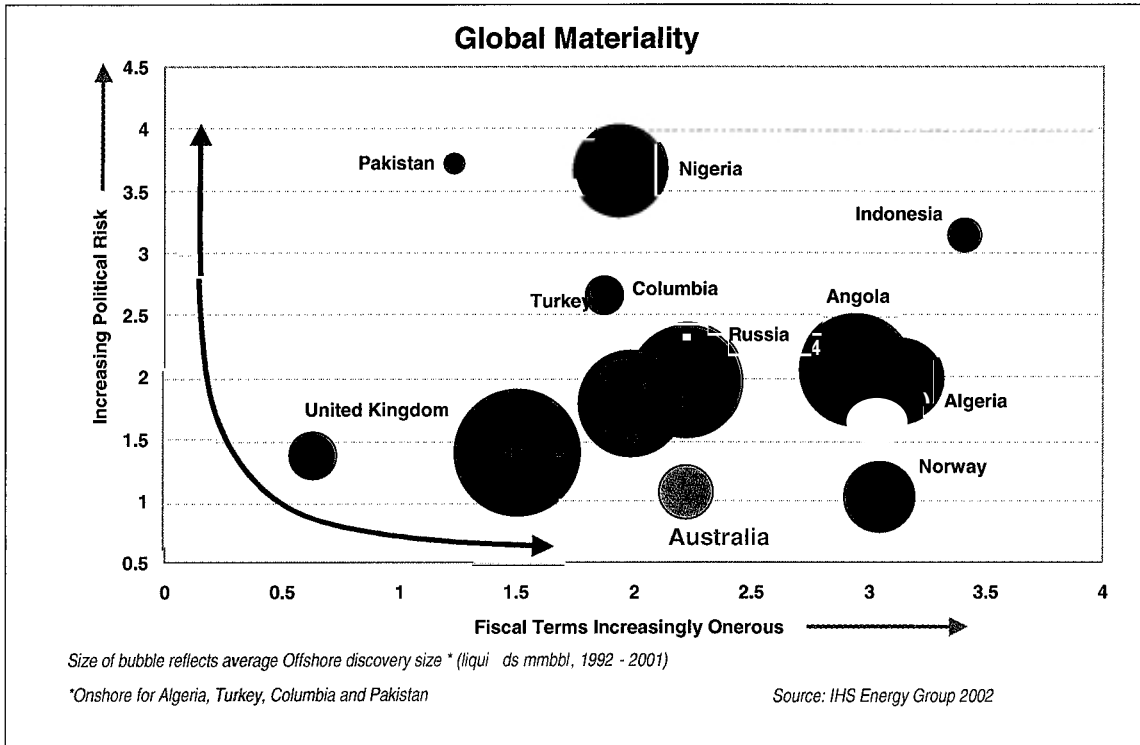
Australia does not rank very favourably at all for deepwater opportunities. It is generally considered to be out of step with many international investment destinations where increasing favourable terms have been introduced to encourage companies to explore the deepwater frontier areas, and compensate them for the increased risk and cost to which they are exposed. A recent study conducted by Wood Mackenzie* on the fiscal regimes applying to deepwater exploration opportunities found that Australia rates poorly, particularly in relation to the smaller field sizes that are more typical in Australia (* "Global Oil & Gas Risks & Rewards", Upstream Economics Benchmarking Survey, February 2002).

Countries that have been markedly successful in encouraging deepwater exploration, such as the United States, tend to have more favourable fiscal terms. The more attractive a fiscal package is, the more incentive there is for companies to explore for and develop smaller fields. A greater risk tolerance can also be achieved if the potential rewards are higher. Generally it is the countries with the lower exploration risks that have the harshest terms.



