

# **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 2019**

**GERHARD K. KRUMMEI**

**18 DECEMBER 2018**

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## ABSTRACT

This year's activities were focused primarily on aspects of marketing and further beneficiation testing aimed to achieve ultra high purity product.

Under the already increasingly uncertain outlook for the global economy, the very competitive environment for LCD glass substrate products was exacerbated by weakening demand for PCs, mobile phones and servers putting downward pressures on demand for silica raw material. This resulted in reduced interest in high purity silica flour and sand compared to 2017. Enquiries for large tonnages of low iron sand of lesser purity overall for the architectural and automotive industries could not be accommodated.

A positive offset to this slowdown likely to carry over to 2019 was a reported increase in demand for optical glass fibre, glass rods, glass tubing for IR heaters and LED lighting, pharmaceutical and medical use and PV cover glass.

Processing lab tests on silica flour and powder to achieve 99.99% SiO<sub>2</sub> purity did not meet targets and produced suspect results, due to possible contamination, the source of which is to be investigated.

Discussions with 3 Crosses Energy to finalise a "Heads of Agreement" for the purchase of Maydena Sands were not successful and were terminated mid year. As a result of this development, some planned follow-on activities did not eventuate.

### Keywords:

Maydena, Silica flour, Silica sand.

## C O N T E N T S

### ABSTRACT

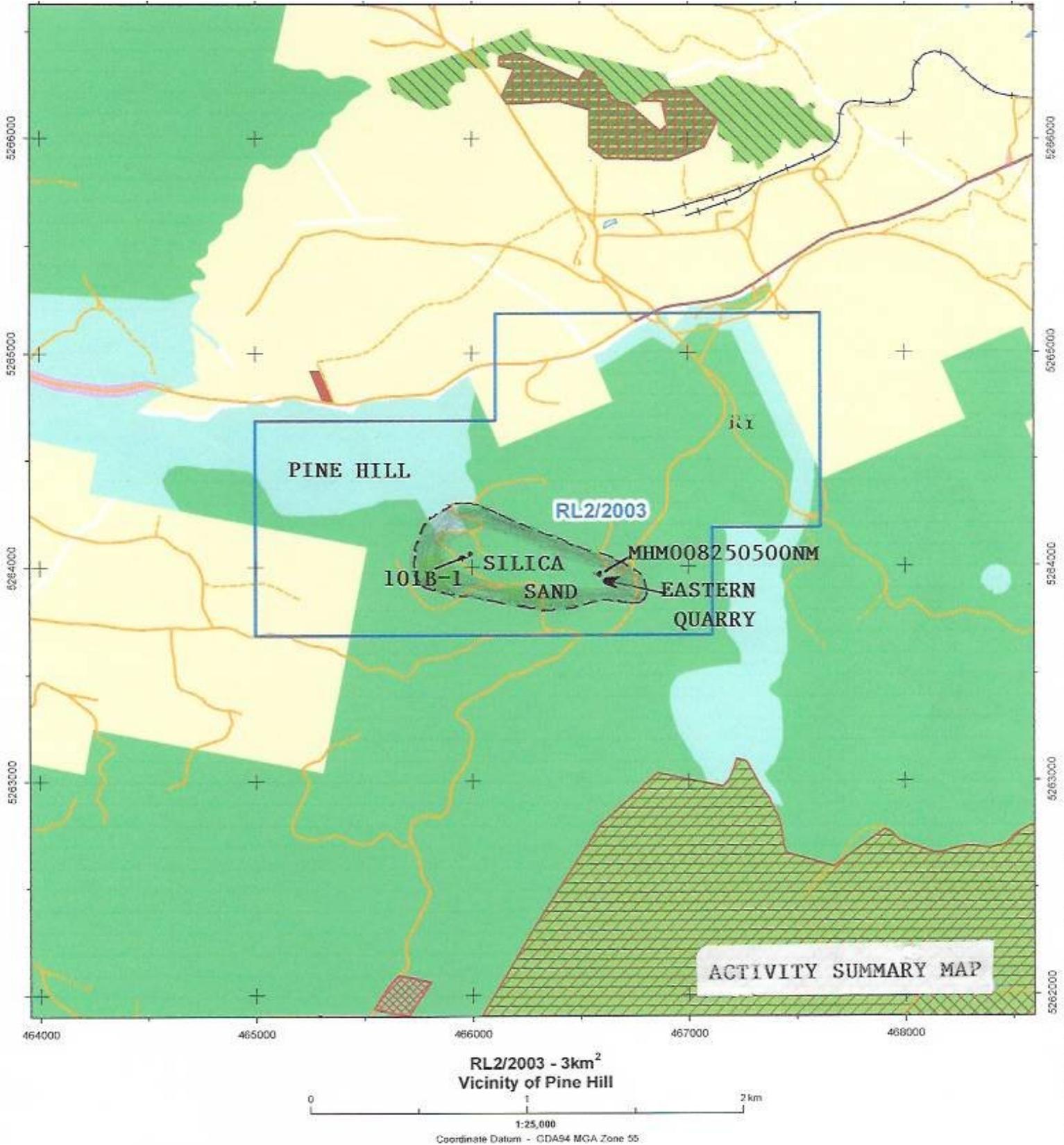
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**Land Tenure / Special Management Areas (Guide Only)**

