TANAMI
EXPLORATION NL

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FIRST

ANNUAL REPORT

EL 22917

ELDORADO

For Year Ending 9 July 2003

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1. SUMMARY

Exploration programs carried out by the Tanami Exploration NL on EL 22917 for the year ending 9 July 2003 comprised regional mapping, prospect scale mapping, soil sampling, stream sediment sampling and rockchip sampling. Several anomalous gold and basemetal values were returned by the programs, however, overall prospectivity of the tenement is considered moderate.

The tenement area was incorporated into the Company's Alice Springs regional mapping program in March-April 2001. The program covered an area of 10,000 km² centred on the Florence Creek Shear Zone and associated structures.

The mapping program and accompanying non-ground disturbing sampling programs were carried out prior to the grant of the tenement under the fossicking provisions of the Mining Act. The initial target identified in the region was Pt-Pd-Au mineralisation associated with the Florence Creek Shear Zone.

In 2001 as an extension of the Company's exploration program on contiguous tenement EL 10078, a series of helicopter supported rockchip and soil sampling traverses were completed on the tenement (see **Plate 3**). A number of anomalous gold-copper values were returned from this program. Known mineral occurrences were also visited including the Oonagalabi area (not within EL 22917) and Selins base-metal deposits. Extensions of the Oonagalabi deposit were located on EL 22917 - the Silver City and Silverado deposit.

In July 2002 (see **Plate 4**) the Riddoch Amphibolite was tested for Pt-Pd mineralisation by stream sediment sampling over approximately 30km of outcropping strike length in the Harts Range. A number of low level anomalies returned by the sampling were followed up in march-April 2003 with detailed stream sediment and sampling and rockchip traverses.

In March-April 2003 (see **Plate 5**) strike extensions of the Oonagalabi Cu-Zn deposit, the Silver City and Silverado prospects, were mapped and rockchip sampled to test tenor, extent and distribution of mineralisation (see **Plate 6**). In addition the Oonagalabi Dome was covered by a stream sediment, mapping and rockchip sampling program targeting repetitions of the Oonagalabi stratigraphic horizon and mineralisation.

Results of sampling did not lead directly to any new discoveries or development of drill targets. However several aspects of the 2003 sampling programs over the Riddoch Amphibolite and Oonagalabi areas have yet to be reviewed and follow-up is anticipated for Year 2.

2. INTRODUCTION

Exploration on EL 22917 was carried out by Tanami Exploration NL (TENL), a wholly owned subsidiary of Tanami Gold NL (TGNL). TGNL is a publicly listed company and active explorer in the Tanami-Arunta Province.

This report provides details of exploration conducted by TENL on EL 22917 since 2001 as part of its major Harts Range Project in Central Australia. The initial phases of this work comprised regional geological mapping, assessment of target commodities and prospectivity and limited reconnaissance sampling.

Systematic exploration commenced soon after grant of the tenement targeting a range of commodities in various geological environments:

- Gold ± Cu ± PGE - hosted in epigenetic shear zones and brittle structures; regionally related to the Alice Springs Orogeny and locally to the major Florence Creek Shear Zone.

- PGE's (Pt + Pd) - hosted within mafic-ultramafic plugs and major ortho-amphibolite units which may represent sills.

- Cu ± Zn ± Pb ± Ag ± Au - 'Oonagalabi-style' stratiform base metal mineralisation associated with anthophyllites and carbonate-rocks.

3. LOCATION AND ACCESS

The tenement is located 100 kilometres NE of Alice Springs (see **Figure 1**). Access to the tenement is via the Stuart and Plenty Highways from Alice Springs (see **Figure 2** and **Plate 1**), then by station tracks.

4. TENEMENT DETAILS

EL 22917 consists of 500 blocks in the Harts Range district of Central Australia. The tenement was granted to TENL with effect on 10 July 2002.

TABLE 1: Tenement Details EL 22917

Name	Blocks	Km²	Grant Date	Expiry	Covenant Y/E 2003
Eldorado	500	1,574	10/07/02	09/07/08	$66,500

EL 22917 was incorporated into the Company's Harts Range Indigenous Land Use Agreement (ILUA) by a Deed for Covenant executed on 20 May 2003 (**Figure 3**). The associated Exploration Deed between TGNL and the Central Land Council (CLC) sets out the terms and conditions for conducting exploration in accordance with the wishes of traditional Aboriginal owners.

