

2. Objectives and Benefits of the Proposed Project

2.1 Socio-Economic Objectives and Impacts

The Sunrise Gas Project market vision is:

'to establish a basis for the profitable development of the Sunrise and Troubadour gas fields, within a supportive community environment'.

Undeveloped reserves of gas contribute nothing to economic development and community living standards. For the economies and citizens of East Timor, the Northern Territory and the rest of Australia to benefit from the Greater Sunrise reserves in the Timor Sea, the fields (Sunrise and Troubadour) must be developed and commercial sales made to customers.

Development and production of the gas and condensate under both FLNG and O LNG scenarios for transportation to shore will benefit the various economies through:

- The front-end engineering and design phase, where Australian and international expertise will apply the latest design concepts and technologies to design world class facilities. Ongoing design work is expected to employ 100-150 highly skilled engineers and support staff in Perth;
- The construction phase when skilled labour sourced from Darwin and the rest of Australia will work offshore to assemble and commission modular units of plant that maybe constructed locally or overseas; and
- The operations phase when gas is produced and used by customers. The offshore production facilities will be staffed by skilled personnel on offshore rosters while based predominantly in Darwin. The number of operations personnel is uncertain at this stage. Logistics support is likely to be based in Darwin.

Natural gas, when used as fuel, produces approximately half the greenhouse gas emissions of other fossil fuel alternatives on a lifecycle basis. In this respect, the development of natural gas supply for domestic and international markets provides tremendous opportunities for continued economic development in Australia. To the extent that gas can be utilised in place of alternative fossil fuels, global emissions will be reduced in line with the National Greenhouse Strategy.

2.1.1 Benefits to the Local Workforce & Economy

The Sunrise Gas Project will introduce many benefits to Darwin and Australia in general, and East Timor. The design phase will provide opportunities for skill and knowledge transfer essential to maintaining regional capability in the oil and gas sector. Local construction and service industries will be called on to support the installation of large capital items, leading to a boost in short term jobs in the construction industries and in industries supplying inputs to construction. Capital goods supplying industries will also experience an increase in demand.

Once the project enters its operations phase permanent jobs will be created in running the production facilities and providing the logistics support.

2.1.2 Benefits to Australia

The profitable production and sale of gas and condensate from the Sunrise and Troubadour fields (which lie 80% in Australian waters and 20% in the Joint Petroleum Development Area, JPDA) will result in substantial tax revenues flowing to the Australian and East Timor Governments. 80% of the project will be subject to Petroleum Resource Rent Tax (tax rate of 40% of net revenues after capital cost recovery) and Australian company tax of 30%. 20% of the project will be subject to petroleum and company taxation of up to an effective rate of 65%, predominantly flowing to East Timor. The

amount of taxation depends on the development concept chosen, the price of gas negotiated with onshore and/or offshore gas customers, and world oil prices.

The export of condensate and downstream products will generate income through foreign exchange. This will add to national income and the consumption prospects of the Australian community.

The extraction of natural gas will add to Commonwealth government revenue directly through the Petroleum Resource Rent Tax levied on gas and condensate production and company tax paid on profits. It will also add indirectly to both Northern Territory and Commonwealth government revenue by expanding economic activity, employment, income, expenditure and hence the tax base in the Northern Territory and rest of Australia. This in turn will enhance the capacities of both governments to support desirable social expenditures, including infrastructure development.

The taxes paid by the Sunrise Joint Venturers will enable future governments to reduce taxation on other segments of the Australian economy thereby stimulating additional economic activity and job creation. In addition, the local economy is likely to benefit from the construction and operation of processing facilities built by our gas customers. The owners of downstream facilities will pay their own taxes, create additional export earnings (or replace imports) and employ additional staff.

Social benefits from Sunrise development will also be felt, predominantly in the Darwin area. These include:

- ❑ Improved job prospects in high technology / high skills industry;
- ❑ Influx of tertiary educated staff and families;
- ❑ Increased national and international recognition of Darwin as a centre for industry;
- ❑ Improved skills in complex industrial and commercial matters within the Northern Territory public service; and
- ❑ Sponsorships by Sunrise Joint Venture companies who wish to build a strong and long-term relationship with local communities.

It is in Australia's strategic interests for all its neighbours to be prosperous and to have a sound economy capable of meeting the aspirations of its citizens. Development of Sunrise will make a substantial contribution to the economy of East Timor, which will decrease East Timor's reliance on foreign aid including aid from Australia.

