MAYDENA SANDS PTY LTD

ACN 111 938 428 ABN 65 111 938 428

RETENTION LICENCE NO. 2/2003

MAYDENA, TASMANIA

ANNUAL REPORT

TO

09 January 2012

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DECEMBER 2011

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ABSTRACT

In the space of one year, the polysilicon industry appears to have gone from boom to bust which discourages further active participation in that sector in the short to medium term.

Fortunately, the high quality glass industry does not seem to have been affected to the same extent, though further downward trends are expected. This scenario is likely to affect overseas demand for high purity silica and may result in a reduced number of enquiries. However, this year's marketing efforts generated several new leads and should continue.

In the technical sphere, successful outcomes were achieved from palaeodating, preliminary HIMF test for iron removal and mineralogical investigations, all of which raised proposals for further work.

Project development is further encouraged by the emergence of a new, potentially suitable processing site at a favourable location, as well as by a recent positive development with TasRail which could soon offer another transport option for product to port and thereby improve project economics exacerbated by loss of some shipping facilities out of the Port of Bell Bay.

Keywords:

Maydena; Silica flour;
Silica sand; Polysilicon;
Solar Glass; Logistics;
Mineralogy.

C O N T E N T S

1. INTRODUCTION

This report outlines activities by Maydena Sands Pty. Ltd. during its eighth year of tenure of Retention Licence 2/2003, granted for a four year period to 9.01.2008 and then renewed annually to 09.01.2012.

This tenement has its origins in EL 17/1998 of 7sq.km previously held and operated by J.J. McDonald &Sons Mining Pty. Ltd. The current tenement of 4sq.km is located just south of the sealed Gordon River road approximately 4 km west south west of Maydena (pop. 250 approx.) and about 90 km by road from Hobart (Fig.1). There is good access to and within the prospect area. Power, water, housing and basic facilities are readily available from within a short radius of the prospect. The last few years saw the progressive upgrade of the narrow gauge New Norfolk- Maydena rail line to passenger standard but only as far as the entrance to the Mt Field National Park from New Norfolk. Plans for a further upgrade to freight standard of the entire stretch have recently been deferred indefinitely and may not eventuate. An alternative rail loading facility, a major freight hub at Brighton, approx. 65km by road east of Maydena is nearing completion.

A 700m long gravel airstrip is located 3 km north west of the silica sand deposit.

The primary target for investigation, assessment and eventual exploitation remains the deposit of silica sand and its silica flour matrix located largely to the west of the Eastern Quarry, about 1 km south east of Pine Hill (Fig.2).

The overall aim of the investigations is to determine if a commercially viable operation can be established, based on products derived from the silica flour, silica sand and silica rock resource in the tenement.

In view of the growing use of solar power locally and overseas, interest was also maintained in the silica rock potential of the tenement. The latter raw material, if of sufficiently high quality is used in the production of high purity silicon metal which is an essential component of photovoltaic solar cells. Also of potential interest is the coarser, higher purity sand fraction for use in the manufacture of technical glass, optical glass and solar cell cover glass with high light transmissivity characteristics.

2. PREVIOUS WORK

Exploration by Pioneer Silicon Industries Pty. Ltd. in 1988/89 identified a lag deposit of hard silica rock at the Western Quarry containing a small resource of material deemed suitable for the manufacture of silicon. (Fig.2). From this, approximately 19,000 tonnes of crushed, screened silica rock was produced in 1991 and 1992 for shipment, of which 10,000 tonnes were consigned to Pioneer's silicon smelter at Electrona and about 9,500 tonnes went to Temco's Bell Bay ferrosilicon plant. Extraction, by Duggans Pty. Ltd. under M.L.1396 P/M, virtually ceased upon closure of the Electrona smelter south of Hobart in 1992, although a small parcel of 850 tonnes of silica rock is reported to have been mined in 1995. At the end of the earlier exploration work, a small cutting of white silica sand first exploited in the 1970s by ANM (now Norske Skog), was located between Pine Hill and the Styx Road in an area now known as the Eastern Quarry Area. Pioneer investigated this deposit in the vicinity of the Eastern Quarry by 23 shallow RC drill holes. Preliminary estimates suggested a resource in the order of some 0.75 – 1.5 million cu. m. of mostly low iron silica sand containing about 10% of high quality lump silica. Pioneer ceased operations at Electrona before any of this latter material could be used for silicon production.

Assay results from a number of subsequent, excavator generated pit samples by the North West Bay Co. Pty. Ltd. supported the high quality of the resource and, together with sizing determinations on a bulk sample, indicated that the sand might be suitable for the manufacture of table ware glass.

During its tenure of EL 17/1998, which contained these deposits, J.J. McDonald & Sons Pty. Ltd., using the air core drill sampling method, completed 43 drill holes totalling 553 m which outlined a raw material resource of about 6 million tonnes of loose silica ranging in size from very coarse to very fine.

The drilling also demonstrated that the deposit is more variable, complex and higher in iron oxides and other impurities than previous data suggested.

Laboratory sizing determinations indicated that the deposit is a possible source of silica flour as well as glass sand, while geological mapping and interpretation pointed to a small resource potential for hard rock silica as well.

Bench scale beneficiation tests and bulk sample processing tests, including acid wash tests on samples of the glass size fraction sand, showed that the -250 micron fraction could be upgraded to a high quality product containing only about 50ppm Fe_2O_3 without major environmental impact, with levels of iron as low as 10ppm a possibility.

Sources of good quality limestone and dolomite were identified in relative proximity to the silica sand deposit for eventual acid neutralization uses.

The company's activities in the marketplace identified the natural silica flour as potentially the deposit's most important component economically. This material provided the major focus for ongoing geological, processing and marketing activities, though the coarser size sand fractions and the hard-rock silica potential remain of interest for future attention under the appropriate market conditions.

In early 2004, EL tenure over the area was converted to a Retention Licence

In late 2004, J.J. McDonald & Sons Mining Pty. Ltd. formed a new holding and operating company, Maydena Sands Pty. Ltd., to which the Retention Licence and all of the former company's interests in the Maydena area were transferred in April 2005.

Since then, all activities are being conducted under the new Company name.

Details of past activities and outcomes are provided in reports listed in the Sections 7 and 8 below.

3. ACTIVITIES FOR PERIOD

These included:

3.1 Work Done

- Geology:

  Update of geological plans and sections. Update of resource plans and sections. Review and re-estimation of drill indicated resource position.

- Dating, using pollens in palaeosoils – completed.
- Mineralogical study – completed.

- Beneficiation:

  Successful completion of preliminary HIMF tests on the +40-250 micron raw material fraction at ERIEZ, Wales for the removal of iron and other magnetics.

  Discussions for bulk test in train.

  Commissioned further bench scale tests for the removal of rutile contaminant, using electrostatic separation under controlled conditions, by Robbins Metallurgical, Brisbane.

  Search continued for suitable methods to remove carbon and organic materials.

- Market related activities:

  Ongoing market research and monitoring – silica sand, silica flour and polysilicon.

  Attendance at China Glass 2011 – Shanghai, providing contacts with:

  Jinjing Group Co. - China

  Taiwan Glass Industry Group

  Innoceram – China

  Xiansait – China

  Wuxi Ding Long Co Ltd – China

  Fives Stein – France

  Contacts or meetings with:

  - Ssang Yong – silica flour, silica sand, silica rock
  - Samsung Corning, L.G. Chem, SAC – S.Korea via Chong Kuen Ahn of DKSH – Silica flour, Silica rock
  - Chem Spring Corp. – China – Silica sand
  - Arc International – UAE – Silica sand, Silica flour
  - Nasir Glass – Bangladesh – Silica sand

  - Gurok Turzin Mad A – Turkey – Silica sand
  - Stratum Resources – Sydney – Silica flour, Silica rock
  - Naturastone – Melbourne - Silica flour, Silica sand
  - SDI Limited – Melbourne - Silica flour
  - MHM Metals Ltd – Tasmania – Silica flour, Silica sand, Silica rock
  - Mintech Chemical Industries – Perth - Silica sand
  - Geowas – Togo, W. Africa - Silica flour
  - D.L. Hagen – US - Silica flour
  - Guan Tay – Perth – Rep. of Japanese interests - Silica flour
  - Giles Miranda – Perth – Rep. of Taiwanese interests – Silica flour, Silica sand
  - B. David – NSW – Silica flour
  - Sunday Solar Technologies – Penrith NSW – Silica rock
  - Cairo Fresh Export/Import – Egypt – Silica sand
  - Savinti – India – Silica sand, Silica flour
  - Durgo Minerals – India – Silica sand, Silica flour
  - North-West Enterprises – India – Silica sand

- Project Planning:
  - Reviewed road and rail transport logistics to port and beyond
  - Identified and assessing new potential site for processing plant
  - Initiated and progressing discussions with SEMF re environmental base line study

- Community relations:

  Occasional contacts with Maydena Development Association maintained

- Environmental

  Checked on re-growth at recently rehabilitated and re-seeded drill sites

3.2 Statistical Summary

Test Samples generated:

Naturastone	:	3 X 1Kg 3 X 6Kg
Naturastone	:	1 X 30Kg
Innoceram	:	1 X 1Kg silica flour 1 X 1Kg silica rock

No. of Samples Analysed	:	45
No. of Analyses	:	352
S.G. Determinations	:	12
Bulk Density Determinations	:	4

3.3 Expenditure

To Dec 2010 (RL Tenure only)	:	$576,183.00
Period Jan – Sep 2011	:	$ 44,331.00
Estimate Oct – Dec 2011	:	$ 26,077.00 (approx.)
Estimated Cumulative Total for period of RL Tenure	:	$646,591.00 (approx.)

4. RESULTS

4.1 Geology

Geological plans and sections were updated to incorporate the results of the RC deep drilling programme undertaken during the previous reporting period.

Interpretation of the results suggest that most of the sand deposit in the Eastern Quarry area probably formed on the flanks of an easterly-trending, collapsed or partly collapsed ridge of brecciated, silicified dolomite unit of unknown thickness over a distance of about 1,000m. It is truncated at its eastern and western extremity by north easterly trending faults with possible minor internal displacements.

As the width and attitude of this silicified source rock remain unknown, it is impossible to make any valid estimates of the silica bedrock resource tonnage at this stage.

The quality of this resource, as indicated by the recent deep drilling programme, falls well short of that required for silica rock feed for the manufacture of high or ultra-high purity polysilicon or monosilicon (Krummei 2011). Furthermore, the depth of any suitable materials, if found in quantity, would make extraction currently uneconomic.

In consequence, any further significant investigations into the silica bedrock resource have been suspended.

Prompted by market enquiries for silica products of different size bands, especially the coarser ones, the drill indicated resource position for low contaminant silica flour was re-assessed and low contaminant silica sand included in the resource envelope.

This review indicated in the order of:-

Silica flour	:	+25 – 215 microns	:	1.076 mil tonnes
Silica sand	:	+215 – 600 microns	:	0.328 mil tonnes

A small area in the central part of the deposit and a narrow zone up to about 50m wide along part of the northern edge of the deposit offer the possibility of adding to the above resource (Fig 3).

The flour and sand resource could be further augmented by grinding down and processing the +600 micron size fraction (oversize), estimated at around 15-20% of the deposit. This would otherwise be stored or consigned to waste.

4.2 Mineralogical Investigations

The ultimate purpose of this project was to contribute pertinent information for product improvement and process design.