Work Area Clearance (WAC) for non-ground disturbing programs was carried out by the CLC in conjunction with the traditional Aboriginal owners.

5. GEOLOGY

5.1 Regional Geology

The tenement was initially acquired to cover possible strike extensions of the Oonagalabi Cu-Pb deposit and the Riddoch Amphibolite. A regional interpretation of the district was compiled for TENL by Dr Ding Puquan in April-May 2001 (Ding, 2001). A portion of this interpretation is presented as **Plate 2**.

The tenement area is predominantly underlain by high grade metamorphic rocks variably assigned to the Palaeoproterozoic 'Harts Range Orogenic Belt' (Puquan Ding, unpublished TGNL reports and Ding & James, 1985), and to the Neoproterozoic to Cambrian 'Harts Range Group' (Hand *et al* 1999). Ding sites field relationships as his main evidence for placing the Riddoch Amphibolite temporally with the Strangways Metamorphic Complex, whereas Hand *et al* site age dating of metamorphic zircons formed at 461±6Ma with preserved cores dated at 734±44 Ma.

In the Oonagalabi area the tenement is underlain by Palaeoproterozoic rocks of the high grade Strangways Metamorphic Complex.

5.2 Riddoch Amphibolite

The Riddoch Amphibolite Member forms the backbone of the Harts Range, comprising long east-west trending steep-sided strike ridges. Several prominent peaks rise to a maximum of 1,216m on Mt Brassey.

The Riddoch Amphibolite is laterally continuous over approximately 70km with maximum width of 6-8km, comprising a composite sequence of compositionally layered and massive amphibolite interlayered with garnet quartzofeldspathic gneiss, biotite gneiss, garnet-biotite gneiss, sillimanite gneiss and hornblende- or clinopyroxene-bearing plagioclase-rich gneiss (Hoatson & Stewart, 2001). Metamorphic grade ranges from amphibolite to granulite facies. Layering within the amphibolites comprises alternating basaltic and tonalitic bands.

Silvel & Foden (1985) suggested the amphibolites were originally fine grained lava flows, the overall package perhaps representing a composite volcano-sedimentary rift sequence (Hoatson & Stewart, 2001). Hoatson (2001) assessed the potential of the Riddoch Amphibolite for hosting magmatic sulphide Ni-Cu-PGE mineralisation. Recent age dating of 'detrital' zircons (pers com John-Claoue-Long, Geoscience Australia) further indicates that the amphibolites represent mainly para-amphibolites.

A metasedimentary and/or volcanic origin of the Riddoch Amphibolite downgrades prospectivity for magmatic sulphide Ni-Cu-PGE mineralisation. However the source of weak Ni-Cu-PGE anomalism in stream sediments draining the Harts Range requires elucidation. Work by TGNL has included petrography to test whether some of the amphibolite units represent sill-like mafic–ultramafic intrusions.

5.3 Oonagalabi

The Oonagalabi 'Tongue' comprises a mixed sequence of sediments and mafic rocks that have undergone upper amphibolite to granulite metamorphism. These rocks have been subjected to at least four phases of deformation, which has greatly thickened and attenuated, and re-distributed the sequence locally. Two separate geological areas became apparent during fieldwork conducted by the Company; the geographically elevated portion of the tongue east (and inclusive) of the Oonagalabi Deposit colloquially referred to as the Oonagalabi 'Dome', and the country west of this known as the Oonagalabi 'Flat'.

The most prominent outcropping lithologies on the 'Dome' are clastic metasediments, ranging from predominantly psammitic quartzofeldspathic to rare, biotitic (pelite-derived) gneisses. These gneisses are locally migmatitic and show signs of incipient melting. Rare, thin, discontinuous, pod-like calc-silicate bodies (garnet-quartz dominated with lesser hornblende + diopside +/- epidote) occur within the quartzofeldspathic gneisses.

The other major rock type in the Oonagalabi 'Dome' is interpreted as variably retrogressed mafic granulite. This is often associated with amphibolites and amphibolitic gneisses that have textures suggestive of derivation from a gabbroic precursor. The mafic granulites appear to have intruded quite late in the sequence as they crosscut the other rock types.