2.1.3 Benefits to East Timor

For East Timor, taxation revenues flowing from the development of Sunrise and Troubadour will be a major source of revenue lasting some 20–30 years from the start-up of production.

The development of the Greater Sunrise gas and condensate fields will secure a long term source of tax revenue for East Timor as well as direct revenue from the Production Sharing provisions of the Timor Sea Arrangement. Direct employment opportunities on the facilities will also emerge for those who acquire the necessary skills through education and training programs currently being established. Education, training and employment initiatives associated with the Project will provide both broad capacity development and economic multiplier effects in the East Timorese economy.

Furthermore, there is the potential for East Timorese involvement in logistics and support operations to the offshore facilities should this be commercially viable. A study is being undertaken to determine East Timor's capacity in this regard.

Already, East Timor's ability to borrow funds for essential community projects has been enhanced by the prospect of secure taxation flowing from Sunrise. The petroleum sector is likely to dominate the economy of East Timor for many years.

Social benefits to East Timor from the Sunrise development include:

- ❑ Improved education and job prospects in high technology / high skills industry;
- ❑ Improved skills in petroleum and commercial matters within the East Timorese public service;
- ❑ A sense of national pride by being part of a world-class petroleum development; and
- ❑ Sponsorships by Sunrise Joint Venture companies who wish to build a strong and long-term relationship with local East Timor communities.

2.2 Meeting Market Demand

The Greater Sunrise Gas resource is estimated to contain around 9 tcf of recoverable natural gas and 320 million barrels of condensate.

This is a significant volume of gas, which could supply a range of export orientated downstream gas consuming projects (LNG, methanol, chemicals, alumina refining) as well as providing gas for domestic consumption (either via power generation or gas transmission/distribution systems) in the Northern Territory and possibly beyond. Australia's current and proposed pipeline systems are illustrated in **Figure 2-1**.

2.3 Impacts on Local Economic Activities

2.3.1 Commercial Fisheries

The Sunrise Gas Field lies entirely to the north of the Australian Provisional Fisheries Surveillance and Enforcement Line, yet is within the Agreed Seabed Boundary between Australia and Indonesia. This means that pelagic fish stocks are under the jurisdiction of Indonesia and East Timor; however, demersal fish stocks fall under the jurisdiction of the Australian Government.

Fisheries under Indonesian and East Timorese jurisdiction in the Sunrise Gas Field area are not actively managed. Over time, East Timorese management of its fisheries will emerge. Woodside will work closely with the East Timorese authorities to ensure co-existence. Discussions with officers from the Australian Fisheries Management Authority (AFMA), and findings from previous investigations undertaken on behalf of Woodside by Sinclair Knight Merz (1993), indicate that in terms of commercial fisheries the region is only lightly exploited by longline fishermen. Sharks are the main target species, with fishing concentrated in the deeper waters.

There are currently no major Australian fishing interests or activities in the Sunrise Gas Field area. AFMA catch and effort returns indicate that only one Australian vessel has fished in the Sunrise Gas Field area in the past few years. The closest Australian commercial fishery to the Sunrise Gas Field is the Timor Reef Fishery, which is located in the 'Timor Box' area, approximately 75 km south east of the gas field (**Figure 2-2**).

It should be noted also that some traditional fishing is likely in the vicinity of Sunrise Gas Project area given the proximity (150 km) of the Sunrise Gas Field to Timor.

A safety zone of 500 m around the platforms and FSO will be maintained during operation. A further exclusion zone will be sought from the authorities and marked on navigation charts. The presence of the facility and its anchors means that fishing boats will need to avoid the area to prevent fouling anchor chains or other accidents. This exclusion is not likely to have any significant impact on fishing activities.

The pipeline route will have a suitable level of protection to guard against potential vessel damage and will be clearly marked on all maritime and navigation charts. During construction there will be an

anchoring exclusion zone along the pipeline corridor. Extensive consultation with all harbour users, including fishermen and the Seafood Council will take place to establish agreement on the best way forward to protect the pipeline with minimum if any disturbance to the fishing community, and this would be done as part of the detailed studies.

2.3.2 Commercial Shipping

Two shipping lanes run to the west of the Sunrise Gas Field, and the Sunrise to Wye pipeline would cross these lanes.

The types of vessels using shipping lanes in the Timor Sea area include rig tenders, navy ships, tankers, livestock, bulk cargo and car carriers, container and general cargo vessels, barges and passenger vessels.

