

**RETENTION LICENCE 2/1996
CHAMPION ROAD, NW TASMANIA**

**REPORT ON EXPLORATION
MARCH 1997 TO MARCH 2003**

For

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RL 2/1996 - Champion Road, NW Tasmania –Exploration Report, 1997-2003

ABSTRACT

This report describes the work carried out by Mineral Holdings Australia Pty Ltd (MHA) and others over two three-year terms from March 1997 to March 2003 on RL 2/1996 at Champion Road, near Meunna, 40 km west of Burnie.

The licence of 2 sq km covers Tertiary, fine-grained, quartz sand and silica flour deposits overlying Precambrian schist bedrock. Previous exploration by MHA based on excavator pitting and bulk sampling has established a resource of 220,000 tonnes of silica sand for marketing for possible optical glass and fibre, fused silica and ferrosilicon production.

In 1999, a second bulk sample of 200 tonnes of silica flour was taken from the deposit by Index Minerals by arrangement with MHA for processing and testing in their Heybridge plant. For various reasons, this remains in stockpile and except for 20- 40 tonnes, has not been processed.

Promotional work was carried out by Index Minerals with Champion Road silica sand as one component of a blend being offered to the South East Asian - USA market but no contracts were realized.

In 2001, an option agreement was negotiated between MHA and Cominex Pty Ltd, the operators of the Corinna silica flour deposits, for the testing, marketing and development of the Champion Road deposits.

The planned bulk testing has not yet taken place due to commercial reasons as Cominex failed to purchase or otherwise get access to the Heybridge plant for the purpose of processing Champion Road material. The option is still in force and recent settlements promise to clear the impediments to testing.

Cominex continues to study the silica market with the possibility of blending the two products and so enhancing the yield from both deposits. The markets are changing for high quality silica with the emphasis moving from optical lenses and fibres to liquid crystal displays (LCD) in the computer industry.

On that basis, MHA has applied for an extension of RL 2/1996 to allow further study and possible development.

RL 2/1996 - Champion Road, NW Tasmania –Exploration Report, 1997-2003

1.0 Introduction

Retention Licence 2/1996 is a flow-on title from EL 24/88 on which Mineral Holdings Australia Pty Ltd (MHA) conducted exploration and evaluation of silica resources, mainly fine sand and flour, from 1988-1996. The RL of 2 sq km, some 40 km west of Burnie (Plan 1), was granted in March 1997 and renewed in March 2000 for a further three-year term. MHA is now applying for a second renewal and, as there was no report written in 2000, this report will cover the period March 1997 to March 2002.

2.0 Previous Exploration

An account of the discovery and evaluation of the silica deposits on Champion Road by MHA is contained in the series of annual reports by Threader (1989-1995). The deposits are believed to have been derived from replacements after carbonates in the Cann Creek area and transported southwards into their present position (Plan 2).

A brief review follows of the main features of the exploration and evaluation work.

Prior to 1988, in the decade of the 1970s, exploration on EL 43/70 had located outcrops of silica sand along Champion Road south of the Cann Creek magnesite and silica prospect.

In 1988-89, nine excavator pits returned silica flour in seven and outlined two deposits - Northern and Southern – at 3.5m and 6.5m thicknesses and volumes of 42,000 cu m and 52,000 cu m respectively- overlying Precambrian schists.

In 1989-90, reconnaissance sampling attempted to extend the prospectivity of the licence by outlining alluvial areas for further test pitting. Two possible sites for bulk sampling were selected. For marketing purposes, samples were dispatched to Australian and overseas clients for testing. Accumulating data on sizing and chemistry suggested that Champion Road silica flour had a 50% better yield at the minus 75µm grain size than Corinna flour but was slightly more impure. The target material came into focus as fine silica sand or flour with greater than 50% of minus 75µm grain size for optical glass, optical fibre and fused silica.

Further test pitting was carried out in 1990-91 with the excavation of seven additional pits spread over the two deposits to provide more fine sand samples for analyses and to access the recemented bottom sand to test that material as a furnace feed for ferrosilicon production at Temco. The fine-grained samples were analysed by Analabs and M.K. Silica and it was confirmed that Champion Road material had slightly lower levels of contaminants than the sand from Cann Creek. The resiliified silica varied from lithified opaline silica to lumps of soft sandstone with the former performing well in the decrepitation tests at Temco but liable to be present in commercially insignificant amounts in the deposits.

