

**EXPLORATION LICENCE 11/92
MEUNNA
NW TASMANIA**

**FINAL REPORT ON EXPLORATION
OCTOBER 1992 TO MARCH 2002**

For

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EL 11/92- Meunna, NW Tasmania- Final Report

ABSTRACT

This report describes the work undertaken by Mineral Holdings Australia Pty Ltd from October 1992 to March 2002 on EL 11/92 at Meunna Hills, south west of Wynyard in NW Tasmania.

The licence of 49 sq km was designed to cover the siliceous rocks of the Rocky Cape Group and included the quartz arenites of the Detention Sub Group and the Jacob Quartzite from the Meunna Hills south west to Blue Peak, a strike distance of some 17 km.

The targets were high-grade quartzite or sand to supply local and overseas markets with fracturing sand, silicon or ferrosilicon products and material for the glass-making industry.

Exploration began with hand sampling of rock chips and sand samples along old forestry tracks. Geochemistry and sizing studies were carried out, the former to record the levels of contaminants.

Based on the analyses, follow up programs of excavating and percussion drilling with further geochemistry outlined several silica resources.

Eleven excavator pits gave an indicated resource of 90,000 cu m and an inferred resource of 270,000 cu m of sand and gravel. Some of this sand may meet the highest purity classification for the silica sand market.

Based on eighteen percussion drill holes, the insitu, hardrock quartzite resources along the ridge are conservatively inferred to be 700,000cu m or 1.7M tonnes assuming an SG of 2.5. The limited analyses available may rule out this material for best quality silicon but it is expected to be acceptable for secondary metallurgical grade silicon or ferrosilicon.

EL 11/92- Meunna, NW Tasmania- Final Report

1.0 Introduction

This licence was held by Mineral Holdings Australia Pty Ltd after the initial granting to Nargun Pty Ltd, a subsidiary company, on 21st October 1992 over an area of 49 sq km in the Meunna Hills, south west of Wynyard in NW Tasmania (Plan 1).

The licence was designed to cover the siliceous rocks of the Rocky Cape Group and included the quartz arenites of the Detention Sub Group and the Jacob Quartzite from the Meunna Hills south west to Blue Peak, a strike distance of some 17 km.

The targets were high-grade quartzite or sand to supply local and overseas markets with fracturing sand, silicon or ferrosilicon products and material for the glass-making industry.

