

96-3941

356001



MANCALA P/L  
PO Box 240,  
Launceston, Tasmania.

**MICROFILMED**

FICHE No. 014134 - 37

Annual Report

Exploration Licence 23/92

EL23/92  
28 NOV 1996

See folio 26

Prepared by  
Tim Akerman  
Senior Geologist

96-3941

ANNUAL REPORT - ALBERTON  
MANCALA P/L - EL 23/92  
T AKERMAN

November 14, 1996

**CONTENTS**

1.0 SUMMARY AND RECOMMENDATIONS	1
2.0 INTRODUCTION	2
3.0 EXPLORATION OBJECTIVES AND RATIONALE	2
4.0 TENEMENT INFORMATION	4
5.0 PREVIOUS EXPLORATION	5
6.0 REGIONAL GEOLOGY	5
7.0 WORK CARRIED OUT BY MANCALA	6
8.0 DATA AND DISCUSSION	9
8.1 Regional geology and literature review	9
8.2 Hinemoa mine workings	13
8.3 Una mine workings	17
8.3.1 Mapping and sampling program	18
8.3.2 Petrographic and mineragraphic work	25
8.3.3 Diamond drilling program	26
9.0 CONCLUSIONS	34
10.0 REFERENCES	35

## LIST OF FIGURES

1. Location of EL 23/92
2. Geology of Tower Hill to Ringarooma
3. Structural interpretation, Dan Rivulet area (back pocket)
4. Una and Hinemoa topography and extent of workings
5. Hinemoa prospect workings (back pocket)
6. Una prospect workings (back pocket)
7. Una drilling, program collar locations
8. 3D model of Una #1 Adit workings
9. Long Projection, Una #1 Adit workings
10. Una #1 Adit, local section 42
11. Una #1 Adit, local section 62

## LIST OF PLATES

1. Hinemoa northern adit, recent exposure of lode zone
2. Una #1 Adit, No. 1 stope
3. Una #1 Adit, Trench 112 (open stope)

## LIST OF APPENDICES

1. Petrographic and mineragraphic descriptions
2. Mapping sheets, Hinemoa workings
3. Mapping sheets, Una workings
4. Assay sheets, Una and Hinemoa workings
5. Database listing of Una #1 Adit drill holes
6. Original logs of Una #1 Adit drill holes
7. Amdel analytical results

## 1.0 SUMMARY AND RECOMMENDATIONS

- \* Mancala Pty Ltd took up EL 23/92 to explore for gold.
- \* The potential host rocks are the Palaeozoic Mathinna Group, which consists of a folded monotonous sequence of turbiditic sandstone, siltstone and mudstone.
- \* A 4km portion of the regional gold lineament is located upon the EL, south of Alberton and north of Mathinna. The structural setting of this region has many similarities to the New Golden Gate Mine.
- \* Individual auriferous lodes in the region have extensive strike lengths up to 600m.
- \* Mapping and sampling has conformed dextral shearing in the region.
- \* Shoots within lodes contain grades up to 106 g/t.
- \* Diamond drilling has identified a potential resource of 1,000 tonnes grading 12-15 g/t Au
- \* Additional mapping, sampling, drilling and bulk sampling is recommended.

## 2.0 INTRODUCTION

The exploration licence 23/92 extends from the Mangana region in the south to the Alberton region in the north, encompassing an area of 149 square kilometres (Figure 1).

The mining lease 6M/95 (Mancala P/L), and the EL 4/88 (Threader and Associates) are totally enclosed within the EL. Areas exempt from the Mining Act within the EL, are the Griffin Forest Reserve (0.1 skm) and 0.3 skm of Crown Reserves.

The northern portion of the EL encompasses the Alberton Goldfield, the central portion a segment of the Dan's Rivulet Goldfield and the southern and western portion an area largely devoid of known gold prospects.

Gold is the main commodity being explored for, although historically sporadic occurrences of tin and tungsten are known, and are not excluded from the target parameters.

## 3.0 EXPLORATION OBJECTIVES AND RATIONALE

The objective of Mancala's exploration in EL 23/92 is to locate a substantial gold resource that would be amenable to a narrow vein, underground style mining. Hard rock, vein targets in the order of +5000 oz Au are sort. The prime target style is that of The New Golden Gate Mine, which produced in excess of 250,000 oz of gold.

Previous, modern exploration in the region has targeted large tonnage, relatively low grade opencut type resources. Previous production from the region has been derived from narrow vein resources and to a lesser extent alluvial workings. Extensive soil and stream sediment sampling programs of previous modern exploration companies have met with little success and have been hampered by technical difficulties.

Mancala's approach to exploration in the EL has had a basis in the extensive work undertaken in ML 6M/95, which is totally encompassed by the EL. The approach is two fold:

- 1) Specific targets generated from a combination of historical data, the application of recent generic models and detailed sampling and mapping.
- 2) Regional targets to be generated from geophysical data and a broad structural interpretation of the area.

To assist financially and to give technical advice (in relation to regional target selection) Mancala is seeking joint venture partners for EL 23/92 and for the other tenements held by the company.

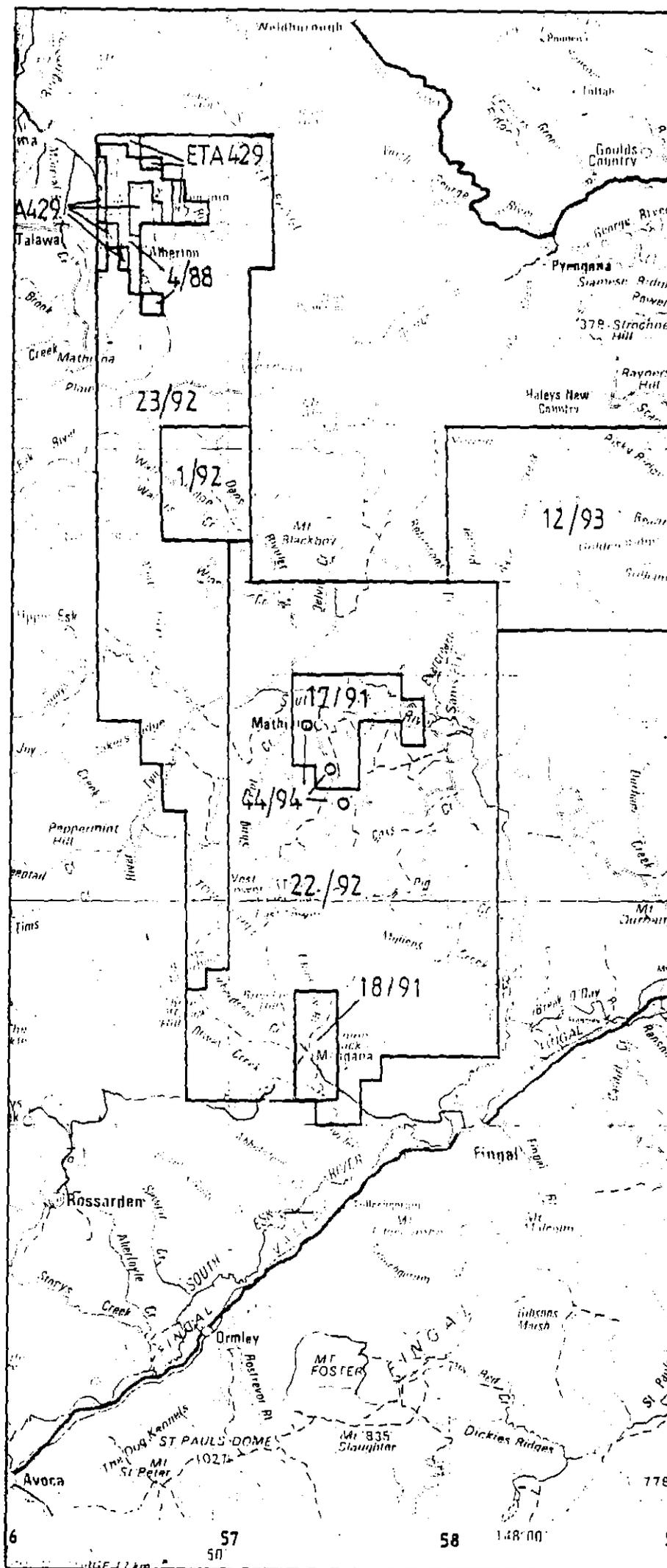


FIGURE 1.  
Location of EL 23/92  
Extract from 1:250,000  
scale Tasmap  
publication.

## 4.0 TENEMENT INFORMATION

Exploration Licence: 23/92  
 Area: 149 square kilometres  
 Land District: Cornwell and Dorset  
 Vicinity: Alberton  
 Municipality: Ringarooma and Fingal

## Schedule:

Commencing at a north west corner at grid co-ordinates 566 000 metres E. 5 434 000 metres N. thence grid east to 572 000 metres E. grid south to 5 428 000 metres N. grid west to 571 000 metres E. again grid south to 5 421 000 metres N. again grid west to 567 000 metres E. again grid south to 5 416 000 metres N. again grid east to 570 000 metres E. again grid south to 5 397 000 metres N. again grid west to 569 000 metres E. again grid south to 5 396 000 metres N. again grid west to 568 000 metres E. again grid north to 5 404 000 metres N. again grid west to 567 000 metres E. aforesaid again grid north to 5 406 000 metres N. again grid west to 566 000 metres E. aforesaid again grid north to 5 408 000 metres N. again grid west to 564 000 metres E. again grid north to 5 428 000 metres N. aforesaid again grid east to 564 500 metres E. again grid north to 5 429 000 metres N. again grid east to 565 000 metres E. again grid south to 5428000 metres E. aforesaid again grid east to 565 500 metres E. again grid south to 5427000 metres N. again grid east to 566 000 metres E. aforesaid again grid south to 5426000 metres N. again grid east to 567 000 metres E. aforesaid again grid north to 5427000 metres N. aforesaid again grid west to 566 000 metres E. aforesaid again grid north to 5 430 000 metres N. again grid east to 569 000 metres E. aforesaid again grid north to 5 431 000 metres N. again grid west to 568 000 metres E. aforesaid again grid north to 5 432 000 metres N. again grid west to 567 000 metres E. aforesaid again grid north to 5 433 000 metres N. again grid west to 566 000 metres E. aforesaid thence again grid north to the point of commencement.

The area excludes: 345 ha Mining Leases  
 0.1 skm Griffin Forest Reserve  
 0.3 skm Crown Reserves

## 5.0 PREVIOUS EXPLORATION

Mancala purchased EL 23/92 from Newcrest Mining Limited in June 1994. Newcrest engaged the services of consultant geologist Lindsay Newnham who compiled an extensive review of previous exploration (Newnham, 1992). This work combined with Pearson (1993) details the previous exploration to date within the EL.

## 6.0 REGIONAL GEOLOGY

The regional geology of the EL has been detailed by geologists of the Tasmanian Mines Department on the 1:50,000 geological maps of Ben Lomond and Alberton. Recent reviews, specific to economic geology are provided by Taheri (1992 and 1993) and Keel et. al. (1994) as part of the Netgold Project.

The northern portion of the EL is located within the 70 km Mangana to Lyndhurst gold lineament. Within the approximately 2 km wide, north-westerly trending lineament, gold mineralisation is hosted by the probable Silurian to Devonian Mathinna Beds.

The Mathinna Beds consist of a monotonous sequence of interbedded, fine to medium grained, commonly graded quartz rich sandstone beds and pelrites (Taheri, 1993). The Mathinna Beds are unconformably overlain by probable Carboniferous and Permo-Triassic sedimentary sequences of the Parmeener Supergroup.

The Mathinna Beds have been intruded by granites and granodiorites, of Devonian age, the thermal alteration halo of which is sporadically mineralised with tin and tungsten. The age of gold mineralisation is uncertain, although it is probable that deposition occurred concurrently with folding and cleavage development, prior to the Devonian granitic intrusives.

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 (Taheri, 1993). Folding is asymmetric with local steep overturning to the west in some cases (Pearson, 1993). A subsequent deformation has produced regional mega kinking about steep, northeast trending kink planes, and numerous steeply dipping kink-bands with both sinistral and dextral geometry's (Goscombe and Findlay, 1989, in Taheri, 1993).

The origin of gold mineralisation and its relation to the structure of the goldfield is uncertain, with a number of theories having been forwarded. Hill (1923), Powell (1991) and Keele et. al. (1994) have all invoked deep seated thrusts models while Taheri (1993) has modelled a pre-Permian extensional dextral jog with dextral transcurrent faulting (Figure 2). At present little field evidence is available to support or disprove the models.

## 7.0 WORK CARRIED OUT BY MANCALA PTY LTD

### Regional Geology and Literature Review

Following the extensive work carried out within ML 6M/95 (Akerman, 1995a) Mancala's gold exploration activities were directed towards major structural features, with an emphasis upon the New Golden Gate structural setting.

A detailed review of all historical data and recent exploration activities within the EL was conducted. All available information on the New Golden Gate mine was gathered and assessed.

Recent advances in the structural geology of the Northeast Goldfields presented within the Netgold data package were incorporated into a regional model for the area, and targets selected.

### Historical Workings, Mapping and Sampling Programs.

Targets generated from regional structural and geological work were located in the field. This commonly required the use of GPS navigation systems and extensive searching. All historical workings within the target areas were located.

Seven adits of varying length were located and mapped at a scale of 1:100. Close spaced rock chip sampling was conducted, with the collection of 60 samples which were analysed for Au at the Cooe laboratory of Analabs Pty Ltd. Gold was analysed by fire assay of a 30g charge (Method GG313) giving a detection limit of 0.005g/t.

Over 25 'trenches' (pits, trenches, winzes and open stopes) were located, sampled and mapped at 1:100 scale. Ninety one rock chip and regolith samples were collected and dispatched for Au analysis at Analabs by method GG313.

### Historical Workings, Survey Work.

The topography, surface trenches and stopes and the underground workings in the vicinity of the Una # 1 adit were surveyed relative to one another. This work preceded diamond drilling, following the completion of which the collars were surveyed. The work was carried out by personnel from Mancala using and EDM theodolite.

Using existing contour data (digital data purchased from DELM) the survey data was approximately tied into AMG. The process of matching similar topographic features between DELM data and the field survey has inherent errors, probably in the order of +/- 10m for northing and easting and +/- 5m in RL. The relative location of features within the field survey is known to an accuracy of +/- 10mm.

Two down hole camera surveys was undertaken on the longest drill hole by staff of ATD.

The Hinemoa adits were located by GPS survey (Campbell Smith, Phelps, Pedley P/L) as an adjunct to the location of the EL boundary. The accuracy of the locations is in the order of +/- 2 to 5m (northing and easting) and +/- 6 to 15m RL.

The locations of the numerous trenches associated with the workings were made relative to the survey points with compass and tape.

### Mineralogical Testwork

Three samples of ore grade mineralisation were dispatched to Roger Townsend and Associates for petrographic and mineragraphic descriptions (Appendix 1).

### Diamond Drilling

Following assay results and geological interpretation for the targeted areas a short diamond drilling program was planned and executed.

Logistical requirements associated with the drilling included the clearing of regrowth from approximately 1km of an existing track and the cutting of a 1 metre wide track for approximately 300m. Some fill material was imported to the vehicular track to fill boggy section (Akerman 1996).

Eight short and close spaced drill holes, totalling 208m, were completed beneath the Una #1 Adit workings.

Drilling was conducted by All Terrain Drilling of Rosebery using a skid mounted, Gopher Light Weight Drill Rig. The holes were cored at BQTK (46.2mm core) size, with NQ collars.

The core was removed from site, to the Anchor mine for logging and sample cutting. A total of 103 samplers were dispatched to Analabs for Au analysis. Fifty eight of the samples were selected to have additional analyses for Ag, Cu, Fe and As conducted upon them.

Re-analysis of selected samples was conducted by Analabs and check assays were conducted by Amdel of Adelaide using a fire assay (Method FA1, with pulverised wash material also being assayed).

### Acquisition of Joint Venture Partner

Following the completion of diamond drilling, Mancala actively sort a JV partner to aid in the exploration of EL 23/92 (in combination with other tenements held by Mancala) and to further up grade the delineated resource.

A documentation package and presentation was prepared and either directly presented to or dispatched to four Australian based companies and one international company.

Preliminary negotiations were held with Titan Resources N.L., Goldstream N.L., Pima Mining and Meekathara Minerals. Mineral Resources Tasmania co-ordinated a presentation and site visit by Echo Bay Mines of the USA.

Although Echo Bay Mines has indicated a preference not to form a JV, negotiations are continuing with the aforementioned Australian companies and other interested parties.

#### Joint Venture Negotiations with Cuttack Mining N.L.

Cuttack Mining are the tenement holders of EL 1/92 which is partially enclosed by EL 23/92. Its location is critical to one of the historical workings targeted by Mancala, as the boundary between the two dissects the prospect. Cuttack approached Mancala with the object of forming a joint venture and exploring the adjacent EL's concurrently.

Mancala's interest was mainly with the dissected prospect, while Cuttack (with agreement by Mancala) regarded the O'Brians mine to be highly prospective. Potential work programs and contractual arrangements were well advanced, with an agreement being vetted by respective lawyers when Cuttack indicated that they wished to cease all negotiations.

During the intervening period Cuttack has again approached Mancala with the object to form a joint venture.

## 8.0 DATA AND DISCUSSION

### 8.1 REGIONAL GEOLOGY, AND LITERATURE REVIEW (TARGET SELECTION)

The extensive mapping carried out on ML 6M/95 (Akerman, 1995a; area totally enclosed by EL 23/92) recognised that the Alberton area was unlikely to host significant (+ 5,000 oz) gold deposits due to:

- \* the lack of extensive and continuous structural hosts
- \* numerous, small lodes widely distributed
- \* brittle? sandstone dominated lithologies.

Consequently, Mancala's exploration effort was directed to areas within the EL where major structures have been documented or postulated.

The distribution of known gold deposits within the Mangana-Lyndhurst belt depicts a zone of approximately 1km in width and 70km long. Approximately 4km of this zone is present within the EL from the southern boundary of ML 6M/95 to the northern boundary of EL 1/92 (Figure 2). This area is represented by the headwaters of the Dorset River and Dan Rivulet and the saddle which separates them. During the current year Mancala's activities have not extended from the zone of known gold occurrences, due primarily to the very attractive nature of the saddle and headwaters of the two rivers.

Considering the extensive prospecting conducted from 1870 to 1920 and recent exploration activities it is probable that the vast majority of outcropping lodes have been discovered upon EL 23/92. However, many of the lodes have only received superficial examination or development.

#### Regional Structure

Findlay (in Taheri, 1992) postulated that (based on the distribution of the Mangana to Alberton goldfields and topographic features) the mineralisation is associated with wrench faulting. A dextral wrench system was envisaged with extensional jogs at Mathinna, the head of Dan Rivulet and at the northern end of the Alberton Valley (Figure 2). The Main Slide at The New Golden Gate Mine was interpreted to have formed as an extensional element in such a system. Findlay (in Taheri, 1992) pointed out that no major wrench faults had been observed in the field and that the model required detailed field analysis before it could be proved.

Keel (1994) described the structure and veining within the gold lineament, indicating the presence of three deformational events (D1 to D3), with associated folding, cleavage development and faulting. D1 faulting resulted in the formation of low angle, east directed thrust faults, which may be deep crustal in origin and potentially the pathways for auriferous fluids (Keel et. al., 1994). The second deformational event (D2), produced northwest-trending wrench faults with steep dips. Gold mineralisation is associated with the D2 faulting. Reactivation of the D2 wrench faults as dip-slip high angle reverse faults occurred in a return to the far-field palaeo-stress conditions characterise the D3 event (Keel, 1994).

The structural interpretation of Findlay (in Taheri, 1992) and Keel (1994) indicate that gold mineralisation is associated with northwest trending and steeply dipping, dextral wrench faults

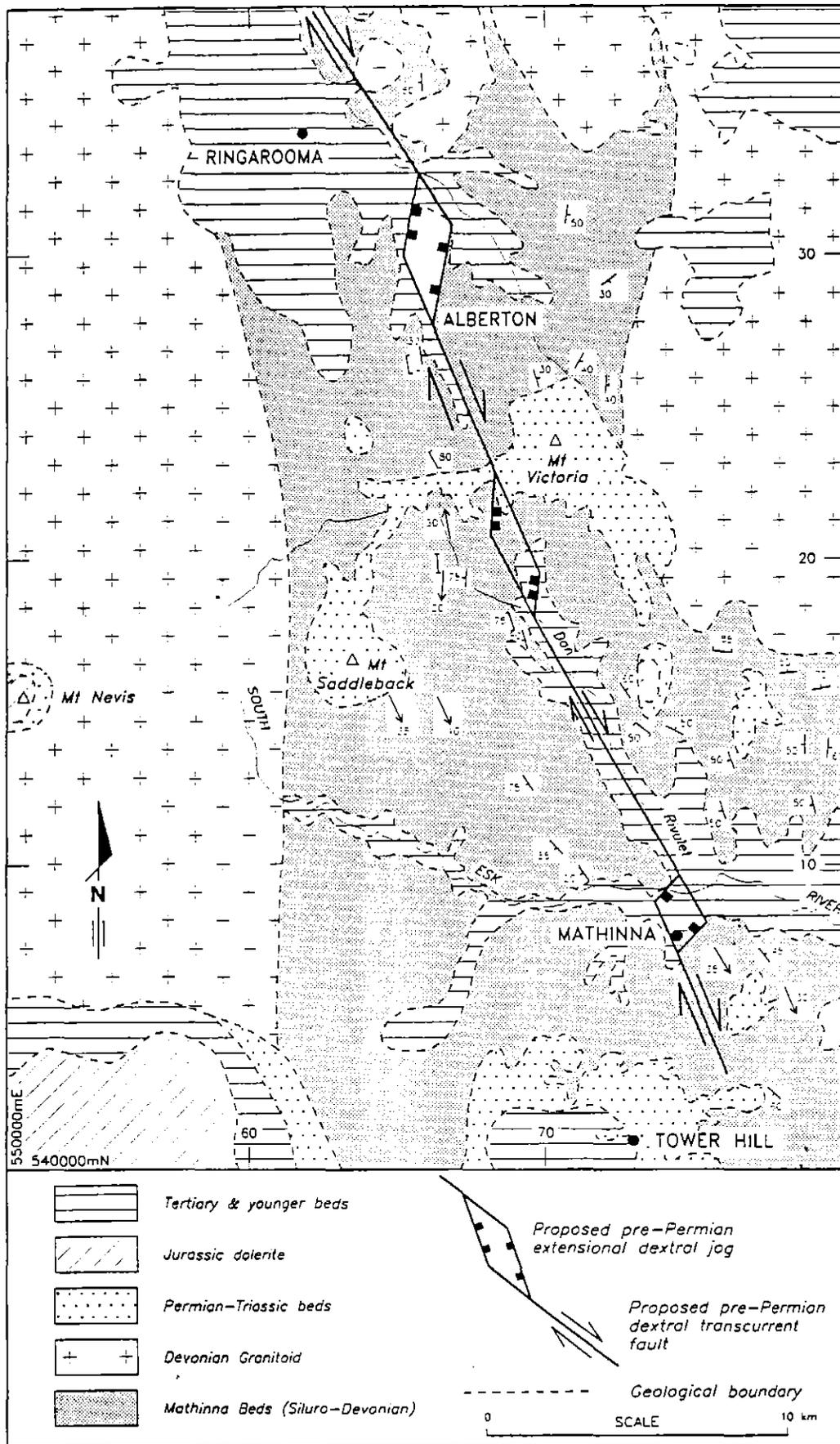
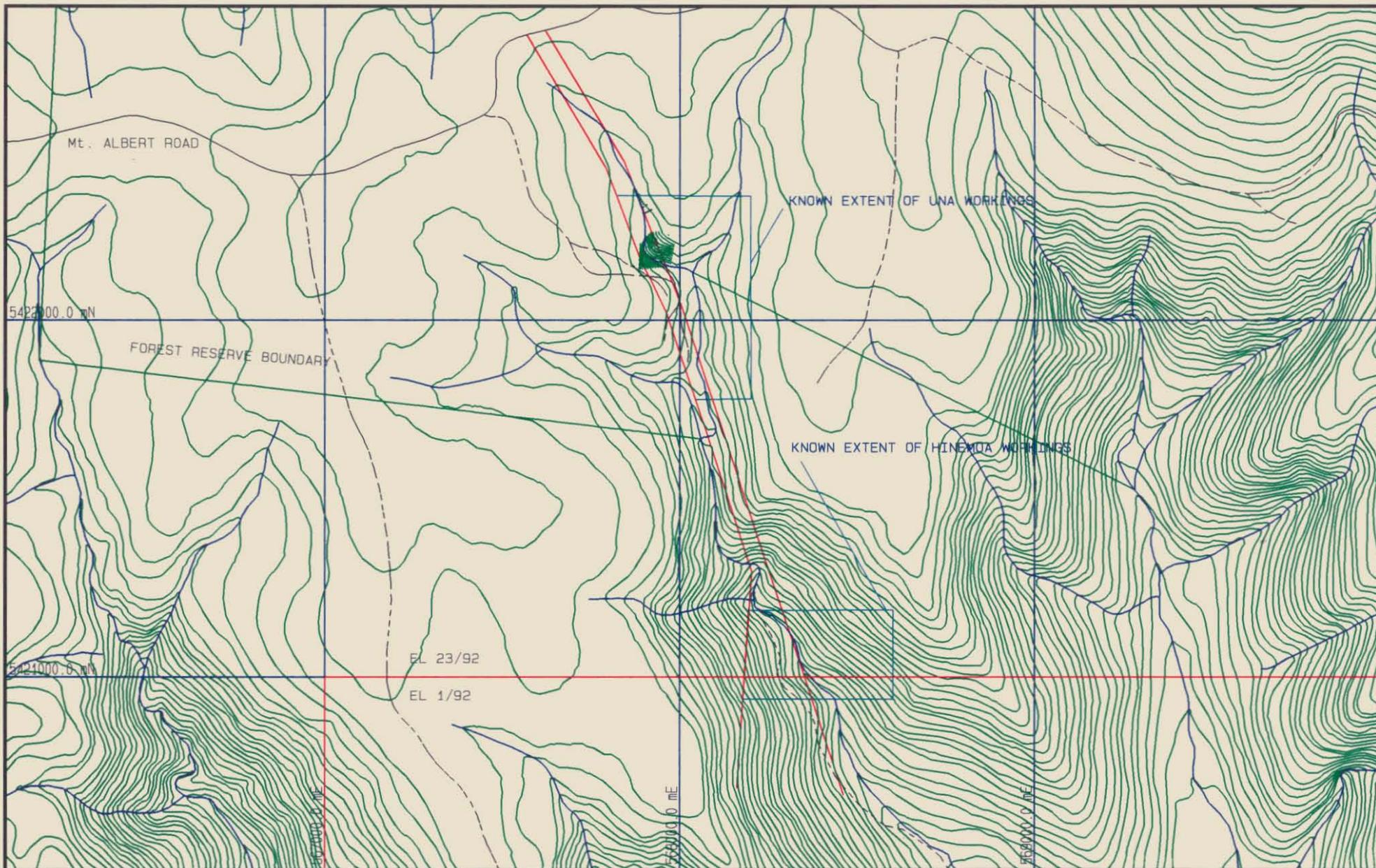


Figure 2

Simplified geology of Tower Hill - Ringarooma area, showing proposed pre-Permian extensional jog and dextral transcurrent fault. (After Taheri, 1993)



Mancala Pty Ltd.  
 P.O. Box 240, 45B Cameron  
 Launceston, Tasmania  
 Australia 7250

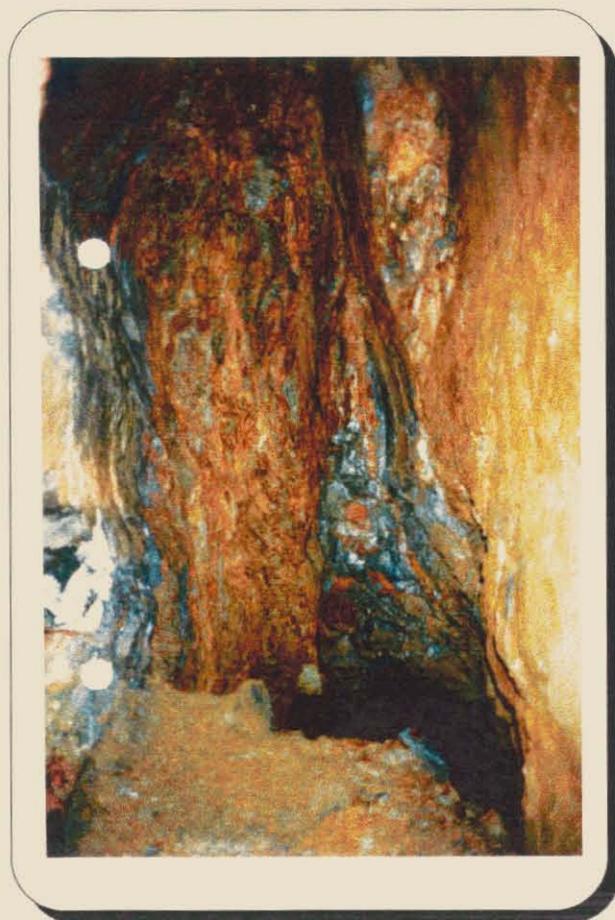
DATE: 11/21/96 TIME: 12:24:11

SCALE (HOR) 1:15000 SCALE (VERT) 1:15000

## UNA AND HINEMOA AREA EXTENT OF WORKINGS AND GOLD BELT

5 cm

FIGURE 4



## PLATE 1

View looking south of recent stoping work in Hinemoa northern adit.  
Lode exposed approximately 90cm wide, grading approximately 1.0g/t Au

which may have formed a series of jogs at Mathinna, the head waters of Dan Rivulet and the northern portion of the Alberton field. The 4km section of the gold lineament (head waters of Dan Rivulet) within the EL, forms a clear target for a +5,000 oz resource.

### Previous Work

Located in the headwaters of Dan Rivulet, adjacent to Una Creek, Mitchell (1980) described two series of workings, The Una Mine in the north and The Hinemoa Mine in the south. Both of the workings were described to be located upon significant structures, with strike extents exceeding 250m (Figure 4). This is in contrast to the lodes at Alberton, and many other locations within the gold lineament where lodes and their hosting structures rarely exceed 50-100m.

The Hinemoa adits were described by Mitchell (1980) to be developed upon a single fault fissure, mineralised throughout, striking north/south, and dipping westward at 75 degrees. The surface trenches (extending south, beyond the EL boundary) and the adits define a system in excess of 250m strike, and open to the south. Average grades of 11 and 8g/t Au from the two adits and 14g/t Au from the southern trenches were reported in widths of 250 to 90cm.

The Una Mine workings were described by Mitchell (1980) to be developed upon a single shear structure, 75m wide and up to 550m long. The structure is orientated NNE and the individual lodes dip steeply to the west. Mitchell (1980) described several individual lodes, which had been exploited by a series of adits and shallow trenches with . Grades reported were generally low with some very high exceptions. Widths ranged from 35cm to over 100cm.

### Structural Model

A plot of the lode location and orientation for Dan Rivulet, the headwaters of Dan Rivulet and Alberton (Figure 3) describes a possible relationship with the dextral jog postulated by Findlay (1992).

Within Dan Rivulet the majority of known lodes strike east/west. This is an unusual orientation for the entire gold lineament and may be explained by tentional openings, normal to the east and west arms of the dextral jog (Figure 3).

To the north, the termination of the jog may be defined by the Hinemoa and Una deposits trends converging. The extremely limited east/west extent (75m) of the lineament in the vicinity of the Una Mine is defined by the extent of old workings and the mapping of a single shear zone on the Mt. Albert Road (Akerman, 1995b).

Further to the north, in the Alberton Valley the distribution of known lodes is less confined than to the south with up to five orientation of structures hosting gold mineralisation (Akerman, 1995a). The dominance of relatively brittle quartzose sandstones at Alberton may have resulted in the D2 event producing an array of wrench faults, which disseminated mineralisation into numerous small lodes (Akerman, 1995a).

The orientation and extent of the structures which host the Una and Hinemoa deposits have distinct similarities to the lodes at the New Golden Gate Mine. The Main Slide at the New Golden Gate Mine trends 327 degrees, and dips 70 to the southwest (Taheri, 1992). The Slide

is up to 12m wide, is a shear zone and occasionally contains auriferous mineralisation. The lodes at the New Golden Gate Mine trend N to NNW and dip either steeply east or west. The Hinemoa workings can be interpreted to lie in a similar position to the New Golden Gate lodes with the Main Slide represented by the Una shear zone.

The Hinemoa Mine and northward to the Una workings are considered to be an area which may host a +5,000 oz hard rock gold deposit. Work by Mancala has concentrated upon this area, and in detail upon the Una deposit. As the potentially more prospective Hinemoa deposit straddles the EL boundary, limited work has been conducted until a JV can be negotiated with the adjacent licence holder.

## 8.2 THE HINEMOA MINE WORKINGS

### Location

The Hinemoa Mine workings were located by traversing down the very steep escarpment from the Strickland Ridge Road (Figure 4). After the site was found, a well formed 4WD road was located leading directly to the workings from the maze of logging tracks in the northern portion of the Dan Rivulet Valley. This track has since been cleared of regrowth and fallen trees by the adjacent licence holder (EL 1/92).

The adjacent licence holder conducted some minor stoping operations within the northern adit of the mine prior to its exact location being known. The survey which defined the location reported that the northern adit is at 568 199E, 5 421 196N and 561 RL and the southern adit is at 568 278E, 5 421 051N and 567 RL. The southern boundary of EL 23/92 at this location is 5 421 000N. Known surface trenches extend beyond the EL boundary to approximately 5 420 940N.

The workings are located within the eastern bank of the steep (+45 degree slope) Strickland Ridge. The ridge has a covering of patchy thick scrub, the semi-scrub slope being too steep to support significant trees. An elevation of 60m exists from the lode development in the south to the trenches on surface.

### Mapping and Sampling Results (Appendix 2)

During the stoping operations an unknown quantity of coarse free gold was obtained from the northern adit. *Some of this material (approximately 1/2 oz) is in the possession of Mancala.*

*Mitchell (1980) has mapped, sampled and described the three adits and surface trenched in detail. An examination of the two lower adits (#1: northern and #2 southern) was conducted. Ample evidence of extensive sampling by Mitchell (1980) was observed.*

The southern adit intersects the lode approximately 100m from the portal (Figure 5). The lode has been developed upon for approximately 14m to the north (placing the development 80m south of the northern adits southern most exposure) and 8m to the south. The host lithologies are gently dipping (25 degrees to 230 degrees Mag.) light grey, fine sandstones regularly interbedded with black (carbonaceous) siltstone. The lode zone is a well formed fault with extremely planar hanging and foot walls, trending 360 degrees Mag. and dipping 70-80 degrees to the west. The zone is up to 1m wide, with patchy grey sulphide bearing quartz developed within sheared and brecciated black siltstone. Poorly developed slickensides indicate a sub-horizontal dextral movement.

Sampling by Mitchell (1980) indicated grade decreasing to the north of the adit intersection, but increasing to the south with an average of 8.5 g/t over 25cm. The fault zone is clearly wider than 25cm and observation of Mitchell's (1980) sample locations show evidence of sampling over the entire width of the zone?

The #1 (northern) adit was driven south on the lode zone for approximately 60m. It displays similar lode zone characteristics to the #2 adit, with the exception of some minor bifurcation of the lode zone, and consequently less well defined hanging wall. The foot wall remains very planar. Over 30 individual samples have been collected from the adit by Mitchell (1980).

The results of Mitchell's (1980) sampling indicated an average grade of 11g/t for the first 55m of the adit (width of 62cm) and a decrease in grade further south. The location of one sample which graded 525 g/t is believed to be the location of the recent stoping operation, from where the free gold was obtained. Additional mapping and sampling of the stoped exposure (Plate 1 Appendix 2) revealed low gold grades (1.91 g/t over 40cm and 1.07 g/t over 1.0m). All the surface trenches up to the exploration boundary were fully exposed of vegetation and soil. These were subsequently mapped and sampled and along with the collapsed #3 adit to conform the findings of Mitchell (1980).

The lode zone exposed in the trenches returned a greater variability in grade (Figure 5, Appendix 2) than the sampling of Mitchell (1980). The width of the zone is consistently between 130cm to 60cm. The trenches A1 to A9 returned grades ranging between 0.49 g/t to 7.84 g/t with an average of 3.19 g/t over an average width of 86cm for 100m strike. Rubble collected during the clearing of the trenches averaged 3.13 g/t.

Trench A10 is located just north of the EL boundary. Sampling indicated an average width of 90cm with 17.85 g/t of gold. Dump material adjacent to the trench returned 19.40 g/t Au. Sampling by Mitchell (1980) of the trenches south of the EL boundary returned an average assay of 15.8 g/t Au.

Lode material collected during the sampling program varied from massive blue/grey quartz (AsPy and Py bearing) to brecciated and sheared black siltstone containing the massive quartz as veinlets. Invariably, the brecciated material returned assays which were moderate to high grade (+3 g/t Au), while the massive quartz assayed either low (0.688 g/t, Trench A7) or high (17.85 g/t Au, Trench A10). This variability of grade with lithology and spatial distribution of grade emphasises the complexity of these lode systems.

The Hinemoa deposit is developed upon a very strong and persistent structural feature. Consistently elevated gold grades are present along the known dip and strike extent. Economically viable grades are known from the southern and northern portions of the lode, the southern of which is open in strike and down dip. A clear potential exists for a +5,000 oz resource exists above the backs and to the south of the lower adit. The full potential of the system to the south and down dip is potentially very large.

### 8.3 THE UNA MINE WORKINGS

#### Location and Access

The Una Mine workings straddles the Una Creek (a tributary to the Dan Rivulet) for approximately 600m of its length (Figure 4). The area is centred on approximately 5 421 900N, 568 000E and 710RL. The mineralised zone is intermittently associated with the creek, which either parallels the zone or cuts across it normal to its strike. Consequently, the creek has radical changes in orientation over short distances. In the immediate vicinity of the workings, slopes are relatively gently (10 degrees), except near the southern most exposures where the silicified zone forms a shear escarpment (Figure 6).

Five hundred metres to the south of Una, the Hinemoa mine workings are located at an elevation of 560m, some 150m lower than Una. A series of waterfalls and radical changes in direction (due to the influence of the mineralised zone) characterise the creek between the workings.

