

Crown Pastoral Land Tenure Review

Lease name : KINROSS

Lease number : PO 348

Conservation Resources Report

As part of the process of Tenure Review, advice on significant inherent values within the pastoral lease is provided by Department of Conservation officials in the form of a Conservation Resources Report. This report is the result of outdoor survey and inspection. It is a key piece of information for the development of a preliminary consultation document.

Note: Plans which form part of the Conservation Resources Report are published separately.

These documents are all released under the Official information Act 1982.

April

07

**DOC REPORT TO THE COMMISSIONER OF CROWN LANDS
ON TENURE REVIEW OF KINROSS PASTORAL LEASE**

PART 1

Kinross (P 348) is a 2042 ha pastoral lease lying between the Waianakarua River to the north and State Highway 85, the Pigroot, to the south. It is situated 28 km inland from Palmerston.

The property runs from the main highway at 300 m altitude over the Horse Range at 700 m then drops again to 300 m at the back corner on the Waianakarua. Maximum altitude is 930 m and only approximately 120 ha lies above 800 m. It is in the Waianakarua Ecological District which has not yet been surveyed under the Protected Natural Areas programme. One back block is still predominantly native including remnant shrublands and forest, but the majority of the rest is dominated by introduced species amongst much reduced tussock.

There are a full range of facilities on the lease with the main buildings being located on the other side of State Highway 85. There is an extensive network of good standard tracks to most parts of the property.

There are no reserves or formally protected areas on the lease.

PART 2

CONSERVATION RESOURCE DESCRIPTION AND ASSESSMENT OF SIGNIFICANCE

2.1 LANDSCAPE

The back of the property lies within an extensive area of predominantly natural appearance hill country with tussock dominated grassland on the tops and shrubland and remnant forest in the gullies. This back area adjoins and connects the north branch of the Waianakarua covenant area and the Waianakarua scenic reserve.

The small part of the property visible from the highway is a farm landscape with closely subdivided grass paddocks with a high and varied population of introduced tree species.

SIGNIFICANCE

The back part of the property is part of an extensive landscape which, although not visible from any roads is accessible by 4WD vehicle and is of at least ecological district, possibly regional, significance.

2.2 LANDFORM AND GEOLOGY

Kinross Pastoral Lease has rather uniform geology being part of the Horse Range - poorly foliated schist of the Haast Schist Group (NZ Geological Survey 1963). The southern boundary of the property is bounded by the Waihemo No. 1 fault, along which the Horse Range is uplifted. The property is virtually all heavily dissected hill country, with high relief between the boundary streams, Happy Valley Creek and the North Branch of the Waianakarua River, and the high point Conical Hill at 945 m. Landforms are generally steep rolling hillslopes, interspersed with narrow valley floors, the latter with very few alluvial terraces. No true alpine altitudes or vegetation are evident.

Throughout, soil parent material is loess and colluvially derived weathered schist. Considerable loss of soils has occurred on warmer north and west aspects at higher altitudes, with pedestal micro-topography on leeward aspects pointing to some redistribution. Snow tussock density is

correspondingly low under these conditions and bare ground is a prominent feature of intertussock spaces.

SIGNIFICANCE

None of the above characteristics are significant in terms of either local or ecological district scale. there are no geopreservation sites on the lease.

2.3 CLIMATE

The climate is typical coastal Otago. Rainfall 625 mm-750 mm, reasonably evenly spread but tending drier in summer and with periodic drought years. Temperatures overall are moderate and significantly affected by cool easterly winds. Snowfalls are common in winter and can occur at any time of year but snow does not lie for more than a few days over most of the property.

2.4 VEGETATION

Vegetation can be divided into bluff communities, broadleaved forest, diverse secondary shrublands and scrub, and tussock grasslands. Bluffs support *Gaultheria crassa*, the eastern Horse Range endemic *Celmisia hookeri*, *Asplenium bookerianum*, *Gingidia montana*, and *Meliccytus alpinus*. Broadleaved forests consist of papauma, narrow-leaved lacebark (*Hoheria angustifolia*), putaputaweta, wineberry, lancewood, Hall's totara, kowhai, tarata, kohuhu, tawapou, *Coprosma linariifolia*, and five finger (*Pseudopanax colensoi* var. *ternatus*), composition similar to other broadleaved forests of the Waianakarua catchment. Secondary shrublands are either mountain flax in damp gully heads on humid eastern aspects, *Olearia bullata* and *Coprosma rugosa* on higher fertility, damp gullies, or on drier soils a mixture of small leaved coprosmas (*Coprosma propinqua*, *C. rigida*, *C. rugosa*, *C. "tayloriae"*). The taller scrub and forest has numerous fern species in the understorey, a diversity attesting to the equable humidity as moderated by sea fogs and easterly rain from the adjacent coastline. Lower altitude faces of Happy Valley Creek support higher fertility-demanding silver tussock. Throughout the rest of the property narrow-leaved snow tussock, with scattered hard tussock, predominates. Some silver tussock occurs on faces draining toward Happy Valley Creek. Tussock stature and cover vary widely - good in the eastern catchment below Bells Saddle and north to the Waianakarua River and poor in most of the north facing country between Conical Hill and the North Branch of the Waianakarua River.

