SPECIAL EXPLORATION LICENCE 22/99

NE TASMANIA

ANNUAL REPORT ON EXPLORATION

SEPTEMBER 2000 TO SEPTEMBER 2001

For

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Annual Report on Exploration - NE Tasmania -
SEL22/1999 Sept 2000-Sept 2001
Mineral Holdings Australia Proprietary Limited*
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ABSTRACT

This report describes the work carried out by Mineral Holdings Australia Pty Ltd on Special Exploration Licence 22/99 for gemstones covering 3856 sq km in NE Tasmania during year one of its tenure. The licence was also the subject of a joint venture with Great Northern Mining Limited (GTN), Sydney, an experienced sapphire miner in NSW and Queensland, which also surveyed the licence leading to bulk testing for sapphires at prospects in the Priory and Weld River areas. The results of these tests are given in a separate report by GTN, a copy of which has been lodged with Mineral Resources Tasmania. At the end of year one, GTN decided to withdraw from the joint venture.

Mineral Holdings carried out sediment sampling in drainages to better define the prospect in the Priory area, sampled in Summers Mine at Sth Mt Cameron to investigate the sapphire content of untreated alluvial wash and continued studies on the size distribution patterns of the sapphires in the province.

Some of the highest sapphire values in the NE region are found in the gravels of an unnamed, mostly-mined creek and in the tailings near the old Siamese tin processing shed at Priory. Large sapphires to 25mm held in a private collection may have come from here. This focus has led to bulk testing of the nearby past and present terraces of the George River.

The three best alluvial wash samples from the active face at Summers Mine ranged from 8.5 to 30g/BCM corundum/sapphire overlapping the range of 15 to 50g/BCM in the economic deposits in New England and Queensland.

In the absence of sapphire yields from substantial bulk sampling in the province, sizing studies have been conducted on the active sands and gravels in the creeks and rivers, on the tails of the former alluvial tin mines and on the collections of amateur prospectors. These preliminary sizing figures suggest that the Tasmanian sapphires are substantially smaller than the Mainland stones. However, some of the local sapphires have the desirable cornflower blue colour and may attract a premium price in the plus 4 to 5mm size range.

The focus of future exploration is for deposits of larger sapphires with a good content of high quality, light blue stones in enough alluvial wash volumes to make economic extraction feasible with or without tin and gold credits.

SEL 22/99- NE Tasmania- Annual Report

1.0 Introduction

Mineral Holdings Australia Pty Ltd has for many years been investigating the potential of alluvial tin deposits in NE Tasmania. In recent years, the company has been able to achieve exploration title to a large area both onshore and offshore covering the major part of the alluvial tin resources of the State. The Ringarooma Alluvial Tin Project has been promoted to the industry both in Australia and overseas in the search for joint venture partners to undertake the high budget evaluation required to bring the resources to development.

In a move to further investigate the value of the placers, Mineral Holdings has concentrated on the documentation of the sapphire content of the tin-bearing alluvials and this has led to the first regional evaluation of the neglected sapphire province of NE Tasmania.

The company applied for a Special Exploration Licence on 14th December 1999 for gems only over a large area to allow for a comprehensive evaluation. This was awarded on 8th September 2000 as SEL 22/99 covering 3856 sq km and included the three ages of basalts and all known sapphire occurrences in NE Tasmania (Plan 1).

To overcome the objections lodged by the Aboriginal Land Council of Tasmania (ALCT), Mineral Holdings agreed to accept a number of provisions mostly contained in the Aboriginal Relics Act 1975 and to provide the ALCT with a copy of any proposed exploration involving land disturbance and with an overview of activity on the licence on an annual basis.

The company, in anticipation of widespread objections by the fossicking community, defused this issue by announcing in media releases, with the cooperation of Mineral Resources Tasmania, that the search for gems by the public in the customary fashion could continue on the licence as the company was searching for large volume, concealed deposits of substantial commercial value.

Mineral Holdings then formed a joint venture with GTN Resources Ltd, the largest sapphire producer in Australia from mines in New England, NSW and Queensland, to carry out exploration and evaluation of the special licence.

2.0 Previous Exploration

Earlier exploration leading up to selection of SEL 22/99 has been described in last year's annual report to EL 19/93 & T2-MEL (Volume 2) by Duncan & Rhodes (2000). The report covers the regional survey of the gem and heavy mineral content of the currently- active sediments in the main river and creek drainages in the NE as well as the tails and middlings of the alluvial tin treatment sites and the residual untreated wash where accessible in the former tin mines.

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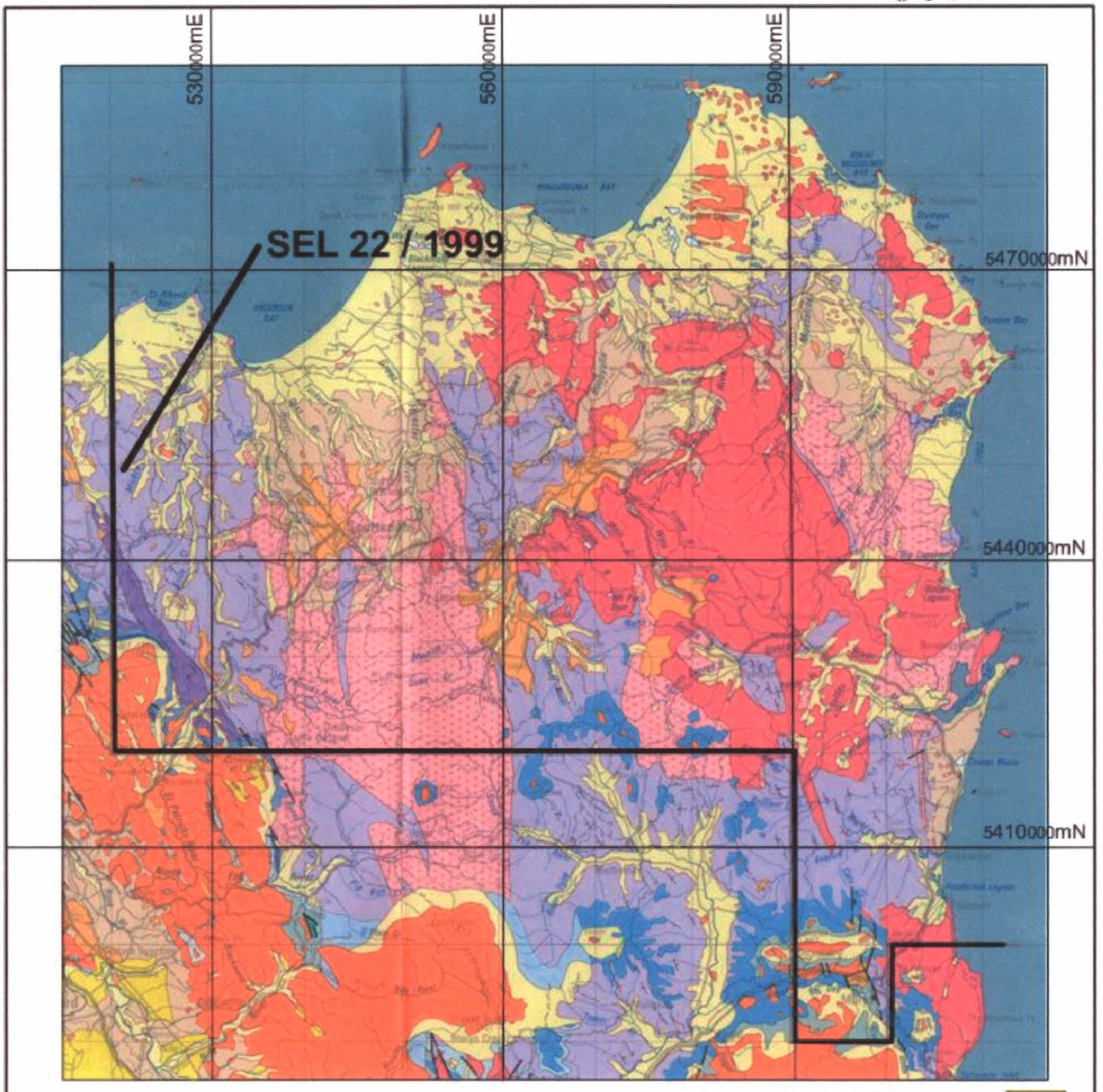

0 15 30 km

QUATERNARY - Alluvial Deposits

TERTIARY - Alluvial Deposits

Mathinna Beds

Granitic Intrusives

N

5 cm

MINERAL HOLDINGS AUSTRALIA PTY., LIMITED

TITLE

PLAN 1 SEL 22 / 1999

REGIONAL GEOLOGICAL PLAN

FILENAME	DRAWN BY	DATE
REGIONAL GEOLOGICAL PLAN.VSD	*Niugini Resources P/L*	19/09.2001
SCALE	PAGE	REVISED
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3.0 Current Exploration

Under the joint venture agreement, GTN are responsible for exploration on the licence and they will be reporting independently on their program including the bulk sampling and processing in the Priory and Weld River prospect areas.

At the same time, Mineral Holdings continued to investigate the Priory area by drainage sampling, and to build up a regional picture of sapphire occurrence by sampling untreated wash at the Summers' Mine, Sth Mt Cameron. Studies continued on the size distribution characteristics of the sapphire population in the NE region.

4.0 Results

The Mineral Holdings exploration is reported below.

4.1 Lloyd's Sapphire Collection, Priory, St Helens

The Priory area, a few kilometres north of St Helens, became interesting following a report by Michael Lloyd (ML) of sapphires in the garden of his 2 ha property. A visit to Lloyd's property revealed over 20 sapphires in the size range of 4-25mm, medium blue with a green cross-table and apparently of good quality –the most impressive parcel of sapphires seen by this company in NE Tasmania (Plate 1). The largest stone was 25mm long with growth zoning and weighed 19g (13.1%). The rest of the parcel was in the ranges 20-10mm (3.3g, 1.9%), 6-10mm (95.6g, 56.3%), 4-6mm (38.3g, 22.5%) and minus 4mm (13.7g, 8.1%). Total weight of the parcel was 169.9g.

