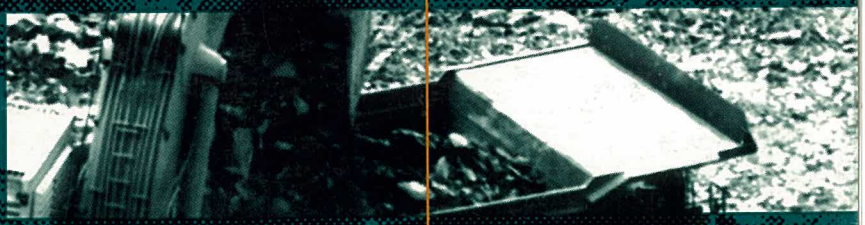
Department of Minerals and Energy

Annual Report 1996



GOVERNMENT OF WESTERN AUSTRALIA

DEPARTMENT OF MINERALS AND ENERGY WESTERN AUSTRALIA

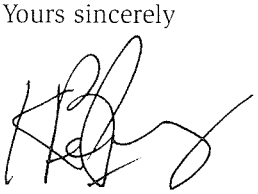
The Honourable Kevin Minson JP MLA
Minister for Mines
Parliament House
PERTH WA 6000

Dear Minister

In accordance with the Financial Administration and Audit Act 1985, I submit for your information and presentation to Parliament, the Annual Report of the Department of Minerals and Energy of the State of Western Australia, for the year ended 30 June 1996.

The Annual Report has been prepared in accordance with the provisions of the Financial Administration and Audit Act 1985. It uses the format established in previous years, with the Department's activities being described under Corporate Programs. These are set against a background of the mining and petroleum industry in 1995-96.

Yours sincerely



Ken Perry
DIRECTOR GENERAL
DEPARTMENT OF MINERALS AND ENERGY

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Report of the Director General

KEN PERRY
Director General

Western Australia is one of the world's great mineral provinces.The Department of Minerals and Energy is charged with responsibility for regulating the safety and environmental performance of mining and petroleum operations, and with the pro-active encouragement of industry through collection and presentation of geoscientific information, and assistance in mineral-processing research. Our vision is for Western Australia to be the best place in the world to explore and develop mineral and petroleum resources and projects.

This vision is focused on the outcomes for our customers of all Department activities. We succeed when tenure is swiftly granted and secure, employee and public safety is assured by industry-wide safety systems, the natural environment is protected, comprehensive geoscientific information and advice are available and readily accessible and the community receives appropriate returns from the exploitation of its natural resources.

The 1995-96 financial year was one of mixed outcomes for the Department in the face of considerable challenges, particularly in relation to native title and the procedures established under the Commonwealth Native Title Act (NTA).

Western Australia continued to dominate the national scene in mineral and petroleum exploration expenditures but there are increasing signs that the uncertainty and delays created by the Commonwealth Native Title Act are beginning to have an impact. The increase in exploration expenditure by Australian companies overseas is now greater than the growth in their local expenditure, no doubt partly as the result of these delays and uncertainties.

Native Title claims covering about 70 per cent of the State have now been registered with the National Native Title Tribunal (NNTT). Around Kalgoorlie the layers of claims reach eight deep in some areas. About 98 per cent of all mineral title applications in Western Australia must now be processed via the future legislative regime of the NTA. Not one of these claims had been determined by the NNTT by 30 June 1996.

Compliance with NTA procedures has delayed the granting of some 90 per cent of exploration titles by three months, with most of the remaining 10 per cent delayed by five to six months and a small number (about 17 titles) delayed for a year or more. Mining titles are affected to an even greater extent with only some 2-3 per cent being granted within the last 10 months of the year. While this has not had an effect on production at this stage, the delays, increased industry costs and uncertainty will do so in the medium to long term if a workable system is not adopted. Compliance with NTA procedures is estimated to have cost Government about $4.7 million including about $3 million by the Department of Minerals and Energy. This has required the diversion of considerable resources within the Department to the detriment of our customers, but with no noticeable improvement in NTA outcomes.

If it is to achieve its vision the Department must work towards resolving these difficulties and must counter the impact on the industry of delays and uncertainties in other ways. A number of initiatives by the Department during 1995-96 contributed towards accomplishing this, including the extension of the Tengraph® computerised tenement graphics system to Meekatharra, Mount Magnet, Marble Bar, Kununurra and Southern Cross.

Other initiatives included a considerable increase in the output of geological and geochemical maps. Also, the commissioning of the Mineral Processing Laboratory at Waterford improved the availability of metallurgical testing facilities in Western Australia, making an important contribution to the State's scientific infrastructure.

Another significant achievement was the proclamation of the new Mines Safety and Inspection Act 1994 and accompanying Regulations. This new legislation, which brought together the requirements for coal and other minerals and formally introduced the "duty of care" principle to the mining industry, is widely recognised as the best package of mine safety legislation in Australia. Work also commenced on the development of a computer-based mining information network which will allow the Department's safety information to be available electronically to mine operators throughout the State. This is expected to provide a boost to the industry's already good safety record.

Report of the Director General

Also on the positive side of the ledger, during the year Western Australia became Australia's leading producer of oil and gas, surpassing Victoria. This has been recognised by industry with a number of major players transferring additional staff or becoming established in Perth.

The Department has adopted the Premier's Public Sector Customer Focus concept into its daily activities and processes. The Department's key customer focus objectives are to provide customers with instant, 24-hour, remote access to relevant Department and industry information; and to increase staff time spent on customer liaison, advisory and educational programs.

Visible aspects of this — the Customer Service Charter and a series of Customer Liaison Committees and Councils — are underpinned by specific customer focus initiatives fully integrated into operational areas. In keeping with this approach, reports on customer service have been incorporated into individual program descriptions and key performance indicators.

The Department deservedly has a good reputation with industry and the community because of the quality and dedication of its staff and its focus on serving the customer. An attitude survey completed in early 1996 indicated that customer service was the unprompted highest priority for our staff.

In the forthcoming year the Department faces a number of challenges. These include the difficulties and costs associated with granting mineral and petroleum titles under the Commonwealth Native Title Act and the on-going problems of monitoring and regulating the rapidly changing industry. In the mining industry the difficulties are exacerbated by the increasing move towards underground mining and the shortage of skilled workers in such operations. In the petroleum industry, the simple pace of exploration and development provides the challenge.

I congratulate and thank staff for their successes during 1995-96. Their record of achievement gives me confidence that we will meet and overcome the challenges of the future.

K R Perry
DIRECTOR GENERAL

29 August 1996

The Department in Brief

The Department of Minerals and Energy manages and supports the sustainable development of minerals and petroleum in Western Australia in the best interests of the community.

Its corporate programs, which are described in this Annual Report, aim to provide:

- Geoscientific information and services to support a high level of effective mineral and petroleum exploration;
- Petroleum and mineral title systems that deliver secure titles which are necessary to give resource explorers and developers the confidence to invest in high-risk ventures;
- Safe and healthy working conditions for people employed in the minerals and petroleum industries;
- Sound environmental management practices during and after exploration, development and mining;
- A fair return to the community for the extraction and sale of minerals and petroleum; and
- A system whereby explosives and dangerous goods are transported and stored so as to minimise the risk to the public.

The Department was established as the Department of Mines on 1 January 1894 following unprecedented demand for services and regulation in the wake of the Coolgardie and Kalgoorlie gold rushes in 1892-93.

It was formed by combining the mining registration and survey functions of the Lands Department with the Geological Survey of Western Australia. Within the first eight years of its birth, the Department was expanded to include the equivalent of the current Explosives and Dangerous Goods Division, the Mineral Processing Laboratory and the Chemistry Centre.

The name of the Department of Mines was changed to the Department of Minerals and Energy on 1 July 1992. However, the responsible Minister is still referred to as the Minister for Mines.

There have been few changes of functions over the years. However on 1 January 1996 the ground water function of the Department was transferred to the new Water and Rivers Commission bringing together all water resources functions of the State for the first time.

The Department currently administers 15 Acts under the Western Australian Parliament, the principal ones being the Mining Act, the Mines Safety and Inspection Act, the Petroleum Act, the Petroleum (Submerged Lands) Act, and the Explosives and Dangerous Goods Act.

During 1995-96 the Department collected $537 million in royalties, lease rents, taxes, licences and other revenues. Of this amount, $18 million was paid to the Commonwealth for its share of royalties received from petroleum production in Commonwealth waters.

Recurrent expenditure incurred by the Department during 1995-96 was $46 million, while another $3 million was spent on capital costs.

There was a 13 per cent turnover of permanent staff during 1995-96. The Department had 578 full-time-equivalent (FTE) employees on its books at 30 June 1996, compared with 650 at the same time the previous year. This reduction in FTEs resulted from the transfer of hydrogeology staff, some increased use of contractors and some efficiency gains.

Features of 1995-96

Customer service

In 1995-96 the Department made major advances in the electronic access to its extensive archive of data and information. Specifically, this related to mineral tenement information (via *Tendex* and *Tengraph*®), exploration data (*WAMEX*) and mine safety information (*MINet*).

Native title

The percentage of mining leases granted dropped from nearly 100 per cent of those applied for in 1994-95 to about 30% in 1995-96 as a result of the Native Title Act procedures.

Petroleum production

The value of petroleum production increased to $3.9 billion to rank ahead of gold for the first time.

Mine safety

Fatality incidence rate and industry injury index decreased significantly. New Mines Safety and Inspection Act and Regulations came into effect giving contractors and companies a specific duty of care towards employees.

Environment

Environmental performance bonds on mining operations increased to $72 million reflecting industry growth.

Community returns

Mineral and petroleum royalties collected for the State and Commonwealth Governments increased from $372 million in 1994-95 to $469 million in 1995-96.

Petroleum exploration

Petroleum exploration activity increased with 220 titles in force at 30 June 1996 compared with 201 the previous year.

Petroleum industry safety

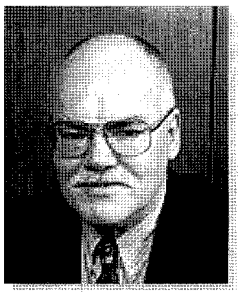
The first safety case in Australia for an existing installation was completed for North Rankin A.

Geoscience mapping

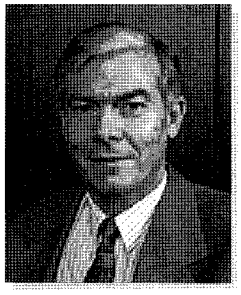
During 1995-96 geological map coverage in Western Australia increased with 12 new full-colour 1: 100 000 scale maps and seven at other scales being published. The publication rate of 1: 100 000 coloured geological maps has doubled over the last four years.

Dangerous goods database

DEXIS, the electronic licensing and inspection management system for dangerous goods, was completed.

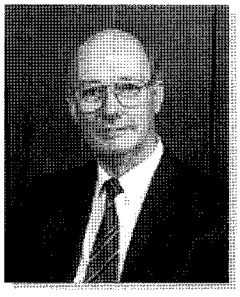


Bill Phillips - Director



Lee Ranford - Assistant Director General

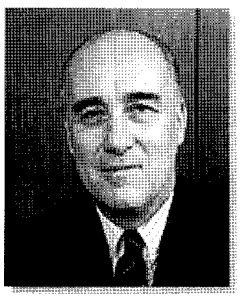
Jim Torlach - Director



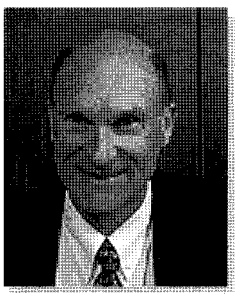
Colin Branch - Assistant Director General

Ken Perry
Director
General

Ian Fraser - Director



Pietro Guj - Director



Ken Price - Director

Tony Bagshaw - General Manager

Directorate Responsibilities

Mineral Titles Division	Mineral title registration and performance Warden's Court Mining information services
Policy and Planning	Economic Policy Corporate planning and review Public affairs Land access
Mining Operations Division	Mining occupational health and safety Mining environmental management
Corporate Services	Human resources Finance and administration Computing and information Internal audit Mineral and petroleum royalties
Petroleum Operations Division	Petroleum title registration and performance Petroleum exploration and production Petroleum safety Petroleum environmental management
Geological Survey Division	Regional geoscience mapping Mineral and petroleum resources Mineral and petroleum exploration data
Explosives and Dangerous Goods Division	Public safety, dangerous goods
Mineral Processing Laboratory	Mineral processing testwork Research and development Consulting and advisory services

Industry Activity in 1995-96

The value of mineral and petroleum production in Western Australia rose by just over seven per cent to around $15 billion in 1995-96. The rise was mainly attributable to an increase in the volume and value of condensate, nickel, heavy mineral sands and liquefied natural gas (LNG).

Petroleum

For the second consecutive year petroleum (crude oil, condensate and natural gas) has been the leading contributor to the State's resources sector. The combined value of petroleum production rose by six per cent to about $4 billion, accounting for 26 per cent of the value of Western Australia's total minerals and energy production. A particular highlight for the petroleum industry over the year was Western Australia's rise to prominence as Australia's leading oil producing State, with the State's daily oil and condensate production exceeding that of Victoria's Gippsland Basin for the first time. Other highlights included first production from the Wanaea and Cossack oilfields, successful production testing of horizontal wells at Apache's offshore Stag oilfield and at Santos' onshore Sundown oilfield. There has been growing international interest in Western Australia's petroleum industry in recent years with a number of foreign companies seeking to purchase local assets. The increased focus on Western Australia is reflected in the movement of head offices of two major oil companies to Perth during the year.

The number of petroleum titles in force at 30 June 1996 was 220, an increase of 19 over the previous year. A high level of exploration and development activity in the petroleum sector continued throughout the year with a consequent demand on Department services.

Locally-produced petroleum has become the key to large-scale mineral processing in Western Australia. Deregulation of the domestic gas market has created greater competition and consequently lower prices for natural gas. This has resulted in companies examining mineral processing options. It has also encouraged private sector participation in energy infrastructure such as the Goldfields gas pipeline and is expected to assist in making other mineral processing projects economically viable.

Gold

In terms of value of production, gold continued to rank second after petroleum. Despite an increase in volume of seven per cent, and an increase in the US dollar price for gold, the value of production increased by less than six per cent to $3 billion. This was due to the appreciation of the Australian dollar. New projects brought on stream in the past year included Lynas Find, Nimary, Jundee, Palm Springs and Chalice. The increase in underground mining continued with work beginning on Kanowna Belle and a commitment to underground development at Yilgarn Star.

An estimated $350 million was spent on gold exploration in Western Australia during the year, representing just over 70 per cent of total mineral exploration expenditure which was estimated at $500 million.

Iron ore

Despite a slight decrease in volume, the value of production increased by four per cent to $3 billion dollars. Highlights of the year included BHP commissioning the expansion of operations at Jimblebar and committing to double the capacity at Marillana Creek (Yandi 2) to 30 million tonnes per annum. BHP also began construction of a $1.4 billion direct-reduced-iron plant and associated infrastructure at Port Hedland. Hamersley Iron commissioned its fines ore treatment plant at Paraburdoo. There was continued interest in downstream processing of iron ore with a number of other developments under consideration.

Alumina

With five per cent increase in volume and firmer average world prices in 1995-96, the value of alumina production increased by 13 per cent to $2 billion. The significant draw-down of aluminium stocks on the London Metal Exchange in 1995, a result of the six leading producing countries agreeing to cut output by ten per cent, prompted a sharp rise in aluminium prices. Though metal prices have since eased, the underlying demand for alumina appears to be on an upwards trend.

Industry Activity in 1995-96

Nickel

The value of Western Australia's nickel production increased by 20 per cent to just over $1 billion. The resurgence of the nickel industry, indicated by buoyant prices and increased output, lead to several new projects being assessed. Some of the excitement in the nickel industry dissipated in 1996 with the realisation that the recent price levels are unlikely to be sustained in the long term if world nickel output continues to increase significantly.

Diamonds

Diamond production in Western Australia increased by almost eight per cent during the year. Lower prices lead to a one per cent decrease in the value of sales of just under $500 million. Normandy Poseidon ceased production at its Bow River alluvial diamond mine in December 1995. Argyle is continuing with its studies of an underground operation. From July 1996 the Argyle Joint Venturers will begin selling direct to the world diamond market after not renewing their contract with the Central Selling Organisation. The partners have suggested that direct marketing can lead to higher prices but does not assure the sale of all diamonds produced. In efforts to secure an alternative market the Argyle joint venture has been negotiating with diamond cutters in India where most Argyle diamonds are currently processed.

Mineral sands

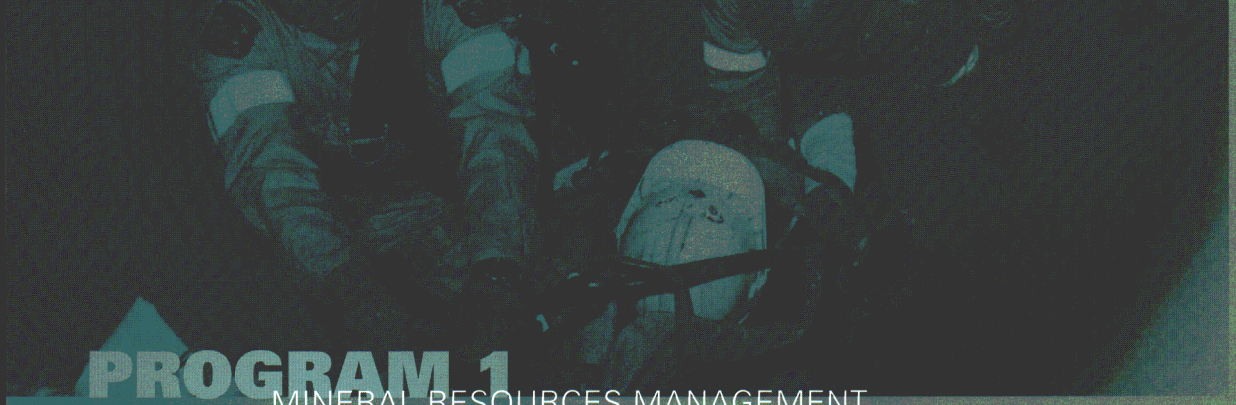
The resurgence of the mineral sands industry continued with an increase of 20 per cent in the value of production to $600 million. Construction of BHP's Beenup mineral sands mine continued and the mine is expected to commence production in late 1996. Westralian Sands has committed to the expansion of its synthetic rutile plant at Capel and Rhone Poulenc Chimie Australia is continuing with plans for its rare earth plant at Pinjarra. The outlook for mineral sands continues to be promising in terms of both demand and price.

Other minerals

Coal experienced a flat year with production increasing less than one per cent and value of production decreasing almost two per cent to $270 million. Western Australia's coal industry has been on an efficiency drive to decrease costs and so improve its competitiveness with natural gas. Western Collieries plan to consolidate all its operations at the Premier mine as existing open cuts are completed in 1996-97.

The value of production of base metals decreased by 18 per cent to $150 million. The tin-tantalum-lithium combined value of production increased by almost ten per cent to $50 million.

Dampier Salt is committed to developing a two million tonne per annum capacity gypsum deposit at Lake MacLeod. Construction is to begin shortly with production commencing in the second half of 1997.



PROGRAM 1
MINERAL RESOURCES MANAGEMENT

Objective: *To ensure that the exploration for and mining of the State's mineral resources are managed for the benefit of the people of Western Australia.*

Description: *Mineral exploration and mining activities are generally conducted through relatively small operations. Most mineral deposits are small in area and, as a result, exploration and mining are controlled through the issue of a large number of relatively small mineral titles. The program ensures that explorers have access to land; explorers and miners have secure titles on which to base their investments; exploration and mining activities are conducted with high standards of worker and public safety and with due care for their impact on the environment; and the community receives a fair return from the mining of its mineral resources.*

Introduction

The direct recurrent expenditure on this program during 1995-96 was $15.3 million. This, together with associated corporate service costs of $7.0 million and capital expenditure of $2.2 million resulted in total expenditure of $24.5 million. At 30 June 1996 a total of 249 full-time equivalent staff were employed under this program.

SUB-PROGRAM 1.1

MINERAL TITLES

Objective: *To provide the mineral industry with a timely, secure and equitable titles system, and accurate up-to-date information about mineral and land tenure in order to encourage and facilitate responsible mineral exploration and development.*

Description: *Accurate and up-to-date information on land status is provided, and systems are maintained to ensure the expeditious processing and determination of title applications. A public plans system and legal title registry systems are also maintained, and dealings creating legal interests are registered. A survey-based, title certification service is provided under a "user pays" survey system, and compliance with expenditure commitments and work obligations is monitored to ensure that land is being actively explored or made available to others.*

Titles

In line with the objective of providing secure title, all applications for mineral titles on tenure other than on freehold land were submitted to the right-to-negotiate procedures of the Commonwealth Native Title Act 1993 (NTA). During the year 3 366 titles were granted.

A record 20 221 tenements, covering 41.1 million hectares, were in force at 30 June 1996. This compared with 19 200 tenements covering 38.1 million hectares at the same date in 1995. The 1995-96 year also saw an increase in new title applications which were up 170 to 5 003.

Coupled with these increases was a significant decrease in the number of tenements expired, surrendered or forfeited as holders sought to retain tenements granted before the NTA came into effect on 1 January 1994.

Table 1: Tenements

Applications for the period 1 July 1995 to 30 June 1996	No.	Area (hectares)
Prospecting Licences	1 627	208 495
Exploration Licences	1 869	19 653 760
Mining Leases	1 214	529 448
Other	293	27 202
TOTAL	**5 003**	**20 418 905**

Tenements granted for the period 1 July 1995 to 30 June 1996	No.	Area (hectares)
Prospecting Licences	1 444	177 533
Exploration Licences	1 306	12 858 959
Mining Leases	368	173 706
Other	248	5 293
TOTAL	**3 366**	**13 215 491**

Tenements in force as at 30 June 1996 (1978 Mining Act)	No.	Area (hectares)
Prospecting Licences	8 111	1 098 339
Exploration Licences	4 417	37 845 997
Mining Leases and others	7 373	2 134 622
(1904 Mining Act)		
Mineral Claims and others	320	34 090
TOTAL	**20 221**	**41 113 048**

Registration of transfers, caveats and other dealings involving changes to the title register dropped from 11 320 in 1994-95 to 10 106 in 1995-96.

Native title

- Native title issues continued to dominate the processing of mineral title applications during 1995-96.
- 150 new and often overlapping native title claims were registered with the National Native Title Tribunal (NNTT). These now cover about 70 per cent of Western Australia.
- 4 672 tenement applications were submitted under the right-to-negotiate provisions of the Native Title Act (NTA).
- Expedited procedure was claimed for 3 400 exploration and prospecting titles. Objections were lodged against 160 of these applications. A total of 2 919 applications were cleared for grant during the year. At 30 June 1996, 722 applications for exploration and prospecting titles were still within the two-months advertising period under the NTA.
- 256 mining leases not subject to native title claim were cleared for grant, and 920 leases within claim areas became subject to negotiations with native title parties.
- 1 338 native title negotiations concerning the granting of mining tenements were under way in June 1996. These involved 906 mining tenement applications and 47 different Aboriginal claimant groups.
- Applications for determination were submitted to the NNTT for 238 mining leases, 11 general purpose leases and one exploration licence.
- 11 agreements were lodged with the NNTT, allowing 27 mining leases to be granted.

Referral of tenement applications under the NTA provisions added months to processing time and affected processing targets.

A mineral title management system and database were developed to assist the Department in dealing with the various processes and legal obligations involved in granting tenements in accordance with the NTA.

Title administration

Advances in information technology and systems development gave improved access to more accurate and up-to-date information.

The *Tengraph®* system was implemented in regional offices at Leonora, Meekatharra, Mount Magnet, Marble Bar, Broome and Kununurra during the year. In support of this, industry-user training was provided in regional centres and Perth as *Tengraph®* was promoted in each office. The system will be installed at the remaining centres of Southern Cross, Norseman and Carnarvon in the first quarter of 1996-97.

In May 1996 conversion of *Tengraph®* to the Windows95™ operating system began. This will provide a platform for direct online access to *Tengraph®* information.

The *Tengraph®* system has continued to receive recognition throughout Australia and won a gold award at the Government Technology Productivity Awards in Canberra in April 1996.

A major project is in hand to computerise all tenement registers as part of the Mining Titles System (*MiTiS*). The system will mirror the existing hardcopy register information and have direct links to *Tengraph®* providing users with access to graphical and textual tenement information from a single screen. Implementation of *MiTiS* is planned to occur in Kalgoorlie in early 1997 with other offices to follow later in the year. When complete, access to information on any tenement will be available from mining registrars' offices throughout the State or via remote access.

In 1995-96 the Tenement Rental and Expenditure System (*TRAXS*) was used to generate rental advice letters to all tenement holders one month prior to the anniversary date. This resulted in fewer initiations of forfeiture action for non-payment of rent.

The level of compliance by tenement holders with expenditure and reporting obligations continued to improve in 1995-96. Compared with the previous year there was a three per cent increase in the lodgement of reports on expenditure, a 9.5 per cent increase in the number of applications for exemption from expenditure and a 40 per cent decrease in the number of tenements forfeited for non-payment of rent. (See Table 2: Title Monitoring).

