

HOUSE OF REPRESENTATIVES  
STANDING COMMITTEE ON INDUSTRY,  
SCIENCE AND RESOURCES

22 JUL 2002

RECEIVED

House of Representatives Standing Committee  
on Industry and Resources

Submission No: 44

Date Received: 22 JULY 2002

Secretary: B. Folke



**WOODSIDE**  
AUSTRALIAN ENERGY

## SUBMISSION

House of Representatives  
Standing Committee on Industry and Resources

Inquiry into Resources Exploration Impediments

Woodside Energy Ltd.

July 2002

## **Contents**

- 1. Introduction and Executive Summary.**
- 2. Terms of Reference.**
- 3. Introduction to Woodside's Exploration Activities.**
- 4. Australia's Resources Endowment and Prospectivity.**
- 5. The structure of the Petroleum exploration industry in Australia.**
- 6. Impediments to accessing capital, particularly by small companies.**
- 7. Access to land including Native Title and Cultural Heritage issues.**
- 8. Environmental and other approval processes, including across jurisdictions.**
- 9. Public provision of geoscientific data.**
- 10. Relationships with indigenous communities and Contributions to regional development.**
- 11. Conclusions.**

## 1. Introduction and Executive Summary

Woodside Petroleum Ltd. is Australia's largest independent oil and gas exploration and production company (by market capitalisation) and is a joint venture participant in, and operator of, Australia's largest resource development - the North West Shelf Venture in Western Australia.

Woodside has extensive production and exploration interests in Australia, including the North West Shelf, the Timor Sea, and the Otway and Gippsland Basins in southern Victoria. It also has interests in Mauritania, Algeria, the Gulf of Mexico and Papua New Guinea.

Woodside strongly supports the inquiry into resource exploration impediments in Australia and appreciates the opportunity to contribute. This submission is a preliminary document designed to open discussion on the main issues with the government. A substantial amount of work will need to take place by government and industry after the initial submissions and public hearings, to ensure positive steps are implemented which will encourage exploration and reduce the inevitable decline in self sufficiency in liquid hydrocarbons in Australia with time.

As a major developer and infrastructure owner in Western Australia, Woodside is a significant stakeholder in both the exploration and development phases of the petroleum sector and hence this submission also covers areas of concern associated with exploration, development and production activities.

The key factors which the inquiry needs to consider are outlined in Table 1.

**Table 1 Key Factors Affecting Exploration Decisions**

<b>Factors</b>	<b>Status within Australia</b>
Exploration (commercial) success rates and field sizes	Declining
Competition for capital	Increasing as other countries become more attractive
Government approvals	Becoming more complex and lengthy
Fiscal regime	Unattractive for high risk, deepwater or other frontier exploration and development of marginal fields (regardless of water depth)
Sovereign/ country risk	Australia generally well placed but many other countries improving (risk/reward balance)

## **2. Terms of Reference**

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:

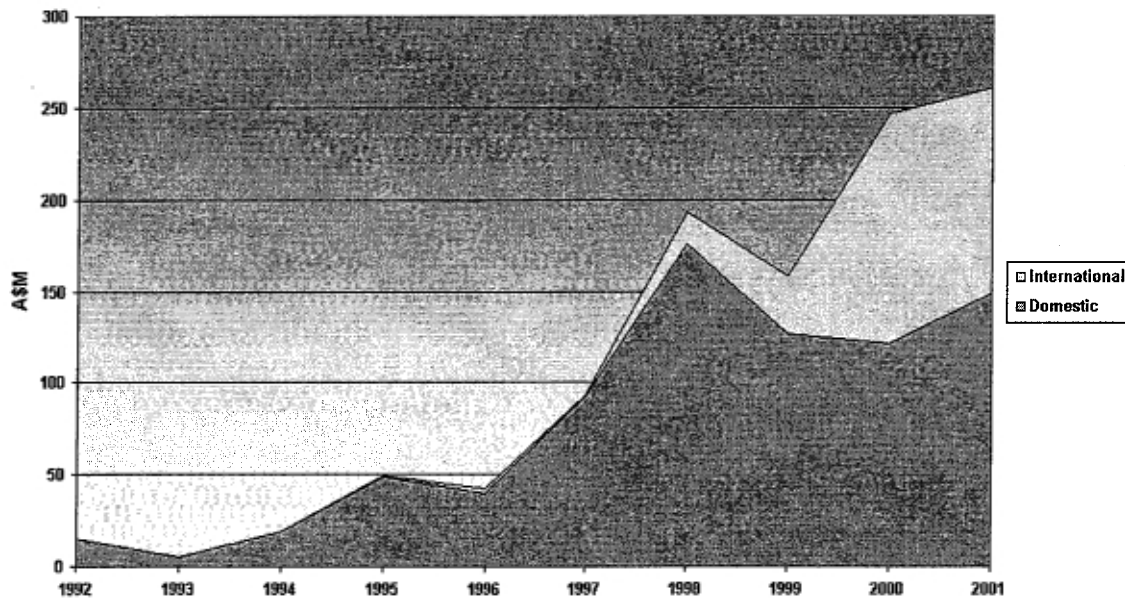
- An assessment of Australia's resource endowment and the rates at which it is being drawn down;
- The structure of the industry and role of small companies in resource exploration in Australia;
- Impediments to accessing capital, particularly by small companies;
- Access to land including Native Title 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.

### 3. Introduction to Woodside's Exploration Activities

After the initial exploration campaigns in the late nineteen sixties and early nineteen seventies, Woodside again increased its exploration effort in the mid-nineteen nineties. This was triggered by the completion of the first phase of development of NWS gas/condensate fields and the discovery of the Laminaria and Corallina oil fields in 1994/5.

