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**Robbins Seismic Survey, T/25P
Stakeholder Briefing Pack**

March 2000

Briefing Outline

- The Joint Venture
- Woodside's role
- T/25P permit location
- Bass Basin history
- Exploration objectives
- T/25P permit work commitment
- 2000 seismic program
- Seismic acquisition method
- Environmental management plan
- Stakeholder consultation
- Seismic issues & implications
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 - Legislation
 - Performance Objectives
 - Proposed mitigation
 - Potential Impacts
- Commitments
- Contacts

The Joint Venture

- Exploration permit T/25P was originally awarded 1991.
The current joint venture is

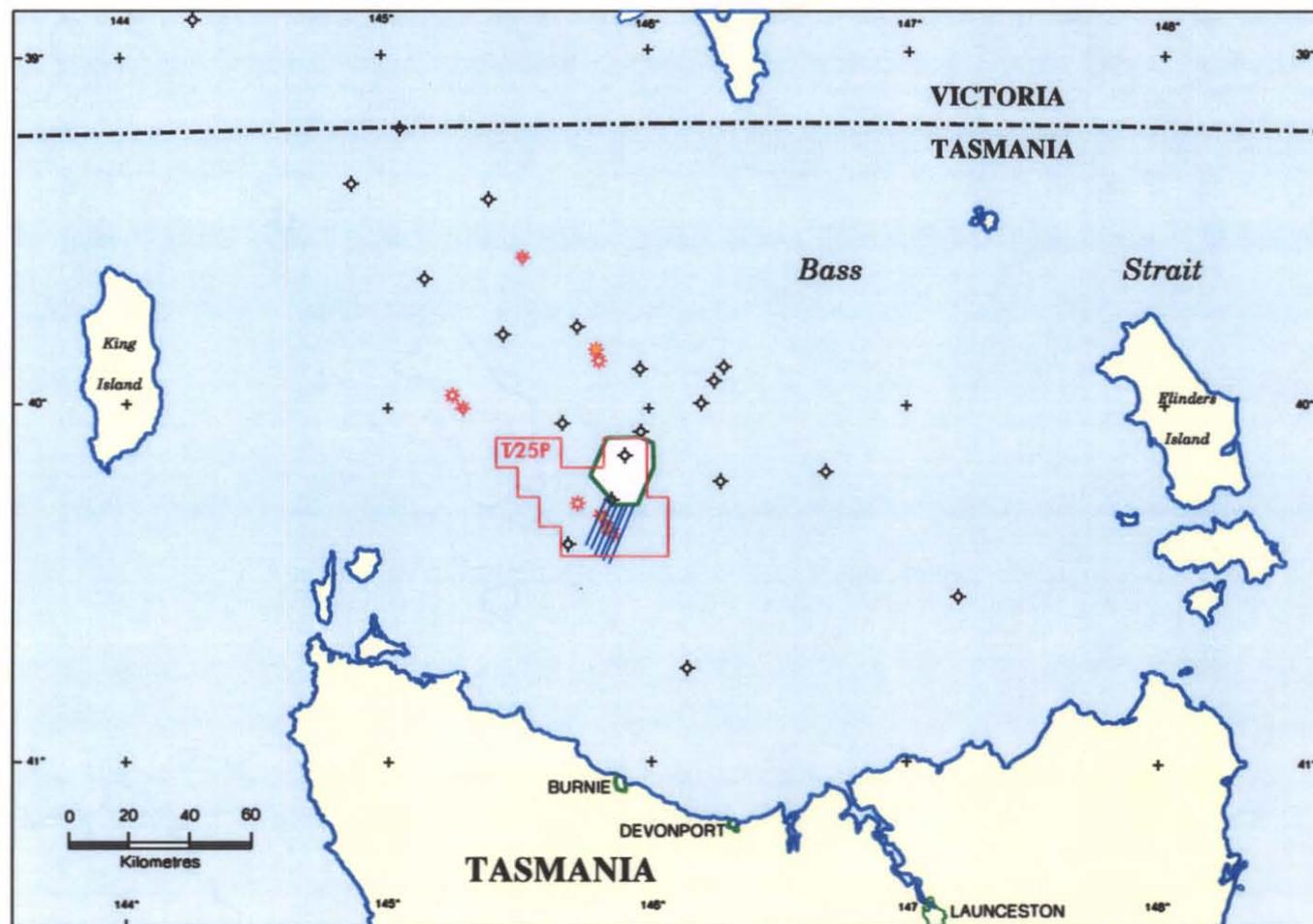
- Origin Energy - Operator 44%
 - previously Boral Energy (renamed Feb 2000)
 - longstanding explorer in area, Yolla Operator
 - only integrated explorer, producer & distributor of natural gas in Australia
- AWE (Australian Worldwide Exploration) 36%
 - small Sydney-based Australasian explorer/producer
 - purchased Premier's interest in January 2000
- CalEnergy 20%
 - London-based exploration and production company

