

Low Impact Diamond Drilling Specialists Pty Ltd
ACN 079 634 692

EL 23/92 ALBERTON

ANNUAL

REPORT

2001-2002

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Copies to:

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ABSTRACT:

Exploration Licence EL 23/92 comprising 31 square kilometres was granted on the 9th October 1992.

The exploration licence is being explored under a joint venture agreement between Hercules Resources and Low Impact Diamond Drilling Specialists (LIDDS). Under the terms of the agreement, LIDDS completed a minimum of 800 metres of diamond drilling within EL 23/92 to earn a fifty (50%) per cent share in the exploration licence. This condition has been satisfied.

Only minor work was completed during the current period and this was concentrated on the sulphide lode at the Una Prospect in the south of the exploration licence. One diamond drill hole was completed during the period for a total of 47.3m. The Heathorn Mine was investigated and significant gold was detected in surface samples (to 12.4 g/t Au). A proposal to further test and drill this prospect is outlined in this report.

Four old drillhole completed at the on the banks of the Dorset River by the Department of mines in 1966 were re-evaluated. Samples of quartz veins were collected and analysed but no significant results were obtained.

An extension on EL 23/92 has been requested from MRT. It is proposed that a significant proportion of the Exploration licence be relinquished with 19 km² being relinquished and 12 km² retained.

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1 Introduction:

Exploration Licence EL 23/92 comprising 31 square kilometres encompasses the historical workings of the Alberton Goldfield.

The exploration licence is being explored under a joint venture agreement between Hercules Resources and Low Impact Diamond Drilling Specialists (LIDDS). Under the terms of the agreement, LIDDS are to complete a minimum of 800 metres of diamond drilling with EL 23/92 to earn a fifty (50%) per cent share in the exploration licence.

Exploration activities completed during the reporting period include:

During the current reporting period the following was completed:

1. A 47.3m deep diamond drill hole was completed below the sulphide lode at the Una workings.
2. Some of the many old workings were visited a mapped and sampled. The Heathorn Mine was identified as a prospect requiring follow-up.
3. Four old drillhole completed at the on the banks of the Dorset River by the Department of mines in 1966 were re-evaluated.

The following report summarises exploration activities and results completed within the licence during the period 2001/2002.

2 Exploration Philosophy and Objectives:

The philosophy and objectives of the exploration undertaken by LIDDS is directed to the definition of a substantial hard rock gold resource that would be amenable to narrow vein, underground mining.

3 Tenement:

Exploration licence EL 23/92 covers an area of 31 km². EL 23/92 is described as commencing at the southwest corner at grid coordinates 566 000 metres E, 5 421 000 metres N thence grid north to 5 426000 metres N, then grid east to 567 000 metres E then grid north to 5 427 000 metres N, then grid west to 566 000 metres E, then North to 5 430 000 metres N then grid east to 570 000 metres E then grid south to 5 427 000 metres N, then west to 569 000 metres E then grid south to 5 423 000 metres N, then grid east to 570 000 metres E then grid south to 5 421 000 metres N, then grid west to the point of commencement (See Figure 1. EL 23/92 Location Plan).

At the time of granting of the exploration licence three mining leases were current. These were ML's 44M/88, 45M/88 and 46M/88. These leases have lapsed and are now part of the exploration licence.

EL 23/92 was originally granted to Newcrest Mining Limited in 1992. The exploration licence was part of a large tenement holding. Newcrest's target was large-scale stockwork style gold mineralisation.

During 1993 Mancala purchased The EL from Newcrest with a time limited royalty clause. This clause has now expired and Newcrest has no interest or claim on the EL.

Mancala Pty Ltd changed its name during 1997 to Hercules Resources Pty Ltd

During 1998 a joint venture agreement was signed between Hercules Resources and Low Impact Diamond Drilling Specialists (LIDDS). Under the terms of the agreement, LIDDS were required to complete a minimum of 800 metres of diamond drilling within EL 23/92 to earn a fifty (50%) per cent share in the exploration licence. This condition has now been satisfied.

An extension on EL 23/92 has been requested from MRT. It is proposed that a significant proportion of the Exploration licence be relinquished with 19 km² being relinquished and 12 km².retained. The proposed relinquishment is shown in figure 2.

Extension Requested:

The remaining portion of EL 23/92 covers 12 km² and occurs as two blocks. The largest block is described as commencing at the southwest corner at grid coordinates 567 000 metres E, 5 424 000 metres N thence grid north to 5 427000 metres N, then grid west to 566 000 metres E, then North to 5 430 000 metres N then grid east to 568 000 metres E then grid south to 5 424 000 metres N then grid west to the point of commencement (See Figure 2. EL 23/92 Retained ground).

The second 3 km² block is described as commencing at the southwest corner at grid coordinates 569 000 metres E, 5 427 000 metres N thence grid north to 5 430000 metres N, then grid east to 570 000 metres E then grid south to 5 427 000 then grid west to the point of commencement (See Figure 2. EL 23/92 Retained ground).

4 Location and Access:

Exploration Licence EL 23/92 is located near the rural township of Alberton, situated in the north-eastern region of Tasmania (See Figure 1. EL 23/92 Location Plan).

The licence is situated within both rural and State Forest areas and is serviced by an excellent network of sealed and all weather graded roads and fire trails.

Topographic relief varies from gently undulating pasture areas to steep hills and ridges with deeply incised valleys developed in the central area of the licence. Vegetation in non-farmed areas is dominated by open eucalypt forest with dense undergrowth that is generally restricted to areas to adjacent drainages.