The fundamental strategies behind this exploration activity were aimed at increasing the number of discrete revenue sources and achieve a balance between oil and gas revenues. Initially the focus was within specific areas of Australia, which were considered to have good exploration potential. However, due to the limited hydrocarbon potential of Australian Basins in terms of discovering commercial quantities of oil and gas that could be monetised within 5 years, Woodside also needed to consider exploration overseas in order to meet its performance targets. A number of focus countries were identified on the basis of prospectivity, accessibility, market, growth potential, country risk and fiscal terms. Fig. 3.1 shows that exploration expenditure has steadily increased to around A\$250 million per annum, with up to half of this now being spent overseas. This level of activity is expected to be maintained or increased in the future. The mix between domestic and international activity will be determined by the quality and commercial attractiveness of the various opportunities. Significantly however, the exploration dollars committed to Australia have remained consistently high compared to the pre-1995 level.

**Woodside Exploration Spend**



**Fig 3.1 Woodside's Exploration Spend (1992-2001)**

The majority of the oil prospects have been potential new stand-alone developments large enough to offer growth potential for Woodside under the current fiscal regime. However, this will tail off over the next few years as the Australian portfolio of oil prospects is depleted. Only a limited number of prospects which could potentially be tied back to existing infrastructure will be drilled, as most prospects are generally small and

uneconomic under the current fiscal regime. Most of the recently drilled gas prospects have targeted areas with immediate access to the domestic gas market (South-East Australia and Darwin). Future exploration for gas will also be largely dependent on the domestic and export marketing opportunities.

### Woodside Exploration Drilling History

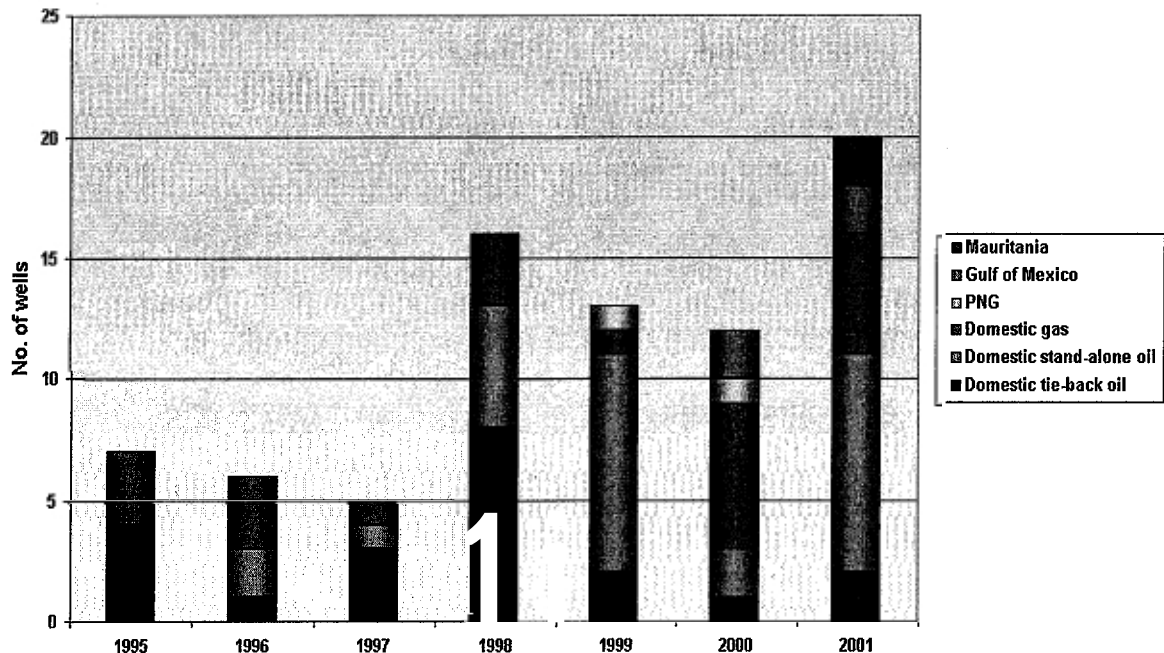


Fig 3.2 Woodside's Recent Exploration Drilling History

Exploration drilling activity to date (Figure 3.2) has been predominantly within Australia, it is expected that there will be a greater proportion of drilling overseas in the future due to the long lead times and evaluation effort needed to mature prospects to be ready to drill. The Australian drilling campaign has maintained a balance between oil and gas. The international exploration effort is focussed in three main areas; Gulf of Mexico, West Africa and North Africa. PNG and Cambodia have received minor attention in the past, but are now considered to have low potential for success. The Gulf of Mexico was identified early as a focus area as it offered significant growth potential (estimated undiscovered resources of 15 billion barrels of oil and 100 Tcf of gas), established infrastructure and market, politically stable area and good fiscal terms. North Africa provides a good balance to the Gulf of Mexico business, again with good growth potential (estimated undiscovered resources of 32 billion barrels of oil), relatively low exploration costs (mainly onshore), but with the fiscal terms and country risk generally not so favourable. West Africa became a focus area after Mauritania was high graded as a country with large growth potential and accessible acreage. Woodside has subsequently established a substantial acreage position and enjoyed early success with the Chinguetti oil discovery.

#### 4. Australia's Resources Endowment and Prospectivity

Australia is dominantly a gas province with developed reserves of approximately 40 Tcf (6.6 billion barrels of oil equivalent) of and 6.2 billion bbls of oil. (Fig. 4.1)

The majority of these reserves are located offshore with only limited prospectivity remaining for onshore areas.