Plaints lodged by third parties seeking forfeiture on the basis of non-compliance with expenditure requirements increased from 225 to 454 during the year. A total of 169 tenements were subsequently forfeited as a result of plaint action.

Table 2: Title monitoring

	1993-94	1994-95	1995-96
Reports received	12 678	15 355	15 812
Exemption applications	3 612	4 496	4 926
Tenements forfeited (rent/expenditure)	102	124	54

Customer and information services

The number of customer enquiries at the Department's Perth and 11 country offices changed little from that of the previous year. The daily average of customers attending the Mineral House Information Centre was 80 compared with 81 for the previous year.

The number of mining tenement register searches increased by 24 per cent to 32 467 during 1995-96.

Orders for tenement plans decreased by 22 per cent to 7 409. This decrease was caused by clients choosing to produce their own plans from the *Tengraph®* system.

At 30 June 1996, approximately 420 clients had online access to the *Tendex* Tenement Information System to search mining tenement register information from external locations via the Internet.

Remote electronic access is a high priority customer focus objective ultimately designed to provide authorised users with 24-hour access to Department computer databases from their offices, homes or, even, directly from field sites.

Unfortunately, some other customer focus performance targets, in particular correspondence turnaround times, have been adversely affected by the additional workload imposed by Native Title Act procedures.

Surveys

During the year 255 survey instructions were issued, 221 new surveys lodged for examination and 161 tenements legally certified.

Approved surveyors were provided with a list of requirements for lodging global positioning system (GPS) observations, resulting in improvements in the standard of field notes and information returned.

LAND ACCESS

Compliance with provisions of the Commonwealth Native Title Act contributed to a busy year for the Department's Land Access Unit. Other issues affecting access to land for exploration and mining involved the conservation estate and urban and regional planning.

Resource access

Development of titanium minerals and basic raw material deposits in the Swan Coastal and Leeuwin Naturaliste regions continued to be affected by plans for urban growth and the demand for more land to be set aside for nature conservation. A series of resource-potential maps was produced by the Department and discussions were held with relevant agencies and community interest groups. A summary of resource areas and infrastructure requirements was provided for use by the WA Planning Commission during the development of the State Planning Strategy. The Department encouraged the quarrying industry in the metropolitan area to produce a report on its resources and production issues for consideration by local authorities and State agencies.

Comprehensive discussions with the Department of Conservation and Land Management and input from industry resulted in refinements to the South Coast and Goldfields regional management plans and agreement to extensions to Cape Range National Park. The Department finalised reports on rehabilitation in the mineral sands and gold mining industries during the year.

Environment

The Department provided comments on the State and National Rangelands Strategies. It also contributed information to the Australian Heritage Commission's Wild Rivers program and Interim Natural Heritage Charter. Advances were made in administrative procedures for the protection of declared rare flora and referrals under the onshore memorandum of understanding with the Environmental Protection Authority. Administrative procedures were developed for offshore mineral exploration and development. The Department provided input to the Department of Environmental Protection's State of the Environment report.

Aboriginal liaison

Aboriginal heritage clearance processes continued to be a major constraint to exploration in the Kimberley region. The Department endeavoured to reduce concerns by facilitating consultation with the mining industry.

Information about mining legislation and the implications and benefits of mining was provided to Aboriginal communities throughout the State.

The Department completed cross-cultural awareness training for 65 per cent of its staff during the year.

SUB-PROGRAM 1.2

MINERAL INDUSTRY SAFETY AND ENVIRONMENTAL MANAGEMENT

Objective: *To achieve improved safety, occupational health and environmental management in the mineral industry.*

Description: *This sub-program ensures that the mining industry protects its employees, the public and the environment from the consequences of mining activities. Strategies to achieve this objective include:*

- *Acquiring data regarding safety, occupational health and the environment.*
- *Assessing community perceptions and requirements with a view to setting minimum standards relating to safety, occupational health and the environment.*
- *Providing information (report-back, advice, education, training) to the community and the industry.*
- *Auditing, measuring and evaluating the industry's performance.*
- *Enforcing compliance by the industry with community standards.*

Occupational Safety and Health

The past year has seen some significant developments, some of which have impacted adversely, some favourably, on the capacity of the Department to service the industry.

Of major importance was the proclamation, in December 1995, of the Mines Safety and Inspection Act (1994) and Regulations (1995). The Act (which brings the metalliferous and coal sectors of the industry under a single legislative framework) has been widely recognised as a major step forward.

Exploration activities are within the ambit of the new Act, creating a further challenge to the Department in its effective administration of this widely spread and mobile industry sector.

Loss of technical and professional inspectorate staff continued to affect the Department adversely during the year. However, four experienced mining engineers were recruited from South Africa and this helped offset the movement of professional staff to the private sector.

The development of a new computer-based information system, (*MINet*), was completed during the year. This will increase the efficiency of information flow, data analysis, and communication with industry. An important component of this external information system is that it provides direct access by mining companies to an extensive range of data to assist in safety management.

The *MINet* project represents another facet of the Department's key customer focus objective of instant, around-the-clock information availability to its widely dispersed customer base.

The Department's Mining Operations Division made a major contribution to the development of the Safe Mining Manual for Australia, published in May 1996 by CCH Australia, for the Australian and New Zealand Minerals and Energy Council (ANZMEC) and the Minerals Council of Australia. This provides the industry with an extensive practical reference for hazard identification and risk management in the industry.

The Mutual Recognition (Western Australia) Act 1995 was proclaimed in December 1995. This Act provides for recognition within each State and Territory of the Commonwealth of regulatory standards relating to goods and occupations across Australia. As a result, persons holding statutory certification from other States for equivalent positions under the Mines Safety and Inspection Act are entitled to operate in those capacities without having to acquire separate certification in WA.

Mining industry safety

Proclamation of the new Mines Safety and Inspection Act has allowed the Interim Mines Occupational Health and Safety Advisory Board to be replaced by the Mines Occupational Safety and Health Advisory Board.

A single Occupational Safety and Health Standing Committee has been formed to provide expert advice to the Board.

The Department continued to develop and distribute guidance notes and other documentation supporting safety in mining operations.

During the year the Department contributed to the planning and organisation of the third Minesafe International Conference which is due to take place in Perth in September 1996. Held every three years since 1990, the conference has become recognised as the premier mining safety conference in the World.

The Department also provided support during 1995-96 for an extensive series of safety management seminars conducted by DuPont which is recognised as the world leader in this field.

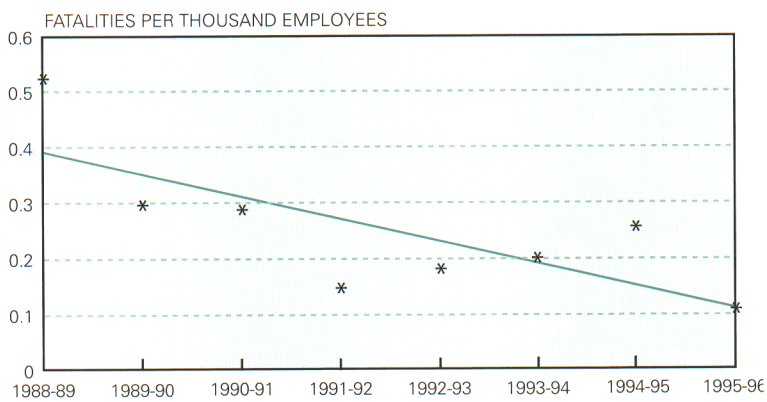
Prosecutions

During 1995-96 there were six successful prosecutions for failure to adhere to safety legislation requirements under the Mines Regulation Act.

Accidents and accident statistics

During the year four fatalities occurred in the mining industry: two in the gold sector and one each in the nickel and coal sectors. Three of the fatalities occurred underground and one on the surface. A fatality incidence rate of 0.11 per 1 000 employees was recorded for the year, compared with 0.26 in 1994-95 (see Table 3 below).

Table 3: Western Australian Mines Fatality Incidence



SOURCE: DEPARTMENT OF MINERALS AND ENERGY REPORTS

Table 4: Mining accidents

Mineral	Employees	Fatal	Serious	Minor	Total
Gold and nickel	17 007	3	192	335	527
Iron ore	8 106		51	114	165
Coal	737	1	12	67	79
Bauxite and alumina	5 846		16	44	60
Mineral sands	2 174		16	57	73
Diamonds	1 192		20	9	29
Base metals	689		5	9	14
Salt	505		1	3	4
Construction materials	355		1	3	4
Other	1008		19	34	53
Total	**37 619**	**4**	**333**	**675**	**1 008**

Accident reporting and communication

Development of the mining information network *MINet* which links the Department's safety and inspection data bases in Perth, Kalgoorlie, Karratha and Collie to mines across the State continued during the year.

As part of the *MINet* initiative, the existing Accident Report and Statistics system (*AXTAT)* has been revised and improved. It can now record high-potential accident and incident details, even where no injuries have occurred, for both mining and exploration companies. In addition, it can now report data electronically.

An internal information system known as *MODIS* (Mining Operations Division Information System) is currently under development. It will store and allow easy retrieval of audit data, record book entries, current legislation, standards, guidelines, significant incident reports and safety bulletins. Mines inspectors will have access to the information in the office and in the field.

A new information service known as *EXIS* (External Information System) is to be made available to registered external users. The information will be updated regularly and includes:

- Accident data from *AXTAT* in the form of graphs;
- Charts and tables;
- Collated accident information from other States;
- Codes of practice, guidelines, standards and current legislation; and
- Significant incident reports and safety bulletins.

Safety and inspections

This year 2 906 inspections were conducted by Inspectors of Mines, 505 more than in the previous year.

There were 424 mine fires reported during the year, 324 on the surface and 100 underground. Although most fires were quickly extinguished with hand-held extinguishers or fixed fire-suppression systems, several could not be extinguished, resulting in the loss of expensive mining machinery and, in some cases, the evacuation of underground workings.

During 1995-96 Department inspectors suspended work at mine sites on 121 occasions, compared with 185 in 1994-95, and 269 items of defective equipment were taken out of service, compared with 276 in 1994-95. Sections of underground mines were closed on 52 occasions (see Table 8 below).

Table 8: Work suspensions

	INSPECTORATE	SURFACE		UNDERGROUND	
		Safety reasons	Following accident	Safety reasons	Following accident
Number of items of equipment stood down	Kalgoorlie	52	3	27	2
	Perth	8	1	3	0
	Karratha	98	3	7	0
	Collie	57	4	4	0
	sub-total	215	11	41	2
Number of times portions of mines were closed	Kalgoorlie	11	10	24	6
	Perth	6	1	7	0
	Karratha	10	1	7	1
	Collie	25	5	7	0
	sub-total	52	17	45	7
	TOTAL	**267**	**28**	**86**	**9**

Significant incident reports

Reports on significant safety-related incidents continue to be prepared and distributed in accordance with the Worksafe guidelines.

Electrical inspections

Electrical inspections of mine sites were conducted by the Office of Energy in accordance with the Department's inter-agency agreement. The arrangement provides for Office of Energy inspection staff, already appointed under the Electricity Act 1945, to be appointed as Special Inspectors of Mines under the Mines Safety and Inspection Act 1994. This results in economies and efficiencies as inspectors carry out the dual inspection function for both Departments.

During the year Special Inspectors of Mines (Electricity) carried out 664 inspections at mine sites and issued 353 letters requiring the correction of specific defects. The inspection rate is approximately seven per cent more than the 622 inspections reported for the previous year.

A total of 124 submissions on installation approvals, appointments and exemptions were received and processed. There were 116 reported electrical incidents, which included seven lost-time injuries and no fatalities. Three warnings were issued for offences relating to unlicensed and unauthorised electrical work.

Radiation safety

A review of radiation doses and associated exposure parameters in the mineral sands industry indicated a 10 per cent increase in the average radiation dose to the 209 "designated" employees in the industry, from 5.8 millisieverts (mSv) in 1994 to 6.4 mSv. These doses must be seen in the context of the prescribed annual occupational dose limit of 50 mSv, or average 20 mSv per year over five years.

Designated employees are those directly involved in operation and maintenance of the dry separation plants. The maximum dose to a designated employee was 28 mSv, up 50 per cent from the previous reporting period, and five employees, all from the same site, exceeded 20 mSv.

The increase in exposure was primarily due to a significant increase in airborne radioactivity at one site, resulting mainly from re-treatment of monazite-rich stockpiles. The increase was also partly caused by a greater focus on task-related sampling for some work categories. The company concerned has recognised the need for increased exposure control and has committed to review work practices and to implement further dust control measures.

Across the five mineral sands sites with designated employees, the average airborne radioactivity level recorded from personal air sampling measurements continued to decline. The success of the mineral sands industry in controlling dust in the separation plants is evidenced by the 85 per cent reduction in airborne radioactivity over the last 10 years.

The Department continued its radiation measurement quality assurance program in the mineral sands and tantalum industries by conducting random audit checks of equipment calibration and comparative radiometric analyses of filtered dust samples. This program confirmed industry measurements reported to the Department.

The Department received 28 reports or submissions dealing with radiation matters in mining for review and comment.

The reports included occupational and environmental radiation reports submitted by the mineral sands industry, the Environmental Review and Management Program and pre-operational radiation monitoring program for the proposed rare earth plant at Pinjarra, radiological aspects of bauxite residue and fused zirconia operations, the Environmental Management Program and draft radiation management plan for disposal of thorium gangue waste at Mt Walton, and International Atomic Energy Agency proposals for radioactive waste and transport of radioactive substances.

The Department provided a submission to the Senate Select Committee on the Dangers of Radioactive Waste and Department officers appeared at a public hearing held in Perth.

The Department received a submission from CRA concerning the excavation and bulk sampling of uranium ore from its Kintyre deposit and was notified of CRA's intention to trigger the environmental approval process for a full-scale project.

A significant milestone during the reporting period was the introduction of a revised regulatory framework for radiation safety in mines. The new framework is consistent with recent national and international recommendations and represents the most up-to-date regulations in Australia. Three guidelines were prepared to support the regulations: Approved Procedures for Radiation Dose Assessment, Preparation of a Radiation Management Plan, and Radiation Gauges Safety.

Occupational hygiene

The Department's ongoing biological monitoring program for mining industry employees exposed to substances such as lead, arsenic, mercury and thallium was provided with a formal legislative basis following proclamation of the Mines Safety and Inspection Regulations 1995. In the reporting period there were 97 blood lead, 13 urinary thallium, six urinary hippuric and trichloroacetic acid, four urinary arsenic, and three urinary mercury tests reported to the Department. Of the 129 results reported, three urinary thallium results, arising from use of thallium in heavy media separation, were in excess of the biological exposure index. All test results came from the one laboratory and an investigation was undertaken by a Department occupational hygienist. The exposure occurred over a brief period and exposures have since been controlled to acceptable levels by improved work and personal protection procedures. For all other substances monitored, the average exposure was less than one-half the recommended exposure index value.

The management of contaminant asbestos was audited at five sites (two iron ore, two gold and one nickel) during the reporting period and a generally satisfactory level of compliance was noted against most audit elements.

Eight hazardous substance management audits were conducted at medium to large-sized mine sites (four gold, three iron ore and one salt). Audit findings varied considerably, ranging from complete absence of any system to a comprehensive, well-documented management system at one iron ore operation. During the year a guideline on management of hazardous substances was developed for application by industry. The guideline will be distributed once it is approved by the Mines Occupational Safety and Health Advisory Board.

During the year the Department conducted one training course for surface mining ventilation officers and two seminars on cyanide management.

A major review of the Department's atmospheric contaminant exposure database system (*CONTAM*) was initiated during the year and a working party comprising industry and Department representatives was established to oversee the development of a revised system specification.

Occupational noise and vibration

A high level of industry compliance with requirements relating to noise surveys was observed. Notification forms submitted to the Department indicate that nearly 28 000 industry workers have been covered by noise surveys, with about 40 per cent estimated to be exposed above the action level of 85 or 90 dB(A) at the time of assessment. Overall, the quality of noise reports prepared for the industry was of a good standard, with very few corrections necessary to bring them in line with approved procedures.

The inspectorate's strategy is to encourage industry to improve performance in noise management continually, as it is recognised that mine workers are at high risk of suffering noise-induced hearing loss due to the inherently noisy conditions prevalent in mines. This strategy was promoted by the regular publication of practical solutions in the quarterly *Minesafe* publication.

Mine workers' health surveillance system

Completely new health surveillance requirements for mine workers were introduced with the proclamation of the Mines Safety and Inspection Act 1994 encompassing occupational history, respiratory symptoms, lung function testing, audiometric testing and chest x-ray. The regulations place a duty on the Department to ensure there is a system established for the safe keeping of health surveillance records, and the Department is currently implementing an electronic database for this purpose. *Minehealth* will enable the regular assessment of the health status of employees and the provision of input data for future epidemiological studies. *Minehealth* will also include modules for noise dosimetry, biological monitoring and radiation dose results.

One contentious issue related to chest x-rays. The Department resolved this by seeking expert medical advice from occupational physicians, the Radiological Council, the Industrial Diseases Medical Panel and the Disease Control Section of the Health Department. The medical advice confirmed that routine chest x-ray screening for most industry employees is now no longer justified. The advice was based on a review of industrial disease claims over the last 10 years and contemporary silica exposure data. A notice of exemption has now been issued and subsequent amendments will be made to the regulations to remove the chest x-ray component of the health assessment.

Geotechnical and rock mechanics

Geotechnical issues on employee safety in open pit and underground mining, as well as abandoned mines, were extensively covered. During the year the Department conducted 86 geotechnical assessments dealing with ground conditions, ground support and reinforcement, mine design and operating issues. As a result improvements were made to a number of mine designs and, in some cases, to operating practices.

Education on ground control in the workplace continued during the year with six presentations to about 100 underground employees in the Kalgoorlie region. In conjunction with the Western Australian School of Mines, the Department participated in a two-day seminar for industry personnel on applied geomechanics in underground mining.

Based on the results of a research project conducted with the Chemistry Centre WA, two technical papers were published on the corrosion behaviour of friction rock stabilisers, the most common method of ground control used in underground mines in WA.

During 1995-96 the Department made 115 assessments on geotechnical aspects of tailings storage design, management and decommissioning. In addition, the Department published *Guidelines on the Safe Design and Operating Standards for Tailings Storages* in March 1996.

Safety publications

The Department's *Minesafe* and *RescueNet* publications continue to be produced quarterly.

Minesafe is now in its seventh year as the Inspectorate's flagship publication for conveying occupational health and safety messages to the mining industry workforce. Demand for this publication is increasing, with 7 000 copies currently being circulated in Western Australia and other copies being distributed to interstate and overseas mines, regulatory authorities and major safety organisations.

Board of examiners

A total of 330 applicants sat for the examinations held in April 1996. This is 20 fewer than the record number who sat similar examinations in May 1995. The 1996 round of examinations was the first to be held under the new Mines Safety and Inspection Act 1994 and Regulations 1995.

ENVIRONMENTAL MANAGEMENT

Audit and annual reporting formats

Guidelines for the preparation of an Annual Environment Report for mining operations were reviewed and a significantly upgraded version published in April 1996. The revised reporting structure requires:

- Accurate figures on areas disturbed by mining operations as an operational total and also by tenement to facilitate review of bonds;
- Data sheets which summarise basic information on waste dumps, tailings dams, saline water impoundments and evaporation ponds;
- More specific information on the monitoring of environmental performance; and
- Identification of site personnel responsible for the different environmental aspects of operation.

Department environmental officers now carry out a site inspection within three months of receiving the Annual Environmental Report. To make the inspection more objective and to allow comparison of performance across the mining industry, a project inspection proforma has been prepared. This includes summary information about the site and an eight-point rating sheet to monitor performance against company commitments and tenement conditions. Scores recorded against the eight points are used as a reference for future inspections, and, when compared across the State, they will identify how different sectors of the industry are performing.

One hundred per cent of recent Mining Act operations, 60 per cent of older Mining Act operations and 20 per cent of Agreement Act operations have been incorporated in the new process. The remainder will be gradually incorporated in the system. A program is in place to search all tenement titles to ensure that they have an annual environmental reporting condition.

An education program has been completed with articles in the *Rehab Blab* publication. Also, guidelines to all registered mine operators and environmental officers have been distributed. All environmental officers have taken part in a training program to ensure that all site assessments are carried out to a standard format.

All data collected from the annual environmental report process will be used for the ongoing review of industry performance. Accurate data on the area affected by mining operations and area rehabilitated have not been available in the past. Collection and collation of data will provide an annual assessment of total area affected by mining operations.

Management of environmental approvals

During the year 265 Notices of Intent (NOI) were received for mining proposals. Of these 57 were referred to the Environmental Protection Authority. There were 12 Formal Assessments comprising eight Consultative Environmental Reviews (CERs), one Public Environmental Review (PER) and three Section 46 changes to conditions of the Environmental Protection Act. The majority of NOI (184) were assessed by Department officers, with the remaining 81 being outsourced for assessment by consultants following the successful trial of this initiative in 1994-95.

The outsourcing of environmental assessments has enabled the Department to maintain the average assessment time within the customer focus target period, despite staff shortages. It has also had the additional benefit of enabling environmental officers to spend more time on customer liaison and advisory activities. This is a key Department strategy to achieve longer-term improvement in industry environmental management practices.

At 30 June 1996 there were 1 708 Environmental Performance Bonds in place with a total value of $72 million. During the year 484 bonds were registered with a total value of $29 million.

Abandoned and non-operational mine sites

Eastern Goldfields

In 1994-95 an external consultant was commissioned to review six non-operating mine sites in the Eastern Goldfields and report on their environmental and public safety aspects. After the consultant's report was received, negotiations began with site owners to bring each site up to an acceptable standard.

Galena area

The Department is represented on a management committee which reports to the Shire of Northampton. The committee is developing a management plan for the historic Galena area to cover the environmental, public safety and heritage aspects of the old mine workings. Consultants contracted by the local Shire will develop most of the plan.

Wittenoom

Department officers acted as technical advisers to the Western Australian Building Management Authority (WABMA) on abandoned mine workings at Wittenoom. WABMA engaged consultants and contractors to tidy up Yampire Gorge and make safe the mine openings at Yampire Gorge, Wittenoom and Colonial mine sites. This work was completed in the last quarter of the year at a cost of around $800,000.

Ravensthorpe

Following complaints about the hazardous condition of abandoned mines over the last few years, some 26 dangerous shafts and surface-penetrating stopes were identified within a few hundred metres of the northern section of the Ravensthorpe town site. Using contractors organised by the WABMA, 25 of the 26 workings were filled in or capped. A further eight shafts were uncovered during the project. One large opening proved difficult to make safe and further work on this will be required early in 1996-97. Background research and technical advice were provided by the Department. Work completed to the end of 1995-96 cost $61 000.

Abandoned minesite inventory

Work has commenced on an inventory of abandoned mine sites, starting with the Phillips River mineral field. The aim is to develop progressively a comprehensive inventory of abandoned mine sites throughout the State so that remedial work can be done when needed.

SUB-PROGRAM 1.3

MINERAL ROYALTIES

Objective: *To collect, for the community, a fair return for the extraction of the State's mineral resources in a manner that is administratively and economically efficient.*

Description: *The strategies involve the development and implementation of royalty systems to assess, collect and verify royalty payments from mineral producers. Royalty assessment and verification arrangements are negotiated with producers within a common framework.*

Most mineral resources in Western Australia belong to the community. Individuals and companies engaged in the extraction and sale of these resources provide benefits to the community through employment, the provision of infrastructure and financial payments in the form of charges, rates and taxes. Royalties represent the price paid for mineral resources transferred from the community to the miner.

The Department is responsible for developing royalty systems, managing the implementation of royalty policy and collecting royalties for the State. Three systems are used to determine the amount of royalty to be paid:

1. A royalty based on the quantity of mineral produced (specific rate royalties). This system is generally applied to low-value products such as sand or construction minerals. Rates vary from 30 to 50 cents per tonne.

2. A royalty based on a percentage of the value of mineral produced and sold (ad valorem royalties). Most minerals such as iron ore, nickel and base metals, have royalties that are based on the proportion of production value. Rates vary from 1.6 per cent to 7.5 per cent depending on the extent of value-adding before the sale point.

3. A royalty based on a percentage of the net profits of the mining operation. Currently only one mining company has a 22.5 per cent profit-based component included in its royalty system.

Setting a benchmark to determine what is considered a fair return for the depletion of non-renewable mineral resources is a complex issue. Variables such as differing production technologies, infrastructure costs, and mineral types have an effect on the value of saleable production at the mine-head. The philosophy incorporated into the Mining Act reflects a 10 per cent mine-head value benchmark. The average rate this year for minerals subject to royalties was 9.6 per cent, the same as that for the previous year. No royalty is collected from the gold industry.

Royalty payments collected from the minerals industry during 1995-96 totalled $327 million.

Mineral royalty collection ($m)

1995-96	327
1994-95	277
1993-94	261
1992-93	269
1991-92	258

Mineral royalties increased by 18 per cent on the previous year owing to higher receipts from iron ore, alumina, diamonds, mineral sands and nickel. The higher royalties generally reflected improved sales volumes and prices. Collections include additional lease rentals which are levied in the form of a royalty on iron ore producers under State Agreement Acts.