- |                       |                                                       |                        |                                            |
|-----------------------|-------------------------------------------------------|------------------------|--------------------------------------------|
| Unavailable Areas     | Future Potential Production Forest (HEC)              | Game Reserve           | Future Potential Production Forest (Crown) |
| Mining Lease          | Informal Reserve (Forestry Operations) - Private Land | Historic Site          | Informal Reserve - FT Managed Land         |
| RAMSAR Site           | Private Land                                          | National Park          | Permanent Timber Production Zone Land      |
| Gas Pipeline Corridor | Indigenous Protected Areas                            | Nature Recreation Area | Authority Land                             |
| Fossilising Area      | Aboriginal Administered Land                          | Nature Reserve         | Crown Land                                 |
| Fossil Site           | Wellington Park                                       | Regional Reserve       | <b>Private Reserves</b>                    |
| Commonwealth Land     | Conservation Area                                     | State Reserve          | Available under the 1st                    |
|                       |                                                       | Public Reserve         | Available under the 2nd                    |



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## 1. INTRODUCTION

This Annual Report outlines activities by Maydena Sands Pty. Ltd. during calendar year 2018 on this Tenement from 10.01.2018 to 09.01.2019.

Retention Licence No: 2/2003     Area: 3sq.km     Datum: AGD 1966

Tenement Holder:             Maydena Sands Pty. Ltd.

Ownership: 100% owned and operated by Maydena Sands Pty. Ltd.

Location: Pine Hill, 4km south west of Maydena, 90kms by road, west of Hobart.  
(Fig.1.)

Infrastructure: Outlined in Krummei, 2017

Objectives: The primary target for investigation, assessment and eventual exploitation is 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 and activities 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 and on various, changing economic and market factors.

Objectives for this year were outlined on Page 16, Krummei, 2017 under "Proposed Future Activities".

## **2. PREVIOUS WORK**

### **2.1 By Previous Holders**

For a Summary see Krummei, 2016.

### **2.2 By Current Tenement Holder**

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 precursor of Maydena Sands Pty. Ltd. (See below).

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 global raw material resource of about 6 million tonnes of loose, unsorted silica material, 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 also pointed to a small resource potential for hard rock silica.

Preliminary bench scale beneficiation and bulk sample processing tests, including acid wash tests showed that the +45 -250 micron silica flour fraction could be upgraded to a high quality product containing only about 50ppm Fe<sub>2</sub>O<sub>3</sub> or less without major environmental impact, with levels of iron as low as 10ppm a possibility for a premium product. Results for the coarser +250-600 micron sand fraction were similar.

Sources of good quality limestone and dolomite were noted in relative proximity to the silica sand deposit for eventual acid neutralization, if needed.

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, as well as any silica powder, 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, Directors of 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.

These included additional shallow AirCore/RC drilling, deep, 4x50m RC drilling into silica bedrock, various further on-going beneficiation tests, on-going extensive company promotion, on-going product marketing and logistics monitoring.

Details of past activities and outcomes are provided in reports listed in Sections 8 and 9. (Krummei, 2017).

### 3. ACTIVITIES FOR PERIOD

These included:

#### 3.1 Work Done

- Processing:

Laboratory processing of a small sample of -4.5 micron Silica powder fraction devised from prior bulk sample No. 101B-1 to try to obtain purity of 99.99% SiO<sub>2</sub> or better.

Laboratory processing of 0.5kg sub-sample of previously upgraded +45-250 micron sample T3210A/T5/B3 derived from prior bulk sample 101B-1.

- Market related activities:

Ongoing market monitoring – silica sand, silica flour, quartz sand, display panels, technical glass, quartz glass crucibles and PV silicon/polysilicon.

Company and product promotion via MRT at PDAC, Toronto, Canada; China Mining Conference, Tianjin, China.

Attendance and promotion at several significant events including:

- Semicon/FPD 2018 Exhibition – Shanghai, China
- China Glass 2018 Exhibition – Shanghai, China
- IMARC Exhibition – Melbourne, Australia.

