

INDEX GROUP OF COMPANIES

RELINQUISHMENT REPORT FOR EL 11/2003

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Prepared by

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CONTENTS

- 1.0 SUMMARY
- 2.0 INTRODUCTION
- 3.0 TENEMENT INFORMATION
- 4.0 GEOLOGICAL SETTING OF EL 11/2003
- 5.0 WORK CONDUCTED DURING 2003/4
- 6.0 RESULTS
- 7.0 CONCLUSIONS

LIST OF FIGURES

- 1. Locality Map
- 2. Exploration Licence Reduction Map

1. SUMMARY

The Index Group has developed an international market for silica sand products. Index is seeking to expand its market and product range. To ensure adequate and reliable supply for its customers Index is required to expand its resource base in Tasmania.

The first year's exploration was designed to review the potential of the Exploration Licence, sample the most readily accessible portions, reduce the area under Licence and to identify areas for the 2005 calendar year worthy of investigation.

While a total of 17 pits were dug all yielded, for silica flour resource, unacceptably high levels of ilmenite though chromium was within limits.

However, geological map reviews, ground traversing and areal surveys indicated that the potential for silica sand in 139 sq km of EL 11 2003 was limited.

It is recommended that the area be reduced to 105 sq km down from the original 244 sq km.

2. INTRODUCTION

The aim of the exploration program is to locate silica deposits which can provide a secure raw product supply to the Burnie Processing Plant.

The Index Group's exploration philosophy is to take the existing knowledge on the known relationships between the development of industrial grade silica generated by silicification processes in the basal Tertiary on the underlying Corinna and Savage Dolomites and expand the search for silica deposits which may be able to be beneficiated. To date attention has focussed on attempting to bring in to production limited tonnage surficial deposits and this has in turn impacted on Index's ability to meet its market demands. However, preliminary investigations suggest the development of a significant proportion of suitable Tertiary sand and gravel deposits south from Corinna and this area has been retained.

3. TENEMENT INFORMATION

Exploration Licence EL 11/2003 was issued to the Index Group of Companies consisting of 244 square kilometres in the Corinna District and applies to all Category 3 and Category 5(a) Minerals.

The Exploration Licence was issued on for five years with an expiry date of 12 December, 2008 and an expenditure commitment of \$234,000 over two years.

It is recommended that the area of the Exploration Licence be reduced to 104 square kilometres.

4. GEOLOGICAL SETTING OF EL 11/2003

The Mesoproterozoic to Early Neoproterozoic of northwest Tasmania was dominated by the deposition of shallow-water siliciclastic rocks and siltstone (Rocky Cape Group) in the west and turbiditic rocks (Burnie and Oonah Formations) in the east. This was followed in the mid-Neoproterozoic by a phase of compressional deformation and metamorphism (Wickham Orogeny), most strongly developed on King Island. An extensional phase in the Late Neoproterozoic was characterised by the intrusion of tholeiitic dolerite dykes (Rocky Cape dyke swarm), extrusion of tholeiitic basalts and deposition of associated volcanogenic sediments, carbonate rocks and shallow marine siliciclastic rocks (Togari and Ahrberg Groups). Active growth faulting has been demonstrated during this phase of deposition, and may also have occurred during the earlier Rocky Cape Group deposition. The Togari and Ahrberg Groups rest on a regional-scale low-angle unconformity, which may be due to the Wickham Orogeny, or may be a direct consequence of the Late Neoproterozoic extension.