Cabinet approved the inclusion of the additional lease rental into the Mining Act to introduce equity for all iron ore producers and the legislation is being amended.

Apart from a few exceptions, royalties were received on a timely basis and accurately reflected the amounts due. The Argyle Joint Venture is currently disputing the valuation of diamond stocks in its profit-based royalty calculation and this has affected diamond royalty collections.

During the year, internal reviews on 1 396 returns and 661 comprehensive audits of returns were completed. The value of returns audited totalled $277 million. Adjustments to royalty collections resulting directly from audit activities totalled $3.3million.

To encourage value adding in the iron ore industry, the State Government introduced a new policy on royalty concessions in December 1995. These concessions relate to iron ore used as an input to secondary processing in Western Australia. The amount of concession depends on the level of processing.

- Low level (pellet production) 0.5 per cent
- Medium level (DRI manufacture) 1.0 per cent
- High level (crude steel manufacture) 2.0 per cent

Twelve major negotiations were undertaken during the year to meet the Department's objectives and royalty assessments for six producers were revised. Legislation was reviewed in relation to five issues and this resulted in two amendments to Mining Act Regulations. Draft Agreement Act royalty legislation was also reviewed for three projects.

Advice was provided to the Commonwealth to assist in amending existing Commonwealth Offshore Mineral Royalty legislation to include details of a hybrid royalty system. The hybrid royalty, which consists of an ad valorem component and a net income component, will be common for all States.

Royalty rates subject to escalation clauses were reviewed and new rates implemented. Two reviews were conducted relating to coal not exported and ilmenite concentrates used as feedstock into a beneficiation plant.

MINERAL RESOURCES MANAGEMENT

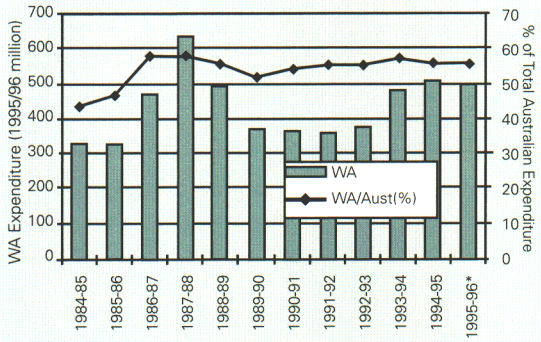
Objective: *To ensure that the exploration for and mining of the State's mineral resources are managed for the benefit of the people of Western Australia.*

Influencing factors

Mineral exploration and development activities are dependent on a number of factors, including world commodity prices and Federal and State fiscal and land access policies, to which Departmental initiatives can only react. Thus, while not a short-term measure of Program effectiveness, the level of mineral exploration and development activity is an important strategic indicator of the context in which the Department operates. The State cannot be complacent if it is to retain its pre-eminent position in Australia in terms of attracting mineral exploration and development investment.

Level of mineral exploration activity

Future mineral production is strongly dependent on current exploration activity, the rate of resource discoveries and corresponding changes in the State's resource inventory. Exploration expenditure is a broad indicator of the level of exploration activity.



Total (estimated) mineral exploration expenditure in WA during 1995-96 has remained steady at about $500 million, more than 70 per cent of which is for gold. Although this represents an unchanged 55 per cent of total exploration expenditure in Australia, there are indications that there is increasing investment by Australian companies overseas and that Western Australia's share of the total investment in exploration by Australian companies is decreasing.

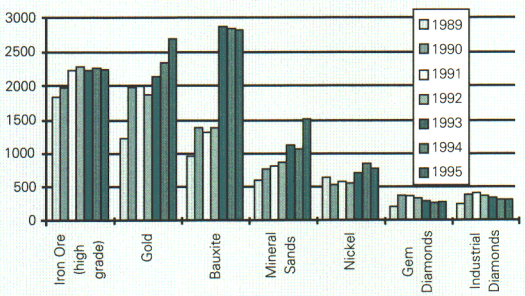
Major minerals resource inventory

Resource inventories for selected commodities (measured and indicated resources at 31 December 1995).

Units of commodities shown:

Iron Ore	tonnes x 10^7
Gold	tonnes
Bauxite*	tonnes x 10^6
Mineral sands	tonnes x 10^5
Nickel	tonnes x 10^4
Diamonds	million carats

* estimate for 1995-96.



Gold resources have increased for the fourth year, however, this is the result of extensions to known ore bodies rather than from new discoveries. Mineral sand resources increased during the year, whereas bauxite reserves, which increased following a major reappraisal in 1993-94, continued to decline. Iron ore, diamonds and nickel resources remained at about the same level

SUB-PROGRAM 1.1

MINERAL TITLES

Objective: *To provide the mineral industry with timely, secure and equitable titles and related information to facilitate mineral exploration and development.*

Indicator

Effectiveness

The proportion of Prospecting Licence, Mining Lease and Exploration Licence applications which are finalised or submitted to the Commonwealth Native Title Act 1993 procedures within the target periods.

This indicator reflects the Department's ability to process title applications in a timely manner. Some applications are subject to delays beyond the control of the Department, for example: where applications affect private land, Aboriginal or Conservation Reserves or where legal disputation arises.

Result

Submission target achievement

	1993-94*	1994-95	1995-96
Prospecting Licences	68%	69%	59%
Mining Leases	73%	66%	66%
Exploration Licences	70%	64%	71%
Target periods:			
Prospecting Licences	85% within four months		
Mining Leases	75% within seven months		
Exploration Licences	75% within seven months		

* Target times for PLs, MLs and ELs in 1993-94 were three, five and seven months respectively.

The average time taken to determine each major title category during the year.

Application processing rate

(Time in months to process)

	1993-94	1994-95	1995-96
Prospecting Licences	3.7	4.4	8.0
Mining Leases	6.0	5.3	8.8
Exploration Licences	8.4	8.2	10.2

The submission of all mineral title applications other than those on freehold land to the right-to-negotiate procedures of the Commonwealth Native Title Act 1993 resulted in significant increases in the average time taken to grant mining tenements: 82 per cent increase for Prospecting Licences, 66 per cent increase for Mining Leases and 24 per cent increase for Exploration Licences.

Efficiency

Administration cost of mineral titles.

This indicator reflects the Department's cost of issuing and maintaining titles. The costs are calculated using average salary levels and allowances for overheads.

Title administration efficiency

	1993-94	1994-95	1995-96
Cost in cents/hectare	24c	25c	23c

An effect of the uncertainty surrounding land access and grant of title under the provisions of the Commonwealth Native Title Act has been a reduction in title turnover resulting in an increase in the area held under title. This, together with increased work efficiencies through re-structure, has improved the cost efficiency of title administration.

SUB-PROGRAM 1.2

MINERAL INDUSTRY SAFETY AND ENVIRONMENTAL MANAGEMENT

Objective: To achieve improved safety, occupational health and environmental management in the mineral industry.

Indicator

Result

Effectiveness

The frequency of lost-time injuries for mining operations.

The lost-time injury (LTI) frequency rate is the number of occurrences of injury or disease for each one million hours worked as defined in Australian Standard AS1885.1 - 1990.

Lost-time injury frequency rate

	1992-93	1993-94	1994-95	1995-96
Coal mines	130	79	90	60
Metalliferous mines	7	13	12	11

The lost-time injuries index for mining operations.

The injury index is the number of days lost for each one million hours worked.

Injury index

	1992-93	1993-94	1994-95	1995-96
Coal mines	980	900	758	392
Metalliferous mines	223	172	176	143

Continuous improvement in the overall safety record of the mining industry has been enhanced by a significant improvement in the performance of the metalliferous underground sector and coal mining, reversing the deterioration in LTI frequency performance recorded last year. Back injuries continue to be disproportionately high in the coal sector.

The extent to which mineral operations comply with Department environmental completion criteria.

A security bond system is maintained to indemnify the State in the event of failure by a proponent of mining activity to comply with environmental conditions of title. Bonds are called on to rectify unsatisfactory environmental performance. Where rehabilitation work is completed to the satisfaction of the Department bonds are reduced or released.

Environmental compliance

	1993-94	1994-95	1995-96
No. of projects assessed	12	18	3
Proportion meeting criteria (Bonds reduced or released)	92%	100%	67%

As companies were reluctant to surrender mining leases resulting from the uncertainties of grant under the Native Title Act, the number of operations requesting release or reduction of bonds was significantly less in 1995-96 than in previous years. Of the three projects assessed two bonds were released and one was called in as the operator had not met tenement conditions. The bond will be used to carry out the required rehabilitation on that lease.

Efficiency

The total cost of salaries plus support services for the Department's safety and environmental inspectorates per employee in the mineral sector.

The costs have been determined using the sub-program salary level and a factor (1.7) for all overheads. Figures before 1994-95 are historical and refer to the safety inspectorates only.

	1992-93	1993-94	1994-95	1995-96
All mining	$188	$193	$190	$241

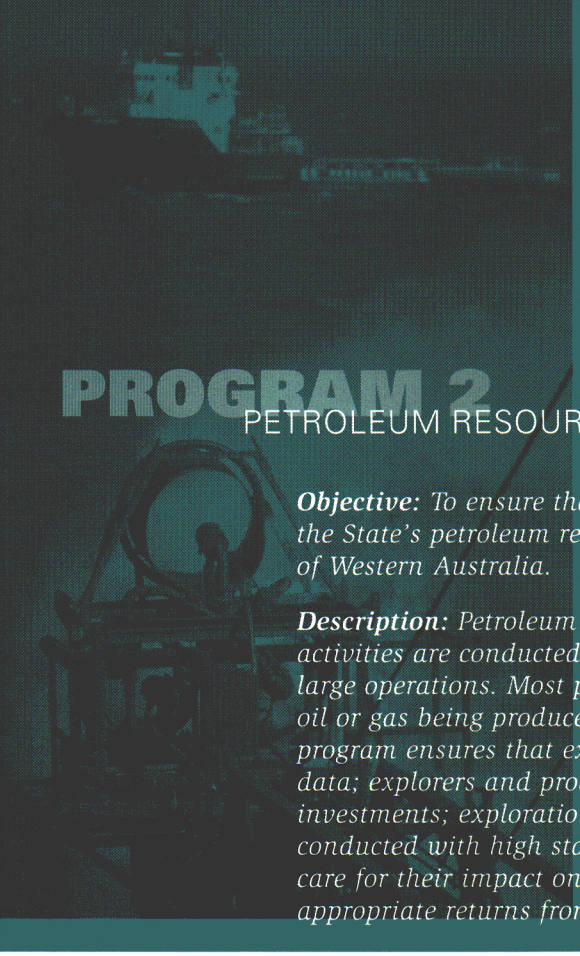
The increased cost reflects an increase in the number of inspection staff, higher salaries and the inclusion of consultants and environmental inspection and assessment costs for the first time.

SUB-PROGRAM 1.3

MINERAL ROYALTIES

Objective: *To collect for the community a fair return for the extraction of the State's mineral resources in a manner that is administratively and economically efficient.*

Indicator	Result
Effectiveness	
Total royalties collected as a proportion of mine-head value Figures shown exclude gold for which no royalty is payable.	**Average royalty rates** **1993-94** 9.5% **1994-95** 9.6% **1995-96** 9.6%
The proportion of royalties reported due which are paid by the required date. The figures exclude royalties unpaid owing to disputes on the amount of royalty payable.	**Royalty payment performance** **1993-94** 99.9% **1994-95** 99.8% **1995-96** 98.6% The increase in late receipt of payments was caused by six individual payments comprising 92 per cent by dollar value of all late payments. All payments have been made.
Efficiency	
The average administration cost per audit visit.	**Royalty audit efficiency** **1993-94** $3 939 **1994-95** $5 083 **1995-96** $4 457 The reduction in cost compared with 1994-95 reflects a reduction in total administration costs as well as an increase in audit activity required to verify source documentation for industrial and construction mineral producers.



PROGRAM 2
PETROLEUM RESOURCES MANAGEMENT

Objective: *To ensure that the exploration, development and production of the State's petroleum resources are managed for the benefit of the people of Western Australia.*

Description: *Petroleum exploration, development and production activities are conducted by the private sector by means of a relatively few, large operations. Most petroleum deposits tend to cover a large area with oil or gas being produced through an array of deep drill holes. The program ensures that explorers have access to land and past exploration data; explorers and producers have secure titles on which to base their investments; exploration, development and production activities are conducted with high standards of worker and public safety, and with due care for their impact on the environment; and the community receives appropriate returns from the extraction of its petroleum resources.*

Introduction

The recurrent and capital expenditure of this program was $2.1 million. This together with associated corporate service costs of $1.1 million resulted in total expenditure of $3.2 million. The program employed a total of 30 full-time equivalent staff and generated direct revenues of $3.6 million through fees and rents.

As part of an overall analysis of Department activities carried out during 1995-96, a review of the program resulted in a streamlined structure comprising the three sub-programs introduced in 1995-96.

SUB-PROGRAM 2.1

PETROLEUM RESOURCES AND TENURE

Objective: *To facilitate the exploration for and the efficient production of petroleum resources in Western Australia by maintaining a regime for the award of timely, secure and equitable titles.*

Description: *Issues include land use and access, petroleum prospectivity, efficiency of resource production, the award of titles, industry awareness of and compliance with regulations, and determining the relevant time for the release of past exploration and production data.*

Strategies*: Include the evaluation and advertising of exploration acreage, evaluation of industry performance, liaison with industry and government agencies, the provision of timely approvals for petroleum exploration and development proposals, and the promotion of exploration opportunities in Western Australia. An accurate and up-to-date petroleum registry is kept, information on land status is provided, and systems are maintained to ensure expeditious processing and determining of title applications. Compliance with expenditure commitments and work obligations is monitored to ensure that areas are being actively explored or made available to others.*

During the year the Department assessed the State's oil and gas reserves and development proposals for the Wandoo oilfield and the East Spar gas/condensate field.

Officers were also involved in:

- Evaluation of drilling over the Gorgon, Lambert, Perseus and Scarborough gas and gas/condensate fields and the Laminaria and Stag oilfields;
- Reservoir engineering studies on Canning Basin oilfields and the East Spar gasfield;
- Analysis of Agincourt, Waggon Creek and Wye discoveries;
- Technical evaluation of all drilling proposals; and
- Monitoring of all exploration and production operations.

Continuing liaison with the Department of Resources Development facilitated major projects including the Goldfields gas pipeline and Gorgon project.

During 1995-96 the number of petroleum titles in force increased from 201 to 220. This increase included two new production licences (Wandoo and East Spar) and nine new pipeline licences, four of which are laterals to the 1 400 kilometre Goldfields gas pipeline.

While the modest increase in titles was welcomed, it was mainly production oriented. New exploration title grants, the life-blood of a healthy resources industry, were somewhat curtailed. Reasons for this were the legal uncertainty surrounding the Commonwealth's offshore area release system which necessitated amendments to its petroleum legislation, and delays to the granting of new onshore exploration titles as a result of the Native Title Act procedures.

The National Native Title Tribunal upheld objections to the Department's application for expedited procedures for onshore exploration titles and the grant of these titles will be delayed as a result. The Department is considering various amendments to its petroleum legislation in the hope of reducing delays in the processing of some titles in the future.

The 1 058 dealings processed during 1995-96 were similar in number to the previous year. However, processing time by the Department was reduced from 90 to 60 days.

Development of the computer-based petroleum title management system (*PETMAN)* was finalised; it will be fully operational for the 1996-97 year. This is the first step towards achieving a fully electronic register, reducing turn-around times and extending the range of electronic access to information by the Department's customers.

SUB-PROGRAM 2.2

PETROLEUM INDUSTRY SAFETY AND ENVIRONMENTAL MANAGEMENT

Objective: *To have continuous improvement in the safety and environmental management of facilities and operations in the petroleum exploration and production industry.*

Description: *Strategies include the maintenance of a legislative framework and worksite visits to audit and, if necessary, enforce compliance with regulations, codes of practice, standards and conditions of title. Guidelines on safety, occupational health and environmental management of petroleum exploration and pipeline operations are prepared and published to assist industry to meet government and community expectations. Through the promotion of, and participation in, educational training programs and the provision of specific advice, operators are encouraged to implement safety, occupational health and environmental management systems which match world's best practice. Mandatory insurance cover is maintained by companies to facilitate administration and emergency response in the event of any environmental mishap.*

Petroleum industry safety

Development and implementation of a quality system has begun to improve the efficiency and effectiveness of customer service. Corresponding work procedures will be developed and in use by the middle of 1998.

A working group for offshore safety resolved a number of issues between the offshore petroleum and maritime industries. A memorandum of understanding between the Australian Maritime Safety Authority and the Department is to be finalised next year.

A committee, chaired by the Department, substantially completed the draft bill for the Petroleum Safety legislation. The aim of the Bill is to bring all upstream petroleum activities in the State under a single safety act.

Significant progress has been achieved in drafting new regulations covering upstream offshore petroleum activities in Commonwealth waters. These regulations will replace the existing prescriptive legislation with a more objective-based regime.

In consultation with industry and drilling contractors, the Department has been in the forefront in developing guidelines for the preparation of Mobile Offshore Drilling Unit (MODU) Safety Case Bridging Documents. While the guidelines have application in State waters, they are being used in Commonwealth waters until national guidelines become available.

In line with requirements of petroleum legislation that safety cases be submitted for existing offshore installations and MODUs before 1 July 1996, safety cases for Woodside's North Rankin A platform, WMC Resources Limited's Airlie project, WAPET's Thevenard Island operations, and eight MODU bridging documents were received and responded to during the year. All these assessments were conducted in accordance with the *Guidelines for the Preparation and Submission of Safety Cases* published by the Department and the Commonwealth Department of Primary Industries and Energy (DPIE).

There was exceptionally severe cyclone activity during the year. Category-five Cyclone Olivia caused significant damage to WAPET's installations on Barrow Island and rendered Apache's unmanned Campbell platform unusable. This prompted the industry to question the validity of current environmental design data.

A fatal accident on the Goldfields gas pipeline project was investigated by the Department and, as a result, the management of safety on the project was upgraded.

A serious incident occurred on board BHP Petroleum's *Griffin Venture*, resulting in an over-pressuring and catastrophic failure of an isolating valve, loss of integrity of the high-pressure flare system and a significant escape of high pressure gas. The incident was investigated and subsequently an international consultant Dr Tony Barrell was commissioned to investigate BHP Petroleum's (BHPP) operations in WA and the Northern Territory and the adequacy of the current regulatory system. In his report, Dr Barrell was generally positive about the regulatory system and supported the corrective measures that BHPP has taken.

A safety seminar conducted by the Department's Safety and Environment Branch was attended by 100 representatives from various sectors of the petroleum industry. This year's seminar focused on the safety case regime from an industry perspective. Feedback from those attending was encouraging and the Department plans to hold the next function, which will be an expanded petroleum and mining safety and environment conference, in March 1997.

Of all injuries reported to the Department, including lost-time injuries and medical treatment injuries, 34 per cent were sprains and strains (see Figure 1), which suggests that greater attention needs to be paid to manual handling issues. Many of these sprains and strains occurred during the summer months when heat stress may have been a contributing factor.

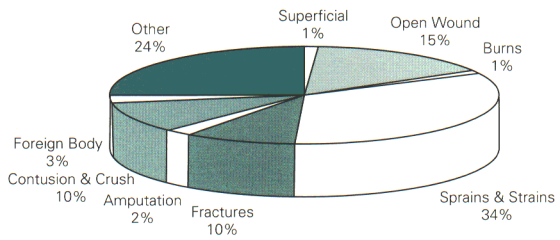
Environmental management

Six oil spills (two onshore and four offshore) were recorded during the year. However, with the exception of a 700-barrel onshore spill which was promptly contained and cleaned-up in less than a day, the spills were minor.

Discussions commenced with the federal Department of Environment and Planning with an aim of establishing a memorandum of understanding to streamline the process of referral of petroleum applications.

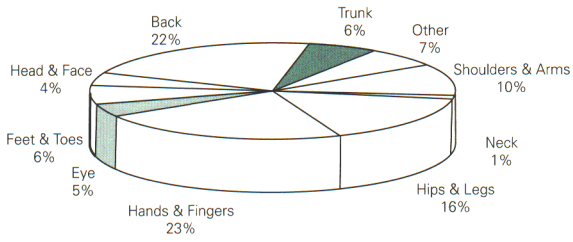
PETROLEUM INDUSTRY ACCIDENT AND INJURY STATISTICS

Figure 1: Nature of Injury 1995-96



Sprains & Strains	80	Open Wound	37
Superficial	3	Amputation	5
Foreign Body	7	Burns	3
Contusion & Crush	25	Fractures	23
Other	59		

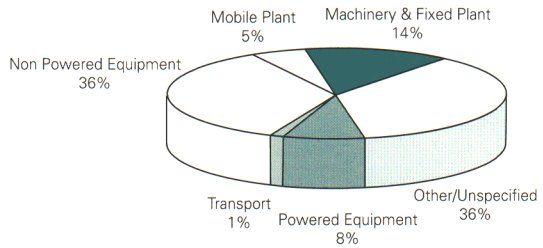
Figure 2: Part of Body Injured 1995-96



Shoulders& Arms	25	Hands & Fingers	54
Hips & Legs	39	Feet & Toes	15
Eye	11	Head & Face	10
Neck	2	Back	54
Trunk	15	Other	17

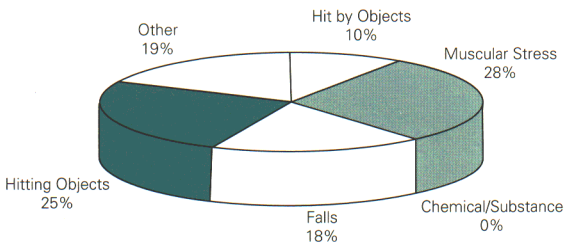
Hands, fingers, and backs continued to be the parts of the body most affected by injuries and accounted for 46 per cent of all reported incidents.

Figure 3: Breakdown Agency 1995-96



Powered Equipment	19	Transport	3
Non Powered Equipment	84	Mobile Plant	12
Machinery & Fixed Plant	34	Other/Unspecified	86

Figure 4: Type of Accident 1995-96



Hit by Objects	23	Muscular Stress	66
Chemical/Substance	0	Falls	42
Hitting Objects	57	Other	43

SUB-PROGRAM 2.3

Petroleum Royalties

Objective: *To collect, for the community, a fair return for the extraction of the State's petroleum resources in a manner that is administratively and economically efficient.*

Description: *The strategies involve the development and implementation of royalty systems to assess, collect and verify royalty payments from petroleum producers. The royalty assessment and verification arrangements are negotiated with producers within a common framework and are usually formalised though royalty schedules.*

Royalty payments are collected by the Department from all producers operating under Western Australian legislation and also from some producers operating in areas of Commonwealth jurisdiction.

Petroleum resources belong to the community. Individuals and companies engaged in the extraction and sale of these resources provide benefits to the community through employment, the provision of infrastructure and financial payments in the form of charges, rates and taxes. Royalties represent the price paid for petroleum resources transferred from the community to the producer.

PETROLEUM RESOURCES MANAGEMENT

Objective: *To ensure that the exploration, development and production of the State's petroleum resources are managed for the benefit of the people of Western Australia.*

Influencing factors

Petroleum exploration and development are dependent on a number of factors, including world commodity prices and Federal and State fiscal and land access policies, to which Departmental initiatives can only react. Thus, while not a short-term measure of Program effectiveness, the level of petroleum exploration and development activity is an important strategic indicator of the context in which the Department operates. The State cannot be complacent if it is to retain its pre-eminent position in terms of attracting petroleum exploration and development investment.

Indicator

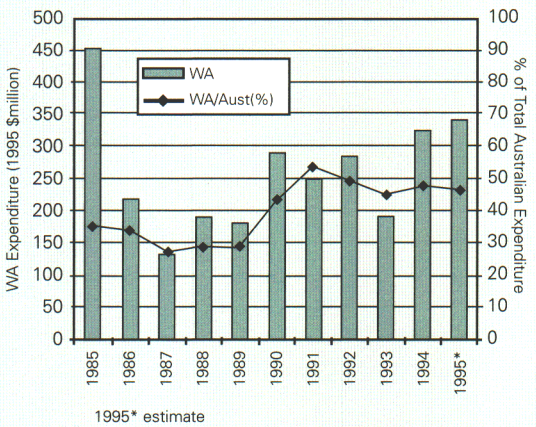
Level of petroleum exploration activity

The rate of resource discoveries and the corresponding changes in the State's resource inventory are related to the level of exploration activity. The graph indicates the current and immediate past levels of aggregate exploration expenditure in Western Australia compared to the total expenditure in Australia.

Exploration expenditure in 1995-96 was slightly higher than in the previous year, but was steady at 47 per cent of total expenditure in Australia.