The rocks of the 'Flat' country are similar to those described above, although dark grey, more pelitic units are more strongly represented amongst the clastic metasediments and calc-silicate lenses and pods are far more common. The metasediments appear to be slightly higher in metamorphic grade as garnet is far more common than in the clastics of the 'Dome' (compositional differences notwithstanding), and migmatitic textures and features such as minor felsic layers are universal. This suggests that the rocks of the 'Flat' represent a slightly deeper crustal level than the rocks evident in the 'Dome'.

Rocks comparable to the lithologies hosting mineralisation at the Oonagalabi Deposit were not observed in either the 'Dome' or the 'Flat'.

Cu-Pb-Zn (+/- Ag, Au) mineralisation at Oonagalabi is restricted to massive anthophyllite rock (anthophyllite-$(Mg,Fe)_7Si_8O_{22}(OH,F)_2$) and calcareous lithologies (eg gedritic calc-silicates and forsteritic marbles). The calcareous lithologies occur as lenticular bodies within migmatitic gneisses and closely associated 'garnet quartzites'.

Mineralisation is associated with disseminated sulphides (predominantly chalcopyrite, with lesser galena and sphalerite) that generally reveal their presence with prominent malachite staining. Material of this kind has Zn content around 3%, although gahnitic (zincian spinel) material may have Zn levels approaching 10%. However, it is unknown whether metallurgical extraction of Zn from gahnite is feasible.

It is unclear as to what kind of deposit Oonagalabi represents. Kelvin Hussey of the Northern Territory Geological Survey (NTGS) has suggested that Oonagalabi is a carbonate-replacement deposit, although some features are reminiscent of skarn deposits. The unusual mineral assemblages are believed to represent metamorphosed alteration assemblages. Of particular interest is the 'garnet quartzite' – such a rock can only form from a very restricted compositional range.

It is very likely that the carbonate-anthophyllite-garnet quartzite association at Oonagalabi represents a specific stratigraphic interval.

6. TENL EXPLORATION PROGRAMS TO 9 JULY 2003

Exploration programs carried out by Tanami Exploration NL on EL 22917 to the year ending 9 July 2003 comprised regional mapping, prospect scale mapping, soil sampling, stream sediment sampling and rockchip sampling. This sampling is summarised below in Table 2.

TABLE 2: Summary of geochemical sampling conducted on EL 22917

Year	Sample Prefix	Type	Fraction	Samples	Significant Assay
2001	HRCRC	Rockchip	-	84	1980ppb Au + 11.3% Cu
2002	HRL	Lag	<6mm +1mm	7	NSR
	ELK	Rockchip	-	15	26ppbb Au + 4.7% Cu; 817ppb PGE
	HRK	Rockchip	-	17	14ppb PGE
	MRK	Rockchip	-	1	NSR
	ELM	Stream Sediment	<1mm; <80#	68	22ppb PGE; 927ppb Ni
2003	HRK	Rockchip	-	75	54ppb PGE
	ONK	Rockchip	-	113	100ppb Au + 0.5% Cu
	HRS	Soil		33	16ppb Au
	ONS	Soil		22	No Significant Result
	HRMa	Stream Sediment	<1mm	34	4ppb Au
	HRMb	Stream Sediment	<80#	33	103ppm Cu
	ONMa	Stream Sediment	<1mm	16	2ppb Au
	ONMb	Stream Sediment	<80#	16	NSR
	ONOa	Stream Sediment	<1mm	6	8ppb Au
	ONOb	Stream Sediment	<80#	6	208ppm Cu + 833ppm Zn
			Total Samples	**546**	

NSR: No Significant Result

Sampling and assay data resulting from exploration described below is presented as digital appendices.

6.1 Exploration conducted prior to 2002

Exploration carried out prior to the grant of the tenement under the fossicking provisions of the Mining Act.

The tenement area was incorporated into the Company's Alice Springs regional mapping program in March-April 2001(see **Plate 2**). The program covered an area of 10,000 km² centred on the Florence Creek Shear Zone (south of the tenement) and associated structures.