Some of the stones in the collection were found by ML in the garden immediately adjacent to the house and some had been passed on to him by his grandfather who had lived in the house and had been a tin miner but had never revealed the source of the sapphires. There seems little chance of the stones occurring naturally on the few acres of property. Although the land sits on a narrow terrace of the George River, the soil in the garden is granite-derived and thin, resting on a granite bedrock judging by the nearby granite outcrops. Brown oxidised rocks found as float within 100m of the house and initially thought to be basalt proved to be metasediment from an unknown source (see sample 630079 in Appendix 7). The nearest basalt outcrop is some 5km to the NNW at Halfway Hill.

The suspicion is that the grandfather collected the sapphires from the alluvial tin mines where he was employed and brought them onto the property where some of them were accidentally lost in the garden. The grandfather was reported to have worked on the alluvials at the adjacent Albion and Littlechilds Creeks in the Priory area, at Royal Ruby Flat and Trafalgar near St Helens and Lottah on the Blue Tier, all in the eastern watershed of the mountains.

Plate 1 - M Lloyd's sapphires

Plate 2 - T Jones' corundum

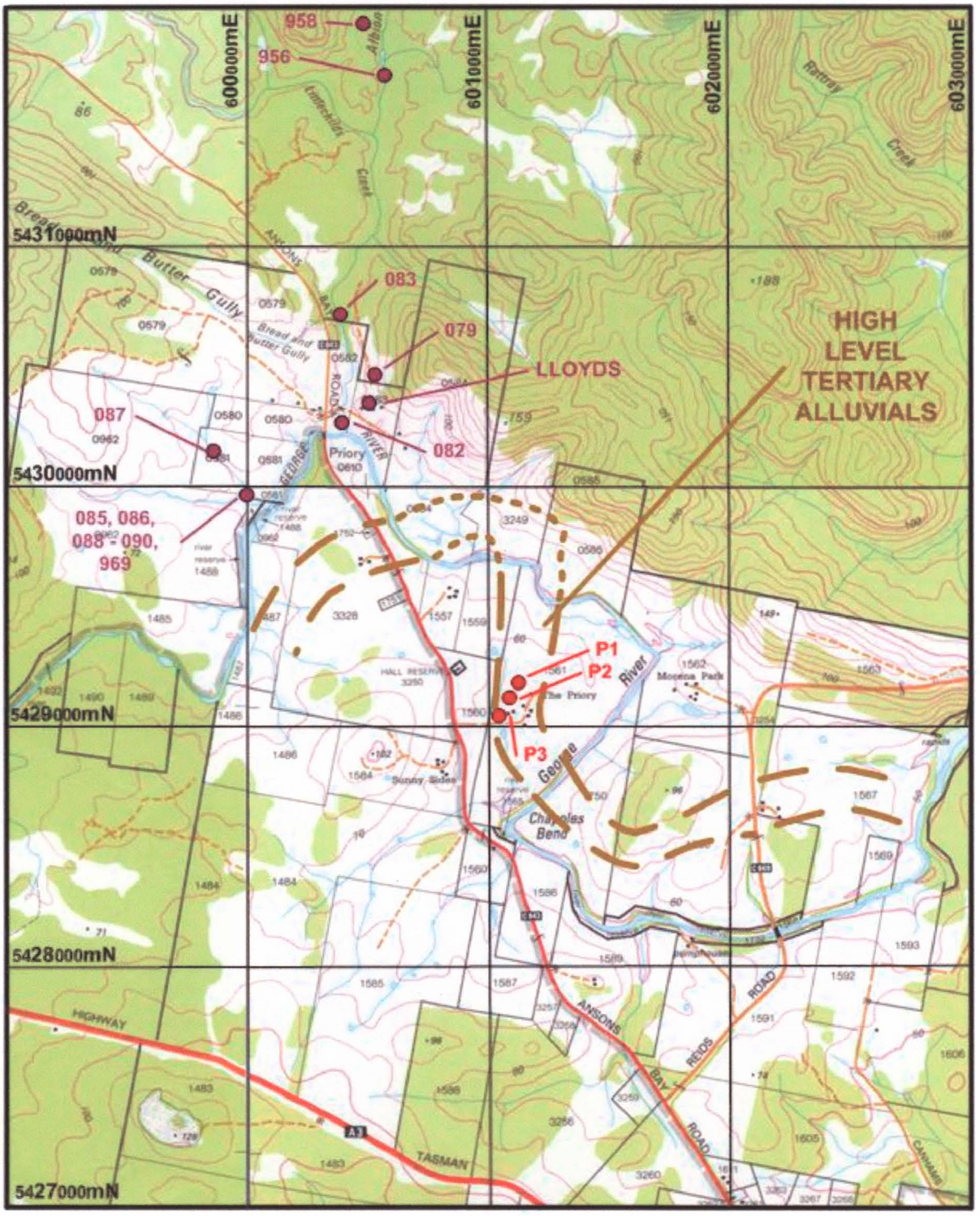
5 cm

TABLE 1- SUMMARY OF SAMPLE RESULTS AT PRIORY

Sample No Prefix 630-	Sapphire g/t	Sapphire g/BCM	Tin g/t	Tin g/BCM	Gold g/t	Gold g/BCM
082 George River	0	0	152	274	0	0
083 Littlechilds Ck	2.7	4.9	591	1064	trace	
085 Un-named Ck	220	396	433	779	0	0
086 As above	160	288	350	630	0	0
087 East branch above	114	205	706	1271	0	0
088 West branch	77	139	1000	1800	0	0
089 East bank	152	274	39	70	0	0
090 Bank between	98	176	11	20	0	0
Prefix 132- 956 Albion Ck trib	0	0	13	23	0	0
957 Albion Ck	0	0	37	67	0	0
958 Albion Ck tail	0	0	558	1004	0	0
959 Forester Ck	0	0	0	0	0	0
960 Forester tail	0	0	15	23	0	0
961 George R tail	9.9	18	219	394	0	0
969 West branch	11.6	21	86	155	0	0

bulk cubic metre?

859009



0 0.5 1.0 km

083 Reconnaissance Samples

P1 GTN Bulk Samples

MAP: Australian Metric Grid

MINERAL HOLDINGS AUSTRALIA PTY., LIMITED

TITLE

PLAN 2 SEL 22 / 1999

PRIORY AREA PROSPECTS

FILENAME	DRAWN BY	DATE
22 1999 FIGURE 12.VSD	*Niugini Resources P/L*	20/09/2001
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5 cm

4.2 Drainage Sampling, Priory

Sampling in the area involving the digging by R Lawry of 10-20kg amounts of sediment from the active drainages confirmed the two branches of the un-named creek flowing into the George River just up-river from the bridge at Priory as yielding high sapphire values (Plan 2). These values derived by hand picking and screening by L Rhodes and assaying for tin at the University of Tasmania, Launceston are given in Tables P-1 and P-2 of the Appendix 2 and summarised in Table 1 which also shows that the catchments of Albion, Littlechild and Forester Creeks to the north of Priory have so far not produced much sapphire interest.

Up to 86 stones have been recorded in the samples giving high grades in the range 139-396g/BCM sapphire and sizes up to 5mm (see Appendix 2 for size distribution). Most of these samples have reasonable tin values up to 1800g/BCM. At least some of the samples are obviously tails particularly 089 and 090 sampled on the banks with low tin grades and fine-grained cassiterite.

There has been some alluvial mining in the creek with the western branch being less disturbed than the eastern branch and, from geological inspection, both contain minimum residual wash. The branches meet on a terrace above the George River which yields sapphire–bearing tin tails near an old presumed processing and mining shed probably used by the Siamese Tin Mining Company. Sapphires up to 4 carats and 7mm (sample 132985) and in various blue to grey colours can be hand picked from these tailings.

It is likely that these sapphire-bearing tails were derived from the un-named creek during alluvial tin mining rather than being deposited on the terrace by the present George River. There is certainly no basalt in the present catchment of the creek and it is supposed that the gravels in the un-named creek bed were part of a more extensive Thureau's lead since reduced in area by erosion. Tertiary sediments were more extensive in the past in the St Helens region with gravels being found up to 100m above present sea level. Sapphires are reported from small creeks flowing northwards into the Priory area and the George River from the Tasman Highway where Tertiary sediments have been mapped by the Mines Department capping hills at a height of more than 100m.

Small blue sapphires (less than 2mm) are found in the sand and gravel choking the present bed of the George River most of which has been derived from tin mining. On the edge of the river, just downstream from the un-named creek, substantial volumes of tailings are found and small sapphires have been panned here. Also, at the next major bend of the river 1km upstream, at the entrance to Rosiers Gully Workings, small blue sapphires were panned in the river wash as well as adjacent to a prominent terrace on the inner bank of the bend. This terrace was produced by the 1929 flood which also closed the Briseis alluvial mine at Derby. This flood may also have caused the tailings piles in the river at the un-named creek as the volume seems too large to have been caused solely by extraction from the diggings in that creek.

Thureau's lead itself has been found to contain sapphires as untreated wash (sample #31) last year was found to contain 21 stones at 7g/BCM and probable tails (sample 132961) from a race entering the George River produced 18 stones at 18g/BCM. Locally, the base of a channel is exposed in the bluff (Maddock's Leap) overlooking the George River (several hundred metres south of the Priory Bridge) where a 4m thick section of conglomerate wash can be seen lying directly on granite basement. However, a channel sample through the section and one at the base was barren of sapphire but gave blackjack and minor tin (Table P3 in Appendix 2).