Result

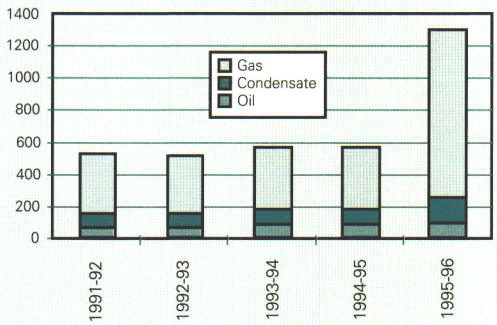
Exploration expenditure



Petroleum reserves inventory

Reserves are from proved developed, proved undeveloped and probable fields at the 50 per cent probability level. For reserves to remain static while fields are in production, the rate of discovery must keep pace with the annual rate of production. Units of commodities shown are: Oil and Condensate: GL; Gas: Gm^3 Current WA production rates (approximate): Condensate and Oil - 14 GL/year Gas - 20 Gm^3/year

Petroleum reserves



As from December 1995, Woodside's Scott Reef and Brecknock Field gas resources, previously carried as a "static resource", have been reclassified by the Department as reserves at the 50 per cent probability level in line with Woodside's own classification policy. Condensate reserves are also sharply higher for the same reason.

SUB-PROGRAM 2.1

PETROLEUM RESOURCES AND TENURE

Objective: *To facilitate the exploration for and the efficient production of petroleum resources of Western Australia by maintaining a regime for the award of timely, secure and equitable titles.*

Indicator

Result

Effectiveness

Well applications

The target time to process well applications is:

- 30 days in State jurisdiction;
- 45 days in Commonwealth jurisdiction.

Well application processing performance

	1994-95	1995-96
Number finalised in year	71*	82
Processed within target time	72%	83%

* *Number received in year.*

Seismic survey applications

The target time to process seismic survey applications is:

- 20 days in State jurisdiction;
- 35 days in Commonwealth jurisdiction.

Seismic survey application processing performance

	1994-95	1995-96
Number finalised in year	33*	57
Processed within target time	64%	67%

* *Number received in year.*

Title applications

The target time to process title applications is three months.

Title application processing performance

	1994-95	1995-96
Number finalised in year	77	126
Average finalisation time (months)	2.5	5.6
Finalised within target time	86%	44%

Title dealings and maintenance

The target time to process title dealings is three months.

Title dealings processing performance

	1994-95	1995-96
Number finalised in year	1 501	1 510
Average finalisation time (months)	1.5	1.4
Finalised within target time	95%	89%

Well and seismic survey application processing performance improved but title applications and dealings processing performance were affected by the diversion of resources to deal with procedures of the Commonwealth Native Title Act 1993.

Efficiency

Administration costs for petroleum titles.

This indicator reflects the cost of processing and issuing all titles.

	1994-95	1995-96
Number of titles processed	77	126
Average cost per title ($)	6 847	5 717

With static resources, the increased number of title applications lead to an improvement in this indicator.

SUB-PROGRAM 2.2

PETROLEUM INDUSTRY SAFETY AND ENVIRONMENTAL MANAGEMENT

Objective: *To have continuous improvement in the safety and environmental management of facilities and operations in the petroleum exploration and production industry.*

Indicator

Effectiveness

Frequency of lost-time injuries for petroleum operations.

The frequency rate is the number of occurrences of injury or disease for each one million hours worked in Australian Standard AS1885.1-1990.

Result

Lost-time injury frequency rate (LTIFR)

	1992-93	1993-94	1994-95	1995-96
Onshore	21.0	17.1	17.0	8.8
Offshore	15.9	11.7	6.4	4.7

The offshore lost-time injury frequency rate continues to decline steadily following the introduction of the Safety Case requirement. The onshore rate, which excludes GGT pipeline activities, has also improved. The onshore LTIFR for the year was 13.2 if pipeline activities were included.

The extent to which petroleum operations comply with the Department's environmental management criteria.

Non-compliances with criteria are identified in field audits of a cross-section of projects selected on a risk-assessment basis following desk evaluations of all environmental management reports received from project operators. The reports comprise Environmental Management Plans (EMP), Environmental Impact Assessments and General Environmental Reports required by legislation as conditions of the project approval.

Non-compliances are defined as specific infringements of commitments made in project EMPs or conditions of approval, or practices not in accordance with Best Environmental Practice and which warrant formal notification by the auditor to the project operator.

Note: This is a newly developed indicator and data for previous years are not shown.

	1995-96
Environmental management reports received	63
Number of active projects covered by the reporting	36
Number of active projects audited	12
Number of audited projects with zero non-compliances	6
Total number of non-compliances identified	17

Total cost of safety and environmental inspectorate per employee in the petroleum sector.

The cost is calculated as total direct expenditure in the Safety and Environmental Inspectorate. In 1993-94 the cost was calculated as total salaries plus a factor of 70 per cent for Department overhead.

193-94	1994-95	1995-96
$413	$318	$289

Employment growth in the petroleum industry has been managed with no increase in the Department's resources.

Efficiency

Environmental assessments

The target time to assess proposals is 15 days.

Environmental assessment performance

	1994-95	1995-96
Assessed within target time	90%	90%

Assessment performance has not improved but multi-skilling of inspectors should lead to improved performance next year.

SUB-PROGRAM 2.3

PETROLEUM ROYALTIES

Objective: *To collect for the community a fair return for the extraction of the State's petroleum resources in a manner that is administratively and economically efficient.*

Indicator	Result
Effectiveness	
Total royalties collected as a proportion of well-head value.	**Average royalty rates**

1993-94	1994-95	1995-96
11.1%	11.3%	11.6%

The increase is due to higher royalty collections from projects with secondary production licences with a royalty rate of 12.5 per cent.

Proportion of royalties reported due which are paid by the required date.

(The figures exclude royalties unpaid owing to disputes on the amount of royalty payable).

Royalty payment performance

1993-94	1994-95	1995-96
99.9%	99.9%	99.9%

Payment performance remains at a high rate.

Efficiency

Average administration cost per audit visit.

Royalty audit efficiency

1993-94	1994-95	1995-96
$1 933	$2 003	1 737

The reduction in costs reflects an increase in audit activity associated with new royalty arrangements and efficiency gains from restructuring.

PROGRAM 3
GEOLOGY AND RESOURCE INFORMATION

Objective: *To improve the knowledge of the geology of Western Australia by providing up-to-date regional geological, geochemical, geophysical and mineral resource maps, and resources information and advice. This improved knowledge assists in the formulation of exploration and development strategies by the mining and petroleum industries, and is used for resource assessment and land-use planning by government and other organisations.*

Description: *Geological, geochemical, geophysical and mineral resource data are collected and synthesised to produce maps and images at a variety of scales. These range from geological maps of the whole State to detailed maps of areas of special interest, such as the Pilbara iron ore district, necessary for land-use planning and development. Most maps produced are regional-scale geological maps at standard 1:250 000 and 1:100 000 scales. These maps cover areas of current mining activity, as well as areas with perceived mineral potential, and are thus essential for the formulation of exploration concepts and discovery of new mineral deposits.*

Regional-scale geochemical and geophysical maps, satellite images and other data sets are used to improve the reliability of geological mapping, as well as to highlight prospective exploration areas for mineral, petroleum and groundwater resources. Use of geochemical and geophysical data sets, which are capable of penetrating soil cover, are crucial in Western Australia as 90 per cent of the State has little or poor exposure of bedrock.

Geoscientific data are also compiled into explanatory notes and reports on individual map sheets, mineral provinces and areas of special interest. These products facilitate the development of new exploration concepts by the mineral and petroleum industries.

Increasing use of digital databases to capture geoscience information means that customer requests for specific information are responded to not only more efficiently but in a variety of media of their choice.

Introduction

The provision of timely, high-quality geoscientific maps, publications and information enhances the chance of success in the exploration for, and development of, the mineral and hydrocarbon resources of the State. The availability of maps and information is also essential in promoting the State's prospectivity for minerals and petroleum, in encouraging existing and new companies to invest in the State, and in maximising the development of its mineral wealth for the benefit of both industry and the people of Western Australia.

Decisions on land-use planning, urban infrastructure and supporting road and rail links are only possible when the best scientific information and advice are available. Geoscientific information is also an essential element in the effective management of the State's mineral, fossil fuel and groundwater resources.

The direct recurrent cost of this program, after the transfer of funds identified with the groundwater function to the Water and Rivers Commission in January 1996, was $10.7 million including $0.3 million on capital expenditure.

After the transfer of staff within the groundwater function, this program employed a total of 139 full-time equivalent staff at 30 June 1996.

Regional geoscience mapping

Most geoscientific effort in regional-scale geoscience mapping and mineral and petroleum resource studies now occurs within integrated project teams. Project areas and commodities are selected on the basis of the needs of government and of the exploration industry and are determined in consultation with various stakeholders through the Geological Survey Liaison Committee. Strategic surveys are initiated to promote the prospectivity of areas which are remote and difficult to access, hence under-explored but perceived as holding potential for discovery of new orebodies.

All maps are produced using computer-assisted techniques and there has been a marked increase in the use of digital information and Geographic Information System technology for rapid update and production of current information. A good example of the use of this technology was an Atlas of Western Australian Mineral Deposits and Petroleum Fields that was produced from start to finish (including printing) within eight weeks. The atlas drew upon the information contained in the *MINEDEX* database and digital geological map information.

All mapping projects were carried out on schedule. Geological map coverage of the State was increased with the publication of 12 full-colour 1:100 000 scale geological maps, seven geological maps at other scales, and six maps relating to geophysical investigations. Four additional maps were at the printer at 30 June and were expected to be available for release in July 1996. Explanatory Notes for nine maps were also published (see Figures 5 and 6).

Map publication and production rates were key areas for improvement identified in a customer satisfaction survey conducted in 1994, during the first year of a four-year Accelerated Geoscience Mapping initiative which saw an increase of 30 per cent in annual funding for mapping projects. The map publication rate achieved in 1995-96 is double that achieved prior to 1993-94 and production times have been halved.

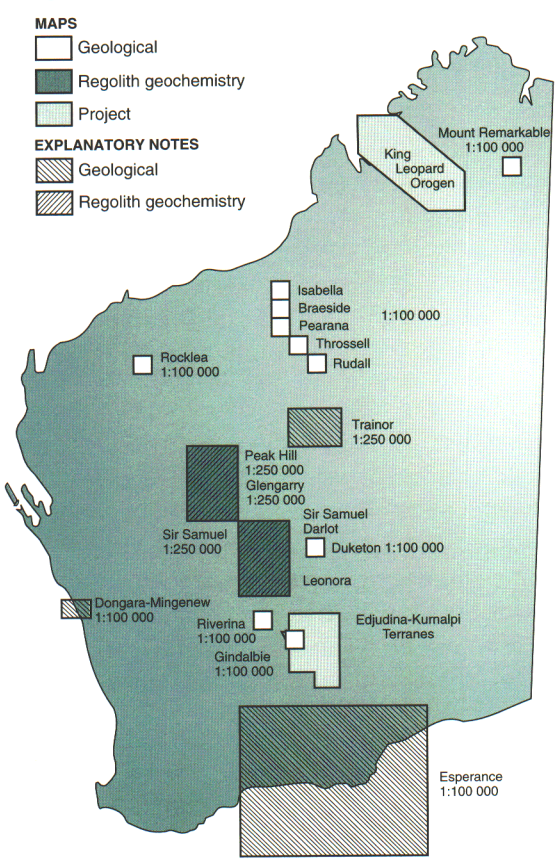
Eastern Goldfields Project

The Eastern Goldfields mapping project covers one of the most significantly mineralised regions of Western Australia, and is conducted under the National Geoscience Mapping Accord (NGMA) in conjunction with the Australian Geological Survey Organisation (AGSO). A joint Geological Survey Division-AGSO Expo displaying products of the NGMA Eastern Goldfields project was held in Kalgoorlie in September 1995.

In 1995-96, field mapping was completed on the Wiluna and Millrose 1:100 000 sheets, and further reconnaissance mapping was carried out on the Wiluna, Sir Samuel and Duketon 1:250 000 sheets. Releases of new products included the Sir Samuel, Darlot, Duketon and Riverina 1:100 000 geological maps, a map and accompanying report detailing a new regional geological interpretation of the Kurnalpi-Edjudina region, and total magnetic intensity images at 1:100 000 scale and 1:250 000 scale of all the Sir Samuel and Duketon 1:250 000 map areas.

The Geological Survey Division maintains an office in Kalgoorlie where, in addition to their involvement in mapping and gold mineralisation studies, three geologists provide access to the major Department collection of company

Figure 5



exploration reports accessed through the *WAMEX* database. They also answer geological enquiries from the mining industry, educational institutions, government departments, and members of the public.

Glengarry Basin Project

Geological mapping of the Glengarry Basin together with compilation of five 1:100 000 scale map sheets (Glengarry, Mooloogool, Thaduna, Padbury and Milgun) were completed. These sheets together with revision of three other sheets previously released in preliminary form (Doolgunna, Bryah and Mount Bartle) are being prepared for final publication.

Results of field mapping have been integrated with airborne survey geophysical data, *Landsat* images, and detailed geochemical and petrological studies of key lithologies, to provide a much improved understanding of the stratigraphy, structure, tectonic history and mineralisation of the Basin. Preliminary interpretations have been presented in a number of publications and oral presentations at conferences and meetings with industry. The Department's activities in the Glengarry Basin have included significant cooperation with mining and exploration companies working, or proposing to begin work, in the area.

King Leopold and Halls Creek Orogens Project

Fieldwork for the King Leopold and Halls Creek Orogens project, which began in 1986, was completed in 1995 and maps and reports are being finalised. The Halls Creek Orogen in the East Kimberley has been mapped with the assistance of AGSO under the National Geoscience Mapping Accord. Summary geological and structural maps of the King Leopold Orogen in the West Kimberley were published in November 1995.

This area has attracted renewed exploration interest and although there are significant indications of gold, base metal and diamond mineralisation, exploration has not as yet led to the discovery of a major orebody since 1980. Diamonds are produced at Argyle and small gold mines have operated in this area in recent years. In addition, significant exploration for base metals, rare-earth elements, nickel and platinum is being undertaken. The 1:100 000 Mount Remarkable geological map was published and preliminary maps of Halls Creek and Ruby Plains are well advanced. Three 1:100 000 sheets (Macintosh, Bow and Turkey Creek) and two 1:250 000 sheets (Mount Ramsay and Lissadell) have been compiled and are being prepared for publication. This revision of the geology has been supported by an extensive program of high-quality geochemical and geochronological work.

Regional geochemical and regolith mapping

Regional geochemical mapping involves determining the distribution of weathered bedrock (regolith), and its chemical composition. Since its inception as a new initiative in 1993-94, maps and explanatory notes for five 1:250 000 scale map sheets have been published. Of these, Peak Hill, Glengarry and Sir Samuel were published in 1995-96. Notes accompanying the Leonora map, published in June 1995, were also released. During the same period, regolith mapping, sampling and chemical analyses were carried out on the Mount Phillips and Nabberu map sheets, and compilation of maps and accompanying explanatory notes on the Robinson Range map sheet continued.

Each set of explanatory notes contains a summary of the regional geology (including the regolith), mineralisation, historical production, and previous exploration. On each sheet area, in excess of 1 000 samples of regolith are collected, and each sample is analysed for approximately 47 elements. These data are shown as a series of element-concentration or contour maps, and analytical data are supplied digitally on disk with the notes. At each sampling site, characteristics of the regolith and surrounding geology are recorded, and used in conjunction with satellite imagery to produce a regolith distribution map. Sample collection and analysis are carried out by outside agencies under the guidance of the Geological Survey Division.

Data resulting from the regional geochemical and regolith mapping project are used to determine the relationship of regolith to bedrock, and the potential for regolith to highlight regional-scale geochemical anomalies with potential indication of as yet undiscovered mineralisation. In 1995-96, an increased amount of data from this project was available in digital form.

Paterson Orogen Project

The Paterson Orogen in the western part of the Pilbara region has been remapped to assist mineral exploration in this remote area. Two new 1:100 000 map sheets (Throssell and Rudall) were published and a third sheet is being prepared for release.

Pilbara Craton Project

The Pilbara Craton project is a National Geoscience Mapping Accord project being carried out in cooperation with AGSO. It includes systematic geological mapping of the north Pilbara Archaean granite-greenstone terrain, new aeromagnetic and radiometric surveys (400 metre line spacing), metallogenic studies, geochronology, and the assembly of a comprehensive GIS database. In 1995-96, Department staff completed geological mapping of the Dampier and Sherlock 1:100 000 map sheets, and commenced mapping on the Roebourne, Pinderi Hills, Mount Wohler and Muccan 1:100 000 sheets. The first stage of airborne geophysical data acquisition was completed in the west Pilbara, and the data made available to the public. The second stage of this program (central and east Pilbara) commenced in May 1996.

The combination of detailed regional geophysical data and the geological mapping program (planned to continue to the year 2000) will assist the mineral exploration industry by providing a much better understanding of the geology and mineral potential of the highly prospective northern part of the Pilbara region.

Three 1:100 000 map sheets from the east Pilbara (Braeside, Pearana and Isabella), and one from the southern Pilbara (Rocklea) were published in 1995-96.

Lennard Shelf and Shark Bay Projects

Fieldwork on the Lennard Shelf project is now completed and the results are being compiled into a comprehensive report and series of maps that document in detail the composition, structure and evolution of the Devonian reef complex. A sub-surface study of mineral exploration drill core was completed and will be integrated into the study, along with data from collaborative work by external institutions and AGSO, and information from seismic surveys and petroleum drill holes. The Lennard Shelf is highly prospective for petroleum as well as lead-zinc mineralisation, with production of these commodities from several operations.

Some field studies and integration of data were undertaken on the Shark Bay World Heritage area which features spectacular marine stromatolites, unusual coquina deposits and Pleistocene evaporites.

Petroleum studies, Interior Basins

This project aims to stimulate petroleum exploration in the onshore Canning and Officer Basins. These basins are poorly understood because of limited available geoscientific data but have proven hydrocarbon potential.

A review of published work and company exploration reports covering both basins is in progress and stratigraphic core hole (Trainor 1) was drilled in the Officer Basin in November 1995. Reconnaissance field work is continuing in the Officer Basin where a second stratigraphic core hole will be drilled in 1996-97.

Following integration and review of these data, plans for the acquisition of further geophysical and geological data during 1996-97 will be formulated.

Petroleum studies, Western Margin

The purpose of this project is to promote private sector petroleum exploration activities in the onshore Perth and Carnarvon Basins through a reassessment of their hydrocarbon potential.

The project involves a systematic review of open-file and published company reports, augmented by new geophysical and geological data acquired by project staff. Geochemical reports summarising analytical data from stratigraphic coreholes drilled last year and from re-sampled industry cores indicate favourable oil and gas source-rock potential for the basins.

Two additional stratigraphic coreholes are programmed for late 1996 to evaluate further the source potential of the Gascoyne Platform area.

Data from aeromagnetic, radiometric and gravity surveys acquired in the Merlinleigh Sub-basin in 1995 were released in both hard-copy and digital forms. Reports on two 1995 stratigraphic coreholes (Gneudna 1 and Ballythanna 1), the hydrocarbon potential of the Merlinleigh Sub-basin, an analysis of exploration results in the Northwest Cape and Giralia areas, and the reservoir quality of Early Permian sandstones in the Merlinleigh Sub-basin were also completed. All reports clearly support the view that the requisite criteria for petroleum generation and entrapment exist in the study areas and warrant further investment in exploration by petroleum companies.

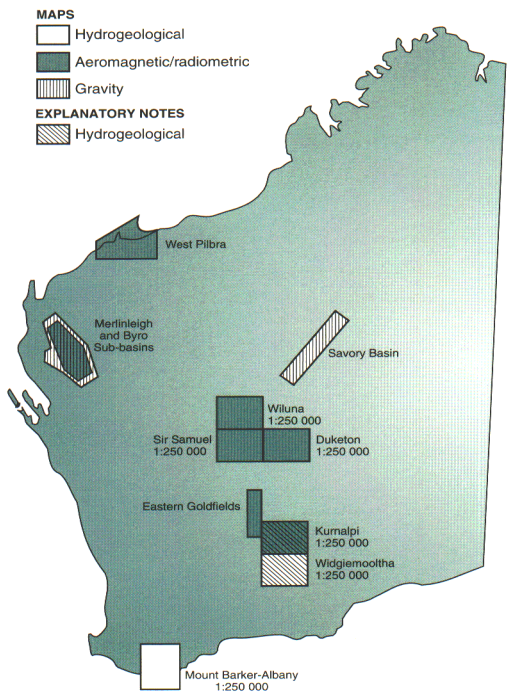
Publications, database products and maps from this project and the Interior Basins project attracted considerable interest when displayed in promotional booths at the premier Australian and American petroleum exploration conferences held in Darwin and San Diego respectively.

Geoscientific advice relating to mining legislation

This project monitors and assesses exploration performance on mineral tenements and provides geological advice needed for the administration of, and for proposed changes to, the Mining Act and Offshore Minerals Act.

Most mineral tenements are held for exploration or prospecting rather than productive mining. Advice on these exploration activities, as gauged from mineral exploration reports and discussions with tenement operators, assists the Department to administer tenements in an efficient and equitable manner, and to ensure that the State is effectively explored.

Figure 6



Exploration performance on approximately 3 400 mineral tenements was reviewed during 1995-96 as part of the assessment of applications for exemption from expenditure conditions, applications for extensions of term of exploration licences, and applications for Ministerial consent to dealings on first-year exploration licences. Where appropriate, in relation to expenditure exemptions, recommendations were made for conditions to be imposed on particular tenements to ensure that ground does not remain unworked for long periods.

Resource studies (MINEDEX)

This project maintains a detailed inventory of the State's identified mineral resources, and monitors activities and provides advice on mineral resources, mineral exploration and potential for mine development. All these functions are primarily supported through *MINEDEX*, the mines and mineral deposits database.

An Atlas of the State's Mineral Deposits and Petroleum Fields, which draws on the *MINEDEX* database, has been released. Resource localities are superimposed on maps showing the geology of the State. Also released was a map showing Pilbara iron ore geology, resources and tenement holdings.

Development of the *MINEDEX* database continued during the year, with provision being made to incorporate details of State production of mineral resources. This will allow current resources and historical production to be linked to provide total in-ground resources for known individual deposits and for the whole State.

An update of mineral exploration activity was produced quarterly throughout the year. This revealed a continuing high level of mineral exploration expenditure in Western Australia, predominantly led by the gold sector. Western Australia is maintaining its dominant share (55 per cent) of Australia-wide exploration expenditure, but the proportion of overseas activities by Australian companies is increasing.

Industrial mineral studies

Industrial minerals are non-fuel and non-metallic resources developed for their physical or chemical properties. Two commodity bulletins, one on talc and magnesite and the other on barite and fluorite occurrences in Western Australia, are now being edited. A report on the basic raw materials of the Shark Bay World Heritage Area has also been completed. Work in progress includes a major review of Western Australian limestone deposits.

Under a sister State agreement with Zhejiang Province, People's Republic of China, there has been cooperation with Chinese experts on a number of industrial mineral deposits in Western Australia that show potential for joint development. Deposits examined include bentonite, potash feldspar, high-grade kaolin and talc. Physical and chemical testing of samples collected in the course of this cooperative project has been completed and a report is being prepared.

Mineralisation studies

This project investigates and documents the geological controls of mineralisation, and proposes new exploration strategies.

Documentation of gold deposits in the Kanowna-Kurnalpi-Pinjin area of the Eastern Goldfields is well advanced.

During the year, work began on the documentation and field verification of mineral deposits and occurrences in the Kimberley region.

Mineral exploration data (WAMEX)

The Western Australian Mineral Exploration Index (*WAMEX*) is the bibliographic database of statutory company reports which provides the mineral industry with ready access to mineral exploration data to encourage efficient and effective mineral exploration and development.

This component seeks to encourage mineral exploration and development activities and prevent wasteful duplication of effort. The strategy is to maintain a complete archive of exploration reports lodged by tenement holders, and to ensure that the reports are readily accessible when they are released to the public under the terms of the relevant legislation.

During the year, 3 193 mineral exploration reports were received on activities carried out on 10 562 tenements. In 1994-95, a total of 3 322 reports were received on 10 827 tenements. The Department's collection of mineral exploration reports numbers 52 078 volumes on 13 657 projects.

Gold continues to be the most commonly sought commodity in mineral exploration reports received, representing 75 per cent of all reports.

A total of 1 156 reports (626 items) were released to open file during the year, bringing the number of volumes available to the public to 21 819.

Mineral exploration reports are submitted to the Department in compliance with the reporting requirements of the Mining Act. These requirements have been strengthened by new regulations and the release in November 1995 of the *Guidelines for Mineral Exploration Reports on Mining Tenements*. It is now compulsory to submit all geoscientific data collected on any type of tenement in a format in accordance with the guidelines. Compliance with the guidelines will improve the quality and availability of open-file data.

The practice of submitting combined mineral exploration reports, that is, reports covering more than one tenement, has also been formally recognised in the legislation. During the year, 414 groups covering 4 056 tenements were given combined reporting status. Currently, 1 232 groups covering 13 051 tenements have combined reporting status.

