

Crown Pastoral Land Tenure Review

Lease name: HOME HILLS

Lease number: PO 383

Public Submissions - Part 1

These submissions were received as a result of the public advertising of the Preliminary Proposal for Tenure Review.

October

06



Te Rūnanga o NGĀI TAHU

Level 6, 158 Hereford Street
Te Waipounamu House
PO Box 13-046, Christchurch
Phone: 03 366 4344
Fax: 03 365 4424

10 August 2006

David Payton
Opus International Consultants
Private Bag 1913
DUNEDIN

Tēnā koe David

Preliminary Proposal for Home Hills Pastoral Lease

Te Rūnanga o Ngāi Tahu has reviewed the Preliminary Proposal and the Cultural Values Report for Home Hills Pastoral Lease.

Te Rūnanga is satisfied that the Preliminary Proposal meets the recommendations outlined in the Cultural Values Report.

Heoi anō

A handwritten signature in black ink, appearing to read 'Takerei Norton'.

Takerei Norton
Environmental Advisor
Te Rūnanga o Ngāi Tahu

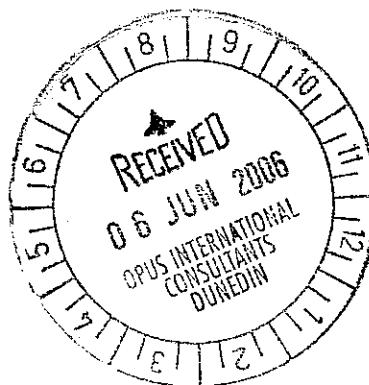


OTAGO CONSERVATION BOARD

1

Our ref: SBC-08-34

2 June 2006



Commissioner of Crown Lands
c/- Opus International Consultants Ltd
Private Bag 1913
DUNEDIN

Dear Sir

SUBMISSION ON TENURE REVIEW OF HOME HILLS PASTORAL LEASE

Thank you for the opportunity to comment on the Preliminary Proposal for the tenure review of the Home Hills Pastoral Lease.

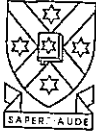
The Otago Conservation Board supports all aspects of the preliminary proposal that was publicly notified.

Yours faithfully

A handwritten signature in cursive script that reads "Fergus Sutherland".

P F

Fergus Sutherland
Chairperson



Department of Botany

Division of Sciences
PO Box 56, Dunedin
NEW ZEALAND

University of Otago
Te Whare Wananga o Otago

Tel: National 03 479 7573 International 64 3 479 7573
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June 12, 2006.

Commissioner of Crown Lands,
c/o Opus International Consultants Ltd.,
PO Box 1913,
DUNEDIN.

**SUBMISSION ON PROPOSED TENURE REVIEW:
HOME HILLS PASTORAL LEASE**

Dear Sir,

Thank you for sending me a copy of this proposal and I appreciate the opportunity to comment on it, based on my knowledge of the area involved, gained over many years of ecological research on the tussock grasslands and pastoral leases of the Central Otago Region and my involvement as supervisor of the PNA survey of the Hawkdun Ecological District by Philip Grove, published in 1994.

I have read the proposal for tenure review of Home Hills Pastoral Lease very carefully and note that there is a generally good balance between the 1542 ha (48%) of land to be restored to full Crown control and management and the 1658 ha (52%) proposed for the freeholding option, each with some "qualified designations".

Referring to the details of this preliminary proposal in the order addressed in the document supplied, firstly:

Conservation Area 1 (1374 ha) is fully endorsed. It borders existing conservation land (Hawkdun Conservation Area) originating from a previous tenure review, to the east, on the Hawkdun Range and extends the altitudinal sequence of vegetation from the crest of the range down close to the Manuherikia River. The area contains a range of tussockland types, particularly copper tussock grassland but also including narrow-leaved snow tussock, silver tussock and blue tussock grasslands over the flats and lower toe slopes of the Hawkdun Range. There are also areas of shrubland associated with stream channels and some interfluves, as well as wetlands in seepage areas and flushes. The area is also important for its diversity of indigenous invertebrates, including several that are nationally significant, as well as for its impressive landscape.

I strongly recommend that this conservation area be extended in its southwest corner, as far as, and to include, the shrublands (and marginal strip) in Johnstones Creek. A new fence would be required along the boundary on the south side of Johnstones Creek. This extension to the Conservation Area 1 would greatly improve its value as a conservation area in terms of its shape and diversity, as well as providing a direct linkage with the small **Conservation Area 3**, on the margin of the reservoir of Falls Dam between Gate Creek and Johnstones Creek. This latter area contains the existing fishing huts, which have caused much recent controversy since they are not located on a legal road. This proposal would also protect the habitat of the nationally endangered native cress, *Lepidium sisymbrioides* ssp. *kawarau*, as well as resolve the controversy and also adequately provide for the important recreational opportunities associated with the use of the Falls Dam Lake and shoreline in

this area. The associated **Qualified Designation**, being continuation in force of the existing easement in favour of the Falls Dam Company Ltd is endorsed.

