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EXPLORATION LICENCE 20/89

(PITTWATER)

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ANNUAL REPORT - YEAR 1

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Consolidated Rutile Limited

A.C.N. 009 719 902

REPORT ON

LLANHERNE PROSPECT,

SEVEN MILE BEACH AREA, TASMANIA

Distribution:

**P. Barrett
P. Wickham
K. Morrison
M. Forster
Tasmanian Mines Department
CRL Library**

**P. Barrett
August 1993
Report No.
93.GEO.7**

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1. BACKGROUND

An approach was received in August 1989 from Mr. M. Forster, representing the Northwest Bay Co. Pty. Ltd. of Hobart, Tasmania, concerning a possible CRL interest in heavy mineral sand deposits at the Seven Mile Beach, and the Friendly and Seymour Beaches in eastern Tasmania.

The writer visited Tasmania in November 1989 and it was decided, on the basis of size and environmental constraints, that CRL's interests were only in the relatively large Seven Mile Beach deposits, which to avoid possible adverse publicity, was referred to as the "Llanherne Project".

Since at that time the Northwest Bay Co. held only applications for exploration title, a restricted number of grab samples were collected from public areas. These broadly confirmed the sample assays of work by Mineral Deposits Ltd. (MDL) in 1976.

Following granting of Exploration Licence 20/89 on 25th September 1992, the writer again visited the site from 7th to 10th November 1992, and collected approximately 200 kg of samples using a hand auger.

This report discusses the results of the CRL work programme, draws conclusions regarding the status of any future work, and makes recommendations about future CRL involvement.

2. LOCATION AND INFRASTRUCTURE

The Llanherne or Seven Mile Beach deposit is a sand spit approximately 5 km long x 1 km wide x 15 m deep, extending westward from the Hobart Airport towards the town of Lewisham as shown in *Figure 1*.

The deposit is 20 km ENE of Hobart by sealed road, and forms a barrier between the Pitt Water and Frederick Henry Bay.

Coastal zones in the area support low level tourism, plus recreational boating and fishing, and the hinterland is mainly occupied by small farms.

Seven Mile Beach proper on the southern margin of the spit is excluded from the exploration title, and is shown in *Plates 1, 2, and 3*.

Five Mile Beach along the northern shore is also excluded, and is shown in *Plates 4, 5, and 6*.

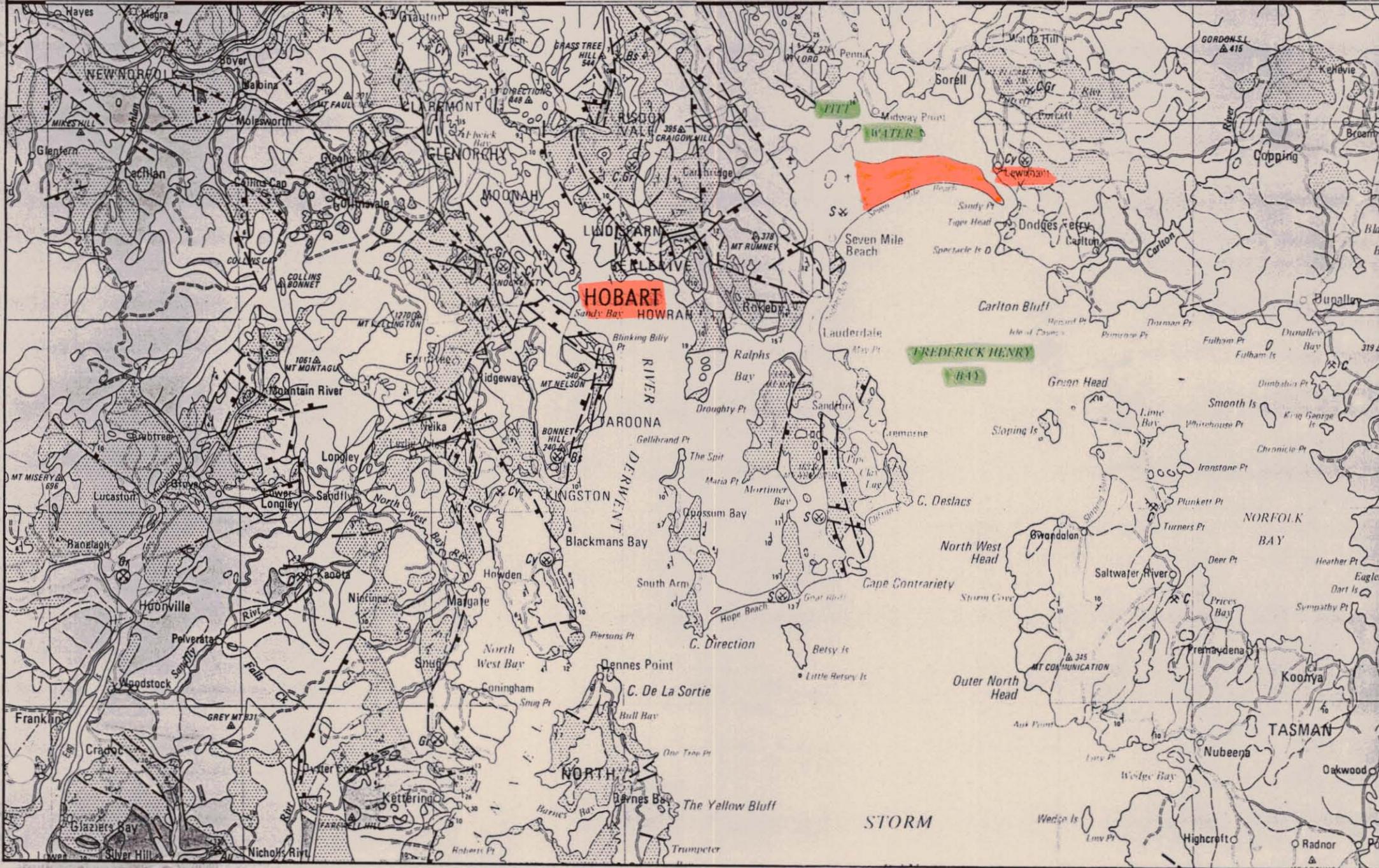
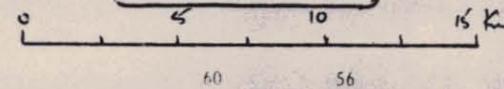
General mining infrastructure is excellent with sealed roads and power to the site, good access to the port of Hobart, the main airport directly adjacent, an easily accessible workforce, and no requirements for a mine to construct housing or other public amenities.

FIGURE 1

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5 cm

Scale 1:250,000



HOBART

FREDERICK HENRY

STORM

3. TENURE

Exploration Licence 20/89 was granted by the Tasmanian Department of Mines on 25th September 1992 for a period of one year.

The licence covers an area of approximately five square kilometres and has a minimum expenditure requirement of \$5,000.00 during the first year.

Full details are given in *Appendix 1*.

4. GEOLOGY

The Seven Mile Beach deposit is a composite sand body made up of Quaternary beach sand, windblown sand dunes, and mobile sand stabilised by vegetative cover.

The spit divides the enclosed Pitt Water from the semi enclosed Frederick Henry Bay, and numerous low relief strandlines are visible on the aerial photographs of the deposit, as shown in *Figure 2*.

Maximum elevation is approximately 5 m above sea level, with up to 15 m of clean sand below sea level, and a basement of green clay overlying Triassic sediments.

Morphology of the spit is uncertain, but appears to be related to the interaction of bedrock high "anchor points" on the western side of the inlet, drainage out of the Pitt Water, and circulating water currents in Frederick Henry Bay.

Provenance of the sands is assumed to be mainly from erosion of Mesozoic sediments, with contribution of heavy minerals from weathering and erosion of the Tertiary volcanics in the basins of the Coal and Orielton Rivers.

Figure 2 shows that the Pitt Water is relatively shallow, except for a major channel from Woody Island around the eastern end of the spit, and a joining subsidiary channel from the Orielton River.

The substantial sand bank offshore from Five Mile Beach suggests that sand accretion is still occurring in Pitt Water.

Drainage of water out of Pitt Water into Frederick Henry Bay has provided the conditions necessary for winnowing of the heavy mineral sands, and deposition in the accreting sediments on the northern side of the sand spit. Heavy mineral values are low in the sand of Seven Mile Beach along the southern side of the spit, suggesting that wave action is not a major concentrating agent in this situation.

The area is shown on the Hobart 1:250,000 and Sorell 1:50,000 scale geological sheets.

The Carlton 1:25,000 scale topographic sheet gives excellent detail of the physical features of the area.

FIGURE 2



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5. PREVIOUS INVESTIGATIONS

In 1975, the Louisa Mining Corporation NL was granted Exploration Licence 7/75 over a 40 km² area covering the sand spit and offshore Pitt Water. Hand auger drilling and sludging to depths of 15 m gave samples of heavy mineral containing 9% rutile and 16% zircon by grain counting.

MDL took up an option to explore the area and in 1976, drilled a cross-section of 37 RC drill holes across the spit. These gave an average heavy mineral grade of 1.34%, containing 8% rutile, 15% zircon, and 50% ilmenite. From these results, MDL estimated the deposit could contain 150,000 tonnes of 88% TiO₂ product grading 0.165% in situ. The location of the drilling is given in *Figure 3*.

A final programme of ten holes in tidal areas of Pitt Water tested the potential for construction sand and shell bed deposits.

Exploration Licence 7/75 was not renewed after expiry in April 1978.

6. CRL INVESTIGATIONS

6.1 SITE VISITS

In November 1989, the writer inspected the Seven Mile Beach area with Messrs. Forster and Morrison.

Items of interest which were noted were:-

- ▶ Generally flat topography with small relict strandline ridges.
- ▶ Coverage of pine plantations.
- ▶ Significant heavy mineral accumulations along the Five Mile Beach shoreline as shown in *Plate 7*.
- ▶ Shell beds associated with heavy mineral enriched zones as in *Plate 8*.

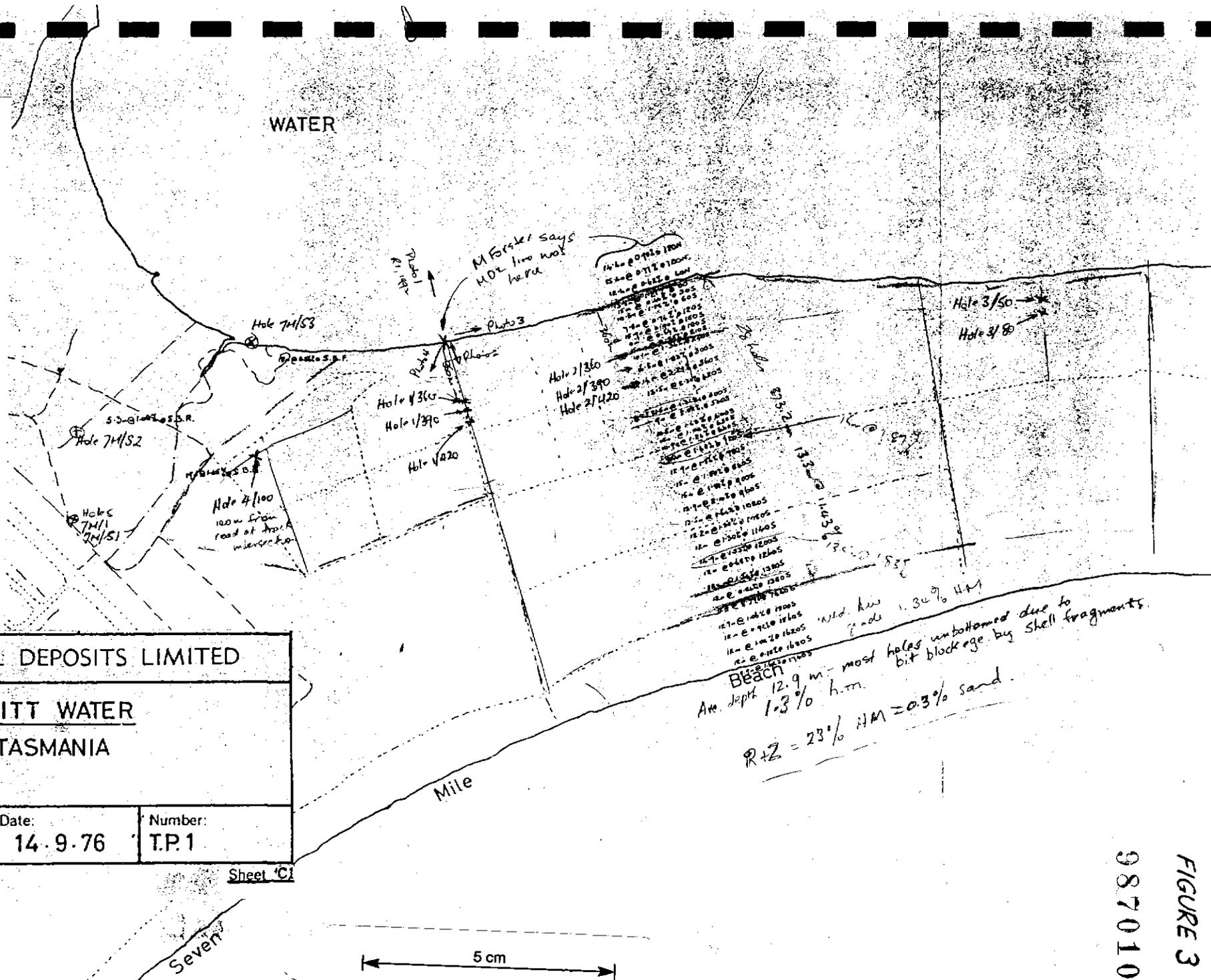
Inspections confirmed that heavy mineral enrichment was greatest on the northern (Five Mile Beach) side of the spit, and since no exploration title was in existence, a number of grab samples for comparative assay were collected from public areas.

Locations of these samples are given in *Figure 3*.

Following the granting of Exploration Licence 20/89, the writer again visited the site in November 1992.

SEE ENLARGED AND
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END OF REPORT

WATER



MINERAL DEPOSITS LIMITED
PITT WATER
TASMANIA

Scale: 1:15,840
(1" = 20 Chains)

Date: 14.9.76

Number: T.P.1

Sheet 'C1

5 cm

Beach
Ave. depth 12.9 m - most holes unbottomed due to bit blockage by shell fragments.
1.3% H.M.
R+Z = 23% H.M. = 0.3% sand.

FREDERICK HENRY BAY

987010
FIGURE 3

Using hand augers, 38 samples from 10 sites on 4 lines across the spit were collected from depths up to 4.5 m below surface.

Since the assays were required primarily for comparative checking of the heavy mineral suite against results of previous MDL drilling, it was not considered necessary to drill below water table using sludging equipment.

Figure 3 also gives the locations of these auger holes, together with the drill sites of the 1975 MDL RC programme.

Figure 4 is a cross-section prepared from the MDL drilling.

In addition to the hand auger drilling, visits were made to the Mines Department to obtain geological data and advice on future development policies, and to the Hobart Port Authority to check shipping facilities.

6.2 CONCEPTUAL STUDIES

Preliminary estimates using MDL 1975 drilling data gave the following resource:-

- ▶ 80 million tonnes of free flowing, slimes free sand in the Exploration Licence, with the possibility of an additional 40 million tonnes from agreements covering the adjacent Readymix and airport areas.
- ▶ Ore body thickness 10 m to 14 m, containing about 1.75% heavy mineral.
- ▶ A heavy mineral suite containing 50% ilmenite, 8% rutile, and 15% zircon.

Conceptually at this stage, CRL was considering a floating dredge and wet plant mining at 1,500 tph (11 million tpa sand), to produce:-

- ▶ 68,000 tpa ilmenite separated on site and shipped ex Hobart.
- ▶ 42,000 tpa of mixed zircon/rutile concentrates to be barged from Hobart to CRL Pinkenba dry mill in Brisbane to produce 23,000 tpa zircon and 15,000 tpa rutile.

Using these parameters, plus a start-up capital expenditure estimate of \$18 million based in part on utilising surplus CRL equipment on North Stradbroke Island, a computer economic model suggested an IRR of about 9% over an operating life of 10 years.

Although not sufficient to meet CRL investment criteria for start-up of a new mine, these results were considered to be worth following up in more detail to ascertain whether further gains could be achieved.

6.3 ASSAYS

Assaying of samples from the Llanherne area have been carried out by various organisations since 1975, utilising varying methods.

Pre 1992 results were obtained by a combination of bromoform heavy media separation, magnetics, and grain counting.

Assays done by CRL and MDL from 1992 have utilised bromoform heavy media separation, magnetic separation, clerici liquid separation of non magnetic heavies, and grain counting for final checking and, if necessary, minor corrections.

Table 1 is a summary of the various assay programmes and their results.

Full lists of assay results are given in **Appendix 2**.

7. RESULTS

7.1 DIFFERENCES BETWEEN PRE 1992 AND LATER ASSAYING

The most significant aspect of the results obtained from the CRL studies is the high contrast between the pre 1992 and the later assay results.

Prior to 1992, and based on MDL drill sample assays and CRL surface check samples, a conceptual mining project had been identified which was sufficiently interesting to warrant further work.