The number of vessels recorded by the Darwin Port Corporation visiting Darwin Port between September 1999 and September 2000 was 2059. Rig tenders (497), livestock carriers (413), navy vessels (392) and container ships (216) make up 73 per cent of the total number of vessels. Pearling vessels, yachts, ferries, fishing and pleasure boats make up a very small proportion of the total.

Several cruise ships enter Darwin Port each year. From September 2001 to November 2002, 22 cruise ships are expected to arrive and depart Darwin Port. Of the 22 cruise ships arriving in Darwin, 6 are expected to travel from Bali, one from Palau and one from Timor/Indonesia. Four ships are bound for Cairns, one for Timor/Indonesia, one for Brisbane and one for Bali.

The offshore facility will be well lit at night and during times of poor visibility, and its presence is unlikely to affect local shipping. A safety zone of 500 m will be maintained around the platforms and FSO. The presence of the facility and anchors means that shipping will need to avoid the area to prevent fouling anchor chains or other accidents. This exclusion is not likely to have any significant impact on shipping activities.

2.3.3 Other Activities

There are no known tourist or recreational fishing interests in the area.

2.4 Local, Regional and Global Environmental Objectives

2.4.1 Environmental Policy Objectives

As operator of the Sunrise Gas Project, the policies and standards of Woodside will be applied to the design and operation of the facilities.

Woodside recognises that operations are carried out in environmentally sensitive areas, and shares the desire of the community to develop natural resources in a way, which protects people and the environment. All activities will be planned and performed so that adverse effects on the environment are either avoided or kept to an acceptable level while meeting all statutory requirements.

Woodside has a corporate environmental policy that provides a public statement of the corporate commitment to protecting the environment as well as a number of individual policies aimed at managing specific environmental issues such as:

- ❑ Waste Minimisation and Disposal Policy - Woodside will ensure that all waste management practises are undertaken in an environmentally acceptable manner;
- ❑ Flaring and Venting Policy; and
- ❑ Ozone Depleting Substance (ODS) Policy.

Woodside's Environmental Policy is contained in **Appendix B**.

At a later stage of the project Woodside will possibly develop project-specific policies, customised to the requirements and processes of the Sunrise Gas Development.

2.4.2 Occupational Health and Safety Objectives

Woodside employs a structured approach to the management of Health, Safety and Environment (HSE) issues via a formal and documented HSE management system (HSE-MS). The HSE-MS ensures that impacts from Woodside's operations are either avoided or kept "as low as reasonably practicable" (ALARP), and it also drives continuous improvement in the company's environmental performance. The HSE-MS assists in providing confidence to regulators, stakeholders and the community that Woodside is responsibly fulfilling its environmental responsibilities.

Woodside believes that all injuries are preventable and that striving continuously to improve the health and safety of all employees, contractors and third parties who are impacted by Woodside activities is fundamental. Woodside's Health and Safety Policy is included in **Appendix B**.

2.4.3 National Greenhouse Strategy Implications

The National Greenhouse Strategy (NGS), released in November 1998, was developed by the Commonwealth and State and Territory Governments, with input from the Australian Local Government Association, industry and the community. It maintains a comprehensive approach to tackling greenhouse issues, and details both existing and additional measures aimed at improving our awareness and understanding of greenhouse issues, limiting the growth of emissions and enhancing greenhouse sink capacity, and developing adaptation responses.

The NGS provides the strategic framework for an effective greenhouse response and for meeting current and future international commitments. It provides an impetus for action by governments, stakeholder groups and the community and leaves Australia in good stead to meet the Kyoto Protocol targets.