In addition, Contacts or Meetings with a number of companies summarised in Section 4.3.

- Project Planning and Feasibility:

- Progressing discussions and negotiations re sale of Maydena Sands Pty Ltd.
- Site visit familiarisation with potential investor.
- General monitoring of project related transport logistics.
- Monitoring Mountain-Bike Tourist Development Proposal in the Maydena area.

- Community relations:

Occasional contact with Maydena Development Association representative.

- Environmental:

No impact. No action required.

### 3.2 Statistical Summary

#### Test Samples for Quality Assessment sent to:

Shanghai Dawnlite Electronics - Shanghai	:	1 x 1Kg Silica Sand – (Sample MHM008250500NM)
Innoceram Co. Ltd – Suzhou, China	:	1 x 1Kg Silica Flour – (Sample 101B-1,+45-250 micron)
M. Watanabe & Co., Tokyo, Japan	:	1 x 1Kg Silica Flour – (Sample 32108/T5/B3NM) 1 x 1Kg Silica Sand – (Sample MHM008250500NM) 1 x 0.9Kg Silica Rock – (Sample 101B-1)

#### Test Samples analysed:

No. of Samples for Lab Test	:	2
No. of Samples Analysed	:	17
No. of Analyses	:	289

## 4. RESULTS

### 4.1 Project Development

#### 4.1.1 Processing

**Work Done:** In the light of growing demand for high purity silica sand products assaying at, or better than 99.99% SiO<sub>2</sub>, two small samples were selected for lab tests to see if these high purity levels could be achieved with the Maydena Sands material. The samples selected for this purpose were sub-samples of:

- The screened-off raw material -45 micron fraction of previously collected sample 101B-1; AGD 1966 Location 5263882 mN, 465893 mE.
- 0.5kg sub-sample of sample T3210A/T5/B3NM; itself the processed, high grade low iron +45-250 micron fraction of sample 101B-1, location as above.

The non-magnetic fractions of both samples were calcined in an induction furnace at 900 degrees C for 15 mins, then acid-leached to remove mainly Fe<sub>2</sub>O<sub>3</sub>, CaO and MgO.

**Results:** The -45 micron (“powder”) fraction - raw material: No significant reduction in CaO or MgO, with levels remaining at around 390ppm and 50ppm respectively. Results for Fe<sub>2</sub>O<sub>3</sub> varied from 30 – 90ppm against a head grade of 80ppm and did not achieve 10ppm or less. Better outcomes may have been obtained using the -45+20 micron fraction.

The +45-250 micron (“flour”) fraction: Sub-sample of a previously upgraded, high quality sample assaying 10ppm Fe<sub>2</sub>O<sub>3</sub>. Again, no significant reduction in CaO or MgO, with levels remaining at around 340ppm and 50ppm respectively. Results for Fe<sub>2</sub>O<sub>3</sub> ranged from 20-40ppm against a head grade of 50ppm. However, this head grade value does not relate well to previous, lower, assays of 10ppm.

99.99% SiO<sub>2</sub> was not achieved in either case. The results for both test samples, particularly Fe<sub>2</sub>O<sub>3</sub>, are suspect and possibly due to contamination by lab equipment or during the assay process. To be investigated, possibly repeated.

Details are provided in the consultant’s report attached as Appendix 1.

## 4.2 Project Planning

### 4.2.1 Logistics

**Road:** Major road upgrades along sections of the Midland Highway between Brighton and Launceston continue. Upgrades between New Norfolk and Bushy Park announced by State Government. Positive developments for project.

**Rail:** Despite one minor, one more serious derailment with damage to rolling stock and engine to end 2018, TasRail performance continues to improve. Freight volumes up 10.5% to 3.36 million tonnes for 2017/18 and a profit of \$440,000. (TasRail 2018). Medium to long term positive for project.

**Ports:** Swire Shipping no longer offers freight shipping services from Hobart. Minor impact on project. Shipping ex Bell Bay remains the preferred option with MAERSK and MSC now also forwarding services from this port. In addition, CMA, CGM, ANL, PIL, QOCL, Hamburg Sud and COSCO are all servicing Tasmania via feeder facilities.

## 4.3 Marketing

### 4.3.1 General

This segment constituted a significant part of this year's activities, involving the marketing of the company's products as well as the Company to potential investors.

Despite increased demand, there is danger of oversupply of polysilicon in China, now the world's largest manufacturer of PV panels, with consequent adverse impact on polysilicon prices (currently hovering around US\$10/kg), though the technically better performing mono-silicon appears to enjoy a small spot-price premium in the market place.

