



CROWN MINERALS →
Annual Report
2009/2010 →

New Zealand Government





THE 2009/2010 YEAR HAS SEEN MAJOR GOVERNMENT-LED INITIATIVES TO

maximise New Zealand's minerals and petroleum potential.

IN CONTINUED SUPPORT OF PETROLEUM EXPLORATION

the Government's \$25 million investment has been used to complete seismic surveys

OVER NEW FRONTIER BASINS AND REWORKING OLD SEISMIC DATA. DATA HAS BEEN USED TO PROMOTE NEW ZEALAND, WITH BLOCK OFFERS OVER THE RAUKUMARA, NORTHLAND AND REINGA BASINS.

MAJOR STEPS HAVE BEEN TAKEN TO ENSURE BOTH EXISTING AND POTENTIAL EXPLORERS HAVE

access to world-class geotechnical data.

PETROLEUM PRODUCTION HAS REMAINED

New Zealand's third largest export earner, while gold production has continued at 20 year highs.

AND THIS IS JUST THE START.

Note: All financial figures are shown in New Zealand dollars

WELCOME TO OUR REPORT FOR THE YEAR

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ABBREVIATIONS

Mmbbls million barrels

Bcf billion cubic feet

P50 proved and probable reserves –
50% certainty of being produced, also called 2P

REPORT FROM THE GROUP MANAGER →

Maximising the contribution of New Zealand's mineral and petroleum potential to help the economy grow is a key initiative of the Government.



The Crown Minerals Group plays a critical role in realising this ambition and, together with the Energy and Communications Branch, is charged with ensuring that the right strategic and operational drivers are present and working well.

Action Plans for the Petroleum and Mineral sectors, released by the Minister of Energy and Resources, have brought about wide ranging strategic thinking and projects with particular focus in the 2009/10 year on knowledge acquisition for petroleum and minerals. This has raised the debate on whether the mineral potential in Schedule 4 conservation land could be better understood and has initiated a review of the regulatory and legislative frameworks that govern the administration of New Zealand's mineral resources.

Increasing the knowledge of New Zealand's mineral and petroleum resources is one of the keys to attracting international investment. As a result, the Crown Minerals Group has managed an active data acquisition programme for petroleum over the past year, including reprocessing of old Great South Basin seismic data, new Pegasus Basin and Bounty Trough Seismic Surveys and the interpretation of the newly acquired data.

Crown Minerals involvement has accelerated the Petroleum Exploration and Geosciences Initiative (PEGI) project, which will enhance understanding of the petroleum systems and geology of the Taranaki Basin, New Zealand's only producing region.

The Raukumara Petroleum Block Offer closed in February 2010 and a large permit was awarded to Petrobras on 1st June. Along with the entry of Anadarko into Canterbury and Taranaki permits this further strengthens the number of major explorers now operating in New Zealand. The Reinga and Northland Basin Block Offers have also been promoted internationally and closed on 18th August 2010.

A significant positive this year has been the securing of \$4 million for increasing knowledge of New Zealand's minerals resources. It is the first time in more than 20 years that new money has been invested by Government for such activity.

Crown Minerals is committed to continually enhancing the quality and access to data for existing and new explorers and our aim is to provide a world-class geological database. We have undertaken key projects to support access to high-quality geotechnical data via our online technical database and national core store. There have been specific data projects for coal and petroleum and we have released data packs for petroleum block offers.

A significant positive this year has been the securing of \$4 million for increasing knowledge of New Zealand's minerals resources.

The 2010 Fraser Institute Global Petroleum Survey demonstrates that we are on the right track with New Zealand being ranked 18th out of 133 jurisdictions in terms of attractiveness for international petroleum investment and 2nd for ease of access to our geological database.

On top of a high profile Government lead strategy, the minerals and petroleum sector in New Zealand continued to buck the global recession and contribute significantly to the local economy. The year saw petroleum production remain a key economic contributor with NZ\$1.7 billion of high quality oil exported in 2009/10. Petroleum is the country's third largest export earner.

On the exploration front the year saw the beginning of the largest work programme undertaken in New Zealand for some time. It includes extensive coal seam gas exploration activity in Southland, the West Coast, Taranaki and the Waikato Coal fields and a large portfolio of conventional petroleum activity at Mangahewa, Tui, Maari and Maui. Additionally, the Albacore, Hoki, Manaia and Tuatara prospects were all drilled. Australian Worldwide Exploration's Taranaki drilling campaign is worth around \$250 million this year alone. The Reflect Resolution vessel, which was contracted by Crown Minerals to acquire seismic data, continues to remain in New Zealand waters undertaking extensive new seismic programmes for permit holders.

Developments at new and existing fields in offshore Taranaki bolstered petroleum production and reserve figures. I am pleased to note a few highlights:

- + Maari, New Zealand's largest oil field, came on-stream in February 2009. Production was better than forecasted reaching 40,000 barrels a day by August 2009.
- + As part of Maari development, the Manaia well was drilled. This is New Zealand's longest oil well at 7,943 metres total depth, testing an estimated 58 million barrels of oil in place.
- + The Kupe field came onstream in April 2010. Kupe is the prime reason gas reserves rose by 5.4%.
- + Further analysis of the producing Tui field has increased reserve estimates to 50.5 million barrels which is up from the initial estimates of 27.9 million barrels.

Extensive minerals exploration programmes continued over our iron sand, gold and coal resources and a new prospecting licence was awarded to Widespread Energy Limited to investigate the phosphate resource in the Chatham rise.

Gold production continued at 20-year highs. Of particular note, the Macraes operation in Otago marked the milestone of 300,000 oz total production of gold. In addition to record production, positive exploration results have added over 120,000 oz of reserves and extended the mine life to 2016. The granting of a new coal mining permit to L&M/Bathurst Resources will see significant new coal exports on stream in 2011.

It has been another very busy and hugely productive year for both the Crown Minerals Group and the petroleum and minerals sector. The team at Crown Minerals are highly committed professionals who constantly drive for excellence. We have dedicated teams across all our areas of operation and focus and I acknowledge the contribution they have made to another successful year.



Chris Kilby, Group Manager





POLICY AND REGULATORY INITIATIVES →

Maximising Economic Contribution

The Government's increased focus on the petroleum and mineral sectors is a key policy driver for Crown Minerals, in particular its commitment to maximise the gains from New Zealand's petroleum and mineral resources by 'unlocking resources' through changes to legislation and the management of Crown land.

Towards the end of last year the Minister of Energy and Resources announced a range of initiatives to unlocking our petroleum and mineral potential.

Firstly, a Petroleum Action Plan that comprises a number of core work streams to ensure that New Zealand is a highly attractive global destination for petroleum exploration and production investment. These include:

- + explicitly positioning Government as pro-active and pro-development of petroleum resources;
- + developing a co-ordinated investment strategy to improve knowledge of New Zealand's petroleum resources;
- + conducting a short focused review of the Crown's capability and resourcing to manage our petroleum estate;
- + improving the quality of information provided by industry participants to Government of the Crown's petroleum resources;
- + reviewing our regulatory, royalty and taxation arrangements for petroleum;
- + reviewing and, where necessary amending, the legislative framework of the petroleum sector; and
- + undertaking further work to develop a pathway for realising the potential of New Zealand's gas hydrate endowment.