A public access version of *WAMEX* is available for open-file searches in the Geological Survey Division library. During the year the database was prepared for dial-in access to become operational in July 1996. Access will be available through dial-in or *Internet* connection. Provided users have a web browser and 3270 emulation software, *WAMEX* can be searched and the results viewed, printed and down-loaded to personal computers.

This will complement the Department's customer focus objective of providing fast customer access to information regardless of location.

Petroleum exploration data (WAPEX)

The Western Australian Petroleum Exploration database (*WAPEX*) provides the petroleum industry with ready access to petroleum exploration and production data to encourage efficient petroleum exploration and development and assists in ensuring previous activities are not unnecessarily duplicated.

A library of core and sample material, technical reports and data on activities within petroleum tenements is maintained. Data, lodged with the Department as a condition of tenure, are released to the public as required by legislation. Cores and samples may be viewed at the State core storage facility.

WAPEX expanded from 43 669 to 47 674 registered items including reports, seismic sections, well logs, digital data, maps, cores and cuttings, and palaeontological data. Data released included 228 edited reports, 291 unedited reports, 45 sets of well logs and 136 sets of seismic sections. A total of 146 requests to extract seismic tapes for reprocessing (16 077 tapes), 31 requests to sample drillcore or cuttings, and 14 requests for access to palaeontological data were satisfied.

Construction of a central repository at Carlisle to consolidate storage of petroleum exploration reports and data with mineral exploration data and library archives was completed during the year.

A prototype petroleum exploration database developed in 1994-95 has been tested and all *WAPEX* data for wells, surveys, permits and general reports have been loaded.

Prospectivity promotion

In order to attract investment in mining and petroleum in Western Australia, the main focus of the Geological Survey Division is to enhance the geological understanding and hence the prospectivity of the State. A series of displays on this theme was mounted at industry seminars. These displays brought to the attention of industry the latest developments from ongoing projects carried out by the Department's Geological Survey Division. The displays were shown at the following events:

- Australian Society of Exploration Geophysicists 11th Geophysical Conference and Exhibition (Adelaide, September 1995);
- New Generation Gold Mines: Case Histories of Discovery - Conference and Exhibition (Australia Mineral Foundation, Perth, November 1995);
- Eastern Goldfields Projects Exposition - Joint GSWA/AGSO display of recent NGMA work (Kalgoorlie, November 1995);
- Recent Developments in Base Metal Geology and Exploration (Australian Institute of Geoscientists, Perth, November 1995);
- 13th Australian Geological Convention and AGSO Jubilee Symposium (Canberra, February 1996);
- WALIS Forum 1996 (Perth, April 1996); and
- Australian Petroleum Exploration and Production Association (*APPEA*) Conference and Exhibition (Darwin, June 1996).

PROGRAM 3

GEOLOGY AND RESOURCE INFORMATION

Objective: *To improve the knowledge of the geology of Western Australia by providing up-to-date regional geological, geochemical, geophysical and mineral resource maps, and resources information and advice. This improved knowledge assists in the formulation of exploration and development strategies by the mining and petroleum industries, and is used for resource assessment and land-use planning by government and other organisations.*

Indicator

Effectiveness

Rate of geoscientific map production

Geoscientific maps are widely used by mineral and petroleum explorers and developers and by groundwater and land-use planners as a basic source of information on which to make resource allocation decisions. The indicator reflects the extent to which the Department is maintaining an adequate coverage of this information over the State.

Note: Many of the first edition 1:250 000 geological maps of the State are more than 20 years old. The National Geoscience Mapping Accord (NGMA) was formed in recognition that, with advancing technology and knowledge, maps of this age become outdated and obsolete. The maps referred to alongside are part of a critical program of updates and revisions of earlier maps, or new maps at a more detailed scale (usually 1:100 000 to allow greater complexity to be displayed) or a new type of map (e.g. geochemical map).

Result

	1993-94	1994-95	1995-96
Maps compiled	15	18	24
Maps issued	10	20	25

The large increase in numbers of maps reflects a combination of increased productivity as well as additional funding provided by the Government since 1993-94 towards a four-year, accelerated mapping program.

Customer satisfaction

In addition to the rate of maps production, the effectiveness of this program can be gauged by the formal positive endorsement of the program from industry as expressed in letters tabled through the customer-based Geological Survey Liaison Committee. This committee, comprising industry and other geoscience customers (e.g. The Australian Geological Survey Organisation and universities), meets approximately twice yearly to assess reports by its Technical Advisory Groups and to provide program guidance and feedback ensuring maximum relative effectiveness.

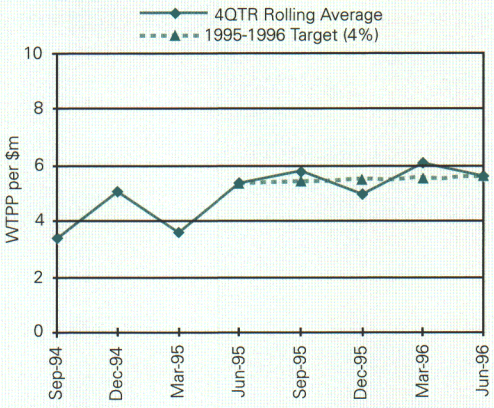
Efficiency

Weighted quarterly published map and publication output against expenditure

Various types of published products (e.g. maps and books) have each been assigned a "weight" which attempts to quantify the relative effort required to proceed from initial field work to final publication. The total weighted products for each quarter are then compared to the expenditure in that quarter. The quarterly weighted products per dollar has been smoothed using a four-quarter rolling average to compensate for output peaks and troughs due to the different completion time for various products.

***Note**: Sub-program 3.2 (Hydrogeology and Groundwater Resources) products released in calendar 1996 and for which the majority of work was completed prior to that date have been included in this productivity index with their related cost of production.*

Geoscience and Resource Information
Weighted Total Published Product per $m

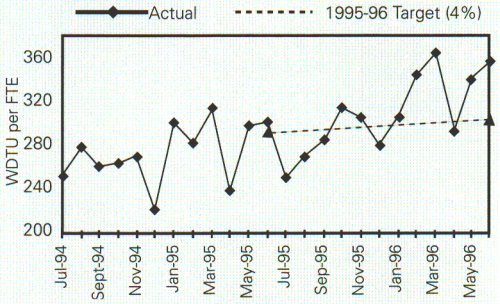


In 1995-96 the level of real productivity improvement was just over four per cent. Weighted total published product per dollar continues to follow an upward trend.

Total weighted monthly data transactions per employee

Within the *WAPEX/WAMEX* sections, the majority of work is directly linked to retrieval, monitoring, duration and release of statutory exploration and commodity production information. These transactions which, when weighted according to complexity (Weighted Data Transaction Units) and compared with numbers of staff involved, provide a measure of their efficiency.

WAPEX/WAMEX Productivity Index
Weighted Data Transaction Unit Per Employee



PROGRAM 4
DANGEROUS GOODS MANAGEMENT

Objective: *To ensure an acceptably low level of risk to the public from the storage, handling and transport of explosives and dangerous goods in Western Australia.*

Description: *Industrial development and mining activities in Western Australia are dependent upon the safe storage, handling and transport of explosives and dangerous goods. The strategy adopted to achieve the objective is based on the regulation of industry by developing, maintaining and enforcing relevant legislation.*

A comprehensive database of the sites where dangerous goods are manufactured and stored is maintained to assist in monitoring and auditing compliance with the regulations, and to provide the information required when an emergency response is necessary.

Educational material and technical advice are also provided on: compliance with the regulations; hazards controls plans; and more general aspects of handling and storing explosives and dangerous goods. Technical advice is also provided to other Government agencies to assist with land use planning and optimisation of land usage surrounding industrial activities.

Introduction

The vision of the Explosives and Dangerous Goods Division is a community confident that measures are in place to keep it safe from hazards associated with the storage, handling and transport of explosives and dangerous goods. Without such community confidence, industrial development in Western Australia would be hampered. The Department of Minerals and Energy seeks to ensure that the hazards to the public that arise from these activities are maintained at an acceptably low level. It does this by the development, maintenance and enforcement of the Explosives and Dangerous Goods Act.

The direct recurrent expenditure of this program during 1995-96 was $1.5 million. This, together with associated corporate service costs of $0.7 million and capital expenditure of $0.1 resulted in total expenditure of $2.3 million. Revenue raised from fees and licences during 1995-96 totalled $1.4 million.

At 30 June 1996 a total of 29 full-time equivalent staff were employed under this program.

Outplacement

The Department began work on several initiatives aimed at outplacing some of the activities currently conducted under the Dangerous Goods Management program. These initiatives include:

- Accreditation of third party consultants to examine proposed facilities for the storage of dangerous goods;
- A partnering agreement with the Western Australian Fire and Rescue Service; and
- Identification of other areas in which opportunities for outplacing activities may exist, such as local government and industry self-regulatory groups or associations.

Examinations of applications for licences to store dangerous goods are conducted free of charge and with good turnaround times hence there was slow industry reaction to the accreditation initiative. This has led to the introduction of an examination fee (due to apply in 1996-97) which will be waived where a proposal has been examined by an accredited consultant.

The Department participated in a partnering exercise with the Western Australian Fire and Rescue Service. Common values and objectives were identified with a view to developing opportunities to improve the effectiveness and efficiency of each agency. Working groups have been established to address high-priority areas of data sharing, incident response and reporting, and premises inspections. Potential for significant efficiency gains has been identified through expanding the role of fire safety officers to include some elements of dangerous goods safety when conducting routine building inspections.

Divisional structure

A minor organisational restructure during the year was initiated following the departure of the Manager Transport Branch. The former Explosives Branch was abolished and its functions absorbed by the Storage and Transport Branches. Essentially this expedited the planned move to treat explosives as Class 1 dangerous goods and to ensure the relevant legislation is appropriately updated.

The overall structure of the Department's Explosives and Dangerous Goods Division was reviewed to establish a requisite structure in alignment with a Department initiative to introduce a new system of management.

DEXIS information management system

Implementation of the Department's new electronic licensing and inspection management system was completed during the year. Development of the $250 000 system known as *DEXIS* (Dangerous Goods and Explosives Information System) was largely outsourced and managed internally. The system has improved the financial controls on licensing revenue, facilitated licence issue and renewal, enabled more detailed information to be recorded for use by emergency services and facilitated management of inspection functions.

The new information management system, in conjuction with the Department's outsourcing, outplacement and managerial structural initiatives described above, is part of a structured approach to process management designed to improve customer focus target response times through improvements in staff effectiveness, efficiency and conditions.

Explosives reserves

The planned relocation of the Kalgoorlie Explosives Reserve to Mungari has progressed to a pre-development phase under the management of LandCorp on behalf of the Department. The proposed new Mungari Explosives Park will be adjacent to the Mungari Industrial Park approximately 20 kilometres west of Kalgoorlie. The Department plans to have the new facility available to industry by the end of 1997.

A major project to provide road train access to the Kalgoorlie Explosives Reserve has progressed slowly because of numerous hurdles encountered in the process. The objective is to improve public safety by diverting explosives and dangerous goods transport around major residential areas and to reduce operating costs for industry by allowing direct road train access to the reserve for the final eight years of its existence. The project is being jointly funded by industry, City of Kalgoorlie-Boulder and the Department. It should be completed before the end of 1996.

National uniformity

Transport

The Explosives and Dangerous Goods Division is cooperating with the National Road Transport Commission and is on schedule to have a nationally-aligned legislative package in place in early 1997. Industry has been extensively consulted during the development of a code and regulations, including a public information seminar which sought comments on the legislative package.

Overall the technical requirements for the transport of dangerous goods will be little changed from the current Australian Code. Most of the changes are administrative and clarify the requirements.

The biggest benefit of nationally-consistent regulations for the transport of dangerous goods will be a significant reduction of "red tape" and hence costs for industry.

Major hazards

The national Worksafe Standard to control major hazards facilities was published in 1996, and is consistent with the way the Department has been operating for many years and what are perceived to be the world's best practices.

Storage

The road to national uniformity in the storage of dangerous goods has proven to be long and arduous. To facilitate completion of the draft national regulations, the Division rejoined the Expert Working Group which is developing model regulations for the storage of dangerous goods. The Department has established formal liaison with the Chamber of Commerce and Industry and WorkSafe WA to facilitate the easy adoption of the Standard when it is published in 1997.

Kwinana Risk Study

The public risk analysis update of the Kwinana industrial area, completed in late 1995, showed that the risk to the public was well within the criteria set by the Environmental Protection Authority. The risk model developed for the project is used to evaluate all hazardous plant expansion and development applications for the Kwinana region and enables the optimisation of land use in the Kwinana area.

The risk models developed for Kwinana are being used to model risks from other future heavy industrial estates at Boodarie, near Port Hedland and at Kemerton, north of Bunbury. This allows public risks to be rationalised in the layout stage of these estates.

Major hazard facility expansions

Risk assessment advice was provided to the Department of Environmental Protection on the following industrial developments :

- Expansion of the Wesfarmers LPG plant at Kwinana;
- Construction of a new ammonium nitrate plant by CSBP at Kwinana;
- Construction of a new co-generation plant by Mission Energy at Kwinana;
- Construction of the LPG extraction project at the Woodside Offshore LNG plant;
- Construction of a new sulphuric acid terminal at Kwinana; and
- Construction of a hot-briquetted-iron plant by BHP at Port Hedland.
- Major hazard facility operations

The State's nine major hazard facilities were reviewed to ensure they were operating in accordance with agreed safety management systems. There were three incidents which had off site impacts and all were brought under control by standard shutdown procedures with no resultant off site damage.

Transport of sodium cyanide solution

The Department managed an extensive comparative risk analysis to assess two alternative routes for the transport of liquid sodium cyanide through the Perth metropolitan area to determine the safest route following the closure of some rail services.

A major factor in allowing the movement of this product through the metropolitan area was the excellent safety record developed over many years of operation and there is every indication that this good safety record should continue. The available road routes will continue to be monitored and changes will be made if a safer option develops.

On-road enforcement

The Department's on-road enforcement (ORE) vehicle again proved its effectiveness during 1995-96, with more than 300 vehicles transporting dangerous goods being intercepted and checked for compliance with the regulations, especially driver and public safety. Resulting from these interceptions a total of 28 charges were laid against companies or individuals. The total value of fines imposed exceeded $40 000.

PROGRAM 4

DANGEROUS GOODS MANAGEMENT

Objective: *To ensure an acceptably low level of risk to the public from the storage, handling and transport of explosives and dangerous goods in Western Australia.*

Indicator **Result**

Effectiveness

The public deems compliance with the relevant legislative controls as providing an acceptably low level of risk. Hence, the extent to which the explosives and dangerous goods industry is observed to be complying with the regulations is seen as a direct indicator to the effectiveness of the Division in achieving its objective.

Transport of dangerous goods

The proportion of vehicles complying with safety standards.

Transport compliance

	1993-94 %	1994-95 %	1995-96 %
Full vehicle	n/a	63	42 *
Documentation	90	83	88
Safety equipment	67	84	92
Emergency equipment	61	84	93
Vehicle load	96	98	99

* This is the first year in which the new computerised management information system (*DEXIS*) was used to compile compliance level data. Although it appears there has been a significant drop in full vehicle compliance levels over this financial year, information from *DEXIS* suggests there was an error in the compilation of data in previous years and that this indicator has remained relatively static. The individual indicators have generally continued their upward trend.

This year 12 per cent of vehicle compliance data was obtained from on-road enforcement work. It was found that the compliance levels from on-road enforcement work were only marginally lower than those obtained from depot inspections.

Storage of dangerous goods

The levels of compliance with regulations observed at premises where dangerous goods are stored and handled.

Random target inspections were conducted during 1995-96 to determine general compliance levels for comparison with 1993-94 data.

Storage compliance

	1993-94 %	1994-95 %	1995-96 %
Placarding of premises	47	n/a	44
Location of stores	93	n/a	90
Secondary containment	69	n/a	44
Fire protection	80	n/a	66
Emergency plans	28	n/a	43

The results show significant improvement in the provision of emergency response plans and a significant reduction in compliance in the areas of secondary containment and fire protection. The reduced compliance in secondary containment is not believed to represent reduced safety, but is most likely a result of the Division applying more stringent requirements for protection of the environment on behalf of the Department of Environment Protection. The lower compliance in fire protection was predominantly due to technical non-compliance as some fire extinguisher rating requirements were upgraded and this affected approximately 75 per cent of premises.

Efficiency

The cost of administering legislation per activity regulated.		**1993-94**	**1994-95**	**1995-96**
Storage and handling of dangerous goods	($ per premises)	69	n/a	72
Transport of dangerous goods	($ per vehicle)	n/a	n/a	29

Little can be drawn from the efficiency indicators at this stage. Attempts will be made to compare the program's efficiency with its national and international equivalents. Any significant variation over time will need to be evaluated in conjunction with changes in the respective effectiveness indicators.

Performance Indicators Audit

Opinion of the Auditor General

To the Parliament of Western Australia

DEPARTMENT OF MINERALS AND ENERGY
PERFORMANCE INDICATORS FOR THE YEAR ENDED JUNE 30, 1996

Scope

I have audited the performance indicators of the Department of Minerals and Energy for the year ended June 30, 1996 under the provisions of the Financial Administration and Audit Act 1985.

The Director General is responsible for developing and maintaining proper records and systems for preparing and presenting performance indicators. I have conducted an audit of the performance indicators in order to express an opinion on them to the Parliament as required by the Act.

My audit was performed in accordance with section 79 of the Act to form an opinion based on a reasonable level of assurance. The audit procedures included examining, on a test basis, the evidence supporting the amounts and other disclosures in the performance indicators and the assessment of the relevance of the performance indicators to the program objectives, and the appropriateness of the performance indicators in assisting users to assess the Department's performance. These procedures have been undertaken to form an opinion as to whether, in all material respects, the performance indictors are relevant and appropriate having regard to their purpose and fairly represent the indicated performance.

The audit opinion expressed below has been formed on the above basis.

Audit Opinion

In my opinion, the performance indicators are relevant to the objectives of the Department of Minerals and Energy. The indicators are appropriate for assisting users to assess the Department's performance and fairly represent the indicated performance for the year ended June 30, 1996.

D D R PEARSON
AUDITOR GENERAL

September 27, 1996

PROGRAM 5
CORPORATE SERVICES

Introduction

The corporate services provided to the Department cost a total of $12.7 million of which $12.4 million was recurrent expenditure and $0.3 million was capital expenditure.

During 1995-96 $0.2 million was expended on corporate services provided to the Chemistry Centre (WA).

Economic policy and statistics

A review of specific-rate royalties applying to certain low-value and bulk minerals was completed and a draft policy on flaring of natural gas was finalised during the year.

The Statistics Digest, the flagship statistics publication on the State's mining industry, was produced with official figures on the output, employment and exports of the State's industry and analysis of the mining industry in an international context.

Information was provided and economic modelling undertaken as part of a review of petroleum royalties and discussions took place regarding the valuation of diamond stocks for the purposes of determining a profit-based royalty for Argyle Diamonds. Several requests for royalty relief were examined during the year and a new system of royalties to encourage the downstream processing of iron ore was developed jointly with the Departments of Resources Development and Treasury.

Corporate planning

A new draft strategic plan for the Department was developed to achieve the Department's vision of Western Australia having the world's best exploration, development and operating regime for petroleum and mineral projects.

In keeping with the plan, some changes were made to the program structure (to take effect from 1 July 1996). Corresponding modifications have also been made to the organisation management structure which is now closely aligned with the program structure.

Human resource management

1995-96 saw a dramatic impact on human resource management within the Department.

- Work began on the stratification of the Department as part of the transition to a *requisite organisation*. At present, the stratification has concentrated on restructuring the Department into fewer and better defined levels of management. The primary aims are greater accountability, improved communication and clearer reporting systems.

- The review of human resource policies, practices and procedures was completed early in the year. This resulted in the compilation of a procedure manual which met Public Sector Standards. It also provided the framework to allow line managers to assume greater accountability for their human resources consistent with the requisite organisation behaviour. This transfer of responsibility to line managers is well under way and implementation will continue over the next year.

- The Department, along with a number of other government agencies, implemented *Clockwork*, an integrated personnel and payroll package, to replace *PIMS*. Consistent with government's outsourcing policy, the services previously provided by the Department of State Services were contracted to Fujitsu Australia Limited.

- Associated with the Department's structural shift was a major review of staff performance management. This resulted in the development and implementation of the Department's Performance Enhancement Program (PEP). All employees were trained in the elements and use of PEP for the process to be fully implemented next year.

- A more concerted focus was given to management training. Additionally, 12 staff were sponsored to participate in a six-month Effective Manager Program specifically customised for the Department. This program fitted well into the Department's broader objective of increasing the level of management effectiveness across all mid to senior management levels.

- Cross-cultural awareness training continued across all levels of the organisation to enhance further understanding of Aboriginal issues.

- The year saw completion of the Department's Workplace Agreement and Enterprise Bargaining Agreement. Progress on the Workplace Agreements (WPA) proceeded smoothly, culminating in Cabinet granting approval to offer separate WPAs to employees of the Department, the Chemistry Centre and the Mineral Processing Laboratory in November. In June an Enterprise Bargaining Agreement (EBA) was finally endorsed, but not before considerable industrial unrest.

- There was a 13 per cent turnover of permanent staff during 1995-96. The Department had 578 full-time-equivalent (FTE) employees on its books at 30 June 1996, compared with 650 at the same time the previous year. This reduction in FTEs resulted from the transfer of hydrogeology staff, some increased use of contractors and some efficiency gains.

- Adherence to Public Sector Standards and Code of Ethics was effected during the year, while Code of Conduct requirements were being reviewed.

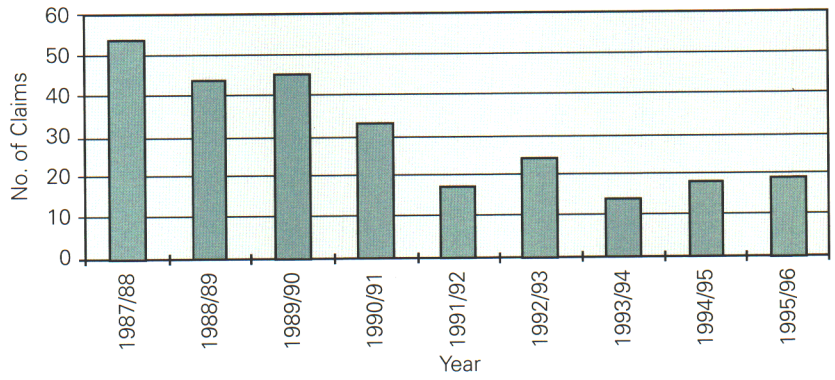
Health and safety

In the first 12 months of the Employee Assistance Services contract there was an average staff use rate of approximately five per cent, indicating that the services were well used and worthwhile.

The Department increased its focus on Occupational Health and Safety (OHS) during the year through the expansion of services in the management of workers' compensation, rehabilitation, and general safety and welfare education. In addition to the efforts of the OHS Committee, health and safety became a highly focused agenda item of every Corporate Executive meeting. A Department hazards register was established, and a process to identify hazards and risks is being developed.

Apart from workplace assessments and on-site education of staff in safe work practices, the Department published in-house Safety Bulletins relating to specific OHS topics, such as manual handling. Line management has the responsibility for disseminating the information and educating staff. Over the last few years this has had a positive effect on reducing the average number of workers' compensation claims per year, as can be seen from the following comparative graph.

Table 10: Number of Workers' Compensation claims by year.



During 1995-96 there were 19 workers' compensation claims. Of these, 18 were accepted and one rejected. A total of 227 working days were lost during the 1995-96 premium period. The Department had a workers' compensation frequency rate of 6.39, an estimated cost of claims of $0.15 per $100 wageroll, and a premium rate of 0.681 per cent.

Disability services

In accordance with the requirements of the Disability Services Act (1993) the Department's Working Group has, in close collaboration with the Disability Services Commission, developed and implemented a Disability Services Plan from 1 January 1996. The plan is a blueprint to improve access to facilities, functions and services for people with disabilities, their families and carers. The plan is subject to annual review and may be amended and extended as priorities and needs change.

Following are key achievements for the six months to 30 June 1996:

- Widespread consultation with Department staff to increase the awareness of the principles of the Disability Services Act (1993);
- Development and implementation of the Disability Service Plan;
- Issue of a policy statement;
- Implementation of a process to record occurrences when services are provided to customers with disabilities;
- Development of grievance procedures;
- Reference to a TTY (Teletypewriter) relay service to be included in future publications; and a
- Specific awareness program introduced for staff in regional offices.

Financial, supply and asset management

The Department completed its first full financial year of accounting on an accrual basis using a new financial management information system. The system performed to expectations throughout the year, and further enhancements were initiated for 1996-97, including implementation of an inventory management module.

A zero-based approach to allocating the Department's budget was taken for the first time in 1995-96. Financial resources were allocated to programs on the basis of the planned achievements of the Department, thus integrating the corporate planning and budgeting processes.

The Department obtained approval from the State Supply Commission for full devolution of purchasing. This enables direct calling of public tenders up to a value of $1 million.