4.3 Summers Mine, Sth Mt Cameron

In the quest to build up a picture of the regional variability in sapphire content of untreated alluvial wash, it was arranged with the agreement of the leasee to take some 10-20kg samples from Summers Mine- the only alluvial tin mine currently operating in Tasmania. The lease lies on the west bank of the Ringarooma River just north of the area previously worked by the Dorset Dredge. The wash is mapped as Tertiary on the MRT Ringarooma Sheet with some Quaternary river terrace deposits and it is probably the latter that the current mine is working. Five samples were selected by R Lawry from around the mine, three from the current work face. The results are shown in the Appendix 3 (Table MW-1) and summarised in Table 2.

TABLE 2-SUMMARY OF WASH SAMPLE RESULTS, SUMMERS MINE

Sample No	Sapphire		Tin		Gold	
Prefix 630-	g/t	g/BCM	g/t	g/BCM	g/t	g/BCM
076 near water pump	2.34	4.21	149	268	0.057	0.103
077 below cleaner jig	0.54	0.97	187	337	0.021	0.038
078A current mine face	5.74	10.33	818	1472	0.024	0.043
078B current mine face	16.44	29.59	1700	3060	0.217	0.391
078C current mine face	4.73	8.51	65	11.7	0.005	0.009

Of the five samples analysed, sapphires were found in all samples in the range 1 to 17 stones giving grades between 1 and 30g/BCM. Tin was mostly in the range 300 to 3000g/BCM and gold mostly between 0.04 and 0.40g/BCM. There is a trend for the higher contents of sapphire to be associated with higher tin and gold.

Studies were run by IDL, Perth, WA on the weight and classification of sapphires derived from the tail at Summers Mine compared with the Dorset Dredge tail on the Great Northern Plains (see Appendix 4).

The Dorset Dredge tail (sample 630056) yielded 43 sapphires in the 2-3mm size fraction (total 6.8075 carats), the individual grains weighing in the range 0.4805 to 0.0190 carats. The classification was 12 blue (28%), 11 blue star (26%) and 20 brown star (46%).

The tail from the old plant site at Summers Mine (sample 630057) yielded 19 sapphires in the corresponding size range (total 2.5505carats), the single grains in the range 0.2100 to 0.0820 carats. The classification was 6 blue (32%), 7 blue star (36%) and 6 brown star (32%).

A screened and panned sample of maiden wash (sample 630058) from a trench near the new plant site gave 2 dark grey star sapphires in the 2-3mm size fraction, each being just over 0.4 carats.

4.3 Sizing Studies

Sizing studies are important as a guide to the expected sizes of sapphires likely to be found in a province or individual deposit. Investigations on tin mining tails at Dorset Dredge, Endurance and Pioneer have recorded few sapphires above 3-4mm due to the screening in the treatment plants so the upper size range of the gems has gone out to the tails with the oversize gravel. Larger sapphires have been collected in the past from the jig screens or out of streaming boxes on the former alluvial tin mines but there is no systematic record of how many and to what size?

The largest sapphire ever recorded in the province was a parti-coloured stone of 264 carats (52.8g) found in the Weld River area and many in the 4 to 12 carat range have been mentioned (Petterd, 1910). In recent years, a 50g flat pebble of nondescript corundum some 5cm across was found by Mr Ted Jones of Jamaica Rd, Judbury in a farmers paddock during ploughing in the Derby area (Plate 2).

To get a closer approximation to a natural population, the company arranged to measure several parcels of sapphires held by local amateur prospectors Ron Lawry, St Helens and Andrew Tuma, Bridport and collected from the active sediments in creek beds throughout N E Tasmania. In addition, the company collected a parcel of sapphires (sample 132984; 573,800mE; 5,445,500mN) with the help of these prospectors from the Weld River at Moorina in the course of one day. The parcels were sized by BFP, Launceston the results are in the Appendix 6 and are summarised in Table 3. The Tuma corundum and sapphires parcels are displayed in Plates 3 and 4 respectively with the minus 2.36mm fraction left out of each parcel.

TABLE 3 – COMPARATIVE SAPPHIRE SIZING STATISTICS

Size mm	Tuma cor cum % retain	Tuma sapph % retain	Lawry mix % retain	Weld River % retain	Subera % retain
+9.5	0	2.8	0.4	0	?
6.7-9.5	2.3	3.7	3.3	0.9	38
4.75-6.7	13.6	15.0	8.3	9.8	58.3
3.35-4.75	57.6	56.6	30.9	49.3	67.3
2.36-3.35	97.5	98.1	82.3	91.4	99.9
1.18-2.36	100	100.1	99.9	100	
Total (g)	562.3	137.5	1169.6	89.1	18.7

Taken at face value, the Tasmanian sizes are substantially smaller than the Subera, Queensland sapphires quoted in the Table for comparison. Whereas, the Tasmanian sapphires have up to 3.3% above 6.7mm, the Queensland figure is 38% and where the former sapphires have up to 14.4% above 4.74mm, the latter have 58%. Above 3.35mm, the populations are closer with the Tasmanian stones recording 30 to 60% and the Queensland ones at 67%.

These figures reinforce the anecdotal evidence that the Tasmanian stones are smaller than the Queensland and New England sapphires. According to GTN Resources, 75% of the revenue from Subera Mine comes from their +7.5mm material which comes from about 38% by mass. The theoretical Tasmanian yield in that size category is only about 3% by mass.

However, the figures are not directly comparable because the Tasmanian ones refer to recent creek gravels while those of Queensland are from a drill hole in insitu wash. Moreover, in both prospectors' collections above, several of the larger stones have been removed for evaluation and faceting. We know from Lloyd's collection at Priory that large sapphires can be found in the Tasmanian province up to 25mm in size. The questions are how common are they and what is the true size distribution in the untreated, residual alluvial wash in NE Tasmania. These questions can only be answered by the bulk treatment and processing of alluvial wash in likely sapphire – bearing areas in the next phase of exploration.

4.4 Other Results

Five pancon results from the Great Northern Plains (samples 630094-098) taken by R Lawry during inspection of areas for bulk sample sites were assayed for tin and hand picked for sapphire and gold and the results are given in the Appendix 5. Tin was

Plate 3 - A Tuma's corundum

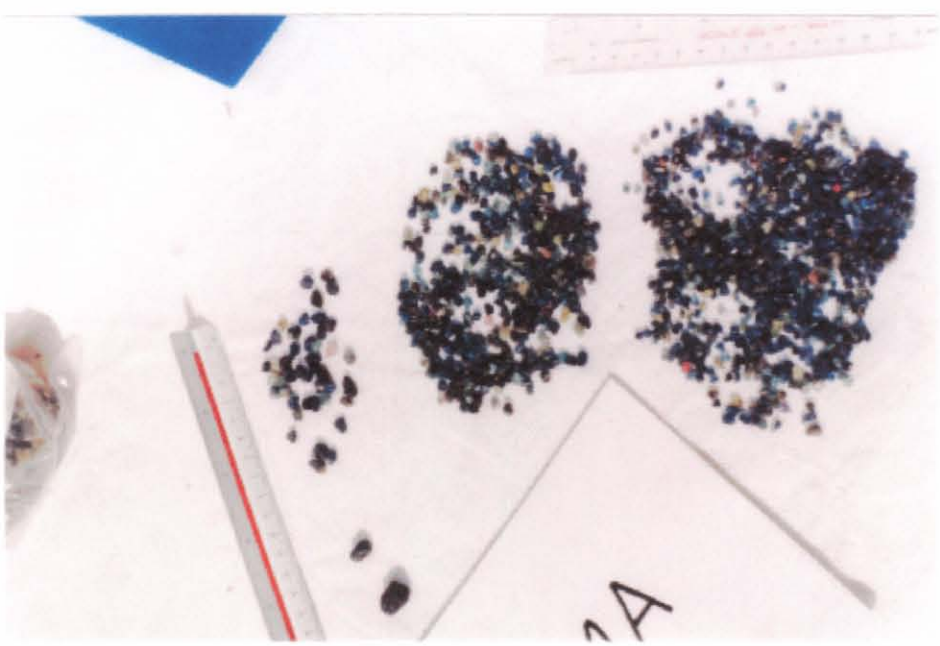


Plate 4 - A Tuma's sapphires

5 cm

prominent throughout, sapphires were recorded at Aberfoyle (11 grains) and Dobson's (7 grains) and gold (11 grains) at Taylor's. The sample at Dobson's was considered to be from an untreated wash pile but the presence of ragging suggested the material was tailings which also included coarse zircon described after panning as 50-60% by volume of the resulting sample.

Four rocks and one mineral were submitted to Mineral Resources Tasmania for identification and the results are in the Appendix 7. Two were described as basalts- one from Rio Grande Ck (wash oversize, sample 630073) and thought to be derived from close to a volcanic vent- the other (sample 630091, collected by GTN) from a stockpile in a quarry and containing light blue mineral inclusions which turned out to be chalcedony (not sapphire) in vesicles. The brown float near Lloyd's place (sample 630079) at Priory is a metasediment, hornfelsed by the granite, suggesting there may be Mathinna sediments in the flanking hills not picked up in the Government geological mapping. The fourth rock (sample 630092) sourced from the Wyniford River, but of a type found more widely in the oversize of the river gravels during reconnaissance sampling, has been identified as an altered dolerite-a member of the prominent NE trending, ? Devonian dyke swarm, some of which have been mapped on the Blue Tier.

A red mineral grain about 5mm in size from the sapphire parcel collected in the Weld River at Moorina was suspected as ruby but proved to have the properties of zircon (sample 132984, Appendix 7).

A composite sample was taken from a cutting in a dam wall on Singline's farm at Weldborough (576,800mE;5,437,250mN). The profile was 1m of colluvium with basalt blocks over 1m of non-bedded ?Tertiary quartz grit on or close to granite basement. After panning, no sapphires or cassiterite were recorded but a small amount of irregularly–shaped spinels was seen (sample 132983, Appendix 6).

5.0 Interpretation

The results from the previous section are discussed as follows.