2.0 Exploration by Mineral Holdings

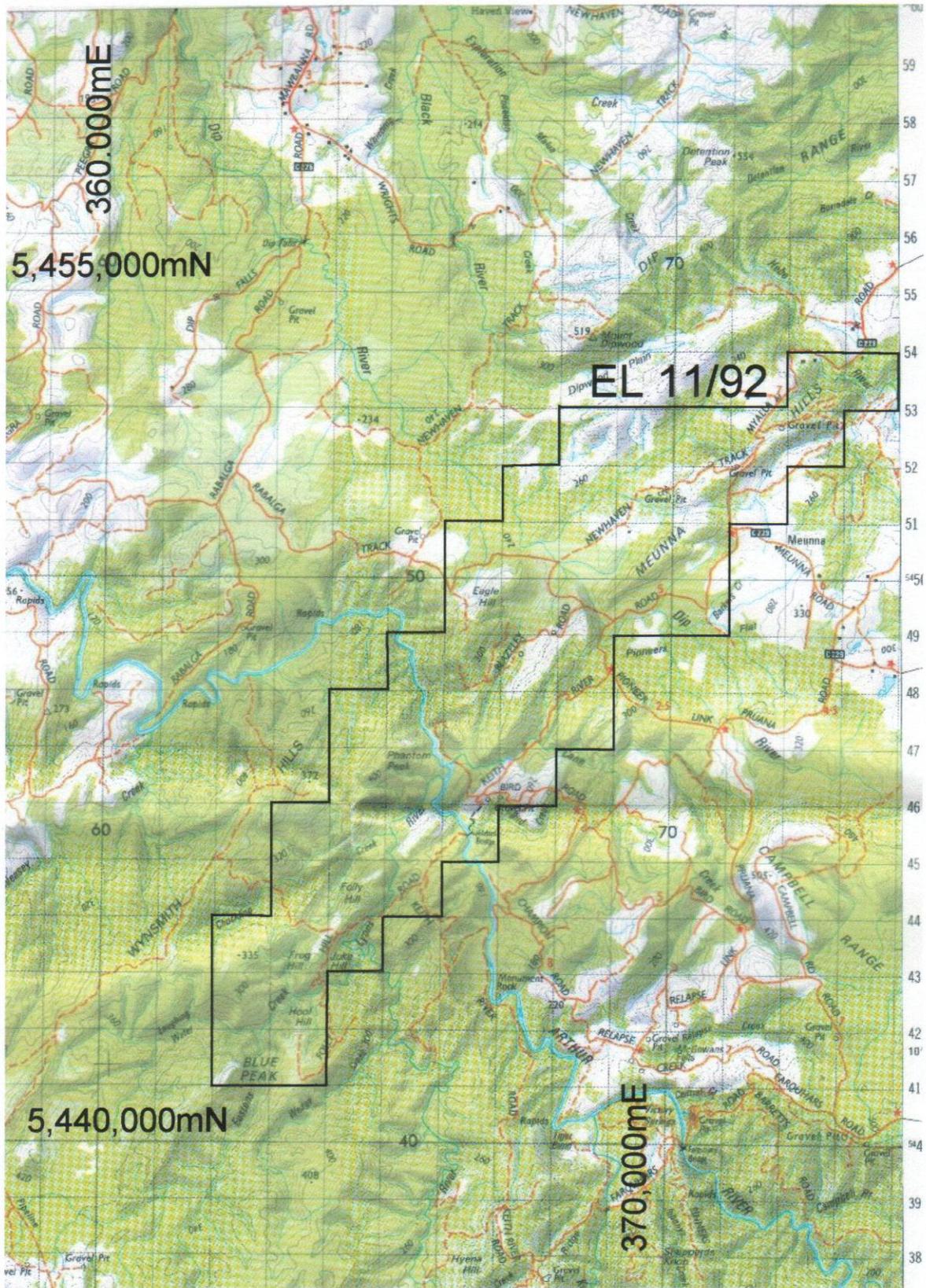
Over the last 20 years, Mineral Holdings has carried out exploration in NW Tasmania and has resources identified at Dip Range (ML 8M/89- quartzite and sand), Champion Rd (RL 9602- silica flour) and has now applied for a Retention Licence RL1/2001 over a small part (approximately 2 sq km) of EL 11/92 as an integral part of its silica inventory. The exploration effort on EL 11/92 has been described in the series of annual reports by V. M. Threader (listed in the References) and is summarised below.

In the year to 1993, exploration consisted of preliminary traverses along existing tracks and three surface samples were taken from an area just west of the Newhaven Track/Myalla Rd junction. The samples were found to be of high purity sand derived from quartz arenite with SiO₂ greater than 99.6%. The conclusion was that the area was prospective for quartz arenite and derived sand as local accumulations in depressions and hill cap remnants.

In the following year, some 26 samples of rock chips and sand derived from the Jacob Quartzite were taken along roads and logging tracks. Most of these were discounted due to high levels of the natural contaminants Al₂O₃, Fe₂O₃ and TiO₂. Three samples of sand from the Meunna Hills, NE of the Myalla Rd showed high chemical purity with the average contaminant level about 0.07%. The area of the licence was reduced to 30 sq km.

The year to 1995 saw eleven excavator pits completed along disused logging tracks in the Meunna Hills following up the surface sampling. An insitu resource of 90,000 cu m of sand and gravel was identified over an area of 25,000 sq m to an average depth of 3.6m above a hard sandstone bedrock. Sizing studies showed that 50% of this was sand at minus 425microns grain size. Chemical analyses revealed that the iron content was variable with the average content being 113ppm. However, three of the samples indicated that they could meet the highest purity classification (less than 20ppm Fe₂O₃) for the silica sand market.