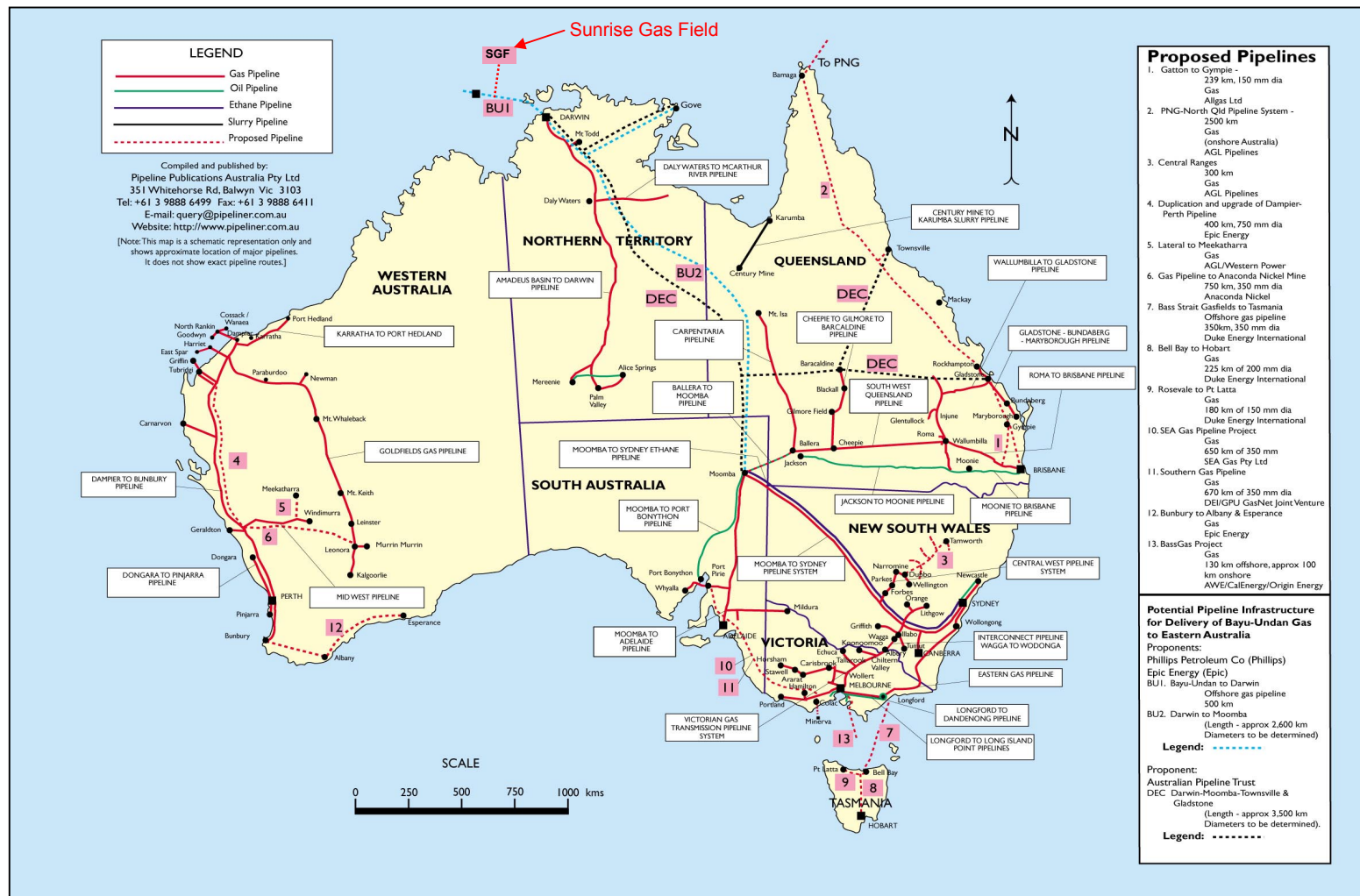
Continued energy market reform is a key element of Australia's greenhouse response and of the NGS. Progressive restructuring of the electricity and gas industries over the last decade has led to greater competition amongst generators, supply efficiency improvements, and innovative promotion of renewable energy.

Further reforms outlined in the NGS include the delivery of consistent and compatible national frameworks for gas and electricity by 2002, and removal of barriers for grid connection of small scale generation, such as from co-generation and renewable sources.

Governments are working with industry to pursue strategies for energy industries to abate greenhouse gas emissions. Furthermore, electricity retailers and other large electricity buyers will be legally required to purchase 2 per cent of their electricity from renewable or specified waste-product energy sources by 2010.

The Northern Territory's response to the Greenhouse Strategy was in the form of several objectives, one of which stipulates that operators of onshore and offshore oil and gas facilities must reduce greenhouse gas emissions to as low as reasonably practicable. The end result was the promulgation of environmental regulations under the *Petroleum (Submerged Lands) Act*, which requires all oil and gas producing companies to submit environmental management plans incorporating emissions reporting (http://ngs.greenhouse.gov.au/action_plans/module7/measure7.1/nt.html).