5.1 Priory

Interest in the Priory area has focussed on the high sapphire values in the gravels in the un-named creek and in the adjacent tailings and treatment area on the George River terrace near the old Siamese tin shed. It is probable that the sapphires have become concentrated in the creek gravels following alluvial tin mining and those that occur near the old shed are the result of heavy mineral processing to remove cassiterite. As the sapphires reach up to at least 7mm in the tailings it is probable that small mesh screens were not used in the processing. It remains conceivable that all or some of the larger sapphires now in M Lloyd's collection were hand picked by his grandfather during the processing of alluvial wash in this area.

No residual alluvial wash remains in the un-named creek or obviously on the surrounding slopes and catchment to provide suitable volumes of material for bulk testing. Small blue sapphires have been panned in the current George River sands and gravels which choke the riverbed as tailings from upstream alluvial mining. There are

small sapphires in the creeks running north into the George River from high level Tertiary gravel residuals suggesting that Thureau's Lead was more extensive in the past. There is little sapphire interest in the larger tin workings in Albion or Littlechilds creeks although sampling has been minimal (2 grains, Sample 630083).

With the impressive collection of sapphires in M Lloyd's possession and the sapphire interest from the Siamese tin workings consideration should be given to testing the past and present terraces of the George River downstream from the Priory area and also west through Thureau's Lead to Goshen and the extensive flats around Pyengana, the first break of slope from the mountain divide.

5.2 Summers Alluvial Tin Mine

The untreated alluvial tin wash at Summers Mine at Sth Mt Cameron was in the range 1 to 30g/BCM sapphire over five samples which overlaps the range 15-50g/BCM for sapphire deposits in New England and Queensland. The best three samples were from the current mine face and ranged from 8.51 to 29.95g/BCM averaging 16.14 g/BCM.

Based on certain assumptions contained in the Appendix 3, the in situ value of the sapphires could be up to $17- $22/ tonne of wash ($30- $40/BCM) depending on the proportion if any that were saleable. The tin and gold value of the ground was in the range $9-$13/tonne of wash ($16-$24/BCM).

The sapphire grades of alluvial tin wash measured on the Great Northern Plains ranged from 0.54 to 110g/BCM over five samples with an average of 25.4g/BCM (Duncan and Rhodes, 2001). Nine samples did not record any sapphires.

In comparison, sapphire grades in the current stream sediments for the proximal creeks in the mountains are 2 to 162g/BCM with an average of 91g/BCM. Those for the distal creeks towards the plains are 2 to 91g/BCM with an average of 21g/BCM.

Where grades are recorded in tails in the alluvial mines, they are very low with a range of 0.32 to 5.76g/BCM with an average of 2.65g/BCM (Duncan and Rhodes, 2000).

From the preliminary results, the sapphire grades in the active creek gravels above, taken with the higher values in the un-named creek at Priory, and compared with the values measured in the maiden wash, suggest that the sapphire contents of the wash are being enhanced by reworking in the current creek gravels. This possible trend will be tested when the results of recent and future bulk sampling of maiden wash become available.

5.3 Sapphire Yield Studies

In the absence of bulk sampling of alluvial wash, preliminary studies of the quality, sizing and saleability of the sapphires are liable to be statistically unreliable. The methods used so far to judge the natural population of sapphire sizes have been indirect and involved the examination of screened tails from alluvial tin plants, the collections of amateur prospectors and 10-20kg samples from maiden wash, active creek gravels and tails from alluvial tin mining.

The sizing figures at present suggest that the Tasmanian sapphires are substantially smaller than the stones from Queensland and NSW. The hope is that the Tasmanian light (cornflower) blue sapphires can be marketed down to 4-5mm in size. This could mean that 30-40% of the size range from a deposit could be potentially saleable.

GTN have supplied values of their gemstones in Australian dollars as 5mm-$12/g, 5.5-6.5mm-$25/g, 6.6-7.5mm-$40/g and plus 7.5mm-$60/g. There are indications that 5mm cornflower blue gemstones could sell for $2.5/g for run of mine stones and that fine blue gemstones could be in the range $20-$60/g. If this is correct, then some of the Tasmanian fine blue gemstones at 5mm could be worth as much as the plus 7.5mm mainland sapphires.

The few classifications carried out on the Tasmanian sapphires by IDL in the alluvial tin areas of the Great Northern Plains at Summers Mine and Dorset Dredge suggest that up to 50% of the corundum may reach gem standard and the blue component may be from 50 to 70% of the sapphires. Alternatively in the Tuma collection, only about 20% of the corundum was classified as gem quality sapphire.

6.0 Conclusions

On the present figures, Tasmanian sapphires are substantially smaller than their Queensland and New South Wales counterparts. Significant quantities of the Tasmanian sapphires are light blue and may attract a premium price in the plus 4-5mm size. Bulk sampling is required to provide enough of a sapphire yield to make classification and sizing more significant.

Reworking processes in the currently-active creek gravels may be giving anomalously high sapphire values when compared with those of the naturally occurring wash.

Sapphire occurrences in the Priory area have yielded some of the highest creek and tailings values in the NE but there is an apparent lack of wash volumes to be sampled and treated. The large sapphires in Lloyd's collection can not be related to untreated wash but it is highly probable that they have been derived from the Eastern watershed and perhaps even from the Siamese workings at Priory. Thureau's lead has been more extensive in the past and there is scope to test by bulk sampling the George River terraces at Priory.

Maiden wash from the Summers Mine at Sth Mt Cameron gave values of 8.5 to 29.6g/BCM with an average of 16.1g/BCM of sapphire just within the range 15-50g/BCM considered commercial by GTN on the mainland. Tin to 3000g/BCM and gold to 0.4g/BCM add more potential value to the wash.

7.0 Future Exploration

Future exploration should concentrate on the location of untreated alluvial wash and its evaluation by bulk sampling and treatment with the mobile jig plant for sapphires and heavy minerals. This exploration would be influenced by the still accumulating results of the recent bulk testing at Priory and Weld River.

The prospect areas are Thureau's Lead including Priory, Royal Ruby and Trafalgar where M Lloyd's grandfather worked, the Goshen Flats and the Pyengana Flats –all current or previous terraces of the George River on the eastern watershed from the Blue Tier.

Other prospect areas, on the northern or western watershed are the Weld River flats, the Wyniford River area, the Motts Creek area (the only gemstone lease ever granted), the Arba Flats and tails, Ruby Flats near Branxholm and Main Creek (high level) Flats.

The purpose in these areas would be to find substantial areas of untested alluvial wash close to the presumed basaltic source areas of the sapphires.

On the Great Northern Plains, large volumes of alluvial tin wash exist with as yet unknown sapphire contents along with the resources at Monarch, Endurance and Pioneer. The latter two will require a large diameter drill to bulk sample for the mobile jig plant. These deposits are somewhat removed from the presumed sapphire source but their potential volumes of wash are liable to be attractive compared with those deposits in the mountains.

The challenge of this exploration is to find deposits of larger sapphires, with good quality blue gemstones with or without tin and gold credits and in sufficient alluvial wash volumes to make commercial extraction feasible.

8.0 Environment

Exploration was restricted to hand tool sampling only in creek and riverbeds and in disturbed areas of old tin mines. As a result, no rehabilitation was required.

9.0 Expenditure

Expenditure on exploration in the licence for the nine months to end June 2001 as a result of the work carried out by Mineral Holdings Australia Pty Ltd is $32,555. Expenditure for the current quarter to end September has yet to be added when available. Expenditure by GTN on the licence as a result of their testing stands at $41,105. The combined amount for the first year of SEL 22/99 is then at least $73,660. At the end of year one, GTN decided to withdraw from the joint venture.

REFERENCES

Duncan, D. McP. and Rhodes, L. J. 2000. EL 19/93 & T2-MEL- Ringarooma Bay, Tasmania. Annual Report on Exploration (Volume 2) - May 1999 to June 2000.

Duncan, D. McP. and Rhodes, L.J. 2001. EL 38/97, Aberfoyle Hill, NE Tasmania. Annual Report on Exploration – April 2000 to March 2001.

Petterd, W.F. 1910. Catalogue of the Minerals of Tasmania. Geol Survey Record No 9. Tasm Dept Mines.

APPENDIX

APPENDIX 1

LOGS AND LOCALITIES OF OVERSIZE (+5mm) FROM STREAM SEDIMENT AND OTHER SAMPLING

PRIORY

Sample No

630082 George River, below bridge at Priory (600,400mE; 5,430,200mN)
55% metasediment; rounded to angular pebbles and blocks to 11cm
30% granite granules and fragments to 7cm
10% white quartz pebbles, to 3cm
5% quartz grits, rounded clasts to 3cm

630083 Littlechilds Creek, 200m above M Lloyds (600,350mE; 5,430,800mN)
70% mg granite, irreg clasts from 6cm down to granule size
15% metasediment, irreg to blocky clasts to 9cm
15% white to yellow quartz clasts, round to flakey

630084 Red soil, 2km N of M Lloyds approx.
with rock chips- unknown but may be brown basalt or lamprophyre
(middlings are mainly granite-derived quartz grains and and fines are specular hematite)

630085 Creek into George R, 0.5km above bridge (600,050mE; 5,429,950mN)
40% white to yellow quartz clasts; irreg to angular to rounded to 8cm
40% mg-cg granite; granule up to 9cm, blocky to irreg fragments
20% metasediment; grey to brown, blocky to subrounded clasts to 9cm
trace black porphyritic rock (plagioclase and quartz)

630086 As above, but 20m upstream (600,050mE; 5,429,950mN)

60% white to orange quartz pebbles and angular flakes to 8cm
20% fg-mg yellow granite; angular flakes to 6cm down to granules
20% metasediment; grey, brown, black; flakes to subrounded to 5cm
trace quartz grit

630087 East branch of above creek, below mine (599,800mE; 5,430,150mN)
75% metasediment, dark grey blocks to 12cm (qtze and sandstones)
20% white to yellow quartz; angular to rounded clasts to 7cm
5% mg-cg granite; granules, occ fragment to 3cm