In 1996, thirteen percussion holes were drilled along the crest of the ridge on the Meunna Hills. Because of drilling difficulties and problems with sample return, only



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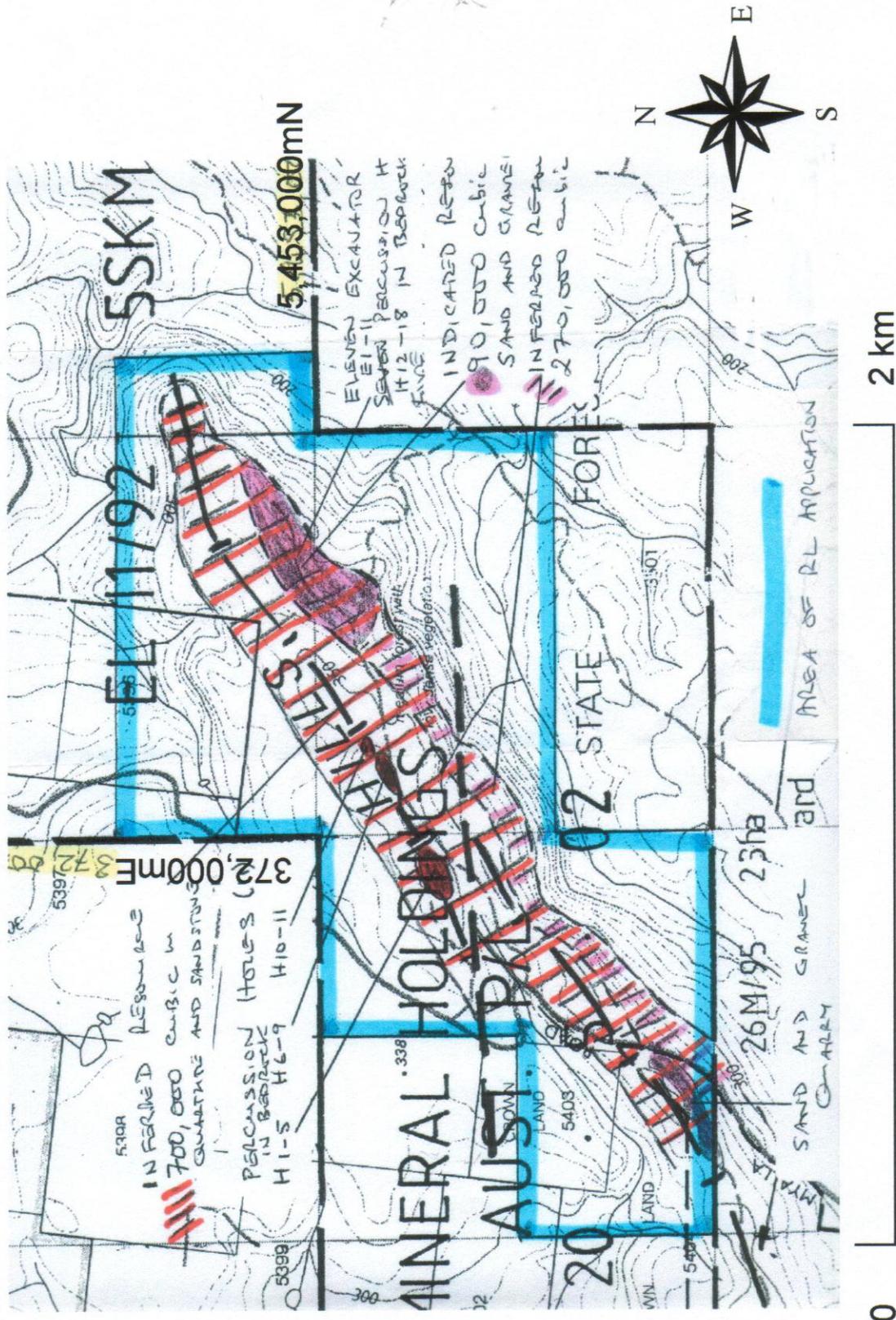