In the vicinity of the Una workings the slopes acceding to the Una Plain are dominated by rainforest species, while the plain is dominated by Button Grass.

Access to the workings is via the well sealed Mt. Albert Road and then by a side track which leads down into the valley. The side track is very boggy in places, which, without winching, restricts access to the summer months.

#### Previous Work

The area encompassing the Una Mine workings was worked intermittently from 1888 to the 1940's. Twelvetrees (1904) reported that the main workings consisted of upper and lower adits containing reef material with an average width of 70cm. Actual production from the workings is unknown, although Twelvetrees (1904) reported that 595 g of gold was extracted from approximately 3 tonnes of ore by hand crushing.

Following hand crushing, the O'Brians Company erected a five head stamp battery driven by a water wheel. The battery crushed approximately 2,000 tonnes of ore with a reported grade of over 62 g/t (Wilson, 1988). Following the removal of the battery to another site, approximately four tonnes of ore was transported to The Premier Battery for toll treatment. This returned 48oz of retorted gold, giving a grade of 373g/t Au (Wilson, 1988).

The mine lay idle until 1931, when two prospectors worked the mine treating ore in a battery powered by a T Model Ford truck engine. The tonnage or grade of production during this period is unknown.

Threader (1963), recommended the drilling of two diamond drill holes to test beneath the workings. Sampling of the exposures had been under taken with poor results. The lack of high grade samples was explained by quoting from Twelvetrees (1904), where 'robbing' of the reefs was general with no regard for economy or safety. Threader (1963) states " it is now

practically impossible to secure a surface sample of economic grade, the high grade material having been selectively mined from shallow diggings". The lack of workings below a depth of six metres from surface and the strike extent of the lode zone added weight to Threaders (1963) proposal. However, the drilling program did not eventuate.

In 1973 Geopeko (Danielson, 1973) investigated the area, prompted by reported assay values of 5% Sn, 4.8% Pb and 23g/t Au from a lode within the Una area. This lode was shown to be a quartz vein with a high sulphide content, exposed for two metres on the eastern side of Una Creek (Adit #6). The lode was found to be 0.5m wide with rock chip assays returning 2.8% Pb, 2.0% Zn 48g/t Au and 100ppm Sn. The original high grade tin assay was questioned.

Danielson (1973) quoted a mineralogical report on the lode material as consisting of a sulphide aggregate in quartz of probable high level mesothermal origin. Sulphide minerals in order of decreasing abundance were arsenopyrite, marcasite, pyrite, sphalerite, chalcopyrite, covellite, galena, cuprite, pyrrhotite and native gold (completely enclosed in arsenopyrite, 5 microns in diameter).

The apparent limited extent of the lode and the lack of high grade tin did not prompt Geopeko to conduct any further exploration.

In 1980, Mitchell reports on work conducted by A.C.A. Howe Australia P/L for the entire Dan Rivulet area. The Una workings were mapped and sampled at 1:500 scale. The sampling results were generally low (<5.0 g/t Au) with some isolated +20 g/t Au results. The low assay grade determined from the samples was related to the possibility that surface enrichment had occurred, which has been subsequently mined in the shallow surface workings, leaving only sub economic material in situ.

Mitchell (1980) concluded that the Una Mine was developed upon a shear zone, 75m wide with a strike in excess of 550m. Mitchell (1980) ranked the Una Mine as the most prospective site of all those examined in the Dan Rivulet area. The high prospectivity was based upon the structural significance of the shear zone, which apparently is lacking at other mineralised sites in the Dan Rivulet area. Recommendations were made by Mitchell (1980) to carry out further exploration of the Una shear zone. No further work was undertaken.

### 8.3.1 MANCALAS MAPPING AND SAMPLING PROGRAM

All mine workings within the Una area were located and mapped and sampled (Appendix 3 and 4) at a scale of 1:100. The adits were identified utilising the nomenclature of Mitchell (1980) with the addition of Adit #6, apparently not discovered by Mitchell (1980). Where a direct relationship exists between surface workings and underground the surface workings were identified based on the adit nomenclature (eg. Adit #2 Lode, trench #4). Surface workings which have not been intersected by adits were identified by numbered survey points placed by Mitchell (1980, eg. 126 Lode, Trench #2).

Six adits were located along the mineralised zone incorporating an along strike distance of 400m. Adits #2, #3 and #5 intersect the extensive Adit #2 Lode (Figure 6). Adit #4, the southern most, did not intersect any lode material. Adit #6, located on the eastern side of Una Creek is of very limited extent and probably represents the sulphide rich workings investigated

by Geopeko. Underhand stoping within the adit since the work of Geopeko has made the adit unaccessible. Adit #1, the northern most, is isolated from the other workings and represents the site of major production for the area.

#### Adit #4 Lode Workings

Adit # 4 was driven in a northeasterly direction, beneath the prominent ridge in the south of the Una area (Figure 6). The aim of the development was to intersect the 130, 126 and Adit #2 lode zones. Development was stopped short prior to reaching any of these targets. The adit exposed strongly silicified sandstone and siltstone interbeds displaying a strong cleavage orientated NNW and dipping steeply eastward.

#### 130 Lode Workings

The 130 Lode workings consist 4 shallow surface trenches developed upon a continuous lode zone, within which small (5 m strike, up to 80cm wide) pods of auriferous quartz is developed (Figure 6, Appendix 3). The hanging wall of the zone is clearly exposed as a fault, juxtaposing massive sandstone to the west against strongly cleaved black to tan siltstone to the east. Within Trench #3, 5-10cm of laminated quartz containing shale shards and sulphides is located adjacent to the hanging wall. The quartz assays up to 16.22 g/t Au, giving a total lode of 60cm at 4.44 g/t Au.

#### 126 Lode Workings

Slightly down hill and parallel to the 130 lode workings the 126 Lode workings outcrop in two small and one extensive series of shallow trenches over 45m of strike (Figure 6, Appendix 3). The trenches are water filled, giving limited exposure at the terminations of individual trenches. The foot wall and hanging wall of the lode are well exposed, with striations upon them indicating sub-horizontal dextral movement. Assayed grades of laminated quartz from the hanging wall indicate up to 22.3 g/t Au (SRC 172, 10cm), although grades ranging between 0.4 and 4.5 g/t Au are common.

Trench #2 is the most extensive working on the lode, being 19m long and up to 1.6m wide. Trench #1 is a water filled shallow winze. Strike projection of the lode from the winze indicates an shallow (10-15 degree) intersection with Adit #2 Lode approximately eight metres from the portal.

#### Adit #2 Lode Workings

Adit # 2 Lode is the most extensive known, semicontinuous lode in the area. The lode has been exposed by trenches and underground workings for a strike length of 120m. Adit #2 exposes a well developed lode channel up to 1.7m wide containing pods of massive blue grey quartz which assays in the range of <0.05 to 15.5 g/t Au (Appendix 3). Consistent low to moderate grades are returned from the brecciated, sheared and quartz veined black siltstone which forms a matrix to the quartz pods. Two samples (30cm and 60cm widths) of lode quartz

and sheared black shale taken from 8m and 10m from the portal returned assay results of 15.5 and 13.0 g/t Au. This is the approximate location of the intersection with the 126 Lode strike.

The Adit #2 lode can be traced on surface for 120m from the portal of Adit #2 within a series of shallow trenches and winzes. The lode/fault zone is well exposed in the workings, frequently containing slickensides indicating sub-horizontal dextral movement on the hanging wall. Massive quartz is generally absent, the foot wall is poorly exposed or absent and grades are low (Figure 6, Appendix 3). The lode zone traced through the series of workings is not planar, rather a series of small (1-3m) offsets to the east occurs along its length (Figure 5).

The northern most trench in the series from Adit #2 (Trench #5) has been stoped for a length of 12 metres and to a depth of 3m from surface. The southern portion of the exposed hanging wall flexes to the west by 10 to 15 degrees. A similar flexure is seen in trench #3. This flexure may explain the apparent offsets between individual exposures. This phenomena may be a crude example of C and S fabric development, associated with dextral shearing. It is of interest to note that the highest grades from Adit #2 lode, either from in situ or as rubble, have been located at a flexure point (Trench #3: 15.5 g/t, rubble and Trench #5: 20.85 g/t, in situ) or an apparent intersection point (Adit #2, 13.0 and 15.5 g/t).

Adit #2 lode has been exposed within Adit #5, approximately 10m below Trench #5 (Figure 6). The lode has been developed upon for 18m in a NNW direction. The lode as exposed consists of massive white quartz containing minor black siltstone shards and virtually no sulphides (Figure 6, Appendix 3). Assays of the exposure returned very low grades, generally less than 0.1 g/t Au. Hanging wall and foot wall exposures are well defined and planar, with some sub-parallel structures.

Exposed within Adit #5, approximately 18m northeast of the Adit #2 lode, and parallel to it, is another un-named lode zone/fault zone (Appendix 3). The lode channel is between 0.8 and 0.9m wide, strikes NNW and dips steeply to the east. Within the zone grey quartz stringers are developed within black siltstone. The highest assay over 0.9m width was 1.95 g/t Au.

Between the Adit #2 and un-named lode, mapping of the adit indicated a synformal closure may exist within massive grey siltstone. East of the un-named lode significant faulting and cleavage development occurs sub-parallel to the lode strike (Appendix 3).

Adit #2 lode may continue NNW from Trench #5 and be represented by two small trenches, giving the total lode extent to be in excess of 300m (Figure 6). The southern most of these is located upon the edge of the access track and displays a strong fault plane and minor quartz development. Assay by Mitchell (1980) returned 0.11g/t Au. Similar characteristics and grade are present in the northern trench which is located westward of Adit #1.

#### Adit #1 Lode Workings

Adit #1 and associated trenches (#111 and 112) are located on the eastern bank of a tributary to Una Creek, below the access track (Figure 7). The creek appears to cross the mineralised zone to the south of the adit and to become parallel to it to the north.

At the portal of the adit a large dump of material exists which represents waste extracted from the workings. Immediately adjacent to the portal a pile of ore is present, from which Mitchell (1980) samples returned results of 52 g/t Au. The material consists of massive blue/grey quartz and sheared and brecciated siltstone containing quartz veining. Visible gold was detected in a number of samples, representative portions of which were dispatched for assay. Results obtained from two samples ranged from 5.26 to 15.90 g/t with variability on repeated assays of over 100%. The variability of the assay results and visibility of the gold indicates coarse, nuggetty type gold is present and the actual grade is very difficult to determine.

Adit #1 was driven NNW along the strike of the lode zone, probably on the eastern limit of the shear zone (Figure 7). Within the initial six metres of development the foot wall and hanging wall are well defined dipping steeply to the south west. The intervening lode zone consists of 20-30cm of blue/grey quartz within sheared and puggy black siltstone. Assaying by Mitchell (1980) of the quartz returned results in the order of 4.0g/t Au.

Beyond the initial six metres of development a partially collapsed stope is encountered (Figure 8). The instability has been generated by the 10-20 degree difference in the hanging wall dip and that of the bedding. Consequently, large bedding parallel slabs have fallen from the hanging wall. This safety concern has allowed only a preliminary examination of the workings to be undertaken (Appendix 3).

The initial stope (stope #1) encountered is approximately 6m high and 13m in length and averages 1.5m in width. The stope geometry appears to define the lode geometry, in that the hanging wall and foot wall are well defined and appear to converge at the maximum height of the stope (Plate 2).

A pillar is encountered beyond stope #1, which separates it from stope #2. The pillar consists of massive blue grey quartz containing abundant sulphides and black siltstone shards. Sampling of the pillar (Appendix 3) across the full width of the lode returned an average grade of 0.968 g/t Au. The variability of repeat samples (URC080 and URC081) is high probably indicating the presence of coarse gold.

The south face of the pillar displays the geometry of the lode to be sigmoidal, with the enclosing faults displaying dip reversals approximately 4m from the backs (Appendix 3).

The second stope is approximately 8m high 14m in length and averages 1.6m in width. Very unstable ground conditions precluded the taking of samples. The lode geometry is well defined by the mining limits, with an apparent sigmoidal shape, pinching out upward. Approximately 6m of development exists beyond stope #2 before a collapse is encountered.

The adit was surveyed by EDM prior to diamond drilling to allow a 3D model to be generated.

### Trench 111

Trench 111 is located approximately 40m, along the strike of the lode, up hill from the portal of Adit #1 (Figure 7). The trench is small, being 5m long and 0.8m wide. The hanging wall and foot wall structures are well defined trending NNW and dipping steeply to the south west. No solid rock is exposed at either end of in the floor of the trench. The digging of a 1m deep



## PLATE 2

View looking south from pillar area to No. 1 stope Una #1 Adit  
Note steeply dipping bedding on hanging wall.

pit in the trench's floor failed to find solid rock. A sample of blue/grey quartz, containing abundant sulphides and siltstone shards from the dump returned an assay result of 22.75 g/t Au.

### Trench 112

Trench 112 consists of a large open stope 14m in length and 10m deep with an extension to the NNW of a shallow trench (Figure 8, Appendix 3). Although the bottom of the open stope is blocked with rubble, it is probable that a chute exists to the collapsed region at the NNW end of adit #1. It is likely that this stope was mined from the adit level to surface, with the ore being extracted via a chute to the adit level (Figure 9).

Significant piles of rubble (ore?) exist on the downhill side of the workings. These were sampled and returned results which averaged 1.29g/t Au for the northern area, 12.01 g/t Au in the central region and 2.81g/t in the southern area. Material from the central area (Appendix ) consisted of massive blue/grey quartz containing siltstone shards. Individual assays ranged from 9.28 g/t Au to 20.70 g/t Au.

The stope was entered from the north (Plate 3), and mapped and sampled. The lode zone within the center of the stope is up to 2.2m wide, and has a distinct sigmoidal shape (Appendix 3). Remanent mineralisation in the stope displays a lithological zonation with massive quartz confined to the hanging wall with a decreasing content of quartz veining present within sheared and brecciated siltstone as the foot wall is approached. Sampling of the remanent mineralisation generally returned low assays values (0.332 to 2.680 g/t Au). The highest grades obtained were from brecciated siltstone containing quartz veining immediately below the hanging wall quartz vein.

Broken ore was discovered on the northern face of the stope. In hand specimen, the ore consisted of massive blue/grey quartz containing abundant arsenopyrite, pyrite and minor galena?. Other lumps of ore consisted of brecciated siltstone (very friable) containing quartz stringer veins of similar composition to the massive ore. Visible gold was present as thin flakes parallel to the cleavage/shearing direction within the brecciated samples. Assays of the ore returned results ranging between 11.1 to 106.6 g/t. The averages of repeat assays on individual samples were 38.45, 72.25 and 11.2 g/t Au (Appendix 3).

NNE of the open stope shallow trenches have been excavated for a distance of 120m along strike of the lode zone. These are now nearly fully overgrown and filled with soil. The exposure available indicated the lode zone/fault is persistent in this area although very little mineralisation is observable.

The presence of mineralised slickensides on the foot wall indicated a dextral component of movement has occurred, with a vertical component to the SSE at approximately 25 degrees. The movement direction combined with the stope geometry indicates the ore shoots within the lode zone may have a SSE plunge at approximately 25 degrees.

The workings exposed within the Adit #1 area indicate a persistent lode zone exists for 190m of strike. Its location and the lack of known mineralisation to the east may indicate it forms the eastern boundary of the main Una shear system. Developed within the lode zone are southerly

356027

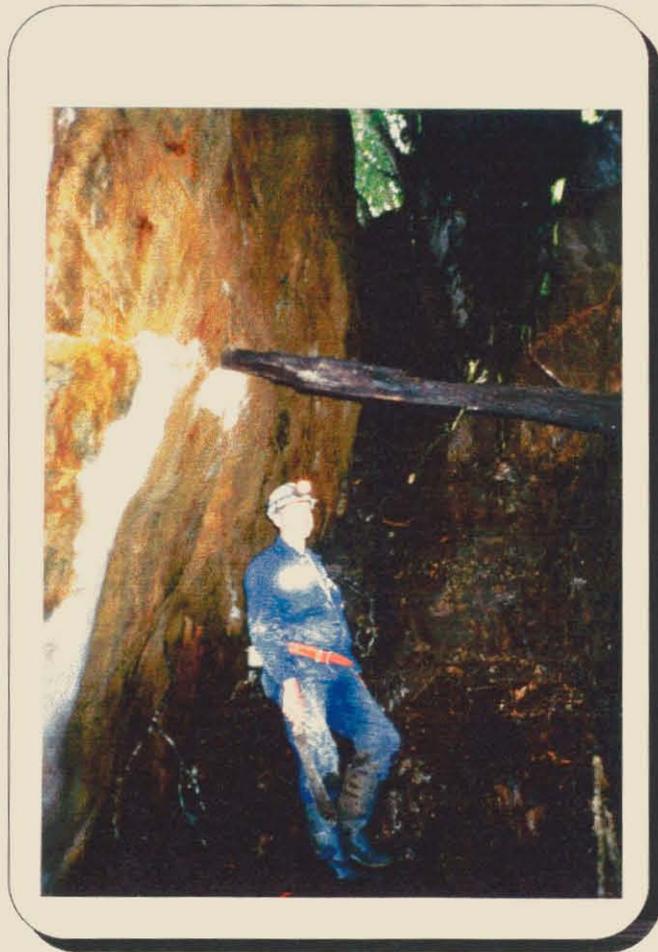


PLATE 3

UNA ADIT #1 TRENCH 112 (OPEN STOPE)  
VIEW LOOKING NORTH

plunging ore shoots with dimensions of approximately 15m by 15m and averaging 1.6m width. The historical production by the O'Brians company of 2,000 tonnes grading 62g/t (Wilson, 1988) probably originated, at least partially from the stopes in Adit #1. The modelled volume of material removed from the stopes represents approximately 1,000 tonnes at an SG of 2.5. Due to the lack of other significant areas of production in the Una area, the historical figures may be inaccurate. The production grade of 62 g/t Au (2oz/tonne) may be realistic considering the assay results from the remaining stope rubble (average 40.63 g/t Au).

Stopes #1 and 2 indicate the ore shoots pinch out in the backs, although they are probably still present within the floor of the drive. The remainder to the developed shoots in the floor and additional shoots either sub-parallel or down plunge represent a significant target. If the 15m by 15m by 1.6m width is considered for a single shoot, and a conservative grade of 30 g/t Au is applied, each shoot could contain in the order of 900 tonnes of ore, representing approximately \$450,000 of contained metal.

### 8.3.2 PETROGRAPHIC AND MINERAGRAPHIC WORK

Preliminary petrographic and mineragraphic examinations were conducted upon three samples from the remanent stope ore from Adit #1 (Appendix 1). An initial understanding of the nature and distribution of gold in the ore was considered essential if the ore could potentially be treated at the Anchor gravity mill.

The samples dispatched were duplicates of the assayed samples SRC189, SRC190 and SRC191. Assay results from these were respectively 20.70 g/t Au (repeated at 9.72 and 13.8), 36.1 g/t Au (repeated at 40.8) and 37.9 g/t Au (repeated at 106.6). Visible gold and sulphides were present when the samples were examined in hand specimen. SRC190 and SRC191 would be described in hand specimen as brecciated siltstone containing quartz veins. SRC189 would be described as massive blue/grey quartz containing sulphides.

The massive quartz sample (SRC189) was described as arsenopyrite bearing quartz, with quartz, K feldspars and arsenopyrite forming the majority of the rock (Appendix 1). No gold was detected. Both SRC190 and SRC191 were described as silicified breccias. The rocks are composed of wallrock fragments, muscovite, quartz with accessory chlorite and rutile. Minor to trace quantities of goethite, arsenopyrite galena and gold were detected. Several phases of silicification were noted.

Gold was only detected by SEM examination, and found to be located within one micron size goethite clasts (possibly after pyrite and arsenopyrite) as very fine argentian particles. The lack of gold in respect to the assay values probable is indicative of coarse gold, which, by chance has not been located upon the thin sections. The very fine gold was postulated to be the original gold in solid solution with the sulphides. The coarse gold may have been remobilised from the sulphides during oxidation.

### 8.3.3 DIAMOND DRILLING PROGRAM

To investigate the possibility of a resource existing below the #1 adit workings, All Terrain Drilling was contracted to drill eight short diamond drill holes below the workings.

Following survey, modeling of the topography and the workings (Figure 8) a local grid was established over the area. The grid was orientated (248 degrees AMG) normal to the lodes mean strike, and sections constructed at 10m intervals with nomenclature derived from distance from the primary survey station at Adit #1 portal. Drilling was conducted on local section northings 20, 32, 42, 52 and 62, collared downhill from the workings, directed eastward (Figures 7 and 9).

All drill holes intersected the anticipated lode position projected from its surface/underground exposure. The lithologies intersected prior to the lode position consisted of interbedded siliceous sandstone, siltstone and graphitic argillite (Appendix 5 and 6). Some correlation of individual lithological units down dip and along strike is possible, although there appears to be considerable variation in thickness and extent. The correlation confirms the general steep westerly dip of units west of the lode position.

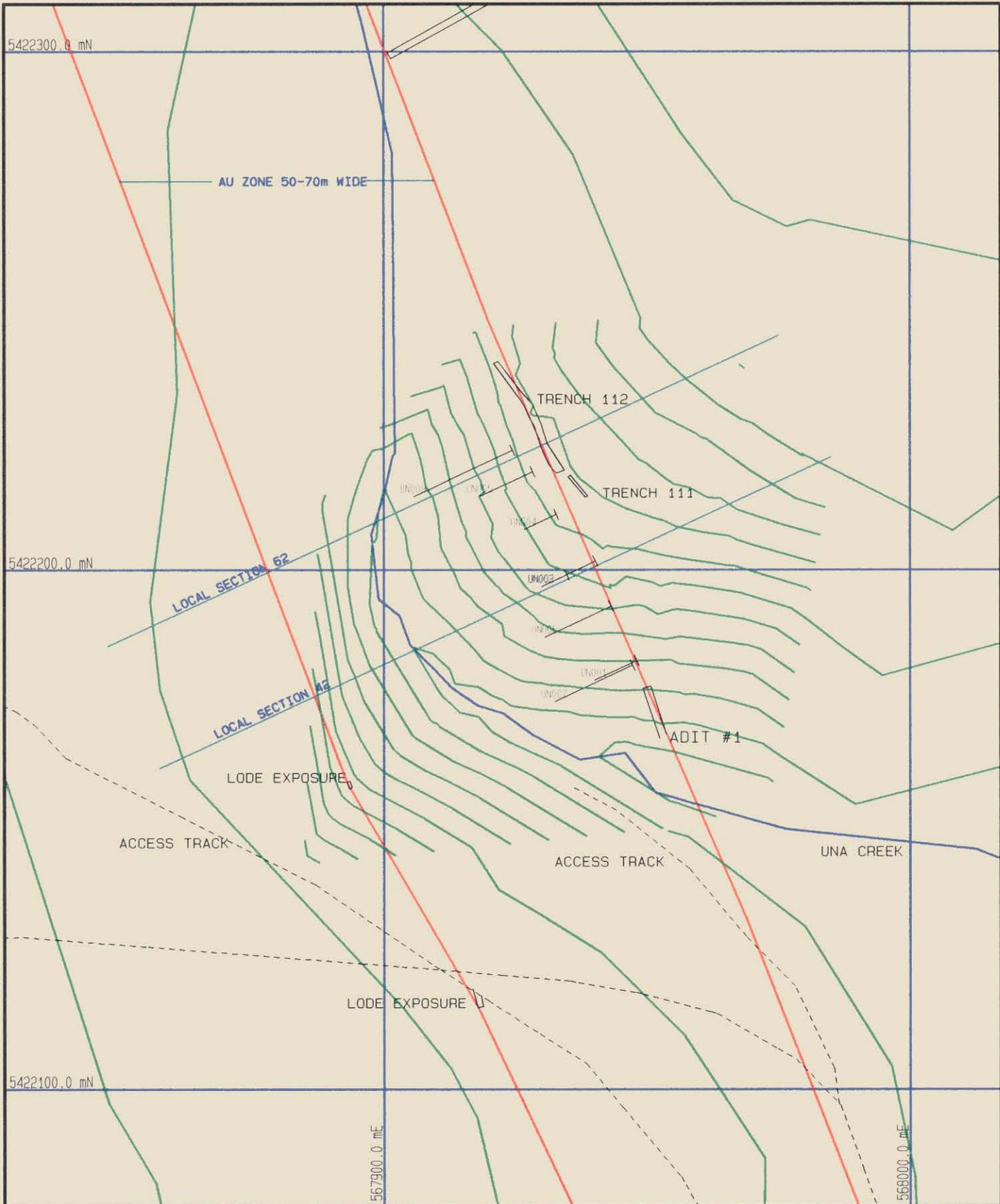
Areas of intense quartz veining and faulting, apparently sub-parallel to the lode zone orientation, were intersected west of the lode position. Assay results of the vein material indicated grades up to 0.61 g/t Au over 1.7m. A significant fault was intersected in the majority of drill holes approximately 3-4m east of the lode position (Figures 10 and 11). At depth (UN008) the fault is associated with intense quartz veining assaying up to 1.99 g/t over 1.0m down hole. The increase in grade and width of veining appears to correspond to the location where the main lode is thinning and reducing in grade. It is possible that the eastern intersection (Figure 11) is the start of another lode system, offset from the main lode in a staggered arrangement.

The presence of significant faulting and auriferous veining adjacent to the Adit #1 lode may be indicative of additional lodes at depth developed within the postulated 75m wide shear zone. Clearly, additional deep and along strike drilling is warranted to locate further auriferous lodes.

The Adit #1 lode was intersected in all drill holes as either a fault zone with limited quartz veining or as massive to brecciated quartz veining with faulted selvages. the most significant intersections were located down plunge (southward) of stope #2 within drill holes UN002, UN006 and UN003 (Figure 10 and 11).

UN002 intersected the lode position approximately 2m below the floor of stope #2. (Figure 10). Unfortunately, core loss occurred from the lode hanging wall for 0.9m down hole. Rubble from this interval indicated massive and brecciated lode material. For an additional 1.3m down hole core similar to the rubble was obtained. If the start of the core loss is assumed to be the hanging wall then a true width of 1.8m is indicated. This is conformed from mapping in the adit, which gives a true width of 1.6m.

A further 12m down plunge of the UN002 intersection, UN006 indicated the lode is present, in a similar form to UN002 but with a true width of 1.3m (Figure 9). UN003 intersected the



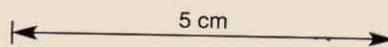
Mancala Pty Ltd.  
 P.O. Box 240, 45B Cameron  
 Launceston, Tasmania  
 Australia 7250

**UNA ADIT #1 AREA  
 DDH LOCATIONS AND SURFACE FEATURES**

DATE: 11/21/96 TIME: 15:22:14

SCALE (HOR) 1:1000 SCALE (VERT) 1:1000

FIGURE 7





Mancala Pty Ltd.  
P.O. Box 240, 45B Cameron  
Launceston, Tasmania  
Australia 7250

DATE: 96/11/21 TIME: 15:34:38

by GEMCOM Services Inc.

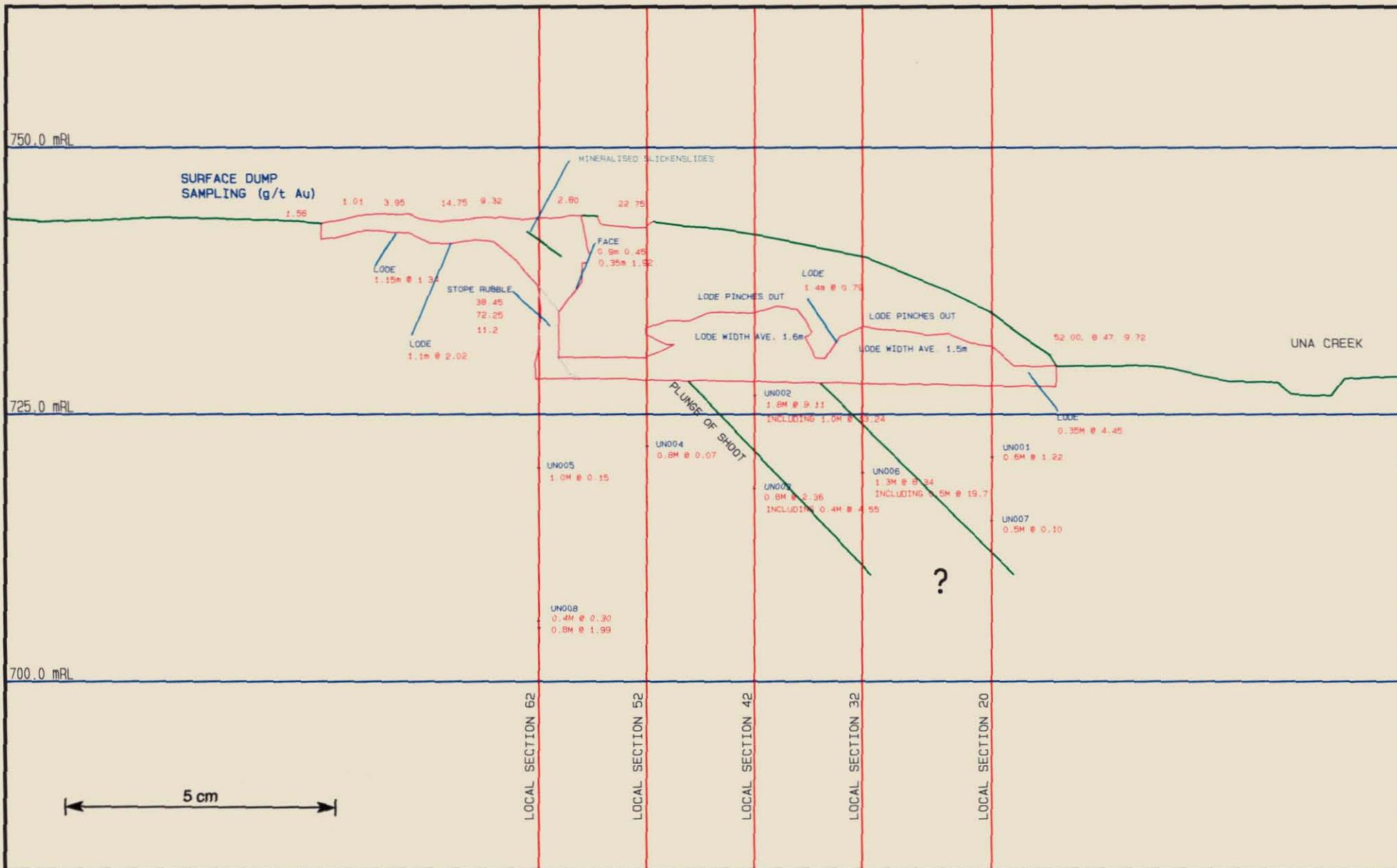
UNDERGROUND AND SURFACE DEVELOPMENT  
AND MODELED SURFACE (2m contours)

UNA # 1 ADIT

FIGURE 8

5 cm

356031



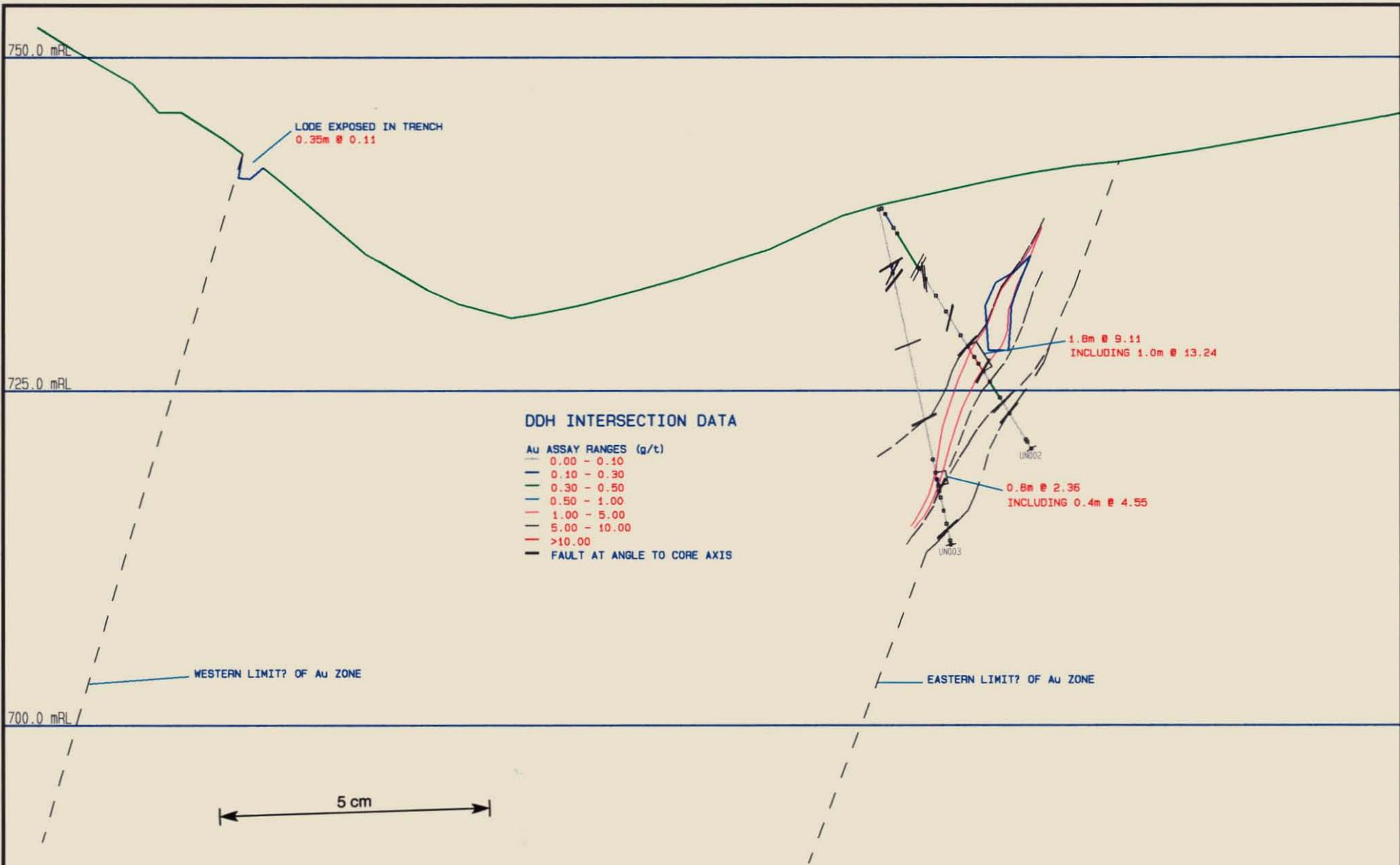
Mancala Pty Ltd.  
P.O. Box 240, 45B Cameron  
Launceston, Tasmania  
Australia 7250

DATE: 11/21/96 TIME: 16:21:37

SCALE (HOR) 1:500 SCALE (VERT) 1:500

## UNA ADIT #1 LONG PROJECTION VIEW NE DDH AND ROCK CHIP ASSAY RESULTS

FIGURE 9



Mancala Pty Ltd.  
P.O. Box 240, 45B Cameron  
Launceston, Tasmania  
Australia 7250

DATE: 11/21/96 TIME: 16:34:59

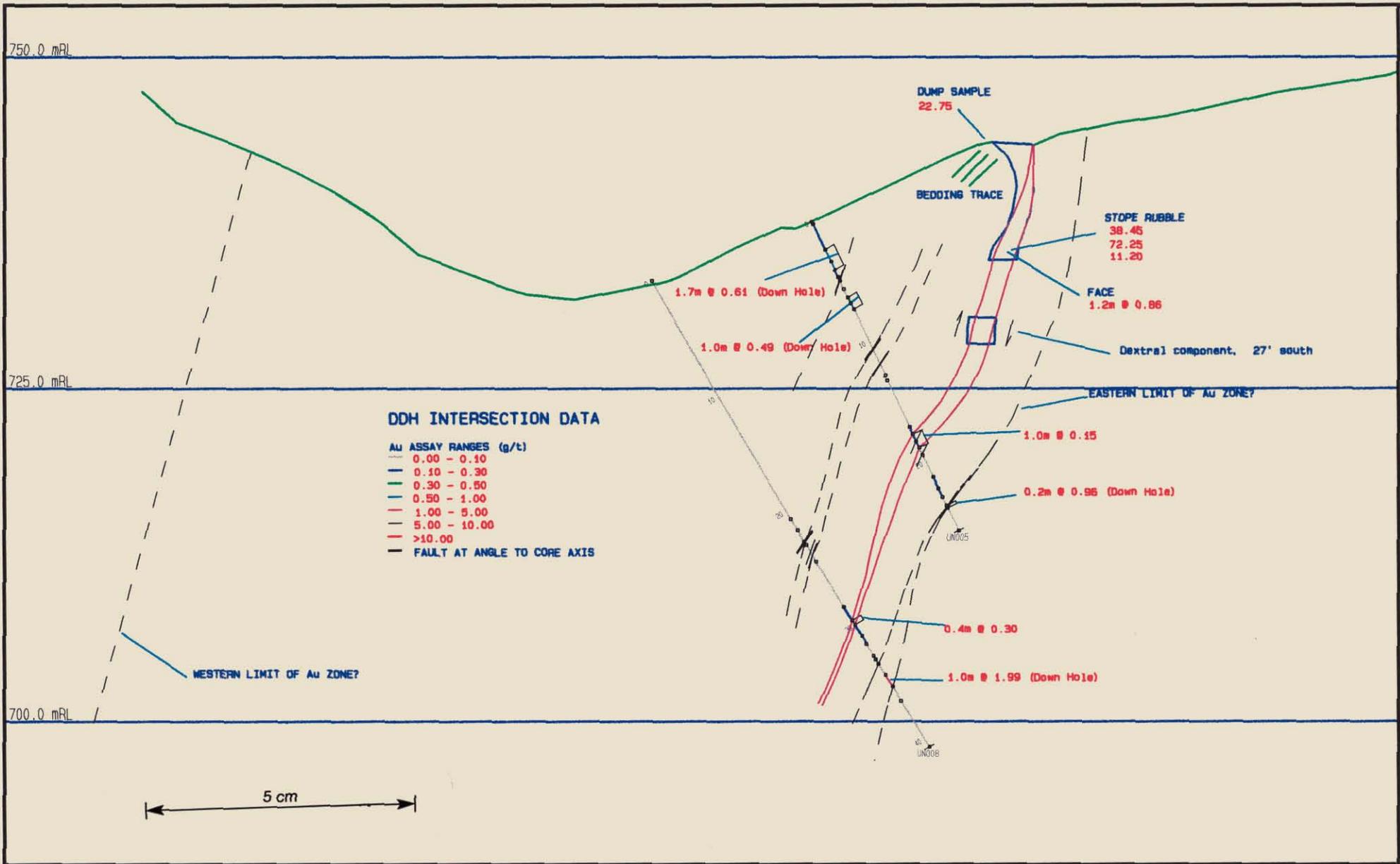
SCALE (HOR) 1:400 SCALE (VERT) 1:400

## UNA ADIT #1 DIAMOND DRILLING RESULTS LOCAL SECTION 42

ASSAY RESULTS g/t Au

FIGURE 10

356033



Mancala Pty Ltd.  
P.O. Box 240, 45B Cameron  
Launceston, Tasmania  
Australia 7250

DATE: 11/21/96 TIME: 16:43:09

SCALE (HOR) 1:400 SCALE (VERT) 1:400

## UNA ADIT #1 DIAMOND DRILLING RESULTS LOCAL SECTION 62

ASSAY RESULTS g/t Au  
FIGURE 11

356034

lode slightly north of the main down plunge trend and correspondingly returned a narrower true width of 0.8m.