The first stage of these investigations commenced toward the end of the last reporting period. It was aimed mainly at identifying any mineral species of boron, phosphorus and lithium.

For this purpose, polished thin sections were used, prepared from rock samples collected from areas reporting elevated concentrations of these elements. These were then examined using the Scanning Electron Microscope (SEM).

The second stage investigation concentrated on titanium minerals, in particular, rutile, and its location within the sand grains or silica crystal structure. Sample 90B-2 and sub-samples 90B-2-75200C and 90B-2-200500NC were used, the latter two being the conducting and non-conducting products of head sample 90B-2 after passing through an electrostatic separator.

The conducting fraction was expected to provide grains of free rutile while any remaining rutile enclosed in the silica grains would report in the non-conducting fraction and so give some indication as to the limits of rutile removal from the sand during processing.

A report on the results is provided in Appendix 2.

In Summary:

Despite considerable effort, no mineral species of boron or lithium have been found in the samples examined. These two elements only average about 3ppm and 1ppm or less, respectively, in the sand generally.

Phosphorus was noted as small but significant clusters of apatite in the silica grains which is the likely source of most of the elevated P205 values in silica flour and sand assayed.

Either stage identified, albeit in very small amounts or as rare single grains and very irregularly distributed, barite, pyrite, galena, cassiterite, wollastonite, chrome spinel, chalcopyrite and iron oxides.

Enigmatic is the rare occurrence of native metals and alloys including native Fe and Ti metal and alloys of Fe-V-Ti-Ni, Fe-Ni-G and Au-Cu. These may not be contaminants introduced during sample preparation.

Titanium seems to present a special problem. Head sample 90B-2 examined assayed 1050ppm Ti02 and was subsequently processed electrostatically down to 100ppm Ti02, which showed no trace of rutile or any other Ti mineral species in the non-conducting fraction. This may be a function of the small amount of material examined. There is the possibility that the titanium in this sample exists in solid solution with the silica.

A significant number of rutile and some ilmenite grains were identified in the conducting fraction in the finer +75-200 micron size band of Sample 90B-2-75200.

A number of zircon grains, all less than 10 microns, were observed in this fraction. These might provide suitable material to obtain zircon dates for the silicification phase of the bedrock dolomite.

4.3 Palaeodating

Towards the end of the last reporting period, 5 x 0.5 kg samples of organic and clay material, possibly representing palaeosoils, were collected from near the base of 5 previously drilled holes (Fig 3).

These were:

SAMPLE	HOLE	DEPTH	COMMENT
POL001	131	49 – 50	Dark choc.brown sandy clay
POL002	133	32 – 33	Dark brown soil with black carbonaceous layer
POL003	132	39 – 40	Dark choc.brown sandy clay and white frags
POL004	93	23 – 24	Choc.brown clay
POL 005	71	4 – 5	Dark brown clay; organic soil

Approximately 100gms of material was separated out from each of the above samples. These sub-samples were submitted for investigation to a University of Melbourne pollen expert, in association with sample preparation facilities in Canada.

Of the above 5 samples only POL005 provided suitable pollen and spore material for study.

The outcome indicates an age for the formation and spread of the Eastern Quarry sand deposit of Late Pliocene to Late Pleistocene, i.e., no older than about 2.6 million years or Upper Tertiary.

Details of this study can be found in Appendix 1.

4.4 Supplementary Assays

4.4.1 Zircon

SEM scans, part of the mineralogical study, identified the presence of zircon grains in sample 90B-2-75200C; all less than 10 microns. (Appendix 2).

10 replicate samples of the 90B-2 series were subsequently analysed for zircon. All showed zircon values below 10ppm. (Appendix 4).

These results suggest that any liberated, free zircons are likely to be removed by electrostatic methods. Further assays are needed to support this preliminary conclusion.

4.4.2 S.G. and Bulk Density Determinations

Four samples of processed +40 -250 micron silica flour, designated SG001 – SG004 were submitted to ALS Laboratory Services Pty Ltd for S.G. and Bulk Density determinations.

The bulk densities of the four samples varied from 1.12 to 1.60, averaging 1.33.

S.G. values of the silica of the four samples, as well as duplicate and triplicate determinations (12 in total) varied between 2.60 and 2.65, averaging 2.63. Details are in Appendix 4.

4.5 Other

Section 4.6 of last year's report discusses the results of electrostatic tests for the removal of, mainly, rutile with end-product assay results presented in the latter report's Appendix 7 (Krummei, 2011).

Subsequently, head sample assays were obtained for this test material. The relevant sample fractions are 90B-2-75, 90B-2-75200 and 90B-2-200500, all of which are sub-samples of 90B-2.

The assay results of these fractions are presented in Appendix 6 of this report for the sake of completeness.

4.6 Beneficiation

4.6.1 HIMF Tests - ERIEZ

First pass HIMF Tests 1 and 2 early in 2011 by ERIEZ, Wales, on portions of a 25kg sample of silica flour in the +40 -250 micron size band at a standard field strength of about 6,500 gauss (0.65 Tesla) were somewhat mixed, though mildly encouraging. Procedures are described in Appendix 3.

An overall 50% reduction of iron from a feed of 40ppm Fe_2O_3 to 20ppm is evident, but the target of 10ppm Fe_2O_3 was not achieved.

Surprisingly, TiO_2 was reduced from 60ppm to 20ppm or less and Al_2O_3 decreased from 70ppm to around 50ppm. (Appendix 3).

By way of a check and comparison, a small sample of about 1kg of the above processed material was then passed through a WHIMS unit at ERIEZ, Melbourne, at a magnetic field strength of about 20,000 gauss without further removal of iron, though TiO_2 was reduced from 20 to 10ppm (see Appendix 5, Test 1 and Test 2).

At the suggestion of ERIEZ, Wales, a second round of HIMF testing (designated Test 3) was undertaken on the material remaining (6kg approx.) from the first round at a maximum field strength of about 10,000 gauss (1 Tesla).

This test successfully achieved the objective of 10ppm Fe_2O_3 or less. Furthermore, TiO_2 was reduced to 10ppm or less, accompanied by significant reductions of K_2O and Na_2O to around 10ppm. Al_2O_3, CaO, MgO and P_2O_5 remained relatively unchanged in the ranges of 40-60ppm, 310-400ppm, 50-70ppm and 80-90ppm respectively. (Appendix 3).

In light of the positive results achieved with Test 3, ERIEZ, Wales, recommended further definitive tests on a larger sample of about 100kg. This would entail desliming and screening of about 200kg of raw material to obtain the requisite amount of dry material in the appropriate size band. The amount of material to be treated was too large for several of the operators approached, but ALS-Ammtec, Heybridge, indicated willingness to consider the proposition and to set up the necessary sample preparation facility. A response on the detailed technical and financial aspects of this procedure is awaited.

4.6.2 Electrostatics

These tests are aimed mainly at the reduction of titanium impurities in the form of rutile, with possible added benefits being the removal of some zircon and carbon contamination as well as any other non-magnetic, conductive materials.

After successful bench top scoping trials on 3x1kg samples at the CSIRO, Melbourne, towards the end of 2010 (Krummei 2011), rutile was included in the mineralogical investigation (See Section 4.2) to determine to what extent it may be occluded in the silica grains and remain a product contaminant after electrostatic processing. Discussions with CSIRO regarding further ES testing for both TiO2 and carbon were halted, pending outcomes of the mineralogical investigations. Unfortunately, the relevant CSIRO researcher left that organisation before the mineralogical studies were completed. The ensuing search for a replacement organisation eventually identified Robbins Metallurgical Pty Limited of Brisbane to continue with the electrostatic tests for rutile removal. The latter organisation recently submitted a test proposal for work, planned to commence early in 2012, using larger samples of about 15 kg for each of the three size bands of interest.

4.7 Project Planning

4.7.1 Plant Site

The south western segment of RL2/2003 overlaps a part of a pine plantation on private lands owned by Norske Skog. This segment (Fig 2), which lies to the south of the Western Quarry and only about 500m–600m downhill westward of the Eastern Quarry silica sand deposit, is essentially flat and ideal for the location of a processing plant and associated infrastructure such as water dams, slimes dams, waste dumps, etc. Discussions were held with Norske Skog with regard to access to part of this land, either via purchase, lease or rent. Norske Skog pointed out that this was valuable prime land for growing pine trees, particularly in the light of the move by the forestry industry from native to plantation timber. Also requested, before further serious consideration of the proposal, were project details which could not be supplied at the present time. The area has since been replanted with pine seedlings.

Meantime, in the latter half of the year, Forestry Tasmania clear-felled and harvested Coupe 37G of about 12 hectares adjacent to the west of the Styx road and just south of the sealed Gordon River road, from which it is screened off by a 100m wide buffer zone of native vegetation. The land slopes gently to the north (Fig 2). It is close to a sealed road and 3-phase power off-take, year-round water supply and, at its nearest points, about 800m north of the centre of the Eastern Quarry silica sand deposit. Although some terracing may be necessary, there appears to be ample room to accommodate a processing plant with associated support infrastructure. It seems to offer viable alternatives to the Norske Skog land discussed above. This opportunity requires further consideration and investigation.

In the light of this development, consideration is being given to initiating a base line environmental study in conjunction with Hobart-based SEMF.

4.7.2 Logistics

General:

Transport logistics and associated costs play an integral role in any operation involving the movement of bulk commodities. In this context, aspects of transport systems in Tasmania, with regard to methods of product delivery from quarry site to port and beyond, including road, rail and ports as they impact on this project's logistics, FOB and CIF product costs, continue to be a matter of concern. This is particularly so in the light of changes and curtailment of seaborne. Recent changes and curtailment to sea-borne services from Bell Bay are a case in point.

Three main land transport alternatives are under consideration and ongoing review:

(a) B-Semi or B-Double road haulage, quarry site to port;

(b) B-Semi or B-Double road haulage to Brighton Hub, thence by rail to port;

(c) B-Semi or B-Double road haulage to Norske Skog at Boyer, thence by rail to port;

Road:

Estimates of road transport costs from quarry site, Maydena to Bell Bay, received from Lloyds North, suggest costs of $37.50 - $48.75 per tonne of product in 20ft containers with 20tonnes per container. This equates to approximately $0.125 - $0.163 per tonne/km.

On that basis, product delivery costs by road in 20ft containers @ 20t from Maydena to the Norske Skog loading area at Boyer, would be in the order of $7.75 - $10.11/tonne. From Maydena to Brighton Hub, the cost would be around $10.00 - $13.04/tonne.

Further enquiries aimed at maximising load efficiencies indicated that, under certain conditions, 20ft containers carried in the B-Semi mode could be loaded up to 29tonnes, while those in the B-Double mode could carry 21tonnes each. In each case, the cost per tonne carried would be reduced.

With the very recent cessation of container shipments from the port of Bell Bay, estimates for road transport costs are being sought from Maydena to the Ports of Burnie and Devonport.

At this stage, the road haulage to port appears to be the most reliable transport option despite the implied higher costs compared to rail, the “carbon” tax and greater environmental and social impacts.

The fact that rail transport would reduce vehicle movement and significantly reduce carbon dioxide emission per tonne of product transported to port, makes one of the rail-road options more attractive in the medium to longer term.

Rail:

These factors focus greater attention on the newly restructured TasRail, its capabilities, current limitations and upgrades to this critical state infrastructure and services.

The TasRail Annual Report for 2010/11 provides a sobering set of data on the company's operations and capital expenditure requirements across its network.