Results from CRL's November 1992 hand auger drilling across the deposit gave the expected total heavy mineral content, but were radically lower than previous studies in the relative contents of the valuable heavy minerals ilmenite, rutile, and zircon.

This is clearly illustrated in **Table 1** and summarised in **Table 2**.

TABLE 2
COMPARISON OF PRE 1992 AND
LATER AVERAGE VALUABLE HEAVY MINERAL CONTENTS

PERIOD	ASSAY METHOD	ASSAY RESULTS - % OF HEAVY MINERAL		
		% ILMENITE	% RUTILE	% ZIRCON
Pre 1992	Magnetism + grain counts	51	8.6	13.7
Post 1992	Magnetism + clerici + grain counts	23	2.9	4.6

TABLE 1

SUMMARY OF ASSAY PROGRAMMES AND RESULTS

REF. NO.	LOCALITY	SAMPLE DATA			ASSAY DATA			ASSAY % OF HEAVY MINERAL		
		SAMPLED BY	DATE	TYPE	ASSAYED BY	DATA	METHOD	ILMENITE	RUTILE	ZIRCON
1	Line 12000E, hole 1000S	?AMC	1975	Auger 0-8.5 m	AMC	1975	Magnetics + grain count	57	6	13
2	Five Mile Beach	?AMC	1975	Not known	AMC	1975	Magnetics + grain count	53	9	17
3	Line 12000E, hole 1000S	?AMC	1975	Auger 0-8.5 m	M. Forster	?	Grain count	55	8	15
4	Cross-section of deposit - 38 holes to basement	MDL	1976	RC rig	MDL	1976	Magnetics + grain count	50	8	15
5	West end of deposit near Airport	CRL	1989	Composite of 4 grab samples	CRL	1989	Magnetics + grain count	35	10	9
6	West end of deposit near Airport	CRL	1989	Composite of 4 grab samples	CRL	1992 (re assay of No. 5 above)	Magnetics + clerici	55	9	14
7	Five Mile Beach near public park	CRL	1989	Surface grab sample	CRL	1989	Magnetics + grain count	53	10	13
8	Total deposit - 38 samples in 10 holes and 4 lines across deposit	CRL	1992	Hand auger to water table	CRL	1992	Magnetics + clerici	15	3.7	3.6
9	Line 1/420S, 4-4.5 m	CRL	1992	Hand auger	CRL	1992	Magnetics + clerici	20	2.9	5.4
10	Line 1/420S, 4-4.5 m	CRL	1992	Hand auger	MDL	1992	Magnetics + clerici	22	3.6	6.5
11	MDL drill line, hole 420S, 10.5-12 m	MDL	1975	RC drill sample	CRL	1992	Magnetics + clerici + grain count	15	2.1	3.6
12	MDL drill line, hole 420S, 10-5-12 m	MDL	1975	RC drill sample	MDL	1992	Magnetics + clerici + grain count	20	2.2	4.9
13	MDL drill line holes 380S, 4-14 m and 420S, 0-13.5 m (combined result)	MDL	1975	RC drill samples	CRL	1992	Magnetic + clerici + grain count	18	2.0	2.9

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Although CRL has in previous investigations found comparable assay differences between the grain counting and clerici methods for the non magnetic heavy fractions, the large differences in the ilmenite figures were unexpected, and there was concern to cross-check these results.

CRL therefore obtained from Mr. Forster, 16 reference splits of MDL 1975 RC drilling samples.

These were assayed and the results given in *Table 3*.

TABLE 3
SUMMARY RESULTS OF ASSAYS OF MDL 1975 SAMPLES

SAMPLE	COMPONENT AS % OF TOTAL HEAVY MINERAL		
	ILMENITE	RUTILE	ZIRCON
CRL 1992 - MDL drill line, hole 3605, 4.5-14 m	16	1.7	3.0
CRL 1992 - MDL drill line, hole 4205, 0-13.5 m	17	2.2	2.9
MDL 1975 - Average of all samples	50	8	15

These results confirm that there is a significant difference between the original MDL averages (whole ore body) of 50% ilmenite, 8% rutile, and 15% zircon in the heavy mineral, and the CRL averages above (admittedly for only 16 samples) of about 17% ilmenite, 2.1% rutile, and 3.0% zircon.

This raised questions about the assay methods, and to test this, a drilling sample from both the CRL and MDL drilling was sent (without identification) to the MDL Laboratory in Southport, Queensland.

The results are as in *Table 4*.

TABLE 4
COMPARISON OF 1992 CRL AND MDL LABORATORY ASSAYS

SAMPLE	ASSAY		HM %	% OF TOTAL HEAVY MINERAL		
	LABORATORY	DATE		ILM.	RUTILE	ZIRCON
Line 1/420S, 4-4.5 m - CRL hand auger sample 1992	CRL	1992	1.8	20	2.9	5.4
	MDL	1992	1.7	22	3.6	6.5
MDL drill line/420S, 10.5-12 m - MDL RC rig 1975	CRL	1992	3.5	15	2.1	3.6
	MDL	1992	2.9	20	2.2	4.9

Table 4 validates CRL's assaying, and it has to be concluded that:-

- (i) The CRL 1992 assaying is substantially correct, and
- (ii) That the real ilmenite, rutile, and zircon contents of the total heavy mineral have in the past been severely over estimated.

7.2 "TRASH" HEAVY MINERAL INVESTIGATIONS

The use of clerici liquid classification for the Tasmanian samples revealed relatively high (for CRL) quantities of non valuable light heavies - i.e. "trash heavy mineral" - in the <4.05 SG category.

In the CRL assay system, ilmenite reports to the rapid disc magnet Poles 1A and 1B fractions.

Samples of the Llanherne <4.05 SG Poles 1A and 1B magnetic fractions sent to Geochempet Services for mineralogical analysis were found to contain substantial amounts of kyanite - i.e. 31% of the Pole 1B magnetic fraction in the first case and 11% of the Pole 1A fraction in the second.

On the assumption that this is general, then the approximate difference of >30% in ilmenite content between the pre 1992 and subsequent samples can be explained.

For the pre 1992 assays, the only logical procedural explanation is that, since most eastern Australian beach sand heavy minerals contain minimal magnetic "trash", the total weights of the magnetic fractions were simply assumed by all parties to be, and were calculated as, ilmenite.

This was certainly the assumption used by CRL in its 1989 preliminary assays which were misleading, and the methodology has now been changed.

Details of the mineralogical investigations are in *Appendix 3*.

7.3 REDUCTIONS IN RUTILE AND ZIRCON PROPORTIONS

Relative to pre 1992 assaying, there are four-fold and five-fold reductions in rutile and zircon contents of the heavy mineral respectively.

These again seem large, but are confirmed by the 1992 check assaying by MDL.

It has been CRL's experience that reductions of up to 50% in rutile and zircon contents are common when clerici assaying replaces grain counting.

In this case, the larger reductions can only be assumed to be related to the difficulty, during grain counting, of avoiding over estimation of valuable heavy mineral grain volumes in the presence of such a high proportion of large, erratically shaped "trash" minerals.

7.4 QUALITY OF ILMENITE, RUTILE, AND ZIRCON

Ilmenite is relatively low TiO_2 , with moderate to high levels of Cr_2O_3 , CaO , and MgO . It is not suitable for sulphate route pigment production, and due to low TiO_2 content, is unlikely to be economically competitive as a synthetic rutile plant feedstock.

It is very similar in sizing and chemistry to ilmenite from North Stradbroke Island, and could possibly find a use as a low cost niche market titanium feedstock.

Rutile and zircon are both clean, high grade minerals similar in appearance to those from North Stradbroke Island. Assays are given in *Appendix 2* and photomicrographs are given in *Plates 9 and 10*.

7.5 ECONOMIC MODELLING

As mentioned in Section 6.2, a preliminary mine economic model using MDL 1975 valuable heavy mineral splits of ilmenite 50%, rutile 8%, and zircon 15%, gave an IRR of 9% over a 10 year life.

A re-run of the model at current valuable heavy mineral splits of ilmenite 23%, rutile 2.9%, and zircon 4.6%, gave a negative IRR with an annual loss of ~\$2M on a cash flow basis.

This shows the extent to which economics of the project are grade dependent.

From *Figure 4*, the MDL drill line cross-sections, it can be seen that any attempt to "high grade" the deposit cannot succeed as the high grade zones are at the base of the ore body, and any gains from omitting the low grade fringes could still not produce the >5% total heavy mineral grade necessary to achieve an IRR \geq the original 9%.

8. CONCLUSIONS

- ▶ The Llanherne deposit is a significant alluvial sand deposit containing an average 1% to 2% total heavy minerals and is located in an area close to Hobart with excellent development infrastructure.
- ▶ However, the valuable heavy mineral content of the deposit – i.e. ilmenite, rutile, and zircon – has been shown in this study to be less than one third of the total heavy mineral, or ~0.3% to ~0.7% in situ. These levels cannot economically justify mining development at present and projected prices.
- ▶ Compared to pre 1992 investigations, the economic potential of the deposit has been substantially downgraded by lower valuable heavy mineral grades due to assay methods which apply higher levels of density discrimination, and minimise the effects of bias in grain counting.
- ▶ There may be some scope for separation of heavy minerals as an adjunct to the extraction of construction sand or land development operations. These are not of interest to CRL and would need to be considered on an individual project basis.

9. RECOMMENDATION

CRL should terminate its interest in this project on the basis of its low in situ valuable heavy mineral grades and the lack of potential to expand the resource by additional exploration.

10. EXPENDITURES

	\$	\$
Analysis		
MDL	600.00	
Geochempet Services	200.00	
Australian Laboratory Services	634.50	
CRL Pinkenba Laboratory	<u>1,316.76</u>	
	2,751.26	2,751.26
Consulting - K. Morrison		376.35
Internal labour - 67 hours		4,199.00
Travel and entertainment		1,375.29
Freight on samples		179.54
Photographs		<u>15.95</u>
TOTAL		<u>\$8,897.39</u>

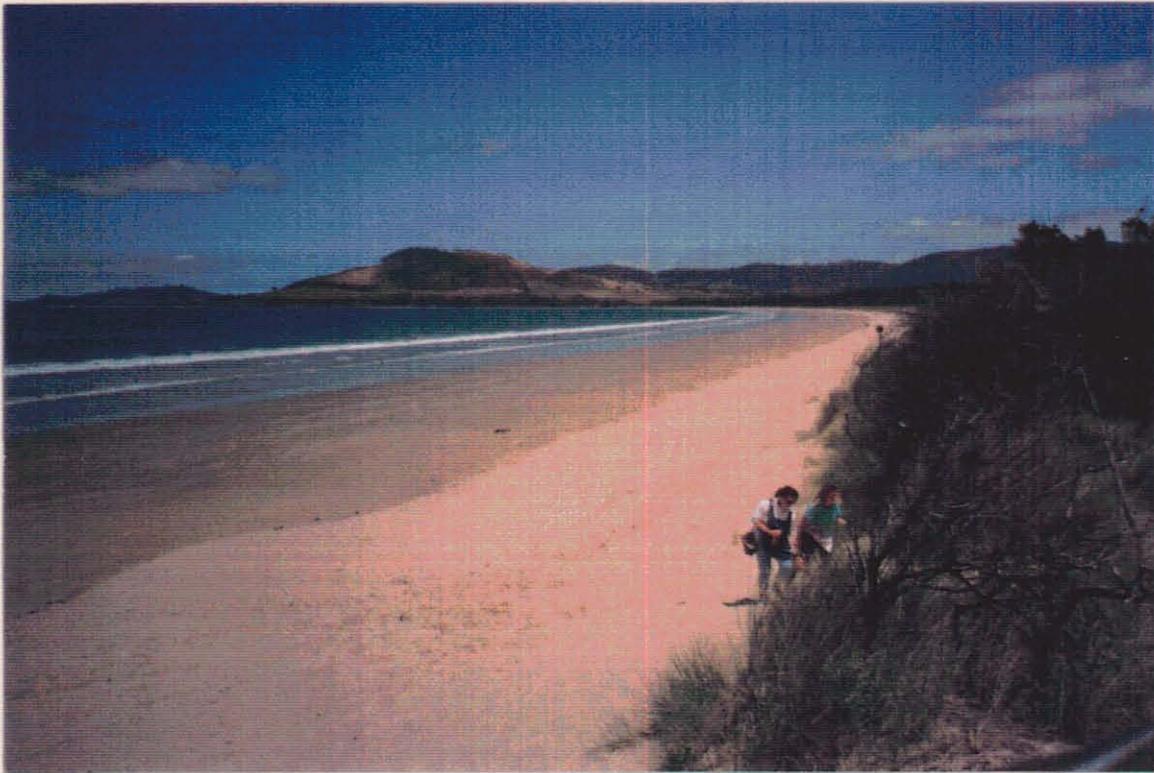


Plate 1 Seven Mile Beach looking west towards Single Hill.



Plate 2 Seven Mile Beach looking east towards Sandy Point.



Plate 3 Looking north across spit from Seven Mile Beach. Note 3 m dunes and pine plantations.

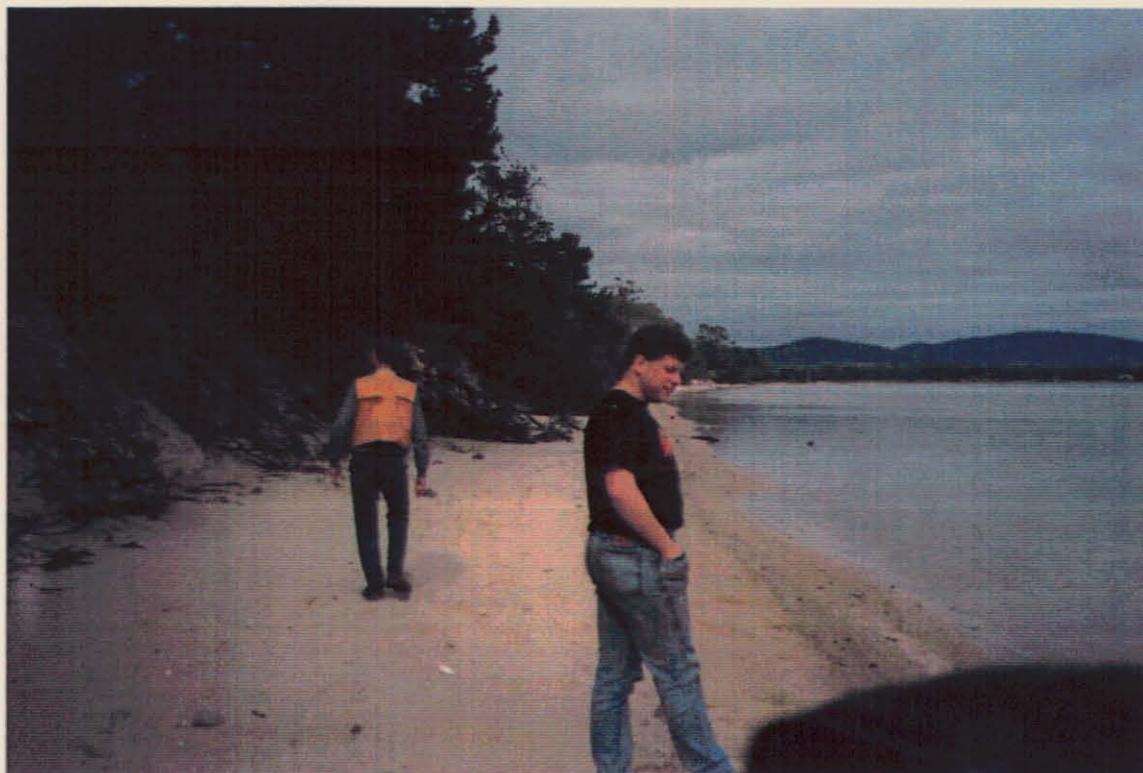


Plate 4 Looking west along Five Mile Beach in direction of Hobart Airport.



Plate 5 Looking south across spit from Five Mile Beach. Note pine plantation.