10 km

PLAN 1- Location Map, EL 11/92, Meunna, NW Tasmania

MINERAL HOLDINGS AUSTRALIA PTY LTD

MINERAL HOLDINGS AUSTRALIA PTY LTD



PLAN 3- Area of RL Application and Resources, EL 11/92, Meunna

one hole reached its target depth (18m). Geochemistry carried out on the successful hole indicated a general increase in the level of the contaminants TiO₂, Al₂O₃ and Fe₂O₃ at about 10-12m depth, above that the SiO₂ content being 99.4% or better. This is the pattern repeated throughout the NW and suggests enrichment by silica by either leaching of impurities or silicification.

Five airtrack holes were drilled successfully in 1997 with downhole hammer in the area of the high quality silica sand resource defined during the excavator program with all holes reaching target depth. Preliminary iron contents carried out by Index Minerals range from 217 to 1040ppm Fe₂O₃ with the lower values being found in the top 10m. This is probably too high for premium quality silica which should be less than 200ppm Fe₂O₃ but is considered to be acceptable for secondary metallurgical grade silicon or ferrosilicon production.

No further exploration was conducted on the licence in recent years. Activity consisted on marketing campaigns until 2001 when the licence, now reduced to 5 sq km (Plan 2), became the subject of application for a flow on title as RL 1/2001 to cover the resources already outlined. These resources are now discussed in the following section.

3.0 Inventory of Silica Resources

The resources identified in EL 11/92 by Mineral Holdings are based on the 1130m thick Jacob Quartzite, a quartz arenite formation within the Rocky Cape Group. They lie along a NE-SW trending 2 km length of the Meunna Hills (Plan 3).

An insitu resource of 90,000cu m of sand and gravel has been identified in the NE of the area based on 11 excavator pits over an area of 25,000 sq m with an average depth to hard sandstone bedrock of 3.6m. Sizing and purity studies are given in the annual exploration accounts. It is judged that this deposit meets the criteria for the Indicated Resource category (JORC 1999).

This sand and gravel resource occurs on the SE flank of the northern part of the NE-SW trending ridge. There is a distinct possibility that, following the pattern elsewhere in Tasmania, the deposit extends along the entire SE flank of the ridge to correlate with the sand and gravel resources of the Pokes Rd Quarry located at the SW end. The ridge topography may have protected the resource on the sheltered SE flank from the eroding effects of the wind and sun prevailing from the north and west. If this interpretation is correct, an additional Inferred Resource of 270,000cu m of sand and gravel could lie along the SE flank of the ridge.

Also, eighteen percussion drill holes have quantified the bedrock quartzite/sandstone resources on the crest of the ridge (11 holes) and also under the sand resources already defined (5 holes). In the programs, three holes encountered schist interbeds.

Based on the drilling, the insitu, hardrock quartzite resources along the ridge are conservatively inferred to be 700,000cu m (2,000m x 50m x 7m) or 1.7M tonnes assuming an SG of 2.5.

The limited analyses available may rule out this material for best quality silicon but it is expected to be acceptable for secondary metallurgical grade silicon or ferrosilicon. On extraction, some of the deposit may be waste either as schist interbeds or substandard quartzite/sandstone.

4.0 Conclusions

4.1 Exploration carried out by Mineral Holdings over the period 1992 to 2002 has discovered silica resources in the Meunna area based on the Jacob Quartzite Formation on EL 11/92 at a cost of \$28,715.

4.2 The resources are-

Sand and gravel	Indicated	90,000cu m
	Inferred	270,000cu m
Quartzite/sandstone	Inferred	0.7M cu m or 1.7M tonnes

4.3 On the basis of that work, Mineral Holdings applied for a Retention Licence RL 1/2001 of about 2 sq km on 20th November 2001 and it was granted on 1st March 2002.

REFERENCES

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KEYWORDS

Meunna Hills, Jacob Quartzite, Detention Subgroup, Rocky Cape Group, Sand, Quartzite, Silica Resources.