Secondly, proposals to improve access to the public conservation estate for mineral explorers and developers, in particular:

- + a review (stocktake) of Schedule 4 of the Crown Minerals Act 1991;
- + improvements to Department of Conservation processes for access arrangements; and
- + establishing a consultation process for the reclassification of conservation land.

As the Government's in-house source of petroleum and minerals geotechnical and operational expertise, Crown Minerals has been providing a valuable contribution into the progress of these action plans for both the petroleum and minerals sectors.

The proposed stock take of the mineral potential of Schedule 4 land, was widely debated and proposals ultimately not pursued. The outcome has been a strengthening in protection for public conservation land, joint ministerial sign off for access to conservation land, and the Government refocusing its mineral strategy to improve knowledge of New Zealand's mineral resources on non Schedule 4 land through data acquisition.

Government has committed \$4 million primarily for aeromagnetic surveys, notably over prospective non Schedule 4 areas of Northland and the West Coast. This work, which has a strong element of public good science, is being managed by Crown Minerals and will identify areas with the highest concentrations of valuable minerals, as well as detect and de-risk a range of hazards associated with soil and rock instability, which will assist local government with the management of regional issues such as earthquakes and landslides.

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Crown Minerals, together with the Fuels and Crown Resources group of the Ministry of Economic Development, has contributed to the development of the Department of Conservation's Standard Operating Procedures and a DOC/MED consultative process for the reclassification of conservation land. Both of these initiatives, now operational, will assist in providing a solid platform for streamlining access applications to conservation land for responsible mineral exploration and mining activity.

Crown Minerals has also been involved in the review of the Crown Minerals Act 1991 in order to better align it with the Government's economic growth agenda, to encourage development of minerals resources to contribute to our economy, and to enable the regime to better deal with future developments and requirements.



PETROLEUM →

Seismic Seekers

Crown Minerals continues to lead an extensive seismic surveying programme.



Seismic surveying is central to the government's strategy of attracting oil majors to explore New Zealand's petroleum potential. Before a new acreage area (block offer) is released, seismic data is collected, processed and interpreted – then made freely available to companies interested in bidding for exploration permits.

In 2009–2010, the government invested in collecting 5,620 km of 2D seismic data. The major focus of the year was the Pegasus basin, which stretches from east of the Wairarapa coastline to the Chatham Rise, east of Kaikoura. Data was collected by the surveying vessel Reflect Resolution from December 2009 to March 2010.

A second programme gathered seismic over an area in the northeast corner of the Great South Basin, about 100 km off the coast of Canterbury. To further support the understanding of this basin, seismic data collected in the 1970s and early 80s was re-processed. As with Pegasus, data interpretation will be complete by the end of 2010.

Seismic surveying sees Crown Minerals working closely with GNS Science, which undertakes the interpretation of the data. Pegasus reinforced the value of such a partnership: as well as Crown Minerals collecting data to a depth of 5-10 km across the basin, GNS used the same seismic shooting to undertake an analysis of geological structures to a depth of 30 km across the lower North Island (this research was called the SAHKE programme).

THE PRIMARY FOCUS IN 2009/2010 WAS

pegasus

Looking ahead, Crown Minerals will assess potential basins within our Exclusive Economic Zone (EEZ) and extended Continental shelf.

Most immediately, to the east of Whangarei, a deepwater area tagged East Slope Northland may well be potentially prospective. A seismic survey is being considered as a first phase of understanding the area.

A worker in an orange jumpsuit and white hard hat is standing in a storage area filled with large orange pipes. The worker is holding a pipe with a red tag that has 'A12' written on it. The background shows rows of pipes stacked on shelves. The word 'basin' is written in large white letters at the bottom of the image.

basin



Exploring the Deepwater

Several oil majors now realise the potential of offshore New Zealand.

Four years ago, there was just one oil multinational exploring offshore New Zealand. Now there are four: OMV, Exxon Mobil, Petrobras and Anadarko; as well as New Zealand-based Shell Exploration.

The increased numbers reflect a new phase of exploration, pushing out to relatively deep water (1,000 m to 2,000 m depth). Tens of millions of years ago, New Zealand was a small continent, with large river systems. The river deltas have resulted in large undersea basins that have petroleum potential. And that's where the explorers are heading.

THE TOTAL AREA INCLUDING
NEW ZEALAND'S EXTENDED
CONTINENTAL SHELF IS
OVER 70% THE SIZE
OF AUSTRALIA, WITH



**huge
petroleum
potential**

The last four years have seen exploration block offers released for the East Coast basin, parts of the offshore and onshore Taranaki Basin, Great South Basin, Reinga Basin, Northland Basin and the Raukumara Basin. Looking ahead, it's probable that more acreage blocks will be released over new basins, as our understanding of further offshore regions increases.

Supporting Government's petroleum action plan, Crown Minerals stays in contact with a number of oil exploration companies around the world with a particular focus on those with deepwater exploration experience. Interest in New Zealand continues to grow – with a natural progression as new companies are encouraged by the lead of existing permit holders.

Understanding the Potential

PEGI will enhance knowledge of New Zealand's petroleum resources.

In 2010, Crown Minerals contracted GNS Science to deliver the two year Petroleum Exploration and Geosciences Initiative (PEGI) Project. As a suite of projects, they will significantly enhance knowledge of New Zealand's petroleum potential.

The projects support point two of the Government's Petroleum Action Plan: "Developing a co-ordinated investment strategy to improve the knowledge of New Zealand's petroleum resources".

When complete, the projects will accelerate delivery of a number of key petroleum 'public good' geoscience projects, led by GNS Science.

The projects feature a range of evaluation and research focusing on Taranaki, New Zealand's only current commercially producing petroleum region. This work will in turn support understanding of other, less explored petroleum basins. The projects also establish a pilot regional data visualisation network, which compiles geophysical metadata from several government agencies, for display on geographical visualisation mediums such as Google Earth.

Delivery will include desktop interfaces that will enable the industry to access comprehensive research, supporting understanding of New Zealand's petroleum systems. Each project will deliver a tool or database that reduces some aspect of the geological uncertainty of exploration.

ACCESS TO
**comprehensive
research**

WILL REDUCE GEOLOGICAL RISK

Future Fuel

There's increasing evidence that coal seam methane is commercially viable.

New Zealand's exploration and evaluation of coal seam methane (CSM) began back in the 1980s. Over 25 years on, there's increasing evidence that this 'unconventional energy' resource will become commercially viable.

Around the country, a large amount of CSM exploration is underway, across 13 active petroleum exploration permits spanning over 20,000 km². Taranaki, the West Coast, Southland and Waikato Coalfields all have active work programmes to delineate and discover prospective accumulations of gassy coal. Leading the CSM exploration are L&M Energy, Chartwell and Solid Energy.

25 years on, there's increasing evidence that this 'unconventional energy' resource can become commercially viable.

Various production pilots are in operation across the country to assess whether CSM can viably contribute to New Zealand's domestic energy supply.

