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RAB DRILLING, VOLUNTEER HILL AREA,
LEFROY, JANUARY 1997

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1. SUMMARY

Exploration on the Lefroy EL 1/95 during 1996-97 concentrated on the Volunteer Hill area at the southern end of the goldfield. A 15 km grid was cut and mapping, rock sampling and High Definition ground magnetics completed. This defined large areas of marked magnetic depletion due to hydrothermal alteration (chlorite-sericite±pyrite and quartz veining), centred on the mined gold shoots in the Volunteer Reef, Reward Reef and others.

The surface work was followed up by a 55-hole 1,156m RAB drilling programme which achieved reasonably systematic coverage of the area south of the Bridport Highway, and tested a range of targets including magnetic lows, old workings, structures and geochemical anomalies. Results of the drilling were very disappointing.

The best intersection was 5m @ 1.5 g/t Au from LGR54 at the Monarch Mine on the adjacent Bell Bay EL, where further drilling is recommended although the potential appears limited. On EL 1/95 the best values were in LGR9 at the East Volunteer: 1m @ 1.3 g/t & 3m @ 0.9 g/t. All other intersections were <0.9 g/t and only 7 other holes had values >0.2 g/t.

As a result of the drilling, the bulk low-grade gold potential of the Volunteer Mine area can be discounted and no further work is recommended south of the Bridport Highway on EL 1/95.

Rock sampling of mine dumps throughout the goldfield indicates there are substantial tonnages of quartz-veined altered sandstone grading 0.5 - 2.0 g/t Au at depth around some of the mined reefs.

Low gold values were obtained from 260m of channel sampling of the Bridport Highway roadcuts (best: 4m @ 0.25 g/t). The sampling showed the Volunteer-Land O'Cakes soil gold anomaly is due to weakly-auriferous quartz veins on a faulted anticlinal axis and has no economic potential.

The channel sample values correlated well with nearby 1995 soil sample values, demonstrating that the latter do reflect patterns of gold distribution in the bedrock despite problems such as lag gravels. This is an important finding given the lack of gold soil anomalies at Lefroy.

Trial MMI soil sampling successfully detected the Volunteer gold shoot. MMI, HDM magnetics and possibly radiometrics, are likely to prove useful in locating unmined auriferous reefs.

Assessment of results from the two years exploration by Lefroy Gold Mines suggests the gold at Lefroy is only in very discrete sites, within or closely associated with the steeply-dipping east-west quartz reefs. These structures have to be the primary targets for any future exploration.

It is recommended exploration be redirected to test for new and known E-W quartz reefs in the central and northern parts of the field (ie: north of Specimen Hill). This work would involve N-S gridlines, HDM magnetics, MMI soil sampling and a high level of drilling.

2. INTRODUCTION

The Lefroy EL 1/95 of 30 sq kms lies 13 kms east of George Town, near the mouth of the Tamar River in NE Tasmania. See Figure 1. The EL covers the old Lefroy Goldfield which produced almost 200,000 oz of gold, largely from quartz reefs, prior to 1905.

Lefroy Gold Mines Pty Ltd (LGM), a subsidiary of Central Kalgoorlie Gold Mines NL, commenced exploration on the EL in July 1995 with an extensive programme of gridding and soil sampling. In November that year they drilled 14 RC percussion holes (1,413m) in the vicinity of the Chum and Pinafore reefs at the northern end of the Lefroy field. Results were modest with best intersections of 4m @ 1.1 g/t Au and 12m @ 0.6 g/t Au (Keele 1996).

In April 1996 the focus was switched to the southern end of the field. Here, the LGM soil and drainage sampling had outlined anomalies and two major reef lines, the Volunteer (50,000 oz produced) and the Land O'Cakes, remained untested. Additionally, the abundant reefs and old diggings on Specimen Hill suggested potential for an auriferous vein stockwork.

This report details the results of work undertaken to evaluate these targets, as well as work elsewhere at Lefroy, in the period April 1996 - April 1997.

3. TENURE

The Lefroy EL 1/95 is 100% owned by LGM and was granted in May 1995.

The EL covers 30 sq km, comprising Crown Land, State Forest, State Forest - Multiple Use Forest Land, Lefroy RAP and Private Property.

Excluded from the EL are 0.4 sq km of Crown Reserves, 0.1 sq km of Commonwealth Government Land, 0.3 sq km of the Curries River Reservoir and a 31 ha Mining Lease.

The Lefroy EL 1/95, and the adjacent EL's 21/94 (Bell Bay, 77 sq km) and 22/94 (Pipers River, 67 sq km), both also 100% owned by LGM, are shown in Figure 1.

4. PREVIOUS MINING & EXPLORATION

Gold was discovered at Lefroy in 1869. Mining had virtually ceased by 1904, by which time 182,000 oz of gold had been won from quartz reefs and 5,000 oz from alluvials (Keele, 1996). At least 30 separate reefs were worked from shafts extending as deep as 380m. See Figure 2.

Because of the scale and abundance of the old workings, it is believed the figures for recorded production (quoted above) substantially understate actual production from the field.

In 1935 the Mines Department put down 12 poorly-recorded and abortive diamond drillholes to test various reefs. Apart from this drilling there was almost no work done at Lefroy in the 70 years between the cessation of mining and 1972.

In 1972 the Mines Department conducted geophysical test surveys at Specimen Hill and drilled three diamond drillholes to test a resistivity anomaly. No mineralization was intersected. In 1976 Comalco briefly pegged an EL over Lefroy to test for syngenetic gold in black shales. They sampled two of the Mines Department's Specimen Hill drillholes but gold values were negligible.

In the 1980's two regional drainage surveys partially covered the Lefroy area but the sampling pattern was too low density to be of any value. These surveys were by CRA Exploration (1982) and Billiton (1989). CRAE also evaluated the potential for alluvial deep leads in the drainage north from the Lefroy field.

In 1983-85 Epoch Minerals Exploration carried out evaluation of the alluvials and old mine dumps at Lefroy (Murdoch, 1983 & 1984). Despite evidence that their sampling was extensive, and the results encouraging enough for them to build a small pilot gold recovery plant just north of Lefroy, no gold production is recorded.

In 1993 Mineral Resources Tasmania covered the Lefroy area with aeromagnetic and gravity surveys, as part of their NETGOLD Project over all of NE Tasmania.

5. GEOLOGY

5.1 Geological Setting

The Ordovician to Early Devonian Mathinna Group is the predominant rock group on the Lefroy EL. These rocks comprise a thick deep-water turbiditic sequence of monotonous quartzose and micaceous sandstones, siltstones and shales. Because of deep weathering, exposure of these rocks on the EL is generally poor. Their approximate distribution is shown in Figure 1.

The sediments strike NNW and dip at low to moderate angles to the WSW. They are mildly folded and cleaved.

To the north and east of Lefroy Township the Mathinna Beds are extensively covered by Tertiary Basalt and Tertiary-Quaternary sands/gravels.

5.2 Gold Mineralization

Gold occurs at Lefroy in quartz reefs which occupy large persistent brittle faults, orientated east-west and dipping steeply north or south. As shown in Figure 2, there are at least 30 parallel reefs arranged like rungs of a ladder over an area 4.5 km NNW-SSE along strike and 2 km E-W.

Commencing in 1869, the reefs produced 182,000 oz of gold at an average grade reputedly around 30 g/t, from discrete shallow shoots within the quartz reefs. Two reefs, the Chum and the Volunteer, produced 50% of the gold from the field. Most gold was won from depths of less than 100m below surface and virtually none from depths greater than 150m below surface. All known shoots were worked out by 1905.

Pyrite and arsenopyrite are minor but persistent associates of the gold mineralization.

5.3 Detailed Geology - Volunteer Hill Area

See Figures 3 & 4. Data on this area comes from mapping on the Volunteer Hill Grid and along the Bridport Highway roadcuts, sampling of the mine dumps and logging of the RAB holes.

The most continuous exposures are along the highway, where the Mathinna Beds comprise interbedded, strongly oxidized, quartz-mica fine grained sandstones, siltstones and shales, in approximately equal proportions. In the RAB holes south of the highway, which penetrated below the limit of oxidation, the most common rocks were quartzose siltstones/sandstones. Thick units of black graphitic and pyritic shale were also intersected.

The rocks on the highway strike NNW and on average dip 20 - 40° to the WSW, with a moderate bedding-parallel foliation. Minor folding occurs, most marked in a deformed zone at the western end of the roadcuts (see Keele, 1996). The folds have attenuated western limbs and short eastern limbs. In at least two instances, anticlinal fold axis are exploited by later-stage faults hosting quartz-vein stockwork zones up to 15m wide. One of these is weakly auriferous (the source of the Volunteer Hill-Land O'Cakes soil anomaly - see **6.8.2**).

As can be seen in Figure 4, the mapping shows that the positions of many of the old major shafts in the Volunteer Hill area coincide with fold axes. The indications are that the axes, even of quite minor open and gentle folds, may have had some role in localizing the gold shoots in the E-W quartz reefs. Thureau (1882) and Keele (1996), made similar observations when examining the locations of gold shoots in the mines at the northern end of the Lefroy field.

Away from the roadcuts, sparse outcrops and the RAB drilling suggest the rocks are even less deformed and more shallowly dipping, averaging <20° to the WSW. With some exceptions, folds are little more than gentle warps. The road exposures thus appear to be within the envelope of deformation associated with the two largest E-W reefs in this part of the goldfield - the Land O'Cakes 50 - 100m north of the road, and the Volunteer roughly the same distance south of it.

Grading in two sandstone beds on the southern side of the road and in two further sandstone beds on Specimen Hill, indicates the rocks are upright. This contradicts the regional interpretation by Powell & Baillie (1992) and others, that the Lefroy area lies on the overturned western limb of the Pipers River recumbent syncline. Although facing information is extremely sparse in the sediments of the Volunteer Hill area, all evidence noted to date points to the rocks being upright.

Along the roadcuts, the sediments are noticeably sericitized in places, particularly the shales. While the sericitization is pervasive and widespread, it is strongest around quartz veins, where it is associated with increased deformation of the shales, including development of a characteristic crenulation cleavage. These features are also evident on the dumps. Below the level of oxidation in the RAB holes the alteration is seen to be moderate to locally strong chlorite-sericite±pyrite, with chlorite predominant. Other lesser alteration types involve silicification (best developed along the Volunteer Reef beneath Volunteer Creek), bleaching and carbonatization.

The wallrock adjacent to many of the outcropping quartz veins is also slightly darker in colour due to a marked increase in iron oxides over widths of typically about 100 mm. This iron build up is detectable magnetically, (see section **6.3**), and has also been noted at the Alberton Goldfield (Leaman, pers comm).

Throughout the Volunteer Hill area quartz veining is widespread and locally abundant, particularly on Specimen Hill where there are some spectacular quartz vein stockworks, both in the flat-lying foliation and as steeply-dipping veins. Throughout the area most veins are preferentially aligned in the foliation and hosted by shale rather than sandstone (a feature also seen on the shaft dumps). Unfortunately, almost all the quartz veins are totally barren, with auriferous vein material largely confined to the larger shaft dumps (none of the old mined reefs outcrop).

In places a conspicuous quartz lag is present on the ground surface, and occasionally a cemented quartz gravel layer up to 1m thick occurs just beneath the soil. These features are best developed on Specimen Hill, where sluicing of both the cemented gravel and the lag has taken place, indicating they contained some gold. The areas of lag, gravel and sluicing are shown in Figure 3.

6. RESULTS

6.1 Gridding

In July 1996 a 14.6 km grid was cut over the Volunteer Hill area at the southern end of the Lefroy Goldfield. The grid comprises 15 lines orientated AMG north-south and spaced 50m apart, with pegs at 20m slope-corrected intervals along the lines. Part of the gridded area had previously been covered by the soil sampling grid cut in 1995. Line 5448500N of that grid was used as a baseline for the new grid.

The Volunteer Hill Grid is shown in Figure 3. Note, the southern 100m of the gridlines lies within the Bell Bay EL 21/94. From the line intersections with the Bridport Highway, it is evident that the maximum position errors for the grid are approximately 7m E-W and 7m N-S, with most pegs within 2 - 3m of true position.

6.2 Mapping

The Volunteer Hill Grid was geologically mapped in as much detail as the poor exposure would allow. Old mining activity was also charted, with pits, trenches, shafts and dumps recorded wherever seen (in many places the vegetation was too thick for workings to be readily visible).

Almost 200 rock samples (outcrop and dump) were collected from the grid area during the mapping programme. Results are listed in Appendices 1 & 2.

All the information (geology, mining activity and geochemical sampling) is shown in Figure 3 at a scale of 1:1,000, with some interpretative geological and geophysical elements shown in Figure 4. Geological observations made during the mapping are discussed in Section **5.3**.

A programme of mining activity mapping was also undertaken on the 1995 grid to the north of Lefroy Township. The mapping, by R. Duraj, is shown in Figure 15.

6.3 Ground Magnetic Survey

On 5th September 1996 the Geophysical Research Institute of the University of New England at Armidale, NSW, carried out a 15 line km High Definition Magnetic survey over the Volunteer Hill Grid. the instrument used, a TM4 caesium vapour magnetometer with a resolution of 0.1nT, is reputed to be the most sensitive ground magnetic system available in Australia.

The survey was done following advice from Dr David Leaman, Geophysical Consultant, that High Definition Magnetics had successfully delineated areas of hydrothermal alteration at another goldfield in the Mathinna Beds (Alberton).

At Volunteer Hill measurements of total magnetic intensity were made at nominally 0.5m intervals along the AMG north-south gridlines. The 50m spacing of the lines was greater than optimum for the TM4 system, and caused minor problems during data processing and imaging. The data was examined by David Leaman (Leaman, 1996).

The text of GRI's report on the survey appears in Appendix 3. The data is shown in the following figures:

Figure 5	-	Stacked Profiles (unfiltered)
Figure 6	-	Imaged Total Magnetic Intensity (raw data)
Figure 7	-	Imaged Total Magnetic Intensity (filtered)
Figure 8	-	Imaged First Vertical Derivative (filtered).

A wealth of geological detail is evident in the magnetic data. See Figure 4. The following comments can be made:

1. Large areas of marked magnetic depletion are present. Lows are concentrated along the Volunteer Reef and to its SW, with lesser lows in the vicinity of the Land O'Cakes Reef and Specimen Hill.

2. The 50,000 oz gold shoot at the Volunteer lies centrally within the largest and most intense magnetic low, and the "bulls-eye" low at Specimen Hill is centred over the Reward Reef - the only major producer there.

An association of gold mineralisation with magnetic lows is indicated. In fact, in the Volunteer Hill area "the affect is noted wherever there has been actual gold production" (Leaman, 1996).

3. A large magnetic low SW of the Volunteer occurs in an area of elluvial/alluvial gold workings where very few shafts penetrated through to bedrock.

4. The magnetic lows are shallow effects (<200m) and basically come to surface (Leaman, pers comm).

5. The magnetic depletion is considered to reflect the hydrothermal alteration seen in the rocks in this area, particularly on the old shaft dumps and around outcropping quartz veins.

(This conclusion was subsequently confirmed by the RAB holes, largely directed into areas of low magnetics and which encountered extensive chlorite-sericite alteration within the sediments - see Section **6.4** below).

6. Zones of spikey character (evident on the magnetic profiles) are thought to reflect concentrations of quartz veining, with the spikes due to the build up of iron minerals commonly seen around outcropping veins (Leaman, 1996). The largest zone of spikey magnetics surrounds the Volunteer Reef.

7. The magnetic lows are broadly arranged in sub-parallel ENE-trending zones, at right angles to rock strike. These apparently reflect a set of ENE cross-structures of a different generation to the E-W faults that control the known auriferous reefs.

8. Blocks of lesser-altered lithologies are evident as areas of relatively high magnetics NE of Specimen Hill, in the SE corner of the grid and around Monarch Hill in the SW. These blocks are characterised by a lack of productive old workings (the Windermere Reef is the only apparent exception).

9. The sharp NW trending margins of the NE and SW high magnetic blocks parallel rock strike, and are stratigraphic boundaries offset by faults. A large NE trending fault running down Blanket Creek separates the SE magnetic high from the altered Volunteer block. This fault passes across the Volunteer Reef just east of the East Volunteer shaft and marks the eastern limit of gold production from this reef.

10. The alteration thus appears to substantially occur within one NW-trending stratigraphic unit.

(There are some minor magnetic lows within the high-magnetic blocks, and evidence NE of Specimen Hill and SW of the Volunteer that the magnetic low trends do actually cross the stratigraphic boundaries and extend for very short distances into the adjacent high-magnetic blocks).

6.4 RAB Drilling

Introduction

Between 24th January and 20th February 1997, 55 RAB holes totalling 1,156m were drilled in the Volunteer Hill area. The rig used was a bombadier-mounted Warman 250 air-core double-tube with cross-over system, fitted with a down-hole hammer or rotary tricone. Holes were angled AMG north at -60° and depths ranged from 11m to 28m.

The drill logs and assay results appear in Appendix 4 and hole locations in Figure 4.

Initially, 100 holes were planned, 56 south of the Bridport Highway and 44 north of it. Only the holes south of the highway were drilled, including four at the Monarch Mine SW of Monarch Hill on the Bell Bay EL 21/94 (see Figure 2). The drill programme was designed to test for bulk low-grade gold mineralization and aimed for a reasonably systematic coverage of the area. However, the holes were primarily directed at magnetic lows, around old workings, known structures or deformed zones and rock or soil gold geochemical anomalies.

Sampling

Drill samples were taken every metre and composited in 4m intervals for initial gold-only 50 gm fire assay at Analabs, Cooee. If the 4m composite value exceeded 0.1 g/t Au the individual 1m "resplits" were analysed, also by 50 gm fire assay. Checks on assay reliability were made by taking occasional duplicate samples, duplicate assays and the despatch of 10 sample pulps to ALS Brisbane.

While no significant assaying problems were encountered, there were occasionally some quite marked variations in values, particularly at low levels (<0.3 g/t Au) and in the >1 g/t values in hole LGR54 at the Monarch Mine (the latter are currently being check assayed). These variations, presumed due to "spotty" gold mineralization, contributed to generally poor correlation between the composites and the 4m average calculated from the 1m "resplits".

The continuity of gold values was tested in the field by the "twinning" of holes (LGR27 & 28, 1.5 m apart), and the "crossing" of holes (LGR24 & 44, drilled at right angles across each other). In both cases the correlation between the holes was good.

Results

Results from the drilling were well below expectations.

RAB Drilling - Best Intersections

Hole No	Interval	Au (g/t)	Depth	Comments
LGR5	2m	0.26	2-4m	Highly oxidized rock, minor vein qtz
LGR8	8m	0.23	11-19m	Altered pyritic Sltst/Sst, minor qtz veins
incl.	2m	0.51	17-19m	Trace aspy in altered Sltst/SSt & qtz veins
LGR9	3m	0.86	11-14m	Fault in graphitic schist with qtz veins
	1m	1.33	19-20m	Pyritic qtzite with pyritic qtz veins
LGR10	1m	0.44	2-3m	Yellow-brown clay
LGR24	1m	0.90	9-10m	Graphitic vein qtz in altered Sltst
LGR30	2m	0.36	16-18m	Pyritic vein qtz with aspy, in altered Sltst
LGR38	1m	0.34	2-3m	Possibly disturbed ground
LGR44	3m	0.48	6-9m	Vein qtz (cross hole with LGR24)
LGR54	5m	1.50	13-18m	Vein qtz in pyritic black shale (Monarch Mine on EL21/94)

On the Lefroy EL all the better results are from holes in the immediate vicinity of the mined shoot on the Volunteer Reef, i.e. the Main Shaft - East Volunteer Shaft area. However, other holes in this area which should have passed through or very close to the Volunteer Reef (e.g. holes LGR7, 27 & 28, amongst others), intersected strongly altered rocks and extensive quartz veining, but no gold at all.

This experience is repeated in many of the other drillholes, where deformed, altered, pyritic and quartz-veined rocks were intersected, but gold values are negligible.

Veining and Alteration

There is no shortage of quartz veining in the Mathinna Beds intersected by the RAB holes, but the vast majority of the quartz is white and devoid of sulphides. In the rare instances where arsenopyrite was noted in either the quartz veins of host sediments, gold values are elevated.

One surprise is the extent and strength of alteration in the sediments, which is greater in the drillholes than expected from outcrop indications. This alteration, primarily chlorite-sericite (with minor silicification and bleaching), is most readily apparent in quartz-mica sandstone/siltstone, which is sometimes bright green in colour due to the strength of chloritization. The alteration is accompanied by pyritization, which increases (to as much as 5%) as the alteration intensity increases. Chlorite-sericite alteration is also evident in grey shales (typically with marked crenulation cleavage), where it is concentrated on the foliation or in tiny veinlets.

Alteration is strongest in quartz-veined zones. This is particularly marked in the vicinity of the Volunteer Reef along Volunteer Creek, where the rocks are also noticeably harder due to moderate-strong silicification.

Alteration (sericitization) is also strong in pyritized quartz-veined siltstone/sandstone flanking a prominent unit of silicified, quartz-veined, pyritic graphitic shale, intersected in holes LGR13 - 19 and covering an area of at least 200 x 100m to the SW of the Volunteer Main Shaft. In holes LGR15 & 17 the unit is +10m thick, and in LGR19 the graphitic shale is strongly silicified, with tiny crackle-breccia quartz veins. Unfortunately, there is no gold mineralization associated with this unit.

Stratigraphy & Structure

The overall shallow SW dip of the sediments is evident wherever marker horizons were intersected in the drillholes. This is well demonstrated by the unit of graphitic shale mentioned above. This unit is exposed in the southern wall of the Volunteer Main Shaft platform and was intersected in holes extending as far as 200m to the SW (LGR18). The indicated south-westerly dip is about 5°, which is shallower and more consistent than that seen in the exposures along the Bridport Highway. This suggests the latter are within the zone of deformation associated with the Land O'Cakes-Volunteer lode structures, whereas the area south of the Volunteer shafts is not.

Hole LGR45, 50m west of the West Volunteer (New) Shaft, encountered unusually deep oxidation (21m), before passing into grey-black puggy shale. It appears there is a major fault in this hole, but the trend of the structure is not evident either from the magnetics or from the topography (the hole lies on a ridge). The fault is not mineralized.

6.5 Channel Sampling

Parts of the excellent exposures in the roadcuttings along the Bridport Highway through Volunteer Hill were sampled in April-May 1996. A distance of 260m on the north side of the highway was tested by 65 horizontal continuous-channel samples, each of 4m length. These were logged for lithology, alteration and density of quartz veining.

The channel samples were analysed for gold and arsenic at Analabs, Cooee. Results are listed in Appendix 5. Sample locations are shown in Figure 3.

Thirty-one 2m chip samples, taken from one section of the roadcuts by R Keele in March 1996, were also analysed. Results are listed in Appendix 6 and the sampled location is shown in Figure 3.

Outcrop along the roadcuts comprises strongly oxidized Mathinna Beds sandstones, siltstones and shales. The rocks are noticeably altered in places, mainly sericite with lesser chlorite. Quartz veining is widespread but not abundant, and averaged about 1 - 2 veins <20 mm thick per 4m channel sample, although many samples contained no veins. Along the sampled section several quartz vein stockwork zones 3 - 15m wide were encountered, with individual veins to 400 mm thick. These zones are marked by an increase in alteration and deformation. For further details of the geology see Section **5.3.**

The best gold results were two channel samples (219844 & 219881) assaying 0.25 g/t and 0.13 g/t. These also had the highest As values at 505 ppm and 151 ppm respectively. The samples came from the eastern end of the roadcut in the area of the Volunteer-Land O'Cakes gold soil anomaly delineated in 1995 (see Figures 3 & 9).

While both samples comprised sericitized shales with quartz veins to 50 mm thick, the higher value sample was part of a 15m wide quartz-veined and strongly deformed zone along a north-trending anticlinal axis. This zone and axis coincides with the peak of the soil anomaly and is believed to be the primary cause of it.

Overall, there is excellent correlation between the channel/chip sample gold values and the Land O'Cakes soil anomaly, with the higher (+50 ppb) channel results almost exactly picking out the 20 ppb soil contour as drawn by Keele (1996). The best two channel values mentioned above coincide with the stronger part of the soil anomaly (40 - 90 ppb), and off the anomaly low soil values (less than 10 ppb) are mirrored by consistently low (less than 25 ppb) values in the channel/chip samples.

This demonstrates that the soil sample results, despite the patchy presence of quartz lag and leaching, do reflect patterns of gold distribution in bedrock, although the latter appears to have gold values 2 - 3 times higher than the overlying soil.

This finding is quite important in the context of the low gold soil results obtained over much of the Lefroy field in the 1995 sampling.

6.6 Dump Sampling

Because of the poor exposure at Lefroy, a campaign of rock sampling was undertaken on the dumps of the old shafts. This programme commenced in 1995-96 but was greatly stepped-up in 1996-97. Sampling concentrated on the likely wallrocks of the auriferous quartz veins, to try and ascertain if zones of low grade gold mineralization exist peripheral to them. Both quartz-veined and non-quartz-veined material was collected.

During 1996-97 190 samples were taken from 57 shafts scattered throughout the field. Results are listed in Appendix 1. Locations of samples taken within the area of the Volunteer Hill Grid are shown in Figure 3.

The most common wallrock found on the smaller dumps is sericitized shale with contorted foliation, sometimes with small quartz lenses in the foliation. Very few samples of this material contained significant gold, with only five samples above 0.3 g/t Au and a maximum of 1.22 g/t Au for a black shale from a shaft dump 100m east of the East Volunteer.

On dumps of the deeper shafts the most abundant wallrock is weakly silicified quartz-mica sandstone, pervasively altered by iron-carbonate and sericite. The sandstone usually contains minor amounts of pyrite, arsenopyrite and quartz veining.

The sandstone is commonly weakly auriferous. Better samples yielded in the 0.5 - 2.0 g/t Au range. Values up to 3.6 g/t Au and 1.08% As were obtained from altered sandstone on the Volunteer Main Shaft dump. Shaft dumps on which the auriferous sandstone is notable for its grade and/or abundance include the New Monarch, Main Volunteer, Main Chum, East Volunteer and Reward, particularly the latter two very large dumps.

The indications are there are substantial tonnages of this mineralized sandstone at depth around some of the mined reef systems.

Selected samples of lode quartz from the dumps yielded values up to 70 g/t Au for a sample from the Volunteer Main Shaft. Lode quartz is often slightly grey due to fine sulphides, and on certain dumps (eg: New Monarch, Main Volunteer, New Chum, Main Pinafore and Recruit), the quartz is highly sulphidic, principally pyrite and arsenopyrite.

6.7 Other Rock Sampling

Miscellaneous Outcrops and Float

Thirty five rock samples were taken from outcrops, old mine exposures and float, at various locations on the Volunteer Hill Grid. Locations are shown in Figure 3 and results in Appendix 2.

Results were very disappointing, with few values above 0.1 g/t Au. In particular, the common zones of stockwork quartz veining on Specimen Hill (up to 30 flat-lying veins 3 - 80 mm thick over a 3m vertical interval in one old pit - sample 214509), were found to be almost totally barren. However, the best rock value of 0.16 g/t Au came from a quartz stockwork exposure near the Queens Birthday Reef.

A sample of black graphitic pug, either mine tailings or fault gouge, from the base of a 2m high wall of an alluvial working in Specimen Gully, assayed 2.03 g/t Au (sample 214545).

Volunteer Costean

Gold analyses were done on 20 previously-unsubmitted 1m chip samples, taken by R Keele in early 1996 from an old costean just west of the Volunteer Main Shaft (see Figure 3). Keele (1996) describes the costean as exposing "the southern side of the 75m wide Volunteer lode". Although there is some scattered faulting, quartz veining and alteration within the sandstones, siltstones and shales in the costean, it cannot be described as constituting a wide lode zone.

The maximum chip sample value was only 0.05 g/t Au, which is actually slightly better than the 0.03 g/t Au obtained by Keele from the few quartz-veined intervals he had assayed in 1996. To check these results, two further grab samples were taken from the costean in February 1997 of outcropping 200 mm thick brecciated quartz veins cemented by massive limonite and hematite. These veins assayed <0.015 g/t Au.

The costean sample results are listed in Appendix 6.

6.8 Soil Sampling

6.8.1 MMI Test Traverse

In September 1996, 20 soil samples were collected for Mobile Metal Ions analysis from a traverse over the Volunteer Reef. The samples were analysed by Amdel, Adelaide. Results are shown in Figure 10 and Appendix 7.

Samples were taken from 0.7m depth using a power auger, at 10m intervals between 5448120N and 5448340N on line 499900E, which runs past the old Volunteer Main Shaft. The shaft is centrally placed within the gold bearing shoot which produced 50,000 oz gold at a grade around 15 - 30 g/t. Three of the 10m sites could not be sampled due to mine mullock and tailings.

As can be seen in Figure 10, the MMI gold results show excellent correlation with the inferred position of the Volunteer Reef (the reef does not outcrop so its position has been scaled from the old mine plans).

North of the steeply south-dipping reef the MMI gold values are low (less than 2 ppb), despite the presence on surface of mine tailings (which contaminated the 1995 soil sampling). The MMI values jump abruptly to 18 ppb close to the inferred reef position. The next three samples going south reach highs of 45 ppb, 33 ppb and 27 ppb, apparently reflecting the down-dip extension of the mineralized reef. Samples further south mark a gradual tailing-off of values from 6 ppb to 0.55 ppb.

The MMI trial was clearly a success and the technique may prove useful in locating unmined auriferous reefs at Lefroy.

6.8.2 Volunteer-Land O'Cakes Anomaly

A small programme of in-fill and confirmatory soil sampling was done over the Volunteer Hill-Land O'Cakes gold-in-soil anomaly, centred at 5448480N / 500050E on the Volunteer Hill Grid. The anomaly was originally outlined by the 1995 soil sampling programme with a peak value of 93 ppb Au.

Fourteen samples were taken at 20m intervals from lines 499950E and 500050E, between 48360N and 48500N. Line 500050E repeated the 1995 sampling, but line 499950E had not been previously tested. The samples were taken at a depth of 0.7m using a power auger and sieved to -80 mesh.

The aim was to see if these methods would get better gold values than the 1995 samples (unsieved and taken with a mattock from less than 0.3m depth), and help explain why the soil gold levels are several times lower than those in their substratum (see Section **6.5**).

Results ranged from >5 ppb Au to 97 ppb Au. The follow-up sampling confirmed and extended the anomaly 50m to the west, but did not upgrade it. See Figure 9 and Appendix 9.

A major shaft, Digny on the Land O'Cakes reef line, is centrally placed within the soil gold anomaly but has not been previously recorded on LGM maps. As mentioned in **6.5**, the main part of the anomaly is believed due to a quartz-veined zone associated with a north-trending anticline. However, the westward extension of the anomaly and the presence of the Digny Shaft, suggests that mineralization along the Land O'Cakes reef line is also contributing.

6.9 Check Assaying

Fifty of the original 1m samples from the RC drillholes drilled at the Pinafore-Chum prospect in November 1995, were sent to ALS Brisbane for check fire assay gold analyses.

The results generally showed good agreement with the original Analabs (Cooee) assays, with the ALS values averaging 5% lower (see Appendix 8). The understatement by ALS is consistent and probably reflects slight differences between the labs in analytical procedures.

Twenty-five low-assaying samples from the Mines Department Specimen Hill DDH No.3 were sent to Amdel in Adelaide for check fire assay gold analyses. Results were all below the detection limit of 0.01 g/t Au (see Appendix 8). The original Analabs results (Keele, 1996) contained five values ranging from 0.01 - 0.031 g/t Au. Again, the degree of agreement between the result sets is very good.

6.10 Radiometrics

Data from the 1993 NETGOLD radiometric survey was re-imaged for an area of 300 sq km centred on Lefroy. The work was done for LGM by Dr Bob Richardson of Mineral Resources Tasmania, in December 1996. The original survey was helicopter-borne, on a 400 x 200m grid pattern with nominal terrain clearance or 60m.

New images at 1:25,000 scale were produced for Total Counts, Uranium, Potassium and Thorium channels. See Figures 11 - 14.

Considerable geological detail is evident in the radiometric pattern. Although zones of high radiometric counts tend to be biased towards areas of rock outcrop, there are numerous exceptions. Within the Lefroy EL points of interest include:

1. A strong and discrete radiometric anomaly (coming largely from the thorium and potassium channels) broadly coincides with the magnetic low over the gold shoot at the Volunteer Mine (50,000 oz Au).

2. A similar discrete radiometric high lies 1 km NW of Specimen Hill in an area close to old gold reefs (Tablier - see Figure 2), but without any significant production.

3. Weak NE trends are evident in the radiometrics in the Volunteer Hill Grid area, similar to the orientation of the magnetic lows.

7. DISCUSSION

A discussion of the potential for gold resources at Lefroy takes into account three major factors:

1. The fact that the field has produced ***at least*** 200,000 oz of gold at economic grades.

2. The generally poor results from exploration to date.

3. The poor state of knowledge about the gold mineralization.

Factor 3 is very important and stems from:
- the poor exposure
- the low level of exploration
- the lack of records from the early mining.

LGM's exploration results to date are undeniably disappointing. This not only applies to the results of the 2,570m of drilling undertaken, but also to the lack of gold values from outcrop and soil sampling. On the positive side, the link established between magnetic lows and alteration associated with some of the mined gold shoots in the old reefs, and a similar link between the shoots and MMI soil anomalism, are likely to prove important in future target definition.

The overall impression gained is that the gold mineralization at Lefroy is in very discrete sites, with little of no "halo" effect. With insignificant exceptions, all the gold found to date is in or closely associated with, steeply-dipping east-west quartz reefs. In the absence of better knowledge, these structures have to be the primary exploration targets for any future work.

The 55-hole RAB programme conducted this year in the vicinity of the Volunteer Reef at the southern end of the field, was the first attempt at Lefroy to systematically test the gold potential over a large poorly-exposed prospective area. The programme tested a wide range of favourable geological, magnetic and geochemical targets, with largely negative results.

The only question mark that can be placed against the RAB drilling is whether it was deep enough to be an effective test (the holes penetrated to a maximum depth of 28m). Leaman's comment that the magnetic lows extend to surface is important - the RAB holes intersected altered rocks and clearly did test the alteration effects seen to be centred on the Volunteer Reef gold shoot. Although the geology in much of this area is almost flat-lying, this is only a concern with shallow drilling if the gold mineralization is lithologically controlled. There is no evidence in any of the drilling or other results for lithological control - the only gold appears to be in and around the steeply-dipping east-west vein systems (NB: Monarch).

Given the number of RAB holes put down, the conclusion is that although the holes were shallower than ideal, the low gold values are more a telling commentary on the tenor and distribution of gold mineralization in this southern area, than a reflection of the effectiveness of the testing method.

The exception is the 5m @ 1.5 g/t Au obtained in the RAB drilling at the Monarch Mine on the Bell Bay EL. Further drilling of this latter target is warranted because so little testing has been done here. However, it is unlikely large tonnages of mineralization are present because the old records indicate the Monarch Reef is less than 200m long.

In late 1995 LGM drilled a fence of 7 RC holes across the Pinafore-Chum reef lines at the northern end of the Lefroy field, for best intersections of:

4m @ 1.1 g/t Au
4m @ 0.9 g/t Au
12m @ 0.6 g/t Au (Keele, 1996)

The mineralization occurs in quartz-veined altered sediments adjacent to the reefs, which have been stoped at this point. For the first time, the RC holes demonstrated that dispersed mineralization exists around the main reef structures. More recently, other evidence for such mineralization has come to light in auriferous quartz-veined altered sandstones commonly found on some of the old shaft dumps.

Although the values to date are modest, they provide some encouragement that more comprehensive drill testing across these or other old reefs at Lefroy might intersect low-grade bulk-mineable mineralization.

LGM's main target at Lefroy has been open-cuttable bulk low-grade mineralization. Given the poor exposure, unmined gold shoots in undiscovered major quartz reefs are also viable targets, although undoubtably difficult to locate. Using the larger of the known reefs as a yardstick, new reefs could reasonably be expected to contain 100,000 - 200,000t at 15 g/t Au. HDM magnetics and MMI sampling followed by drilling, offer ways of locating such reefs.

It is concluded that the potential for both bulk low-grade and smaller tonnage high-grade gold deposits at Lefroy has not been satisfactorily tested, particularly in the central and northern parts of the field. Soil sampling was ineffective over substantial areas here due to cover and cultural disturbance. In the Volunteer area at the southern end of the field, the bulk low-grade potential can be discounted following LGM's RAB programme.

Whatever the target type for future exploration at Lefroy, the poor exposure and low level of previous testing means the explorer must be prepared to commit to a large amount of drilling as the primary search tool.

8. CONCLUSIONS

1. Results of the 1996-97 exploration programme at Lefroy are generally disappointing.

2. Except at the Monarch Mine on the Bell Bay EL, where there is modest potential, no further testing for bulk low grade gold deposits is warranted south of the Bridport Highway.

3. Material on some of the larger mine dumps indicates there are substantial tonnages of quartz-veined altered sandstone grading 0.5 - 2.0 g/t Au, at depth around some of the mined reefs.

4. There are links between magnetic lows and hydrothermal alteration centred on the mined gold shoots, and between gold shoots and MMI soil anomalism. The links provide targetting techniques for future exploration. Indications are that radiometrics may be similarly useful.

5. Soil gold values, obtained from uncontaminated residual soils in the 1995 sampling, reflect patterns of gold distribution in the bedrock, despite other influences such as lag gravels.

6. The Volunteer-Land O'Cakes soil gold anomaly (found 1995) is due to weakly-auriferous quartz veining on a faulted anticlinal axis. The anomaly has no economic significance.

7. Overall results to date suggest the gold mineralization at Lefroy is in very discrete sites, within or closely associated with, the steeply-dipping east-west quartz reefs. These structures have to be the primary targets for any future exploration.

8. The potential for both bulk low-grade and smaller tonnage high-grade gold deposits has yet to be satisfactorily tested, particularly in the central and northern parts of the field. A large amount of drilling will be required.

9. RECOMMENDATIONS

1. The exploration focus be shifted to test for gold mineralization in and around new and the known E-W quartz reefs, in the central and northern parts of the field (ie: north of Specimen Hill).

2. This testing should involve north-south gridlines, HDM ground magnetics, MMI soil sampling and a high level of drilling.

3. A small programme of RAB of RC drilling be undertaken at Monarch Mine on the Bell Bay EL to follow-up the intersection in RAB hole LGR54 (5m @ 1.5 g/t Au).

4. The use of radiometrics should be investigated (because of the potential for rapid airborne survey coverage), initially by evaluating the anomaly in the vicinity of the Tablier Reef.