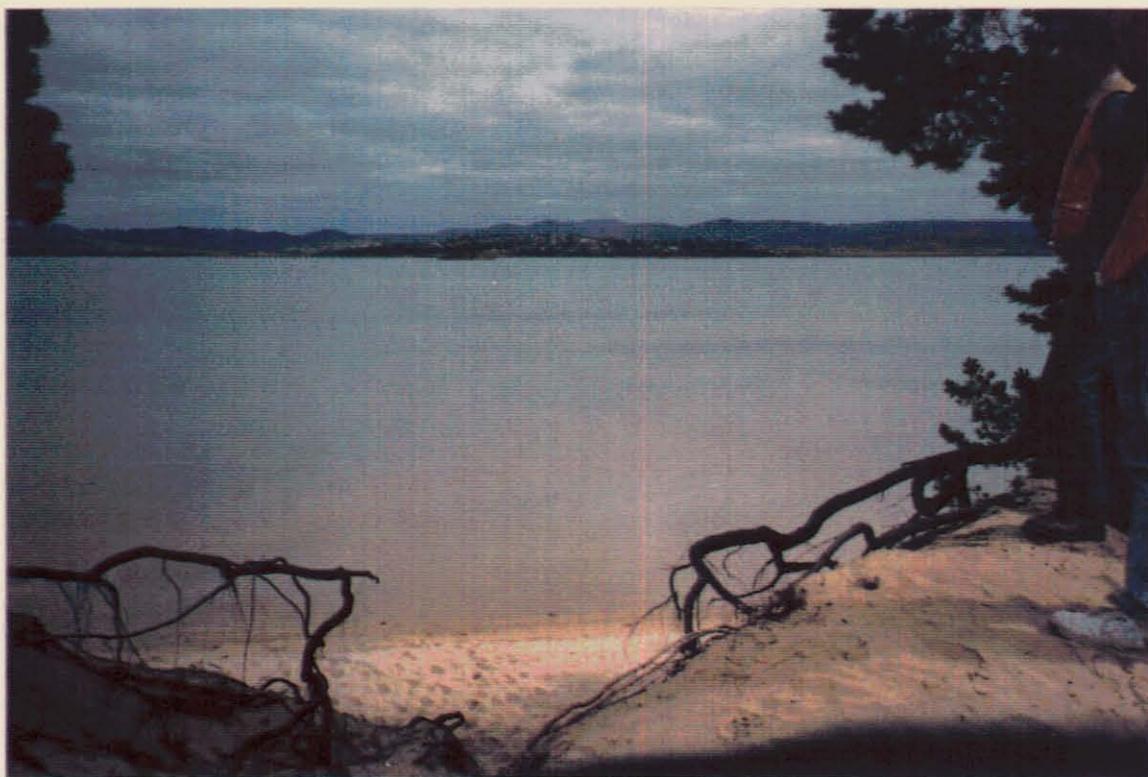


Plate 6 View north from Five Mile Beach across Pitt Water towards Woody Island and Sorell.



Plate 7 Shoreline concentration of heavy mineral on Five Mile Beach.



Plate 8 Shell detritus in zone of heavy mineral enrichment, Five Mile Beach.



Plate 9 Rutile product, Llanherne, Tasmania.

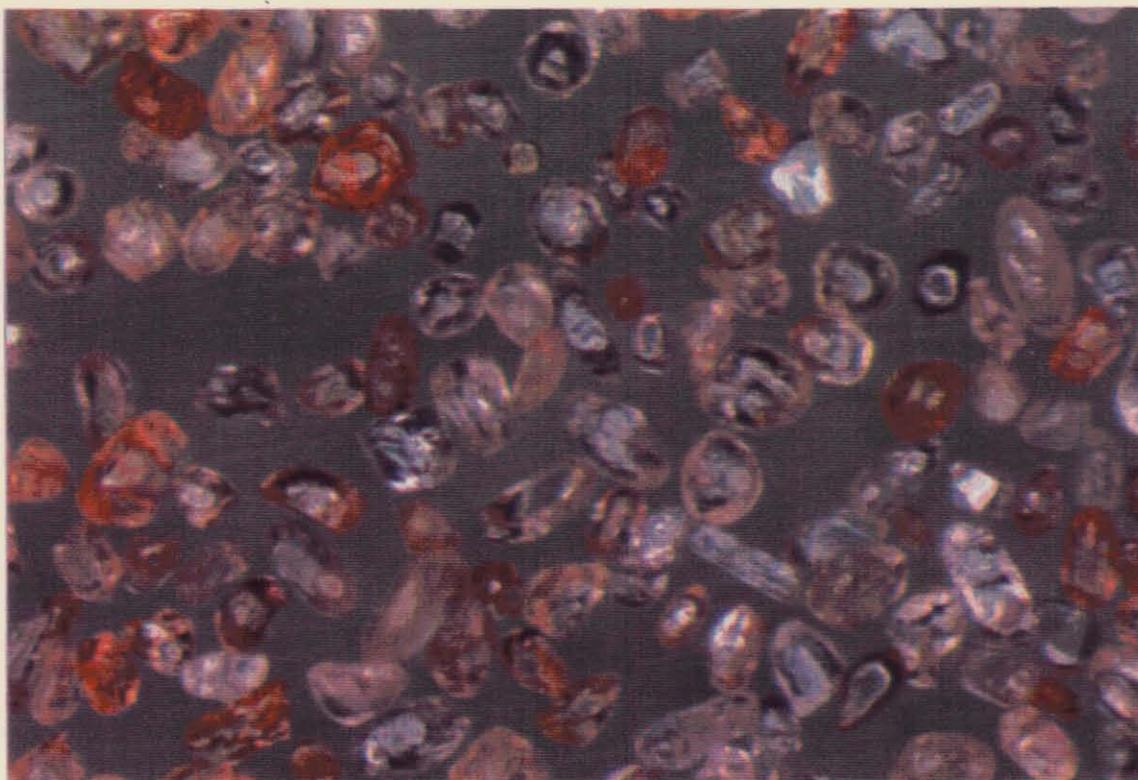


Plate 10 Zircon product, Llanherne, Tasmania.

NORTHWEST BAY CO. PTY. LTD.
-----**Bibliography - E.L. 20/89**

An application for the exploration licence at Pittwater was made on 22nd February, 1989 for an area of 10 sq.km. covering part of the Seven Mile Beach-Five Mile Beach sand spit, east of the Hobart Airport, and part of Pittwater along Five Mile Beach. E.L. 20/89 was granted on 25/9/92 following the change in the Tasmanian Government, but with the area reduced to 5 sq.km. thereby excluding the Pittwater area.

PROJECT AIMS

The main aim of the project being to further evaluate the area for its sand mining potential by extending the previous work of Louisa Mining Corporation N.L. Field work will include further drilling and sampling.

CONSOLIDATED RUTILE LIMITED was approached in Aug. 1989 with a view to forming a J.V. to jointly extend the exploration work and to carry out a feasibility study into the mining of heavy mineral sands on the spit.

C.R.L. made an evaluation of the potential mining prospects and the report from C.R.L., herewith, forms the Year 1 report.

THE PROPOSED PROGRAMME - YEAR 2

This will evaluate the general area and test the sands for suitability as a future long term sand reserve for Hobart.

A joint venture for the evaluation is proposed with R.M.B. Trading Pty.Ltd., or its nominee.

APPENDIX 1

EXPLORATION LICENCE 20/89

SEVEN MILE BEACH

DEPARTMENT OF
MINES
TASMANIA

Enquiries: S. Cumming
Phone: 33 8407
Your ref:
Our file: REG06:JH
EL 20/89

- 6 OCT 1992

Mr M Forster
North West Bay Co Pty Ltd
'Lee Wave' RMB 341
SANDFLY TAS 7150

Dear Sir

EXPLORATION LICENCE 20/89 - SEVEN MILE BEACH

Please find enclosed your copy of the above licence which has been issued to 25 September 1993. You should read the licence carefully to ensure that you are aware of all the provisions.

A copy of the licence is enclosed for the officer in charge of your exploration programme. This is to ensure that he is aware of all the conditions and requirements. I emphasise that biannual reports (accompanied by adequate maps and charts) must be submitted. To assist in this regard, I have enclosed two copies of the Department's Biannual Report form. Your application for renewal will basically be assessed on the quality of your reporting. Please notify the name and address of the officer in charge of your exploration programme.

Please note that the minimum expenditure commitment on this licence during the first year is \$5,000.

A brochure relating to current Exploration Licence Conditions and Guidelines is attached for your information.

You are also advised that there may be current mining tenements within your licence area. These may be relinquished at any time and will then revert to your licence. Enclosed is a piece of plan showing areas excluded from your licence.

You should note that this plan is by way of illustration only and it is your responsibility to ascertain exact locations of boundaries from reference to larger scale maps.

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This licence empowers you to explore on both Crown and Private Land. There is no guarantee, however, that the title to any minerals will rest with the Crown. In the majority of cases the Crown will own the minerals but the onus of determining ownership of minerals rests with you.

Yours faithfully



D.R. Burgess
REGISTRAR OF MINES

Encl.

987029

TASMANIA

No. EL 20/89

(Regulation 6A)

The Mining Act 1929

EXPLORATION LICENCE

Issued to **NORTHWEST BAY CO. PTY LTD** of 'LEE WAVE', RMB 341, **KINGSTON, TASMANIA 7050** in respect of **FIVE** square kilometres of land in the Land District of **MONMOUTH** vicinity of **PITTWATER** as described in the schedule hereto.

This licence shall remain in force until the **TWENTY FIFTH** day of **SEPTEMBER 1993**.

This licence is subject to the following conditions:-

1. That the licensee shall immediately on the issue of this licence take steps to commence preliminary works necessary for the investigation of the area.
2. That the licensee shall carry out investigations as may be necessary to determine the mineral potential of the area, and in particular will fulfil the proposals set out in the exploration programme and approved by the Director of Mines.
3. That the licensee shall employ such technical and other staff and equipment as may be necessary effectively to carry out such investigations.
4. This licence shall apply to all minerals.
5. The licensee shall observe, perform and fulfil the conditions as set forth in Schedule 'A' (Revised) and Schedule 'B' attached hereto.
6. The licensee shall be liable to pay the cost of any work carried out to remedy any damage arising from any breach of the conditions of this licence.

987030

7. The licensee shall deposit an amount of \$5000 (Performance/Rehabilitation Deposit) as security that the conditions contained herein shall be observed. Upon expiry or sooner determination of the licence, if the licensee satisfies the Director of Mines that such conditions have been complied with, the Director of Mines shall refund such deposit or such portion thereof, as he may determine.
8. If it is found, that the operations hereby authorised, are causing any undue damage to, or erosion of, the subject land or other land in the vicinity thereof or are unnecessarily disturbing the environment, the Minister may cancel the licence without compensation to the licensee by giving seven days' notice in writing of his intention so to do.
9. The licensee shall arrange and keep in good standing public liability insurance to the minimum of \$1,000,000. Evidence of currency shall be produced on demand.
10. The licensee shall satisfy the minimum expenditure of \$5000 during the first year of the licence.
11. Any exploration activity on the licence area shall not take place without the prior written permission of the Mineral Exploration Working Group.

SCHEDULE

Commencing at a north east corner of the area whose grid co-ordinates are 547 000 metres E. 5 258 195 metres N. being a point 100 metres inland from the high water mark on Pittwater thence grid south to 547 000 metres E. 5 257 400 metres N. south westerly to 544 145 metres E. 5 256 530 metres N. north westerly to 543 780 metres E. 5 256 955 metres N. again north westerly to 543 680 metres E. 5 257 295 metres N. again south westerly to 543 020 metres E. 5 257 000 metres N. grid west to 542 445 metres E. 5 257 000 metres N. again north westerly to 542 385 metres E. 5 257 090 metres N. again south westerly to 542 350 metres E. 5 257 065 metres N. again north westerly to 542 275 metres E. 5 257 180 metres N. north easterly to 542 335 metres E. 5 257 265 metres N. again north easterly to 542 415 metres E. 5 257 430 metres N. again north easterly to 542 480 metres E. 5 257 475 metres N. south easterly to 542 560 metres E. 5 257 390 metres N. again north easterly to 543 565 metres E. 5 257 835 metres N. again north westerly to 543 550 metres E. 5 257 885 metres N. being a point 100 metres inland from the high water mark on Pittwater aforesaid thence in a general north easterly direction 100 metres from and parallel to that high water mark aforesaid to the point of commencement.

LAND TENURE:

The area comprises: Seven Mile Beach Protected Area

NOTE: This land tenure table is a guide only.

987031

EXCLUSIONS

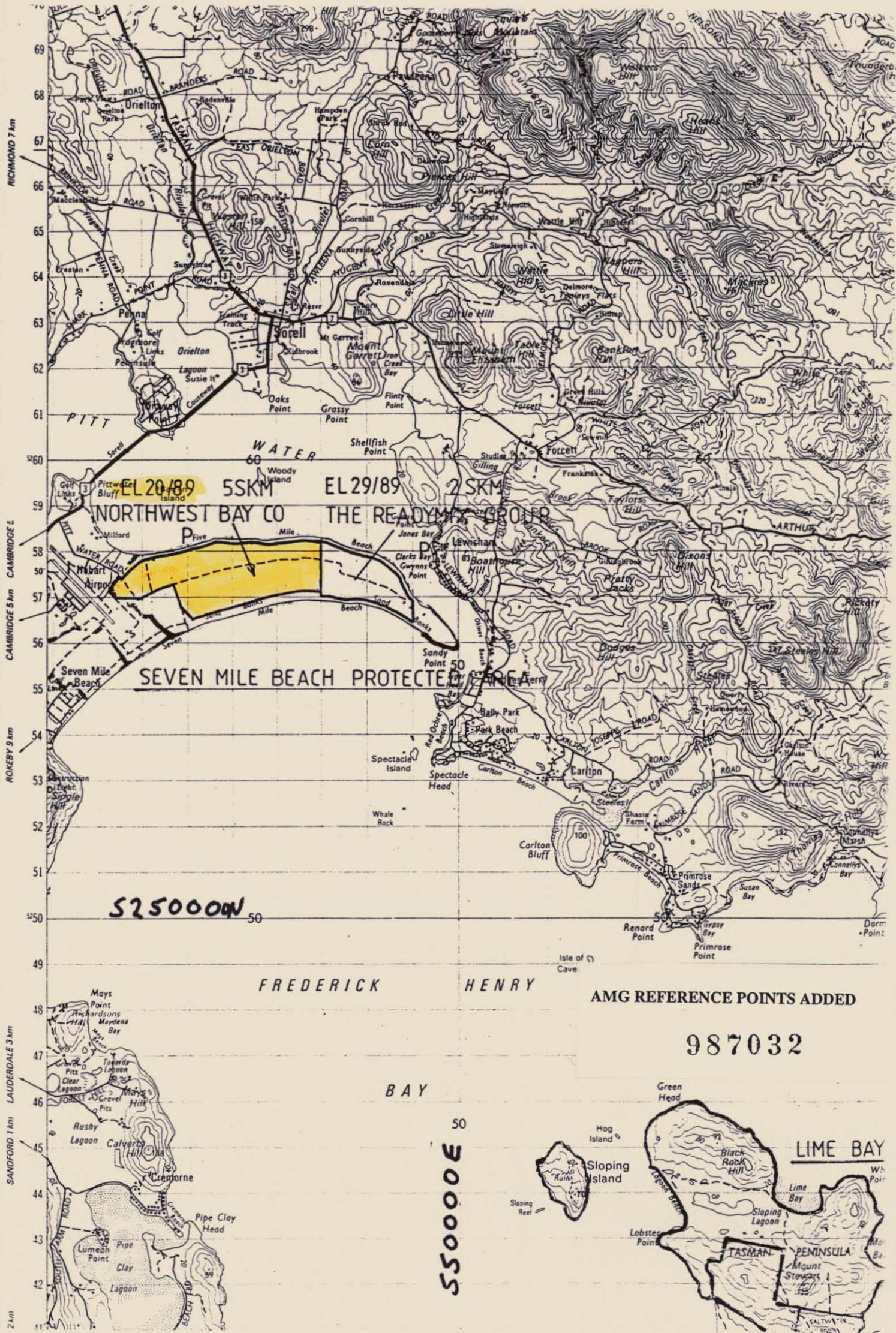
The area embraced by this licence includes State Forests but does not include:

- (a) All other public reserves or municipal reserves or roadways.
- (b) All forms of mining tenements and water licences including leases, water licences, easement licences, exploration licences, prospectors licences, miners rights, permits to enter, owners consents and owners rights which were in lawful possession or marked out prior to the date of application of this licence.
- (c) Land exempt from the provisions of the Mining Act, 1929.
- (d) Land under the National Parks and Wildlife Act, 1970, not subject to the Mining Act, 1929.
- (e) All Crown reservations or other land set apart or dedicated for any public purposes.



MINISTER FOR MINES

Date 1/10/92



RICHMOND 7 km

CAMBRIDGE 5 km

ROKEBY 3 km

LAUDERDALE 3 km

SANDFORD 1 km

EL 20/89 5SKM NORTHWEST BAY CO
EL 29/89 2SKM THE READINESS BROOK

SEVEN MILE BEACH PROTECTED AREA

525000N

FREDERICK HENRY

AMG REFERENCE POINTS ADDED

987032

BAY

550000E

LIME BAY

TASMAN PENINSULA

2 km

987033

5 cm

Scale 1:250,000



987034

DEPARTMENT OF
MINES
TASMANIA

Enquiries: S. Cumming
Phone: 33 8407
Your ref:
Our file: REG06:JH
EL 20/89

- 6 OCT 1992

Mr M Forster
North West Bay Co Pty Ltd
'Lee Wave' RMB 301
SANDFLY TAS 7150

Dear Sir

EXPLORATION LICENCE 20/89 - SEVEN MILE BEACH

Please find enclosed your copy of the above licence which has been issued to 25 September 1993. You should read the licence carefully to ensure that you are aware of all the provisions.

A copy of the licence is enclosed for the officer in charge of your exploration programme. This is to ensure that he is aware of all the conditions and requirements. I emphasise that biannual reports (accompanied by adequate maps and charts) must be submitted. To assist in this regard, I have enclosed two copies of the Department's Biannual Report form. Your application for renewal will basically be assessed on the quality of your reporting. Please notify the name and address of the officer in charge of your exploration programme.

Please note that the minimum expenditure commitment on this licence during the first year is \$5,000.

A brochure relating to current Exploration Licence Conditions and Guidelines is attached for your information.

