Oil & Gas
Northern Territory 2004

The Northern Territory Department of Business Industry and Resource Development administers four different areas:

- **AREA 1.** Onshore Area, 1.35 million km² of land.
- **AREA 2.** Territorial Waters Three nautical miles around the Territory coastline.
- **AREA 3.** Northern Territory Adjacent Area, 0.501 million km² between the Territorial Waters line and the international borders. This area is administered by the Department on behalf of the Commonwealth of Australia.
- **AREA 4.** The Territory of Ashmore and Cartier Islands Adjacent Area, 77187 km² within the Western Australian Adjacent Area. This area is administered by the Department on behalf of the Commonwealth of Australia.

**JPDA Development Area** (JPDA) is administered by a joint authority independent from the Australian Government. All resource within the offshore area belongs to the Federal Government and the Department administers these areas on behalf of the Commonwealth of Australia.

**CONFERENCES**

The Department attended the following petroleum events:

- **APPEA 2004,** the annual Australian Petroleum Production and Exploration Association Conference was held in Canberra from 28–31 March. This is considered to be the most important national petroleum event in Australia. The Department had a noteworthy presence and hosted several activities, ranging from a stand in the exhibition to hosting the author’s lunch. The Honourable Kon Vatskalis, the Minister for Mines and Energy, invited industry representatives for a breakfast briefing organized by OTD where Mr A. Andreffakis presented a talk on the Territory and its hydrocarbon opportunities. Mr John Carrol also spoke during the Author’s Lunch hosted by the NT Government. Both speakers highlighted business opportunities and Darwin’s competitive advantages.

**SEAOCSEAAOCSEAAOCSEAAOCSEAAOC 2004,** an international annual conference, was held in Darwin from 7–9 June 2004 and was a great success. It was organized by OTD in conjunction with the Chief Minister of the Northern Territory, The Hon Clare Martin. A number of high-level presentations on strategic issues were given. This year an inaugural exhibition was also organized and it is intended that this will be expanded in future conferences.

**JOINT PETROLEUM DEVELOPMENT AREA (JPDA)**

The following are significant activities undertaken in the Joint Petroleum Development Area:

- **Sunrise Project** deferred indefinitely.
- **Bayu-Undan development drilling completed.**
- **Bayu-Undan to Darwin pipeline nears completion.**
- **Bayu-Undan 2004 production (provisional figures)**: 216 Bcf raw gas (residual gas is re-injected after removal of condensate and LPGs), Liquids production = 132 million bbl condensate, and 5.7 million bbl LPGs.
- **JPDA Oil Information Centre officially opened in February 2004.**
- **Total number of Bayu-Undan field wells completed (to 31 December 2004):** 6 producers and 4 injectors.
- **As of 31 December 2004, Bayu-Undan Facilities were handling up to 1.1 billion standard cubic feet of raw gas per day.** This is the design capacity.

**Onshore**

Onshore, five exploration permits, two retention licences and three production licences are being administered by the Department.

- Two Exploration Permits in the McArthur Basin were awarded to Sweetpea Corporation on 15/04.
- Five other permit applications are currently being progressed through the Department’s Assessment.

**Producing Fields**

- The following are significant producing fields:

  - **Bayu-Undan Field**
  - **Morrin Field**
  - **Tennant Creek Field**
  - **Ngukurr Field**
  - **Koonalda Field**

**Development Area**

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PETROLEUM RESOURCE ACTIVITIES END OF 2004 CALENDAR YEAR UPDATE

OBJECTIVES

The objectives of the Department’s Resource Management section are to provide a framework for hydrocarbon to be exploited in a manner that maximizes returns to the community. This is achieved by advising on matters related to granting and maintaining petroleum titles in the Territory and in adjacent Territory and Commonwealth waters; by monitoring oil and gas production; and by ensuring the operators are following pertinent legislation, guidelines and good practice in petroleum activities.

HIGHLIGHTS OF 2004

2004 was a year of significant events in the petroleum area. There was great interest in onshore exploration, with numerous applications and ambitious work programs committed.

The Northern Territory Government sponsored several activities at APPEA 2004, over 300 delegates attended AC/L1 in Darwin.

In December 2004, OMV Australia intersected an oil column in Katandra-1, in AC/P24.

Seven geophysical surveys were carried out in offshore permits at a total cost of A$4.2 million.

Three onshore and two offshore wells were drilled in 2004 at a cost of A$33.8 million.

Three new Retention Leases plus two renewal applications are currently being assessed by Resource Management.

Onshore, Mereenie continues to produce oil.

POTENTIAL EXPLORATION AREAS

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OIL PRODUCTION

The Northern Territory’s onshore oil production comes only from the Mereenie gas and oil field. The volume of onshore oil sales from Mereenie declined by 6.3% between 2003 and 2004. (Figure 2). The Southern Territory’s onshore oil production is generated from the Northern Territory Morwell 1 well, which was completed in 2004.

GAS SALES

All of the Territory’s gas production is from the Amadeus Basin, south of Alice Springs. The Territory Government has contracted Magellan Petroleum, who operate Palm Valley, and Santos, who operate Mereenie, to supply the gas needed to generate electricity.