Within the lode material intersected by UN002, UN006 and UN003 visible gold was detected. The gold occurred as individual grains up to 0.5mm in size. They are present scattered throughout the intersections with no apparent relationship to the surrounding arsenopyrite and pyrite bearing blue/grey quartz or the brecciated wall rock material. The initial sample interval from UN002 (13.1 to 13.7m down hole, sample No. SCD023) eight individual gold grains were counted within the 60cm of half core dispatched for assay. Similar concentrations were counted for the intersection of UN006 (samples SCD069, 070 and 071) and a lesser concentration within UN003 (samples SCD032). With such high concentrations of visible gold high assay results were anticipated.

The half core intersections for the entire drilling program were dispatched to Analabs for assay. Unfortunately, the entire core was pulverised and assayed. Instructions to the lab were that a quartz wash should follow the pulverising and the wash be assayed in conjunction with the original sample. This procedure would have cleaned any smeared gold from the pulverising vessels and given a accurate assay.

Owing to the lack of correct procedure, the original results from Analabs may underestimate the grade. The results obtained for the core intersection in UN002 ranged from 12.100 to 14.000 g/t, UN006 ranged from 0.204 to 19.700 g/t and for UN003 0.090 to 4.830 g/t. Despite the majority of free gold having probably been lost from the reject sample material, samples SDC003, 023, 024, 031 and 032 were re-pulverised and the wash material analysed for gold. Insufficient material remained for re-analysis of the wash from SDC003 and 022. The wash material analysis generally returned in low results (<0.01g/t) although sample SCD024 returned 0.3 g/t Au. This indicates that some free gold remained in the sample and was collected by the wash. Consequently, significant quantities of gold may have been discarded in the original wash.

In an attempt to resolve the actual grades of the intersections, the remaining half core was quartered and dispatched for analysis at Amdel Laboratory in Adelaide. The small sample volume in the quartered core and the obvious nuggetty gold occurrences place some doubt on the Amdel results, although comparison with Analabs is useful (Table 1). The Amdel procedure was to use a quartz wash in preparation and analyse the wash material in conjunction with the original sample.

The Amdel results (Appendix 7) of wash analysis indicated some gold remained in the pulveriser following sample preparation and was captured by the wash material. Generally the results were low (<0.01 g/t) although 0.08 g/t was returned from the wash of sample SDC048.

The comparison of Amdel to Analabs assay results (Table 1) show that Amdel results are generally lower than Analabs, the exact opposite of what was anticipated. By way of example, sample SCD023 was analysed twice by Analabs to give an average of 13.750 g/t Au, while the Amdel result gave an average of 6.42 g/t.

Clearly, the gold distribution within lode material at Una is erratic and its coarse nature does not allow for precise grade prediction from small sample volumes. The mineragraphic work conducted indicated gold was present as very small particles associated with sulphides. Two

## COMPARISON OF Au ASSAY RESULTS

SAMPLE NO.	ANALABS (HALF CORE)				AMDEL (QUARTER CORE)		
	Au (g/t)	Au (g/t)	Au (g/t)	AVERAGE	Au (g/t)	Au (g/t)	AVERAGE
SDC006	1.220	-	-	1.22	0.93	0.99	0.96
SDC022	3.570	2.820	3.160	3.183	1.34	1.32	1.33
SDC023	14.000	13.500	-	9.167	5.98	6.86	6.42
SDC024	13.500	12.100	-	8.533	13.00	17.30	15.15
SDC031	4.830	4.260	-	3.030	2.89	2.81	2.85
SDC032	0.179	-	-	0.060	0.20	0.17	0.19
SDC048	0.651	-	-	0.217	0.73	0.68	0.71
SDC049	0.120	-	-	0.040	0.04	0.03	0.04
SDC069	19.700	13.400	-	11.033	15.80	18.00	16.90
SDC070	0.204	-	-	0.068	0.45	0.30	0.38
SDC071	2.940	2.450	-	1.797	1.91	1.89	1.90
SDC072	0.583	-	-	0.194	0.11	0.14	0.13
SDC079	0.055	-	-	0.018	0.05	0.04	0.05
SDC080	0.007	0.007	0.007	0.007	0.09	0.11	0.10

TABLE 1

NOTE: AMDEL results include quartz wash results added proportionally to the original assay result.

populations of gold would appear to be present, the very fine and the relatively coarse material.

If the original Analabs data is used, with the knowledge that it is probable conservative, potential resource may exist at Una # 1 Adit in the order of 1,000 tonnes grading 12-15g/t. The small tonnage limits the economic of mining the single lode shoot below the #2 stope. If additional lodes can be located, which appears likely, mining small high grade shoots in conjunction will likely be economic.

## 9.0 CONCLUSIONS

The portion of EL 23/92 located at headwaters of the Dorset River and Dan Rivulet is highly prospective for hard rock gold deposits. The regional structure in the area, postulated to be a dextral shear zone has been partially confirmed by mapping. The individual lodes of the Una and Hinemoa mine areas are extensive with strike lengths up to 550m. The setting has many similarities to the structural regime at the New Golden Gate Mine which produced over 250,000 oz of gold.

At Hinemoa, economic mineralisation has been located at the northern and southern extremities of the known workings. The prospects location, straddling the EL boundary, has precluded detailed work until a JV can be negotiated with the holder of the adjacent licence.

The area north of Hinemoa and south of Una is considered highly prospective as the regional structural elements appear to intersect in the region.

The east/west extent Una workings (50 to 70 metres) suggest that the extensive regional structure (Mangana to Lyndhurst) is confined in this region. Dextral shearing, strike extensive lode development and very high individual grades have been defined. Known individual lodes appear to be limited to 500 to 1000 tonnes of probably 15-30 g/t Au.

It is highly likely that the surface expression of the regional structure is duplicated at depth. Distinct possibilities exist of significant individual or multiply lode deposits being present at depth below the Una workings.

Detailed creek and ridge mapping program will be undertaken from the Mt. Albert Road saddle southward to the Hinemoa workings during the next reporting period. The postulated presence of C and S fabric development and its association with high grades within the shear zone will be investigated.

Diamond drilling, both shallow and deep is proposed at sites which appear prospective based upon the results of mapping.

The joint venture negotiation with Cuttack Mining will be re-instigated. This will allow exploration in the Hinemoa area to be carried out to the full extent of the prospect. Mapping, sampling, potential diamond drilling and bulk sampling is recommended for the area.

## REFERENCES

- Akerman, T.E. (1995a). Trenching Program, Alberton. 6M/95. Unpublished internal report, Mancala Pty. Ltd.
- Akerman, T.E. (1995b). Annual Report, Exploration Licence 23/92. 7 Sept. 1995. Unpublished internal report, Mancala Pty. Ltd.
- Akerman, T.E. (1996). Proposed Work Program, EL 23/92. Una Workings. Unpublished internal report, Mancala Pty. Ltd.
- Danielson, M.J. 1973. Geological evaluation of SPL 107, N.E. Tasmania. Geopeko Ltd Report. KI/73/1 [TCR 73-952]
- Hills, C.L. (1923). *The Mount Victoria Goldfield. Unpublished Report Tasmania Department of Mines.* 1923:35-66
- Keele, R.A, Taheri, J. and Bottrill, R.S. (1994). Structure and veining in the Devonian-aged Mathinna-Alberton Gold Lineament, northeast Tasmania *Report 1994/06, Mineral Resources Tasmania.*
- Mitchell, P.R. (1980). *Geological appraisal of the Dan Rivulet area (EL31/76), Mathinna Tasmania.* ACA Howe Aust. Pty. Ltd. (TCR 80-1446).
- Newnham, L.A. (1992) Exploration licences 22/92 and 23/92, North-East Tasmania *Review of previous exploration information.* Unpublished report, Newcrest Mining Limited.
- Pearson, D.F. (1993). *Annual report for exploration licences 22/92 Tower Hill, 23/92 Alberton and 34/92 Mt. Saddleback, Tasmania 9 October 1992 to September 1993.* Newcrest Mining Limited.
- Powell, C. McA. (1991). Structure of the Beaconsfield and Lefroy goldfields. *Report 1991/16 Division of Mines and Mineral Resources Tasmania.*
- Taheri, J. (1992). Northeast Goldfields: A summary of the Tower Hill, Mathinna and Dans Rivulet Goldfields. *Report 1992/10, Mineral Resources Tasmania.* 1993/34.
- Taheri, J. (1993). Northeast Goldfields: A summary of the Alberton Goldfield. *Report 1993/34 Mineral Resources Tasmania.*
- Threader, V.M. (1967). The geology of the Magana-Waterhouse Goldfield. M.Sc. Thesis, University of Tasmania: Hobart.
- Wilson, G. (1988). (ed.) *As The River Flows.* Ringarooma Council. Tasmania.
- Twelvetrees, W. H. (1904). *Report on the Mount Victoria goldfield.* Department of Mines, Tasmania.

356039

APPENDIX 1

PETROGRAPHIC AND MINERAGRAPHIC DESCRIPTIONS

SAMPLES SRC189, 190, 191

By Roger Townend and Associates



# Mancala Pty Ltd

A.C.N. 056 204 267

## Mine Management & Contracting

P.O. Box 240  
Launceston Tas 7250

Ph: (003) 347576  
Fax: (003) 340215

Roger Townend and Associates  
PO Box 120 Bentley,  
W.A. 6102

356040

2/4/96

Dear Roger,

As per our telephone conversation of early February, I am enclosing three samples of Au ore from one of our N.E. Tasmania prospects. I have examined them under 40 times scope. Free Au is apparent as are a number of sulphides.

Could you please provide provide a petrographic and mineragraphic description of each. Of particular interest is the size distribution (max, min and approximate mean (point counting not necessary at this stage)) and mineral association of Au. Alteration assemblage, estimated mineral abundances etc. are also required. Photomicrographs of Au occurrences would be useful.

Samples numbers and assay results are tabulated below:

SRC189 (largest slab), 20.70 g/t Au repeated at 9.72 and 13.80 g/t Au.

SRC191 (middle size slab), 36.1 g/t Au repeated at 40.8 g/t Au.

SRC192 (smallest slab), 37.9 g/t Au repeated at 106.6 g/t Au.

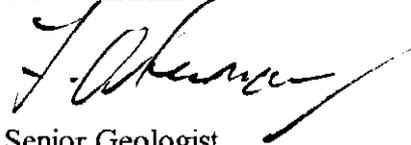
If any problem with the requirements etc please contact me at the above number.

I also enclose a purchase order for your records and invoice.

Thank you.

Regards,

Tim Akerman



Senior Geologist



# ROGER TOWNEND AND ASSOCIATES CONSULTING MINERALOGISTS

ACN 069 920 476

*Principal: Dr. Roger Townend*

PHONE: (09) 358 1138  
A/H: (09) 453 2640  
FAX: (09) 358 1139

336041

Tim Akerman,

1-5-96

Mancala Pty Ltd,

PO BOX 240,

Launceston,

Tas 7250

our ref. 96141

your ref. 00006962

Preparation of three polished thin sections of three  
rock samples and petrographic/mineragraphic  
examination. (SRC 189,191,192.)

R Townend

SAMPLE SRC 191  
-----

ROCK SAMPLE silicified breccia

POLISHED THIN SECTION

WALLROCK FRAGMENTS

QUARTZ MAJOR TO TRACE  
MUSCOVITE DOMINANT TO MINOR  
PLAGIOCLASE ACCESSORY  
RUTILE 1-2%  
GRAPHITE <1%  
APATITE <1%  
ZIRCON <<1%  
MONAZITE <<1%

QUARTZ DOMINANT  
CHLORITE ACCESSORY  
CHALCOPYRITE <<1%

VEINS  
QUARTZ  
CHLORITE

The rock represents a highly silicified sequence of sediments, that included shale/phyllite and more arenitic members. These sediments occur as minor relics within a dominant quartz. There are later quartz chlorite veins crossing all this.

The sediment fragments range from sub 0.1mm wisps to half cm + elongate blocks. Overall these are roughly aligned. The composition of these lithic fragments ranges from dominantly micaceous shale or phyllite essentially fine muscovite, to sandy pelitic with angular quartz and a rare distorted twinned plagioclase of 0.2mm. These sediments contain quite abundant fine TiO<sub>2</sub> oxides. The sediments are generally set in a quartz matrix that has a bladed texture with a similar preferred fabric to the sediment long axes. This quartz contains a fine chlorite component following the quartz lineation.

Unequivocal veins are mainly of quartz or of quartz chlorite. The former appears earlier and its internal linear fabric appears to reflect the wallrock fabric, ie it appears to have been tectonised. The chlorite bearing quartz vein, in contact appears post deformation. This contains a series of fine vermiform chlorites along its internal margin, typically of hydrothermal material. The quartz shows no evidence of deformation.

The section contains negligible opaques. These are a few thin strips of graphite in the pelitic band, and several sub 10 micron specks of chalcopryrite in the quartz. An SEM scan found no gold, some heavy minerals and several apatites to 0.25mm with silica inclusions.

SAMPLE SRC 189  
-----

ROCK SPECIMEN            arsenopyrite bearing quartz

POLISHED THIN SECTION

QUARTZ	DOMINANT
K FELSPAR	ACCESSORY
ARSENOPYRITE	MINOR TO TRACE
GALENA	TRACE
GOETHITE	TRACE
CHALCOPYRITE	TRACE

VEINS  
QUARTZ  
K FELDSPAR  
CHLORITE  
RUTILE

Five pieces of the rock were mounted in an attempt to get a representative section. These each measured 2 x 1 cm.

All chips are composed of VEIN QUARTZ containing disseminated ARSENOPYRITE. There is K FELDSPAR in veins.

There are minor late quartz veins crossing the main fabric, which itself is of widely varying textures. Individual quartz grains may exceed 5mm, and have a strongly undulose extinction. There are also patches of microcrystalline silica. Unlike SRC 191-2, it appears devoid of wallrock material, although there is some chlorite with fine rutile.

Apart from the ores, the non quartz appears only in veins. This is either K feldspar, or Chlorite. The former is in coarse discontinuous crosscutting bodies. The feldspar tends to be dusty simply twinned non sanidine type, to 0.4mm crystals. The chlorite is in separate narrow veins, rarely reaching a width of 0.3mm where it is associated with a brown translucent microcrystalline ?clay. Adjacent as re small rhombic casts, probably filled with oxidised As species such as scorodite.

The ores are > 95% arsenopyrite in erratic groups in all chips, with rhombic shapes dominant and sizes from sub 20 to 500 microns+. They are always fresh. There are several clusters that are intergrown with coarse goethite, possibly pyrite. One chip contains a few small anhedral grains of galena. In the vein quartz, there is rare fine chalcopyrite.

An SEM scan failed to detect gold.

SAMPLE SRC 192  
-----

ROCK SPECIMEN            silicified breccia.

POLISHED THIN SECTION

WALLROCK FRAGMENTS  
MUSCOVITE MAJOR  
QUARTZ MAJOR  
CHLORITE ACCESSORY  
RUTILE ACCESSORY  
GOETHITE MINOR  
HEAVY MINERALS TRACE  
ARSENOPYRITE TRACE  
GALENA TRACE  
GOLD TRACE

QUARTZ DOMINANT  
CHALCOPYRITE TRACE

VEINS  
QUARTZ DOMINANT  
CHLORITE ACCESSORY

The sample is similar to SCR 191. Thus it consists of relict sediments in secondary quartz. As above, there appear to have been several phases of silicification.

The wallrock varies again from pelitic to semi pelitic material. The former are smaller linear fragments of mica -rich shale, whereas the latter are a mixed shale arenite. The latter consists of sand sized angular quartzes ranging down to silt and a muscovite dominant matrix. There are patches of an orange phyllosilicate, which seem identical to an adjacent vein. This lithology is the site for the coarse goethites, as below.

There are several coarse goethite casts to a mm+ . The coarse equidimensional examples are probably ex pyrite, while the smaller acute rhombic shapes, after arsenopyrite., They are within the major sediment area. They have marked quartz pressure shadows. There is also quartz within the margins, either as irregular core, or narrow near margin developments. These can be riddled with very fine sulphides, that are confirmed by SEM as arsenopyrite and rare galena.

As for SRC 191 , the various lithic fragments tend to be similarly aligned. The smaller example are set in a quartzite that has a bladed moderately lineated fabric. There is also an orange tinted ? oxidised chlorite, an incipient foliation.

The quartz veins sensu stricto shows variation indisposition and texture. The major example across the foliation has a marked lineation parallel to the macrofabric, whereas minor veins in other directions lack this strong parallel fabric.

SRC 192. cont.

These veins are essentially monomineralic, and barren of mineralization apart from a trace of chalcopyrite. There also at the slide margin a narrow veins of ? iron stained chlorite.

An SEM examination of the goethite fine sulphide part found very fine argentian golds particles in the goethite casts, both of arsenopyrite and pyrite shapes. These particles were around micron sizes. Zircon was also present in the casts.

#### COMMENT

The lack of visible gold in these three sample is surprising , in view of the assays, although they are not of course of the identical pieces. In addition, the only gold detected was both extremely fine and argentian. Neither would be expected , for the poor assay agreement, and the presence of the silver in an oxidised host. Although wholly within silica, sulphur has been lost. It is concluded however that the bulk of the gold was rather coarse and although a major across section of the area of the three samples was examined, just did not appear in the polished surfaces.

With regard to the extremely fine gold in the goethite, perhaps this represents material that was originally in sold solution in the sulphide host, although recent probe studies of arsenopyrites and pyrites do not mention the presence of silver.

PHOTO 1. SRC 189. QUARTZ VEIN TEXTURE. FIELD WIDTH 2MM

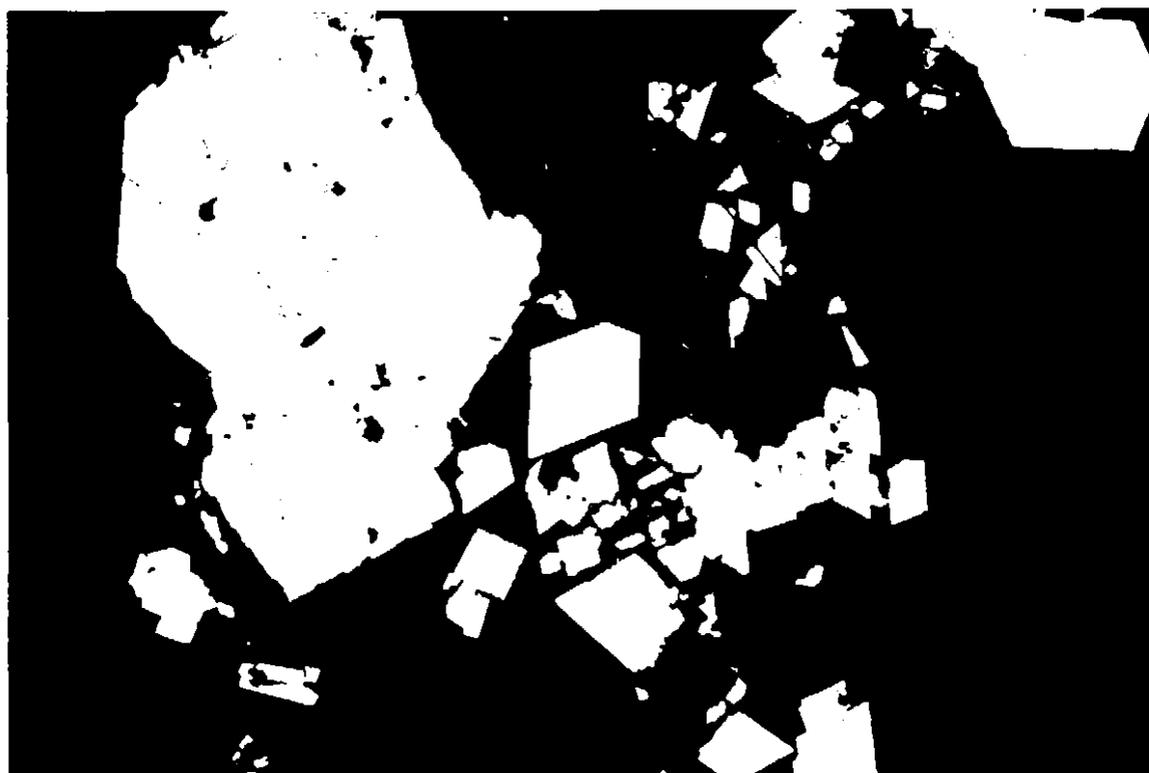
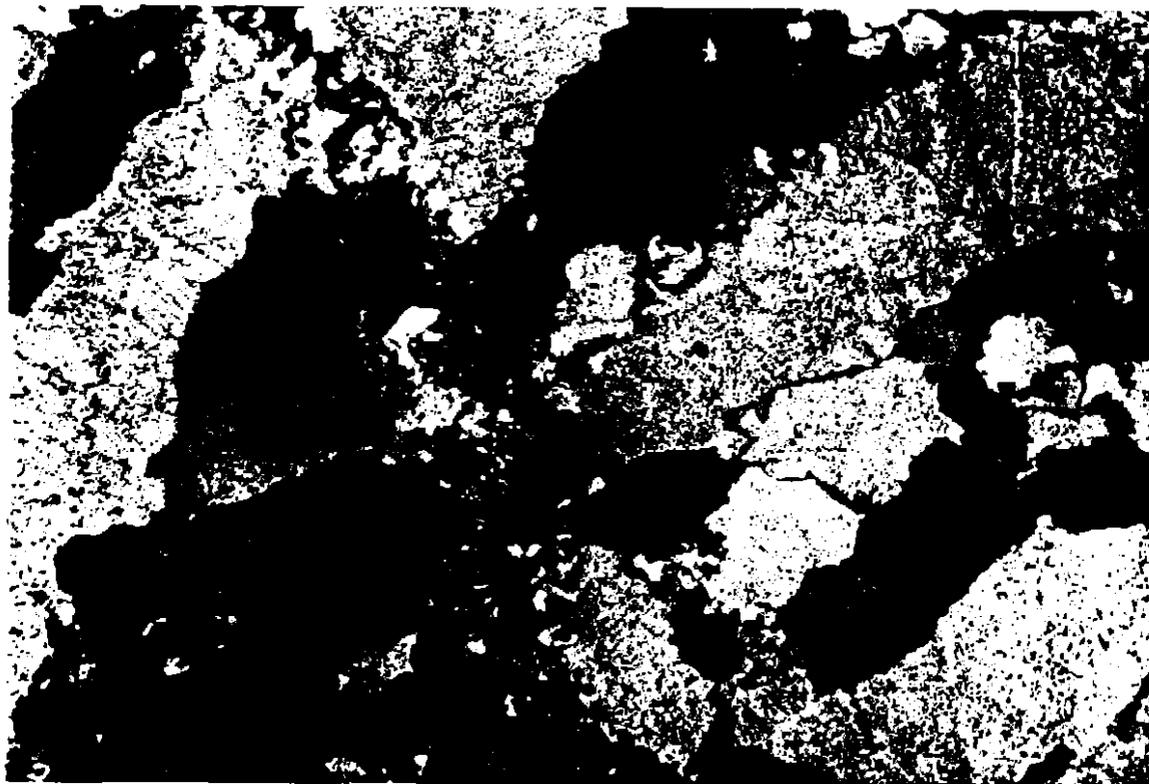


PHOTO 2. SRC 189. ARSENOPYRITE CLUSTER IN QUARTZ. FIELD WIDTH 0.54MM

PHOTO 3. SRC 191. PELITIC LITHIC FRAGMENTS IN FINE SILICEOUS MATRIX. FIELD WIDTH 2MM

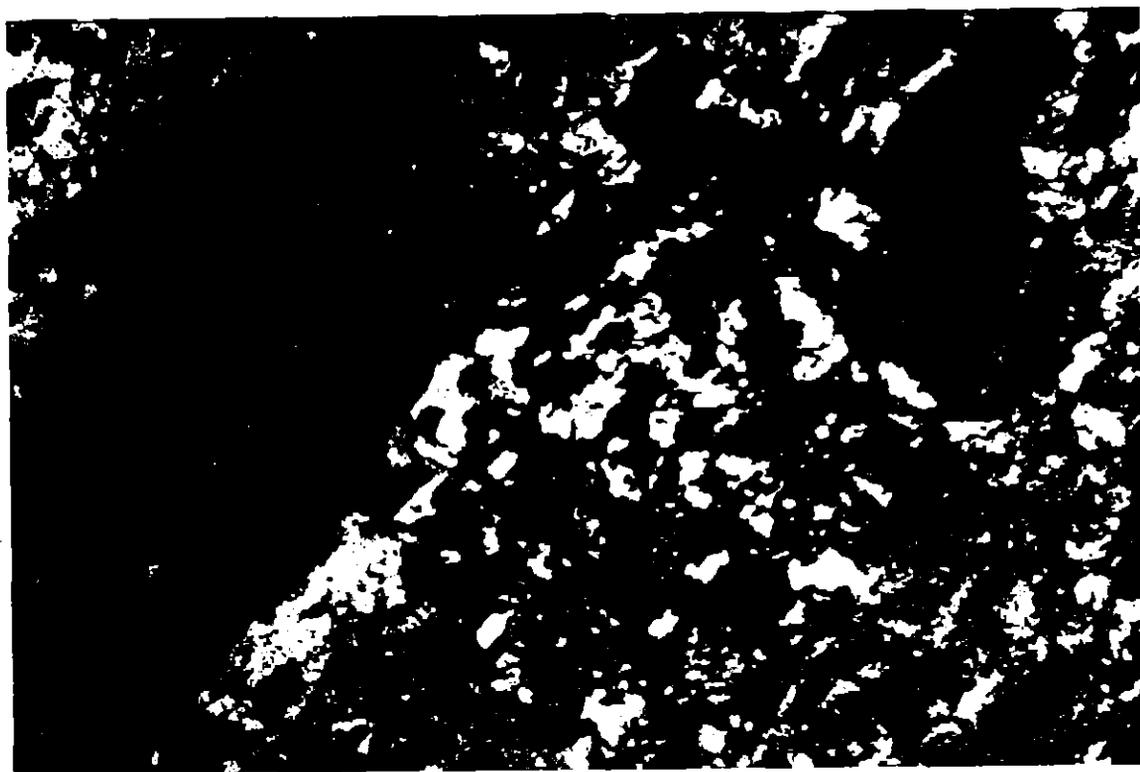
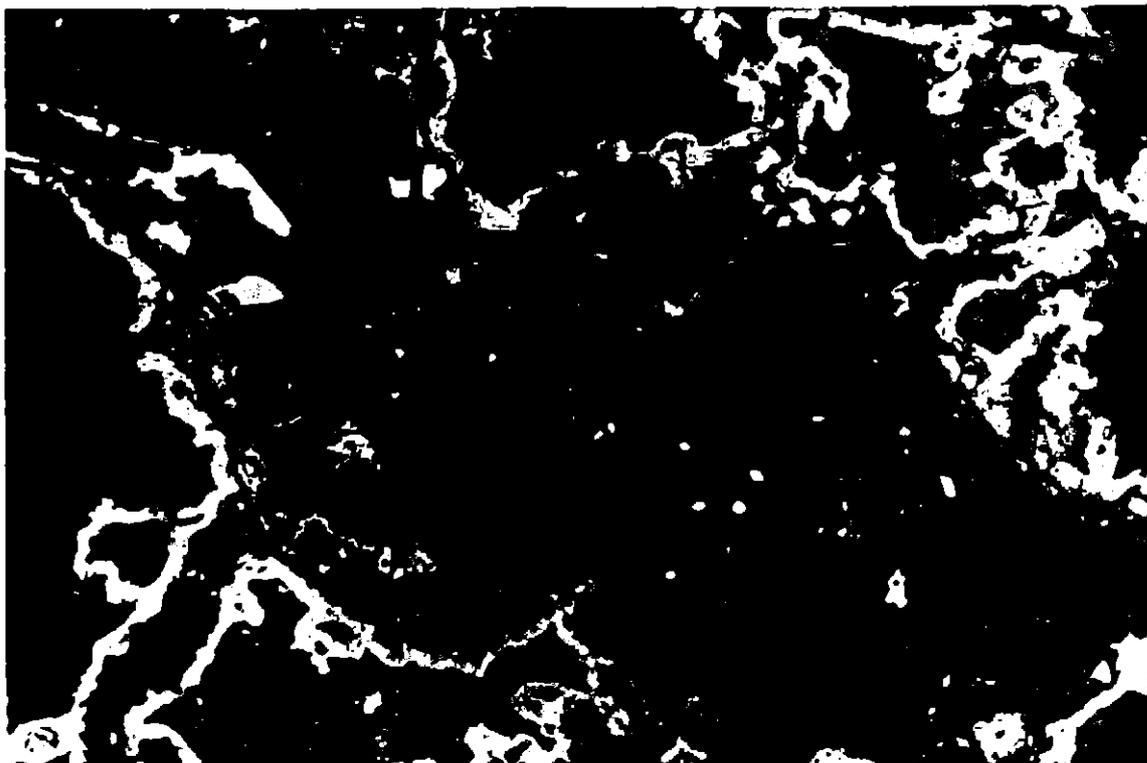


PHOTO 4. SRC 192. SEDIMENT FRAGMENTS IN SILICA MATRIX. FIELD WIDTH 2MM

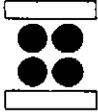
PHOTO 5. SRC 192. FINE ARSENOPIRITE IN QUARTZ WITHIN LARGE  
GOETHITE CASTS EX SULPHIDES. FIELD WIDTH 0.54MM



APPENDIX 2

MAPPING SHEETS

HINEMOA MINE



# Mancala Pty Ltd

## Mine Management & Contracting

380030

P.O. Box 240  
Launceston Tas 7250

A.C.N. 056 204 267

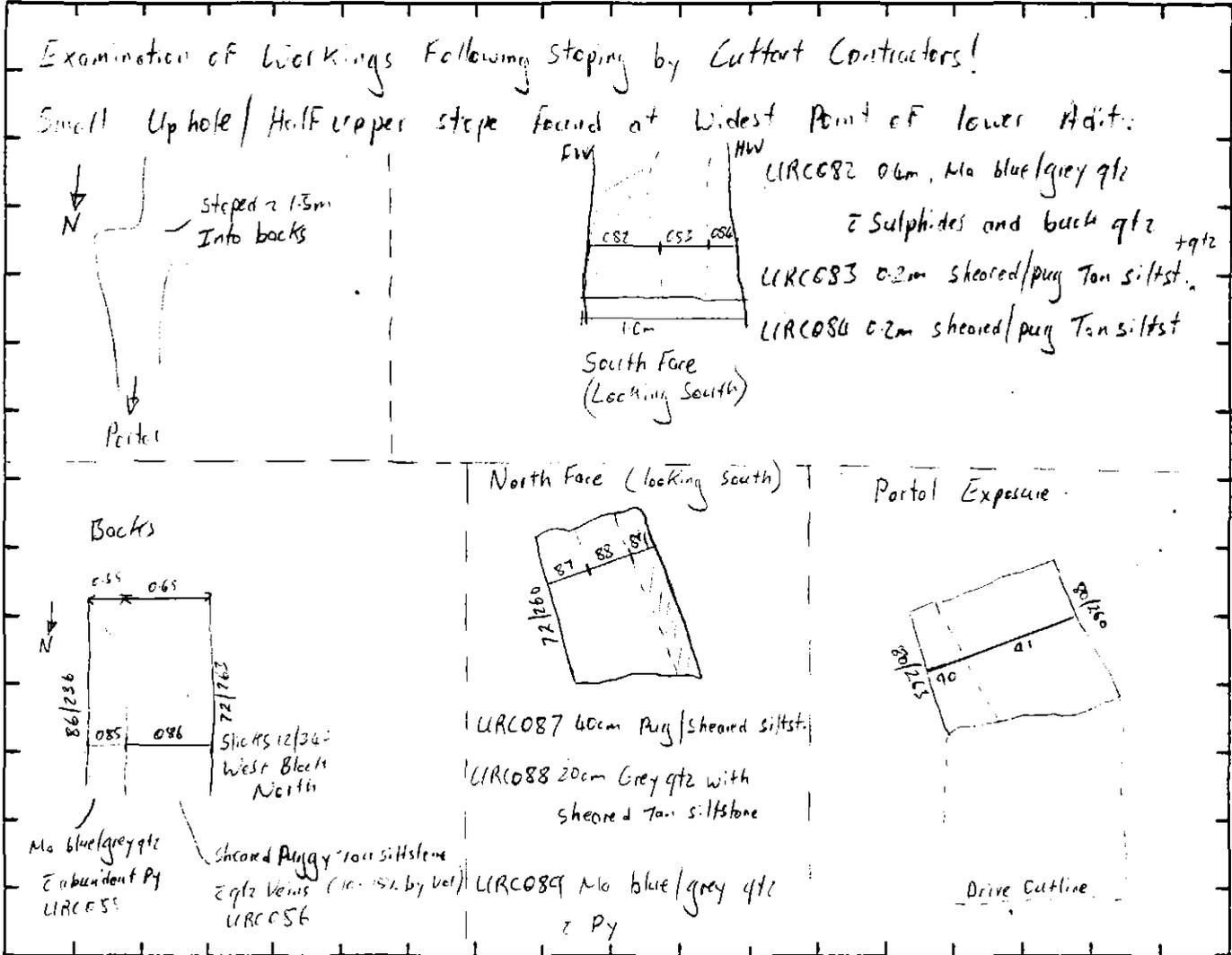
TENEMENT  
23/92

### MAPPING SHEET

GEOLOGIST  
TEA

SCALE NTS      DATE 23/2/96      PAGE 1 of 1

LOCATION Hinemaa Mine Lower #1 Adit.



### SAMPLING

URCO90 Semi Mn grey qtz with Puggy (20%)  
URCO91 sheared/puggy Tan siltstone 90%

ASSAY BY Anolabi

ASSAY DATE

Sample No.	From	To	Au g/t	g/t		Au (Ave)
URCO82			1.050			
083			1.200			
084			0.311			
085			1.120			
086			0.145			
087			0.232			
088			2.510	3.080		2.795
089			0.788	1.230	0.810	0.943
090			0.764			
091			2.500			
SUM						

APPENDIX 3  
MAPPING SHEETS  
UNA WORKINGS

# Mancala Pty Ltd

Mine Management & Contracting

336052

P.O. Box 240  
Launceston Tas 7250

A.C.N. 056 204 267

TENEMENT

EL 23/92

MAPPING SHEET

GEOLOGIST

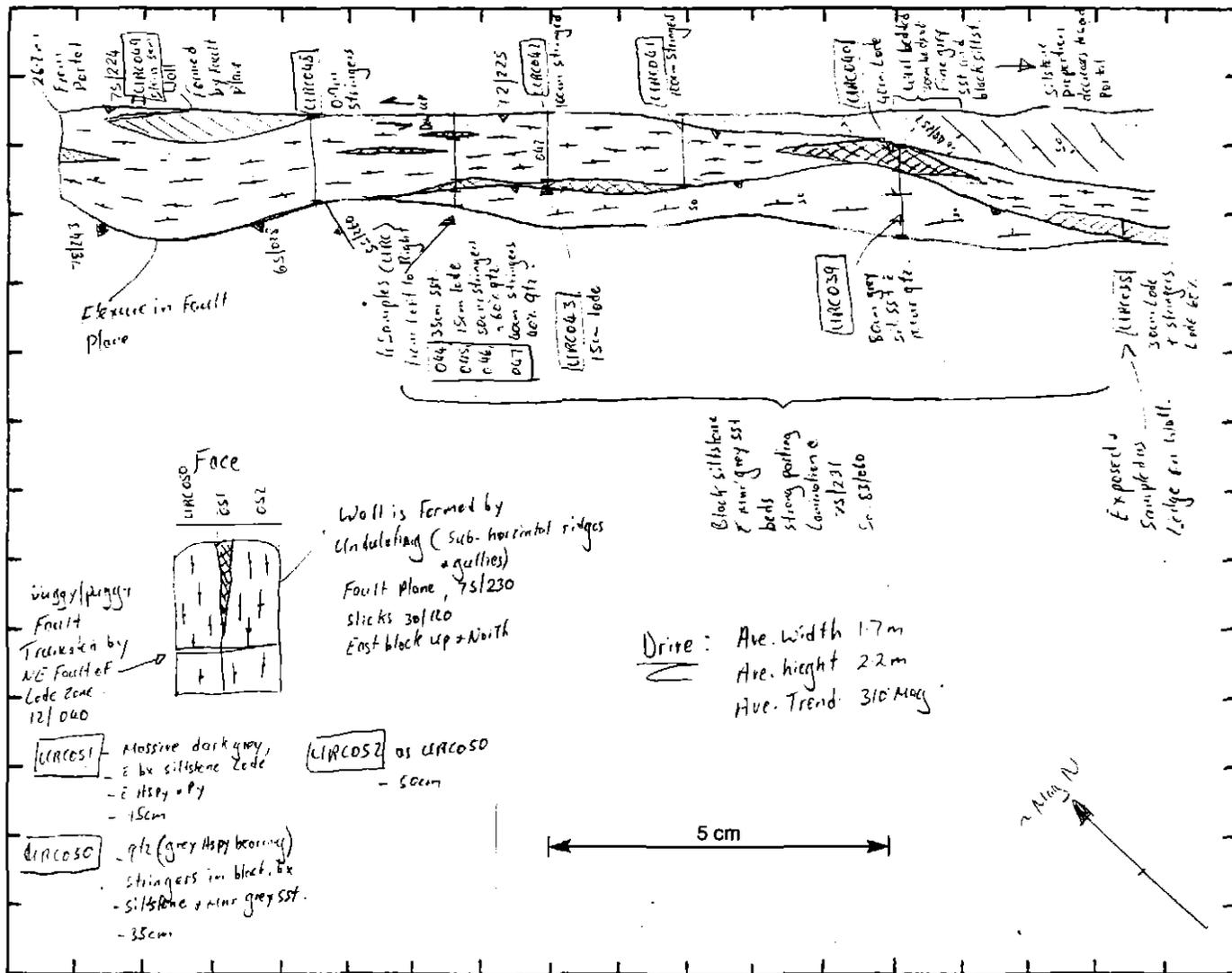
TEA

SCALE 1:100

DATE 11/9/95

PAGE 1 of 2

LOCATION UPR #2 ADIT All Measurements in Mag. N, Brick Mapping



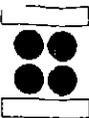
## SAMPLING

ASSAY BY Aquatic Lab.