As to the three "**Qualified Designations**" associated with the CA1 proposal, and dealing with each in turn:

(a): **Grazing Concession** issued to E.S. Johnstone for specified grazing and associated topdressing and track maintenance for a period of 10 years, I recommend this concession be restricted to 5 years and, moreover, that no topdressing be permitted after year-3, this being considered adequate to maintain productivity and adjust the farming procedures to suit the new situation.

(b) and (c): **Continuation in force of existing easements** in favour of the Hawkdun Idaburn Irrigation Company Ltd and the Falls Dam Company Ltd, respectively, are endorsed.

Conservation Area 2 (138 ha) is also strongly endorsed. It contains mixed shrublands, tussocklands, herbfields, rock outcrops, scree slopes and associated fauna, occupying upper river terraces and the toe of the hill slopes and rocky scree slopes, contains important associations of indigenous shrub, herb and animal species. It is also an important area for public recreation. The associated **Qualified Designation**, being continuation of an existing easement in favour of the Falls Dam Company Ltd, is endorsed.

The proposed **designation of ~27 ha of land to be restored to or retained in full Crown ownership and control, for the specified purpose of lake bed**, is endorsed. The associated **Qualified Designations** relating: a) a farm management easement to be issued to E.S. Johnstone where the existing farm track crosses this land (as per the blue line "a-b" on the plan in Appendix 2); b) to the continuation in force of an existing easement in favour of the Omakau Area Irrigation Company Ltd, and c) similarly for the Falls Dam Company Ltd, are each endorsed.

The additional **Qualified Designation of a Farm Management Easement Concession** to E.S. Johnstone where this track shown as "a-b" on the plan in Appendix 2, around the true left side of the Falls Dam Reservoir is over an existing 4WD track that is located on the marginal strip expected to be created as a result of this tenure review, for a term of 30 years, is also endorsed.

The proposed freehold disposal of the remaining 1658 ha to E.S. Johnstone, subject to a **Qualified Designation** in relation to an existing easement, to certain **Conservation Covenants** and to **Easements** for both **Public Access** and **Conservation Management Purposes**, as outlined below, as well as the ~130 ha from the northern end being transferred to the **Conservation Area CA1**, is endorsed. The case for transferring the ~130 ha to the area CA1 has already be outlined above. As to the other conditions:

The **Qualified Designation** for continuation in force of an existing easement in favour of the Falls Dam Company Ltd as per Appendix 5 of the report, is endorsed; two **Conservation Covenants** totalling ~100 ha, being the two more southern of the three shown on the Sheet 1 of Appendix 2 (Note; it has been recommended above that the covenant proposed in Johnstones Creek be added to the area CA1), together with the photo-point monitoring as proposed in Appendix 8 of the report. Given that the steep topography alongside these creeks is assumed to prevent the access of grazing stock, their lateral boundaries should be extended up-slope to the top of the steep faces. There should also be a condition added to these covenants to cover the situation where the monitoring shows adverse effects of stock grazing on their indigenous vegetation/flora. This should require grazing to cease with fencing being erected, at a cost to be shared equally between the owner and the Minister. The **Public Access Easement** (for foot, horse and non-motorised vehicles) and the **Management Purpose Easement** (with the addition of motor vehicle access for conservation management purposes), which both follow the blue line "a-b" on the plan in Appendix 2 of the report, are each endorsed. In relation to this public access easement, I see no good reason for not including motor vehicle access, as provided for conservation management along this route, this being the

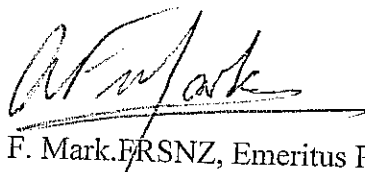
shortest and for some, the most convenient access to the fishing huts and other opportunities at the upper (northern) end of the Falls Dam reservoir.

In relation to public access easements, I recommend that an easement be negotiated with the lessee, for public foot and mountain bike access from the Fiddlers Flat Road along the existing farm track to Trig F at 991 m on the crest of Home Hills, from which magnificent views are available of the Manuherikia Valley and Hawkdun Range.

I trust you will give my submission, including its recommendations, serious consideration.

I also thank you for the opportunity to comment on this proposal which, when implemented, should add significantly to the intrinsic values and area of the proposed Oteake/Hawkdun Conservation Park, as proposed in the current Conservation Management Strategy (CMS; with which I was associated as a member of the Otago Conservation Board) for the Otago Conservancy.

Sincerely,

A handwritten signature in black ink, appearing to read 'A F Mark', with a horizontal line drawn underneath it.

Alan F. Mark.FRSNZ, Emeritus Professor.

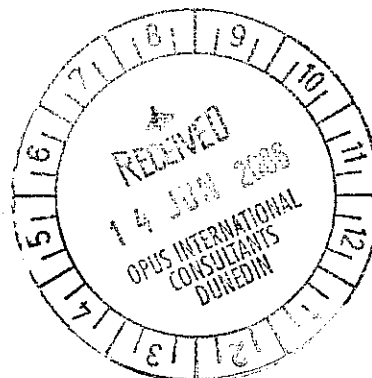


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13 June 2006

Tenure Review Contract Manager
Opus International Consultants Limited
Private Bag 1913
DUNEDIN

Attention: David Payton



Dear Dave

**HOME HILLS PASTORAL LEASE
TENURE REVIEW SUBMISSION BY CROWN MINERALS**

The Commissioner of Crown Lands has invited public submissions on the tenure review of Home Hills Pastoral Lease which occupies an area of some 3,200 hectares in Otago.