J. G. Purvis

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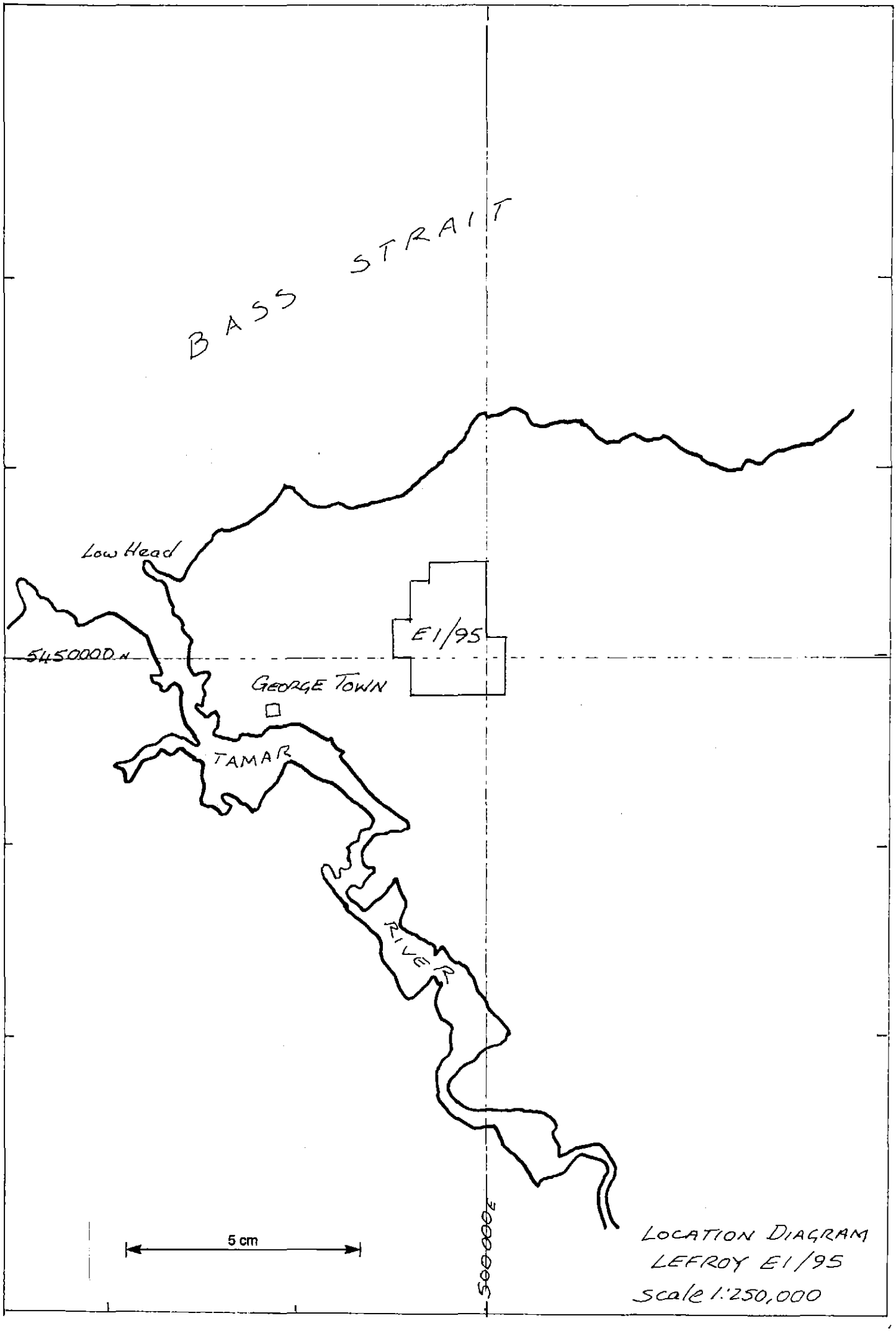

BASS STRAIT
Low Head
E1/95
5450000 N
GEORGE TOWN
TAMAR
RIVER
500000 E
5 cm
LOCATION DIAGRAM
LEFROY E1/95
Scale 1:250,000

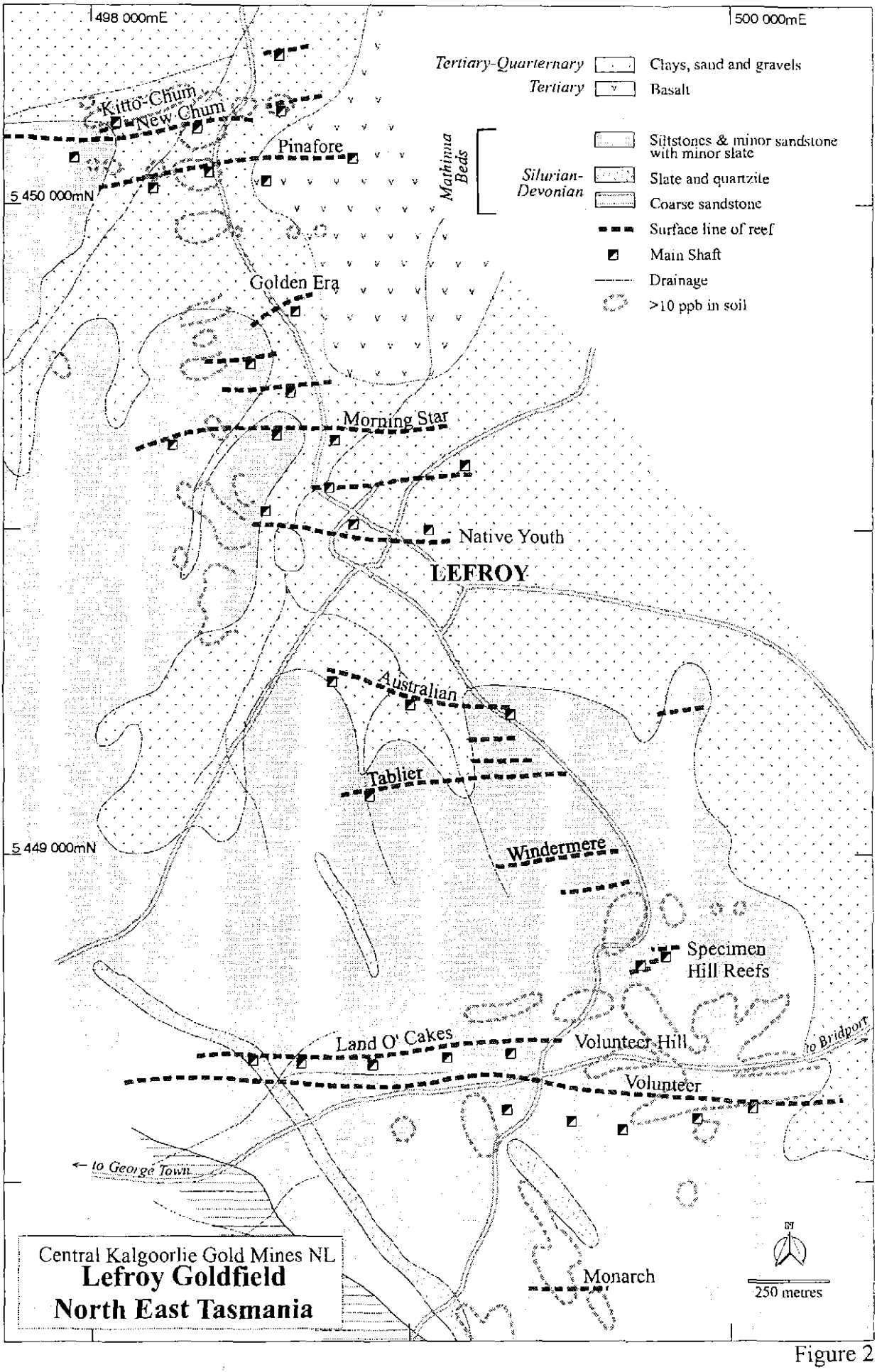

498 000mE
500 000mE
5 450 000mN
5 449 000mN
Tertiary-Quarternary
Clays, sand and gravels
Tertiary
Basalt
Mathinna Beds
Silurian-Devonian
Siltstones & minor sandstone with minor slate
Slate and quartzite
Coarse sandstone
Surface line of reef
Main Shaft
Drainage
>10 ppb in soil
Kitto-Chum
New Chum
Pinafore
Golden Era
Morning Star
Native Youth
LEFROY
Australian
Tablier
Windermere
Specimen Hill Reefs
Land O' Cakes
Volunteer Hill
Volunteer
to Bridport
← to George Town
Monarch
N
250 metres
Central Kalgoorlie Gold Mines NL
Lefroy Goldfield
North East Tasmania

Figure 2

5 cm

5 cm

LOW HEAD	WEYMOUTH
BELL BAY	WEYMOUTH

Sheet 1 / Sheet 2

Mining Activity

Pit
Trench — with dumps
Excavation (eg. sluice working)
Shaft with dump (col = collapsed)
Adit with entrance cut

Mining Activity Rating
(where shown)

1. Light surface scratchings
2. Serious pitting and/or trenching
3. Exploratory shaft
4. Producer shaft
5. Major producer shaft

CENTRAL KALGOORLIE GOLD MINES
(LEFROY GOLD MINES PTY LTD)

LEFROY - E.L. 1/95
VOLUNTEER HILL AREA
GEOLOGY AND MINING ACTIVITY

Compiled : J.G.Purvis	Scale : 1:1000	Date : Oct. 1996
Drawn : J.G.Purvis	0 20 40 m	Drawing No. FIGURE 3
Revised :		

AMG N MN 13°

LEGEND

MATHINNA BEDS (Devonian - Ordovician)

- Sst — Quartz-mica SANDSTONE
- Slt — SILTSTONE. Sometimes carbonaceous
- Sh — SHALE. Generally carbonaceous (usually only apppparent where unoxidised).

Note: Most surface exposures strongly oxidised to ± 10m depth.

Abbreviations

Qf	Quartz float/scree
Qg	Quartz gravel
Q (300)	Quartz vein in outcrop or on mine dump with thickness in mm
ser	sericite alteration
sil	silicification
cb	carbonate alteration
chl	chlorite alteration
fe	iron oxides
py	pyrite

Symbols

- Contact or outcrop boundary
- 37° Bedding
- 37° Cleavage
- 37° Bedding and cleavage parallel
- Facing
- Fault
- 20° Anticline with plunge
- 20° Syncline with plunge
- Zones of disrupted cleavage and/or shearing
- Quartz vein with dip and thickness in mm (where measured)
- × 214521 Rock sample
- 219833 Rock channel or chip sample
- AMG north-south gridlines (pegged at 20m intervals)
- old line 740E Gridlines cut in 1995

(Note: The 1996 grid is assumed to be straight. Position errors to a maximum of 7m N-S and 7m E-W are evident where the lines cross the Bridport Highway)

5449000mN · 5448900mN · 5448800mN · 5448700mN · 5448600mN · 5448500mN · 5448400mN · 5448300mN · 5448200mN · 5448100mN · 5448000mN · 5447900mN

WINDERMERE · LEEFLOYD · REWARD WEST · REWARD · SPECIMEN HILL · QUEENS BIRTHDAY · SPECIMEN GULLY · SANDRUBBER · DAM · CADET · WEST VOLUNTEER (OLD) · WEST VOLUNTEER EXTENDED · WEST VOLUNTEER (NEW) · VOLUNTEER MAIN · OLD MAIN SHAFT · EAST VOLUNTEER · SHAMROCK ADIT · VOLUNTEER CREEK · VOLUNTEER – LAND O'CAKES GOLD SOIL ANOMALY · DIGNY · MONARCH HILL · Alluvium · Mullock Dump · Old Line

97-4005

381027

CENTRAL KALGOORLIE GOLD MINES

(LEFROY GOLD MINES PTY LTD)

LEFROY - E.L. 1/95
VOLUNTEER HILL AREA
INTERPRETATIVE GEOLOGY & RAB DRILLHOLES

Compiled: J.M.D.Forde | Scale 1:1000 | Date: Oct. 1995
Drawn: I.D.P.Forde | 0 — 20 — 40 m | Drawing No. FIG 4a
Revised: | 5 cm

LEGEND

MATHINNA BEDS (Devonian - Ordovician)

- Sd — Quartz-rich SANDSTONE
- Sh — SILTSTONE, Sometimes carbonaceous
- Sh/Sd — SHALE, Generally carbonaceous, Interbedded SILTSTONE and SANDSTONE.

Note: Most outcrop exposures strongly oxidised to < 10m depth.

Abbreviations

Qf	Quartz floodplain
Qg	Quartz gravel
Qvein	Quartz veining or vein or veins (vein thickness in mm)
ser	sericite alteration
si	silicification
ca	carbonate alteration
chl	chlorite alteration
hem	hematite
Py	pyrite

Symbols

- Contact or outcrop boundary
- Bedding
- Cleavage
- Bedding and cleavage parallel
- Fabric
- Fault
- Anticline with plunge
- Syncline with plunge
- Zones of disrupted cleavage & fold assembly
- Quartz veins with dip and strike (where measured)
- Rock sample
- Rock channel or chip sample
- AMG north-south gridlines (Eastings in metres)
- Gridlines cut in 1995

(Note: The 1995 grid is assumed to be parallel to the 1988 grid. Position errors in a maximum of 7m N-S and 7m E-W are expected with the lines cross the Bricktport Highway)

Mining Activity

Pit with dump; Trench with dump; Stope with dump (and subaqueous); Excavation (eg. stope working); Adit with entrance cut

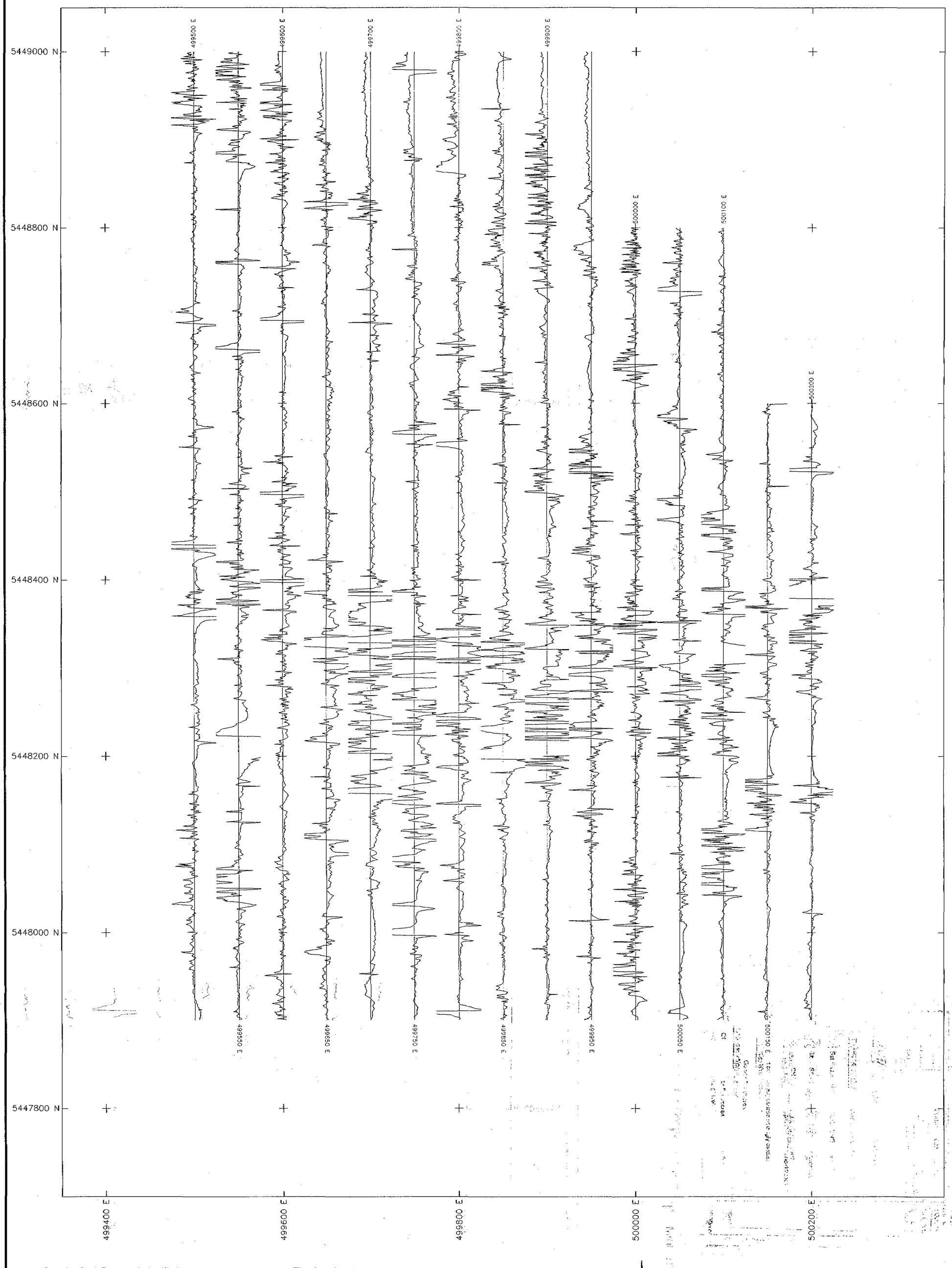
Mining Activity Rating (where shown)

1. Light surface workings
2. Extensive surface working
3. Exploratory shaft
4. Producer shaft
5. Major producer shaft

LOW HEAD WENNOUTH
BELL BAY WENNOUTH
Sheet 1
Sheet 2

AMG N MN 1°

HIGH
MAGNETIC
TERRANE
LOW
VOLUNTEER – LAND O'CAKES GOLD SOIL ANOMALY
VOLUNTEER
LAND O'CAKES
WEST VOLUNTEER
ROCKY SPRING
HIGHWAY
UNDERBANKS
MOUNT HYDE
MOUNT HYDE ROAD
Old Line
Abandoned
Fence
Track
Creek
Dam
Mine Shaft
Adit
Pit
Trench
Stope
Dump
Old Workings
Quartz Reef
Shear Zone
Fault
Bedding
Cleavage
Fold Axis
Outcrop
Rock Sample
Chip Sample
Drillhole
Grid Line
Contour
Road
Power Line
Building
Tank
Windmill
Gate
Cattle Grid
Boundary
Lease Boundary
Tailings
Water
Swamp
Salt Lake
Alluvium
Colluvium
Laterite
Granite
Dolerite
Quartz
Sandstone
Siltstone
Shale
Mathinna Beds
Ordovician
Devonian
Carboniferous
Permian
Triassic
Jurassic
Cretaceous
Tertiary
Quaternary
Recent
Pleistocene
Pliocene
Miocene
Oligocene
Eocene
Paleocene
Cretaceous
Jurassic
Triassic
Permian
Carboniferous
Devonian
Ordovician
Cambrian
Precambrian
Archean
Proterozoic
Phanerozoic
Paleozoic
Mesozoic
Cenozoic
Quaternary
Tertiary
Cretaceous
Jurassic
Triassic
Permian
Carboniferous
Devonian
Ordovician
Cambrian
Precambrian
Archean
Proterozoic
Phanerozoic
Paleozoic
Mesozoic
Cenozoic



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Armidale, NSW, 2351
Telephone: (067) 73 2617
Facsimile: (067) 73 3307

Base Level: 61630 nT
Vertical Scale: 30 nT/cm
Positive Clip: 61660 nT
Negative Clip: 61600 nT

Filtering Strategy

Unfiltered Data
Corrected for Diurnal Variation

0 50 100 150 Metres
SCALE 1:2500

5 cm

Volunteer Hill, Lefroy, Tasmania

Client: Central Kalgoorlie Gold Mines

Total Magnetic Intensity – Stacked Profiles
September 1996
Plotted by B Payne.

FIGURE 5

97-4005

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381028

Northing (mN, AMG Co-ordinates)

5 448 800
5 448 600
5 448 400
5 448 200
5 448 000

499|600 499|800 500|000

Easting (mE, AMG Co-ordinates)

0.00 100.00 200.00 300.00 400.00

Scale 1:2500

5 cm

GN
MN
13°

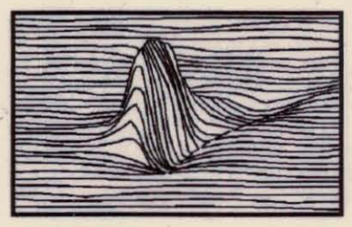
Nanoteslas
61637.5
61635.3
61633.4
61632.2
61631.4
61630.5
61629.8
61629.1
61628.5
61627.9
61627.1
61626.3
61625.0
61621.5

FIGURE 6 : Total Magnetic Intensity

Central Kalgoorlie Gold Mines
Volunteer Hill Grid, Lefroy,
Northern Tasmania.

Sun Angle Illumination: Inclination 30°, Declination 45°.

381029



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High Definition Magnetics
September 1996
Plotted by B Payne.

97-4005

Northing (mN, AMG Co-ordinates)

5 448 800
5 448 600
5 448 400
5 448 200
5 448 000

499|600
499|800
500|000

Easting (mE, AMG Co-ordinates)

Nanoteslas
61634.0
61632.4
61631.5
61630.6
61630.0
61629.5
61628.9
61628.4
61628.1
61627.9
61626.7
61625.8
61624.4

5 cm

0.00 100.00 200.00 300.00 400.00

Scale 1:2500

GN
MN
13°

Figure 7 : Total Magnetic Intensity

Central Kalgoorlie Gold Mines
Volunteer Hill Grid, Lefroy,
Northern Tasmania.

Filtering Strategy:
- removal of cultural features (1 pass median filter, window 101.5m, threshold 10 nT)
- low pass filter with cut off wavelength = 50m

Sun Angle Illumination: Inclination 45°, Declination 60°.

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High Definition Magnetics
September 1996
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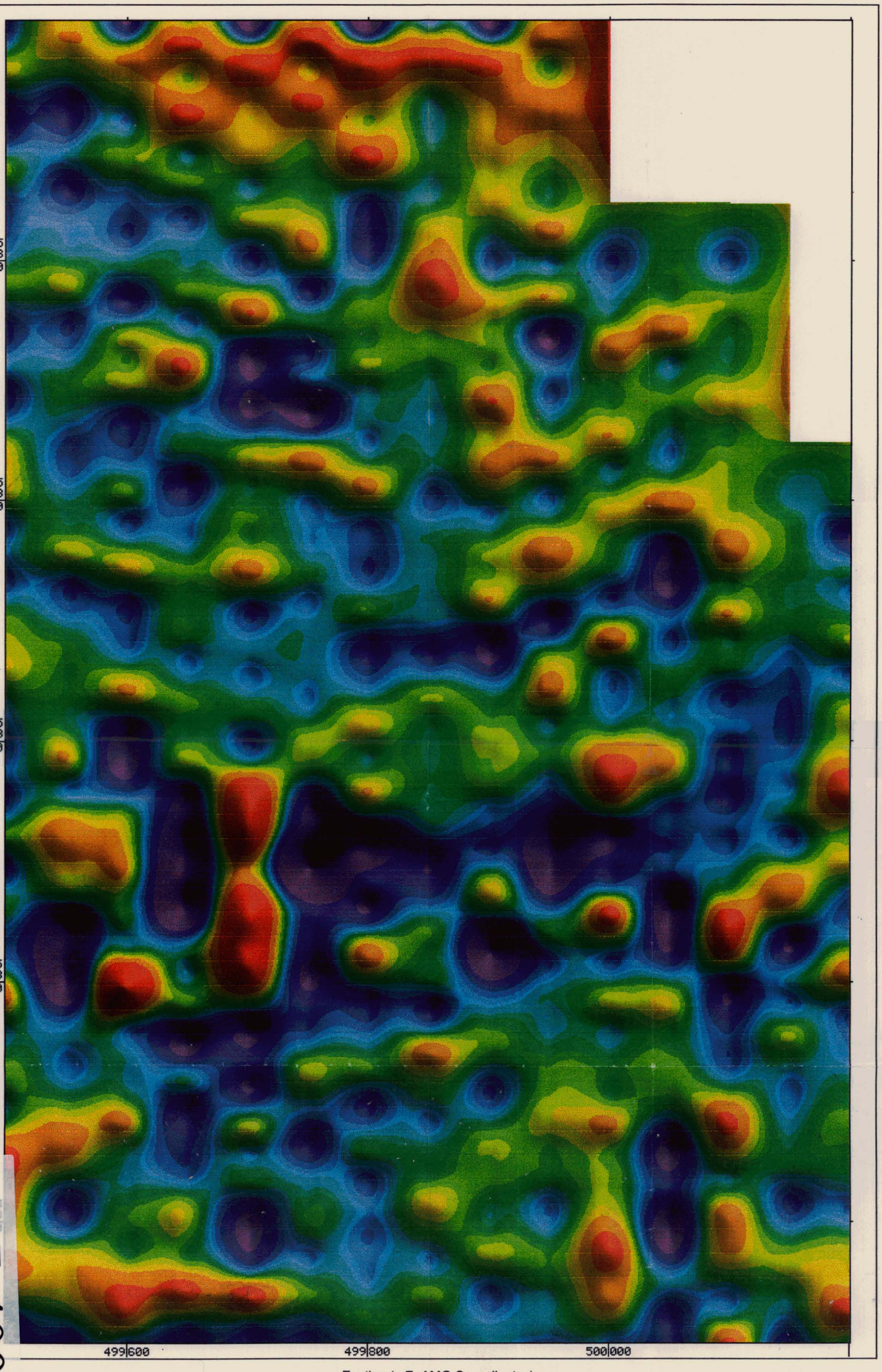
Geophysical Research Institute



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97-4005

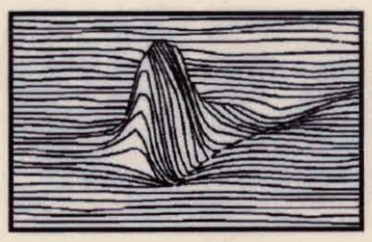
Figure 8 :First Vertical Derivative of Total Magnetic Intensity.

Volunteer Hill Grid, Lefroy, Tas.

Filtering Strategy: Removal of Cultural Features (see Figure 2)
Low Pass Filtered (wavelength 50m.)
First Vertical Derivative, Upward Continuation of 5m,

Sun Angle Illumination: Inclination 30°, Declination 30°.

381031



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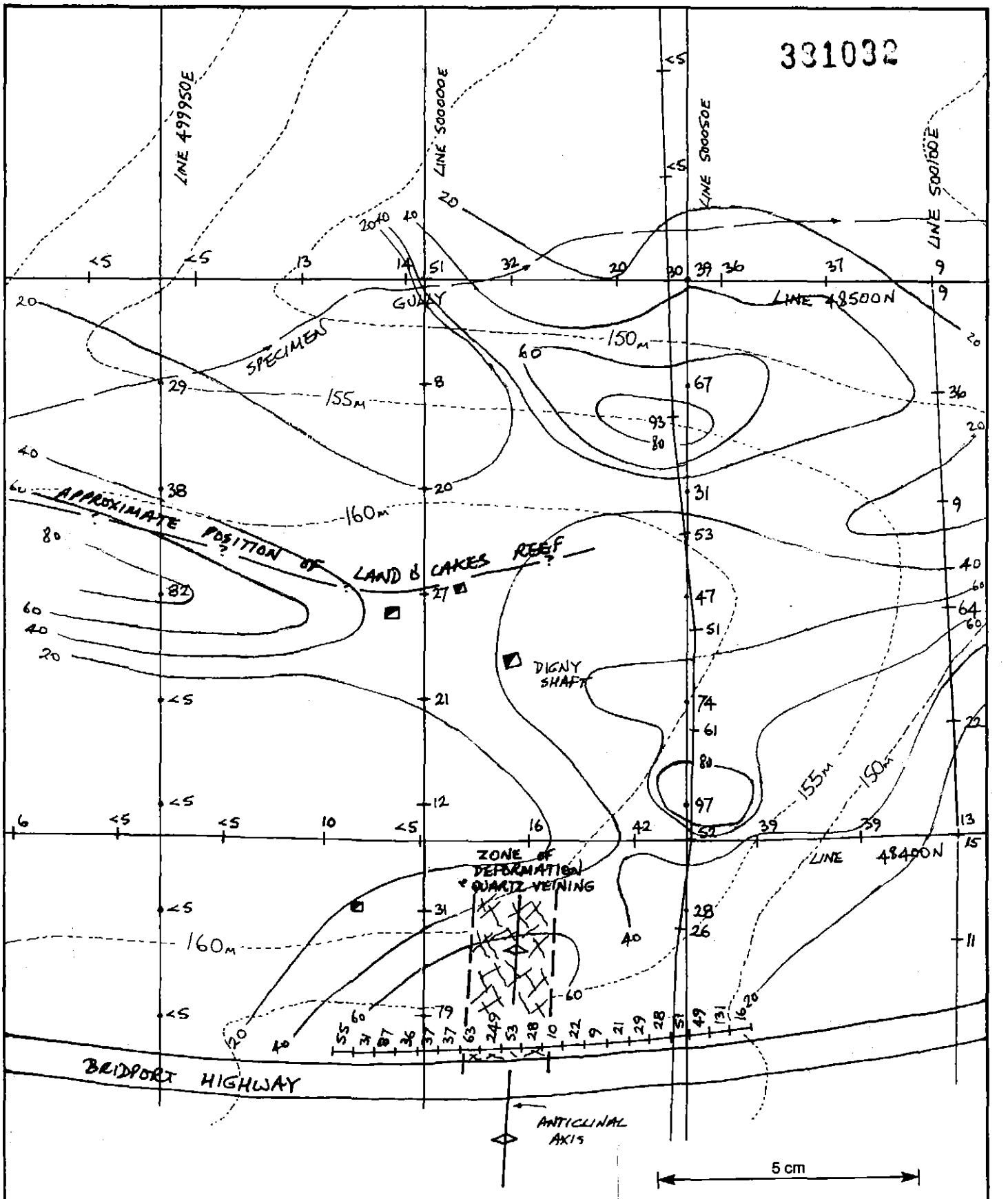
High Definition Magnetics
September 1996
Plotted by B Payne.

Surveyed for Central Kalgoorlie Gold Mines.



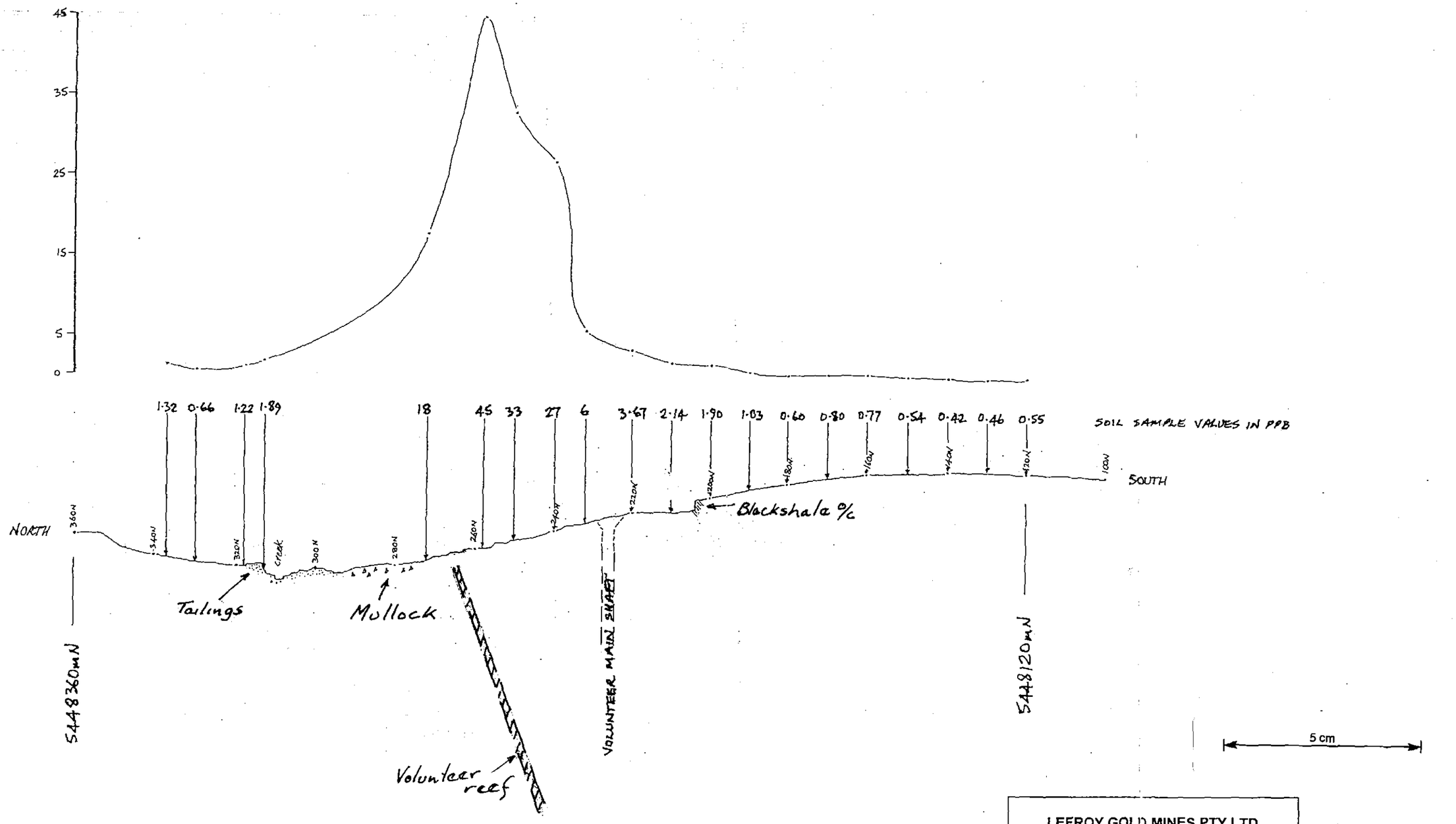
LEGEND

- 67 — 1996 Gridline with soil sample value (gold in ppb). Taken by power-auger.
- 21 — 1995 Gridline with soil sample value (gold in ppb). Taken by mattock.
- <5 — Bedrock channel sample with gold value in ppb.

LEFROY GOLD MINES PTY LTD

COMPILED: JGP	FOLLOW-UP SAMPLING VOLUNTEER-LAND O'CAKES GOLD SOIL ANOMALY
DATE: APRIL 1997	
DRAWN: JGP	EL 1/95 LEFROY
REF.:	
REVISIONS:	
DRAWING No.	SCALE 1: 1000 (0 — 20m) FIG. No.

FIGURE 9



LEFROY GOLD MINES PTY LTD

LEFROY PROJECT, NE TASMANIA

MMI SOIL SAMPLING TRAVERSE

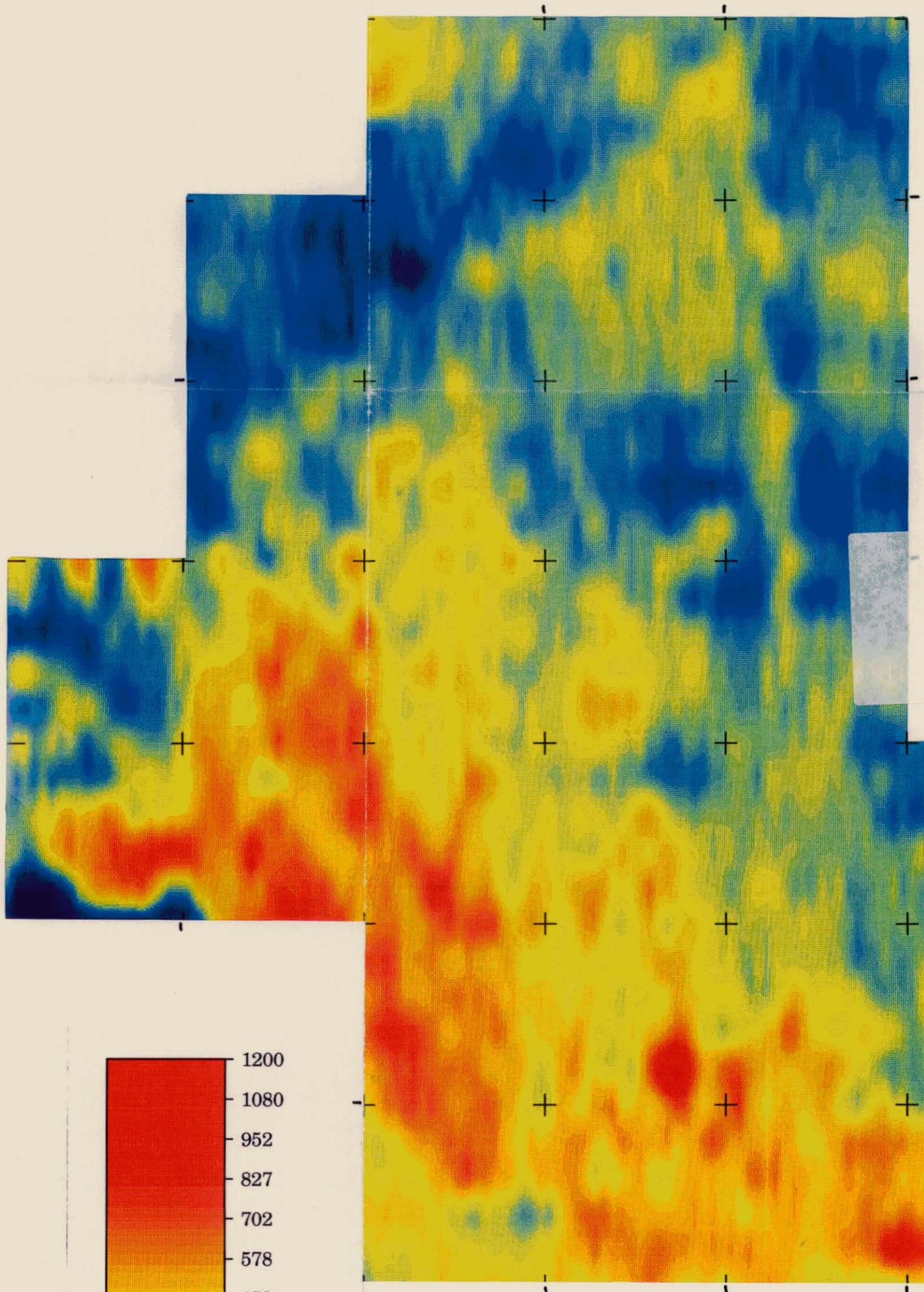
VOLUNTEER REEF - SECTION 499 900E

1 : 1 000 FIGURE 10

J.G.Purvis Nov 96

381033

ANNUAL REPORT - LEFROY
LEFROY GOLD MINES-EL 1/95
J.G.PURVIS



LEFROY GOLD MINES PTY LTD

Lefroy Area Radiometrics - Total Counts

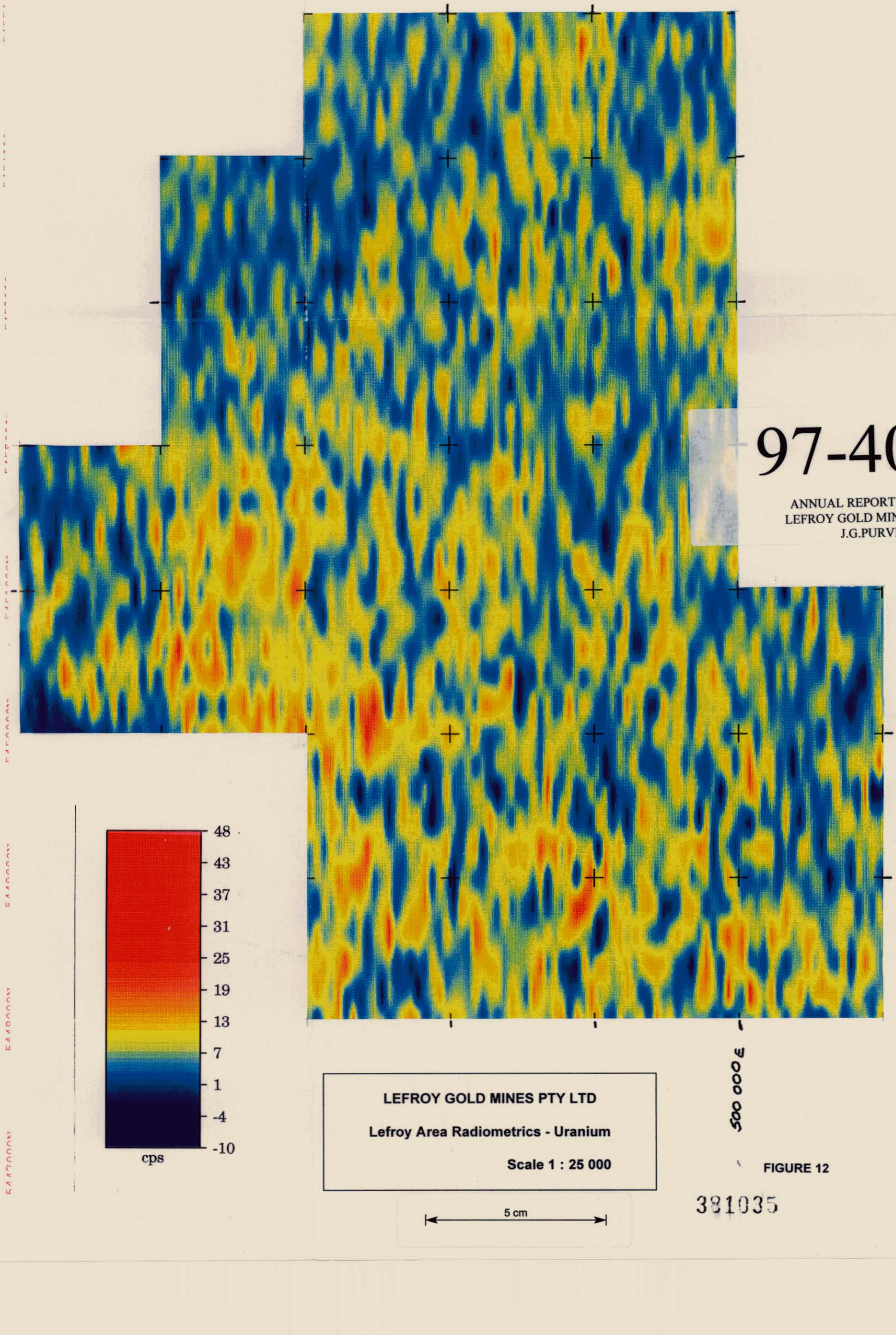
Scale 1 : 25 000

FIGURE 11

5 cm

97-4005

ANNUAL REPORT - LEFROY
LEFROY GOLD MINES-EL 1/95
J.G.PURVIS



LEFROY GOLD MINES PTY LTD

Lefroy Area Radiometrics - Uranium

Scale 1 : 25 000

5 cm

FIGURE 12

381035

ANNUAL REPORT - LEFROY
LEFROY GOLD MINES-EL 1/95
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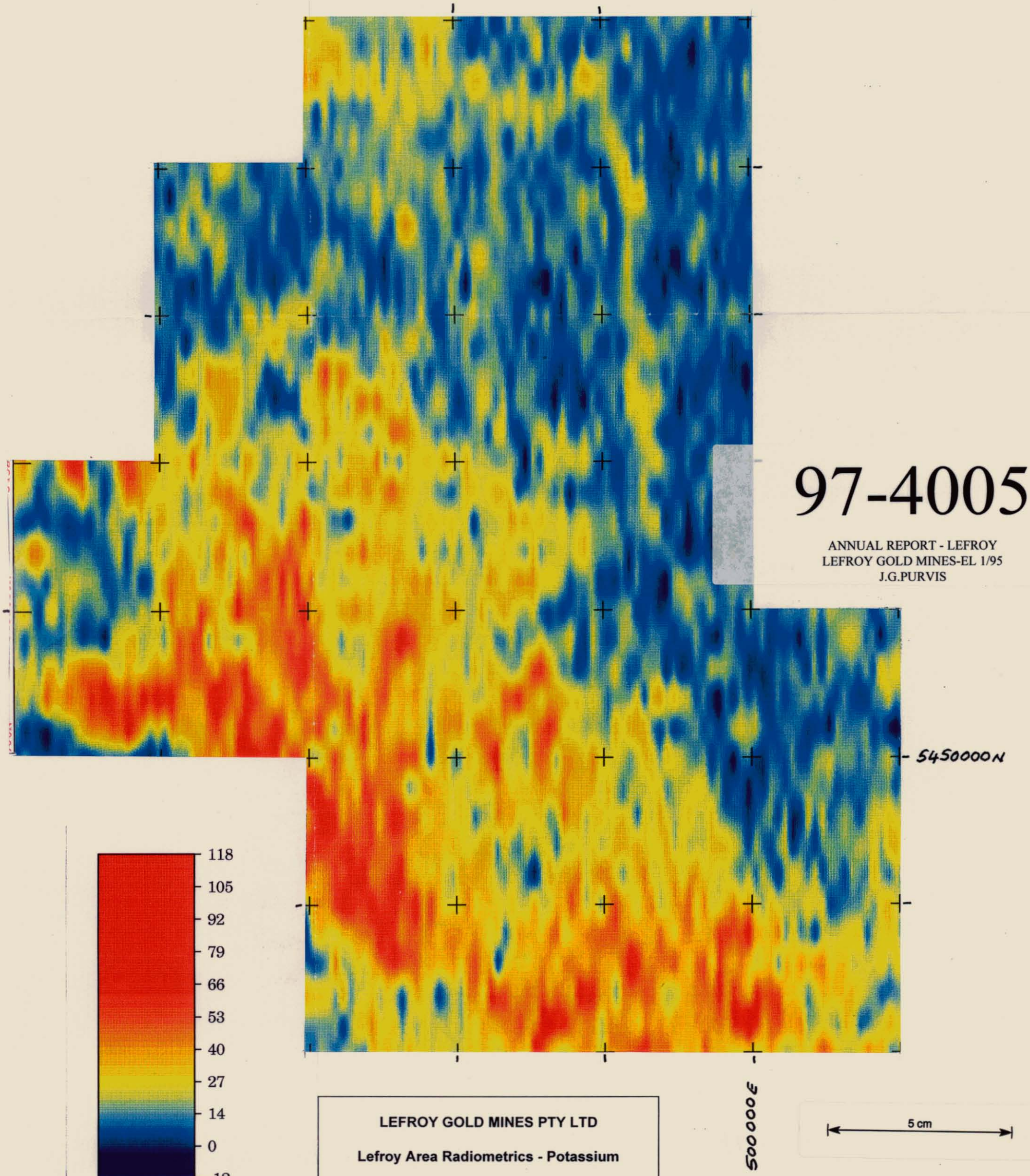
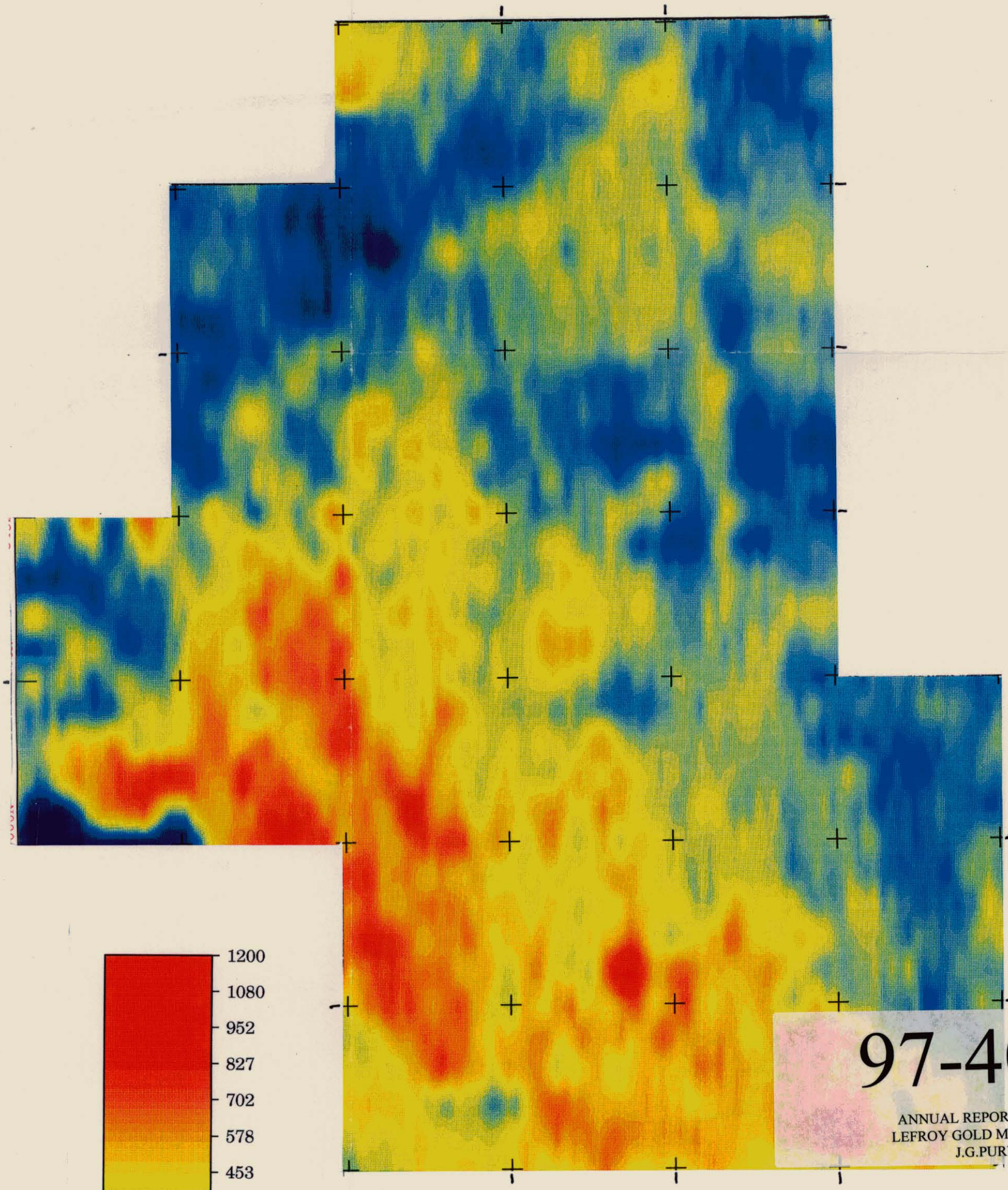