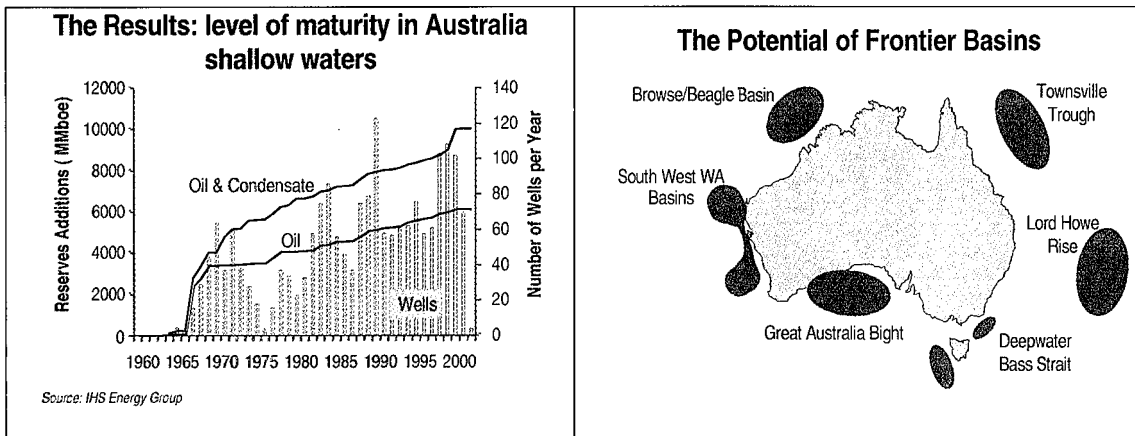
In the context of Australia's global fiscal and prospectivity ranking, it is not difficult to understand why the country only attracts 1% of the global exploration spend, and why the focus tends to be on the proven but mature basins. When compared to the opportunities available globally, the reward that can be achieved in Australia is not commensurate with the assessed prospectivity and level of risk. Consequently, unless changes are made Australia will struggle to divert funds away from the countries where major deepwater oil has already been discovered.

On balance, in considering the three factors of political risk, prospectivity and fiscal terms, Australia is clearly not amongst the most attractive investment destinations.



Recommendations to Stimulate Australian Offshore Exploration

The shallow water areas are mature and unlikely to yield material volumes of hydrocarbons. If there are any large oil fields left in Australia that can help slow the decline in the country's self sufficiency, it is likely that they will be in the deepwater frontier basins where exploration has been limited or non-existent.

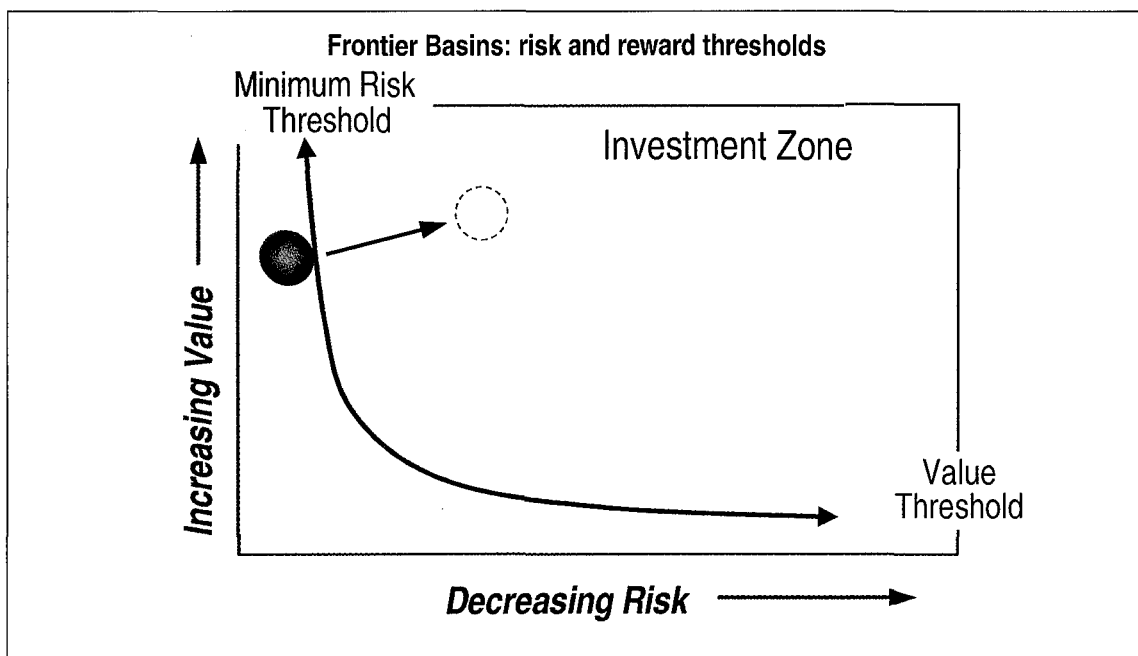


Advancing industry understanding of the deepwater margins - and in the event of deepwater discoveries, appraising and developing fields - is a time-consuming process. While some exploration is taking place in these areas, progress is slow.

