

**MINERAL HOLDINGS AUSTRALIA PTY LTD**

**RETENTION LICENCE 1/2005  
HOGARTH CREEK, NW TASMANIA**

**ANNUAL REPORT ON EXPLORATION  
TO JUNE 2008**

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## **RL 1/2005 HOGARTH CREEK, NW TASMANIA, ANNUAL REPORT 2008**

### **ABSTRACT**

This report gives a review of the marketing and exploration work carried out by Mineral Holdings Australia Pty. Ltd. over the past 12 months on RL 1/2005.

The licence covers 5 sq km in the Dip Ranges and encloses the Thomas Mountain Silica Mine.

The licence covers the Detention Quartzite of the Rocky Cape Group and the target of exploration is silica, silica sand and quartzite for the chemical, metallurgical glass and coal seam methane industries.

Previous exploration by Mineral Holdings Australia Pty. Ltd. and its joint venture partners has outlined a substantial inventory of potential silica products in the RL namely 0.35Mt of hard, silicified quartzite, 1.55Mt of hard sandstone, 0.65Mt of poorly consolidated, soft sandstone and 2.45Mt of very soft unconsolidated sand. Some infill drilling would be required to raise this resource estimate to the Indicated Level (JORC Code)

A bulk sample of approximately 100 tonnes was taken from the lower test pit area and forwarded to Index Minerals in Burnie. The sample was wet sieved to provide a coarser +45 US mesh (850microns) which was forwarded to Halliburton in Singapore for evaluation as a Frac sand and a finer fraction which was sent to the USA for furnace tests in the manufacture of TV screens and solar panels. Results are awaited.

## **RL 1/2005 HOGARTH CREEK, NW TASMANIA, ANNUAL REPORT 2008**

### **1.0 INTRODUCTION**

RL 1/2005 was applied for by Mineral Holdings Australia Pty Ltd on 21st February 2005 and was granted on 15<sup>th</sup> June 2005. This is the Annual Report for year three of the licence. There was no report for 2005 as no work was carried out during the first year of the Licence.

RL 1/2005 covers the site of the Thomas Mountain Silica Resource which was originally covered by CML 8M/1989 and 1W/1088. Under its policy of revoking non performing mining leases Mineral Resources Tasmania suggested that a Retention Licence would be a more appropriate title for the marketing and industrial testing activities currently being pursued by MHA. Consequently RL1/2005 was granted and the mineral leases cancelled.

The Thomas Mountain Mine and prospect occurs in the northern Dip Range about 25 km south-west of Wynyard and 20km south-east of a deep water harbour at Port Latta. Access is via the township of Montumana on the Bass Highway, 25 km west of Wynyard, thence 6 km south along Montumana and Newhaven roads to a turn-off just east of Hogarths Creek.

Over the past several years, MHA has had discussions with a number of industrial companies, within Australia and overseas, as potential customers or developers of the deposit. There has been considerable interest in the potential for producing “frac” sands from the site and renewed interest in the area as a source of fine silica sand for the glass and specialized silica products.

### **2.0 GEOLOGY**

Resources of high grade quartzite have been reported in various government publications as occurring within the Proterozoic rocks of north- west Tasmania. The better quartzite occurred within the Detention Quartzite sub-group and rocks of this sub-group underlie most of the licence area..

Gee(1971) described the Proterozoic sequence within the Rocky Cape Group from youngest to oldest as – the Jacob Quartzite (1130m in thickness), the Irby Siltstone (760m) and the Detention Sub-group (1400m). Gee suggested The Detention Sub-group contained about 10% siltstone in beds from a few metres to more than 80 metres in thickness. The Rocky Cape Group, in turn, overlies the Cowrie Siltstone which was at least 2400m in thickness.

Structurally the Detention Quartzite is folded into a tight series of anticlines and synclines with north-east trending and dipping axes with folds becoming overturned in the east resulting in north-west dipping beds at 45 degrees or above.

Gee (1971) described the quartzites as uniformly fine grained orthoquartzites with 99% quartz grains and a granular to glassy texture depending on the degree of cementation by silica. Turner (1989) on the other hand preferred to call the mature, quartzose, sandy sediments quartz arenites and attributes their variable physical character as mostly due to variable silicification and occasionally to metamorphism.

The silica resources currently outlined in the licence are 0.35Mt of very hard, silicified sandstone or quartzite, 1.55 Mt of hard sandstone, 0.65 Mt of poorly consolidated or soft weathered sandstone and 2.45 Mt of unconsolidated sand. The potential uses of the resources include silicon metal, silica sand and quartzite for the chemical, metallurgical, glass petroleum and coal seam gas industries.

### **3.0 PREVIOUS EXPLORATION AND EVALUATION**

There has been a long history of exploration by MHA and a series of joint venture partners for a wide range of silica products at Thomas Mountain. Details of that work were provided in the 2007 report.