630088 Western branch of creek, at junction (600,050mE: 5,429,950mN)
60% white to yellow quartz; subrounded blocks and pebbles to 7cm
30% mg-cg granite; blocks and flakes from 9cm down to granule
10% metasediment; dark to black qtze, rounded clasts to 4cm
one possible basalt pebble

630089 East bank of creek, possible tailings (600,050mE; 5,429,950mN)
80% white to yellow quartz; blocks and pebbles to 6cm
15% mg granite; mainly granules but occ blocks to 6cm
5% metasediment; dark to grey pebbles to 4cm
trace brown ironstone pebbles to 2cm

639090 Between creeks, possible tailings (600,050mE; 5,429,950mN)
85% white to yellow quartz; blocks to pebbles to 8cm
10% mg granite; irreg clasts to 8cm down to granule
5% metasediment; black, brown,yellow; pebbles and flakes to 3cm

132956 Albion Creek tributary (600,650mE; 5,431,800mN)
100% quartz and feldspar granules 5-10mm, angular cg granite derived

132957 Albion Creek (600,600mE; 5,432,200mN)
100% quartz and feldspar granules and cg granite composites to 2cm
irreg shapes, local derivation

132958 Albion Creek, mine tailings (600,500mE; 5,431,950mN)
100% quartz and feldspar granules and cg granite composites to 3cm
irreg and blocky shapes, local derivation

132959 Forester Creek (597,650mE; 5,433,550mN)
100% quartz and feldspar granules, 5-10mm
granite derived; trace charcoal

132960 Forester gravel pit, possible tailings (597,800mE; 5,433,650mN)
100% cg granite, angular and blocky shapes to 7cm down to granules
occ fragments quartz to 5cm, angular or blocky

132961 nr George River at Thureau's lead (598, 600mE; 5,429,050mN)
50% white to yellow quartz; pebbles and blocks to 5cm
35% cg granite granules
10% metasediment, variety of colours; pebbles to 9cm

5% quartz grit, iron cemented, to 5cm

132969 Western creek branch, 40m east of 088 (600,000mE; 5,429,950mN)
65% granite granules and occ irreg fragments to 5mm
35% white quartz pebbles and subrounded clasts to 6cm
5% black metasediment pebbles to 3cm

SUMMERS MINE, STH MOUNT CAMERON

Sample No

630076 Wash, near water pump, new plant site (581,400mE; 5,457,850mN)
50% metasediment (sandstone); rounded clasts to 9cm
50% white quartz, rounded clasts to 6cm down to granules
one granite angular clast to 4cm

630077 Wash, below cleaner jig, new plant site (581,400mE; 5,457,850mN)
60% sandstone clasts; rounded to 12cm, light coloured, occ cleaved
40% white quartz; rounded clasts to 12cm to qtz & granite granules

630078A Wash, current mine workface (581,400mE; 5,457,850mN)
70% quartz pebbles to 6cm down to granules; some fractured
30% metasediment clasts; rounded to blocky to 7cm
occ ferug. quartz grit and amethyst pebble at 2cm

630078B Wash, as above
80% white quartz pebbles to 7cm down to granules (inc granite)
20% metasediment clasts; rounded to 3cm, grey sdst, qtze, pelite
5cm angular block of yellow chalcedony

630078C Wash, as above, as with 078B
+ ferug. cemented quartz grit clast at 7cm

LOCALITIES OF SAMPLES SELECTED FOR PETROGRAPHY

Sample No

630073 Rio Grande Creek, Weldborough (576,650mE; 5,439,300mN)
Altered, porphyritic basalt with xenoliths (from creek wash)

630079 M Lloyd's Property, Priory (600,600mE; 5,430,500mN)
Hornfelsed, Mathinna metasediment (fg sandstone) float

630091 Quarry stockpile on Mt Paris Dam Rd (573,700mE; 5,437,050mN)
Basalt with amygdales, occ containing light blue chalcedony

630092 Common cobbles in Wyniford River (580,400mE; 5,447,650mN)
Altered, mg porphyritic dolerite (Devonian?)

Appendix 2

TABLE P-1

SAMPLES FROM VARIOUS LOCATIONS AROUND PRIORY

Sample No. PREFIX 630-	Site	Sn g/t	Sapphires number	Sapphires mass g	Sapphires head value g/t	Gold number	Gold mass g	Gold head value g/t
082	George River downstream from bridge	152						
083	Littlechild Creek 200m above Michael Lloyd's place	591	2	0.0316	2.7	1	<0.0001	<0.01
084	2km north of Michael Lloyd's place	-----	see explanatory note in covering letter					
085	Creek into George River 0.5 km above bridge	433	80	2.2628	220			
086	Same creek but 20m upstream from 085	350	56	2.1793	160			
087	Eastern branch of creek immediately below mine workings	706	36	1.1455	114			
088	Western branch of creek at junction with eastern branch	0.10%	19	0.6368	77			
089	East bank of creek below junction of branches, 3m above streambed and 45cm below ground surface	39	70	1.6769	152			
090	Soil sample taken above the junction of the branches and equidistant between the two branches, 30cm deep including surface dirt	11	35	1.0712	98			

TABLE P-2

SAMPLES FROM VARIOUS LOCATIONS AROUND PRIORY

Sample No.	Site	Sn g/t	Sapphires number	Sapphires mass g	Sapphires head value g/t	Gold number	Gold mass g	Gold head value g/t
132956	Tributary to Albion Creek	13						*
132957	Albion Creek	37						*
132958	Mine tailings near Albion Creek	558						*
132959	Forester Creek							#
132960	Mine tailings south of Forester gravel pit	15						*
132961	Mine tailings near George River at Thureau's lead	219	18	0.1300	9.9			
132969	Western branch of creek (same as 088 but 40m upstream)	86	6	0.1611	11.6			

* Samples contain monazite and ilmenite

\# No cassiterite present so it was not assayed for tin. Sample contained ilmenite and zircon.

TABLE P-3

SAMPLES FROM VARIOUS LOCATIONS AROUND PRIORY

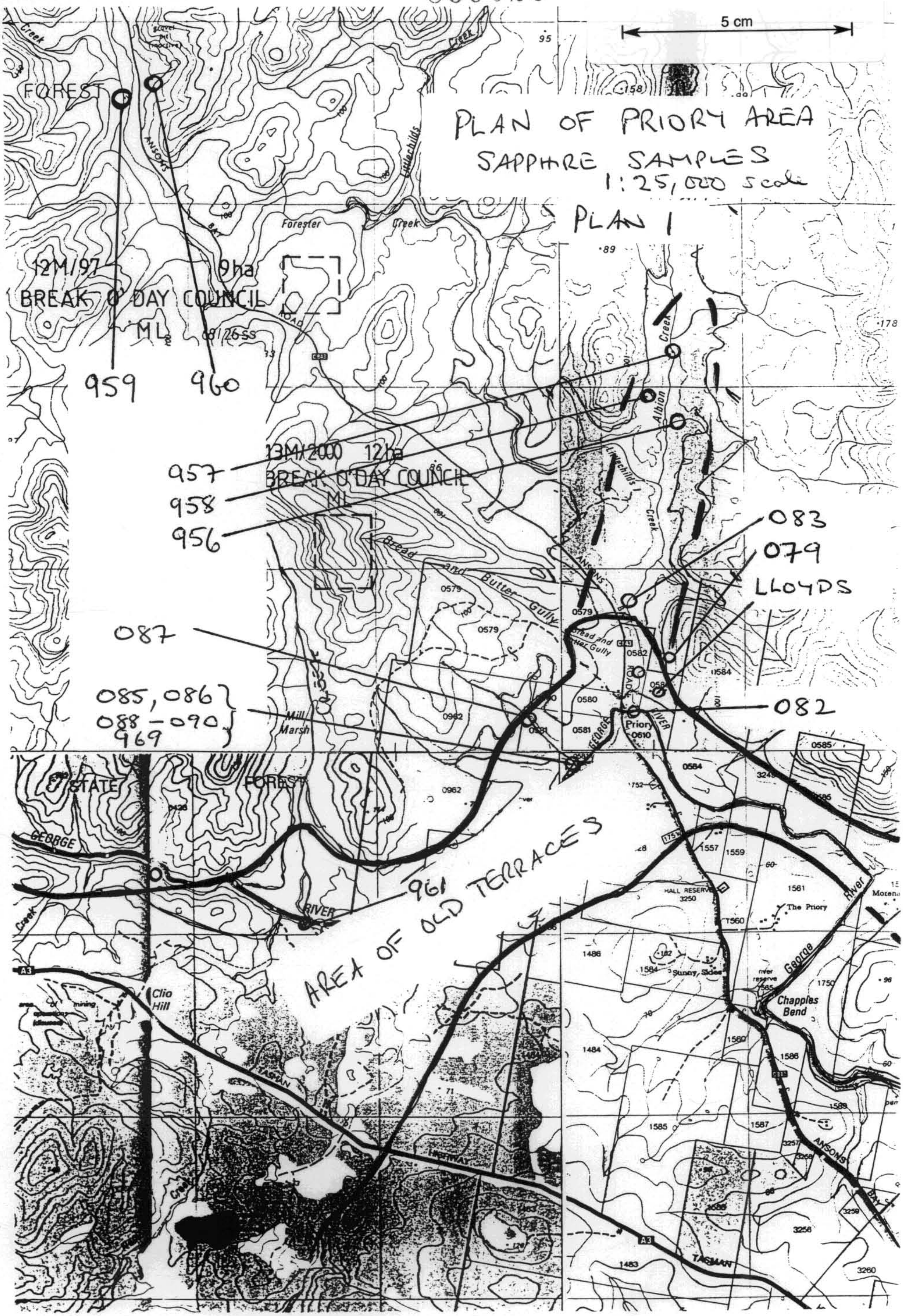
Sample No. PREFIX 132-	Site	Sn g/t	Sapphires number	Sapphires mass g	Sapphires head value g/t	Gold number	Gold mass g	Gold head value g/t
∅977	Thureau's lead at Maddock's Leap channel sample through lead	32						
∅978	Thureau's lead at Maddock's Leap sample from bottom	24						

