

Tennant Creek Office: C/- Barkly Enterprise Development Network 179 Paterson St (PO Box 163) Tennant Creek NT 0861 Tel: (08) 8962 0633 Fax: (08) 8962 0677 Email: peko@switch.com.au

2003 ANNUAL REPORT FOR

MCC 284, MLC's 45-47, 68, 154-155, 578-579

FOR THE PERIOD ENDING 31 DECEMBER 2004

JUNO TENEMENTS

TENNANT CREEK DISTRICT

NORTHERN TERRITORY

TENNANT CREEK 1: 250,000 SHEET SE 53-14

VOLUME 1 of 1

AUTHOR: PHIL JONES

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INTRODUCTION

This report details exploration undertaken by Sitzler Savage Pty Ltd, the holder of the tenements MCC 284, MLC's 45-47, 68, 154-155 and 578-579. These tenements constitute the Juno tenements for the 12 month period ending 31 December 2004 and form part of the Peko Tailings Project, managed by Peko Rehabilitation Project Pty Ltd. All other non-exploration activities undertaken on the Peko Tailings Project are detailed in the Mining Management Plan, which is submitted annually as a separate report by the operator, Peko Rehabilitation Project Pty Ltd, a subsidiary of Sitzler Savage Pty Ltd.

LOCATION, ACCESS AND CLIMATE

The Juno tenements lie approximately 4 kilometres southeast of Tennant Creek Township. Access to the tenement is gained via the sealed Peko Road to the Peko mine from Tennant Creek, then via a sealed road past the Juno horse stud southwest to the Juno mine. A well-developed network of good gravel tracks provides vehicular access within and to most of the tenements.

The climate of the Tennant Creek district is mild and dry through most of the autumn, winter and spring months. The summer period is hot, with seasonal heavy monsoonal rainfall in January, February and March making vehicular access off sealed roads very difficult during these months.

TENURE

The Juno tenements contains the following mineral claims and leases: MCC 284, MLC's 45-47, 68, 154-155 and 578-579 totalling 98 hectares in area. On 13 October 2000 ownership of these tenements was transferred from Santexco Pty Ltd, a subsidiary of the Normandy Group of Companies, to Sitzler Savage Pty Ltd. These tenements are included in 89 tenements held by Sitzler Savage Pty Ltd, which form part of the Peko Tailings Project. The operator of this project is Peko Rehabilitation Project Pty Ltd ("Peko"), a subsidiary company of Sitzler Savage Pty Ltd. The Juno tenements covered by this report are shown in Figure 1.

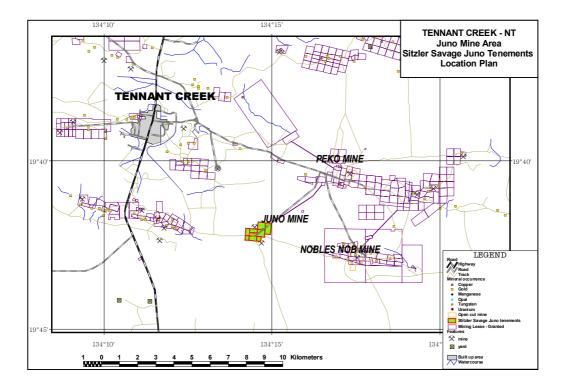


Figure 1. Juno tenements location plan

<u>GEOLOGY</u> The Juno regional geology is shown in Figure 2.

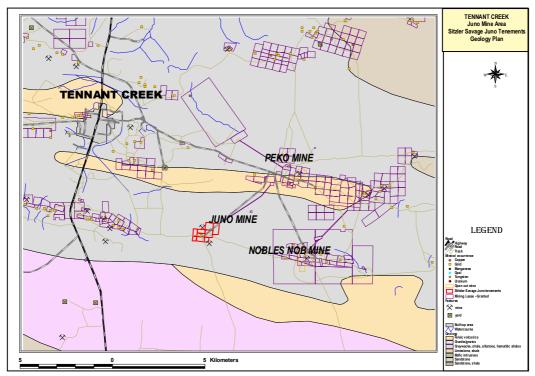


Figure 2. Regional geology of the Juno mine area.

The Juno tenements are located entirely within the Proterozoic Warramunga Formation, a sequence of fine grained sediments composed of greywackes, shales, siltstones and hematitic shales.