In Summary:

Employees	:	210
2010/11 Revenue	:	$30 million
Of which Freight	:	$26,336 million
Total Freight moved	:	2,385,529 tonnes
Of which Total Ship Loading Tonnes	:	450,462
Operational track	:	632 route kilometres
Non-operational track	:	211 kilometres
Train Service per week	:	115
Bulk Commodity Trains	:	4542 in 2010/11
Running Performance	:	84-85% Departure. 77-83% Arrival.
Locomotives	:	34 - ?36
Wagons	:	374
Fleet	:	+ 30 years old, unreliable, fuel inefficient, 7 wagon classes, 3 different load carrying capacities, mixed single and duel braking systems.

Rail Distances:

Boyer to Western Junction	:	14km approx.
Brighton Hub to Western Junction	:	155km approx.
Western Junction to Bell Bay	:	47km approx.
Western Junction to Devonport	:	113km approx.
Western Junction to Port of Burnie	:	153km approx.

Although progress with the construction of the $78mil. Brighton Transport Interchange (commonly known as the Brighton Hub) is said to be satisfactory and slated for opening in early 2012, TasRail outlines a series of significant problems to be addressed over the next 3-5 years on the Brighton – Western Junction – Burnie line, affecting both physical infrastructure and rolling stock.

These include:

- Replacing or repairing major bridges
- Need for extensive track upgrade due to the highly degraded state of the rail and sleepers in many places.
- Mainline derailments.
- Need for a new fleet of locomotives and rolling stock.

Despite the fact that more than $110m is said to have been spent already since 2007, the TasRail Chairman indicated (Hansard, 2011) that the latter company will need more than $500m over the next 3-5 years for new rolling stock and for upgrades to sections of highly degraded operational track, amongst other items.

In the context of the current limitations and restrictions, recent guidelines from TasRail for container transport with silica flour suggest costs of around $30.72/t, Brighton Hub to Burnie Port. This includes the return cost of empty containers to Brighton. To this estimate needs to be added the sum of $10.00/t - $13.04/t for road transport from Maydena to Brighton, resulting in an overall road/rail combination, Maydena to Burnie Port, cost estimate of $40.42/t - $43.76/t.

Despite some small improvements to date, the future holds many significant challenges for TasRail and a step in the right direction has just been taken with the signing of a $60 million purchase contract for 17 new locomotives which will double haulage capacity to about 3.5 million tonnes.

Contacts have been established with TasRail personnel and developments will be monitored on an ongoing basis.

Ports:

Due to issues and uncertainties involving the Port of Hobart, this company focused on the Port of Bell Bay and its facilities as a more convenient and cost effective way to store and direct ship product to Asian and other world markets.

Thus, it was extremely disappointing to learn at the beginning of 2011 that the port operators decided to discontinue direct shipments to Asia. Instead, goods are now trans-shipped via the Port of Melbourne from both Bell Bay and Burnie, thereby significantly adding to the cost of seaborne freight and CIF product prices. The problem was compounded by TasRail's decision, fortunately since revoked, to discontinue rail services to the Port of Bell Bay. This would have entailed land transport of product from Maydena to Bell Bay by road.

The situation was exacerbated further by the recent decision to cease container shipments from Bell Bay altogether, in favour of either Devonport or the Port of Burnie.

Clearly, these decisions erode seriously the competitiveness of Tasmanian export products in the world markets and discourage investment in the state.

The suitability of the ports of Devonport and Burnie for export of this company's products requires closer assessment.

4.8 Marketing

4.8.1 Overview - Polysilicon

A watching brief was maintained on the PV polysilicon industry in the event of any future off-take opportunities for small parcels of silica rock by-product from the Eastern Quarry silica sand deposit.

The stability of PV polysilicon spot prices in range of US$60-70/kg prevailing in the latter half of 2010 and into early 2011, could not be maintained. These have now crashed to around US$25/kg in December 2011 and placed the polysilicon industry in turmoil. These price levels are the lowest in eight years and lie close to, or below, the operating costs of many producers. The main causes of this downward price trend is a combination of oversupply, overcapacity, dumping, reduction in the demand for solar panels due to cuts in feed-in tariff subsidies in Spain, Germany, Italy and the Czech Republic, amongst others, and the latest round of the Global Financial Debt crisis. The consequences now impacting on the polysilicon industry are production cuts, cancellation of supply or off-take contracts, rationalisations, mergers, bankruptcies, and staff lay-offs.

Over the current year, the short-term outlook for the polysilicon industry has deteriorated markedly and rapidly. Established companies with longer term off-take contracts, especially for high quality product, appear to be better placed in the market place than new entrants reliant on spot prices.

On the positive side, research into new polysilicon production method, product improvements and conversion efficiencies, as well as lowering solar panel production costs, suggest that the PV industry should emerge stronger and more efficient in the medium term and beyond.

4.8.2 Overview – Display Glass

No thanks to the current Global Debt Crisis, the low to modest growth in the global display glass business expected for 2011 (Krummei 2011) did not persist far into the year.

Specialty glass maker, Corning, is a global leader in the production of display glass with about 60% market share in LCD glass. It revised downwards its earlier estimate for global demand for various types of display glass in 2011 from 3.8 billion sq.ft. to 3.0 billion sq,ft. Recently, a production capacity fall of 25% by the end of the December quarter was announced to match lower demand.

Forward estimates for 2012 have not been provided, presumably due to the uncertainties in the market place. The currently unfolding Global Financial (Debt) Crisis leaves little room for optimism.

4.8.3 Marketing Activities

Marketing activities were stepped up during the year, with the main emphasis on silica flour and silica sand. These efforts were supported by the company website and membership of the GlassGlobal marketing platform which generated a range of enquiries. Additional contacts were achieved during attendance at China Glass 2011.

Most of the contacts dealt with are listed in Section 3.1 above. Many related to silica sand carrying much less demanding chemical specification. Small test samples were supplied when requested.

A feature of note was the lack of interest from Europe and Japan, offset by an increase in responses from India, South Korea, China and, surprisingly, mainland Australia. An enquiry from Taiwan related to very high quality IOTA standard silica flour and rock which the Maydena Sands material could not satisfy.

The most important of these contacts and enquiries were:

<u>JinJing Group Co. – China</u>

This large Chinese glass producer requires a supply of silica sand feed for the production of low iron solar panel cover glass. The Maydena Sands material was well within specifications. However, the large volumes required, the need for bulk transport and low price offered, made this proposition unattractive at this stage.

<u>Innoceram – China</u>

This company is seeking high purity silica for PV glass and fused silica rollers. Samples of sand supplied to, and tested by, this company assayed 40 ppm iron (as Fe_2O_3?) and appear to meet its required chemical specifications. Results for rock sample assays and action by this company are awaited and are overdue.

Ssang Yong – South Korea

Tests by this company on sample forwarded last year were completed early this year. Head sample assay results prior to despatch are given in Appendix 6. (101B-3-series). The check tests were deemed successful, but their product price limits and the unexpectedly amended delivery date could not be met. The company decided to source material elsewhere.

Arc International – UAE

This large French manufacturer of crystal and glassware enquired about high purity silica sand and flour for its operation in the United Arab Emirates. The company's chemical specifications can be met, but it has a preference for sand in bulk shipments. Discussions are on-going, intermittent.

NaturaStone – Australia

This company is a producer of acrylic engineered stone in the process of expansion. Its products are used mainly for domestic decorative and functional purposes. Small samples of 3 grades of silica sand, supplied for visual assessment of colour and texture, were accepted. Subsequently, 3 x 6 kg high purity samples, consisting of material in the +20-40microns, +40-250microns and +250-400microns size bands were requested for more rigorous testing. Head sample assays are given in Appendix 6 (T681 series). Results are awaited. If successful, tests using 1 tonne of material per size band will be required.

SDI Limited – Australia

This company uses high purity silica flour in the manufacture of speciality glass for dental applications. Visual examination of a small sample indicated that colour and chemical quality are acceptable. Annual quantities currently used are small but growth has been flagged. A useful contact in this high tech area.

North-West Enterprises – India

This commodity trader is attempting to source a supply of silica sand for its client, Videocon, a multi-billion Indian company with a division producing electronic display goods. It has been pointed out that the chemical quality of the Maydena material is too good and the size band too fine relative to specifications, but that it may be suitable for blending. The matter is under consideration by the principals. A response is pending.

4.9 Environmental

This year's activities had no environmental impacts..

4.10 Rehabilitation

None was required as activities caused no disturbance.

A check on regrowth at recently rehabilitated and re-seeded drill sites (Krummei 2011) showed incipient growth of tree and shrub seedlings. Re-seeding is apparently successful.

5. CONCLUSIONS AND RECOMMENDATIONS

- Due to the unexpected and rapid reversal of fortunes in the global polysilicon industry in 2011, any further involvement in the near to medium term will be reduced and confined to a monitoring role only.
- Despite the dampening effects of the current financial crisis, there appears to be an underlying demand for display glass, technical glass and for various other high tech applications which warrant persistence with this project.
- Marketing and promotion efforts resulted in an increased number of enquiries, with several positive outcomes. These should continue unabated, despite the potentially difficult economic times ahead.
- Paleodating using spores provided a time horizon for the silica sand deposit.
- Mineralogical studies provided useful information for, and possible constraints on, the beneficiation process. This work should continue with a focus on carbon and organic particle contamination as an aid to their removal.

- Zircons identified by SEM should be used to date the introduction of the silica into pre-existing bedrock as an aid to regional exploration for similar deposits.
- After initial success, further tests should continue on the removal of rutile contaminants using electrostatics.
- Similarly, after the initial success of the HIMF tests to remove iron, further confirmatory tests should be undertaken on a larger sample.
- Clearly, efforts are being made to improve rail freight services in Tasmania. Progress needs to be monitored closely, as well as port-side developments and shipping arrangements out of and into Tasmania.
- A potentially suitable site for a processing plant has been identified. This opportunity needs to be followed up and brought into the project planning process.
- Project capex/opex should be reviewed and updated regularly in the light of changing business conditions and costs in Tasmania.

6. PROPOSED FUTURE ACTIVITIES

- Mineralogical investigation of the nature of carbon/organic contaminants.
- Continue with the next phase of HIMF separation tests with ERIEZ.
- Continue with tests to remove rutile, zircon, etc. using electrostatics.
- Investigate appropriate methods to remove carbon and organic particles.
- Subject to successful completion of tests currently in progress, investigate and, if warranted, apply methods to obtain 3X1 tonne samples in the required size bands for suitability tests for acrylic engineered stone.
- Commence environmental baseline study in and around the proposed sand extraction and newly identified processing areas.
- Continue with product development and promotion and identify further sales opportunities with the aim to secure off-take arrangements.
- Continue with product marketing, including attendance at China Glass 2012, and with follow-up activities on 2011 market contacts and enquiries.
- Continue monitoring logistic support systems in Tasmania.
- Continue with reviews of process plant and design, sand extraction concepts and capex/opex estimates.
- Maintain contact with State and local regulatory authorities, as well as local civic associations and groups, on project related matters.

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APPENDIX 1

PALYNOLOGICAL REPORT

Palynological age determination on samples from Tasmania.

By Barbara E. Wagstaff
School of Earth Sciences
The University of Melbourne

April 2011

Palynological age determination on samples from Tasmania.

