



EXPLORATION LICENCE
EL61/2007, EL62/2007, EL63/2007
SORELL PENINSULA REGION, WESTERN TASMANIA

COMBINED ANNUAL REPORT FOR THE YEAR ENDED
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1 EXECUTIVE SUMMARY

EL61/2007, EL62/2007 and EL63/2007 are separate licences in the Macquarie Harbour region in Western Tasmania which were granted on 27 April 2007. All three have common boundaries with other licences held by MHM Metals Limited. Prior to November 2010, MHM Metals Ltd., was formerly called Macquarie Harbour Mining Ltd., and has changed its name to more accurately reflect its core business, which is the recovery of aluminium from slag.

EL61/2007 and EL63/2007 lie in zones of meta-sedimentary Proterozoic rocks on the Sorell Peninsula while EL62/2007, which straddles Macquarie Harbour, covers a magnetic high which reflects a continuation of the prospective nickel-bearing ultramafic rocks northwards offshore.

Work during the fifth year of tenure included drilling 5 short diamond drill holes for a total of 102.6m on EL63/2007. Results show that there is a moderately dipping, high purity quartzite unit approximately 12m thick that may have sufficient quality to be considered as lump silica for metallurgical grade silicon.

Rock chip sampling at Mt Antill has confirmed that the sample results taken by Comalco Australia in the mid 1970s are very similar to recent results.

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2 INTRODUCTION

This is the fourth annual report on EL61/2007 (57 sq km), EL62/2007 (67 sq km) and EL63/2007 (80 sq km) which are held in the name of Goldstock Mining Pty Ltd, a wholly owned subsidiary of MHM Metals Ltd ("MHM"). EL61/2007 lies between EL21/2007 and EL22/2007 with the ocean along its south western boundary, EL63/2007 forms the northwest extremity of Cape Sorell Peninsula and EL62/2007 covers part of Macquarie Harbour between EL20/2007 to the north and EL's 21 & 22/2007 to the south (see Figure 1). The licences all fall within the South West Conservation Area and any exploration requires continual consultation with the relevant government authorities, particularly Mineral Resources Tasmania and Parks and Wildlife Services.

Previous reports on these EL's have been under the name of Macquarie Harbour Mining Ltd. however the company changed its name in November 2010 to MHM Metals Ltd.

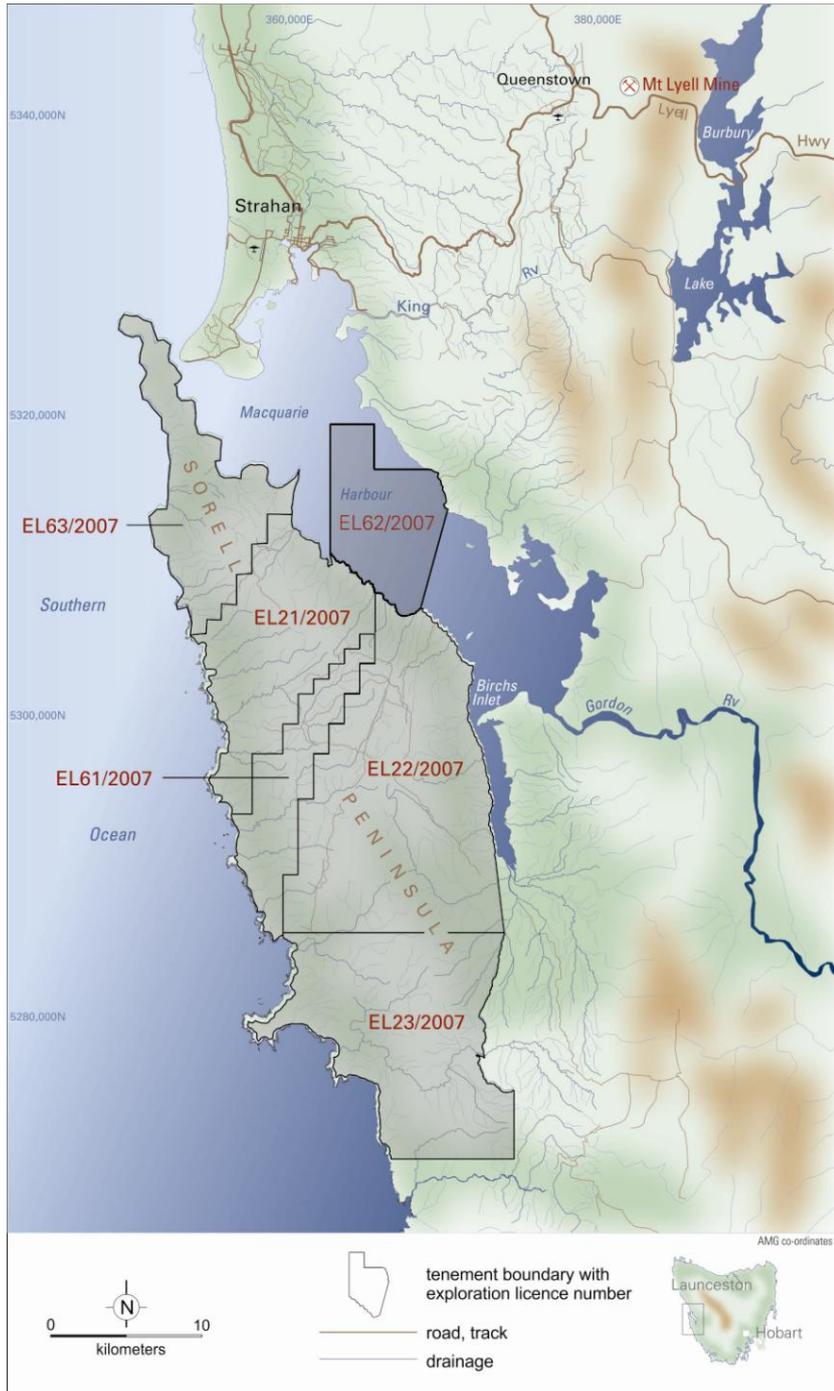


Figure 1. Location of EL's 61/2007, 62/2007 and 63/2007

3 REGIONAL GEOLOGY

EL 61/2007 and EL63/2007 represent two areas of older rocks (Mesoproterozoic-Neoproterozoic) which form thrust boundaries with younger Neoproterozoic and Cambrian sequences. EL62/2007 has no geological outcrop but observation of airborne geophysical data indicates that the NNE trending magnetic high which reflects the Hibbs ultramafic belt (known to host nickel mineralisation) on the south side of Macquarie Harbour, continues to the north (see Figure 2). A simplified geological map of EL61/2007 and EL63/2007 is shown as Figure 3.