PRIORY SAPPHIRES

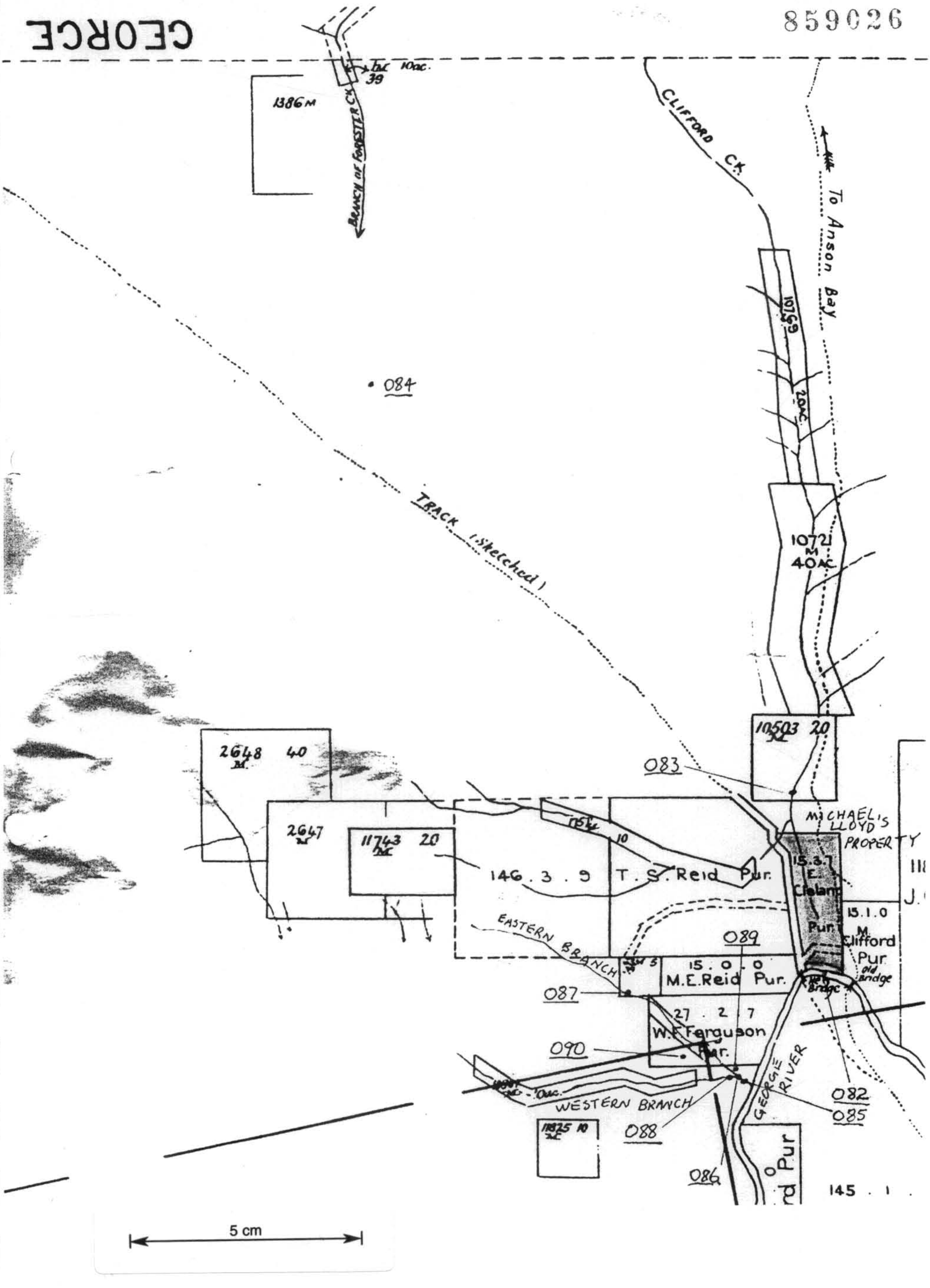
To assist in counting the sapphires that were found in each sample, they were laid on graph paper with 10mm squares and 2mm gradations. They were sorted into size and compared with the 2mm gradations. The results are as follows:-

Sample no. PREFIX 630-	2mm	3mm	4mm	5mm	Total
086	28	18	8	2	56
087	14	15	6	1	36
088	9	5	5		19
089	27	35	8		70
090	16	13	4	2	35
Total	94	86	31	5	216

859025


5 cm
PLAN OF PRIORY AREA
SAPPHIRE SAMPLES
1:25,000 scale
PLAN 1
12M/97 9ha
BREAK O'DAY COUNCIL
ML 68/26ss
959
960
13M/2000 12ha
BREAK O'DAY COUNCIL
ML
957
958
956
083
079
LLOYDS
087
085, 086
088 – 090
969
082
961
AREA OF OLD TERRACES
FOREST
STATE
Forester Creek
Littlechilds
Albion Creek
Bread and Butter Gully
ANSONS BAY ROAD
Priory
GEORGE RIVER
Mill Marsh
HALL RESERVE
The Priory
Sunny Skies
Chapples Bend
Clio Hill
TASMAN HIGHWAY
A3

859026


1386 M
BRANCH OF FORESTER CK
39
10ac.
CLIFFORD CK
To Anson Bay
10759
20AC
• 084
TRACK (sketched)
10721
M
40AC
10503 20
083
2648 40
M
2647
M
11743 20
M
146 . 3 . 9
T. S. Reid Pur.
10
MICHAEL LLOYD'S PROPERTY
15.3.7
E.
Clelan
Pur.
15.1.0
M.
Clifford
Pur.
old bridge
EASTERN BRANCH
089
15.0.0
M.E.Reid Pur.
087
27 . 2 . 7
W.F.Ferguson Pur.
090
GEORGE RIVER
WESTERN BRANCH
082
085
088
11825 10
086
145 . 1
5 cm

Appendix 3

TABLE MW-1

WASH SAMPLES FROM MINESITES IN THE RINGAROOMA BASIN

Shane Summers' Mine

Sample No.	Site	Sn g/t	Sapphires number	Sapphires mass g	Sapphires head value g/t	Gold number	Gold mass g	Gold head value g/t
076	Near water pump	149	4	0.0408	2.34	111	0.0010	0.057
077	Below cleaner jig	187	1	0.0104	0.54	4	0.0004	0.021
078A	Current mine workface	<818	5	0.0952	5.74	6	0.0004	0.024
078B	Current mine workface	>0.17%	17	0.2727	16.44	60	0.0036	0.217
078C	Current mine workface	65	4	0.0864	4.73	2	0.0001	0.005
078A + 078B		0.13%	22	0.3679	11.1	66	0.0040	0.12
078A + 078B + 078C4		846	26	0.4543	8.8	68	0.0041	0.08

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Tasmania 7215
E-Mail LJRHODES4MC@tassie.net.au

859028

Lawry Rhodes (B. Tech., Adelaide) M.A.I.M.M.

Consulting Metallurgist ABN 93 505 360 431 Phone (03) 6372 2330

December 19, 2000

Mr. Neil Thomas,
C/- Mineral Holdings Australia Pty. Ltd.,
2nd. Floor,
135 Collins Street,
Melbourne, Victoria. 3000

Dear Neil,

Please find enclosed Table MW-1 showing the results of samples taken at Shane Summers' mine. There were three samples taken at the current workface of his mine. It was intended that these three samples would be considered as one sample.

When I was treating them I found that they were different in nature and I decided to treat them individually. Sample 078B was very high grade and to make the gold recovery easier on the vanning plaque I divided the concentrate into two or three parts and one of these parts was mistakenly put with the concentrate from sample 078A. The plastic bag holding the concentrate from sample 078A was wrongly marked as 078B – hence the mistake. This is why the calculated tin heads show 078A as <818 g/t and 078B as >0.17%.

I would estimate that the grade of 078A was similar to the grades of 076 an 077. If the estimate of the grade for 078A is taken as 200g/t, then the grade of 078B would be of the order of 0.23% Sn.

Sample 076 did not get to bottom and Ron Lawry reckons that the grade would be greater at bottom. There was a lot of gold in this sample but the gold was very fine.

I have calculated the value of the ground at the current workface using the tin price of US$5270 per ton and the gold price of US$270.20 per ounce, and the exchange rate 54.58c. I have used the figure of $2 per gram for the sapphires and the assumption that all the sapphires are saleable. Peter Schipp says there is no sale for these size sapphires.

	078A + 078B	078A + 078B + 078C
Tin	$12.32	$ 8.17
Sapphires	$22.20	$17.60
Gold	$ 1.04	$ 0.69
Total	$35.56	$26.46

I enclose an account for work carried out since my last statement, payment for which has been received.