Woodside's role

- **Origin has reached an agreement with Woodside regarding access to the seismic vessel "Western Pride" under Woodside's contract with Western Geophysical**
- **Woodside will also assist with management of the survey, including vessel supervision, safety and environment**
- **Origin will be responsible for survey planning, permitting, approvals, liason and reporting**

T/25P Permit Location

5 cm



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Bass Basin history

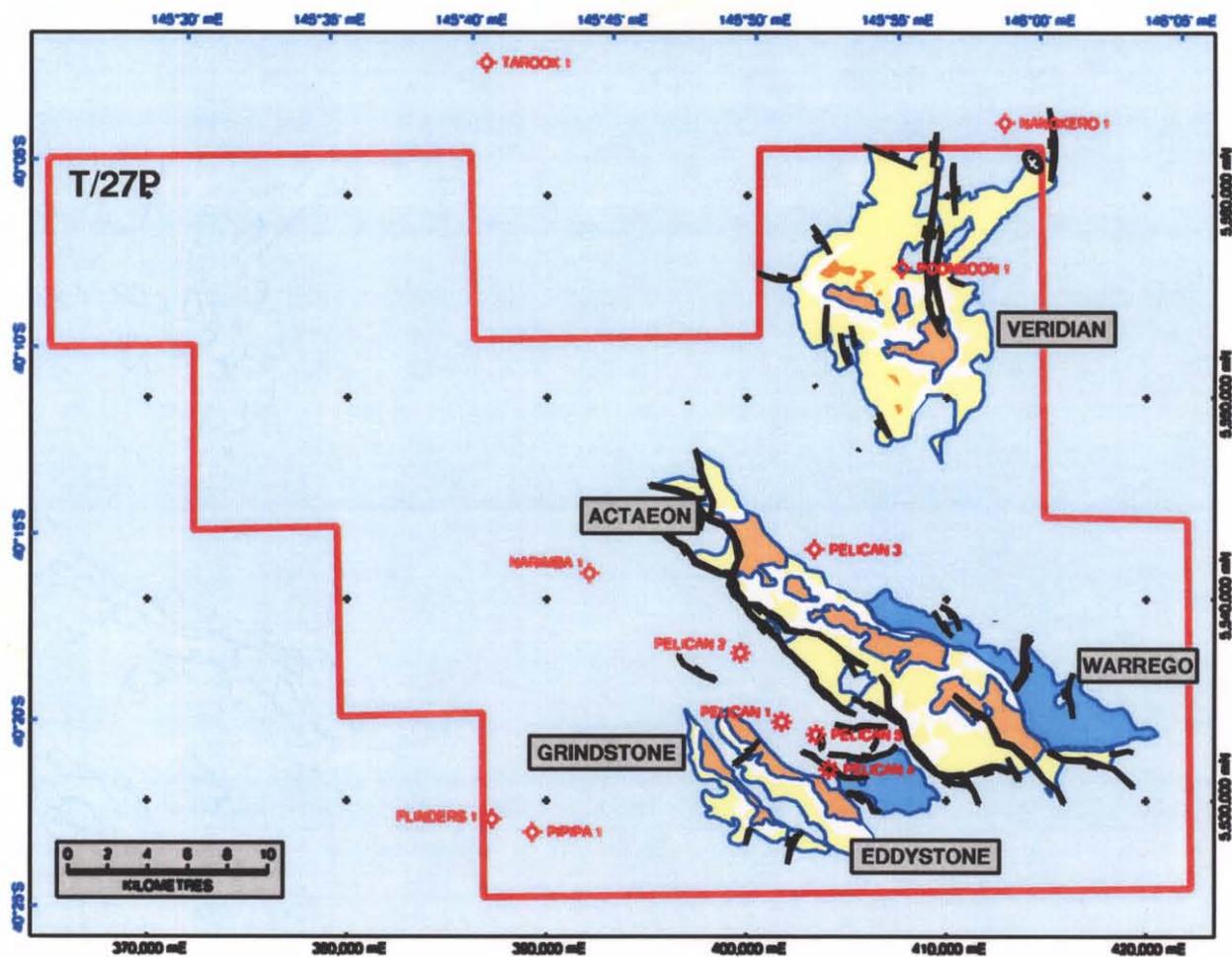
- Explored since the 1960s by Esso, Amoco, Hematite, SAGASCO/Boral and others
- About 20 seismic surveys have been conducted in the area between 1963 & 1996
- Also about 20 wells drilled during 1965 -1998
- Discoveries made at Yolla, Pelican, White Ibis