These persistent low prices do not encourage further interest in this dynamic sector, with the exception of PV cover glass.

Major producers of display glass in China and Japan report unspectacular but steady growth in the mid single digit percentages year on year, with downward price pressures predicted to ease in this highly competitive segment.

Encouraging is the increasing demand for optical glass fibre from the global communications industry. China is directing huge investments into rapid developments to become a new engine for the global display industry encompassing TFT-LCD, OLED, AMOLED and MICRO-LED substrates as well as essential products for the semi-conductor industry.

In other areas of the display industry sector, there are signs of declining demand for PCs and smart phones, all of which use silica-based display and touch screens.

Furthermore, emerging trade tensions, tariff impositions and the uncertainties of a possible no-deal Brexit are a cause of concern to the glass industry overall with negative sentiments and impacts on investment by the industry and consumers.

#### **4.3.2 Activities**

The Company and its products were promoted at PADC Toronto, SEMICON/FPD China, China Glass 2018, China Mining and IMARC Melbourne, all of which are major events. Approx. 20 product enquiries for silica sand and silica flour, mainly from China, were dealt with from producers and marketing entities for a variety of applications, in various segments of the glass industry and elsewhere. Most were for volumes well in excess of those Maydena Sands could potentially supply, along with lower product specs, thus creating low price expectations by the prospective purchasers.

Small test samples were sent to Innoceram, Suzhou, China (Fused quartz products); Shanghai Dawnlite Electronics, China (Rods and Lamp Tubes); and M.Watanabe & Co., Japan, acting on behalf of Ohara, a major Japanese producer of optical glass. (See Section 3.2). As the latter's quality requirements (unspecified) for silica sand and flour apparently were not met and there were price concerns, no further discussions ensued. An added complication mentioned was competition with material from India and Sri Lanka. There has been no feedback to date from Innoceram or Dawnlite Electronics.

None of the 5 contacts carried over from last year produced concrete results, though 2 remain “on file” for possible future attention.

Disappointingly, two-year negotiations with 3 Crosses Energy to acquire Maydena Sands were terminated by Maydena mid-year without agreement. Consequently, planned bulk sampling at the Eastern Quarry for tests in the US were abandoned and work towards a mining lease application suspended.

Preliminary contacts in the second half of the year with WIM Resource and NQ Minerals plc to acquire Maydena Sands are at an early stage. A representative of the latter company undertook a technical visit to Maydena’s Pine Hill deposit. Feed-back awaited from both parties, with outcomes uncertain at this stage.

Contact maintained with:

- Shanghai Dawnlite Electronics Tech.Co.Ltd – Shanghai,China – Silica Sand
- Innoceram Co. Ltd – Suzhou, China – Fused Silica & Ceramics
- Wuxi Ding Long Co. Ltd. – Wuxi, China – Silica Flour & Sand

#### **4.4 Environmental**

This year’s activities had no environmental impacts.

#### **4.5 Rehabilitation**

No rehabilitation was necessary, including on area relinquished.

#### **4.6 Community Relations**

Occasional contacts with members of the Maydena Development Association were maintained. No apparent issues.

#### **4.7 Administration**

Statutory reporting as required. Application for a 2 year “Extension of Term of the RL” submitted.

## 5. CONCLUSIONS

- The results, especially for iron, of this year's beneficiation tests are suspect and require investigation and verification. Some or all of the tests may have to be repeated.
- Contacts with NQ Minerals plc and WIM Resource to be pursued.
- In view of slowing growth in the display panel industry and a decline in the sales of smart phones and PC tablets, new markets and applications for Maydena's high purity products need investigating.
- Product awareness and company promotion should continue at China Glass 2019 and SEMICON/FPD 2019, China, PADC, Canada and IMARC, Melb.
- There were no major adverse changes to the transport infrastructure related to this project, except that rail transport facilities and reliability provided by TasRail in Tasmania continue to show commendable improvements.
- Power supply in Tasmania appears to have stabilised, though persistently high power costs are a major concern.

## 6. PROPOSED FUTURE ACTIVITIES

- Investigate and verify results of this year's processing tests and, if necessary, repeat parts or all of the tests.
- Initiate laboratory scale investigations into the possibility of producing high purity silica powder from the +20-45 micron "waste" fraction of the silica resource.
- Initiate and progress revision of flow sheet design and capex/opex estimates including both high purity silica flour and high purity silica sands product and also, possibly, silica powder.
- Continue work towards determining a reliable minegate, FOB and CIF product price for the high purity silica flour and silica sand product.
- Follow up on 2018 and prior market contacts, enquiries and product sale opportunities, with attempts to lock in off-take agreements.
- Respond to any product enquiries in 2019.
- Continue with product awareness and marketing activities, including attendance at SEMICON/FPD China 2019 and China Glass 2019 Trade Shows as well as PDAC, Canada and IMARC, Melbourne
- Continue monitoring developments in logistics support systems in Tasmania, including road, rail and shipping as these contribute to the FOB product price.
- Maintain contact with State and Local Regulatory Authorities, and other relevant parties on project related matters.