LEFROY GOLD MINES PTY LTD

Lefroy Area Radiometrics - Potassium

Scale 1 : 25 000

FIGURE 13



97-4005

ANNUAL REPORT - LEFROY
LEFROY GOLD MINES-EL 1/95
J.G.PURVIS

LEFROY GOLD MINES PTY LTD

Lefroy Area Radiometrics - Thorium

Scale 1 : 25 000

5 cm

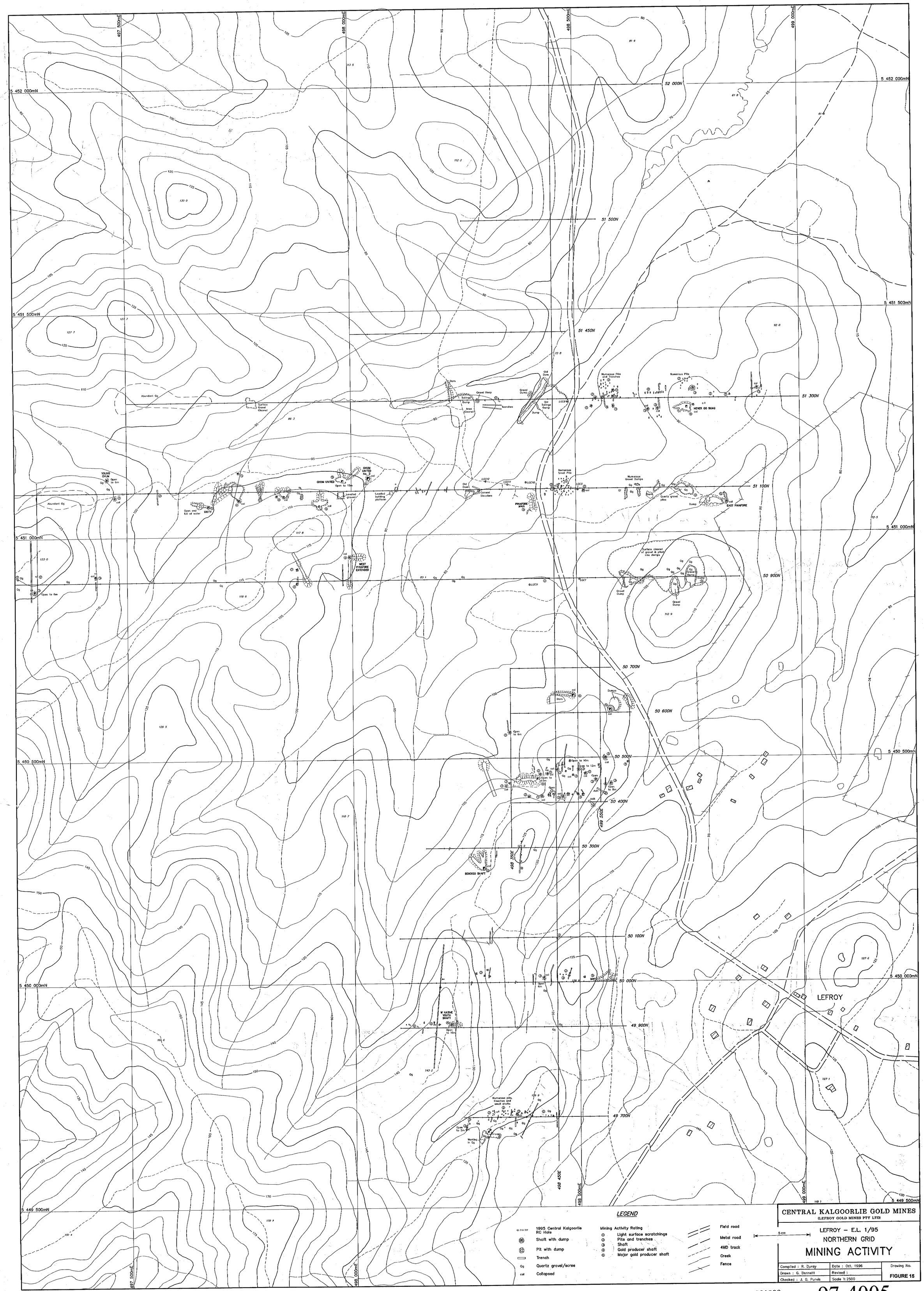
FIGURE 14

381037

LEFROY NORTHERN GRID

MINING ACTIVITY

1 : 2500



LEGEND

- 1995 Central Kalgoorlie RC Hole
- Shaft with dump
- Pit with dump
- Trench
- Qg — Quartz gravel/scree
- col — Collapsed

Mining Activity Rating

1. Light surface scratchings
2. Pits and trenches
3. Shaft
4. Gold producer shaft
5. Major gold producer shaft

- Field road
- Metal road
- 4WD track
- Creek
- Fence

5 cm

CENTRAL KALGOORLIE GOLD MINES
(LEFROY GOLD MINES PTY LTD)

LEFROY – E.L. 1/95
NORTHERN GRID
MINING ACTIVITY

Compiled : R. Duray	Date : Oct. 1996	Drawing No.
Drawn : G. Bennett	Revised :	FIGURE 15
Checked : J. G. Purvis	Scale 1:2500	

381038

97-4005

APPENDIX 1

SHAFT DUMP ROCK SAMPLE RESULTS

APPENDIX 1

Shaft Dump Rock Sample Results

Laboratory: Analabs, Cooee (Report No.s: 103380.60.11876 & 11974; CEN201.60.12107, 12159 & 12249). Gold by fire assay.

Captain Shaft Dump (Volunteer Reef Line)

ID	SAMPLE No.	Au g/t	As ppm	AMG N	AMG E	DESCRIPTION
1	214015	<0.005	-	5448290	499340	Highly cleaved qtz-mica siltst/sst with 5mm qtz veins and minor py. Slight sericitization.
2	214016	<0.005	-	5448290	499340	Micaceous sst, strongly cleaved with dispersed lim throughout, (possibly Fe-carb alteration).
3	214017	<0.005	-	5448290	499340	Hematite, (small fragment).
4	214018	<0.005	-	5448290	499340	Pale grey highly cleaved slightly greasy micaceous siltst with small black nodules.
5	214019	<0.005	-	5448290	499340	Pale brown fi gr qtz-mica sst. Moderately cleaved. One 2-3mm qtz vein. Dispersed FeOx throughout, (cb alteration ?).

California Shaft Dump (Volunteer Reef Line)

6	214020	<0.005	-	5448240	499290	One 100mm qtz vein with frags of strongly chloritized shale.
7	214021	0.020	-	5448240	499290	Pyritic black shale. 3-5% fi gr py in laminae and threads // clv and on fractures.
8	214022	0.010	-	5448240	499290	Lode qtz in contorted chloritized shale with sulphide stains.
9	214023	<0.005	-	5448240	499290	Contorted qtz-mica chlorite siltst/sst. Very strongly cleaved. 1-2mm qtz veinlets.
10	214024	<0.005	-	5448240	499290	Several pieces of qtz to 100mm. Some green and glassy with dispersed chlorite. One piece with lim stains.

West Volunteer Extended Dump

11	214056	<0.005	-	5448232	499560	Cleaved and contorted black pyritic shale (not sericitized, prob lode zone or close).
12	214057	<0.005	-	5448232	499560	As above. 1-2% pyrite, some in large cubes. Sl graphitic.
13	214058	0.015	-	5448232	499560	Limonitic qtz with chlorite and shale frags. (Note: qtz rare on this dump).
14	214059	<0.005	-	5448232	499560	Very strongly cleaved grey siltst with minor dissem py.
15	214060	<0.005	-	5448232	499560	Hard, sl silif fine qtzose sst with minor dissem py. Sl chloritized.
16	214515	<0.005	-	5448195	499547	Silif qtzose sst with qtz veins to 10mm, cross cutting cleavage. (Loose boulder from dump).

Recruit Shaft Dump

17	214036	6.220	-	5451500	496500	One piece of pyritic lode qtz with yellow stains (3-5% py).
18	214037	0.166	-	5451500	496500	Lode: qtz-sed bx. 80% qtz cement, 20% altered shale frags with sulphide and yellow stains.
19	214038	0.270	-	5451500	496500	Massive, strongly cleaved qtz-mica sst with network of thin qtz veinlets. Fe-carb alt and sl silif.
20	214039	0.080	-	5451500	496500	Large lump of lode qtz with inclusions of shiny black graphite.
21	214040	0.064	-	5451500	496500	As above. Lode qtz with 30-40% graphite.
22	214041	0.061	-	5451500	496500	Dark grey-black ferruginous (after sulphide) shale. Sl heavy.
23	214042	0.028	-	5451500	496500	Disturbed and slickensided black graphitic shale riddled with qtz veinlets, (lode channel material).
24	214043	1.070	-	5451500	496500	Lode: Grey qtz with minor sulphide stains and some included contorted shale material.
25	214044	0.070	-	5451500	496500	Black siltst/shale with abundant ferruginous laminae prob after sulphides.
26	214045	0.128	-	5451500	496500	Black masssive siltst:graphitic and sulphidic. No qtz.

Queens Birthday West Shaft Dump

ID	SAMPLE No.	Au g/t	As ppm	AMG N	AMG E	DESCRIPTION
27	214046	<0.005	-	5448594	499546	Lode qtz containing minor frags of chloritic shale. White qtz (some dog tooth).
28	214047	0.028	-	5448594	499546	Selected frags of sericitized grey shale with lim stains. One with qtz veins to 10 mm.

Queens Birthday Reef Dumps

29	214062	<0.005	-	5448592	499613	Pale greenish-grey soft sericitized siltst with numerous lim qtz veins, average at 2-3mm.
30	214063	<0.005	-	5448592	499613	Strongly cleaved sericitized shale with lim qtz veins, average at 10-50mm.
31	214064	<0.005	-	5448592	499613	Strongly cleaved soft black shale with 3% fine sooty py. No qtz.
32	214065	<0.005	-	5448592	499613	Lode qtz-limonitic. Selected frags to 100mm.
33	214066	<0.005	-	5448592	499613	Pale green chlorite-mica schist after siltst, with prominent lim (after carb alt?). Several 2mm qtz-lim veins.
34	214075	0.051	-	5448585	499633	Grey-black greasy (sericitized) strongly cleaved shale with pits after py. Some contorted cleavage.
35	214076	<0.005	-	5448585	499633	White dog-tooth qtz veins. Selected frags to 100mm with shale selvages. (Note: only minor qtz on dump).
36	214077	0.060	-	5448585	499658	100mm qtz vein with limonitic stains, in alt shale.
37	214078	1.079	-	5448585	499657	Ox qtz-mica sst with abundant 1-3mm qtz veins. Rock sl silif.

New Years Gift Shaft Dump

38	214080	0.196	-	5448630	499674	Frag of highly ferruginous folded shale with 50mm qtz vein.
39	214081	0.011	-	5448630	499674	Sl bleached and sericitic sst with minor dissem py.
40	214082	0.460	-	5448630	499674	Alt (mod ser, weak silif) siltst/sst with minor py and FeOx flecks after carb, mica or sulphides. Similar to above.

Leefloyd Shaft Dump

41	214050	0.496	-	5448892	499546	Abundant 5mm qtz-lim veins in fi gr sst.
42	214051	0.048	-	5448892	499546	Lode: selected frags of limonitic vein qtz to 100mm. (Note: Very little qtz on this dump).
43	214052	0.011	-	5448892	499546	Grey chloritized shale with 30mm white qtz vein. Sl sulphide stains in shale.
44	214053	0.010	-	5448892	499546	Fi gr siltst with 1-3mm qtz veins at right angles to bedding.
45	214054	0.008	-	5448892	499546	Fi gr sst/siltst with fine bedding. Sl sericitic and micaceous, cleaved. Trace dissem py. No qtz.

Reward West Shaft Dump

46	214069	<0.005	-	5448680	499596	Lode qtz, limonitic, vuggy. (Much qtz veined sericite-chlorite alt seds on this dump, esp contorted shale).
47	214070	<0.005	-	5448680	499596	Limonitic qtz to 30mm in chloritic contorted shale, partly bx.
48	214071	<0.005	-	5448680	499596	Limonitic qtz veins stockwork in chloritized fi gr sst with lim stains.
49	214072	<0.005	-	5448680	499596	Sericite-chlorite alt contorted shale with lim. No qtz.

East Volunteer Shaft Dump

50	214593	0.024	-	5448240	500000	"Background rock". Hard mod sil-ser-cb alt qtzose sst. Cleaved with minor dissem py and minor thin qtz-FeOx veinlets.
51	214594	1.280	-	5448240	500000	Similar to above except more strongly sil-ser-cb-alt, with, abundant white qtz veins to 10mm. Minor dissem py.
52	214595	5.850	-	5448240	500000	Lode qtz: White to grey qtz with 1% py and grey sulphide. Alt sediment inclusions.
543	214596	1.660	-	5448240	500000	Lode: Silif sst (ble) with prominent sulphide stains. Highly qtz flooded rock, originally qtzose-mica sst.
54	214597	0.119	-	5448240	500000	Pale blue-grey fi gr siliceous siltst/sst with 1-2% py.
55	214598	0.682	-	5448240	500000	Hard silif and sericitized qtz-mica sst with qtz veinlets to 3mm. Cleaved.

West Volunteer Old Shaft Dump

ID	SAMPLE No.	Au g/t	As ppm	AMG N	AMG E	DESCRIPTION
56	214524	1.063	-	5448266	499770	Sericitized fi gr qtzose sst with stockwork of qtz-lim veins (10%).
57	214525	0.032	-	5448266	499770	Black sericitized shale with very strong foliation. Weak crenulation cleavage. 1% dissem py.
58	214526	<0.005	-	5448266	499770	Silif and sericitized qtz sst with minor py.
59	214527	0.185	-	5448266	499770	As above.

Volunteer Old Main Shaft Dump

60	214585	1.440	-	5448255	499950	Grab sample of fines-much black shale/siltst, some with py. Some vein qtz frags.
61	214586	0.029	-	5448255	499950	150mm frag of white vein qtz with myriad of fracs filled with FeOx.
62	214587	3.080	-	5448255	499950	150mm frags of grey lode qtz with minor chlorite and dark grey sulphide.
63	214588	0.079	-	5448255	499950	Black pyritic (2-3%) shale. Cleaved. Much of this on dump.
64	214589	0.020	-	5448255	499950	Silif and cb alt fine qtz mica sst with minor dissem py and qtz veinlets.
65*	4141850	2.040	7240	5448252	499850	Blue/grey qtz veining. Laminated veining with fi gr aspy and py.
66*	4141848	3.630	10800	5448252	499850	Grey sericitized qtzite with py cubes and Fe-carb veining. Minor qtz veining. Possible scorodite.
67*	4141849	70.1	3360	5448252	499850	White/grey qtz vein with possible malachite. Kaolin alteration. ± scorodite.

* Samples taken by CRAE, May 1996.

Digny Shaft Dump

68	214564	0.029	-	5448425	500015	Strongly cleaved almost carbonate. Fibe qtzose sst with abundant veinlets of qtz and FeOx.
69	214565	0.013	-	5448425	500015	As above but less qtz veinlets. Veinlets in cleavage not crosscutting.
70	214566	0.104	-	5448425	500015	Qtz>chlorite veins in chlorite altered sst. Qtz 80%, sst 20%.
71	214567	0.340	-	5448425	500015	Sericitic shale with minor pits after py.

East Recruit Shaft Dump

72	214528	0.045	-	5451500	496600	Qtz vein stockwork in cb-alt and ble qtzose sst. (Much alt sst with qtz veins, on this dump).
73	214529	<0.005	-	5451500	496600	Alt (cb) sst without qtz veins. Pale brown-grey in colour.
74	214530	0.029	-	5451500	496600	Lode zone: Bx of qtz and puggy grey-black shale. 50% vein qtz, 50% shale.
75	214531	0.016	-	5451500	496600	Rusty qtz-lim veinlet stockwork in fine qtz-mica sst.

Bannockburn Shaft Dump (Land O'Cakes Reef Line)

76	214083	0.440	-	5448460	499650	Bleached, sericitized and brecciated shale with small knots of leached qtz, (a fault-lode zone).
77	214084	0.306	-	5448460	499650	Similar to above. Contorted alt shale with leached qtz veinlets and prominent lim stains.
78	214085	0.049	-	5448460	499650	Bleached sericitized shale with lim after sulphides and minor leached qtz.
79	214086	0.021	-	5448460	499650	Oxidized sericitized shale with lim stains. No qtz.
80	214087	0.442	-	5448460	499650	Selected pieces of grey, white and/or limonitic lode qtz.

Old East Volunteer Shaft Dump

ID	SAMPLE No.	Au g/t	As ppm	AMG N	AMG E	DESCRIPTION
81	214602	1.010	-	5448245	500030	Grey lode qtz with 1-2% pyrite and grey sulphide.
82	214603	0.076	-	5448245	500030	Qtz- sercite altered qtzose sst with lim stains after py. Minor 1-2mm qtz-limonite veinlets.
83	214604	1.640	-	5448245	500030	Lode material: Qtzose sst with qtz-lim veins (boxworks) - originally very sulphidic.
84	214605	0.477	-	5448245	500030	Dump fines: much puggy black shale and sulphide stained material. Minor qtz.

Chum New Main Shaft Dump

85	219854	0.974	6193	5451230	498400	Silif qtz- sericite sst with qtz veins to 30mm. 1% py. Aspy on vein margins. Minor lim after carbonate.
86	219855	1.014	3048	5451230	498400	Lode qtz: white qtz with 1% grey sulphide or lim after sulphides.
87	219856	1.765	6687	5451230	498400	Lode bx: lode qtz with sericitized sed frags. Aspy on margins of sed frags. 60% qtz, 40% sed frags.
88	219857	0.829	5885	5451230	498400	Silif and sericitized qtzose sst with 10% qtz vein stockwork. Sst has minor dissem pyrite.
89	219858	0.015	216	5451230	498400	Cleaved and sericitized micaceous siltst.
90	219859	0.015	95	5451230	498400	Intensely cleaved and crenulated chloritic phyllite after dark shale (from in or around lode channel).
91	219860	0.013	49	5451230	498400	As above but seamed by stockwork of irregular qtz veins to 10mm thick.
92	219861	0.230	1759	5451230	498400	Silif qtzose sst with minor sericite and cb. Tiny fracts of qtz-lim (<<1mm).
93	219862	0.247	2559	5451230	498400	Lode qtz. White to dark grey qtz with alt sulphidic country rock frags. 1-2% aspy in qtz & seds.
94*	4141853	1.410	6990	5451230	498400	Carbonate veining in sheared sericitized qtzite with scorodite stains.

* Samples taken by CRAE, May 1996.

Pinafore New Main Shaft Dump

95	219863	0.120	249	5451070	498510	Sulphidic dark grey lode qtz. 3-5% py and fi gr grey sulphide. Small frags of graphitic black shale.
96	219864	0.597	2040	5451070	498510	Lode qtz: A qtz silif sst bx with white to grey qtz silif sst frags. 65% qtz, 35% sst. Minor py and lim.
97	219865	0.301	662	5451070	498510	Lode qtz bx: Grey sulphidic vein qtz with frags of black shale and strong lim stains.
98	219866	0.335	1984	5451070	498535	Silif grey siltst with 1% dissem py and arsenpy with prominent brown and yellow stains.
99	219867	0.418	2061	5451070	498535	Qtz vein stockwork in silif qtz sst. Minor dissem py. Sst brown due to stains after carb alt. Qtz veins white.
100	4141852	0.108	135	5451070	498510	* Blue-grey lode qtz. Localized bx, including black shale fragments. Minor fragments of py. Same rock as 219863.

Reward Shaft Dump

101	219868	0.113	2222	5448695	499720	Clvd qtzose sst with weak sericitization, carbonatization & bleaching. Minor dissem py. Strong stains after sulphides.
102	219869	0.943	1913	5448695	499720	120mm lode qtz vein, white to grey, with threads and zones of silvery sulphide.
103	219870	0.466	1906	5448700	499735	Massive, carbonatized qtz-mica sst with minor silica-sericite alteration. Several qtz veins to 5mm. Minor dissem py.
104	219871	0.035	213	5448700	499735	Qtzose sericitic siltst with carb alt. Minor dissem py and thin veinlets of qtz-(Fe)carb.
105	219872	1.390	4373	5448690	499735	Similar to 870: cb-altered qtz-mica sst, with weak silica-sericite-bleach alteration. Several qtz veins. Minor py & aspy. silif and bleached with minor py and silvery sulphide. Seceral qtz veins to 10mm.

Miscellaneous Shaft Dumps

ID	SAMPLE No.	Au g/t	As ppm	AMG N	AMG E	DESCRIPTION
106	214516	<0.005	-	5448103	499535	Vein qtz to 150mm with patches of chlorite and minor limonite.
107	214517	<0.005	-	5448100	499530	Sericitic shale with warped cleavage.
108	214518	0.016	-	5448000	499560	Lode material: Limonitic qtz vein stockwork in strongly cleaved and disrupted sericitic-limonitic shale.
109	214519	<0.005	-	5448000	499560	Lode material, similar to above, but less limonitic and less qtz veins.
110	214520	<0.005	-	5448000	499560	Qtz-mica sst, possibly cb altered. Minor pits after py.
111	214521	<0.005	-	5447960	499755	Strongly cleaved black shale.
112	214533	0.403	-	5448450	499735	Highly bleached and silif qtzose sst with diffuse qtz veins (a qtz-flooded rock).
113	214534	0.023	-	5448450	499750	Frags of vein qtz to 200mm, white or slightly limonitic, with some sericitic shale wallrock.
114	214535	0.175	-	5448450	499750	Sericitized grey shale with some limonite.
115	214536	0.034	-	5448450	499750	Bleached qtz-mica sst with lim spots after minor py. Limonitic fracts and rare qtz-lim veins.
116	214538	0.015	-	5448540	499750	Grey current- bedded siltst/sst with rare py.
117	214539	<0.005	-	5448540	499750	Black highly cleaved shale.
118	214540	0.010	-	5448985	499770	Vein qtz and highly qtz- veined siltst/shale.
119	214541	0.032	-	5448985	499770	Siltst/shale, weakly sericitized, rare pits after py.
120	214542	0.018	-	5448990	499785	Grey sericitic, highly cleaved greasy shale, with thin limonitic fractures at right angles to cleavage.
121	214544	0.014	-	5448615	499815	Lode material?: Sericitic highly cleaved shale, with minor qtz veins.
122	214546	0.012	-	5448437	499800	Slightly puggy, strongly cleaved, black graphitic & sericitic shale. Minor lim fracts.
123	214547	0.049	-	5448437	499800	Similar to above, but more altered: creamy-grey sericitic shale with prominent limonitic fractures.
124	214548	0.013	-	5448435	499860	Sericitized and bleached sst with qtz-limonitic veinlets (<1mm).
125	214549	0.006	-	5448435	499860	Black, slightly graphitic, highly cleaved sericitic shale with silty layers. Trace py.
126	214550	0.088	-	5448435	499860	Vein qtz + chlorite, with chloritic shale wallrock.
127	214551	0.015	-	5448675	499865	Lode channel material: Highly sericitized and cleaved shale. No qtz.
128	214552	0.014	-	5448820	499844	Lateritic iron (hematite and limonite) with qtz vein frags.
129	214554	<0.005	-	5448795	499915	Vein qtz with some sericitized shale wallrock.
130	214555	0.012	-	5448739	499952	Grey-black sericitized shale, with 1% small pits after py.
131	214557	0.013	-	5448565	499890	Cleaved, bleached & sericitized siltst/sst, with 1-2% pits after py. Adjacent to qtz veining.
132	214561	<0.005	-	5448660	500095	Oxidized sericitized shale with minor spots of FeOx after py.
133	214563	0.106	-	5448380	499990	Sericitized shale with 1% fine pits after py. Some frags quite ferruginous.
134	214569	0.009	-	5448155	499785	Black strongly cleaved, weakly silif and pyritic shale.
135	214570	<0.005	-	5448155	499785	Qtz veined highly cleaved sst>shale. Weak chloritic alteration.
136	214571	<0.005	-	5448155	499785	Lode material: Highly qtz veined and disrupted black silif shale. Weak sericite-chlorite alteration.
137	214572	<0.005	-	5448155	499785	Lode material: Brecciated and cleaved chloritized black shale, seamed by veins and knots of qtz.
138	214573	<0.005	-	5448010	499795	Soft crumbly grey-green qtz-mica sst, with qtz-limonite veinlets.
139	214574	<0.005	-	5448010	499795	Lode material: Qtz veins to 15mm in cleaved & disrupted chloritic black shale. 60% shale, 40% qtz.
140	214575	<0.005	-	5448010	499795	*Lode material: Vein qtz to 50mm with selvages of chloritic shale.*
141	214576	<0.005	-	5448010	499795	Silif black shale with prominent sulphide stains. No qtz veins.

Miscellaneous Shaft Dumps continued

ID	SAMPLE No.	Au g/t	As ppm	AMG N	AMG E	DESCRIPTION
142	214577	<0.005	-	5448010	499795	Greasy, soft, highly cleaved graphitic black shale.
143	214581	0.010	-	5448000	499835	Oxidized, sericitized shale with minor fine pits after py and rare qtz veinlets.
144	214582	<0.005	-	5448150	499850	Oxidized greasy sericitized shale with strong cleavage.
145	214591	<0.005	-	5448005	500010	Oxidized sericitized shale.
146	214599	<0.005	-	5448260	500035	Highly sericitized and cleaved/disrupted grey shale. Lode zone wallrock.
147	214600	<0.005	-	5448260	500035	As above but with abundant lode qtz veins.
148	214601	<0.005	-	5448260	500035	Cleaved, bleached & sericitized fi gr sst, with trace py
149	214608	1.180	-	5448230	500100	Fines from dump: Limonite-stained carbonaceous shale and siltst. Minor qtz.
150	214609	0.077	-	5448230	500100	Vein qtz. Highly fract white qtz, with abundant limonite filling fractures.
151	214610	0.171	-	5448230	500100	Grey and black, highly cleaved, weakly sericitized shale with limonite stains after py.
152	214510	1.440	-	5448695	499680	Qtz vein frags with hematite and limonite stains.
153	214511	0.455	-	5448735	499730	Limonitic qtz vein frags.
154	214512	0.063	-	5448735	499730	Strongly cleaved sericitic siltst with 1% pits after py.
155	214513	0.038	-	5448740	499685	Grey shale/siltst with marked crenulation cleavage.
156	214514	0.073	-	5448740	499685	Vein qtz to 100mm with marked limonite stains.
157	214061	0.013	-	5448585	499595	Sericitized siltst and shale, some black, with minor pits after pyrite. No qtz.
158	214088	0.013	-	5447955	499655	Chips off block of vein qtz 0.6m by 0.3m.
159	214089	0.126	-	5447950	499695	Chloritic and sericitic grey-black shale with thin qtz veins. Limonite stains and fine pits after py.
160	214090	0.023	-	5447950	499695	Lode qtz fragments: Slightly grey and limonitic qtz with shale selvages.
161	214091	<0.005	-	5447957	499698	Lumps of sugary vein qtz to 0.4m. Minor limonite.
Bannockburn Shaft Dump (Land O'Cakes Reef Line)						
162	219849	<0.005	22	5448445	499310	Grey qtz-feld-mica-sericite sst with <1mm qtz fe-carb veins. Cleaved.
163	219850	0.009	38	5448445	499310	As above except finer gr -a Slt. Lim ± qtz veinlets at all angles. Strongly cleaved.
164	219851	0.009	25	5448445	499310	Pale grey, bleached & sericitized, cleaved siltst with dissem py. No veining.
165	219852	<0.005	5	5448445	499310	Qtz feld-mica-sericite sst, cleaved, with several pinkish qtz veins (average: 5-10mm). Minor py in sst.
166	219853	0.005	9	5448445	499310	Qtz vein 200mm. Highly brecciated and fractured. Minor country rock frags in qtz.
Specimen Hill Shaft Dump (Land O'Cakes Reef Line)						
167	214501	0.739	-	5448480	499720	Fines from dump. Cemented grey-black sulphidic shale, sst & vein qtz.
168	214502	0.271	-	5448480	499720	Frags of vein qtz. Minor lim staining.
169	214503	0.007	-	5448480	499720	Greenish-grey, sericite-chlorite alt qtz-mica sst. Strongly cleaved. Rare dissem py.
170	214504	0.903	-	5448480	499720	Qtz vein stockwork in chlorite-alt sst. Strongly cleaved.
171	214505	1.205	-	5448480	499720	Grey-black shale with strong limonite/sulphide stains and some qtz veins. (Lode material)
172	214537	0.774	-	5448480	499750	Lode material: crumbly, faulted grey shale and fine felsic sst, with stockwork of qtz veins. 70% wallrock 30% qtz.

West Volunteer New Shaft Dump

ID	SAMPLE No.	Au g/t	As ppm	AMG N	AMG E	DESCRIPTION
173	214093	0.120	-	5448225	499725	Dump fines. Mainly grey-black shale with minor qtz frags.
174	214094	0.024	-	5448225	499725	Selected frags of vein qtz. White with Fe-carb patches and/or shale inclusions.
175	214095	0.017	-	5448225	499725	Lode: qtz with minor py and chlorite, in greasy chloritized black shale.
176	214096	<0.005	-	5448225	499725	As above with lesser qtz. Qtz-chlorite veins in chloritized and contorted black shale.
177	214097	0.057	-	5448225	499725	Thin qtz vein stockwork, ± Fe-carb, in silif grey shale.
178	214098	0.178	-	5448225	499725	Grey sst with qtz vein stockwork. Silif sst with Fe-carb alt and minor py.
179	214099	<0.005	-	5448225	499725	Silif sst but no qtz veins. Weak Fe-carb alt.
180	214100	<0.005	-	5448225	499725	Silif fine sst/slt with 1% dissem py and weak Fe-carb alt. No qtz. Strongly cleaved.
181	214522	0.409	-	5448225	499750	Lode qtz: qtz-sst bx (cataclasite). White and grey qtz with 30% silif and sericitized sst frags. Minor py and aspy.
182	214523	0.984	-	5448225	499750	300mm thick margin of lode: 50% qtz>sst cataclasite & 50% heavily qtz-veined silif sericitized sst. Minor py and aspy.

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APPENDIX 2

ROCK SAMPLE RESULTS

APPENDIX 2

ROCK SAMPLE RESULTS
VOLUNTEER HILL GRID

Analysed by Analabs, Cooee.
Analabs Report No.s : 103380.60.11876
CEN201.60.12107
CEN201.60.12159
CEN201.60.12249
CEN201.60.12778
Au analysed by 50gm Fire Assay
As analysed by Hydride Generation - AAS

Sample No.	Sample Type	Au (g/t)	As (ppm)	Grid AMG Northing	Grid AMG Easting	Location	Description
219873	13m chip	0.012	18	48728	499635	Specimen Hill	Limonitic vein qtz stockwork (sampled) in Sst, Slt & Sh (not sampled).
219874	Outcrop	0.005	9	48710	499612	Specimen Hill	Irregular limonitic 300 mm thick qtz vein.
214048	2m chip	<0.005		48750	499540	Specimen Hill	Qtz vein stockwork in sericitic shale.
214049	2m chip	<0.005		48745	499533	Specimen Hill	Flat-lying qtz veins in Sst.
214055	Float	<0.005		48567	499489	Volunteer Hill	200 x 100 mm laminated grey lode qtz vein.
214067	0.4m channel	<0.005		48635	499605	Specimen Hill	Cemented qtz gravel layer exposed in sluice working.
214068	0.5m channel	<0.005		48665	499615	Specimen Hill	Cemented qtz gravel layer exposed in sluice working.
214073	6m chip	<0.005		48745	499600	Specimen Hill	Flat-lying limonitic qtz veins (sampled) in Sst (not sampled)
214074	3m channel	<0.005		48605	499635	Specimen Hill	Qtz vein stockwork in sericitized Slt/Sh with minor py.
214079	0.5m chip	0.162		48595	499620	Specimen Hill	Qtz vein stockwork in sericitized Sh/Slt.
214092	Outcrop?	0.032		48218	499700	West Volunteer	Oxidized clayey altered Sh with contorted cleavage (fault zone?).
214506	Outcrop	0.029		48640	499696	Specimen Hill	300mm flat-lying qtz reef. Minor limonite stains.
214507	1m channel	0.033		48653	499700	Specimen Hill	Oxidized quartzose Sst. One 5mm qtz-limonite vein.
214508	0.75m channel	<0.005		48683	499680	Specimen Hill	Sericitized Sh. One 20mm qtz vein.
214509	1m channel	0.007		48655	499690	Specimen Hill	Flat-lying qtz veins (10/1m) in sericitized Sh.
214532	Outcrop	<0.005		48315	499655	Near Cadet Reef	Hard black Sh.
214543	Float	0.025		48905	499800	Poverty Gully	Massive hematite-limonite laterite with qtz vein fragments.
214545	"Outcrop"	2.03		48460	499800	Specimen Gully	Black graphitic pug. Mine tailings or fault gouge.
214553	Outcrop	<0.005		48820	499794	Poverty Gully	0.5m vertical qtz-veined zone in sericitized Sh.

ROCK SAMPLE RESULTS
VOLUNTEER HILL GRID

Analysed by Analabs, Cooee.
Analabs Report No.s : 103380.60.11876
CEN201.60.12107
CEN201.60.12159
CEN201.60.12249
CEN201.60.12778
Au analysed by 50gm Fire Assay
As analysed by Hydride Generation - AAS

Sample No.	Sample Type	Au (g/t)	As (ppm)	Grid AMG Northing	Grid AMG Easting	Location	Description
214556	0.5m chip	0.091		48570	499885	Specimen Hill East	Qtz-veined zone in sericitized Slt.
214558	Outcrop	<0.005		48820	500030	Near Blanket Ck	+ 1m thick massive white qtz vein.
214559	0.4m chip	<0.005		48800	500035	Near Blanket Ck	Sst and sericitized Sh with 50mm qtz vein.
214560	Sub outcrop	<0.005		48545	500057	Specimen Gully	Weakly silicified Sst with minor qtz veinlets.
214562	Outcrop	<0.005		48600	499865	Specimen Hill East	Massive dark grey Slt with pits after fine pyrite (1%).
214568	Float	0.104		48473	500000	Specimen Gully	Ferruginous (lateritized) silicified Sh with qtz veinlets.
214578	Outcrop	<0.005		48300	499874	Volunteer Creek	Sheared sericitized & silicified Sh. Common pits after py.
214579	Outcrop	0.055		48300	499885	Volunteer Creek	Sericitized, strongly foliated, Sst with sheared bands. 1% py
214580	1.5m channel	0.031		48205	499895	Volunteer Main Shaft	Black Sh & Slt. Partly ferruginous. Minor pyrite.
214583	Outcrop	<0.005		48285	499850	Volunteer Creek	Sericitized Sst-strongly cleaved. Trace pyrite.
214584	0.5m channel	0.137		48280	499950	Volunteer Track	Hard, cleaved Slt.
214590	Outcrop	<0.005		48135	499965	Volunteer South	Random chips from 0.5m wide zone of qtz veins in Sh.
214592	Outcrop	<0.005		48115	499990	Volunteer South	Greasy sericitized black Slt/Sh.
214607	Outcrop	<0.005		48170	500100	Blanket Creek	Strongly cleaved micaceous Slt.
214611	Outcrop	0.017		48145	499733	Volunteer Creek	Highly cleaved, weakly sericitized black Sh.
214612	Outcrop	0.051		48199	499743	Volunteer Creek	Sheared black Sh with qtz veinlets.
214613	Outcrop	0.013		48230	499021	Volunteer Costean	200mm brecciated qtz vein cemented by hematite/limonite.
214614	Outcrop	0.010		48226	499021	Volunteer Costean	150mm brecciated qtz vein cemented by hematite/limonite.

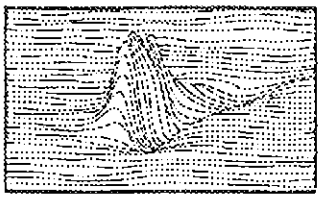
APPENDIX 3

GRI REPORT

ON

HIGH DEFINITION MAGNETIC SURVEY,

VOLUNTEER HILL GRID
(TEXT ONLY)



GRI Project Report No: 96176

A High Definition Magnetometer Survey for Gold Exploration

Lefroy Area, Northern Tasmania.

Prepared For

Central Kalgoorlie Gold Mines.

By

Ben Payne B.Sc. (Hons.)

Dr John M Stanley PhD.

October, 1996.

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FIGURE 2. STACKED PROFILES OF TOTAL MAGNETIC INTENSITY - VOLUNTEER HILL GRID, LEFROY, TASMANIA. THE EFFECT OF CULTURAL, NEAR SURFACE FEATURES HAS BEEN REMOVED USING A ONE DIMENSIONAL, MEDIAN FILTER (WINDOW LENGTH 100.5 METRES. THRESHOLD 10 nT) SCALE 1:2500.

FIGURE 3. COLOUR IMAGE OF TOTAL MAGNETIC INTENSITY - VOLUNTEER HILL GRID, LEFROY, TASMANIA. CULTURAL FEATURES HAVE BEEN REMOVED AS FOR FIGURE 2, BEFORE LOW PASS FILTERING (WAVELENGTH 50 METRES) SUN ANGLE ILLUMINATION: INCLINATION 45 DEGREES, DECLINATION 60 DEGREES. SCALE 1:2500.

FIGURE 4. COLOUR IMAGE OF TOTAL MAGNETIC INTENSITY - VOLUNTEER HILL GRID, LEFROY, TASMANIA. CULTURAL FEATURES HAVE BEEN REMOVED AS FOR FIGURE 2, BEFORE LOW PASS FILTERING (WAVELENGTH 50 METRES) SUN ANGLE ILLUMINATION: INCLINATION 45 DEGREES. DECLINATION 120 DEGREES. SCALE 1:2500.

FIGURE 5. COLOUR IMAGE OF TOTAL MAGNETIC INTENSITY - VOLUNTEER HILL GRID, LEFROY, TASMANIA. CULTURAL FEATURES HAVE BEEN REMOVED AS FOR FIGURE 2, BEFORE LOW PASS FILTERING (WAVELENGTH 50 METRES) SUN ANGLE ILLUMINATION: INCLINATION 45 DEGREES. DECLINATION 180 DEGREES. SCALE 1:2500.

FIGURE 6. COLOUR IMAGE OF TOTAL MAGNETIC INTENSITY - VOLUNTEER HILL GRID, LEFROY, TASMANIA. CULTURAL FEATURES HAVE BEEN REMOVED AS FOR FIGURE 2, BEFORE LOW PASS FILTERING (WAVELENGTH 50 METRES) SUN ANGLE ILLUMINATION: INCLINATION 45 DEGREES. DECLINATION 240 DEGREES. SCALE 1:2500.