EL61/2007:

The principal geological unit within this licence is a metamorphosed turbidite sequence of interbedded quartzwacke and mudstone/siltstone considered to be of lower Neoproterozoic age. In the southwest of the tenement there are also metamorphosed impure dolomite-rich sequences of mudstone, siltstone and sandstone which correlate to the Oonah Formation. There are also minor early Cambrian gabbroic intrusions.

EL63/2007:

This licence covers metamorphic rocks of Mesoproterozoic age comprising a multiply-folded sequence of clean orthoquartzite beds with minor interbedded phyllitic siltstone and locally developed siliceous conglomerate lenses (see Figure 4). Along its eastern boundary the quartzite sequence overlies Neoproterozoic rocks along a sub-horizontal thrust sheet.

The sequence shows at least three phases of deformation, the massive siliceous rocks behaving competently to form broad truncated folds while the phyllites and thin laminated quartzites are contorted with boudinage structures. The regional strike is north to northeast. Due to their resistance to weathering the massive quartzite beds form prominent outcrops and strike ridges. Quartzite scree often covers the softer eroded phyllites giving the false impression of the quartzite beds being thicker than in fact they are.

The quartzite varies in quality from pure (almost 100% SiO₂) to high clay and/or high iron where it is strongly crossbedded. The colour, hardness and quality of the quartzite is dependent on the nature and thickness of the bedding, percentage of silica, and the amount of clay and iron minerals present. High purity silica represents an important commodity of commercial interest to MHM.

Quaternary sand dunes have built up along the western coast of Cape Sorell peninsula and in the extreme northeast.