Geological reconnaissance and first-pass geochemical sampling was conducted, initially concentrating on known mineral occurrences at Oonagalabi and the Selins Cu-Zn prospect (**Plate 1 & 3**). Strike extensions south of the Oonagalabi deposit were located, which were subsequently named the 'Silverado' and 'Silver City' prospects. Rockchip sampling returned results to 410ppb Au and 15g/t Ag associated with copper-zinc mineralisation in anthophyllite-rock, marble and calc-silicate rocks.

6.2 2002 Exploration

Exploration conducted in July 2002 specifically targeted the Riddoch Amphibolite, in particular the potential for primary magmatic mineralisation within mafic-ultramafic units (see **Plate 4**).

A major program of stream sediment sampling was conducted along active fluvial systems draining from the southern and northern faces of the Harts Range, and from low lying ranges north of the Plenty Highway. Ninety-three sites were visited, and at each site two samples were taken: a fluvial 'trap site' sample sieved to -1mm, and an 'over-bank silt' sample sieved to minus 80mesh. The trap site sample was assayed for heavy metals Au, Pt and Pd, and the over-bank silt sample assayed for Cu, Ni, Co, Ag, Zn, Pb, As, Bi, Mo, Sb. Significant results are listed below in Table 3.

TABLE 3: Significant results from stream sediment sampling program 2002

Sample	MGA East	MGA North	Au ppb	Pd ppb	Pt ppb	PGE ppb	Ni ppm	Cu ppm	Comments
ELM130	482207	7447886	2	0	0	0	24	56	
ELM116	462221	7449190	2	1	0	1	18	53	

In addition to stream sediment sampling, rockchip sampling was also undertaken during the program. Results are listed below in Table 4.

TABLE 4: Significant results from rockchip sampling program 2002

Sample	MGA East	MGA North	Au ppb	Pd ppb	Pt ppb	PGE ppb	Ni ppm	Cu ppm	Lithology
ELK014	469530	7464365	13	343	474	817	636	1150	VQ
HRK039	469538	7464365	0	47	140	187	88	175	VQ/mn
ELK009	464887	7446120	4	24	29	53	2908	354	MAF
ELK012	464880	7446080	2	16	17	33	2735	108	MAF
ELK010	464884	7446132	2	3	5	8	1284	157	MAF
ELK011	464800	7446135	1	0	5	5	1248	21	GNS
ELK008	464870	7446120	4	4	1	5	182	957	MAF

Three sources of elevated PGE were detected from the stream sediment and rockchip sampling carried out in 2003:

1. *Vein hosted* - returning a maximum value of 817ppb PGE from a manganiferous quartz vein associated with a swarm of east-west oriented pegmatites north of the Plenty Highway (ELK014 & HRK039). Another vein in the Harts Range returned 113ppb PGE (MRK011). Nearby stream sediment samples did not return anomalous values.

2. *Ultramafic plug hosted* - two circular ultramafic plugs with diameter up to 500m south of Mt Riddoch returned values up to 53ppb PGE associated with high Ni and elevated copper (ELK009). Stream sediments nearby returned elevated PGE to 22ppb (ELM024).

3. *Amphibolite hosted* - PGE-anomalous stream sediment samples not known to be associated with vein- or ultramafic plug-hosted mineralisation, and therefore possibly associated with elevated values within the Riddoch Amphibolite. PGEs to maximum value of 13ppb & 10ppb were located on an adjoining tenement from sediments derived from the Harts Range near Mt Mabel. These samples are not elevated in Ni & Cu which would be expected if the source was magmatic sulphide mineralisation, and low copper, gold, silver and zinc also suggest the source is not hydrothermal vein-hosted mineralisation.

In addition, numerous elevated Cu and/or Ni stream sediment samples not associated with elevated PGEs were identified. These may relate to weathering of any of the above and will require further assessment.

6.3 2003 Exploration

Exploration conducted during the 2003 field season is summarised on **Plate 5**.

6.3.1 Silverado/Silver City

Exploration in March-April 2003 comprised mapping and composite rockchip sampling to test tenor of mineralisation.