MINERALISATION

Most of the gold and copper production within the Tennant Creek goldfield has come from ironstone pods and hydrothermally altered metasediments adjacent to and below the ironstones. Of the 700 recorded ironstone occurrences within the field, only 200 contain any significant mineralisation and of these, only 25 have produced more than 100kg of gold.

The following table lists those 8 of those producers that lie within the 89 tenements held by Sitzler Savage Pty Ltd.

<u>Mine</u>	<u>Ore (tonnes)</u>	<u>Ore Grades</u>	<u>Metals Produced</u>
Nobles Nob	2,140,000	17.0 g/t Au	34,580 Kg Au (1,112,000 ozs)
Juno	450,000	57.0 g/t Au 7.0 g/t Ag 0.4% Cu 0.6% Bi	26,130 Kg Au (840,000 ozs) 2,752 Kg Ag 1,429 tonnes Cu 2,293 tonnes Bi
Peko	3,160,000	3.5 g/t Au 14.0 g/t Ag 4.0 % Cu 0.2% Bi	7,481 Kg Au (241,000 ozs) 44,163 Kg Ag 118,884 tonnes Cu 7,350 tonnes Bi
Rising Sun	10,466	27 g/t Au	284.7 Kg Au (9,153 ozs)
Rising Sun West	7,000	19 g/t Au	122.5 Kg Au (4,035 ozs)
Two Blues	500	40 g/t Au	20.2 Kg Au (649 ozs)
Kimberley Kids	305	50 g/t Au	16.1 Kg Au (517 ozs)
Weabers Find	10	300 g/t Au	3.0 Kg Au (96 ozs)

The orebodies themselves are not very big in size, so looking for a buried one is difficult. Sophisticated exploration techniques are needed in order to minimise the amount of expensive exploratory drilling that is required to discover any new orebodies.

Such small bodies of hematite-magnetite can be host to quite large gold and copper orebodies. Because thousands of prospectors and geologists have explored every square centimetre of the Tennant Creek district over the last 40 years since the discovery of the first such body, there are no more such deposits to be found by simple prospecting. Similarly, the most obvious magnetic targets have already been identified by numerous aeromagnetic surveys over the years and it is only the smaller, deeper or less magnetic more hematite altered bodies that have yet to be found by this method. Hence the next Peko or Nobles Nob or Juno orebody must rely on other exploration techniques such as gravity or other geophysical methods.

PREVIOUS WORK

Previous exploration and mining history has been presented by Normandy in earlier annual reports.

In 1998 Normandy flew a detailed airborne magnetic and radiometric survey covering the southern Tennant Creek mineral field including the Juno leases. Survey specifications were 40m-sensor height, 50 m line spacings on a N-S line orientation with a 7m in line sample spacings. Elevation recordings were recorded every seventh sample for digital terrain modelling.

Whilst Normandy carried out geophysical data interpretation and modelling in 1999, Sitzler Savage Pty Ltd has only been provided with the raw data from these surveys. Southern Geoscience Consultants in Perth have carried out reprocessing and reinterpretation of this data, including magnetic modeling of selected targets. Their report is included in Appendix 1.

Several ground gravity surveys have been carried out by various companies across the Juno leases and Peko is in possession of the raw data. A definite gravity high lies over the main Juno orebody, which lies within a pronounced north-south trending gravity corridor. Within this corridor, several other gravity highs exist and have yet to be tested. Southern Geoscience Consultants have re-interpreted the gravity data utilising the DTM elevation data from the 1998 aeromagnetic survey to produce a 3D model to identify any hematite (as distinct from magnetite) bodies at shallow depth that have not yet been drill tested. This work is included in Appendix 1.

An environmental rehabilitation programme was carried out over the old Juno mine area in which earthworks, isolation of contaminants, landscaping, ripping, seeding, analysis of contaminated soils and monitoring were completed.

WORK CARRIED OUT DURING THE 12 MONTH PERIOD ENDING 31/12/2004

Resource Estimation

All the drilling data compiled from various Normandy digital databases was collated and compiled into a single dataset. This data was then used to create a digital block model and a resource estimate for the entire "unmined" orebody was made using this model. A description of the methodology used is contained in the report included in Appendix 2. This "unmined" resource was then "mined" by removing the known stopes as digitised from old long and cross sections. Both the "unmined" and "mined" resource estimates are also included in Appendix 1.

