

MINERAL HOLDINGS AUSTRALIA PTY LTD

**RETENTION LICENCE 1/2001
MEUNNA, NW TASMANIA**

ANNUAL REPORT TO MARCH 2004

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TABLE OF CONTENTS

ABSTRACT

	Page No
1.0 INTRODUCTION.....	4
2.0 MARKETING.....	4
3.0 FRAC SAND POTENTIAL.....	5
4.0 FUTURE PROGRAM.....	5
5.0 REFERENCES.....	6
6.0 KEYWORDS.....	6

Plan 1 – Locality Map and MHA Tenements

Plan 2 – MRT Geology Map and MHA Tenements, 1: 250,000 Scale

Plan 3 – Silica Resources, RL 1/2001, Meunna

APPENDIX

RL 1/2001- MEUNNA, NW TASMANIA – ANNUAL REPORT 2004**ABSTRACT**

This report describes the work carried out by Mineral Holdings Australia Pty Ltd in Year Two of the licence covering 2 sq km in the Meunna Hills, some 25 km south-west of Wynyard.

The licence, granted on 1st March 2002, was designed to cover the silica resources of the 1130m thick Proterozoic Jacob Quartzite, a quartz arenite formation within the Rocky Cape Group. The resources lie along a NE-SW trending 2km length of the Meunna Hills.

Exploration carried out by MHA under EL 11/1992 over the period 1992-2002 has outlined an indicated resource of 90,000cu m and an inferred resource of 270,000 cu m of silica sand and gravel. In addition, there is an inferred, insitu, quartzite resource of 700,000 cu m or 1.7 million tonnes, assuming an SG factor of 2.5.

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

In the current Year Two, marketing letters with technical data from previous reports were sent to 10 industrial companies inviting participation in the project, one of which has already had two field visits and a further six negotiating to visit the area with tests on samples from stockpiles being run by one of these companies.

Future sampling and field work should be directed at testing the Meunna deposits for their frac sand potential as well as investigating their utility for fused silica, silicon carbide, silicon metal, glass sand and other specialist uses such as the production of automobile windows, liquid crystal screens and solar panels.

Marketing studies will continue with industrial companies with suitable expertise being approached for potential joint ventures with down stream processing as part of any future development.

RL 1/2001- MEUNNA, NW TASMANIA – ANNUAL REPORT 2004

1.0 INTRODUCTION

RL 1/2001 of 2 sq km was applied for by Mineral Holdings Australia Pty Ltd (MHA) on 20th November 2001 and was granted on 1st March 2002.

The licence was designed to cover the silica resources of the 1130m thick Proterozoic Jacob Quartzite, a quartz arenite formation within the Rocky Cape Group. The resources lie along a NE-SW trending 2km length of the Meunna Hills, some 25 km south west of Wynyard (Plans 1 and 2).

Exploration carried out by MHA under EL 11/1992 over the period 1992-2002 (Threader, 1993-1997 and Duncan, 2002) has outlined an indicated resource of 90,000cu m and an inferred resource of 270,000 cu m of silica sand and gravel. In addition, there is an inferred, insitu, quartzite resource of 700,000 cu m or 1.7 million tonnes, assuming an SG factor of 2.5 (Plan 3).

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

2.0 MARKETING

In Year One, efforts were focused on marketing the deposits in RL 1/2001 Meunna as part of the total silica resource inventory available to MHA at EL 38/2002 Dip Range, ML 8M/89 (Thomas Mountain) and RL 2/1996 Champion Road. Coburn Cement and INCOR, both of WA visited the area during the year for field inspections as potential joint venture partners. As no technical results were available for reporting, MHA was granted a waiver of reporting for this year.

In the current Year Two (to 1st March 2004), marketing efforts were stepped up with more companies being approached to take an interest in the project. Marketing letters were sent out to Tri-Star Petroleum, Queensland Gas Company and Oil Company of Australia, all of Brisbane; Unimin Corporation, Sydney; Degussa Australia and Pilkington Australia Ltd, both of Dandenong; Halliburton Australia Pty Ltd, Parkside, SA; Sydney Gas Company, NSW; Rockla Concrete Materials, Cloverdale, WA and Cookson Plibrico Pty Ltd, Brussels. The marketing cover letters written by MHA Head Office to these companies are reproduced in the Appendix (A1- A 9) for audit purposes. These mainly relate to frac sand potential at Thomas Mountain and Meunna but also to silicon carbide.

Field visits to the silica properties including Meunna resulting from these letters were carried out by Unimin personnel on two occasions recently on 3rd March and 5-6th April in company with Mr Kevin Pinner representing MHA.

At the time of writing this report, the following companies are negotiating to visit the silica areas- Rockla, Queensland Gas, Oil Company of Australia, Tri-Star Petroleum and Haliburton Australia. In addition, Degussa Australia have been provided with

silica and carbonate samples for testing including a quartzite sample from Hebe River, Meunna. These results will be reported in future when available.

3.0 FRAC SAND POTENTIAL

Much effort in the past has been put into testing the sand derived from the Detention Quartzite as a propping agent in oil drilling. Dip Range sand was tested by Stim Laboratories, Halliburton Services and Dowell Schlumberger all of the USA and Santos and Amdel in Australia in the early 1990s (Threader, 1992). Tests were carried out on the 20/40 size range (US screen classification) which is the -850 to +420 um fraction. Dip Range sand is a fine/medium grained sand with a median value of about 250um and only about 25% is in the 20/40 size fraction. However, frac sand has a high unit value of some US\$ 225-270/2000lb and so it may still be economic to pursue this usage.

As summarized by Stim-Lab (1992, reproduced in Appendix, A 11), the Dip Range sample passed the sieve analysis, the shape factor, the acid solubility test, and the turbidity test but failed the sand grain clusters and crush resistance tests as reported in Threader (1992, reproduced in Appendix, A 12- 16). From the Amdel tests, it is found that the sand grains have a dramatic decrease in crush resistance at about 4000psi which would, according to Halliburton, restrict the use of this sand to shallow wells less than 1200m in depth. It was also suggested by Stim-Lab that the sand may be usable in low-closure reservoirs particularly for coalbed methane.

No tests to date have been carried out on the Meunna sand from the Jacob Quartzite for its frac sand potential. However, the sizing tests from samples from excavator pits in the area show that on average about 30% of the resource would be in the plus 420 um range considered optimum for frac sand (see Table 1 in Appendix A 10, from Threader, 1995). Plotting on a conventional size-grading diagram shows that Meunna, Dip Range and Hebe River sand are closely related in grain size distribution (Figure from Threader, 1995 in Appendix A11). It is apparent that specific testing for this usage should be carried out on Meunna samples in the coming year.

4.0 FUTURE PROGRAM

Future sampling and field work should be directed at testing the Meunna deposits for their frac sand potential as well as investigating their utility for fused silica, silicon carbide, silicon metal, glass sand and other specialist uses such as the production of automobile windows, liquid crystal screens and solar panels.

Marketing studies will continue with industrial companies with suitable expertise being approached for potential joint ventures with down stream processing as part of any future development.

5.0 REFERENCES

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6.0 KEYWORDS

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

PLANS 1- 3

APPENDIX A 1- 11