SUMMARY:

Palynological examination was carried out on five samples from Tasmania in an attempt to determine the age of the samples. Samples POL001-POL004 were barren of spores and pollen. Sample POL005 contained a diverse, well-preserved and abundant palynomorph assemblage that allowed the sample to be given an age of Late Pliocene to Late Pleistocene.

Palaeosoil sample	Sample type	Palynological Zone	Age
POL001	Loose sediment	None determined	None determined
POL002	Loose sediment	None determined	None determined
POL003	Loose sediment	None determined	None determined
POL004	Loose sediment	None determined	None determined
POL005	Loose sediment	*Tubulifloridites pleistocenicus* Zone	Late Pliocene to Late Pleistocene

MATERIALS AND METHODS:

Mr. Gerhard Krummei of Maydena Sands Pty Ltd provided 5 loose sediment samples from Tasmania for palynological age determination. Global Geolab Ltd. in Calgary Canada processed the samples using standard palynological processing involving mineral digestion and oxidation. Two oxidised slides were provided for each sample, as well as one kerogen slide. One oxidised slides was counted to provide abundance data and both slides were scanned to search for age indicator species. Age determination was made using the current southeast Australian biostratigraphy (attached to this document) as published in Monteil (2006). This has been updated to the Gradstein (2004) time scale. Specific information on the Tasmanian record was provided by the work of Macphail et al. (1993).

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Client: Maydena Sands Pty Ltd **Date:** 8/04/2011

Project: Tasmania

Sample type: Loose sediment **Samples ID** POL001, POL002, POL003, POL004

Yield (spore-pollen): Barren
Diversity (spore-pollen): Barren
Depositional environment: None determined
Preferred Age: None determined
Zone: None determined
Confidence rating: N/A
Index species: None
Maximum age: N/A
Minimum age: N/A
Contaminants: None
Reworked species: None
Abundant Taxa: N/A

Comments: These samples were all barren of spore-pollen. An examination of the kerogen (unoxidised) slides showed that they contained high amounts of dispersed brown organic fragments and less abundant dark brown to black fragments. An examination of the oxidised slides showed that oxidation had removed the abundant dispersed brown organics and the dark brown-black (charcoal and or naturally oxidised fragments) remained. These samples all suggested that oxidation of the spore-pollen had occurred after burial as often happens in soils or samples exposed to weathering.

Client: Maydena Sands Pty Ltd **Date:** 8/04/2011

Project: Tasmania

Sample type: Loose sediment **Sample ID** POL005

Yield (spore-pollen): High
Diversity (spore-pollen): High
Depositional environment: Fluvio-lacustrine, probably a swamp
Preferred Age: Late Pliocene –Late Pleistocene
Zone: *Tubulifloridites pleistocenicus* Zone
Confidence rating: High
Index species: *Monotocacidites galateus, Quintiniapollis psilatispora, Tubulifloridites antipodica, T. pleistocenicus*
Maximum age: Late Pliocene based on the first appearance of *Tubulifloridites pleistocenicus*
Minimum age: Late Pleistocene based on the last appearance of *Quintiniapollis psilatispora* that may have survived up to Oxygen isotope stage 5 (Macphail, 1993) i.e. approx 70,000years BP.
Contaminants: None
Reworked species: None
Abundant Taxa:
1. Abundant (>30%): Epacridaceae
2. Commmon (5-30%): Casuarinaceae, Restionaceae

Comments: This palynomorph assemblage has an abundant and high diversity Late Pliocene-Late Pleistocene assemblage. Even though the assemblage had high amounts of pollen in the families Epacridaceae and Restionaceae and thus obviously represents a swamp, there was still a reasonably diverse floral input from the surrounding region to allow an age to be determined.

SPORE-POLLEN OBSERVED IN SAMPLE POL005

Fossil taxon	Modern analogue
Fungal cells and hyphae	**Fungal cells and hyphae**
Algae	
Zygnemataceae	Zygnemataceae
Bryophytes	
Steriesporites antiquasporites	*Sphagnum*
Ferns	
Cyathidites spp.	*Cyathea*
Gleicheniidites spp.	Gleicheniaceae
Laevigatosporites spp.	Monolete psilate spores
Matonisporites ornamentalis	*Dicksonia antarctica* type
Polypodiisporites histiopteroides	*Histiopteris incisa*
Gymnosperms	**Gymnosperms**
Microlatidites palaeogenicus	*Pyllocladus*
Phyllocladidites mawsonii	*Lagarostrobus*
Podocarpidites spp.	*Podocarpus*
Podosporites erugatus	*Microstrobus*
Angiosperm trees and shrubs	
Casuarininidites cainozoicus	*Allocasuarina*
Ericipites spp.	*Ericales* spp.
Hakeidites spp.	*Hakea/ Grevillea*
Monotocidites galeatus	*Monotoca*
Myrtaceidites eucalyptoides	*Eucalyptus*
Myrtaceidites sp. A	*Melaleuca* type
Nothofagidites asperus	*Nothofagus cuninghamii* type
Proteacidites spp.	Proteaceous taxa genus indet
Quintiniapollis psilatispora	*Quintinia*
Tricolporites (*Richea* type)	*Richea*
Shrubs and Herbs	
N/A	*Centrolepis*
Chenopodipolllis chenopodiaceaoides	Chenopodiaceae-Amaranthaceae
Tubulifloridites antipoda	Asteraceae (Tubuliflorae)
Tubulifloridites pleistocenicus	*Cassinia arcuata* type
Droseropollis	Droceraceae
Graminidites spp.	Poaceae
Haloragacoidites halaragoides	*Haloragis*
Liliacidites spp.	Liliaceae
Milfordia hypolaeonoides	Restionaceae
Rhoipites ampereaformis	*Amperea*
Rhoipites indet sp.	
Tricolpites indet spp.	

Australian Government
Geoscience Australia

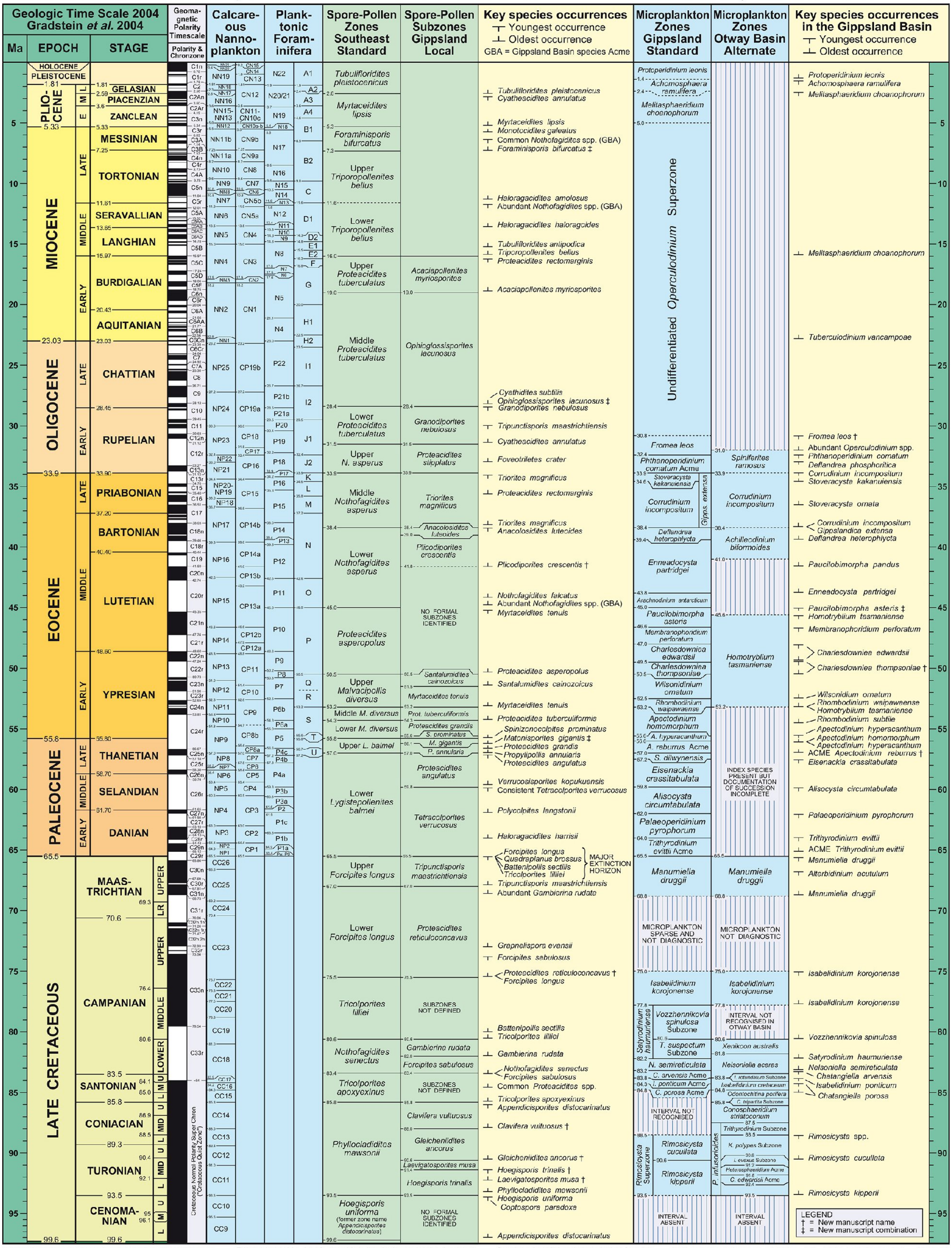
LATE CRETACEOUS – CENOZOIC PALYNOLOGY ZONATIONS GIPPSLAND BASIN

Alan D. Partridge — Biostrata Pty Ltd

VCEMP Virtual Centre of Economic Micropalaeontology & Palynology

Geoscience Australia — 2006 Timescale-VCEMP Project

Geoscience Australia publication ISBN: 1 921 236 05 1 – Chart 4 of 4.



Acknowledgement: The author thanks Geoscience Australia and the Virtual Centre of Economic Micropalaeontology and Palynology (VCEMP) for the scientific assistance and financial support in the compilation of this chart. Alan D. Partridge publishes with the permission of the Chief Executive Officer, Australia.