Exploration

During the calendar year 2004, a continuing study of company and mine records held at Peko's Tennant Creek office, open file company and other technical reports held at the Northern Territory Mines Department offices in both Darwin and Alice Springs was carried out.

Various digital reports of aeromagnetic, gravity and other geophysical surveys conducted in the Tennant Creek region were located. Southern Geoscience Consultants were commissioned to compile and process this data and identify and rank exploration targets within the Peko, Juno and Nobles Nob tenement blocks.

The data sets available for interpretation by Southern Geoscience Consultants were;

- Geoscience Australia and NTGS gravity databases for the Tennant Creek area.
- Austirex/Geopeko survey of Central Tennant Creek flown in the early 80's using 200m flight lines and 80m flying height.
- Shuttle Radar DEM available from NASA with a 90m pixel size.
- A detailed airborne magnetic, radiometric and hyperspectral survey flown by Fugro for a Peko Rehabilitation Project lead consortium in 2000. This covered Peko and Nobles Nob but did not extend far enough west to include Juno. It was flown at 80m flying height on 50m spaced lines which from the point of view of the aeromagnetics is flown too high for the line spacing or alternately flown using excessively close line spacing given the flying height. It would have been better flown at less than 40m flying height
- Low level helicopter aeromagnetics and radiometrics over the Nob and Juno tenements as well as three small areas between the Nob and New Hope flown by Normandy Mining using their in-house helicopter system. The data provided consists only of point located magnetic and radiometric data without survey specifications, however based on similar surveys undertaken by Normandy, it is likely that the flying height of the towed bird sensor was around 30m. The line spacing was 50m
- Helicopter Time domain EM over the Nob and Peko and from Nob West to Kiora Dam flown by Normandy Mining using their in-house "Hoistem" system. The system used for this survey was an early version of Hoistem and had the transmitter towed below the helicopter at a nominal elevation of 70m with the receiver towed 30m below this. The line spacing used was 100m, flying north south.
- Six lines of ground TEM straddling the Nobles Nob pit. These data were acquired by Normandy mining using their in-house "Posem" system in In-loop mode with a 100m loop and 50m moves.
- A partial drilling database for the area including some of Normandy's recent drilling and assays in binary Datamine format.

The area in the immediate vicinity of the mined deposits has been relatively heavily explored over the past 30 years however little modern geophysics has been applied to any of the deposits in this area. Geopeko undertook limited down hole magnetic surveying of Peko and Juno before selling them to Normandy. Australian Development Ltd. (ADL) acquired detailed gravity around Nobels Nob and Juno in '83-'84 prior to becoming part of the PosGold, later Normandy Mining group. As noted above, Normandy acquired limited ground TEM data around Nobles Nob and flew some low level magnetic and TEM surveys over selected areas shortly before they withdrew from the area in '99-2000. Very little systematic, detailed ground work has been done away from the deposits and Peko in particular, has had almost no modern geophysical exploration undertaken around it.

3D inversion of the gravity and magnetic data has been undertaken by Southern Geoscience Consultants along with a 3D compilation of the 1D conductivity images from the Hoistem data. These have been combined into a 3D geophysical model ready for target selection. The ground TEM data has similarly been imaged using a 1D algorithm and sections inserted into the 3D model. A routine was written to convert the binary Datamine drilling and assay files into a readable format with the intention of adding the available drilling information to the 3D model to help rank targets. Unfortunately the poor state of the survey information for some of these holes has caused some problems with this process and the holes have not yet been included in the model. Once this is done targets selected for follow up from the geophysics can be checked to ensure they have not yet been drilled.

The available drilling database only appears to include some of the Normandy/ADL drilling and none of the Geopeko drilling. As some of the Geopeko holes had 3D magnetic data acquired in them, they will also have been surveyed. As much of this data as possible should be captured and included in the current database to help advance target selection. The available Normandy drilling database for the Nob-line leases includes only about 1000 holes, including some underground holes which were presumably drilled by accessing the underground workings from the open cut rather than having been drilled prior to the shaft collapse in 1967. By modern standards, the coverage of this drilling is limited and leaves large gaps untested. It remains to be determined whether the available data includes all the drilling. There is a dearth of geophysical information on the Peko line of lode and given the recent announcements regarding their Golden Kangaroo project by Giants' Reef Mining, this should be addressed.