## 7. REFERENCES

- |               |      |                                                                                 |
|---------------|------|---------------------------------------------------------------------------------|
| Krummei, G.K. | 2016 | Retention Licence No. 2/2003, Maydena, Tasmania.<br>Annual Report to 09.01.2017 |
| Krummei, G.K. | 2017 | Retention Licence No. 2/2003, Maydena, Tasmania.<br>Annual Report to 09.01.2018 |
| TasRail       | 2018 | Annual Report 2017-2018                                                         |

## **APPENDIX 1**

### **MAYDENA SANDS LEACHING TESTS**

**MAYDENA SANDS LEACHING TESTS**

**AUGUST 2018**

**C. J. BROWNE**

1

## **1. OBJECTIVE OF TESTS**

Two sand samples were received, one labelled -45 micron and the other labelled +45 micron. The finer sample (-45 micron) was noticeably brown in colour.

The objective was to determine whether a marketable product could be produced from these samples, by reduction of contaminant levels, particularly iron and calcium.

## **2. TEST PROCEDURE**

Both samples were initially subjected to dry magnetic separation using a Reading High Intensity Roll Magnet, to remove magnetic iron particles, generating a non-magnetic fraction at 16,000 gauss, using a standard procedure as applied to previous tests on similar material.

The iron level in the non-magnetic fraction would then be further reduced by leaching with 20 gpl oxalic acid and alternatively 20 gpl citric acid at room temperature for 180 minutes using a procedure used in previous leaching test work with similar material.

The procedures used in these tests are described in detail in the report "Maydena Sands Oxalic Acid Treatment for Iron Removal from Oxidised Ore" (C.J.Browne Sept 2013).

Further tests were carried out in order to establish the effect of exposure to high temperature on leachability of the metal contaminants.

A 50 g sample of the non-magnetics fraction from each type was then calcined for 15 minutes at 900°C in an induction furnace using a contamination free-procedure involving a pure graphite crucible.

The calcined samples were then leached with 20 gpl citric acid for 180 minutes, in the case of the +45 micron sample and with both 20 gpl citric and 20 gpl oxalic acid for 180 minutes, in the case of the -45 micron sample.

All fractions from the magnetic separation and leaching tests were submitted to ALS for standard analysis of metal content.

## **3. TEST RESULTS**

The results are attached as Tables 1, 2 and 3 below.

Table 1 shows the weight distribution and analysis results obtained from the magnetic separation procedure, for both the -45 micron and +45 Micron samples.

Table 2 shows the leach results for the +45 Micron sample Non-magnetic fraction.

Table 3 shows the leach results for the -45 Micron sample Non-magnetic fraction.

## **4. DISCUSSION OF RESULTS**

### **4.1. Magnetic Separation**

There appears to be an anomaly in the iron content reported in the magnetic separation results from both samples. In both cases the iron content of the head sample appears to be excessively low, at 20 ppm in the case of the +45 micron sample and 50 ppm in the case of the -45 micron sample.

Back calculation, using the weights and analysis result for the three fractions generated from each sample indicates that the iron content in the head sample as 90 ppm and 454 ppm respectively, which makes more sense, particularly from visual observation of the samples.

On this basis the test results indicate that the magnetic separation procedure resulted in a considerable reduction in iron level, from 90 to 50 ppm in the case of the +45 micron material, and from 454 to 80 ppm in the case of the -45 micron material, in line with previous test results obtained on similar material.

A considerable reduction in  $Al_2O_3$  and  $TiO_2$  levels was noted in both cases, with some evidence of reduction in  $MgO$ ,  $MnO$ ,  $Na_2O$ ,  $K_2O$  and  $P_2O_5$  content. There was little evidence of any reduction in  $CaO$ .

### **4.2. Leaching of No-Magnetic Fractions**

Both citric and oxalic acid appeared to be equally effective in reduction of iron levels, with slightly lower iron levels obtained with the +45 micron no-magnetics (20-30 ppm), compared to 30-50 ppm with the -45 micron non-magnetics. A larger number of tests would be required to establish whether there was a real difference between these results.

### **4.3. Calcination Tests**

With both non-magnetics, it appears that calcination has a negative effect on the leachability of the iron.