ASSAY DATE 17/4/95

Sample No.	From	To	Au g/t	Ag g/t	As %	L. th.
URCS03		15cm	6.3			Lode
044		35cm	0.48			SST
045		15cm	6.7			Lode
046		50cm	4.0			Stringers
047		40cm	0.4			Stringers
048		90cm	3.1			Stringers
049		5cm	0.15			Fault skin
050		35cm	0.15			Stringers
051		15cm	8.0			Lode
URCS11		50cm	0.33			Stringers

FACE  
1.0m @  
1.41 g/t.  
Pill sampled



# Mancala Pty Ltd

## Mine Management & Contracting

P.O. Box 240  
Launceston Tas 7250

A.C.N. 056 204 267

336053

TENEMENT

EL 23192

MAPPING SHEET

GEOLOGIST

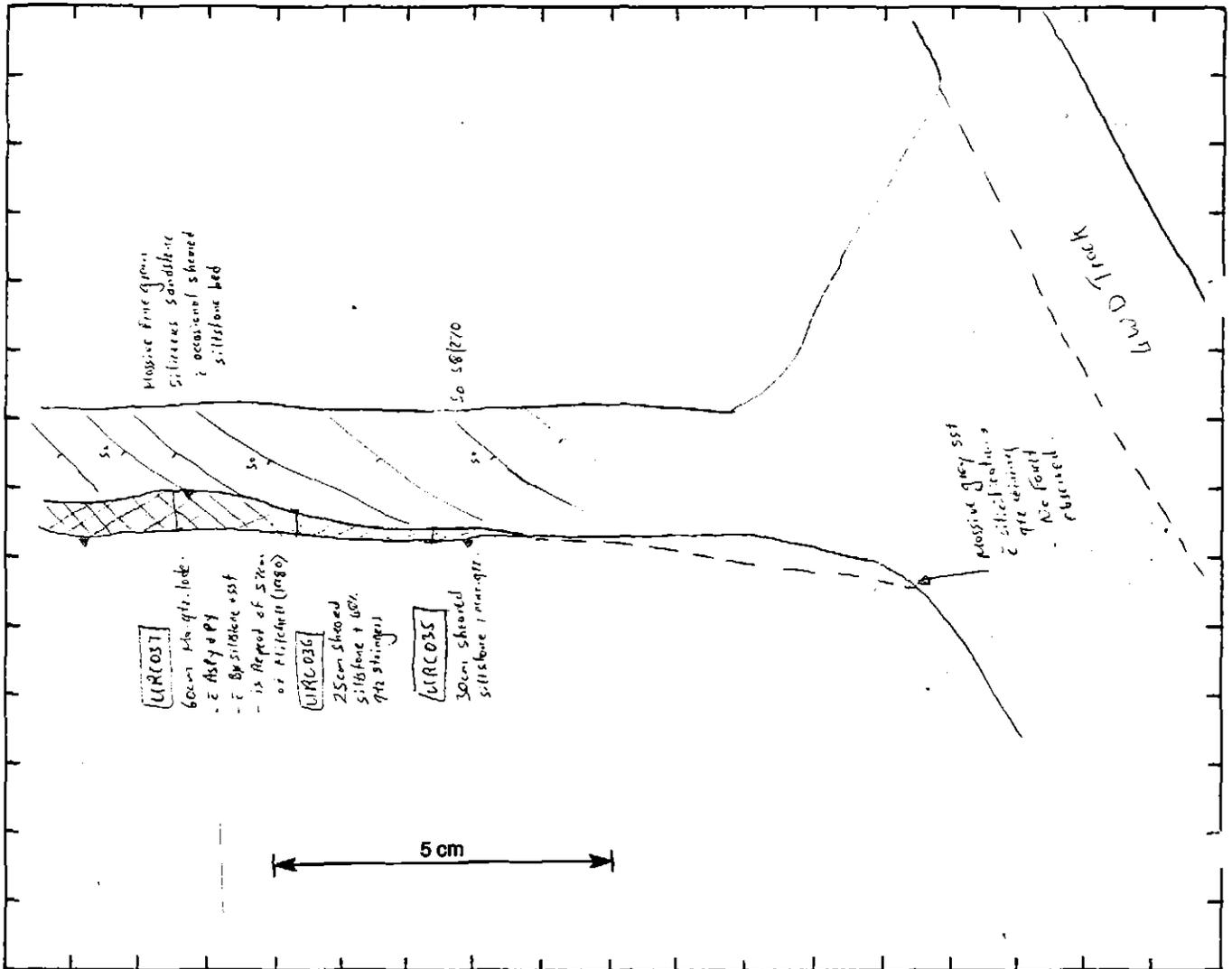
TEA

SCALE 1:100

DATE 11/9/95

PAGE 2 of 2

LOCATION UNA #2 Adit, Back Mapping



### SAMPLING

ASSAY BY Aquatic Lab

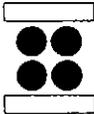
ASSAY DATE 17/9/95

Sample No.	From	Width <del>mm</del> (cm)	Fe	Au g/t	Ag g/t	As %	Litho.
URC035		30cm		0.20			siltstone
036		25cm		0.15			siltstone
037		60cm		13.0			Lode
038		30cm		15.5			Lode
039		80cm		<0.05			sst
040		40cm		<0.05			Lode
041		100cm		0.68			Stringers
042		100cm		0.24 (Ave)			Stringers
SIIM							









# Mancala Pty Ltd

## Mine Management & Contracting

P.O. Box 240  
Launceston Tas 7250

A.C.N. 056 204 267

336057

TENEMENT

23/92

MAPPING SHEET

GEOLOGIST

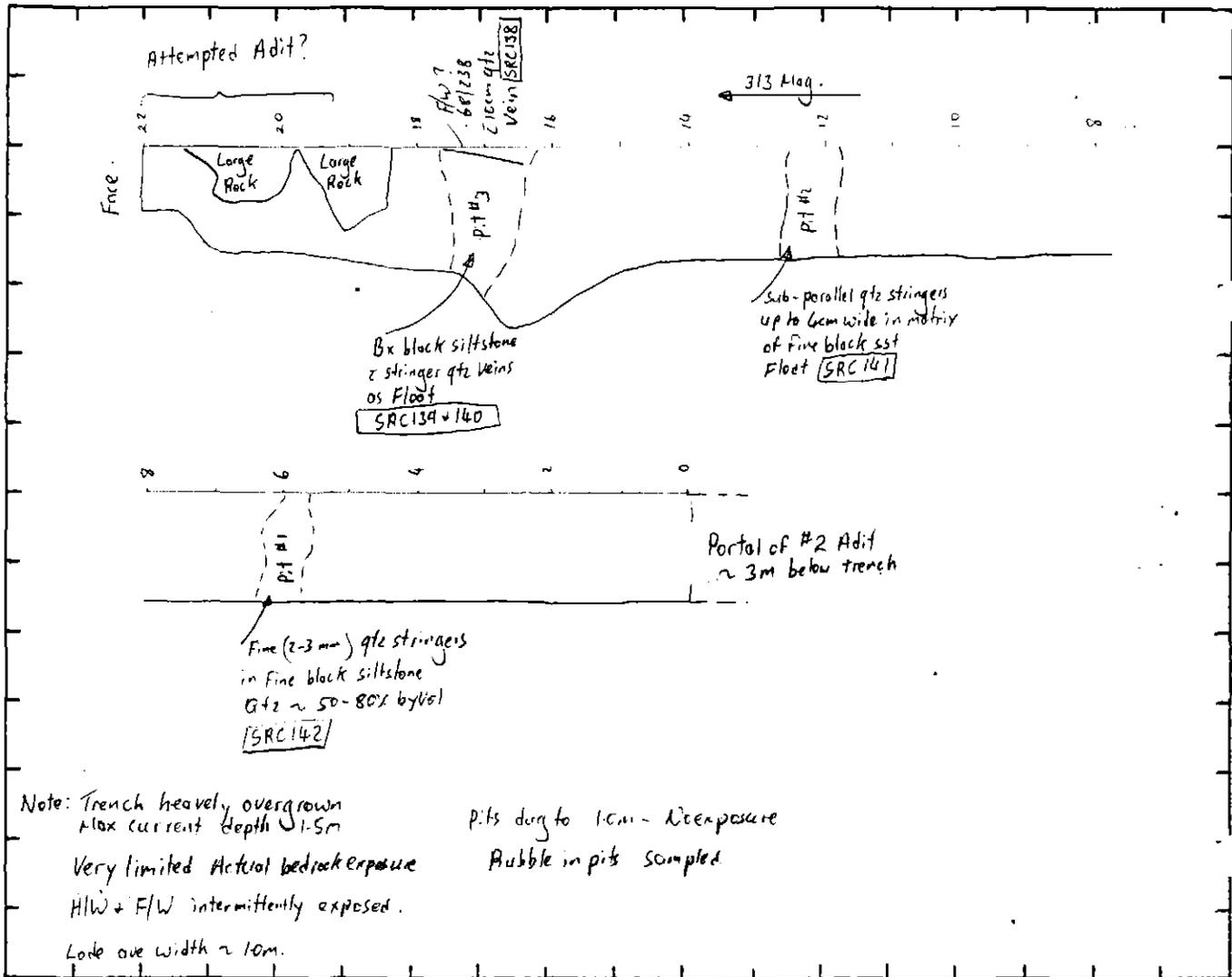
TEA

SCALE

DATE 30/1/96

PAGE 1 of 2

LOCATION UWA Trench #1, Adit #2 Lode



### SAMPLING

ASSAY BY Analabs

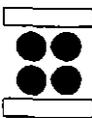
ASSAY DATE

Sample No.	From	To	Au g/t	Ag g/t	As %
SRC 136	0.0	0.5			
137	0.5	1.0	0.111		
138	Float	-	0.267		
139	"	-	1.100		
140	"	-	0.854		
141	"	-	0.141		
142	Float	-	0.042		









# Mancala Pty Ltd

## Mine Management & Contracting

P.O. Box 240  
Launceston Tas 7250

A.C.N. 056 204 267

356061

TENEMENT

23/92

### MAPPING SHEET

GEOLOGIST

TEA.

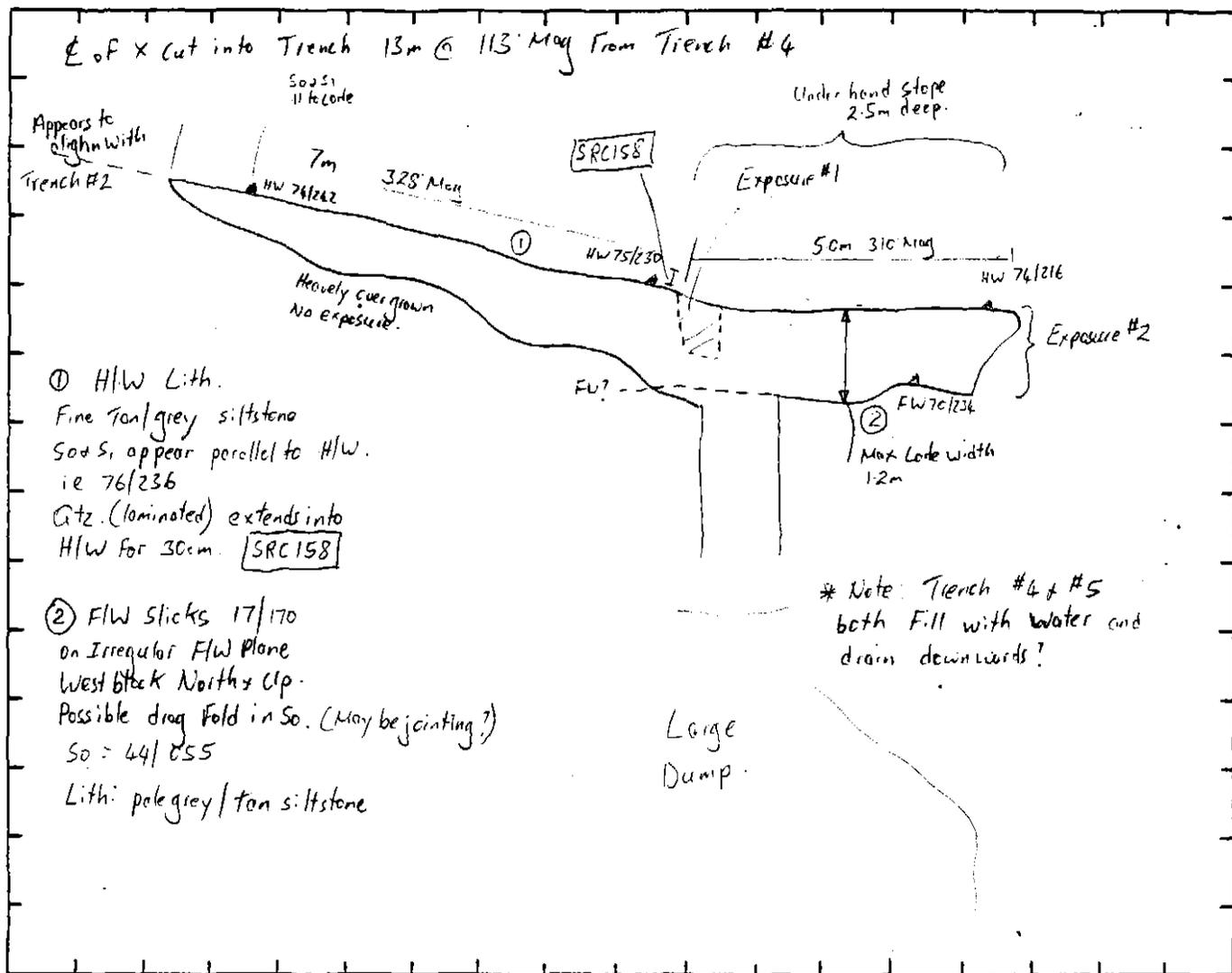
SCALE

DATE 7/2/96.

PAGE

1 of 2

LOCATION Unit Trench #5 Adit #2 Lode

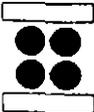


### SAMPLING

ASSAY BY Analabs

ASSAY DATE 23/02/96.

Sample No.	From	To	Au g/t	Au Ag g/t	Au As %
SRC158			0.187		
159			6.520	9.660	
160			2.150		
161			3.970		
162			3.970	6.680	5.50
163			0.239		
164			0.091		
165			1.99	21.8	
SUM					



# Mancala Pty Ltd

## Mine Management & Contracting

P.O. Box 240  
Launceston Tas 7250

A.C.N. 056 204 267

336067

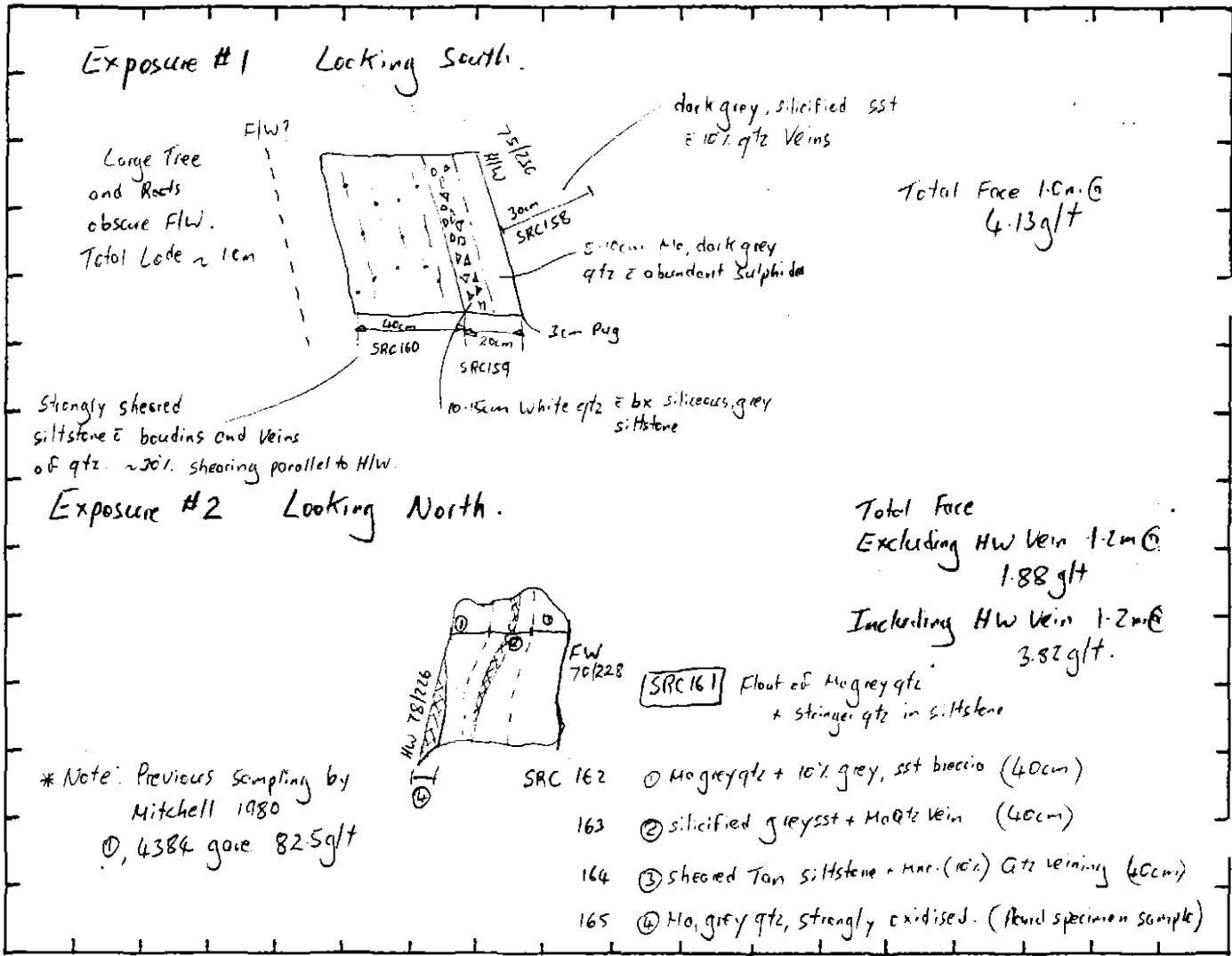
TENEMENT  
23/92

### MAPPING SHEET

GEOLOGIST  
TEA.

SCALE \_\_\_\_\_ DATE 7/2/96. PAGE 2 of 2

LOCATION UNIT Trench #5, Adit #2 Lode



### SAMPLING

ASSAY BY Ana labs

ASSAY DATE 23/02/96

Sample No.	From	To	Au g/t	Ag g/t	As %	Au Ave.
SRC158	HW	0.30	0.187			
159	0.8	1.0	6.52	9.660		8.090
160	0.4	0.8	2.150			
161	float	-	3.970			
162	0.0	0.4	3.970	6.480	5.50	5.317
163	0.4	0.8	0.239			
164	0.8	1.2	0.091			
165	0.0	0.15	19.900	21.8		20.85

(Prev. sample 82.5g/t)



# Mancala Pty Ltd

## Mine Management & Contracting

P.O. Box 240  
Launceston Tas 7250

A.C.N. 056 204 287

356063

TENEMENT  
23/92

### MAPPING SHEET

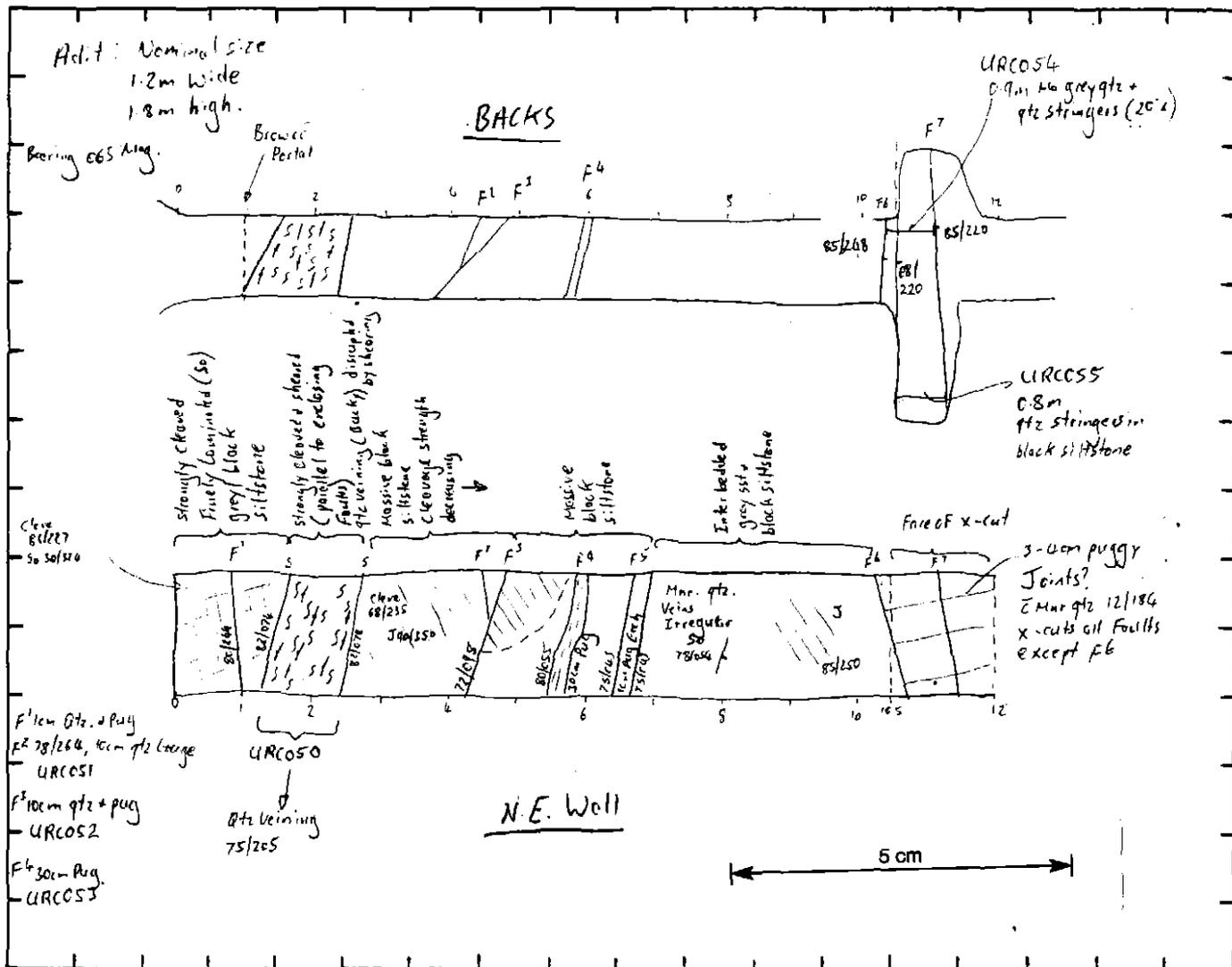
GEOLOGIST  
TEA

SCALE 1:100

DATE 8/2/96

PAGE 1 of 4

LOCATION U1A Adit #5



### SAMPLING

ASSAY BY Analebs

ASSAY DATE 23/02/96

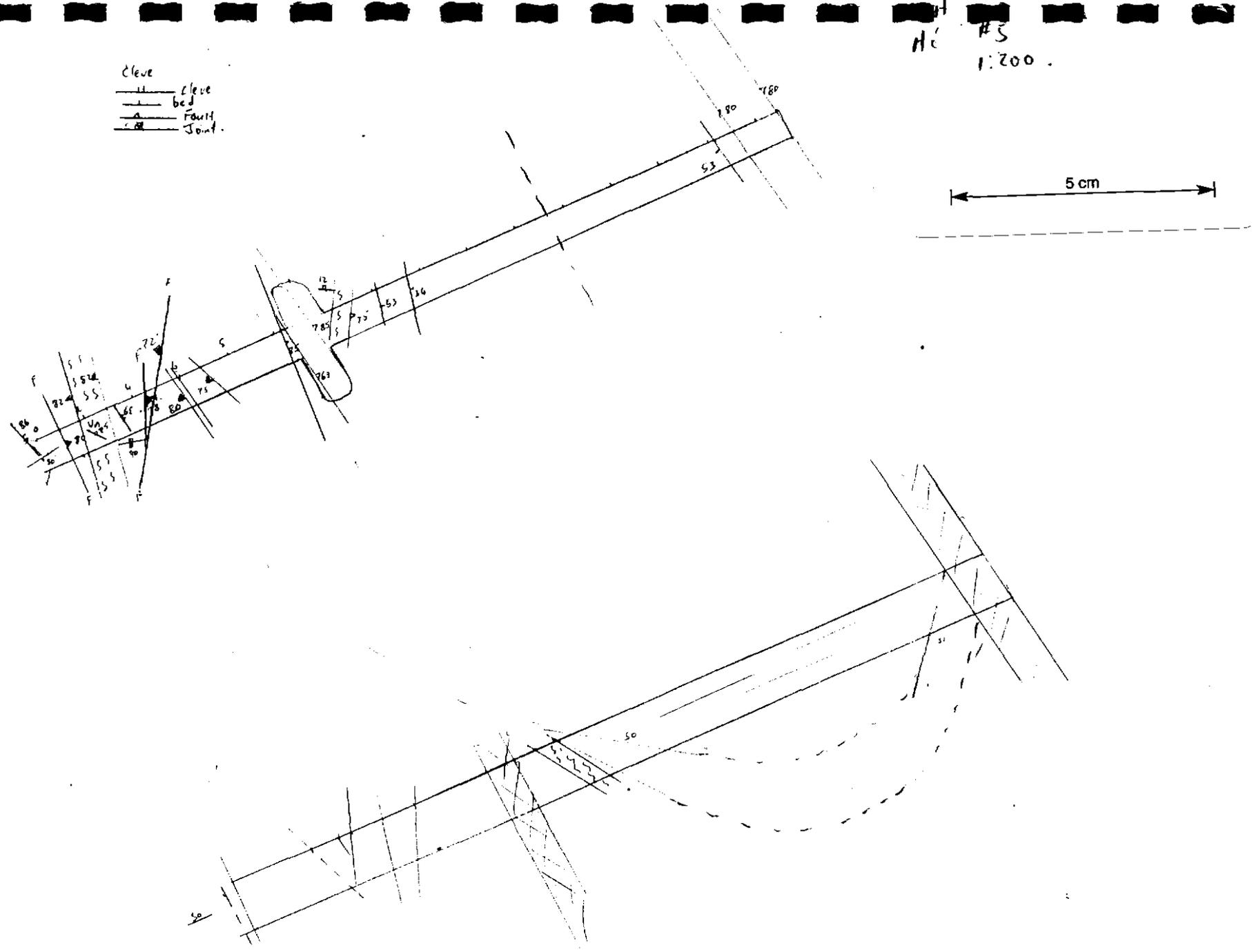
Sample No.	From	To	Au g/t	Ag g/t	As %
URC050	1-3	2-4	0.016		
051			0.265		
052			0.201	0.385	
053			0.666		
054			1.910	1.990	
055			0.067		
SUM					



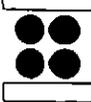
Hc #5  
1:200.

Cleave

— —	Cleave
— —	bed
— —	Fault
— —	Joint



350005



# Mancala Pty Ltd

## Mine Management & Contracting

P.O. Box 240

Launceston Tas 7250

A.C.N. 056 204 267

336060

TENEMENT

23/92

### MAPPING SHEET

GEOLOGIST

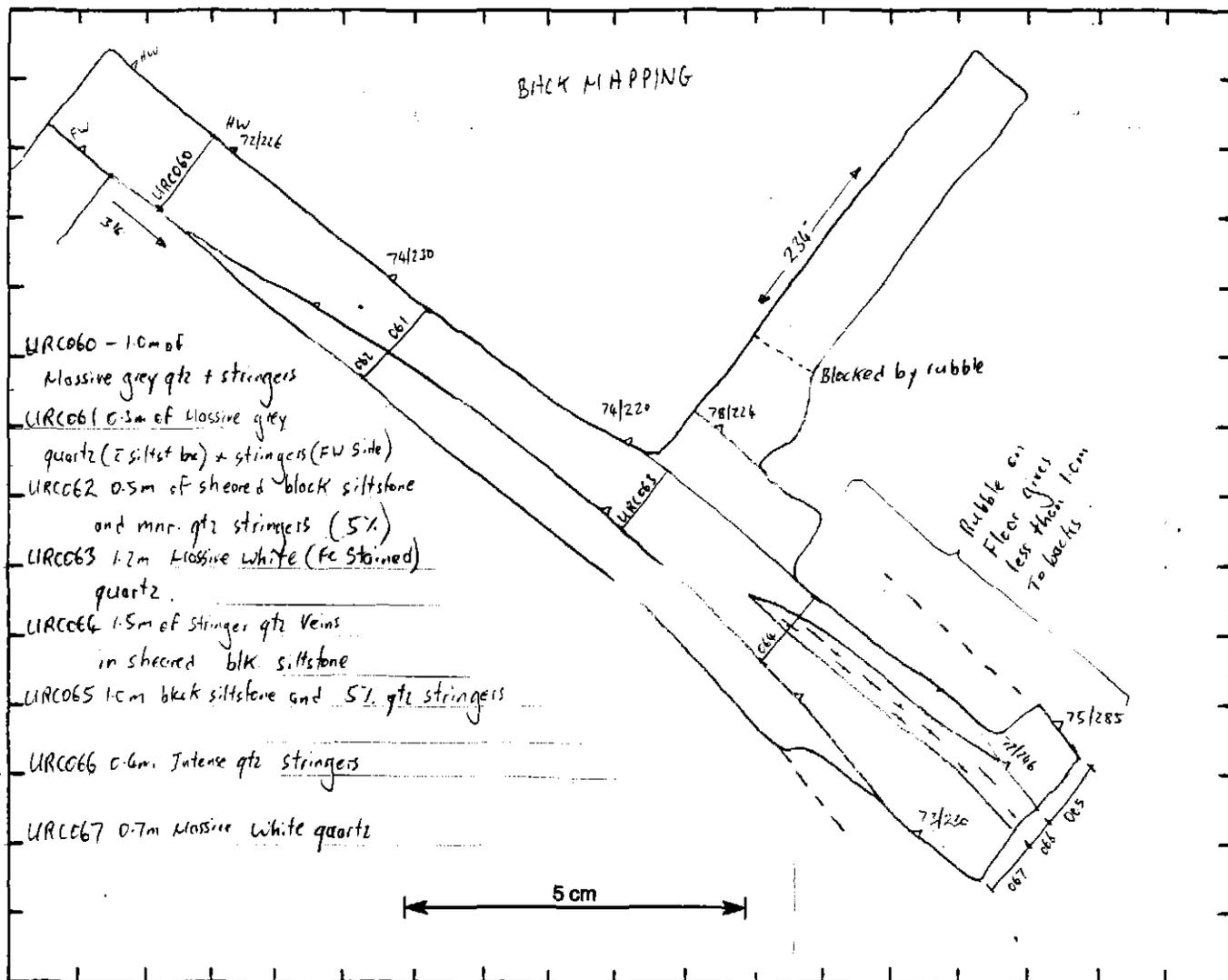
TEA

SCALE 1:100

DATE 8/2/96

PAGE 4 of 4

LOCATION LINA, Adit #5



### SAMPLING

ASSAY BY Analabs

ASSAY DATE 23/02/96

Sample No.	From	To	Au g/t	Ag g/t	As %
URC060			1.770		
061			0.109	0.130	
062			0.060	0.076	
063			0.082		
064			0.073		
065			0.033		
066			0.052		
067			0.043		
SUM					



# Mancala Pty Ltd

## Mine Management & Contracting

P.O. Box 240  
Launceston Tas 7250

A.C.N. 056 204 267

336067

TENEMENT  
23/92

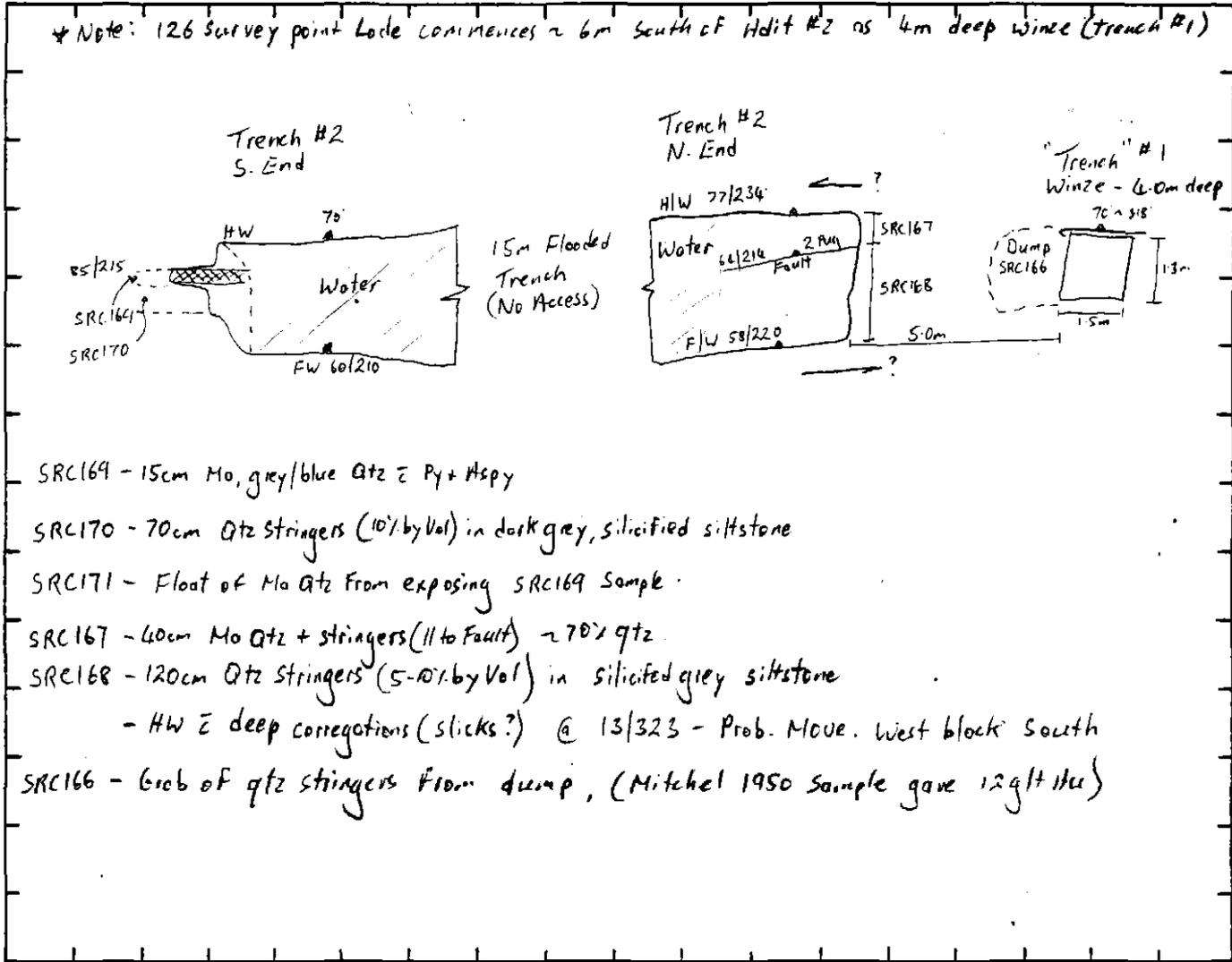
### MAPPING SHEET

GEOLOGIST  
TEA

SCALE NTS      DATE 19/2/96      PAGE 1 of 1

LOCATION 126 Survey Point Lode Trenches #1 + #2 (UNH Workings)

\* Note: 126 Survey point Lode commences ~ 6m South of Adit #2 as 4m deep Winze (Trench #1)



SRC164 - 15cm Mo, grey/blue Qtz ± Py + Hspy

SRC170 - 70cm Qtz Stringers (10% by Vol) in dark grey, silicified siltstone

SRC171 - Float of Mo Qtz from exposing SRC169 Sample.

SRC167 - 40cm Mo Qtz + stringers (11 to Fault) ~ 70% Qtz.