### Developed Reserves in Australia

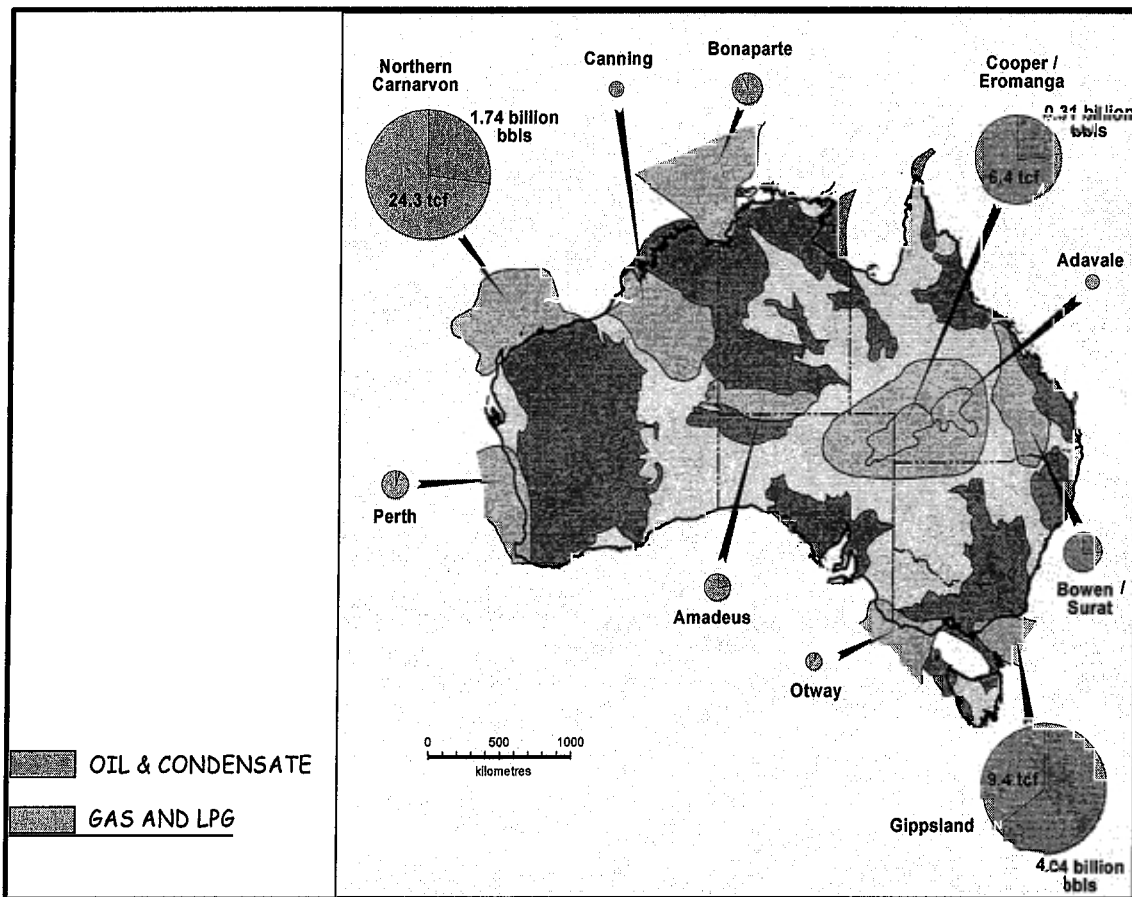
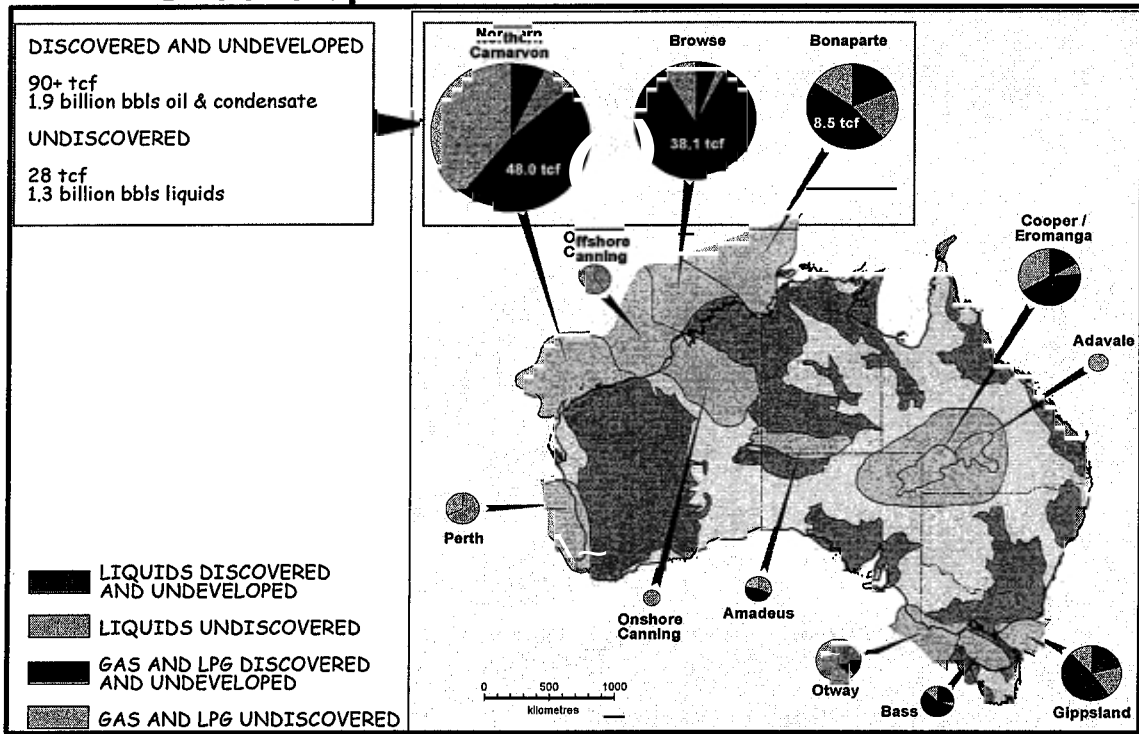