Exploration objectives

- **Further explore and develop Bass Basin gas-bearing potential**
- **Better define recognised leads, particularly the Veridian lead, by acquiring 3D seismic data**
- **Assess potential volume, geological risk and commercial viability of leads**
- **If commercially feasible, drill high-graded lead**

T/25P Seismic Survey

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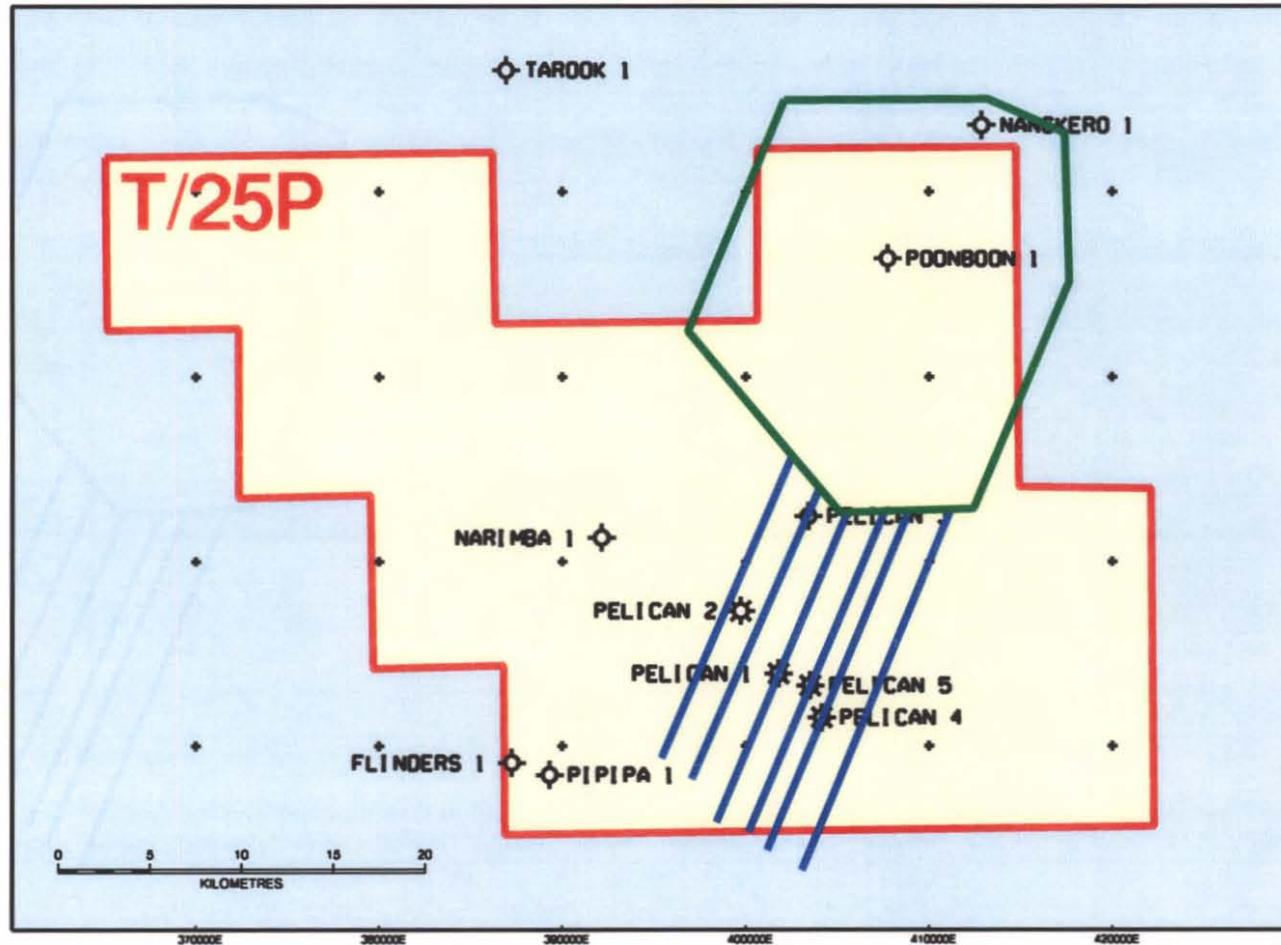
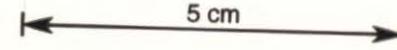
T/25P Seismic Survey