No discernable reduction on calcium levels was achieved in either case.

## **5. CONCLUSIONS**

A product with chemical properties similar to those generated from other samples from this lease can be obtained from either the -45 or the +45 micron samples, but with finer particle size range.

The indicated yield would be 90.7% in the case of the +45 micron material and 82.9% in the case of the finer -45 micron product

TABLE 1  
MAGNETIC SEPARATION RESULTS

SAMPLE	FRACTION	Wt (%)	ANALYSIS																	
			Al <sub>2</sub> O <sub>3</sub> %	CaO %	Cr <sub>2</sub> O <sub>3</sub> ppm	Fe <sub>2</sub> O <sub>3</sub> ppm	MgO %	MnO %	TiO <sub>2</sub> %	V <sub>2</sub> O <sub>5</sub> %	Na <sub>2</sub> O %	K <sub>2</sub> O %	P <sub>2</sub> O <sub>5</sub> %	Co %	Cu %	Pb %	Zn %	Li %	Ni %	
+45µ	Head	100.0	0.005	0.035	1	20	0.005	<0.001	0.001	0.001	<0.001	0.001	<0.001	0.008	<1	<1	1	<2	<1	<1
	Non Magnetics	90.7	0.005	0.034	<1	50	0.005	<0.001	0.001	<0.001	0.001	<0.001	0.009	<1	<1	<1	<2	<1	<1	
	Mids	8.2	0.005	0.037	1	80	0.005	<0.001	0.004	<0.001	0.001	<0.001	0.010	<1	<1	<2	<1	<1		
-45µ	Magnetics	1.1	0.020	0.047	22	3470	0.015	0.004	0.133	<0.001	0.003	<0.001	0.020	<1	12	2	4	<1	1	
	Head	100.0	0.009	0.039	1	50	0.007	<0.001	0.008	<0.001	0.001	0.001	0.011	<1	<1	1	<2	1	1	
	Non Magnetics	82.9	0.007	0.039	<1	80	0.007	<0.001	0.008	<0.001	0.001	0.001	0.010	<1	1	<1	<2	<1	<1	
	Mids	8.9	0.009	0.045	1	160	0.007	<0.001	0.014	<0.001	0.001	0.001	0.011	1	1	2	<2	<1	<1	
	Magnetics	8.2	0.048	0.030	37	4560	0.022	0.008	0.223	<0.001	0.005	0.005	0.031	<1	57	2	6	1	2	

TABLE 2  
LEACH RESULTS (>45micron NON-MAGNETICS)

FRACTION	ANALYSIS																
	Al <sub>2</sub> O <sub>3</sub> %	CaO %	Cr <sub>2</sub> O <sub>3</sub> ppm	Fe <sub>2</sub> O <sub>3</sub> pppm	MgO %	MnO %	TiO <sub>2</sub> %	V <sub>2</sub> O <sub>5</sub> %	Na <sub>2</sub> O %	K <sub>2</sub> O %	P <sub>2</sub> O <sub>5</sub> %	Co ppm	Cu ppm	Pb ppm	Zn ppm	Li ppm	Ni ppm
Head	0.005	0.034	<1	50	0.005	<0.001	0.001	<0.001	0.001	<0.001	0.009	<1	<1	<1	<2	<1	<1
Citric Acid Leached	0.006	0.030	1	40	0.005	<0.001	0.002	<0.001	0.001	<0.001	0.008	1	<1	<1	<2	<1	<1
Citric Acid Leached*	0.006	0.034	<1	20	0.005	<0.001	0.001	<0.001	0.004	<0.001	0.009	<1	1	<1	<2	<1	<1
Citric Acid Leached	0.005	0.035	<1	30	0.005	<0.001	0.001	<0.001	0.003	0.001	0.010	<1	1	<1	<2	<1	<1
Oxalic Acid Leached	0.007	0.033	<1	20	0.005	<0.001	0.002	<0.001	0.003	0.002	0.008	<1	2	2	<2	<1	<1