A bulk sample of 150 tonnes of fine sand was excavated from the North Deposit by M.K. Silica in January 1991 and stockpiled at Heybridge, Burnie for processing for the overseas market but this was delayed until 1994 due to closure of the plant. Meanwhile, a grab sample across the cutting prior to bulk sampling by the Gwalia Group gave a significantly higher proportion of glass sand (-250 to +75 um) than the material tested up to that date.

Hand augering and test pitting was carried out in 1991-92 in the SW of the licence mainly with negative results although a small area of 10,000 cu m of sand per metre depth was indicated. A market study of silica sand from both Champion Road and Thomas Mt was carried out by MHA and test reports accumulated from Comalco, Unimin (USA), Santos and Stim-Lab (USA).

In 1992-93, there was no fieldwork but the previously taken bulk sample was processed in the plant at Heybridge, now taken over by Index Minerals. In 1993-94, power auger drilling in the SW confirmed the small deposit as a potentially viable resource.

In 1994-95, eleven excavator pits were dug in the SW Deposit with five unbottomed in +6m of silica flour giving at least 30,000 cu m or 50,000 tonnes (SG factor 1.69) as an indicated resource. The deposit may continue to the SW.

In 1996, MHA successfully applied for Retention Licence 2/1996 which was granted on an in situ resource of 220,000 tonnes of silica sand (Plan 3). Details of the application by Vic Threader & Associates Pty Ltd are contained in the appendix of this report.

3.0 Current Evaluation

During the first term of the licence from 1997 to 2000, a bulk sample of 200 tonnes was taken from the same position in the North Deposit as the 1991 bulk sample (Plan). The sample was taken by Index Minerals at the end of 1999 at their cost under an arrangement with MHA using Hazell Bros as contractors. The sample was dug on the edge of the forestry road using an excavator, was loaded directly onto trucks and was transported to the Heybridge plant to stockpile. At completion, the pit was filled in and the land surface recontoured (Plates 1 & 2, courtesy of MRT).

For various reasons, not the least due to the imminent sale of the plant, the sample was not tested except for about 20-40 tonnes which were processed with generally similar results to the previous bulk sample (Dave Collidge, pers comm.). The costing of the bulk sampling was not revealed or reported at the time and now can no longer be retrieved. The value of the work has been estimated as \$3,400 and that amount has been added to the RL account bringing it to a total of \$3,800.

Promotional work continued by Index Minerals including Champion Road silica sand as one component of a blend being offered to the South East Asian / USA market but no contracts were realised.

During the second term of the licence from 2000 to 2003, continued development of the sand sources was pursued. In May 2000, a joint venture on all of MHA's silica and carbonate licences was proposed with Goldamere Pty Ltd, trading as Australian Bulk Minerals, but never came to fruition.

Finally, in June 2001, Cominex Pty Ltd, the operator of the Corinna silica flour deposits, entered into an option agreement with MHA on the Champion Road Deposits. The purpose was to allow Cominex to investigate their commercial potential by further bulk sampling and processing through the Heybridge plant which Cominex was negotiating to buy. The purchase did not eventuate and the plant became embroiled in litigation with the result that no further processing of Champion Road material was achieved in this term to fully research and test its potential.

4.0 Future Program

However, the option continues and the legal difficulties are reported to have been solved. Meanwhile, Cominex have continued, and will continue, with their market research into end use demand, customer specifications and pricing (Nolan, 2002).

The Champion Road material as presently understood is finer grained on the average than the Corinna flour but slightly more impure. While efforts continue to find a niche market for the Champion Road flour, there are blending possibilities with Corinna material which might optimise the yield from both deposits.

Whereas traditional markets for silica in optical glass suffer from substitution by plastics particularly at the lower value end, the liquid crystal display (LCD) market is growing by 30% per annum.

With its proximity to a modern shipping port with natural gas and other energy sources becoming available, Champion Road silica sand deposit will continue to be investigated for its marketing and development opportunities.

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KEYWORDS

Champion Road, Corinna, Silica Sand, Silica Flour, Lenses, Fibres, LCD

APPENDIX