In 1993/4 MHA developed 42 hammer drill holes along 8 sections for 666m in the area SW of Hogarths Creek. This has allowed a resource estimate to be made for an area of about 25 Ha extent to a depth of 10 metres extending south- west of the Quarry site. (Duncan (2005) estimated an inferred resource of **5 million tonnes** of siliceous material in the area just south of Hogarths Creek which breaks down to –

**0.35 Mt of very hard, silicified sandstone,  
1.55 Mt of hard sandstone,  
0.65 Mt of poorly consolidated, soft sandstone and  
2.45 Mt of very soft sand**

Duncan suggested some infill drilling would be necessary to lift the resource to the Indicated level of the JORC Code. He also suggested a significant increase in resource was likely at depth and along strike to the NE and SW with an inferred 20 Mt of high grade sand and sandstone available as a conservative figure in the area of the Retention Licence.

In recent times considerable effort was put into testing the unconsolidated sand from Thomas Mountain as a propping agent in oil drilling. Dip Range sand was tested by **Stim Laboratories, Halliburton Services and Dowell Schlumberger** of the USA and **Santos and Amdel** in Australia. Tests were carried out on the 20/45 size range (US screen) which is the -850 to +420um fraction. Dip range sand is a fine / medium grained sand with a median value of about 250um with about 50% in the 20/45 size fraction

As summarized by Stim, the Dip Range sample passed the size analysis, the acid solubility test and the turbidity test but was slightly below standard for shape factor, grain clusters and crush resistance tests for deep wells. From the Amdel tests, it is found that the sand grains have a dramatic decrease in crush resistance at about 4000 psi which

would, according to Halliburton, restrict the use of the sand to shallow wells where less than 1200 psi is required in the recovery of methane gas from coal seams.

#### **4.0 CURRENT EXPLORATION AND MARKETING**

Marketing letters have been sent out to a number of companies inviting them to inspect, or declare expressions of interest in, the Thomas Mountain mine with a view to developing extractive and processing industries in NW Tasmania. The companies include OI Asia Pacific (ACI Operations P/L), Mitsubishi Australia Ltd., RIO Tinto, Santos, Halliburton Services and Dowell Schlumberger. Technical meetings and /or site visits were held with Mitsubishi, OI Asia Pacific, Index minerals and Metals Ex..

All companies expressed a keen interest in the potential for producing both frac or proppant sands and high quality fine silica sand. As a result MHA arranged to collect a 100 tonne bulk sample from the existing No1 test pit. The sample was sent to Index Minerals in Burnie where it was separated into a coarser +45 US mesh sample for evaluation as a frac sand and a fine -45 mesh sample for evaluation as a specialist silica sand. The coarse fraction was forwarded to Halliburton in Singapore while the fine fraction was sent to Index associated laboratories in the US. Full results are awaited.

#### **5.0 CONCLUSION**

Marketing efforts by MHA have generated considerable interest in the potential for the Thomas Mountain mine to produce proppant sands for the expanding coal seam methane industry. Some 40 to 60% of the unconsolidated sand falls within the favourable 20 to 40 mesh size range and in a commercial operation the run of mine material could be screened to produce a +30mm fraction of metallurgical silica, a 20 to 40 mesh fraction of frac sand and a -40 mesh fraction for glass sand. The deposit is too coarse for silica flour.

Discussions are continuing with interested parties with a view to developing a commercial mining operation.

The bulk sample was collected from an existing sample pit. No new ground disturbance was necessary and consequently there was no need for rehabilitation.

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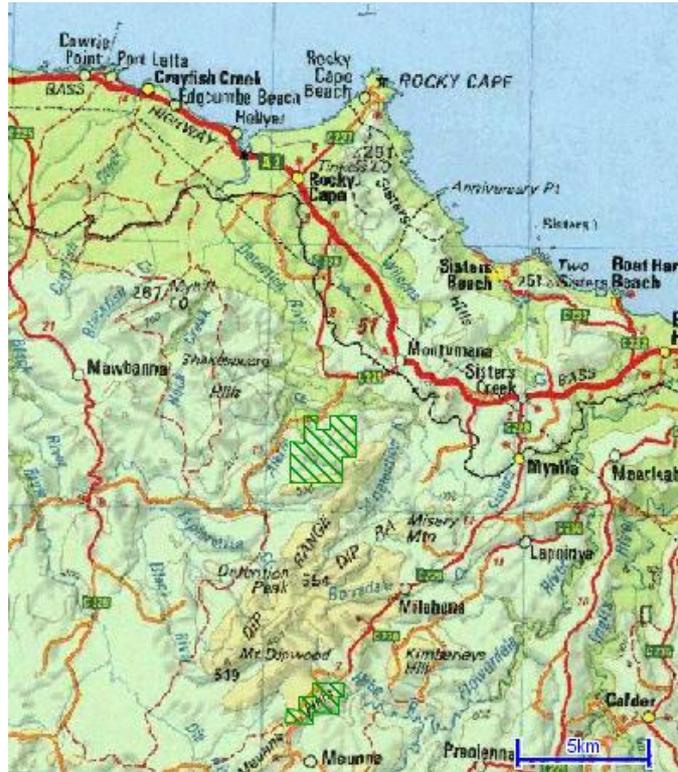
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## **7.0 KEYWORDS**

Dip Range, Thomas Mountain, Detention Subgroup, Rocky Cape Group, Sand, Quartzite, Silica Resources.



PLAN 1 Location diagram RL 1/2005