5 Regional Geology:

The regional geology of EL 23/92 has been previously described by MRT geologists and summarised on the 1:50,000 Alberton geological map. Recent publications specific to the economic geology of the area are provided by Taheri (1992 and 1993) and Keele et.al (1994) as part of the Netgold project. The following is gleaned from this work.

The exploration Licence is located within the 70 kilometres long, 2 kilometre wide northwesterly trending Mangana to Lyndhurst gold lineament. Gold mineralisation contained within the lineament is hosted by the Silurian to Devonian Mathinna Beds. The Mathinna Beds comprise an alternating sequence of bedded quartzites, sandstones, siltstones and slates. The quartzites have a lithic component and display graded structures locally. The Mathinna Beds are unconformably overlain by probable Carboniferous and Permo-Triassic sedimentary sequences of the Parmeener Supergroup.

Granites and granodiorite of Devonian age have intruded the Mathinna Beds. Sporadic tin and tungsten mineralisation is associated with granitic intrusion.

Regionally the Mathinna Beds are folded about northwest trending axes to form small scale and kilometre scale wavelength tight to moderate folds. Axial plane cleavage development takes the form of a slaty cleavage in the pelitic units. A subsequent deformation has produced regional mega kinking about steep, northeast trending kink planes, and numerous steep, northeast trending kink planes, and numerous steep dipping bands with both sinistral and dextral geometry.

The age of the gold mineralisation is uncertain, however it is probable that gold mineralisation was concurrent with folding and cleavage development prior to emplacement of the Devonian granites.

6 Mining History:

The Alberton district contains numerous gold occurrences that have been exploited to varying degrees since the late 1800's.

Auriferous quartz veins were discovered in the Alberton goldfield prior to 1883 (Thureau, 1883). Over one hundred gold bearing lodes were subsequently discovered and mined between 1883 and 1939.

The majority of lodes failed to make good returns and with the exception of the Ringarooma United and Mercury Lodes the operators failed to locate significant reserves. Consequently the deposits within the district developed a reputation as being shallow and discontinuous.

The majority of the deposits occur along a major NW trend in the NW corner of the Exploration Licence. According to Alistair Reed (MRT, pers. Com) there are two orientations in this trend, a NW fault which accounts for the main NW alignment of the deposits and a second NNE trend. This NNE trend is either due to alignment along a second structure or the deposits are located adjacent to the NW trending structure in an en-echelon array. Approximately 50% of the mines occur on NW striking quartz veins and the remainder occur on NNE trends. The largest mine in the area, the Ringarooma United mine sits at or close to the junction on the two structural trends.

Stratigraphic position is also important with the deposits within the main Alberton trend occurring at the interface between sandstone and shale successions, i.e. a rheological control.

Brief accounts of the major mines within the tenement are given below and are listed from north to south. The number in brackets is the MRT reference number from the 1:25,000 Mirloch series map, Victoria. The source of the data is from Taheri (1993). Taheri sourced his information from Hills (1923), Twelvetrees (1900 and 1904) and Herrmann, (1987).

- | | | |
|--------------------------|-------|-----------------------|
| 1. Drunken's Dream | (37) | 5427800 N, 567200 E., |
| 2. Tiger | (109) | 5429700 N, 567300 E, |
| 3. New River / Predegast | (81) | 5429640 N, 566840 E, |
| 4. Pennefather's Lode | (88) | 5429500 N, 566600 E, |
| 5. Central Ringarooma | (27) | 5429400 N, 566700 E, |

6. McCaul's "A1"	(76)	5429250 N, 566700 E,
7. Almora	(10)	5429150 N, 566600 E,
8. Mallunah	(62)	5428900 N, 566500 E
9. Heathorn	(51)	5428685 N, 569396 E*,
10. Forest King (Jans)	(45)	5428470 N, 566880 E,
11. Crown Prince	(35)	5428400 N, 567200 E,
12. Ringarooma United	(96)	5428200 N, 566700 E,
13. Beckers	(13)	5426800 N, 567400 E,
14. Mercury #1	(69)	5426750 N, 567150 E,
15. Caxton #1	(24)	5426130 N, 567480 E,
16. Long Struggle	(60)	5426100 N, 567420 E,
17. Mt Victoria	(73)	5425400 N, 567700 E,
18. Hinemoa	(52)	5422150 N, 568200 E,
19. Una lodes	(111-113)	5426230-4040 N, 567400-450E

. *- Newly calculated co-ordinates.

1. Drunkard's Dream:

The Drunken Dream working occur on a NE striking NW dipping fault related fissure fill quartz vein. The lode was 23 metres long and between 0.7 and 0.9 m wide. A shaft was sunk at either end of the lode. Au grade were high (85 g/t Au) and remarkably consistent for the field. It is unknown why production ceased.

2. Tiger

The Tiger workings occur on a NE striking SE dipping fault related fissure fill quartz vein. The lode was 24 m long and from 0.3 – 0.6 metres wide. Shafts were sunk at both ends of the lode. The lode contained arsenopyrite and pyrite. A 100 tonne crushing averaged 28 g/t Au.

3. Prendegast (New River).

The Prendegast workings occur on a N- NE striking E-SE dipping fault related fissure fill quartz vein. A 60m tunnel was driven and a quartz reef 0.45 to 1.2m wide was intersected for 45m of this driving. A total of 131 kg of gold was produced from this mine making it the third highest producer on the field.