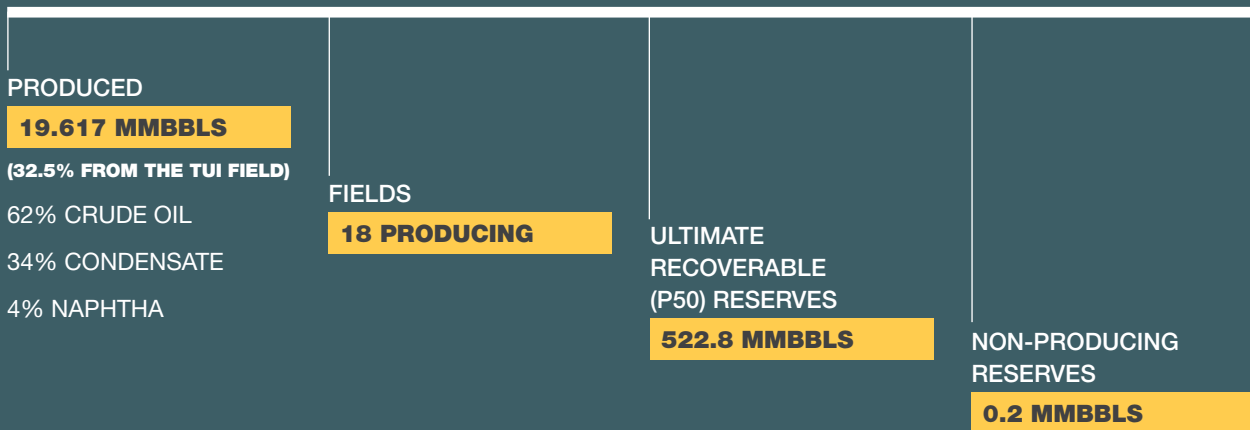
In the last year, the first modest contingent reserves have been independently booked. The first CSM mining permit was granted in 2007. Production from this unconventional resource is expected to commence in the near future.

PRODUCTION IS EXPECTED IN THE

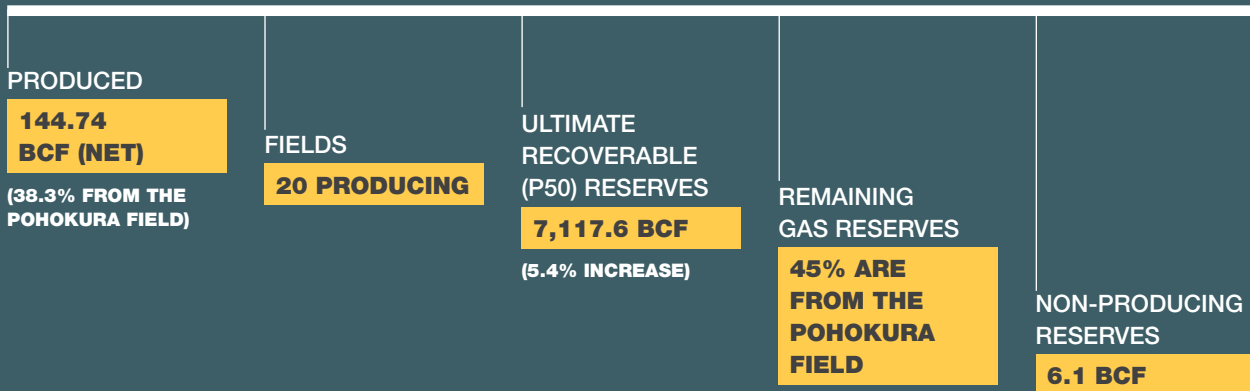
**near
future**

PETROLEUM: 09/10 SNAPSHOT →

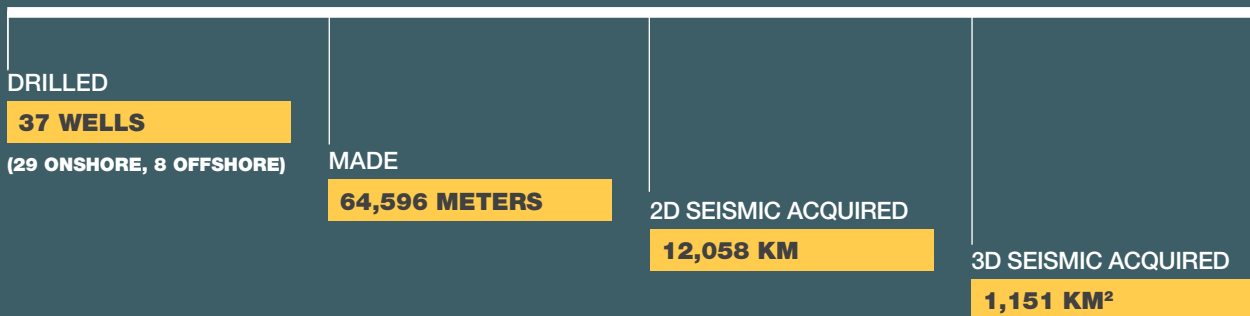
OIL PRODUCTION (2009 CALENDAR YEAR)



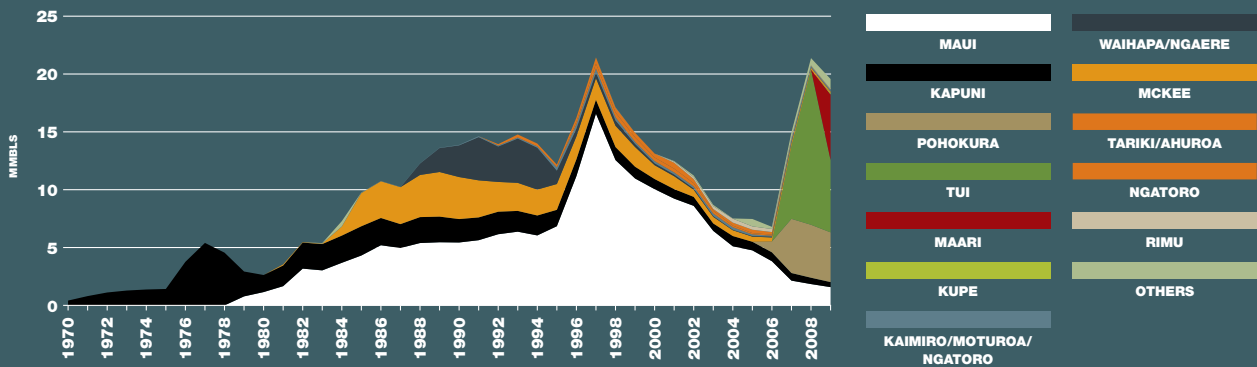
GAS PRODUCTION (2009 CALENDAR YEAR)