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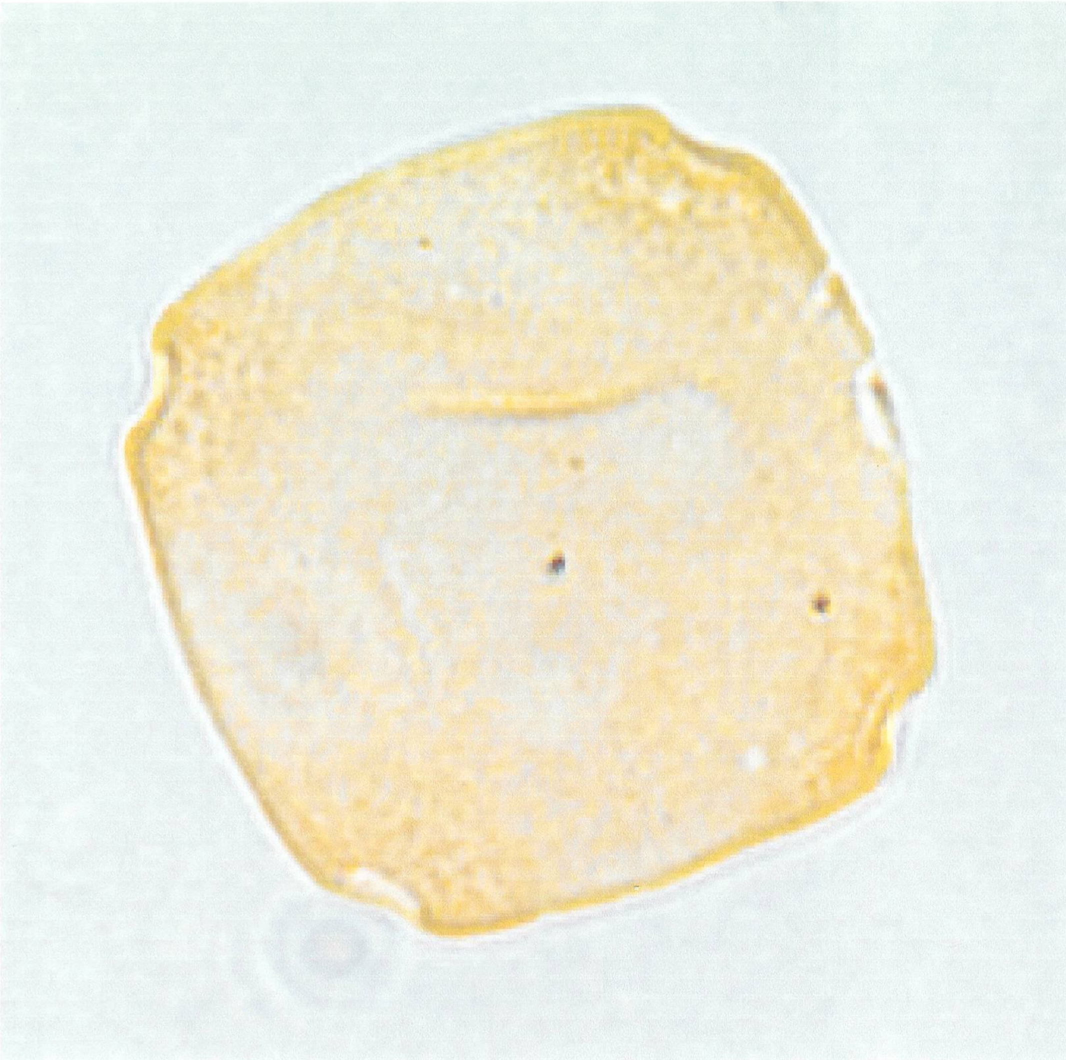
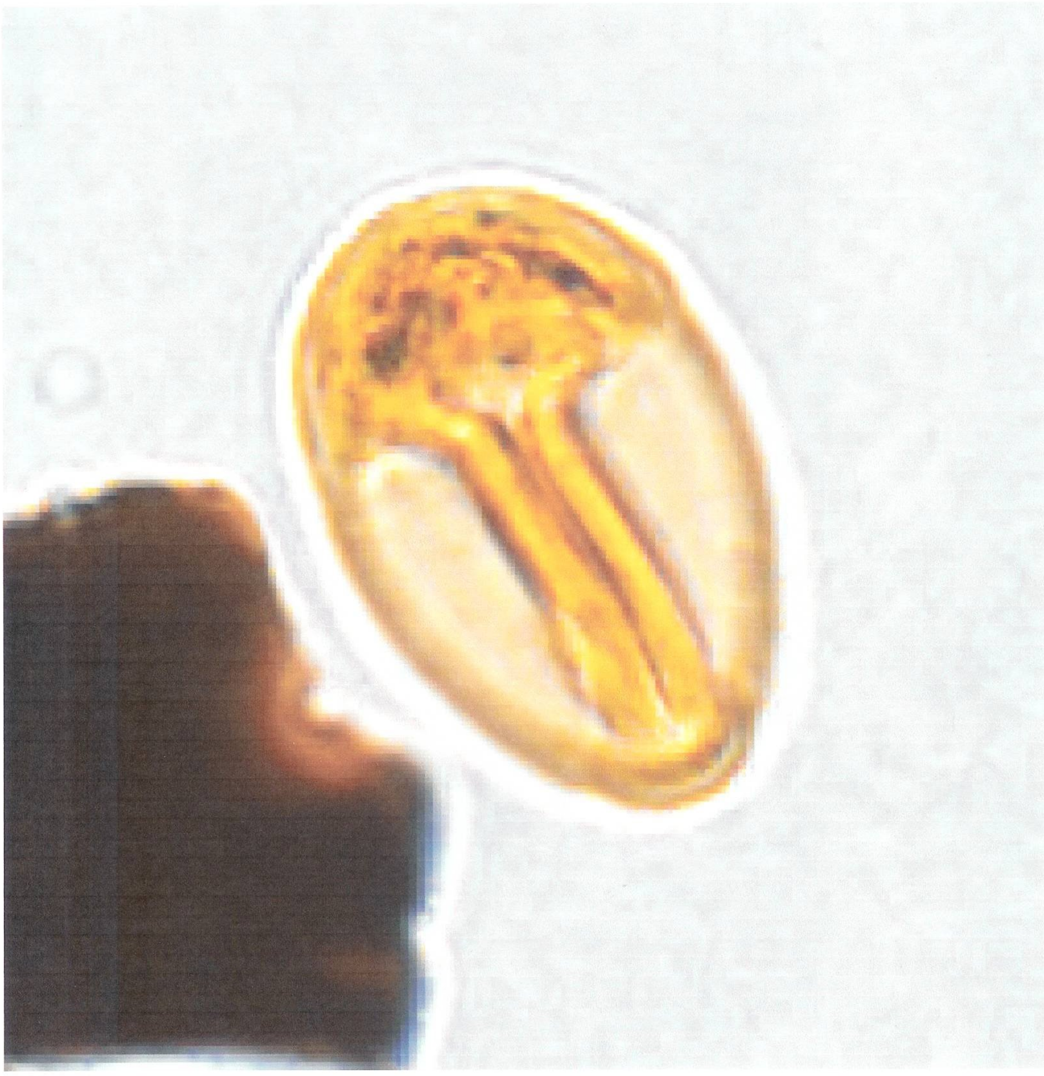
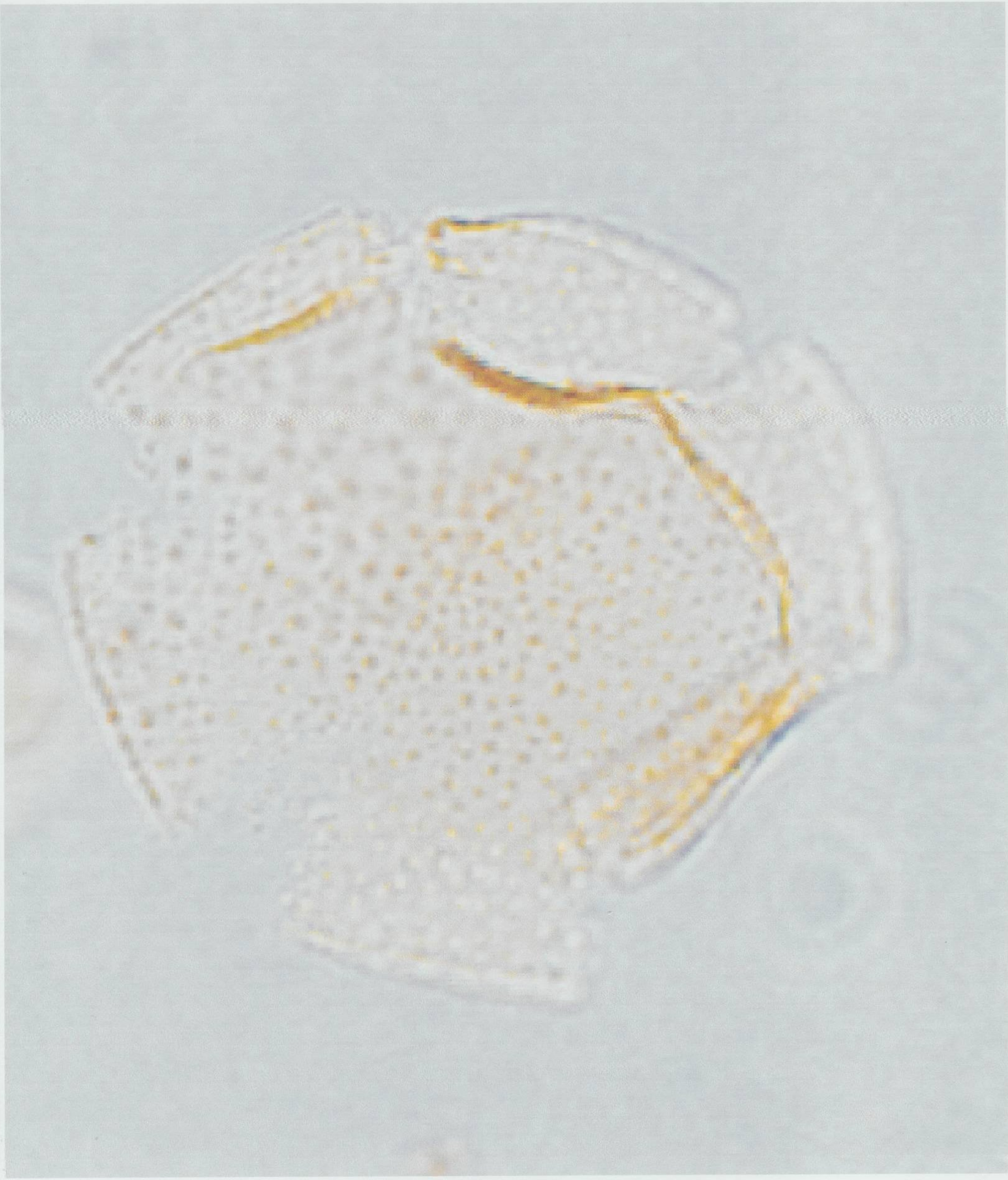


4 pored Casuarinaceae

Epacridaceae



Monotocidites galeatus



Nothofagidites asperus

APPENDIX 2

MINERAL PHASES IN SILICA SAND SAMPLES

FROM THE MAYDENA SANDS PROPERTY

Mineral phases in silica sand samples from the Maydena Sands Property

Reid R. Keays
School of Geosciences
Monash University

12 November 2011

This Report is on a separate disk

APPENDIX 3

ERIEZ MAGNETICS

LABORATORY TEST REPORT

CONFIDENTIAL INFORMATION
A: Maydena Sands Pty Ltd
B: Eriez Magnetics Europe Ltd

LABORATORY TEST REPORT

Eriez Magnetics Europe Limited
Manufacturing, Design and Laboratory Facility.

Greenway,
Bedwas House Industrial Estate,
Bedwas,
Caerphilly CF83 8YG
United Kingdom

tel 029 2086 8501
International
+44 029 20868501

fax 029 2085 1314
International
+44 029 20851314

e-mail
eriez@eriezeurope.co.uk

www.eriez.com

Report for:	**Maydena Sands Pty Ltd** **Suite 28, 487 St Kilda Road** **Melbourne Vic 3004** **AUSTRALIA**
Contact Name:	**Gerhard Krummei**
Test Number:	**T3210**
Eriez Reference:	**AU1900**
Date:	**09 FEBRUARY 2011**
Page:	**1 of 5**

Laboratory Test Report Contents

1. INTRODUCTION

Eriez Magnetics Europe Ltd has been asked to undertake a laboratory test programme to investigate methods of dry magnetic separation on Fine Silica sand/Silica Flour.