SRC168 - 120cm Qtz Stringers (5-10% by Vol) in silicified grey siltstone

- HW ± deep corrugations (slicks?) @ 13/323 - Prob. Move. West block South

SRC166 - Grab of Qtz stringers from dump, (Mitchel 1950 Sample gave 12g/t Au)

### SAMPLING

ASSAY BY Analabs

ASSAY DATE

Sample No.	From	To	Au g/t	g/t	As %	Au. (Ave)
SRC166			0.446		—	
167			0.542		—	
168			4.520	3.920	—	4.220
164			2.780		—	
170			0.165		—	
171			0.979		—	
					—	
					—	
					—	
					—	
					—	
SUM						



# Mancala Pty Ltd

## Mine Management & Contracting

P.O. Box 240  
Launceston Tas 7250

A.C.N. 056 204 267

350066

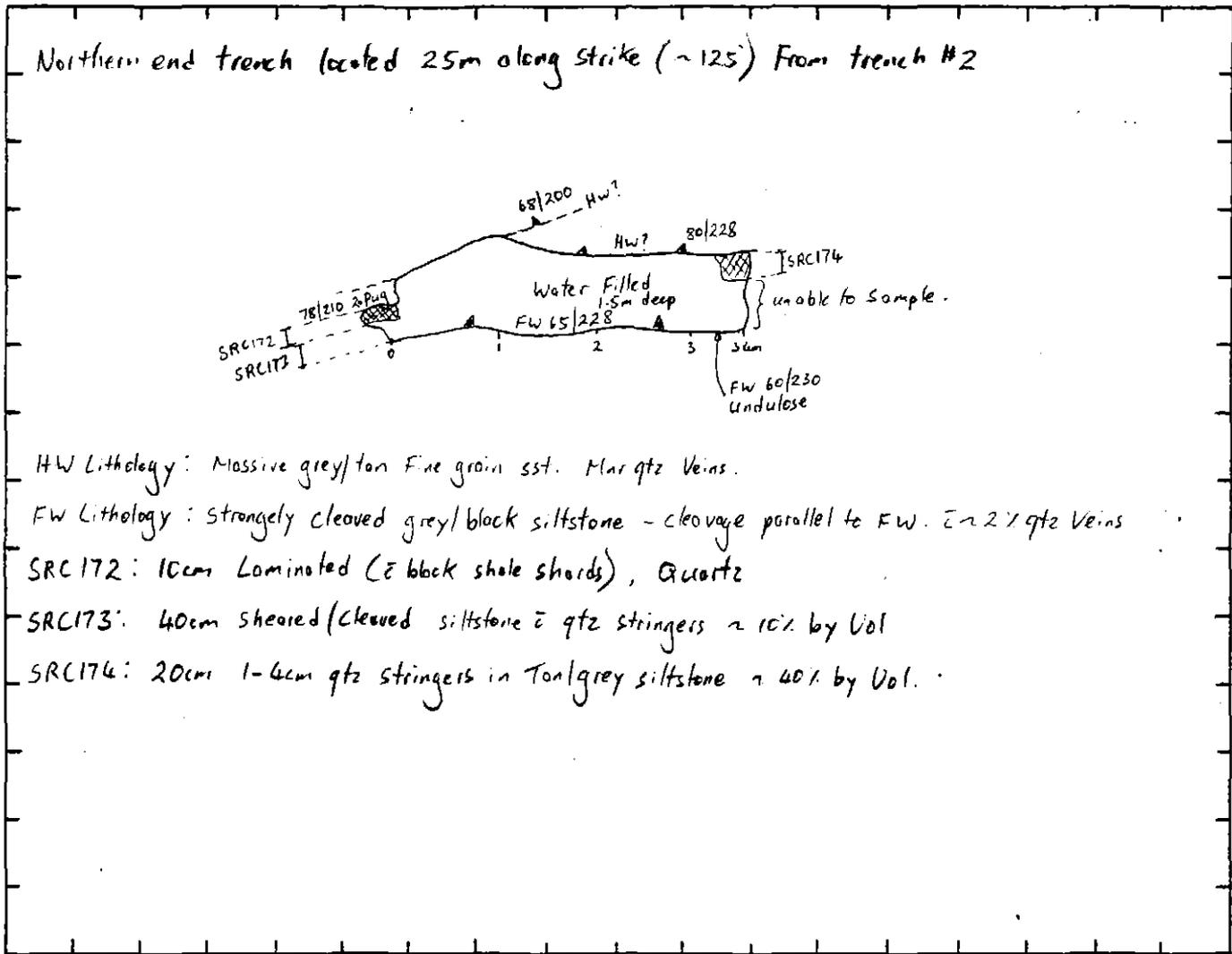
TENEMENT  
EL 23/92

### MAPPING SHEET

GEOLOGIST

SCALE NTS      DATE 19/2/96      PAGE 1 of 1

LOCATION UNA 126 Survey Point Lode Trench #3.



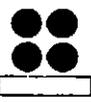
- HW Lithology: Massive grey/ tan Fine grain sst. Mn qtz Veins.
- FW Lithology: Strongly cleaved grey/black siltstone - cleavage parallel to FW.  $\bar{c}$  2% qtz Veins
- SRC172: 10cm Laminated ( $\bar{c}$  black shale shards), Quartz
- SRC173: 40cm sheared/cleaved siltstone  $\bar{c}$  qtz stringers  $\bar{c}$  10% by Vol
- SRC174: 20cm 1-6cm qtz stringers in Tan/grey siltstone  $\bar{c}$  40% by Vol.

### SAMPLING

ASSAY BY Anolabs

ASSAY DATE 1/3/96

Sample No.	From	To	Au g/t	g/t		Au. Ave.
SRC172			20.000	22.800	24.20	22.330
173			0.414			
174			0.331			
SUM						



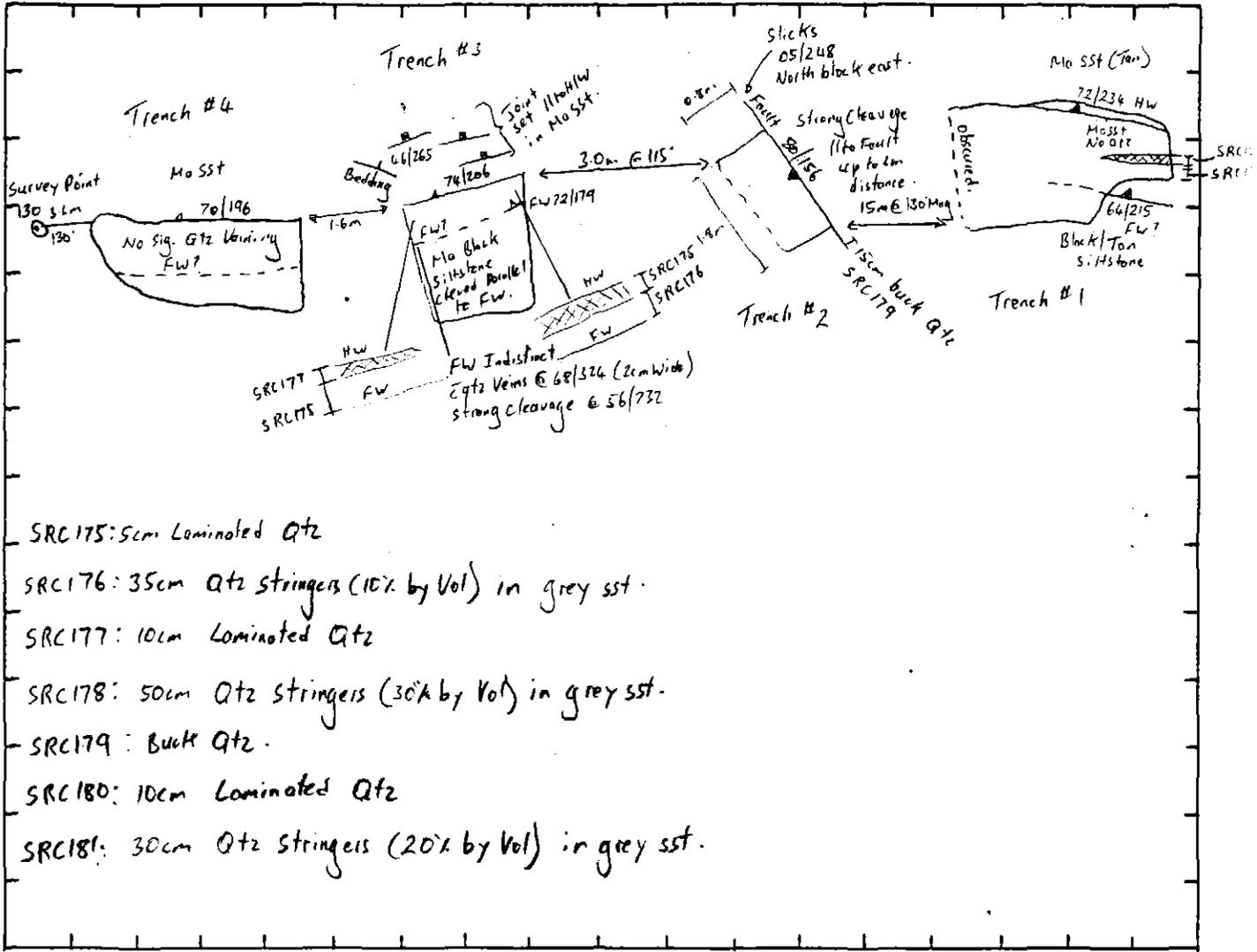
TENEMENT  
 23/92

**MAPPING SHEET**

GEOLOGIST  
 TEA

SCALE N.T.S.      DATE 20/2/96      PAGE 1 of 2

LOCATION UNA 130 Survey Point Lode



- SRC175: 5cm Laminated Qtz
- SRC176: 35cm Qtz stringers (10% by Vol) in grey sst.
- SRC177: 10cm Laminated Qtz
- SRC178: 50cm Qtz stringers (30% by Vol) in grey sst.
- SRC179: Buck Qtz.
- SRC180: 10cm Laminated Qtz
- SRC181: 30cm Qtz stringers (20% by Vol) in grey sst.

**SAMPLING**

ASSAY BY

ASSAY DATE

Sample No.	From	To	Au g/t	g/t		Au (Ave)
SRC175			1.310			
176			0.105			
177			19.000	6.860	22.8	16.22
178			2.190	1.990		2.090
179			0.073			
180			0.244			
181			0.061			
SUM						



# Mancala Pty Ltd

## Mine Management & Contracting

P.O. Box 240  
Launceston Tas 7250

A.C.N. 056 204 267

336070

TENEMENT

23/92

### MAPPING SHEET

GEOLOGIST

TEA

SCALE NTS

DATE 20/2/96

PAGE

2 of 2

LOCATION UNA

130 Survey Point Lode Trench #5

Trench #5 Located ~ 33m along Lode strike (~ 115 Mag) From Trench #4.

Cleavage Plane/Fault

↗ slicks 03/316 West block North.

80/042 ↘



Mo Tan/grey Fine grain sst. Strongly silicified.

↗ Irregular qtz (buck) Veining (No Sulphide)

SRC 182

Outcrop Mid way between Trench #4 & #5

Massive, Tan Fine grain sst. - strongly silicified.

↗ strong Parting Cleavage with 2-3cm buck quartz @ 70/037

↗ 10-15cm spaced Joints (↗ 2cm buck qtz) @ 80/327

### SAMPLING

ASSAY BY Analabs

ASSAY DATE

Sample No.	From	To	Au g/t	Ag g/t	As %
SRC 182			0.476		
SUM					



# Mancala Pty Ltd

## Mine Management & Contracting

P.O. Box 240  
Launceston Tas 7250

A.C.N. 056 204 267

330072

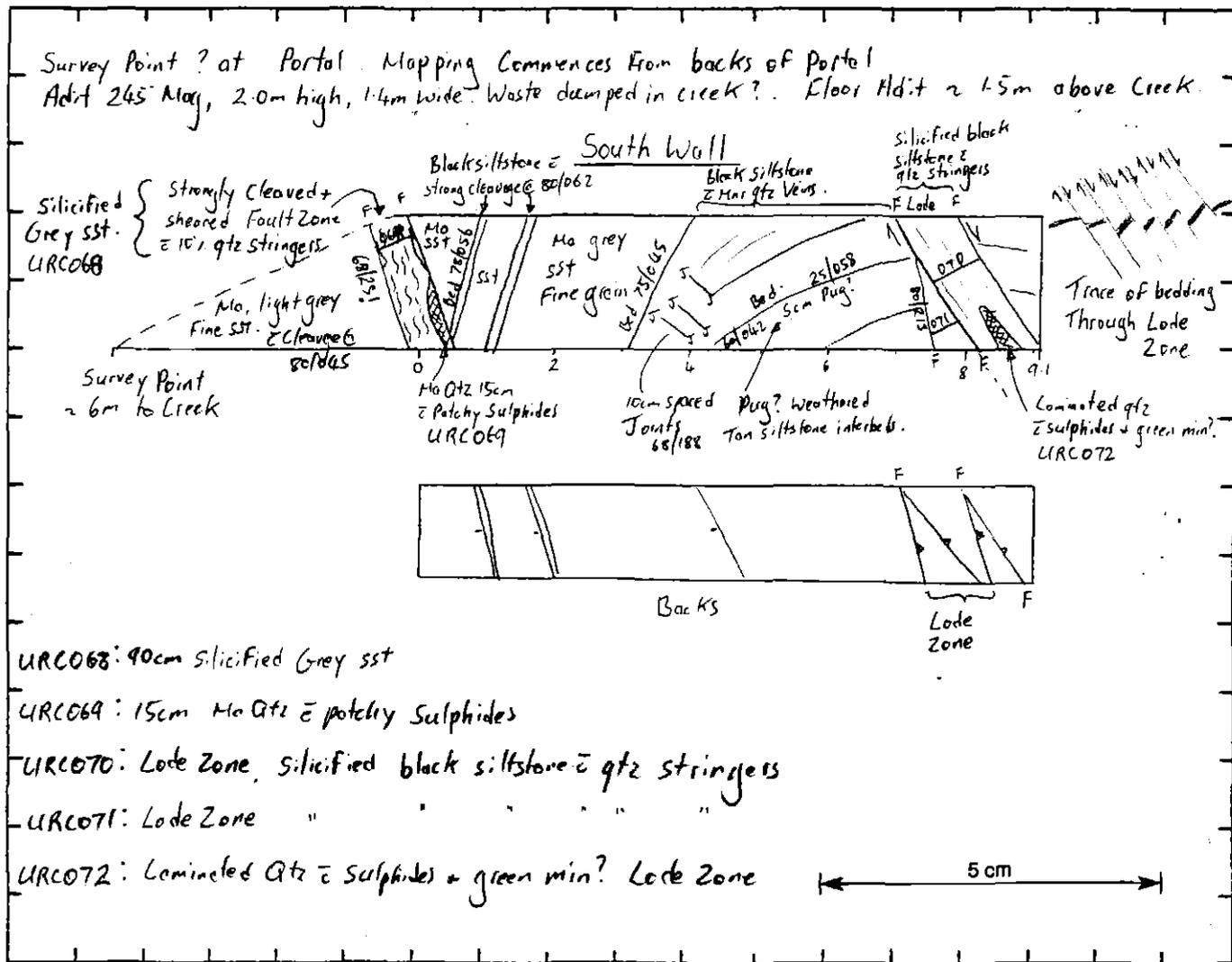
TENEMENT  
23/92

### MAPPING SHEET

GEOLOGIST  
TEA

SCALE 1:100      DATE 22/2/96      PAGE 1 of 2

LOCATION UNA Adit #3

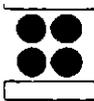


### SAMPLING

ASSAY BY

ASSAY DATE

Sample No.	From	To	Au g/t	Ag g/t	As %
URC068			0.056		
069			0.025		
070			0.373		
071			0.074		
072			0.833		
SUM					



# Mancala Pty Ltd

## Mine Management & Contracting

A.C.N. 056 204 267

P.O. Box 240  
Launceston Tas 7250

336072

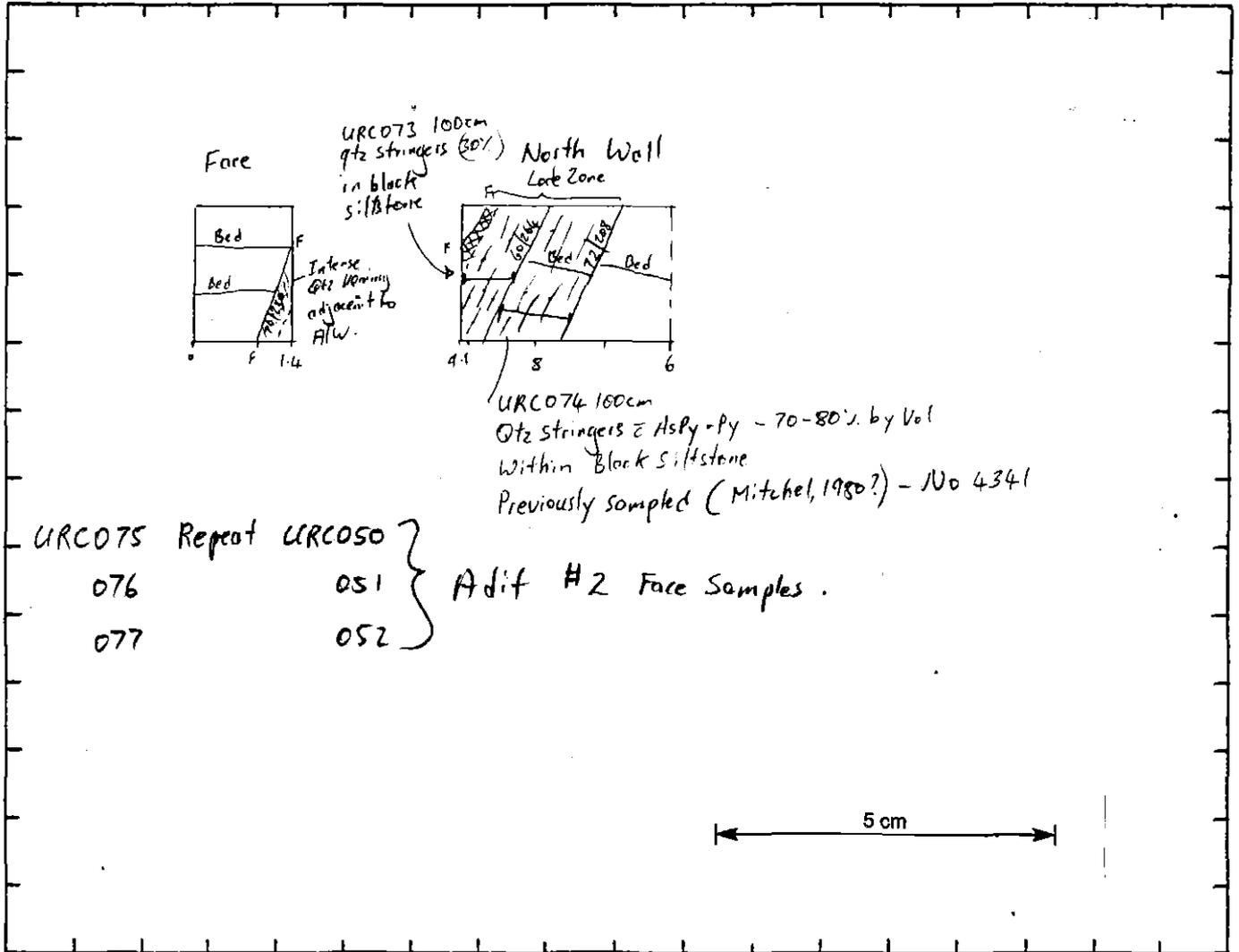
TENEMENT  
23/92

### MAPPING SHEET

GEOLOGIST  
TEA

SCALE 1:100      DATE 22/2/96      PAGE 2 of 2

LOCATION *UNA Adit #3*



### SAMPLING

ASSAY BY *Analabs.*

ASSAY DATE

Sample No.	From	To	Au g/t	Ag g/t	As %
URCO7			0.110		
74			0.535		
75			0.802		
76			11.350		
77			0.230		
SUM					



# Mancala Pty Ltd

## Mine Management & Contracting

P.O. Box 240  
Launceston Tas 7250

A.C.N. 056 204 267

336073

TENEMENT  
23/92

### MAPPING SHEET

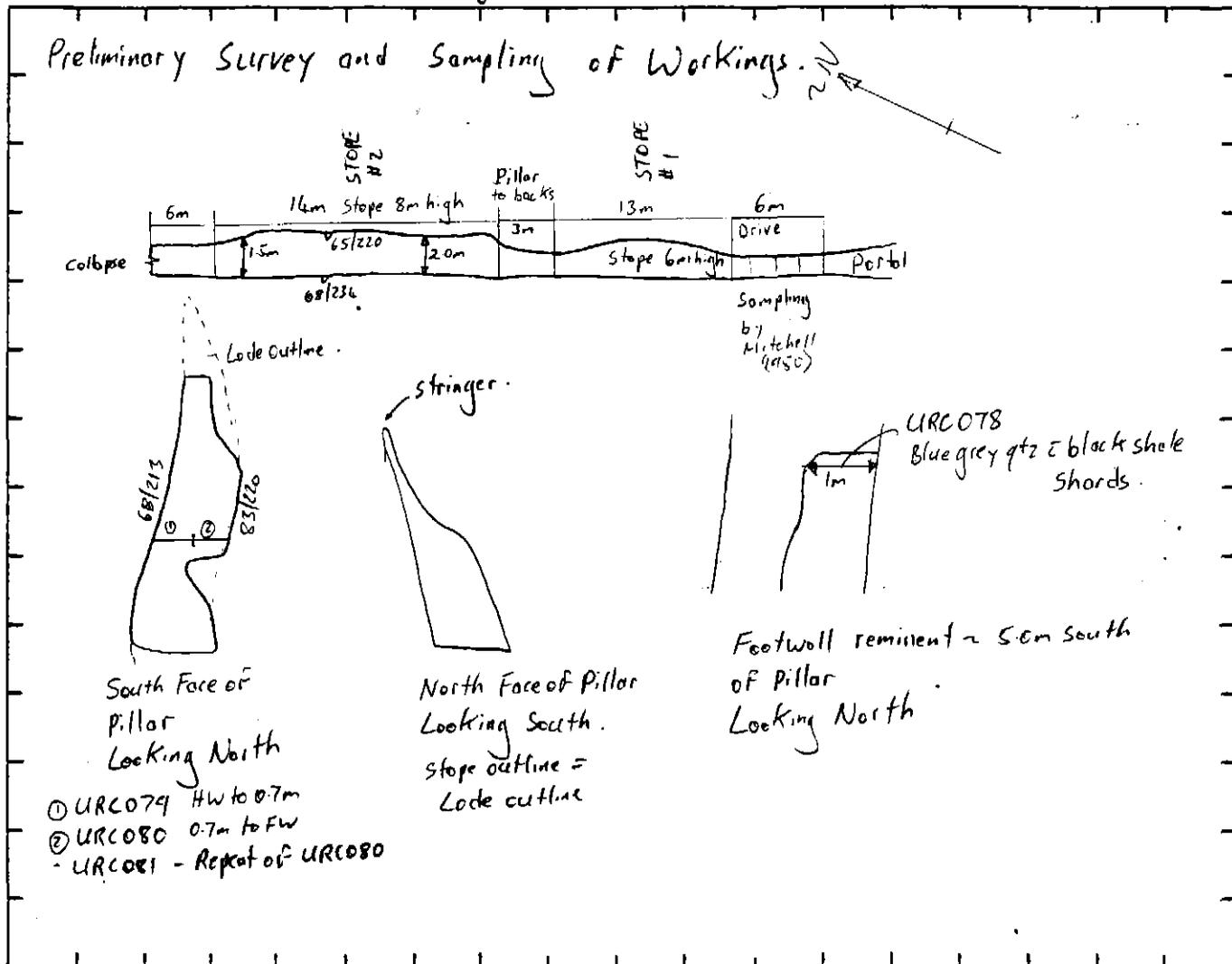
GEOLOGIST  
TEA

SCALE NTS

DATE 23/2/96

PAGE 1 of 1

LOCATION LVA Workings Hd.t #1

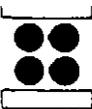


### SAMPLING

ASSAY BY Anolabs

ASSAY DATE

Sample No.	From	To	Au g/t	g/t	As %	Au. (Ave)
URC078			0.181			
079			0.848	0.827		0.838
080			0.165	0.148		0.157
081			2.040			
SUM						



# Mancala Pty Ltd

## Mine Management & Contracting

P.O. Box 240  
Launceston Tas 7250

A.C.N. 056 204 267

336074

TENEMENT  
23/92

### MAPPING SHEET

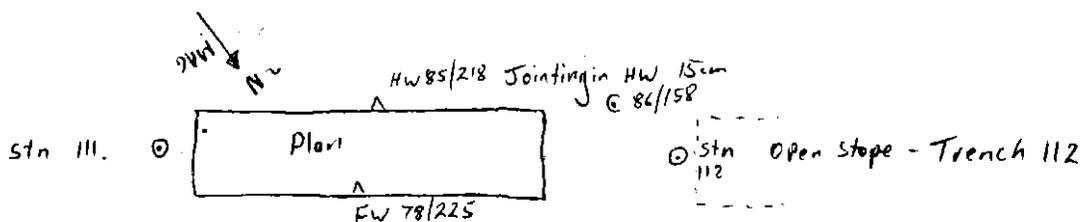
GEOLOGIST  
TEA.

SCALE NTS      DATE 29/2/96      PAGE 1 of 3

LOCATION UNH Workings - Adit #1, Trenches above Adit.

Trenches Named with Survey stations placed by Mitchell 1980.

Trench III. 0.8m Wide 3.7m Long.



Pit dug by hand  
- No Solid Rock.  
Section Looking

HW Lithology: Strongly silicified, Md. grey, Fine sst. ± disseminated AsPy?

FW Lithology: Grey siltstone - weathered & friable.

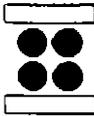
SRC184: Grab sample of Blue/grey qtz ± Py, AsPy + shale shreds from Occup.

### SAMPLING

ASSAY BY Analabs.

ASSAY DATE

Sample No.	From	To	Au g/t	Au g/t	Au Ave.
SRC184			23.200	22.300	22.750
SUM					



# Mancala Pty Ltd

## Mine Management & Contracting

P.O. Box 240  
Launceston Tas 7250

A.C.N. 056 204 267

356075

TENEMENT

23/92

### MAPPING SHEET

GEOLOGIST

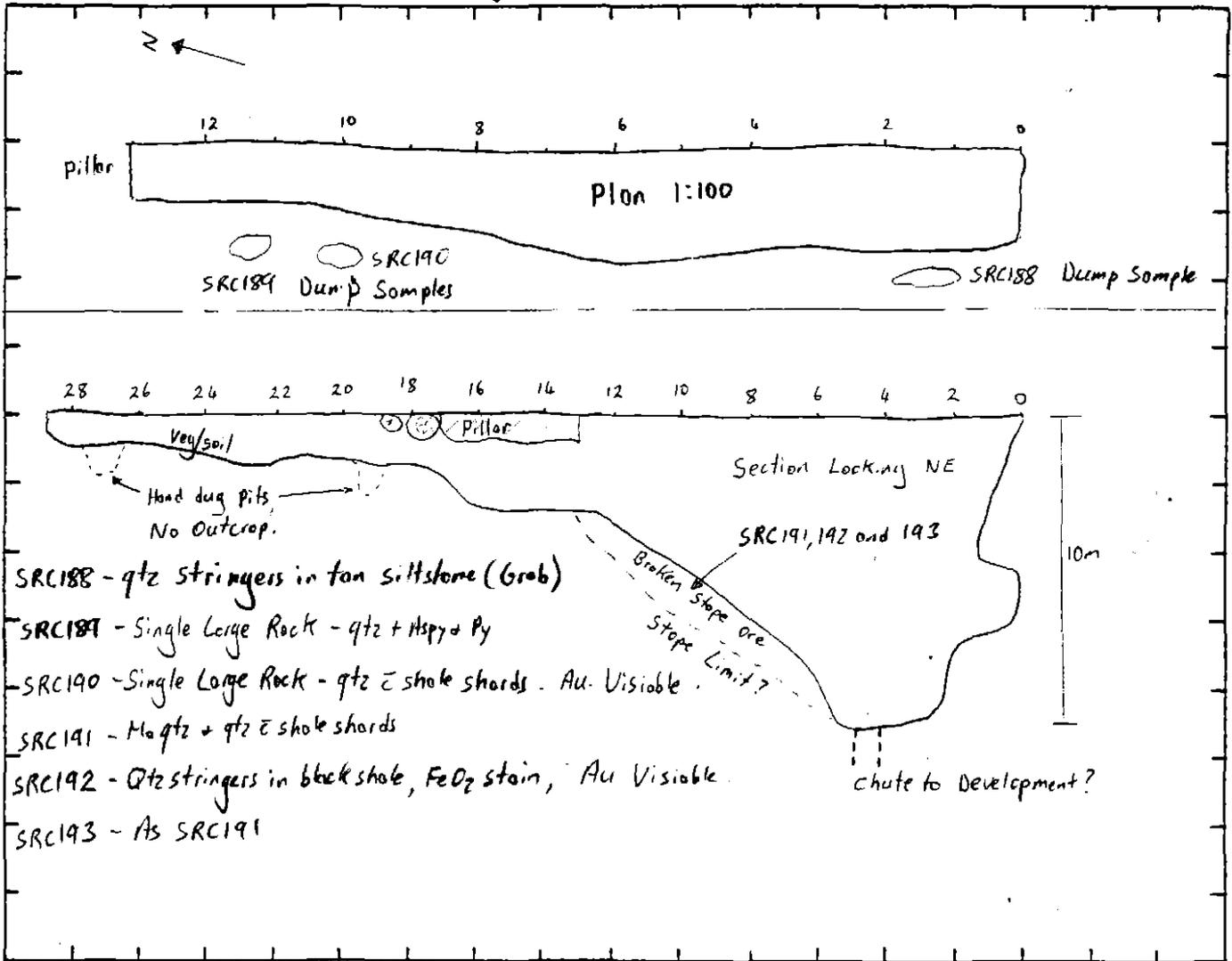
TEA

SCALE NTS

DATE 29/2/96

PAGE 2 of 3

LOCATION Unit Workings, Adit #1, Trench # 112

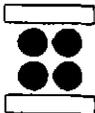


### SAMPLING

ASSAY BY Anolabs

ASSAY DATE

Sample No.	From	To	Au g/t	Au g/t	Au g/t	Au Ave.
SRC188			2-810			
189			20.700	9.720	13.800	14.740
190			9.360	9.280		9.320
191			36.100	40.800		38.450
192			37.900	106.600		72.250
193			11.100	11.300		11.200
SUM						



# Mancala Pty Ltd

## Mine Management & Contracting

P.O. Box 240  
Launceston Tas 7250

A.C.N. 056 204 267

336076

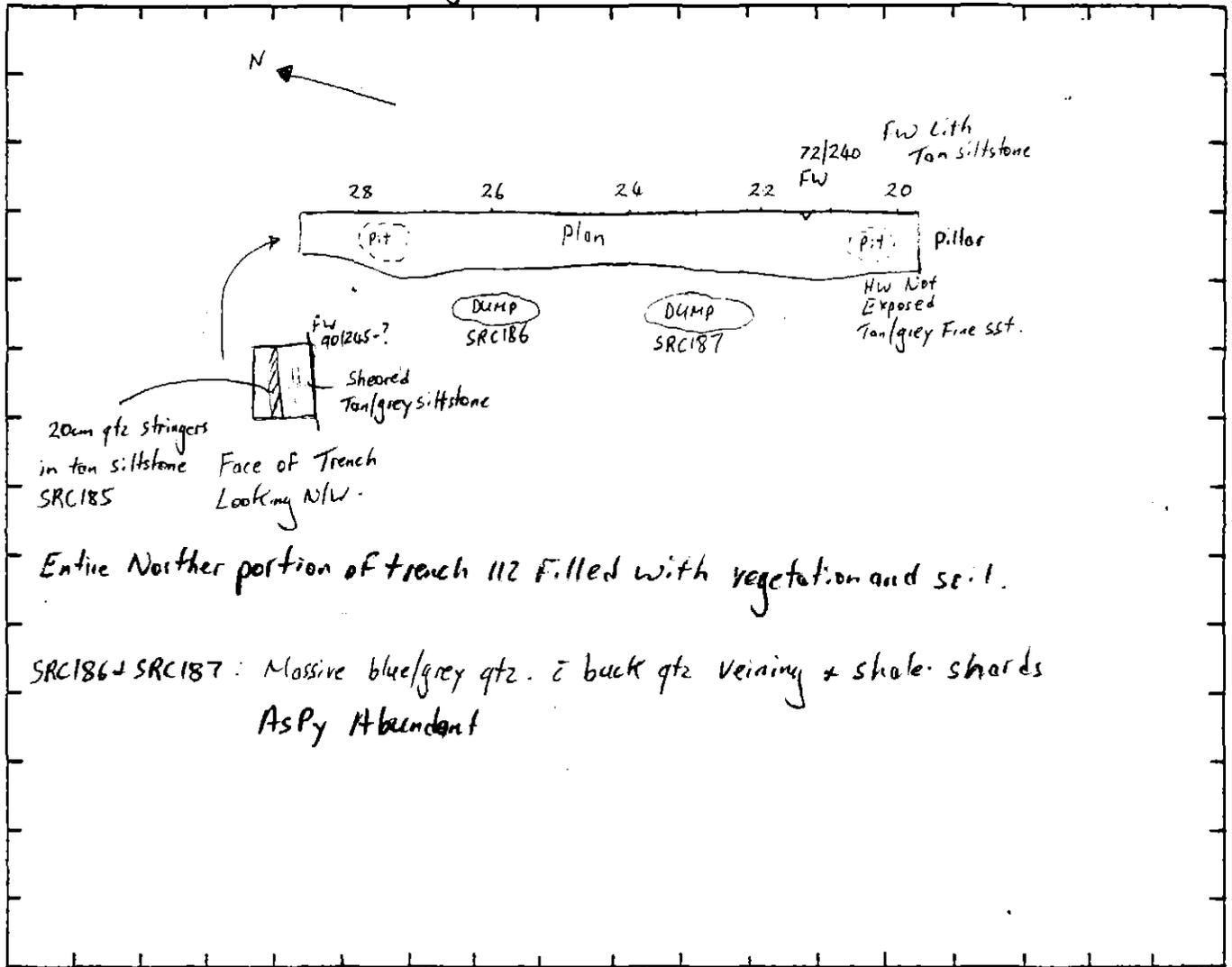
TENEMENT  
23/92

### MAPPING SHEET

GEOLOGIST  
TEH.