If increased exploration effort is desired in these under-explored frontier areas, there must be an attractive fiscal and regulatory regime to compensate for the increased technical risks and additional costs. Conditions are needed which will create an attractive environment to put deepwater Australia in a more internationally competitive position.

BHP Billiton considers that such encouragement needs to come from two directions:

- Firstly, there is a need to introduce operating and fiscal conditions which actively encourage oil companies to undertake the initial reconnaissance exploration necessary in frontier areas to increase knowledge and help quantify risk in a more proactive and cost effective manner;
- Secondly, there is a need to establish a fiscal regime that in the event of success rewards the company for accepting the increased risks and costs associated with finding and developing hydrocarbons in frontier areas.



Changes in both of these areas will allow Australia's deepwater opportunities to be moved across the risk threshold, and turned into viable investment opportunities.

With respect to a regulatory/fiscal system to encourage companies to undertake the initial reconnaissance exploration necessary in frontier areas, consideration should be given to the following:

- Increasing non-exclusive work by Geoscience Australia to increase knowledge and allow quantification of risk.
There is clearly a need for more data. To encourage exploration in frontier areas, pre-competitive work needs to be carried out to reduce uncertainty, particularly on the presence of source rock. The pre-competitive work

conducted by Geoscience Australia in the Great Australian Bight and the Outer Browse increased knowledge, allowed for a greater quantification of risk and was instrumental in encouraging companies to bid on the acreage. Such work should be increased and targeted at areas that hold the greatest potential for material oil discoveries.

- Introducing an exclusive reconnaissance licence for frontier areas for the purpose of conducting remote sensing (and in some cases, shallow drilling) activities.
The following conditions could apply:
 - Licence area to be defined and nominated by the oil company;
 - Three year terms for licences;
 - No committed work program for the licence (work activities to be determined by the oil company);
 - The right to convert 50% of the area to an exploration permit at the end of the term (with an agreed work program to include a well);
 - All the data from the remaining 50% area to be submitted to the government and made available to other oil and gas companies;
 - All activities under such reconnaissance licences could be treated as research and development and subject to the current concessions for research and development expenditures. Other options for incentives under the company taxation framework should be given consideration to encourage early reconnaissance in frontier and other high-risk areas.

- Doubling of the term of deepwater/frontier exploration permits in recognition of the time and costs necessary to undertake exploration work in such environments.
For example, the costs associated with mobilising a drilling rig with deepwater drilling capability from the USA or Africa into Australia are prohibitive for a single company.

There are many examples around the world where countries have introduced equivalent types of regulatory concessions to stimulate exploration in frontier and deepwater areas, including New Zealand, the Philippines and Turkey.

In establishing a fiscal regime which rewards a company for accepting the increased risks and costs associated with finding and developing hydrocarbons in frontier areas, there are a number of initiatives that have been introduced in other countries. These initiatives include:

- Lower Royalty for marginal/deepwater fields.
 - Brazil has reduced its royalty for marginal fields to 5% (from 10%).
 - The Philippines has a negative royalty that is based on the percentage of Filipino participation. For deepwater, the royalty is a flat 7.5% when Filipino participation is over 15%. For standard areas there is a sliding scale starting from 1.5% for Filipino participation over 15%, up to 7.5% when Filipino participation is greater than 30%.
 - Brunei's royalty structure has deepwater areas greater than 10 miles offshore at 8%, onshore 12.5% and 3 -10 miles offshore at 10%.