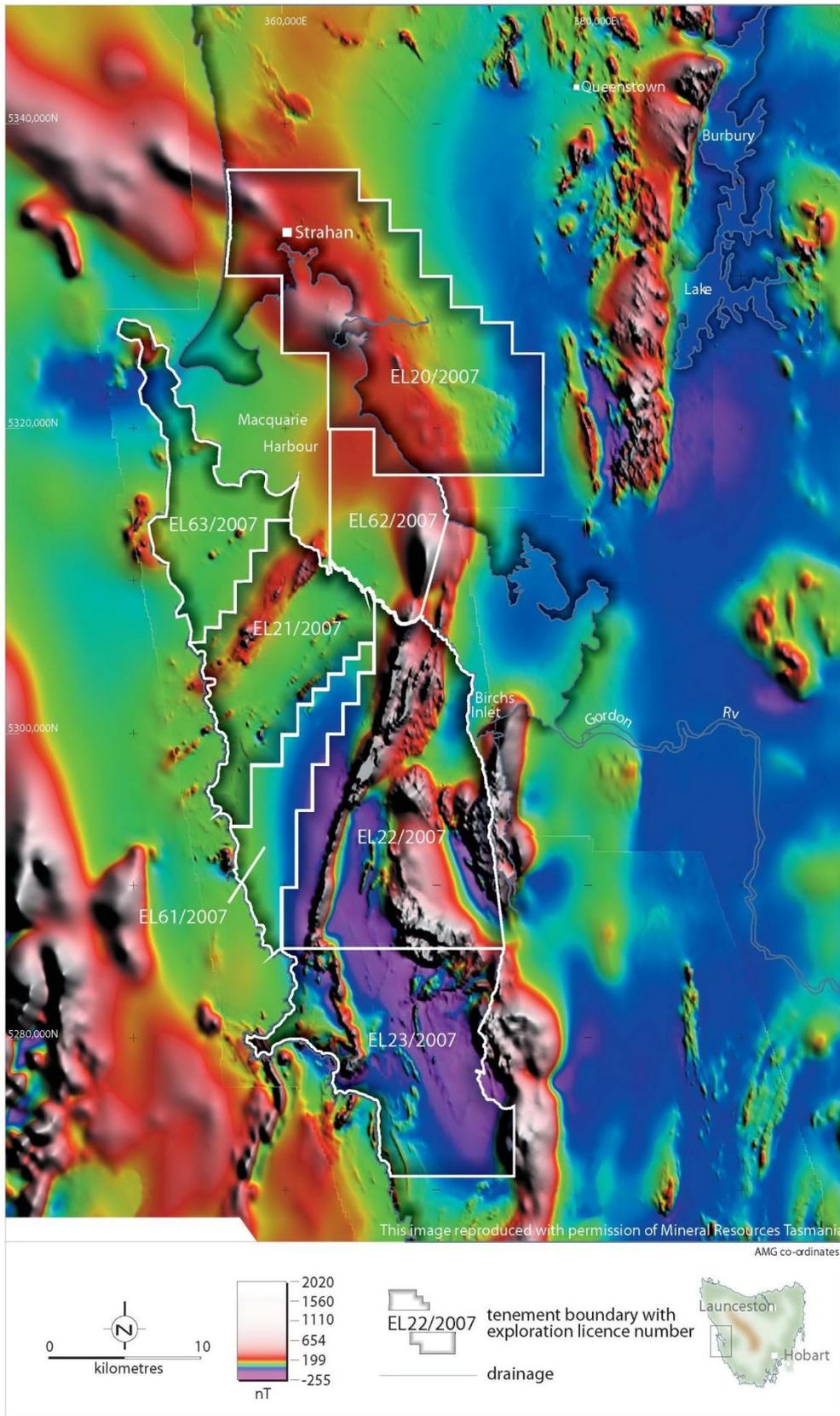


Figure 2. Magnetic Map of Macquarie Harbour area

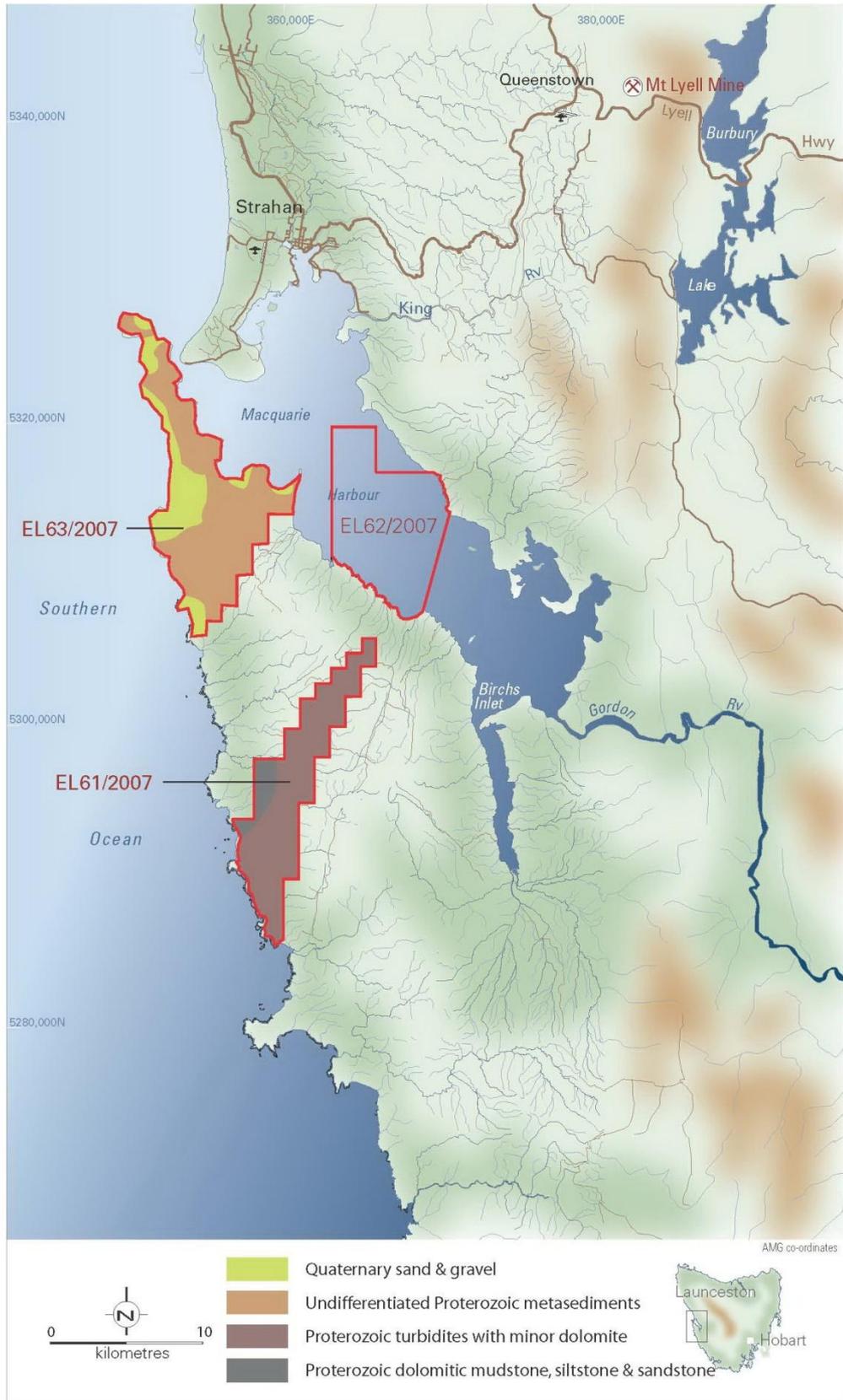


Figure 3. Generalised geology of the Cape Sorell Peninsula

4 REVIEW OF WORK BY PREVIOUS EXPLORERS

Modern exploration commenced south of Macquarie Harbour in the mid-1950's and has been carried out intermittently since then, led by a relatively small number of companies which have expended considerable time and effort in an area with no existing infrastructure and a climate which limits concerted field programmes to the warmer months. This work was directed mainly towards base and precious metals but regional airborne geophysics and geological mapping by Lyell – EZ Explorations (1956-1962) and BHP (1965-1972) were instrumental in providing a strong basis for the structural understanding of the area.

Because of the low prospectivity for metallic mineralisation in EL61/2007 and EL63/2007 there has been no ground based follow-up base or precious metals exploration over the area covered by these two licences. However considerable work has been carried out in the Cape Sorell area (EL63/2007) on high grade silica deposits within the quartzites by Comalco Ltd in the 1970's. This is considered a highly attractive target for MHM and the previous exploration is reviewed below.

Evaluation of Cape Sorell Silica 1970-1976:

In January 1971 EL1/71 was granted to Comalco. It covered the entire north western extremity of Cape Sorell Peninsula as far south as Sloop Point and the company's ultimate objective was to acquire reserves of quartzite suitable for producing silicon metal to alloy with aluminium.

Prominent quartzite outcrops in the area include Mount Antill, Mount Obvious and The Grandfathers. To the east of Mount Obvious is an abrupt change in topography referred to by Comalco as "North Escarpment". It is at these localities where most of Comalco's exploration was focussed.

A preliminary surface sampling programme was carried out during 1971 which indicated that the softer and finely bedded quartzite as well as the harder massively bedded quartzite was mostly of high SiO₂ content. This was followed up by five inclined diamond holes which were drilled by Associated Diamond Drillers during 1974 to test some of the quartzite outcrops at depth. Two of these drill holes were located in an area northwest of Mount Antill, one to the northwest of North Escarpment, and the remaining two in The Grandfathers area. Holes 1 (18.6m), 2 (20.4m) and 3 (24.7m) encountered only thin beds of quartzite with interbedded phyllite. Holes 4 (20.0m) and 4a (71.9m) at Grandfathers were drilled in quartzite however analysis of samples indicated these were just below "silicon grade" requirements.