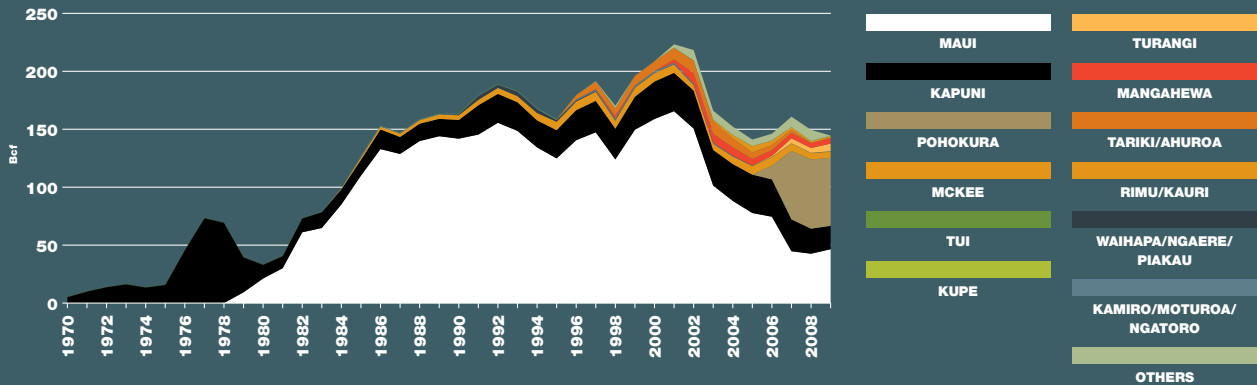
WELLS/SEISMIC (2009 CALENDAR YEAR)



NZ OIL, CONDENSATE, NAPHTHA & NATURAL GAS LIQUIDS PRODUCTION BY FIELD 1970-2009



NET GAS PRODUCTION (Bcf) 1970-2009



PERMITTING (2009 CALENDAR YEAR)

ACTIVE PROSPECTING/ EXPLORATION PERMITS	71
ACTIVE MINING PERMITS/LICENCES	24

EXPENDITURE (2009 CALENDAR YEAR)

PROSPECTING AND EXPLORATION EXPENDITURE	\$191 MILLION
MINING PERMIT/ LICENCE EXPENDITURE	\$1,202 MILLION

MINERALS →

Three Million Ounces

Production is healthy at New Zealand's largest gold mining operation.



March 2010 saw the three millionth ounce of gold poured at the Macraes gold operation in Otago. Macraes is located approximately 100 km north of Dunedin, and is owned and run by publicly-listed company OceanaGold. It is New Zealand's largest gold operation.

The operation includes the Macraes open-cut mine, commissioned in 1990, and the Frasers underground mine, commissioned in 2008. In 2009, total production (including Globe Progress production) was a record 300,391 oz.

Defined mineralisation of the Macraes Goldfield extends along a 40 km strike length. Only 20 km of this has been explored. OceanaGold holds mining and exploration permits over most of the entire length, with freehold title to most of the land.

EXPLORATION DRILLING HAS LED TO KNOWN GOLD RESERVES BEING

significantly

To extend the mine reserves, OceanaGold has invested in considerable exploration.

Drilling has been undertaken from an underground platform in Frasers mine to holes that from the surface could be more than 1,000 m deep.

Exploration has led to a significant increase of known reserves. As a result, the forecast life of Macraes mining operations has been extended to at least around 2016.

increased

Global Interest in Iron Sands

Trans-Tasman Resources Ltd

Prospecting and exploration for iron sands is going from strength to strength.

With continuing global hunger for steel, there's increasing demand for iron ore. That's led to overseas interest in New Zealand's potential. An area of offshore west coast North Island is under multiple permits, mostly focused along a 480 km stretch of the North Island coast line from Kaipara to Whanganui.

New Zealand's deposits of titanomagnetite iron ore (iron sands) are among the most extensive and concentrated in the world. In places, deposits are of a size and quality suiting commercial use – such as in the Waikato's North Head and Taharoa. The potential offshore resource is huge.

NEW ZEALAND TITANOMAGNETITE COULD SOON BE A KEY TO MEETING

global demand

Sinosteel Australia, Fortescue Metals Group, and Trans-Tasman Resources (TTR) are all running prospecting programmes. Rio Tinto Iron Ore has moved into exploration. In April 2010, Houston-based Denham Capital Management LLP announced a 48% stake in Wellington-based TTR – which has predicted that a \$US1 billion investment in seabed dredging could yield 50 million tonnes of iron ore a year within five years.

Around the world, many iron ore development projects are not expected to begin operating for perhaps another ten years, so initiatives that can be brought to market quickly are seen by overseas producers as highly desirable.

In Search of **Placer Gold**



A new international-New Zealand venture is prospecting for offshore placer gold.

In early-2010, international companies De Beers and AngloGold Ashanti announced a marine exploration and mining joint venture – seeking offshore placer gold. The partners committed at least US\$5.9 million to fund prospecting and exploration activities undertaken by New Zealand's Seafield Resources.

Seafield Resources holds offshore permits for the Westland Continental Shelf, between Karamea and Jackson's Head. In March 2010 a Seafield-operated prospecting vessel began taking core samples from the seabed, mostly out to the start of the 12-mile Exclusive Economic Zone.

The prospecting vessel has been using a purpose-built drill called a sonic vibro-corer, as well as an associated launch/recovery system. The vibro-corer enables samples to be taken from fine seabed rock deposits – placer gold is finely grained eroded gold that is scattered through such deposits.

In mid-2010, core samples were sent to South Africa for heavy mineral analysis. Plans are for the sampling and analysis phase to be completed by the fourth quarter of 2010.

The vibro-corer and launch/recovery system were developed and built in New Zealand by Seafield and its partners. Wellington company New Zealand Diving and Salvage assisted in design of the drilling tool, while Nelson marine support company Unimar led construction and provided the vessel. Numerous other contractors supported the project.

NEW DRILLING TECHNOLOGY WAS DEVELOPED BY

New Zealand companies

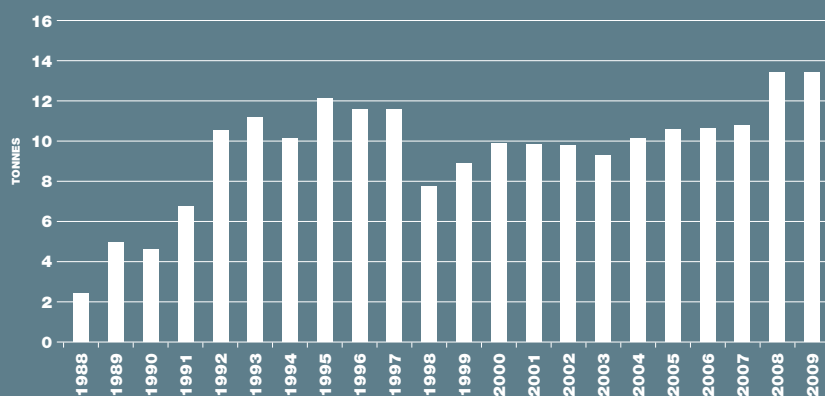
MINERALS: 09/10 SNAPSHOT →

MINERALS PRODUCTION (2009 CALENDAR YEAR)

GOLD PRODUCED 13.442 TONNES VALUE \$662,497,080	SILVER PRODUCED 14.264 TONNES VALUE \$10,606,470	IRON SANDS PRODUCED 2,092,640 TONNES	INDUSTRIAL MINERALS PRODUCED 32,984,558 TONNES VALUE \$425,854,594
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PERMITTING (2009 CALENDAR YEAR)

ACTIVE 681 PERMITS	PROSPECTING 36 PERMITS	EXPLORATION 154 PERMITS	MINING 491 PERMITS/ LICENCES	UNDER ACTIVE PERMIT FOR IRON SAND 58,835.87 KM² AT 31 DECEMBER 2009
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GOLD PRODUCTION 1988-2009**EXPENDITURE (2009 CALENDAR YEAR)****TOTAL EXPLORATION AND PROSPECTING EXPENDITURE****\$28,744,492**

PROSPECTING
\$6,218,531

EXPLORATION
\$22,525,961

Expenditure totals relate to: money spent on data compilation; drilling, geochemical, geophysical, mapping and appraisal work; obtaining consents; administration. Includes Continental shelf licences.