4. Pennefather's Lode

The Pennefather's workings occur on a NW striking SW dipping fault related fissure fill quartz vein. The lode was 21 metres long and 0.3m wide. A 37m deep shaft was sunk on the lode. A crushing in 1900 of 30 tonnes (Twelvetrees 1904) of quartz yielded 594 grams of gold (19 g/t). A further crushing in 1920 reported results of around 39 g/t Au (Hills 1923).

5. Central Ringarooma

The Central Ringarooma workings occur on a NNE quartz vein. A 60 metre long tunnel was driven on a 0.1-0.6 metre wide quartz vein. The quartz vein was rich in arsenopyrite and gold grades averaged 20 g/t Au.

6. McCaul's "A1"

The McCaul's "A1" lode is a NE striking, SE dipping, fault related fissure fill quartz vein. The vein is 10m long and from 0.15 to 0.6 m wide. The quartz contained pyrite and arsenopyrite and contained an average of 28 g/t Au.

7. Almora

The Almora lode is a NE striking, fault related fissure fill quartz vein. Several shallow shafts were dug on the lode. The quartz lode is 88m long and from 0.25-0.6 metres wide. Gold grades were poor and averaged only 4.5 g/t.

8. Mallunah

The Mallunah workings were exploiting a mineralised fault fissure striking 025 and dipping to the SW. The vein was only 6m long and 1.2m wide at surface, and at 17m depth it was 27m long but very thin. The quartz was of varying grade averaging from 9 g/t to 34 g/t Au.

9. Heathorn.

There is no information on the Heathorn mine in Taheri (1994). Keid (1951) visited the deposit in 1951. Two adits separated by 300m were driven into a vein. In the northern

most adit a winze was sunk. Samples collected from within the two adits varied from 1 dwt 7 gns to 5 oz 11 dwt 5 gns. Two samples in excess of 1 ounce to the tonne were recorded from the winze area in the northern adit. Additional work has been completed during the reporting period and this is reported in work completed.

10. Forest King (Jans)

The Forest King (Jans) lode is a NNE striking, SE dipping, 0.3m wide quartz vein with an adjacent 0.45m wide stockwork zone. An 18m deep shaft was dug on the vein but was abandoned due to water troubles. Subsequently an adit was driven along the lode. The entire 0.75m wide zone averaged 14 g/t Au but it is reported that the quartz vein averaged 71 g/t Au?

11. Crown Prince

The Crown Prince workings were on a fault related fissure fill quartz vein striking NE and dipping to the SE. An adit was driven along the vein and a shaft was dug to a depth of 27 metres. The lode was a brecciated quartz arsenopyrite veined sandstone. Gold averaged 28 g/t for the lode but this dropped off rapidly with depth. 3 kilograms of gold was produced.

12. Ringarooma United

At the Ringarooma United Prospect mining occurred on three levels and two separate reefs, the Rosalind-Gumsucker and the Premier Reefs. The reefs were blue-grey arsenopyrite bearing quartz veins. A total of 12,576 ounces of gold (approximately 400 kg) was mined between 1901-1918. This was the biggest gold producer on the field.

13. Beckers

Beckers working exploited a NE striking NW dipping quartz vein. A 5 tonne crushing returned 198 grams of gold (39.6 g/t)

14. Mercury #1

The Mercury #1 workings were on a fault related fissure fill quartz vein striking NW and dipping to the NE. The mine was worked on three separate levels and the quartz vein was up to 1.2 metres wide. Two separate crushing had diverse grades, 907 grams of gold was extracted from a 92 tonne crushing for 9.8 g/t Au and 2155 grams of gold was extracted from a 98 tonne crushing for 22 g/t Au. A total of 46 kg of gold was produced from this mine making it the third highest producer on the field.

15. Caxton Lode #1

The Caxton Lode #1 workings are on a NW striking NE dipping stratabound quartz vein that is parallel to the Long Struggle Reef. The reef is 104 metres long and has an average width of 0.4 metres. The quartz is rich in arsenopyrite and pyrite and also contained small amounts of galena and sphalerite. Three tunnels were driven on the lode. Gold grades ranged from 8 to 29 grams per tonne and a minimum production of 3.2 kg was recorded from the workings.

16. Long Struggle

Two reefs were worked at the Long Struggle mine, the #1 Reef, a NW striking NE (320/50NE) dipping reef and the Whip Shaft Reef a NE striking NW dipping reef.

The #1 reef was driven for 67 metres. Its average width was 0.3 metres and the average grade was 38-58 g/t Au.

The whip shaft reef (#2) was driven for 91 metres on a vein with a width between 0.1 and 0.3 metres thick. Two shafts (one 27 metres deep, the other 15 metres deep) were also sunk on the reef.

Three holes were drilled on this prospect by the Department of Mines in 1938 (Blake, in Taheri, 1993). The first hole was a horizontal underground hole. Two lodes with widths of 600mm and 150mm yielded grades of 92 and 39 g/t Au respectively. A further core sample containing coarse gold was not analysed. The other two holes failed to intersect significant mineralisation.

17. Mt Victoria.

The Mount Victoria workings exploited a fault related fissure filling quartz vein striking NE and steeply dipping to the NW. This mine was a major producer in the field and was worked on 4 levels. The upper adit was 67 metres long and worked a vein that varied in thickness from 0.15- 1.50 metres wide. A 250-ton parcel of ore returned grades of 61 g/t Au.

The No 2 levels was driven for 91 metres

The No 3 level was driven for 183 metres

The No 4 level was driven for 396 metres but no reef was intersected.

A total of 146 kg of gold was produced.