You are also advised that there may be current mining tenements within your licence area. These may be relinquished at any time and will then revert to your licence. Enclosed is a piece of plan showing areas excluded from your licence.

You should note that this plan is by way of illustration only and it is your responsibility to ascertain exact locations of boundaries from reference to larger scale maps.

This licence empowers you to explore on both Crown and Private Land. There is no guarantee, however, that the title to any minerals will rest with the Crown. In the majority of cases the Crown will own the minerals but the onus of determining ownership of minerals rests with you.

Yours faithfully



D.R. Burgess
REGISTRAR OF MINES

Encl.

987036

TASMANIA

No. EL 20/89

(Regulation 6A)

The Mining Act 1929

EXPLORATION LICENCE

Issued to **NORTHWEST BAY CO. PTY LTD** of 'LEE WAVE', RMB 341, KINGSTON, TASMANIA 7050 in respect of **FIVE** square kilometres of land in the Land District of **MONMOUTH** vicinity of **PITTWATER** as described in the schedule hereto.

This licence shall remain in force until the **TWENTY FIFTH** day of **SEPTEMBER** 1993.

This licence is subject to the following conditions:-

1. That the licensee shall immediately on the issue of this licence take steps to commence preliminary works necessary for the investigation of the area.
2. That the licensee shall carry out investigations as may be necessary to determine the mineral potential of the area, and in particular will fulfil the proposals set out in the exploration programme and approved by the Director of Mines.
3. That the licensee shall employ such technical and other staff and equipment as may be necessary effectively to carry out such investigations.
4. This licence shall apply to all minerals.
5. The licensee shall observe, perform and fulfil the conditions as set forth in Schedule 'A' (Revised) and Schedule 'B' attached hereto.
6. The licensee shall be liable to pay the cost of any work carried out to remedy any damage arising from any breach of the conditions of this licence.

987037

7. The licensee shall deposit an amount of \$5000 (Performance/Rehabilitation Deposit) as security that the conditions contained herein shall be observed. Upon expiry or sooner determination of the licence, if the licensee satisfies the Director of Mines that such conditions have been complied with, the Director of Mines shall refund such deposit or such portion thereof, as he may determine.
8. If it is found, that the operations hereby authorised, are causing any undue damage to, or erosion of, the subject land or other land in the vicinity thereof or are unnecessarily disturbing the environment, the Minister may cancel the licence without compensation to the licensee by giving seven days' notice in writing of his intention so to do.
9. The licensee shall arrange and keep in good standing public liability insurance to the minimum of \$1,000,000. Evidence of currency shall be produced on demand.
10. The licensee shall satisfy the minimum expenditure of \$5000 during the first year of the licence.
11. Any exploration activity on the licence area shall not take place without the prior written permission of the Mineral Exploration Working Group.

SCHEDULE

Commencing at a north east corner of the area whose grid co-ordinates are 547 000 metres E. 5 258 195 metres N. being a point 100 metres inland from the high water mark on Pittwater thence grid south to 547 000 metres E. 5 257 400 metres N. south westerly to 544 145 metres E. 5 256 530 metres N. north westerly to 543 780 metres E. 5 256 955 metres N. again north westerly to 543 680 metres E. 5 257 295 metres N. again south westerly to 543 020 metres E. 5 257 000 metres N. grid west to 542 445 metres E. 5 257 000 metres N. again north westerly to 542 385 metres E. 5 257 090 metres N. again south westerly to 542 350 metres E. 5 257 065 metres N. again north westerly to 542 275 metres E. 5 257 180 metres N. north easterly to 542 335 metres E. 5 257 265 metres N. again north easterly to 542 415 metres E. 5 257 430 metres N. again north easterly to 542 480 metres E. 5 257 475 metres N. south easterly to 542 560 metres E. 5 257 390 metres N. again north easterly to 543 565 metres E. 5 257 835 metres N. again north westerly to 543 550 metres E. 5 257 885 metres N. being a point 100 metres inland from the high water mark on Pittwater aforesaid thence in a general north easterly direction 100 metres from and parallel to that high water mark aforesaid to the point of commencement.

LAND TENURE:

The area comprises: Seven Mile Beach Protected Area

NOTE: This land tenure table is a guide only.

987038

EXCLUSIONS

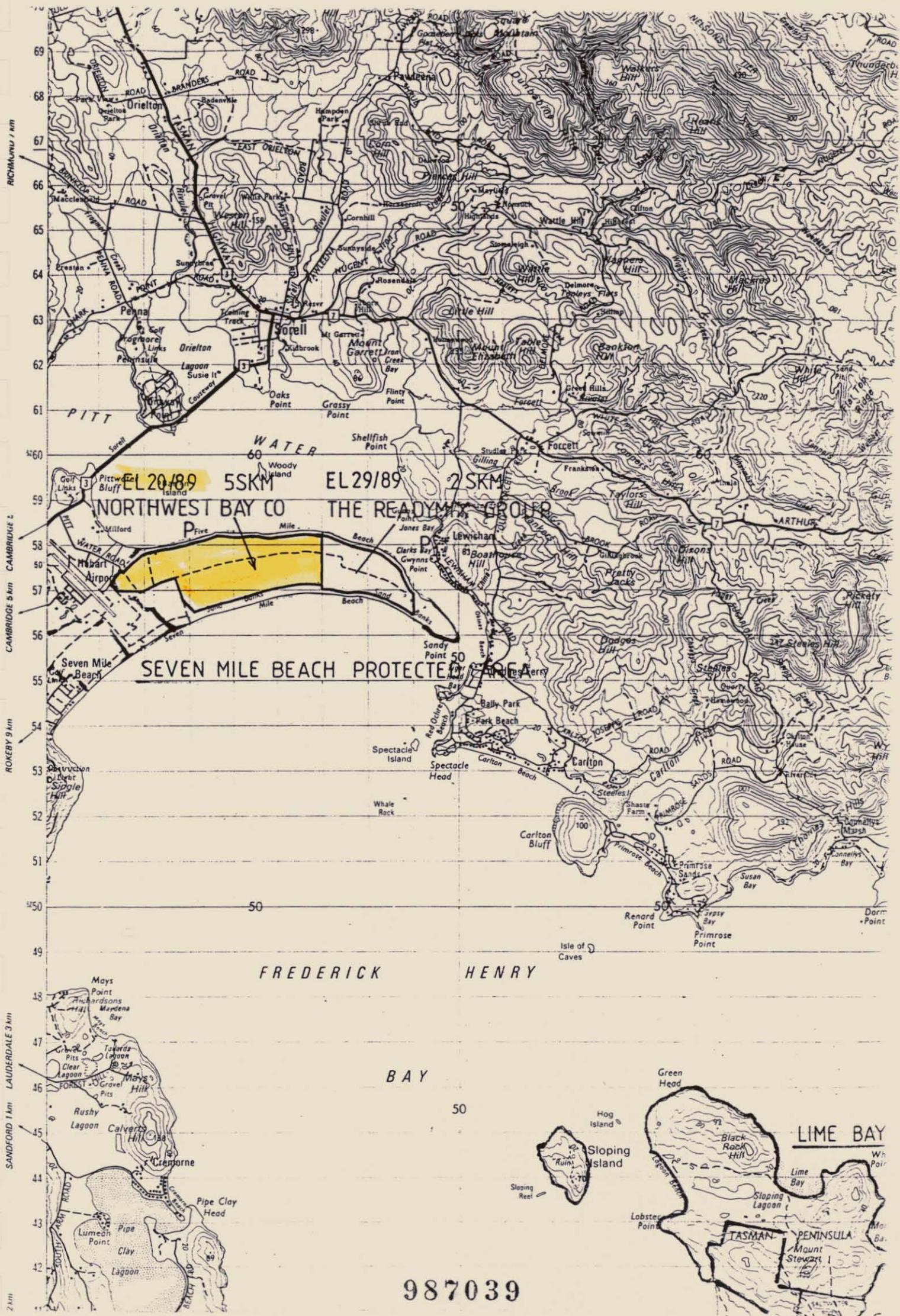
The area embraced by this licence includes State Forests but does not include:

- (a) All other public reserves or municipal reserves or roadways.
- (b) All forms of mining tenements and water licences including leases, water licences, easement licences, exploration licences, prospectors licences, miners rights, permits to enter, owners consents and owners rights which were in lawful possession or marked out prior to the date of application of this licence.
- (c) Land exempt from the provisions of the Mining Act, 1929.
- (d) Land under the National Parks and Wildlife Act, 1970, not subject to the Mining Act, 1929.
- (e) All Crown reservations or other land set apart or dedicated for any public purposes.



MINISTER FOR MINES

Date 1/10/92



RICHMOND 7 km

CAMBRIDGE 5 km

ROXEBY 9 km

LAUDERDALE 3 km

SANDFORD 1 km

2 km

EL20/89 5SKM EL29/89 2SKM
NORTHWEST BAY CO THE READY GROUP

SEVEN MILE BEACH PROTECTED AREA

FREDERICK HENRY

BAY

LIME BAY

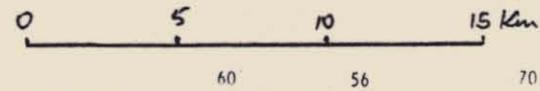
TASMAN PENINSULA

987039

987040

5 cm

Scale 1:250,000



147°00'

50 10

147°30'

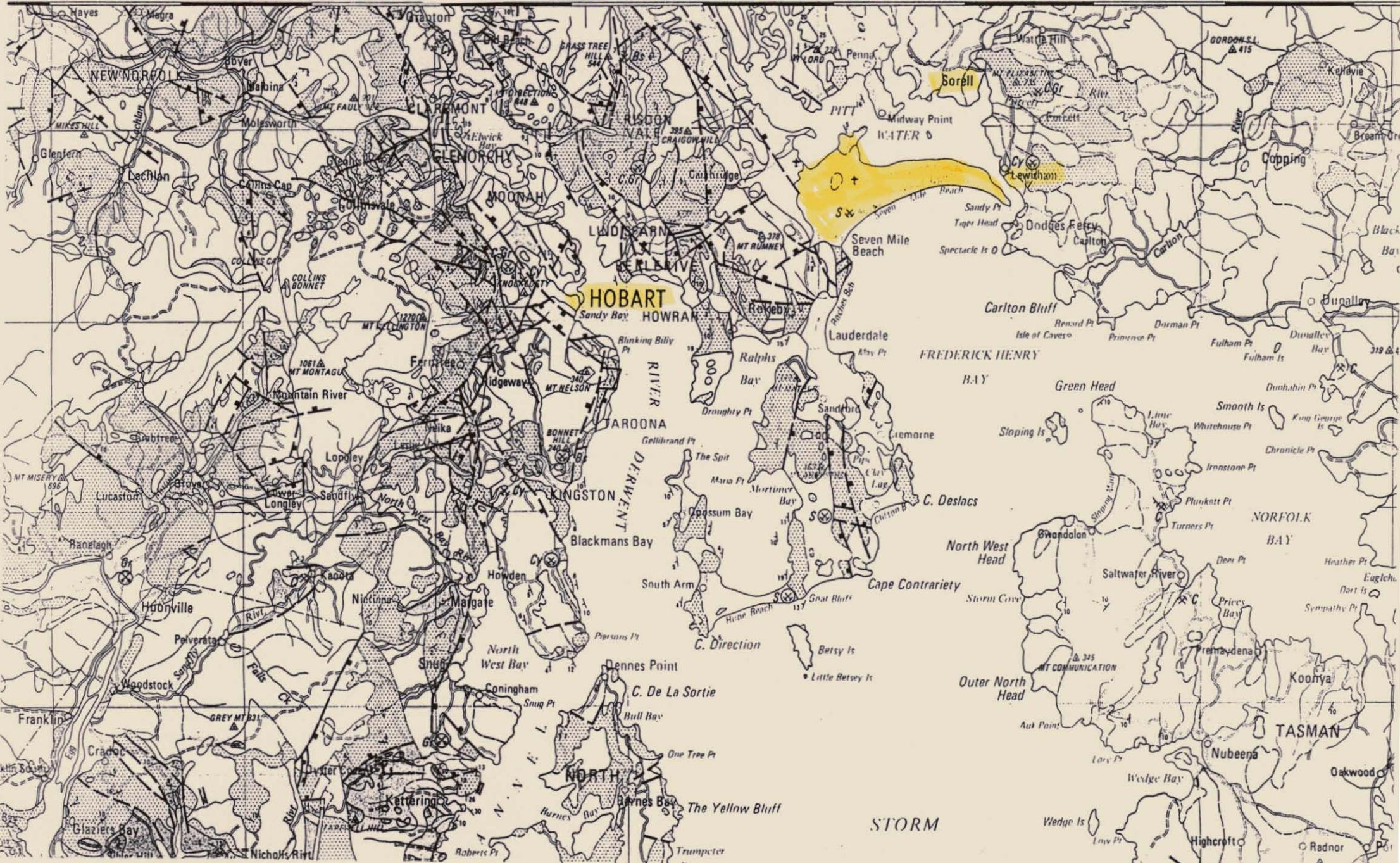
54

50

60

56

70



APPENDIX 2

ASSAY RESULTS

ASSAYS OF CRL 1992
DRILLING SAMPLES

APPENDIX 2

TASMANIAN
SAMPLES
REF NO. 0098

CRL Drilling (hand assay)

SAMPLE	RAPID MAGNET RESULTS % IN HEAVY MINERAL					
	PERM MAG	POLE 1A	POLE 1B	POLE 2A	POLE 2B	NON MAGS
1/360S 0-1	0.27	27.84	30.41	19.86	2.16	19.46
1/360S 1-2	0.48	27.19	22.73	27.34	2.70	19.55
1/360S 2-3	0.58	36.77	26.26	14.59	1.17	20.62
1/360S 3-3.5	0.89	29.54	19.35	23.78	1.03	25.41
1/390S 0-1	0.52	45.91	25.06	10.42	1.29	16.80
1/390S 1-2	0.66	44.42	26.19	14.78	0.99	12.97
1/390S 2-3	0.72	52.19	18.99	13.66	1.32	13.12
1/390S 3-4	0.74	43.86	21.82	10.34	1.03	22.22
1/390S 4-4.5	0.59	39.47	23.44	13.55	0.99	21.96
1/420S 0-1	0.19	39.24	12.38	33.52	0.57	14.10
1/420S 1-2	0.45	31.47	12.95	33.71	1.34	20.09
1/420S 2-3	0.39	31.32	32.49	14.79	1.17	19.84
1/420S 3-4	0.58	36.87	26.64	13.61	1.74	20.56
1/420S 4-4.5	0.51	34.53	26.82	13.67	2.16	22.30
2/360S 0-1	0.30	31.16	21.66	30.27	1.48	15.13
2/360S 1-2	0.20	31.19	16.30	31.59	3.02	17.71
2/360S 2-3	0.33	26.15	19.57	28.13	1.81	24.01
2/360S 3/4	0.00	19.33	16.67	37.00	2.00	25.00
2/390 0-1	0.43	18.72	20.00	44.68	1.28	14.89
2/390 1-2	0.00	19.03	27.43	32.74	2.65	18.14
2/420 0-1	0.00	13.36	31.34	37.33	1.84	16.13
2/420 1-2	0.34	17.63	21.69	41.69	1.69	16.95
3/50 0-1	0.25	20.40	28.21	30.23	1.51	19.40
3/50 1-2	0.00	16.81	21.98	28.88	4.31	28.02
3/50 2-3	0.33	25.90	14.10	41.64	1.64	16.39
3/50 3-3.5	0.19	36.18	15.96	25.05	1.67	20.96
3/80 0-1	0.00	25.82	17.84	37.56	1.88	16.90
3/80 1-2	0.00	25.40	26.59	28.57	1.59	17.86
3/80 2-3	0.00	19.59	21.22	38.78	1.22	19.18
3/80 3-3.9	0.00	18.78	19.29	29.95	1.52	30.46
4/100 0-1	0.54	45.39	11.93	13.56	1.27	27.31
4/100 1-2	0.88	52.07	9.59	9.50	0.88	27.09
4/100 2-3	0.81	49.32	13.41	9.36	2.25	24.84
4/100 3-3.4	0.82	40.30	20.09	9.70	1.17	27.92
4/200 0-1	0.51	31.70	25.97	20.91	1.35	19.56
4/200 1-2	0.56	38.22	20.22	23.19	1.11	16.70
4/200 2-3	0.59	44.54	15.04	18.29	1.47	20.06
4/200 3-4	0.81	41.91	13.75	15.63	1.21	26.68