An arc-continent collision in the Early to Middle Cambrian initiated the Tyennan Orogeny and produced the Arthur Lineament, a high-strain metamorphic belt. This belt is composed of metasedimentary and mafic meta-igneous lithologies of the eastern part of the Ahrberg Group, the Bowry Formation, and a high-strain part of the Oonah Formation. The lineament separates the Rocky Cape Group and western part of the Ahrberg Group, to its west, from the relatively low-strain parts of the Oonah Formation and Burnie Formation, to its east. In the most recent tectonic interpretation (Holm and Berry, 2002), folding and thrusting in the late Early to early Middle Cambrian caused emplacement of the allochthonous Bowry Formation, which is interpreted to be a fault-bounded slice, towards the eastern margin of the parautochthonous eastern part of the Ahrberg Group. The Bowry Formation contains relict glaucophane, indicating an early blueschist metamorphic history. There were two folding events in the early stages of formation of the Arthur Lineament which were followed, later in the Cambrian, by more folding and west-dipping steep thrusts. These produced the linear expression of the structure. (Source Mineral Resources, Tasmania ETA 595 Geological Summary Notes, 2003)

In a small proportion of the area the Proterozoic rocks are covered by flat-lying Permian and Tertiary sedimentary rocks, Jurassic dolerite and Tertiary basalt.

Industrial Minerals

The Arthur Lineament is rich in industrial minerals, with two substantial mines, Savage River (iron ore) and Corinna (silica flour), and large deposits of magnesite with associated ochre and umber pigments. Gold occurs in numerous hard-rock and alluvial deposits in the area, most of which were worked last century. There are also a few small base metal deposits (mostly copper). Much of the known mineralisation in the Arthur Lineament lies within the Bowry Formation, a sequence dominated by mafic to pelitic schist and amphibolite.

Silica Flour

Very high purity, silt to fine-sand grade quartz (> 99.9% SiO₂), locally termed silica flour, forms residual deposits overlying dolomite and is mined for use in optical glass. Fluid inclusion data suggest that the initial silicification of the dolomite took place at temperatures of about 250°C from a fluid of magmatic or metamorphic origin, following quartz veining at a temperature of around 300°C.

The silica flour deposits lie near the centre of old alluvial gold workings which have never clearly been linked to their primary source. It is suggested that, because of the close association of chalcedony clasts with alluvial gold in the area, silicification of the dolomite may have been related to gold mineralisation. There is high potential for silica flour in dolomite areas of the Arthur Lineament (ETA, 595, *ibid*).

The prime target for Index was the area located south of the Pieman River and in the area of the Corinna Creek catchment which represented the equivalent situation to the known Corinna Deposits north of the Pieman River.

5. WORK CONDUCTED DURING 2003/4

The work conducted during 2003/4 consisted of literature review, photo interpretation, mapping, roadside sampling and pit sampling from forestry tracks running tangentially from the Corinna Road south of the Pieman River. An informal review of radiometrics was also conducted and this was ably assisted by the Geophysics Department of Mineral Resources Tasmania. No formal maps were produced.

No suitable sites were located north of the Pieman River and accordingly no sampling was undertaken.

The pitting program was conducted in accordance with the Mineral Code of Practice.

Orientation meetings were held with interested parties such as Peter Sims and the West Coast Council.