A review of the assets held by the Department began during the year with a view to rationalising all real estate assets during 1996-97. Assets with current or potential future value to the Department will be retained; those which have commercial value but no value to the agency will be earmarked for disposal at an appropriate time; and those which are of no value to the Department and have no commercial value will be referred to the Department of Land Administration for appropriate action.

A project was initiated late in the financial year to evaluate appropriate technology to increase efficiency through the use of electronic funds transfer and electronic procurement. This study will be conducted in 1996-97, to identify options for 1997-98.

Internal Audit

For the first time the Internal Audit Branch used private contractors to conduct two major audit assignments. Traditional audit work continued throughout the various Divisions and regional offices using new risk-based methodologies. Special audit work included a review of the Laboratory Information Management System (LIMS) throughout the Chemistry Centre (WA) and security reviews of the Financial Management Information Systems (*FMIS*) and the new *Clockwork* system which replaced the Personnel Information Management System (*PIMS*). Membership of the Audit Committee was changed to provide for rotational membership among the Corporate Executive.

Information systems and technology

An external review of computing and information systems was completed during the year. The review considered establishing a more appropriate and cost-efficient architecture to develop and operate computing systems in the Department's Mineral House and across its 13 regional offices. Key recommendations included the need to adopt a set of open systems standards for the design and development of distributed computing systems for upgrading the Department's data network. A plan to implement recommendations in 1996-97, was developed and approved.

An innovative means of providing direct access to Department and industry data was introduced in 1995-96. This system, referred to as *DME Access,* uses the *Internet* and advanced dial-in telecommunications technology to enable clients to access information from their office or home. The system has been well accepted and currently has several hundred subscribers. The Department will increase the scope of access to other databases during the coming year.

During 1995-96 the Department, in conjunction with 12 other WA agencies, formed a consortium to investigate and evaluate the potential for large-scale outsourcing of information technology infrastructure and services. It is envisaged that a formal specification of the required infrastructure and services across the 13 agencies will be completed and issued as a formal tender by mid 1996-97. Arrangements will be made through formal contracts for the phased outsourcing of the specified information technology services.

However, physical replacement of infrastructure and actual provision of services by an external provider will not take place until 1997-98.

The introduction of the Commonwealth Native Title Act and subsequent claims and appeals against tenement applications has generated an urgent need within the Department to develop a simple but effective tracking system on the status of applications and claims. A system, known as *FANTM*, was put in place to handle this important aspect of the Department's business during the fourth quarter of 1995-96.

A major challenge facing the Department is the retention of its high-calibre information technology staff during the outsourcing preliminaries and negotiations.

Public affairs

A major review and analysis of Departmental publications, the first of its kind, was carried out during the year. The report and its recommendations were still under consideration at the end of the year. Department staff were heavily involved in planning for the second Minerals and Energy Week, to be held in March 1997 in partnership with the Chamber of Minerals and Energy and other industry groups and Departments. Staff also worked on improvements to the Department's annual Awards for Environmental Excellence in the Mining and Petroleum Industries.

Outsourcing of some activities was started early in the financial year as a result of a continuing review of priorities and staffing. After some initial hiccups, outsourcing was firmly established as an effective strategy.

A high priority was given to media relations and the Department's successful media information package for the Goldfields region was reviewed and updated. Positive media contacts were maintained as a result of this innovation.

ACCOUNTING

The financial statements for the year ended 30 June 1996 have been prepared in accordance with the provisions of the Financial Administration and Audit Act, 1985, Treasurer's Instructions issued pursuant thereto, and relevant accounting standards of the Australian Society of Certified Practising Accountants and the Institute of Chartered Accountants in Australia. To assist in comparisons with other Government agencies they follow the format suggested in the appendices to the Treasurer's Instructions.

Mineral and Petroleum royalties represent the bulk of revenue collections but, as they are not operating revenue, they appear below the bottom line of the Operating Statement as administered revenue.

The Statement of Financial Position shows a significant increase in non-current assets over the last twelve months. This does not reflect acquisition of assets. It is the result of capitalisation of a small number of significant items which were valued and brought to account during the year.

REVENUE

Consolidated Fund

During the financial year the Department was responsible for the collection of $537 million through the Consolidated Fund (CF). Mineral and petroleum royalties collected from companies operating under State legislation comprised 80 per cent of this amount. Part of the revenue was also payments collected by the State on behalf of the Commonwealth for petroleum produced within Commonwealth waters. These receipts were subsequently paid to the Commonwealth by way of special purpose payments after payment into Consolidated Fund.

In addition to royalties, the Department also collected lease and other rental charges, (representing approximately 12 per cent of revenue), taxes and licences (one and a half per cent) and Departmental revenue (approximately one quarter of one per cent).

EXPENDITURE

Consolidated Fund

Funds are appropriated by the Parliament through the Consolidated Fund to provide for recurrent services and capital expenditure.

Recurrent services

This appropriation includes provision for operating costs of the Department, refunds of revenue collected in previous years and payments to the Commonwealth. Payments to the Commonwealth are made under the provisions of the Petroleum (Submerged Lands) Act 1982 for the Commonwealth share of royalties received from offshore operations. The Commonwealth revenue has been collected by the State into the Consolidated Fund. Payments to the Commonwealth totalled $20.05 million in the year, compared with $19.187 million paid in the previous year.

During the financial year, the Department's operating budget of $46.815 million was underspent by $875 000 due to underspending on the Mineral Industry Titles Information System (MiTiS), and transfer of the Hydrogeology Branch to the Water and Rivers Commission, which were partially offset by costs associated with the Enterprise Bargaining and Work Place Agreements.

Capital expenditure

During the year, $2.944 million was spent on capital projects funded from this source.

FINANCIAL MANAGEMENT

The Department continued the development of its integrated new generation financial management information system (FMIS). Work included the development of user-friendly financial reports with accrual-based information and preparation to implement an inventory module.

PRICING POLICY

The Department generally adopts a full-cost-recovery user-pays approach in determining fees and charges for services provided to the public and industry. With some services, where there is considered to be an element of service to the general public, a nominal fee has been determined. However, this represents only a small fraction of services provided and has minimal impact on revenue. In other cases the data collected are considered to be a freely available resource for the public and for industry, but a charge is levied to cover the cost of supplying this data in user-friendly formats.

ROYALTY POLICY

The Department has a corporate objective of ensuring that the community receives a fair return for the extraction of non-renewable resources owned by the people of the State. The Department continually aims to develop royalty systems and collect royalties on time, economically and efficiently.

Operating Statement

for the year ended 30 June 1996

	Note	1995-96 ($'000)	1994-95 ($'000)
COST OF SERVICES			
Operating expenses			
Salaries	5	28 314	26 123
Superannuation	6	397	1 018
Administration expenses	8	20 140	20 276
Depreciation	7	3 143	2 643
Net loss on disposal of non-current assets	9	2	NIL
Total cost of services		51 996	50 060
Operating revenues			
User charges and fees	10	1 096	1 654
Other revenues	11	356	266
		1 452	1 920
Cost of service before abnormal items		50 544	48 140
Abnormal items	12	1 031	NIL
Net cost of services		51 575	48 140
REVENUES FROM GOVERNMENT			
Appropriations	13	48 884	45 604
Receipts paid into Consolidated Fund	14	(1 335)	(1 841)
Resources received free of charge	15	1 846	1 589
Liabilities assumed by the Treasurer	16	397	1 018
Total revenues from Government		49 792	46 370
CHANGE IN NET ASSETS RESULTING FROM OPERATIONS		(1 783)	(1 770)
ADMINISTERED EXPENSES AND REVENUES	17		
EXPENSES			
Petroleum (Submerged Lands) Act 1982		20 050	19 187
Total administered expenses		20 050	19 187
REVENUES			
Taxes and fees		8 312	7 485
Royalties and rentals		541 260	532 223
Total administered revenues		549 572	539 708

Statement of Financial Position

for the year ended 30 June 1996

	Note	1995-96 ($'000)	1994-95 ($'000)
CURRENT ASSETS			
Cash and amounts in suspense	18	356	479
Restricted cash	19	2 499	6 038
Inventories	20	2 323	3 698
Accounts receivable	21	289	173
Prepayments	22	322	14
Total current assets		5 789	10 402
NON-CURRENT ASSETS			
Property, plant, equipment and vehicles	23	39 887	7 620
Works in progress	24	793	33
Total non-current assets		40 680	7 653
Total assets		46 469	18 055
CURRENT LIABILITIES			
Accounts payable	25	551	691
Employee entitlements	27	4 680	3 736
Trust accounts	29	2 637	6 038
Treasurer's advances	28	20	467
Accrued salaries	26	198	100
Total current liabilities		8 086	11 032
NON-CURRENT LIABILITIES			
Employee entitlements	27	2 124	2 241
Total non-current liabilities		2 124	2 241
Total liabilities		10 210	13 273
EQUITY	30		
Accumulated surplus		2 999	4 782
Asset revaluation reserve		33 260	NIL
Total equity		36 259	4 782
Total liabilities and equity		46 469	18 055
ADMINISTERED ASSETS AND LIABILITIES	31		
ADMINISTERED CURRENT ASSETS			
Restricted cash		2 478	4 222
Accounts receivable		119 831	105 688
Total administered current assets		122 309	109 910
Total administered assets		122 309	109 910
ADMINISTERED CURRENT LIABILITIES			
Payments received in advance		2 478	4 103
Accounts payable		2 254	119
Total administered current liabilities		4 732	4 222
Total administered liabilities		4 732	4 222

Statement of Cash Flows
for the year ended 30 June 1996

	Note	1995-96 ($'000) Inflows (Outflows)	1994-95 ($'000) Inflows (Outflows)
CASH FLOWS FROM OPERATING ACTIVITIES			
Payments			
Salaries and related costs		(27 276)	(25 794)
Administration		(18 664)	(17 996)
Receipts			
User charges and fees		1 335	1 841
Other revenues		NIL	NIL
Net cash from operating activities	33	(44 605)	(41 949)
CASH FLOWS FROM INVESTING ACTIVITIES			
Payments for purchase of non-current assets		(2 944)	(1 813)
Net cash from investing activities		(2 944)	(1 813)
CASH FLOWS FROM GOVERNMENT			
Receipts from capital appropriations		2 944	1 313
Receipts from recurrent appropriations		45 940	44 290
Revenue paid to CF		(1 335)	(1 841)
Net cash provided by government		47 549	43 762
Net increase in cash held		NIL	NIL
Cash at the beginning of the reporting period		20	20
Cash at the end of the reporting period		20	20

Note:
- This statement does not include transactions relating to the Drilling component of the Treasurer's Advance which was finalised by the sale of an asset which was originally funded from the Advance, together with a transfer of funds appropriated to the Water and Rivers Commission.
- The cash flow figures do not include amounts held in suspense at Treasury for accrued salaries.

CASH FLOWS FROM ADMINISTERED TRANSACTIONS		
CASH INFLOWS FROM ADMINISTERED TRANSACTIONS		
Business	8 312	7 485
Mining	527 117	426 534
Total administered cash inflows	535 429	434 019
CASH OUTFLOWS FROM ADMINISTERED TRANSACTIONS		
Administered expenses	17 796	19 187
Total administered cash outflows	17 796	19 187
Net cash inflows/(outflows) from administered transactions	517 633	414 832

Program Schedule of Expenses and Revenues and Administered Expenses and Revenues

for the year ended 30 June 1996

PROGRAM	MINERAL RESOURCES MANAGEMENT		PETROLEUM RESOURCES MANAGEMENT		GEOLOGY & RESOURCES INFORMATION		DANGEROUS GOODS		CORPORATE SERVICES		REFUNDS OF PREVIOUS YEAR'S REVENUE		TOTAL	
	1995-96 $'000	1994-95 $'000	1995-96 $'000	1994-95 $'000	1995-96 $'000	1994-95 $'000	1995-96 $'000	1994-95 $'000	1995-96 $'000	1994-95 $'000	1995-96 $'000	1994-95 $'000	1995-96 $'000	1994-95 $'000
Operating expenses														
Salaries	11 042	11 278	1 703	1 888	7 872	6 607	1 322	1 203	6 375	5 147			28 314	26 123
Superannuation	167	428	36	88	59	152	20	50	115	300			397	1 018
Administration expenses	6 468	7 030	596	563	4 184	4 971	225	360	6 841	4 956	1 826	2 396	20 140	20 276
Depreciation	1 353	1 104	95	48	559	564	62	47	1 074	880			3 143	2 643
Net loss on disposal of non-current asset					2								2	
Total cost of service	19 030	19 840	2 430	2 587	12 676	12 294	1 629	1 660	14 405	11 283	1 826	2 396	51 996	50 060
Operating revenues														
Users fees and charges and other revenues	373	559	25	130	375	286	505	656	174	289			1 452	1 920
Total revenue from services	373	559	25	130	375	286	505	656	174	289	0	0	1 452	1 920
Cost of services before abnormal items	18 657	19 281	2 405	2 457	12 301	12 008	1 124	1 004	14 231	10 994	1 826	2 396	50 544	48 140
Abnormal items	(150)		(23)		1 293		(18)		(71)				1 031	
Net cost of service	18 507	19 281	2 382	2 457	13 594	12 008	1 106	1 004	14 160	10 994	1 826	2 396	51 575	48 140
Revenues from Government														
Appropriations	17 515	18 480	2 184	2 506	12 287	10 908	1 635	1 718	13 437	9 596	1 826	2 396	48 884	45 604
Receipts paid into Consolidated Fund	(259)	(514)	(25)	(42)	(400)	(342)	(477)	(654)	(174)	(289)			(1 335)	(1 841)
Resources received free of charge	1 709	889							137	700			1 846	1 589
Liabilities assumed by the Treasurer	167	428	36	88	59	152	20	50	115	300			397	1 018
Total revenues from Government	19 132	19 283	2 195	2 552	11 946	10 718	1 178	1 114	13 515	10 307	1 826	2 396	49 792	46 370
CHANGE IN NET ASSETS RESULTING FROM OPERATIONS	625	2	(187)	95	(1 648)	(1 290)	72	110	(645)	(687)	0	0	(1 783)	(1 770)
ADMINISTERED EXPENSES AND REVENUES														
EXPENSES ADMINISTERED FOR THE CROWN														
Petroleum (Submerged Lands) Act 1982			20 050	19 187									20 050	19 187
Total administered expenses	0	0	20 050	19 187	0	0	0	0	0	0	0	0	20 050	19 187
REVENUES ADMINISTERED FOR THE CROWN														
Taxes, fees and royalties	383 394	394 772	165 297	144 036			881	900					549 572	539 708
Total administered revenues	383 394	394 772	165 297	144 036	0	0	881	900	0	0	0	0	549 572	539 708

Program Schedule of Assets and Liabilities and Administered Assets and Liabilities

for the year ended 30 June 1996

PROGRAM	MINERAL RESOURCES MANAGEMENT		PETROLEUM RESOURCES MANAGEMENT		GEOLOGY & RESOURCES INFORMATION		DANGEROUS GOODS		CORPORATE SERVICES		REFUNDS OF PREVIOUS YEARS REVENUE		TOTAL	
	1995-96 $'000	1994-95 $'000	1995-96 $'000	1994-95 $'000	1995-96 $'000	1994-95 $'000	1995-96 $'000	1994-95 $'000	1995-96 $'000	1994-95 $'000	1995-96 $'000	1994-95 $'000	1995-96 $'000	1994-95 $'000
Assets														
Current														
Cash and amounts in suspense	77		12		86	459	53		128	20			356	479
Restricted cash			2 499	6 038									2 499	6 038
Inventories	12	177	11		2 300	3 516		5					2 323	3 698
Accounts receivable	192	79			63	88	34	6					289	173
Prepayments	101	12	22		28	1	12	1	159				322	14
Total current assets	382	268	2 544	6 038	2 477	4 064	99	12	287	20			5 789	10 402
Non-current														
Property plant and equipment	3 740	3 751	61	94	2 749	1 680	1 390	57	31 947	2 038			39 887	7 620
Works in progress	608	33			80		105						793	33
Total non-current assets	4 348	3 784	61	94	2 829	1 680	1 495	57	31 947	2 038			40 680	7 653
Total assets	4 730	4 052	2 605	6 132	5 306	5 744	1 594	69	32 234	2 058			46 469	18 055
Liabilities														
Current accrued salaries	77	41	12	8	55	16	9	5	45	30			198	100
Accounts payable	255	68	121	8	82	347	6	9	87	259			551	691
Employee entitlements	1 995	1 593	311	248	1 176	939	231	184	967	772			4 680	3 736
Trust accounts			2 499	6 038	31		44		63				2 637	6 038
Treasurers advances						447			20	20			20	467
Total current liabilities	2 327	1 702	2 943	6 302	1 344	1 749	290	198	1 182	1 081			8 086	11 032
Non-current														
Total non current liabilities	900	950	143	151	542	572	100	105	439	463			2 124	2 241
Total liabilities	3 227	2 652	3 086	6 453	1886	2 321	390	303	1 621	1 544			10 210	13 273
Net assets	1 503	1 400	(481)	(321)	3 420	3 423	1 204	(234)	30 613	514			36 259	4 782
ADMINISTERED ASSETS AND LIABILITIES														
Administered current assets														
Accounts receivable	87 226	75 389	32 605	30 299									119 831	105 688
Restricted cash	1 865	2 853	457	707	156	662							2 478	4 222
Total administered current assets	89 091	78 242	33 062	31 006	156	662							122 309	109 910
Administered current liabilities														
Payments received in advance	1 865	2 853	457	707	156	543							2 478	4 103
Accounts payable		6	2 254			113							2 254	119
Total administered current liabilities	1 865	2 859	2 711	707	156	656							4 732	4 222

Summary of Consolidated Fund Appropriations and Revenue Estimates

for the year ended 30 June 1996

	1995-96 Estimate $	1995-96 Actual $	1995-96 Variation $	1994-95 Estimate $	1994-95 Actual $	1994-95 Variation $
Details of Appropriation Items and Expenditures Authorised by Other Statutes						
Item 40 Amount provided for recurrent services for the year	46 668 000	45 791 581	(876 419)	43 344 000	44 168 821	824 821
Sub-Total	46 668 000	45 791 581	(876 419)	43 344 000	44 168 821	824 821
Amount authorised by other statutes						
- Salaries and Allowances Act 1975	147 000	148 376	1 376	111 000	121 908	10 908
- Petroleum (Submerged Lands) Act 1982	14 700 000	17 796 232	3 096 232	16 100 000	19 186 773	3 086 773
Total recurrent services	61 515 000	63 736 189	2 221 189	59 555 000	63 477 502	3 922 502
Item 199 Amount provided for capital services for the year	3 290 000	2 944 122	(345 878)	1 746 000	1 313 109	(432 891)
Grand Total	**64 805 000**	**66 680 311**	**1 875 311**	**61 301 000**	**64 790 611**	**3 489 611**
Details of Expenditure						
RECURRENT						
Corporate services	**220 000**	**220 000**	**0**	**220 000**	**243 462**	**23 462**
Refunds of revenue	**1 960 000**	**1 826 153**	**(133 847)**	**1 960 000**	**2 396 117**	**436 117**
Programs						
Mineral Resources Management	**23 359 000**	**22 337 377**	**(1 021 623)**	**19 674 000**	**20 728 075**	**1 054 075**
Sub-program details:						
Mineral titles	12 941 000	11 963 765	(977 235)	10 305 000	11 390 041	1 085 041
Mineral industry safety and environmental management	9 968 000	9 944 762	(23 238)	8 959 000	8 898 032	(60 968)
Mineral royalties	450 000	428 850	(21 150)	410 000	440 002	30 002
Petroleum Resources Management	**3 367 000**	**3 265 756**	**(101 244)**	**3 443 000**	**3 259 011**	**(183 989)**
Sub-program details:						
Petroleum resource and tenure	1 867 000	1 878 727	11 727	1 706 000	1 731 006	25 006
Petroleum industry safety and environmental management	1 230 000	1 103 523	(126 477)	1 415 000	1 218 004	(196 996)
Petroleum royalties	270 000	283 506	13 506	322 000	310 001	(11 999)
Geology and Resource Information	**15 704 000**	**16 036 874**	**332 874**	**15 991 000**	**15 490 056**	**(500 944)**
Sub-program details:						
Regional geoscience mapping and exploration support	13 261 000	14 045 874	784 874	12 953 000	12 913 047	(39 953)
Groundwater resources	2 443 000	1 991 000	(452 000)	3 038 000	2 577 009	(460 991)
Dangerous Goods Management	**2 205 000**	**2 253 797**	**48 797**	**2 167 000**	**2 174 008**	**7 008**
Recurrent Expenditure	**46 815 000**	**45 939 957**	**(875 043)**	**43 455 000**	**44 290 729**	**835 729**
CAPITAL						
Capital expenditure	3 290 000	2 944 122	(345 878)	1 746 000	1 313 109	(432 891)
Appropriations per operating statement	**50 105 000**	**48 884 079**	**(1 220 921)**	**45 201 000**	**45 603 838**	**402 838**
Appropriations for administered expenses	14 700 000	17 796 232	**3 096 232**	16 100 000	19 186 773	3 086 773
GRAND TOTAL OF APPROPRIATIONS	**64 805 000**	**66 680 311**	**1 875 311**	**61 301 000**	**64 790 611**	**3 489 611**
Details of revenue estimates						
OPERATING REVENUES						
Departmental						
Explosives	490 000	476 990	(13 010)	570 000	654 451	84 451
Administration	133 000	174 414	41 414	233 000	265 558	32 558
Geological Survey	287 000	399 836	112 836	275 000	560 118	285 118
Mining Operations	42 000	61 066	19 066	21 000	39 953	18 953
Mineral Titles	251 000	197 565	(53 435)	218 000	291 810	73 810
Petroleum	37 000	25 384	(11 616)	22 000	29 247	7 247
	1 240 000	1 335 255	95 255	1 339 000	1 841 137	502 137
ADMINISTERED REVENUES						
Business						
Petroleum permits and licences	4 183 000	3 585 690	(597 310)	3 408 000	3 293 910	(114 090)
Prospecting exploration and other mining licences	3 156 000	3 845 104	689 104	2 639 000	3 290 998	651 998
Explosives regulations	146 000	141 383	(4 617)	146 000	149 709	3 709
Dangerous goods regulations	750 000	739 611	(10 389)	660 000	750 291	90 291
	8 235 000	8 311 788	76 788	6 853 000	7 484 908	631 908
Mining						
Royalties:						
Iron ore	159 500 000	156 284 784	(3 215 216)	140 000 000	138 971 476	(1028 524)
Petroleum	198 000 000	159 405 226	(38 594 774)	114 500 000	113 736 996	(763 004)
Alumina	28 000 000	30 194 089	2 194 089	27 000 000	27 484 829	484 829
Diamonds	34 500 000	37 972 557	3 472 557	28 500 000	28 551 513	51 513
Mineral sands	20 500 000	22 295 061	1 795 061	7 500 000	11 537 989	4 037 989
Nickel	26 000 000	23 648 999	(2 351 001)	15 000 000	17 680 335	2 680 335
Other	33 000 000	31 344 648	(1 655 352)	28 500 000	26 086 396	(2413 604)
Lease and other rentals	64 500 000	65 972 058	1 472 058	54 500 000	62 484 836	7 984 836
	564 000 000	527 117 422	(36 882 578)	415 500 000	426 534 370	11 034 370
TOTAL REVENUE ESTIMATES	**573 475 000**	**536 764 465**	**(36 710 535)**	**423 692 000**	**435 860 415**	**12 168 415**

Notes to the Financial Statements

1 Departmental objectives and funding

To manage and support the sustainable development of the State's mineral and petroleum resources in the best interest of the community of Western Australia; and to ensure that the community is protected from the hazards associated with dangerous goods.

The Department is funded by Parliamentary appropriation.

2 Significant accounting policies

(a) Basis of accounting

The financial statements have been prepared in accordance with Treasurer's Instruction 1101A and are based on the provision of Australian Accounting Standard AAS 29. They have been prepared on the accrual basis of accounting using historical costs, with the exception that certain non-current physical assets, excluding land and buildings, have been introduced at written down current cost as at 30 June 1995. Additions to non-current physical assets since valuation are stated at cost.

Land and buildings have been brought to account for the first time. Their valuations are based on integrity1 or "desk-top" valuations by the Valuer General, except for certain metropolitan properties which have been valued as integrity3 "kerbside". These valuations were as at 30 June 1995. All properties are held on the government property register at these valuations. In some cases, buildings owned by the Department are located on land owned by other Government agencies. In such cases the buildings are brought to account in these statements, whilst the land is brought to account in the financial statements of the agencies which own the land. The value of land and buildings have been brought to account through the asset revaluation reserve. The provisions of paragraph 181 of AAS 29 have been departed from since Crown land was originally acquired at no cost. If the provisions of that paragraph had been followed and the revaluation adjustment for land and impovements reported against the accumulated surplus or deficit, the surplus would have been $36.259M and the asset reserve Nil.

The totals of user charges (being fees for services rendered by the Department that are not regulatory in nature), recoups, reimbursements and proceeds from the sale of assets controlled by the Department are included as operating revenues of the Department notwithstanding that the amounts or parts thereof are required to be paid directly into the Consolidated Fund and are not controlled by the Department in the sense of being retained by the Department through a net appropriation or otherwise. Inclusion of these amounts in operating revenues discloses a more accurate net cost of services, which would not otherwise be disclosed.