COAL →

Reaching Deeper

New technology may enable deep, unmineable coal deposits to be converted into gas – underground



New Zealand has significant coal resources that are too deep to mine by conventional means. But these resources may be suitable for underground coal gasification (UCG), a method of extracting the energy from coal without having to put men and materials underground. Using proven technology, coal is converted in place into a combustible gas which is then bought to the surface.

The recovered gas can be used for industrial heating, power generation or the manufacture of hydrogen, synthetic natural gas or diesel fuel. The basic UCG process involves drilling two wells into the coal. One well is for injection of oxidants (water/air or water/oxygen mixtures). The other, some distance away, is to bring the gas to the surface. The coal at the base of the first well is heated to temperatures that would normally cause the coal to burn. However, by regulating the oxidant flow, the coal is instead separated into syngas – which is drawn out of the second well. It's a similar process to surface gasification, but with UCG, the underground cavity itself is the reactor.

UCG technology is currently being investigated in several countries, and commercial scale pilot projects have started in Australia, China, South Africa, and India. Large-scale operations were developed in the Soviet Union in the 1970s with one plant continuing to operate in Uzbekistan. Its potential in New Zealand is currently being evaluated by Solid Energy in deep coal at Huntly.

New Zealand has deep coal resources in the Waikato, King Country, West Coast and Ohai that are uneconomic or too deep to mine conventionally but have potential for UCG.

Using proven technology, coal is converted in place into a combustible gas which is then brought to the surface.

UCG COULD PRODUCE

**unconventional
gas supply**

Expanding Coal Exports



MAXIMUM

resource recovery

FROM EFFICIENT PERMITTING

New entrant to coal mining at Buller.



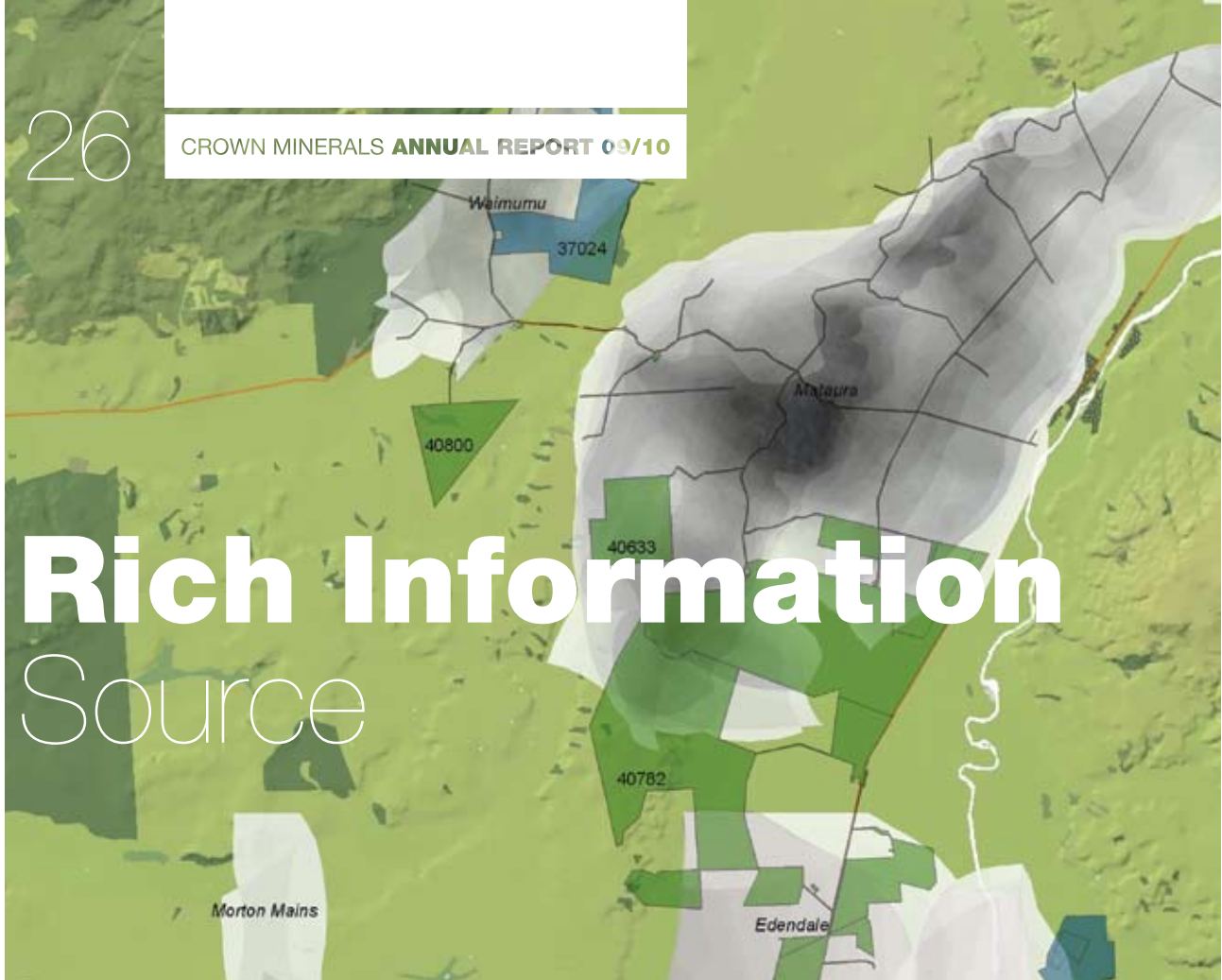
In 2005, Crown Minerals granted an exploration permit to Christchurch-based L&M Holdings, to explore 18,000 ha of the Buller coalfield. The permit covered abandoned workings and ground that appeared of little commercial interest. But since then L&M has sifted through historic data, completed extensive field mapping, and drilled 20 holes. In so doing, they have indentified a coal resource of over 80 million tonnes.

Consequently, L&M has been granted a mining permit over an estimated seven million tonnes of high-quality coking coal, near the old Escarpment mine. L&M has entered sale negotiations with Perth-based company Bathurst Resources Ltd for their permits.