18. Hinemoa:

The Hinemoa workings have been explored by three adits and as series of surface trenches over a 250-metre strike length. The quartz lode is hosted within a significant north-south striking west dipping (75°) fault zone. The mine was assessed in 1980 by Mitchell (1980). Mitchell collected numerous surface, trench and underground samples and calculated two resources covering just the area of old workings of 1300 tonnes @ 11 g/t Au and 2000 tonnes @ 8.5 g/t Au.

19. Una

Five adits and a series of surface trenches have been excavated at the Una Mine. The quartz lode occurs within a 75m wide shear zone, which is over 550m long. Twelvetrees (1904) reports gold grades to 83.5 g/t in surface trenches and Mitchell (1980) reports mainly low gold values with the exception of a dump sample grading 51.9 g/t Au.

7. Previous Work:

EL 23/92 was originally granted to Newcrest Mining Limited in 1992. The exploration licence was part of a large tenement holding. Newcrest's target was large-scale stockwork style gold mineralisation.

During **1992-1993** (Pearson 1993) these tenements were collectively explored. The exploration programme included geological mapping at 1:25,000 scale, image processing and interpretation of the aeromagnetic data available for part of the project area, drainage sampling and detailed geochemical surveys including soil and outcrop sampling. Many of the old mine workings were visited. Lindsay Newnham (Newnham 1993) was commissioned to review the previous exploration on the licence.

Mancala bought the EL from Newcrest with a time limited royalty clause. All interest of any sort in the EL by Newcrest is now lapsed. Mancala took over the exploration licence during 1993. Only minor work was completed on the EL during **1993-94** and this is reported in Iliff, 1994a. A proposal was also written by Iliff (1994b) for exploration work to be completed on the exploration licence including an analysis of the Heathorn Mine.

Although only minor work was completed on the EL Mancala completed a considerable amount of work on mining leases 44M/88, 45M/88 and 46M/88 via an agreement with Tas Tiger Pty Ltd. These leases have lapsed and are now part of the exploration licence (Iliff, 1994c).

Work included diamond drilling at the Ringarooma United Mine (255), Long Struggle Mine (530.8m) and the Mount Victoria Mine (228.8m). Results from this programme were mixed with no major intersections at the Ringarooma Mine, several thin (0.15-0.2m) zones of +10 g/t Au at the Long Struggle Mine and one 0.1m wide intersection greater than 10 g/t Au at the Mt Victoria Mine.

During **1994-5** (Akerman, 1995) the Una and Hinemoa mines were assessed and an exploration programme was proposed.

During **1995-6** (Akerman, 1996) an eight hole (UNA 001- Una 008), 208 metre diamond drilling was completed at the Una workings in the South of the exploration licence. The Una and Hinemoa workings were mapped and sampled in detail prior to the drilling. All of the holes were drilled below the existing workings at the UNA #1 mine. The holes

were shallow (maximum depth 40.7 metres) and all holes intersected the lode in the expected position. Three holes intersected the lode with abundant visible gold. The results from these three intersections were surprisingly low. UNA 002 intersected 1m @ 13.2 g/t Au, UNA 006 intersected 0.5m @ 19.7 g/t Au and UNA 003 intersected 0.4m @ 4.55 g/t Au. An error with the assay procedure was queried but re-assay of the other half of the core resulted in even lower assay results.

This exploration programme outlined a small resource of 1,000 tonnes at 12-15 g/t Au on the narrow lode that varied between 0.5 and 1.8-metre width. The assessed grade was calculated from both surface results and drill results.

During **1996-7** (Akerman, 1998a) Mancala attempted to attract a joint venture partner to the tenement. The 1997 annual report gives a good overview of the previous exploration.

During **1997-8** (Akerman, 1998b) a joint venture was negotiated with Low Impact Diamond Drilling Specialists. No work was completed on the tenement. Mancala Pty Ltd changed names to Hercules Resources Pty Ltd in July 1998.

During **1998-9** (Griffith, 1999) LIDDS exploration concentrated on the Una workings. Three closely spaced angled holes were drilled totalling 391.7 metres under the workings of the Una #1 lode. These holes failed to intersect significant mineralisation.

During **1999-2000** (Stebbing and Dunham 2000) LIDDS completed a drilling programme at the Una Prospect and commenced work at the Ringarooma United Prospect. Diamond drilling was designed to test the thickness and grade of the gold mineralisation developed at the intersection of the east dipping Rosalind-Gumsucker Reef and the west dipping Premier Reef.

During **2000-2001** (Denwer 2001) work concentrated on the Ringarooma United Prospect located in the north of the exploration licence. Two diamond drill holes (RUL01 and RUL03) were completed during the period for a total of 433.6m. A 0.8-metre interval in drillhole RUL01 contained several grains of visible gold but initial assays returned only 3.65 g/t Au. This result was very disappointing and significantly reduced the enthusiasm for this project. A recent reappraisal suggests that the gold was very “nuggetty” and the result was not representative of the clear visible gold in the core tray. On resubmission of the auriferous section of this interval an assay of 0.3 m @ 85.9 g/t Au was returned. A 0.4 m interval in hole RUL03 returned an assay of 14.8 g/t Au.

8. Exploration Completed During the Reporting Period.

During the current reporting period the following was completed:

4. A 47.3m deep diamond drill hole was completed below the sulphide lode at the Una workings
5. Some of the many old workings were visited a mapped and sampled. The Heathorn Mine was identified as a prospect requiring follow-up.
6. Four old drillhole completed at the on the banks of the Dorset River by the Department of mines in 1966 were re-evaluated.