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T/25P permit work commitment

- Year 1 (98/99) Basin study Completed
- Year 2 (99/00) 3D seismic survey In planning
- Year 3 (00/01) Studies
- Year 4 (01/02) 1 well
- Year 5 (02/03) Studies

T/25P Seismic Survey



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T/25P Seismic Survey



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T/25P Seismic Survey

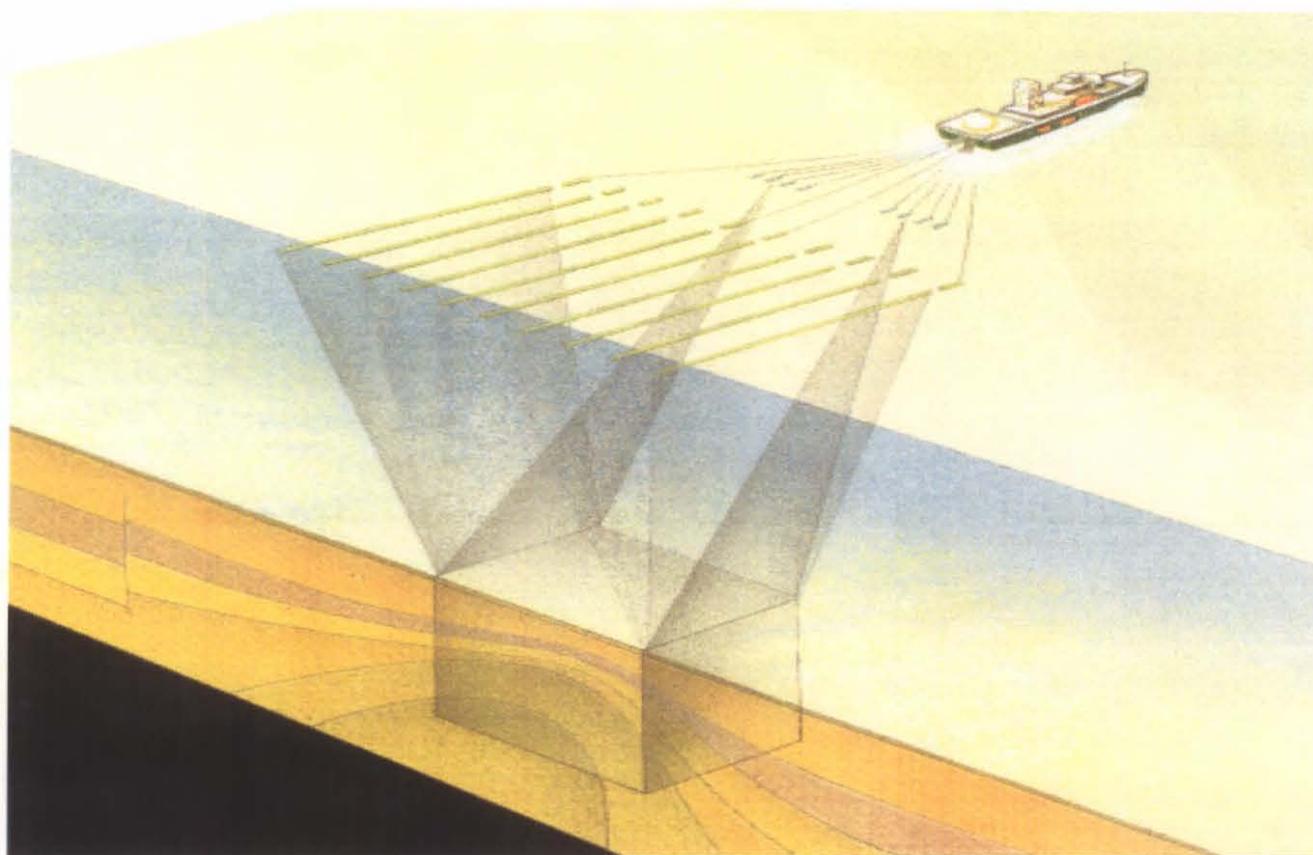


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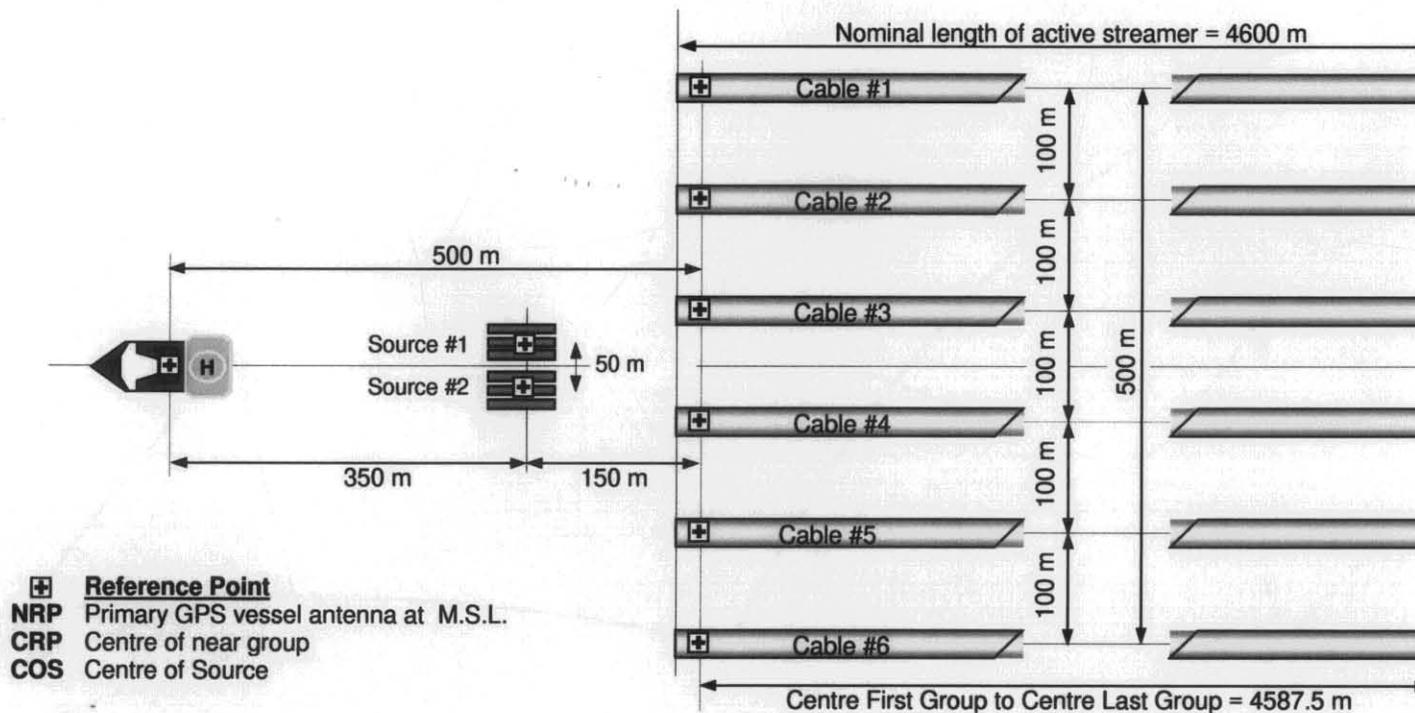
Seismic Acquisition



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Seismic Acquisition



5 cm

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The Environment

- **Environment Plan**

- **Information on**

- Climate
- Oceanography
- Fish & Marine mammals
- Commercial interests

- **Risks & Impacts**

Stakeholder Consultation

- **Key Stakeholders**

- **MRT**
- **Dept Industry, Water & Environment**
 - **Parks & Wildlife**
 - **Wild Fisheries Mgt**
 - **Environmental Mgt**
- **Tasmanian Fishing Industry Council**

Stakeholder Consultation

• Other Stakeholders

• Devonport Chamber of Commerce	• Burnie City Council
• Port of Devonport Corporation	• Wilderness Society
• Royal Volunteer Coastal Patrol	• Circular Head Council
• Wynyard Municipal Council	• Kelp Industries
• Devonport City Council	• King Island Council
• Burnie Chamber of Commerce	• CSIRO
• Central Coast Council	• Marine and Safety Tasmania
	• Australian Marine Science Association
	• Marine and Coastal Community Network Southern Australia TAS
	• Fishermen Associations and Co-ops;