FIGURE 7. COLOUR IMAGE OF TOTAL MAGNETIC INTENSITY - VOLUNTEER HILL GRID, LEFROY, TASMANIA. CULTURAL FEATURES HAVE BEEN REMOVED AS FOR FIGURE 2, BEFORE LOW PASS FILTERING (WAVELENGTH 50 METRES) SUN ANGLE ILLUMINATION: INCLINATION 45 DEGREES, DECLINATION 300 DEGREES. SCALE 1:2500.

FIGURE 8. COLOUR IMAGE OF TOTAL MAGNETIC INTENSITY - VOLUNTEER HILL GRID, LEFROY, TASMANIA. CULTURAL FEATURES HAVE BEEN REMOVED AS FOR FIGURE 2, BEFORE LOW PASS FILTERING (WAVELENGTH 50 METRES) SUN ANGLE ILLUMINATION: INCLINATION 45 DEGREES. DECLINATION 360 DEGREES. SCALE 1:2500.

FIGURE 9. COLOUR IMAGE OF FIRST VERTICAL DERIVATIVE OF TOTAL MAGNETIC INTENSITY - VOLUNTEER HILL GRID. LEFROY, TASMANIA. CULTURAL FEATURES HAVE BEEN REMOVED AS FOR FIGURE 2, BEFORE LOW PASS FILTERING (WAVELENGTH 50 METRES). FIRST VERTICAL DERIVATIVE AND UPWARD CONTINUATION OF 5 METRES. SUN ANGLE ILLUMINATION: INCLINATION 30 DEGREES. DECLINATION 30 DEGREES. SCALE 1:2500.

INTRODUCTION

This report describes the high definition magnetometer survey conducted at the Volunteer Hill Grid, Lefroy, approximately 10 kilometres east of Georgetown, Tasmania. This survey was conducted in September 1996, under the supervision of Gerald Purvis, on behalf of Central Kalgoorlie Gold Mines.

The primary objective of the High Definition Magnetic (HDM) survey was to provide the highest quality magnetic data in order to determine the extent and position of the detectably magnetic, sericite-carbonate alteration associated with auriferous quartz reefs. Principal interest was in providing optimally sampled north-south profiles. The line spacing of 50 metres did not provide an optimal sampling rate in the east-west direction.

LOCATION OF THE SURVEY GRID.

The bounding corners of the grid are given by the following AMG grid coordinates:

499500.00E	5447900.00N
499500.00E	5449000.00N
499950.00E	5449000.00N
499950.00E	5448800.00N
500100.00E	5448800.00N
500100.00E	5448600.00N
500200.00E	5448600.00N
500200.00E	5447900.00N

The grid comprised 15 cleared north-south lines, 50 metres apart and varying from 1100 metres to 700 metres in length. Each line was pegged at 20 metre, slope corrected intervals. Grid north corresponds to 347° magnetic.

Vehicular access to the grid was excellent, as were the layout and precision of the grid co-ordinates. The very high quality of the cleared lines, at 50 metre intervals, allowed completion of the survey within the allotted time, however, infill surveying at a lesser line spacing would not have been accomplished as easily, due to the dense bush occurring throughout the grid.

SURVEY TECHNICAL SUMMARY

The Geophysical Research Institute model TM4 caesium vapour magnetometer system was used to record the survey data. The TM4 system has been designed to record the total magnetic field intensity to a resolution of 0.1 nT (approximately 2 parts per million of the Earth's field). The hand carried system has an in-built positioning device which is accurate to approximately 0.1% (about 1 metre on a 1 kilometre survey line). Measurements of the magnetic field (and its position) can be made at up to 400 times per second. This allows for extremely detailed data sets to be collected rapidly. The TM4 magnetometer has a unique, in-built filter for rejecting 50 Hz electromagnetic interference. This filter was used for the duration of this project.

Measurements were automatically triggered using the TM4's cotton-thread, electronic odometer. As close as practically possible, the magnetic sensor was held at constant elevation of 0.75 metre above the ground and sampling was set at a nominal sample interval of 0.50 metres. It has been shown that the magnetic field surface in a plane one metre above the ground can be completely defined at 0.5 metre sample intervals in both directions (Stanley, 1988). Whilst this sampling interval adequately recorded the total magnetic field along north-south profiles, it was inadequate for sampling the short wavelength component of the magnetic profile perpendicular to the survey lines. While this under-sampling across lines may not disadvantage the mapping of linear target features, the uncertainty and ambiguity so introduced to the short-wavelength end of the spectrum has its own penalty.

Appendix A contains a general summary of the TM4 magnetometer system and Appendix B is a technical summary of the survey specifications.

DATA PROCESSING

The task at Lefroy, and the survey specifications permitted by logistical constraints has called for special attention to be paid to the data processing strategy.

The relevant issues determining the appropriate data processing strategy are:

1. Vegetation and line cutting constraints determined that the data acquisition line separation would be 50m
2. Intense, short wavelength magnetic interference was encountered due to the presence of surface metallic refuse from previous mining activity.
3. The target of interest (alteration associated with near-surface shear structures) was anticipated to present a weak magnetic signature that might be only several metres in width but with long strike length.

The problems specific to these issues were:

1. 50 metre survey line spacing incurs aliasing of magnetic features of wavelength less than 100 metres.
2. the consequences of aliasing intense, short wavelength features such as the interference from surface metallic refuse can be catastrophic if not properly accounted for.
3. Colour imaging or contouring of data that contains intense short wavelength information that has not been properly sampled will be unsatisfactory.
4. Imaging and contouring strategies that compensate for improperly sampled data are effective only at the expense of filtering short wavelength information, some of which may contain the information essential to a successful exploration program. While it is not uncommon to filter such data in order to produce "nice looking" images, so doing hides both the problem and the information that was the purpose of the survey.

Exploration usually involves the judicious balance of compromises. It is also a fact in the industry that management is more willing to remain ignorant of information that best practices and available technology was capably of cost-effectively acquiring, than to justify an additional, site-specific exploration expense. Those companies that have effectively used our high definition exploration techniques over the last 15 years have, in most cases, been handsomely rewarded.

The processing of the Lefroy data has addressed the issues above in order to minimise the compromises necessary. The data has been properly sampled along the survey lines and this has permitted theoretically sound processing to identify and minimise those magnetic features in the data that have as their origin, items of surface magnetic refuse.

The field measurements were first recovered to a file as position corrected and base-station levelled data. Figure 1 contains a plot of profiles of this "raw" magnetic data. The scale chosen was such that features of geological interest were clearly presented, while the intense interference from cultural sources was often clipped.

Next, the raw data was processed using a non-linear filter designed to discriminate against magnetic features having high amplitude and width less than 50 m. Having severely discriminated against such features, the application of further filters can be expected to be well behaved. Figure 2 contains a plot of magnetic profiles that have been stripped of interference from near surface cultural sources. It can be seen that the filter has left geological information in these waveforms unaffected while it has taken most of the energy out of the cultural noise.

In order to meet the objective of identifying narrow linear features perpendicular to the survey direction, there is little alternative than to look for correlation of such features between the profiles in Figures 1 or 2. The under-sampling that has been necessary across lines does not permit valid interpolation of the short-wavelengths present in the data.

In order to meet the objective of identifying broad linear features in the data it is valid to apply anti-alias filtering along the survey lines and then to interpolate across lines. So doing disregards short wavelength geological information that may be present and may not be recognisable from the individual profiles. We applied a 50m low-pass filter to the data from which the cultural features had first been attenuated. This data was then grided to a 2 m cell size. The sampling bias in this data was reduced to an acceptable 2:1 by this strategy. Figures 3 to 8 show this filtered data imaged with

incident light angles of 60, 120, 180, 240, 300 and 360 degrees respectively. Our perception of these images is that they have enabled stratigraphic boundaries to be identified and they have identified, weak, low magnetisation linear zones, one of which correlates with existing mine workings.

The final processing attempted was to calculate the first vertical derivative (1VD) of the filtered data. A single image of this data has been included as Figure 9. 1VD filtering can be expected to enhance the short wavelength component of the data. It was of course the short wavelength data that was under-sampled by this survey specification and consequently the subject of anti alias filtering. The application of the 1VD filter has attempted to recover that data first filtered out. It has consequently tended to enhance the noise component of the data although some of the geological information evident in the total field data can also be recognised.

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Stanley, J.M. (1988), The Use of Magnetics in Engineering Site Investigation. ASEG Conference, Feb. 1988.

APPENDIX A

THE TM-4 MAGNETOMETER SYSTEM.

A model TM-4, optically pumped magnetometer was used for this survey. This instrument may be either hand-carried, vehicle-mounted on a 4WD quadcycle ATV or operated from a marine vessel or aircraft.

When hand-carried, the magnetometer system involves two operators. One operator is required to hold the sensor while the other controls the data acquisition system. The sensor is connected to the control electronics by a 5 metre coaxial cable. Separating the sensor from the control electronics by this distance insures that the sensor is free from magnetic and electromagnetic interference originating from the electronics. The TM-4 has an in-built, cotton thread type odometer which electronically triggers the magnetometer to take readings at preset nominal sample intervals. When the start and end coordinates or intermediate control points of a traverse line are known, the actual sample interval is calculated during data recovery. By this method, it is normally possible to obtain positional accuracy along survey lines which is better than 0.2% of the distance between control points.

In vehicle-mounted operation measurements are initiated by an attachment to the vehicle's odometer. Odometer corrections may be performed as above if the survey has been conducted along straight grid-lines. Optional, differential GPS can be used to relieve the necessity to survey along a regular grid pattern. Differential GPS allows an absolute positional accuracy of approximately 2 metres to be achieved. A relative accuracy of just a few millimetres in the sample interval is obtained from the odometer. Real time heading, pitch and roll compensation and navigation is performed through the use of a triaxial fluxgate magnetic sensor, rigidly mounted to the vehicle platform. The multi-tasking operating system of the TM-4 allows compensation and navigation computations to be performed during data acquisition.

Operation of the TM-4 from a boat or aircraft involves the recording of measurements at preset time intervals. Positional information may be obtained from differential GPS or existing navigational equipment. When the sensor is operated from a towed bird or fish, advantage can be taken of the extreme portability of the TM-4 compared with conventional marine and airborne instrumentation.

The TM-4 is capable of sampling up to 100 measurements per second with an accuracy of 0.005 nT, or of up to 400 measurements per second to 0.05 nT. A 480 x 128 pixel graphics display provides a comprehensive monitor of the data acquisition process. Both digital and graphic displays of survey parameters and data profiles are available. An audio tone at selectable sensitivity ranges provides an alternative monitor enabling the operators to hear magnetic anomalies and relate these to observed geology or cultural objects that might be a source of magnetic interference. The data logging system is interactive and permits the operator to record notes during the survey. Cultural features such as fences or scrap metal may be permanently recorded in the data file in order to assist interpretation.

The very fast data measurement rate enables electromagnetic interference from power lines to be filtered in real time. The filtered data is then resampled at regular distance increments along each traverse and this data is recorded.

APPENDIX B

Survey Technical Summary.

Project No. 96176.

Location: Volunteer Hill, Lefroy, 10km east Georgetown, Tas.

OBJECTIVE:	Geological mapping for mineral exploration	
CLIENT:	Central Kalgoorlie Gold Mines.	
CONTACT:	Gerald Purvis	
SURVEY DATES:	4-5 September 1996.	
SURVEY DURATION:	1 day	
DOWN TIME:	Nil	
SURVEY TYPE:	TM-4 Cs Vapour High Definition Total Field Ground Magnetics.	
OPERATORS:	BP	
SUPERVISOR:	JMS	
ACCOMMODATION:	Provided on site.	
SURVEY SPECS:	Survey Mode:	ASCII Grid, Distance
	Line Bearing:	347 Degrees / 167 Degrees.
	Line Spacing:	50 metres.
	Sample Interval:	0.50 metres.
	Total Line Km:	15 km.
GRID SPECIFICATIONS:	Grid Type:	Local
	50 Hz Filter:	On.
SURVEY POSITIONING:	North - South control lines (AMG Grid) were established.	

APPENDIX 4

RAB DRILLHOLE LOGS

CENTRAL KALGOORLIE GOLD MINES

RAB Drillhole Log (Sheet....1....of....2....) Hole No. LGR 1

Project: Lefroy, Volunteer Hill Grid Locality: ~~EAST~~ VOLUNTEER AREA Depth: 28m

FROM (M)	TO (M)	WEIGHT (kg)	COLOUR	CHIP DESCRIPTION	INTERPRETED LOG	COMPOSITE SAMPLE No.	Au g/t	RESPLIT SAMPLE No.	Au g/t
0	1		Yellow-brown	Clayey soil with frags of ox qtz-mica Sst ± qtz	Soil	217001	0.005		
1	2		" "	Ox sst > sh. Minor qtz. Sh sericitized.	Ox Sst > ser Sh. Minor qtz veins				
2	3		" "	Ox sericitized Sst ± Sh. Minor qtz.	↓				
3	4		" "	Ox ser Sst.	Ox Sst - no veins				
4	5		" "	Ox Sst		217002	0.017		
5	6		" "	Ox Sst					
6	7		" "	Ox Sst/Slt					
7	8		" "	Ox Sst/Slt					
8	9		Pale yellow	Ox Sst/Slt. Rare qtz.		217003	0.008		
9	10		Khaki	Ox Sst > sericitic Sh (strongly cleaved)	Thin ser Sh band				
10	11		"	Ox Sst/Slt.	Ox Sst/Slt				
11	12		"	Ox Sst/Slt. Minor qtz. Trace dissem py (± aspy?) in Sst.	Minor qtz veins				
12	13		Pale grey	Base of ox. Qtz-mica Slt-sericitized ± 1% py.	Sericitized Slt ± py, ± strong cleavage	217004	<0.005		
13	14		" "	Ditto.					
14	15		Grey	Sericitized Slt with crenulated cleavage and minor py.					
15	16		Dark grey	Ditto. No py.					
16	17		" "	Sericitized Slt/Sst ± qtz veins. Minor py.	Qtz veins	217005	0.084		
17	18		" "	Dark grey poggy sericitized Slt ± pyritic qtz veins. 1% py.	Possible cavity.				
18	19		Grey	Grey sericitized Slt ± qtz veins. V minor py.					
19	20		"	Ditto sericitized					
20	21		"	Poggy dark grey Slt ± 1% py ± qtz veins.		217006	0.024		
21	22		"	Ditto					
22	23		"	Grey sericitized ± sil silicified Slt with strong cleavage ± qtz veins. Minor py.					
23	24		"	Ditto. 1% py.					

COMMENTS:

COLLAR CO-ORDS (AMG): N: 5448219 E: 508049 RL:

ANGLE: -60° AZIMUTH (AMG): 0° HOLE TYPE: 100mm Tricone DATE: 24·1·97 GEOLOGIST: J.G. Purvis

COMPOSITE: DESPATCH No.: LGM 97-1 ANALABS LAB REPORT No.: CEN201.60.12719 RESPLIT: DESPATCH No.: LAB REPORT No.:

331052

CENTRAL KALGOORLIE GOLD MINES

RAB Drillhole Log

Hole No. LGR 1

Project: Lefroy Area: (Sheet....2....of..2..) Depth: 28m

FROM (M)	TO (M)	SAMPLE WEIGHT (kg)	SAMPLE COLOUR	GEOLOGICAL DESCRIPTION	INTERP	COMPOSITE SAMPLE No.	Au g/t	RESPLIT SAMPLE No.	Au g/t
24	25		Grey	Sericitized strongly cleaved Sft ± qtz ± chlorite veins. Minor py.		217007	0.083		
25	26		"	60% vein qtz ± chlorite ± py. 40% Sft as above.		↓			
26	27		Black	Black shale ± 1-2% py + minor qtz veins. Possible sp in sh.					
27	28		Black	Ditto.					
28	29			EOH					
29	30								
30	31								
31	32								
32	33								
33	34								
34	35								
35	36								
36	37								
37	38								
38	39								
39	40								
40	41								
41	42								
42	43								
43	44								
44	45								
45	46								
46	47								
47	48								

COMMENTS: Quite strongly altered sediments (Sft).

COLLAR CO-ORDS (AMG): N: E: RL:

ANGLE: AZIMUTH: HOLE TYPE: DATE: GEOLOGIST: J.G. Purvis

COMPOSITE:
DESPATCH ORDER No.:
LAB REPORT No.:
LAB DETAILS:

RESPLIT:
DESPATCH ORDER No.:
LAB REPORT NO.:
LAB DETAILS:

INPUT APPROVAL - DATE: APPROVED:
DATE: APPROVED:

CHECKLIST:	DATE	BY	DATE	BY
COMPUTER ENTRY				
PLAN PLOT				
SECTION PLOTS				

331063

CENTRAL KALGOORLIE GOLD MINES

RAB Drillhole Log (Sheet...1....of..1..) Hole No. LGR 2

Project: Lefroy, Volunteer Hill Grid Locality: EAST VOLUNTEER AREA Depth: 20m

FROM (M)	TO (M)	WEIGHT (kg)	COLOUR	CHIP DESCRIPTION	INTERPRETED LOG	COMPOSITE SAMPLE No.	Au g/t	RESPLIT SAMPLE No.	Au g/t
0	1		Yellow-brown	Clayey soil. Chips of ox qtz-mica Sst	Soil	217008	0.011		
1	2		" "	Ditto	↓				
2	3		" "	Ox qtz-mica Sst.	Ox Sst				
3	4		Pale Khaki	Ditto. Minor sericitized Sltst + Sh. V minor vein qtz.	↓				
4	5		" "	Ditto	↓	217009	0.037		
5	6		" "	Sericitized qtz-mica Sst/Sltst + sericitized black Sh. Common qtz.	Ox qtz-veined ser Sst/Sltst/Sh				
6	7		" "	Ox ser Sst/Sltst + vein qtz (50%)	↓				
7	8		" "	Sericitized cleaved black Sh. Minor qtz.	Ser Sltst + black Sh.				
8	9		" "	Sericitized Sltst > Sh	↓	217010	0.016		
9	10		" "	Ditto Sh is black.	↓				
10	11		Yellow-brown	Ox clayey + puggy rock (fault gouge?). Minor ox Sst	Fault? Ox Sst				
11	12		" "	Ox qtz-mica Sst.	↓				
12	13		Khaki	Ditto Limonite veinlets.	↓	217011	0.028		
13	14		"	Ditto	↓				
14	15		Grey	Base of ox. Sericitized cleaved Sltst.	Sericitized cleaved Sltst > Sh				
15	16		Dark grey	Highly cleaved black Sh (phyllite). Minor qtz-chl veinlets. Minor py.	Minor py				
16	17			Highly cleaved sericitic Sltst. Minor py.	↓	217012	<0.005		
17	18			Ditto.	↓				
18	19			Ditto. Minor limonite-stained qtz veins (contamination?)	↓				
19	20			Ditto - dark grey-black. 1% disseminated py (possible sp?). Minor qtz.	↓				
20	21			EOH					
21	22								
22	23								
23	24								

COMMENTS:

COLLAR CO-ORDS (AMG): N: 5448226 E: 500087 RL:

ANGLE: -60° AZIMUTH (AMG): 0° HOLE TYPE: 87mm Tricone DATE: 24·1·97 GEOLOGIST: J.G. Purvis

COMPOSITE: DESPATCH No: LGM 97-1 ANALABS LAB REPORT No: CEN201.60.12719 RESPLIT: DESPATCH No.: LAB REPORT No.:

3310694

CENTRAL KALGOORLIE GOLD MINES

RAB Drillhole Log (Sheet....1... of...1...) **Hole No.** LGR 3

Project: Lefroy, Volunteer Hill Grid Locality: EAST VOLUNTEER AREA. **Depth:** 20m

FROM (M)	TO (M)	WEIGHT (kg)	COLOUR	CHIP DESCRIPTION	INTERPRETED LOG	COMPOSITE SAMPLE No.	Au g/t	RESPLIT SAMPLE No.	Au g/t
0	1		Yellow	Soil with abundant qtz frags.	Soil	217013	0.020		
1	2		"	Ditto	↓	↓			
2	3		"	Ditto	↓	↓			
3	4		"	Ox qtz-mica Slt. Minor qtz.	Ox Slt.	↓			
4	5		"	Mainly qtz. Minor ox Sh.	Qtz veins in Sh.	217014	0.015		
5	6		"	Soft ox Sst. No qtz	Ox Sst	↓			
6	7		"	Ditto. Sst is slightly hematitic	↓	↓			
7	8		"	Mainly qtz. Some ox Sst + minor unox ser Sh.	Qtz veins in ser Sh.	↓			
8	9		Pink-brown	Mainly sl hematitic ox qtz-mica Sst. Lesser ox ser Sh. Minor qtz.	Ox Slt/Sst + ser Sh	217015	0.011		
9	10		Brown	Partly ox sericitized Sh ± crenulation cleavage. Minor qtz.	↓	↓			
10	11		Yellow-brown	Ditto. Also minor ox qtz-mica Slt/Sst. Minor qtz.	↓	↓			
11	12		" "	Strongly ox, sl hematitic, qtz-mica Slt/Sst.	↓	↓			
12	13		Brown	50% Slt/Sst as above. 50% ox sericitized crenulated Sh.	↓	217016	0.014		
13	14		Yellow-brown	Mostly Sh as above. Lesser Slt/Sst as above. Minor qtz.	↓	↓			
14	15		" "	50% vein qtz. Rest ox Slt/Sst as above.	Qtz-veined Slt + ser Sh	↓			
15	16		" "	30% vein qtz. Sericitised crenulated Sh > ox qtz-mica Slt.	↓	↓			
16	17		Khaki	40% vein qtz. Grey Slt + sericitized Sh.	↓	217017	0.012		
17	18		"	Base of ox. Dark grey sericitized crenulated Sh. Minor qtz.	Sericitized Sh	↓			
18	19		"	Ditto. Minor qtz.	↓	↓			
19	20		Khaki-grey	Ditto. Moderate sericite-chlorite alteration. Minor qtz.	↓	↓			
20	21			EOH					
21	22								
22	23								
23	24								

COMMENTS: Less sample than in LGR 1+2 – loss of coarser frags.

COLLAR CO-ORDS (AMG): N: 5448255 E: 500103 RL:

ANGLE: −60° AZIMUTH (AMG): 0° HOLE TYPE: 87mm Tricone DATE: 25·1·97 GEOLOGIST: J.G. Purvis

COMPOSITE: DESPATCH No.: LGM97-1 ANALABS LAB REPORT No.: CEN 201.60.12719 RESPLIT: DESPATCH No.: LAB REPORT No.:

381093

CENTRAL KALGOORLIE GOLD MINES

RAB Drillhole Log (Sheet....1....of..1..) **Hole No.** LGR 4

Project: Lefroy, Volunteer Hill Grid Locality: ~~EAST~~ VOLUNTEER AREA **Depth:** 16·2m

FROM (M)	TO (M)	WEIGHT (kg)	COLOUR	CHIP DESCRIPTION	INTERPRETED LOG	COMPOSITE SAMPLE No.	Au g/t	RESPLIT SAMPLE No.	Au g/t
0	1			] Discarded - old mine tailings					
1	2			] in vicinity.					
2	3		Brown	Sandy clay after ox sediments.	Ox sediments	217018	0·022		
3	4		Blekhaki	Ditto. Minor qtz	↓				
4	5		khaki	50% qtz. 50% dark grey Sh ± crenulation cleavage.	Qtz veins in Sh				
5	6		"	30% qtz. Cleaved Slt and Sh as above.	↓				
6	7		"	Sh as above. Minor qtz + ox Slt.	Shale	217019	0·006		
7	8		Grey	Base of ox. Grey cleaved Slt. Minor qtz + Sh as above.	Cleaved Slt > Sh				
8	9		"	Grey Slt as above > grey-black Sh. Both strongly cleaved. Minor qtz.					
9	10		"	Grey Slt as above (phyllite). Minor dissem py.					
10	11		"	Ditto - moderately sericitized, minor py. Lesser black shale (crenulated).		217020	0·008		
11	12		"	Mostly hard siliceous phyllitic Slt > Sh. Foliation v strong. Minor qtz.					
12	13		"	Slt as above					
13	14		"	50% qtz, in strongly ser-chl alt cleaved Sh. Rest ser-chl alt Slt.	Qtz veined zone in alt Sh/Slt.				
14	15		"	Mainly silic phyllitic Slt ± mod ser-chl alt. Minor qtz.	Cleaved altered Slt.	217021	<0·005		
15	16		"	Qtz-ser schist after alt Slt. Minor dissem py. Minor qtz.	Fault zone with strongly				
16	17		"	Ditto.	altered wallrocks.				
17	18			EOH @ 16·2m - in fault with major water inflow.					
18	19								
19	20								
20	21								
21	22								
22	23								
23	24								

COMMENTS: Strong fault in base of hole, with qtz-ser altered sediments.

COLLAR CO-ORDS (AMG): N: 5448309 E: 500100 RL:

ANGLE: −60° AZIMUTH (AMG): 0° HOLE TYPE: 87mm Tricone DATE: 25·1·97 GEOLOGIST: J.G. Purvis

COMPOSITE: DESPATCH No.: LGM 97-1 ANALABS LAB REPORT No: CEN201.60.12719 RESPLIT: DESPATCH No.: LAB REPORT No.:

3210666

CENTRAL KALGOORLIE GOLD MINES

RAB Drillhole Log (Sheet....1....of..2.) Hole No. LGR 5

Project: Lefroy, Volunteer Hill Grid Locality: EAST VOLUNTEER AREA Depth: 26.5m

FROM (M)	TO (M)	WEIGHT (kg)	COLOUR	CHIP DESCRIPTION	INTERPRETED LOG	COMPOSITE SAMPLE No.	Au g/t	RESPLIT SAMPLE No.	Au g/t
0	1			] Discarded because of	Soil	////			
1	2			] gold mine tailings		////			
2	3	3	Brown	Ox sandy rock. Minor qtz frags.		217022	0·123	215001	0·186
3	4	6	"	Clay. / Rare small qtz frags. Base of ox.				215002	0·338
4	5		Khaki	Pale grey mox sericitic, qfrose Sst. Minor qtz.	Cleaved Sericitic Sst			215003	0·032
5	6		Grey	Ditto. Strongly cleaved. 30% vein qtz c minor py + aspy (?)	c qtz veins			215004	0·032
6	7		"	Ditto. Sericite-chlorite altered (a qtz-ser-chl schist). 20% qtz.		217023	0·022		
7	8		"	Mostly chl>ser alt qfrose Sft (phyllite). Also dk grey crenulated Sh.	Altered cleaved Sft+Sh				
8	9		"	Mostly grey-black chl>ser alt crenulated Sh. Also Sft as above (minor py). 20% qtz.					
9	10		"	As above: Sft > Sh. Mod chl>ser alt + strongly cleaved (phyllites).					
10	11		"	As above Sft >> Sh. Minor py in Sft.		217024	0·013		
11	12		"	50:50 Sft/Sh. Minor qtz.					
12	13		"	Mostly Sft. Minor Sh.					
13	14		"	80% white vein qtz. Rest Sh > Sft with strong chl>ser alt + cleavage.	Qtz veined zone				
14	15		"	60% white qtz + chlorite. Rest Sft > Sh as above.	in Sft/Sh	217025	0·011		
15	16		"	25% " " " " " . Rest Sft as before, c 1% py.					
16	17		"	Mostly Sft as above - alt moderate. Minor py. Minor Sh. Minor qtz.	Altered Sft > Sh				
17	18		"	Ditto.					
18	19		"	Dk grey phyllitic Sh c minor py.		217026	0·008		
19	20		"	Mostly Sft as before - moderate chl>ser alt + 1% py. Rest Sh as above.					
20	21		"	Ditto. Minor qtz. No Sh.					
21	22		"	V qfrose Sft/Sst c strong chl-ser-sil alt + minor py. Minor qtz.	Strongly altered + cleaved				
22	23		"	Ditto. Strong cleavage. No qtz.	Sft/Sst	217027	0·010		
23	24		"	Mostly Sft as above. Rest dk grey crenulated Sh (also alt). V minor qtz					

COMMENTS:

COLLAR CO-ORDS (AMG): N: 5448301 E: 500053 RL:

ANGLE: -60° AZIMUTH (AMG): 0° HOLE TYPE: 87mm HAMMER DATE: 25-1-97 GEOLOGIST: J.G. PURVIS

COMPOSITE: DESPATCH No: LGM97-1 ANALABS LAB REPORT No: CEN201.60.12719 RESPLIT: DESPATCH No: LGM97-3. ANALABS LAB REPORT No: CEN201.60.12742

331061

CENTRAL KALGOORLIE GOLD MINES

RAB Drillhole Log

Hole No. LGR 5

Project: Lefroy Area: EAST VOLUNTEER AREA. (Sheet...2....of..2..) Depth: 26·5m

FROM (M)	TO (M)	SAMPLE WEIGHT (kg)	SAMPLE COLOUR	GEOLOGICAL DESCRIPTION	INTERP	COMPOSITE SAMPLE No.	Au g/t	RESPLIT SAMPLE No.	Au g/t
24	25		Grey-Black	Mostly Black chloritic phyllite after Sh. 1% py. 30% qtz± chl. Rest Sh.	Black shale ± qtz veins				
25	26		Black	Black phyllitic Sh ± prominent crenulation cleavage.	↓				
26	27	26.5m	Grey	80% qtz-rich Sh ± chl-ser alt + minor py. 20% Black Sh. Minor qtz.	Altered Sh.	217028	0·022		
27	28			EOH (Rock v hard and strong water inflows).					
28	29								
29	30								
30	31								
31	32								
32	33								
33	34								
34	35								
35	36								
36	37								
37	38								
38	39								
39	40								
40	41								
41	42								
42	43								
43	44								
44	45								
45	46								
46	47								
47	48								

COMMENTS: Strongly cleaved and altered sequence similar to base of LGR 4.

COLLAR CO-ORDS (AMG) N: E: RL:

ANGLE: AZIMUTH: HOLE TYPE: DATE: GEOLOGIST: J.G. Purvis

COMPOSITE:
DESPATCH ORDER No:
LAB REPORT No:
LAB DETAILS:

RESPLIT:
DESPATCH ORDER No.
LAB REPORT No.:
LAB DETAILS:

INPUT APPROVAL:	DATE:	APPROVED:
	DATE:	APPROVED:

CHECKLIST:	DATE	BY	DATE	BY
COMPUTER ENTRY				
PLAN PLOT				
SECTION PLOTS				

3310653

CENTRAL KALGOORLIE GOLD MINES

RAB Drillhole Log (Sheet... 1....of..1...) **Hole No.** LGR 6

Project: Lefroy, Volunteer Hill Grid Locality: ~~EAST~~ VOLUNTEER AREA **Depth:** 20m

FROM (M)	TO (M)	WEIGHT (kg)	COLOUR	CHIP DESCRIPTION	INTERPRETED LOG	COMPOSITE SAMPLE No.	Au g/t	RESPLIT SAMPLE No.	Au g/t
0	1			Discarded - fill. 1m of PVC casing placed.		//////			
1	2	0.5	Brown	clay.	Oxidized sediments	217029	0.028		
2	3	2	Yellow-brown.	Sandy clay	↓	↓			
3	4		Yellow	Clay!	↓	↓			
4	5		"	Highly oxidized clayey Sst	Oxidized Sst	217030	0.022		
5	6		"	Ditto. 20% qtz.	↓ + qtz veins.	↓			
6	7		"	50% qtz. 50% ox Sh ± crenulation cleavage.	Qtz veined zone in Sh.	↓			
7	8	3.5	Yellow-brown.	Mostly ox sericitic Sh ± cren cleav. 20% qtz. Minor blc Slt/Sst	Ser Sh ± qtz veins	↓			
8	9		Yellow	Mostly Sh as above. Lesser ox blc Slt/Sst. Minor qtz.	↓	217031	0.018		
9	10		Yellow-brown	Hard, ox, qtz-mica Sst/Slt.	Qtz-mica Sst/Slt	↓			
10	11		Pale khaki	Ditto. V qtzose.	↓	↓			
11	12		"	80% Sst/Slt as above. 20% cren Sh ± tiny qtz-limonite veinlets	↓	↓			
12	13		Khaki	Grey unox cren ser Sh. qtzose Slt as above. qtz (30%).	Mostly qtzose Slt/Sst ±	217032	0.015		
13	14		"	Mostly Sh as above (60%). Slt as above (30%) 10% qtz.	minor Sh bands ± qtz veins	↓			
14	15		Pale brown	Ox zone ± qtz (40%). Rest qtzose Slt as above	↓	↓			
15	16		Pale khaki	Weakly ox qtzose Slt as above. Minor qtz.	↓	↓			
16	17		Grey	50% cren Sh (some ser) 40% Slt as above. 10% qtz.	↓	217033	0.008		
17	18		Fawn	Mostly ox qtz-mica Slt/Sst as above. 10% White qtzite. Minor qtz.	↓	↓			
18	19		"	Slt/Sst as above.	↓	↓			
19	20		Grey	Slt/Sst (partly ox) as above + minor dissem py. V. minor qtz	↓	↓			
20	21			EOH					
21	22								
22	23								
23	24								

COMMENTS:

COLLAR CO-ORDS (AMG): N: 5448263 E: 500050 RL:

ANGLE: -60° AZIMUTH (AMG): 0° HOLE TYPE: 94mm Tricone DATE: 26-1-97 GEOLOGIST: J.G. Purvis

COMPOSITE: DESPATCH No: LGM97-1. ANALABS LAB REPORT No.: CEN201.60.12719 RESPLIT: DESPATCH No.: LAB REPORT No.:

331069

CENTRAL KALGOORLIE GOLD MINES

RAB Drillhole Log (Sheet....1....of....1....) Hole No. LGR 7

Project: Lefroy, Volunteer Hill Grid Locality: ~~EAST~~ VOLUNTEER AREA Depth: 20m

FROM (M)	TO (M)	WEIGHT (kg)	COLOUR	CHIP DESCRIPTION	INTERPRETED LOG	COMPOSITE SAMPLE No.	Au g/t	RESPLIT SAMPLE No.	Au g/t
0	1			Discarded - f.ll.		//////			
1	2	<3	Brown	Clayey soil	Soil	217034	0·021		
2	3	4	Yellow-brown	Clayey ox rock - no chips	↓	↓	↓		
3	4	3	" "	Qtz > ox ghost Sst/Slt.	Qtz-veined ox Sst/Slt.	↓	↓		
4	5	6	" "	Ox qtz-mica Sst/Slt. No qtz.	Ox qtz-mica Sst/Slt	217035	0·029		
5	6	4	Yellow	Ditto. Some white clay.	↓	↓	↓		
6	7	4	"	Ditto.	↓	↓	↓		
7	8	6	"	Ditto. 5% white fine qtzite.	↓	↓	↓		
8	9	6	Khaki	70% Sst/Slt as above. 20% grey unox Sh. 10% qtz.	Ox Sst/Slt ± qtz veins in	217036	0·016		
9	10	6	"	50% Slt as above. 30% grey crenulated Sh. 20% clay balls.	Sh bands.	↓	↓		
10	11	4	Fawn	Hard weakly ox qtz-mica Slt/Sst as before.	Unox Slt/Sst	↓	↓		
11	12	5	Pale grey	Base of ox. Ditto - mainly unox. Strongly foliated. V minor qtz.	↓	↓	↓	(DUPLICATE SAMPLE)	
12	13	5	" "	Ditto. Minor py + weak chlorite-sericite alteration.	↓	217037	0·018	217038	0·013
13	14	6	" "	Ditto.	↓	↓	↓	↓	
14	15	12	Grey	70% black phyllitic Sh ± marked crenulation cleavage. 30% Slt/Sst as before.	Black Shale	↓	↓	↓	
15	16	10	Pale grey	60% greenish Slt ± chl-ser alt, 1% py + strong cleavage. 40% Sh as above.	Minor qtz. Altered Slt	↓	↓	↓	
16	17	10	"	80% Dk grey phyllitic cren Sh. 20% Slt ± 1% py, as above	Black Shale	217039	<0·005		
17	18	10	"	60:40 Slt:Sh as above.	↓	↓	↓		
18	19	12	"	90:10 Slt:Sh as above.	Altered Slt	↓	↓		
19	20	12	"	Ditto.	↓	↓	↓		
20	21			EOH					
21	22								
22	23								
23	24								

COMMENTS:

COLLAR CO-ORDS (AMG): N: 5448261 E: 499992 RL:

ANGLE: -60° AZIMUTH (AMG): 0° HOLE TYPE: 87mm TRICONE DATE: 26·1·97 GEOLOGIST: J.G. PURVIS

COMPOSITE: DESPATCH No.: LGM 97-1 ANALABS LAB REPORT No.: CEN201.60.12719 RESPLIT: DESPATCH No.: LAB REPORT No.:

331070

CENTRAL KALGOORLIE GOLD MINES

RAB Drillhole Log (Sheet....1....of....1....) **Hole No.** LGR 8

Project: Lefroy, Volunteer Hill Grid Locality: EAST VOLUNTEER AREA **Depth:** 19m

FROM (M)	TO (M)	WEIGHT (kg)	COLOUR	CHIP DESCRIPTION	INTERPRETED LOG	COMPOSITE SAMPLE No.	Au g/t	RESPLIT SAMPLE No.	Au g/t
0	1			Discarded - fill	Alluvium	///////			
1	2	3	Brown	Sandy soil / alluvium.		217040	0·042		
2	3	4	Brown	Alluvium: qtz + sediment frags (some unox). Some clay.					
3	4	10	Brown	Grey phyllitic ghost Slt - mostly unox. Minor qtz.	Silicified cleaved Slt				
4	5	12	Pale grey	Ditto - / hard ghost Slt/Sst (unox). Minor qtz.		217041	0·014		
5	6	+15	" "	Ditto. No qtz.					
6	7	+15	" "	Ditto. Minor qtz + Sh ± cren cleavage.					
7	8	+15	Grey	Black phyllitic Sh ± cren cleavage + minor py. Rare qtz.	Black Shale				
8	9	+15	"	80% ghost Slt as before. 20% Sh as above. No qtz.	Silicified Slt with minor	217042	0·143	215005	0·008
9	10	+15	"	50:50 Slt : Sh as above. No py. No qtz.	Black Shale bands			215006	<0·005
10	11	+15	"	70:30 Slt : Sh as above except Sh dark grey.				215007	<0·005
11	12	+15	"	80% Slt as above except chl-ser alt + minor py. 20% grey-black cren Sh.				215008	0·192
12	13	+15	"	90:10 Slt : Sh as above. Minor qtz.		217043	0·109	215009	0·036
13	14	+15	"	70% hard Slt as above ± 1% py. 20% Sh as above. 10% qtz ± chl veins.				215010	0·318
14	15	+15	"	All Slt as above except only trace alt + trace py. V hard + silic. Minor qtz.				215011	0·107
15	16	+15	"	80% Slt as above, 10% Sh as above. 10% qtz ± chl veins.				215012	0·057
16	17	+15	"	Ditto		217044	0·268	215013	0·118
17	18	+15	"	80% Slt - v hard + silic ± mod chl-ser alt + 1-2% py. 10% grey cren Sh. 10% qtz. Strongly silif Slt ±				215014	0·424
18	19	+15	"	V hard light grey silif Slt ± 1% py + minor aspy. 10-20% qtz ± trace aspy.	py + chl-ser alt + qtz veins			215015	0·591
19	20			EOH (Very hard and heavy water inflow).					
20	21								
21	22								
22	23								
23	24								

COMMENTS: Strong silicification towards base of hole, with minor py and aspy.

COLLAR CO-ORDS (AMG): N: 5448301 E: 499995 RL:

ANGLE: -60° AZIMUTH (AMG): 0° HOLE TYPE: 94mm TRICONE DATE: 27·1·97 GEOLOGIST: J.G. PURVIS

COMPOSITE: DESPATCH No: LGM 97-2 ANALABS LAB REPORT No: CEN201.60.12729 RESPLIT: DESPATCH No: LGM97-4. ANALABS LAB REPORT No: CEN201.60.12759

CENTRAL KALGOORLIE GOLD MINES

RAB Drillhole Log (Sheet....1....of....1....) Hole No. LGR 9

Project: Lefroy, Volunteer Hill Grid Locality: EAST VOLUNTEER AREA Depth: 20m

FROM (M)	TO (M)	WEIGHT (kg)	COLOUR	CHIP DESCRIPTION	INTERPRETED LOG	COMPOSITE SAMPLE No.	Au g/t	RESPLIT SAMPLE No.	Au g/t
0	1			Discarded - mine mullock	Mullock	///////			
1	2	3	Brown	Discarded - " "	"	///////			
2	3	3	Brown	Clayey soil.	soil	217045	0.075		
3	4	5	Yellow-brown	Clayey ox rock. Chips: 70% ox qtz-mica Slt/Sst. 30% qtz (sl grey).	Ox qtz-mica Slt	↓			
4	5	10	Brown	50% ox sericitic qtz-mica Slt c lim veinlets. 40% qtz. 10% qtzite.	heavily qtz veined	217046	0.034		
5	6	10	"	60% white qtz. 40% Slt as above	↓	↓			
6	7	+12	Khaki	50% qtz. Rest mainly Slt as above, with lesser ser Sh.					
7	8	+12	Pale Khaki	90% white qtz. 10% ox sericitised Sh with lim stains.	Qtz vein in ser Sh	↓			
8	9	+12	Yellow-brown	10-20% qtz. Rest ox qtz-mica phyllitic Slt (quite hard). Lim stains.	Ox qtz-mica Slt, heavily qtz veined	217047	0.197	215016	0.031
9	10	+12	" "	40% qtz (some coarse frags). Rest ox micaceous Slt c lim stains.	↓			215017	0.050
10	11	+12	Brown	20% qtz. 10% black prg. Rest qtz-mica Slt.				215018	0.104
11	12	+12	Khaki	50% black fault prg. 30% qtz. 20% Slt as above.	Fault in black shale,	↓		215019	0.581
12	13	+12	"	30% qtz. 20% black qtz-graphitic rock. 50% ox Slt as above.	with qtz veins	217048	0.558	215020	1.281
13	14	7	"	20% qtz 20% black qtz-graphitic schist. Rest Slt as above	↓	↓		215021	0.712
14	15	4	"	10% qtz. Rest Slt as above.	Qtz-mica Slt			215022	0.243
15	16	4	Pale grey	Base of ox. 70% Slt as above, 30% grey Sh c crenulation cleavage. Minor qtz.	↓	↓		215023	0.031
16	17	5	Grey	90% Slt as above (trace py). 10% Sh as above. No qtz	↓	217049	0.369	215024	0.021
17	18	5	"	All grey grose Slt c trace py.	Slt, increasingly silif	↓		215025	0.174
18	19	4	"	Ditto.	↓			215026	0.156
19	20	2	"	Mostly grey slightly pyritic qtz > pyritic qtzite (ie: silif Slt)	Qtz veins in silif pyritic Slt.	↓		215027	1.335
20	21			EOH (soft ground - possible cavity or stope).	Stope?				
21	22								
22	23								
23	24								

COMMENTS: Silicified pyritic Slt at base adjacent to probable old stope. Some zones of qtz veining.