8.1 Drilling at the sulphide lode:

A small outcropping fault related sulphide lode was tested by diamond drilling at the Una Prospect. The working is a small pit, which exposed a narrow <5cm wide zone of pyritic sericite altered sediment. The zone reportedly swells rapidly to be of the order of 1m wide at about 1metres depth. A sample of sphalerite rich material reportedly from within this pit was observed in Ringarooma.

A 47.3m deep diamond drillhole was completed using a Longyear Hydracore 28. The hole was collared at 5422550 mN, 567950 mE, and the collar was set-up at an azimuth of 055 degrees and a declination on 49 degrees. The hole failed to intersect any significant mineralisation. The hole has not been logged in detail.

8.2: Old Workings:

A two-day reconnaissance trip was completed to mines that Stebbing and Dunham considered significant. Mines visited included the Ringarooma United, Heathorn, and Predegast. Samples were collected and sample description and assay results are included in appendix 1.

8.2.1 Ringarooma United Mine:

At the Ringarooma United mine the sites for the LIDDS drillholes was inspected and an underground site visit was completed. A porphyry dyke was exposed in the old workings and this was of particular significance as in the Ringarooma United hole RUL 01 a pyrite veined and sericite-pyrite altered aplite intersected from 150.3-162 averaged 1.13 g/t Au over its 12.6m length. Although these results are not economic they were regarded as

being significantly high enough to warrant further investigation of the extent of these altered aplite intrusives.

Two samples were collected of intrusive material from underground. One was of fresh Green-yellow hard quartz-eye porphyry and the other was a deeply weathered equigranular aplite. Neither of these samples was auriferous. A sample of blue-grey quartz from within the ballroom was not anomalous in gold.

8.2.2 Heathorn Mine:

8.2.2.1 Historical Work

At the Heathorn mine there are two adits separated by approximately 300 metres. The adits are into the side of the hill amongst copses of trees in the middle of a farmer's paddock. The main adit is located at 5428685mN, 569396mE. Outside the adit are the remains of a 15-stamp battery. This adit is a single adit with a minor offshoot at the end and a 15 m winze developed (that is now filled with water). The mine was apparently worked intermittently until the 1940's. Mining ceased due to an injury to the owner (or main worker) at the mine.

The workings were visited Keid (1951) in 1951. Two adits separated by 300m were driven into a vein. In the northern most adit a winze was sunk. Samples collected from within the two adits varied from 1 dwt 7 gns to 5 oz 11 dwt 5 gns. Two samples in excess of 1 ounce to the tonne were recorded from the winze area in the northern adit. Keid's results are tabulated in Table 1.

#	Location	Width	Gold Oz dwt gns	Silver Oz dwt gns
1	Sample within winze, northern most working	5 inches 12.5 cm	5 11 5	0 14 9
2	End of small westerly drive, northern most working	6 inches 15 cm	2 19 5	0 10 9
3	back of small westerly drive, northern most working	10 inches 25 cm	0 8 19	0 2 9
4	Face of drive, southern most working	12 inches 30 cm	0 6 19	0 2 0
5	Bottom of the winze, southern most working	12 inches 30 cm	0 4 19	0 1 5

6	Prospect hole, 1700 feet SE from main adit	5 inches 12.5 cm	NIL	NIL
7	Prospect hole, 1700 feet SE from main adit	1.5 inches 4 cm	0 2 2	0 0 12
8	Prospect hole, 1700 feet SE from main adit	9 inches 22.5 cm	0 1 7	0 0 12
9	Prospect hole, 1700 feet SE from main adit	20 inches 50 cm	0 2 20	0 0 19

Table 1: Samples collected from the Heathorn Workings by Keid (1951).

Keid reports four prospect pits located 1700 SE from the main workings on a north striking quartz vein. The four pits all expose a quartz vein with thickness varying from 1.5 inches (4 cm) to 20 inches (50cm). Three of the four samples collected were auriferous (See table 1).

The main adit at the Heathorn Mine was mapped by Iliff (1994a).

8.2.2.2: Work Completed during the current period:

The worked veins are blue-grey quartz veins with pyrite, arsenopyrite and some basemetals and are orientated at 140/80S. Three samples were collected from this adit, two from the workings and one from the stockpile. The underground samples contained minor gold, (0.22 g/t and 0.02 g/t Au) and the dump sample was mildly auriferous at 0.95 g/t Au.

A sample of white bucky-blue quartz with abundant arsenopyrite, minor galena and veinlets to 6mm of limonite (after arsenopyrite) collected on surface approximately above the end of the adit assayed 12.4 g/t Au.

A second adit is located at 5428430mN, 569516mE. At the end of the adit a small crosscut is worked along a 1 metre wide both bucky white and arsenopyrite rich blue quartz vein orientated at 185/70W. A sample collected of the Blue-grey arsenopyrite rich quartz from the dump at mouth of this adit assayed 5.8 g/t Au.

It is suspect that the veins intersected in the end of the two adits are one and the same and that the vein and/or veins structure is continuous and strikes approximately NW between

the two workings. This hypothesis is strengthened by the magnetics, which show a clear NW linear passing through the prospect (pers. comm, Alistair Reed, MRT).

8.2.3 Prendegast Mine:

At the Prendegast Mine an adit has been mined with a large + 25m deep (070/70S) stope developed at the end of the adit. Samples were collected from underground of massive limonite (after pyrite?) veins and a milky quartz vein. A dump sample was collected of arsenopyrite rich, grey quartz. The quartz samples were mildly auriferous assaying 0.43 and 0.33 g/t Au respectively.