During January 1975 Comalco applied for four 100 hectare Mineral Leases within EL1/71 but the following month these were converted to a Consolidated Lease 16M/75 which was formally granted in March 1975.

Over the 1974-75 field season an intensive costean sampling programme by drilling and blasting of the quartzite was accompanied by a topographical/geological mapping

programme to infer an adequate tonnage and grade so that plans could be made for a silicon smelter. The minimum inferred tonnage from Mount Antill, Mount Obvious and North Escarpment was 2.78 million tonnes, having an average grade of 99.13% SiO₂, 0.34% Al₂O₃ and 0.05% Fe₂O₃. North Escarpment alone was 0.80 million tonnes at 99.60% SiO₂, 0.07% Al₂O₃ and 0.01% Fe₂O₃. Ten diamond holes totalling 755m were recommended from the costeaning and mapping to raise the status of inferred to measured or proven. Note that these figures are prior to the introduction of the JORC reporting standards and for this reason should be considered as "pre-JORC estimates". The recommendation for drilling was never implemented "for various economic reasons" and eventually ML 16M/75 was relinquished.

5 PREVIOUS WORK BY MHM

The history of exploration from the early 1970's until 2009 has been reported in previous annual reports to MRT and will not be repeated here (e.g. Lindsay, 2010).

In 2010 considerable time and effort was expended in seeking market interest for the high purity silica product as well as down-stream processing opportunities. The potential costs for exporting raw lump silica from EL63/2007 to an international port mitigate against the economic viability of the project. These are mainly the lack of a suitable heavy ship port on the northeast coast of Macquarie Harbour and the lack of a rail service from Strahan. However, the possibility of opening a new silicon smelter in Tasmania has renewed interest in the project as moderate tonnages of lump silica could conceivably be shipped by small ship from a port within Macquarie Harbour, or alternatively barged to Strahan and then either trucked or trucked and railed from Zeehan to the smelter site. Hence a new focus has sought interested parties to join MHM Metals in building a silicon metal smelter in Tasmania to process the silica product. Considerable interest has been raised by several companies, however negotiations have hinged largely on factors other than the availability of raw silica, particularly the cost of electricity, the availability of local supplies of suitable charcoal from non natural growth forests and a suitable project site. These discussions and negotiations are now in an advanced stage and have involved parties from senior levels of the State government, the State's electricity providers, the Tasmanian Chamber of Business and Commerce and various commercial parties.

Further check sampling of some of Comalco's sample original sites provided material for checks by a number of different sources. These were reported in detail in the annual report to MRT in 2010. Results generally confirmed the repeatability of Comalco's results in the mid 1970's.

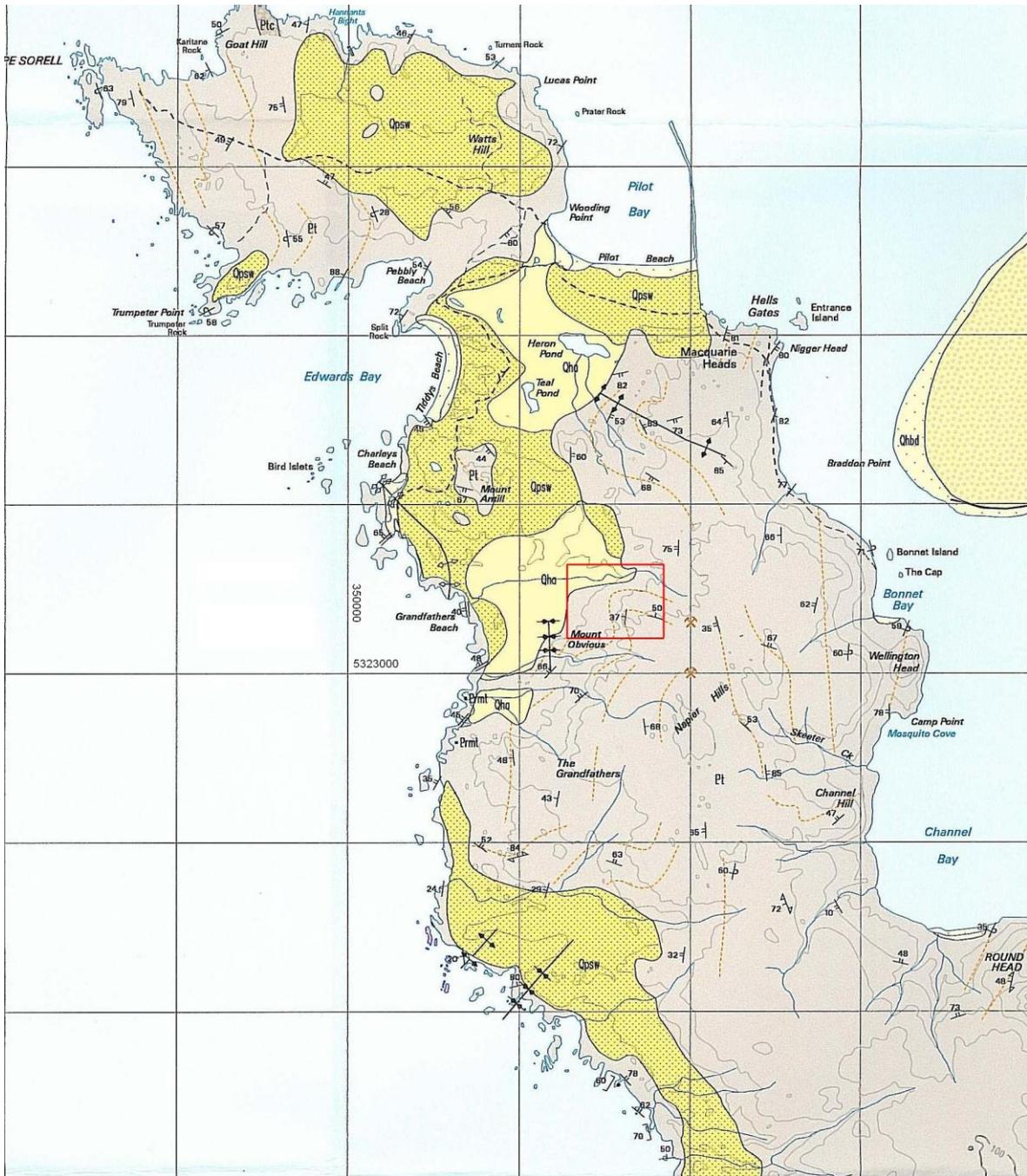


Figure 4. Geological map of Cape Sorell with North Escarpment area marked in red (1 km grid).