COLLAR CO-ORDS (AMG): N: 5448224 E: 500000 RL:

ANGLE: -60° AZIMUTH (AMG): 0° HOLE TYPE: 94mm TRICONE DATE: 27-1-97 GEOLOGIST: J.G. PURVIS

COMPOSITE: DESPATCH No: LGM97-2. ANALABS LAB REPORT No: CEN201.60.12729 RESPLIT: DESPATCH No: LGM97-4 ANALABS. LAB REPORT No: CEN201.60.12759

3311072

'ENTRAL KALGOORLIE GOLD MINES — RAB Drillhole Log

(Sheet....1....of....1....) Hole No. LGR 10

Project: Lefroy, Volunteer Hill Grid — Locality: VOLUNTEER OLD MAIN SHAFT — Depth: 17.5m

FROM (M)	TO (M)	WEIGHT (kg)	COLOUR	CHIP DESCRIPTION	INTERPRETED LOG	COMPOSITE SAMPLE No.	Au g/t	RESPLIT SAMPLE No.	Au g/t
0	1			No return.	Soil	//////			
1	2	1	Yellow-brown	Clayey soil.		217050	0.245		
2	3	2	" "	" " .				215028	0.438
3	4	3	" "	Clay. Frags of highly ox Slt + sericitic Sh.	Highly oxidized Slt			215029	0.092
4	5	4	Yellow.	Sticky clay. Minor qtz.		217051	0.054		
5	6	4	Yellow-brown	Ditto. No qtz. Tiny frags of ox qtz-mica Slt.					
6	7	2	" "	Ditto.					
7	8	3	" "	Clayey rock. Small frags of ox qtz-mica Slt ± qtz-limonite veinlets. Minor qtz.					
8	9	2	" "	Ditto. Some white qtz + bleached sericitic Slt.		217052	0.039		
9	10	10	" "	Ox qtz-mica Slt/Sst. Minor qtz.	Ox qtz-mica Slt				
10	11	12	" "	Ditto. Slt has tiny qtz-limonite veinlets. 10% grey Sh. No qtz.					
11	12	12	" "	Ditto.					
12	13	10	" "	Ditto		217053	0.031		
13	14	12	" "	Ditto. No qtz-lim veinlets. Hard (weak ox).					
14	15	12	Pale Grey	Base of ox. Light grey qtz-mica Slt ± minor qtz-lim veinlets + minor dark silph (ksspy?) Minor qtz.					
15	16	12	" "	70% Slt-vnox, hard, silif Slt ± minor py. 30% white qtz.	Silicified Slt				
16	17	10	Khaki-grey	90% Slt as above. 10% qtz.	± some qtz veins + pyrite.	217054	0.141	215030	0.120
17	17.5	6	Grey	No qtz. All grey highly silicified qtz-mica Slt as above ± 2% py.					
18	19			EOH @ 17.5m in old drive or stope (fragments of wood).	Stope or drive				
19	20								
20	21								
21	22								
22	23								
23	24								

COMMENTS: Rocks much less cleaved than those along Volunteer Creek.

COLLAR CO-ORDS (AMG): N: 5448238 E: 499935 RL:

DIP: -60° AZIMUTH (AMG): 0° HOLE TYPE: 94mm TRICONE DATE: 27.1.97 GEOLOGIST: J.G. Purvis

COMPOSITE: DESPATCH No: LGM97-2 ANALABS LAB REPORT No: CEN201.60.12729

RESPLIT: DESPATCH No: LGM97-4. ANALABS LAB REPORT No: CEN201.60.12759

331073

CENTRAL KALGOORLIE GOLD MINES

RAB Drillhole Log (Sheet....1....of..1) Hole No. LGR 11

Project: Lefroy, Volunteer Hill Grid Locality: VOLUNTEER OLD MAIN SHAFT Depth: 22m

FROM (M)	TO (M)	WEIGHT (kg)	COLOUR	CHIP DESCRIPTION	INTERPRETED LOG	COMPOSITE SAMPLE No.	Au g/t	RESPLIT SAMPLE No.	Au g/t
0	1			Fill - discarded.	Soil				
1	2			Soil - discarded.					
2	3	3	Yellow-brown.	Clay.		217055	0.034		
3	4	10	Orange	Clay. Tiny highly ox frags of qtz-mica Slt/Sst. Minor qtz.	Highly ox Slt/Sst/Sh				
4	5	7	Yellow-brown.	Ditto. No qtz.					
5	6	5	" "	Clay with tiny frags of mod ox grey Sh. 10% qtz.					
6	7	7	" "	10-20% qtz. Rest ox Sh ± crenulation cleavage.	Ox sericitic Sh ± qtz veins	217056	0.024		
7	8	10	Yellow	40% qtz. 50% Sh as above. 10% qtzose Slt ± prominent limonite.					
8	9	10	"	50:50 Sh as above + qtz-mica Slt. Minor qtz + qtz-graphite rock ± py.					
9	10	+12	Yellow-brown.	70% Slt as above. 25% qtz. 5% ox crenulated Sh.	Ox Slt Qtz veins				
10	11	+12	" "	90% Slt as above. 10% white "qtzite". Minor qtz.		217057	0.025		
11	12	+12	" "	80% Slt as above. 15% "qtzite". 5% qtz.					
12	13	+12	Pale Khaki	60% qtz with limonite stains. 30% grey sericitized Sh ± cren cleav.	10% ox Slt] Qtz-veined zone in sericitized Sh				
13	14	+12	" "	Base of ox. 30% qtz with some limonite. 70% grey qtz-mica Slt.					
14	15	+12	Pale Grey	10% qtz. 90% grey phyllitic qtz-mica Slt ± trace py (clear increasing).	Sericitized Slt ± minor Sh bands	217058	0.009		
15	16	+12	DK grey	20% qtz. 70% Slt as above, 1% py. 10% black sericitized Sh.					
16	17	+12	Pale grey	No qtz. All Slt as above (weakly sericitized).					
17	18	+12	Grey	90% Moderately sericitized Slt ± 1-2% py. 10% grey sericitized cren Sh.					
18	19	+12	Grey	70% weakly sericitized Slt ± minor py. 30% Sh as above ± trace py.		217059	<0.005		
19	20	+12	Pale grey	90:10 Slt:Sh as above. Minor qtz.					
20	21	+12	" "	80:20 Slt:Sh as above. Minor qtz.					
21	22	+12	" "	90:10 Slt:Sh as above. Minor qtz.					
22	23			EOH.					
23	24								

COMMENTS: Nothing startling. Zones of white qtz veining. Less cleaved than along Volunteer Creek.

COLLAR CO-ORDS (AMG): N: 5448198 E: 499949 RL:

ANGLE: -60° AZIMUTH (AMG): 0° HOLE TYPE: 94mm TRICONE DATE: 27-1-97 GEOLOGIST: J.G. PURVIS

COMPOSITE: DESPATCH No: LGM97-2 ANALABS LAB REPORT No: CEN201.60.12729 RESPLIT: DESPATCH No.: LAB REPORT No.:

331074

CENTRAL KALGOORLIE GOLD MINES

RAB Drillhole Log (Sheet....1....of..1..) Hole No. LGR 12

Project: Lefroy, Volunteer Hill Grid Locality: SOUTH OF VOLUNTEER MAIN SHAFT Depth: 20m

FROM (M)	TO (M)	WEIGHT (kg)	COLOUR	CHIP DESCRIPTION	INTERPRETED LOG	COMPOSITE SAMPLE No.	Au g/t	RESPLIT SAMPLE No.	Au g/t
0	1			Discarded - fill					
1	2	2	Yellow-brown	Clay		217060	<0.005		
2	3	4	Yellow	Clay ± tiny ox rock frags including common qtz.	? Major sample losses				
3	4	3	Yellow-brown	Clay. Ditto.	due to clogged				
4	5	2	" "	Clay.	tricone	217061	0.009		
5	6	2	Brown	Clay + ox rock chips.	- samples unreliable				
6	7	1	Yellow-brown	Ditto					
7	8	1	" "	Ditto					
8	9	-		No return.					
9	10	2	Khaki-brown	Ox rock - no chips.		217062	<0.005		
10	11	5	" "	95% ox qtz-mica Slt/Sst. 5% grey crenulated Sh. No qtz.	Ox Slt/Sst > ser Sh				
11	12	15	" "	50% partly ox grey cren sericitized Sh. 40% Slt/Sst as above. 10% qtz.	Minor qtz veining				
12	13	12	" "	60% ghost Slt/Sst. 20% Sh as above. 20% qtz.		217063	0.005		
13	14	7	" "	Slt + Sh as above. 10% qtz - some ± black graphitic material					
14	15	1	Yellow-brown	Ditto. Wet sample.					
15	16	-		No return - wet.	?				
16	17	-		No return - wet.					
17	18	3	Khaki	No qtz. Tiny frags ox Slt > Sh.	Ox Slt > partly ox grey Sh	217064	0.008		
18	19	3	"	Minor qtz. Ditto: ox Slt > grey ser Sh.					
19	20	8	"	10% qtz. 60% grey Sh. 30% ox Slt ± limonite + MnOx stains.					
20	21								
21	22								
22	23								
23	24								

COMMENTS: Strongly oxidized section. Very ordinary rocks.

COLLAR CO-ORDS (AMG): N: 5448160 E: 499951 RL:

ANGLE: -60° AZIMUTH (AMG): 0° HOLE TYPE: 94mm TRICONE TO 4m. 94mm HAMMER. DATE: 28.1.97 GEOLOGIST: J.G. PURVIS

COMPOSITE: DESPATCH No.: LGM 97-2. ANALABS LAB REPORT No.: CEN201.60.12729 RESPLIT: DESPATCH No.: LAB REPORT No.:

331075

CENTRAL KALGOORLIE GOLD MINES

RAB Drillhole Log (Sheet....1....of....2....) **Hole No.** LGR 13

Project: Lefroy, Volunteer Hill Grid Locality: SOUTH OF VOLUNTEER MAIN SHAFT **Depth:** 28m

FROM (M)	TO (M)	WEIGHT (kg)	COLOUR	CHIP DESCRIPTION	INTERPRETED LOG	COMPOSITE SAMPLE No.	Au ppt	RESPLIT SAMPLE No.	Au ppt
0	1	12	Yellow-brown	Clay with ox rock frags - mostly Sh.	Ox Sh + Slt.	217065	<0.005		
1	2	20	" "	90% ox Sh, 10% ox ghost Slt/Sst.					
2	3	20	" "	90% ox Slt as above. 10% ox Sh. Minor qtz.					
3	4	20	" "	50:50 ox Slt: weakly ox grey Sh. Sh sericitic ± crenclear. No qtz.					
4	5	20	Orange	Ditto. Minor qtz. Sh ± hairline qtz-lim frack. Slt sl ferruginous.		217066	0.011		
5	6	20	Dk grey	Base of ox. 10% qtz-some grey. 90% Black shale.	Black graphitic and pyritic shale				
6	7	20	" "	100% Black shale - sl graphitic. Hard.					
7	8	20	" "	90% Black shale as above. 10% grey "qtzite" (silif Slt) ± 1-2% py.				(DUPLICATE SAMPLE:)	
8	9	20	Black	Ditto. Sh has 2-3% py. Py nodules in silif Slt.		217067	0.038	217068	0.007
9	10	20	"	Ditto.					
10	11	20	"	Ditto. Both Sh + Slt ± 3-5% py.					
11	12	20	"	100% Black shale as before except sl pyrgy.					
12	13	20	"	70% Black shale, 1-2% less graphitic. 25% sericitized Slt ± 1-2% py. 5% qtz.		217069	<0.005	1m resplits as checks:	
13	14	20	Dk grey	10% qtz. Rest black shale, graphitic, 3% py + sil-ser Slt ± 2% py.	Black shale + sericitized pyritic Slt.			8-9m:	
14	15	20	" "	Ditto. Minor qtz.				215031	0.042
15	16	20	" "	80% sft sericitized Slt ± trace py. 20% dk grey Sh, minor py. No qtz.	Heavily qtz veined very strongly qtz-ser altered, soft Slt, minor Sh			10-11m:	
16	17	20	Grey	70% qtz - with lim stains (opening close?). Rest Slt + Sh as above.		217070	0.012	215032	0.044
17	18	20	Pale grey	30% qtz - minor lim. 70% pale grey strongly qtz-ser alt Slt (soft).					
18	19	20	" "	20% qtz. Rest Slt as above. Minor py.					
19	20	20	" "	60% white qtz ± trace py. Rest Slt as above - strongly alt, soft + pyrgy.					
20	21	20	Grey	40% qtz. 40% Slt as above. 20% grey sericitized Sh. Strong alt.		217071	0.066		
21	22	20	"	50% White qtz. Rest soft pyrgy sericitized Slt + Sh. 1-2% py.					
22	23	20	"	Ditto. 2% py. Alteration very strong.					
23	24	20	"	70% White qtz. Rest altered Slt + Sh, with 3-5% py.					

COMMENTS:

COLLAR CO-ORDS (AMG): N: 5448179 E: 499901 RL:

ANGLE: -60° AZIMUTH (AMG): 0° HOLE TYPE: 110mm TRICONE DATE: 28·1·97 GEOLOGIST: J.G. PURVIS

COMPOSITE: DESPATCH No: LGM 97-2 ANALABS LAB REPORT No: CEN201.60.12729 RESPLIT: DESPATCH No: LGM 97-4. ANALABS LAB REPORT No: CEN201.60.12759

CENTRAL KALGOORLIE GOLD MINES

RAB Drillhole Log

Hole No. LGR 13

Project: Lefroy Area: (Sheet 2 of 2) Depth: 28m

FROM (M)	TO (M)	SAMPLE WEIGHT (kg)	SAMPLE COLOUR	GEOLOGICAL DESCRIPTION	INTERP	COMPOSITE SAMPLE No.	Au g/t	RESPLIT SAMPLE No.	Au g/t
24	25	20	Black	20% qtz. 80% graphitic and pyritic Black Shale (much Sft)	Black graphitic Shale	217072	0.016		
25	26	20	"	50:50 Sh as above + sericitized Sft.	and strongly altered Sft.				
26	27	20	Grey	Sft qtz-ser altered Sft ~ 1-2% py. Alt strong.					
27	28	20	"	50:50 altered Sft (minor py) + Black graphitic Shale ~ 1-2% py. Minor qtz. EOH.					
28	29								
29	30								
30	31								
31	32								
32	33								
33	34								
34	35								
35	36								
36	37								
37	38								
38	39								
39	40								
40	41								
41	42								
42	43								
43	44								
44	45								
45	46								
46	47								
47	48								

COMMENTS: Prominent unit of Black graphitic shale with very qtz-sericite altered quartz-veined rocks beneath. Close to major vein system?

COLLAR CO-ORDS (AMG): N: 5448179 E: 499901 RL:

ANGLE: -60° AZIMUTH: 0° HOLE TYPE: DATE: 28-1-97 GEOLOGIST: J.G. PURVIS

COMPOSITE:
DESPATCH ORDER No.: LGM 97-2
LAB REPORT No.: CEN201.60.12729
LAB DETAILS: ANALABS

RESPLIT:
DESPATCH ORDER No.
LAB REPORT No.:
LAB DETAILS:

INPUT APPROVAL - DATE: APPROVED:
DATE: APPROVED:

CHECKLIST:	DATE	BY	DATE	BY
COMPUTER ENTRY				
PLAN PLOT				
SECTION PLOTS				

331071

CENTRAL KALGOORLIE GOLD MINES

RAB Drillhole Log (Sheet....1....of....1....) Hole No. LGR 14

Project: Lefroy, Volunteer Hill Grid Locality: VOLUNTEER MAIN SHAFT DUMP Depth: 20m

FROM (M)	TO (M)	WEIGHT (kg)	COLOUR	CHIP DESCRIPTION	INTERPRETED LOG	COMPOSITE SAMPLE No.	Au g/t	RESPLIT SAMPLE No.	Au g/t
0	1			] Discarded - mine mullock.	Mullock				
1	2			]					
2	3	8	Brown	Mixture: Ox rock, qtz, mullock + minor material from base of LGR 13.		217073	0.017		
3	4	5	Yellow-brown	Soil - v clayey.	Soil				
4	5	8	" "	80% ox qtz-mica Slt. 20% ox ser Sh ± cren cleav.	Ox Slt + Sh (ser).	217074	0.013		
5	6	8	Khaki	30% white qtz. Rest Slt + Sh as above.	qtz veins				
6	7	+10	"	70% weakly ox grey ser Sh ± cren cleav. 30% ox Slt as above.					
7	8	+10	Black	Base of ox. 80% Black graphitic + pyritic (2-3%) Sh. 20% yellow clay (contam.)	Black Shale				
8	9	+10	"	100% Black Sh as above - weakly sil-ser-chl alteration.		217075	0.010		
9	10	+10	Khaki-grey	20% Black Sh as above. Rest grey ser cren Sh + qtz-mica Slt (hard).	Altered Slt + Shale				
10	11	+10	" "	5% qtz. 70% sericitic Slt. 25% sericitic Sh as above.					
11	12	+10	" "	Ditto.					
12	13	+10	Grey	30% grey qtz ± chlorite. Rest: Grey qtz-ser alt Slt > ser cren Sh.	Qtz-veined altered	217076	0.012		
13	14	25	"	30% qtz. 30% Slt, 30% Sh - both as above. 10% Black Shale - silif.	Slt + Sh.				
14	15	25	Dk grey	20% qtz ± chl. 40% Grey-Black Sh - ser, cren, 2% py. 40% strongly ser Slt, 2% py					
15	16	25	Pale grey	Minor qtz. 80% Slt as above, trace py. 20% Sh as above, minor py.	Strongly altered +				
16	17		Grey	Rare qtz. Ditto. Both rock types strongly cleaved.	cleaved Slt > Sh	217077	0.010		
17	18		Grey	Minor qtz. 80% Slt - more silicif, minor py. 20% Sh as above.					
18	19		Grey	5% qtz. Rest Slt + Sh as above. Strong cleavage, minor py.					
19	20		Pale grey	40% qtz ± chl. Mostly sil-ser alt Slt ± minor py. Minor Sh.	Qtz veins in altered Slt.				
20	21			EOH					
21	22								
22	23								
23	24								

COMMENTS: Much the same as LGR 13 - Graphitic shale unit then altered qtz-veined zone.

COLLAR CO-ORDS (AMG): N: 5448198 E: 499848 RL:

ANGLE: -60° AZIMUTH (AMG): 0° HOLE TYPE: 110mm TRICONE DATE: 28.1.97 GEOLOGIST: J.G. AURVIS

COMPOSITE: DESPATCH No.: LGM 97-2. ANALABS LAB REPORT No.: CEN201.60.12729 RESPLIT: DESPATCH No.: LAB REPORT No.:

331078

CENTRAL KALGOORLIE GOLD MINES

RAB Drillhole Log (Sheet....1....of....1..) **Hole No.** LGR 15

Project: Lefroy, Volunteer Hill Grid Locality: SOUTH OF VOLUNTEER MAIN SHAFT **Depth:** 22m

FROM (M)	TO (M)	WEIGHT (kg)	COLOUR	CHIP DESCRIPTION	INTERPRETED LOG	COMPOSITE SAMPLE No.	Au g/t	RESPLIT SAMPLE No.	Au g/t
0	1			] Discarded due to contamination					
1	2			] from material from LGR 14.					
2	3	+10	Yellow-brown	Clay.	Soil	217078	0·041		
3	4		Brown + pink	Ox grey Sh ± prominent crenulation cleavage.	Ox Slt/Sst + Sh				
4	5		" "	Minor qtz. Ox Sh > ox Sst/Slt. Mostly clay.	No qtz veins				
5	6		Pale Khaki	Ox Sh : Ox Sst/Slt.					
6	7		" "	Weakly ox. 70% Slt/Sst ± trace py. 30% Sh as above		217079	0·018		
7	8		Khaki	50 : 50 Slt as above + dk grey crenulated Sh.					
8	9		"	70:30 Sh : Slt as above. Strongly cleaved.					
9	10		Grey	Base of ox : 90% dk grey - black highly cren Sh. 10% Slt - strongly cleaved.	Strongly cleaved				
10	11		"	70% grey cren Sh. 30% Slt.	Shale + minor Slt.	217080	0·032		
11	12		Khaki	90% qtz-mica Sst/Slt. 10% Sh as above.	Sst/Slt				
12	13		Black	20% qtz. 70% Black Shale - graphitic + pyritic (1-2%). 10% ox Slt (contam).	← qtz veins on contact.				
13	14		"	No qtz. 100% Black Shale. Sl silic.	Pyritic and graphitic				
14	15		"	Minor qtz. Ditto. 2-3% py.	silicified Black Shale	217081	0·041		
15	16		"	Rare qtz. Ditto.					
16	17		"	Ditto. More cleaved + 3-5% py.					
17	18		"	Minor qtz. Ditto.					
18	19		"	Rare qtz. Ditto. Mod silic, highly graphitic, 5% py.		217082	0·036		
19	20		"	No qtz. Ditto.					
20	21		"	Ditto.					
21	22	↓	"	Ditto. 5% greenish strongly sericitized, silic Slt.					
22	23			EOH (rock hard).					
23	24								

COMMENTS: Nice - looking pyritic + silicified black shale below 12m but lacks qtz veining.

COLLAR CO-ORDS (AMG): N 5448159 E 499851 RL:

ANGLE: −60° AZIMUTH (AMG): 0° HOLE TYPE: 110mm TRICONE DATE: 29·1·97 GEOLOGIST: J. G. PURVIS

COMPOSITE: DESPATCH No: LGM 97-3. ANALABS LAB REPORT No: CEN 201·60.12742 RESPLIT: DESPATCH No.: LAB REPORT No.:

3810763

CENTRAL KALGOORLIE GOLD MINES

RAB Drillhole Log (Sheet....1....of..1..) Hole No. LGR 16

Project: Lefroy, Volunteer Hill Grid Locality: SOUTH OF VOLUNTEER MAIN SHAFT Depth: 21m

FROM (M)	TO (M)	WEIGHT (kg)	COLOUR	CHIP DESCRIPTION	INTERPRETED LOG	COMPOSITE SAMPLE No.	Au g/t	RESPLIT SAMPLE No.	Au g/t
0	1			] Discarded due to contamination					
1	2			] from LGR 15.					
2	3	10	Yellow-brown.	Clay with abundant qtz frags	Clay after ox Sh	217083	0.013		
3	4	10	Red-brown	Clay.					
4	5	10	" "	Minor qtz. Clay + ox grey Sh.					
5	6	5	Brown	Clay.					
6	7	4	"	Clay. Few frags of ox grey Sh > ox qtzose Slt.		217084	0.006		
7	8	5	Pale Khaki	10% qtz. 70% ox grey strongly crenulated Sh. 20% ox qtz-ser Slt/Sst.	Crenulated Sh ± qtz veins				
8	9	0.5		Discarded - contaminated by drillers foam.	?				
9	10	1	Khaki	30% qtz. 40% grey cren ser Sh. 30% sericitized qtz-mica Slt.	Crenulated ser Sh ± qtz veins	217085	0.017		
10	11	2	"	Base of ox. Minor qtz. 50:50 grey ser Sh + grey ser Slt.	Ser Sh + Slt.				
11	12	3	Grey	Minor qtz. Ditto.					
12	13	5	"	Minor qtz. 50:50 Black graphitic Sh ± minor py + sericitic qtzose Slt.	Black graphitic shale				
13	14	7	"	30% coarse qtz ± chl + py. 30% strongly ser Slt/Sst 40% Black Sh ± 2% py.	+ sericitic Slt, with	217086	0.028		
14	15	4	"	20% qtz ± chl. 50% ser-qtz Slt as above. 30% Black shale as above.	qtz veins.				
15	16	7	Dk grey	10% qtz. 70% Black silif Sh as above. 20% ser Slt as above.					
16	17	+10	Black	Minor qtz. All Black graphitic shale, silif, ± 3-5% dissem py + massive py bands to 10mm.	] Pyritic graphitic silicified				
17	18	+10	"	5% qtz. 75% Black Shale as above. 20% grey qtz-graphite-py rock (5% py).	] Black shale	217087	0.022		
18	19	+15	"	95% silif Black shale as above. 5% qtz-ser-py Slt (5% py).	with bands of silicified pyritic Slt.				
19	20	+15	"	Ditto.					
20	21	+15	"	Minor qtz. 90% silif Black Shale ± 5% py, 10% grey qtz-graphite-py rock.					
21	22			EOH - very hard.					
22	23								
23	24								

COMMENTS: Silicified pyritic black shale unit below 12m is same unit as in LGR 15.

COLLAR CO-ORDS (AMG): N: 5448119 E: 499850 RL:

ANGLE: -60° AZIMUTH (AMG): 0° HOLE TYPE: 110mm TRICONE DATE: 29.1.97 GEOLOGIST: J.G. PURVIS

COMPOSITE: DESPATCH No.: LGM 97-3. ANALABS LAB REPORT No.: CEN201.60.12742 RESPLIT: DESPATCH No.: LAB REPORT No.:

38109

CENTRAL KALGOORLIE GOLD MINES

RAB Drillhole Log (Sheet 1 of 1) Hole No. LGR 17

Project: Lefroy, Volunteer Hill Grid Locality: SOUTH-WEST OF VOLUNTEER MAIN SHAFT Depth: 20m

FROM (M)	TO (M)	WEIGHT (kg)	COLOUR	CHIP DESCRIPTION	INTERPRETED LOG	COMPOSITE SAMPLE No.	Au g/t	RESPLIT SAMPLE No.	Au g/t
0	1			Discarded - contaminated by material from LGR 16.		////////			
1	2	+15	Khaki-brown.	30% qtz. Ox Slt + Sh.	Ox Slt + Black Sh	217088	0.006		
2	3	8	" "	Ox qtz-mica Sst/Slt > ox Sh. Some graphitic shale from LGR16					
3	4	10	Pale khaki	20% black shale ± ox fracts. Rest ox Sst/Slt.					
4	5	12	" "	10% graphitic black shale ± ox stains. 90% ox Slt.		217089	<0.005		
5	6		Grey	Base of ox. 60% grey qtz-mica Slt. 40% dark grey phyllitic Sh.	Sericitic Slt and				
6	7		Dk grey	All highly crenulated dk grey Sh.	strongly cleaved Sh				
7	8		Grey	70% Sh as above. 30% sericitic qtz-mica Slt.					
8	9		"	75% sericitic qtzose Slt 25% Sh as above.		217090	0.022		
9	10		"	95% Slt as above (minor py). 5% grey-black strongly cleaved Sh.					
10	11		Dk grey	30% qtz. 70% grey-black Sh - sl graphitic, silif + ser, strongly cleaved. 2% py.	Qtz veins on contact				
11	12		" "	Minor qtz. 90% Black Sh - graphitic, sl silif, 3% py. 10% ser Slt.	Black graphitic				
12	13		Black	10% qtz. 90% Black Sh as above, with 5mm massive py bands.	silicified shale with	217091	0.054		
13	14		"	Rare qtz. Ditto. Qtz-py seams to 3mm.	3-5% pyrite				
14	15		"	Ditto.					
15	16		"	Ditto. No qtz. 3-5% py.					
16	17		"	Ditto. 2-3% py.		217092	0.034		
17	18		"	Minor qtz. Ditto.					
18	19		"	Rare qtz. Ditto. Patchy strong silif ± qtz-py. Overall: 3-5% py.					
19	20		"	No qtz. Ditto. Some hard qtz-graphite-py seams.					
20	21			EOH (Strong water inflow)					
21	22								
22	23								
23	24								

COMMENTS: The silicified graphitic shale unit must be almost flat-lying. Intersected in holes LGR 13-17.

COLLAR CO-ORDS (AMG): N: 5448087 E: 499850 RL:

ANGLE: -60° AZIMUTH (AMG): 0° HOLE TYPE: 110mm TRICONE DATE: 29-1-97 GEOLOGIST: J.G. PURVIS

COMPOSITE: DESPATCH No.: LGM 97-3. ANALABS. LAB REPORT No.: CEN201.60.12742 RESPLIT: DESPATCH No.: LAB REPORT No.:

331081

CENTRAL KALGOORLIE GOLD MINES

RAB Drillhole Log (Sheet....1....of....1....) **Hole No.** LGR 18

Project: Lefroy, Volunteer Hill Grid Locality: SOUTH-WEST OF VOLUNTEER MAIN SHAFT **Depth:** 23m

FROM (M)	TO (M)	WEIGHT (kg)	COLOUR	CHIP DESCRIPTION	INTERPRETED LOG	COMPOSITE SAMPLE No.	Au g/t	RESPLIT SAMPLE No.	Au g/t
0	1	3	Brown	Soil	Soil	217093	0·022		
1	2	5	Pale khaki	Soil					
2	3	10	" "	Ox ghose Slt/Sst - strongly foliated.	Ox Slt > Sh				
3	4	15	Khaki	Mostly clay. Few frags: ox ghose Slt.					
4	5	6	"	80% ox Slt as above. 20% grey-black Sh.		217094	0·022		
5	6	5	"	60% Slt as above. 40% grey-black crenulated Sh.					
6	7	5	"	Weakly ox grey qtz-mica Slt - strongly cleaved. Minor Sh.					
7	8	5	Grey	Base of ox. 20% qtz. 70% soft strongly sericitized Slt c 1-2% py. 10% Black Shale.	Sericitized Slt + Black Shale				
8	9	6	"	No qtz. Soft Slt as above + soft graphitic Shale.		217095	0·018		
9	10	5	"	60% white qtz ± chl. 40% grey-black cren Sh c 2% py (partly graphitic).	Strongly qtz-veined zone in strongly sericitised Slt.				
10	11	6	"	Ditto.					
11	12	3	Grey-black	Few frags. 30% qtz. 40% Sh as above. 30% soft strongly ser Slt.					
12	13	5	Grey	Few frags. Qtz + soft ser Slt.		217096	0·016		
13	14	8	"	75% white qtz. 25% soft strongly ser Slt c trace py.					
14	15	5	"	90% white qtz c chl-ser + minor py. 10% soft ser Slt c minor py.					
15	16	10	"	25% qtz. 50% ser Slt c py. 25% Black silif graphitic + pyritic Sh.					
16	17	15	Black	40% white qtz. 60% silif Sh as above, c 2-3% py. Some chl-ser in Sh.	Silicified graphitic pyritic Sh with quartz-chlorite veins.	217097	0·018		
17	18	16	"	10% qtz. 90% Sh as above c 3-5% py, + v thin qtz veinlets.					
18	19	18	"	5% qtz. Ditto.					
19	20	18	"	10% qtz ± chl (some green qtz). Ditto.					
20	21	25	"	10% qtz ± chl. Ditto (Sh has 2% py).		217098	0·026		
21	22	25	"	20% qtz. 80% Ditto - weak silif.					
22	23	17	"	10% qtz ± chl. 90% ditto c tiny qtz-py veins.					
23	24			EOH - drill breakdown.					

COMMENTS: Same black graphitic shale unit below 15m, this time with altered Slt + qtz veins on top of unit.

COLLAR CO-ORDS (AMG): N: 5448064 E: 499764 RL:

ANGLE: -60° AZIMUTH (AMG): 0° HOLE TYPE: 110mm TRICONE DATE: 30·1·97 GEOLOGIST: J.G. PURVIS

COMPOSITE: DESPATCH No: LGM97-3. ANALABS LAB REPORT No: CEN201.60.12742 RESPLIT: DESPATCH No.: LAB REPORT No.:

CENTRAL KALGOORLIE GOLD MINES

RAB Drillhole Log (Sheet....1....of....1....) **Hole No.** LGR 19

Project: Lefroy, Volunteer Hill Grid Locality: SOUTH OF WEST VOLUNTEER SHAFT **Depth:** 20m

FROM (M)	TO (M)	WEIGHT (kg)	COLOUR	CHIP DESCRIPTION	INTERPRETED LOG	COMPOSITE SAMPLE No.	Au g/t	RESPLIT SAMPLE No.	Au g/t
0	1			Discarded – fill.	Soil + alluvium	////////			
1	2	10	Yellow-brown	Ox qtz-mica Sst + Slt. Minor qtz. Partly alluvial - some frags rounded	↓	217099	<0.005		
2	3	10	Pale khaki	Ox Sst + Slt as above. Minor black shale. No qtz.	Ox Sst/Slt.	↓			
3	4	12	Grey	Weakly ox qtz-mica Sst/Slt. Minor py.	↓				
4	5	12	"	Base of ox. 90% grey Sst/Slt as above. 10% black shale ± cren clear.	Grey Sst/Slt with bands	217100	<0.005		
5	6	12	"	20% qtz. 60% Sst as above. 20% Sh as above.	of grey-black Sh,	↓			
6	7	14	"	40% qtz. 60% grey-black Sh.	with common qtz veins				
7	8	15	"	40% contam from hiles in hole. 50% Sh as above. 10% ser-chl alt Slt.	throughout	↓			
8	9	10	"	Minor qtz. 100% grey qtz-mica Slt/Sst.	↓	217101	0.020		
9	10	16	"	Ditto.		↓			
10	11	15	"	60% qtz. 30% grey sericitized Slt ± minor py. 10% grey-black cren Sh.					
11	12	14	"	30% qtz. 70% Slt as above		↓			
12	13	14	"	20% qtz. 70% Slt as above. 10% grey-black cren Sh.	↓	217102	0.036		
13	14	15	Grey + black	20% qtz ± chl. 80% black graphitic Sh. (grey colour = piggy ser Slt)	↑ qtz veins + ser Slt on contact	↓			
14	15	16	Black	Minor qtz. 100% Black Sh as above ± 2% py + cren clear.	Black graphitic +				
15	16	18	"	10% qtz. 90% Black Sh as above (3% py). Minor qtz-chl-py rock.	pyritic Shale	↓			
16	17	18	"	20% qtz. 80% Black Sh as above. Minor strongly sericitized Slt.	↓ with minor qtz veins	217103	0.008		
17	18	7	"	10% qtz. 90% strong silif Black Sh ± 3-5% py. No cren clear.	Ditto, strongly	↓			
18	19	16	"	10% qtz 90% Black Sh as above ± fine qtz-filled fracts at all angles.	silicified, ± crackle				
19	20	16	"	10% qtz. 90% Black Sh as above.	brecciation.	↓			
20	21			EOH (Rig breakdown)					
21	22								
22	23								
23	24								

COMMENTS: Black Shale unit in base of hole looks good - strongest silicification seen to date, with crackle-brecciation healed by qtz.

COLLAR CO-ORDS (AMG): N: 5448099 E: 499749 RL:

ANGLE: -60° AZIMUTH (AMG): 0° HOLE TYPE: 110mm TRICONE DATE: 2·2·97 GEOLOGIST: J. G. PURVIS

COMPOSITE: DESPATCH No.: LGM 97-4. ANALABS LAB REPORT No.: CEN201.60.12759 RESPLIT: DESPATCH No.: LAB REPORT No.:

3381083

CENTRAL KALGOORLIE GOLD MINES

RAB Drillhole Log (Sheet 1 of 1) Hole No. LGR 20

Project: Lefroy, Volunteer Hill Grid Locality: SOUTH OF WEST VOLUNTEER SHAFT Depth: 18.5m

FROM (M)	TO (M)	WEIGHT (kg)	COLOUR	CHIP DESCRIPTION	INTERPRETED LOG	COMPOSITE SAMPLE No.	Au g/t	RESPLIT SAMPLE No.	Au g/t
0	1	5	Yellow-brown	Soil ± fine chips of qtz.	Soil	217104	<0.005		
1	2	8	Pale khaki	Mostly clay. Chips: 10% qtz, 60% ox Slt/Sst, 30% ox Sh.					
2	3	10	" "	Weakly ox. Qtz-mica Slt, sericitic Slt + grey-black Sh.	Ox Slt + Sh				
3	4	10	Pale grey	Base of ox. 50% qtz-mica Slt. 50% grey-black ser Sh. Both strongly cleaved.	Strongly cleaved + sericitised Slt + Sh				
4	5	8	Grey	5% qtz. 80% Sh as above ± minor py. 15% sericitic Slt.		217105	<0.005		
5	6	9	"	Minor qtz. 60% ser-chl altered Slt. 40% Sh as above.					
6	7	9	"	5% qtz. Rest Slt + Sh as above.					
7	8	10	"	60% strong ser>chl alt Slt ± 2% py. 40% Sh as above, ± 2% py.					
8	9	10	"	Minor qtz. 90% Slt as above (minor py). 10% Sh as above.		217106	<0.005		
9	10	10	"	70:30 Slt:Sh as above, both ± minor py. Sh is sl graphitic.					
10	11	10	"	50:50 Slt:Sh as above.					
11	12	10	"	10% qtz ± chl. Rest Slt:Sh as above. Sh is crenulated, ± 1% py.					
12	13	10	Pale grey	10% qtz, 60% Slt as above. 30% Sh as above.		217107	<0.005		
13	14	12	Grey-black	20% qtz ± chl ± py. 50% Black graphitic Sh ± 2% py. 30% ser Slt as above (2% py)	qtz-chl-py veins on contact.				
14	15	10	Black	25% qtz ± chl ± py. 75% Black Sh-graphitic, weakly silif, 3% py.					
15	16	10	"	Minor qtz. Rest Black shale as above.	Black graphitic + pyritic Shale, increasingly silicified with depth + minor qtz veining.				
16	17	15	"	100% Black Shale - silif v weak.		217108	<0.005		
17	18	16	"	Minor qtz. Rest Black Shale as above - silif moderate.					
18	18.5	14	"	10% qtz. 90% Black Shale as above, ± 3-5% py.					
19	20			EOH @ 18.5m - ground very hard (sudden change)					
20	21								
21	22								
22	23								
23	24								

COMMENTS: Would liked to have continued - Black Shale unit is nicely silicified + pyritic at base.

COLLAR CO-ORDS (AMG): N: 5448140 E: 499752 RL:

ANGLE: -60° AZIMUTH (AMG): 0° HOLE TYPE: 110mm TRICONE DATE: 4.2.97 GEOLOGIST: J.G. PURVIS

COMPOSITE: DESPATCH No: LGM97-4. ANALABS LAB REPORT No: CEN201.60.12759 RESPLIT: DESPATCH No: LAB REPORT No:

3910841

CENTRAL KALGOORLIE GOLD MINES

RAB Drillhole Log (Sheet....1....of....1....) **Hole No.** LGR 21

Project: Lefroy, Volunteer Hill Grid Locality: SOUTH OF WEST VOLUNTEER SHAFT **Depth:** 21m

FROM (M)	TO (M)	WEIGHT (kg)	COLOUR	CHIP DESCRIPTION	INTERPRETED LOG	COMPOSITE SAMPLE No.	Au gpt	RESPLIT SAMPLE No.	Au gpt
0	1			] Discarded due to contamination		////			
1	2			] by material from LGR 20.		////			
2	3	6	Yellow	50% qtz. 50% ox Slt/Sh.	Ox Slt + Sh with qtz veins	217109	<0.005		
3	4	5	Khaki	10% qtz. 90% ox Slt + Sh.					
4	5	5	"	10% limonitic qtz. 50% dk grey mox cren Sh. 40% ox Slt.					
5	6	4	Pale khaki	20% qtz. Rest weakly ox Slt + Sh.					
6	7	4	Pale grey.	Base d) ox. 20% qtz / 10% Black Shale. 70% grey Slt.	Sericitized Slt/Sst + Black Shale, with common qtz veins	217110	<0.005		
7	8	5	" "	20% qtz. 80% pale grey, sericitized Slt/Sst, trace py.					
8	9	4	" "	20% qtz. 70% Slt/Sst as above. 10% Black Sh-silt.					
9	10	3	" "	30% qtz ± chl. 40% Slt as above (some strongly ser-chl alt) 30% Black Shale					
10	11	3	Grey	70% qtz ± chl. 30% Slt as above - strongly altered (ser-chl)	Highly qtz-veined zone in strongly altered (ser-chl) Slt and Black Shale	217111	<0.005		
11	12	6	Dk grey	50% qtz ± chl. 50% Slt (as above) + grey-black Sh, ē minor py.					
12	13	9	Pale Grey	50% qtz ± chl. 40% grey-black slt chloritic Sh (cren, minor py) 10% Slt as above.					
13	14	15	Grey	90% White qtz. 10% Slt + Sh as above.					
14	15	6	Dk grey	50% White qtz. 25% Black Shale as above. 25% strongly alt Slt as above. Minor py		217112	<0.005		
15	16	20	Grey	20% qtz ± chl ± py. 60% Grey-black chloritic Sh. 20% Slt as above.					
16	17	18	"	50% qtz ± chl. 40% Sh as above ē 1% py. 10% alt Slt as above.					
17	18	17	"	Ditto exactly. Some Slt dark green in colour due to chl-ser alt.					
18	19	23	Dk grey	60% qtz ± chl ± py. 30% Sh as above. 10% alt Slt as above.		217113	0.007		
19	20	20	Pale grey	90% qtz ± chl. / 10% Sh + Slt as above.					
20	21	8	" "	40% qtz ± chl. 60% Sh + Slt as above.					
21	22			EOH.					
22	23								
23	24								

COMMENTS: Only slight trace d) graphite in black shale - most d) colour is dark chlorite. Alot d) qtz veining. Samples above 11m unreliable due to small size.