← 28% leucosomes = 5.7% of H₂O = 0.11
in calc

TASMANIAN
 SAMPLES
 REF NO. 0098

SAMPLE	CLERTICI RESULTS % of H.M. sample							
	POLE 1A+B		POLE 2A+B		NON MAGS			
	-4.05	+4.05	-4.05	+4.05	-3.85	+3.85-4.05	+4.05-4.38	+4.38
1/360S 0-1	41.22	17.02	20.96	1.07	11.33	1.17	3.42	3.54
1/360S 1-2	34.50	15.42	29.43	0.62	13.20	0.93	2.87	2.55
1/360S 2-3	44.02	19.01	15.22	0.54	12.27	0.97	3.56	3.82
1/360S 3-3.5	32.96	15.93	24.19	0.62	19.64	0.86	2.05	2.85
1/390S 0-1	52.58	18.39	11.48	0.23	6.39	1.00	3.70	5.70
1/390S 1-2	56.46	14.15	15.60	0.16	4.88	0.70	3.20	4.19
1/390S 2-3	58.14	13.04	14.75	0.23	7.12	0.29	2.35	3.36
1/390S 3-4	51.82	13.85	11.16	0.20	17.61	0.23	1.78	2.60
1/390S 4-4.5	44.81	18.10	14.25	0.29	13.99	0.82	2.86	4.29
1/420S 0-1	40.09	11.53	33.63	0.47	8.12	1.15	2.42	2.40
1/420S 1-2	35.74	8.68	34.78	0.27	15.78	0.94	1.72	1.65
1/420S 2-3	55.74	8.07	15.75	0.20	16.38	0.80	1.43	1.24
1/420S 3-4	47.52	15.99	15.02	0.32	12.29	0.85	2.74	4.69
1/420S 4-4.5	41.32	20.04	15.28	0.54	13.28	0.68	2.95	5.39
2/360S 0-1	39.91	12.91	31.54	0.21	9.68	1.30	2.12	2.03
2/360S 1-2	32.22	15.27	33.96	0.65	12.20	0.64	2.51	2.36
2/360S 2-3	27.80	17.93	29.05	0.88	17.24	0.62	2.95	3.21
2/360S 3/4	28.56	7.44	37.89	1.11	22.21	0.58	1.33	0.88
2/390 0-1	29.40	9.33	45.21	0.75	11.29	0.64	1.75	1.22
2/390 1-2	40.14	6.32	34.86	0.54	16.18	0.26	1.13	0.58
2/420 0-1	38.10	6.60	38.56	0.61	13.48	0.85	1.05	0.75
2/420 1-2	34.92	4.40	42.95	0.44	14.87	0.81	0.87	0.40
3/50 0-1	40.82	7.79	31.38	0.36	16.26	0.65	1.73	0.76
3/50 1-2	35.18	3.61	32.84	0.35	26.61	0.47	0.56	0.37
3/50 2-3	31.02	8.98	42.62	0.66	11.75	1.12	1.94	1.58
3/50 3-3.5	37.33	14.80	26.16	0.56	15.02	0.49	3.08	2.38
3/80 0-1	35.29	8.37	38.54	0.90	12.92	0.84	1.82	1.32
3/80 1-2	43.40	8.59	29.66	0.50	13.75	0.87	1.97	1.27
3/80 2-3	33.33	7.48	39.53	0.47	15.79	0.73	1.59	1.08
3/80 3-3.9	31.96	6.11	31.11	0.36	27.75	0.89	0.83	0.99
4/100 0-1	20.07	37.26	14.07	0.75	8.07	1.25	6.61	11.37
4/100 1-2	23.07	38.59	9.56	0.82	7.76	0.86	6.85	11.62
4/100 2-3	24.96	37.78	10.65	0.97	4.80	0.91	6.88	12.25
4/100 3-3.4	25.67	34.73	10.01	0.85	11.07	1.48	5.20	10.17
4/200 0-1	36.96	20.72	21.73	0.53	9.48	1.14	3.80	5.15
4/200 1-2	42.05	16.39	23.99	0.32	6.78	1.11	3.54	5.27
4/200 2-3	36.10	23.48	19.31	0.45	9.10	1.56	3.76	5.64
4/200 3-4	26.07	29.59	16.07	0.78	13.64	1.36	4.29	7.40

Handwritten notes and corrections at the bottom of the page, including "15.15", "6.12/0.68", and "3.6".

TASMANIAN
 SAMPLES
 REF NO. 0098

SAMPLE	SIZINGS			HEAVY MINERAL %
	+1.18	-1.18 um +38 um	-38 um	
1/360S 0-1	0.19	99.81	0.00	1.43
1/360S 1-2	0.06	99.94	0.00	1.23
1/360S 2-3	3.57	96.33	0.00	0.99
1/360S 3-3.5	3.18	96.82	0.00	1.31
1/390S 0-1	0.41	99.59	0.00	1.81
1/390S 1-2	0.07	99.93	0.00	2.30
1/390S 2-3	1.96	98.04	0.00	3.28
1/390S 3-4	0.93	99.07	0.00	3.33
1/390S 4-4.5	0.46	99.54	0.00	1.76
1/420S 0-1	0.06	99.94	0.00	0.99
1/420S 1-2	0.06	99.94	0.00	0.83
1/420S 2-3	1.80	98.20	0.00	1.00
1/420S 3-4	1.45	98.55	0.00	1.88
1/420S 4-4.5	4.99	95.01	0.00	1.83
2/360S 0-1	0.30	99.70	0.00	0.69
2/360S 1-2	2.64	97.36	0.00	0.95
2/360S 2-3	1.74	98.26	0.00	1.19
2/360S 3/4	0.73	99.27	0.00	0.57
2/390 0-1	0.25	99.75	0.00	0.46
2/390 1-2	0.19	99.81	0.00	0.46
2/420 0-1	0.25	99.75	0.00	0.52
2/420 1-2	0.12	99.88	0.00	0.46
3/50 0-1	0.29	99.71	0.00	0.58
3/50 1-2	0.16	99.84	0.00	0.43
3/50 2-3	0.53	99.47	0.00	0.60
3/50 3-3.5	0.07	99.93	0.00	0.78
3/80 0-1	0.16	99.84	0.00	0.43
3/80 1-2	0.37	99.63	0.00	0.56
3/80 2-3	0.10	99.90	0.00	0.51
3/80 3-3.9	0.69	99.31	0.00	0.39
4/100 0-1	0.49	99.51	0.00	1.05
4/100 1-2	0.10	99.90	0.00	2.12
4/100 2-3	1.32	98.68	0.00	2.19
4/100 3-3.4	10.36	89.64	0.00	1.42
4/200 0-1	0.15	99.85	0.00	1.13
4/200 1-2	2.34	97.66	0.00	0.98
4/200 2-3	0.46	99.54	0.00	1.31
4/200 3-4	8.11	91.89	0.00	1.41

Line of Error
1.08%

TASMANIAN
 SAMPLES
 REF NO. 0098

SAMPLE	RAPID MAGNET RESULTS % IN TOTAL SAMPLE					
	PERM MAG	POLE 1A	POLE 1B	POLE 2A	POLE 2B	NON MAGS
1/360S 0-1	0.004	0.398	0.435	0.284	0.031	0.278
1/360S 1-2	0.006	0.335	0.280	0.337	0.033	0.241
1/360S 2-3	0.006	0.365	0.261	0.145	0.012	0.205
1/360S 3-3.5	0.012	0.386	0.253	0.311	0.014	0.332
1/390S 0-1	0.009	0.829	0.452	0.188	0.023	0.303
1/390S 1-2	0.015	1.021	0.602	0.340	0.023	0.298
1/390S 2-3	0.024	1.711	0.623	0.448	0.043	0.430
1/390S 3-4	0.025	1.462	0.727	0.345	0.034	0.740
1/390S 4-4.5	0.010	0.693	0.411	0.238	0.017	0.385
1/420S 0-1	0.002	0.389	0.123	0.332	0.006	0.140
1/420S 1-2	0.004	0.262	0.108	0.280	0.011	0.167
1/420S 2-3	0.004	0.314	0.326	0.148	0.012	0.199
1/420S 3-4	0.011	0.693	0.501	0.256	0.033	0.386
1/420S 4-4.5	0.009	0.631	0.490	0.250	0.039	0.407
2/360S 0-1	0.002	0.214	0.149	0.208	0.010	0.104
2/360S 1-2	0.002	0.298	0.155	0.301	0.029	0.169
2/360S 2-3	0.004	0.312	0.233	0.335	0.022	0.286
2/360S 3/4	0.000	0.111	0.095	0.212	0.011	0.143
2/390 0-1	0.002	0.086	0.092	0.205	0.006	0.068
2/390 1-2	0.000	0.087	0.125	0.149	0.012	0.083
2/420 0-1	0.000	0.070	0.164	0.195	0.010	0.084
2/420 1-2	0.002	0.082	0.101	0.194	0.008	0.079
3/50 0-1	0.001	0.118	0.163	0.174	0.009	0.112
3/50 1-2	0.000	0.072	0.094	0.123	0.018	0.119
3/50 2-3	0.002	0.156	0.085	0.252	0.010	0.099
3/50 3-3.5	0.001	0.283	0.125	0.196	0.013	0.164
3/80 0-1	0.000	0.111	0.077	0.161	0.008	0.072
3/80 1-2	0.000	0.141	0.148	0.159	0.009	0.099
3/80 2-3	0.000	0.099	0.108	0.197	0.006	0.097
3/80 3-3.9	0.000	0.073	0.075	0.116	0.006	0.118
4/100 0-1	0.006	0.475	0.125	0.142	0.013	0.286
4/100 1-2	0.019	1.102	0.203	0.201	0.019	0.574
4/100 2-3	0.018	1.081	0.294	0.205	0.049	0.545
4/100 3-3.4	0.012	0.571	0.285	0.137	0.017	0.396
4/200 0-1	0.006	0.357	0.293	0.236	0.015	0.220
4/200 1-2	0.005	0.376	0.199	0.228	0.011	0.164
4/200 2-3	0.008	0.582	0.197	0.239	0.019	0.262
4/200 3-4	0.011	0.592	0.194	0.221	0.017	0.377

TASMANIAN
SAMPLES
REF NO. 0098

SAMPLE	CLERICI RESULTS % of TOTAL sample							
	POLE 1A+B		POLE 2A+B		NON MAGS			
	-4.05	+4.05	-4.05	+4.05	-3.85	+3.85-4.05	+4.05-4.38	+4.38
1/360S 0-1	0.590	0.243	0.300	0.015	0.162	0.017	0.049	0.051
1/360S 1-2	0.425	0.190	0.363	0.008	0.163	0.012	0.035	0.031
1/360S 2-3	0.437	0.189	0.151	0.005	0.122	0.010	0.035	0.038
1/360S 3-3.5	0.431	0.208	0.316	0.008	0.257	0.011	0.027	0.037
1/390S 0-1	0.949	0.332	0.207	0.004	0.115	0.018	0.067	0.103
1/390S 1-2	1.298	0.325	0.359	0.004	0.112	0.016	0.073	0.096
1/390S 2-3	1.906	0.428	0.483	0.008	0.233	0.009	0.077	0.110
1/390S 3-4	1.727	0.462	0.372	0.007	0.587	0.008	0.059	0.087
1/390S 4-4.5	0.787	0.318	0.250	0.005	0.246	0.014	0.050	0.075
1/420S 0-1	0.397	0.114	0.333	0.005	0.081	0.011	0.024	0.024
1/420S 1-2	0.297	0.072	0.289	0.002	0.131	0.008	0.014	0.014
1/420S 2-3	0.560	0.081	0.158	0.002	0.164	0.008	0.014	0.012
1/420S 3-4	0.893	0.300	0.282	0.006	0.231	0.016	0.051	0.088
1/420S 4-4.5	0.754	0.366	0.279	0.010	0.243	0.012	0.054	0.098
2/360S 0-1	0.275	0.089	0.217	0.001	0.067	0.009	0.015	0.014
2/360S 1-2	0.307	0.146	0.324	0.006	0.116	0.006	0.024	0.023
2/360S 2-3	0.331	0.214	0.346	0.011	0.206	0.007	0.035	0.038
2/360S 3/4	0.163	0.043	0.217	0.006	0.127	0.003	0.008	0.005
2/390 0-1	0.135	0.043	0.207	0.003	0.052	0.003	0.008	0.006
2/390 1-2	0.183	0.029	0.159	0.002	0.074	0.001	0.005	0.003
2/420 0-1	0.199	0.034	0.201	0.003	0.070	0.004	0.006	0.004
2/420 1-2	0.162	0.020	0.200	0.002	0.069	0.004	0.004	0.002
3/50 0-1	0.235	0.045	0.181	0.002	0.094	0.004	0.010	0.004
3/50 1-2	0.150	0.015	0.140	0.001	0.113	0.002	0.002	0.002
3/50 2-3	0.187	0.054	0.257	0.004	0.071	0.007	0.012	0.010
3/50 3-3.5	0.292	0.116	0.204	0.004	0.117	0.004	0.024	0.019
3/80 0-1	0.151	0.036	0.165	0.004	0.055	0.004	0.008	0.006
3/80 1-2	0.241	0.048	0.165	0.003	0.076	0.005	0.011	0.007
3/80 2-3	0.169	0.038	0.201	0.002	0.080	0.004	0.008	0.005
3/80 3-3.9	0.124	0.024	0.121	0.001	0.107	0.003	0.003	0.004
4/100 0-1	0.210	0.390	0.147	0.008	0.084	0.013	0.069	0.119
4/100 1-2	0.488	0.817	0.202	0.017	0.164	0.018	0.145	0.246
4/100 2-3	0.547	0.828	0.233	0.021	0.105	0.020	0.151	0.269
4/100 3-3.4	0.364	0.492	0.142	0.012	0.157	0.021	0.074	0.144
4/200 0-1	0.416	0.233	0.245	0.006	0.107	0.013	0.043	0.058
4/200 1-2	0.414	0.161	0.236	0.003	0.067	0.011	0.035	0.052
4/200 2-3	0.472	0.307	0.253	0.006	0.119	0.020	0.049	0.074
4/200 3-4	0.368	0.418	0.227	0.011	0.193	0.019	0.061	0.104

SIZING OF COMPOSITE SAMPLE
OF CRL 1992 DRILLING
PROGRAM

987047

TASMANIAN SAMPLE 0098 COMPOSITE SIZING

SIZE	SIZE DISTRIB	H.M. %	H.M. DISTRIB
+250	14.09	0.46	5.07
+212	11.40	0.41	3.67
+180	19.08	0.38	5.77
+150	26.66	0.52	10.84
+125	21.23	0.88	14.69
+106	5.28	3.20	13.29
+90	1.56	19.52	23.95
+75	0.25	64.04	12.76
-75	0.44	29.08	9.97
TOTALS	100.00	1.27	100.00

FULL ASSAY (incl. clerici) OF
CRL 1989 SAMPLES

TASMAIAN
SAMPLES
REF NO. 0001

SAMPLE	CLERICI RESULTS % of total sample								
	POLE 1A+B		DISK 2A+B		NON MAGS				
	-4.05	+4.05	-4.05	+4.05	-3.85	+3.85-4.0	+4.05-4.3	+4.38	
5 MILE BEACH CONS	1.90	64.03	0.20	1.03	0.52	0.16	7.00	21.11	
7 M/1	0.73	3.94	0.25	0.06	0.38	0.04	0.62	0.98	
7M/S1	0.86	3.64	0.15	0.07	0.16	0.04	0.64	1.12	
7M/S2	0.36	2.76	0.16	0.05	0.29	0.03	0.35	0.57	
7M/S3	0.24	0.35	0.09	0.00	0.00	0.00	0.00	0.00	

TASMAIAN
 SAMPLES
 REF NO. 0001

SAMPLE	CLERICI RESULTS % of H.M. sample							
	POLE 1A+B		DISK 2A+B		NON MAGS			
	-4.05	+4.05	-4.05	+4.05	-3.85	+3.85-4.0	+4.05-4.3	+4.38
	<i>Ilmenite</i>					<i>rutile Zircon</i>		
5 MILE BEACH CONS	1.94	65.46	0.20	1.05	0.54	0.16	7.16	21.58
7 M/1	10.29	55.44	3.48	0.81	5.31	0.52	8.73	13.85
7M/S1	12.63	53.47	2.24	1.05	2.34	0.55	9.46	16.44
7M/S2	7.79	59.56	3.55	1.12	6.31	0.75	7.61	12.29
7M/S3	33.56	48.69	12.65	0.26	0.00	0.00	0.00	0.00

Ilmenite
 Ave 54.3%

0.81

Insufficient sample

R Ave 8.6%

Z Ave 14.2

LLANDHERNE (7 MILE BEACH 5 ML. BEACH) Zircon - v. good, clear

- ILMENITE QUALITY

Rutile - normal, black

ASSAYS

987050

TASMANIAN
SAMPLES
REF NO. 0001

SAMPLE	A.L.S. RESULTS ON DISK 1A MAGS										
	TiO2	ZrO2	Fe2O3	SiO2	Cr2O3	Al2O3	CaO	MnO	MgO	U	Th
5 MILE BEACH CONS	47.90	0.16	48.60	1.70	1.22	1.04	0.16	0.61	1.26	< 5 ppm	25 ppm
7 M/1	39.20	0.15	44.30	10.10	0.98	3.31	1.27	0.65	3.14	< 5 ppm	20 ppm
7M/S1	43.80	0.21	45.10	6.54	1.03	3.13	0.70	0.67	2.23	< 5 ppm	60 ppm

TASMANIAN
SAMPLES
REF NO. 0001

SAMPLE	RAPID MAGNET RESULTS % H.M.					
	PERM MAG	POLE 1A	POLE 1B	POLE 2A	POLE 2B	NON MAGS
5 MILE BEACH CONS	1.90	66.46	0.95	1.15	0.11	29.43
7 M/1	1.58	60.77	4.96	3.73	0.50	28.41
7M/S1	1.82	60.27	5.83	2.61	0.68	28.79
7M/S2	1.00	63.82	3.54	4.21	0.47	26.97
7M/S3	3.23	74.19	8.06	12.10	0.31	1.61

Brisbane Head Office and Laboratory
32 Shand Street, Stafford, Q. 4053
P.O. Box 66, Everton Park, Q. 4053
Telephone: (07) 352 5577
Facsimile: (07) 352 5109

ANALYTICAL REPORT

PAGE 1 of 1

CLIENT: CONSOLIDATED RUTILE LTD
ADDRESS: 200 HOLT STREET
PINKENBA
QLD 4008

LABORATORY: STAFFORD
BATCH NUMBER: ST4572-0

CONTACT: R. FITZGERALD

No. of SAMPLES: 2
DATE RECEIVED: 07/10/98
DATE COMPLETED: 08/10/98

ORDER No: 005177

SAMPLE TYPE: *TASMANIAN* ILMENITE

PROJECT No:

SAMPLE NUMBER	ELEMENT UNIT METHOD	TiO2 % MS306	Total Fe % MS306	Cr2O3 % MS318	Al2O3 % MS319	MgO % MS321
<i>5 mls bench cons</i> CRL 0001-1		49.8	33.6	1.28	0.35	0.99
<i>7 m/si</i> CRL 0001-2		49.7	32.4	1.13	0.32	1.15
DETECTION LIMIT:		0.1	0.1	0.01	0.01	0.01

COMMENTS: *** DUPLICATE ASSAYS.