To date twenty target areas within the Peko, Nobles Nob and Juno tenements have been identified. Within the Juno leases, seven target areas have been identified. Three of the target areas have very good potential for the development of supergene copper and gold blankets at or near the water table at depths below 100 metres, with each area potentially hosting mineralisation exceeding plus 100,000 gold equivalent ounces (on the basis of 1% copper is equivalent to 1.55 g/t gold). Within the Juno mine itself there is a strong probability that resources in excess of 40,000 ounces of gold and 500 tonnes of contained copper remain as possibly economically viable remnants. At deeper levels below the Juno mine, some 400-500 metres below surface, the M10 body that contains a drill-indicated resource of 95,000 ounces of gold, may be economically viable at the current gold price. An estimated total of 5,250 metres of RC drilling at a total exploration cost of \$ 302,500 will be required to test the seven areas.

(i) Juno Mine Remnants

Based on the recommendations contained within the Juno Development Proposal, R.D.McNeil, 22/8/65 construction of the Juno Mine commenced in late 1995 and production commenced in late 1966. The development proposal was based upon initial mining reserves of 80,400 tonnes @ 64 dwts (99g/t) Au and 0.92% Bi. At that time, the gold price was \$30/ounce and the bismuth price was \$7/pound, with insitu ore values being \$93/tonne for the gold content and \$ 157/tonne for the bismuth content. i.e. the Juno Mine was richer in bismuth than gold. Based on the above figure, the initial mining reserved contained 255,911 ounces of gold and 739,680 kgs of bismuth. The mine closed in January 1977 by which time 454,938 tonnes of ore had been mined, from which the following metals were extracted and sold:

Gold:	838,236 ounces	(3.27 times initial reserves)
Bismuth:	2,293,422 kgs	(3.10 times initial reserves)
Silver:	88,480 ounces	
Copper:	1,418 tonnes	

Most of the mine production records are missing from the Tennant Creek files and ore reserve statements are only available up until January 1974, i.e. 3 years before the mine closed. The remaining ore reserve at January 1974 was 113,000 tonnes @ 55.4 g/t Au, 0.48% Cu and 0.79% Bi. Cut-off grades used in calculation of ore reserves at that time were 6.8 g/t Au (gold only bodies) and 1.75% Cu (copper only bodies).

An ore resource statement of April 1974 was produced for the Juno Mine Bells Area which showed ore reserves in this part of the mine as 22,410 tonnes @ 47.6 g/t Au, 0.04% Cu, 0.21% Bi (containing 34,300 ounces of gold). Reference to this area in "Report on Juno Mine Rehabilitation and Rework" dated 29/5/80 (i.e. post mine closure) suggests that these reserves have not yet been mined.

An ore resource statement of August 1974 was also produced for the Number 2 orebody pods and remnants. This showed ore reserves as follows:

 Gold Pods:
 7,980 tonnes @ 28.2 g/t Au, 0.38% Cu, 0.12% Bi

 Copper Pods:
 23,100 tonnes @ 0.7 g/t Au, 2.04% Cu, 0.11% Bi

 Remnants:
 2,500 tonnes @ 11.3 g/t Au, 0.33% Cu, 0.29% Bi

Because of the closure of the Peko concentrator in 1974 and the inability of the Nobles Nob gold processing plant to treat copper rich ore, it is very probable that the copper pods in the Number 2 orebody remain unmined, as well as that copper mineralisation intersected (and open to depth) by drilling from the 400 Level.

At a life-of-mine production rate of 40,000 tpa, it appears that the remaining ore reserves at January 1974 may have been completely mined out by the time of mine closure in January 1977. Further searches of mine production records for the years 1974-1977 held in the NT Mines Department will be necessary to confirm this probability.

As outlined in the section "Resource Estimation" above, the initial "pre-mining" ore reserves were calculated based on the existing Normandy underground drill database. From this resource was subtracted the recorded production to give an estimate of the remaining unmined resource above the 900 level.