An assessment of the area has shown that the northern flats of the Home Hills lease host a large important lignite resource that is contiguous to the nationally significant Hawkdun lignite deposit. This area is currently overlain by a granted exploration permit held by L & M Lignite Limited.

Please find enclosed a written submission on this tenure review proposal.

Yours sincerely

Adam Feeley
Group Manager, Crown Minerals

**Crown Pastoral Land Act 1998
Tenure Review
Preliminary Proposal**

Lease name: HOME HILLS

Lease number: PO 383

**Submission by Crown Minerals
Ministry of Economic Development**

June 2006

HOME HILLS PRELIMINARY PROPOSAL FOR TENURE REVIEW

SUBMISSION BY CROWN MINERALS TO COMMISSIONER OF CROWN LANDS

BACKGROUND

1. The Crown Pastoral Land Act 1998 provides a framework for tenure review of high country land in the South Island. In order to gain ownership of the land leaseholders may request that their lease be considered for tenure review.
2. An invitation to undertake tenure review has been accepted for Home Hills Pastoral Lease and has reached the stage where the Commissioner of Crown Lands has put a preliminary proposal for tenure review to Euan Sclater Johnstone as lessee of Home Hills. The Commissioner of Crown Lands has invited submissions on this preliminary proposal for tenure review.
3. Home Hills Pastoral Lease comprises 3,200 hectares of land in the Hawkdun Range north west of Ranfurly. Home Hills stretches 11 kilometres in a north-north-easterly direction from the Loop Road off State Highway 85 in the south west to the foothills of the Hawkdun range in the north east.
4. It is proposed that 1,515 hectares be restored to or retained in Crown control as Conservation Area subject to qualified designations, 27 hectares to be restored to or retained in full Crown ownership and control for the specified purpose of lake bed subject to qualified designations, and 1,658 hectares to be disposed of by freehold disposal subject to a qualified designation and protective mechanisms.

CROWN MINERALS

5. Crown Minerals, a group within the Ministry of Economic Development, is the government agency that manages New Zealand's state owned oil, gas, mineral and coal resources known as the Crown mineral estate. Crown Minerals is responsible for the efficient allocation of prospecting, exploration and mining rights, the promotion of the mineral estate to investors, and ensuring that the Crown receives a fair financial return for the use of its mineral estate.
6. The Crown (on behalf of all New Zealanders) owns all in-ground petroleum, gold and silver and approximately half of the in-ground coal, non-metallic and other metallic minerals including industrial rocks and building stones.

TENURE REVIEW

7. The Associate Minister of Energy and Crown Minerals have previously registered their concern to both the Minister of Land Information and LINZ officials that the land tenure review process gives little consideration to the land's mineral value and potential for mineral development and that it does not recognise that existing mineral permit and licence holders have an interest in the land. As a consequence of the ongoing review

of pastoral leases, some land that is highly prospective for mineral development is passing into the Conservation estate, or into private ownership, where it may become more difficult, if not impossible in some cases, for individuals and companies to gain access to this land for the purpose of exploration and mining. This represents a significant loss of economic development opportunity.

8. The objectives of tenure review are set out in section 24 of the Crown Pastoral Land Act and include "enabling reviewable land capable of economic use to be freed from the management constraints (direct and indirect) resulting from its tenure under reviewable instrument".
9. The economic benefits from mineral development can be substantial and should not be overlooked. If the land has high mineral potential and/or significant mineral content, then consideration should be given to the mineral value when determining future ownership and use of such land.
10. The purpose of this submission is to bring to your attention the known and potential mineral wealth of the land subject to the Home Hills tenure review and to request that this be taken into consideration when making a final decision on the review.

REGIONAL GEOLOGY

11. The regional geology of the area is dominated by Miocene coal measures that comprise the St Bathans Coalfield and the regional basement of Haast Schist. The Haast Schist lies within textural zone 3 which is well foliated, slightly segregated schist. The strike is generally north west – south east, dipping at moderate angles. The protolith of the schist is inferred to be volcanoclastic sandstone and mudstone.

LOCAL GEOLOGY

12. The St Bathans Coalfield occupies a northwest trending fault angle depression at the foot of the Hawkdun Range in the Upper Manuherakia Valley. The defined lignite resource of the St Bathans Coalfield is in excess of 1.5 billion tonnes. In the area surrounding Home Hills the Haast Schist strikes north west – south east with variable dip, between 10° - 40°. This is a result of faulting and folding in the area. The main structural features of the area are the north west trending fault angle depression at the foot of the Hawkdun range on the eastern side of the pastoral lease and the northern extension of the Dunstan fault to the west of the lease. Both of these features trend in a broadly northerly direction in the vicinity of the pastoral lease. The Dunstan fault up throws schist rocks to the west. The downthrown eastern side of fault is comprised of schist derived Quaternary rocks.