Initial field reconnaissance was conducted with Kelvin Hussey of the NTGS who had recently mapped the nearby Oonagalabi Deposit. The stratigraphic sequence at Silverado/Silver City is similar to that at Oonagalabi although garnet-quartzites and amphibole-pyroxene-magnetite rocks are missing from the margin of the mineralised unit (variably altered carbonate rock including anthophyllite, marble and calc-silicate). Mapping of the distribution of the mineralisation indicated complex folding of the sequence and significant ‘stoping-out’ of the host-sequence by mafic-granulites.

At Silverado the host sequence forms a relatively flat-lying cap to the hill top, dipping gently towards the northeast. Two composite east-west rock-chip traverses were conducted (50 x 5m spacing) upwards through the sequence to test the tenor of mineralisation. The maximum true thickness of the mineralised unit (on the southern traverse) is 10-12m. Extensions to the south and west could not be located, the stratigraphy there likely representing the footwall to the mineralised unit (see below: ‘Oonagalabi Dome’). To the north and east the stratigraphy becomes more upright and complexly folded around eastwards towards Silver City.

At Silver City the mineralised unit is exposed in the steep banks of a creek that has exploited a NNW trending fracture. Previously, sections of the mineralised unit exposed on opposing banks of the creek were thought to represent offsets along the NNW-trending fault. Field examination suggests that the distribution of the mineralised unit more likely results from complex folding, and abundant ‘stoping-out’ by mafic granulite adds further complexity. Three composite north-south rock-chip traverses (5m composites) were conducted at various locations of best exposure to test the tenor of mineralisation. Maximum true thickness of the mineralised unit is approximately 15m.

Results of the systematic composite rockchip sampling traverses are summarised in Table 5 and presented on **Plate 6**. The sampling repeated but failed to improve upon known low grade base metal mineralisation with maximum combined base metal tenor of <2%. Precious metal mineralisation is also of low tenor, averaging 3-14g/t Ag and generally <100ppb for gold. There is no enrichment of other precious metals such as PGE.

TABLE 5: Silverado and Silver City composite rock chip traverses

	Comp Width	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm
Silverado Traverse 1	115m	45	13	2,098	2,719	5,947
				(0.2%)	(0.3%)	(0.6%)
Including	20m	47	6	5,207	402	14,182
				(0.5%)		(1.4%)
Silverado Traverse 2	95m	39	3	920	1,399	4,686
					(0.1%)	(0.5%)
Including	20m	35	5	4,659	661	8,287
				(0.5%)		(0.8%)
Silver City 1	11m	68	14	2,225	6,524	4,696
				(0.2%)	(0.6%)	(0.5%)

Tonnage is also thought to be low-moderate, the mineralised horizon at Silverado forming a hilltop cap of no greater than 10-12m true thickness, and being complexly folded and stoped out by mafic granulites at Silver City. Also, the best mineralised anthophyllite rock forms discontinuous lenses or pods within the overall mineralised horizon.

No additional along strike repeats of the mineralised horizon were located from geological traverses and prospecting.

In conjunction with stream sediment sampling over the Oonagalabi Dome (Section 7.3.2 below) a short stream sediment orientation sampling program was conducted along the creek draining through Silver City. The aim of the survey was to validate the sampling method, indicate relative elevation of elements in the coarse versus fine fractions, and reflect relative elevation of elements in the stream sediment load versus distance from source. Results are outlined below in Table 6.

TABLE 6: Silver City stream sediment orientation sampling

	Distance from Source	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm
ONO001A	0m	8	0.4	104	140	425
ONO001B	0m	3	0.4	208	124	833
ONO002A	50m	1	0.3	67	128	295
ONO002B	50m	0	0.2	51	53	226
ONO003A	100m	0	0.3	63	125	276
ONO003B	100m	0	0.2	61	59	262
ONO004A	150m	0	0.2	59	90	237
ONO004B	150m	3	0.2	86	81	349
ONO005A	200m	0	0.2	49	87	195
ONO005B	200m	0	0	45	41	167
ONO006A	250m	0	0.1	43	59	168
ONO006B	250m	0	0.1	49	43	181

The orientation program confirmed that the method of stream sediment sampling is an adequate exploration tool.

6.3.2 Oonagalabi Dome

Regional exploration was conducted over the Oonagalabi 'Dome' to test for repetitions of the host sequence, with the rationale that previous explorers had conducted stream sediment sampling and mapping around the perimeter of the dome but had not penetrated into the interior of the dome where access is extremely difficult. TGNL utilised a Bell 47 helicopter to gain access to the majority of the interior.