Perth Laboratory
Phone: (09) 249 2988 Fax: (09) 249 2942
Kalgoorlie Laboratory
Phone: (090) 21 1457 Fax: (090) 21 6253
Southern Cross Laboratory
Phone: (090) 49 1292 Fax: (090) 49 1374
Orange Laboratory
Phone: (063) 63 1722 Fax: (063) 63 1189
Brisbane Laboratory
Phone: (07) 352 5577 Fax: (07) 352 5109

All pages of this report have been checked and approved for release.

G. Amundson
Signed

TASMANIA - 1 Mill Beach - H.M. Samples

Ilmenite Sizings

987052

Howe & Coe
Ilmenite Sizing Specs

TASMANIAN
SAMPLES
REF NO. 0001

SAMPLE	5ML BEACH CONS			7M/1			7M/S1		
	WEIGHT	%	%	WEIGHT	%	%	WEIGHT	%	%
+180	4.59	24.62	24.62	1.37	20.21	20.21	19.99	17.72	17.72
+150	7.32	39.27	63.89	1.25	18.44	38.64	23.54	20.87	38.60
+125	3.73	20.01	83.91	1.22	17.99	56.64	17.70	15.69	54.29
+106	2.24	12.02	95.92	1.60	23.60	80.24	26.80	23.76	78.05
+90	0.53	2.84	98.77	0.80	11.80	92.04	12.46	11.05	89.10
+75	0.17	0.91	99.68	0.45	6.64	98.67	10.20	9.04	98.15
-75	0.06	0.32	100.00	0.09	1.33	100.00	2.09	1.85	100.00
	18.64	100.00		6.78	100.00		112.78	100.00	

CRL 1989 ASSAYS (non-clerici)
OF CRL SAMPLES

987053

asmanian sa

Ref no 0001	% in Total Sample (without slimes)										
	Heavy Mineral		+150um							non mags	
Sample	+150um	-150um	mags	mid mags	-3.85	3.85-4.05	4.05-4.38	+4.38	R%	Z%	O%
M BEACH CO	46.139	52.397	1.267	26.428	0.831	1.416	5.102	11.095	4.650	5.928	7.866
M	2.984	4.244	0.067	0.984	0.935	0.275	0.392	0.331	0.334	0.266	1.333
M/S1	4.949	1.874	0.099	1.735	0.691	0.299	0.875	1.250	0.738	0.985	1.392
M/S2	0.786	3.932	0.018	0.263	0.340	0.059	0.071	0.035	0.068	0.026	0.411
M/S3	0.474	0.242	0.145	0.000	0.237	0.042	0.028	0.022	0.027	0.007	0.059

asmanian sa

Ref no 0001	% IN TOTAL SAMPLE (WITHOUT SLIMES)									
	-150um							non mags		
Sample	mags	mid mags	-3.85	3.85-4.05	4.05-4.38	+4.38	R%	Z%	O%	
5 BEACH CO	0.556	26.223	0.907	4.246	0.842	19.623	4.652	17.468	3.498	
7M/1	0.031	1.914	0.399	0.189	0.629	1.081	0.561	0.894	0.822	
7M/S1	0.015	0.755	0.106	0.056	0.299	0.644	0.318	0.538	0.249	
7M/S2	0.027	1.868	0.395	0.156	0.514	0.971	0.452	0.860	0.330	
7M/S3	0.110	0.000	0.045	0.019	0.037	0.030	0.035	0.028	0.024	

97.50

98.71
5.10
98.85
27 HMM
89 R of HM
153 R of HM
281 HMM

Tasmanian samples

Ref no	Size Distribution (%)			% Heavy Mineral in		
	+150um	-150+38um	-38um	+150um	-150+38um	
0001						
Sample						HMM
SM BEACH CO	46.90	52.36	0.74	97.65	99.33	97.7% - beach core at 6-Mile Beach
7M/1	90.33	7.97	1.69	3.25	52.32	7.11% Surface conc. near Airport - 7 Mile Beach
7M/S1	96.45	3.25	0.29	5.12	57.46	6.81% Grab sample at walk 50m E of S1
7M/S2	89.49	8.76	1.75	0.86	44.10	4.63% " " " " " " " "
7M/S3	98.57	0.57	0.86	0.48	41.85	0.71% Sample near car park water tank. 6 Mile Beach

Ref no	Breakdown of +150um H.M. Fraction (%)						grain counts +150 HM		
	mags	mid mags	-3.85 SG	3.85 - 4.05	4.05 - 4.38	+4.38	R%	Z%	O%
0001									
Sample									
SM BEACH CO	2.745	57.280	1.801	3.069	11.058	24.046	10.08	12.85	17.05
7M/1	2.254	32.977	31.330	9.217	13.143	11.079	11.19	8.91	44.67
7M/S1	2.000	35.055	13.969	6.040	17.682	25.254	14.91	19.90	28.13
7M/S2	2.229	33.439	43.268	7.563	9.066	4.434	8.71	3.31	52.31
7M/S3	30.537	0.000	50.010	8.886	5.966	4.602	5.65	1.46	12.34
	9.76	25.37	34.64	7.93	11.46	11.34	10.17%	8.40%	

Ref no	Breakdown of -150um H.M. Fraction (%)						% in +38-150um H.M.		
	mags	mid mags	-3.85 SG	3.85 - 4.05	4.05 - 4.38	+4.38	R%	Z%	O%
0001									
Sample									
SM BEACH CO	1.061	50.047	1.731	8.104	1.606	37.451	8.88	33.34	6.68
7M/1	0.742	45.107	9.393	4.454	14.827	25.477	13.23	21.07	19.36
7M/S1	0.776	40.279	5.653	2.996	15.939	34.358	16.95	28.71	13.29
7M/S2	0.692	47.514	10.039	3.975	13.083	24.697	11.49	21.87	8.40
7M/S3	45.578	0.000	18.620	7.883	15.462	12.457	14.34	11.50	9.96
	18.96	33.23					14.00%	20.79%	

Wtd. Ave
 $\%R = 10.3\%$
 $\%Z = 9.04\%$
 $\%O = 35.18$

SM BEACH CO

7M/1
 S2
 S3

30.63 + 98.71
 45.18 + 5.10

47.51
 28.13

K.C. MORRISON PTY. LT

Geological Exploration — Minerals and Fossil Fuels

M.D.L. 1975 REFERENCE

SAMPLES ex M. FORSTER

ACN 009 558 070

41 Tasma St
North Hobart Tasmania 7000
Phone : (002) 31 0492
Fax : (002) 31 1548

987056

14 January 1993

Mr. P. Barrett
Consolidated Rutile Ltd.
200 Holt Street
PINKENBA 4088

Dear Peter,

Re: Llanherne Project

Enclosed are 16 sample splits from the Mineral Deposits line; Holes 360S and 420S. The top three samples from Hole 360S are missing.

If there is enough material available it would be interesting to see if the heavy mineral composition above the water table in 420S (say 0 - 4.5 m) differs from that below.

Probably another 4 or 5, mainly complete holes, are available in Mac's dairy if needed. They are from the southern end of the line (1300 - 1600 S)

Yours sincerely,



Ken Morrison.

Mr P Barrett
200 Holt Street
Pinkenba 4088

CRL 1992 ASSAYS OF MDL 1975
DRILLING SAMPLES

987057

TASMANIAN
SAMPLES
REF NO. 0102

SAMPLE	RAPID MAGNET RESULTS % IN HEAVY MINERAL					
	PERM MAG	POLE 1A	POLE 1B	POLE 2A	POLE 2B	NON MAGS
360S 4.5-6	0.51	26.80	30.01	16.15	1.01	25.53
360S 6-7.5	0.51	12.59	35.00	23.52	0.56	27.82
360S 7.5-9	0.86	28.35	23.45	20.43	5.61	21.29
360S 9-10.5	0.30	23.04	31.68	22.66	0.68	21.64
360S 10.5-12	0.44	25.41	27.97	27.53	0.53	18.13
360S 12-13.5	0.46	14.44	41.35	24.85	0.54	18.36
360S 13.5-14	0.54	24.24	35.43	16.11	1.27	22.40
420S 0-1.5	0.79	29.72	24.83	29.46	0.79	14.40
420S 1.5-3	0.74	35.75	21.14	18.36	0.86	23.14
420S 3-4.5	0.89	38.64	28.56	16.99	0.75	14.16
420S 4.5-6	1.01	31.96	22.49	17.50	0.63	26.41
420S 6-7.5	0.87	21.91	36.00	14.16	0.55	26.50
420S 7.5-9	0.30	25.24	36.81	16.13	0.84	20.68
420S 9-10.5	0.20	22.36	37.85	10.87	0.61	28.11
420S 10.5-12	0.38	20.77	34.46	18.21	0.60	25.58
420S 12-13.5	0.32	17.84	37.18	16.33	0.53	27.81

8.4% leucorite = 2.4% of HMA = 0.05% in calc

360S 6-7.5

SMANTIAN
MPLES
REF NO. 0102

908
Kijambo

SAMPLE	CLERICI RESULTS % of H.M. sample							
	POLE 1A		POLE #B		NON MAGS			
	-4.05 <i>Trach</i>	+4.05 <i>Ilmenite</i>	-4.05 <i>Trach</i>	+4.05 <i>Ilmenite</i>	-3.85	+3.85-4.05	+4.05-4.38 <i>Pyrite</i>	+4.38 <i>Zircon</i>
50S 4.5-6	13.99	12.80	28.81	1.19	21.26	0.51	1.40	2.36
50S 6-7.5	5.08	7.52	34.24	0.77	25.10	0.29	0.69	1.74
360S 7.5-9	11.92	16.43	21.56	1.89	14.67	1.22	2.01	3.39
360S 9-10.5	5.89	17.15	27.92	3.76	13.79	1.09	2.53	4.24
360S 10.5-12	10.22	15.18	25.48	2.49	12.90	0.35	2.00	2.87
360S 12-13.5	5.96	8.48	34.77	6.58	13.64	0.61	1.41	2.70
360S 13.5-14	8.89	13.37 15.35	31.64	2.97 3.80	16.71	0.60	1.77 1.71	3.07 3.39
20S 0-1.5	15.33	14.39	23.31	1.52	7.72	0.53	2.76	3.39
20S 1.5-3	24.20	11.55	20.46	0.68	18.25	0.48	1.86	2.55
420S 3-4.5	21.97	16.67	27.66	0.90	6.26	0.48	3.18	4.24
20S 4.5-6	12.24	19.72	21.01	1.48	18.54	1.00	2.85	4.01
20S 6-7.5	11.29	10.63	34.33	1.67	22.91	0.79	1.54	1.26
420S 7.5-9	11.95	13.29	35.45	1.36	16.38	0.77	1.73	1.81
420S 9-10.5	4.55	17.81	33.03	4.82	20.28	1.21	2.46	4.16
20S 10.5-12	5.45	15.31	31.47	2.99	19.01	0.81	2.13	3.63
420S 12-13.5	6.11	10.6 11.73	34.77	2.01 2.41	24.12	0.83	2.27 1.38	2.97 1.48

4.09

2.4

2.0

2.9

TASMANIAN
SAMPLES

REF NO. 0102

SAMPLE	SIZINGS			HEAVY MINERAL %
	+1.18	-1.18 um +38 um	-38 um	
360S 4.5-6	1.84	96.04	2.11	1.24
360S 6-7.5	0.12	99.33	0.55	2.18
360S 7.5-9	2.85	95.13	2.02	3.17
360S 9-10.5	1.08	96.99	1.93	3.78
360S 10.5-12	0.31	99.28	0.41	4.01
360S 12-13.5	2.16	97.84	NOT DONE	4.73
360S 13.5-14	0.15	98.35	1.50	6.59
420S 0-1.5	0.02	99.67	0.31	1.06
420S 1.5-3	0.53	99.17	0.30	2.97
420S 3-4.5	0.25	98.90	0.86	2.70
420S 4.5-6	3.85	92.64	3.51	1.94
420S 6-7.5	9.05	89.86	1.10	1.42
420S 7.5-9	0.17	98.68	1.15	2.75
420S 9-10.5	0.95	98.48	0.57	4.26
420S 10.5-12	2.02	97.98	NOT DONE	3.52
420S 12-13.5	0.57	98.38	1.05	4.46

TASMANIAN
 SAMPLES
 REF NO. 0102

SAMPLE		RAPID MAGNET RESULTS & IN TOTAL SAMPLE					
		PERM MAG	POLE 1A	POLE 1B	POLE 2A	POLE 2B	NON MAGS
360S	4.5-6	0.006	0.331	0.371	0.199	0.013	0.315
360S	6-7.5	0.011	0.274	0.763	0.512	0.012	0.606
360S	7.5-9	0.027	0.897	0.742	0.647	0.178	0.674
360S	9-10.5	0.011	0.871	1.198	0.857	0.026	0.818
360S	10.5-12	0.018	1.019	1.122	1.104	0.021	0.727
360S	12-13.5	0.022	0.683	1.956	1.175	0.026	0.868
360S	13.5-14	0.036	1.597	2.335	1.062	0.084	1.476
420S	0-1.5	0.008	0.315	0.263	0.312	0.008	0.153
420S	1.5-3	0.022	1.063	0.629	0.546	0.026	0.688
420S	3-4.5	0.024	1.044	0.772	0.459	0.020	0.383
420S	4.5-6	0.020	0.619	0.436	0.339	0.012	0.511
420S	6-7.5	0.012	0.311	0.511	0.201	0.008	0.376
420S	7.5-9	0.008	0.694	1.012	0.443	0.023	0.568
420S	9-10.5	0.008	0.951	1.611	0.463	0.026	1.196
420S	10.5-12	0.013	0.732	1.214	0.641	0.021	0.901
420S	12-13.5	0.014	0.796	1.658	0.728	0.023	1.240

TASMANIAN
 SAMPLES
 REF NO. 0102

SAMPLE	CLERICI RESULTS % of TOTAL sample								
	POLE 1A		POLE 1B		NON MAGS				
	-4.05	+4.05	-4.05	+4.05	-3.85	+3.85-4.05	+4.05-4.38	+4.38	
360S 4.5-6	0.173	0.158	0.356	0.015	0.263	0.006	0.017	0.029	
360S 6-7.5	0.111	0.164	0.746	0.017	0.547	0.006	0.015	0.038	
360S 7.5-9	0.377	0.520	0.682	0.060	0.465	0.039	0.064	0.107	
360S 9-10.5	0.223	0.648	1.056	0.142	0.521	0.041	0.096	0.160	
360S 10.5-12	0.410	0.609	1.022	0.100	0.518	0.014	0.080	0.115	
360S 12-13.5	0.282	0.401	1.644	0.311	0.645	0.029	0.067	0.128	
360S 13.5-14	0.585	1.012	2.084	0.250	1.101	0.039	0.113	0.223	
420S 0-1.5	0.163	0.153	0.247	0.016	0.082	0.006	0.029	0.036	
420S 1.5-3	0.719	0.343	0.608	0.020	0.542	0.014	0.055	0.076	
420S 3-4.5	0.594	0.450	0.748	0.024	0.169	0.013	0.086	0.115	
420S 4.5-6	0.237	0.382	0.407	0.029	0.359	0.019	0.055	0.078	
420S 6-7.5	0.160	0.151	0.487	0.024	0.325	0.011	0.022	0.018	
420S 7.5-9	0.328	0.365	0.974	0.037	0.450	0.021	0.048	0.050	
420S 9-10.5	0.193	0.758	1.406	0.205	0.863	0.051	0.105	0.177	
420S 10.5-12	0.192	0.539	1.108	0.105	0.670	0.028	0.075	0.128	
420S 12-13.5	0.272	0.523	1.551	0.107	1.075	0.037	0.061	0.066	

MINERAL DEPOSITS LIMITED

(INCORPORATED IN NEW SOUTH WALES)

ACN: 000 154 087

987062

TELEFAX FROM: 075 399863 (within Australia) 61 75 399863 (International)

To: CONSOLIDATED RUTILE LIMITED
Attention: MR. BARRY FITTOCK
Fax No. (07) 260 1504
From: TREVOR VICKERS
Subject: PHYSICAL ANALYSIS

Ref: FX. TS 106/93
Date: 24.02.93.
Time: 4.30 pm
Pages: FIVE

Dear Mr. Fittock,

Physical analysis of two exploration samples is now complete.