The financial statements have been prepared consistent with the requirements of the Financial Administration and Audit Act 1985.

The Department controls approximately 100 Crown Reserves throughout the State. The majority are decommissioned explosives reserves. They have been brought to account under the asset category of land. A large number have negligible future economic value and will be relinquished in due course.

(b) Appropriations

Appropriations in the nature of revenue, whether recurrent or capital, are recognised as revenues in the period in which the Department gains control of the appropriated funds. The Department gains control of appropriated funds at the time those funds are drawn down by the Department. Appropriations which are repayable by the Department to theTreasurer are recognised as liabilities.

(c) Employee entitlements

1 Annual and long service leave

Annual leave entitlements are calculated at current remuneration rates. Long service leave entitlements are calculated on a present value basis for employees not settled as at 30 June 1996.

2 Sick leave

Experience indicates that on average sick leave paid during the reporting period is equal to the amount due and no liability for non-vesting sick leave exists.

3 Superannuation

Staff contribute to the Superannuation and Family Benefits Act Scheme (a pension scheme now closed), or the Government Employees Superannuation Act Scheme (a lump sum benefit scheme), which are both defined benefits schemes. If staff elect not to contribute to the lump sum benefits scheme they become non-contributory members of that scheme. The employer's portion of liability under both Schemes is assumed by the Treasurer.

The superannuation expense comprises the following elements:

change in the unfunded employer's liability in respect of current employees who are members of the Superannuation and Family Benefits Act Scheme and current

employees who accrued a benefit on transfer from that Scheme to the Government Employees Superannuation Act Scheme; and

notional employer contributions which would have been paid to the Government Employees Superannuation Act Scheme if the Department had made concurrent employer contributions to the Scheme.

The superannuation expense does not include payment of pensions to retirees as this does not constitute part of the cost of services provided by the Department in the current year.

(The total unfunded liability for pensions and transfer benefits assumed by the Treasurer at 30 June 1996 in respect of current employees is $10.184m and for pensions payable to retirees is $31.050m).

(d) Depreciation of non-current assets

All non-current assets having a limited useful life are to be systematically depreciated over their useful lives in a manner which reflects the consumption of their service potential.

Buildings	50 Years	Straight Line Method
Furniture	10 Years	Straight Line Method
Office Equipment	5 Years	Straight Line Method
Computer Equipment	5 Years	Diminishing Value Method
Computer Software	3-5 Years	Straight Line Method

Motor Vehicles are not depreciated. As the Department is exempt from sales tax, experience has indicated that the resale value returns an amount approximately equivalent to the purchase price.

Proprietary computer software is not capitalised as it is not owned by the Department. The Department merely pays for a licence to use it. However, in-house developed software is capitalised and hence depreciated over a period of three to five years (depending on the assessed useful life) once full costs have been determined.

(e) Valuation of Inventories

All inventories brought to account are chargeable publications and maps produced by the organisation. They are generally valued on the basis of the selling price which in turn approximately equates to the marginal cost of publishing the end product.

In accordance with national policy under the National Geoscience Mapping Accord (NGMA) maps older than 20 years are systematically written off.The value of maps younger than 20 years is in turn reduced to 80, 50 and 20 per cent of their original selling value dependent on average demand over recent years.

3 Changes in accounting policy

(a) Provision for employee entitlements

Employee entitlements have been calculated in accordance with AAS30 for the first time. The adoption of this standard has resulted in a change in the method of calculating provision for long service leave. In the past a provision was made only in respect of employees with more than four years' service. Provision for long service leave is now, for all employees, based on the present value of estimated cash outflows to be made resulting from employees' services up to balance date. The provision also includes related salary on-costs.

The adoption of this standard has also resulted in a change in the method of calculating the provision for annual leave. In the past a provision for annual leave was based on current remuneration costs.

The provision now includes related on-costs.

The financial effect of these changes has been to increase salaries and decrease abnormal items by $297 000 resulting in a nil effect on cost of services in the operating statement.

(b) Inventory

Inventory are now carried at the lower of cost and net realisable value. Cost is based on the first in first out principle. Net realisable value is determined on the basis of average demand over recent years. As a result there has been a write down of asset values amounting to $1 375 000.

4 Programs of the Department

The programs of the Department and their objectives are:

Program 1 - Mineral Resources Management

Objective: To ensure that the exploration for and mining of the State's mineral resources are managed for the benefit of the people of Western Australia.

Program 2 - Petroleum Resources Management

Objective: To ensure that the exploration, development and production of the State's petroleum resources are managed for the benefit of the people of Western Australia.

Program 3 - Geology and Resources Information

Objective: To increase the knowledge of the geology, mineral and petroleum resources of Western Australia for use by industry, government and the public. All hydrogeology functions, including the drilling program were transferred to the Water and Rivers Commission from 1 January 1996.

Program 4 - Dangerous Goods Management

Objective: To achieve an acceptably low level of risk to the public as a result of the storage, handling and transport of explosives and dangerous goods in Western Australia.

In addition, the objective of Corporate Services is to assist the Department in using its human, financial and other resources effectively and efficiently to provide a service responsive to the needs of the community, industry and government.

Corporate support is provided from the following areas:

Executive
Finance and Administration
Human Resources
Internal Audit
Computing and Record Services
Public Affairs
Policy and Planning.

		1995-96 ($'000)	1994-95 ($'000)
5	**Salaries**		
	Salaries	27 190	25 894
	Change in employee entitlements	1 124	229
		28 314	26 123
6	**Superannuation**		
	Total expense for the year	397	1 018
	The significant reduction in 1995-96 has occurred as a result of a substantial reduction in liability under the Contributory Lump Sum Scheme which has been taken as a credit in arriving at the net cost of superannuation.		
7	**Depreciation**		
	Buildings	190	NIL
	Computer software	446	409
	Furniture	88	82
	Office equipment	300	296
	Computer equipment	2 119	1 856
		3 143	2 643
8	**Administration expenses**		
	Expenses incurred during the year	18 294	18 687
	Resources received free of charge (see note 15)	1 846	1 589
		20 140	20 276
9	**Net loss on disposal of non-current assets**		
	Office equipment	2	NIL
10	**User charges and fees**		
	Explosives	491	656
	Mineral Titles	220	337
	Geological Survey	329	592
	Mining Operations	30	40
	Petroleum	26	29
		1 096	1 654
11	**Other revenues**		
	Administration	356	266
	All the above receipts form part of "operating revenues" as disclosed in the Operating Statement.		

		1995-96 ($'000)	1994-95 ($'000)
12	**Abnormal items**		
	Inventory write-down	1 375	NIL
	Asset adjustments	(47)	NIL
	Employee entitlement adjustment	(297)	NIL
		1 031	NIL
13	**Appropriations**		
	Consolidated fund		
	Recurrent	45 792	44 169
	Other statutes - salaries and allowances	148	122
	Capital	2 944	1 313
		48 884	45 604
14	**Receipts paid into Consolidated Fund**		
	Departmental revenue		
	Explosives	(477)	(654)
	Mineral Titles	(197)	(292)
	Geological Survey	(354)	(560)
	Mining Operations	(30)	(40)
	Petroleum	(25)	(29)
	Administration	(252)	(266)
		(1 335)	(1 841)
15	**Resources received free of charge**		
	Administration expenses	1 846	1 589
	Resources received free of charge has been determined on the basis of the following estimates provided by agencies:		
	Office of the Auditor General		
	- audit services	70	60
	Building Management Authority		
	- property maintenance services	12	603
	Government Property Office		
	- property management services	7	4
	Health Department		
	-health surveillance of mine employees	112	NIL
	Department of Land Administration		
	-land registration dealings, land information and products	1 597	889
	Treasury Department		
	- GAS processing and associated services	48	33
		1 846	1 589
16	**Liabilities assumed by the Treasurer**		
	Superannuation	397	1 018
17	**Administered expenses and revenues**		
	Expenses		
	An appropriation is made under the provisions of the Petroleum (Submerged Lands) Act 1982 for the Commonwealth's share of royalties received from offshore operations. The Commonwealth revenue has been collected by the State into the Consolidated Fund receipts.		
	Petroleum (Submerged lands) Act 1982	20 050	19 187
	Revenue		
	Taxes, licences and royalties		
	The Department is responsible for collection of certain taxes, licences and royalties. These are not classified as operating revenues and are paid directly to Consolidated Fund.		
	Collections made during the year were: $527.117m (1994-95 $434.019m) and revenues due but not collected were $112.956m (1994-95 $105.688m).		

		1995-96 ($'000)	1994-95 ($'000)
	Royalties		
	Iron ore	156 155	187 689
	Petroleum	161 711	144 036
	Diamonds	43 605	39 966
	Alumina	32 255	33 954
	Mineral sands	21 209	17 142
	Nickel	25 669	19 678
	Other	34 684	27 273
	Lease and other rentals	65 972	62 485
		541 260	532 223
	Taxes and Fees		
	Petroleum permits and licences	3 586	3 294
	Prospecting exploration and other mining licences	3 845	3 291
	Explosives regulations	141	150
	Dangerous goods regulations	740	750
		8 312	7 485
		549 572	539 708
18	**Cash and amounts in suspense**		
	Accrued Salaries Suspense Account	198	NIL
	Suspense Account - General	138	NIL
	Cash on hand	20	20
	Drilling	NIL	459
		356	479
19	**Restricted cash**		
	Trust account		
	Barrow Island Royalty Trust	2 499	6 038
20	**Inventories**		
	Geological Survey - Carlisle	2 184	3 516
	Mining Titles	139	177
	Explosives	NIL	5
		2 323	3 698
21	**Accounts receivable**		
	Accounts receivable for goods and services supplied	289	173
	Less: provision for doubtful debts	NIL	NIL
		289	173
	Accounts receivable includes an amount of $104 000 relating to work done by the Department for the Commonwealth in respect of Indian Ocean Territories.		
22	**Other current assets**		
	Prepayments	322	14
23	**Property, Plant, equipment and vehicles**		
	Land - at valuation	14 022	NIL
	Buildings - at valuation	19 237	NIL
	- at cost	126	NIL
	Accumulated depreciation	177	NIL
	Total buildings	19 186	NIL
	Furniture - at cost	648	895
	Accumulated depreciation	352	495
	Total furniture	296	400
	Office equipment - at cost	1 737	2 419
	Accumulated depreciation	935	648
		802	1 771

		1995-96 ($'000)	1994-95 ($'000)
	Computer equipment - at cost	11 693	9 022
	Accumulated depreciation	7 567	5 761
		4 126	3 261
	Total equipment	4 928	5 032
	Computer software - at cost	2 232	2 232
	Accumulated depreciation	855	409
	Total computer software	1 377	1 823
	Vehicles - at cost	78	365
	Total of property, plant, equipment and vehicles	39 887	7 620

The Department controls some 100 Crown Reserves throughout the State. The majority are decommissioned explosives reserves and have been brought to account under the category of land. A large number have negligible future economic value and will be relinquished in due course. Vehicles are not depreciated as they are purchased exempt of sales tax and hence are sold after two years for amounts similar to their purchase price.

24 Works In Progress

Mining Registrar/Magistrate Chamber - Meekatharra	608	33
State Drill Store- Carlisle	80	NIL
Kalgoorlie Explosives Reserve Roadwork	49	NIL
Dexis	56	NIL
	793	33

25 Accounts payable

Amounts payable for goods and services received	551	691

26 Accrued salaries 198 100

27 Employee entitlements

Current liabilities		
Fringe benefit tax	93	75
Liability for annual leave	2 683	2 071
Liability for long service leave	1 904	1 590
	4 680	3 736
Non-current liabilities		
Liability for long service leave	2 124	2 241
	6 804	5 977

28 Treasurer's Advances

Cash advances- Sub advance	20	20
Drilling Advance Account	NIL	447
	20	467

29 Trust Accounts

Barrow Island Royalty Trust	2 499	6 038
Suspense Account	138	NIL
	2 637	6 038

30 Equity

Equity represents the residual interest in the net assets of the Department. The Government holds the equity interest in the Department on behalf of the community. The asset revaluation reserve represents that portion of equity resulting from the revaluation of non-current assets.

Accumulated surplus		
Balance at the beginning of the year	4 782	7 371
Asset valuations brought to account in accordance with AAS29	NIL	(819)
Change in net assets resulting from operations	(1 783)	(1 770)
Balance at end of the year	2 999	4 782

		1995-96 ($'000)	1994-95 ($'000)
	Asset revaluation reserve		
	Balance at the beginning of the year	NIL	NIL
	Revaluations during the year	33 260	NIL
	Balance at end of the year	33 260	NIL
	Total equity	36 259	4782
31	**Administered assets and liabilities**		
	Administered assets and liabilities are not controlled by the Department but are administered by it on behalf of the Government.		
	Administered current assets		
	Restricted cash		
	Special projects trust fund	167	662
	Deposits Mines Department Account	464	707
	Survey of leases under Mining Act account	1 847	2 853
		2 478	4 222
	Accounts receivable	119 831	105 688
	This represents royalty not collected as at 30 June 1996 on production which occurred prior to balance date.		
		122 309	109 910
	Accounts receivable includes a royalty collection of $4.1 million which was due and payable prior to 30 June and is in dispute. The Department is confident that the amount will be collected. An additional amount of $8.2 million is also in dispute but is likely to be subject to arbitration and hence has not been brought to account.		
	Other negotiations are taking place to determine royalty arrangements for individual mines and wells. As these discussions result in substantial levels of royalty collection by the State, they represent a contingent asset. However it is not possible to quantify the level of this asset at balance date.		
	Administered current liabilities		
	Trust Account	2 478	4 103
	Accounts payable	2 254	119
		4 732	4 222
32	**Resources provided free of charge**		
	During the year the following resources were provided to other agencies free of charge for functions outside the normal operations of the Department:		
	Health Department and MERIWA (building services, parking, conferences)	3	36
	Chemistry Centre (notional rent on buildings)	348	774
	DOLA	NIL	59
		351	869
33	**Reconciliation of net cash used in operating activities to net cost of service.**		
	Net cash from operating activities (statement of cash flows)	(44 605)	(41 949)
	Adjustment to non-current assets	47	NIL
	Decrease/(increase) in accrued salaries	100	(100)
	Decrease/(increase) in employee entitlements	(827)	(229)
	(Decrease)/increase in accounts receivable	117	79
	(Decrease)/increase in inventory	(1 375)	NIL
	Superannuation	(397)	(1 018)
	Decrease/(increase) in accounts payable	48	(212)
	Depreciation	(3 143)	(2 643)
	Resources received free of charge	(1 846)	(1 589)
	(Decrease)/increase in prepayments	308	(479)
	Loss on sale of non-current assets	(2)	NIL
	Net cost of service (operating statement).	(51 575)	(48 140)

		1995-96 ($'000)	1994-95 ($'000)
34	**Remuneration and retirement benefits of Senior Officers**		
	Remuneration		
	Total of salaries and other benefits received, or due and receivable, for the financial year by Senior Officers of the Department.	915	783

The number of Senior Officers whose total salaries and other benefits received, for the financial year, falls within the following bands:

	1995-96	1994-95
$40 000 to $50 000	1	1
$50 000 to $60 000	-	-
$60 000 to $70 000	-	-
$70 000 to $80 000	-	4
$80 000 to $90 000	1	4
$90 000 to $100 000	1	1
$100 000 to $110 000	5	-
$160 000 to $170 000	1	1

Retirement benefits		
In respect of Senior Officers the following amounts became payable for the financial year.		
Notional contributions to the Government Employees Superannuation Act Scheme.	86	93
Redundancy payments	NIL	NIL
The number of Senior Officers employed at 30 June who are members of the Superannuation and Family Benefits Act Scheme:	NIL	NIL
Senior Officers of the Department's Corporate Executive	3	3

35 Adjustments

Some adjustments have been made to classifications this year to more appropriately reflect certain categories of transactions. As a result , comparative figures shown in these statments are not directly comparable with figures shown in last years financial statments.

36 Explanatory Statement

The Summary of Consolidated Fund Appropriation Compliance and Revenue Estimates discloses appropriation and other statutes expenditure estimates, the actual expenditure made and revenue estimates and payments into Consolidated Fund, all on a cash basis.

The following explanations are provided in accordance with Treasurer's Instruction 945:

(a) Details of expenditure in advance of appropriation approved in accordance with Section 29 ofthe Financial Administration and Audit Act.

(i) Amount provided for Recurrent Services	(876)	825
Half of the savings achieved in 1995-96 related to transfer of the Department's Hydrogeology Branch to the Water and Rivers Commission on 1 January 1996.		
(ii) Amount Authorised by Other Statutes		
Salaries and Allowances Act 1975	1	11
Petroleum (Submerged Lands) Act 1982	3 096	3 087
Excess funding was provided by Treasury to meet these special act requirements.		

	1995-96 ($'000)	1994-95 ($'000)
(b) Significant variations (greater than 10 per cent) where actual expenditures were less than budget estimates for the financial year.		
(i) Amount provided for Capital Services	(346)	(433)
Major underspending has occurred as a result of the Mining Registrar's Offices and Magistrate's Chambers at Meekatharra, State Drill Core Storage Facility. Mining Information Network (*MINeT*) and Mineral Titles Management System (*MiTiS*) not being completed in 1995-96 and funding carried forward.		
(c) Significant variations where actual revenues exceeded or were less than budget estimates for the financial year.		
(i) Department Revenue	95	502
A slight Increase in revenue mainly attributable to externally funded projects in the Geological Survey area. This situation occurs as no budget provision is made for special projects on either the revenue or expenditure side of the estimate. Supplementary funding was provided to cover the additional expenditure on the basis that a like amount of unbudgeted revenue has been collected to accommodate it.		
(ii) Business Revenue	77	632
A small increase in revenue due to an increase in application for mining tenements.		
(iii) Mining Revenue	(36 883)	11 034
Lower petroleum royalty collections due to the delay in start up of the Cossack/Wanaea project and the delayed banking of a large royalty payment for June 1996.		
(d) Significant variation between actual outcomes for the financial year and outcomes for the immediately preceding financial year.		
(i) Refunds of Revenues	1 826	2 396
Refunds were below last year's level as a result of less payments for general refunds.		
(ii) Amount Authorised by other statutes	17 796	19 187
Petroleum (Submerged Lands) Act 1982		
Payments to the Commonwealth for their royalty share were slightly less than last year.		
(e) Significant variation (greater than 10 per cent) where actual expenditures exceed the estimate for programs identified in the annual estimates.		
(i) CORPORATE SERVICES	NIL	23

37 Lease commitment

The Department has an operating lease with Lease Plan Australia Limited for its motor vehicle fleet. The two year contract commenced operation on 13 January 1995. On the basis of the current monthlycharge of $35 000 per calender month the commitment is as follows:

1996-97	6.5 months @ $35 000 =	$227 500
Thereafter		NIL
	Total commitment	$227 500

38 Other commitments

As at balance date there were no major capital or other commitments of a material nature.

		1995-96 ($'000)	1994-95 ($'000)
39	**Contingent obligations**		
	Nil		
40	**Events occurring after balance date**		
	No known event or events occurred after year end which materially affect the results reflected in this financial report.		
41	**Related bodies**		
	The Department had no related bodies as defined in the Financial Administration and Audit Act 1985 and Treasurer's Instruction 951.		
42	**Affiliated bodies**		
	The Department had no affiliated bodies as defined in Financial Administration and Audit Act 1985 and Treasurer's Instruction 951.		
43	**ACCOUNTS OF THE TRUST FUND**		
	Survey of leases under the Mining Act Account		
	Survey fees collected under the Mining Act are paid into this account. The actual cost of surveys is charged to the Consolidated Fund, and fees previously collected are then transferred to Consolidated Revenue. If the applicant decides not to proceed with the survey, the fee collected is refunded. The balance of the Account is held at Treasury.		
	Opening balance 1 July	2 853 204CR	3 789 321CR
	Add receipts		
	Survey fees	NIL	NIL
		2 853 204	3 789 321
	Less payments		
	Transferred to revenue	508 605	NIL
	Refunds	497 887	936 117
	Closing balance 30 June	1 846 712 CR	2 853 204 CR
	Barrow Island Royalty Trust Account		
	The account was created under the Barrow Island Royalty Trust Account Act 1985 which provides for royalty payments received under the Barrow Island lease to be credited to the account and subsequently apportioned between the Commonwealth and the State. The balance of the Account is held at Treasury.		
	Opening balance 1 July	6 348 866 CR	4 102 345CR
	Add receipts		
	Royalties received	9 835 682	19 584 617
	Total receipts	9 835 682	19 584 617
		16 184 548	23 686 962
	Less payments		
	Transferred to revenue	1 936 526	4 585 467
	Remitted to Commonwealth	10 915 693	12 752 629
	Total payments	12 852 219	17 338 096
	Closing Balance 30 June	3 332 329 CR	6 348 866 CR
	Note: Commonwealth share of royalty payment payable in July 1996 was $ 2.499m and the State's share of refund of royalty payable in July 1996 was $0.833m due to quarterly provisional receipts exceeding assessed royalty due.		

	1995-96 ($'000)	1994-95 ($'000)
Deposits: Mines Department Account		
Funds held are received for the issue of temporary reserves and exploration permits pending finalisation of certain legal requirements. The balance of the Account is held at Treasury.		
Opening balance 1 July	707 000 CR	996 500 CR
Add receipts		
Bonds, securities	8 000	150 500
Interest	39 759	52 045
	754 759	1 199 045
Less Payments		
Refund of bonds, securities	250 500	440 002
Transfers to revenue		
- Interest	39 759	52 043
Total payments	290 259	492 045
Closing balance 30 June	464 500 CR	707 000 CR
Transfers to Suspense Account		
The account is maintained to hold funds to meet any relevant end of year commitment in respect of plant and equipment or land. The balance of the account is held at Treasury.		
Opening balance 1 July	NIL	422 429 CR
Add receipts		
Transfers ex CF - plant and equipment	54 055 CR	NIL
	54 055 CR	422 429 CR
Less payments		
Purchase of plant and equipment or land	NIL	422 429
Closing balance 30 June	54 055 CR	NIL
Special Projects Trust Fund Account		
The account was created to hold funds for the purpose of participating in significant projects with other countries and the private sector to the mutual benefit of the other participants and the State of Western Australia.		
Opening balance 1 July	661 733 CR	228 383 CR
Add receipts		
Contribution from:		
Industry	120 878	59 360
Government	125 270	684 677
Total receipts	907 881	972 420
Less payments Salaries	110 415	108 895
Travel	13 048	10 910
Equipment, misc	446 787	190 882
Transfers	171 056	NIL
Total payments	741 306	310 687
Closing balance 30 June	166 575 CR	661 733 CR

Departmental Receipts in Suspense

This account which is held at Treasury is used to hold moneys temporarily pending identification of the purpose for which the funds were received. The balance of the account as at 30 June 1996 was $83 575.

	1995-96 ($'000)	1994-95 ($'000)
TREASURER'S ADVANCE		
Drilling		
Recoverable drilling expenditure was initially charged to a Treasurer's Advance Account. The cost of work performed, together with overhead charges, were recovered and credited to this account. The advance was extinguished during 1995-96 with the transfer of the hydrogeology branch to the Water and Rivers Commission.		
SUPPLEMENTARY FINANCIAL INFORMATION		
Losses of public monies and public or other property through theft or default	NIL	1400
Amount recovered	NIL	NIL
Losses for write off	NIL	1400
Public and other property, revenue and debts due to the State, written off in accordance with section 45 of the Financial Administration and Audit Act by:		
The Accountable Officer	1269	328
The Minister	NIL	NIL
	1269	328
Analysis of losses written off		
Stock shortages	1269	NIL
Bad debts	NIL	328
	1269	328
Consolidated Fund revenues due	289 247	172 593
Less considered to be irrecoverable	NIL	132
Amount considered to be recoverable	289 247	172 461
Unpaid expenditure claims as at 30 June - CF	310 541	361 514
Gifts of public property	NIL	NIL

Certification of Financial Statements

The accompanying financial statements of the Department of Minerals and Energy have been prepared in compliance with the provisions of the Financial Administration and Audit Act 1985 from proper accounts and records to present fairly the financial transactions for the year ending 30 June 1996 and the financial position as at 30 June 1996.

At the date of signing we are not aware of any circumstances which would render the particulars included in the financial statements misleading or inaccurate.

K Perry
Accountable Officer

24 September 1996

P H Palmer FCPA
Principal Accounting Officer

OPINION OF THE AUDITOR GENERAL

To the Parliament of Western Australian

DEPARTMENT OF MINERALS AND ENERGY
FINANCIAL STATEMENTS FOR THE YEAR ENDED JUNE 30, 1996

Scope

I have audited the accounts and financial statements of the Department of Minerals and Energy for the year ended June 30, 1996 under the provisions of the Financial Administration and Audit Act 1985. The Department has submitted for audit accrual based financial statements in accordance with the Treasurer's Instructions.

The Director General is responsible for keeping proper accounts and maintaining adequate systems of internal control, preparing and presenting the financial statements, and complying with the Act and other relevant written law. The primary responsibility for the detection, investigation and prevention of irregularities rests with the Director General.