COLLAR CO-ORDS (AMG): N: 5448181 E: 499752 RL:

ANGLE: -60° AZIMUTH (AMG): 0° HOLE TYPE: 110mm TRICONE DATE: 4-2-97 GEOLOGIST: J.G. PURVIS

COMPOSITE: DESPATCH No. LGM97-4. ANALABS LAB REPORT No. CEN201.60.12759 RESPLIT: DESPATCH No.: LAB REPORT No.:

391083

CENTRAL KALGOORLIE GOLD MINES

RAB Drillhole Log (Sheet 1 of 1) Hole No. LGR 22

Project: Lefroy, Volunteer Hill Grid Locality: SOUTH OF WEST VOLUNTEER SHAFT Depth: 22m

FROM (M)	TO (M)	WEIGHT (kg)	COLOUR	CHIP DESCRIPTION	INTERPRETED LOG	COMPOSITE SAMPLE No.	Au g/t	RESPLIT SAMPLE No.	Au g/t
0	1			] Discarded - contaminated by material from LGR 21.					
1	2				Ox Slt/Sst + Sh				
2	3	6	Pale brown	25% qtz. 50% grey-black Sh. 25% ox qtz-mica Slt/Sst.		217114	0.032		
3	4	9	" "	70% ox qtz-mica Slt/Sst. 30% grey cren Sh.					
4	5	9	" "	Minor qtz. 80% ox qtz-mica Slt/Sst. 20% unox grey cren Sh.					
5	6	11	" "	Ditto.					
6	7	11	Khaki	Weak ox. 80% qtz-mica Slt. 20% grey + black Sh.		217115	0.018		
7	8	11	Pale khaki	90:10 Slt : Sh as above. Base of ox.	Weakly silicified Slt with minor qtz veins and sericitic Sh bands.				
8	9	12	" "	100% hard ghrose Slt. weak					
9	10	12	Pale grey	5% qtz. 60% Slt as above (silif, ± py). 35% ox Slt (contamination)					
10	11	12	Grey	20% qtz. 50% Slt as above (minor py). 30% grey ser cren Sh.		217116	0.040		
11	12	10	Pale grey	20% qtz ± chl. 70% Slt as above (1% py). 10% Sh as above.					
12	13	12	Grey	No qtz. 50:50 Slt as above : black shale ± minor py.	Silicified Slt + Black Shale with increasing qtz veins with depth				
13	14	14	Pale grey	5% qtz-cb veins. Rest Slt + Black shale as above.					
14	15	14	Dk grey	5% qtz-cb. 85% Slt (mod sericitized). 10% Black Shale as above		217117	0.038		
15	16	14	Grey	30% qtz. 40% Slt as above. 30% Black cren Sh.					
16	17	14	Dk grey	60% qtz ± py. 20:20 Slt + Black Shale as above.	Qtz veined zone in Slt + Black Shale.				
17	18	14	Grey	70% qtz ± cb. Rest Slt + Black shale as before. Slt mod ser-chl alt.					
18	19	15	"	10% qtz. 70% Slt as above. 20% Black Shale ± 1-2% py + sl silif.	Slt + Black Shale	217118	0.010		
19	20	16	Pale grey	Rock type change : hard, silic Slt. Minor py.	Silicified Slt				
20	21	15	" "	Minor qtz. Ditto. Rock is silicified.					
21	22	15	" "	No qtz. Ditto.					
22	23			EOH. (Hard rock)					
23	24								

COMMENTS:

COLLAR CO-ORDS (AMG): N: 5448218 E: 499801 RL:

ANGLE: -60° AZIMUTH (AMG): 0° HOLE TYPE: 94mm TRICONE DATE: 5-2-97 GEOLOGIST: J. G. PURVIS

COMPOSITE: DESPATCH No: LGM97-5. ANALABS LAB REPORT No.: CEN201.60.12778 RESPLIT: DESPATCH No.: LAB REPORT No.:

CENTRAL KALGOORLIE GOLD MINES

RAB Drillhole Log (Sheet....1....of..1..) **Hole No.** LGR 23

Project: Lefroy, Volunteer Hill Grid Locality: NEAR MAIN VOLUNTEER DUMP **Depth:** 22m

FROM (M)	TO (M)	WEIGHT (kg)	COLOUR	CHIP DESCRIPTION	INTERPRETED LOG	COMPOSITE SAMPLE No.	Au g/t	RESPLIT SAMPLE No.	Au g/t
0	1								
1	2								
2	3	6	Yellow	10% qtz. 10% white qtzite. Rest: ox qtz-mica Slt.	Ox Slt with minor Sh.	217119	0·020		
3	4	8	"	80% Slt as above. 20% grey cren Sh.					
4	5	8	Pale khaki	Grey Slt as above. Base of ox.					
5	6	8	Grey	10% qtz. 60% Slt as above. 30% grey-black cren Sh.					
6	7	8	Pale grey	5% qtz. 95% pale grey silicified Slt/Sst (same rock as in base of LGR22).		217120	0·014		
7	8	10	Grey	70% grey-black cren Sh. 30% Slt as above ± minor py.					
8	9	10	"	100% Slt as above - s/sericitized, moderately cleaved.	Sil-ser-chl altered Slt with bands of grey-black Shale				
9	10	10	"	Ditto. Hard (silic+sericitized).					
10	11	14	"	70% Slt as above. Mod ser>sil/alt + 1% py. 30% grey-black cren Sh.		217121	0·012		
11	12	14	"	90:10, Slt:Sh as above.					
12	13	14	"	5% qtz. 75% Slt (mod ser-chl>sil/alt) + minor py. 20% Sh as above.					
13	14	14	"	Minor qtz. 70:30 Slt:Sh as above.					
14	15	15	"	Ditto.		217122	0·024		
15	16	15	"	5% qtz ± chl. Rest Slt>Sh as above. Minor py in both rocks.					
16	17	15	"	50:50 Slt:Sh as above, 1% py in both. Ser-chl alt in Slt is strong.					
17	18	16	Grey-black	25% qtz. 50% Black cren Sh (2% py). 25% Slt as above, ± 2% py.	Zone of qtz veining & stronger alteration				
18	19	16	Pale grey	30% qtz. 60% Slt as above. 10% Sh as above		217123	0·173	215033	0·150
19	20	16	Dk grey	30% qtz ± chl ± py. 50% Slt (mod alt, 1% py). 20% grey-black Sh. Minor py.				215034	0·072
20	21	16	Grey	Minor qtz. 50:50 Slt:Sh. Both ± minor py.				215035	0·008
21	22	16	"	20% qtz ± chl ± py. 40:40 alt Slt as above : Sh as above.				215036	0·040
22	23			EOH					
23	24								

COMMENTS: Similar rocks to LGR22, particularly the silicified Slt. Shale probably chloritized (not graphitic).

COLLAR CO-ORDS (AMG): N: 5448247 E: 499802 RL:

ANGLE: -60° AZIMUTH (AMG): 0° HOLE TYPE: 94mm TRICONE DATE: 5·2·97 GEOLOGIST: J.G. PURVIS

COMPOSITE: DESPATCH No.: LGM97-5. ANALABS LAB REPORT No.: CEN201.60.12778

RESPLIT: DESPATCH No.: LGM97-7. ANALABS LAB REPORT No.: CEN201.60.12807

CENTRAL KALGOORLIE GOLD MINES

RAB Drillhole Log (Sheet....1....of....1..) **Hole No.** LGR 24

Project: Lefroy, Volunteer Hill Grid Locality: BESIDE VOLUNTEER MAIN DUMP **Depth:** 21m

FROM (M)	TO (M)	WEIGHT (kg)	COLOUR	CHIP DESCRIPTION	INTERPRETED LOG	COMPOSITE SAMPLE No.	Au g/t	RESPLIT SAMPLE No.	Au g/t
0	1			] Discarded: Mine mullock.					
1	2			]					
2	3			Discarded. Mixture of tailings silts and brown clay. Much qtz.					
3	4	5	Grey	100% white qtz. Volunteer Reef?	Volunteer Qtz Reef?	217124	0.026		
4	5	5	Yellow-brown	70% white qtz. 25% ox qtz-mica Slt ± qtz veinlets. 5% ser Slt/Sst.					
5	6	6	Pale khaki	40% qtz. 40% grey Sh. 20% qtz-mica Slt. Weakly ox.	Qtz veins, Sh + Slt.				
6	7	10	Khaki-brown	No qtz. 50:50 Sh + Slt as above.	Slt + Sh	217125	0.404	215037	0.014
7	8	14	" "	Based ox. 60:40 Slt as above : grey-black Sh.				215038	0.018
8	9	15	Khaki-grey	Minor qtz. 70:30, Slt as above : soft black shale ± minor py.				215039	0.130
9	10	15	Pale grey	75% vein qtz ± graphite. 20% strongly ble-ser-sil Slt. 5% Black graphitic Sh ± py	Qtz vein (1m)			215040	0.898
10	11	15	"	20% qtz ± chl. 75% Slt as above. 5% Sh as above.	Sil-ser-chl altered Slt and lesser Black Shale, with common qtz veining.	217126	0.038		
11	12	16	"	35% qtz ± chl ± py. 65% Slt as above with minor py.					
12	13	16	Dk grey	20% qtz ± chl ± py. 5% strong chl green Slt. 75% Black cren chl Sh, minor py.					
13	14	16	Grey	10% qtz-chl. 90% Black shale with prominent cren clear + minor py.					
14	15	10	"	40% qtz ± chl. 60% mod sil-ser-chl alt Slt. No py.		217127	0.067		
15	16	12	Dk grey	10% qtz. 75% Slt as above ± minor py. 15% Black Shale, minor py.					
16	17	7	"	15% qtz. 85% Slt as above.					
17	18	16	Pale grey	Minor qtz. 90% Slt as above. 10% grey cren Sh.					
18	19	12	"	Ditto, no qtz.		217128	0.092		
19	20	15	Grey	10% qtz. 90% Slt as above.					
20	21	12	"	15% qtz. 80% Slt as above. 5% grey-black cren Sh.					
21	22			EOH (Rocks v hard).					
22	23								
23	24								

COMMENTS:

COLLAR CO-ORDS (AMG): N: 5448257 E: 499851 RL:

ANGLE: -60° AZIMUTH (AMG): 0° HOLE TYPE: 94mm TRICONE 82mm HAMMER BELOW 14m. DATE: 5-2-97 GEOLOGIST: J.G. PURVIS

COMPOSITE: DESPATCH No: LGM97-5. ANALABS LAB REPORT No.: CEN201.60.12778 RESPLIT: DESPATCH No.: LGM97-7. ANALABS LAB REPORT No.: CEN201.60.12807

391088

CENTRAL KALGOORLIE GOLD MINES

RAB Drillhole Log (Sheet....1....of....1....) **Hole No.** LGR 25

Project: Lefroy, Volunteer Hill Grid Locality: NEAR VOLUNTEER MAIN DUMP **Depth:** 20m

FROM (M)	TO (M)	WEIGHT (kg)	COLOUR	CHIP DESCRIPTION	INTERPRETED LOG	COMPOSITE SAMPLE No.	Au g/t	RESPLIT SAMPLE No.	Au g/t
0	1			] Discarded: Mine mullock + alluvials.	Mine mullock + alluvials	////			
1	2					////			
2	3	8	Grey	80% qtz ± chl. 20% unox strongly chl Slt (dark green). Some grey clay.	Qtz vein or layer.	217129	0·091		
3	4	10	Pale grey	95% grey qtz-mica Sst/Slt ± mod ser>chl-sil alt + minor py. 5% Sh.	Sst/Slt (altered)	↓			
4	5	10	" "	40% White qtz. 50% Sst/Slt as above. 10% Sh.	Highly qtz-veined				
5	6	9	" "	50% White qtz. 50% Sst/Slt as above. Silif is moderate.	zone in altered	↓			
6	7	9	" "	50% White qtz. 40% Slt as above. 10% grey cren Sh.	Sst/Slt	217130	0·032		
7	8	10	" "	60% White qtz. 30% Slt-greenish due to strong ser>chl-sil alt. Hard. 10% Sh.	↓	↓			
8	9	3	" "	100% White qtz.	↓	↓			
9	10	9	" "	5% qtz. 95% Slt as before: mod sil-ser-chl alt. Strongly cleaved.	Strongly sil-ser-chl	↓			
10	11	10	" "	10% qtz-chl. 70% Slt as above (strong alt). 20% grey-black cren Sh.	altered Slt with	217131	0·024		
11	12	12	" "	Minor qtz. 100% Slt/Sst as above.	bands of Sh, and	↓			
12	13		Grey	Ditto exactly.	minor qtz veining	↓			
13	14		Dk grey	15% qtz. 50% dk grey crenulated Sh. 35% Slt as above.	throughout.	↓			
14	15		Pale grey	15% qtz ± chl ± py. 85% Slt as above (strong sil-ser-chl alt + minor py).	Strongly	217132	0·033		
15	16		" "	Ditto exactly.	cleaved.	↓			
16	17		" "	5% qtz. 95% Slt/Sst as above.		↓			
17	18		Grey	5% qtz. 50:50 Slt/Sst as above + grey-black cren ser Sh. No py.		↓			
18	19		"	Ditto exactly.		217133	0·055		
19	20		"	20% qtz. 70% Slt/Sst as above. 10% grey Sh as above.	↓	↓			
20	21			EOH (due to water inflows below 15m).					
21	22								
22	23								
23	24								

COMMENTS: Very altered and quartz veined. Not much pyrite.

COLLAR CO-ORDS (AMG): N: 5448279 E: 499846 RL:

ANGLE: -60° AZIMUTH (AMG): 0° HOLE TYPE: 94mm TRICONE 82mm HAMMER BELOW 9m. DATE: 5·2·97 GEOLOGIST: J. G. PURVIS

COMPOSITE: DESPATCH No.: LGM97-5. ANALABS LAB REPORT No.: CEN201.60.12778 RESPLIT: DESPATCH No.: LAB REPORT No.:

331089

CENTRAL KALGOORLIE GOLD MINES

RAB Drillhole Log (Sheet....1....of....1....) Hole No. LGR 26

Project: Lefroy, Volunteer Hill Grid Locality: VOLUNTEER MAIN SHAFT Depth: 21m

FROM (M)	TO (M)	WEIGHT (kg)	COLOUR	CHIP DESCRIPTION	INTERPRETED LOG	COMPOSITE SAMPLE No.	Au g/t	RESPLIT SAMPLE No.	Au g/t
0	1			Discarded: Mine mullock. Some brown soil.	Mine Mullock				
1	2								
2	3								
3	4								
4	5	6	Fawn	70% qtz. 30% unox grey qtz-mica Slt ± py (could be mullock).	Qtz layer ? (ie: mullock?)	217134	0.066		
5	6	6	"	60% qtz. 30% ironstone (leex frags). 10% unox seds (mullock).					
6	7	10	Pale khaki	80% qtz. 10% grey-black cren Sh. 10% silic Slt. (Both unox).					
7	8	12	Yellow-brown	Bedrock. 80% coarse white qtz. 10% strongly sil-ser alt Slt. 10% ox Slt.					
8	9	12	Pale grey	90% coarse white qtz. 10% Slt as above + grey-black Sh. Minor py.	Qtz vein stockwork in altered Slt + Sh (80% qtz, 20% wallrock)	217135	0.019		
9	10	14	Grey	Ditto exactly. (qtz ± ser).					
10	11	14	"	80% coarse qtz ± chl. 20% Slt + Sh as above. Slt ± minor py.					
11	12	14	"	Ditto 90% qtz, 10% Slt + Sh.					
12	13	4	"	Wet sample. Ditto exactly. Sh has coarse cubic py.		217136	0.035		
13	14	4	"	Ditto exactly.					
14	15	5	"	20% white qtz ± chl. 70% Slt as above (strongly sil-chl-ser alt) 10% Sh.	Strongly altered Slt > Sh with abundant qtz veins (75% wallrock 25% qtz)				
15	16	10	Dk grey	15% white qtz. Rest Slt + Sh (± cren) as above, both ± minor py.					
16	17	4	Grey	Wet sample. 90% white qtz ± chl ± py. 10% Slt ± 1% py.		217137	0.094		
17	18	4	Pale grey	" " . 75% white ± chl ± py. 20% Slt as above. 5% Black Shale.					
18	19	9	Dk grey	10% white qtz. 60% dk grey chl-ser alt Sh ± 1% py. 30% Slt as above.					
19	20		" "	50% qtz. 25% Slt as above (strong sil-chl-ser alt). 25% chl alt Sh. 1% py.					
20	21		Grey	20% qtz ± chl. 40:40 Slt: Sh as above, strongly alt. Minor py.		217138	0.037		
21	22			EOH (rig breakdown).					
22	23								
23	24								

COMMENTS: Alot of quartz veining and strong alteration.

COLLAR CO-ORDS (AMG): N: 5448284 E: 499900 RL:

ANGLE: -60° AZIMUTH (AMG): 0° HOLE TYPE: 94mm TRICONE + 82mm HAMMER DATE: 7.2.97 GEOLOGIST: J.G. PURVIS

COMPOSITE: DESPATCH No: LGM97-5+7. ANALABS LAB REPORT No: CEN201.60.12778 RESPLIT: DESPATCH No.: LAB REPORT No.:

+12807

39103

CENTRAL KALGOORLIE GOLD MINES

RAB Drillhole Log (Sheet ...1....of...1...) **Hole No.** LGR 27

Project: Lefroy, Volunteer Hill Grid Locality: VOLUNTEER MAIN SHAFT **Depth:** 20m

FROM (M)	TO (M)	WEIGHT (kg)	COLOUR	CHIP DESCRIPTION	INTERPRETED LOG	COMPOSITE SAMPLE No.	Au g/t	RESPLIT SAMPLE No.	Au g/t
0	1	1	Brown	Site fill + soil.		217139	0.089		
1	2	0.5	Yellow-brown.	Clayey soil	Clayey soil				
2	3	1	Yellow	Ditto					
3	4	0.3	"	Ditto					
4	5	7	Fawn	80% qtz ± minor lim stains. 20% ox cren sericitic Sh.	Large qtz vein with ser Sh wallrocks	217140	0.028		
5	6	11	"	70% qtz as above. 30% Sh as above.					
6	7	10	"	80% qtz as above. 20% Sh as above (strongly ox: creamy White)					
7	8	8	Pale brown	20% qtz. 50% ox Sh as above. 30% ox qtz-mica Slt/Sst.	Ox crenulated sericitic Shale + ox Slt/Sst.				
8	9	9	" "	Minor qtz. 90% ox Slt/Sst as above. 10% ox Sh as above.		217141	0.034		
9	10	6	Pale yellow	Minor qtz. 80% ox Slt/Sst as above. 10% Black shale. 10% "qtzite"					
10	11	6	" "	Minor qtz. Ox ser Sh, unox ser highly crenulated Sh, ox Slt/Sst.					
11	12	12	Grey + yellow	10% qtz ± py. 70% unox Sh as above. 20% ox Sh.					
12	13	8	Pale khaki	85% qtz. 10% unox ser qtz-mica Slt/Sst with minor py. 5% ox ditto.	Large qtz vein	217142	0.029		
13	14	12	" "	Base of ox. 50% qtz. 40% grey Slt/Sst as above. 10% ser cren Sh.					
14	15	10	Grey	20% qtz. 75% grey Slt as above (mod ser-sil alt) 1% py. 5% Sh.	Moderately-altered + qtz-veined, Slt/Sst > Sh				
15	16	10	"	10% qtz. 90% Slt as above.					
16	17	12	"	80% Slt as above. 20% dk grey cren Sh.		217143	0.028		
17	18	+15	Dk grey	5% qtz. Rest: ditto above.					
18	19	+15	Grey	5% coarse qtz. 90% Slt/Sst as above. 5% Sh as above.					
19	20	8	"	100% Slt/Sst as above. Sericitization weak. Minor py.					
20	21			EOH					
21	22								
22	23								
23	24								

381090

COMMENTS: Probable Volunteer Reef at 4-7m.

COLLAR CO-ORDS (AMG): N 5448261 E 499902 RL:

ANGLE: -60° AZIMUTH (AMG): 0° HOLE TYPE: 94mm TRICONE DATE: 11·2·97 GEOLOGIST: J.G. PURVIS

COMPOSITE: DESPATCH No: LGM97-7. ANALABS LAB REPORT No: CEN201.60.12807 RESPLIT: DESPATCH No.: LAB REPORT No.:

CENTRAL KALGOORLIE GOLD MINES

RAB Drillhole Log (Sheet 1 of 1) **Hole No.** LGR 28

Project: Lefroy, Volunteer Hill Grid Locality: VOLUNTEER MAIN SHAFT **Depth:** 22m

FROM (M)	TO (M)	WEIGHT (kg)	COLOUR	CHIP DESCRIPTION	INTERPRETED LOG	COMPOSITE SAMPLE No.	Au g/t	RESPLIT SAMPLE No.	Au g/t
0	1	2		Discarded: fill and					
1	2	1		contamination from base of LGR 27.	Clayey soil				
2	3	1·5	Yellow	Clayey soil		217144	0·012		
3	4	5	Yellow-brown	Ditto. Frags of ox cren Sh. 10% qtz.					
4	5	8	Pale yellow	60% coarse qtz ± minor limonite stains. 40% ox ser cren Sh.	Large qtz vein in				
5	6	7	Pale khaki	80% qtz as above. 20% Sh as above - strongly ser + ble. Ox.	sericitized Sh.				
6	7	8	Fawn	40% qtz. 60% Sh as above.	qtz veins	217145	0·049		
7	8	10	"	50% qtz. 25% Sh as above. 25% grey silic Siltst. Weak ox.	Ox Slt/Sst > Sh				
8	9	9	Pale brown	10% qtz. 70% Slt as above. 20% ser Sh as above. Ox.					
9	10	9	Pale khaki	Minor qtz. 80% qtz-mica Slt/Sst. 20% Black Shale ± minor py. Ox					
10	11	9	Pale brown	Minor qtz. Strongly ox. 95% Slt/Sst as above. 5% Black Shale	Strongly ox Slt/Sst	217146	0·022		
11	12	3	" "	Strongly ox. Few frags: grey unox Slt ± minor py.					
12	13	9	" "	Minor qtz. 70% strongly ox Slt. 30% grey unox qtz-mica Slt ± 1-2% py.					
13	14	6	Pale khaki	40% qtz. 40% grey partly ox Slt/Sst ± 2-3% py. 20% ser cren Sh.	Qtz-veined pyritic Slt/Sst.				
14	15	4	" "	Base of ox. 50:50 grey-black soft Sh + ser soft Slt. Trace py.	Ser-chl altered	217147	0·020		
15	16	8	Pale grey	80% sericitized Slt/Sst ± minor py. 20% Sh as above ± minor py.	Slt/Sst > Sh				
16	17	12	" "	10% qtz. 80% Slt/Sst ± 1-2% py. 10% Sh as above.					
17	18	10	Grey	50% qtz. 30% ser Slt/Sst ± minor py. 20% Sh as above.	← qtz veins				
18	19	15	"	60% strong ser-chl alt Slt ± minor py. 40% cren Sh as above.		217148	0·048		
19	20	15	Pale grey	95% strong sil-ser-chl alt Slt/Sst ± minor py. 5% Sh.					
20	21	12	" "	100% Slt/Sst as above.					
21	22	12	Grey	5% qtz. 95% ser-chl alt qtz-mica Slt/Sst ± minor py.					
22	23			EOH					
23	24								

COMMENTS: Qtz veining @ 4–6m probably Volunteer Reef. A "twin" hole with LGR 27 to test continuity of gold values.

COLLAR CO-ORDS (AMG): N: 5448259 E: 499902 RL:

ANGLE: −60° AZIMUTH (AMG): 0° HOLE TYPE: 94mm TRICONE DATE: 12·2·97 GEOLOGIST: J.G. RURVIS

COMPOSITE: DESPATCH No: LGM97-7. ANALABS LAB REPORT No: CEN201.60.12807 RESPLIT: DESPATCH No.: LAB REPORT No.:

381092

CENTRAL KALGOORLIE GOLD MINES

RAB Drillhole Log (Sheet....1....of...1..) Hole No. LGR 29

Project: Lefroy, Volunteer Hill Grid Locality: VOLUNTEER MAIN SHAFT Depth: 21m

FROM (M)	TO (M)	WEIGHT (kg)	COLOUR	CHIP DESCRIPTION	INTERPRETED LOG	COMPOSITE SAMPLE No.	Au g/t	RESPLIT SAMPLE No.	Au g/t
0	1			Discarded - contamination from LGR 28.		///////			
1	2	3	Yellow-brown	Clayey soil	Soil	217149	0.029		
2	3	3	" "	Ditto.		↓			
3	4	5	" "	20% coarse qtz. 60% ox Sh 20% ox Slt/Sst	qtz veining in ox Sh + Sst/Slt.	↓			
4	5	7	Fawn	50% qtz. 50% ox qtz-mica Slt/Sst.		217150	0.032		
5	6	7	Yellow-brown	10% qtz. 90% ox Sst as above.	Ox Sst/Slt with limonite seams	↓			
6	7	8	" "	50:50 ox Sst/Slt + Sh, as above.		↓			
7	8	9	" "	100% ox Sst/Slt as above, c lim veinlets.		↓			
8	9	9	" "	10% limonitic qtz. 90% ox Sst/Slt as above.		217151	0.022		
9	10	8	Pale brown	Ditto. Abundant limonite and MnOx veinlets.		↓			
10	11	6	Brown	Minor limonitic qtz. Rest ox Sst/Slt as above.		↓			
11	12	8	Pale brown	10% coarse qtz. 90% ox Sst/Slt as above.		↓			
12	13	4	" "	Minor qtz. Rest weakly ox Sst/Slt as above.		217152	0.044		
13	14	2	Grey	Base of ox. 30% qtz c minor graphitic material. 70% Sst/Slt (v weakly ox)	← Qtz veins	↓			
14	15	1	Pale grey	No qtz. Hard grey qtzose Sst/Slt as before except unox. Trace py.		↓			
15	16	-		No sample 14.5–16.5m: cavity. Old drive or stope.	Old drive or stope	↓			
16	17	-		No sample		↓			
17	18	8	Pale khaki	20% qtz. 70% Sst/Slt as before. 10% grey-black Sh. frags of wood.	Sst/Slt with qtz veins + bands of black shale	↓			
18	19	12	Pale grey	30% qtz. 40% grey qtz-mica Slt. 30% Black Sh (cren). frags of wood.		217153	0.100		
19	20	10	" "	50% qtz. 30% sericitic Slt as above, c trace py. 20% cren Black Sh.		↓			
20	21			Discarded. 50% contaminated by ox material (mud fill in old drive or stope?)	Old drive or stope				
21	22			EOH - No return (old drive/stope?).					
22	23								
23	24								

COMMENTS: Very ordinary Sst/Slt with marked tiny limonite seams. Old drive @ 14.5–16.5m and possibly 20–21m.

COLLAR CO-ORDS (AMG): N: 5448243 E: 499907 RL:

ANGLE: -60° AZIMUTH (AMG): 0° HOLE TYPE: 94mm TRICONE DATE: 12.2.97 GEOLOGIST: J.G. PURVIS

COMPOSITE: DESPATCH No.: LGM97-7. ANALABS LAB REPORT No.: CEN201.60.12807 RESPLIT: DESPATCH No.: LAB REPORT No.:

CENTRAL KALGOORLIE GOLD MINES

RAB Drillhole Log (Sheet....1....of....1....) **Hole No.** LGR 30

Project: Lefroy, Volunteer Hill Grid Locality: VOLUNTEER OLD MAIN SHAFT AREA **Depth:** 21m

FROM (M)	TO (M)	WEIGHT (kg)	COLOUR	CHIP DESCRIPTION	INTERPRETED LOG	COMPOSITE SAMPLE No.	Au ppt	RESPLIT SAMPLE No.	Au ppt
0	1	2	Yellow-brown	Soil.	Soil	217154	0·067		
1	2	3	" "	Clayey soil with highly ox rock frags	↓				
2	3	5	" "	100% strongly ox qtz-mica Sst/Slt.	Ox Sst/Slt + Sh				
3	4	6	Pale yellow	Minor qtz. Ox Sst/Slt as above. Very strongly cleaved.	Strongly cleaved.				
4	5	6	Pale khaki	10% qtz. 60% ox cren Sh. 30% ox Sst/Slt as above.	↓	217155	0·108	215041	<0·005
5	6	7	Pale grey	Base of ox. 60% grey-black cren Sh. 40% qtz-mica Slt ± trace py.	Grey-black Sh with			215042	<0·005
6	7	8	Grey	80% Sh as above. 20% Slt as above. Strongly cleaved.	minor Slt.			215043	<0·005
7	8	8	Pale grey	Minor qtz. 80% grey Slt as above ± minor py. 20% Sh as above.	Ser Slt/Sst > Sh			215044	<0·005
8	9	12	" "	50:50 grey ser Slt as above + Sh as above. Strongly cleaved.	Strongly cleaved	217156	0·023		
9	10	10	" "	80% ser Slt/Sst ± 1% py. 20% Sh as above.	↓				
10	11	13	Grey	5% qtz. 60% strongly ser-chl alt Slt ± 1% py. 35% ser Sh ± 1% py.	↓				
11	12	6	"	15% qtz ± chl. 65% black cren Sh ± 2% py. 20% Slt as above.	Black cren Sh ± qtz veins				
12	13	15	"	Mostly Slt as above (alt mod). Minor Black Shale. Strongly cleaved.	Ser-chl-sil altered	217157	0·032		
13	14	15	"	10% qtz. 90% Slt as above, 1% py.	Slt				
14	15	12	"	90% Slt as above. 10% grey cren Sh. Both strongly cleaved.	Strongly cleaved				
15	16	+15	"	5% qtz. 95% Slt as above ± ser-chl-sil alt + 1-2% py.	↓				
16	17	8	"	10% qtz. 90% Slt as above.		217158	0·351	215045	0·210
17	18	5	"	Slight smell of H_2S. 10% qtz-some highly pyritic with abund aspy (?). 90% Slt	← qtz veins ± py-aspy.			215046	0·502
18	19	8	"	Minor White qtz. Rest Slt as before/Minor py.	↓			215047	0·068
19	20	12	"	Minor qtz. 60% Slt, strong alt, 1% py. 40% grey-black cren Sh.	Alt Slt > Sh			215048	0·079
20	21	7	"	Minor qtz. Ditto above.	↓	217159	0·040		
21	22			EOH (Hard ground).					
22	23								
23	24								

COMMENTS: Apart from qtz ± py-aspy @ 17-18m, hole unremarkable except for strong cleavage of sediments.

COLLAR CO-ORDS (AMG): N: 5448286 E: 499950 RL:

ANGLE: -60° AZIMUTH (AMG): 0° HOLE TYPE: 94mm TRICONE DATE: 12-2-97 GEOLOGIST: J.G. PURVIS

COMPOSITE: DESPATCH No.: LGM97-7. ANALABS LAB REPORT No.: CEN201.60.12807

RESPLIT: DESPATCH No.: LGM97-9. ANALABS LAB REPORT No.: CEN201.60.12833

CENTRAL KALGOORLIE GOLD MINES

RAB Drillhole Log (Sheet....1....of....1....) **Hole No.** LGR 31

Project: Lefroy, Volunteer Hill Grid Locality: VOLUNTEER OLD MAIN SHAFT AREA **Depth:** 18m

FROM (M)	TO (M)	WEIGHT (kg)	COLOUR	CHIP DESCRIPTION	INTERPRETED LOG	COMPOSITE SAMPLE No.	Au g/t	RESPLIT SAMPLE No.	Au g/t
0	1			Discarded - contamination from LGR 30 material.	Tailings				
1	2			Discarded - possible tailings. Very sandy and only slox. Base of ox.					
2	3	7	Pale grey	40% qtz. Much clay. 40% unox ser qtz-mica Slt ± py. 20% unox Black Sh-cren.	Qtz veins in Sh	217160	0.026		
3	4	9	" "	Minor qtz. 80% grey Sh. 20% Slt as above (alt is weak ser > chl). Strongly cleaved.					
4	5	6	" "	Minor qtz. 100% Slt as above. Minor py.	Slt				
5	6	6	" "	5% qtz. 95% Slt as above. Trace py.					
6	7	10	" "	5% qtz. 90% Slt as above. 5% grey-black cren Sh. Strongly cleaved.	Strongly cleaved	217161	0.022		
7	8	12	Grey	Minor qtz. 30% Slt as above. 70% Sh as above.					
8	9	15	"	10% qtz ± chl. 60% Sh as above. 30% Slt as above.	Qtz veins in altered				
9	10	15	Pale grey	30% qtz ± chl. 40% Slt ± mod ser-chl alt + 1% py. 30% grey-black cren Sh.	cleaved Slt + Sh				
10	11	15	" "	25% qtz-chl. 50% strong ser-chl alt Slt ± 1% py. 50% grey Sh ± py.		217162	0.014		
11	12	15	Dk grey	5% qtz ± chl. 85% grey-black strongly crenulated Sh ± 1% py.	Crenulated Sh ± qtz veins				
12	13	15	Grey	25% qtz. 65% Sh as above. 10% Slt as before.					
13	14	+20	"	5% qtz. 10% Black Sh as above. 85% alt Slt as before (1% py). Less cleaved.	Silicified altered Slt/Sst				
14	15	5	"	5% qtz. 5% Black Sh. 90% strongly silif > ser-chl Slt/Sst. Less cleaved.		217163	0.009		
15	16	+20	"	Minor qtz. 70% Slt as above (minor py). 30% grey-black cren Sh.					
16	17	+15	"	5% qtz. 90% Slt as above. 5% Sh.					
17	18	4	"	10% qtz. 90% silif Slt/Sst as above.					
18	19			EOH (Very hard rock).					
19	20								
20	21								
21	22								
22	23								
23	24								

COMMENTS:

COLLAR CO-ORDS (AMG): N: 5448310 E: 499950 RL:

ANGLE: -60° AZIMUTH (AMG): 0° HOLE TYPE: 94mm TRICONE DATE: 12.2.97 GEOLOGIST: J.G. PURVIS

COMPOSITE: DESPATCH No: LGM97-7. ANALABS LAB REPORT No: CEN201.60.12807 RESPLIT: DESPATCH No.: LAB REPORT No.:

381095

CENTRAL KALGOORLIE GOLD MINES

RAB Drillhole Log (Sheet....1....of..1..) **Hole No.** LGR 32

Project: Lefroy, Volunteer Hill Grid Locality: WEST VOLUNTEER AREA **Depth:** 19m

FROM (M)	TO (M)	WEIGHT (kg)	COLOUR	CHIP DESCRIPTION	INTERPRETED LOG	COMPOSITE SAMPLE No.	Au gpt	RESPLIT SAMPLE No.	Au gpt
0	1			Discarded - contaminated by material from LGR 31.		////////			
1	2	1	Yellow-brown	Clayey soil.	soil	217164	<0.005		
2	3	5	Grey + Yellow	Odd-looking sample. 90% qtz. 10% vnox black cren Sh.	Telecom trench fill?				
3	4	3	Pale brown	30% qtz. Rest ox Slt + Sh + vnox ditto (black shale + silic Slt).	Ox Sst/Slt + Sh				
4	5	0.5	Brown	–					
5	6	5	Dk brown	Weakly ox 80% qtz-mica Slt/Sst 20% grey Sh.		217165	0.007		
6	7	6	Grey	Base of ox. 90% vnox grey qtz-mica Slt/Sst ± 1% py. 10% grey + black Sh.					
7	8	7	"	Ditto. Slt strongly sil-ser + chl alt + 1-2% py. Sh ± 1-2% py.	Sst/Slt ± strong ser-chl-sil alteration				
8	9	5	"	100% Slt/Sst as above.		217166	<0.005		
9	10	8	"	Ditto. Mod alt. Minor py.					
10	11	8	"	10% qtz ± chl. 85% Sst/Slt as above except alt strong sil-ser-chl. 5% grey Sh.					
11	12	7	"	90% Sst/Slt as above. 10% Sh as above.					
12	13	14	"	Minor qtz, otherwise ditto above.		217167	0.009		
13	14	15	"	Ditto					
14	15	15	"	Ditto. Cleavage stronger than before.					
15	16	15	Dk grey	5% qtz ± chl ± py. 70% Sst/Slt as above. 25% Black Shale, cren, minor py.	Sst/Slt > Black Sh				
16	17	9	Grey	60% strongly chl-ser alt Slt ± 1% py. 40% grey-black Sh, ser, cren, 1-2% py.	strongly cleaved and strongly chl-ser altered	217168	0.009		
17	18	4	"	Few frags: mostly Slt as above. Also Sh as above. Both ± trace py.					
18	19			No return (soft ground)	Soft ground				
19	20			EOH (no return due to soft ground or cavity).					
20	21								
21	22								
22	23								
23	24								

COMMENTS: Virtually the same rock from top to bottom. Little qtz veining but Sst/Slt is strongly altered, with pyrite.

COLLAR CO-ORDS (AMG): N: 5448284 E: 499800 RL:

ANGLE: −60° AZIMUTH (AMG): 0° HOLE TYPE: 94mm TRICONE DATE: 13·2·97 GEOLOGIST: J.G. PURNIS

COMPOSITE: DESPATCH No.: LGM 97-7. ANALABS LAB REPORT No.: CEN201.60.12807 RESPLIT: DESPATCH No.: LAB REPORT No.:

3810096

CENTRAL KALGOORLIE GOLD MINES

RAB Drillhole Log (Sheet....1....of....1....) **Hole No.** LGR 33

Project: Lefroy, Volunteer Hill Grid Locality: WEST VOLUNTEER AREA **Depth:** 24m

FROM (M)	TO (M)	WEIGHT (kg)	COLOUR	CHIP DESCRIPTION	INTERPRETED LOG	COMPOSITE SAMPLE No.	Au g/t	RESPLIT SAMPLE No.	Au g/t
0	1		Brown	Clayey soil contaminated by bulldozing. - discarded.		///////			
1	2	6	Pale brown	Clayey soil. Ox qtz-mica Sst/Slt (80%). 10% qtz. 10% mox Black Shale.	Soil	217169	<0·005		
2	3	5	Khaki	Base of ox. 80% Sst/Slt as above. 20% grey-black cren Sh.	Sst/Slt with minor Sh bands				
3	4	8	"	Minor qtz. 80% Sst/Slt + 20% Sh, as above.					
4	5	10	Grey	Ditto exactly.		217170	0·006		
5	6	5	"	5% qtz ± chl. 80% grey qtz-mica Slt ± trace py. 15% Sh. Rocks strongly cleaved.					
6	7	4	"	100% Slt as above.					
7	8	10	"	Strong chl alt zone: 25% qtz ± chl-py. 25% Sh. 50% strong chl>ser alt Sst/Slt.	Very strongly chl-alt zone				
8	9	3	"	Few frags; all strongly chl alt: qtz ± chl, chl Sh + Slt.		217171	<0·005		
9	10	3	"	Minor qtz ± chl. 70% chl>ser alt Slt. 30% grey-black cren Sh.	Sst/Slt > Sh				
10	11	2	"	40% White qtz. 40% strongly chl-ser-sil alt Slt/Sst. 20% Sh as above.	Mod chl-ser-sil alt + some qtz veins.				
11	12	1·5	"	10% qtz. 30% pyritic Black Shale. 30% strongly chl + cren Sh. 30% chl-ser Slt ± py.					
12	13	13	"	100% Sst/Slt, mod chl-ser alt ± 1% py.		217172	0·011		
13	14	15	Black+grey	90% Black graphitic + pyritic Sh (3-5% py). 10% chl-alt Sh + Slt.	Black pyritic Sh.				
14	15	3	" "	Tiny frags. Chl-alt grey Sh, chl-ser alt Sst/Slt, Black Shale. (All ± 1% py).					
15	16	10	" "	70% grey strongly chl>ser + cren Sh ± py. 20% Slt/Sst as above. 10% Black Shale.	Strongly chl alt and pyritic				
16	17	10	Grey	80% Sst/Slt as above. 20% grey Sh as above. Both ± 1-2% py.		217173	0·007		
17	18	15	Dk grey	90% Sst/Slt as above. 10% Black Shale.	Sst/Slt > Sh				
18	19	15	" "	10% qtz. 30% Black Shale (3-5% py). 30% chl Slt ± py. 30% chl Sh ± py.	Rocks softer than above 13m.				
19	20	15	" "	Minor qtz. 50% chl Slt ± py. 50% grey + black chl Sh ± py. (Alteration strong).					
20	21	18	Grey-black	15% qtz. 70% sil-chl alt Slt ± py. 15% Black Shale ± py		217174	0·014		
21	22	18	Grey	95% Slt as above (1-2% py). 5% Black Shale ± py.					
22	23	18	"	5% qtz. 70% Slt as above. 25% grey-black chl Sh ± py (2-3% py).					
23	24	20	Dk grey	Minor qtz. 50:50 Slt:Sh as above.					

COMMENTS: Below 13m sequence is different to that in LGR32. Alteration (chl and pyritization) is strong below 13m, but almost no qtz veining.

COLLAR CO-ORDS (AMG): N: 5448319 E: 499798 RL:

ANGLE: −60° AZIMUTH (AMG): 0° HOLE TYPE: 94mm TRICONE DATE: 13·2·97 GEOLOGIST: J.G. PURVIS

COMPOSITE: DESPATCH No.: LGM 97-7. ANALABS LAB REPORT No: CEN201.60.12807 RESPLIT: DESPATCH No.: LAB REPORT No.:

3810097

CENTRAL KALGOORLIE GOLD MINES

RAB Drillhole Log (Sheet....1....of..1..) **Hole No.** LGR 34

Project: Lefroy, Volunteer Hill Grid Locality: BRIDPORT HIGHWAY **Depth:** 11m

FROM (M)	TO (M)	WEIGHT (kg)	COLOUR	CHIP DESCRIPTION	INTERPRETED LOG	COMPOSITE SAMPLE No.	Au g/t	RESPLIT SAMPLE No.	Au g/t
0	1			Discarded - contamination from LGR 33.		////////			
1	2	10	Cream	Minor qtz. Strongly ox cren Sh.	↑	217175	0.008		
2	3	8	Pale yellow	Minor qtz. Ditto - after black shale.	Ox Black Shale	↓			
3	4	10	Yellow	90% ox ser cren Black Shale. 10% ox qtz-mica Sst/Slt.	↓	↓			
4	5	12	Yellow-brown	70% qtz with lim stains. 20% ox Slt as above. 10% ox Sh.	Qtz-veined zone	217176	0.040		
5	6	6	Khaki	10% qtz. 70% grey Slt. (weakly ox). 10% grey + black cren, ser, Sh.	Ox Slt + Sh	↓			
6	7	6	"	15% qtz. 65% partly ox grey cren Sh. 20% ox Slt/Sst as above.	with minor qtz veins.	↓			
7	8	7	Yellow-brown	85% qtz with lim stains. 10% ox Slt, 5% ox grey cren Sh.	Large qtz vein	↓			
8	9	12	" "	Ditto exactly.	↓	217177	0.012		
9	10	9	Khaki	20% qtz. 40% ox Slt. 40% ox Sh, both as above.	Ox Slt + Sh	↓			
10	11	9	"	15% qtz. 50% ox Slt. 35% mostly unox grey cren Sh.	with qtz veins	↓			
11	12			EOH (Rig falling off site).					
12	13								
13	14								
14	15								
15	16								
16	17								
17	18								
18	19								
19	20								
20	21								
21	22								
22	23								
23	24								

COMMENTS: Soft oxidized sediments with much qtz veining.