8.3: Old Department of Mines Drillholes.

Four drill holes (Alberton BH1- BH4) were completed by the Department of Mines during the period 1966-1967 near the Alberton recreation ground.

The holes were not re-logged rather vein intervals were inspected (and compared with the veins intersected in the LIDDS holes from the Ringarooma United Prospect) and any units intersected that may be useful for correlation were also noted. These notes are included as appendix 1. The location data for the holes is confusing and are in yards North and yards South. AMG co-ordinates have been estimated and then the same coordinates are given for all of the holes. Here the procedure followed was that this co-ordinate was given to the original hole (Alberton BH1) and then co-ordinates for the remaining holes were calculated from the yards North and yards South collar position.

Hole Number	Collar (yards)	Collar (yards)	Collar (AMG est)	Collar (AMG est)	Azimuth (mag)	Dip
	y	x	mN	mE		
Alberton BH1	561240	910640	5427550	566200	49	-50
Alberton BH2	561150	910620	5427465	566180	49	-50
Alberton BH3	561320	910690	5427625	566245	49	-50
Alberton BH4	561440	910810	5427640	566360	49	-50

Table 2: Collar Locations, Alberton Holes.

Ralph Botrill (MRT) provided the original logs for these holes. There are no comments except for when the original log is regarded as being incorrect. As mentioned before this re-evaluation was favoured towards the veins intersected.

Nine samples were collected of veins and submitted for analysis. Sample description and analysis are appended in appendix 3. No gold anomalism was detected.

9. Discussions and Conclusions:

The historical production from the Alberton Goldfield demonstrates that the majority of worked veins in the field assayed in excess of ½ ounce (15 g/t) per tonne. This is in marked contrast to what has generally been sampled via grab or rock chip samples by explorers. This suggests to the author that there is a very strong nugget effect, which almost precludes sampling on a small scale (<100 kg). This off course has major ramifications for exploration, how can you determine the grade of a system if you can't sample it?

Proposed Work, Extended EL 23/92 for the period 2002-2003.

The Heathorn mine has enormous potential. Approximately 1700 feet (600 metres) of strike length is essentially untested. Where it has been tested by two adits and pits significant gold grades have been intersected. It is proposed to fully evaluate the workings by mapping and geochemical sampling to enable accurate drill targeting to test this prospect. A minimum 4 hole, 300 metre drilling programme is planned at this prospect. **Proposed budget, \$60,000.**

The drilling completed in 2000 at the Ringarooma Prospect highlighted the potential of this prospect. It has confirmed that high-grade mineralisation persists below the limit of the old workings (0.3m @ 85.96 g/t Au in RUL 01) and also that other gold mineralisation occurs within the country rocks (0.4m @ 14.8 g/t in RUL 03).

A more complete assessment of these results and the previously completed mining and exploration is planned for the future. Drilling is proposed around this high-grade sample in an attempt to prove-up continuity of the high-grade material. A minimum 1 hole, 250 metre drilling programme is proposed at this prospect. **Proposed budget \$45,000**

The Mt Victoria mine was the site of the main stamp battery for the Alberton Field. It is suspected that high level of gold may remain in the sand left over from the crushed quartz vein material. Further investigation of the sands from the old stamp mill by initial surface sampling on a grid pattern and then by auger sampling is proposed. **Proposed budget \$10,000**

It is proposed to investigate the major workings on the EL. Field mapping, site visits and geochemical sampling is proposed. **Proposed budget \$5,000.**

10. Expenditure:

The following is the estimated expenditure for the reporting period.

Geology:	\$6200
Drilling Costs (47.3m):	\$12320
Travel and Accommodation:	\$3963
Overheads	\$2248

Total Expenditure for the Period September 2001 – July 2002:	\$ 24731
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The total expenditure on exploration licence EL 23/98 is \$559735.

11. References:

Akerman, T.E., 1995. Annual report for EL 23/92 Alberton. *Unpublished report for Mancala Proprietary Limited. TCR 95-3771.*

Akerman, T.E., 1996. Annual report for EL 23/92 Alberton. *Unpublished report for Mancala Proprietary Limited. TCR 96-3941.*

Akerman, T.E., 1997. Partial surrender report for EL 23/92 Alberton. *Unpublished report for Mancala Proprietary Limited. TCR 97-3996.*

Akerman, T.E., 1998a. Annual report for EL 23/92 Alberton September 1996 to September 1997. *Unpublished report for Mancala Proprietary Limited TCR 98-4110.*

Akerman, T.E., 1998b. Annual report for EL 23/92 Alberton. September 1997 to September 1998. *Unpublished report for Mancala Proprietary Limited TCR 98-4221.*

Denwer, K.P., 2001. Annual Report for EL 23/92- Alberton for the period 2000-2001. *Unpublished report for Low Impact Diamond Drilling Specialists (LIDDS) TCR 02-4634.*

Griffith, A., 1999. Annual report for EL 23/92 Alberton, 1998-1999. *Unpublished report for Low Impact Diamond Drilling Specialists. TCR 99-4370.*

Herrmann, W., 1987. Report on reconnaissance mapping and sampling of EL 17/86 in Roberts P.A., Annual Report for 1986-1987, Branxholm area. *Unpublished Gold Fields Exploration Report (TCR 87-2735) TCR 87-2735.*

Hills, C.L., 1923. The Mount Victoria Goldfield. Unpublished report, Department of Mines, Tasmania. 1923: 35-66

Iiff, G.D., 1994a. Annual report for EL 23/92 Alberton. 10-09-1993 to 16-09-1994. *Unpublished report for Mancala Proprietary Limited. TCR 94-3634.*