2. SAMPLES RECEIVED

One sample as follows:

MATERIAL COMPOSITION

SiO2	99.5%
Fe3O4	40ppm

PARTICLE SIZE

+40 - -250microns

OBJECT

Remove Fe bearing minerals including any illmenite and garnets.
Fe2O3 - <10ppm

CAPACITY

10t/h

3. EQUIPMENT

- Eriez® Model RE300 300mm Ø Rare Earth Roll Magnetic Separator
- Eriez® Model HI-Filter wet Magnetic Separator

4. PROCEDURE

RE Roll:

A test was carried out using the Eriez® Model RE300 300mm Ø Rare Earth Roll Magnetic Separator the procedure was as follows:

- Representative sample of approximately ~2.0 kg taken from the feed material.
- The representative sample was fed under controlled conditions to the Magnetic Separators using a single stage system.
- The magnetic and non-magnetic fractions were weighed and bagged.

HI-Filter:

For the HI Filter test a pre-determined weight of sand was extracted and added to a pre-determined volume of water in a feed preparation vessel. The resulting slurry was then agitated by means of a mechanical stirrer until dispersed and homogeneous. The dispersed slurry was then pumped by means of a pneumatically operated reciprocating diaphragm pump at an even flowrate through the energised Laboratory HI Filter and the resulting non-magnetic product collected. The HI Filter was then flushed with the magnet still energised and the flushing's (labelled "middlings") collected separately.

The HI Filter was then de-energised and a combination of water and compressed air used to discharge the magnetic particles collected in the matrix and this also collected separately (labelled "magnetics").
The background magnetic intensity for the test was 0.65 Tesla.
A matrix composed of 3:1 FEX/MEX expanded metal mesh was tested. The middlings, magnetics and non-magnetics fractions were filtered and then dried in an oven at 105°C.

5. RESULTS

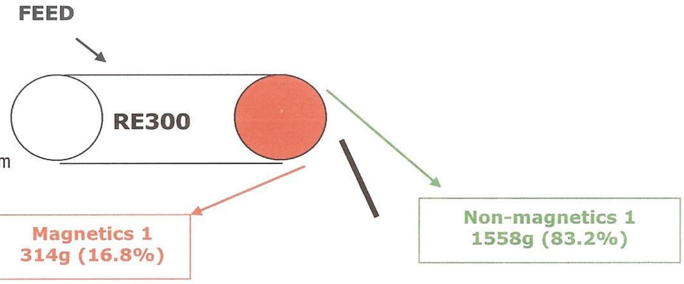
Test 1

RE Roll Tests:

Capacity: 1.0/t/h

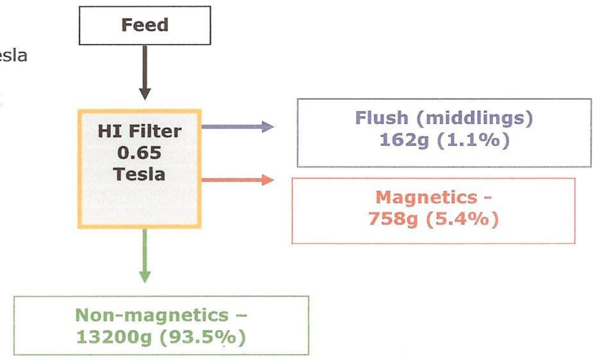
Belt speed: 60m/min

Splitter Pos: A:161mm



Test 2

Magnetic field: 0.65 Tesla
Flow rate: 4.7cm/s
Matrix load: 63.0g/cm2



6. CONCLUSIONS

Both the preliminary magnetics and non-magnetics fractions were examined by means of a RE Tube Magnet, no particles were attracted from the non-magnetics. From the magnetics some opaque particles were attracted – these appeared to be slivers of ferrous metal rather than natural mineral particles.

It was then decided to carry out a wet test for best possible separation.

Please note that due to the nature of our testing system we may introduce more iron than taken out.

For Eriez Magnetics Europe Ltd

R. Greenway

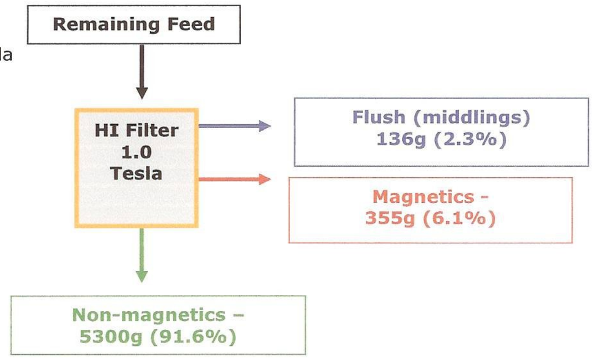
Name: Raith Greenway

Position: Laboratory Engineer

Additional test: 21/6/2011

<u>Test 3</u>

Magnetic field: 1.0 Tesla
Flow rate: 4.5cm/s
Matrix load: 25.8g/cm2



Non-Magnetics

For Eriez Magnetics Europe Ltd

R. Greenway

Name: Raith Greenway

Position: Laboratory Engineer

Australian Laboratory Services Pty. Ltd.
32 Shand Street
Stafford
Brisbane QLD 4053
Phone: +61 (7) 3243 7222 Fax: +61 (7) 3243 7218
www.alsglobal.com

Finalized Date: 9- MAR- 2011
Account: MCDSON

Project: Silica Sands + Li

CERTIFICATE OF ANALYSIS BR11025831

Sample Description	Method / Analyte / Units / LOR	ME-ICP64 Al2O3 % 0.001	ME-ICP64 CaO % 0.001	ME-ICP64 Cr2O3 ppm 1	ME-ICP64 Fe2O3 % 0.001	ME-ICP64 MgO % 0.001	ME-ICP64 MnO % 0.001	ME-ICP64 TiO2 % 0.001	ME-ICP64 V2O5 % 0.001	ME-ICP64 Na2O % 0.001	ME-ICP64 K2O % 0.001	ME-ICP64 P2O5 % 0.001	ME-CON02 Li ppm 1
Test 1 T3210- 1		0.004	0.031	<1	0.002	0.005	<0.001	0.002	<0.001	0.001	0.014	0.008	<1
Test 1 T3210- 2		0.006	0.034	<1	0.002	0.005	<0.001	0.002	<0.001	0.003	0.004	0.009	<1
Test 1 T3210- 3		0.032	0.031	<1	0.009	0.007	<0.001	0.002	<0.001	0.003	0.013	0.008	<1
Test 1 T3210- 4		0.004	0.031	<1	0.003	0.005	<0.001	0.002	<0.001	0.001	0.005	0.009	<1
Test 2 T3210- 1		0.004	0.035	<1	0.002	0.005	<0.001	<0.001	<0.001	0.001	0.005	0.008	<1
Test 2 T3210- 2		0.006	0.034	1	0.003	0.005	<0.001	0.002	<0.001	0.001	<0.001	0.009	<1
Test 2 T3210- 3		0.006	0.034	<1	0.002	0.005	<0.001	0.002	<0.001	0.001	<0.001	0.008	<1
Test 2 T3210- 4		0.004	0.034	<1	0.002	0.005	<0.001	<0.001	<0.001	0.001	<0.001	0.009	<1

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Finalized Date: 9- MAR- 2011
Account: MCDSON

Project: Silica Sands + Li

QC CERTIFICATE OF ANALYSIS BR11025831

Sample Description	Method / Analyte / Units / LOR	ME- ICP64 Al2O3 % 0.001	ME- ICP64 CaO % 0.001	ME- ICP64 Cr2O3 ppm 1	ME- ICP64 Fe2O3 % 0.001	ME- ICP64 MgO % 0.001	ME- ICP64 MnO % 0.001	ME- ICP64 TiO2 % 0.001	ME- ICP64 V2O5 % 0.001	ME- ICP64 Na2O % 0.001	ME- ICP64 K2O % 0.001	ME- ICP64 P2O5 % 0.001
STANDARDS												
BCS267		0.642	1.565	143	0.790	0.030	0.158	0.160	0.002	0.051	0.128	0.025
Target Range - Lower Bound		0.789	1.625		0.734	0.054	0.138	0.157		0.055	0.121	
Upper Bound		0.911	1.875		0.847	0.065	0.161	0.183		0.066	0.142	
BSC313- 1		0.038	0.007	<1	0.013	0.002	<0.001	0.015	<0.001	0.004	0.004	<0.001
Target Range - Lower Bound		0.033	0.005	<1	0.010	<0.001	<0.001	0.015		0.002	0.003	
Upper Bound		0.040	0.007	2	0.014	0.002	0.002	0.019		0.004	0.006	
BLANKS												
BLANK		<0.002	<0.001	<1	<0.001	<0.002	<0.001	<0.002	<0.001	<0.001	0.002	<0.001
Target Range - Lower Bound		<0.001	<0.001	<1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Upper Bound		0.002	0.002	2	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
DUPLICATES												
Test 2 T3210- 4		0.004	0.034	<1	0.002	0.005	<0.001	<0.001	<0.001	0.001	<0.001	0.009
DUP		0.004	0.035	<1	0.002	0.005	<0.001	<0.002	<0.001	0.001	<0.001	0.009
Target Range - Lower Bound		0.003	0.032	<1	<0.001	0.004	<0.001	<0.001	<0.001	<0.001	<0.001	0.008
Upper Bound		0.005	0.037	2	0.003	0.006	0.002	0.002	0.002	0.002	0.002	0.010

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Finalized Date: 28-JUL-2011
Account: MCDSON

Project: ICP44 and ME-CON02

CERTIFICATE OF ANALYSIS BR11124992

Sample Description	Method	ME-ICP64	ME-ICP64	ME-ICP64	ME-ICP64	ME-ICP64	ME-ICP64	ME-ICP64	ME-ICP64	ME-ICP64	ME-ICP64	ME-ICP64	ME-CON02
	Analyte	Al2O3	CaO	Cr2O3	Fe2O3	MgO	MnO	TiO2	V2O5	Na2O	K2O	P2O5	Li
	Units	%	%	ppm	%	%	%	%	%	%	%	%	ppm
	LOR	0.001	0.001	1	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	1
T3210-1		0.006	0.040	1	0.001	0.007	<0.001	0.002	<0.001	0.001	<0.001	0.008	<1
T3210-2 TEST-3		0.005	0.037	1	0.001	0.007	<0.001	<0.001	<0.001	0.001	0.001	0.008	<1
T3210-3		0.005	0.037	<1	<0.001	0.007	<0.001	<0.001	<0.001	0.001	0.001	0.008	<1
T3210-4		0.005	0.038	1	0.001	0.007	<0.001	<0.001	<0.001	0.001	0.001	0.009	<1

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Finalized Date: 28- JUL- 2011
Account: MCDSON