6. RESULTS

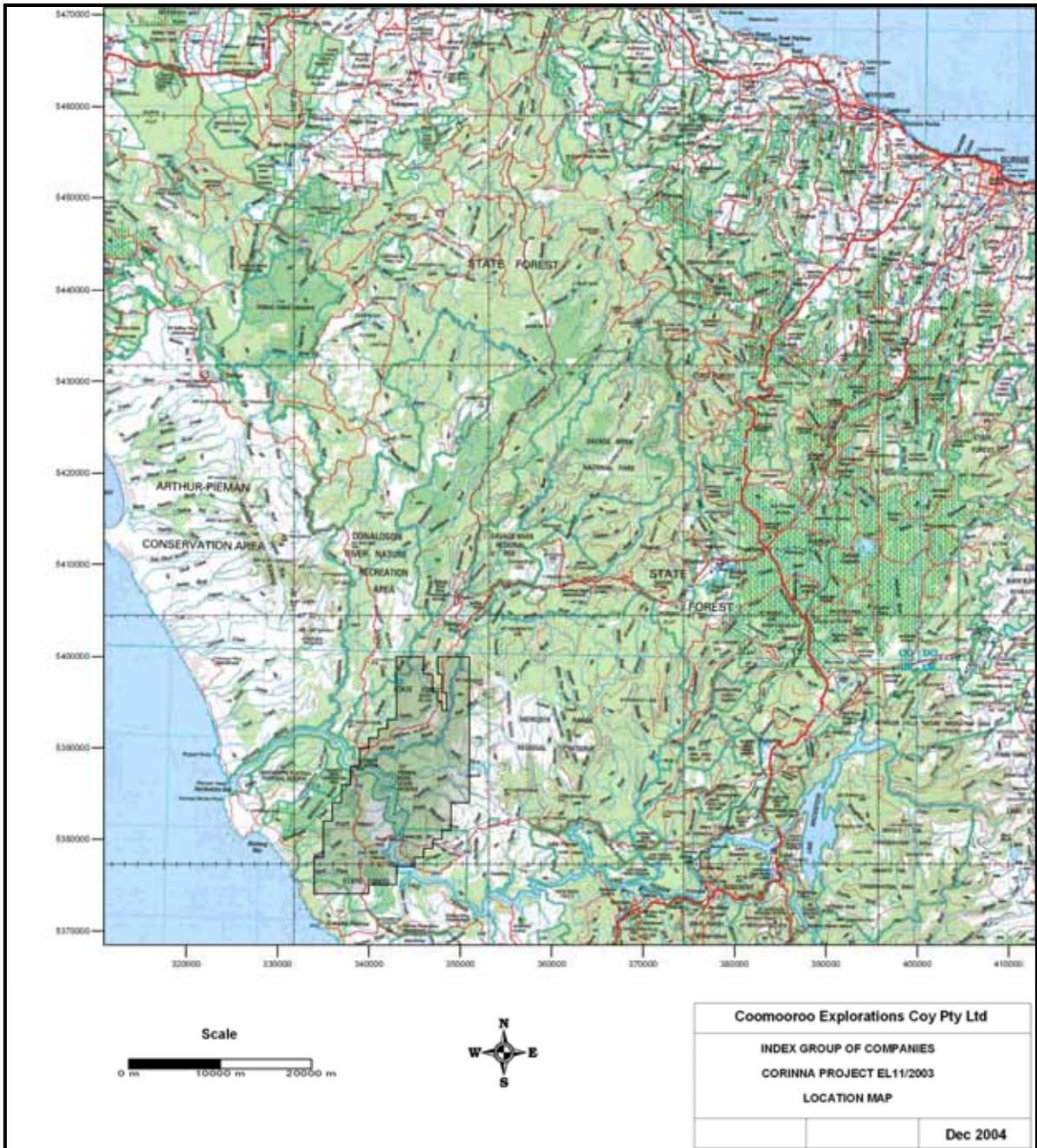
No sites could be found and therefore no sampling was undertaken