Landsat imagery over the Oonagalabi region was queried to determine possible look-a-like targets to known Cu-Zn-Pb mineralisation at the Oonagalabi Deposit. A major focus was placed upon delineating structural repetitions or dismembered portions of the mineralised stratigraphy adjacent to the areas of known mineralisation.

A large number of possible look-a-like 'stratigraphic' targets and structural-type plays within the Oonagalabi 'dome' and the country west of the Oonagalabi Deposit were generated from the Landsat images. Geological traverses and geochemical prospecting including rock chips and soil sampling tested the majority of these targets. To test more systematically for potential mineralisation within the dome, detailed stream sediment sampling concentrated on small, previously un-sampled catchments within the interior of the dome.

A minor outcrop of forsterite-bearing marble and calc-silicate west of the Oonagalabi Deposit (which appears on the published 100k geology map) was rockchip sampled. Numerous additional outcrops of calc-silicate were located within the dome interior and to the west of Oonagalabi but are probably equivalents of Hussey's 'Type 2' calc-silicates, which are not regarded as prospective. However, rockchip and soil sample traverses were conducted over these occurrences to verify this. No visible copper mineralisation was observed.

Results from stream sediment sampling conducted throughout the interior of the Oonagalabi Dome are summarised below in Table 7.

TABLE 7: Results of stream sediment sampling Oonagalabi Dome

	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm
ONM003A	1				
ONM003B		0	30	6	33
ONM004A	2				
ONM004B		0	15	5	30
ONM005A	2				
ONM005B		0	8	4	25
ONM006A	2				
ONM006B		0	6	6	33
ONM007A	1				
ONM007B		0	16	6	32
ONM010A	1				
ONM010B		0	11	7	36

Four adjacent catchments 1km east of Oonagalabi returned elevated gold (1-2ppb) from stream sediment sampling, plus weak coincident copper (~30ppm), to levels comparable to down-stream values from the orientation survey. Zinc, lead and silver were not elevated within the minus 80# overbank sample taken by TGNL, however a single point sample taken by previous explorers in the vicinity returned weakly elevated zinc (57ppm) and lead (29ppm).

The base metal values are low, possibly suggesting an alternative source other than Oonagalabi-style. However the levels may also simply be indicative of greater distance from source. These weak anomalies require follow-up to elucidate source.

6.3.3 Riddoch Amphibolite

Exploration during the 2003 field season continued to target possible ortho-amphibolite-hosted PGE within the Riddoch Amphibolite. Systematic stream sediment geochemistry was completed, including follow-up to elevated results returned from initial sampling conducted in 2002 and over previously un-sampled catchments extending the tested strike length to 40km.

A main focus of the project was the differentiation of ‘ortho-amphibolite’ (mafic igneous protolith) from ‘para-amphibolite’ (meta-sedimentary protolith, sediments probably had a mafic source component). The Riddoch Amphibolite is dominated by a banded rock consisting of intercalated discontinuous bands and boudins of amphibole-quartz-feldspar gneiss and amphibolite, both of which may be garnet-bearing. New information suggests that these amphibolites are mainly para-amphibolites, as evidenced by ‘detrital’ zircons (post-AGES discussion with John-Claoue-Long, Geoscience Australia). However, subordinate massive, melanocratic to mesocratic amphibolite units, currently interpreted as ortho-amphibolites, remain prospective for orthomagmatic sulphide mineralisation.

Detailed across-strike geological traverses were made and petrographic samples of representative amphibolites were taken to attempt to validate and elucidate the existence and composition of any ortho-amphibolites.

Follow-up of elevated stream sediment samples collected in 2002 (maximum of 13ppb and 10ppb PGE) was conducted within two catchments. Stream sediment samples were taken at regular intervals and at the confluence of tributaries to locate the source sub-catchment. Grab rockchip samples were taken of representative amphibolite units, as well as veins and other interesting lithologies. Potential alternative sources of anomalous PGE were also targeted: (1) shear-hosted vein mineralisation associated with Cu, Au, Ag as previously drill-tested by TGNL at the Mt Riddoch Prospect in 2001; and (2) young, essentially undeformed, mafic-ultramafic plugs which also returned elevated PGE, Ni and Cu from rockchip grab samples in 2002.