SCALE NTS      DATE 29/2/96      PAGE 3 of 3

LOCATION UWA Workings Adit #1, Trench 112 (cont)

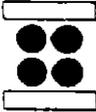


### SAMPLING

ASSAY BY Analabs

ASSAY DATE

Sample No.	From	To	Au g/t	Au g/t		
SRC185			0.366			
186			1.560			
187			1.010			
SUM						



P.O. Box 240  
 Launceston Tas 7250

336077

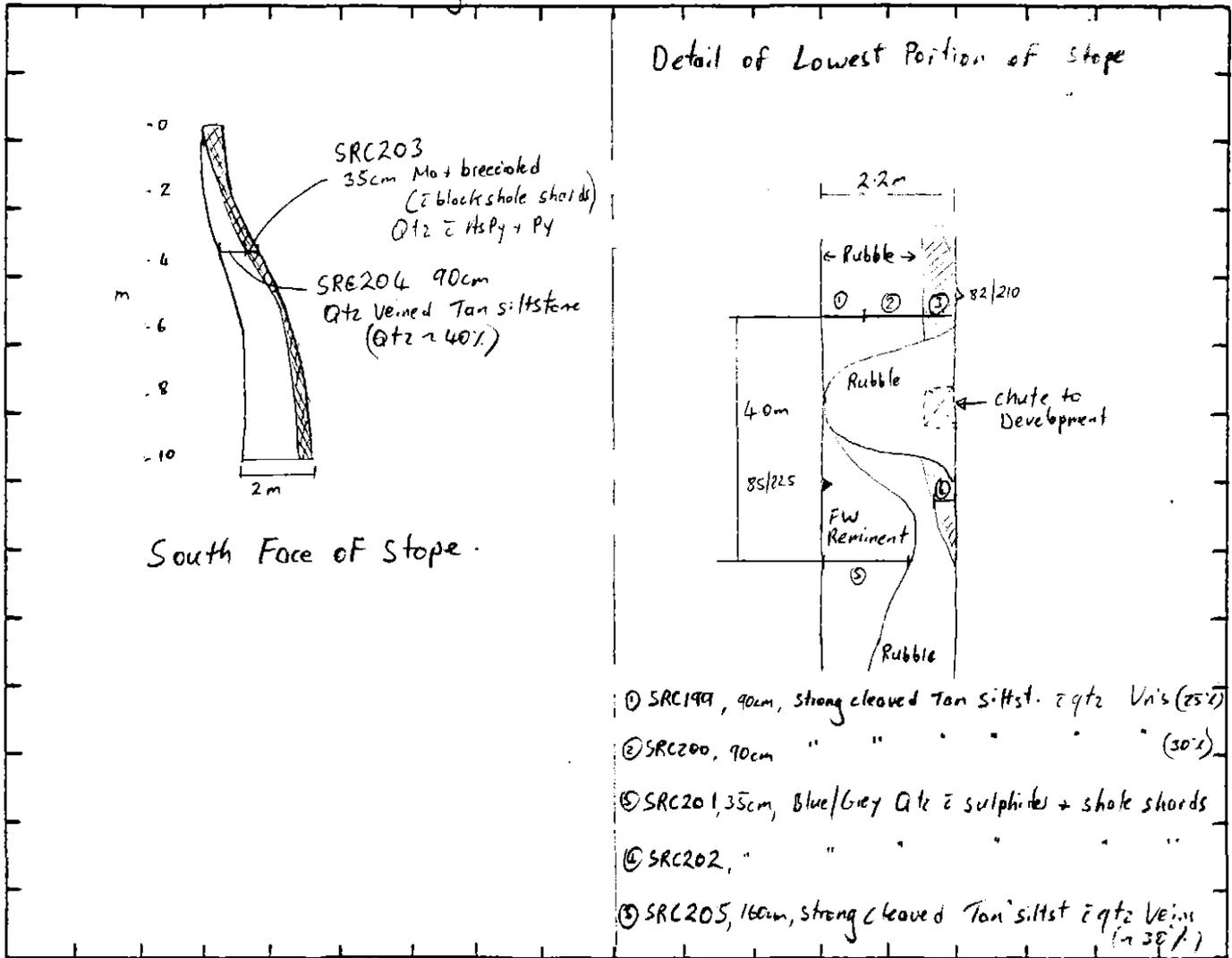
TENEMENT  
 23/92

**MAPPING SHEET**

GEOLOGIST  
 TEA

SCALE NTS      DATE 4/3/96      PAGE 1 of 1

LOCATION UNA Workings, Adit #1, Trench 112 (Open Slope)

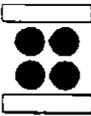


**SAMPLING**

ASSAY BY Analabs

ASSAY DATE

Sample No.	From	To	Au g/t	Au g/t	Au (Ave)
SRC199			0.332		
200			2.680		
201			0.641		
202			0.476		
203			1.420		
204			0.405	0.492	0.449
205			0.518	0.417	0.468
SUM					



# Mancala Pty Ltd

## Mine Management & Contracting

P.O. Box 240  
Launceston Tas 7250

A.C.N. 056 204 267

336078

TENEMENT

23/92

### MAPPING SHEET

GEOLOGIST

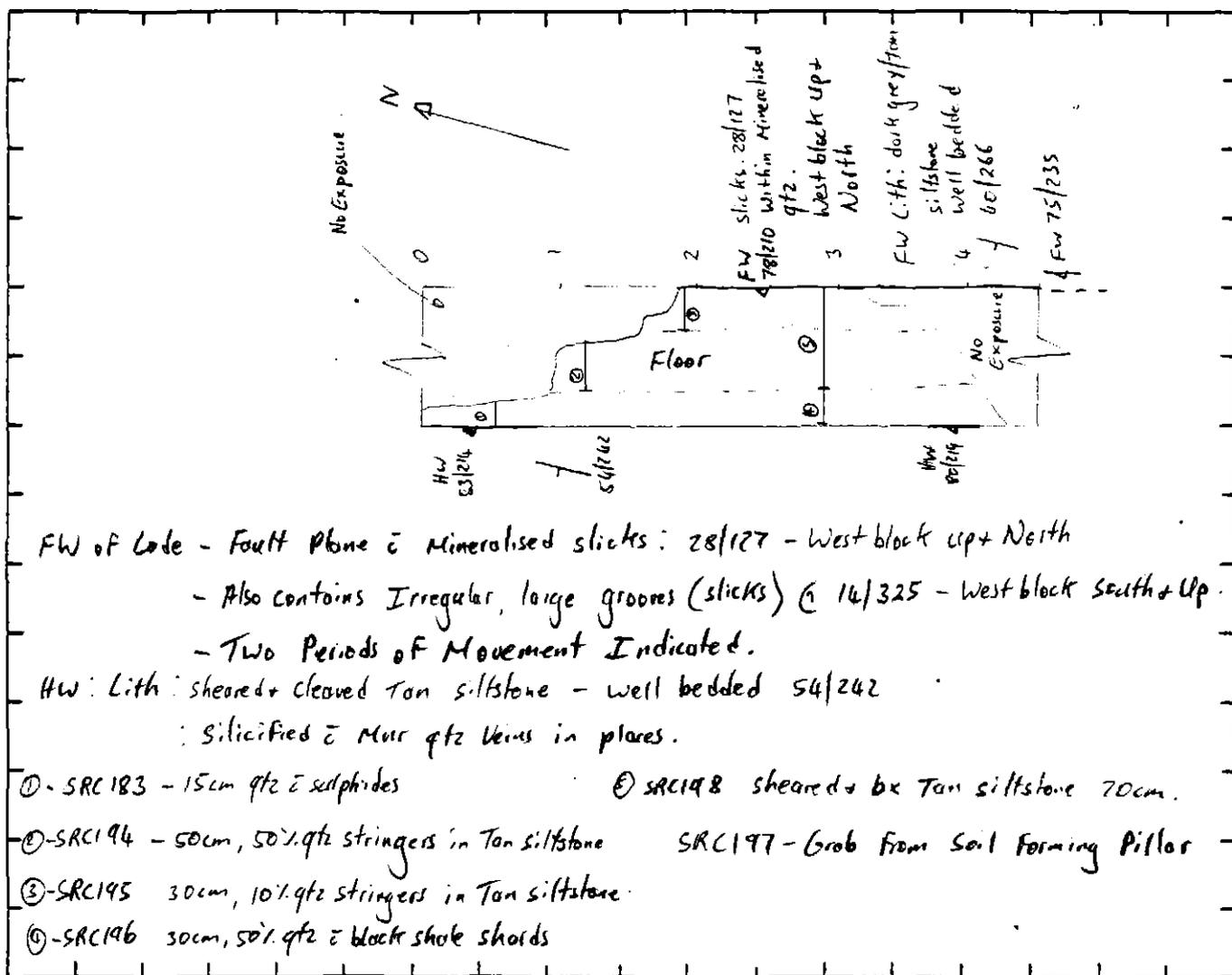
TEH

SCALE 1:50

DATE 4/3/96

PAGE 1 of 1

LOCATION UNH, Adit #1, Trench 112, Detail of Pillar Area



### SAMPLING

5 cm

ASSAY BY Analabs

ASSAY DATE

Sample No.	From	To	Au g/t	Au g/t		Au Ave.
SRC183			3.810	3.670		3.740
SRC194			1.660	2.100		3.760
195			0.099			
196			4.610			
197			4.810	2.950	4.100	3.953
198			1.260			
SUM						

APPENDIX 4

ASSAY SHEETS

UNA AND HINEMOA WORKINGS

MANCALA P/L

SAMPLE SHEET

ACN 056 204 267

Date Submitted	15/09/95
Date Assayed	17/09/95
LAB	Aquatic

356080

PO Box 240 Launceston  
 Ph (003) 347576  
 Fax (003) 340215

SAMPLE NO	LENGTH		LITHO	SG	Au (ppm)	Au Rept	Au Rept	Au Ave	Sample Date	Remarks
	CM									
URC035	30		Sh. Siltstone		0.20	-	-	0.20	11/09/95	UNA MINE, # 2 ADIT CHIP SAMPLING
URC036	25		Sh. Siltstone		0.15	-	-	0.15	11/09/95	UNA MINE, # 2 ADIT CHIP SAMPLING
URC037	60		Lode/siltstone		13.00	-	-	13.00	11/09/95	UNA MINE, # 2 ADIT CHIP SAMPLING, REPEAT MITCHELL (23.4 g/t)
URC038	30		Lode/siltstone		15.50	-	-	15.50	11/09/95	UNA MINE, # 2 ADIT CHIP SAMPLING
URC039	80		Qtz. Stringers		<0.05	-	-	<0.05	11/09/95	UNA MINE, # 2 ADIT CHIP SAMPLING
URC040	40		Qtz. Lode		<0.05	-	-	<0.05	11/09/95	UNA MINE, # 2 ADIT CHIP SAMPLING
URC041	100		Qtz. Stringers		0.68	-	-	0.68	11/09/95	UNA MINE, # 2 ADIT CHIP SAMPLING
URC042	100		Qtz. Stringers		0.10	0.38	-	0.24	11/09/95	UNA MINE, # 2 ADIT CHIP SAMPLING
URC043	15		Qtz. Lode		6.30	-	-	6.30	11/09/95	UNA MINE, # 2 ADIT CHIP SAMPLING
URC044	35		Sandstone		0.48	-	-	0.48	11/09/95	UNA MINE, # 2 ADIT CHIP SAMPLING
URC045	15		Qtz. Lode		6.70	-	-	6.70	11/09/95	UNA MINE, # 2 ADIT CHIP SAMPLING
URC046	50		Qtz. Stringers		9.10	9.00	-	9.05	11/09/95	UNA MINE, # 2 ADIT CHIP SAMPLING
URC047	40		Qtz. Stringers		0.90	-	-	0.90	11/09/95	UNA MINE, # 2 ADIT CHIP SAMPLING
URC048	90		Qtz. Stringers		3.10	-	-	3.10	11/09/95	UNA MINE, # 2 ADIT CHIP SAMPLING
URC049	5		Qtz. Lode		0.15	-	-	0.15	11/09/95	UNA MINE, # 2 ADIT CHIP SAMPLING
URC050	35		Qtz. Stringers		0.15	-	-	0.15	11/09/95	UNA MINE, # 2 ADIT CHIP SAMPLING, FACE
URC051	15		Qtz. Lode		8.00	-	-	8.00	11/09/95	UNA MINE, # 2 ADIT CHIP SAMPLING, FACE
URC052	50		Qtz. Stringers		0.33	-	-	0.33	11/09/95	UNA MINE, # 2 ADIT CHIP SAMPLING, FACE
SF024	FLOAT		Lode/siltstone		0.43	-	-	0.43	11/09/95	WINZE DUMP MATERIAL

MANCALA P/L

SAMPLE SHEET

336081

ACN 056 204 267

Date Submitted	06/02/96
Date Assayed	08/02/96
LAB.	Analabs

PO Box 240 Launceston  
 Ph (003) 347576  
 Fax (003) 340215

SAMPLE NO	LENGTH cm	LITHO	SG	Au (ppm)	Au Rept	Au Rept	Au Ave		Sample Date	Remarks
SRC136	50	QTZ VEIN		?	-	-	?		30/01/96	Una, Adit #2 Lode, Trench #1, North Face, East (LHS).
SRC137	50	QTZ VEIN		0.111	-	-	0.111		30/01/96	Una, Adit #2 Lode, Trench #1, North Face, West (RHS).
SRC138	10	QTZ VEIN		0.267	-	-	0.267		30/01/96	Una, Adit # 2 Lode, Trench #1, Pit #3, F/W vein.
SRC139	FLOAT	QTZ VEIN		1.100	-	-	1.100		30/01/96	Una, Adit # 2 Lode, Trench #1, Pit #3, Floaters.
SRC140	FLOAT	QTZ VEIN		0.854	-	-	0.854		30/01/96	Una, Adit # 2 Lode, Trench #1, Pit #3, Floaters.
SRC141	FLOAT	QTZ VEIN		0.141	-	-	0.141		30/01/96	Una, Adit # 2 Lode, Trench #1, Pit #2, Floaters.
SRC142	FLOAT	QTZ VEIN		0.042	-	-	0.042		30/01/96	Una, Adit # 2 Lode, Trench #1, Pit #1, Floaters.
SRC143	50	QTZ VEIN		0.099	-	-	0.099		30/01/96	Una, Adit # 2 Lode, Trench #2, H/W of lode.
SRC144	50	QTZ VEIN		1.280	-	-	1.280		30/01/96	Una, Adit # 2 Lode, Trench #2, F/W of lode.
SRC145	FLOAT	QTZ VEIN		16.100	14.900	-	15.500		30/01/96	Una, Adit # 2 Lode, Trench #3, Floaters.
SRC146	30	QTZ VEIN		4.800	-	-	4.800		30/01/96	Una, Adit # 2 Lode, Trench #3, Lode channel.
SRC147	5	QTZ VEIN		0.527	0.605	1.250	0.794		30/01/96	Una, Adit # 2 Lode, Trench #3, H/W Vein.
SRC148	40	QTZ VEIN		0.025	-	-	0.025		01/02/96	Una, FernTrack Lode, Track Intersection, F/W Lode
SRC149	25	QTZ VEIN		0.056	-	-	0.056		01/02/96	Una, Fern Track Lode, Track Intersection, H/W Lode
SRC150	FLOAT	QTZ VEIN		0.301	-	-	0.301		01/02/96	Una, Fern Track Lode, Track Intersection, Pit 3m to North.
SRC151	ORE S/P	QTZ VEIN		0.611	-	-	0.611		01/02/96	Una, Adit #1, Ore Stockpile, Visible Gold Sample.
SRC152	ORE S/P	QTZ VEIN		7.330	9.220	8.870	8.473		01/02/96	Una, Adit #1, Ore Stockpile, Grab Sample.
SRC153	ORE S/P	QTZ VEIN		8.020	15.900	5.260	9.727		01/02/96	Una, Adit #1, Ore Stockpile, Grab Sample.
SRC154	?	?		0.332	-	-	0.332		?	S. Mackenzie Sample QLD.
SRC155		QTZ VEIN		1.060	-	-	1.060		12/01/96	Hinemoa Grab Sample, DJB.
SRC156	70	QTZ VEIN		0.009	0.008	-	0.009		?	Hinemoa Vein Extended, Northern Site, DJB.

MANCALA P/L

SAMPLE SHEET

ACN 056 204 267

Date Submitted	09/02/96
Date Assayed	01/02/96
LAB.	Analabs

356082

PO Box 240 Launceston  
 Ph (003) 347576  
 Fax (003) 340215

SAMPLE NO	Length (cm)	LITHO	SG	Au (ppm)	Au Rept	Au Rept	Au Ave	Sample Date	Remarks
SRC157	30	Qtz. Stringers		0.109	-	-	0.109	07/02/96	Una, Adit #2 Lode, Trench #4, Total Lode.
SRC158	30	Qtz. Stringers		0.187	-	-	0.187	07/02/96	Una, Adit #2 Lode, Trench #5, H/W Stringer vein.
SRC159	20	Qtz. Stringers		6.520	9.660	-	8.090	07/02/96	Una, Adit # 2 Lode, Trench #5, South Face, H/W lode..
SRC160	40	Sh. Siltstone		2.150	-	-	2.150	07/02/96	Una, Adit # 2 Lode, Trench #5, South Face, Partial F/W Lode.
SRC161	FLOAT	Qtz. Vein		3.970	-	-	3.970	07/02/96	Una, Adit # 2 Lode, Trench # 5, Float from exposure of F/W.
SRC162	40	Qtz. Vein		3.970	6.480	5.500	5.317	07/02/96	Una, Adit # 2 Lode, Trench #5, North Face, H/W of Lode.
SRC163	40	Qtz. Vein		0.239	-	-	0.239	07/02/96	Una, Adit # 2 Lode, Trench #5, North Face, Center of Lode.
SRC164	40	Sh. Siltstone		0.091	-	-	0.091	07/02/96	Una, Adit # 2 Lode, Trench #5, North Face, F/W of Lode.
SRC165	14	Qtz. Vein		19.900	21.800	-	20.850	07/02/96	Una, Adit # 2 Lode, Trench #5, North Face, H/W quartz.
URC050	100	Sh. Siltstone		0.160	-	-	0.160	08/02/96	Una, Adit # 5, Adit shear (Mapped at 2.0M)
URC051	10	Flt. Qtz. Gouge		0.265	-	-	0.265	08/02/96	Una, Adit # 5, Fault # 2 Gouge (Mapped at 4.5m)
URC052	20	Flt. Qtz. Gouge		0.201	0.385	-	0.293	08/02/96	Una, Adit # 5, Fault # 3 Gouge (Mapped at 4.6m)
URC053	25	Flt. Pug		0.666	-	-	0.666	08/02/96	Una, Adit # 5, Fault # 4 Gouge (Mapped at 5.6m)
URC054	90	Qtz. Stringers		1.910	-	-	1.910	08/02/96	Una, Adit # 5, Lode #1, Southern face.
URC055	80	Qtz. Stringers		0.047	-	-	0.047	08/02/96	Una, Adit # 5, Lode #1, Northern face.
URC056	80	Sh. Siltstone		0.061	-	-	0.061	08/02/96	Una, Adit # 5, Adit shear, (Mapped at 12.8m)
URC057	20	Qtz. Stringers		0.729	-	-	0.729	08/02/96	Una, Adit # 5, Fault # 5 Gouge (Mapped at 18.0m)
URC058	70	Bx. Qtz. Vein		0.098	-	-	0.098	08/02/96	Una, Adit # 5, Lode #2, F/W veining, (Mapped at 30.0m)
URC059	80	Sh. Siltstone		0.079	-	-	0.079	08/02/96	Una, Adit # 5, Lode #2, H/W, (Mapped at 30.9)
URC060	100	Qtz. Vein		1.770	-	-	1.770	08/02/96	Una, Adit # 5, Lode #2 X-Cut, Backs at 2.0m.
URC061	50	Qtz. Vein		0.109	0.130	-	0.120	08/02/96	Una, Adit # 5, Lode #2 X-Cut, Backs at 6.0m.
URC062	50	Sh. Siltstone		0.060	0.076	-	0.068	08/02/96	Una, Adit # 5, Lode #2 X-Cut, Backs at 6.0m.
URC063	120	Qtz. Vein		0.082	-	-	0.082	08/02/96	Una, Adit # 5, Lode #2 X-Cut, Backs at 10.4m.
URC064	150	Qtz. Vein		0.073	-	-	0.073	08/02/96	Una, Adit # 5, Lode #2 X-Cut, Backs at 13.0m.
URC065	100	Sh. Siltstone		0.033	-	-	0.033	08/02/96	Una, Adit # 5, Lode #2 X-Cut, Northern Face, above H/W.
URC066	40	Qtz. Stringers		0.052	-	-	0.052	08/02/96	Una, Adit # 5, Lode #2 X-Cut, Northern Face, Stringers in Lode.
URC067	70	Qtz. Vein		0.043	-	-	0.043	08/02/96	Una, Adit # 5, Lode #2 X-Cut, Northern Face, Lode.

MANCALA P/L

SAMPLE SHEET

ACN 056 204 267

Date Submitted	21/02/96
Date Assayed	24/02/96
LAB	Analabs

PO Box 240 Launceston  
 Ph (003) 347576  
 Fax (003) 340215

356083

SAMPLE NO	Length (cm)	LITHO	SG	Au (ppm)	Au Rept	Au Rept	Au Ave		Sample Date	Remarks
SRC166	FLOAT	Qtz. Stringers		0.446	-	-	0.446		19/02/96	Una, 126 Lode, Trench #1(4.0m winze).
SRC167	40	Qtz. Vein		0.542	-	-	0.542		19/02/96	Una, 126 Lode, Trench #2, N End, H/W of Lode
SRC168	120	Qtz. Stringers		4.520	3.920	-	4.220		19/02/96	Una, 126 Lode, Trench #2, N End, F/W of Lode.
SRC169	15	Qtz. Vein		2.780	-	-	2.780		19/02/96	Una, 126 Lode, Trench #2, S End, H/W of Lode.
SRC170	40	Qtz. Vein		0.165	-	-	0.165		19/02/96	Una, 126 Lode, Trench #2, S End, Partial F/W of Lode.
SRC171	FLOAT	Qtz. Vein		0.979	-	-	0.979		19/02/96	Una, 126 Lode, Trench #2, S End, Rubble from Lode Zone.
SRC172	10	Qtz. Vein		20.000	22.800	24.200	22.333		19/02/96	Una, 126 Lode, Trench #3, S End, H/W of Lode.
SRC173	40	Sh. Siltstone		0.414	-	-	0.414		19/02/96	Una, 126 Lode, Trench #3, S End, F/W of Lode.
SRC174	20	Qtz. Stringers		0.331	-	-	0.331		19/02/96	Una, 126 Lode, Trench #3, N End, H/W of Lode.
SRC175	5	Qtz. Vein		1.310	-	-	1.310		20/02/96	Una, 130 Lode, Trench #3, N End, H/W of Lode.
SRC176	35	Qtz. Stringers		0.105	-	-	0.105		20/02/96	Una, 130 Lode, Trench #3, N End, F/W of Lode.
SRC177	10	Qtz. Vein		19.000	6.860	22.800	16.220		20/02/96	Una, 130 Lode, Trench #3, S End, H/W of Lode.
SRC178	50	Qtz. Stringers		2.190	1.990	-	2.090		20/02/96	Una, 130 Lode, Trench #3, S End, F/W of Lode.
SRC179	20	Qtz. Stringers		0.073	-	-	0.073		20/02/96	Una, 130 Lode, Trench #2, Buck Qtz. Fault Gouge.
SRC180	10	Qtz. Vein		0.249	-	-	0.249		20/02/96	Una, 130 Lode, Trench #1, Center of Lode.
SRC181	30	Qtz. Stringers		0.061	-	-	0.061		20/02/96	Una, 130 Lode, Trench #1, F/W of Lode.
SRC182	GRAB	Qtz. Stringers		0.476	-	-	0.476		20/02/96	Una, 130 Lode, Trench #5, Cleavage parallel qtz.

ACN 056 204 267

Date Submitted 21/02/96

Date Assayed 24/02/96

LAB Analabs

356084

PO Box 240 Launceston

Ph (003) 347576

Fax (003) 340215

SAMPLE NO	Length (cm)	LITHO	SG	Au (ppm)	Au Rept.	Au Rept.	Au Ave	Sample Date	Remarks
URC068	90	Sil. Sst		0.056	-	-	0.056	22/02/96	Una, Adit #3, -0.4 to 0.5 mapping.
URC069	15	Qtz. Vein		0.025	-	-	0.025	22/02/96	Una, Adit #3, 0.5 to 0.6 mapping.
URC070	60	Blk. Siltst. Qtz		0.373	-	-	0.373	22/02/96	Una, Adit #3, 7.6 to 8.5 mapping, Adit #2 Lode?
URC071	30	Qtz. Stringers		0.074	-	-	0.074	22/02/96	Una, Adit #3, 7.5 to 8.1 mapping, Adit #2 Lode?
URC072	30	Qtz. Vein		0.833	-	-	0.833	22/02/96	Una, Adit #3, 8.4 to 8.8 mapping, Adit #2 Lode?
URC073	100	Qtz. Stringers		0.110	-	-	0.110	22/02/96	Una, Adit #3, 8.2 to 9.1 mapping, North wall, Adit #2 Lode?
URC074	100	Qtz. Stringers		0.535	-	-	0.535	22/02/96	Una, Adit #3, 7.4 to 8.4 mapping, North wall, Adit #2 Lode?
URC075	35	Qtz. Stringers		0.802	-	-	0.802	22/02/96	Una, Adit #2, Face, Repeat of URC050.
URC076	15	Qtz. Vein		11.100	11.600	-	11.350	22/02/96	Una, Adit #2, Face, Repeat of URC051.
URC077	50	Blk. Sh +Qtz.		0.230	-	-	0.230	22/02/96	Una, Adit #2, Face, Repeat of URC052.
URC078	100	Qtz. Vn+Blk. Sh.		0.181	-	-	0.181	23/02/96	Una, Adit #1, North face of pillar, H/W to 0.7m, North End Stope #1.
URC079	70	Qtz. Stringers		0.848	0.827	-	0.838	23/02/96	Una, Adit #1, North face of pillar, H/W to 0.7m, North End Stope #1.
URC080	70	Qtz. Stringers		0.165	0.148	-	0.157	23/02/96	Una, Adit #1, North face of pillar, 0.7 to F/W, North End Stope #1.
URC081	70	Qtz. Vein		2.040	-	-	2.040	23/02/96	Una, Adit #1, North face of pillar, 0.7 to F/W, North End Stope #1. Rpt. URC080
URC082	40	Qtz. Vein		1.050	-	-	1.050	23/02/96	Hinemoa, Castles Stope, South Face, H/W to 0.4m.
URC083	20	Pug/SiltSt. Qtz.		1.200	-	-	1.200	23/02/96	Hinemoa, Castles Stope, South Face, 0.4m to 0.6m.
URC084	20	Pug/SiltSt. Qtz.		0.311	-	-	0.311	23/02/96	Hinemoa, Castles Stope, South Face, 0.6m to F/W.
URC085	35	Qtz. Vein		1.120	-	-	1.120	23/02/96	Hinemoa, Castles Stope, Backs, H/W to 0.35m.
URC086	65	Pug/SiltSt. Qtz.		0.145	-	-	0.145	23/02/96	Hinemoa, Castles Stope, Backs, 0.35m to F/W.
URC087	40	Pug/SiltSt. Qtz.		0.232	-	-	0.232	23/02/96	Hinemoa, Castles Stope, North Face, F/W to 0.4m.
URC088	20	Pug/SiltSt. Qtz.		2.510	3.080	-	2.795	23/02/96	Hinemoa, Castles Stope, North Face, 0.4 to 0.6m.
URC089	20 (100)	Qtz. Vein		0.788	1.230	0.810	0.943	23/02/96	Hinemoa, Castles Stope, North Face, 0.6 to 0.8m. (1.0m width in drive)
URC090	20	Qtz. Vein		0.764	-	-	0.764	23/02/96	Hinemoa, Portal Exposure, F/W to 0.20m.
URC091	90	Pug/SiltSt. Qtz.		2.500	-	-	2.500	23/02/96	Hinemoa, Portal Exposure, 0.2m to H/W.

MANCALA P/L

SAMPLE SHEET

356085

ACN 056 204 267

Date Submitted	05/03/96
Date Assayed	08/03/96
LAB	Analabs

PO Box 240 Launceston  
 Ph (003) 347576  
 Fax (003) 340215

SAMPLE NO	Length (cm)	LITHO	SG	Au (ppm)	Au Rept	Au Rept	Au Ave		Sample Date	Remarks
SRC183	15	Qtz. Vein		3.810	3.670	-	3.740		04/03/96	Una, Adit #1, Trench 112, Northern bridge face, H/W vein.
SRC184	FLOAT	Qtz. Vein		23.200	22.300	-	22.750		04/03/96	Una, Adit #1, Trench 111, Dump material.
SRC185	20	Qtz. Stringers		0.366	-	-	0.366		04/03/96	Una, Adit #1, Trench 112, Northern most face of trench.
SRC186	FLOAT	Qtz. Vein		1.560	-	-	1.560		04/03/96	Una, Adit #1, Trench 112, Northern dump material.
SRC187	FLOAT	Qtz. Vein		1.010	-	-	1.010		04/03/96	Una, Adit #1, Trench 112, Northern dump material.
SRC188	FLOAT	Qtz. Vein		2.810	-	-	2.810		04/03/96	Una, Adit #1, Trench 112, Southern dump material.
SRC189	FLOAT	Qtz. Vein		20.700	9.720	13.800	14.740		04/03/96	Una, Adit #1, Trench 112, Central dump material.
SRC190	FLOAT	Qtz. Vein		9.360	9.280	-	9.320		04/03/96	Una, Adit #1, Trench 112, Central dump material.
SRC191	STOPE ORE	Mix. Vn. Types		36.100	40.800	-	38.450		04/03/96	Una, Adit #1, Trench 112, Remanent stope dirt.
SRC192	STOPE ORE	Bx. Qtz. Vein		37.900	106.600	-	72.250		04/03/96	Una, Adit #1, Trench 112, Remanent stope dirt, Fe Stained, free Au?1 roc
SRC193	STOPE ORE	Mix. Vn. Types		11.100	11.300	-	11.200		04/03/96	Una, Adit #1, Trench 112, Remanent stope dirt.
SRC194	50	Qtz. Stringers		1.660	2.100	-	1.880		04/03/96	Una, Adit #1, Trench 112, Northern bridge face, central lode, 60% Qtz.
SRC195	35	Qtz. Stringers		0.099	-	-	0.099		04/03/96	Una, Adit #1, Trench 112, Northern bridge face, F/W lode, 5% Qtz.
SRC196	25	Qtz. Stringers		4.610	-	-	4.610		04/03/96	Una, Adit #1, Trench 112, Bridge area, Floor, H/W qtz. veining.
SRC197	FLOAT	Mix. Vn. Types		4.810	2.950	4.100	3.953		04/03/96	Una, Adit #1, Trench 112, Bridge area, Qtz. from soil and F/W remnants.
SRC198	75	Qtz. Stringers		1.260	-	-	1.260		04/03/96	Una, Adit #1, Trench 112, Bridge area, Floor, F/W of lode.
SRC199	90	Qtz. Stringers		0.332	-	-	0.332		04/03/96	Una, Adit #1, Trench 112, U/Hand stope, Center, F/W lode stringers.
SRC200	90	Qtz. Stringers		2.680	-	-	2.680		04/03/96	Una, Adit #1, Trench 112, U/Hand stope, Center, Center lode stringers.
SRC201	25	Qtz. Vein		0.691	-	-	0.691		04/03/96	Una, Adit #1, Trench 112, U/Hand stope, Center, H/W lode qtz. veining.
SRC202	20	Qtz. Vein		0.476	-	-	0.476		04/03/96	Una, Adit #1, Trench 112, U/Hand stope, North, H/W lode qtz. veining.
SRC203	35	Qtz. Vein		1.920	-	-	1.920		04/03/96	Una, Adit #1, Trench 112, U/Hand stope, South, H/W lode qtz. veining.
SRC204	90	Qtz. Stringers		0.405	0.492	-	0.449		04/03/96	Una, Adit #1, Trench 112, U/Hand stope, South, F/W stringer qtz. veining.
SRC205	100	Qtz. Stringers		0.518	0.417	-	0.468		04/03/96	Una, Adit #1, Trench 112, U/Hand stope, North, F/W remanent.

MANCALA P/L

SAMPLE SHEET

336086

ACN 056 204 267

Date Submitted	15/03/96
Date Assayed	20/03/96
LAB.	Analabs

PO Box 240 Launceston  
Ph (003) 347576  
Fax (003) 340215

SAMPLE NO	Length (cm)	LITHO	SG	Au (ppm)	Au Rept	Au Rept	Au Ave	Sample Date	Remarks
SRC206	FLOAT	Qtz. Vein		1.000	-	-	1.000	08/03/96	Hinemoa, Trench A3.
SRC207	FLOAT	Mix. Vn. Types		1.040	0.906	-	1.430	08/03/96	Hinemoa, Trench A3.
SRC208	10	Qtz. Vein		1.820	-	-	1.820	08/03/96	Hinemoa, Trench A4, H/W of Lode, South Face.
SRC209	80	Bx. Sh. SiltSt.		2.740	-	-	2.740	08/03/96	Hinemoa, Trench A4, Center of Lode, South Face.
SRC210	40	Qtz. Vein		1.170	-	-	1.170	08/03/96	Hinemoa, Trench A4, F/W of Lode, South Face.
SRC211	25	Qtz. Vein		1.170	-	-	1.170	08/03/96	Hinemoa, Trench A4, H/W of Lode, North Face.
SRC212	40	Qtz. Vein		11.200	12.800	-	7.435	11/03/96	Hinemoa, Trench A5, H/W of Lode.
SRC213	40	Qtz. Vein		3.670	-	-	3.670	11/03/96	Hinemoa, Trench A5, F/W of Lode.
SRC214	FLOAT	Qtz. Vein		5.000	4.210	-	2.705	11/03/96	Hinemoa, Trench A5.
SRC215	60	Mix. Vn. Types		0.409	-	-	0.409	11/03/96	Hinemoa, Trench A6, Total Lode.
SRC216	FLOAT	Mix. Vn. Types		2.850	-	-	2.850	11/03/96	Hinemoa, Trench A6.
SRC217	20	Qtz. Vein		4.110	4.010	-	2.399	11/03/96	Hinemoa, Trench A6, Vein in Cross Cutting Fault.
SRC218	60	Qtz. Vein		0.688	-	-	0.688	11/03/96	Hinemoa, Trench A7, H/W Lode?
SRC219	FLOAT	Mix. Vn. Types		4.330	-	-	4.330	11/03/96	Hinemoa, Trench A7.
SRC220	FLOAT	Qtz. Vein		3.730	-	-	3.730	11/03/96	Hinemoa, Trench A8.
SRC221	80	Mix. Vn. Types		3.860	-	-	3.860	11/03/96	Hinemoa, Trench A9, Total Lode.
SRC222	FLOAT	Mix. Vn. Types		3.500	-	-	3.500	11/03/96	Hinemoa, Trench A9.
SRC223	90	Qtz. Vein		18.100	17.600	-	18.600	11/03/96	Hinemoa, Trench A10, Total Lode.
SRC224	FLOAT	Qtz. Vein		19.100	19.700	-	9.550	11/03/96	Hinemoa, Trench A10.

356087

APPENDIX 5

DATABASE LISTING OF UNA #1 ADIT DRILL HOLES  
(UN001 TO UN008)

HOLE ID UN001

LOCATION	EASTING	NORTHING	RL	EOH
	567940.07	5422178.75	732.51	18.2

## SURVEY

FROM	TO	AZIMUTH	DIP
0.0	18.2	64.5	-61

## ALTERATION

FROM	TO	STYLE	INTENSITY
10.0	10.6	Si	3
12.0	12.5	Si	5
14.3	18.2	Si	4

## TEXTURE

FROM	TO	GRAIN SIZE	FABRIC	BED>CORE	CLEAVAGE
------	----	------------	--------	----------	----------

## LITHOLOGY

FROM	TO	ROCK TYPE	REMARKS
0.0	0.5	-	NO CORE
0.5	2.3	SST	
2.3	2.5	SILTST	
2.5	6.2	SILTST/SST	INTERBEDDED
6.2	8.5	SST	LAMINATED
8.5	10.0	SILTST	
10.0	10.6	SST	SILICEOUS
10.6	12.0	SILTST	
12.0	12.5	LODE	
12.5	14.3	SST/SILTST	INTERBEDDED
14.3	18.2	SST	SILICEOUS

## COLOUR

FROM	TO	COLOUR
0.0	0.5	NO CORE
0.5	2.3	LGREY
2.3	2.5	DGREY
2.5	6.2	L/D/GREY
6.2	8.5	L/D/GREY
8.5	10.0	L/D/GREY
10.0	10.6	LGREY
10.6	12.0	DGREY
12.0	12.5	WHITE
12.5	14.3	GREY/BLACK
14.3	18.2	GREY

## MINERALISATION

FROM	TO	AsPy	STYLE	Py	STYLE	OTHER	STYLE
10.0	10.6	1	DIS	1	FRACTURES	FREE AU	FRACTURE PLANES
12.0	12.5	3	VEIN	2	VEIN	FREE AU?	FINE SPECKS
12.5	13.4	1	VEIN	1	VEIN		
13.6	13.7	1	VEIN	1	VEIN		
13.7	14.5	1	DIS	1	DISS/VEIN		
17.5	17.9	1	VEIN	1	VEIN		

## FAULTS

FROM	TO	GOUGE	ANGLE TO CORE AXIS
8.5	8.9	BX/PU/RU	65
9.9	10.0	PU/RU	80
11.9	12.0	RU	70
13.4	13.5	PU	60

## VEINS

FROM	TO	MINERAL	SPACE(cm)	ANGLE	WIDTH (cm)
1.3	1.3	VUG QTZ	0	35	10
8.0	8.5	BUCK QTZ	10	70	1
10.0	10.6	QTZ/PT/ASPY	5	70	5
10.6	12.0	QTZ	5	60	1
12.0	12.5	BX QTZ	0	60	50
12.5	13.6	QTZ	10	10	2
13.6	13.7	BX QTZ	0	55	10
13.7	14.5	QTZ	10	50	3
14.5	14.7	QTZ/PY/ASPY	5	30	3
14.7	17.5	QTZ/PY/ASPY	15	40	1
17.5	17.9	QTZ/ASPY/PY	0	45	40

RQD		
FROM	TO	RQD
0.0	0.5	0
0.5	2.3	71
2.3	3.5	9
3.5	5.4	47
5.4	7.7	5
7.7	10.0	0
10.0	10.6	67
10.6	12.0	29
12.0	12.5	0
12.5	14.2	12
14.2	18.2	58

## ASSAYS

FROM	TO	SAMPLE NO.	Au (ppm)	Au (ppm)	Au (ppm)	Ag (ppm)	Cu (ppm)	Fe (%)	As (ppm)	Sn (ppm)
8.0	9.0	1	0.034	-	-	<1	24	2.61	53	NS
9.0	10.0	2	0.025	-	-	<1	25	2.33	47.8	NS
10.0	10.6	3	0.174	-	-	<1	17	1.79	26.5	NS
10.6	11.2	4	0.080	-	-	<1	23	3.51	31.1	NS
11.2	12.0	5	0.109	-	-	<1	31	4.54	23.9	NS
12.0	12.5	6	1.220	-	-	<1	11	2.56	1637	NS
12.5	13.4	7	0.019	-	-	<1	23	3.70	38.7	NS
13.4	14.1	8	0.006	-	-	<1	24	3.35	49.5	NS
14.1	14.6	9	0.007	-	-	<1	24	3.42	38.0	NS
14.6	15.5	10	<0005	-	-	<1	10	2.16	23.1	NS
15.5	16.5	11	<0005	-	-	<1	10	2.03	36.9	NS
16.5	17.5	12	<0005	0.006	-	<1	8	2.14	32.1	NS
17.5	17.9	13	0.008	-	-	<1	13	2.17	29.4	NS
17.9	18.2	14	0.007	-	-	<1	6	2.16	30.3	NS

<b>HOLE ID</b>	UN002			
<b>LOCATION</b>	<b>EASTING</b>	<b>NORTHING</b>	<b>RL</b>	<b>EOH</b>
	567930.13	5422196.89	738.66	21.2

<b>SURVEY</b>		<b>AZIMUTH</b>	<b>DIP</b>
<b>FROM</b>	<b>TO</b>		
0	21.2	64.5	-58.2

<b>ALTERATION</b>			
<b>FROM</b>	<b>TO</b>	<b>STYLE</b>	<b>INTENSITY</b>
0.5	5.2	SI	3
5.2	5.4	SI	5
13.1	14.4	SI	5
14.4	16.2	SI	3
16.7	18.1	SI	3
19.3	21.3	SI	3

<b>TEXTURE</b>					
<b>FROM</b>	<b>TO</b>	<b>GRAIN SIZE</b>	<b>FABRIC</b>	<b>BED&gt;CORE</b>	<b>CLEAVAGE</b>

<b>LITHOLOGY</b>			
<b>FROM</b>	<b>TO</b>	<b>ROCK TYPE</b>	<b>REMARKS</b>
0.0	0.5	NO CORE	
0.5	5.9	SST	SILICEOUS, FE STAIN ADJACENT TO FRACTURES
5.9	6.2	LOST CORE	
6.2	10.7	SST	SILICEOUS, FE STAIN ADJACENT TO FRACTURES
10.7	11.0	SST	
11.0	12.2	SST	
12.2	13.1	NO CORE	RUBBLE OF BX SST/SILTST AND QTZ VEINING
13.1	14.4	LODE	MASSIVE BX LODE QTZ VEINING
14.4	16.2	SST/SILTST	
16.2	16.7	LOST CORE	
16.7	18.1	SST/SILTST	SILTST MINOR COMPONENT
18.1	19.3	SILTST/SST	SST MINOR COMPONENT
19.3	21.2	SST/SILTST	IRREGULAR SILTST BEDS

<b>COLOUR</b>		
<b>FROM</b>	<b>TO</b>	<b>COLOUR</b>
0.0	0.5	NO CORE
0.5	5.9	GREY/BROWN
5.9	6.2	LOST CORE
6.2	10.7	GREY/BROWN
10.7	11.0	GREY
11.0	12.2	GREY
12.2	13.1	LOST CORE
13.1	14.4	WHITE/DARK GREY
14.4	16.2	DARK GREY
16.2	16.7	LOST CORE
16.7	18.1	GREY/BROWN
18.1	19.3	BLACK
19.3	21.2	GREY