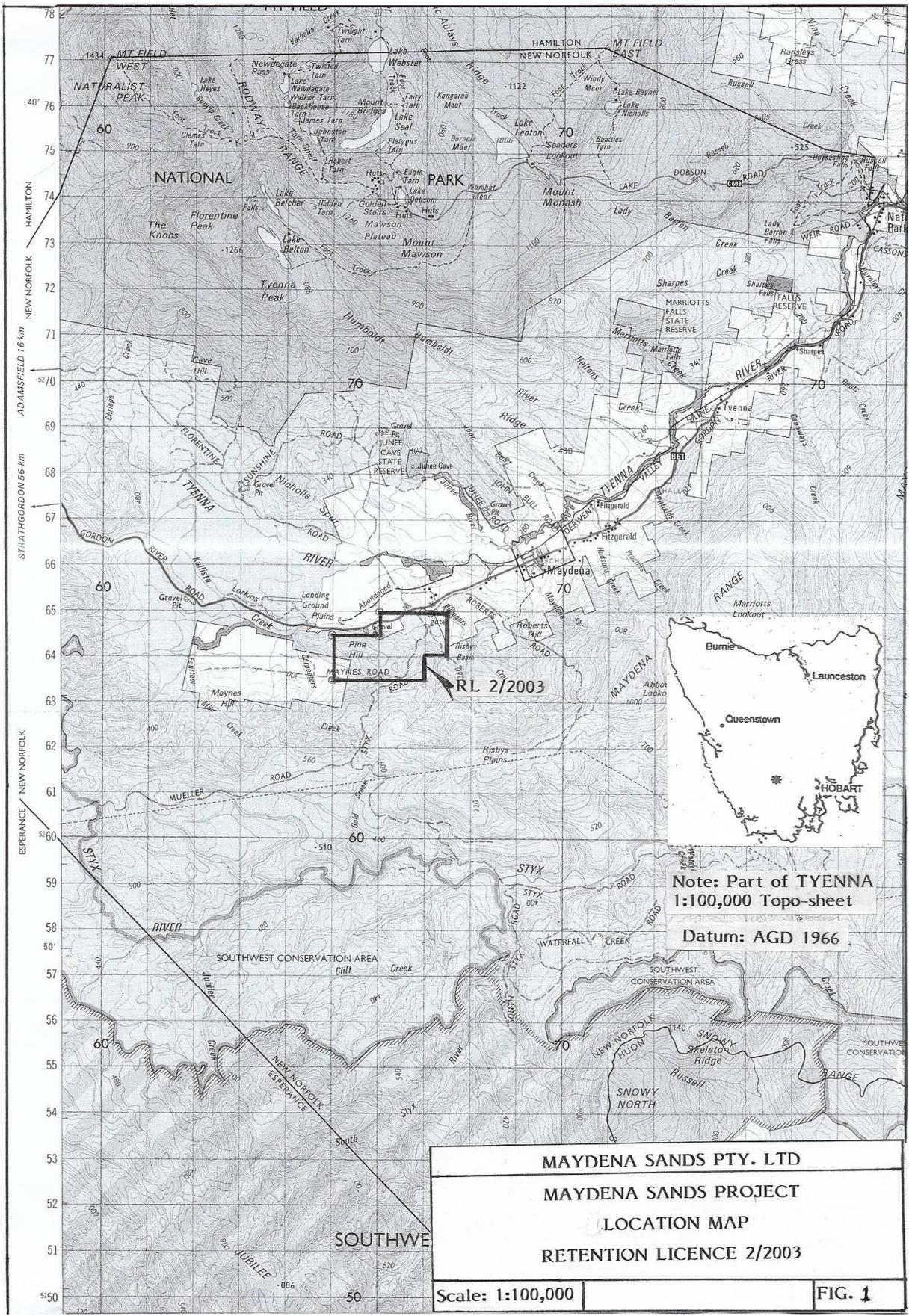
\*Calcined at 900°C for 15 minutes prior to leaching.