Bathurst intends mining by 2011, pending consents and development of transport infrastructure. The company believes the project has prospects for production of one million tonnes a year, over at least a 30-year operating life—with potential to expand to two million tonnes a year. The Escarpment mining permit will be Bathurst's start-up mine and a new export venture for the New Zealand resources sector.

Bathurst is listed on the Australian stock exchange and intends listing in New Zealand. Their investment adds significant depth to the range of mining companies operating here.

L&M has been granted another five-year term to investigate further mining projects. An unprospective area has been dropped from the exploration permit. The permit allocation process also allowed removal of a strip of land from the permit to enable Solid Energy to maximise recovery of valuable coal along the boundary of their Stockton mining licence.



Seam thickness contouring of the Matura and Waimumu lignite deposits, showing mining licences and exploration permits.

A new coalfield GIS will enhance permitting administration and resource management

Accurate information is imperative to the best decisions. So in 2009 Crown Minerals began developing a coalfield GIS (Geographic Information System). The GIS will at first assist with permitting administration and resource management. An open-file version will be developed later for free public access to key coalfield information via the Crown Minerals website.

Spatial information is being sourced and compiled, with layers showing geology, resource blocks, mine workings (current and historic), seam structure and coal thickness. The GIS will allow permit areas to be layered over the multiple factors defining a coalfield, and so provide a spatial framework on which to build an inventory of New Zealand's coal resources.

So far, most of the North Island coalfields have been compiled, and a basic resource GIS compiled for the huge South Island lignite fields. The next priority is the complex West Coast coalfields.

THE DATABASE WILL CREATE
A COMPREHENSIVE

spatial framework

COAL: 09/10 SNAPSHOT →

COAL PRODUCTION (2009 CALENDAR YEAR)

TOTAL COAL PRODUCTION

4,563,334 TONNES

BITUMINOUS

2,085,486 TONNES

SUB-BITUMINOUS

2,218,144 TONNES

LIGNITE

259,704 TONNES

OPERATING COAL MINES

17

UNDERGROUND

5

OPENCAST

12

PERMITTING (2009 CALENDAR YEAR)

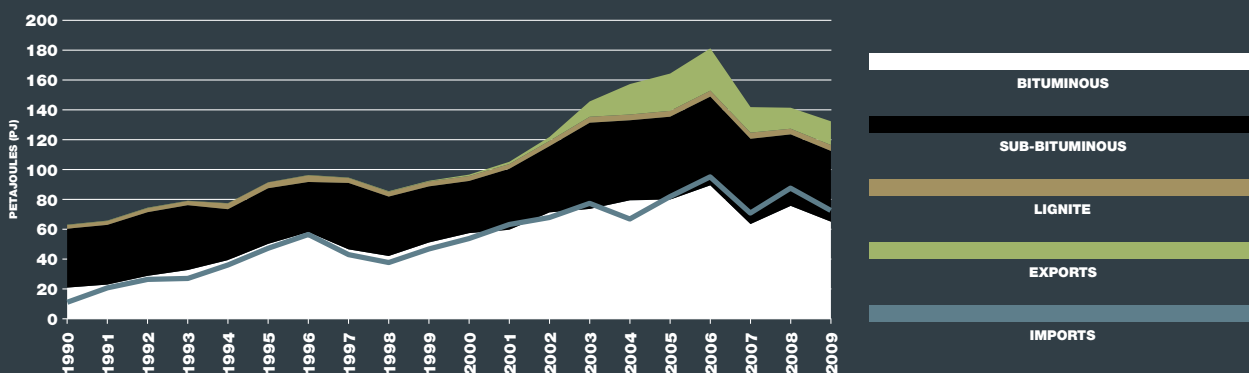
PROSPECTING OR EXPLORATION

46 PERMITS

MINING

88 PERMITS/LICENCES

COAL PRODUCTION BY TYPE 1990-2009



TECHNICAL DATA →

Future-Proofing the Data

Crown Minerals' technical database has seen major upgrades in 2010.

Explorers need access to accurate information. Since 2006, Crown Minerals has operated a technical database: it's a repository for all the geophysical and other exploration data that permit holders are required to submit. After five years, data is freely accessible to others.

The last year has seen major enhancements to the database, with project completion in September 2010. A major new upgrade of software products has been introduced, new hardware has been launched and there has been a shift to a new data centre.

Together, these upgrades pave the way for future growth in demand for exploration data, from petroleum, coal and minerals players. The upgrades will also make for easier, more cost-effective administration by Crown Minerals.

The technical database now features an enhanced search capacity. This enables all catalogues and fields (including PDFs) to be searched by keywords and phrases. Another boost for information searches is that all data for coal, petroleum and minerals have been consolidated into a single database. Looking ahead, this will be of huge benefit as the resource themes merge, for example with coal seam methane (CSM).

Access to all online data and reports is free to registered users. Where data needs to be sent (such as copies of seismic tapes) only the costs are charged. It all adds up to accessibility – which in turn opens up new opportunity.

**quality
+ access**

OF DATA HELPED
NEW ZEALAND
ACHIEVE A 2ND
PLACE RANKING
FOR GEOLOGICAL
DATABASES BY THE
FRASER INSTITUTE



An Accurate Legacy

Legacy seismic data sets are being checked, loaded, and indexed within the technical database.

DATA SETS ARE BEING INTERROGATED FOR GREATER

accuracy

Crown Minerals holds numerous legacy field and processed seismic data project sets, provided by permit holders over several decades. Data is stored in a variety of media, but until recently has not been in an easily retrievable format.

Over the last four years a major project has been underway to re-master Crown Minerals' entire seismic field data collection held on magnetic tape – onto new high-density media. Re-mastering is critical to protect this valuable data asset from being lost through deterioration of magnetic media.

At the same time, a comprehensive index has been created and will soon be added to the Crown Minerals technical database. The data itself hasn't changed: but the quality and ease of access most certainly has.

In 2010, another major project has begun. GNS Science has been working alongside Crown Minerals to ensure legacy seismic projects are reasonable quality, in a standard load-ready format and, where appropriate, loaded onto the technical database.

Similar efforts are being made with thousands of physical samples at the national core store in the Wairarapa (see last year's report). Thirty percent of the core samples held by the store have now been indexed and photographed, with the data currently being prepared for placement online.

A great deal of effort is being put into quality assurance of all new data. As the capability of software and technical teams advances, data is interrogated to greater depth. There's significant focus on raising the standard of the data provided by permit holders, for example through improved data sheets and submission guidelines.

Partnership Power

A pan-agency initiative will enhance access to petroleum metadata.

The Petroleum Exploration and Geosciences Initiative (PEGI) initiative aims to give explorers faster access to better quality and more detailed data. One work stream within PEGI is a pilot metadata project involving Crown Minerals, GNS Science, NIWA, and Geosciences Australia. Completion is scheduled for 2012.

The PEGI metadata pilot initiative aims to provide a new single-index source, pointing the way to a multitude of publicly funded science metadata relevant to petroleum exploration, but held by multiple agencies. The metadata spans active petroleum systems between the extended continental shelf and the New Zealand coastline.

When it's complete, an explorer seeking specific information for an area will be able to go straight to the new single-index source, and access links to all data held by the participating agencies. As such, comprehensive information will be immediately at explorers' fingertips.