Combined gas sales volumes (Figure 3) from the Palm Valley and Mereenie gas field declined by an overall 4.6% between 2003 and 2004. Details for the two fields are as follows:

1. Palm Valley: Gas sales volumes declined by 9.3%.
2. Mereenie: Gas sales volumes declined by 2.7% of the same period in 2003.

PRODUCTION

The offshoo fields, Laminaria, Corallina, Jabiru and Challis (Figure 1), are reported in the section on offshore operations.

The well flowed up to 8 million standard cubic feet of gas per day.

The Department administers 13 exploration permits, four retention leases and four production licences in the Ashmore and Cartier Islands Adjacent Area, on behalf of the Commonwealth of Australia. A new well is currently committed to be drilled in 2005 in this area. (Figure 4).

TERRITORY OF ASHMORE AND CARTIER ISLANDS ADJACENT AREA

Two areas were offered in the Ashmore and Cartier Islands Adjacent Area.

1. AC03-2 was offered to Coogee Resources, which has accepted the offer.

2. AC03-3 was offered to Coogee Resources and accepted by Natural Gas Corporation Pty Ltd. This area is currently offered under AC/P33, following its award in 24 June 2004.

3. Two Retention Leases, AC/P44 and 5, were awarded to the Tenacous Oil Field on 1 April 2004.

4. O/PV operates both titles, which include the two parts of the Tenacous oil discovery in both AC/P44 and 5.

Three applications for new Retention Leases are currently being assessed and negotiated with the Commonwealth in this area.

NORTHERN TERRITORY ADJACENT AREA “BONAPARTE BASIN”

The Department administers 8 eleven exploration permits and three retention leases in the Northern Territory Adjacent Area, on behalf of the Commonwealth of Australia. A new well is currently committed to be drilled in 2005 in this area. Over 1000 line kilometres of 2D seismic surveys are also committed in this area.

N/TP68 was awarded to TEP Australia on 23 February 2004.

Figure 1 Northern Territory petroleum producing fields.

Figure 2 Annual oil production from 1997 to 2004.

Figure 3 Quarterly gas sales volumes in the last two years.

• Cool-1 (AC/P2, Coogen)

Cool-1 was drilled from 7-24 March 2004, to a final depth of 1624.9 m. The well was plugged and abandoned.

Several exploration and work-over wells are expected to be drilled consecutively as the Ocean Bounty is contracted for the following drilling. The Ocean Bounty was abandoning Tabbot-1 and Tabbot-2 at the time of preparation of this update:

Mojave-1 in AC/P26, is expected to be drilled by Hardman. The rig’s well in the near future, as the Ocean Bounty finalises the abandonment of Tabbot-1 and 2.

Vista-1 in AC/P21 is expected to be drilled by Eni soon after.

Calidus-1 is expected to be drilled in NT/P64 by ConocoPhillips, soon after the rig moves from Vesta-1.

The Ocean Bounty has been contracted by Coogee, who are planning to drill 3 wells, starting in mid July 2005:

Magellan-4 in NT/P61. After Coogee bid in and acquired an interest in this permit, and two commitment wells in AC/P34, three additional wells are planned. Another two optional wells are being discussed, but no decision has been made on these, as yet.

Another rig will be involved in an extensive drilling program planned by Woodside in AC/P4 and AC/L4. The Axiom Eagle has been contracted by Woodside for several drilling and work-over operations, and an exploration well, Potalamoa-1, is to be drilled in AC/P8. This is an exploration commitment well.

The well flowed up to 8 million standard cubic feet of gas per day.

Another commitment well, Corallina-2 horizontal, was drilled in the northern part of the field. The well faced serious drilling problems. The well’s completion is scheduled for October 2005.

The well, which flowed 2128 m of gas per day, was abandoned.

Another commitment well, Marloo-1, was drilled between 12 October 2004 and 3 November 2004 to a depth of 1366.6 m. The well was designed to boost gas production from the P-1 level gas cap in the Mereenie structure. The well flowed up to 8 million standard cubic feet of gas per day.

In AC/P26, a development well was drilled in Marloo-1 between 4 June and 13 August 2004. PV-11 was designed to accelerate gas production from this field. The well faced serious drilling problems. Finally, the well reached the planned total depth of 2114 m without success, and it could not flow gas after several attempts. It was then decided to plug and abandon the well.

Two wells were drilled in Mereenie following completion of PV-11. The two wells were designed to increase gas production and meet Mereenie contractual obligations to Gasgo:

1. East Mereenie-43: This well was drilled between 11 October 2004 and 3 November 2004 to a depth of 1366.6 m. The well was designed to boost gas production from the P1 level gas cap in the Mereenie structure. The well flowed up to 8 million standard cubic feet of gas per day.

2. West Mereenie-43: This well was drilled from 11-27 November 2004 to a depth of 1218 m. The well was designed to boost gas production from the P1 level gas cap in the Mereenie structure. The well flowed up to 8 million standard cubic feet of gas per day.

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