- India has introduced terms that reduce the royalty for offshore areas deeper than 400m to 5% for the first seven years of commercial production (reverting to standard 10% thereafter).
- Higher Contractor Profit Splits for marginal/deepwater fields.
 - Indonesia has separate frontier terms that increase contractor profit share in frontier and deepwater areas.
 - Malaysia has also introduced deepwater and ultra-deepwater terms that increase contractor share in these areas.
 - In Angola, a contractor's share of profit is 80% in deepwater areas and 60% in other areas.
- Higher Cost Recovery limits for deepwater fields.
 - Malaysia has terms which increase limits from 50% to 70% in water depths of 200 -1000m and 75% when greater than 1000m.
 - Brunei offers 70% cost recovery for deepwater (as opposed to 60% in non-deepwater areas).

While all of the above examples relate to fiscal regimes that are different to the Australian regime, the effect of the initiatives introduced (in all cases) is to allow the oil company a higher rate of return on its investment in recognition of the increased risks and costs associated with deepwater exploration and development.

It is particularly worth noting the fiscal regime in the USA that applies to the deepwater Gulf of Mexico. Compared to Australia, the Gulf of Mexico is a highly prolific hydrocarbon province where giant fields are still being discovered, the fiscal regime is simple and profitable, and the leasing system allows competitors of all sizes to participate. The infrastructure in the form of pipelines and platforms is extensive, and there is a buoyant and accessible gas market. There are also abundant play types as a result of the style of deposition and salt tectonics.

It is difficult for other countries to compete with the Gulf of Mexico, as few offer low political risk in combination with easy access to markets, relatively low technical risks and competitive fiscal regimes. In addition to this positive environment, a fiscal and regulatory system has also been put in place for the deepwater and ultra deepwater areas that acknowledges the increased costs and risks, thereby encouraging the drilling of wells. The more wells drilled, the greater the chance of finding more fields.

The fiscal incentives for the Gulf of Mexico include:

- A lower royalty rate of 12.5% in water depths greater than 400m;
- A royalty free threshold of 87.5 million barrels of oil equivalent for production in water depths of greater than 800m under the Deep Water Royalty Relief Act.

This combination of initiatives in the deepwater Gulf of Mexico has resulted in a disproportionate number of deepwater wells drilled in the region compared to anywhere else.

BHP Billiton has been drawn to the Gulf of Mexico by this attractive environment and now spends over half its exploration budget in this location.

For those countries without access to markets and with modest resources, a more flexible, competitive and co-operative approach is required to lure exploration dollars away from the small number of demonstrably attractive areas. Australia is a country that needs these kinds of incentives.

For Australia to become competitive with the other deepwater locations, it needs to offer "frontier or deepwater" terms, especially for the smaller fields that are typically discovered. These terms need to encourage equally those companies that are new entrants to Australia, as well as those who are currently payers of petroleum resource rent tax. They also need to recognise the increased risk and cost associated with exploring, developing and producing in deepwater frontier areas. The acceptance of the additional costs, risks and challenges of entering into and exploring deepwater frontier areas, must be rewarded by a greater rate of return than that available in the mature shallow water areas.

The Petroleum Resource Rent Tax Act 1987 ("PRRT Act") should be amended to respond to the greater risks and costs associated with frontier and deepwater exploration and production. There are some options within the parameters of PRRT Act which could be used to improve the incentives for frontier exploration, including:

- A per project barrel of oil equivalent production exemption from the assessment of the PRRT Act. This could be quarantined to specific frontier deepwater projects, would be easy to administer and would not impact the other operational aspects of the PRRT Act;
- A lowering or abolition of the PRRT tax rate from such projects;
- For companies currently paying PRRT, an increase in the uplift rate would not provide additional incentive to explore as these exploration costs are offset immediately against income from other projects.

Other incentives to encourage frontier/deepwater exploration could include:

- A lower corporate tax rate;
- A sliding scale tax rate based on oil prices;
- Investment allowance on capital costs;
- Depreciation on an "as incurred" basis.

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 gas, both for domestic and export use.

Exploration for gas in Australia might increase if exploration and production companies were more confident in the commercial viability of any gas discovery. While there are ways to help slow the decline in oil production, there is an abundance of gas in Australia and all efforts should be made to encourage it to be commercialised.

Conclusion

Australia 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. Therefore it needs to look at further ways to encourage those exploration dollars to be invested in Australia, rather than in locations 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.