6 EXPLORATION COMPLETED DURING THE REPORT PERIOD

Activities in the fourth year of tenure have focussed on re-mapping and drilling the North Escarpment prospect (see Figure 5).

A review of the geological mapping at North Escarpment revealed that many of the outcrops are tightly folded hinge zones of folds (see Figure 5). This has the effect of doubling the apparent thickness of the bedded quartzite zone which is approximately 12-15m thick). Hole CSD01 was designed to test the keel of one such hinge zone, hole CSD02 (drilled from the same site) was aimed towards testing the northern limb of the fold but was abandoned at 4.5m. This fold is overturned and plunges to the southwest.

A total of 102.6m were drilled by diamond drilling using a Longyear 28 hydromaster heli-transportable rig. Hole CSD02 was abandoned at 2m due to broken and very hard ground. Table 1 summarises the drill holes.

HoleID	East_AGD66	North_AGD66	RL	TotalDepth	Collar_Dip	AMG66
						Azimuth
CSD01	351555	5323338	45	42.7	-50	135
CSD02	351555	5323338	45	4.5	-45	110
CSD03	351542	5323366	38	20.4	-45	90
CSD04	351557	5323392	40	18	-45	90
CSD05	351526	5323444	6	14	-90	90
CSD06	352226	5324222	65	3	-90	70

Table 1 Summary of drilling completed in 2011

The aim of the drilling program was to:

- Test the idea that an extensive leached cap of high purity silica overlies the sedimentary succession,
- Test the down-dip extension of a thick quartzite unit that forms the North Escarpment and dips to the west.

Results showed that the silica leached cap is very thin over impure sandstones and siltstones (<2m). However, the quartzite unit that forms the face of the North Escarpment does continue down-dip, at least to approximately 20m and maintains some purity. Assay results of the drilling are located in Appendix 1.

Drilling conditions were difficult. The top section was often composed of broken quartzite and soil, possibly scree material with broken blocks of quartzite that when encountered with a drill bit stripped the bit of diamonds and rendered it useless, sometimes without any advance (e.g. Hole CSD02). Once through the broken near-surface material, the quartzite proved extremely hard and polished the bit, even when a

soft matrix bit was employed. Drilling costs were far in excess of normally encountered costs due to excessive bit wear, slow drilling and stuck rods causing contractual work-time conditions to be invoked.

