MINERAL HOLDINGS AUSTRALIA PTY LTD

RETENTION LICENCE 1/2005
HOGARTH CREEK, NW TASMANIA

ANNUAL REPORT ON EXPLORATION
TO JUNE 2014

Compiled by
T W Dickson
5 Crouch Court,
Doncaster VIC 3108

For
Mineral Holdings Australia Pty Ltd
11 Kent Court,
Toorak VIC 3142

1 May 2014

TABLE OF CONTENTS

TABLE OF FIGURES

RL1/2005 HOGARTH CREEK, NW TASMANIA - ANNUAL REPORT 2014

ABSTRACT

This report gives a review of the marketing and exploration work carried out by Mineral Holdings Australia Pty Ltd (MHA) over the past 12 months on RL1/2005. The licence covers 3 square kilometres in the Dip Ranges and encloses the Thomas Mountain Silica Mine within 23M/2009.

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 MHA 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 20 tonne bulk sample of raw sand from Hogarth Creek was mined and sent to Riverside Industrial Sands of Brisbane for sizing and field testing as a frac sand for the Queensland coal gas industry. Further bulk samples are intended to continue the test program.

Marketing of the quartzite and frac sand resources has continued. Meetings and discussions were held with numerous companies and several site visits were made.

RL1/2005 HOGARTH CREEK, NW TASMANIA - ANNUAL REPORT 2014

1.0 INTRODUCTION

RL1/2005 was applied for by Mineral Holdings Australia Pty Ltd (MHA) on 21 February 2005 and was granted on 15 June 2005. RL1/2005 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 (MRT) 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 25km 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, 25km west of Wynyard, thence 6km south along Montumana and Newhaven Roads to a turn-off just east of Hogarths Creek. The mine site is held within 23M/2009, a 2 square kilometre area inside RL1/2005.

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 specialised silica products.

A 20 tonne bulk sample of raw sand from Hogarth Creek was mined and sent to Riverside Industrial Sands of Brisbane for sizing and field testing as a frac sand for the Queensland coal gas industry. Further bulk samples are intended to continue the test program.

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 (1,130m in thickness), the Irby Siltstone (760m) and the Detention Sub-group (1,400m). 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 2,400m 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, 1.55Mt of hard sandstone, 0.65Mt of poorly consolidated or soft weathered sandstone and 2.45Mt 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 1993/94, MHA developed 42 hammer drill holes along 8 sections for 666m in the area south-west of Hogarths Creek. This has allowed a resource estimate to be made for an area of about 25ha extent, to a depth of 10 metres, extending south- west of the Quarry site.

Duncan (2005) estimated an inferred resource of 5 million tonnes (Mt) of siliceous material in the area just south of Hogarths Creek, which breaks down to:

0.35Mt of very hard, silicified sandstone,
1.55Mt of hard sandstone,
0.65Mt of poorly consolidated, soft sandstone and
2.45Mt 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 20Mt of high-grade sand and sandstone available (as a conservative figure) in the area of the Retention Licence.

In 2010, MHA was asked by BHP Billiton to supply a bulk sample of quartzite from Hogarth Creek to determine its suitability in the manufacture of ferrosilicon at the TEMCO plant in Bell Bay. About 8,000 tonnes of quartzite was mined and crushed on site to +25 -60mm size and 5,000 tonnes of sized material was shipped to Bell Bay. A full report has not yet been supplied but verbal information suggests the Hogarth

Creek material provided superior furnace returns but the cost of transport to Bell Bay more than offset the cost of inferior local quartzite. (Great material but cost of transport is too high). TEMCO has subsequently ceased production of ferrosilicon and the Bell Bay plant is for sale.