KNOWN MINERALISATION

13. Gold was discovered at Cambrians, in 1862. Early mining involved ground sluicing and paddocking of the quaternary gravels of Pennyweight Hill, the head of which is about a kilometre south of Home Hills Pastoral Lease. The Pleistocene terraces in a few locations were sluiced for gold with varying success.
14. Small scale gravel pits have been worked in several valleys throughout the area on an intermittent basis.

15. The St Bathans Coalfield is known to contain in excess of 1.5 billion tonnes of lignite which is essentially divided equally between the Hawkdun, Home Hills and the Falls Dam Sectors. The majority of the historic coal exploration work has focused on the Hawkdun Sector to the north west of the Home Hills pastoral lease and on the Home Hills sector which is located immediately to the south east of the pastoral lease. The Liquid Fuels Trust Board (LFTB) conducted intensive studies in the area looking at the potential for lignite resources to supply a synthetic fuel facility in the area.
16. The LFTB studies focussed primarily on the Hawkdun and Home Hills Sectors of the St Bathans coalfield, however, work undertaken in the area of the Home Hills Pastoral Lease did confirm that an in-ground lignite resource of 550 million tonnes was contained in the area to the north of Falls Dam, this area being the flats of the Home Hills pastoral lease. This resource did not receive significant exploration at the time other than the broad scale definition of the resource potential. The resource is at a greater depth and has higher ash content than the coal resources of the Hawkdun and Home Hills Sectors.

CURRENT PERMITS AND MINERAL INTEREST IN THE LAND

17. Home Hills Pastoral Lease is currently partially overlain by exploration permit 40 749 that covers approximately 50% of the lease area. L & M Lignite Limited holds this permit to explore for Lignite. A map showing the relationship of Home Hills Pastoral Lease to the permit is appended to this report, along with a copy of the permit document.
18. L & M Lignite Limited is a subsidiary company of L & M Mining Limited. The New Zealand Group of companies operating under the L & M banner are managed and operated from a common office based in Christchurch, New Zealand. All of the New Zealand Group energy companies, as well as L & M Mining Limited, are wholly owned subsidiaries of Auriferous Mining Limited.
19. Exploration permit 40 749 was granted on 14 July 2005 to explore for lignite over 8,690 hectares for an initial term of 2 years. L & M Lignite Limited is likely to apply to extend the duration of this permit for a further term. The work authorised under the permit includes geological mapping, drilling, coal sample analysis, construction of a geological model, and pre-mining feasibility studies.

STRATEGIC POTENTIAL AND IMPORTANCE

20. The 550 million tonnes of lignite contained in the area of the Home Hills Pastoral Lease is contiguous to the Hawkdun lignite resource. This significant additional resource was not incorporated in the original studies of the LFTB as it was not defined until the latter stages of the study. This resource is higher in ash content and at a greater depth than Hawkdun deposit. Given the results of the economic analysis of the Hawkdun deposit, it is probable that a significant portion of this 550 million tonne resource will have potential to be utilised for gasification because its proximity to the Hawkdun deposit.
21. L & M's current exploration activity under the permit, and an economic analysis undertaken by Crown Minerals, have both confirmed that the lignite resources of the St Bathans Coalfield are of a nationally significant scale.
22. Crown Minerals commissioned David Natush to undertake an economic assessment of the Hawkdun and Home Hills lignite resources. This valuation uses the database

developed by the LFTB which focussed its work on identification and evaluation of all practical options for producing transport fuels from indigenous resources.

23. The extent of the South Island Lignite was established largely as a result of the 1970's Coal Resources Survey with the result that 10 major deposits of lignite were identified (Taylor, 1999). These were further defined by the LFTB work during the 1980's culminating in a selection of a preferred deposit for development of a transport fuels and production project. This work identified the Hawkdun deposit as one of the preferred options for development.
24. The database developed by the LFTB is still valid today. There have been advances in some of the technologies involved but the individual lignite deposits are still in the same places and still have the same physiochemical characteristics. What has changed substantially however are the costs and economics involved in the extraction and processing of these lignite resources.
25. All of the technology that would be employed in the development of the St Bathans coalfield is proven and well established and would not involve pioneer technology. The optimal way to process lignite is to gasify it to produce syngas from which a wide range of fuel, petrochemicals and energy products can be derived from proven technology.
26. Based on current market values of the various products at a New Zealand port, or nearest market mode, the undiscounted Gross Product Value ("GPV") for the potential products from the Hawkdun deposit are listed in the table below.
27. At today's prices these products would have a GPV of between \$75 and \$120 billion if the Hawkdun lignite deposit were mined to completion. This is based on a recoverable resource of 329 million tonnes. The GPV for the lignite resource contained within the Home Hills Pastoral Lease is likely to be between 25% and 50% of this value.