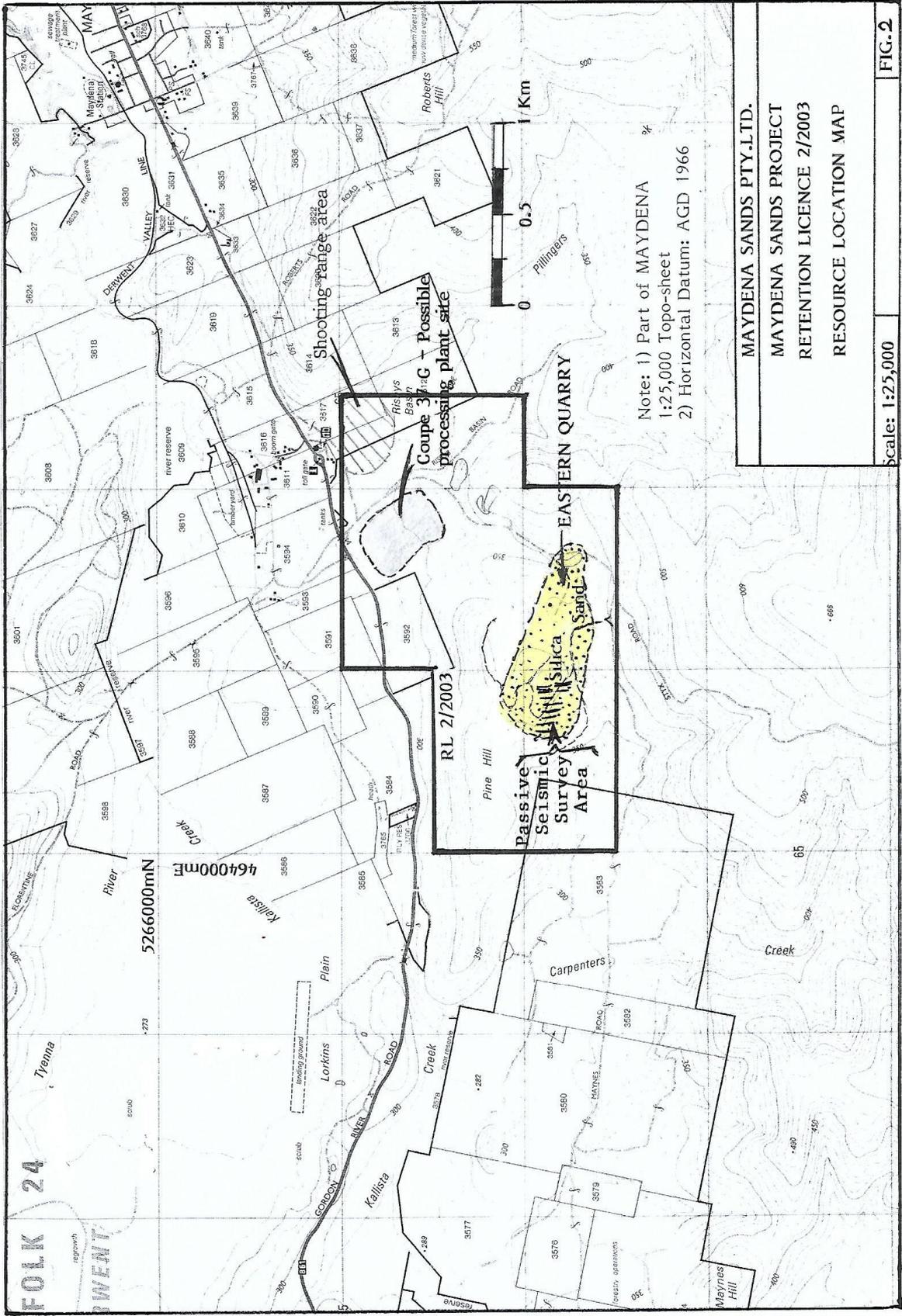
TABLE 3  
LEACH RESULTS (<45 micron NON-MAGNETICS)

FRACTION	Al <sub>2</sub> O <sub>3</sub> %	CaO %	Cr <sub>2</sub> O <sub>3</sub> ppm	Fe <sub>2</sub> O <sub>3</sub> pppm	MgO %	MnO %	TiO <sub>2</sub> %	V <sub>2</sub> O <sub>5</sub> %	Na <sub>2</sub> O %	K <sub>2</sub> O %	P <sub>2</sub> O <sub>5</sub> %	Co ppm	Cu ppm	Pb ppm	Zn ppm	Li ppm	Ni ppm	*cal cine d at 900 °C for 15
Head	0.009	0.039	1	80	0.007	<0.001	0.008	<0.001	0.001	0.001	0.011	<1	<1	1	<2	1	<1	1
Citric Acid leached	0.006	0.039	<1	30	0.005	<0.001	0.005	<0.001	0.003	0.001	0.009	<1	1	<1	<2	<1	<1	1
Oxalic Acid leached	0.007	0.043	<1	40	0.007	<0.001	0.006	<0.001	0.003	0.001	0.010	<1	2	2	<2	<1	<1	1
Oxalic Acid leached	0.006	0.037	<1	50	0.005	<0.001	0.007	<0.001	0.012	<0.001	0.010	<1	2	<1	<2	<1	<1	1
Oxalic Acid leached*	0.007	0.039	<1	70	0.006	<0.001	0.007	<0.001	0.003	0.001	0.012	<1	1	1	<2	1	<1	1
Citric Acid leached*	0.013	0.034	<1	90	0.005	<0.001	0.007	<0.001	0.001	0.001	0.012	<1	1	2	2	1	<1	3

minutes prior to leaching.

## ILLUSTRATIONS





**MAYDNA SANDS PTY.LTD.**  
**MAYDNA SANDS PROJECT**  
**RETENTION LICENCE 2/2003**  
**RESOURCE LOCATION MAP**

Scale: 1:25,000

**FIG.2**