Fig 4.1 - Developed Reserves in Australia

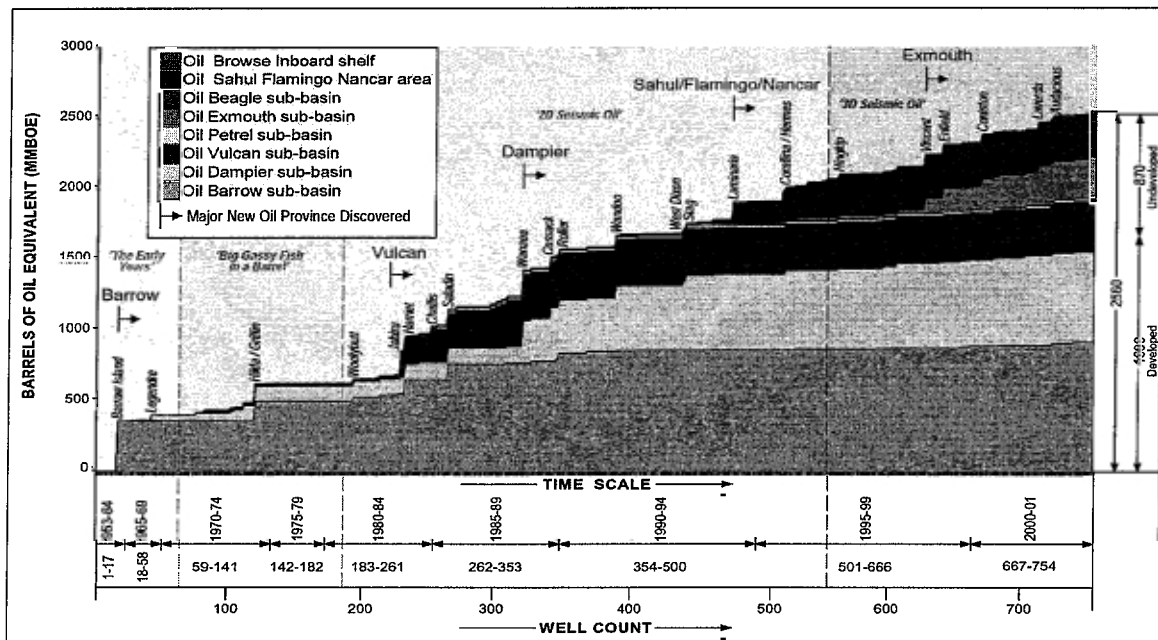
In addition, some 90 Tcf (14.9 billion barrels of oil equivalent) gas has been discovered that has yet to be developed due to its remote location or difficulty in finding a market. (Fig. 4.2). It is estimated that there is a further 28 Tcf (4.6 billion barrels of oil equivalent) of gas and 1.3 billion bbls of oil and condensate yet to be found. This is in marked contrast to the large undiscovered volumes of oil and gas in both the Gulf of Mexico and North Africa.

## Undeveloped and Undiscovered Reserves



**Fig 4.2 Undeveloped and Undiscovered Reserves**

Exploration for additional gas will only be carried out if it is substantially better positioned for an available market than the existing stranded discoveries and exploration for oil will only continue while prospects are large enough to be commercially viable. Fig. 4.3 summarises the cumulative discovery history for oil exploration along the greater North West Shelf of Australia, which shows that exploration of the area is relatively mature.



**Fig 4.3 Cumulative Discovery History - North West Shelf**



There are a number of factors related to the regulatory framework of offshore exploration permits that potentially impede exploration activities, particularly in frontier areas. These are;

1. There is a long time period from when a company identifies a prospective area to being able to actively explore. This is due to the process of requesting the government to release the acreage during the annual gazettal cycle, allowing time for work to be done in order to prepare for a competitive bid and then finally being awarded the acreage. This process can take up to two years, by which time the exploration momentum and priorities may have moved elsewhere.
2. The current framework, has an emphasis on work commitments in the primary (three year) term and often does not allow the time or flexibility to meet requirements of exploring frontier areas. These areas are inherently risky by nature and can be geologically complex. They can take several years to evaluate properly and need careful planning around various operational, environmental and weather restrictions. They also need exit points to ensure that companies are not over-exposed to commitment activities should preliminary work show that the acreage is not prospective. The New Zealand regulatory framework allows for an AFO (Acceptable Frontier Offer) on frontier acreage, allowing for an exit point prior to drilling, once the initial exploration programme has been completed.
3. Related to the point above, the current system in Australia does not allow flexibility as technical understanding matures or operational conditions change. The ability to transfer renewal commitments between the permit years or to other permits would encourage higher levels of exploration activities.
4. There is an urgent need to increase funding to Government agencies to review frontier areas and assess prospectivity of under explored basins as well as manage the day-to-day operations of the petroleum industry. Oil companies cannot get funding to explore in areas that they have no title over or ability to produce if a discovery is made. Agencies such as Geoscience Australia, State Designated Authorities and Geological Surveys are best placed to do this work and promote these areas to the petroleum industry. Resourcing of the research, policy and administrative sector of government managing the resource industries is considered inadequate. These agencies find it increasingly difficult to attract and retain experienced personnel and an extensive review of government staffing is recommended to allow government the ability to provide adequate advice to companies wishing to invest their exploration and development capital in Australia.
5. There have been many recent amendments to the Commonwealth Petroleum Submerged Lands Act P(SL)A which have been made to promote exploration and increase efficiency. However, few of these changes are reflected in the State P(SL)A's. This causes unnecessary duplication and complexity in obtaining approvals, which add costs to both companies and government without justification. Transparency across boundaries is desirable and will reduce costs and provide a more efficient legislative framework.