Project: ICP44 and ME- CON02

QC CERTIFICATE OF ANALYSIS BR11124992

Sample Description	Method / Analyte / Units / LOR	ME- ICP64 Al2O3 % 0.001	ME- ICP64 CaO % 0.001	ME- ICP64 Cr2O3 ppm 1	ME- ICP64 Fe2O3 % 0.001	ME- ICP64 MgO % 0.001	ME- ICP64 MnO % 0.001	ME- ICP64 TiO2 % 0.001	ME- ICP64 V2O5 % 0.001	ME- ICP64 Na2O % 0.001	ME- ICP64 K2O % 0.001	ME- ICP64 P2O5 % 0.001
STANDARDS												
BCS267		0.857	1.805	165	0.841	0.045	0.169	0.167	0.002	0.053	0.125	0.024
Target Range - Lower Bound		0.789	1.625		0.734	0.054	0.138	0.157		0.055	0.121	
Upper Bound		0.911	1.875		0.847	0.065	0.161	0.183		0.066	0.142	
BSC313- 1		0.039	0.007	3	0.014	0.002	<0.001	0.015	<0.002	0.004	0.006	0.001
Target Range - Lower Bound		0.033	0.005	<1	0.010	<0.001	<0.001	0.015		0.002	0.003	
Upper Bound		0.040	0.007	2	0.014	0.002	0.002	0.019		0.004	0.006	
BLANKS												
BLANK		<0.001	<0.001	<1	<0.001	<0.002	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001
Target Range - Lower Bound		<0.001	<0.001	<1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Upper Bound		0.002	0.002	2	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
DUPLICATES												
T3210- 4		0.005	0.038	1	0.001	0.007	<0.001	<0.001	<0.001	0.001	0.001	0.009
DUP		0.005	0.038	1	0.001	0.005	<0.001	0.002	<0.002	0.001	0.001	0.008
Target Range - Lower Bound		0.004	0.036	<1	<0.001	0.005	<0.001	<0.001	<0.001	<0.001	<0.001	0.007
Upper Bound		0.006	0.040	2	0.002	0.007	0.002	0.002	0.002	0.002	0.002	0.010

APPENDIX 4

SUPPLEMENTARY ASSAYS - ZIRCON

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Finalized Date: 17- NOV- 2011
Account: MCDSON

Project: ME- ICP64

CERTIFICATE OF ANALYSIS BR11139723

Sample Description	Method / Analyte / Units / LOR	ME- ICP64 Fe2O3 % 0.001	ME- ICP64 TiO2 % 0.001	ME- ICP64 P2O5 % 0.001	ME- ICP64 ZrO2 % 0.001
90B- 2- 200500- 1		0.007	0.010	0.001	<0.001
90B- 2- 200500- 2		0.003	0.010	<0.001	<0.001
90B- 2- 200500- 3		0.003	0.010	<0.001	<0.001
90B- 2- 200500- 4		0.004	0.010	<0.001	<0.001
90B- 2- 200500- 5		0.004	0.010	0.001	<0.001
90B- 2- 200500NC- 1		0.003	0.010	<0.001	<0.001
90B- 2- 200500NC- 2		0.003	0.010	<0.001	<0.001
90B- 2- 200500NC- 3		0.004	0.010	<0.001	<0.001
90B- 2- 200500NC- 4		0.003	0.010	0.001	<0.001
90B- 2- 200500NC- 5		0.004	0.010	0.001	<0.001

Comments: This is an ameneded report. Noe addition of ZrO2 results as subsequently requested.

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Finalized Date: 8- AUG- 2011
Account: MCDSON

Project: ME- ICP64

QC CERTIFICATE OF ANALYSIS BR11139723

Sample Description	Method Analyte Units LOR	ME- ICP64 Fe2O3 % 0.001	ME- ICP64 TiO2 % 0.001	ME- ICP64 P2O5 % 0.001
STANDARDS				
BCS267		0.798	0.160	0.023
Target Range - Lower Bound		0.734	0.157	
Upper Bound		0.847	0.183	
BSC313- 1		0.011	0.015	0.001
Target Range - Lower Bound		0.010	0.015	
Upper Bound		0.014	0.019	
BLANKS				
BLANK		<0.001	<0.002	<0.001
Target Range - Lower Bound		<0.001	<0.001	<0.001
Upper Bound		0.002	0.002	0.002
DUPLICATES				
90B- 2- 200500NC- 5		0.004	0.010	0.001
DUP		0.006	0.010	<0.001
Target Range - Lower Bound		0.004	0.009	<0.001
Upper Bound		0.006	0.011	0.002

APPENDIX 5

ANALYSES: WHIMS NON MAGNETICS CHECK

S.G. AND BULK DENSITY DETERMINATIONS

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Project: Silica Sands + Li and SG + BD

CERTIFICATE OF ANALYSIS BR11057561

Sample Description	Method Analyte Units LOR	ME- ICP64 Al2O3 % 0.001	ME- ICP64 CaO % 0.001	ME- ICP64 Cr2O3 ppm 1	ME- ICP64 Fe2O3 % 0.001	ME- ICP64 MgO % 0.001	ME- ICP64 MnO % 0.001	ME- ICP64 TiO2 % 0.001	ME- ICP64 V2O5 % 0.001	ME- ICP64 Na2O % 0.001	ME- ICP64 K2O % 0.001	ME- ICP64 P2O5 % 0.001	ME- CON02 Li ppm 1	OA- GRA08b S.G. Unity 0.01	OA- GRA09 B.D. g/cm3 0.01
TEST1- T3210- 4NM20		0.006	0.030	1	0.003	0.005	<0.001	0.001	<0.001	0.001	<0.001	0.007	<1		
TEST2- T3210- 4NM20		0.006	0.030	1	0.003	0.005	<0.001	0.001	<0.001	0.003	0.001	0.007	<1		
101B1- 40250NM20		0.004	0.031	<1	0.003	0.005	<0.001	0.002	<0.001	0.001	<0.001	0.007	<1		
101B1- 250400NM20		0.006	0.009	1	0.004	0.002	<0.001	0.002	<0.001	0.003	0.001	0.001	<1		
SG001														2.63	1.37
SG001 dup														2.63	
SG001 trip														2.65	
SG002														2.61	1.12
SG002 dup														2.62	
SG002 trip														2.63	
SG003														2.62	1.22
SG003 dup														2.62	
SG003 trip														2.60	
SG004														2.64	1.60
SG004 dup														2.63	
SG004 trip														2.63	

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Finalized Date: 20- MAY- 2011
Account: MCDSON

Project: Silica Sands + Li and SG + BD

QC CERTIFICATE OF ANALYSIS BR11057561

Sample Description	Method / Analyte / Units / LOR	ME-ICP64 Al2O3 % 0.001	ME-ICP64 CaO % 0.001	ME-ICP64 Cr2O3 ppm 1	ME-ICP64 Fe2O3 % 0.001	ME-ICP64 MgO % 0.001	ME-ICP64 MnO % 0.001	ME-ICP64 TiO2 % 0.001	ME-ICP64 V2O5 % 0.001	ME-ICP64 Na2O % 0.001	ME-ICP64 K2O % 0.001	ME-ICP64 P2O5 % 0.001
STANDARDS												
BCS267		0.803	1.675	152	0.800	0.039	0.155	0.152	0.002	0.051	0.112	0.023
Target Range - Lower Bound		0.789	1.625		0.734	0.054	0.138	0.157		0.055	0.121	
Upper Bound		0.911	1.875		0.847	0.065	0.161	0.183		0.068	0.142	
BSC313-1		0.036	0.006	1	0.013	0.001	<0.001	0.014	<0.001	0.004	0.005	0.001
Target Range - Lower Bound		0.033	0.005	<1	0.010	<0.001	<0.001	0.015		0.002	0.003	
Upper Bound		0.040	0.007	2	0.014	0.002	0.002	0.019		0.004	0.006	
BLANKS												
BLANK		<0.002	<0.001	1	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Target Range - Lower Bound		<0.001	<0.001	<1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Upper Bound		0.002	0.002	2	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
DUPLICATES												
101B1-250400NM20		0.006	0.009	1	0.004	0.002	<0.001	0.002	<0.001	0.003	0.001	0.001
DUP		0.006	0.009	1	0.004	0.002	<0.001	0.002	<0.001	0.003	<0.001	0.002
Target Range - Lower Bound		0.005	0.008	<1	0.003	<0.001	<0.001	<0.001	<0.001	0.002	<0.001	<0.001
Upper Bound		0.007	0.010	2	0.005	0.003	0.002	0.003	0.002	0.004	0.002	0.002

APPENDIX 6

HEAD SAMPLE ASSAYS

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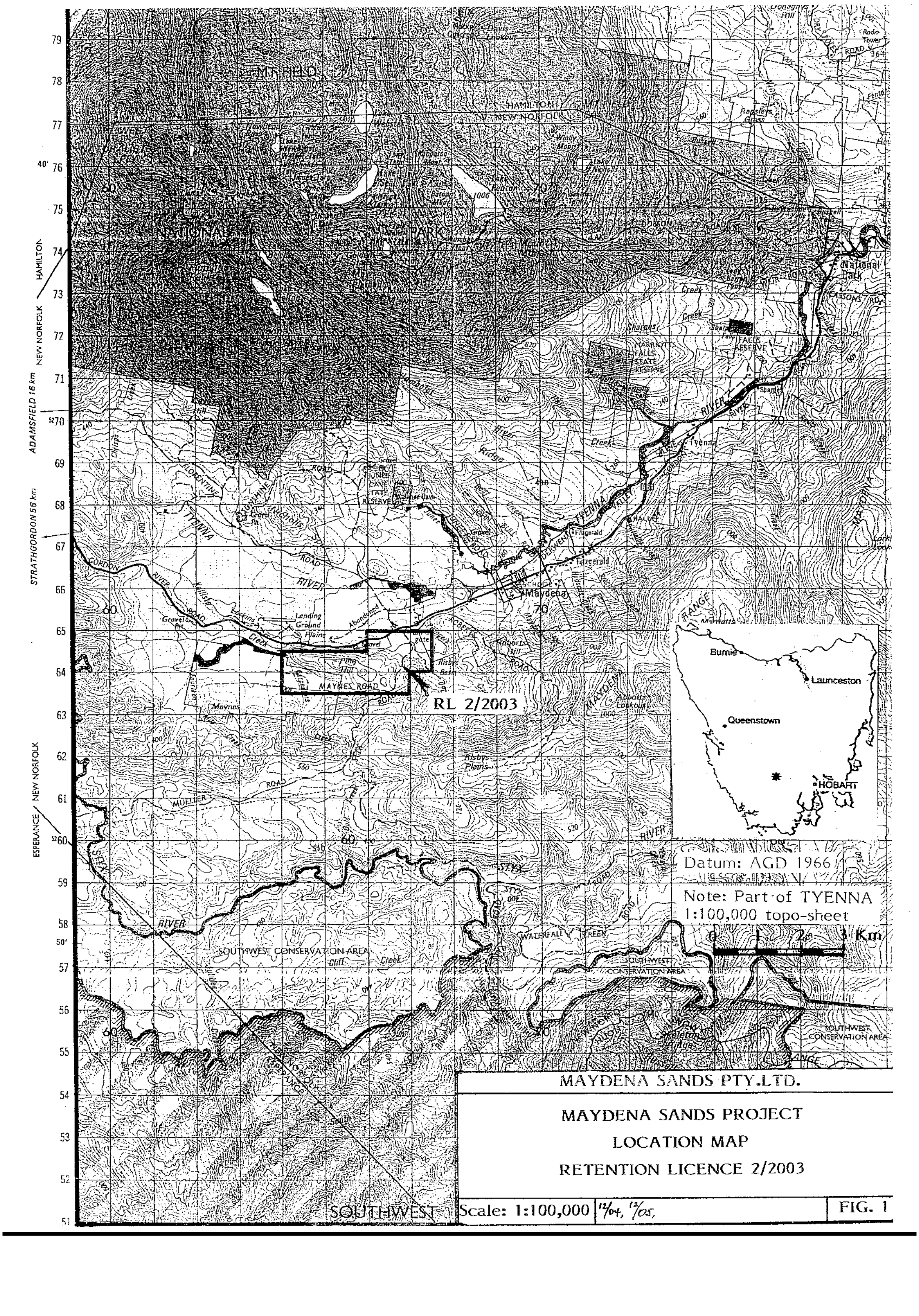
Finalized Date: 2- DEC- 2011
Account: MCDSON