In recent times considerable effort was put into testing the unconsolidated sand from Thomas Mountain as a proppant agent in oil drilling. Dip Range sand was tested by Stim-Lab, Halliburton and Schlumberger of the USA and Santos and Amdel in Australia. Tests were carried out on the 20/40 size range (US Mesh screen) which is the -850 to +420um fraction. Dip range sand is a fine to medium-grained sand with a median value of about 250um, with about 50% in the 20/40 size fraction

As summarized by Stim-Lab (SL9176 – February 2011), the Dip Range sample passed all the API RP-56 tests for size, shape (sphericity and roundness), grain clusters, acid solubility, turbidity and crush resistance. The crush resistance tests indicate that the sand is most suitable for shallow wells, such as coal seam gas recovery operations, where lower pressure is required.

4.0 CURRENT EXPLORATION AND MARKETING

A 20 tonne bulk sample of raw sand from Hogarth Creek was mined and sent to Riverside Industrial Sands of Brisbane for sizing and field testing as a frac sand for the Queensland coal gas industry. Further bulk samples are intended to continue the test program.

Attempts to market the quartzite and frac sand resources have continued. A number of meetings and site visits have been made with Riverside Industrial Sands, XLX Pty Ltd, Momentive, Santrol and Hazell Bros. Correspondence was maintained with Norton Abrasives, Baker Hughes (USA), Schlumberger, Halliburton, Stikine Energy, US Silica, Jericho Resources, Fairmount Minerals and Simcoa.

5.0 EXPENDITURE

MHA's audited accounts show it has spent $23,958 on Dip Range during the nine months to 30 March 2014. It should be noted these accounts do not include any overheads or any expenditure incurred by third parties. Sibelco have indicated their field inspection costs in 2013 were $14,500 and their testing of frac sand samples would run to many thousands of dollars more. Heemskirk have not indicated their sampling and testing costs as yet.

6.0 CONCLUSION

TEMCO have suggested the higher transport costs make the Thomas mountain quartzite uneconomic at this stage, however, Sibelco and Jericho Resources are taking considerable interest in the quartzite and are currently evaluating further participation.

Considerable interest in the potential for the Thomas Mountain mine to produce proppant sands for the expanding coal seam methane industry has also been generated. Some 40 to 60% of the unconsolidated sand falls within the favourable 20 to 40 US 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 US Mesh fraction of frac sand and a -40 US Mesh fraction for glass sand. Riverside Industrial Sands of Brisbane, Momentive and XLX Pty Ltd are currently evaluating the frac sand potential.

7.0 REFERENCES

Anon, April 1981. Report on Stage 2 – Geological Investigation of EL43/1970 for Kaiser Aluminium. Longworth and McKenzie Pty. Ltd. TCR 81-1553.

Anon, June 1981. Report on Stage 3 – Preliminary Drilling of EL43/1970 for Kaiser Aluminium. Longworth and McKenzie Pty. Ltd. TCR 81-1573.

Anon, Aug, 1994. Treatment of A High Grade Silica Sand for Gwalia Consolidated Ltd. Dip Range. Ammtec Ltd. TCR94-3652

Bacon, C. A. 1989. Silica. Mineral Resources Tasmania 12.

Dickson, T. W., May 2008. Annual Report on Exploration to June 2008, Retention Licence 1/2005 Hogarth Creek NW Tasmania. Mineral Holdings Australia Pty Ltd.

Dickson, T. W., May 2009. Annual Report on Exploration to June 2009, Retention Licence 1/2005 Hogarth Creek NW Tasmania. Mineral Holdings Australia Pty Ltd.

Dickson, T. W., April 2010. Annual Report on Exploration to June 2010, Retention Licence 1/2005 Hogarth Creek NW Tasmania. Mineral Holdings Australia Pty Ltd.

Dickson, T. W., May 2011. Annual Report on Exploration to June 2011, Retention Licence 1/2005 Hogarth Creek NW Tasmania. Mineral Holdings Australia Pty Ltd.

Dickson, T. W., May 2012. Annual Report on Exploration to June 2012, Retention Licence 1/2005 Hogarth Creek NW Tasmania. Mineral Holdings Australia Pty Ltd.

Dickson, T. W., May 2013. Annual Report on Exploration to June 2013, Retention Licence 1/2005 Hogarth Creek NW Tasmania. Mineral Holdings Australia Pty Ltd.