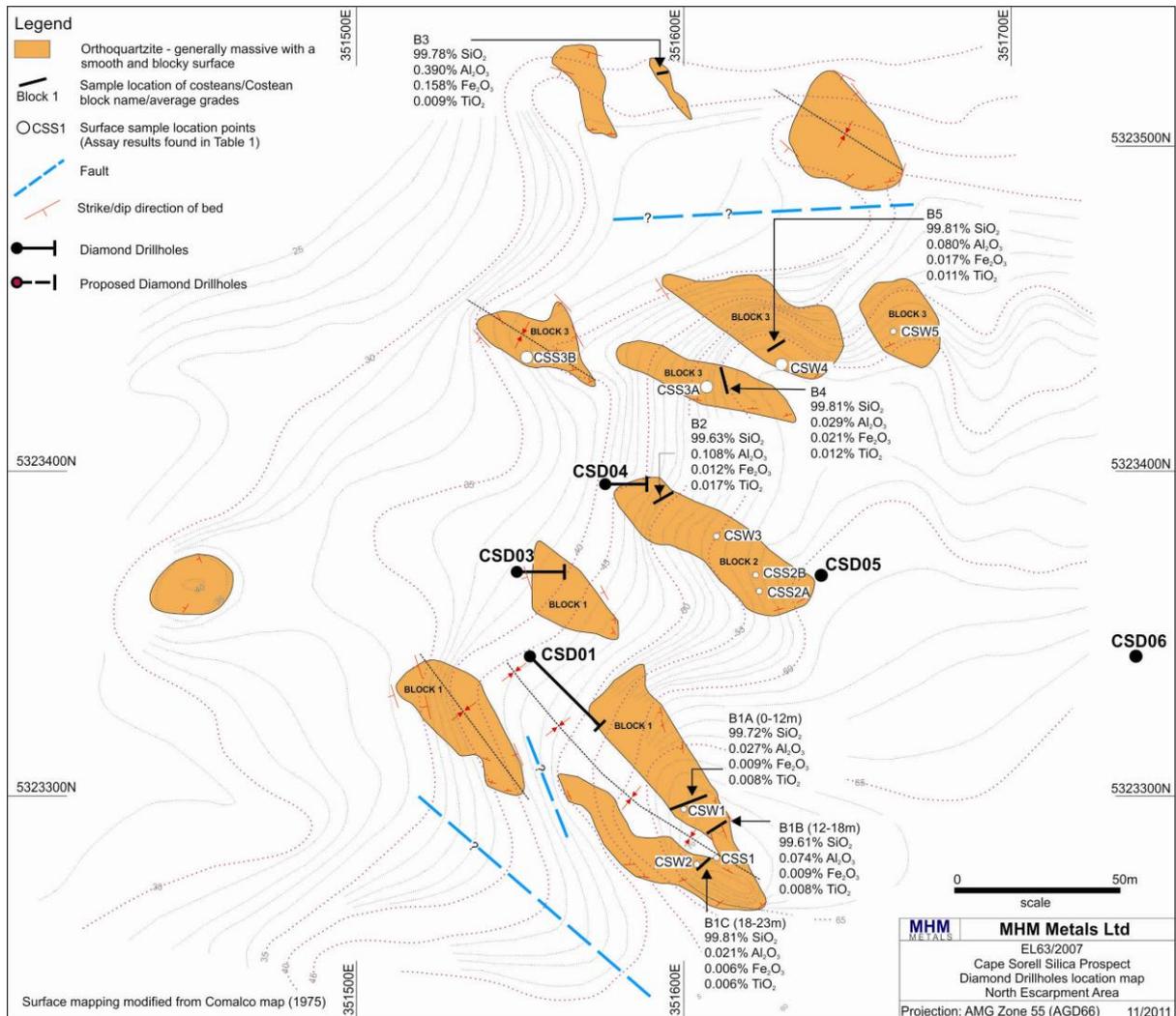


Figure 5. Geological outcrop map with summary results of previous trench sampling and recent drill hole locations

Geological cross sections of the drill holes are shown in Figures 7 to 9. Drill holes CSD05 and CSD06 were short holes (14m and 3m respectively) drilled to test the thickness of the silica leached cap.

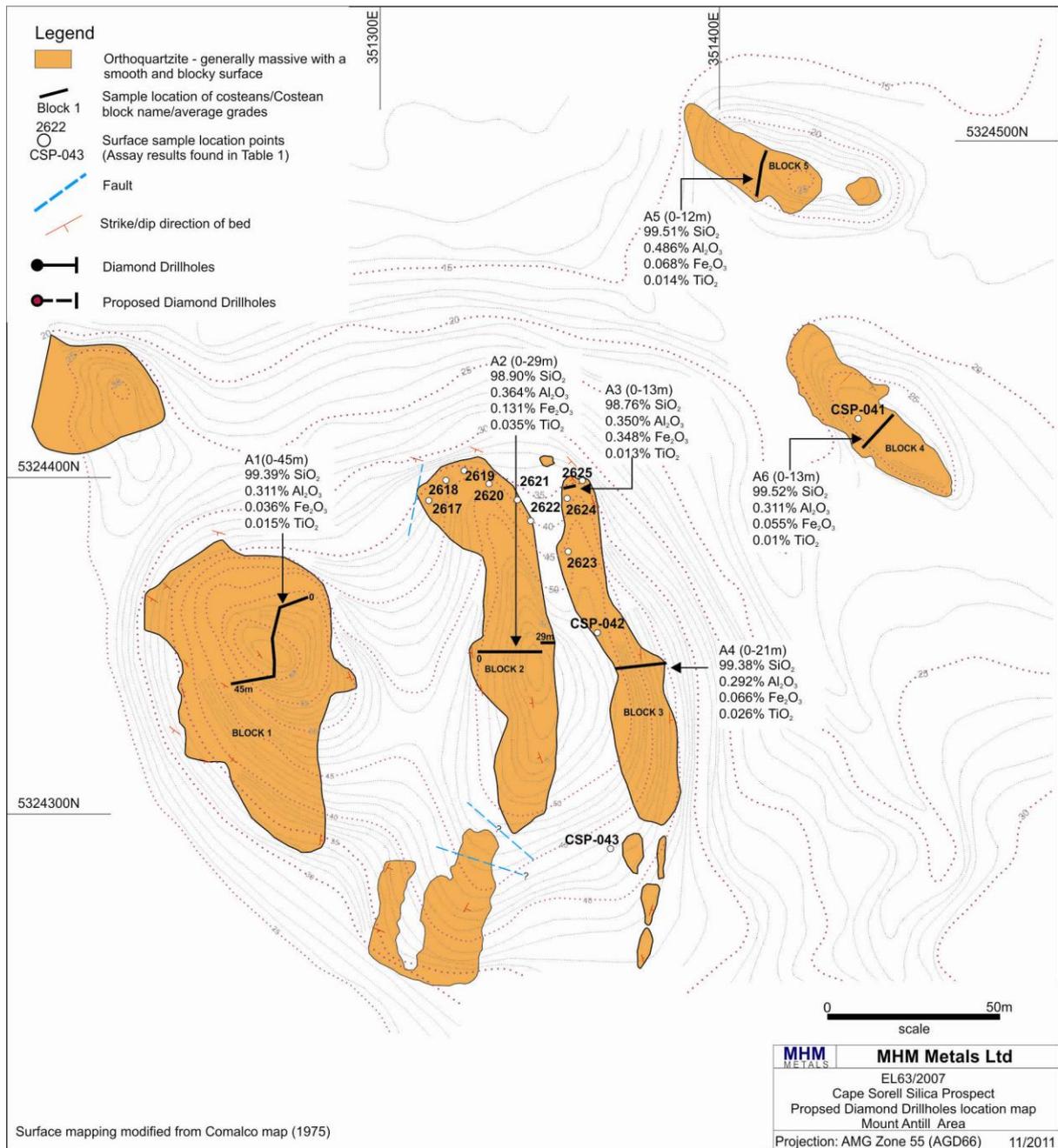


Figure 6. Geological plan of Mt Antill showing averaged costean results (Comalco) and MHM check assay locations.