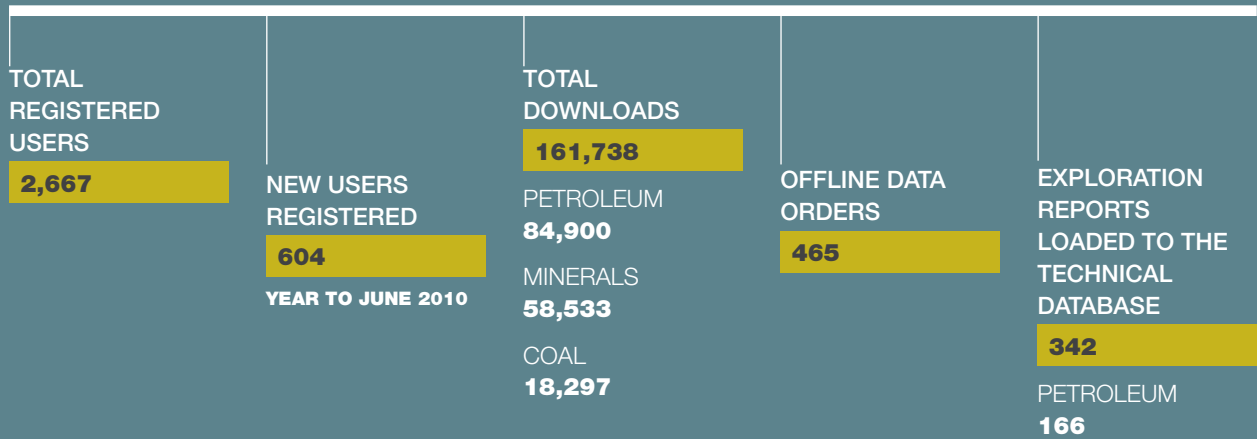
The precise form of the index source has not yet been confirmed. However it is likely to be accessed via multiple media channels.

ACCESS TO DATA WILL BE

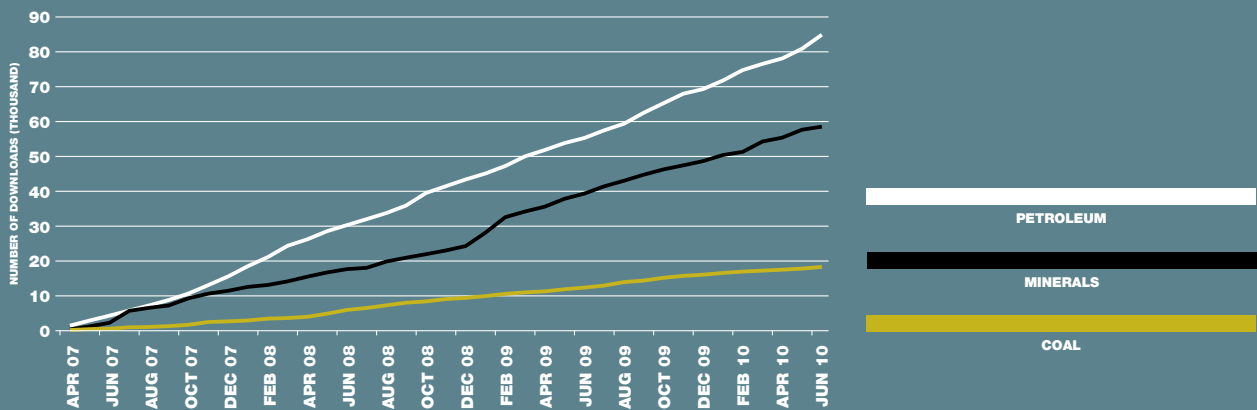
compre

TECHNICAL DATA: 09/10 SNAPSHOT →

DATA DOWNLOADS AND ORDERS (APRIL 2007 – JUNE 2010)



DATA DOWNLOADS/
APRIL 2007 – JUNE 2010



hensive

ROYALTIES AND ERL →

Maintaining Revenues

Crown Minerals oversees the collection of royalties and energy resources levy (ERL) payments, on behalf of the Crown.

Royalties are payable on all petroleum, coal or minerals produced from a permit, with the amount based on net sales revenues. The royalty return to the Government for the 2009/2010 year was almost \$451 million.

The 2009/2010 year was highlighted by a 73% increase in minerals royalties – the first time these royalties have exceeded \$10 million. Positive exploration results at existing mines indicate that royalty returns from gold will remain high over coming years.

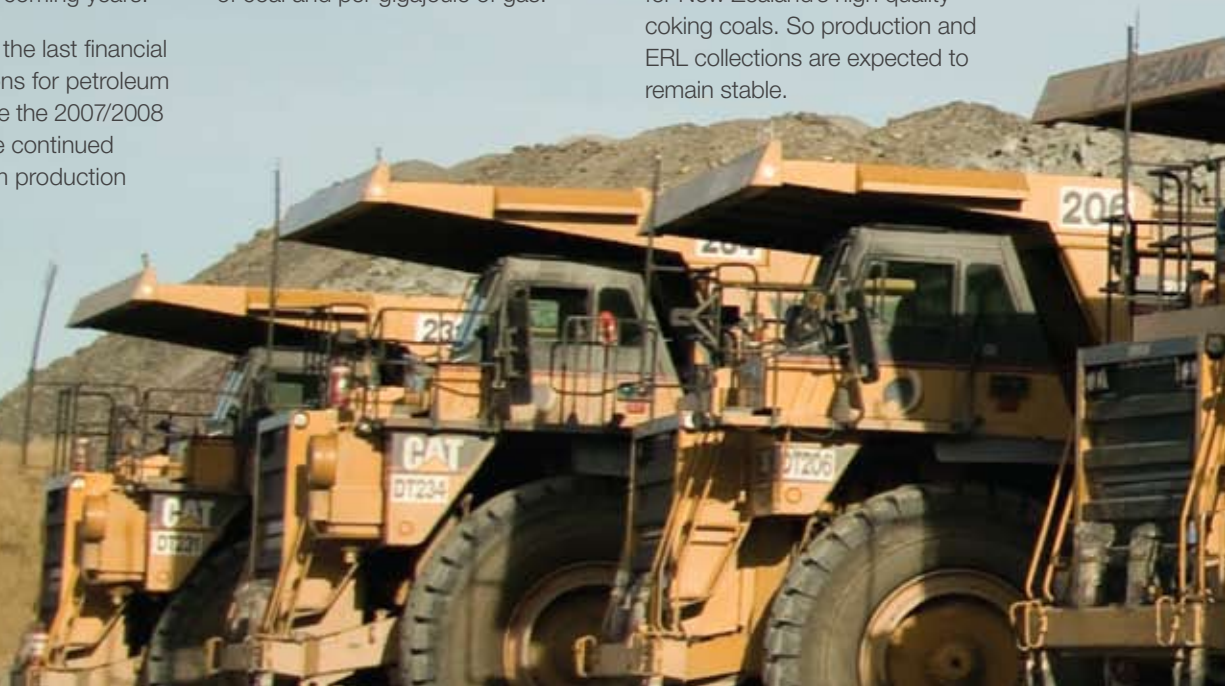
While down 22% on the last financial year, royalty collections for petroleum were still 351% above the 2007/2008 year. This reflects the continued increase in petroleum production over recent years.