Duncan, D. McP., March 2004. Exploration Licence 38/2002 Dip Range, NW Tasmania. Annual Report on Exploration to March 2004. Mineral Holdings Australia Pty. Ltd.

Duncan, D. McP., Feb 2005. Application for a Retention Licence as a Flow on Title from EL38/2002, Previously EL43/1970, and MLS 8M/1989 and 1W/1988- Dip Range N.W. Tasmania. Mineral Holdings Australia Pty Ltd.

Gee, R.D, 1971. Table Cape, Tasmania. Tasmanian Geological Atlas - 1 Mile Series Expl. Rep., Sheet 22 (8016S).

Threader, V. M. Nov, 1989. Annual Report, EL25/1988 (Dip Range). Mineral Holdings Australia Pty Ltd. TCR 89-3047.

Threader, V. M. Oct, 1990. Annual Report, EL25/1988 (Dip Range). Mineral Holdings Australia Pty Ltd. TCR 90-3193.

Threader, V. M. Oct, 1991. Annual Report, EL25/1988 (Dip Range). Mineral Holdings Australia Pty Ltd. TCR 91-3307.

Threader, V. M. Oct, 1992. Annual Report for 1991-2, EL24/1988 (Champion Road) andEL 25/1988 (Dip Range). Mineral Holdings Australia Pty Ltd. TCR 92-3395.

Threader, V. M. Oct, 1994. Annual Report for 1993-1994, EL25/1988 (Dip Range). Mineral Holdings Australia Pty Ltd.

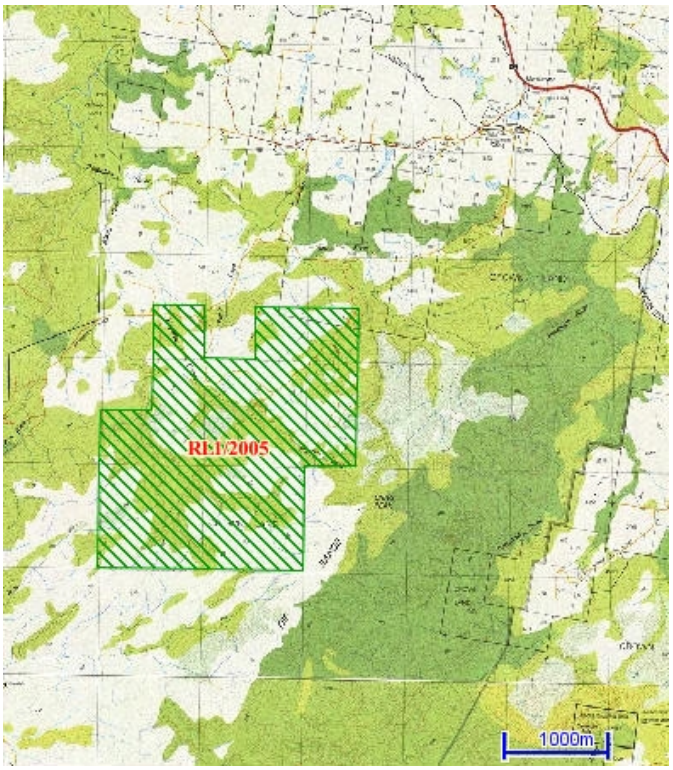
Threader, V. M. Aug, 1995. Annual Report for 1994-1995, EL11/1992 (Muenna) and EL 20/1993 (Hebe River). Mineral Holdings Australia Pty Ltd. TCR 95-3765.