In summary, the vegetation pattern is best preserved in diversity and naturalness in the catchment below Bells Saddle, which has intact sequences of tussock grassland, flax, and woody communities, the latter in sheltered gullies or on south and east aspects.

PROBLEM PLANTS

The back block contains a number of old pine trees around a probable building site and these have seeded into the surrounding catchment. Because of the height of the vegetation the wilding population appears only moderate but there is almost certainly a much higher number of seedlings not yet visible.

There is an area of approximately 100 ha down the eastern boundary which is predominantly broom, however, given the vigour of regeneration of undisturbed native shrubland and forest in the locality, the broom is probably not of conservation concern. From the farming aspect *Hieracium* is a significant problem plant over a substantial part of the property.

SIGNIFICANCE

The vegetation in the back (eastern) block of the property is only lightly modified and also has a good diversity of both types and species. These features give that area a medium to high significance on an ecological district scale.

2.5 FAUNA

INVERTEBRATES

Conical Peak Tussock Lands:

Three chafer beetle species, native leaf vein slugs, earwigs and darkling beetles are an indication of a good functional community dominated by natives. In addition, the large weevil *Anagotis lewisi* and the carabid *Holcaspis angustula* associated with rock outcrops are indicative of a rich community.

Waianakarua River Catchment below Conical Peak and Bells Saddle:

This catchment comprises lower elevation tussock grassland with fingers of broadleaved forest in the gullies and areas of shrubland and shield fern. Much of it is south facing and below 600 m. The strong influence of coastal forest is demonstrated by the insects located. These include the

rabid beetle species *Megadromus fultoni/memes* and *Megadromus haplopus*. Both are of uncertain conservation status (Molloy and Davis 1994). However, *M. fultoni/memes* is widely distributed in Otago while *M. haplopus* is only known from shrub and forest remnants between Palmerston and Oamaru. This is a small area for such a species and maintenance of existing habitat is a priority. The lowland-montane grasshopper *Sigaus campestris* is present and the bush edge ant species *Prolasius advena* is part of the mosaic of communities present. Pill millipedes, leaf vein slugs and an undescribed ground weta were from the forest floor and indicate that these small areas are still large enough to support viable populations of sensitive invertebrate species.

North Branch Waianakarua River:

The river is bound by steep slopes in most places with few toe slopes or terraces. The aquatic invertebrates were not sampled, however, the diversity of pools with litter retention, riffle habitat and the numerous side seeps and streams will have an equivalent diversity of caddis, stoners and mayflies.

Carex Wetland:

The wetland bunch grass *Carex secta* is found in open wetland areas throughout the Pigroot along the Shag River, however, these wetlands are significantly modified and in decline. There is a small but healthy area of *C. secta* adjacent to the homestead. Big herbivorous insects on these plants are the weevil *Anagotus graniger* and moths *Wiseana umbraculata* and *Tmetolophota sulcana*.

AQUATIC VERTEBRATES

There are no freshwater fish records for Kinross on the NIWA freshwater fish database. A fish survey in the vicinity of Kinross along the North Branch of Waianakarua River was carried at three sites at which only *Galaxias vulgaris* was collected. The lessee reported that on one occasion he saw an eel (most probably a longfinned eel).

SIGNIFICANCE

While the invertebrates in the area of highest vegetation values are an integral part of the system that is of significance on an ecological district scale, the fauna here is otherwise not of significant importance.

PROBLEM ANIMALS

Goats are a problem in the locality, particularly in the more remote more heavily vegetated areas, ie, the areas of highest conservation values, and regular control is needed.

In the more intensely farmed country, rabbits require regular control. They are not a problem but have the potential to be one if ignored.

Wild sheep, deer and pigs are also visitors but largely controlled by recreational hunters.