None of the stream sediment and or concurrently taken rock chip samples of amphibolite or vein quartz returned significant assay results. These included a repeat sample of the best stream sediment sample from the 2002 field season (13ppb Pd from an adjoining tenement).

A petrographical sample of melanocratic amphibolite from a creek near the Virginia Prospect (south of EL 22917) has been interpreted as an ortho-amphibolite (*ie*. igneous protolith), however it has not been determined whether the precursor was volcanic (basalt) or intrusive (gabbro or diorite) and this has implications for massive sulphide prospectivity.

The results suggest that the Riddoch Amphibolite is not prospective for massive sulphide Ni-Cu-PGE mineralisation.

6.3.4 Ultramafic Plug

A mafic-ultramafic plug with highly elevated PGE located in 2002 was further tested by geological mapping and soil and rock chip sampling in 2003.

The ultramafic plug crops out as a spinifex covered conical hill dominated by medium-grained peridotite with a minor plagioclase-bearing hornblendite component (**Figure 4**). A smaller outcrop of medium-grained peridotite and coarse-grained hornblendite separated by a thin plagioclase-hornblendite layer is recognised approximately 100m to the southeast. The two outcrops are interpreted as the tops of a single larger mafic-ultramafic intrusive body.

The margins of the main plug are characterised by a metre-scale unit of coarse-grained biotite and garnet-biotite rock. Petrographic analysis also recognised a quartz-amphibole-orthopyroxene-diopside rock near the contact which may represent altered country rock. The contacts with the host amphibolite dip away from the centre of the intrusive bodies, steeply in the north, west and south sides of the hill, whilst on the eastern margin the dip is very shallow and it is likely that the main plug is connected at depth to the smaller southeast elongate intrusive. PGE enrichment appears to be hosted by the peridotite in a central layer of the main plug.

Initial grab sampling returned encouraging results to 146ppb PGE (HRK086). Follow-up geological mapping and composite rock chip sampling (1-2m wide) was conducted over the anomalous intervals as well as a number of grab samples targeting compositional layer boundaries on both plugs. The best result was 41ppb PGE over a 1.5m composite (HRK234).

7. EXPLORATION EXPENDITURE YEAR ENDING 9 JULY 2003

Exploration expenditure including an allocation for the 2001 regional mapping and reconnaissance sampling program is given below in Table 8.

TABLE 8: Exploration Expenditure Year Ending 9 July 2003

Salaries/Wages - Field and Office	$56,948
Draughting/Computing/Office/Data	7,516
Camp Supplies/Field Equipment	16,079
Travel/Accommodation	11,593
Vehicles/Fuel/Maintenance	10,496
Helicopter and Fuel	7,038
Analysis	8,817
Land Maintenance and Legal	1,634
Remote Sensing and Geophysical	699
Administration	18,167
Total	**$138,987**
First Year Commitment	*$66,500*

8. PROPOSED EXPLORATION PROGRAM YEAR 2

The recent programs in the Oonagalabi area require follow-up to elucidate the source of weak geochemical anomalism within the Oonagalabi Dome.

Analysis of existing hyperspectral imagery (Hymap) is planned to map lithological units and test for previously unidentified alteration zones. In particular the analysis will target possible Oonagalabi-style host rocks, ultramafic plugs and alteration associated with epigenetic gold-copper mineralisation associated with Florence Creek Shear Zone –style structures.

Follow-up exploration will consist of further prospect-scale mapping and detailed geochemical sampling. Due to the rugged terrain this work may be helicopter supported. A budget to conduct this work is outlined below in Table 9.

TABLE 9: Proposed Exploration Program Year 2

Salaries/Wages - Field and Office	$8,000
Drafting/Computing/Office/Data	1,500
Camp Supplies/Field Equipment	3,000
Travel/Accommodation	3,500
Vehicles/Fuel/Maintenance	2,500
Helicopter and Fuel	10,000
Analysis	2,500
Land Maintenance and Legal	500
Remote Sensing and Geophysical	2,000
Administration	5,000
Total	**$38,500**

9. REFERENCES

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