Threader, V. M. June, 1996. Relinquishment Report. EL25/1988 Dip Range (Part). Mineral Holdings Australia Pty Ltd. TCR 96-3879

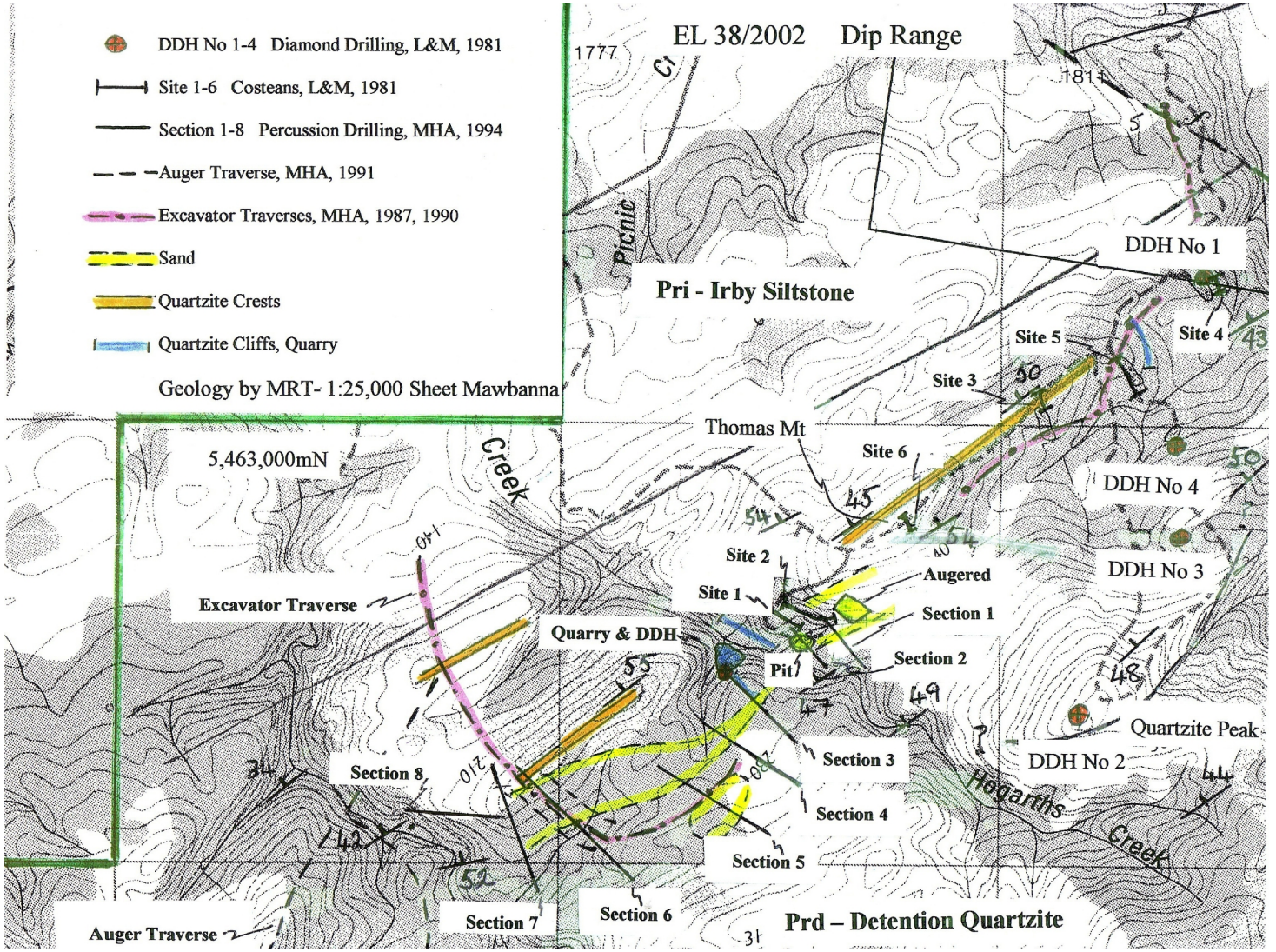
Turner, N. J., 1989. in Geology and Mineral Resources of Tasmania. Special Publication Geological Society of Australia 15. Eds. Burret, C. F., Martin, E. L.

8.0 KEYWORDS

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



PLAN 1: Location Diagram - RL1/2005



PLAN 2: Geology & Exploration – RL1/2005