My audit was performed in accordance with section 79 of the Act to form an opinion based on a reasonable level of assurance. The audit procedures included examining, on a test basis, the controls exercised by the Department to ensure financial regularity in accordance with legislative provisions, evidence to provide reasonable assurance that the amounts and other disclosures in the financial statements are free of material misstatement and the evaluation of accounting policies and significant accounting estimates. These procedures have been undertaken to form an opinion as to whether, in all material respects, the financial statements are presented fairly in accordance with applicable Accounting Standards and other mandatory professional reporting requirements (Urgent Issues Group Consensus Views) as modified by the Treasurer's Instructions.

Western Australian State public sector departments are continuing a major financial reform requiring a move from cash based to accrual based financial reporting. Australian Accounting Standard 29 (AAS 29) "Financial Reporting by Government Departments" provides the framework that now guides departmental reporting arrangements to assure effective financial reporting by June 30, 1997. Transitional provisions exist in AAS 29 to assist in its implementation. This Accounting Standard has still to be formally applied to State departments, although the Treasurer's Instructions require the application of certain provisions of the Standard where accrual based financial statements are prepared by departments. The initial implementation of accrual based financial reporting has created certain difficulties in relation to various accounting matters, in particular the identification, recognition and valuation of assets, and calculation of liabilities for employee entitlements. These matters have been referred to in Note 2 of the financial statements.

In supporting the implementation of accrual based financial reporting and, ultimately accrual accounting, I have taken the transitional nature of the financial reform process into consideration in forming my audit opinion. Users of the financial statements are advised to consider the implications of the transitional arrangements when interpreting these financial statements.

The audit opinion expressed below has been formed on the above basis.

Audit Opinion

In my opinion,

(i) the controls exercised by the Department of Minerals and Energy provide reasonable assurance that the receipt and expenditure of moneys and the acquisition and disposal of property and the incurring of liablilities have been in accordance with legislative provisions; and

(ii) the Operating Statement, Statement of Financial Position, Statement of Cash Flows, Program Schedules and Summary of Consolidated Fund Appropriations and Revenue Estimates and the Notes to and forming part of the financial statements are based on proper accounts and present fairly in accordance with applicable Accounting Standards and other mandatory professional reporting requirements as modified by the Treasurer's Instructions, the transactions for the year ended June 30, 1996 and the financial position at that date.

D D R PEARSON
AUDITOR GENERAL
September 27, 1996

APPENDIX 1

DEPARTMENT DIRECTORY

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Facsimile (09) 222 3430

Metropolitan Offices
Baldivis Explosives Reserve
Stakehill Road
Baldivis WA 6171
Telephone (09) 524 1301
Facsimile (09) 524 1792

Geological Survey Transport Store
and Laboratory
91 Briggs Street
Welshpool WA 6106
Telephone — Store (09) 470 0308
Telephone — Laboratory (09) 470 0324
Facsimile (09) 362 5694

Mineral Processing Laboratory
15 Conlon Street
Waterford WA 6152
Telephone (09) 334 8900
Facsimile (09) 334 8999

Regional Offices
Mining Registrar
c/- Ministry of Justice
Court House (Box 28)
Broome WA 6725
Telephone (091) 921 137
Facsimile (091) 921 878

Mining Registrar
c/- Ministry of Justice
Court House (35)
Carnarvon WA 6701
Telephone (099) 411 082
Facsimile (099) 412 779

Regional Mining Engineer
66 Wittenoom Street
Collie WA 6225
Telephone (097) 341 222
Facsimile (097) 341 606

Mining Registrar
40 Bayley Street (Box 41)
Coolgardie WA 6429
Telephone (090) 266 066
Facsimile (090) 266 204

Regional Mining Engineer
Brookman Street (Box 10078)
Kalgoorlie WA 6430
Telephone (090) 219 419
Facsimile (090) 213 612

Regional Mining Registrar
Brookman Street (Box 364)
Kalgoorlie WA 6430
Telephone (090) 213 066
Facsimile (090) 912 428

Kalgoorlie Explosives Reserve
Piccadilly Street West
Kalgoorlie WA 6430
Telephone (090) 218 246
Facsimile (090) 913 222

Geological Survey
Cnr McDonald Street and Boulder Road
Kalgoorlie WA 6430
Telephone (090) 219 425
Facsimile (090) 914 499

Regional Mining Engineer
Hedland Place (Box 518)
Karratha WA 6714
Telephone (091) 868 243
Facsimile (091) 868 251

Kimberley Regional Office
Shop 24 Kununurra Shopping Centre
Kununurra WA 6743
Telephone (091) 68 3011
Facsimile (091) 68 3051

Mining Registrar
c/-Ministry of Justice
Court House (Box 917)
Kununurra WA 6743
Telephone (091) 681 011
Facsimile (091) 681 103

Mining Registrar
Rochester Street (Box 4)
Leonora WA 6438
Telephone (090) 376 106
Facsimile (090) 376 248

Mining Registrar
Bohemia Road (Box 7)
Marble Bar WA 6760
Telephone (091) 761 044
Facsimile (091) 761 048

Mining Registrar
Savage Street (Box 7)
Meekatharra WA 6642
Telephone (099) 81 1008
Facsimile (099) 81 1482

Mining Registrar
Richardson Street (Box 13)
Mount Magnet WA 6638
Telephone (099) 634 040
Facsimile (099) 634 488

Mining Registrar
Prinsep Street
Norseman WA 6443
Telephone (090) 391 082
Facsimile (090) 391 657

Mining Registrar
Great Eastern Highway
Southern Cross WA 6426
Telephone (090) 491 107
Facsimile (090) 491 431

National Relay Service

Deaf people, hearing-impaired people and those with a speech impairment who are text callers, TTY users or modem users can contact Department-listed telephone numbers via the National Relay Service by dialling 13 25 44.

APPENDIX 2

LEGISLATION

The Department is responsible to the Minister for Mines for administering 15 Acts of the Western Australian Parliament:

- Barrow Island Royalty Trust Account Act 1985
- Barrow Island Royalty Variation Agreement Act 1985
- Coal Industry Tribunal of Western Australia Act 1992
- Coal Miners' Welfare Act 1947
- Explosives and Dangerous Goods Act 1963
- Miners' Phthisis Act 1922
- Mines Safety and Inspection Act 1994
- Mining (Validation and Amendment) Act 1986
- Mining Act 1978
- Mining on Private Property Act 1898
- Petroleum (Registration Fees) Act 1967
- Petroleum (Submerged Lands) Act 1982
- Petroleum (Submerged Lands) Registration Fees Act 1982
- Petroleum Act 1967
- Petroleum Pipelines Act 1969

The following Commonwealth offshore legislation is administered by the State through Commonwealth/State Joint Authorities:

- Offshore Minerals (Exploration Licence Fees) Act 1981
- Offshore Minerals (Mining Licence Fees) Act 1981
- Offshore Minerals (Registration Fees) Act 1981
- Offshore Minerals (Retention Licence Fees) Act 1994
- Offshore Minerals (Royalty) Act 1981
- Offshore Minerals (Works Licence Fees) Act 1981
- Offshore Minerals Act 1994
- Petroleum (Submerged Lands) (Registration Fees) Act 1967
- Petroleum (Submerged Lands) (Royalty) Act 1967
- Petroleum (Submerged Lands) Act 1967
- Petroleum (Submerged Lands) Fees Act 1994

The Department also carries out various functions in relation to the following State Agreement Acts:

- Alumina Refinery (Mitchell Plateau) Agreement Act 1971
- Alumina Refinery (Pinjarra) Agreement Act 1969
- Alumina Refinery (Wagerup) Agreement and Act Amendment Act 1978
- Alumina Refinery (Worsley) Agreement Act 1973
- Alumina Refinery Agreement Act 1961
- Broken Hill Proprietary Company's Integrated Steel Works Agreement Act 1960
- Broken Hill Proprietary Company Limited (Export of Iron Ore) Act 1965
- Broken Hill Proprietary Company Limited Agreements (Variation) Act 1980
- Broken Hill Proprietary Steel Industry Agreement Act 1952
- Cement Works (Cockburn Cement Limited) Agreement Act 1971
- Collie Coal (Griffin) Agreement Act 1967

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- Collie Coal (Western Collieries) Agreement Act 1967
- Dampier Solar Salt Industry Agreement Act 1967
- Diamond (Argyle Diamond Mines Joint Venture) Agreement Act 1981
- Evaporites (Lake MacLeod) Agreement Act 1967
- Goldfields Gas Pipeline Act 1994
- Goldfields Gas Pipeline Agreement Act 1994
- Iron Ore (Channar Joint Venture) Agreement Act 1987
- Iron Ore (Dampier Mining Company Limited) Agreement Act 1969
- Iron Ore (Goldsworthy-Nimingarra) Agreement Act 1972
- Iron Ore (Hamersley Range) Agreement Act 1963
- Iron Ore (Hope Downs) Agreement Act 1992
- Iron Ore (Marillana Creek) Agreement Act 1991
- Iron Ore (McCamey's Monster) Agreement Authorisation Act 1972
- Iron Ore (Mount Bruce) Agreement Act 1972
- Iron Ore (Mount Goldsworthy) Agreement Act 1964
- Iron Ore (Mount Newman) Agreement Act 1964
- Iron Ore (Murchison) Agreement Authorisation Act 1973
- Iron Ore (Rhodes Ridge) Agreement Authorisation Act 1972
- Iron Ore (Robe River) Agreement Act 1964
- Iron Ore (The Broken Hill Proprietary Company Ltd) Agreement Act 1964
- Iron Ore (Wittenoom) Agreement Act 1972
- Iron Ore - Direct Reduced Iron (BHP) Agreement Act 1996
- Iron Ore Beneficiation (BHP) Agreement Act 1996
- Iron Ore Processing (BHP Minerals) Agreement Act 1994
- Iron Ore Processing (BHP Minerals) Agreement Act 1994
- Leslie Solar Salt Industry Agreement Act 1966
- Mineral Sands (Beenup) Agreement Act 1995
- Mineral Sands (Cooljarloo) Mining and Processing Agreement Act 1988
- Mineral Sands (Eneabba) Agreement Act 1975
- Nickel (Agnew) Agreement Act 1974
- Nickel Refinery (Western Mining Corporation Limited) Agreement Act 1968
- North West Gas Development (Woodside) Agreement Act 1979
- Oil Refinery (Kwinana) Agreement Act 1952
- Onslow Solar Salt Agreement Act 1992
- Ord Hydro Energy Agreement Act 1994
- Pilbara Energy Agreement Act 1994
- Pilbara Energy Project Agreement Act 1994
- Poseidon Nickel Agreement Act 1971
- Shark Bay Solar Salt Industry Agreement Act 1983
- Silicon (Kemerton) Agreement Act 1987
- Tailings Treatment (Kalgoorlie) Agreement Act 1988
- Uranium (Yeelirrie) Agreement Act 1978
- Western Mining Corporation Limited (Throssell Range) Agreement Act 1985
- Wundowie Charcoal Iron Industry Sale Agreement Act 1974

APPENDIX 2

CHANGES TO LEGISLATION

Mines Safety and Inspection Act 1994

The Act was assented to on 7 November 1994 and proclaimed on 8 December 1995. The Act revises, updates and combines the provisions of both the Mines Regulation Act 1946 and the Coal Mines Regulation Act 1946 and includes occupational health, safety and welfare provisions for exploration activities.

Occupational Safety and Health Legislation Amendment Act 1995 (No 30 of 1995)

Assented to 11 September 1995 and proclaimed to operate from 20 January 1996. Changes were made to the Occupational Safety and Health Act to bring it in line with the Mines Safety and Inspection Act 1994.

Industrial Relations Legislation Amendment and Repeal Act 1995 (No 79 of 1995)

Minor changes to the definition of "trade union" in Section 4(1) of the Mines Safety and Inspection Act 1994.

Local Government (Consequential Amendments) Act 1996 (No 14 of 1996)

Assented to 28 June 1996 and proclaimed to operate from 1 July 1996. Consequential amendments relating to new terms as a result of the new Local Government Act 1995.

Mines Safety and Inspection Regulations 1995

These regulations which complement the Mines Safety and Inspection Act 1994 were gazetted on 8 December 1995 to operate from 9 December 1995.

Mines Safety and Inspection Amendment Regulations 1996

Gazetted on 19 January 1996 to operate from 20 January 1996. Amends the regulations to comply with changes made by the Occupational Safety and Health Amendment Act 1995.

Mines Safety and Inspection Amendment Regulations (No 2) 1996

Gazetted on 9 February 1996. Minor changes to Schedule 2.

Mining Act 1978

Mining Amendment Act 1994 (No 58 of 1994)

Assented to 2 November 1994. Main provisions, which relate to reporting requirement amendments, were proclaimed to operate from 14 October 1995.

Acts Amendment and Repeal (Native Title) Act 1995 (No 52 of 1995)

Assented to 24 November 1995 and proclaimed to operate from 9 December 1995. Minor changes relating to the repeal of the State's Land (Titles and Traditional Usage) Act 1993.

Water Agencies Restructure (Transitional and Consequential Provisions) Act 1995 (No 73 of 1995)

Assented to 27 December 1995 and proclaimed to operate from 1 January 1996. Minor amendments relating to the renaming of the Water Legislation.

Local Government (Consequential Amendments) Act 1996 (No 14 of 1996)

Assented to 28 June 1996 and proclaimed to operate from 1 July 1996. Consequential amendments relating to new terms as a result of the new Local Government Act 1995.

Mining Regulations 1981

Amendment No 4 of 1995

Gazetted on 15 December 1995 to operate from that date. Minor amendment to royalty table.

Amendment No 2 of 1996

Gazetted on 19 April 1996 to operate from that date. Increases the rental on deemed 1904 Act mining leases.

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Explosives and Dangerous Goods Act 1961

Local Government (Consequential Amendments) Act 1996 (No 14 of 1996)

Assented to 28 June 1996 and proclaimed to operate from 1 July 1996. Consequential amendments relating to new terms as a result of the new Local Government Act 1995.

Dangerous Goods Regulations 1992

Dangerous Goods Amendment Regulations 1996

Gazetted on 28 June 1996, some parts came into operation on 1 July 1996 and the remainder are due to take effect from 1 October 1996. All fees and charges were increased in line with CPI over the past five years and a new fee was introduced for the examination of applications for the license to store dangerous goods. Amendments relating to the transport of dangerous goods were made in the areas of recognition of interstate licences, suspension of licences and requirements for the renewal of drivers' licences.

Petroleum Act 1967

Acts Amendment and Repeal (Native Title) Act 1995 (No 52 of 1995)

Assented to 24 November 1995 and proclaimed to operate from 9 December 1995. Minor changes relating to the repeal of the State's Land (Titles and Traditional Usage) Act 1993.

Local Government (Consequential Amendments) Act 1996 (No 14 of 1996)

Assented to 28 June 1996 and proclaimed to operate from 1 July 1996. Consequential amendments relating to new terms as a result of the new Local Government Act 1995.

Petroleum Pipelines Act 1969

Acts Amendment and Repeal (Native Title) Act 1995 (No 52 of 1995)

Assented to 24 November 1995 and proclaimed to operate from 9 December 1995. Minor changes relating to the repeal of the State's Land (Titles and Traditional Usage) Act 1993.

Local Government (Consequential Amendments) Act 1996 (No 14 of 1996)

Assented to 28 June 1996 and proclaimed to operate from 1 July 1996. Consequential amendments relating to new terms as a result of the new Local Government Act 1995.

Petroleum (Submerged Lands) Act 1982

Acts Amendment and Repeal (Native Title) Act 1995 (No 52 of 1995)

Assented to 24 November 1995 and proclaimed to operate from 9 December 1995. Minor changes relating to the repeal of the State's Land (Titles and Traditional Usage) Act 1993.

Coal Miners Welfare Act 1947

Local Government (Consequential Amendments) Act 1996 (No 14 of 1996)

Assented to 28 June 1996 and proclaimed to operate from 1 July 1996. Consequential amendments relating to new terms as a result of the new Local Government Act 1995.

APPENDIX 3

RESEARCH AND TECHNICAL INVESTIGATIONS

Mining Operations Division

Projects completed:

- A review of diesel underground equipment to evaluate the variance in exhaust opacity of similar engines (co-project with WASM);
- Contributions and compilation of *Handbook of Safe Mining*;
- Development of various databases for the *MINet* project;
- Development of a number of broad management systems audits;
- Survey to review procedures for performing close-up inspections and scaling of high underground work areas;
- Survey to review procedures in underground locations where remote controlled mining equipment is used;
- Audit and survey of mine rescue equipment and facilities on minesites;
- Review of the Worksafe training module on Safety and Health in the Mining Industry;
- Survey of solvent vapour exposure during rubber lining activities;
- Specification of arsenic in biological monitoring samples;
- Leaching characteristics of mineral sands tailings;
- Development of a functional requirements specification for *Minehealth*;
- Use of standard handrails for mine rescue operations; and
- Personnel proximity protection devices from mobile equipment underground.

Projects begun or continuing:

- Review and propose amendments to the Mines Safety and Inspection Regulations 1995;
- Investigation of asbestiform amphibole minerals from Western Australian mines;
- Identification and quantification of gold room fumes;
- Characterisation of inhaled dust on mine sites (MERIWA project);
- Diesel fume exposure in underground mines;
- Development of a functional requirements specification for *CONTAM*;
- Development of a specific, high impact function audit; and
- Mid-shaft cage arrestors for steel guided shafts.

Petroleum Operations Division

Projects begun:

- Compilation of *Atlas of WA Oil and Gas Fields;*
- Compilation of *Schedule of WA Wells* (in collaboration with the Department's Geological Survey Division).

Projects completed:

- Development of *Guidelines for the Preparation of Mobile Offshore Drilling Unit (MODU) Safety case Bridging Documents*;
- Conducted industry-wide, one-day safety seminar.

Geological Survey Division

Projects continuing:

- Geological mapping in the Eastern Goldfields, Glengarry Basin, Halls Creek Orogen, Pilbara Craton and Paterson Orogen;
- Regolith mapping and regional geochemical studies in the Glengarry Basin and Capricorn Orogen;

- Acquisition and release of airborne geophysical data in the northern Goldfields and north-west Pilbara;
- Geochronological studies of the Albany-Fraser Orogen, the Eastern Goldfields and the Paterson Orogen;
- Studies of controls of gold mineralisation in the Eastern Goldfields;
- A review of the styles of mineralisation in the East Kimberley region;
- Reviews of the State's lead-zinc, talc, magnesite, fluorite and barite resources;
- A study of the Lennard Shelf and Devonian Reef Complex;
- A study of the Shark Bay World Heritage area;
- Investigations on the geology and petroleum potential of the State's onshore sedimentary basins;
- Development of computer-based Geographic Information Systems (GIS);

Projects transferred to the Water and Rivers Commission:

- Hydrogeological mapping in the Eastern Goldfields;
- Groundwater exploration in the Perth basin and selected country areas; and
- Hydrogeological studies relating to groundwater contamination.

APPENDIX 4

PUBLICATIONS

The Department has over 900 publications and maps. These publications cover a wide range of topics, including:

- Environmental issues affecting mining and petroleum exploration;
- Mine work and safety practices;
- Petroleum exploration, safety and environmental considerations;
- Mineral exploration and land access;
- Geological, geophysical and geochemical maps and publications;
- A range of educational material, including a series of fact sheets;
- Explosives and dangerous goods;
- Departmental Annual Report;
- Statistical Digest
- Mineral tenement maps and various thematic maps relating to mining and other land-use applications in Western Australia;
- Occupational Health and Safety Acts and Regulations.

Draft *Guidelines for the Mines Safety and Inspection Act* have been prepared on a range of operating practices. They are intended to assist industry employers and employees in meeting duty of care obligations under the Act by outlining safe practices and safe systems of work. The guidelines, which are subject to endorsement by the Mines Occupational Health and Safety Advisory Board, include:

- Guidelines for the Mines Safety and Inspection Act;
- Health surveillance of mine employees;
- Guidelines for mining project approval;
- Emergency preparedness for underground fires in metalliferous mines;
- Isolation and tag-out procedures;
- Underground ventilation (metalliferous mines);
- Noise control in mines;
- Management of sulphide dust explosion risk;
- Vertical opening safety practice;
- Diesel transport, storage and refuelling underground;
- Personal access to heavy mining machinery;
- Guidelines for safe procedures in exploration activities;
- Biological monitoring procedures;
- Management and heat stress;
- Foam fire suppression systems on mine vehicles;
- Safe design and operating standards for tailings storages;
- Safety bund walls around abandoned open pits;
- Control of contaminant asbestos;
- Management of hazardous substances on mine sites;
- Approved procedure for radiation dose assessment;
- Radiation gauges safety;
- Preparation of a radiation management plan; and
- Design of work-boxes used with cranes.

APPENDIX 4

In accordance with Worksafe guidelines the Department prepared and distributed significant incident reports. The six reports issued from the Department were:

- No 59 - Off-loading unpalletised articles;
- No 60 - Uncontrolled movement of elevating work platforms;
- No 61 - Caught in a rotating drill rod — fatal accident;
- No 62 - Anchorage of underground scraper hoists;
- No 63 - Remotely operated underground LHD — near miss; and
- No 64 - Fire on front-end loader.

There were also 10 safety bulletins prepared and distributed. These were:

- No 12 - Effects of tiredness, drugs and alcohol;
- No 13 - Injuries through opening enclosed systems;
- No 14 - Ground support in underground mines;
- No 15 - Re-entry after blasting;
- No 16 - Hazard alert — use of inert gases in mining/industrial processes;
- No 17 - Use of the bucket of a loader as an elevating work platform in underground operation;
- No 18 - Operating practice with drilling jumbos in development and stope headings;
- No 19 - Scaling and rock bolting in large stope and development headings;
- No 20 - Seat belts and restraining harness in heavy earth moving equipment; and
- No 21 - Surface drill rigs — protection from rotating parts.

Details of all publications available from the Department can be obtained from either the library on the fifth floor of Mineral House, 100 Plain Street, East Perth, or at any of the Department's regional offices. Address details are listed in Appendix 1 — Department Directory, of this publication.

APPENDIX 5

GLOSSARY

AGSO	— Australian Geological Survey Organisation, based in Canberra.
ANZMEC	— Australian and New Zealand Minerals and Energy Council.
AXTAT	— Accident Report and Statistics System.
CF	— Consolidated Fund.
Clockwork	— An integrated personnel and payroll package.
CONTAM	— Contaminant exposure database.
Craton	— A part of the earth's crust that has attained stability.
DEXIS	— Dangerous Goods and Explosives Information System.
EBA	— Enterprise Bargaining Agreement.
EXIS	— External Information System.
FANTM	— Future Act Native Title Management system.
FMIS	— Financial Management Information System.
Future Act Process	— When the State seeks to grant a mining tenement which affects Native Title rights it follows a procedure specified under the Native Title Act. This procedure is known as the Future Act Process.
GGT	— Goldfields Gas Transmission pipeline.
Giga cubic metres (Gm3)	— One thousand million cubic metres.
Giga litres (GL)	— One thousand million litres.
GIS	— Geographic information system.
GPS	— Global positioning system.
GSWA	— Geological Survey of Western Australia, a division of the Department.
LIMS	— Laboratory Information Management Service.
LTI	— Lost-time injury.
LTIFR	— Lost-time incidence frequency rate.
MERIWA	— Minerals and Energy Research Institute of Western Australia.
MINEDEX	— A computer-based Mine and Mineral Deposit Enquiry System.
Minehealth	— A health surveillance record for current and future epidemiological studies.
Minesafe	— A quarterly publication issued by the Mining Operations Division.
MINet	— A computer-based system which provides information to mining companies about safety management issues.
MiTiS	— Mining Titles System.
ML	— Millions of litres.
Mm3	— Millions of cubic metres.
MODIS	— Mining Operations Division Information System.
MODU	— Mobile offshore drilling unit.
NGMA	— National Geoscience Mapping Accord.
NNTT	— National Native Title Tribunal.
NTA	— Commonwealth Native Title Act.
ORE	— On-road enforcement vehicle operated by the Explosives and DangerousGoods Division.

APPENDIX 5

Orogen — A linear or curved region that has been subjected to folding or other deformation.

PEP — Performance Enhancement Program.

PETMAN — Electronic title management system for petroleum tenements.

PIMS — Personnel Information Management System.

Regolith — Soil overlying bedrock.

RRR — Resource rent royalty system.

Tendex — Tenement Index System. It records the status of various mining tenements, but will eventually be replaced by the MiTiS system.

Tengraph® — A computer-based tenement graphics system operated by the Department.

TRAXS — Tenement Rental and Expenditure System.

TTY — Teletypewriter relay service for people with disabilities.

WABMA — Western Australian Building Management Authority.

WAMEX — Western Australian Mineral Exploration Index.

WAPEX — Western Australian Petroleum Exploration database.

WASM — Western Australian School of Mines.

WPA — Workplace agreement.

Department of Minerals and Energy

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http://www.dme.wa.gov.au

DEPARTMENT OF
MINERALS AND ENERGY
WESTERN AUSTRALIA