Seismic Issues & Implications

- **Major issue is noise arising from compressed air acoustic source**
 - **May affect whales and other marine fauna in a number of ways**
 - Communication
 - Hearing
 - Behaviour
 - Injury or mortality (only at sound source)
 - **Fish may be startled or alarmed up to ~2km from source**
- **Access of fishermen, shipping and recreational users will be restricted to survey area during survey period (about 20 days)**
- **Streamers extend up to 5km behind seismic vessel**
 - **Safety of all vessels and equipment is the first priority**
- **At sea refuelling of survey vessel may take place**
 - **Prevention and mitigation of fuel and oil spills essential**

Multiple Use

- Bass Strait Scallop Fishery - Central Zone
- Southern Shark Fishery
- Southern Rock Lobster, Squid Jig & SETF?
- Shipping
- Recreational vessels (yachts)
- Oil and gas exploration/production

Federal and State Government policy is 'multiple use'
No activity or user has priority access rights to the area
*Potentially competing users must work cooperatively to
develop ways of minimising impacts on each other*

Legislation

- **Petroleum (Submerged Lands) Act (PSLA):**
 - **Exploration permit confers *rights* to “...carry on such operations and execute such works as are necessary [to explore for petroleum]” (S28)**
 - **Exploration permit confers *obligations* to “...carry on those operations in a manner that does not interfere with [other users] to a greater extent than is necessary for the reasonable exercise of the rights” (S124)**

Performance Objectives

- **Minimise impacts of acoustic impulses on marine fauna**
- **Minimise disruption to commercial fishing, shipping and recreational vessels**
- **Minimise impact of waste discharge on marine environment**
- **Minimise effects of fuel and oil spills on marine environment**
- **Minimise potential for vessel collisions**

Key stakeholders satisfied that seismic survey activities are managed in a manner that is not detrimental to their interests

Proposed Mitigation

- **Noise**

- Survey conducted outside May to October SRW migration period
- Whale watch/stop work procedures
- Advance warning vibrations ('soft start') to allow fish and other marine fauna to move away

- **Access and safety**

- Consultation with fishermen and fishing industry groups re timing/survey areas
- Notices to Mariners
- AMSA liaison
- Radio contact with other vessels
- Navigation aids/lighting
- Scout vessel to advise fishing vessels and move gear if necessary

Proposed Mitigation

- **Refuelling at sea (marine diesel)**
 - In-line bunkering
 - Safe location away from coast and islands
 - Safe sea state and wind conditions
 - Daylight hours only
 - Dry-break couplings for flexible transfer hoses
- **Fuel spill**
 - Specific fuel spill contingency plan
 - AMOSC and AMSA liaison/standby support
 - OSRA (AMSA) to identify sensitive areas
- **Waste**
 - Comminuted putrescible and sewage waste to sea
 - All other waste stored for onshore management

Potential Impacts

- **Potential impacts from proposed survey on commercial fisheries are limited to:**
 - **Loss of catch as a consequence of restricted access to fishing grounds and removal of gear from path of vessel**
 - **Loss of gear through entanglement with survey vessels and towed array**

Objective is to minimise impacts on fishing and seismic operation through consultation, communication, cooperative mechanisms and use of scout vessel

Commitment

- **Joint Venture is committed to:**
 - **Working with other users of the area to minimise impacts on others' and its own activities**
 - **A cooperative working relationship**
 - **Regular information about vessel position and movements via Notices to Mariners, radio schedules**
 - **Shared radio frequencies**

Commitment

- **Joint Venture is committed to:**
 - **Scout vessel to assist with movement/protection of fishing and seismic gear, advice to vessels**
 - **Consultation to plan activities so as not to impact either fishing or seismic operations**
 - **Fair and reasonable recompense where another user has taken reasonable steps to work cooperatively, and unavoidable damage to gear or loss of catch is incurred as a result of seismic operations**

Contacts

- **Briefings and consultation with Stakeholders**

- 4Q 1999
- February/March 2000

- **Key Contacts**

- **Origin Energy**

- Jenny Bauer, Manager Offshore Exploration (07 38580601)
- Doug Roberts, Manager Seismic Operations (08 82175757)

- **Woodside**

- Jeremy Colman, Environmental Advisor (08 93484688)