The slippage from last year's royalty total is mostly due to a projected drop in production from the Tui field. Worth noting, further analysis and development at Tui have so far led to production exceeding projections.

Energy Resources Levy (ERL) payments apply to coal/lignite produced from opencast mines, and to gas produced under licence from a pre-1986 discovery. Payments are calculated per tonne of coal and per gigajoule of gas.

ERL payments increased for the 2009/2010 year, reflecting increased gas production. Planned enhancements at Maui are expected to extend the field life, so gas ERL collections are anticipated to remain consistent in coming years.

ERL collections from coal reflect the small decrease in coal production. Operator disputes that impacted production are now resolved and there is continued global demand for New Zealand's high quality coking coals. So production and ERL collections are expected to remain stable.



THE YEAR TO JUNE 2010 SAW
MINERALS ROYALTIES TOP

ten million dollars

FOR THE FIRST TIME

09/10 SNAPSHOT →

(1 JULY 2009 - 30 JUNE 2010)

TOTAL REVENUE

\$450,650,223

TOTAL ROYALTIES

TOTAL ROYALTIES RECEIVED

\$411,458,620

PETROLEUM ROYALTIES

\$399,194,756

MINERALS ROYALTIES

\$11,345,525

COAL ROYALTIES

\$918,338

ENERGY RESOURCES LEVY

TOTAL ERL REVENUE

\$39,191,602

COAL ERL

\$6,494,094

GAS ERL

\$32,697,507

Statement Of Financial Performance*

(1 JULY 2009 - 30 JUNE 2010)

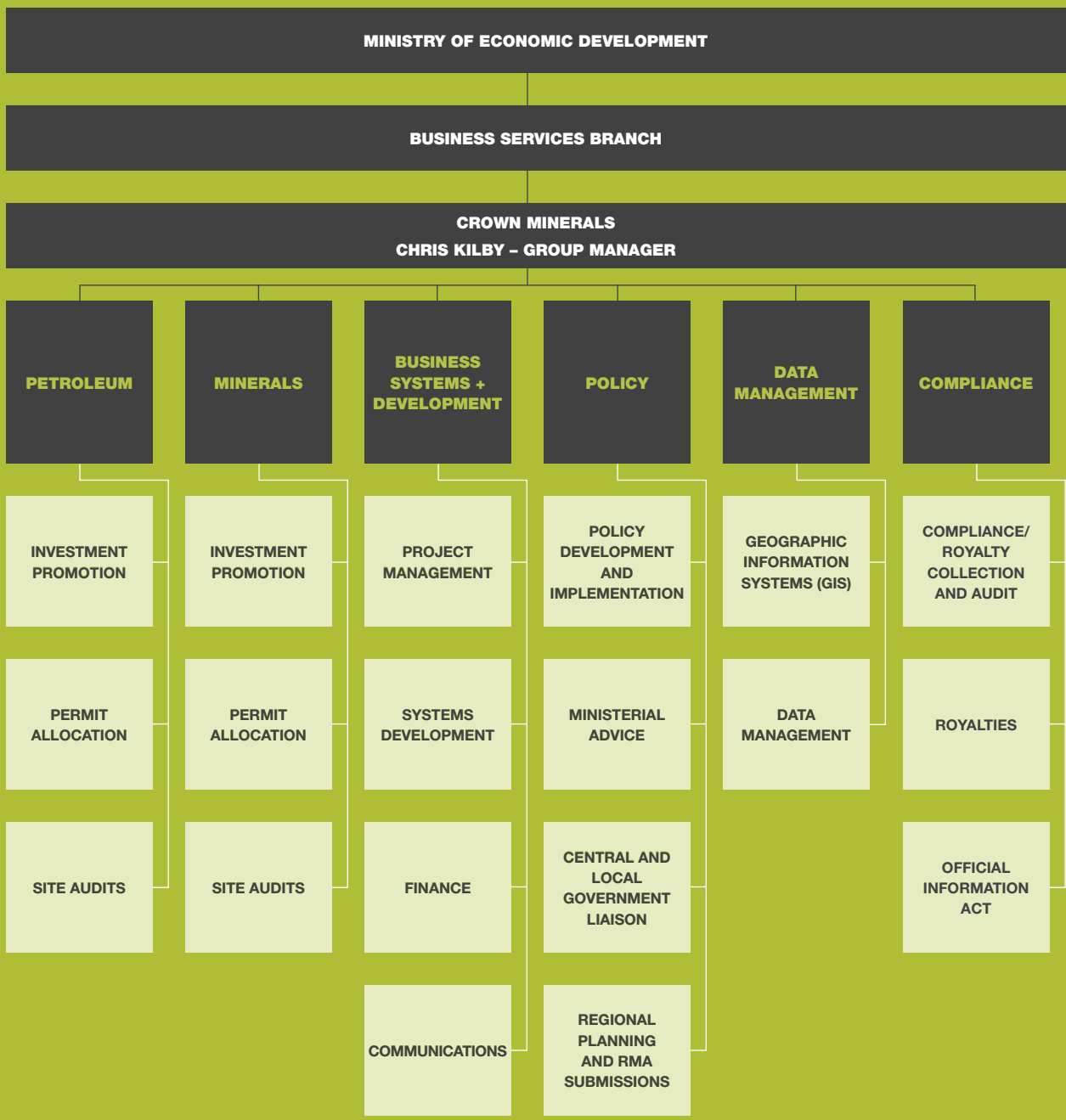
(GST EXCLUSIVE)	NOTE	2010 ACTUAL \$000	2010 BUDGET \$000	2010 VARIANCE \$000	2009 ACTUAL \$000
REVENUE					
Crown funded		2,815	2,835	20	2,752
Other	1	6,599	6,559	40	6,614
TOTAL REVENUE		9,414	9,394	20	9,366
EXPENSES					
Personnel		2,879	2,968	89	2,800
Operating		3,265	2,916	-349	2,837
Depreciation		627	838	211	584
SUPPORT AND OTHER					
IT Costs		827	859	32	1,417
Occupancy		518	534	16	552
Capital charge		220	225	5	133
Other		1049	1047	-2	869
TOTAL EXPENSES		9,385	9,387	2	9,192
NET SURPLUS/(DEFICIT)		29	7	22	174

NOTES TO THE STATEMENT OF FINANCIAL PERFORMANCE

1 REVENUE OTHER	2010 ACTUAL \$000	2010 BUDGET \$000
SOURCES OF REVENUE OTHER		
Petroleum	3,027	3,452
Minerals	2,470	2,160
Coal	736	625
Conferences	299	250
Other fees	67	72
	6,599	6,559

* The statement of financial performance is subject to audit. Confirmed audited figures are available in the Ministry of Economic Development 2009-2010 Annual Report.

Business Units



Contacts and Numbers

We prize our relationships with industry, permit holders, government agencies, and the public.

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