The % heavy mineral results are as follows:

Sample No.	% H.M.			CRL 2HM.
0098	1.69	1/4205	4-4.5	1.83
0102	2.91	4205	10.5-12	3.42

Grain count assays are as per attached results.

Yours faithfully,

T. J. Vickers

T. J. VICKERS
CHIEF CHEMIST

Trevor D. M. H.

p.s. Please supply your Order No. for this work.

			HT	IL	R	Z
CRL	1/4205	4-4.5m	1.83	20	2.9	6.4
MDL	1/4205	4-4.5m	1.69	22	3.5	6.5
CRL	1/4205	10-12.5m	3.4	40	2.1	3.6
MDL	1/4205	10-12.5m	2.9	20	2.1	4.9

**MINERAL DEPOSITS LIMITED
TECHNICAL SERVICES DEPARTMENT**

Client: **Consolidated Rutile Limited**

Sample: "0098"

Mags Fraction	S.G. Fraction	% Wt Distn to Fraction	Mineral Distribution by Fraction													Total
			H/S	Ilmenite	Altered Ilmenite	Monaz- ite	Mag Others	Mag Rutile	Rutile	Mag Leucoc	Leucoc	Mag Zircon	Zircon	N/Mag Others		
H/S		100.00	100.00													100.00
0.35 Mag	- 4.05	57.58						100.00								100.00
	+ 4.05	42.42		94.48				5.84								100.00
	Sub-Tot	100.00		40.07	0.00			59.93	0.00		0.00		0.00			100.00
1.5a Mag	- 4.05	93.77			1.50			98.50								100.00
	+ 4.05	6.23			84.60	Trace		11.78	1.13				2.51		100.00	
	Sub-Tot	100.00			8.67	Trace		93.10	0.07		0.00		0.18		100.00	
2.4a Mag	- 4.05	88.00						94.25								100.00
	+ 4.05	12.00						6.00	83.60		5.75				100.00	
	Sub-Tot	100.00					0.00	83.86	10.03		5.31		1.00		100.00	
2.4a N/Mag	- 4.05	31.30										87.27			32.73	100.00
	+ 4.05	68.70										35.87			63.78	100.00
	Sub-Tot	100.00									24.50	21.44		43.81	10.25	100.00

Mags Fraction	S.G. Fraction	% Wt Distn to Fraction	Total Mineral Distribution													Total
			H/S	Ilmenite	Altered Ilmenite	Monaz- ite	Mag Others	Mag Rutile	Rutile	Mag Leucoc	Leucoc	Mag Zircon	Zircon	N/Mag Others		
H/S		0.62	0.62													0.62
0.35 Mag	- 4.05	28.54						28.54								28.54
	+ 4.05	21.03		19.86				1.16								21.03
	Sub-Tot	49.57		19.86				29.70								49.57
1.5a Mag	- 4.05	29.94			0.45			29.49								29.94
	+ 4.05	1.99			1.68	Trace		0.23	0.02				0.05		1.99	
	Sub-Tot	31.93			2.13			29.72	0.02				0.05		31.93	
2.4a Mag	- 4.05	2.73						2.58				0.16				2.73
	+ 4.05	0.37						0.02	0.31			0.01		0.03		0.37
	Sub-Tot	3.11						2.60	0.31			0.16		0.03		3.11
2.4a N/Mag	- 4.05	4.83										3.11			1.51	4.83
	+ 4.05	10.16								3.62		0.06		6.48		10.16
	Sub-Tot	14.78								3.62		3.17		6.48	1.51	14.78
HM Sample		100.00	0.62	19.86	2.13			62.02	0.33	3.62	0.16	3.17	0.06	6.48	1.51	100.00
Total Sample		1.69	0.01	0.34	0.04			1.05	0.01	0.05	0.00	0.05	0.00	0.11	0.03	1.69

Note: Grain counts shown as two decimal places for calculation purposes only

**MINERAL DEPOSITS LIMITED
TECHNICAL SERVICES DEPARTMENT**

Client: **Consolidated Rutile Limited**

Sample: **"0098"**

Mags Fraction	S.G. Fraction	% Wt Distn to Fraction	Mineral Distribution by Mineral											
			H/S	Ilmenite	Altered Ilmenite	Monaz- ite	Mag Others	Mag Rutile	Rutile	Mag Leucoc	Leucoc	Mag Zircon	Zircon	N/Mag Others
H/S		0.62	100.00											
0.35	- 4.05	28.54			-			46.01	-					
Mag	+ 4.05	21.03		100.00				1.68	-					
	Sub-Tot	49.57		100.00				47.69	-					
1.5a	- 4.05	29.94			21.06			47.54	-					
Mag	+ 4.05	1.99			78.92	Trace		0.36	6.72				61.73	
	Sub-Tot	31.93			100.00	-		47.92	6.72				61.73	
2.4a	- 4.05	2.73						4.15	-		95.26			
Mag	+ 4.05	0.37						0.04	93.28		4.74		38.27	
	Sub-Tot	3.11						4.19	93.28		100.00		38.27	
2.4a	- 4.05	4.63									96.24			100.00
N/Mag	+ 4.05	10.16								100.00	1.76		100.00	-
	Sub-Tot	14.79								100.00	100.00		100.00	100.00
HM Sample		100.00	100.00	100.00	100.00	-	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Note: Grain counts shown as two decimal places for calculation purposes only

**MINERAL DEPOSITS LIMITED
TECHNICAL SERVICES DEPARTMENT**

Client: **Consolidated Rutile Limited**
Sample: "0102"

Magne Fraction	S.G. Fraction	% Wt Dietn to Fraction	Mineral Distribution by Fraction													Total	
			H/S	Ilmenite	Altered Ilmenite	Monaz-ite	Mag Others	Mag Rutile	Rutile	Mag Leucoc	Leucoc	Mag Zircon	Zircon	N/Mag Others	Shell		
H/S		100.00	100.00														100.00
0.35 Mag	- 4.05	60.60						100.00									100.00
	+ 4.05	39.40		91.72				8.28									100.00
	Sub-Tot	100.00		36.14	0.00			63.66	0.00		0.00		0.00				100.00
1.5a Mag	- 4.05	91.31			0.50			99.50									100.00
	+ 4.05	8.69			71.78	Trace		26.91	0.28				1.05				100.00
	Sub-Tot	100.00			6.69	Trace		93.19	0.02		0.00		0.09				100.00
2.4a Mag	- 4.05	66.37						76.87									100.00
	+ 4.05	11.63						5.44	14.71								100.00
	Sub-Tot	100.00					0.00	70.33	1.71		26.66		1.28				100.00
2.4a N/Mag	- 4.05	51.22										24.13			81.71	14.16	100.00
	+ 4.05	48.78								30.30		0.71		66.42	0.49		100.00
	Sub-Tot	100.00								14.82		12.71		33.37	31.85	7.26	100.00

Magne Fraction	S.G. Fraction	% Wt Dietn to Fraction	Total Mineral Distribution													Total	
			H/S	Ilmenite	Altered Ilmenite	Monaz-ite	Mag Others	Mag Rutile	Rutile	Mag Leucoc	Leucoc	Mag Zircon	Zircon	N/Mag Others	Shell		
H/S		0.91	0.91														0.91
0.35 Mag	- 4.05	30.23						30.23									30.23
	+ 4.05	19.66		18.03				1.63									19.66
	Sub-Tot	49.89		18.03				31.86									49.89
1.5a Mag	- 4.05	28.64			0.14			28.69									28.64
	+ 4.05	2.74			1.97	Trace		0.74	0.01				0.03				2.74
	Sub-Tot	31.58			2.11			29.43	0.01				0.03				31.58
2.4a Mag	- 4.05	2.57						2.03				0.54					2.57
	+ 4.05	0.34						0.02	0.05			0.23		0.04			0.34
	Sub-Tot	2.91						2.05	0.05			0.78		0.04			2.91
2.4a N/Mag	- 4.05	7.54										1.82			4.65	1.07	7.54
	+ 4.05	7.18								2.18		0.05		4.91	0.04		7.18
	Sub-Tot	14.71								2.18		1.87		4.91	4.69	1.07	14.71
HM Sample		100.00	0.91	18.03	2.11			63.34	0.06	2.18	0.78	1.87	0.07	4.91	4.69	1.07	100.00
Total Sample		2.91	0.03	0.52	0.06			1.84	0.00	0.06	0.02	0.05	0.00	0.14	0.14	0.03	2.91

Note: Grain counts shown as two decimal places for calculation purposes only

**MINERAL DEPOSITS LIMITED
TECHNICAL SERVICES DEPARTMENT**

Client : Consolidated Rutile Limited

Sample : "0102"

Mag Fraction	S.G. Fraction	% Wt Dltn to Fraction	Mineral Distribution by Mineral													
			H/S	Ilmenite	Altered Ilmenite	Monazite	Mag Others	Mag Rutile	Rutile	Mag Leucox	Leucox	Mag Zircon	Zircon	N/Mag Others	Shell	
H/S		0.91	100.00													
0.35	- 4.05	30.23						47.73	-							
Mag	+ 4.05	19.66		100.00				2.67	-							
	Sub-Tot	49.89		100.00	-			50.30	-							
	- 4.05	28.64			6.82			45.30	-							
Mag	+ 4.05	2.74			89.18	Trace		1.17	13.37				43.69			
	Sub-Tot	31.58			100.00	-		46.47	13.37				43.69			
2.4a	- 4.05	2.57						3.20	-		69.90					
Mag	+ 4.05	0.34						0.03	86.63		30.02		56.31			
	Sub-Tot	2.91						3.23	86.63		100.00		56.31			
2.4a	- 4.05	7.54									97.27			-	99.25	100.00
N/Mag	+ 4.05	7.18								100.00		2.73		100.00	0.76	-
	Sub-Tot	14.71								100.00		100.00		100.00	100.00	100.00
HM Sample		100.00	100.00	100.00	100.00	-		100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Note: Grain counts shown as two decimal places for calculation purposes only

NORTHWEST BAY CO. PTY. LTD.

987067

Incorporated in Tasmania 1978 A.C.N. 009 513 697

FACSIMILE TRANSMISSION

DATE 6-1-93

TO : Peter Barrett - CRL

FROM: Mac Forster

SUBJECT: Blancherua sands.

COPY TO:

TO FACSIMILE NO.: 07-2601504

Peter,
herewith some determinations
by AEM. in 1975

12000E (1000S) 0-27.5 is
close to the spot where I
drilled a hole with you etc.
& the same hole as my
grain count.

Regards

Mac

HEAVY MINERAL ANALYSIS REPORT SHEET

SAMPLE SOURCE 7 Mile Beach Line 12000E (1000S) 0-27.5'

LABORATORY:

DATE: 8th Dec., 1975

(Analysis expresses as % of indicated sub-fraction)

(Components as % of Heavy Mineral)

SAMPLE NO.	DESCRIPTION	GRADE	NON-MAGNETICS			MAGNETICS			Cr ₂ O ₃ in Ilmenite	Ilmenite in Mags	S in Mags	SnO ₂ in N/Mags
			N.M. Other	Rutile	N.M. Zircon	Mag Zircon	Monazite	Bal-ance				
SCS 1425	Line 12000E(1000S) 0-27.5'	97.0	1.7	6.2	12.5	0.5	2.2	76.9	1.93	74.7 (57% total mags)		0.048
	<u>Magnetite in Mags</u>	18.8	(M.M.) Total									
	<u>POPAZ in N/Mags</u>	1.1										

57 12:29
2000 NORTHWEST BAY CO
TEL 003-395568
P. 2

987068

ASSOCIATED MINERALS CONSOLIDATED LIMITED

HEAVY MINERAL ANALYSIS REPORT SHEET

SAMPLE SOURCE Tasmania

LABORATORY:

DATE: 28th Jan/, 1975

(Components as % of Heavy Mineral)

(Analysis expresses as % of indicated sub-fraction)

SAMPLE NO.	DESCRIPTION	GRADE	NON-MAGNETICS			MAGNETICS			Cr ₂ O ₃ in Ilmenite	Ilmenite in Mags	S in Mags	S in N/Mags
			N.M. Other	Rutile	N.M. Zircon	Mag Zircon	Monazite	Balance				
SCS 27	Tasmania Sample "A" <i>Five Mile Beach</i> <i>Pittwater</i>	96.9	(9.5) 4.7	(9.0) 8.8	(17.5) 16.5	0.5	1.1	(70.0) 68.4	3.97	51% 75.5		

987069

0800 NORTHWEST BRY Co

TEL 002-396688

P. 3

195 12:29

120006 1.0005

987070

0-275 ft

0-15 ft

Rutile	6.2%	9%
Zinc	13.0%	17%
Magnetite	2.2%	1.1%
Ilmenite	57%	53%
Fe_2O_3	11.1%	4%

ANALYTICAL REPORT

PAGE 1 of 2

CLIENT: CONSOLIDATED RUTILE LTD
ADDRESS: 200 HOLT STREET
PINKENBA
QLD 4008

LABORATORY: STAFFORD
BATCH NUMBER: ST5294-0

CONTACT: MR B FITTOCK

No. of SAMPLES: 2
DATE RECEIVED: 28/01/93
DATE COMPLETED: 01/02/93

ORDER No: 005198

SAMPLE TYPE: ILMENITE

PROJECT No:

SAMPLE NUMBER	ELEMENT UNIT METHOD	TiO2	Cr2O3	Al2O3	CaO	SiO2
		% IC583	% IC583	% IC583	% IC583	% IC583
CRL 0102 TEST 1		48.80	0.52	1.11	0.54	2.58
CRL 0102 TEST 2		48.70	0.51	1.21	0.57	2.93
DETECTION LIMIT:		0.01	0.01	0.01	0.01	0.01

CRL 0102 TEST 1 - Hole 360S Pole 1A magnetics + 4.06 SG
CRL 0102 TEST 2 - Hole 420S Pole 1A magnetics + 4.05 SG.

COMMENTS: *** DUPLICATE ASSAYS.



ANALYTICAL REPORT

PAGE 2 of 2

CLIENT: CONSOLIDATED RUTILE LTD
ADDRESS: 200 HOLT STREET
PINKENBA
QLD 4008

LABORATORY: STAFFORD
BATCH NUMBER: ST5294-0

CONTACT: MR B FITTOCK

No. of SAMPLES: 2
DATE RECEIVED: 28/01/93
DATE COMPLETED: 01/02/93

ORDER No: 005198

SAMPLE TYPE: ILMENITE

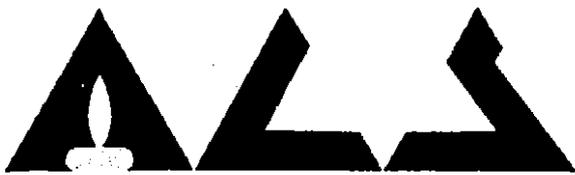
PROJECT No:

SAMPLE NUMBER	ELEMENT UNIT METHOD	MgO % IC583				
CRL 0102 TEST 1		1.12				
CRL 0102 TEST 2		1.51				
DETECTION LIMIT:		0.01				

COMMENTS:

Goldville Laboratory
Phone: (077) 79 9155 Fax: (077) 79 9729
Harbours Towers Laboratory
Phone: (077) 87 4155 Fax: (077) 87 4220
Orange Laboratory
Phone: (063) 63 1722 Fax: (063) 63 1189
Perth Laboratory
Phone: (054) 46 1390 Fax: (054) 46 1389

Perth Laboratory
Phone: (09) 249 2988 Fax: (09) 249 2942
Kalgoorlie Laboratory
Phone: (090) 21 1457 Fax: (090) 21 6253
Southern Cross Laboratory
Phone: (090) 49 1292 Fax: (090) 49 1374



AUSTRALASIAN
LABORATORY
SERVICES P/L
A.C.N. 009 936 029

ASSAYS

987073

Brisbane Head Office and Laboratory
32 Shand Street, Stafford, Q. 4053
P.O. Box 66, Everton Park, Q. 4053
Telephone (07) 352 5577
Facsimile (07) 352 5109

ANALYTICAL REPORT

CONSOLIDATED RUTILE LTD

Attention: MR B FITTOCK
Your Order: 005189
Sample Type: RUTILE

Page-no: 1
STAFFORD
Batch-no: 4966
Sub-batch: 0
No-samples: 1
Received: 01/12/92
Checked:

Element
Unit
Method

TiO2
/
MS302
Fe2O3
/
MS302

2120 SiO2

PL0001 RUTILE

90.6 0.45

3.28 2.21

Cr2O3 Al2O3 Ni
0.16 0.17 0.26

P2O5 V2O5
0.035 0.54

Detection limit 0.1 0.01

port complete, 1 pages sent.