## 5. The Structure of Australia's Petroleum Exploration Industry

5.1 Australia's petroleum industry has been pioneered by companies which have invested in exploration and development opportunities with a long-term approach to provide benefits to their shareholders and to Australia. These companies include large multinationals, large Australian Petroleum companies and small explorers. Many smaller companies have come and gone over the decades, but few, if any have had any significant impact on making new discoveries or pursuing development opportunities, particularly offshore where the majority of production occurs. The role of small exploration and development companies in the offshore Australian petroleum industry has been minor due to the increased technical risk and the need for significant amounts of risk capital. Both large and small companies are now looking overseas in areas of higher prospectivity to meet their exploration targets and hence the recent decline in exploration activity in Australia.

The fact that many large gas discoveries have not entered the production phase due to lack of gas markets has created a perception that exploration in Australia is not as attractive as other overseas countries because of the low prospectivity for oil and lack of commercial markets for Australian gas.

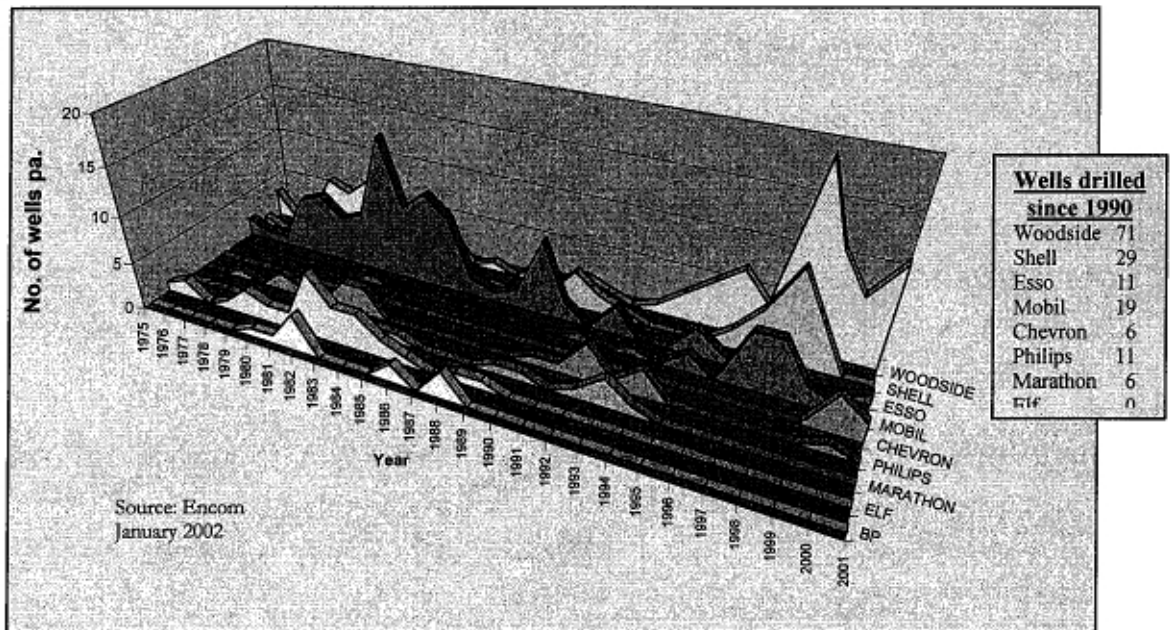


Fig. 5.1 Australian Exploration History by Operator

Fig. 5.1 shows offshore drilling levels in Commonwealth waters over the past decade performed by the major companies, all of which have considerable international technical expertise in exploration and development. The role of small companies in the offshore areas has been relatively insignificant.

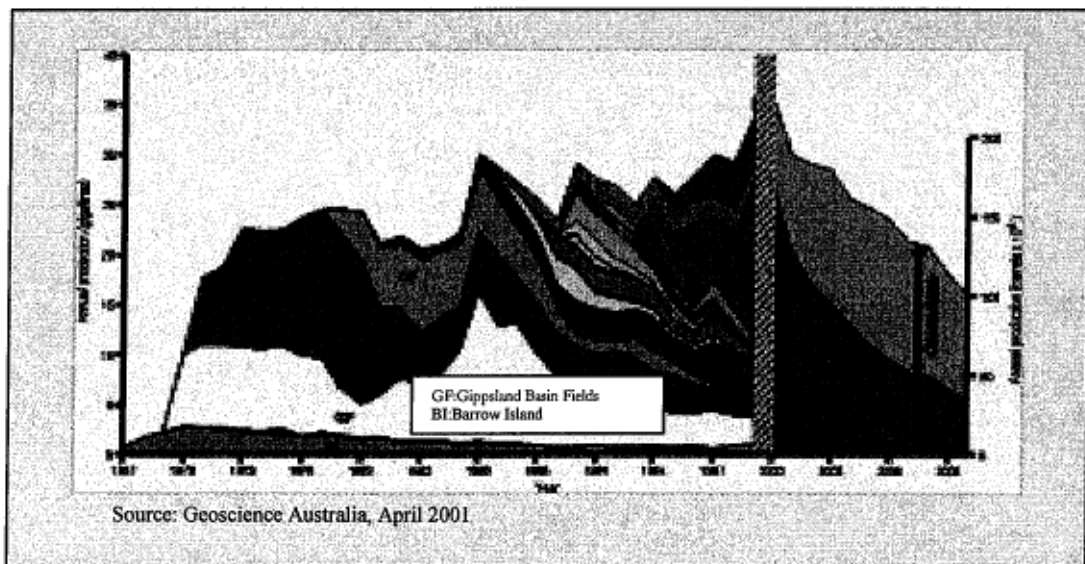
In 2001, Woodside as operator of the NWS Venture accounted for 39% of Australia's petroleum production and produced gas for the West Australian market, LNG, oil, condensate and LPG worth \$8 billion. Woodside is also

Australia's most active offshore explorer with interests in the North West Shelf, Timor Sea, the Otway and Gippsland Basins (see Appendix 1 for further details).