Yours faithfully

L. J. Rhodes

Cc Dr. Dave Duncan
Mr. Shane Summers

Appendix 4 859030

HEAVY MINERAL DATA

Sample No: P630056 Dorset Dredge

Job No: 371

Date Started: 20/11/00

Processing Weights

Initial:	4.8 kg
+2mm:	0.056 kg
After RE:	1.9 kg
After TBE:	1.3 kg

Positive (Economic Minerals) X

Negative

Positive (Other)

Ø/mm	>2	>1	>0.8	>0.5	>0.4	>0.3	<0.3
Crush							
RE	x	x	x	x	x	x	x
HL	x	x	x	x	x	x	x
Mag							

Fractions Analysed(x) Observed only(o) Scanned only(s)

Ø/mm	>2	>0.8	>0.5	>0.4	>0.3	>0.2	>0.1
NM	o						
M4							
M3							

Economic Minerals Vol% of Concentrate

Sieve Size/mm	>2	>1	>0.8	>0.5	>0.4	>0.3	>0.2	>0.1		Wear/km
Sapphire	43									

Detailed Descriptions

Mineral	Size/ct	Grade	Description
NB			All Material supplied is -3mm.
Sapphire	See attached file.		Blue (non star) - 12 Blue star - 11 Brown star - 20
Total:	6.8075		

Other Minerals (Volume% after Heavy Liquid-HL)

Almandine		Orthopyroxene		Spinel		Apatite	
Andradite		Clinopyroxene		Magnetite		Monazite	T
Grossular		Amphibole		Leucoxene		Phosphate	
Spessartine		Biotite					
		Prehnite		Limonite		Rock Fragments	
Andalusite		Corundum	O	Pyrite(psuedo)			
Kyanite		Hematite		Pyrite		Zircon	F
Sillimanite		Ilmenite		Barite		Titanite	
Staurolite		Rutile		Anhydrite		Pleonaste	P
Epidote		Anatase					
Tourmaline		Brookite		Magnesite			

P >50% A 20-50% C 10-20% S 1-10% O 20grains-1% F 5-20grains T 1-5grains

Mineralogist/Observer: BS

Date Completed: 22/11/00

859031

Sapphire weights/ carats				Sample:	P630056
0.4805	0.0775				
0.3710	0.0760				
0.3245	0.0700				
0.2470	0.0450				
0.2450	0.0190				
0.2440	**6.8075**				
0.2150					
0.2140					
0.2095					
0.2035					
0.1945					
0.1895					
0.1785					
0.1755					
0.1670					
0.1600					
0.1530					
0.1510					
0.1470					
0.1440					
0.1420					
0.1395					
0.1360					
0.1355					
0.1350					
0.1310					
0.1260					
0.1255					
0.1230					
0.1210					
0.1135					
0.1100					
0.1065					
0.1060					
0.0980					
0.0925					
0.0860					
0.0790					

HEAVY MINERAL DATA

Sample No: P630057 SUMMERS MINE SOUTH AFRICA ON

Job No: 371

Date Started: 20/11/00

Processing Weights

Initial:	2.6 kg
+2mm:	0.019 kg
After RE:	1.4 kg
After TBE:	1.1 kg

Positive (Economic Minerals) X

Negative

Positive (Other)

Ø/mm	>2	>1	>0.8	>0.5	>0.4	>0.3	<0.3
Crush							
RE	x	x	x	x	x	x	x
HL	x	x	x	x	x	x	x
Mag							

Fractions Analysed(x) Observed only(o) Scanned only(s)

Ø/mm	>2	>0.8	>0.5	>0.4	>0.3	>0.2	>0.1
NM	o						
M4							
M3							

Economic Minerals Vol% of Concentrate

Sieve Size/mm	>2	>1	>0.8	>0.5	>0.4	>0.3	>0.2	>0.1		Wear/km
Sapphire	19									

Detailed Descriptions

Mineral	Size/ct	Grade	Description
NB			All Material supplied is -3mm.
Sapphire	See attached file.		Blue (non star) - 6 Blue star - 7 Brown star - 6
Total:	2.5505		

Other Minerals (Volume% after Heavy Liquid-HL)

Almandine		Orthopyroxene		Spinel	T	Apatite	
Andradite		Clinopyroxene		Magnetite		Monazite	
Grossular		Amphibole		Leucoxene		Phosphate	
Spessartine		Biotite					
		Prehnite		Limonite		Rock Fragments	
Andalusite		Corundum	O	Pyrite(psuedo)			
Kyanite		Hematite		Pyrite		Zircon	F
Sillimanite		Ilmenite		Barite		Titanite	
Staurolite		Rutile		Anhydrite		Pleonaste	P
Epidote		Anatase					
Tourmaline		Brookite		Magnesite			

P >50% A 20-50% C 10-20% S 1-10% O 20grains-1% F 5-20grains T 1-5grains

Mineralogist/Observer: BS

Date Completed: 22/11/00

859033

Sapphire weights/ carats				Sample:	P630057
0.2100					
0.2060					
0.1910					
0.1770					
0.1485					
0.1410					
0.1365					
0.1275					
0.1220					
0.1210					
0.1205					
0.1180					
0.1145					
0.1140					
0.1105					
0.1095					
0.1030					
0.0980					
0.0820					
2.5505					

859034

HEAVY MINERAL DATA

Sample No: P630058 Sumner's Mine TRENCH SAMPLE

Job No: 371

Date Started: 20/11/00

Processing Weights

Initial:	0.428 kg
+2mm:	kg
After RE Mag:	0.193 kg
After TBE:	66 g

Positive (Economic Minerals) [X]

Negative [ ]

Positive (Other) [ ]

Ø/mm	>2	>1	>0.8	>0.5	>0.4	>0.3	<0.3
Crush							
Table							
HL	x	x	x	x	x	x	x
Mag							

Fractions Analysed(x) Observed only(o) Scanned only(s)

Ø/mm	>2	>0.8	>0.5	>0.4	>0.3	>0.2	>0.1
NM	o						
M4							
M3							

Economic Minerals Vol% of Concentrate

Sieve Size/mm	>2	>1	>0.8	>0.5	>0.4	>0.3	>0.2	>0.1		Wear/km
Sapphire	2									

Detailed Descriptions

Mineral	Size/ct	Grade	Description
Sapphire	0.4665		Dark grey, Weak asterism.
	0.4260		
Total:	0.8925		

Other Minerals (Volume% after Heavy Liquid-HL)

Almandine		Orthopyroxene		Spinel		Apatite	
Andradite		Clinopyroxene		Magnetite		Monazite	
Grossular		Amphibole		Leucoxene		Phosphate	
Spessartine		Biotite					
		Prehnite		Limonite		Rock Fragments	O
Andalusite		Corundum	C	Pyrite(psuedo)			
Kyanite		Hematite		Pyrite		Zircon	F
Sillimanite		Ilmenite		Barite		Titanite	
Staurolite		Rutile		Anhydrite		Pleonaste	P
Epidote		Anatase					
Tourmaline		Brookite		Magnesite			

P >50% A 20-50% C 10-20% S 1-10% O 20grains-1% F 5-20grains T 1-5grains

Mineralogist/Observer: BZ

Date Completed: 23/11/00

Appendix 5

Subject: Pan Concentrates
Date: Thu, 17 May 2001 15:58:09 +1000
From: "Lawry Rhodes" <LJRHODES4MC@tassie.net.au>
To: "Neil Kinnane" <nkinnane@ozemail.com.au>
CC: "David Duncan" <duncanr@tassie.net.au>

Pan Concentrates

Sample No.	Site	Mass g	% Sn	Sapphires No.	Sapphires Mass g	Gold No.	Gold Mass g
094	Monarch	24.8	27.2				
095	Dry Gut	14.8	12.3				
096	Dobsons *	89.1	9.1	7	0.0923		
097	Taylors	17.5	9.0			11	0.0004
098	Aberfoyle	97.9	5.7	11	0.1107		

* This sample contained one nut punching and a quantity of steel shot which was obviously jig ragging and would indicate that this sample site was where jig concentrates were up-graded. I estimate that the sample contained 50%-60% coarse zircon. Lawry

Comparative Sapphire Statistics

Appendix 6

SIZE mm	TUMA cor percent retained	TUMA sapph percent retained	LAWRY mix percent retained	GTN Subera percent retained
plus 9.5	0	~~2.1~~ 2.8	0.4	
6.7-9.5	2.3	~~3~~ 3.7	3.3	38
4.75-6.7	13.6	~~14.4~~ 15.0	8.3	58.3
3.35-4.75	57.6	~~56.3~~ 56.6	30.9	67.3
2.36-3.35	97.5	98.1	82.3	99.9
minus 2.36	100	100.1	99.9	
Total grams	**562.3**	**~~136.5~~ 137.5**	**1169.6**	**18.7**

Comments DMD

A Tuma's collection is based on seiving letting minus 1mm escape
19.6% ~~19.5%~~ of collection he has classified as gem quality sapphires
some stones have been removed and are with MHA for evaluation
R Lawry's collection is based on panning and it is mixed sapphires and corundum
Several large gem sapphires have been removed and facetted

GTN data based on a mine drill hole

GTN's comments are that their + 6.5mm material accounts for 75% of revenue
while this comes from 38% by mass at Subera our yield of +6.7mm is only about 3%

Whereas Subera has 58% at + 5mm, we have only at best 14% at +4.75mm

GTN quoted values of stones at -
2-3mm fines- $0.20/g or throw out
4mm-$1.75/g often no market and they have drums of this material
5mm- $12/g
the last two categories are if the stones are gem quality, if only corundum it is worthless

5.5-6.5mm- $25/g; rough stones of good clarity and colour
6.6-7.5mm-$40/g
plus 7.5mm-$60/g; all Australian dollars

GTN have not quoted on our cornflower blue stones but N Kinnane said
basic pricing for 5mm (0.5g) stones would be $2.5/g for run of mine
fine blue would be up to $20/g but could be $60/g
if this is correct, some of our blue stones at 5mm could be worth
as much as their larger category stones including their plus 7.5mm

859037

BFP

TEST RESULTS

materials testing laboratories
369A Bass Highway Prospect Vale Tas 7250
Ph (03) 6340 2155 Fax (03) 6340 2177

job No 26391
cert No 391/AB

client MINERAL HOLDINGS AUSTRALIA Pty Ltd
project General Testing
location TASMANIA
date tested 15/2/01
tested by MAM

sample identification ANDREW TOMA COLLECTION
sample submitted by LAWRIE RHODES
sample description Sapphires
date received 15/2/01

Test Description	test method AS 1141	results	remarks

Particle size distribution by sieving — method 11

mm	Near Gem Quality mass retained g	Near Gem Quality percent passing	Gem Quality mass retained g	Gem Quality percent passing	
26.5					
19					
13.2			*	100	
9.5		100.0	~~2.8~~ 3.8	~~97.2~~	~~97.9~~
6.7	13.1	97.7	1.2	~~96.3~~	~~97.0~~
4.75	63.3	86.4	15.5	~~85.0~~	~~85.6~~
3.35	247.5	42.4	57.2	~~43.4~~	~~43.7~~
2.36	224.6	2.5	57.1	1.9	+9
-2.36	13.8	-	2.7	-	0
Total	562.3		~~137.5~~ ~~136.5~~ 137.5	Δ	

Approved Signatory
M.A.Maundrill

16/2/01
date of issue

* This value corrected from original mass written on bag.
DMD.