Gross Product Values Derived from Hawkdun (after Natusch 2005)

Lignite Conversion Options	Primary Conversion Products	Product GPV	Process GPV
		mil. NZ\$	mil. NZ\$
Gasification	Synthesis Gas	38,247	38,247
Fisher Tropsch Synthesis	Gasoline	19,607	82,780
	Diesel	63,173	
Liquefaction	Gasoline	59,295	120,067
	Diesel	46,051	
	Avtur	14,711	
Methanol Synthesis	Methanol	74,498	74,498
	Sulphur		
Ammonia/Urea Synthesis	Ammonia	83,001	130,553
	Urea	47,552	
Electricity Generation	Electricity	77,918	77,918

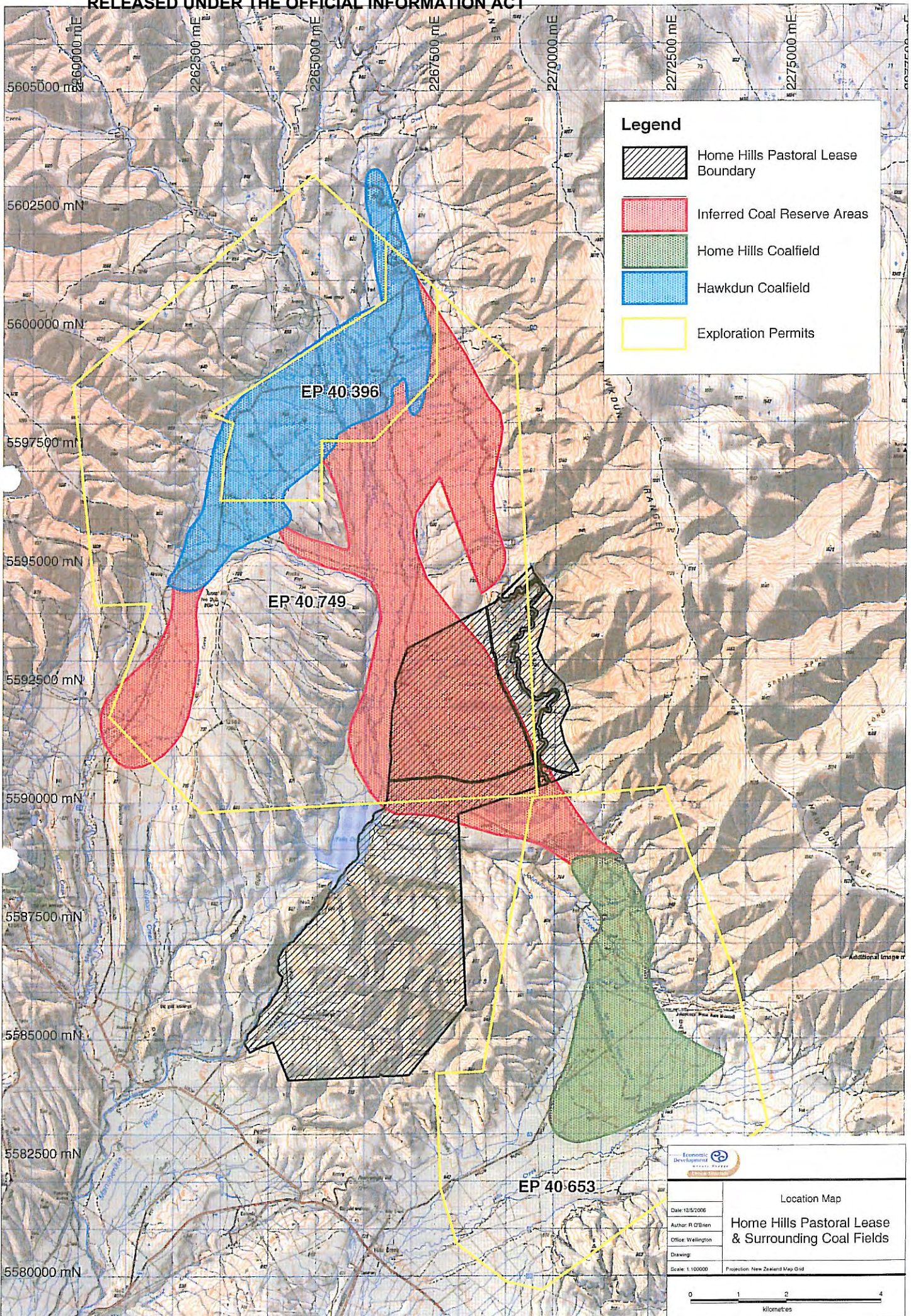
28. In addition to the increased taxation and royalty takes, a lignite processing project at Hawkdun would greatly increase national self sufficiency in respect of the resulting products for a considerable period of time, and would improve New Zealand's Balance of Payments. For example, conversion of the technically recoverable reserves of the Hawkdun lignite deposit could:
 - Provide 71 million tonnes of transport fuel enough to supply New Zealand's total national transport fuel requirements for 15-20 years:

- Provide all of New Zealand's nitrogenous fertiliser requirements for 127 years together with additional exports of 1.9 million tonnes per year providing an annual income of about \$540 million:
 - Supply New Zealand's domestic requirements for methanol and provide an annual export income of \$1 billion:
 - Supply all of the South Island's electricity demand (about 30% of national electricity demand) for about 60 years:
 - Supply 1.2 million tonnes of hydrogen per year, for about 60 years, which could theoretically power about ninety percent of New Zealand's vehicle fleet through hydrogen fuel cell technologies:
 - Development of the lignite contained in the area of the Home Hills pastoral lease are estimated to be capable of providing 25% to 50% of the values indicated for Hawkdun.
29. The above values are approximate and take no account of demand growth or changes in product prices. They illustrate that lignite development could have significant national benefit. For example production of transport fuels would not only assist with greater self reliance but could improve New Zealand's balance of payments deficit to the extent of about \$1 billion annually.
30. A lignite extraction and processing project at Hawkdun and Home Hills would create 6,000 new jobs during mine opening and process plant construction, and about 2,500 jobs for ongoing operations. In addition between 1.5 and 2.0 service providers and support personnel would be required for each project worker. Considerable regional development would result in the form of social services and workforce housing.
31. In light of the scale of the resource, the economic and energy value of New Zealand's lignite reserves, and its potential for development, it needs to be reconsidered within the context of New Zealand's wider primary energy demand. Moreover, it needs to be recognised that developing this resource does not mean simply extracting and combusting it in a conventional fashion to simply produce electricity. It can be extracted and synthesised to produce methane as a feedstock for a number of value-added products such as clean synthetic fuels, and fertilisers with electricity as a bi-product. Further the resources could be utilised to produce hydrogen to meet a large portion of the energy requirements of a future hydrogen based economy.
32. There are potentially significant national benefits from extracting lignite for use as a feedstock to produce transport fuels, fertiliser, methanol or electricity. There could be considerable national benefit in terms of:
- Increased national self sufficiency on each of these products which would have positive balance of payments implications:
 - Security of supply:
 - A bridge to any potential hydrogen economy:
 - Local and regional socioeconomic development:
 - Job creation.

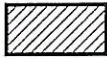


33. Pre-feasibility studies of the Hawkdun deposit by the L & M Group identified the most likely plant configuration and scale would be gasification via Fischer-Tropsch synthesis to produce gasoline and middle distillate transport fuels in the order of 60,000 bbl/d. Production of this order would meet about half of New Zealand's demand for fuel products, the great majority of which is currently imported. Final project configuration is not known, but options to include generation of electricity and production of methanol, and ammonia urea are included in the study. The results of this feasibility study are expected to be completed by August 2006.
34. L & M Lignite Limited is well advanced with independent studies to evaluate extracting and developing lignite conversion products. This work is attracting the interests of large multinational energy companies. Any developments to release the benefits of these resources would require investment in the order of \$2-10 billion and relevant local and central government regulatory approvals.

COMMENT AND RELIEF SOUGHT

35. Crown Minerals notes that a majority of the land hosting the lignite resources located within the Home Hills Pastoral Lease is proposed to be retained by the Crown as conservation area. Crown Minerals acknowledges that the transfer of this land to the Department of Conservation ("DOC") does not preclude access to the land for the purpose of prospecting, exploration and mining of the lignite resources present. Permit holders can apply to DOC for an access arrangement under section 61 of the Crown Minerals Act 1991. However, because the Minister of Conservation's consideration of an application for access largely relates to conservation objectives, it is fair to say that it becomes more difficult, and in some cases impossible, for an exploration or mining company to secure a workable access agreement on conservation land.
36. In the interests of ensuring that all energy options remain on the table, especially those with significant potential and national benefit, it is imperative that the opportunity to develop lignite remains open and is not closed off, or significantly impeded by central or local government processes. This will ensure that the energy and economic potential of the lignite can be considered and factored into energy strategy development such as the National Energy Strategy. In addition, keeping development options open will continue to encourage private sector players, which have the necessary expertise and capital to develop the resources, to fully assess the resources.
37. Home Hills Pastoral Lease should be recognised as hosting an important lignite resource. To further assess the potential of the area it is critical that exploration and mining companies get ongoing access to this land. Whatever the outcome of Home Hills tenure review, Crown Minerals would want to see provision made to allow for exploration and mining development activities to continue to be undertaken.
38. Crown Minerals requests that the Commissioner of Crown Lands takes notice of the lignite potential of the Home Hills Pastoral Lease. Action needs to be taken to implement some form of transitional provisions to ensure that lignite explorers and developers have a right to continued access to the land to be retained by the Crown (CA1) on reasonable terms for the purpose of carrying out exploration and mining activities and also any exploration or mining activities under subsequent permits granted in accordance with section 32 of the Crown Minerals Act.




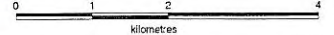
Legend

-  Home Hills Pastoral Lease Boundary
-  Inferred Coal Reserve Areas
-  Home Hills Coalfield
-  Hawkdun Coalfield
-  Exploration Permits

EP 40.396

EP 40.749

EP 40.653

		Location Map	
Date: 13/5/2006		Home Hills Pastoral Lease & Surrounding Coal Fields	
Author: R O'Brien			
Office: Wellington			
Drawing:		Projection: New Zealand Map Grid	
Scale: 1:100000		 0 1 2 4 kilometres	

**EXPLORATION PERMIT 40 749
CROWN MINERALS ACT 1991**

PERMIT HOLDER: L & M Lignite Limited
Level 9 BNZ Building
137 Armagh Street
CHRISTCHURCH

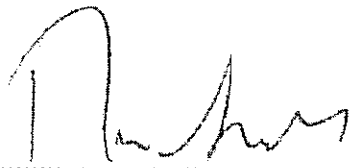
NOW THEREFORE: I, ROBERT WILLIAM SMILLIE, Manager, Exploration and Mining Services Unit, Crown Minerals, acting under delegated authority of 2 February 2004 and in accordance with section 25 of the Crown Minerals Act 1991, do

HEREBY GRANT to the Permit Holder an exploration permit for the duration of 5 years commencing on the date hereof

WHICH HEREBY gives the exclusive rights to explore for coal and lignite in the land described in the First Schedule and delineated on the plan attached hereto

UPON THE CONDITIONS specified in the Second Schedule hereto and subject to the Crown Minerals Act 1991 and any regulations made thereunder.