Iiff, G.D., 1994b. Proposed exploration in EL 23/92, ML's 44M/88, 45M/88 and 46M/88 and ATP 1/93. *Unpublished report for Mancala Proprietary Limited. TCR 94-3635.*

Iiff, G.D., 1994c. Alberton Mining Leases 44M/88, 45M/88 and 46M/88. Report on diamond drilling in 1994. *Unpublished report for Mancala Proprietary Limited.*

Keele, R.A., Taheri, J., and Bottrill, R.R., 1994. Structural and veining in the Devonian aged Mathinna-Alberton Gold Lineament, northeastern Tasmania. *Report 1994/06, Mineral Resources Tasmania.*

Keid, H.G.W., 1951. Heathorn Gold Prospect, New River. *Internal Mines Department memorandum from Keid to the Director of Mines.*

Mitchell, P.R., (1980). Geological appraisal of the Dan Rivulet Area (EL 31/76), Mathinna Tasmania. *Unpublished report for ACA Howe Aust. Pty. Ltd.*

Newnham, L.A., 1993. Exploration Licences 22/92 and 23/92 North-East Tasmania. Review of previous exploration. *An unpublished report prepared for Newcrest Mining Limited. TCR 93-3498A.*

Pearson, D.F., 1993. Annual report for EL 22/92 Tower Hill, 23/92 Alberton and 34/92 Saddleback, Tasmania. Annual Report 9-10-1992 to 9-09-1993. *Unpublished report for Newcrest Mining Limited. TCR 93-3498.*

Stebbing, L., and Dunham, M., 2000. Annual Report for EL 23/92- Alberton for the period 1999-2000. *Unpublished report for Low Impact Diamond Drilling Specialists (LIDDS) TCR 00-4502.*

Taheri, J., 1992. Northeast Goldfields: A summary of the Tower Hill, Mathinna and Dans Rivulet Goldfields. *Report 1992/10, Mineral Resources Tasmania.*

Taheri, J., 1993. Northeast Goldfields: A summary of the Alberton Goldfield. *Report 1993/34, Mineral Resources Tasmania.*

Twelvetrees, W.H., 1900. Report on the north Mount Victoria Goldfield. *Report to the secretary for Mines Department Tasmania, 1899-1900.*

Twelvetrees, W.H., 1904. Report on the Mount Victoria Goldfield. *Department of Mines, Tasmania.*

Appendix 1

Drill Logs

Old Department of Mines Drillholes.

Four old drillhole completed at the Ringarooma Prospect were re-evaluated.

The holes were not re-logged rather vein intervals were. The location data for the holes in confusing and are in yards North and yards South. AMG co-ordinates have been estimated and then the same coordinates are given for all of the holes. Here the procedure followed was that this co-ordinate was given to the original hole (Alberton BH1) and then co-ordinates for the remaining holes were calculated from the yards North and yards South collar position.

Hole Number	Collar (yards)	Collar (yards)	Collar (AMG est)	Collar (AMG est)	Azimuth (mag)	Dip
	y	x	mN	mE		
Alberton BH1	561240	910640	5427550	566200	49	-50
Alberton BH2	561150	910620	5427465	566180	49	-50
Alberton BH3	561320	910690	5427625	566245	49	-50
Alberton BH4	561440	910810	5427640	566360	49	-50

Alberton BH1:

Much of this hole has been sampled by a J. Ryba. Jake recalls that he was a Polish man studying at the university of Tasmania.

127' and 134': Vuggy crystalline quartz veins 10mm wide.

171': 40cm wide pug fault

218'- 221': Milky quartz veins to 10mm wide comprise about 3% of this unit. The veins are offset by minor structures.

274'- 277'6": Stockwork and parallel vein set of vuggy crystalline quartz veinlets.

326'- 342': Minor quartz veinlets to 20cm of vuggy crystalline quartz.

380'- 393': Minor vuggy quartz veins at 070 to VCA. The widest (+5cm) veins contain angular clasts of country rock; the host rock appears paler than usual which may be due to some alteration.

464'- 530': Common thin sweatout veinlets (5 x 2-5mm veinlets / metre). At 508' a 20mm brecciated selvage to 10mm veinlet.

518' 8'- 519'4": 20cm vein of blue quartz and clear quartz with clots of pyrite (**Sample #: 100742**).

557' 7" 25cm interval of blue quartz and clear quartz with clots of pyrite. The clear and blue quartz occur in 2-3mm bands pyrite (**Sample #: 100743**).

581' 7": a 20cm wide pug zone.

732' - 745' several pieces of core have been cut previously to sample distorted thin (<10mm wide) quartz veinlets

747' 1" - 775': Yellow green quartz eye (5%, 1-2mm) porphyry. An identical unit is intersected from 328' 6" - 355' 10" in Alberton BH3.

952' - 953': Blue and clear quartz veinlet (banded) with blue-black angular wallrock inclusions (this has been previously sampled)

961' 4" - 967' 7": Brecciated wallrock veined with milky quartz.

967' 7" - 971' 2": deeply weathered altered? Intrusive (**Sample #: 100744**).

Alberton BH2:

229' 6" - 231': Zone of stringy quartz veinlets separated by 1-5mm wide zones of sediment giving this interval a banded appearance.

384' 6" - 386'. Milky quartz veins to 15mm with chloritic wisps crosscut by 2x 5-7mm quartz carbonate-pyrite veinlets (**Sample #: 100745**).