Australia has abundant reserves of natural gas. Proven and probable reserves as at January 2000 amounted to around 110 trillion cubic feet (Tcf) which is equal to more than 100 years supply at current production levels. With the exception of the Cooper basin and South-West Queensland, most major accumulations are offshore and some distance from the major markets. In recent years, there have been a number of significant finds and potential developments in the Timor Sea, Otway and Bass Basins. Major new pipelines, including links to PNG gas fields and supply to Tasmania from Victorian gas fields are being planned but many gas fields are still isolated from markets and are likely to remain so for quite some time.

Liquefied Natural Gas (LNG) is presently produced and exported from only one location which is the Woodside operated North West Shelf Project (NWS). Exports in 2000/01 totalled 7.5 million tonnes worth \$2.7 billion. The North West Shelf Venture is currently in the process of increasing LNG production capacity by 64% via the construction of a 4<sup>th</sup> LNG train. There are plans for the further expansion of Australia's LNG productive capability, most notably further LNG trains on the Burrup Peninsula and development of the Bayu Undan and Sunrise Projects. At the present time there are major supply contracts being considered with potential customers such as China. However, the international LNG market is highly competitive with Australia facing strong competition from new projects and project expansions in Indonesia, Malaysia, Eastern Russia, Alaska, Qatar, Oman and Yemen.

In relation to oil reserves the country is facing a decline in prospectivity, with no major finds (ie fields of 300 million barrels or more) since the discovery of the Bayu-Undan field in 1995. For the first time in over 20 years the number of exploration wells drilled in the oil and gas sector (offshore and onshore) fell below 100 during 2000.



F

Fig 5.2 - Oil field size v's yearly production

Fig. 5.2 shows that Australia's oil production has historically been from a few large fields but has now moved to numerous small to medium sized fields. This requires companies to now manage fields with short field lives and apply the latest production technology to enhance recovery. This is much more costly and technically challenging than producing from large, prolific, long life fields.

According to projections of oil supply and demand produced by Geoscience Australia and ABARE, Australia's oil self-sufficiency is likely to fall from its peak of 90 percent in recent years to less than 50 percent within four years. The impact on the Nation's international balance of payments could be a decline of up to \$5 billion pa by 2005. This imminent decline is unavoidable due to the lack of new oil projects currently under development. Beyond 2005, the decline could be arrested or even reversed if there is a rapid turnaround within the next few years in Australia's exploration effort, success rates and the incentives to facilitate marginal developments are put in place.

A large proportion of Australia's petroleum liquids production are co-produced with gas (eg North West Shelf Venture produced 78 million barrels of oil and condensate in 2001) and significant amounts of oil and condensate are held within as yet undeveloped gas fields (eg the Scott Reef/ Brecknock fields and Sunrise/Troubadour fields contain 311 million and 298 million barrels of condensate respectively). The development of these currently "stranded" gas resources would also help address the downward trend in Australia's liquids production. To maintain production we will need to continue to find and develop a regular stream of new fields.

Australia is not the only country facing an oil self sufficiency problem, total oil production across the south east Asian region is expected to decline over the coming decade. Asian countries will also be required to develop strategies to deal with this, which most likely will include a greater role for natural gas. This will provide Australia with an opportunity to increase its LNG exports to the Asian region.

## **5.2 Taxation Incentives**

Woodside believes that the Inquiry must review taxation of the petroleum industry and offer more advantageous terms, which relate to the increased risks, reduced prospectivity and commerciality in deep water areas, and for gas provinces isolated from markets.

Most recent oil discoveries are generally smaller than those discovered in the past, are being found in deeper water and are more structurally complex. The taxation changes that enable the development of marginal fields must be considered as part of a broader agenda if Australia is to slowdown the inevitable decline of its indigenous petroleum production. There is a need to improve the economics of marginal projects to ensure that the return on investment is sufficient to be an incentive to explore and develop in costly deep-water frontier areas or areas where higher technical risks are involved.

As Australia's oil prospectivity declines companies are being forced to focus on exploration in deep water or other frontier areas and on the development of marginal fields. The taxation regime needs to be modified in order to take more account of these changing circumstances to arrest the decline in Australia's self-sufficiency. To this end, company tax changes are necessary to improve the

economics of marginal projects regardless of water depth, reservoir complexity as well as to enable the full drainage of existing fields. Changes to the Petroleum Resource Rent Tax (PRRT) regime are also necessary in order to ensure that the returns are adequate to cover the higher risks and costs associated with deep-water frontier areas.

### **Company Tax**

- **Deductibility of exploration expenditure**

With Australia's prospectivity levels falling and greater focus being placed on deep water and other frontier areas, the cost and risk of exploration are continually increasing. Deep water wells require the use of specialist deep water rigs which are generally twice the cost of conventional rigs. In recognition of these increased risks, deductibility for exploration expenditure should be enhanced to ensure these areas are appropriately explored. Woodside recommends that when acreage is released for these high-risk deep water areas, exploration expenditure should be uplifted so as to allow a deduction for 150% of the expenditure incurred. Without such incentives, the increased risks associated with these areas will result in exploration remaining stagnant.