<b>MINERALISATION</b>							
<b>FROM</b>	<b>TO</b>	<b>AsPy</b>	<b>STYLE</b>	<b>Py</b>	<b>STYLE</b>	<b>OTHER</b>	<b>STYLE</b>
5.2	5.4	3	VEIN	3	VEIN		
7.7	9.1	2	DIS	2	DIS/VEIN		
11.7	12.0	3	DIS	3	DIS/VEIN		
13.1	14.4	5	VEIN	5	VEIN		
14.4	16.2	2	DIS	2	DIS/VEIN		
17.5	17.6	3	VEIN	3	VEIN		

**FAULTS**

FROM	TO	GOUGE	ANGLE
5.1	5.2	BX/RU	60
5.2	5.4	BX/PU	60
5.9	6.2	PU/BX	25
9.6	9.7	BX/QTZ VN	45
12.1	12.2	PU/BX	75
14.3	14.4	BX/SH/VN	60
15.0	15.3	PU	70
17.1	17.2	BX/PU	75
18.0	18.1	BX/PU	70

**VEINS**

FROM	TO	MINERAL	SPACE(cm)	ANGLE	WIDTH (cm)
0.5	5.2	PY	10	60	0.2
5.2	5.4	ASPY/PY/QTZ	0	60	15
6.9	7.0	QTZ/VUG	1	60	0.4
7.7	9.6	PY	5	60	0.2
11.7	12.0	PY	5	60	0.2
13.1	14.4	QTZ/PY/ASPY	0	60	130
14.4	16.2	QTZ/PY	5	40	0.5
16.7	21.2	QTZ	15	55	0.5

**RQD**

FROM	TO	RQD
0.0	0.5	0
0.5	4.7	46
4.7	5.9	0
5.9	6.2	0
6.2	12.2	38
12.2	13.1	0
13.1	14.4	28
14.4	15.2	59
15.2	16.2	0
16.2	16.7	0
16.7	18.2	11
18.2	21.2	0

**ASSAYS**

FROM	TO	SAMPLE NO.	Au (ppm)	Au (ppm)	Au (ppm)	Ag (ppm)	Cu (ppm)	Fe (%)	As (ppm)	Sn (ppm)
0.5	1.7	15	0.154	-	-	<1	9	1.97	26.2	NS
1.7	2.2	16	0.095	-	-	<1	11	1.96	70	NS
2.2	5.2	17	0.337	-	-	<1	10	1.79	112	NS
5.2	5.4	18	0.762	-	-	<1	8	1.43	2550	NS
5.4	6.2	19	0.053	0.042	-	<1	27	3.78	321	NS
7.7	9.1	20	0.029	-	-	<1	18	2.83	40.7	NS
9.1	12.2	21	0.069	-	-	<1	20	2.67	59	NS
12.2	13.1	22	3.570	2.820	3.16	<1	34	3.58	1317	NS
13.1	13.7	23	14.000	13.500	-	<1	7	>5.0	2912	NS
13.7	14.4	24	13.500	12.100	-	<1	14	1.81	0.59	NS
14.4	15.3	25	0.083	-	-	<1	29	3.37	39.4	NS
15.3	16.7	26	0.472	-	-	4	26	3.54	47	NS
16.7	18.1	27	0.033	-	-	<1	17	3.00	39.5	NS
20.4	20.6	28	0.028	-	-	1	15	4.59	64	NS

<b>HOLE ID</b>	UN003			
<b>LOCATION</b>	<b>EASTING</b>	<b>NORTHING</b>	<b>RL</b>	<b>EOH</b>
	567929.96	5422196.81	738.6	25.7

<b>SURVEY</b>			
<b>FROM</b>	<b>TO</b>	<b>AZIMUTH</b>	<b>DIP</b>
0.0	25.7	64.5	-78

<b>ALTERATION</b>			
<b>FROM</b>	<b>TO</b>	<b>STYLE</b>	<b>INTENSITY</b>
0.3	4.3	SI	3
14.0	16.1	SI	2
16.1	20.2	SI	1

<b>TEXTURE</b>					
<b>FROM</b>	<b>TO</b>	<b>GRAIN SIZE</b>	<b>FABRIC</b>	<b>BED&gt;CORE</b>	<b>CLEAVAGE</b>

<b>LITHOLOGY</b>			
<b>FROM</b>	<b>TO</b>	<b>ROCK TYPE</b>	<b>REMARKS</b>
0.0	0.3	NO CORE	
0.3	4.9	SST	SILICIFIED
4.9	9.5	SST/SILTST	YOUNG UP HOLE
9.5	10.4	SST	LEACHED?
10.4	11.9	SST/SILTST	
11.9	12.4	SILTST	
12.4	16.6	SST/SILTST	REGULAR BEDS
16.6	20.2	SILTST/SST	SILTST 60%
20.2	21.6	LODE	FAULT ZONE
21.6	22.1	SST	
22.1	25.7	SILTST/SST	

<b>COLOUR</b>		
<b>FROM</b>	<b>TO</b>	<b>COLOUR</b>
0.0	0.3	NO CORE
0.3	4.9	LIGHT GREY
4.9	9.5	LIGHT GREY
9.5	10.4	LIGHT BROWN/WHITE
10.4	11.9	LIGHT GREY/BLACK
11.9	12.4	BLACK
12.4	16.6	LIGHT GREY
16.6	20.2	GREY/DARK GREY
20.2	21.6	DARK GREY
21.6	22.1	GREY
22.1	25.7	DARK GREY

<b>MINERALISATION</b>							
<b>FROM</b>	<b>TO</b>	<b>AsPy</b>	<b>STYLE</b>	<b>Py</b>	<b>STYLE</b>	<b>OTHER</b>	<b>STYLE</b>
4.8	4.9	1	VN	1	VN		
16.1	16.2	1	VN	1	VN		
20.2	21.6	1	VN	3	VN/DIS		

<b>FAULTS</b>			
<b>FROM</b>	<b>TO</b>	<b>GOUGE</b>	<b>ANGLE</b>
4.3	4.3	VN/BX	75
4.8	4.9	PU/VN	40
5.4	5.5	BX/PU	50
10.4	10.4	PU	80
16.1	16.2	PU/BX/VN	75
20.2	21.6	BX/SH/VN	50
21.6	21.6	BX/SH/VN	35
24.5	24.6	VN/BX	60

## VEINS

FROM	TO	MINERAL	SPACE(cm)	ANGLE	WIDTH (cm)
0.3	4.3	QTZ	10	50	2
4.3	4.4	QTZ/ASPY/PY	0	40	5
4.8	4.9	QTZ/PY/ASPY	0	40	10
4.9	14.0	PY	5	50	0.5
14.0	16.1	PY	10	50	0.2
16.1	16.2	QTZ/PY/ASPY	0	75	10
16.2	20.2	PY	10	50	0.2
20.2	21.6	QTZ/PY/ASPY	2	30	3
21.6	22.1	QTZ/PY/ASPY	10	20	1
22.1	24.6	QTZ/PY/ASPY	10	40	0.2
24.6	24.6	QTZ/PY/ASPY	0	60	5
24.6	25.7	QTZ	10	25	2

## RQD

FROM	TO	RQD
0.0	0.3	0
0.3	4.8	35
4.8	6.9	18
6.9	9.5	52
9.5	11.9	0
11.9	20.2	56
20.2	21.6	0
21.6	25.7	62

## ASSAYS

FROM	TO	SAMPLE NO.	Au (ppm)	Au (ppm)	Au (ppm)	Ag (ppm)	Cu (ppm)	Fe (%)	As (ppm)	Sn (ppm)
4.3	4.9	29	0.213	0.224	-	2	23	3.29	150	NS
19.2	20.2	30	0.031	-	-	<1	25	2.89	48.2	NS
20.2	20.7	31	4.830	-	-	<1	58	3.35	2576	NS
20.7	21.2	32	0.179	-	-	<1	22	3.26	224	NS
21.2	21.6	33	0.090	-	-	<1	21	3.03	71	NS
21.6	22.1	34	0.054	-	-	<1	21	3.09	71	NS
22.1	23.1	35	0.023	-	-	1	26	3.89	50	NS
23.1	24.1	36	0.026	-	-	1	18	3.10	60	NS
24.1	25.4	37	0.027	-	-	<1	27	3.19	102	NS

HOLE ID UN004

LOCATION	EASTING	NORTHING	RL	EOH
	567926.73	5422207.81	740.09	24.3

SURVEY FROM	TO	AZIMUTH	DIP
0.0	24.3	64.5	-74

ALTERATION FROM	TO	STYLE	INTENSITY
5.0	8.7	SI	3
18.0	19.2	SI	2

TEXTURE FROM	TO	GRAIN SIZE	FABRIC	BED>CORE	CLEAVAGE
--------------	----	------------	--------	----------	----------

LITHOLOGY FROM	TO	ROCK TYPE	REMARKS
0.0	0.2	NO CORE	
0.2	8.7	SST	
8.7	16.2	SST/SILTST	SST 85%
16.2	18.0	SILTST	FINE LAMINATIONS
18.0	19.2	LODE	QTZ VN 10%
19.2	21.3	SILTST/SST	
21.3	24.3	SILTST/SST	SST MINOR

COLOUR FROM	TO	COLOUR
0.0	0.2	NO CORE
0.2	8.7	LIGHT GREY
8.7	16.2	GREY
16.2	18.0	TAN
18.0	19.2	GREY/WHITE
19.2	21.3	DARK GREY
21.3	24.3	DARK GREY

MINERALISATION FROM	TO	AsPy	STYLE	Py	STYLE	OTHER	STYLE
6.1	6.2	2	VN	3	VN		
8.2	8.5	2	VN	2	VN		
16.2	16.6	3	VN	3	VN		
18.0	19.2	1	VN	3	VN		

FAULTS FROM	TO	GOUGE	ANGLE
11.4	11.4	PU	70
16.2	16.6	SH	25
17.1	17.2	PU/BX	55
19.2	19.2	VN	40
20.8	21.2	RU	55

VEINS FROM	TO	MINERAL	SPACE (cm)	ANGLE	WIDTH (cm)
6.1	6.1	PY/ASPY/QTZ	0	35	2
8.7	8.7	PY/QTZ	0	45	3
18.0	19.2	QTZ/PY/ASPY	10	53	5
19.2	21.3	PY/QTZ	10	50	0.2

## RQD

FROM	TO	RQD
0.0	0.2	0
0.2	8.7	84
8.7	9.9	63
9.9	12.1	10
12.1	14.2	52
14.2	18.0	11
18.0	19.6	50
19.6	20.0	0
20.0	20.4	75
20.4	21.3	0
21.3	24.3	77

## ASSAYS

FROM	TO	SAMPLE NO.	Au (ppm)	Au (ppm)	Au (ppm)	Ag (ppm)	Cu (ppm)	Fe (%)	As (ppm)	Sn (ppm)
6.1	6.2	38	0.160	0.448	-	<1	17	2.75	860	NS
15.2	16.2	39	0.054	-	-	<1	15	3.34	79	NS
16.2	16.6	40	0.073	-	-	<1	25	3.78	85	NS
16.6	18.0	41	0.040	-	-	<1	27	3.48	70	NS
18.0	18.6	42	0.056	-	-	<1	11	2.11	27.3	NS
18.6	19.2	43	0.089	-	-	<1	8	2.13	66	NS
19.2	20.2	44	0.046	-	-	<1	25	3.65	68	NS
20.2	21.3	45	0.029	0.026	-	<1	26	4.14	75	NS

<b>HOLE ID</b>	UN005			
<b>LOCATION</b>	<b>EASTING</b>	<b>NORTHING</b>	<b>RL</b>	<b>EOH</b>
	567918.43	5422214.23	737.56	25.7

<b>SURVEY</b>			
<b>FROM</b>	<b>TO</b>	<b>AZIMUTH</b>	<b>DIP</b>
0.0	25.7	64.5	-64.8

<b>ALTERATION</b>			
<b>FROM</b>	<b>TO</b>	<b>STYLE</b>	<b>INTENSITY</b>
0.2	3.3	S/Py	3
3.3	4.9	S/Py	2
4.9	5.6	S/Py	2
5.6	6.2	BLEACHED	5
6.2	10.7	S/Py	2
21.2	22.9	S/Py	2

<b>TEXTURE</b>					
<b>FROM</b>	<b>TO</b>	<b>GRAIN SIZE</b>	<b>FABRIC</b>	<b>BED&gt;CORE</b>	<b>CLEAVAGE</b>

<b>LITHOLOGY</b>			
<b>FROM</b>	<b>TO</b>	<b>ROCK TYPE</b>	<b>REMARKS</b>
0.0	0.2	NO CORE	
0.2	3.3	SST	SILICEOUS
3.3	4.9	SST	STRONG QTZ VN
4.9	5.6	SST	SILICEOUS
5.6	6.2	SST	BLEACHED
6.2	10.7	SST	SILICEOUS
10.7	12.2	SST/SILTST	MINOR SILTST
12.2	12.8	SILTST	
12.8	17.1	SST/SILTST	INTERBEDDED
17.1	17.7	SILTST	
17.7	18.3	SST	
18.3	19.4	LODE	SH/BX/QTZ VN BLEACHED SILTST
19.4	21.2	SST/SILTST	
21.2	22.9	SST	SILICEOUS
22.9	25.7	SST/SILTST	INTERBEDDED

<b>COLOUR</b>		
<b>FROM</b>	<b>TO</b>	<b>COLOUR</b>
0.0	0.2	NO CORE
0.2	3.3	LIGHT GREY
3.3	4.9	WHITE/GREY
4.9	5.6	LIGHT GREY
5.6	6.2	BROWN
6.2	10.7	LIGHT GREY
10.7	12.2	GREY/BLACK
12.2	12.8	BLACK
12.8	17.1	GREY/BLACK
17.1	17.7	BLACK
17.7	18.3	GREY
18.3	19.4	TAN/WHITE
19.4	21.2	DARK GREY
21.2	22.9	DARK GREY
22.9	25.7	DARK GREY

<b>MINERALISATION</b>							
<b>FROM</b>	<b>TO</b>	<b>AsPy</b>	<b>STYLE</b>	<b>Py</b>	<b>STYLE</b>	<b>OTHER</b>	<b>STYLE</b>
0.2	2.3	3	VN	1	DISS		
3.3	4.9	5	VN	1	DISS		
6.3	7.3	3	VN	3	VN		
7.3	11.3	1	VN	1	VN/DISS		
12.8	13.0	3	VN	3	VN		
17.7	18.3	1	VN	1	VN		
18.3	19.4	3	VN/BX	3	VN/BX		
21.2	23.8	2	VN	2	VN		

**FAULTS**

FROM	TO	GOUGE	ANGLE
4.9	4.9	BX	45
10.6	10.7	BX/RU	65
11.9	11.9	RU	60
18.3	19.4	SH/BX	50
19.4	19.4	SH/BX/VN	35
23.7	23.8	SH/BX	60

**VEINS**

FROM	TO	MINERAL	SPACE(cm)	ANGLE	WIDTH (cm)
0.2	2.3	QTZ/PY/ASPY	10	45	5
2.3	3.3	QTZ/PY/ASPY	20	45	3
3.3	4.9	QTZ/PY/ASPY	5	45	50
4.9	6.3	QTZ/PY/ASPY	30	45	0.5
6.3	7.3	QTZ/PY/ASPY	10	45	10
7.3	11.3	QTZ/PY/ASPY	40	45	1
18.3	19.4	QTZ/PT/ASPY	5	50	5
19.4	19.4	QTZ/PY/ASPY	5	35	5
21.2	23.8	PY/QTZ	30	35	1

**RQD**

FROM	TO	RQD
0.0	0.2	0
0.2	2.3	68
2.3	3.2	73
3.2	5.2	83
5.2	8.0	59
8.0	12.2	89
12.2	18.3	17
18.3	20.5	0
20.5	22.9	70
22.9	24.2	25
24.2	25.7	76

**ASSAYS**

FROM	TO	SAMPLE NO.	Au (ppm)	Au (ppm)	-	Ag (ppm)	Cu (ppm)	Fe (%)	As (ppm)	Sn (ppm)
0.2	2.3	46	0.104	-	-	<1	14	2.08	321	NS
2.3	3.3	47	0.575	-	-	<1	10	2.02	1900	NS
3.3	4.0	48	0.651	-	-	<1	22	2.38	224	NS
4.0	4.6	49	0.120	-	-	<1	13	1.79	465	NS
4.6	4.9	50	0.259	-	-	1	35	1.91	322	NS
4.9	5.6	51	0.052	-	-	<1	12	2.02	273	NS
5.6	6.3	52	0.072	0.091	-	<1	8	2.34	387	NS
6.3	6.8	53	0.350	-	-	<1	10	1.76	1864	NS
6.8	7.3	54	0.626	-	-	<1	11	1.99	2173	NS
12.8	13.2	55	0.024	-	-	<1	15	2.49	123	NS
17.1	17.7	56	0.151	0.222	-	<1	18	4.04	188	NS
17.7	18.3	57	0.254	-	-	<1	12	2.66	799	NS
18.3	18.8	58	0.105	-	-	<1	14	2.48	245	NS
18.8	19.4	59	0.090	-	-	<1	20	3.82	128	NS
19.4	21.2	60	<0.005	-	-	<1	23	3.61	111	NS
21.2	22.2	61	0.186	-	-	<1	13	2.03	105	NS
22.2	22.9	62	0.147	-	-	<1	14	1.91	169	NS
22.9	23.6	63	0.061	-	-	<1	23	3.24	205	NS
23.6	23.8	64	0.985	-	-	<1	31	3.27	153	NS

<b>HOLE ID</b>	UN006			
<b>LOCATION</b>	<b>EASTING</b>	<b>NORTHING</b>	<b>RL</b>	<b>EOH</b>
	567930.70	5422187.09	734.88	24.2

<b>SURVEY</b>		<b>AZIMUTH</b>	<b>DIP</b>
<b>FROM</b>	<b>TO</b>		
0.0	24.2	64.5	-55.2

<b>ALTERATION</b>		<b>STYLE</b>	<b>INTENSITY</b>
<b>FROM</b>	<b>TO</b>		
8.4	9.7	SI/DIS/VN	1
12.9	15.0	SI/DIS	1
16.0	17.1	SI/DIS/VN	2
17.7	19.0	SI/VN	5
20.3	21.6	SI/DIS	2

<b>TEXTURE</b>		<b>GRAIN SIZE</b>	<b>FABRIC</b>	<b>BED&gt;CORE</b>	<b>CLEAVAGE</b>
<b>FROM</b>	<b>TO</b>				

<b>LITHOLOGY</b>		<b>ROCK TYPE</b>	<b>REMARKS</b>
<b>FROM</b>	<b>TO</b>		
0.0	0.7	NO CORE	
0.7	4.0	SST	
4.0	5.3	SILTST/SST	
5.3	6.6	SST	
6.6	8.3	SILTST/SST	
8.3	11.0	SST	
11.0	15.0	SST/SILTST	
15.0	17.1	SST	LAMINATED FINE
17.1	17.7	SST	
17.7	19.0	LODE	QTZ/BX LODE AU PRESENT
19.0	20.3	SILTST	ALMOST A SHALE
20.3	21.6	SST/SILTST	
21.6	24.2	SST/SILTST	

<b>COLOUR</b>		<b>COLOUR</b>
<b>FROM</b>	<b>TO</b>	
0.0	0.7	GREY
0.7	4.0	GREY
4.0	5.3	GREY
5.3	6.6	GREY/TAN
6.6	8.3	GREY
8.3	11.0	TAN/GREY
11.0	15.0	GREY
15.0	17.1	GREY
17.1	17.7	GREY
17.7	19.0	WHITE/GREY
19.0	20.3	BLACK
20.3	21.6	DARK GREY
21.6	24.2	DARK GREY

<b>MINERALISATION</b>		<b>AsPy</b>	<b>STYLE</b>	<b>Py</b>	<b>STYLE</b>	<b>OTHER</b>	<b>STYLE</b>
<b>FROM</b>	<b>TO</b>						
16.7	17.1	3	VN	2	VN		
17.1	17.7	1	VN	1	VN		
17.7	19.0	4	VN	4	VN	GOLD	SPOTS

**FAULTS**

FROM	TO	GOUGE	ANGLE
2.2	2.4	PU	60
10.5	10.6	PU/RU	75
17.1	17.3	RU/SH	55
19.0	19.0	CLEAN	45
21.5	21.5	SH/QTZ/ASPY	25

**VEINS**

FROM	TO	MINERAL	SPACE(cm)	ANGLE	WIDTH (cm)
8.4	9.7	QTZ	15	50	0.8
16.7	17.1	QTZ/PY/ASPY	5	55	2
17.1	17.7	QTZ	10	55	1
17.7	19.0	QTZ/ASPY/PY/AU	0	50	130
19.0	20.3	PY/QTZ/GREEN MIN	5	45	3
22.7	22.8	QTZ/PT/ASPY	0	60	5

**RQD**

FROM	TO	RQD
0.0	0.7	0
0.7	2.4	25
2.4	4.3	0
4.3	6.7	30
6.7	8.4	0
8.4	12.8	45
12.8	13.9	32
13.9	17.1	60
17.1	17.7	0
17.7	19.0	64
19.0	19.8	88
19.8	20.3	0
20.3	20.7	90
20.7	24.2	42

**ASSAYS**

FROM	TO	SAMPLE NO.	Au (ppm)	Au (ppm)	Au (ppm)	Ag (ppm)	Cu (ppm)	Fe (%)	As (ppm)	Sn (ppm)
15.0	15.8	65	<0.005	0.013	-	<1	28	2.99	41.1	15
15.8	16.8	66	0.013	-	-	<1	10	1.62	37.6	13
16.8	17.1	67	0.803	-	-	<1	10	1.82	3597	7
17.1	17.7	68	0.112	-	-	<1	33	3.14	932	15
17.7	18.2	69	19.700	13.400	-	1	59	1.67	6200	7
18.2	18.7	70	0.204	-	-	<1	43	1.98	1792	12
18.7	19.0	71	2.940	2.450	-	<1	53	2.31	446	11
19.0	20.3	72	0.583	-	-	<1	45	4.86	256	8
20.3	21.3	73	0.010	-	-	<1	17	2.36	109	9
21.3	21.6	74	0.016	-	-	<1	27	3.81	146	12
21.6	22.6	75	0.018	-	-	<1	31	3.58	148	11
22.6	22.9	76	0.132	-	-	<1	24	3.39	203	11

HOLE ID UN007

LOCATION	EASTING	NORTHING	RL	EOH
	567932.53	5422174.61	730.57	27.2

SURVEY	FROM	TO	AZIMUTH	DIP
	0.0	27.2	64.5	-53

ALTERATION	FROM	TO	STYLE	INTENSITY
	18.1	19.2	SI	3
	23.2	25.2	SI	3

TEXTURE	FROM	TO	GRAIN SIZE	FABRIC	BED>CORE	CLEAVAGE
---------	------	----	------------	--------	----------	----------

LITHOLOGY	FROM	TO	ROCK TYPE	REMARKS
	0.0	1.2	NO CORE	
	1.2	4.7	SST/SILTST	
	4.7	6.3	SILTST	
	6.3	6.7	SILTST/SST	
	6.7	11.9	SILTST/SST	
	11.9	15.8	SILTST	
	15.8	16.9	SILTST	
	16.9	18.1	SST	
	18.1	19.2	LODE	
	19.2	23.2	SILTST/SST	
	23.2	25.2	SST	
	25.2	27.2	SILTST/SST	

COLOUR	FROM	TO	COLOUR
	0.0	1.2	NO CORE
	1.2	4.7	GREY/D.GREY
	4.7	6.3	BLACK/D.GREY
	6.3	6.7	D.GREY
	6.7	11.9	L.TAN
	11.9	15.8	GREY/BLACK
	15.8	16.9	BLACK/GREY
	16.9	18.1	GREY
	18.1	19.2	GREY
	19.2	23.2	BLACK/GREY
	23.2	25.2	GREY
	25.2	27.2	D.GREY/BLACK

MINERALISATION	FROM	TO	AsPy	STYLE	Py	STYLE	OTHER	STYLE
	18.1	19.2	1	VN	2	DISS/VN		
	20.5	20.7	1	VN	1	VN		
	21.4	21.9	3	VN	4	VN	1AU	SPOTS
	21.9	23.8	1	VN	1	VN		
	23.8	23.9	1	VN	2	VN		

FAULTS	FROM	TO	GOUGE	ANGLE
	4.7	4.8	QTZ	30
	12.6	12.7	RU	65
	18.2	18.3	RU/PY/PU	55
	19.2	19.3	PU/RU	55

## VEINS

FROM	TO	MINERAL	SPACE(cm)	ANGLE	WIDTH (cm)
4.7	5.6	QTZ,PY	5	60	1
7.5	7.7	QTZ	2	60	0.5
18.1	19.2	QTZ,PY,ASPY	5	55	3
20.5	20.7	QTZ,ASPY,PY	5	55	0.5
21.4	21.5	QTZ,ASPY,PY,AU	10	65	10
23.8	23.9	QTZ,ASPY,PY	5	65	1
23.9	27.2	QTZ,ASPY,PY	10	30	2

## RQD

FROM	TO	RQD
0.0	1.2	0
1.2	4.7	13
4.7	6.2	56
6.2	11.9	16
11.9	12.9	0
12.9	16.9	42
16.9	18.1	0
18.1	19.2	34
19.2	23.2	78
23.2	24	43
24.0	27.2	88

## ASSAYS

FROM	TO	SAMPLE NO.	Au (ppm)	Au (ppm)	Au (ppm)	Ag (ppm)	Cu (ppm)	Fe (%)	As (ppm)	Sn (ppm)
4.7	5.6	77	0.020	-	-	<1	27	3.46	148	NS
17.0	18.1	78	0.090	-	-	<1	23	3.21	145	NS
18.1	18.6	79	0.055	-	-	<1	17	2.28	159	NS
18.6	19.2	80	0.101	-	-	<1	10	2.01	170	NS
19.2	20.5	81	0.007	0.007	0.007	<1	22	3.23	117	NS
20.5	20.7	82	0.032	-	-	<1	20	4.07	182	NS
20.7	21.4	83	0.016	-	-	<1	29	3.61	143	NS
21.4	21.9	84	<0.005	-	-	<1	22	3.77	109	NS
21.9	23.2	85	0.006	-	-	<1	26	3.62	136	NS
23.2	23.8	86	0.021	-	-	<1	16	2.77	130	NS
23.8	23.9	87	0.276	-	-	<1	13	1.81	842	NS
25.7	26.1	88	0.063	-	-	<1	30	3.91	134	NS

HOLE ID	UN008			
LOCATION	EASTING	NORTHING	RL	EOH
	567905.78	5422214.17	733.11	40.7

SURVEY			
FROM	TO	AZIMUTH	DIP
0.0	25.0	64.5	-60.8
25.0	40.7	64.5	-58.8

ALTERATION			
FROM	TO	STYLE	INTENSITY
18.2	22.7	SI	2
22.7	23.4	SI	4
23.4	24.3	SI	2
32.7	33.4	SI	5
33.4	40.7	SI	2

TEXTURE					
FROM	TO	GRAIN SIZE	FABRIC	BED>CORE	CLEAVAGE

LITHOLOGY			
FROM	TO	ROCK TYPE	REMARKS
0.0	1.5	NO CORE	NO CORE
1.5	1.9	SILTST	
1.9	10.0	SILTST	
10.0	14.7	SST/SILTST	
14.7	20.9	SST/SILTST	
20.9	22.7	SST	
22.7	25.0	SST/SILTST	
25.0	29.6	SST/SILTST	
29.6	30.0	SST	
30.0	32.7	SST/SILTST	
32.7	33.4	LODE	
33.4	36.7	SST/SILTST	
36.7	40.7	SST	

COLOUR		
FROM	TO	COLOUR
0.0	1.5	NO CORE
1.5	1.9	GREY
1.9	10.0	D.GREY/BLACK
10.0	14.7	GREY
14.7	20.9	D.GREY
20.9	22.7	GREY
22.7	25.0	GREY
25.0	29.6	L.GREY
29.6	30.0	L.GREEN
30.0	32.7	GREY
32.7	33.4	WHITE/GREY
33.4	36.7	D.GREY
36.7	40.7	D.GREY

MINERALISATION							
FROM	TO	AsPy	STYLE	Py	STYLE	OTHER	STYLE
18.2	22.7	1	VN	1	VN		
22.7	23.0	3	VN/DIS	3	VN/DIS		
23.0	23.4	1	VN/DIS	1	VN/DIS		
29.0	30.0	2	VN	2	VN		
31.0	31.7	1	VN	1	VN		
32.7	33.0	1	DIS	1	DIS		
33.0	33.4	3	VN	3	VN		
33.4	36.2	1	VN	1	VN		

**FAULTS**

FROM	TO	GOUGE	ANGLE
22.7	22.8	RU	65
23.6	23.9	PU/PU	50

**VEINS**

FROM	TO	MINERAL	SPACE(cm)	ANGLE	WIDTH (cm)
6.8	6.9	QTZ,PY	3	75	2
18.2	22.7	QTZ	15	50	0.5
22.7	23.0	QTZ,PY,ASPY	0	65	30
23.0	23.4	QTZ,PY,ASPY	3	60	0.4
27.0	29.0	QTZ	40	50	1
29.6	30.0	QTZ,PY,ASPY	5	50	2
31.0	31.7	QTZ,PY,ASPY	5	45	2
31.7	32.7	QTZ,ASPY,PY	10	65	2
32.7	33.0	QTZ	10	65	1
33.0	33.4	QTZ,ASPY,PY	0	70	40
33.4	36.2	QTZ,PY,ASPY	15	55	2

**RQD**

FROM	TO	RQD
0.0	1.5	0
1.5	4.7	10
4.7	12.4	54
12.4	13.0	0
13.0	16.0	42
16.0	22.7	76
22.7	25.0	34
25.0	27.0	78
27.0	28.0	22
28.0	32.7	82
32.7	40.7	86

**ASSAYS**

FROM	TO	SAMPLE NO.	Au (ppm)	Au (ppm)	Au (ppm)	Ag (ppm)	Cu (ppm)	Fe (%)	As (ppm)	Sn (ppm)
20.7	21.7	89	0.023	-	-	<1	24	2.64	154	15
21.7	22.7	90	0.023	-	-	<1	20	2.5	116	10
22.7	23.0	91	0.102	0.074	-	<1	13	2.52	116	7
23.0	24.4	92	0.038	-	-	<1	20	2.88	119	9
28.4	29.6	94	0.217	-	-	<1	54	4.13	153	11
29.6	30.0	95	0.318	-	-	<1	35	2.82	394	14
30.0	31.0	96	0.283	-	-	<1	46	3.58	148	10
31.0	31.7	97	0.255	-	-	<1	33	4.39	170	10
31.7	32.7	98	0.033	-	-	<1	28	3.69	180	14
32.7	33.0	99	0.094	-	-	<1	21	2.53	194	10
33.0	33.4	100	0.304	-	-	<1	20	3.23	903	12
33.4	34.4	101	0.034	-	-	<1	27	3.3	196	12
34.4	35.4	102	1.990	-	-	<1	25	3.33	1856	8
35.4	36.7	103	<0.005	-	-	<1	25	3.41	163	10

APPENDIX 6

ORIGINAL LOGS OF UNA #1 ADIT DRILL HOLES  
(UN001 TO UN008)

MANCALA PTY LTD

DIAMOND DRILL HOLE LOG

356105

HOLE NO. UN001 COLLAR NORTHING 562218.8 EASTING 567940.1 RL 732.51

PAGE 1 OF 1

AZIMUTH 055 MAG DIP -61 LOGGED 9/5/96 BY TEA

CORE SIZE BQTK

PURPOSE To Test for Mineralisation below LNA Adit #1 (Local Section 20)

DRILLED BY ATD

CORE RECD	DEPTH m	ALTERATION		TEXTURE		So TO CORE >	S? TO CORE >	LITHOLOGY	COLOUR	MINERALISATION			FAULTS	VEINS	DEPTH m	RQD	REMARKS
		CARB	OTHER	GRAIN SIZE	FABRIC					AsPy	Py	OTHER					
No Core	0.50																
1.70	2			med fine	massive	-	-	ss	light grey						177cm		siliceous sandstone, siliceous weathering, some quartz; irregular bedded sandstone
3.10	3			fine	sampled	50-60	-	200 siltstone	dark grey						178cm		2.5' contact with siliceous sandstone, some quartz, some calcite; greyish of ss - 2.5' to 50' of LNA
4.70	4			med fine	well bedded, fine lamination	60	-	2.5' bedded dark grey to light grey siltstone	dark grey						180cm		Remainder fine well laminated siltstone
6.10	5			fine	well laminated	70	-	well laminated fine ss	light grey						182cm		6.20 contact bedded. Contact zone 20cm
7.70	7			fine	well laminated	70	-	well laminated fine ss	light grey						184cm		well laminated fine ss to near basebeds of dark grey siltstone
9.70	9			fine	well bedded	70-75	-	well laminated siltstone	dark grey						186cm		8.50 fault bedded. - fracturing common on Co planes
10.7	10			fine	well bedded	70-75	-	well laminated siltstone	dark grey						188cm		10.0 fault bedded
12.10	11			fine	well bedded	70-75	-	well laminated siltstone	dark grey						190cm		10.0 fault bedded
13.70	12			fine	well bedded	70-75	-	well laminated siltstone	dark grey						192cm		12.0 fault bedded
15.70	13			fine	well bedded	70-75	-	well laminated siltstone	dark grey						194cm		15.50 fault bedded
17.70	14			fine	well bedded	70-75	-	well laminated siltstone	dark grey						196cm		17.50 fault bedded
18.70	15			fine	well bedded	70-75	-	well laminated siltstone	dark grey						198cm		18.50 fault bedded

HOLE NO. UN002 COLLAR NORTHING 542214.89 EASTING 567930.13 RL 738.66

PAGE 1 OF 2

AZIMUTH 055 MAG DIP -58.2 LOGGED 9/5/96 BY TEA

CORE SIZE BQTK

PURPOSE To test Au Mineralisation below the UMA #1 Adit (Local section 62)