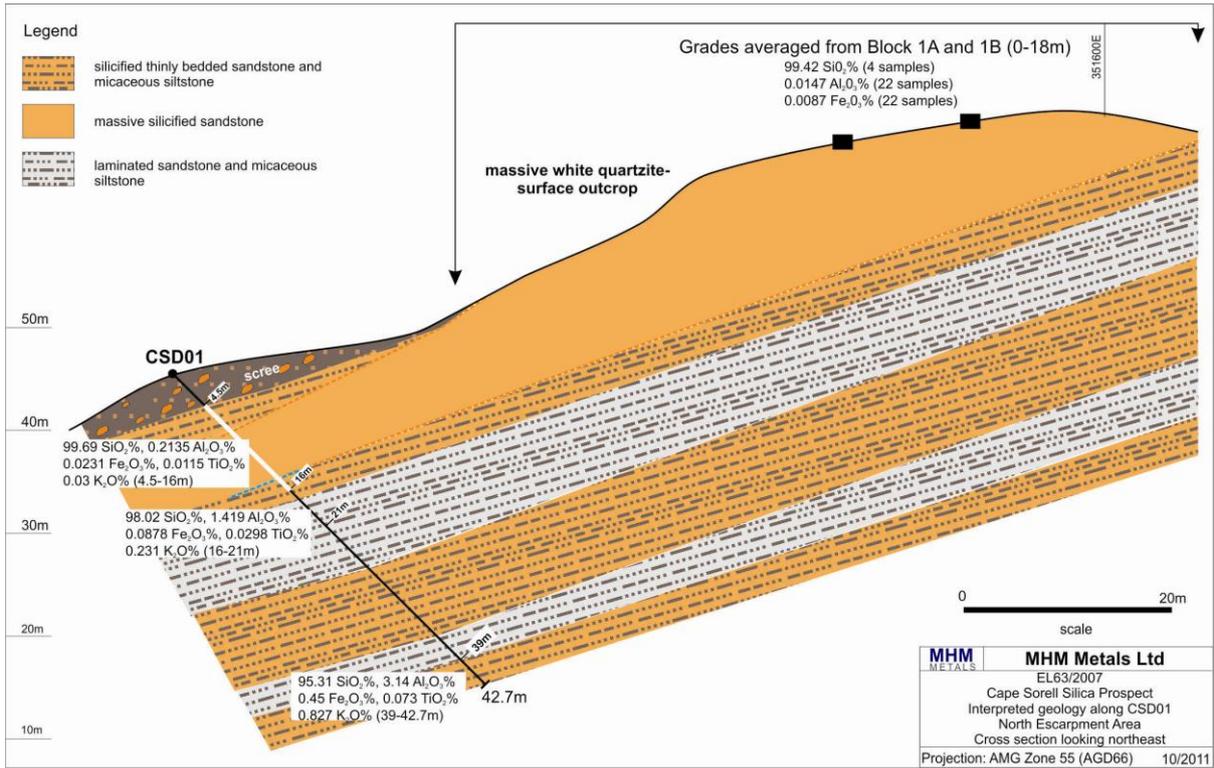


Figure 7. Geological section of drill hole CSD01 (looking north)

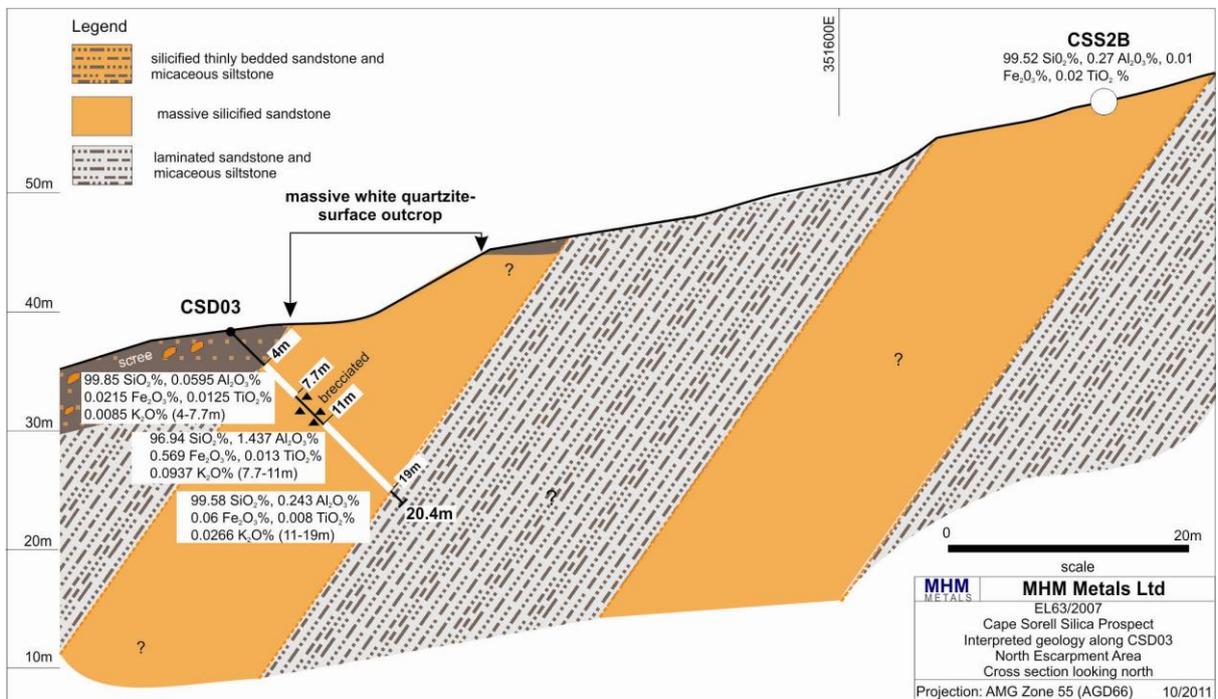


Figure 8. Geological section of drill hole CSD03 (looking north)