2.6 HISTORIC

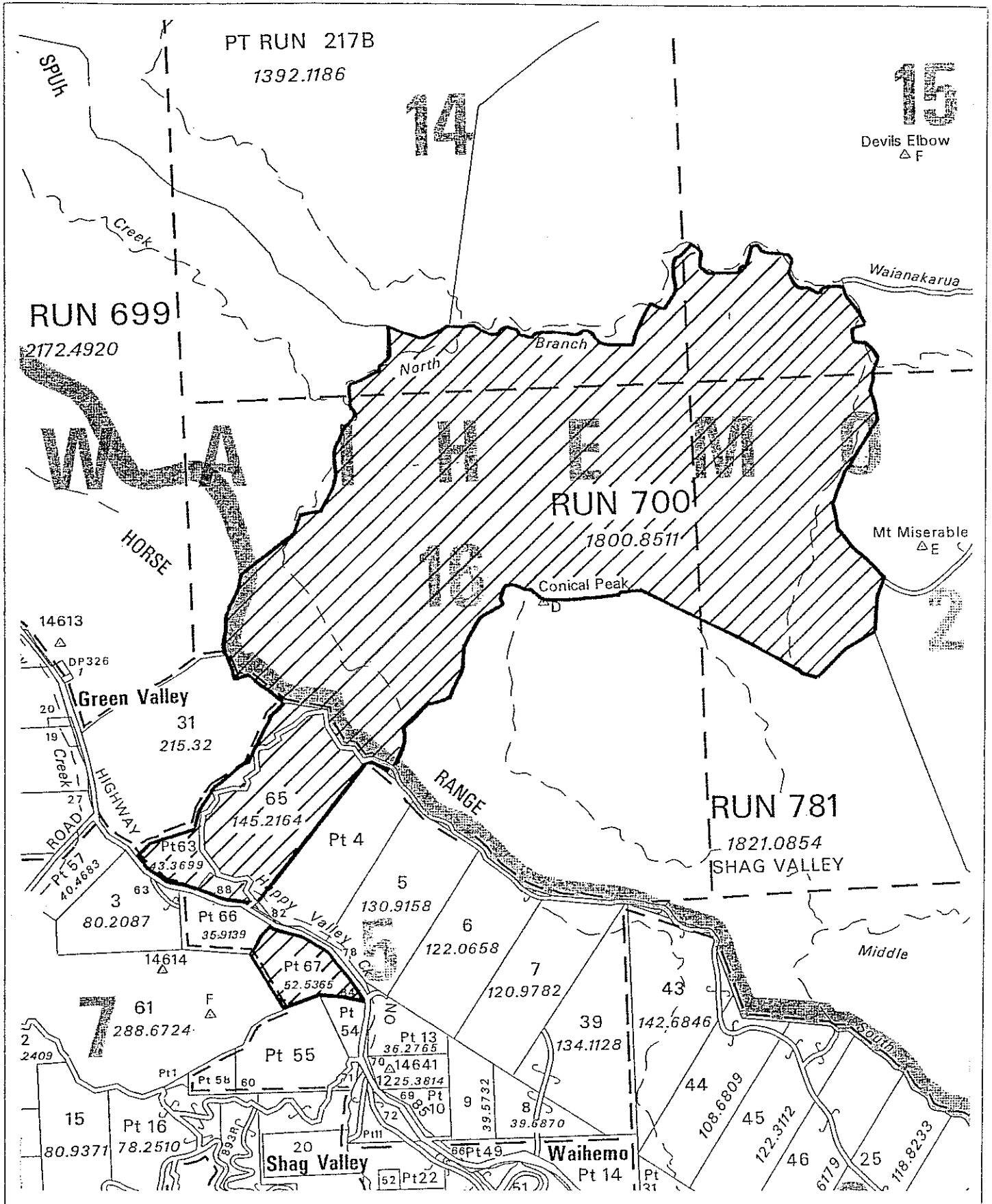
There are no historic sites of significance on the lease and no pre-European features are known to DOC, but Trevor Howse has visited the property and will report direct to CCL on any Ngai Tahu interests.

2.7 PUBLIC RECREATION

Present use is restricted to some shooting and use of the tracks for access to other areas. Current visitor numbers are low.

Formal access from State Highway 85 (a major route) to the major recreation areas (both DOC controlled and private) in this district is poor and this property is in an important location from this aspect with good tracks to both the Waianakarua scenic reserve and to the upper north branch of the Waianakarua River.