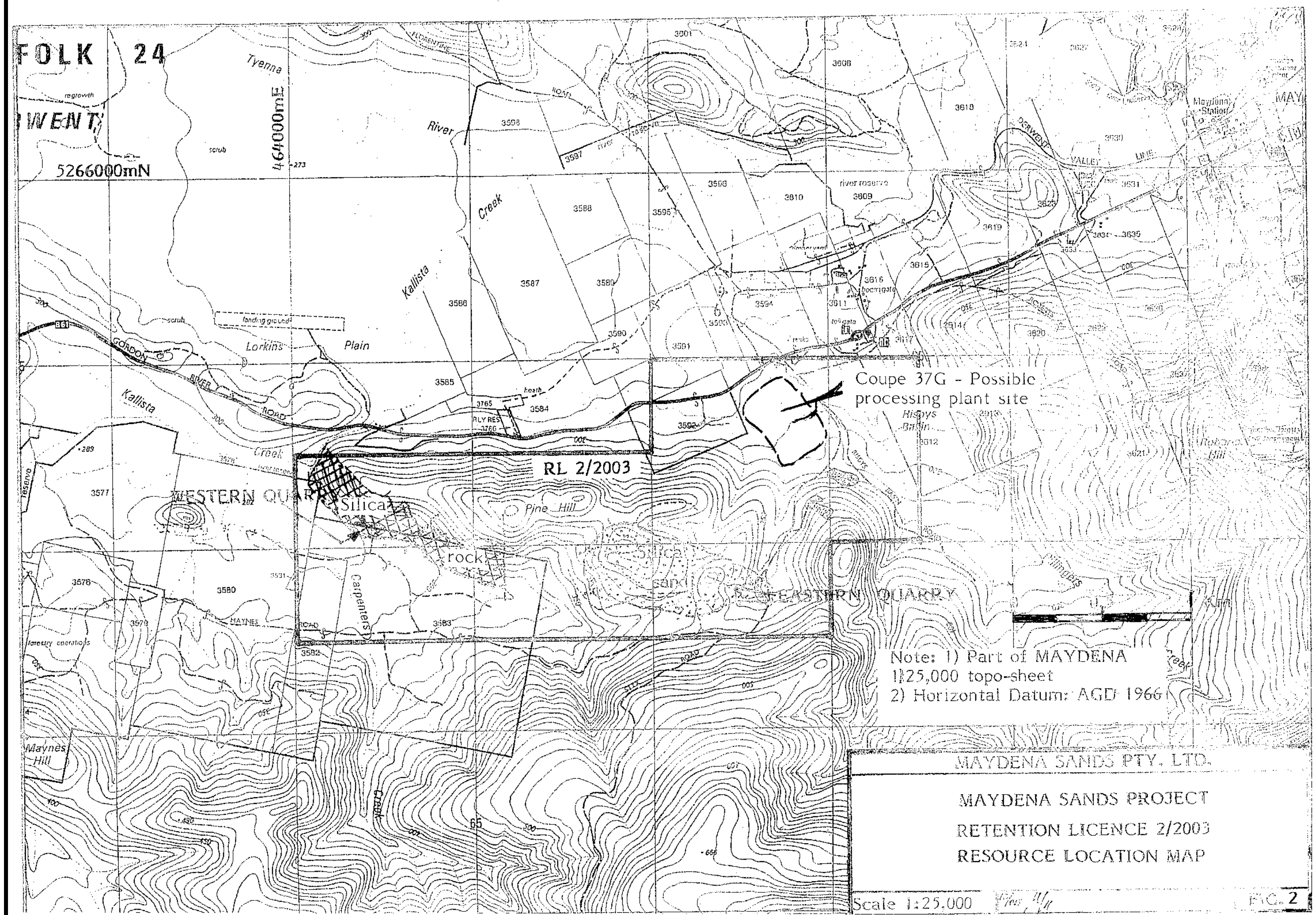
Project: ICP64 and ME- CON02

CERTIFICATE OF ANALYSIS BR11233590

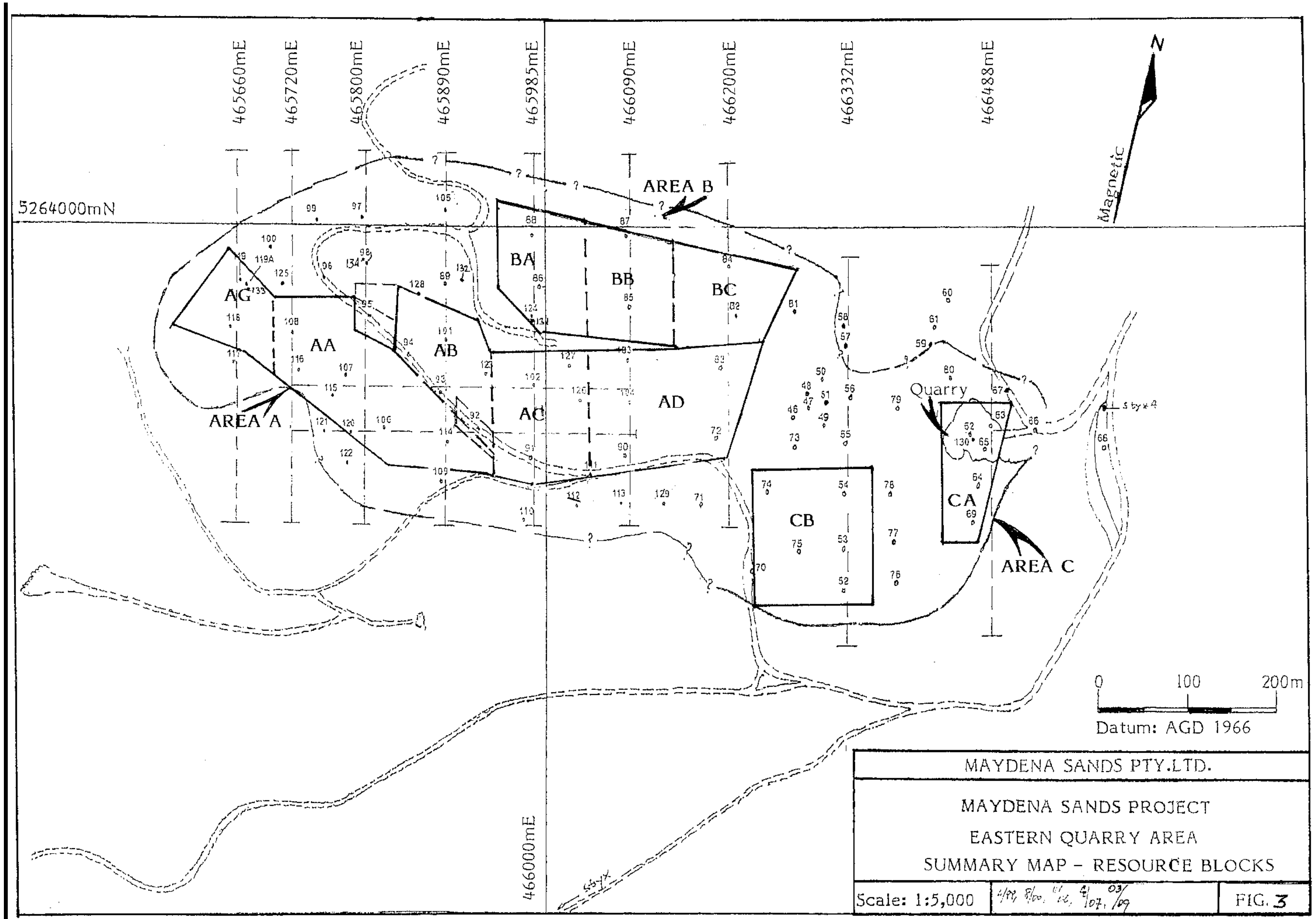
Sample Description	Method / Analyte / Units / LOR	ME- ICP64 Al2O3 % 0.001	ME- ICP64 CaO % 0.001	ME- ICP64 Cr2O3 ppm 1	ME- ICP64 Fe2O3 % 0.001	ME- ICP64 MgO % 0.001	ME- ICP64 MnO % 0.001	ME- ICP64 TiO2 % 0.001	ME- ICP64 V2O5 % 0.001	ME- ICP64 Na2O % 0.001	ME- ICP64 K2O % 0.001	ME- ICP64 P2O5 % 0.001	ME- CON02 Li ppm 1	
T681- 020		0.059	0.020	3	0.017	0.010	<0.001	0.045	<0.001	0.004	<0.001	0.004	8	HEAD - 6 Kg Sample to Naturastone: -20μ
T681- 2040		0.015	0.015	<1	0.004	0.007	<0.001	0.002	<0.001	0.003	<0.001	0.002	4	" " " " " +20-40μ
T681- 40250		0.011	0.011	1	0.003	0.005	<0.001	<0.001	<0.001	0.003	<0.001	0.001	2	" " " " " +40-250μ
T681- 250400		0.013	0.009	1	0.003	0.003	<0.001	<0.001	<0.001	0.004	<0.001	<0.001	2	" " " " " +250-400μ

ILLUSTRATIONS


MAYDENA SANDS PTY.LTD.
MAYDENA SANDS PROJECT
LOCATION MAP
RETENTION LICENCE 2/2003
Scale: 1:100,000
12/04, 12/05,
FIG. 1
RL 2/2003
Datum: AGD 1966
Note: Part of TYENNA
1:100,000 topo-sheet
0 1 2 3 Km
Burnie
Launceston
Queenstown
HOBART
Maydena
Tyenna
MAYNES ROAD
TYENNA
RIVER
GORDON
STYX
SOUTHWEST CONSERVATION AREA
NATIONAL
PARK
MT FIELD
HAMILTON
NEW NORFOLK
ADAMSFIELD 16 km
STRATHGORDON 56 km
ESPERANCE
SOUTHWEST



FOLK 24
WENT
5266000mN
464000mE
Tyenna
River
Kallista
Creek
Lorkins
Plain
GORDON
RIVER
ROAD
Coupe 37G - Possible
processing plant site
RL 2/2003
WESTERN QUARRY
Silica
rock
Pine Hill
EASTERN QUARRY
Carpenters
Maynes Hill
Note: 1) Part of MAYDENA
1:25,000 topo-sheet
2) Horizontal Datum: AGD 1966
MAYDENA SANDS PTY. LTD.
MAYDENA SANDS PROJECT
RETENTION LICENCE 2/2003
RESOURCE LOCATION MAP
Scale 1:25,000
FIG. 2



N
Magnetic
465660mE
465720mE
465800mE
465890mE
465985mE
466090mE
466200mE
466332mE
466488mE
466000mE
5264000mN
AREA A
AREA B
AREA C
Quarry
AG
AA
AB
AC
AD
BA
BB
BC
CA
CB
0
100
200m
Datum: AGD 1966
MAYDENA SANDS PTY.LTD.
MAYDENA SANDS PROJECT
EASTERN QUARRY AREA
SUMMARY MAP - RESOURCE BLOCKS
Scale: 1:5,000
FIG. 3