486' - 500': Zone of quartz-carbonate veining at 080 and 030 to VCA. Larger veins at 489' - 489' 6" and 499' - 500' contain abundant angular fragments of country rock.

540' - 540' 6" (1/2 core). Clear and white irregular quartz veined zone lined with white feldspar?

547' 6" - 548': Milky quartz

652' - 653': Milky and pale yellow quartz veins.

Alberton BH3:

79' 6" - 84' 6". Numerous sugary sweatout quartz veinlets.

98.6' - 107.7': Brown blue fine-grained unit, originally logged as a phyllite but it could be a mafic dyke.

142' - 149': Black shale with several thin quartz-pyrite veinlets (no Aspy as stated in original log).

328' 6" - 355' 10" Yellow green quartz eye (5%, 1-2mm) porphyry. Clear 1-3mm quartz phenocrysts in a pale yellow-green matrix. This unit is identical to the unit intersected from 747' 1" - 775' in Alberton BH1.

436' - 442': Series of 2-10mm milky quartz veinlets- no Aspy.

678' - 695': Moderate density of 2-15mm milky and semi-crystalline quartz veinlets, no sulphides.

Appendix 2

Assay Results

Various Old Mines:

Sample Number	Location	Description	Au	Au®
100746	Underground, Ringarooma United Mine	Green-yellow hard quartz-eye porphyry	0.03	
100747	Underground, Ringarooma United Mine	Deeply weathered equigranular aplite	<0.01	-
100748	Underground, Ringarooma United Mine		<0.01	-
100749	Heathorn Mine, 5 428 685N 569 396 E, sample from back of the winze.	Blue-grey quartz, minor pyrite	0.22	
100750	Heathorn Mine, 5 428 685N 569 396 sample from the end of the tunnel.	Quartz sandstone cut by a network of 3-5 mm vuggy quartz veinlets/stockwork.	0.02	
100751	Heathorn Mine, 5 428 685N 569 396 E at mouth of adit	Dump sample. Blue-grey quartz, veinlets of arsenopyrite, minor pyrite	0.95	-
100752	Heathorn Mine #2, 5 428 430N 569 516 E at mouth of adit	Blue-grey arsenopyrite rich quartz from dump at mouth of adit.	5.80	-
100753	Heathorn Mine. On surface approximately above the winze. 5 428 667 N 569 469 E	White bucky-blue quartz with abundant Arsenopyrite, minor galena and veinlets to 6mm of limonite (after arsenopyrite)	12.4	13.5
100754	Prendegast Mine 5 429 790 N, 566 901 E, in stope	Massive limonite (after pyrite?)	0.05	-
100755	Prendegast Mine 5 429 790 N, 566 901 E, in stope	Sample of collapse material in stope. Milky quartz, numerous limonitic fractures.	0.43	0.46
100756	Prendegast Mine 5 429 790 N, 566 901 E, in drive approx 5m back from crosscut	N-S striking E dipping zone of massive limonite. Sample is brecciated with 5cm blocks of shale	0.09	0.09
100757	Prendegast Mine 5 429 790 N, 566 901 E, dump sample	Arsenopyrite rich, grey quartz.	0.33	-

- ❖ Samples were analysed by Analabs Burnie, reference BUO18846,
- ❖ Au was analysed using Fire Assay, technique F650,
- ❖ Au repeat analysis was done using Fire Assay, technique F650,

Appendix 3

Assay Results

Alberton Drill holes:

Sample Number	Hole Number	Hole Depth	Description	Au
100737	BH 3	1003' – 1006'	1003' – 1006' (approx). Veined interval with one 10cm milky quartz vein with angular clasts of country rock. Common blue-grey quartz veins to 20mm separated by blue-black chloritic/shaly intervals. 3-5% pyrite as veinlets and clots.	0.04
100738	BH4	117' 6" – 121' 6"	Milky to grey quartz vein with clots of green? The vein is brecciated and cut by a thin network of (<1mm) dark sulphide rich? Quartz	0.06
100739	BH4	197-200': 197'-207' 6":	Series of quartz veined blue sandstone early contorted quartz-feldspar "sweatout" veins with coarse dark-green chlorite. This veinset is crosscut by a later milky quartz phase. From 203' – 206' the veins contain abundant pyrite	0.04
100740		200-203' 197'-207' 6":	Series of quartz veined blue sandstone early contorted quartz-feldspar "sweatout" veins with coarse dark-green chlorite. This veinset is crosscut by a later milky quartz phase. From 203' – 206' the veins contain abundant pyrite	<0.01
100741		203-207' 6"	Series of quartz veined blue sandstone early contorted quartz-feldspar "sweatout" veins with coarse dark-green chlorite. This veinset is crosscut by a later milky quartz phase. From 203' – 206' the veins contain abundant pyrite	0.03
100742	BH 1	518' 8" - 519' 4":	20cm vein of blue quartz and clear quartz with clots of pyrite	0.04
100743	BH 1	557' 7"	25cm interval of blue quartz and clear quartz with clots of pyrite. The clear and blue quartz occur in 2-3mm bands pyrite	0.12
100744	BH1	967' 7" – 971' 2":	deeply weathered altered? Intrusive	<0.01
100745	BH2	384' 6" – 386' .:	Milky quartz veins to 15mm with chloritic wisps crosscut by 2x 5-7mm quartz carbonate-pyrite veinlets	<0.01

- ❖ Samples were analysed by Analabs Burnie, reference BUO18818,
- ❖ Au was analysed using Fire Assay, technique F650,
- ❖ Au repeat analysis was done using Fire Assay, technique F650,