DATED AT Wellington this 16th day of July 2005



.....
Manager, Exploration and Mining Services Unit, Crown Minerals

**FIRST SCHEDULE
EXPLORATION PERMIT 40 749**

AREA: 8,690 hectares
 LAND DISTRICTS: Otago
 LOCAL AUTHORITY: Central Otago

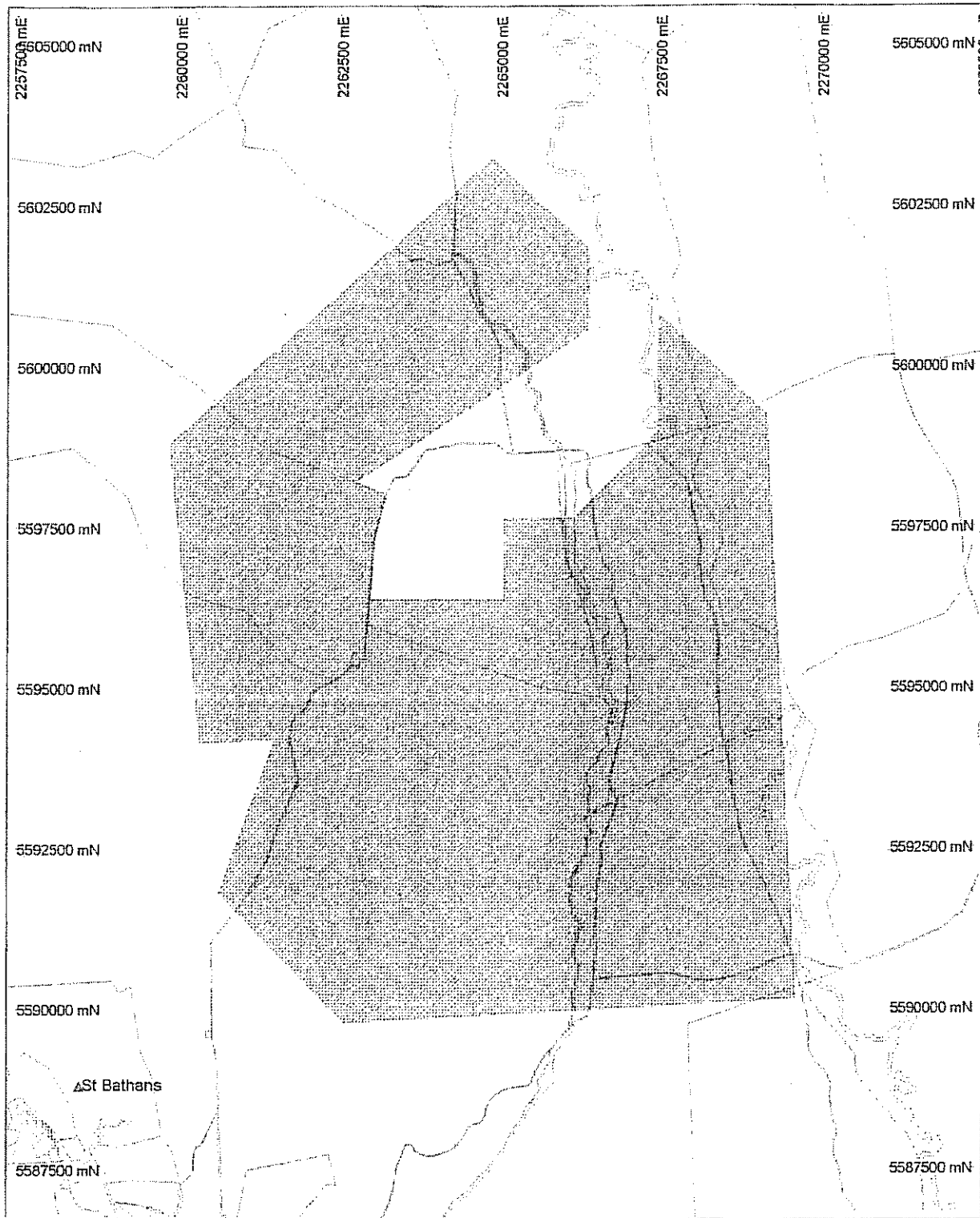
LEGAL DESCRIPTION OF PERMIT AREA:

All that area of land being part Legal Roads and River beds and as is more particularly described below and as shown on the plan attached.