7. CONCLUSIONS

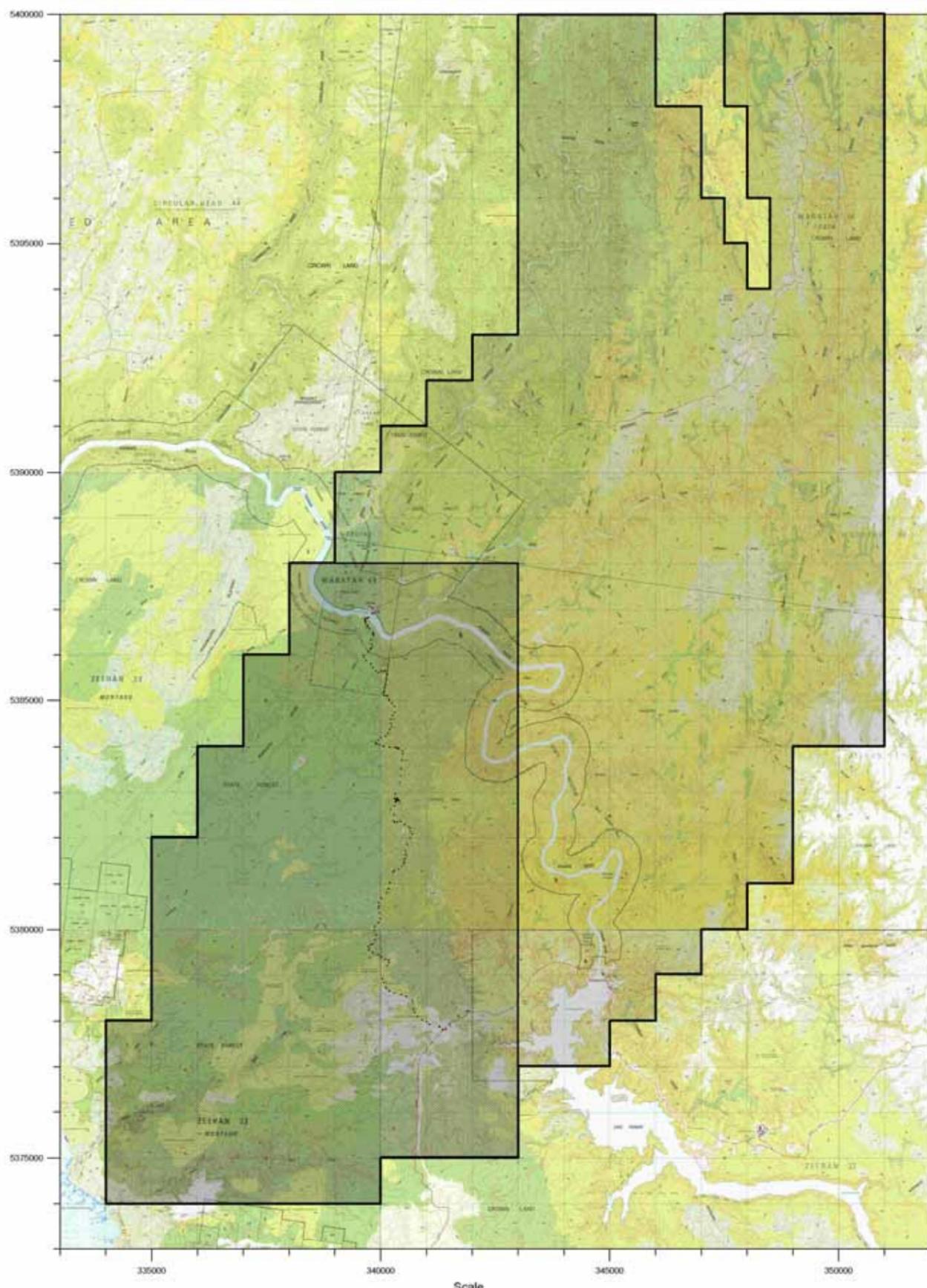
Only one location of silica flour but with high ilmenite contamination was located during the first 12 months of exploration and this was in the area deemed suitable for retention..

In general the Tertiary investigated during this period represented a normal Tertiary environment in southern Australia with perched sand, clay and pebble to cobble gravels predominating with minor sand interbeds showing as much as two fossil soil horizons.

It is recommended that 139 sq km be deleted from EL 11 2003 (See Map 2).



Map 1 Location Map



- Granted Exploration Licence 11/2003 Boundary
- Reduced Area Exploration Licence 11/2003

Scale
0 m 50000 m

Coomooroo Explorations Coy Pty Ltd		
INDEX GROUP OF COMPANIES		
CORINNA PROJECT EL 11/2003		
EL REDUCTION MAP		
		Jan 2005

Map 1 EL Reduction Map