COLLAR CO-ORDS (AMG): N: 5448321 E: 499848 RL:

ANGLE: -50 AZIMUTH (AMG): 0° HOLE TYPE: 94mm TRICONE DATE: 13·2·97 GEOLOGIST: J.G. PURVIS

COMPOSITE: DESPATCH No.: LGM97-7. ANALABS LAB REPORT No. CEN201.60.12807

RESPLIT: DESPATCH No.: LAB REPORT No.:

CENTRAL KALGOORLIE GOLD MINES

RAB Drillhole Log (Sheet....1....of....1....) **Hole No.** LGR 35

Project: Lefroy, Volunteer Hill Grid Locality: BRIDPORT HIGHWAY **Depth:** 24m

FROM (M)	TO (M)	WEIGHT (kg)	COLOUR	CHIP DESCRIPTION	INTERPRETED LOG	COMPOSITE SAMPLE No.	Au g/t	RESPLIT SAMPLE No.	Au g/t
0	1		Red	No sample					
1	2	2	Pink	Ox sandy rock. No frags.	Highly ox Sst with qtz veins	217178	0·006		
2	3	6	Red	90% qtz with limonite stains. 10% ox Sh (strong ox).					
3	4	8	Bright yellow	Ditto exactly. Both rocktypes contain chl.					
4	5	8	" "	Clayey highly ox rock. Felsic chips.		217179	<0·005		
5	6	8	" "	Ditto.					
6	7	7	Pale khaki	Weaker ox. Tiny chips: cren Sh + qtz-mica Slt.					
7	8	11	Khaki	50:50 Grey micaceous Sh : qtz-mica Slt. Feox + MnOx stains.	Ox micaceous Sst/Slt + Sh				
8	9	10	Pale brown	5% qtz. Rest ox Slt/Sst as above + grey cren Sh.		217180	0·006		
9	10	12	" "	No qtz. Ditto.					
10	11	14	Yellow-brown	100% ox Sst/Slt - very micaceous.					
11	12	15	" "	40% ox Sst/Slt as above. 40% ox cren Sh. 20% unox Black Shale					
12	13	15	Pale khaki	40% ox Slt/Sst as above. 40% unox cren Sh, 20% ox ditto.		217181	<0·005		
13	14	13	Grey	Base of ox. Grey cren Sh.					
14	15	15	Dk grey	60% Graphitic black shale, cren, ē py cubes to 2mm. 40% grey mica Sh.	Black graphitic + pyritic Sh.				
15	16	14	Black	100% Black graphitic Sh ē py to 3mm (1-2% py).					
16	17	13	Grey	40% qtz ± chl ± py. 50% Black Shale as above ē some chl. 10% chl alt Slt ē py	Qtz vein	217182	0·009		
17	18	15	"	90% qtz ± chl-py-graphite. 10% Black Shale - pyritic + graphitic.					
18	19	18	Pale grey	50% qtz ± chl-py. 25% Grey cren Sh + 25% silif Slt/Sst, both strongly chl>ser alt ē py	Altered Slt + Sh				
19	20	7	Grey	100% White qtz.	Qtz vein				
20	21	4	"	50% White qtz. 25:25 strong chl-ser-sil alt Slt/Sst + cren grey-Black Sh. Minor py.		217183	0·007		
21	22	15	"	10% qtz. 45:45 Slt as above ē 1% py + Sh as above ē veinlets of chl>ser at vt ∠s to clear.	Quartz-veined altered Slt/Sst				
22	23	7	"	40% White qtz. 50% Slt/Sst as above. 10% grey cren Sh.					
23	24	6	"	20% white qtz. 80% Slt/Sst as above except only trace py.					

COMMENTS: Major qtz veining and strong alteration below 16m. Graphitic shale 14–18m.

COLLAR CO-ORDS (AMG): N: 5448347 E: 499826 RL:

ANGLE: -60° AZIMUTH (AMG): 0° HOLE TYPE: 82mm HAMMER DATE: 13·2·97 GEOLOGIST: J.G. PURVIS

COMPOSITE: DESPATCH No.: LGM97-7. ANALABS LAB REPORT No. CEN201.60.12807 RESPLIT: DESPATCH No.: LAB REPORT No.:

381099

CENTRAL KALGOORLIE GOLD MINES

RAB Drillhole Log (Sheet....1....of....1....) **Hole No.** LGR 36

Project: Lefroy, Volunteer Hill Grid Locality: ~~WEST~~ VOLUNTEER **Depth:** 20m

FROM (M)	TO (M)	WEIGHT (kg)	COLOUR	CHIP DESCRIPTION	INTERPRETED LOG	COMPOSITE SAMPLE No.	Au ppt	RESPLIT SAMPLE No.	Au ppt
0	1								
1	2	5	Pale khaki	No qtz. Mod ox qtz-mica Slt/Sst.	Ox Slt/Sst > Sh	217184	0·012		
2	3	9	" "	Weak ox Slt/Sst as above (70%). 30% unox grey-black cren Sh.					
3	4	11	Pale grey	Base of ox. 90% Slt/Sst with chl-ser alt. 10% Sh as above.					
4	5	7	" "	Ditto	Qtzose Sst/Slt with chl-ser alt.	217185	<0·005		
5	6	8	" "	100% Slt/Sst as above, minor py.					
6	7	9	Grey	5% qtz ± chl. 95% Slt/Sst as above.					
7	8	8	"	Ditto. 1% py.					
8	9	9	"	Ditto. Trace py.		217186	0·009		
9	10	12	"	Minor qtz. 90% Slt/Sst - mod sil-chl-ser alt ± minor py. 10% Sh.					
10	11	13	Pale grey	Ditto					
11	12	10	Whitish	100% qtzose Sst/Slt mod alt + minor py.	Grainsize coarsening				
12	13	12	Pale grey	10% qtz. Qtzose Sst as above (90%)		217187	0·015		
13	14	12	" "	5% qtz. 95% qtzose Sst as above.					
14	15	12	" "	Ditto					
15	16	14	Dk grey	5% qtz. 90% grey-black cren Sh ± minor py. 5% Sst as above.	Altered Sst/Slt + Black pyritic Sh				
16	17	12	Pale grey	60% Sst/Slt - strongly chl>ser alt + minor py. 40% Sh as above.		217188	0·037		
17	18	11	" "	Ditto.					
18	19	13	Dk grey	80% grey cren Sh + black graphitic pyritic Sh (3-5% py). 20% Slt as above.					
19	20	12	Pale grey	Minor qtz. 95% Slt/Sst (mod sil-chl-ser alt, minor py). 5% Sh as above.					
20	21			EOH					
21	22								
22	23								
23	24								

COMMENTS: Very little quartz veining. Sequence is chl-ser altered.

COLLAR CO-ORDS (AMG): N: 5448226 E: 499749 RL:

ANGLE: -60° AZIMUTH (AMG): 0° HOLE TYPE: 82mm HAMMER DATE: 14·2·97 GEOLOGIST: J.G. PURVIS

COMPOSITE: DESPATCH No: LGM97-8. ANALABS LAB REPORT No: CEN201.60.12810 RESPLIT: DESPATCH No: LAB REPORT No:

381100

CENTRAL KALGOORLIE GOLD MINES

RAB Drillhole Log (Sheet....1....of....1..) Hole No. LGR 37

Project: Lefroy, Volunteer Hill Grid Locality: WEST VOLUNTEER Depth: 17m

FROM (M)	TO (M)	WEIGHT (kg)	COLOUR	CHIP DESCRIPTION	INTERPRETED LOG	COMPOSITE SAMPLE No.	Au g/t	RESPLIT SAMPLE No.	Au g/t
0	1					///////			
1	2	4	Khaki	clayey soil c ox rock chips	Ox Sh > Slt	217189	0·010		
2	3	13	"	Base of ox. 80% grey cren Sh. 20% ox qtz-mica Slt.					
3	4	11	Pale Khaki	60% Sh as above. 40% sl ox Slt as above.					
4	5	10	" "	80% Slt as above 20% Sh as above.	Slt/Sst c minor Sh bands	217190	0·012		
5	6	11	" "	Ditto.					
6	7	10	" "	Ditto.					
7	8	11	" "	95% qtzose Slt/Sst as above. 5% Sh as above.					
8	9	12	Pale grey	80% grey Sh. 20% grey qtz-mica Slt.	Grey Sh	217191	0·005		
9	10	9	Whitish	Rock type change: 100% light grey hard sil-ser alt Sst/Slt. Trace py.	Silicified Sst				
10	11	13	Grey	15% Sst as above. 70% grey Slt (minor py). 15% grey cren Sh.	Slt				
11	12	10	Whitish	Minor qtz. As for 9-10m: Hard silif Sst c trace py.	Silicified Sst				
12	13	13	Pale grey	Ditto.		217192	0·012		
13	14	14	Grey	Rock type change: 10% qtz. 70% Slt/Sst c strong sil-chl-ser alt, minor py. 20% Sh.	Altered Slt/Sst				
14	15	13	"	10% qtz. 90% as for 9-10m: Hard silif Sst/Slt (c chl-ser + minor py).					
15	16	12	Whitish	5% qtz. 95% as above.	Silicified Sst/Slt				
16	17	11	Pale grey	100% Sst/Slt as above. V hard.		217193	0·011		
17	18			EOH (Rock v hard).					
18	19								
19	20								
20	21								
21	22								
22	23								
23	24								

COMMENTS: Very ordinary section - almost no qtz veining. Some alteration (mainly silif) below 9m.

COLLAR CO-ORDS (AMG): N: 5448257 E: 499750 RL:

ANGLE: -60° AZIMUTH (AMG): 0° HOLE TYPE: 82mm HAMMER DATE: 14·2·97 GEOLOGIST: J.G. PURVIS

COMPOSITE: DESPATCH No.: LGM97-8. ANALABS LAB REPORT No.: CEN201.60.12810 RESPLIT: DESPATCH No.: LAB REPORT No.:

3811101

CENTRAL KALGOORLIE GOLD MINES

RAB Drillhole Log (Sheet....1....of....!....) **Hole No.** LGR 38

Project: Lefroy, Volunteer Hill Grid Locality: WEST VOLUNTEER **Depth:** 20m

FROM (M)	TO (M)	WEIGHT (kg)	COLOUR	CHIP DESCRIPTION	INTERPRETED LOG	COMPOSITE SAMPLE No.	Au g/t	RESPLIT SAMPLE No.	Au g/t
0	1				↑				
1	2				Fill				
2	3	5	Yellow-brown	Total mixture: Minor qtz. Ox + unox Sh, Slt + Sst. Probable fill.	↓	217194	0·208	215049	0·341
3	4	11	Yellow	Clay. Minor qtz. Tiny frags of ox Sh + Slt. Natural surface.	Soil	↓		215050	0·011
4	5	15	Yellow-brown	Ox qtz-mica Slt/Sst (60%). Gren Sh (40%).	↑	217195	0·019		
5	6	15	Pale yellow	10% qtz. 50% ox Slt/Sst as above. 40% grey Sh.	Ox Slt/Sst > Sh				
6	7	12	" "	10% qtz. 70% ox Slt/Sst as above. 20% grey Sh (weakly ox).					
7	8	14	Pale khaki	95% weakly ox Slt/Sst as above. 5% grey gren Sh (unox).					
8	9	13	Khaki	70% Slt/Sst as above. 30% Sh as above.		217196	0·016		
9	10	12	Pale khaki	90% Slt/Sst as above. 10% Sh as above					
10	11	14	" "	Ditto.					
11	12	12	" "	10% qtz. 75% Slt as above (finer gr). 15% Sh as above.					
12	13	13	Khaki	Base of ox. 60% Slt. 40% Sh.	↑	217197	0·018		
13	14	16	Grey	60% dk grey gren Sh. 40% grey qtz-mica Slt.	Slt + Sh				
14	15	12	"	Minor qtz. 70% Slt as above (some weakly ox). 30% grey Sh as above.					
15	16	13	"	70% Sh as above. 30% mod ox qtz-mica Sst/Slt as above.	↓				
16	17	14	Black	100% Black gren + pyritic Sh.	Black pyritic Shale	217198	0·012		
17	18	14	Grey-black	40% qtz ± py. 50% Black Sh as above. 10% strongly chl Slt ± py.	qtz vein				
18	19	13	Grey	Minor qtz. 70% chl-ser alt Slt ± minor py. 30% Black Shale ± py.	Slt > Sh chl-ser alteration				
19	20	13	"	70% Slt as above (alt + 1% py). 30% grey gren Sh ± chl alt.					
20	21			EOH					
21	22								
22	23								
23	24								

COMMENTS: Very uninteresting section. Little qtz veining or alteration.

COLLAR CO-ORDS (AMG) N: 5448290 E: 499751 RL:

ANGLE: −60° AZIMUTH (AMG): 0° HOLE TYPE: 82mm HAMMER DATE: 14·2·97 GEOLOGIST: J. G. PURVIS

COMPOSITE: DESPATCH No.: LGM97-8. ANALABS LAB REPORT No.: CEN201.60.12810 RESPLIT: DESPATCH No.: LGM97-9. ANALABS LAB REPORT No.:

3811102

CENTRAL KALGOORLIE GOLD MINES

RAB Drillhole Log (Sheet 1 of 1) Hole No. LGR 39

Project: Lefroy, Volunteer Hill Grid Locality: WEST VOLUNTEER AREA Depth: 22m

FROM (M)	TO (M)	WEIGHT (kg)	COLOUR	CHIP DESCRIPTION	INTERPRETED LOG	COMPOSITE SAMPLE No.	Au g/t	RESPLIT SAMPLE No.	Au g/t
0	1								
1	2			No return	Soil				
2	3	5	Bright yellow	Clayey soil ± strongly ox frags of Sh + Slt. Minor qtz.		217199	0.016		
3	4	12	" "	100% ox qtz-mica Sst/Slt.	Ox Sst/Slt				
4	5	10	Yellow	Minor grey qtz. 90% ox Sst/Slt. 10% ox cren Sh.					
5	6	11	Pale brown	50% ox grey Sh. 50% Sst/Slt.	Ox Slt/Sst > Sh				
6	7	11	" "	30% qtz. 60% Slt/Sst as before. 10% grey Sh.	with minor qtz veins	217200	<0.005		
7	8	12	Khaki	5% qtz. 70% Slt/Sst as above. 25% grey Sh (some ox).					
8	9	13	"	75% Slt/Sst as above. 25% grey-black cren Sh					
9	10	13	Pale grey	Base of ox. 20% qtz. 80% grey hard Slt/Sst	Slt/Sst				
10	11	15	Grey	90% Slt/Sst ± chl>ser alt. 10% Sh as before.	Weakly altered,	217201	<0.005		
11	12	15	Pale grey	10% qtz. 80% Slt/Sst as above. 10% Sh as above.	with minor				
12	13	16	" "	95% Slt/Sst as above (minor py). 5% Sh.	qtz veins				
13	14	15	" "	20% qtz 80% Slt/Sst as above.	throughout.				
14	15	15	Grey	15% qtz. 70% silic Sst/Slt as above. 15% Sh.		217202	<0.005		
15	16	14	"	100% Sst/Slt as above.					
16	17	14	Dk grey	15% qtz ± chl. 75% grey Slt as above ± mod chl-ser alt + minor py. 10% Sh					
17	18	13	" "	30% qtz ± py. 60% grey-black cren Sh ± py + strong chl alt. 10% green chl Slt.	Grey-black shale with qtz veins + strong chl alteration				
18	19	15	" "	10% qtz ± chl. 90% shale as above.		217203	<0.005		
19	20	12	Grey	10% qtz. 10% Sh. 80% grey Slt/Sst, trace py.	Slt > Sh				
20	21	13	"	10% Sh. 90% Slt as above.					
21	22	6	"	60% Slt, mod chl>ser alt + minor py. 40% Sh as above.					
22	23								
23	24								

COMMENTS: Very uninteresting section. Minor qtz veins + altered zones.

COLLAR CO-ORDS (AMG): N: 5448324 E: 499753 RL:

ANGLE: -60° AZIMUTH (AMG): 0° HOLE TYPE: 82mm HAMMER DATE: 14·2·97 GEOLOGIST: J.G. PURVIS

COMPOSITE: DESPATCH No: LGM97-8. ANALABS LAB REPORT No: CEN201.60.12810 RESPLIT: DESPATCH No.: LAB REPORT No.:

381103

CENTRAL KALGOORLIE GOLD MINES

RAB Drillhole Log (Sheet....1....of....1....) **Hole No.** LGR 40

Project: Lefroy, Volunteer Hill Grid Locality: CADET VICINITY **Depth:** 24m

FROM (M)	TO (M)	WEIGHT (kg)	COLOUR	CHIP DESCRIPTION	INTERPRETED LOG	COMPOSITE SAMPLE No.	Au g/t	RESPLIT SAMPLE No.	Au g/t
0	1								
1	2	1·5	Yellow-brown	Clay.	Soil	217204	0·005		
2	3	10	" "	Ox qtz-mica Sst/Slt.	Ox Sst/Slt				
3	4	10	Khaki-grey	Ditto.					
4	5	11	Khaki	90% ditto. 10% dk grey cren Sh. Base of ox.		217205	<0·005		
5	6	12	Dk grey	100% Dk grey-black cren Sh	Grey-Black Sh				
6	7	9	Grey	70% Sh as above. 30% dk grey Slt ± mod chl alt + minor py.					
7	8	12	"	Ditto.					
8	9	12	"	90% Slt, mod sil-chl>ser alt + minor py. 10% Sh.	Slt + Sh	217206	<0·005		
9	10	13	"	75:25 Slt:Sh as above.	Both mod altered				
10	11	13	"	80% Sh as above - chl alt + minor py. 20% Slt as above.					
11	12	13	"	Ditto. Minor qtz.					
12	13	14	Dk grey	60% qtz-chl (some qtz dk green). 40% Sh as above.	Qtz vein in Shale	217207	0·810		
13	14	11	" "	5% qtz ± chl. 80% Sh as above (grey-black, cren, chl alt + minor py).	5% Slt				
14	15	13	Pale grey	5% qtz. 5% Sh. 90% Sst/Slt-grey, mod sil-chl-ser alt + trace py. Hard.	Interbedded				
15	16	14	Dk grey	Minor qtz. 80% Sh as before. 20% Slt as above ± strong sil-chl>ser alt.	Slt/Sst + Sh			DUPLICATE SAMPLE:	
16	17	15	Grey-black	90% Sh (sl graphitic, 1% py). 10% Slt as above.	Mod-strong sil-chl-ser	217208	<0·005	217209	<0·005
17	18	13	Grey	90% Slt (mod alt). 10% grey Sh.	alteration, increasing				
18	19	13	Dk grey	90% grey>black Sh (mod chl alt). 10% Slt as above.	with depth				
19	20	6	" "	80% Slt (strong sil-chl>ser alt), minor py. 20% Sh as above.					
20	21	13	Grey-black	70% Sh as above. 30% Slt as above (strong sil-chl-ser alt).		217210	<0·005		
21	22	7	" "	60% Slt as above. 40% Sh as above.					
22	23	9	Grey	20% qtz. 60% Slt as above (hard). 20% Sh as above	← Minor qtz veins				
23	24	9	"	80% Slt/Sst as above. 20% Sh as above.					

COMMENTS: Very ordinary section. No qtz at all to 11m. Some alteration - increasing with depth.

COLLAR CO-ORDS (AMG): N 5448320 E 499658 RL

ANGLE: -60° AZIMUTH (AMG): 0° HOLE TYPE: 82mm HAMMER DATE: 15·2·97 GEOLOGIST: J.G. PURVIS

COMPOSITE: DESPATCH No.: LGM 97-8 ANALABS LAB REPORT No.: CEN201.60.12810 RESPLIT: DESPATCH No.: LAB REPORT No.:

381104

CENTRAL KALGOORLIE GOLD MINES

RAB Drillhole Log (Sheet....1....of....1..) **Hole No.** LGR 41

Project: Lefroy, Volunteer Hill Grid Locality: CADET VICINITY **Depth:** 20m

FROM (M)	TO (M)	WEIGHT (kg)	COLOUR	CHIP DESCRIPTION	INTERPRETED LOG	COMPOSITE SAMPLE No.	Au g/t	RESPLIT SAMPLE No.	Au g/t
0	1								
1	2	5	Yellow-brown.	Ox qtz-mica Sst/Slt.	Ox Sst/Slt > Sh	217211	<0.005		
2	3	6	" "	70% ditto. 30% cren Sh.					
3	4	9	Pale Khaki	50 : 50 weakly ox Sh : Sst/Slt.					
4	5	11	" "	70 : 30 Sst/Slt : Sh. V weakly ox.		217212	<0.005		
5	6	12	Grey	Base of ox. 100% Dk grey Sh (not crenulated).	Grey Shale				
6	7	12	"	Ditto.					
7	8	14	"	15% qtz. 75% Sst/Slt - mod chl-ser alt + trace py. 10% Sh as above.	Sst/Slt ± alteration + qtz veins				
8	9	15	"	100% grey-black Sh (50% ± cren clear).		217213	<0.005		
9	10	13	"	Ditto. Most cren, grey > black.					
10	11	14	"	Ditto. Grey sh is chl alt.	Grey-Black Shale Some chl alt.				
11	12	15	"	Ditto. All ± cren clear.					
12	13	16	"	Ditto.		217214	<0.005		
13	14	16	"	Ditto. All strong cren + chl alt. Trace py.					
14	15	17	"	10% qtz ± chl. 60% greenish Slt ± strong chl + minor py. 30% Sh as above.	± qtz veins on contact. Slt chl > sil-ser alt				
15	16	16	Pale grey	100% Hard + blocky Slt ± mod chl > sil-ser alt.					
16	17	8	" "	Ditto.		217215	<0.005		
17	18	15	Grey	50% Slt as above. 50% grey-black cren Sh.					
18	19	18	"	5% qtz ± chl ± py. 95% Sh as above, some chl alt.	Grey-Black Shale Some chl alt				
19	20	12	Dk grey-black	Ditto. Sh has minor py + mod chl alt.					
20	21			EOH					
21	22								
22	23								
23	24								

COMMENTS: Very ordinary. Alteration seems ubiquitous. Little qtz veining.

COLLAR CO-ORDS (AMG): N: 5448293 E: 449650 RL:

ANGLE: -60° AZIMUTH (AMG): 0° HOLE TYPE: 82mm HAMMER DATE: 15.2.97 GEOLOGIST: J.G. PURVIS

COMPOSITE: DESPATCH No: LGM97-8. ANALABS LAB REPORT No: CEN201.60.12810 RESPLIT: DESPATCH No.: LAB REPORT No.:

381105

CENTRAL KALGOORLIE GOLD MINES

RAB Drillhole Log (Sheet....1....of..1..) Hole No. LGR 42

Project: Lefroy, Volunteer Hill Grid Locality: WEST VOLUNTEER AREA Depth: 19m

FROM (M)	TO (M)	WEIGHT (kg)	COLOUR	CHIP DESCRIPTION	INTERPRETED LOG	COMPOSITE SAMPLE No.	Au g/t	RESPLIT SAMPLE No.	Au g/t
0	1								
1	2			No return					
2	3			No return					
3	4	3	Pale khaki	Few frags. Ox qtz-mica Slt/Sst > ox grey Sh.	Ox Slt/Sst & Sh	217216	<0.005		
4	5	8	Khaki	50% ox Slt as above. 50% weakly ox grey Sh.					
5	6	7	Pale khaki	5% qtz. 75% ox Slt/Sst. 25% grey-black (nox Sh.					
6	7	13	Khaki	Base of ox. 60% Sh as above. 40% Slt as above.					
7	8	13	Khaki-grey	10% qtz-some grey. 50% qtz>mica Slt as above. 40% Sh	Slt + Sh	217217	<0.005		
8	9	13	" "	80% Slt as above c chl alt. 20% grey-black Sh as above.	some chl alt.				
9	10	15	" "	Ditto (Slt c mod chl>ser alt, trace py).					
10	11	14	Grey	50% Slt as above. 50% Sh as above.					
11	12	12	"	Ditto. (Grey Sh is chl alt c minor py).		217218	<0.005		
12	13	13	"	80% greenish Slt c mod chl-ser-sil alt + minor py. 20% Sh.					
13	14	14	Pale grey	100% Slt/Sst as above. Qfrose.	Hard qfrose Slt/Sst				
14	15	11	Grey	Ditto					
15	16	3	"	Ditto. Alt weak. Trace py.	c mod chl-ser-sil alt	217219	<0.005		
16	17	6	"	Ditto - a v fi gr Sst.					
17	18	16	"	Ditto: Slt/Sst as above.					
18	19	11	"	Ditto. Qfrose + hard. Mod ser-sil-chl. Trace py.					
19	20			EOH					
20	21								
21	22								
22	23								
23	24								

COMMENTS: Very ordinary section. Rock below 12m is same as in base of LGR 40+41. Almost no qtz veining or decent alteration.

COLLAR CO-ORDS (AMG): N: 5448261 E: 499651 RL:

ANGLE: -60° AZIMUTH (AMG): 0° HOLE TYPE: 82mm HAMMER DATE: 15.2.97 GEOLOGIST: J.G. PURVIS

COMPOSITE: DESPATCH No.: LGM97-8. ANALABS LAB REPORT No.: CEN201.60.12810 RESPLIT: DESPATCH No.: LAB REPORT No.:

381106

CENTRAL KALGOORLIE GOLD MINES

RAB Drillhole Log (Sheet....1....of....1....) **Hole No.** LGR 43

Project: Lefroy, Volunteer Hill Grid Locality: WEST VOLUNTEER AREA **Depth:** 24m

FROM (M)	TO (M)	WEIGHT (kg)	COLOUR	CHIP DESCRIPTION	INTERPRETED LOG	COMPOSITE SAMPLE No.	Au g/t	RESPLIT SAMPLE No.	Au g/t
0	1								
1	2	1	Yellow-brown	Clayey soil.	Soil	217220	<0.005		
2	3	5	" "	Ditto.	↓				
3	4	12	" "	100% strongly ox Slt/Sh.	Ox Slt/Sst				
4	5	12	Yellow	Ox grey Sh.	Ox Sh	217221	<0.005		
5	6	13	"	90% strongly ox qtz-mica Sst/Slt. 10% ox Sh.					
6	7	10	"	10% qtz. 90% ox Sst as above.	Ox Sst/Slt Minor qtz veins.				
7	8	13	Yellow-brown	20% qtz. 60% ox Sst/Slt as above. 20% ox Sh as before.					
8	9	14	Pale Khaki	Minor qtz. 60% ox Sst/Slt as above. 40% weakly ox grey-black cren Sh.	Ox Sst/Slt > Sh	217222	<0.005		
9	10	10	" "	90% weakly ox Sst/Slt. 10% mox cren Sh as above.					
10	11	13	Grey	Base of ox. 80% Sh as above. 20% Slt/Sst - dk grey, qtz-mica.	Grey-black Sh > Sst/Slt.				
11	12	10	"	Ditto					
12	13	10	"	50% Sh as above. 50% Slt/Sst as above.		217223	<0.005		
13	14	13	"	Minor qtz ± chl. 80% Sh as above: grey-black, some chl alt. 20% strongly	chl Slt, minor py.				
14	15	13	Pale grey	100% Hard grey qtzose Sst/Slt - ± mod ser-chl-sil alt + trace py.	Qtzose Sst/Slt ser-chl-sil alt				
15	16	12	" "	Ditto					
16	17	14	Grey	90% grey-black cren Sh ± minor py. 10% Sst/Slt as above.	Black Shale	217224	<0.005		
17	18	15	"	100% Sh as above.					
18	19	15	"	70% Black Shale, cren, sl graphitic, 1% py. 35% strongly chl Slt, 1% py.					
19	20	13	Pale grey	100% grey hard qtzose Slt/Sst ± mod chl-ser-sil alt + minor py.	Qtzose Sst/Slt > Sh chl-ser-sil alt				
20	21	13	Grey	60% Slt/Sst as above. 40% grey-black cren Sh.		217225	<0.005		
21	22	15	"	50:50 as above.					
22	23	12	"	100% grey hard qtzose Slt/Sst as above. Minor py.					
23	24	15	"	Minor qtz. 60% green Sh Slt/Sst as above - strong alt. 40% grey cren Sh.					

COMMENTS: Very ordinary section, similar to LGR40-42. Rock below 14m is same as in those holes. Very little qtz veining.

COLLAR CO-ORDS (AMG): N: 5448269 E: 499700 RL:

ANGLE: -60° AZIMUTH (AMG): 0° HOLE TYPE: 82mm HAMMER DATE: 15-2-97 GEOLOGIST: J.G. RURVIS

COMPOSITE: DESPATCH No.: LGM97-8. ANALABS LAB REPORT No.: CEN201.60.12810 RESPLIT: DESPATCH No.: LAB REPORT No.:

381107

CENTRAL KALGOORLIE GOLD MINES

RAB Drillhole Log (Sheet....1....of....1....) Hole No. LGR 44

Project: Lefroy, Volunteer Hill Grid Locality: VOLUNTEER MAIN DUMP Depth: 20m

FROM (M)	TO (M)	WEIGHT (kg)	COLOUR	CHIP DESCRIPTION	INTERPRETED LOG	COMPOSITE SAMPLE No.	Au g/t	RESPLIT SAMPLE No.	Au g/t
0	1								
1	2			Discarded: Mullock? 100% qtz.					
2	3	6	Fawn	Mullock? 100% white qtz. Minor mox rock frags - mullock.	Mullock - qtz layer (battery reject?)	217226	0.005		
3	4	3	Grey	100% white qtz - some faced with sericitic material. Mullock					
4	5	4	Brown	Natural surface: Some qtz with limonite stains. Mostly ox qtz-mica Sst/Slt	Highly qtz veined ox Sst/Slt > Sh	217227	0.368	215051	0.106
5	6	10	Yellow-brown	50% qtz as above! 40% ox Sst/Slt > Sh. 10% unox Sh (mullock?)				215052	0.120
6	7	10	Brown-black	Unusual colour. 50% qtz. 25% ox Slt. 25% unox grey-black Sh.				215053	0.774
7	8	8	Pale grey	95% coarse white qtz. 5% unox ser Slt. Base of ox.				215054	0.467
8	9	8	Grey	95% coarse white qtz. 5% grey-black Sh - some ± chl alt.	Major qtz reef	217228	0.128	215055	0.245
9	10	8	Pale grey	Ditto. Sh is cren.	Minor alt cren Sh wallrocks			215056	0.083
10	11	8	" "	Ditto.				215057	0.068
11	12	10	Grey	80% white qtz. 15% Sh as above - some chl alt. 5% Sst/Slt - ser alt.				215058	0.016
12	13	13	Dk grey	75% white qtz. 25% strongly chl Sh >> Slt (some of Slt is dark green).		217229	0.005		
13	14	13	Grey	15% qtz. 80% greenish strong chl > ser alt Slt/Sst. 5% Black Shale.	Minor qtz veins Hard, strongly chl > ser-sil altered				
14	15	14	"	10% qtz. 80% Sst/Slt as above (chl > ser-sil alt). 10% cren Sh.					
15	16	15	Pale grey	Ditto.					
16	17	14	" "	100% hard greenish Sst/Slt ± strong chl > ser-sil alt. Trace py.	Sst/Slt	217230	0.027		
17	18	15	" "	80% Sst/Slt - v hard (strong chl-sil-ser alt). Minor py. 20% Sh as before.					
18	19	15	" "	5% qtz. 90% Sst/Slt as above. 5% Sh.					
19	20	8	" "	Heavily contam by material from higher in hole. 20% qtz. 75% alt Sst/Slt. 5% Sh					
20	21			EOH (Very hard + water inflows).					
21	22								
22	23								
23	24								

COMMENTS: Cross hole with LGR 24. Layer of qtz just under surface (Volunteer battery reject?). Much qtz veining to 13m (Volunteer Reef). Then altered section.

COLLAR CO-ORDS (AMG): N: 5448264 E: 499845 RL:

ANGLE: -60° AZIMUTH (AMG): 090° HOLE TYPE: 82mm HAMMER DATE: 16·2·97 GEOLOGIST: J.G. PURVIS

COMPOSITE: DESPATCH No.: LGM97-8. ANALABS LAB REPORT No. CEN201.60.12810 RESPLIT: DESPATCH No.: LAB REPORT No.:

CENTRAL KALGOORLIE GOLD MINES

RAB Drillhole Log (Sheet....1....of....1....) **Hole No.** LGR 45

Project: Lefroy, Volunteer Hill Grid Locality: WEST VOLUNTEER AREA **Depth:** 23m

FROM (M)	TO (M)	WEIGHT (kg)	COLOUR	CHIP DESCRIPTION	INTERPRETED LOG	COMPOSITE SAMPLE No.	Au g/t	RESPLIT SAMPLE No.	Au g/t
0	1								
1	2	2	Bright yellow	Clayey soil.		217231	0.014		
2	3	7	" "	Ditto.					
3	4	8	" "	Clayey: strongly ox qtz-mica Slt.					
4	5	9	" "	100% clay.	Highly oxidized - Mostly clay	217232	<0.005		
5	6	8	" "	Mostly clay - some pink. Few highly ox frags: qtz, cren Sh, Slt.					
6	7	9	Pink-yellow	Mostly clay.					
7	8	10	Bright yellow	All clay - no chips.					
8	9	10	" "	Ditto.		217233	0.005		
9	10	12	" "	Mostly clay. Minor chips of strongly ox qtz-mica Slt.					
10	11	8	" "	Mostly clay. Chips: ditto.					
11	12	12	Khaki-yellow	Mostly clay. Small chips: ox Slt + grey Sh. Ox decreasing.					
12	13	12	Khaki	Mod ox grey Sh > grey Slt.		217234	<0.005		
13	14	15	Khaki-yellow	20% qtz - limonite stained. 40:40 strongly ox Slt + Sh.	Highly oxidized: - clay after ox Slt + Sh with minor qtz veins				
14	15	12	Yellow-brown	Strongly ox. 30% qtz - limonite stained. 70% ox Slt.					
15	16	12	Khaki-yellow	Strongly ox. 15% qtz as above. 85% ox Slt > Sh (tiny frags).					
16	17	12	" "	Very strong ox. 50% qtz. 50% qtz-mica Slt (few + tiny frags).		217235	0.009		
17	18	11	Pale yellow	Very strong ox. Mostly clay. Few frags: Ox Slt >> qtz.					
18	19	11	Khaki-yellow	Very strong ox. 10% limonitic qtz. 80% ox Slt. 10% ox grey Sh.					
19	20	11	Pale khaki	Strong ox. Few + tiny frags: 90% ox Slt. 10% unox white qtzite ± 3-5% py.					
20	21	11	Khaki	Mod ox. 50% qtz (5% highly pyritic). 45% ox Slt. 5% Black Shale.		217236	0.006		
21	22	12	Grey	Base of ox: Fault Zone. 40% Black puggy Sh. 30% qtz ± py ± graphite. 30% ser alt Slt.	Black pug after Shale. Minor qtz veins				
22	23	12	"	Fault Zone: Largely black pug. Few frags: Ser alt Slt ± 1% py.					
23	24			EOH (Hammer stopped working).					

COMMENTS: Major fault Zone? Strongest and deepest oxidation seen to date underlain by puggy shales. Unusual hole.

COLLAR CO-ORDS (AMG): N: 5448199 E: 499650

ANGLE: -60° AZIMUTH (AMG): 0° HOLE TYPE: 82mm HAMMER DATE: 17-2-97 GEOLOGIST: J.G. PURVIS

COMPOSITE: DESPATCH No: LGM97-9. ANALABS LAB REPORT No: CEN 201.60.12833 RESPLIT: DESPATCH No.: LAB REPORT No.:

381109

CENTRAL KALGOORLIE GOLD MINES

RAB Drillhole Log (Sheet....1....of. 2.) Hole No. LGR 46

Project: Lefroy, Volunteer Hill Grid Locality: SOUTH-WEST OF WEST VOLUNTEER Depth: 26·5m

FROM (M)	TO (M)	WEIGHT (kg)	COLOUR	CHIP DESCRIPTION	INTERPRETED LOG	COMPOSITE SAMPLE No.	Au ppt	RESPLIT SAMPLE No.	Au ppt
0	1								
1	2			Discarded: contamination from LGR45.					
2	3	6	Yellow-brown	Mostly clay. Few tiny frags of qtz + ox rock.		217237	<0·005		
3	4	9	" "	15% qtz. 80% strongly ox grey Sh. 5% ox Slt. Mostly clay.	Highly oxidized - mostly clay				
4	5	9	Khaki+Yellow	Ditto.					
5	6	7	Pink-brown	Mostly clay. Few frags of ox grey Sh + qtz.	Minor chips of				
6	7	10	Yellow-brown	10% qtz. 70% strongly ox grey Sh. 20% ox Slt. Mostly clay.	qtz, Slt + Sh.	217238	<0·005		
7	8	6	" "	Mostly clay. Chips: 50% qtz, 40% ox Slt. 10% ox Sh.					
8	9	8	" "	Mostly clay. Chips: 5% qtz. 50% ox Slt. 45% ox grey Sh.					
9	10	10	" "	Mostly clay. Chips: 60% qtz. 30% ox Sh. 10% Slt. (Sh weakly ox. Slt strongly ox).					
10	11	8	" "	Mostly clay. Chips: 30% qtz 35% Slt + 35% grey Sh, as above.		217239	<0·005		
11	12	9	Yellow khaki	Mostly clay. Few+tiny frags of strongly ox qtz-mica Slt as above.					
12	13	9	" "	Mostly clay. Ditto					
13	14	10	Dk khaki	Mostly clay. Chips: 50% qtz. 50% chloritic ox Sh.					
14	15	10	Dk grey	Mostly puggy soft grey-black shale. Rare frags of qtz + chl grey-black Sh.		217240	<0·005		
15	16	12	Pale grey	Weakly ox. Soft rock - probably alt Slt. Rare frags: silic pyritic Slt.	Soft puggy rock - probable grey-black				
16	17	10	Grey	Base of ox. No frags - rock v soft.	Sh + sericitic Slt.				
17	18	10	"	No frags. Ditto.					
18	19	10	Dk grey	Rare tiny frags of semi-massive py (in Sh.?). Graphitic sheen on water.	Rare qtz-pyrite	217241	0·011		
19	20	12	Pale grey	Rare frags: qtz ± graphite; sericitic Slt; semi-massive py.	veins				
20	21	12	Dk grey	Rare frags: pyritic qtz. Graphitic sheen on water.					
21	22	12	" "	Few frags: Black, sl graphitic Sh + minor qtz ± py + graphite.					
22	23	10	Grey-black	Abundant frags: 50% qtz ± py + chl. 25% Graphitic Black Sh. 25% grey ser-chl Sh.	Puggy grey-black	217242	0·005		
23	24	12	" "	Few frags: Mostly qtz ± py + chl. Rest: Dk grey or black graphitic + pyritic Sh. Some strong chl alt	Shale ± qtz-py veins.				

COMMENTS:

COLLAR CO-ORDS (AMG): N: 5448139 E: 499650 RL:

ANGLE: −60° AZIMUTH (AMG): 0° HOLE TYPE: 82mm HAMMER DATE: 18·2·97 GEOLOGIST: J.G. PURVIS

COMPOSITE: DESPATCH No.: LGM 97-9. ANALABS LAB REPORT No.: CEN 201.60.12833 RESPLIT: DESPATCH No.: LAB REPORT No.:

3811110

CENTRAL KALGOORLIE GOLD MINES

RAB Drillhole Log

Hole No. LGR 46

Project: Lefroy Area: SOUTH-WEST OF WEST VOLUNTEER (Sheet....2....of..2.) Depth: 26·5m

FROM (M)	TO (M)	SAMPLE WEIGHT (kg)	SAMPLE COLOUR	GEOLOGICAL DESCRIPTION	INTERPRETED LOG	COMPOSITE SAMPLE No.	Au g/t	RESPLIT SAMPLE No.	Au g/t
24	25	12	Black	60% white qtz ± chl ± py. 40% chl Sh > Black Shale ± py. Tr chip: 10mm massive py.	Zone of qtz-py veining in Black Sh	217242	(continued)		
25	26	10	Black	70% white + grey qtz ± chl ± py. 30% grey strongly chl Sh > Black Shale ± py.		↓			
26	27			EOH (26·5m)					
27	28								
28	29								
29	30								
30	31								
31	32								
32	33								
33	34								
34	35								
35	36								
36	37								
37	38								
38	39								
39	40								
40	41								
41	42								
42	43								
43	44								
44	45								
45	46								
46	47								
47	48								

COMMENTS: Interesting hole - similar to LGR 45. Possible major fault zone. Deep strong oxidation underlain by puggy altered grey + black shale with qtz-py veins.

COLLAR CO-ORDS (AMG): N: 5448139 E: 499650 RL:

ANGLE: -60° | AZIMUTH: 0° | HOLE TYPE: 82mm HAMMER | DATE: 18·2·97 | GEOLOGIST: J.G. PURVIS

COMPOSITE:
DESPATCH ORDER No.: LGM97-9.
LAB REPORT No.: CEN 201.60. 12833
LAB DETAILS: ANALABS

RESPLIT:
DESPATCH ORDER No.
LAB REPORT No.:
LAB DETAILS:

INPUT APPROVAL - DATE: APPROVED:
DATE: APPROVED:

CHECKLIST:	DATE	BY	DATE	BY
COMPUTER ENTRY				
PLAN PLOT				
SECTION PLOTS				

3811111

CENTRAL KALGOORLIE GOLD MINES

RAB Drillhole Log (Sheet....1....of....1....) Hole No. LGR 47

Project: Lefroy, Volunteer Hill Grid Locality: SOUTH WEST OF WEST VOLUNTEER Depth: 18m

FROM (M)	TO (M)	WEIGHT (kg)	COLOUR	CHIP DESCRIPTION	INTERPRETED LOG	COMPOSITE SAMPLE No.	Au g/t	RESPLIT SAMPLE No.	Au g/t
0	1								
1	2			Discarded - little return.					
2	3	4	Bright yellow	Mostly clay. Few frags - mostly qtz.	Strongly oxidized rock - mainly clay.	217243	0.007		
3	4	7	" "	Ditto.					
4	5	8	Brown	Mostly clay.					
5	6	10	Yellow-brown	Ditto.					
6	7	11	Khaki	40% qtz. 60% mod ox grey slightly chl cren Sh.		217244	0.009		
7	8	10	"	90% limonite-stained qtz. 10% Sh as above. Base of ox.	Qtz veined zone				
8	9	10	Dk grey	Mostly dk grey Sh? Few frags: Mostly qtz > ox chl cren Sh (latter contamination).					
9	10	10	" "	Ditto. Few frags: Mostly lim-stained qtz, > ser-chl alt Slt > Sh. Frags ox.					
10	11	10	Black	Black graphitic Sh? Few frags: 50% qtz + ox rock as above. 50% qtz ± py + grey-black Sh ± common py		217245	0.008		
11	12	11	Dk grey	Dk grey-black Sh? Few frags: 60% pyritic + graphitic qtz. 40% dk grey-black Sh (py)					
12	13	12	Grey-black	Ditto. Few frags: Qtz ± py-graphitic. > Dk grey-black Sh (graph, py, chl, cren)					
13	14	12	" "	Ditto.	Soft grey + black chl				
14	15	11	Dk grey	Ditto.	pyritic Shale ± minor qtz-py	217246	0.006		
15	16	11	" "	Ditto.	veins				
16	17	8	" "	100% white + grey qtz - some very pyritic ± graph-chl.	Large qtz-py veins in Shale				
17	18	7	Grey	95% qtz - some pyritic ± chl. 5% chl-ser alt grey Sh + Slt, both ± py.					
18	19			EOH					
19	20								
20	21								
21	22								
22	23								
23	24								

COMMENTS: Similar to LGR 46: soft rocks with pyritic qtz veins and alteration.