DRILLED BY ATD

CORE REC'D	DEPTH m	ALTERATION		TEXTURE			LITHOLOGY	COLOUR	MINERALISATION			FAULTS	VEINS	DEPTH m	RQD	REMARKS											
		CARB	OTHER	GRAIN SIZE	FABRIC	S <sub>0</sub> TO CORE >			S <sub>7</sub> TO CORE >	AsPy	Py						OTHER										
170	1																										
3.30	2		S: 3	Med/Fine	M0		Siliceous sst	grey to brown brown cdy to fine (froz stain)		Disseminated through out - 0.5%? (froz stain) occasional veins on split planes 1-1.5mm			Neoblasts Py veins - 1-3mm		196m	46											
4.70	6																										
5.4	5	S?	S-E												0	50	grey bright later material										
6.20	6														0	50											
7.0	7														0	62											
8	8			Med/Fine	M0	45-? Shale black siliceous	Siliceous sst	As above		Disseminated 0.5-1mm veins			60% sst - 40% sil				2 starts of black siliceous - subangular - 3mm x 0.5mm at a 65' local to										
9.20	9																										
10.70	10																										
11	11																										
12.20	12																										
13.0	13																										
15.10	14		S: 5		D/Vn		Massive gtl	White/ dark grey		2-5% sst - 0.5mm - 1mm - 2mm - 3mm - 4mm - 5mm - 6mm - 7mm - 8mm - 9mm - 10mm - 11mm - 12mm - 13mm - 14mm - 15mm - 16mm - 17mm - 18mm - 19mm - 20mm - 21mm - 22mm - 23mm - 24mm - 25mm - 26mm - 27mm - 28mm - 29mm - 30mm - 31mm - 32mm - 33mm - 34mm - 35mm - 36mm - 37mm - 38mm - 39mm - 40mm - 41mm - 42mm - 43mm - 44mm - 45mm - 46mm - 47mm - 48mm - 49mm - 50mm - 51mm - 52mm - 53mm - 54mm - 55mm - 56mm - 57mm - 58mm - 59mm - 60mm - 61mm - 62mm - 63mm - 64mm - 65mm - 66mm - 67mm - 68mm - 69mm - 70mm - 71mm - 72mm - 73mm - 74mm - 75mm - 76mm - 77mm - 78mm - 79mm - 80mm - 81mm - 82mm - 83mm - 84mm - 85mm - 86mm - 87mm - 88mm - 89mm - 90mm - 91mm - 92mm - 93mm - 94mm - 95mm - 96mm - 97mm - 98mm - 99mm - 100mm - 101mm - 102mm - 103mm - 104mm - 105mm - 106mm - 107mm - 108mm - 109mm - 110mm - 111mm - 112mm - 113mm - 114mm - 115mm - 116mm - 117mm - 118mm - 119mm - 120mm - 121mm - 122mm - 123mm - 124mm - 125mm - 126mm - 127mm - 128mm - 129mm - 130mm - 131mm - 132mm - 133mm - 134mm - 135mm - 136mm - 137mm - 138mm - 139mm - 140mm - 141mm - 142mm - 143mm - 144mm - 145mm - 146mm - 147mm - 148mm - 149mm - 150mm - 151mm - 152mm - 153mm - 154mm - 155mm - 156mm - 157mm - 158mm - 159mm - 160mm - 161mm - 162mm - 163mm - 164mm - 165mm - 166mm - 167mm - 168mm - 169mm - 170mm - 171mm - 172mm - 173mm - 174mm - 175mm - 176mm - 177mm - 178mm - 179mm - 180mm - 181mm - 182mm - 183mm - 184mm - 185mm - 186mm - 187mm - 188mm - 189mm - 190mm - 191mm - 192mm - 193mm - 194mm - 195mm - 196mm - 197mm - 198mm - 199mm - 200mm - 201mm - 202mm - 203mm - 204mm - 205mm - 206mm - 207mm - 208mm - 209mm - 210mm - 211mm - 212mm - 213mm - 214mm - 215mm - 216mm - 217mm - 218mm - 219mm - 220mm - 221mm - 222mm - 223mm - 224mm - 225mm - 226mm - 227mm - 228mm - 229mm - 230mm - 231mm - 232mm - 233mm - 234mm - 235mm - 236mm - 237mm - 238mm - 239mm - 240mm - 241mm - 242mm - 243mm - 244mm - 245mm - 246mm - 247mm - 248mm - 249mm - 250mm - 251mm - 252mm - 253mm - 254mm - 255mm - 256mm - 257mm - 258mm - 259mm - 260mm - 261mm - 262mm - 263mm - 264mm - 265mm - 266mm - 267mm - 268mm - 269mm - 270mm - 271mm - 272mm - 273mm - 274mm - 275mm - 276mm - 277mm - 278mm - 279mm - 280mm - 281mm - 282mm - 283mm - 284mm - 285mm - 286mm - 287mm - 288mm - 289mm - 290mm - 291mm - 292mm - 293mm - 294mm - 295mm - 296mm - 297mm - 298mm - 299mm - 300mm - 301mm - 302mm - 303mm - 304mm - 305mm - 306mm - 307mm - 308mm - 309mm - 310mm - 311mm - 312mm - 313mm - 314mm - 315mm - 316mm - 317mm - 318mm - 319mm - 320mm - 321mm - 322mm - 323mm - 324mm - 325mm - 326mm - 327mm - 328mm - 329mm - 330mm - 331mm - 332mm - 333mm - 334mm - 335mm - 336mm - 337mm - 338mm - 339mm - 340mm - 341mm - 342mm - 343mm - 344mm - 345mm - 346mm - 347mm - 348mm - 349mm - 350mm - 351mm - 352mm - 353mm - 354mm - 355mm - 356mm - 357mm - 358mm - 359mm - 360mm - 361mm - 362mm - 363mm - 364mm - 365mm - 366mm - 367mm - 368mm - 369mm - 370mm - 371mm - 372mm - 373mm - 374mm - 375mm - 376mm - 377mm - 378mm - 379mm - 380mm - 381mm - 382mm - 383mm - 384mm - 385mm - 386mm - 387mm - 388mm - 389mm - 390mm - 391mm - 392mm - 393mm - 394mm - 395mm - 396mm - 397mm - 398mm - 399mm - 400mm - 401mm - 402mm - 403mm - 404mm - 405mm - 406mm - 407mm - 408mm - 409mm - 410mm - 411mm - 412mm - 413mm - 414mm - 415mm - 416mm - 417mm - 418mm - 419mm - 420mm - 421mm - 422mm - 423mm - 424mm - 425mm - 426mm - 427mm - 428mm - 429mm - 430mm - 431mm - 432mm - 433mm - 434mm - 435mm - 436mm - 437mm - 438mm - 439mm - 440mm - 441mm - 442mm - 443mm - 444mm - 445mm - 446mm - 447mm - 448mm - 449mm - 450mm - 451mm - 452mm - 453mm - 454mm - 455mm - 456mm - 457mm - 458mm - 459mm - 460mm - 461mm - 462mm - 463mm - 464mm - 465mm - 466mm - 467mm - 468mm - 469mm - 470mm - 471mm - 472mm - 473mm - 474mm - 475mm - 476mm - 477mm - 478mm - 479mm - 480mm - 481mm - 482mm - 483mm - 484mm - 485mm - 486mm - 487mm - 488mm - 489mm - 490mm - 491mm - 492mm - 493mm - 494mm - 495mm - 496mm - 497mm - 498mm - 499mm - 500mm - 501mm - 502mm - 503mm - 504mm - 505mm - 506mm - 507mm - 508mm - 509mm - 510mm - 511mm - 512mm - 513mm - 514mm - 515mm - 516mm - 517mm - 518mm - 519mm - 520mm - 521mm - 522mm - 523mm - 524mm - 525mm - 526mm - 527mm - 528mm - 529mm - 530mm - 531mm - 532mm - 533mm - 534mm - 535mm - 536mm - 537mm - 538mm - 539mm - 540mm - 541mm - 542mm - 543mm - 544mm - 545mm - 546mm - 547mm - 548mm - 549mm - 550mm - 551mm - 552mm - 553mm - 554mm - 555mm - 556mm - 557mm - 558mm - 559mm - 560mm - 561mm - 562mm - 563mm - 564mm - 565mm - 566mm - 567mm - 568mm - 569mm - 570mm - 571mm - 572mm - 573mm - 574mm - 575mm - 576mm - 577mm - 578mm - 579mm - 580mm - 581mm - 582mm - 583mm - 584mm - 585mm - 586mm - 587mm - 588mm - 589mm - 590mm - 591mm - 592mm - 593mm - 594mm - 595mm - 596mm - 597mm - 598mm - 599mm - 600mm - 601mm - 602mm - 603mm - 604mm - 605mm - 606mm - 607mm - 608mm - 609mm - 610mm - 611mm - 612mm - 613mm - 614mm - 615mm - 616mm - 617mm - 618mm - 619mm - 620mm - 621mm - 622mm - 623mm - 624mm - 625mm - 626mm - 627mm - 628mm - 629mm - 630mm - 631mm - 632mm - 633mm - 634mm - 635mm - 636mm - 637mm - 638mm - 639mm - 640mm - 641mm - 642mm - 643mm - 644mm - 645mm - 646mm - 647mm - 648mm - 649mm - 650mm - 651mm - 652mm - 653mm - 654mm - 655mm - 656mm - 657mm - 658mm - 659mm - 660mm - 661mm - 662mm - 663mm - 664mm - 665mm - 666mm - 667mm - 668mm - 669mm - 670mm - 671mm - 672mm - 673mm - 674mm - 675mm - 676mm - 677mm - 678mm - 679mm - 680mm - 681mm - 682mm - 683mm - 684mm - 685mm - 686mm - 687mm - 688mm - 689mm - 690mm - 691mm - 692mm - 693mm - 694mm - 695mm - 696mm - 697mm - 698mm - 699mm - 700mm - 701mm - 702mm - 703mm - 704mm - 705mm - 706mm - 707mm - 708mm - 709mm - 710mm - 711mm - 712mm - 713mm - 714mm - 715mm - 716mm - 717mm - 718mm - 719mm - 720mm - 721mm - 722mm - 723mm - 724mm - 725mm - 726mm - 727mm - 728mm - 729mm - 730mm - 731mm - 732mm - 733mm - 734mm - 735mm - 736mm - 737mm - 738mm - 739mm - 740mm - 741mm - 742mm - 743mm - 744mm - 745mm - 746mm - 747mm - 748mm - 749mm - 750mm - 751mm - 752mm - 753mm - 754mm - 755mm - 756mm - 757mm - 758mm - 759mm - 760mm - 761mm - 762mm - 763mm - 764mm - 765mm - 766mm - 767mm - 768mm - 769mm - 770mm - 771mm - 772mm - 773mm - 774mm - 775mm - 776mm - 777mm - 778mm - 779mm - 780mm - 781mm - 782mm - 783mm - 784mm - 785mm - 786mm - 787mm - 788mm - 789mm - 790mm - 791mm - 792mm - 793mm - 794mm - 795mm - 796mm - 797mm - 798mm - 799mm - 800mm - 801mm - 802mm - 803mm - 804mm - 805mm - 806mm - 807mm - 808mm - 809mm - 810mm - 811mm - 812mm - 813mm - 814mm - 815mm - 816mm - 817mm - 818mm - 819mm - 820mm - 821mm - 822mm - 823mm - 824mm - 825mm - 826mm - 827mm - 828mm - 829mm - 830mm - 831mm - 832mm - 833mm - 834mm - 835mm - 836mm - 837mm - 838mm - 839mm - 840mm - 841mm - 842mm - 843mm - 844mm - 845mm - 846mm - 847mm - 848mm - 849mm - 850mm - 851mm - 852mm - 853mm - 854mm - 855mm - 856mm - 857mm - 858mm - 859mm - 860mm - 861mm - 862mm - 863mm - 864mm - 865mm - 866mm - 867mm - 868mm - 869mm - 870mm - 871mm - 872mm - 873mm - 874mm - 875mm - 876mm - 877mm - 878mm - 879mm - 880mm - 881mm - 882mm - 883mm - 884mm - 885mm - 886mm - 887mm - 888mm - 889mm - 890mm - 891mm - 892mm - 893mm - 894mm - 895mm - 896mm - 897mm - 898mm - 899mm - 900mm - 901mm - 902mm - 903mm - 904mm - 905mm - 906mm - 907mm - 908mm - 909mm - 910mm - 911mm - 912mm - 913mm - 914mm - 915mm - 916mm - 917mm - 918mm - 919mm - 920mm - 921mm - 922mm - 923mm - 924mm - 925mm - 926mm - 927mm - 928mm - 929mm - 930mm - 931mm - 932mm - 933mm - 934mm - 935mm - 936mm - 937mm - 938mm - 939mm - 940mm - 941mm - 942mm - 943mm - 944mm - 945mm - 946mm - 947mm - 948mm - 949mm - 950mm - 951mm - 952mm - 953mm - 954mm - 955mm - 956mm - 957mm - 958mm - 959mm - 960mm - 961mm - 962mm - 963mm - 964mm - 965mm - 966mm - 967mm - 968mm - 969mm - 970mm - 971mm - 972mm - 973mm - 974mm - 975mm - 976mm - 977mm - 978mm - 979mm - 980mm - 981mm - 982mm - 983mm - 984mm - 985mm - 986mm - 987mm - 988mm - 989mm - 990mm - 991mm - 992mm - 993mm - 994mm - 995mm - 996mm - 997mm - 998mm - 999mm - 1000mm																	
15.7	15		S: 5	Fine	Finest black siliceous	60	dark grey sst	dark grey		Disseminated																	
16.7	16																										
18.0	18		S: 3	Med/Fine	Med/Fine	20	siliceous sst	grey Fe stain - brown																			
19.20	19			fine bedding	Med/Fine	20	siliceous sst	Black																			
19.70	19		S: 3			20	siliceous sst	grey																			

HOLE NO. UN002 COLLAR NORTHING S822146.89 EASTING 567930.13 RL 738.66

PAGE 2 OF 2

AZIMUTH 055°44'00" DIP -58.2 LOGGED 9/5/96 BY TEA

CORE SIZE 80TK

PURPOSE To test Au Mineralisation below UVA #1 Adit (Lead Section 62)

DRILLED BY ATD

CORE RECD	DEPTH m	ALTERATION		TEXTURE		S <sub>0</sub> TO CORE >	S <sub>7</sub> TO CORE >	LITHOLOGY	COLOUR	MINERALISATION			FAULTS	VEINS	DEPTH m	RCD	REMARKS
		CARB	OTHER	GRAIN SIZE	FABRIC					AsPy	Py	OTHER					
21%	21									20-40 μm	5%	in Calc	20-40 μm	20-40 μm			See Logbook for Au & Ag grade
	11																21-21.0
	10																
	06																
	15																

HOLE NO. UN003 COLLAR NORTHING 562244.31 EASTING 587929.96 RL 738.66

PAGE 1 OF 2

AZIMUTH 055 MAG DIP - 78 LOGGED 14/5/96 BY TEA

CORE SIZE 80TK

PURPOSE To test mineralisation below UN001 Adit (Local Section 42)

DRILLED BY ATD

CORE RECD	DEPTH m	ALTERATION		TEXTURE			LITHOLOGY	COLOUR	MINERALISATION			FAULTS	VEINS	DEPTH m	ROD	REMARKS	
		CARB	OTHER	GRAIN SIZE	FABRIC	S <sub>0</sub> TO CORE >			S <sub>1</sub> TO CORE >	AsPy	Py						OTHER
170	1																
310	2		SS: pervasive	fine	h10		light grey siltstone	light grey		disseminated	irregular thin Pyroclastic replacement		irregularly occurring white wavy ppt com. ~ 50% 1-5cm max grain	157cm	35	massive sst & occasional Py! Mining as per UN002. Fe staining adjacent to fracture. Fracturing common at ~ 60m - 100m.	
470	4													68		67	fractured contact
610	6													69	18	55% sst & 50% siltstone beds graded down then thick upper sst/sst contact commonly with flame structures	
770	7				bedded siltstone	SS	Light grey sst & black siltstone interbedded	light grey					occasional ppt Py thin irregular	69	52	Yacoring up hole.	
870	9													70		45% bedded contact - 70'	
107	10													70		bleached & leached sandstone?	
127	11				bedded	75	20% sst & black siltstone	light grey/black						70	0	Light grey sst & beds (graded & flame structures) of black siltstone - 5-10cm thick at 6.5-6.6m intervals bedded contact	
147	12				bedded	70	12% siltstone	black						70		12% large siltstone in sst. bedded contact	
157	13				bedded	70	55% regular siltstone beds	light grey						70		30cm siltstone bed & every 2cm siltstone is graded and has good flame structure	
157	13		25% pervasive											70			
167	14													70		66% bedded contact	
172	15		15% pervasive			75	siltstone/sst ~ 60% siltstone	grey/dark grey						70		56.	Regular alternations of siltstone & sst. Whispy laminae at x bedding some siltstone streak in sst / base.
177	16													70			

HOLE NO. UN003 COLLAR NORTHING 5422196.91 EASTING 567929.96 RL 738.66

PAGE 2 OF 2

AZIMUTH 055.4116 DIP -78 LOGGED 14/5/96 BY TEA

CORE SIZE 80TK

PURPOSE To test Au mineralisation below UNA #1 Adit. (Local Section 42)

DRILLED BY ATD

Note only minor changes to  
over fault line compared with UN002

CORE RECD	DEPTH m	ALTERATION		TEXTURE			LITHOLOGY	COLOUR	MINERALISATION			FAULTS	VEINS	DEPTH m	RQD	REMARKS
		CARB	OTHER	GRAIN SIZE	FABRIC	S <sub>0</sub> TO CORE >			S <sub>7</sub> TO CORE >	AsPy	Py					
212	21			20.2 fine/fin	Faulted Shales	7	20.1 silt/silt	dark grey	20.2 none	20.1 abundant - quartz - calcite	Py dissolution through silt/silt	20.2 20.1	20.2 20.1	20.2 20.1	0	20.2 Fault zone - massive silt 20.1 Fault zone
227	25			21.6 Med	Mudstone	7	21.6 silt	grey	21.6 -	21.6 in stringers		21.6 21.5	21.6 21.5	21.6 21.5		21.6 21.5 Fault zone
261	26			26.1 V.F.	bedded F. silt Laminated	70	26.1 silt silt silt	dark grey	26.1 -	26.1 on fracture planes silt/silt		26.1 26.0	26.1 26.0	26.1 26.0	25.6 62	26.1 Pyconcretion on fracture planes and within qtz veins
257	25															
	26															Adit 25.7
	27															

HOLE NO. U1006 COLLAR NORTHING 562207.81 EASTING 567926.73 RL 760.09

PAGE 1 OF 2

AZIMUTH 055 MAG DIP -74 LOGGED 14/5/96 BY TZA

CORE SIZE BQTK

PURPOSE To test Au mineralisation below UVA #1 Adit (Local Section S2)

DRILLED BY ATD

CORE RECD	DEPTH m	ALTERATION		TEXTURE			LITHOLOGY	COLOUR	MINERALISATION			FAULTS	VEINS	DEPTH m	ROD	REMARKS		
		CARB	OTHER	GRAIN SIZE	FABRIC	So TO CORE >			S? TO CORE >	AsPy	Py						OTHER	
	0																	
	1.50																	occasional Fe staining esp around fractures.
	2.50						ss?	Light grey										
	3.50																	
	4.50																	
	5.50																	
	6.50																	
	7.50																	
	8.50																	
	9.50																	
	10.50																	
	11.50																	
	12.50																	
	13.50																	
	14.50																	
	15.50																	
	16.50																	
	17.50																	
	18.50																	
	19.50																	
	20.50																	

MANCALA PTY LTD

DIAMOND DRILL HOLE LOG

386111

HOLE NO. UJ004 COLLAR NORTHING 5422207.81 EASTING 587926.73 RL 740.89

PAGE 2 OF 2

AZIMUTH 055 MAG DIP -74

LOGGED 14/5/96 BY TEA

CORE SIZE BQTK

PURPOSE To test for mineralisation below UWA #1 Adit (Local Section 52)

DRILLED BY ATD

CORE REC'D	DEPTH m	ALTERATION		TEXTURE			LITHOLOGY	COLOUR	MINERALISATION			FAULTS	VEINS	DEPTH m	RQD	REMARKS
		CARB	OTHER	GRAIN SIZE	FABRIC	S <sub>0</sub> TO CORE >			S <sub>7</sub> TO CORE >	AsPy	Py					
21				v. fine	well bedded	65	-	Blue siltstone 2.5 bed	dark grey		py (thin) sil (thin)					20.3 30.2 25 21.3 22.0 21.5 strongly fractured in core. Py or calciferous planes
21.3	21															
22.8	23			v. fine	bedded conglomerate	70	-	fine conglomerate siltstone + occasional siliceous beds.	dark grey							23.0 77
24.3	24															24.3 EOM
	25															
	26															
	27															
	28															
	29															
	30															

MANCALA PTY LTD

DIAMOND DRILL HOLE LOG

336112

HOLE NO. UNA005 COLLAR NORTHING 562224.23 EASTING 567918.63 RL 737.56

PAGE 1 OF 2

AZIMUTH 055 MAG DIP -64.8 LOGGED 26/5/96 BY TEA

CORE SIZE BQTR

PURPOSE To test for mineralisation below UNA #1 Adit (Local Section 62)

DRILLED BY ATO

CORE RECD	DEPTH m	ALTERATION		TEXTURE			LITHOLOGY	COLOUR	MINERALISATION			FAULTS	VEINS	DEPTH m	RQD	REMARKS		
		CARB	OTHER	GRAIN SIZE	FABRIC	So TO CORE >			S? TO CORE >	AsPy	Py						OTHER	
1.70	1			Medium	lit	-	ss+ (siliceous)	Light grey	10% sil	20% sil						1.70-2.30	Ingle's Feature Py mineralisation (1.70-2.30) whisp.	
3.10	3		30% sil - Py wh														2.30-3.20	7th Unit - 30-50% sil gangue - led top
4.70	4		55% sil - Py wh	Medium	Vn	-	strongly siliceous ss+	White/grey	10% sil	25% sil							3.20-4.90	8th Unit - 70-80% sil - some regularity at 3.20-4.90 Some small pygmoids style.
6.20	6		30% sil - Py wh	Med	lit	-	sil ss+	Light grey									4.90-5.20	
7.70	7		30% sil - Py wh	Med	lit	-	sil ss+	Light grey									5.20-6.20	
9.70	9																6.20-7.70	
11.70	11																7.70-11.70	
12.20	12			Med/V Fine	occasional se med/fin	60	consist of crystalline black siliceous beds	Light grey Black	10% sil	40% sil							11.70-12.20	So comb well defined + sharp. 9th Unit whisp Pygmoid at 11.70
13.70	13			Med/V Fine	med/fin	60	black siliceous	Black	20% sil	50% sil							12.20-13.70	10th Unit siliceous by light sandy beds on siliceous
15.70	15			Med/V Fine	well bedded Med	60	subbed siliceous	grey black		crystal whisp Py Vn sil gangue							13.70-15.70	Well bedded siliceous between units, ss+ siliceous Possible grading of base siliceous - siliceous spring up hole.
17.70	17																15.70-17.70	17th Unit comb so sil (Erosion?)
19.70	19			Med/V Fine	shaly	-	shaly to siliceous	Tan/White	50% sil	20% sil							17.70-19.70	Low comb 60 siliceous w/ 2 beds of beds? black siliceous "Low comb" shaly to siliceous bedded siliceous

HOLE NO. UN005 COLLAR NORTHING 582214.23 EASTING 567918.63 RL 737.56

PAGE 2 OF 2

AZIMUTH 05 MAG DIP -64.8 LOGGED 22/5/96 BY TEA

CORE SIZE B07K

PURPOSE To test for mineralisation below UNA #1 Adit (Local Section 62)

DRILLED BY ATD

CORE REC'D	DEPTH m	ALTERATION		TEXTURE			LITHOLOGY	COLOUR	MINERALISATION			FAULTS	VEINS	DEPTH m	RCD	REMARKS
		CARB	OTHER	GRAIN SIZE	FABRIC	S <sub>0</sub> TO CORE >			S <sub>7</sub> TO CORE >	AsPy	Py					
2120	70			Very fine	Laminated bedded	70		Dark grey						70		2120-70 Irregularly interbedded f & laminae (indistinct)
2270	167		3D Sst + Py	Med	Ab	-		Dark grey	1.5%	2.4% Sst 2.9% Py	-		20-30m 40-50m of Sst Unif. Py common	167		2270-167 bedded contact f & laminae - dark and grey patches - mineralisation exposed?
2570	247			Very fine	Conchoidal bedded M <sub>6</sub>	65-70		Dark grey				23.5% Sst 10%	257	257-247		2570-247 Jagged conchoidal patches with laminae like sst (50%) → patches of sst (grey) overall sst = 70%
2570	257													2570		2570 ECH

HOLE NO. UN006 COLLAR NORTHING 5822187.04 EASTING 587930.70 RL 736.88

PAGE 1 OF 2

AZIMUTH 055 MAG DIP -33.2 LOGGED 20/5/96 BY TEA

CORE SIZE B07K

PURPOSE To test Au mineralisation below LENA #1 Adit (Core Section 32)

DRILLED BY HTD

CORE RECD	DEPTH m	ALTERATION		TEXTURE		LITHOLOGY	COLOUR	MINERALISATION			FAULTS	VEINS	DEPTH m	RQD	REMARKS
		CARB	OTHER	GRAIN SIZE	FABRIC			S0 TO CORE >	S? TO CORE >	AsPy					
	0.70												0	No Core	
170	1			medium	Ma	ss	grey						25	Broken to clean of fractures	
320	3												0		
470	4			fine med	bedded	45	grey						65	ss with added water to form a zone below soft sed structures - Young Upheal	
620	6			med	Ma		grey/tau						30		
770	7			med fine	bedded	55	grey						60	Highly broken - push bed drilling rock. Thin bed zones apparent. Irregular - erratic?	
920	9			med fine	bedded	60	tau grey						80	Upper contact 80' subtle comminution in situ (chips) fissure at 55' appears bedded.	
1070	10			med									65		
1220	12			med fine	bedded	65	grey						80		
1370	13												32		
1520	15												60		
1670	16			med	conglomerate	60-70	grey						110	fine granulation - some small light dark alteration of ss in situ. occasional elongated chert - soft sed disrupted.	
1820	18			med	bedded		grey						0	bedded ss	
1970	19			med	bedded		white/grey						64	One bedded in ss - 90' - 95' the clearly visible.	
2120	21			med	bedded		black						88	Heavily bedded - some small light dark alteration of ss in situ. occasional elongated chert - soft sed disrupted.	

HOLE NO. UN006 COLLAR NORTHING S422107.09 EASTING S47430.70 RL 756.88

PAGE 2 OF 2

AZIMUTH 055 MAG DIP 1-55-2 LOGGED TEA BY 20/5/86

CORE SIZE 60TK

PURPOSE To test Au mineralisation below UVA #1 Adit (Local Section S2)

DRILLED BY ATD

CORE RECD	DEPTH m	ALTERATION		TEXTURE			LITHOLOGY	COLOUR	MINERALISATION			FAULTS	VEINS	DEPTH m	RQD	REMARKS		
		CARB	OTHER	GRAIN SIZE	FABRIC	So TO CORE >			IS? TO CORE >	AsPy	Py						OTHER	
2100	1.0		70% S <sub>2</sub>	F=3 S=1	well bedded	15	-	2100-2105 15-20 bands of black silicates	dark grey		100	30% quartz 20% pyrite	2100-2105 2105-2110 2110-2115	2100-2105 2105-2110 2110-2115	203	2100-2105 2105-2110 2110-2115	203 2100-2105 2105-2110 2110-2115	203 2100-2105 2105-2110 2110-2115
2200	2.0			med V fine	bedded	20	-	Interbedded silicates	dark grey/ grey				2200-2205 2205-2210 2210-2215	2200-2205 2205-2210 2210-2215	167 42		Well bedded, sst ~ 70% by vol Many soft sed structures (lenses) Younger up hole.	
2020	3.0															2020-2025		

MANCALA PTY LTD

DIAMOND DRILL HOLE LOG

336116

HOLE NO. UN007 COLLAR NORTHING 542274.61 EASTING 567432.53 RL 730.57

PAGE 1 OF 2

AZIMUTH 055 MAG DIP -53.0 LOGGED 20/5/46 BY TEA

CORE SIZE BQTK

PURPOSE To test for Au mineralisation below UNA #1 Adit (Local Section 20)

DRILLED BY ATD

CORE REC'D	DEPTH m	ALTERATION		TEXTURE			LITHOLOGY	COLOUR	MINERALISATION			FAULTS	VEINS	DEPTH m	RQD	REMARKS	
		CARB	OTHER	GRAIN SIZE	FABRIC	S <sub>0</sub> TO CORE >			S <sub>1</sub> TO CORE >	AsPy	Py						OTHER
120	1																
320	3			200/100	Bl/Bedded	65	SSS siltstone of siltstone	grey dark grey						670	13		Siltstone beds finely laminated. Siltstone 20-30cm beds spaced 20-30cm. Highly broken with E-W fracture surface.
670	6						670		670				670	670			
670	6			V fine	siltstone laminated	SS-LS siltstone matrix	670	black dark grey	670				670	670	55cm 56		Sulphide bearing siltstone. Sub H.H. H.H. matrix. Dark grey siltstone (blue) - slight grey.
770	7			670 siltstone	bedded		670 siltstone	dark grey					670	670			670 siltstone above with sec. siltstone beds.
920	9				Large laminated	65	fine siltstone with siltstone	light tan						960	16		Very irregular black laminae. 65-65' 40'
1220	12						1220							1220	11-80		
1370	13			fine siltstone	bedded	65	siltstone	grey black					1370	0			Interbedded grey & black siltstone - massive fine laminations.
1520	15						1520							1520	42		
1670	16			fine siltstone	laminated	70	siltstone	black grey					1670	1670			Regular (6-8cm) interbedding of black and grey siltstone - 2 phases of grey siltstone.
1820	18			fine siltstone	bedded	70	fine siltstone siltstone	grey					1820	0			SSS siltstone - coarse (10') irregular siltstone.
1970	19			fine siltstone	bedded		fine siltstone siltstone	grey					1970	36			SSS siltstone - coarse (10') irregular siltstone.

336117

HOLE NO. UN007 COLLAR NORTHING 50221766 EASTING 56793253 RL 730.57

PAGE 2 OF 2

AZIMUTH 055 MAG DIP -53.0 LOGGED 20/5/96 BY TEA

CORE SIZE BQ TK

PURPOSE To test for Au mineralisation below LPA #1 Adit (Local Section 20)

DRILLED BY ATO

CORE RECD	DEPTH m	ALTERATION		TEXTURE				LITHOLOGY	COLOUR	MINERALISATION			FAULTS	VEINS	DEPTH m	RQD	REMARKS	
		CARB	OTHER	GRAIN SIZE	FABRIC	S0 TO CORE >	S? TO CORE >			AsPy	Py	OTHER						
2170	71																	
2270	72		30% S. 10% Sp 10% S 2% S	Vf. / fine	Bedded	SS	-	Int. bedded s. siliceous grey sst	black/grey									
2420	74	252	30% S 10% S	fine	Int. bed	-	-	ss + altered	grey									
2570	75	252						252										
2720	76			fine / med	bedded	25	-	Int. bedded black siliceous grey sst	black/grey/grey									
2720	77																	
2720	78																	
2720	79																	
2720	80																	

HOLE NO. UN008 COLLAR NORTHING 582224.77 EASTING 567908.78 RL 733.11

PAGE 1 OF 2

AZIMUTH 055 MAG DIP -60.8 LOGGED TEA BY 21/5/96

CORE SIZE BO TR

PURPOSE To test for Au mineralisation below UNA #1 Adit

DRILLED BY MFD

CORE RECD	DEPTH m	ALTERATION		TEXTURE		S <sub>0</sub> TO CORE >	S <sub>1</sub> TO CORE >	LITHOLOGY	COLOUR	MINERALISATION			FAULTS	VEINS	DEPTH m	RQD	REMARKS
		CARB	OTHER	GRAIN SIZE	FABRIC					AsPy	Py	OTHER					
1.0	1.0																
3.0	3.0																
4.70	4.70																
6.20	6.20																
7.70	7.70																
7.70	7.70																
10.70	10.70																
10.70	10.70																
13.70	13.70																
15.70	15.70																
16.70	16.70																
15.70	15.70																
17.70	17.70																

HOLE NO. UJ068 COLLAR NORTHING 54222617 EASTING 56790578 RL 735.11

PAGE 2 OF 2

AZIMUTH 055 MAG DIP -60.8 LOGGED TEA BY ZI/SY6

CORE SIZE Botk

PURPOSE To test for Au mineralisation below the UWA #1 Adit

DRILLED BY ATD

CORE RECD	DEPTH m	ALTERATION		TEXTURE			LITHOLOGY	COLOUR	MINERALISATION			FAULTS	VEINS	DEPTH m	RQD	REMARKS	
		CARB	OTHER	GRAIN SIZE	FABRIC	S <sub>0</sub> TO CORE >			S <sub>1</sub> TO CORE >	AsPy	Py						OTHER
2170	71			60c			2090									2090	
2270	72			Med	1-2mm Bed	65	SS + fine silt bed	grey								511cm 76	SS + 5% silt finely laminated bedding where it is defined. Some siltstone
2470	74		40% S <sub>1</sub>	11cm	1-2mm bed	60	SS + fine silt bed	grey								78cm 34	SS + 10% Strong cleavage in siltstone 11 to 50.
2570	75			55c			25c									250	75c
2770	77			fine fine	laminated disrupted	55	laminated siltstone	light grey								156cm 78	Waxy, disrupted bedding/laminations. occasional beds/beds? light green siltstone - some bed part of sand.
2870	78															77cm 22	
2970	79			60c			2000 columnar	light grey								2000	2000 gradual crack over sand
3070	80			fine med	bedded	65	fine silt	grey								357cm	3000 sharp crack 70' grade - mostly vertical.
3270	82			fine med	bedded	65	fine silt	grey								310	82
3370	83		50% S <sub>1</sub>	fine med	bedded	65	fine silt	grey								330	330 sharp thin faulted contact 65' (40' to 50' S <sub>1</sub> )
3470	84			fine med	bedded	65	fine silt	grey								330	330 sharp thin faulted contact 65' (40' to 50' S <sub>1</sub> )
3670	86		20% S <sub>1</sub>	fine med	bedded	65	fine silt	grey								86	86
3770	87			fine med	bedded	65	fine silt	grey								616cm 100cm	616-700 Well bedded siltstone (some sandy) siltstone structures etc.
3870	88			fine med	bedded	65	fine silt	grey									716cm

ECH 4070

APPENDIX 7  
AMDEL ANALYTICAL RESULTS

356121

MINERAL CHEMISTRY

Amdel Laboratories Ltd  
PO Box 338  
Torrensville Plaza SA 5031  
ACN 009 076 555

Telephone (08) 416 5300  
Facsimile (08) 234 0321

Mr Tim Akerman  
Mancala Pty Ltd  
PO Box 240  
LAUNCESTON TAS 7250

## FINAL ANALYSIS REPORT

Your Order No: 00007398

Our Job Number : 6AD2610A

Sample rec'd : 10/07/96

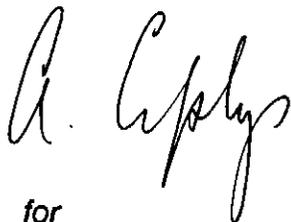
Results reported : 30/07/96

No. of samples : 42

Report comprises a cover sheet and pages A: 1 to 1, B: 1 to 1

*This report relates specifically to the samples tested in so far that the samples as supplied are truly representative of the sample source.*

Approved Signature:



for  
Alan Ciplys  
Manager - Mineral Chemistry

Report Codes:

N.A. - Not Available.

L.N.R. - Listed But Not Received.

I.S. - Insufficient Sample.

Distribution Codes:

CC - Carbon Copy

EM - Electronic Media

MM - Magnetic Media

Final

## ANALYTICAL REPORT

SAMPLE	Au	Au	Dp1
SDC006	0.93		0.99
SDC022	1.34		1.32
SDC023	5.98		6.86
SDC024	13.0		17.3
SDC031	2.89		2.81
SDC032	0.20		0.17
SDC048	0.73		0.68
SDC049	0.04		0.03
SDC069	15.8		18.0
SDC070	0.45		0.30
SDC071	1.91		1.89
SDC072	0.11		0.14
SDC079	0.05		0.04
SDC080	0.09		0.11

UNITS	ppm	ppm
DET. LIM	0.01	0.01
SCHEME	FA1	FA1

Final

## ANALYTICAL REPORT

SAMPLE	Au	Au Dpl	Wt
SDC006 CLEANOUT	0.01	--	250.0
SDC022 CLEANOUT	<0.01	--	250.0
SDC023 CLEANOUT	0.01	--	250.0
SDC024 CLEANOUT	0.04	--	250.0
SDC031 CLEANOUT	0.02	--	250.0
SDC032 CLEANOUT	<0.01	--	250.0
SDC048 CLEANOUT	0.08	--	250.0
SDC049 CLEANOUT	<0.01	--	250.0
SDC069 CLEANOUT	0.01	0.01	250.0
SDC070 CLEANOUT	<0.01	--	250.0
SDC071 CLEANOUT	0.01	--	250.0
SDC072 CLEANOUT	<0.01	--	250.0
SDC079 CLEANOUT	<0.01	--	250.0
SDC080 CLEANOUT	<0.01	--	250.0

UNITS	ppm	ppm	grams
DET. LIM	0.01	0.01	0
SCHEME	FA1	FA1	FA1

5425000.0 mN

5420000.0 mN

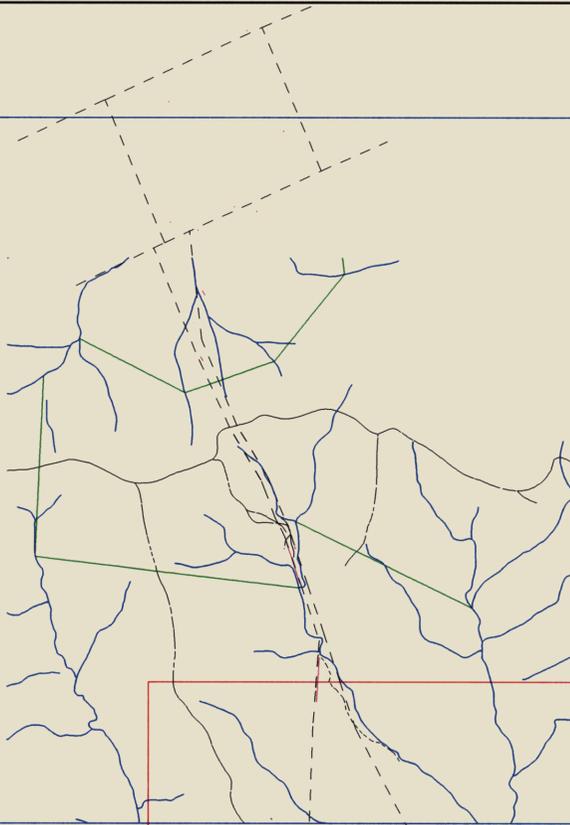
5415000.0 mN

5410000.0 mN

EL 23/92

EL 1/92

- MINERALISED LODE (ORIENTATED)
- MINERALISED LODE (UNORIENTATED)
- TRACE OF REGIONAL FAULT/SHEAR



306124  
5 cm

# 96-3941

ANNUAL REPORT - ALBERTON  
MANCALA P/L - EL 23/92  
T AKERMAN

**Mancala Pty Ltd.**

**REGIONAL STRUCTURAL INTERPRETATION**

MODIFIED AFTER TAHERI (1993)

NORTHERN PORTION AFTER THREADER (1967)

FIGURE 3

SCALE (HORIZONTAL) 1:25000 SCALE (VERTICAL) 1:25000

Launceston Office  
P.O. Box 240, 458 Cameron  
Launceston, Tasmania  
Australia 7250

DATE:	11/22/96	TIME:	15:12:54
-------	----------	-------	----------

1	
2	
3	
4	
5	



Mt. Victoria Forest Reserve Boundary

5422100.0 mN

5422000.0 mN

5421900.0 mN

5421800.0 mN

Adit #2 Lode

Rubble 0.30 g/t  
70cm @ 0.04 g/t

1m @ 0.06 g/t  
1.2m @ 0.08 g/t  
1.0m @ 1.77 g/t  
12m @ 3.92 g/t  
2.15m @ 2.07 g/t  
Mitchel - 8.8 g/t  
Trench #5  
1m @ 6.12 g/t  
2.20m @ 8.0 g/t

Trench #4  
30cm @ 0.11 g/t  
30cm @ 4.8 g/t  
Dump 15.5 g/t  
Trench #3  
Trench #2  
2.3m Winco

Face of Drive  
1.0m @ 1.41 g/t  
2.15m @ 3.8 g/t  
Mitchel - 20.55 g/t

Trench #1  
1.0m @ 0.11 g/t  
Dump 0.98 g/t  
Dump 0.16 g/t  
Dump 0.06 g/t  
60cm @ 1.5 g/t

126 Lode  
Dump 0.48 g/t  
12.2 g/t (Mitchel)  
72  
130 Lode  
72  
60m @ 0.16 g/t  
1.6m @ 3.3 g/t  
Trench #2  
Dump 0.98 g/t  
1.8m @ 1.47 g/t  
68 Adit #3  
1.60m @ 0.05 g/t  
80cm @ 0.80 g/t

Trench #2  
20m @ 0.07 g/t  
Trench #3  
16m @ 0.25 g/t  
60m @ 4.4 g/t  
70  
Trench #4  
2.10m @ 16.22 g/t  
Water Filled  
Trench #5  
100cm @ 0.53 g/t  
50m @ 0.4 g/t  
2.10m @ 2.2 g/t

Adit #4  
Strong Cleavage & Silicification

Trench #5  
Cleavage parallel back qtz.  
0.48 g/t

UNA CREEK

Adit #6 (Sulphide Lode)  
Stopped underground ~ 2.0m  
Ave. Grade, 50m 11.5 g/t (600peck)  
1.15m @ 35.34 g/t

Mill Area  
Water Race  
Water Wheel

96-3941

ANNUAL REPORT - ALBERTON  
MANCALA P/L - EL 23/92  
T AKERMAN

Mancala Pty Ltd.

UNA WORKINGS  
SOUTHERN SHEET

356126

FIGURE 6A

SCALE (HORIZONTAL) 1:500 SCALE (VERTICAL) 1:500

Launceston Office  
P.O. Box 240, 45B Cameron  
Launceston, Tasmania  
Australia 7250

DATE: 11/22/96	TIME: 17:57:42
1	
2	
3	
4	
5	