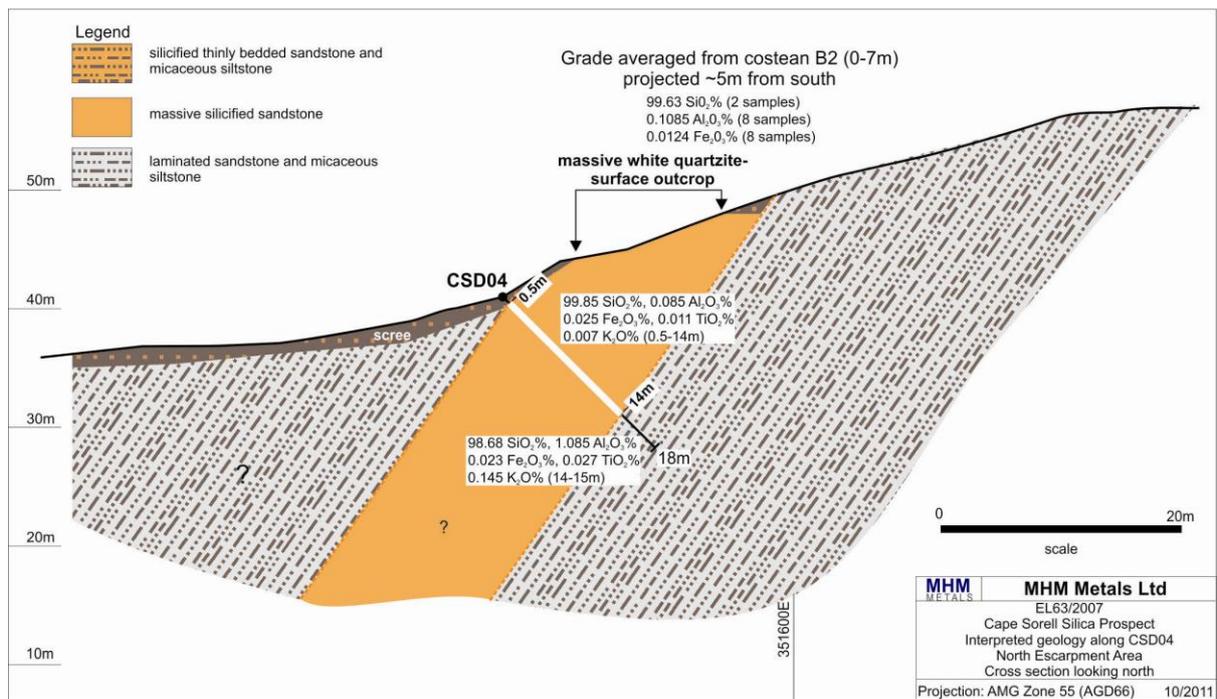


Figure 9. Geological section of drill hole CSD04 (looking north)

Geological mapping and chip sampling was carried at Mt Antill to verify previous work done by Comalco in the 1970's. Several channel chip samples were taken along the northernmost extent of the outcrop (sample nos. 2617 to 2623, see Figure 6).

Results generally confirmed previous channel chip results by Comalco. Analytical results are located in Appendix 2.

7 CONCLUSIONS

Drilling at North Escarpment has shown that there is a very thin (<2m) thick leached cap above the siliclastic sequence.

Drilling has shown that there is a thick (10-15m) high purity quartzite unit that forms the escarpment face at North Escarpment and extends to at least shallow depths of 25m below surface.

Check rock chip sampling at Mt Antill confirms assay grades of samples taken by Comalco in the mid 1970's.

8 REFERENCES

- Bacon C. A., Calver C. R., Pemberton J. 2008. The Industrial Mineral Deposits of Tasmania. Mineral Resources of Tasmania, 13.
- Bacon C. A., Pemberton J. 1995. Silica in Tasmania. Tasmanian Geological Survey Record 1995/03.
- Bartlett A. H. 1978. Final Report EL1/71 at Cape Sorell. Comalco Ltd. MRT Ref. 78_1252.
- Bartlett A. H., Picken I.D. 1976. The Sale of Cape Sorell Silica. Comalco Ltd. MRT Ref. 76_1182.
- Picken I. D. 1971 EL1/71 Cape Sorell Peninsula, West Tasmania. Progress Report of Operations for the Month Ending 31 March 1971. Comalco Ltd. MRT Ref. 71_741.
- Picken I. D. 1975. Proposals and "Indicated" Quartzite Ore (Not Reserves), Cape Sorell, Western Tasmania. Comalco Ltd. MRT Ref. 75_1083.
- Corbett K D, 2003. Western Tasmanian Regional Minerals Programme Mt Read Volcanics Compilation. A review of geology and exploration in the Macquarie Harbour Elliott Bay area, South West Tasmania. MRT Ref. UR2003_04.
- Leaman D.E. 1986. Mt Read Volcanics Project, Geophysical Report 2. Preliminary interpretation report: 1985 West Tasmania aeromagnetic survey (Macquarie Harbour south to Elliott Bay) Mineral Resources Tasmania. MRVGP2.
- Leaman D.E. 1988A. Review of Structural Implications of Geophysical Data, Sorell Peninsula, Western Tasmania. MRT Report UR1988_01.
- Leaman D.E. 1988E. Review of Structural Implications of Geophysical Data, Sorell Peninsula, Western Tasmania. Leaman Geophysics for the Mt Read Volcanics Project. MRT Ref. UR1988_01.
- Lindsay, R.P. 2010, EL61/2007, EL62/2007, EL63/2007, Sorell Peninsula Region, Western Tasmania. Combined Annual Report for the Year Ended 27 April 2010.
- McClenaghan M.P, Findlay R.H. 1993. Geological Atlas 1:50 000 series. Sheet 64 (7913S). Macquarie Harbour. Explanatory Report Geological Survey Tasmania. ER7913S0.
- Richardson J.I. 2009. EL61/2007, EL62/2007, EL63/2007, Sorell Peninsula Region, Western Tasmania. Combined Annual Report for the Year Ended 27 April 2009.
- Richardson J.I. 2010. EL61/2007, EL62/2007, EL63/2007, Sorell Peninsula Region, Western Tasmania. Combined Annual Report for the Year Ended 27 April 2010.
- Summons T.G. 1981. Silica in Tasmania. MRT Ref. UR1981_12.

9 EXPENDITURE

Total annual expenditure for EL61/2007, EL62/2007 and EL63/2007.

Geoscientific Costs	
Geology	202,803
Geochemistry	
Geophysics	
Remote sensing	
Drilling & Gridding Costs	
Gridding	
Drilling	47,815
Earthmoving	
Land Access Costs	
Feasibility Costs	
Other Costs	86,535
Rental fees	
Vehicular track Construction	
Surveying, contract drafting etc	
Capital equipment purchase	
Administration Costs	104
(note: not to exceed 10% of annual expend)	
Legal	
Office & Admin	
Total	337,257

10 Key words:

Lump silica, Sorell Peninsula, leached caprock