Woodside is making concerted efforts to reduce Greenhouse emissions, as a voluntary participant in the Commonwealth Government's Greenhouse Challenge launched in 1995. The Greenhouse Challenge is a joint voluntary initiative between the national Government and industry to abate greenhouse gas emissions. Participating organisations sign agreements with the Government that provide a framework for undertaking and reporting on actions to abate emissions. The Greenhouse Challenge has been highly effective in achieving greenhouse gas emissions abatement, and in building the capacity of both Government and industry to identify, monitor, manage and report greenhouse gas emissions.

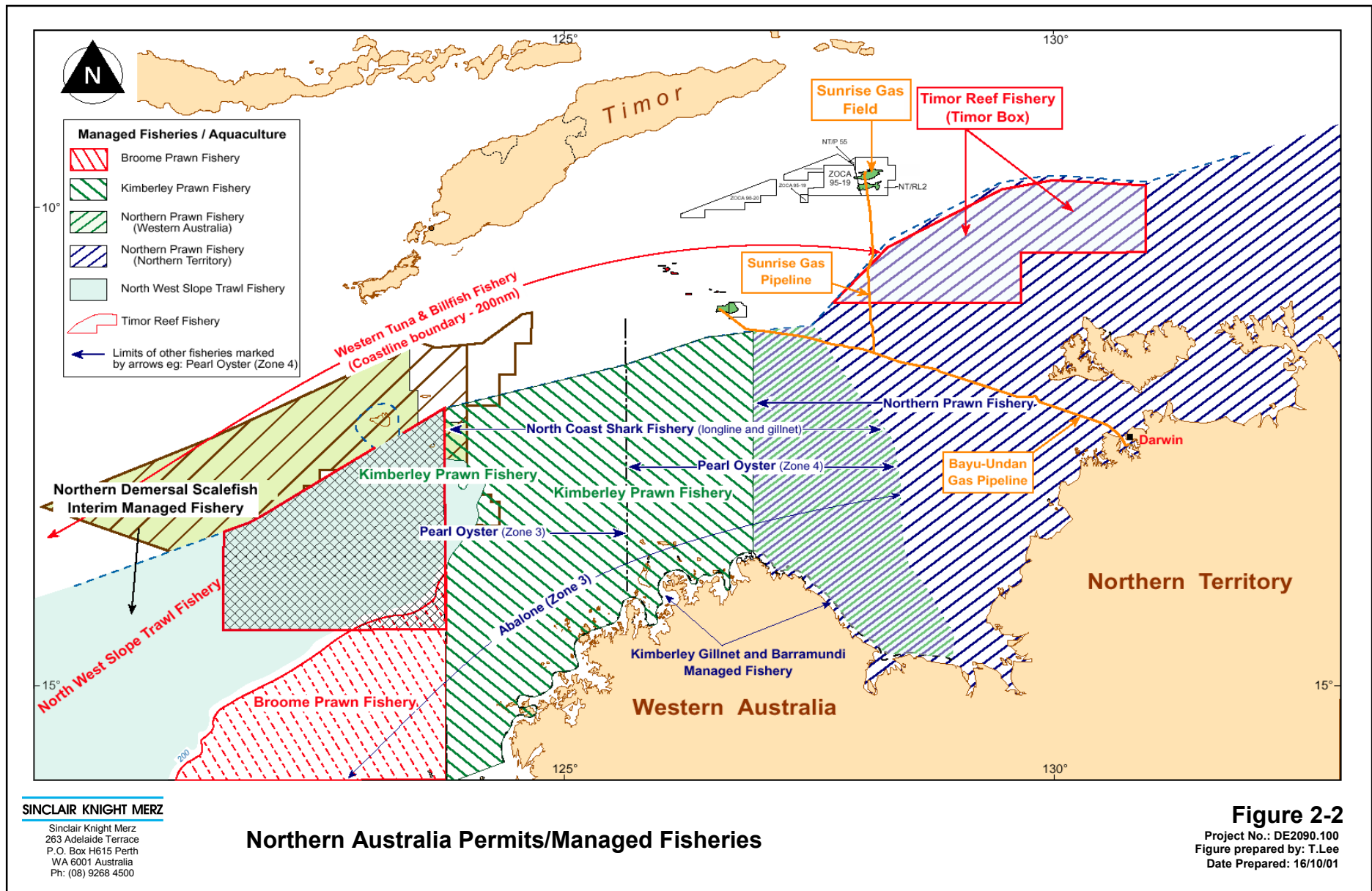


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Australia's Major Pipeline Systems

Figure 2-1
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Northern Australia Permits/Managed Fisheries

Figure 2-2

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