AUSTRALASIAN
LABORATORY
SERVICES P/L
A.C.N. 009 936 029

Brisbane Head Office and Laboratory
32 Shand Street, Stafford, Q. 4053
P.O. Box 66, Everton Park, Q. 4053
Telephone (07) 352 5577
Facsimile (07) 352 5109

ANALYTICAL REPORT

CONSOLIDATED RUTILE LTD

Attention: MR B FITTOCK
Your Order: 005189
Sample Type: ZIRCON

Page-no: 1
STAFFORD
Batch-no: 4966
Sub-batch: 1
No-samples: 1
Received: 01/12/92
Checked:

Element	ZrO2 11102	TiO2	Fe2O3	Al2O3
Unit	/	/	/	/
Method	MS303	MS303	MS303	MS319
CRL0001 ZIRCON	66.2	0.19	0.206	0.20

Detection Limit 0.1 0.01 0.001 0.01

APPENDIX 3

**MINERALOGICAL REPORT ON
FOUR HEAVY MINERAL FRACTIONS**

JOYCE 1993

Geochempet Services

PETROLOGICAL and GEOCHEMICAL CONSULTANTS

REGISTERED IN QUEENSLAND

Principal: A.S. Joyce B. Sc. (Hons), Ph.D.
198 Chapel Hill Road
Chapel Hill, Qld. 4069

Telephone: (07) 892 1789
AH 378 6467

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MINERALOGICAL REPORT ON FOUR HEAVY MINERAL FRACTIONS

prepared for
CONSOLIDATED RUTILE LTD

Transfer No: 005199
Ref: P. Barrett

A.S. Joyce
A.S. Joyce B.Sc.(Hons), Ph.D.
4th February, 1993.

MINERALOGICAL REPORT ON FOUR HEAVY MINERAL FRACTIONSWORK REQUESTED

Mineralogical appraisal of supplied heavy mineral fractions by microscopy.

METHODS AND COMMENTS

Each sample was repeatedly coned to improve homogeneity prior to subsampling for grain counting using transmitted polarized light microscopy and oil immersion mounts. Mineral identifications have been made on microscopic appearance in transmitted light and where necessary checked in obliquely reflected light.

Essential results are reported in Table 1 and supplementary brief notes offer some additional information. Results are based on counts of 200 grains per sample in random linear traverses.

RESULTSTAS0102 360S 6-7.5 -3.85 Non mags

This fraction is dominated by relatively coarse, curved and platy carbonate shell fragments, mostly whitish or light grey, but some brownish; there are also a few small, whole Foraminifera shells. The shells (47%) have presumably reported in this "light" heavy fraction because the carbonate is aragonite.

The other major component is 32.5% of a colourless silicate mineral interpreted to be kyanite (platy cleavage, low birefringence, inclined extinction).

Minor minerals of potential economic significance comprise 1% opaque oxide (probably ilmenite) composite with silicate, 8.5% leucoxene (some composite with silicate), 1.5% rutile (small yellowish brown grains), 0.5% anatase (small yellowish grains) and a trace of zircon (small, rounded, colourless prisms).

Other components are 1.5% brown staurolite, 0.5% apatite, 1.5% sericitic aggregates, 2.5% yellowish epidote, 0.5% greenish pyroxene, 1% limonite, 0.5% brown tourmaline and 1% pale brown sphene.

TAS0098 1/420S 3-4 -3.85 Non mags

This fraction is dominated by relatively coarse, curved and platy carbonate shell fragments, mostly whitish or

2/...

FEBRUARY, 1993

GEOCHEMPET SERVICES, BRISBANE

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brownish. The shells (33%) have presumably reported in this "light" heavy fraction because the carbonate is aragonite.

Small grains of opaque oxide amount to 0.5%, leucoxene to 28%, rutile (variously yellowish brown, brown, red and nearly black) to 7.5%, yellowish anatase to 1.5%, colourless zircon to 16%, pale yellowish monazite or xenotime to less than 0.5%, pinkish garnet to 1.5% and colourless kyanite to 9%.

Other minor components are 1% brown staurolite, 0.5% sericitic aggregates, 0.5% limonite and 1% brown tourmaline.

TAS0102 360S 6-7.5 (1B) -4.05 Mag

There are only a few fragments (0.5%) of whitish and brown carbonate shell material in this fraction.

The most abundant component is a colourless silicate (90.0%) with optical properties consistent with kyanite (platy cleavage, low birefringence, inclined extinction); the fragments are essentially colourless, but in transmitted light some are seen to be mildly iron-stained.

Leucoxene amounts to 1.5%, nearly black rutile to 0.5% and pale pink garnet to 1.5%.

Other minor components are 4% brown, olive and green tourmaline, 0.5% green pyroxene, 0.5% yellowish epidote and 1% limonite.

TAS0102 420S 7.5-9 1A -4.05 Mag

The most abundant component is an essentially colourless silicate (88.5%) interpreted to be kyanite; the fragments are commonly faintly iron-stained.

Leucoxene amounts to 0.5%, opaque oxide (probably ilmenite) to 4% and pale pink garnet (essentially colourless in transmitted light) to 3.5%.

Other minor components are 1% brown, olive and green tourmaline, 1% green pyroxene, 1% green and brown hornblende and 0.5% hematite.

3/...

GEOCHEMPET SERVICES, BRISBANE

3.

Table 1. Mineralogical Composition* of the Four Fractions

	360S 6-7.5 -3.85 SG Non mags	1/420S 3-4 -3.85 SG Non mags	360S 6-7.5 1B -4.05SG Mags	420S 7.5-9 1A -4.05SG Mags
Opaque oxide	1.0	0.5		4.0
Leucoxene	8.5	28.0	1.5	0.5
Rutile	1.5	7.5	0.5	
Anatase	0.5	1.5		
Zircon	<0.5	16.0		
Xenotime/ monazite		<0.5		
Garnet		1.5	1.5	9.5
Kyanite	32.5	9.0	90.0	88.5
Staurolite	1.5	1.0		
Pyroxene & epidote	3.0		1.0	1.0
Hornblende & tourm.	0.5	1.0	4.0	2.0
Other	51.0	34.0	1.5	0.5

* Percentages based on counts of 200 grains in random linear traverses

987081



**AUSTRALIAN
LABORATORY
SERVICES P/L**
A.C.N. 009 936 029

Brisbane Head Office and Laboratory
32 Shand Street, Stafford, Q. 4053
P.O. Box 66, Everton Park, Q. 4053
Telephone (07) 352 5577
Facsimile (07) 352 5109

ANALYTICAL REPORT

CONSOLIDATED RUTILE LTD

Page-no: 2

Attention: MR B FITTOCK

STAFFORD

YourOrder: 005193

Batch-no: 5177

SampleType: MINERAL SAND

Sub-batch: 0

No-samples: 3

Received: 07/01/93

Checked:

Element	Ca	Mg	Si	Mn
Unit	%	%	%	%
Method	IC583	IC583	IC583	IC583
CRL 0098 TEST 1	0.12	0.78	0.98	0.70
CRL 0098 TEST 2	4.85	8.09	20.50	0.43
CRL 0100 TEST 3	0.09	0.42	0.56	0.84

SiO₂
41.82

Detection limit 0.01 0.01 0.01 0.01



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ANALYTICAL REPORT

PAGE 1 of 2

CLIENT CONSOLIDATED RUTILE LTD
ADDRESS 200 HOLT STREET
PINKENBA
QLD 4008

LABORATORY STAFFORD
BATCH NUMBER ST5177-0

CONTACT MR B FITTOCK

No. of SAMPLES 3
DATE RECEIVED 07/01/93
DATE COMPLETED 14/01/93

ORDER No 005193

SAMPLE TYPE MINERAL SAND

PROJECT No:

SAMPLE NUMBER	ELEMENT UNIT METHOD	Cr	Al	Ti	Fe	Ca
		% IC583				
Tasmania CRL 0100 TEST 1		2.16	0.84	27.60	31.60	0.18
3 Sinal CRL 0100 TEST 2		0.20	3.24	2.78	16.10	4.85
Sinal CRL 0100 TEST 3		0.13	0.42	31.50	30.00	0.09
SECTION LIMIT:		0.01	0.01	0.01	0.01	0.01

REMARKS: *** DUPLICATE ASSAYS.

Perth Laboratory
Phone: (07) 79 9155 Fax: (07) 79 9729
Melbourne Laboratory
Phone: (07) 87 4155 Fax: (07) 87 4220
Geelong Laboratory
Phone: (03) 63 1722 Fax: (063) 63 1189
Sydney Laboratory
Phone: (054) 46 1390 Fax: (054) 46 1389

Perth Laboratory
Phone: (09) 249 2988 Fax: (09) 249 2942
Kalgoorlie Laboratory
Phone: (080) 21 1457 Fax: (080) 21 6253
Southern Cross Laboratory
Phone: (090) 49 1292 Fax: (090) 49 1374

All pages of this report
have been checked and
approved for release.

Signed



ANALYTICAL REPORT

CLIENT: CONSOLIDATED RUTILE LTD
ADDRESS: 200 HOLT STREET
PINKENBA
QLD 4008

LABORATORY: STAFFORD
BATCH NUMBER: ST5177-0

CONTACT: MR B FITTOCK

No. of SAMPLES: 3
DATE RECEIVED: 07/01/93
DATE COMPLETED: 14/01/93

ORDER No: 005193

SAMPLE TYPE: MINERAL SAND

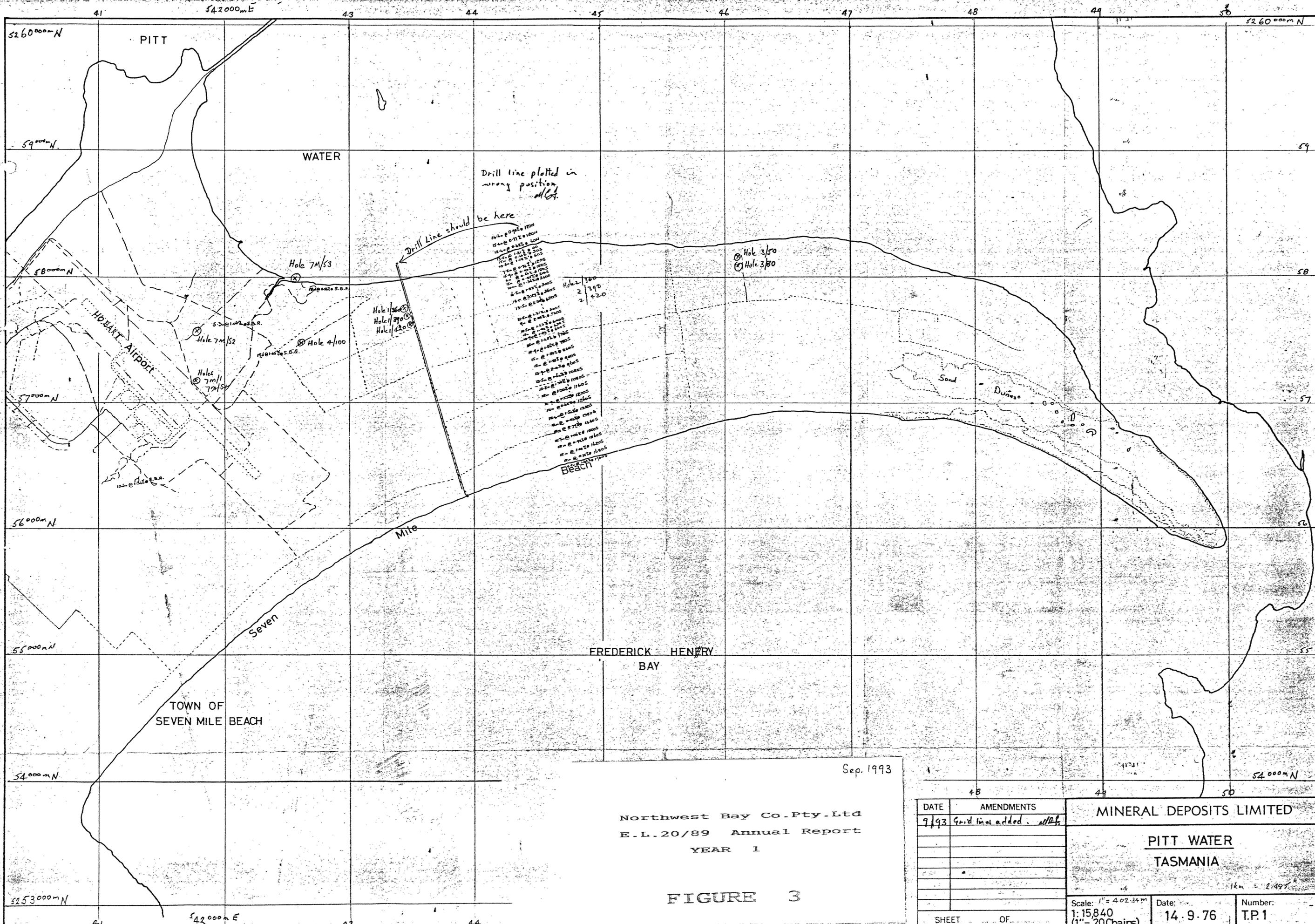
PROJECT No:

SAMPLE NUMBER	ELEMENT UNIT METHOD	Mg	Si	Mn		
		% IC583	% IC583	% IC583		
CRL 0100 TEST 1		0.78	0.98	0.70		
CRL 0100 TEST 2		8.09	20.50	0.43		
CRL 0100 TEST 3		0.42	0.56	0.84		
DETECTION LIMIT:		0.01	0.01	0.01		

REMARKS:

Woolville Laboratory
e: (077) 79 9155 Fax: (077) 79 9729
Leppington Laboratory
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Geelong Laboratory
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Igo Laboratory
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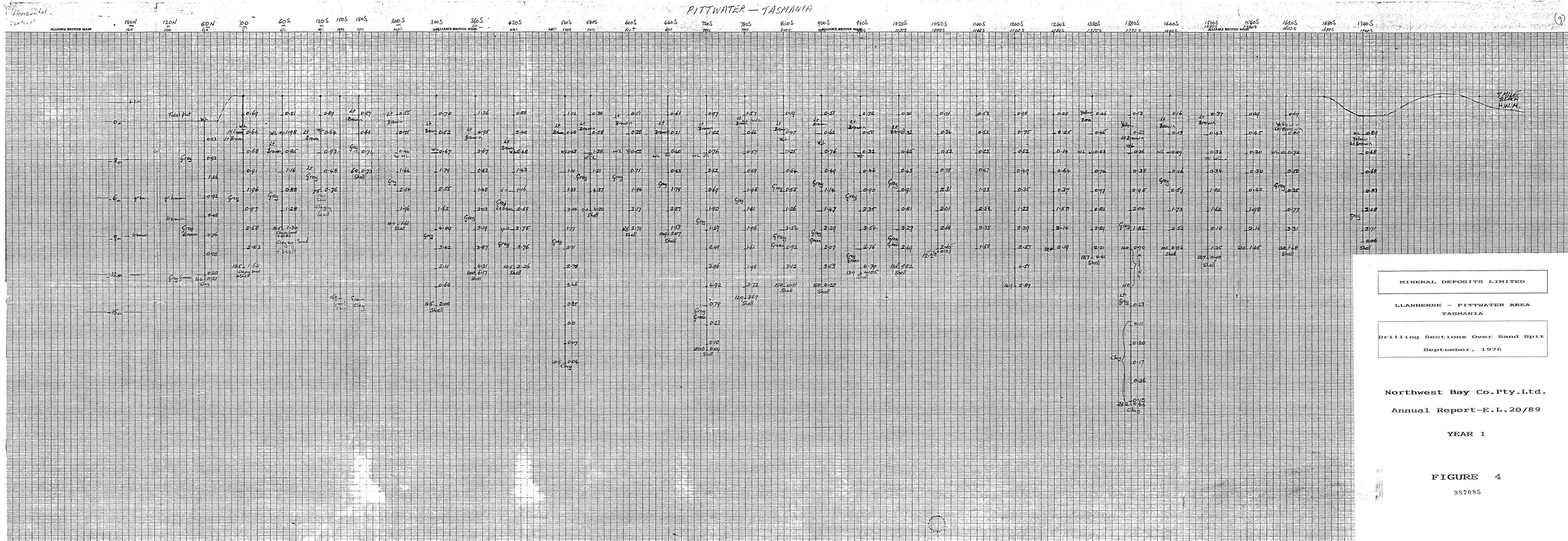
Northwest Bay Co. Pty. Ltd
E.L. 20/89 Annual Report
YEAR 1

Sep. 1993

FIGURE 3

DATE		AMENDMENTS	MINERAL DEPOSITS LIMITED	
9/93		Grid lines added. <i>all G.</i>	PITT WATER TASMANIA	
			1km = 2.495	
			Scale: 1" = 402.34m 1:15,840 (1" = 20 Chains)	Date: 14.9.76
				Number: T.P.1
SHEET		OF		

5 cm



MINERAL DEPOSITS LIMITED

LLANHERNE - PITTWATER AREA
TASMANIA

Drilling Sections Over Sand Spit
September, 1976

Northwest Bay Co. Pty. Ltd.
Annual Report - E.L. 20/89

YEAR 1

FIGURE 4

987085