<i>Ref</i>	<i>Legal Description</i>	<i>Instrument of Title</i>	<i>Ownership of Non Statue Minerals</i>
17	Pt Run 585 Blk XI St Bathans SD	OT338/127	Crown
22	Crown Land Block V St Bathans SD		Crown
25	Old River Bed Block II St Bathans SD		Crown
29	Crown Land Block V St Bathans SD	Crown Land Reserved from Sale (Marginal Strip) Sec 58 Land Act 1948	Crown
30	Crown Land Block XIII St Bathans SD	Crown Land Reserved from Sale (Marginal Strip) Sec 58 Land Act 1948	Crown
36	Pt Run 582	OT15C/20	Crown
43	Sec 5 SO 24231	7149	Crown
44	Sec 1 Block XI St Bathans SD		Crown
46	Sec 1 Block XIII St Bathans SD		Crown
47	Part Run 227B	OT386/75	Crown
49	Sec 12 Block III St Bathans SD	7149	Crown
57	Pt Run 227A	OT15C/21	Crown
61	Old River Bed Block II St Bathans SD		Crown
64	Pt Run 582	OT15C/20	Crown

RELEASED UNDER THE OFFICIAL INFORMATION ACT

<i>Ref</i>	<i>Legal Description</i>	<i>Instrument of Title</i>	<i>Ownership of Non Statue Minerals</i>
65	Sec 2 Block XI St Bathans SD		Crown
67	Pt Run 584	OT386/13	Crown
69	Crown Land Block III St Bathans SD	Crown Land Reserved from Sale (Marginal Strip) Sec 58 Land Act 1948	Crown
71	Sec 19 Block VII St Bathans SD	OT338/127	Crown
72	Crown Land Block III St Bathans SD	Crown Land Reserved from Sale (Marginal Strip) Sec 58 Land Act 1948	Crown
81	Sec 3 SO 24231	OT18C/1153	Crown
87	Pt Run 584	OT386/13	Crown
88	Pt Run 227A	OT15C/21	Crown
91	Pt Run 227A	OT15C/21	Crown
95	Pt Run 582	OT15C/20	Crown
102	Sec 4 SO 24231	OT18C/1153	Crown
107	Run 685	OT4D/401	Crown
111	Pt Run 227A	OT15C/21	Crown
114	Sec 4 SO 24042	OT18C/1153	Crown
117	Sec 6 SO 24231	OT18C/1153	Crown
126	Sec 2 SO 24231	OT18C/1153	Crown
131	Old River Bed Block III St Bathans SD		Crown
132	Sec 1 SO 24231	OT18C/1153	Crown
133	Crown Land Block XIII St Bathans SD	Crown Land Reserved from Sale (Marginal Strip) Sec 58 Land Act 1948	Crown
137	Run 685	OT4D/401	Crown
138	Sec SO 24981	Held for Conservation Purposes 4875	Crown



I verify that this plan is a true representation of the area intended to be held under Exploration Permit 40 749.

Signed: *[Signature]*

Date: 21/09/05

EP 40 749 Area = 5,690 ha Clago Land District	
Date Issued: _____ Date Valid Until: _____ Date Expired: _____ Date Issued: _____	Prepared: <i>[Name]</i> Date: <i>[Date]</i>
0 250 500 Kilometres	

**SECOND SCHEDULE
CONDITIONS OF EXPLORATION PERMIT 40 749**

(Terms used in this Schedule shall have the same meaning as in the Minerals Programme for Minerals other than coal and petroleum (1 October 1996) unless the context indicates otherwise.)

Work Programme

1. The permit holder shall to the satisfaction of the Chief Executive of the Ministry of Economic Development (The Chief Executive), explore the permit area in accordance with good exploration practice, so as to clearly indicate lignite resources within the area to which this permit applies.
2. The permit holder shall to the satisfaction of the Chief Executive carry out the following minimum work programme:
 - (a) Within 18 months of the commencement date of the permit:
 - i undertake a review of relevant geological, geophysical and topographic data and literature;
 - ii undertake a programme of geological mapping;
 - iii complete a minimum of 3 cored boreholes in a programme of drilling;
 - iv complete coal sample analysis on the drilling samples;
 - v undertake a preliminary assessment of potential uses for the lignite resource; and
 - vi provide the Ministry with a report detailing all new work completed, including submission of digital data, on a date mutually agreed upon by the Ministry and the permit holder.
 - (b) Within 36 months of the commencement date of the permit:
 - i complete drilling and chemical sampling of a minimum of 3 additional cored or wash-drilled holes;
 - ii construct a geological model and calculate preliminary coal resource estimates;
 - iii commence mining pre-feasibility studies; and
 - iv provide the Ministry with a report detailing all new work completed, including submission of digital data, on a date mutually agreed upon by the Ministry and the permit holder.
 - v submit for the approval of the Chief Executive of the Ministry of Economic Development an ongoing work programme for the remainder of the permit term; or
Surrender the permit

3. In accordance with Section 38 of the Crown Minerals Act 1991, conditions 2 (a) i, ii, iii & vi, and 2 (b) i, ii, iv and v must be completed to the satisfaction of the Chief Executive to have achieved substantial compliance with the work programme.

Reports

4. The permit holder shall report in accordance with the prescribed regulations.

Fees

5. The permit holder shall pay any prescribed fees that apply to this permit.

THE CROWN MINERALS ACT 1991

EXPLORATION PERMIT No. 40 749

Manager,
Exploration and Mining Services Unit,
Crown Minerals

TO

L & M Lignite Limited

Area: 8,690 hectares

MEMORIALS