- **Deductibility of costs associated with infill drilling**

Infill drilling is an integral part of oil and gas developments to maximise levels of productions.

Tax concessions for infill drilling and for production associated with tail-end production to ensure that reservoirs are more fully exploited prior to abandonment will maximise utilisation of our oil and gas reserves. Woodside recommends that costs associated with these activities carry a deduction of 150% of expenditure incurred and be immediately deductible in the year incurred.

- **Deductibility of costs associated with gas reinjection**

Special tax treatment for the investment that companies may choose to make to dispose of associated gas in an environmentally responsible manner, i.e. where companies chose to export or re-inject associated gas as opposed to flaring, should also be considered. Woodside recommends that costs associated with these activities carry a deduction of 150% of expenditure incurred and be immediately deductible in the year incurred.

### **PRRT**

- **Uplift for carry forward general project expenditure**

There are a number of specific concerns with PRRT which adversely impact a company's decision making process when focussing on future exploration and development. PRRT was modified in 1991 to significantly reduce the carry forward rate for undeducted general project costs from LTBR plus 15% to LTBR plus 5%. This reduction ignored the risks associated with oil and gas developments and has created an environment whereby PRRT may become payable before the time economic rent associated with the project has been generated.

Reinstatement of the original carry forward rate of LTBR plus 15% is required to enhance the prospects of a commercial development proceeding after exploration / appraisal activities have been completed. If we do not enhance the prospects of future commercial development, companies will not commit to the initial exploration expenditure.

- **Barrel exemption for oil produced from separate fields**

As mentioned earlier in our submission, recent oil discoveries are generally smaller and less likely to be commercial on a stand alone basis. Government policy to date for Excise has been to provide a 30m barrel exemption for oil produced from separate fields. This type of concession has facilitated the development of marginal oil projects. Woodside recommends that a similar barrel exemption concession be provided to discoveries in PRRT areas to assist in maximising production from all discovered resources located in separate fields in PRRT areas.

Summary of Woodside's recommendations for amendments to petroleum taxation are:-

**Company Tax**

- Immediate deduction of 150% for exploration incurred in designated deep water areas.
- Immediate deduction of 150% for expenditure incurred on drilling infill wells for incremental reserves on existing fields.
- Immediate deduction of 150% for expenditure incurred on gas re-injection.

**Petroleum Resource Rent Tax**

- Restore the General Project Expenditure Uplift rate to LTBR + 15%.
- Implement a PRRT volume exemption for oil produced from separate fields.

**6. Impediments to accessing capital, particularly by small companies.**

Woodside does not have any specific comments on this point.

**7. Access to land including Native Title and Cultural Heritage issues.**

Woodside recommends that the government should thoroughly assess Native Title and Heritage issues before onshore exploration acreage is offered for gazettal and assess access to land, which is required for development and processing purposes. These issues can add significant time and expense to exploration and development plans and reduce shareholder confidence in a company's ability to produce reserves and commercialise discoveries in areas affected by native title and heritage issues.

A clear understanding of native title issues prior to acreage release will benefit all parties concerned and provide clarity for all stakeholders and avoid subsequent delays to developments.

## **8. Environmental and other approval processes, including across jurisdictions**

### **Environmental**

Woodside would like to see the following issues relating to environmental approvals addressed in the Parliamentary Inquiry.

#### **Length of Approval Process and Duplication**

Exploration activities (seismic and drilling) are often undertaken with limited lead-time, making use of windows of opportunity with contracted rig and vessel availability. The ability to do this allows facility sharing between exploration companies and saves companies vast amounts of money on mobilisation and stacking rates.

The vast majority of exploration activity has common and well understood environmental risks, which are managed by routine procedures and management systems.

Exploration activities in Commonwealth waters are subject to the EPBC Act; activities in State and Territory waters are also subject to the EPBC Act if matters of National Environmental Significance (NES) arise. Minimal statutory EPBC timeframes for a controlled action is ~ 6 1/2 months. Such a lead-time is too long to accommodate flexible scheduling and facility sharing.

The Petroleum Submerged Lands Management of Environment Regulations (PSLMER) apply to all petroleum activities in Commonwealth Waters. Approvals under the PSLMER can be achieved in a significantly shorter time frame.

Whether exploration activity has been assessed under the EPBC or not, the proponent is still required to prepare an Environment plan under the PSLMER, leading to duplicated effort.

The length and high costs of detailed environmental approvals for development and where required exploration, could be seen as an impediment to exploration activities, particularly for smaller companies. It is not uncommon for costs for the development of Formal Environmental Approval documentation to exceed \$1M in external costs alone.

Because of the long lead time for granting formal environmental approvals, proponents are often required to submit documentation before a detailed basis of design has been prepared, drill targets known, (seismic) survey design finalised and before the preferred concept, vessel or drilling rig has been selected. Once approvals have then granted it is then very difficult for the proponent to change aspects of the scope or design, without risking further assessment and schedule or financial risk.

Proposals which cross two regulatory jurisdictions are generally assessed by both the State/Territory and Commonwealth jurisdictions - creating duplication and delays.