These values are correct

859038

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TEST RESULTS

materials testing laboratories
369A Bass Highway Prospect Vale Tas 7250
Ph (03) 6340 2155 Fax (03) 6340 2177

job No 26290
cert No 290/BN

client MINERAL HOLDINGS AUSTRALIA Pty Ltd
project General Testing
location TASMANIA
date tested 24/1/01
tested by MAM

sample identification RON LAWRY COLLECTION
sampled by LAWRIE RHODES
sample description Sapphires
date received 24/1/01

Test Description	test method AS 1141	results	units	remarks

Particle size distribution by sieving — method 11

mm	mass retained g	percent passing
26.5		
19		
13.2		100.0
9.5	5.0	99.6
6.7	34.5	96.7
4.75	59.0	91.7
3.35	264.5	69.1
2.36	600.8	17.7
1.18	205.8	0.1
Total	1169.6	

Approved Signatory
M.A.Maundrill

9/2/01
date of issue

RON LAWRY'S SAPPHIRE COLLECTION

Size Fraction mm	Mass g	Distribution %	%cumulative	Number Present in Size Fraction	
+ 9.5	4.9	0.4	0.4	2	*
-9.5 + 6.7	34.5	3.0	3.4	30	*
-6.7 + 4.75	58.8	5.0	8.4	151	*
-4.75 + 3.35	264.0	22.6	31.0	1700	#
-3.35 + 2.36	600.4	51.4	82.4	10000	#
-2.36 + 1.18	205.5	17.6	100.0	6500	#

* Actual count

\# Estimated count

The estimated counts were calculated from the mass of 100 sapphires form each of the size fractions.

Size Fraction mm	Number of sapphires	Mass g
-4.75 + 3.35	100	15.6321
-3.35 + 2.36	100	5.9899
-2.36 + 1.18	100	3.1646

859040

BFP **TEST RESULTS**

materials testing laboratories

369A Bass Highway Prospect Vale Tas 7250
Ph (03) 6340 2155 Fax (03) 6340 2177

job No 26391
cert No 391/AC

client	MINERAL HOLDINGS AUSTRALIA Pty Ltd	date tested	7/3/01
project	General Testing	tested by	MAM
location	TASMANIA		

sample identification	RON LAWRY + ANDREW TOMA COLLECTION		
sampled by	LAWRIE RHODES	date received	7/3/01
sample description	Sapphires		

Test Description	test method AS 1141	results		units	remarks
Particle size distribution by sieving					
mm	method 11	mass retained g	retained %		
26.5					
19					
13.2					
9.5					
6.7		0.8	0.9		
4.75		7.9	8.9		
3.35		35.2	39.5		
2.36		37.5	42.1		
1.18		7.7	8.6		
Total		89.1			

Approved Signatory
M.A.Maundrill

7/3/01
date of issue

Sample No. 984

WELD RIVER SAPPHIRES

Two separate collections of sapphires were obtained in a field day involving Dave Duncan, Andrew Tuma, and Ron Lawry. Dave Duncan and Andrew Tuma worked together and produced a parcel of sapphires. Ron Lawry worked on his own and produced a quantity of pan concentrate rich in spinel and weighing about 8kg.

The quantity of pan concentrate was examined under the microscope and the sapphires were recovered.

	Andrew Tuma	Ron Lawry	Total
Number	554	563	1117
Mass g	53.7	35.4	89.1
Average mass of sapphire	0.097	0.063	0.080

The two parcels were combined and a screen analysis was conducted by BFP Consultants. The results are as follows:-

Screen size	Mass g	%	% cumulative
- 9.5mm + 6.7mm	0.8	0.9	0.9 * 1 sapphire
- 6.7mm + 4.75mm	7.9	8.9	9.8
- 4.75mm + 3.35mm	35.2	39.5	49.3
- 3.35mm + 2.36mm	37.5	42.1	91.4
- 2.36mm + 1.18mm	7.7	8.6	100.0
Total	89.1	100.0	

The 8kg of pan concentrate which consisted mainly of spinel with some zircon, topaz and cassiterite was forwarded to Independent Diamond Laboratories via Skynet to see if any further sapphires could be recovered.

Sample No. 0983

This sample was taken from the up-slope side wall of a dam on W. Singline's property at Weldborough just south of the Tasman Highway.

The sample consisted of ~~basitic~~ basaltic soil with residual basalt stones. It weighed 7.75kg.

It was examined by pan concentration. No cassiterite was present so it was not assayed for tin. No sapphires were recovered but a small quantity of spinels were seen. The spinels were not waterworn but were oddly shaped as if they were formed by filling cavities in the matrix.

Appendix 7

Tasmania

MINERAL RESOURCES TASMANIA

PETROLOGY OF SOME ROCK SAMPLES, NE TASMANIA

IDENTIFICATION OF A MINERAL GRAIN, NE TASMANIA

An unpublished report for Mineral Holdings Pty Ltd

R.S. Bottrill

29/05/01

Mineral Resources Tasmania

INTRODUCTION

Four thin sections of basalt from northeast Tasmania were submitted for the analysis and identification of various minerals in the matrix and xenoliths.

The samples submitted were:

Sample No.	Identification
630079	Metasediment, Priory (float)
630073	Basalt, Rio Grande Ck
630091	Basalt, GTN
630092	Porphyritic basic rock, Wyniford R.

These minerals were examined by polarised light microscopy and the results presented below.

RESULTS

Sample 630073 Basalt, Rio Grande Ck

This basalt is fine grained and microporphyritic, with some small xenoliths and considerable alteration. It is composed mostly of fine to medium grained phenocrysts of plagioclase, pyroxene and olivine, in a subophitic/intergranular matrix of fine-grained (less than 30 μm) augite, plagioclase, opaques and olivine. The phenocrysts (~10% of the rock) are mostly less than 0.2 mm, or rarely up to 1mm, in size. The pyroxene appears to be a pink titaniferous augite. The olivine is altered largely to clays/iddingsite and there are abundant vesicles filled with smectite (montmorillonite or saponite?), celadonite(?) and a carbonate. The matrix is partly variably altered to carbonate, clays and chlorite. There is a small xenolith of quartz, ~0.5 mm diameter, with a rim of fine pyroxenes and clays (altered glass?), and a larger (10mm) xenolith comprising feldspar (anorthoclase?) and pyroxene (with symplectic textures). The varied and abundant phenocrysts, xenoliths and alteration suggest a source close to volcanic vent.

Sample 630079 Metasediment, Priory (float)

This rock is fine grained (~50-80 μm) with irregular, fine, dark lamination. It is composed mostly of quartz (~80%), biotite (~15%) and muscovite (largely intergrown with biotite, ~5%). The biotite is dark greenish brown coloured and is probably partly altered to vermiculite and limonite. The lamination is defined by biotite-rich layers. The is little or no tectonic fabric in the micas. The rock is probably a Mathinna-group metasediment, hornfelsed by Devonian granite.

Sample 630091 ***Basalt, GTN***

This basalt is fine grained and microporphyritic, with sub-trachytic texture and considerable alteration. It is composed mostly of fine to medium grained olivine phenocrysts (~5%), in a subophitic/intergranular matrix of fine-grained (less than 30 μm) augite, plagioclase, opaques and olivine. The phenocrysts are up to 2mm in size. The pyroxene appears to be a titan-augite. The olivine is partly altered to clays/iddingsite and the matrix is partly altered to chalcedony and clays. There are abundant vesicles filled with botryoidal chalcedony and minor clays.

Sample 630092 ***Porphyritic basic rock, Wyniford R.***

This rock is a medium grained, porphyritic dolerite, with considerable alteration. It is composed mostly of plagioclase laths (~40%; An30-60; up to 2 mm long) in a matrix of green, matted actinolitic amphibole aggregates (~35%), opaques (~5%, up to 0.5 mm) and clay (~5%). In the actinolite there are sporadic relics of pink titaniferous augite originally up to 2 mm in size). Also present are abundant plagioclase phenocrysts and glomerocrysts (~15%, An30-60, up to 15mm in size). Most of the pyroxene and some of the plagioclase are altered to actinolitic amphibole, opaques and brown clay (smectite?). The rock originally was medium grained, with subophitic intergrowths of plagioclase and pyroxene. The rock is a uralitised dolerite, unlike those of Jurassic age, and is probably a Devonian intrusive (McClenaghan et al., 1982, Bulletin 61).

R S Bottrill
MINERALOGIST-PETROLOGIST

INTRODUCTION

One mineral grain from the Weld River, northeast Tasmania was submitted for identification.

The sample submitted was:

Sample No.	Identification
984	Weld River

This grain was examined by stereomicroscopy and tested for specific gravity, and the results presented below.

RESULTS

This mineral is a dark red-brown in colour, is about 5 mm in diameter, and is subhedral but slightly waterworn and pitted. It is transparent to translucent, appears to have a conchoidal fracture, no cleavage, high hardness and vitreous lustre.

The specific gravity was tested by pycnometer and microbalance, and was determined to be about 4.80. The closest fits amongst common detrital, non-metallic minerals are zircon, monazite and chromite. Chromite is usually black and opaque, while monazite is normally yellowish and translucent t opaque.

In summary these details best fit the mineral zircon. It is larger and darker than the normal granitic zircon, and may have a basaltic origin (as for zircon from Sisters Beach).

R S Bottrill
MINERALOGIST-PETROLOGIST