The track from highway 85 up to the Horse Range crest and then turning southeast is on a legal road. Other than this there are no legal roads or marginal strips on the property.



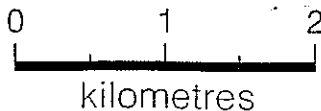
KINROSS

File Ref: P348

Map Ref: Sheet 142



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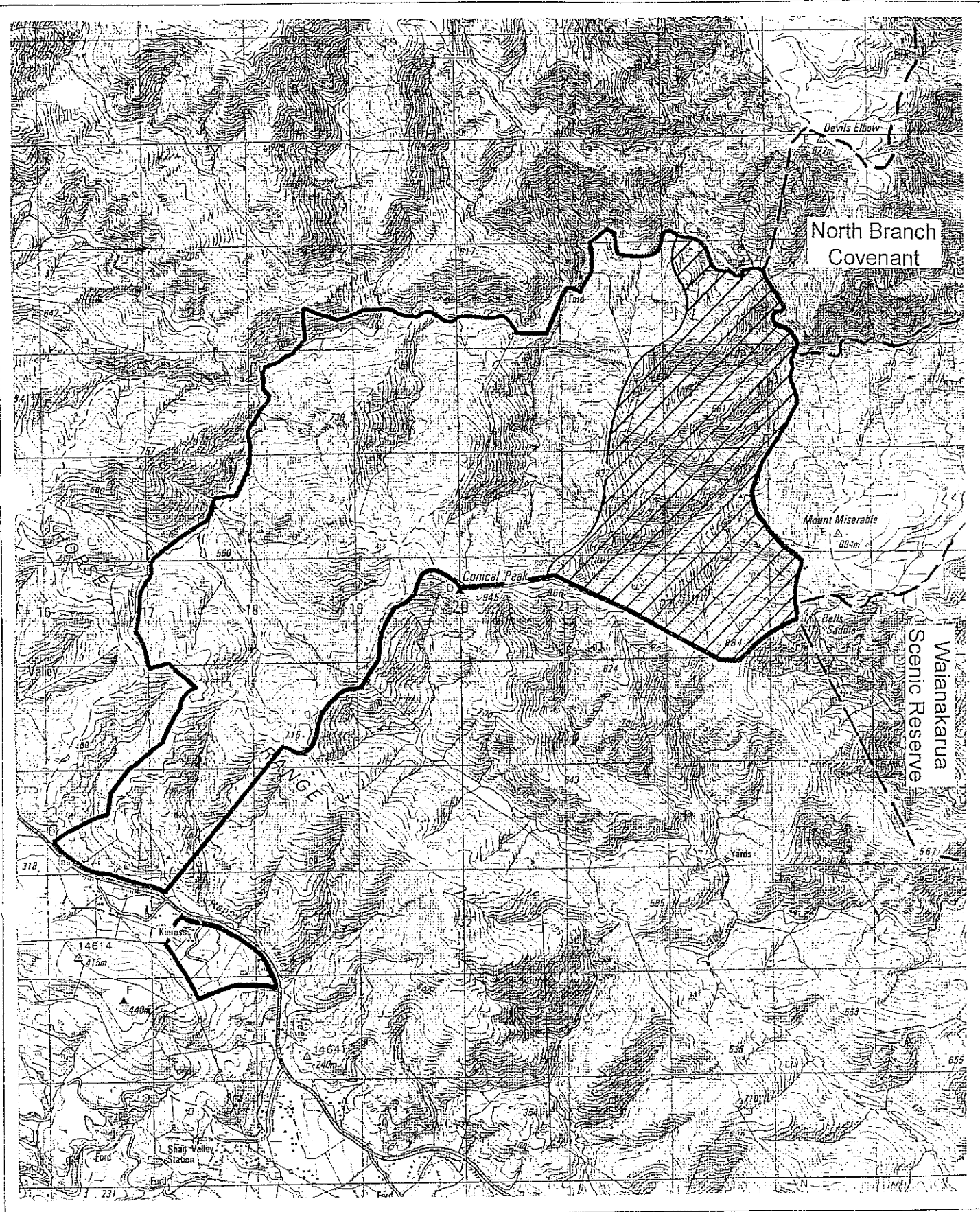


Map 1 : Cadastral



Kinross

Pastoral Lease



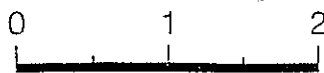
KINROSS

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Map Ref: Sheet I42





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kilometres

Map 2 : Conservation Resource

 Kinross Pastoral Lease

 Area of high indigenous ecological values