Woodside proposes that:

- MOU's be established between Environment Australia (EA) and the Designated Authorities so that the vast amount of exploration activities are assessed only under the PSL Management of Environment Regulations.
- Clear guidance is prepared by stakeholders and published by EA to indicate the circumstances under which an exploration activity would need to be assessed under the EPBC.
- Mechanisms be explored by Govt. for reducing the costs to proponents for producing formal approval documentation.
- Phased formal approval processes within regulatory jurisdictions, which allow for staged approvals, accommodating greater flexibility mechanisms.
- Remove State/Territory duplication with the Commonwealth by establishing bilateral agreements

#### **Cetacean Interference Permits**

One of the difficulties with the EPBC Act is that an exploration activity which has been determined as "not a controlled action" under the EPBC Act, still requires a proponent to apply to EA for a cetacean interference permit. This is despite the fact that there are NES triggers for cetaceans and migratory species and agreed EA Guidelines for minimising interference with cetaceans from seismic acquisition.

The approval process for a cetacean permit is lengthy and can take up to 6 1/2 months.

**Woodside proposes that:**

- The requirement for E&P proponents to apply for cetacean permits be removed from the EPBC Act.

#### **Simplifying Environment Plans under the PSLMER**

Simplified EP's referring to company management systems, codes of practices and standard operating procedures could simplify the documentation required for Environment Plans and expedite the approval processes.

Proponents are required to demonstrate ALARP (As Low As Reasonably Practicable) within EP's. There is no guidance from the Joint Authority on ALARP.

Some prescriptive elements remain within the PSLMER and PSLA, e.g. well abandonment, decommissioning, oil in water limits. These limit the ability of a best environmental or sustainable development solution to be considered.



There is often a lack of consistency in application of the PSLMER between Designated Authorities.

Woodside proposes that:

- Simplified EP's referring to company management systems, standard procedures and codes of practices be accepted under the PSLMER.
- The Joint Authority should prepare guidelines covering ALARP.
- Remove prescriptive elements from the PSLA and PSLMER.
- Industry, Tourism & Resources and Environment Australia should provide better guidance to Designated Authorities for decision making.

### **Formal Environmental Approval Processes - Access to Sensitive Areas and Conservation Reserves**

Despite an exemplary record in Australia, a perception remains within the public, NGO's and also within some regulatory agencies that oil and gas exploration and development pose an unacceptable risk to the environment.

This manifests in a number of ways including:

- Activities being unnecessarily formally assessed
- Activities being given higher levels of assessment than warranted
- High profile activities being easily politicised
- Unnecessary exclusions from marine and terrestrial conservation reserves

The marine conservation estate is growing in Commonwealth and State and Territory Waters. Risk based, case by case access to marine reserves is essential for the oil and gas industry to explore and develop new reserves.

Woodside proposes that:

- Conservation reserve management frameworks which automatically exclude exploration and development access be reviewed and replaced with a risk based case by case assessment approach.
- Key Government agencies play more active roles in promoting the ability of the oil and gas industry to operate safely within sensitive areas and in accordance with the principles of sustainable development.

## **9. Public provision of geoscientific data.**

The costs associated with a company managing their exploration data are significant due to the need to keep the data for their own uses as well provide copies to the Government Archives. Most companies rely on digital data but find access to open-file data is often slow and of inconsistent quality.

The government has made good progress with improving the management of exploration data in recent years but should review the need for a central digital

library. This would make access to data quicker and would ensure consistent quality.

#### **10. Relationships with indigenous communities and Contributions to regional development.**

The NWS Venture has contributed around \$80 million to social and economic infrastructure in the Karratha region. This includes the development of the Tambrey Community Centre, contributions to schools, the Karratha hospital, water supply, police, sports facilities, theatres and other community facilities. In addition improvements have been made to local infrastructure including the Karratha airport, local roads and the Dampier port.

Woodside has developed strong relationships with the local Aboriginal community with activities including several Aboriginal employment and training programs and the management of issues related to heritage and Native Title. With funding from the NWSV, the Ngarluma Yindjibarndi Foundation has been established to provide long term sustainable support to the local Aboriginal communities in the areas of education, training, business assistance, investment, health, culture and heritage.

#### **11. Conclusions**

Woodside supports the process underway to review impediments to exploration in Australia. The need to slow the decline in self sufficiency of Australia's petroleum resources will require additional incentives from government to encourage exploration. Exploration drilling here could be stimulated by allowing international costs to be deducted locally - ultimately this may result in lower tax revenues, but this may be the cost of getting resources developed.

Petroleum demand continues to grow, production from existing fields is declining and the industry's interest in new oil exploration areas in Australia is at a low level. Current exploration expenditure is insufficient to halt the inevitable decline. Projections prepared by government agencies, clearly indicate that a do-nothing policy will result in rapidly increasing oil imports and significant economic costs for Australia.

The nation has limited oil potential but significant potential for gas and associated liquids. Our proximity to Asian gas markets is a significant advantage, and a vision to achieve self sufficiency and become the preferred gas supplier for the Asian markets is required.

A clear energy policy is required that will assist generating local demand for gas and be a foundation for export. This will require an adjustment of consumer behaviours to allow Australia to be self sufficient.

There is a need to identify what has to change to allow Australian gas to be most attractive to the customer. Underwriting developments or spare capacity, for example, cheap finance, or fiscal or financial exchange/interest rate guarantees could all contribute to this shift.

Options to slow the decline in self sufficiency will take time to implement and have a meaningful impact and therefore urgent action is required to commence this process.

There is a need to develop a comprehensive strategy to identify options and priorities and encourage new investment in exploration, research and the

development of new energy supply infrastructure. The goals of the strategy should be to;

- Maintain Australia's traditional high levels of energy (including oil) self sufficiency and the develop a sustainable base for long term energy supply
- Create a more competitive fiscal and investment regime for upstream oil and gas exploration and development
- Develop a comprehensive policy with the objective of further developing local markets for gas sector including new offshore developments, export growth, attraction of gas based processing industries, extensions of the gas grid and expanded gas penetration
- Implement a streamlined approach to the assessment of and granting of approvals for petroleum projects.