COLLAR CO-ORDS (AMG): N: 5448099 E: 499644 RL:

ANGLE: -60° AZIMUTH (AMG): 0° HOLE TYPE: 82mm HAMMER DATE: 18-2-97 GEOLOGIST: J.G. PURVIS

COMPOSITE: DESPATCH No: LGM97-9. ANALABS LAB REPORT No.: CEN 201.60. 12833 RESPLIT: DESPATCH No.: LAB REPORT No.:

381112

CENTRAL KALGOORLIE GOLD MINES

RAB Drillhole Log (Sheet....1....of 2.) Hole No. LGR 48

Project: Lefroy, Volunteer Hill Grid Locality: SOUTH WEST OF WEST VOLUNTEER Depth: 26m

FROM (M)	TO (M)	WEIGHT (kg)	COLOUR	CHIP DESCRIPTION	INTERPRETED LOG	COMPOSITE SAMPLE No.	Au g/t	RESPLIT SAMPLE No.	Au g/t
0	1								
1	2			Contaminated by LGR47 material - discarded.	Soil:				
2	3	4	Pale grey	Qtz + clay	Clay + qtz	217247	0·006		
3	4	7	Whitish	Qtz 20%. 80% sl graphitic white "qtzite" (vnox).	"Quartzite"				
4	5	8	Yellow-brown	40% limonitic qtz. 50% ox chl-ser alt Sh. 10% ox qtz-mica Slt.					
5	6	9	Yellow	50% lim qtz. 50% strongly ox Slt as above.	Highly ox Slt > Sh				
6	7	9	Yellow-brown	60% lim qtz. 30% ox cren chl Sh. 10% ox Slt. Much limonite.	with qtz veins	217248	<0·005		
7	8	10	Khaki	Ditto.					
8	9	9	"	80% white qtz. 20% weakly ox Sh as above.					
9	10	10	Pale yellow	90% qtz - minor lim stains. 10% cren ser Sh. Base of ox.					
10	11	10	Dk grey	60% white qtz ± graphite. 40% graphitic dk grey-black Sh, cren. Minor py.		217249	<0·005		
11	12	10	Black	Soft black graphitic shale. Chips: 95% white qtz. 5% Black Shale (cren).					
12	13	10	Grey-black	Ditto. Chips: 100% white qtz ± graphitic margins.	Soft graphitic				
13	14	12	Black	Ditto. Chips: 90% white qtz ± graph + chl margins. 10% Black py Sh.	and highly pyritic				
14	15	12	Grey-black	Soft graph + pyritic shale. Chips: 100% white qtz ± graph Sh selvages.	Black Shale	217250	0·020		
15	16	10	Black	Ditto. Few frags: Qtz as above > Black graphitic pyritic Sh.	with minor qtz				
16	17	13	"	Ditto. Rare frags of Sh as above (3-5% py). No qtz.	veins				
17	18	13	"	Ditto. Rare frags: massive py > pyritic black shale.					
18	19	14	"	Ditto exactly.		217251	0·012		
19	20	16	"	Ditto. Rare frags: silif highly pyritic, graphitic Sh.					
20	21	15	"	Ditto exactly. +5% py.					
21	22	15	"	Ditto exactly (2-3% py).					
22	23	15	"	Ditto exactly +5% py.		217252	0·008		
23	24	10	"	Ditto. Rare frags: Highly py black shale + pyritic ghost Slt.					

COMMENTS:

COLLAR CO-ORDS (AMG): N: 5448059 E: 499645 RL:

ANGLE: -60° AZIMUTH (AMG): 0° HOLE TYPE: 82mm TRICONE DATE: 18·2·97 GEOLOGIST: J. G. PURVIS

COMPOSITE: DESPATCH No.: LGM97-9. ANALABS LAB REPORT No.: CEN 201. 60. 12833 RESPLIT: DESPATCH No.: LAB REPORT No.:

381113

CENTRAL KALGOORLIE GOLD MINES — RAB Drillhole Log

Hole No. LGR 48

Project: Lefroy Area: SOUTH WEST OF WEST VOLUNTEER (Sheet....2....of....2....) **Depth:** 26m

FROM (M)	TO (M)	SAMPLE WEIGHT (kg)	SAMPLE COLOUR	GEOLOGICAL DESCRIPTION	INTERPRETED LOG	COMPOSITE SAMPLE No.	Au g/t	RESPLIT SAMPLE No.	Au g/t
24	25	2	Black	Soft Black graphitic shale. Chips: 20% qtz. 30% massive py. 50% silif BSh + 5% py.] Soft graphitic		217252	(continued).		
25	26	4	"	Ditto. Rare chips: pyritic Black graphitic Sh. EOH	and highly pyritic Black Sh + qtz minor veins ↓				
26	27								
27	28								
28	29								
29	30								
30	31								
31	32								
32	33								
33	34								
34	35								
35	36								
36	37								
37	38								
38	39								
39	40								
40	41								
41	42								
42	43								
43	44								
44	45								
45	46								
46	47								
47	48								

COMMENTS: Nice-looking highly pyritic black shale unit. Generally only minor qtz veins and not silicified like unit south of Volunteer Main Shaft.

COLLAR CO-ORDS (AMG): N: 5448059 E: 499645 RL:

ANGLE: −60° AZIMUTH: 0° HOLE TYPE: 82mm TRICONE DATE: 18-2-97 GEOLOGIST: J.G. PURVIS

INPUT APPROVAL - DATE: APPROVED:

DATE: APPROVED:

COMPOSITE:
DESPATCH ORDER No.: LGM97-9
LAB REPORT No.: CEN 201.60.12833
LAB DETAILS: ANALABS

RESPLIT:
DESPATCH ORDER No.:
LAB REPORT NO.:
LAB DETAILS:

CHECKLIST:	DATE	BY	DATE	BY
COMPUTER ENTRY				
PLAN PLOT				
SECTION PLOTS				

3811114

CENTRAL KALGOORLIE GOLD MINES

RAB Drillhole Log (Sheet....1....of....1.) Hole No. LGR 49

Project: Lefroy, Volunteer Hill Grid Locality: WEST VOLUNTEER EXTENDED Depth: 22m

FROM (M)	TO (M)	WEIGHT (kg)	COLOUR	CHIP DESCRIPTION	INTERPRETED LOG	COMPOSITE SAMPLE No.	Au g/t	RESPLIT SAMPLE No	Au g/t
0	1			] Discarded: mullock from West Volunteer Shaft.	Mullock				
1	2								
2	3	7	Yellow	Highly ox rock. Chips: qtz.	↑	217253	<0.005		
3	4	7	"	Highly ox sandy rock. Chips: 80% qtz, 20% ox qtz-mica Slt.	Highly oxidized				
4	5	8	Pink-brown	Chips few + tiny: 70% qtz 30% ox Sh + Slt.	qtz-mica Sst/Slt				
5	6	9	" "	Ditto. Chips: Tiny. No qtz. Ox Slt > Sh.	with minor Sh bands				
6	7	9	" "	Ditto No Sh fragt.	and very minor	217254	<0.005		
7	8	9	Yellow	Ditto. Chips: few + tiny. Qtz > ox Sst.	qtz veins				
8	9	11	"	Ditto Chips: Ditto. Ox Sst/Slt, minor qtz.					
9	10	11	Yellow-brown	Ditto exactly					
10	11	12	" "	Ditto. Chips few + tiny: 100% ox qtz-mica Sst/Slt.		217255	<0.005		
11	12	12	Pink-yellow	Ditto. Chips few + tiny: Mostly Soft ox Sst/Slt. Minor ox Sh.					
12	13	12	Yellow-brown	Ditto. Chips tiny: 20% lim qtz. 70% ox Slt/Sst. 10% ox Sh.					
13	14	14	" "	Ditto. Chips tiny: Minor qtz. 70% ox Slt. 30% unox cren ser grey Sh.					
14	15	12	Yellow	10% qtz. 45% mod ox Slt. 45% weakly ox Sh.		217256	<0.005		
15	16	11	"	5% qtz. 5% Sh as above. 90% Slt as above.					
16	17	12	Yellow-brown	100% strongly ox Slt.					
17	18	12	" "	10% qtz. 90% ox Sst/Slt.					
18	19	12	Yellow-khaki	5% qtz. 5% chl Sh. 90% ox (strongly) Sst/Slt (qtz-mica).		217257	<0.005		
19	20	12	" "	Ditto exactly.					
20	21	11	Khaki	Base of ox. 30% qtz. 70% dk grey chl cren Sh (unox).	Grey chl-alt Sh				
21	22	12	Grey	20% qtz. 80% Sh as above.	with qtz veins				
22	23			EOH					
23	24								

COMMENTS: Deeply weathered section due to predominance of sandy rocks. Nothing of interest.

COLLAR CO-ORDS (AMG): N: 5448243 E: 499548 RL:

ANGLE: -60° AZIMUTH (AMG): 0° HOLE TYPE: 82mm TRICONE DATE: 18-2-97 GEOLOGIST: J.G. PURVIS

COMPOSITE: DESPATCH No.: LGM97-9. ANALABS LAB REPORT No.: CEN 201.60. 12833 RESPLIT: DESPATCH No.: LAB REPORT No.:

381115

CENTRAL KALGOORLIE GOLD MINES

RAB Drillhole Log (Sheet 1 of 1) Hole No. LGR 50

Project: Lefroy, Volunteer Hill Grid Locality: WEST VOLUNTEER EXTENDED Depth: 20m

FROM (M)	TO (M)	WEIGHT (kg)	COLOUR	CHIP DESCRIPTION	INTERPRETED LOG	COMPOSITE SAMPLE No.	Au g/t	RESPLIT SAMPLE No.	Au g/t
0	1	2	Brown	Soil - few frags: qtz + ox rock.	Soil	217258	0.021		
1	2	4	Yellow	Ditto. Some unox silic Slt (from shaft?).					
2	3	6	Cream-yellow	40% qtz. 40% ox strongly ser Sh. 10% ox Black Shale. 10% ox qtz-mica Slt.	Ox ser Sh c qtz veins				
3	4	7	" "	20% qtz. 60% ser Sh as above. 10% Black Shale. 10% silic Slt.					
4	5	8	" "	75% qtz. 20% ser cren Sh as above. 5% silic Slt.		217259	0.016		
5	6	8	" "	20% qtz. 60% strongly silif pyritic Black Shale. 10% ox Sh. 10% silic Slt.	Ox ser Sh + silif BSh c qtz veins				
6	7	5	" "	Mostly strongly ox rock. Few tiny frags: Ox ser Sh > qtz.	Ox ser Sh				
7	8	8	Yellow-brown	95% qtz. 5% ser Sh.	Qtz veined zone in ox ser Sh				
8	9	5	" "	100% qtz c prominent Mn stains.		217260	<0.005		
9	10	7	" "	90% qtz ditto. 5% ox ser Sh. 5% ox qtz-mica Sst.					
10	11	8	" "	50:50 Strongly ox Sh + qtz-mica Sst/Slt.					
11	12	7	Dk yellow	10% qtz. 50% strongly ox Sst/Slt. 40% ox ser Sh.	Ox Slt/Sst > Sh (weak ser)				
12	13	6	" "	Strongly ox rock. Few tiny chips: Qtz, ox ser Sh, ox Sst/Slt.		217261	<0.005		
13	14	8	" "	5% qtz. 95% strongly ox Sst/Slt.					
14	15	8	" "	5% qtz. 75% strongly ox Sst/Slt. 20% ox Sh.					
15	16	10	Fawn-brown	100% ox clayey grey Sh.	Ox grey Sh (ser/chl/alt) with minor qtz veins				
16	17	6	bk khaki	10% qtz. 90% weakly ox grey ser-chl/alt Sh.		217262	<0.005		
17	18	7	" "	20% qtz. 80% Sh as above (micaceous).					
18	19	7	" "	Base of ox. 100% hard qtz-mica Slt.	Qtz-mica Slt (unox)				
19	20	7	" "	Ditto. Rare py. EOH					
20	21								
21	22								
22	23								
23	24								

COMMENTS: Very deep strong oxidation. Sericitized shales with qtz veins, in upper part of hole. Very ordinary sediments below this.

COLLAR CO-ORDS (AMG): N: 5448200 E: 499549 RL:

ANGLE: -60° AZIMUTH (AMG): 0° HOLE TYPE: 82mm TRICONE DATE: 19·2·97 GEOLOGIST: J.G. PURVIS

COMPOSITE: DESPATCH No: LGM97-9. ANALABS LAB REPORT No.: CEN 201·60. 10833 RESPLIT: DESPATCH No.: LAB REPORT No.:

381116

CENTRAL KALGOORLIE GOLD MINES

RAB Drillhole Log (Sheet....1....of....1....) Hole No. LGR 51

Project: Lefroy, Volunteer Hill Grid Locality: WEST VOLUNTEER EXTENDED Depth: 20m

FROM (M)	TO (M)	WEIGHT (kg)	COLOUR	CHIP DESCRIPTION	INTERPRETED LOG	COMPOSITE SAMPLE No.	Au g/t	RESPLIT SAMPLE No.	Au g/t
0	1								
1	2	2	Khaki-brown	Clayey ox rock frags + qtz.	Highly ox rock – Slt/Sst + Sh	217263	0.012		
2	3	3	Yellow-brown	Ditto.					
3	4	4	Yellow	Clay.					
4	5	4	"	Highly ox clayey rock. Rare frags: Strongly ox qtz-mica Sst/Slt.		217264	<0.005		
5	6	4	"	Ditto. Rare frags: Strongly ox Sst/Slt + trace ser Sh.					
6	7	4	Creamy	Ditto. Rare frags: Hematitic + limonitic micaceous Slt] Lateritized	Mainly pale clay ± laterite frags				
7	8	10	"	Ditto. Rare frags: ferruginous Sh.] Sediments					
8	9	10	"	Ditto. Rare frags: sl ferruginous Sh.		217265	<0.005		
9	10	10	"	Ditto. Rare frags: Highly ox Sh.	Strongly oxidized Sh				
10	11	11	"	Ditto exactly.					
11	12	12	"	Ditto exactly.					
12	13	8	Pale brown	Ditto. Few frags: 95% qtz. 5% ox ser Sh.	Highly ox ser Sh + Slt ± qtz veins	217266	0.030		
13	14	10	Whitish	Ditto. Few tiny frags: 50% qtz. 25% ox ser Sh. 25% ox ser Slt.					
14	15	12	Creamy	Ditto. Few frags: 95% ox blc silif graph + pyritic Black Sh. 5% ox Slt.]	Highly ox Slt/Sst with bands of silif pyritic ox Black Shale				
15	16	13	"	85% silif pyritic graphitic Black Shale. 10% qtz. 5% ox Sst. Sh ox + blc.]					
16	17	13	"	Ox clayey rock. Few frags: Mostly pale grey ox blc silic Sh ± sulph stains > ox Slt.]		217267	0.018		
17	18	13	Pale yellow	Ditto. Rare frags: Highly ox Slt.					
18	19	14	" "	Ditto. Rare frags: Highly ox Slt > ox blc silic graphitic Black Shale].					
19	20	14	" "	Ditto. Rare frags of highly ox unidentified rock. EOH					
20	21								
21	22								
22	23								
23	24								

COMMENTS: Highly oxidized to base, with some lateritic profile. Some nice silicified and pyritic Black Shale 14–17m.

COLLAR CO-ORDS (AMG): N: 5448165 E: 499550 RL:

ANGLE: –60° AZIMUTH (AMG): 0° HOLE TYPE: 82mm TRICONE DATE: 19·2·97 GEOLOGIST: J.G. PURVIS

COMPOSITE: DESPATCH No.: LGM97-9 ANALABS LAB REPORT No.: CEN 201.60.12833 RESPLIT: DESPATCH No.: LAB REPORT No.:

3811117

APPENDIX 5

ROCK CHANNEL SAMPLE RESULTS,

BRIDPORT HIGHWAY

APPENDIX 5

Rock Channel Sampling - Bridport Highway Roadcuts (Northern side)

(4m horizontal, continuous). Laboratory: Analabs, Cooee (Report No.s: 103380.60.11847 & 11876). Gold by fire assay.

A: Going east from origin at 5448330N, 499260E (western end of roadcut)

ID	SAMPLE No.	Au g/t	As ppm	AMG N	AMG E	LOCATION (m)	DESCRIPTION
1	219824	<0.008	-	5448330	499262	0-4E	Ox grey shales with greasy feel. Lim stains on fracts. One 20mm steeply west dipping qtz vein.
2	219825	<0.008	-	5448331	499266	4-8E	Ox shales passing into fine quartzose sst. No qtz veining. White clayey seams.
3	219826	<0.008	-	5448332	499270	8-12E	Ox fi gr quartzose mica sst with minor shale. One 20mm qtz vein in shallow west-dipping cleavage.
4	219827	<0.008	-	5448333	499274	12-16E	Fi gr ox qtz-mica sst, some siltst and greasy shale. Lim stains throughout.
5	219828	<0.008	-	5448334	499278	16-20E	Ox cleaved fi gr sst > siltst, minor greasy shale. One 20mm qtz vein and two 10 mm qtz veins (limonitic with MnOx)
6	219829	<0.008	-	5448334	499282	20-24E	Ox siltst/shale 20-21mE, then massive cleaved fi gr sst. Lim and MnOx stains. One 10mm qtz vein in siltstone/shale.

B: Going east from origin at 5448369N, 499889E (eastern end of R.Keele's chip sampling)

7	219830	0.030	32	5448365	499891	0-4E	Ox greasy shales becoming C/D horizon soil @ 3-4mE. Three 10mm qtz veins. Two qtz frags @ 3-4mE.
8	219831	0.023	30	5448365	499895	4-8E	Ox shales, C horizon to 5.7mE then D horizon. Yellow-brown clay. Greasy. Many small qtz frags.
9	219832	0.030	37	5448364	499899	8-12E	C/D horizon-pale to yellow-brown clay after shales. Minor qtz frags after veins to 20mm.
10	219833	0.054	61	5448363	499903	12-16E	C horizon yellow-brown clay after shales/siltst. Rare small qtz frags.
11	219834	0.010	32	5448362	499907	16-20m	C/D horizon yellow-brown clay. Siltst to 18mE then ox shales. One small piece of qtz.
12	219835	0.018	34	5448361	499911	20-24E	Yellow-brown clay C/D horizon over siltst and shales. One small piece of qtz.
13	219836	0.027	32	5448360	499915	24-28E	C/D horizon dark yellow/brown clay with large frags of fi gr sst (clvd). One piece of qtz.
14	219837	0.055	58	5448359	499983	94-98E	Ox sst/siltst, limonitic yellow-brown. Shales at 97.5 m to 98mE. No qtz. Some hematitic colours after chlorite.
15	219838	0.031	58	5448358	499987	98-102E	Partly ox black greasy sericitic shales. 1mm qtz veins // cleavage over 0.3m.
16	219839	0.087	99	5448357	499992	102-106E	Ox siltst/shale, varying from white to dark yellow-brown. Very greasy and sericitic. Two thin qtz veins.
17	219840	0.036	49	5448356	499996	106-110E	Ox massive siltst with minor shales. Some chloritic pink colours. One 70mm qtz vein.
18	219841	0.040	61	5448355	499100	110-114E	Massive clvd siltst/sst with minor ox shale. Two <10mm qtz veins. Pink chloritic colours.
19	219842	0.045	233	5448354	499104	114-118E	Ox massive siltst and sst with minor shale (black in places). Dark limonitic brown with spots after py. One 40mm qtz vein.
20	219843	0.063	207	5448353	499108	118-122E	Qtz vein stockwork in ox greasy siltst and shale. Numerous qtz veins 50-200mm at all angles.
21	219844	0.249	505	5448353	500013	122-126E	Still in qtz stockwork zone. Ox shales with several qtz veins to 250mm. Shales are strongly altered around veins.
22	219845	0.053	212	5448354	500018	126-130E	Ox greasy alt sericitic shales with several qtz veins to 50mm.
23	219846	0.028	41	5448354	500023	130-134E	Ox shales and siltst with minor sst. Two 10mm qtz veins (several lensey veins to 50mm not in sample.) End of qtz stockwork.
24	219847	0.010	31	5448355	500029	134-138E	Ox massive sst with two 5mm qtz veinlets. East dipping cleavage.
25	219848	0.022	35	5448355	500034	138-142E	Ox siltst/sst to 140mE with two 20mm qtz veins, then greasy siltst and shale with pink chloritic colours.
26	219875	0.009	36	5448356	500035	142-146E	Ox siltst/shale to 143mE, then massive ox qtzose sst. Two 5mm qtz veinlets.
27	219876	0.021	48	5448356	500037	146-150E	Ox and clayey sst to 148.5mE, then siltst/shale. Very greasy. One 100mm and two 5mm qtz veins.
28	219877	0.029	71	5448357	500041	150-154E	Ox pink sst and minor clayey shales. Becoming C horizon scree at 153mE. One 15mm qtz vein.
29	219878	0.028	61	5448358	500044	154-158E	Ox clayey yellow/brown siltst/shale with sst(157-158mE). One 20mm qtz vein.

Rock Channel Sampling - Bridport Highway Roadcuts (Northern side)

(4m horizontal, continuous) Laboratory. Analabs, Cooee (Report No. 103380.60.11846). Gold by fire assay.

ID	SAMPLE No.	Au g/t	As ppm	AMG N	AMG E	LOCATION (m)	DESCRIPTION
30	219879	0.051	203	5448360	500047	158-162E	Ox clayey pale yellow/brown D horizon after sst/siltst/shales. No qtz veins.
31	219880	0.049	205	5448361	500050	162-166E	As above, mainly siltst/sst. Some C horizon in places. No qtz veins.
32	219881	0.131	451	5448362	500051	166-170E	Ox and clayey C/D horizon from siltst/shale. Several qtz veins to 50mm @ 166-168mE.
33	219882	0.016	51	5448364	500053	170-174E	Ox and clayey yellow-brown C/D horizon after siltst/shale. No qtz veins.

C: Going west from origin at 5448390N, 499782E (western end of R.Keele's chip sampling)

34	219883	0.006	22	5448389	499782	0-4W	Ox creamy greasy shales>siltst. Two 5-10mm qtz veins at 0-2mW. West dipping cleavage.
35	219884	0.010	33	5448390	499779	4-8W	Ox clayey and greasy creamy shales with lim stains and on fractures. Several qtz veins to 70mm, (average:<10mm).
36	219885	0.009	38	5448391	499775	8-12W	Ox and clayey greasy siltst,shale and fi gr sst. 350mm qtz reef (limonitic and vughy). Three other qtz veins, one 50mm).
37	219886	0.012	34	5448392	499771	12-16W	Ox massive siltst with minor shale and fi gr sst. Two 5mm qtz veins. West dipping cleavage.
38	219887	0.005	45	5448393	499767	16-20W	Ox yellow-brown clayey shales/siltst. Limonitic colours common. Two qtz veins <10mm.
39	219888	<0.005	23	5448394	499763	20-24W	Ox clayey siltst, minor shale. Dark limonitic colour. No qtz veins.
40	219889	0.006	28	5448394	499759	24-28W	Ox limonitic siltst, minor clayey shales. One 20mm qtz vein in west dipping cleavage.
41	219890	<0.005	18	5448395	499755	28-32W	Yellow-brown and pink fi gr sst, with lesser clayey siltst and shale. Minor soil in sample. No qtz veins.
42	219891	0.005	15	5448395	499751	32-36W	Ox mainly massive siltst>greasy shales. One 5mm qtz vein.
43	219892	0.015	11	5448395	499746	36-40W	Ox greasy sericitized shales. 200mm qtz reef (vertical) at 39.75mW. Cleavage dipping west @ 40 degrees.
44	219893	0.005	15	5448396	499741	40-44W	Ox shales with minor siltst. Very greasy due to sericitization . Two qtz veins @40-41mW, one 20mm, one 10mm.
45	219894	<0.005	15	5448397	499737	44-48W	Hard ox to unox interbedded dark grey greasy shales and siltst/sst. Cleavage 45 degrees to west. No qtz veins.
46	219895	0.005	13	5448397	499733	48-52W	Ox bright yellow siltst and greasy ox shale. One 15mm qtz vein, one 2mm qtz vein.
47	219896	<0.005	14	5448398	499729	52-56W	Interbedded ox red or yellow fi gr sst and creamy greasy sericitized shales. No qtz veins.
48	219897	<0.005	15	5448399	499725	56-60W	Ox sericitized shale siltst, >pale yellow fi gr sst. One 200mm qtz reef. Two <10mm qtz veins.
49	219898	<0.005	11	5448399	499721	60-64W	Ox siltst and shale. Sericitization decreasing. 600mm W dipping qtz reef @ 63.4-64mW. Cleavage almost horizontal.
50	219899	<0.005	22	5448400	499717	64-68W	Ox sericitized shales and siltst. Four 10-100mm qtz veins @ 64-66mW. Stronger sericite around veins.
51	219900	0.005	14	5448401	499713	68-72W	Interbedded yellow-brown and pink ox massive siltst/sst, and creamy-purple ox greasy sericitized shale. One 100mm qtz vein.
52	214001	0.010	9	5448401	499708	72-76W	Massive ox siltst/shale. Lim pits after py. Two 2mm qtz veinlets.
53	214002	0.005	15	5448401	499704	76-80W	Ox massive fi gr sst with lim fracts and several qtz veinlets <3mm. Also crumpled sericitized shale with 10mm qtz vein.
54	214003	0.005	12	5448401	499699	80-84W	Ox interbedded sst, siltst, and greasy sericitized shale. One 150mm, one 50mm, one 10mm, qtz veins.
55	214004	0.011	9	5448402	499695	84-88W	Ox sst,siltst and shales. Seams of creamy-grey clay in cleavage. One 25mm qtz vein.
56	214005	0.010	7	5448402	499691	88-92W	Ox siltst interspersed with weakly ox black shale and some sericitized shale. Minor lim seams and pits after py. No qtz veins.
57	214006	0.005	10	5448402	499687	92-96W	Ox siltst > greasy shales. Shales host 250mm wide steeply E-dipping lim qtz vein and two 10-20mm qtz veins.
58	214007	0.014	11	5448403	499683	96-100W	Massive band of ox siltst with lim on fracts and minor pits after py. Partly ox black shales 99-100mW. No qtz veins.
59	214008	0.074	11	5448403	499679	100-104W	100-102mW: Ox greasy black shale. 102-104mW: Massive ox siltst with thin limonitic bands. No qtz veins.
60	214009	0.009	18	5448403	499675	104-108W	Ox siltst/sst with minor greasy ox shale. 100mm band of hard lim in clv @ 105mW. No qtz veins. Clv dips 40 degrees W.
61	214010	0.009	13	5448404	499671	108-112W	Fi gr sst/siltst. Clv dipping 10-20 degrees west. One 20mm east-dipping qtz vein in greasy shale band.
62	214011	0.008	9	5448404	499667	112-116W	112-114mW: Ox to unox siltst/sst. 114-116mW:Ox sericitized shale/siltst with 200mm lim qtz vein and one 10-20mm qtz vein.
63	214012	0.007	11	5448405	499663	116-120W	Ox siltst and shale. Vertical lode channel @ 117-118.2mW in sericitized shale (no qtz).
64	214013	0.015	12	5448405	499659	120-124W	Ox massive fi gr sst with 1m bands of greasy dk grey sericitized shale with puggy seams. Two 3mm qtz veins in sst.
65	214014	0.007	13	5448405	499655	124-128W	Ox siltst. Lim and hematite on fracts. Bands of creamy-grey sericitized shales. One 5mm qtz vein in shale band.

APPENDIX 6

ROCK CHIP SAMPLE RESULTS,

BRIDPORT HIGHWAY

&

VOLUNTEER COSTEAN

APPENDIX 6 : ROCK CHIP SAMPLE RESULTS
Page 1 of 2 BRIDPORT HIGHWAY & VOLUNTEER COSTEAN

A : BRIDPORT HIGHWAY ROADCUT

2m chip samples taken by R Keele, going west from origin at 5448365mN / 499889mE.
Analysed by 30 gm Fire Assay at Analabs, Cooee.
Analabs Report No. 103380.60.11847, 3rd May 1996.

Sample No	Interval	Au (g/t)	Au (g/t) Repeat Assay	Description
219804	71-73m	<0.008		Sst/Slt.
219805	73-75m	<0.008		Sst, minor qtz veins.
219806	75-77m	<0.008		Sst.
219807	77-79m	<0.008		Sst, minor qtz veins.
219808	79-81m	<0.008		Slt/Sst.
219811	85-87m	<0.008		Slt & Sst.
219812	87-89m	<0.008		Slt/Sh & Sst, minor qtz veins.
219813	89-91m	<0.008	<0.008	Slt & Sst. Qtz veins.
219814	91-93m	0.015		Slt & Black Sh. Qtz veins.
219815	93-95m	<0.008		Sst/Slt.
219818	99-101m	<0.008		Slt/Sst.
219819	101-103m	<0.008	<0.008	Slt. Qtz veins.
219820	103-105m	0.018		Sst & Slt.
219821	105-107m	<0.008		Sst & Slt.
219822	107-109m	<0.008		Slt & Sst.
219823	109-111m	<0.008		Sst/Slt.
219918	5-7m	0.065		Slt.
219919	7-9m	0.021		Slt.
219920	9-11m	0.022	0.013	Slt.
219921	11-13m	<0.008		Slt/Sst.
219922	13-15m	<0.008	<0.008	Slt/Sst.
219923	15-17m	<0.008		Sst.
219924	17-19m	<0.008		Micaceous Sst.
219925	19-21m	<0.008		Micaceous Slt.
219926	21-23m	0.021		Sst.
219927	23-25m	<0.008		Slt/Sst.
219928	25-27m	<0.008		Qtz-mica Sst.
219929	27-29m	<0.008		Qtz-mica Sst.
219977	31-33m	<0.008		Sst/Slt.
219978	33-35m	<0.008		Sst.
219981	35-37m	<0.008		Slt/Sst.

APPENDIX 6 : ROCK CHIP SAMPLE RESULTS
Page 2 of 2 BRIDPORT HIGHWAY & VOLUNTEER COSTEAN

B : VOLUNTEER COSTEAN

1m chip samples taken by R Keele, going south from origin at 5448247mN / 499918mE.
Analysed by 30 gm Fire Assay at Analabs, Cooee.
Analabs Report No. 103380.60.11847, 3rd May 1996.

Sample No	Interval	Au (g/t)	Au (g/t) Repeat Assay	Description
219938	2-3m	0.016		Brown clayey soil.
219939	3-4m	0.012		Strongly oxidized rock.
219940	4-5m	<0.008	<0.008	Slt.
219941	5-6m	0.009		Qtzose Sst.
219942	6-7m	0.051		Qtzose Sst/Slt.
219947	11-12m	<0.008	<0.008	Slt.
219948	12-13m	0.009		Pyritic Slt.
219949	13-14m	0.014		Silicified Sh/Slt.
219951	15-16m	0.012		Crenulated Slt/Sh.
219952	16-17m	0.014		Crenulated Slt.
219955	19-20m	0.013		Slt.
219961	25-26m	0.011		Slt.
219962	26-27m	<0.008		Slt.
219963	27-28m	<0.008		Crenulated Slt.
219964	28-29m	0.016		
219971	36-37m	<0.008		Micaceous Sst.
219972	37-38m	<0.008	<0.008	Slt.
219974	39-40m	<0.008	<0.008	
219975	40-41m	<0.008		Sst/Slt.
219976	41-42m	<0.008		Slt.

APPENDIX 7

MOBILE METAL IONS

SOIL SAMPLE RESULTS

APPENDIX 7

MOBILE METAL IONS SOIL SAMPLE RESULTS

TRAVERSE ALONG LINE 499900E ACROSS VOLUNTEER REEF

All samples taken from B/C Horizon at 0.7m depth using a power auger.
Analysis by AMDEL, Adelaide, by IC8M. Report No. 6AD3202, 24th September 1996.

All results in ppb.

Sample No.	AMG North	Au	Pt	Pd	Ag	As	Cu	Pb	Zn	Mo	Cd	Sb	Bi	Ti	Ba	Ni	Co	Se	Te
211522	5448337	1.32	0.21	1.58	5.25	18	230	131	9	12	<1	2	0.5	<1	631	58	7	39	<1
211523	5448330	0.66	0.11	0.61	5.40	18	316	62	7	2	<1	1	0.5	<1	520	92	9	29	<1
211524	5448318	1.22	0.12	1.11	6.75	17	297	104	13	4	<1	<1	0.4	<1	627	123	10	37	<1
211525	5448313	1.89	0.15	2.12	5.85	544	840	393	212	4	1	4	0.9	<1	2200	328	121	81	<1
211529	5448272	18.00	0.03	1.52	5.35	85	114	131	4	12	<1	3	0.5	<1	619	134	11	20	<1
211530	5448258	45.00	0.06	0.81	5.90	368	199	19	19	47	<1	4	0.6	<1	113	304	16	25	<1
211531	5448250	33.00	0.03	0.20	3.70	32	248	3	5	41	<1	<1	0.1	<1	62	255	26	10	<1
211532	5448240	27.00	0.19	0.99	6.60	168	116	17	29	17	<1	3	0.4	<1	131	115	13	16	<1
211533	5448232	6.00	0.02	0.56	8.65	13	254	4	5	19	1	1	0.1	<1	61	204	19	16	<1
211534	5448220	3.67	0.15	0.27	7.15	4	286	<1	1	15	<1	<1	0.2	<1	34	175	12	10	<1
211535	5448210	2.14	0.09	0.76	5.85	14	130	11	<1	1	<1	2	0.4	<1	316	44	7	20	<1
211536	5448200	1.90	0.01	1.51	11.00	15	155	84	25	4	<1	2	0.5	<1	733	48	8	21	<1
211537	5448190	1.03	0.12	0.68	3.75	13	245	68	28	9	<1	1	0.7	<1	660	129	10	9	<1
211538	5448180	0.60	<0.01	0.14	3.35	10	108	47	22	1	<1	<1	0.7	<1	887	54	6	15	<1
211539	5448170	0.80	0.20	0.73	3.95	10	294	43	8	1	<1	1	0.4	<1	666	72	8	26	<1
211540	5448160	0.77	0.12	0.51	2.90	16	193	20	13	5	<1	1	0.7	<1	180	87	9	35	1
211541	5448150	0.54	0.07	1.05	2.55	8	116	56	3	5	<1	1	0.6	<1	1100	40	8	35	<1
211542	5448140	0.42	0.10	0.53	3.40	8	88	40	3	6	<1	<1	0.4	<1	512	66	8	29	<1
211543	5448130	0.46	0.04	1.12	2.65	9	102	79	4	<1	<1	1	0.7	<1	838	51	8	43	<1
211544	5448120	0.55	0.05	0.80	2.15	9	85	46	3	1	<1	1	0.6	<1	535	80	6	39	<1

APPENDIX 8

CHECK ANALYSES - 1995 DRILLHOLE SAMPLES

APPENDIX 8

CHECK ANALYSES - 1995 DRILLHOLE SAMPLES

A : 1M SAMPLES FROM RC DRILLHOLES LGC2, 4, 5 & 14
PINAFORE - CHUM REEFS

Originally analysed by 30 gm Fire Assay at Analabs, Cooee
(Analabs Report No.s 103380.60.11413 & 11450).
Re-assayed by 50 gm Fire Assay at ALS, Brisbane
(ALS Report No. ST15124)

Sample No	Hole No.	Interval	Analabs Original Assay Au (g/t)	ALS Re-assay Au (g/t)
212708	LGC5	22-23m	<0.008	<0.01
212709	LGC5	23-24m	0.181	<0.01
212710	LGC5	24-25m	0.308	0.30
212711	LGC5	25-26m	0.095	0.08
212712	LGC5	30-31m	0.096	0.07
212713	LGC5	31-32m	0.678	0.64
212714	LGC5	32-33m	1.200	1.14
212715	LGC5	33-34m	0.534	0.55
212716	LGC5	34-35m	1.680	1.71
212717	LGC5	35-36m	0.497	0.54
212718	LGC5	36-37m	0.456	0.44
212719	LGC5	37-38m	0.415	0.42
212720	LGC5	38-39m	0.513	0.51
212721	LGC5	39-40m	0.288	0.28
212722	LGC5	40-41m	0.721	0.44
212723	LGC5	41-42m	0.031	0.01
212724	LGC5	50-51m	<0.008	<0.01
212725	LGC5	51-52m	0.337	0.33
212726	LGC5	52-53m	2.110	2.00
212727	LGC5	53-54m	0.120	0.12
212728	LGC5	54-55m	0.050	0.04
212729	LGC5	55-56m	0.025	0.01
212730	LGC5	64-65m	0.062	0.08
212731	LGC5	65-66m	0.347	0.34
212732	LGC5	66-67m	0.106	0.09
212733	LGC5	67-68m	0.084	<0.01
212734	LGC2	82-83m	0.253	0.26
212735	LGC2	83-84m	0.325	0.34
212736	LGC2	84-85m	0.206	0.13
212737	LGC2	85-86m	0.602	0.50

APPENDIX 8

CHECK ANALYSES - 1995 DRILLHOLE SAMPLES

A : 1M SAMPLES FROM RC DRILLHOLES LGC2, 4, 5 & 14
PINAFORE - CHUM REEFS

Originally analysed by 30 gm Fire Assay at Analabs, Cooee
(Analabs Report No.s 103380.60.11413 & 11450).
Re-assayed by 50 gm Fire Assay at ALS, Brisbane
(ALS Report No. ST15124)

Sample No	Hole No.	Interval	Analabs Original Assay Au (g/t)	ALS Re-assay Au (g/t)
212738	LGC2	86-87m	0.633	0.58
212739	LGC2	87-88m	1.440	1.34
212740	LGC2	88-89m	0.597	0.58
212741	LGC2	89-90m	0.055	0.04
212742	LGC2	94-95m	0.290	0.27
212743	LGC2	95-96m	0.077	0.08
212744	LGC2	96-97m	0.086	0.08
212745	LGC2	97-98m	0.830	0.80
212746	LGC3	95-96m		<0.01
212747	LGC3	112-113m		<0.01
212748	LGC4	34-35m	0.696	0.66
212749	LGC4	35-36m	0.396	0.39
212750	LGC4	36-37m	1.510	1.41
212751	LGC4	37-38m	0.455	0.44
212752	LGC5	14-15m	0.750	0.74
212753	LGC5	15-16m	0.096	0.08
212754	LGC14	30-31m	<0.008	<0.01
212755	LGC14	31-32m	0.180	<0.01

APPENDIX 8

CHECK ANALYSES - 1995 DRILLHOLE SAMPLES

B : SPLIT DRILLCORE FROM MINES DEPARTMENT DRILLHOLE BH3, SPECIMEN HILL

Originally analysed by 30 gm Fire Assay at Analabs, Cooee
(Analabs Report No.s 103380.60.11478).
Re-assayed by 50 gm Fire Assay at AMDEL, Adelaide
(Amdel Report No. 6AD2294)

Sample No	Interval	Analabs Original Assay Au (g/t)	AMDEL Re-assay Au (g/t)
212756	3.46-3.96m	<0.008	<0.01
212757	3.96-4.46m	<0.008	<0.01
212758	4.90-5.92m	<0.008	<0.01
212759	5.92-6.18m	<0.008	<0.01
212760	6.18-7.97m	<0.008	<0.01
212761	7.97-9.04m	<0.008	<0.01
212762	9.04-10.86m	0.010	<0.01
212763	10.86-12.29m	<0.008	<0.01
212764	12.29-13.18m	<0.008	<0.01
212765	13.18-14.35m	<0.008	<0.01
212766	14.35-16.05m	<0.008	<0.01
212767	16.05-16.76m	<0.008	<0.01
212768	16.76-17.57m	<0.008	<0.01
212769	17.57-19.30m	<0.008	<0.01
212770	23.91-25.86m	<0.008	<0.01
212771	25.86-28.07m	0.015	<0.01
212772	28.07-28.77m	<0.008	<0.01
212773	28.77-29.45m	<0.008	<0.01
212774	29.45-29.87m	<0.008	<0.01
212775	29.87-31.09m	<0.008	<0.01
212776	31.09-32.00m	<0.008	<0.01
212777	32.00-32.73m	<0.008	<0.01
212778	34.44-35.04m	0.011	<0.01
212779	36.80-37.93m	0.013	<0.01
212780	37.93-39.00m	0.031	<0.01

APPENDIX 9

FOLLOW-UP SOIL SAMPLE RESULTS,

VOLUNTEER-LAND O'CAKES ANOMALY

APPENDIX 9

FOLLOW-UP SOIL SAMPLE RESULTS, VOLUNTEER - LAND O'CAKES ANOMALY

All samples taken from B Horizon at 0.7m depth using a power auger.
Samples sieved to -80 mesh.
Analysis by 50gm Fire Assay at Analabs, Cooee.
Analabs Report No. CEN201.60.12248, 16th september 1996.

	Grid Co-ords (AMG)			Repeat Assay
Sample No.	Northing	Easting	Au (g/t)	Au (g/t)
211501	5448360	499950	<0.005	
211502	5448380	499950	<0.005	
211503	5448400	499950	<0.005	
211504	5448420	499950	<0.005	
211505	5448440	499950	0.082	
211506	5448460	499950	0.038	
211507	5448480	499950	0.029	
211508	5448380	500050	0.028	0.027
211509	5448400	500050	0.097	
211510	5448420	500050	0.074	
211511	5448440	500050	0.047	
211512	5448460	500050	0.031	0.032
211513	5448480	500050	0.067	
211514	5448500	500050	0.039	