	Tonnes	Gold	Copper
Total "Unmined"	1,293,000	30,127 kgs @	6,077 tonnes
		23.3 g/t	@ 0.47%
Recorded Production	454,938	26,072.054 kgs @ 57.31 g/t	1,418 tonnes @ 0.31%
Calculated Remaining	838,062	4,055 kgs @ 4.84 g/t	4,659 tonnes @ 0.56%

 Table 1. Calculated remnant resource

Because of the high cut-off grades (+20 g/t Au in the early years, deceasing to 6.8 g/t Au in the later years), it is highly probable that a substantial resource of +5 g/t Au material still remains above, below and adjacent to the mined stopes as indicated in Table 1 above. A substantial resource named the M10 body lies unmined below the 900 Level. This is discussed as a separate target area.

(ii) Juno M10 Body

Underground drilling from the 900 Level has outlined a broad alteration channel way beneath the main Juno lode. This alteration channel way has been tested from 900RL (-274m) down to 1900RL (-579m). Intercepts of economic interest were found between RL's 1400-1600 (426-488 metres below surface) and this zone of mineralisation has been termed the M10 Mineralised Zone.

These intercepts are shown in the following table:

Hole No.	Metres	Au (g/t)
900/80	18.3	6.3
900/76	12.2	3.9
	7.3	7.4
900/14/1	4.6	28.14
900/14	4.9	7.1
900/77	11.0	3.9
900/68	42.7	6.7
900/78	11.0	5.2
Average:	13.8 metres @ 8.14 g	g/t Au

Various methods have been used to compute a possible resource estimate of this mineralisation and the one most commonly used is 691,300 tonnes @ 4.3 g/t Au, containing 95,530 ounces of gold. The M10 resource was re-calculated again in the report included in Appendix 2. This resource estimate described as a "Target" was 1.2 million tonnes at 5.0 g/t Au containing 192,900 ounces and assumes maximum likely projections of the drill intercepts.

Numerous proposals have been put forward to carry out additional drilling in order to increase the tonnage and grade reliability of this resource estimate, but to this day, no additional drilling has been carried out on the M10 body.

Numerous studies have been carried out with a view to reopening the Juno mine to exploit the M10 body. Several reports discuss the high probability that further drilling will define a resource totaling 1,000,000 tonnes at a grade approaching 6 g/t. A graph accompanying these reports shows breakeven grades of 4.5 g/t Au at a gold price of \$550/oz and 6.5 g/t Au at a gold price of \$350/oz. Clearly with the current gold price the M10 body is beginning to look attractive.

(iii) Juno Supergene

A study was made of geological/analytical cross-sections through the Juno Mine prepared by Geopeko in 1984 and onto these were plotted subsequent drillhole data from programmes carried out by Poseidon and Normandy in the 1990's. The individual sections are based on the metric mine grid. Line 00E passes through the Western Residual Area, Line 300E through the centre of the Juno Mine, and Line 560E through the Eastern Residual Area. A discussion of some of these lines follows:

168E, 198E These sections show the most western projection of the Juno orebody at depth, as well as the location of JDH-01. No assays are available for this hole. Both sections show that the Juno orebody at and above the water table has not yet been drill tested for supergene mineralisation. A spot gold vacuum geochemical anomaly centered on the F1 structural lineament at 250m N probably represents the surface expression of the structure controlling the deposition of the Juno orebody. Two angled RC holes to downhole depths of 150m and 175 m collared at 350mN and 400mN respectively would test the potential for supergene gold (and copper) enrichment where this structure cuts the water table at RL 100 (approx).

236E This section shows the locations of RAB holes JNRB 28, JNRB-01, RNRB-02 and percussion hole JNPH-01, underground drillhole (from Level 400feet) JD400-40 and the Juno orebody. An intercept of 3.6 metres @ 4.27% Cu in drillhole JD400-40 as well as anomalous bismuth geochemistry in RAB holes 1 and 28 indicate a significant potential for supergene copper and gold mineralisation at or near the water table at RL 100. A 200metre RC hole collared at 400mN would test this potential as well as given a better insight into the exploration significance of the copper intercept in JD400-40.Two additional holes with downhole depths of 150m and 200m collared at 350mN and 450mN respectively may be warranted, depending upon the results obtained from the first hole.

274E This section shows the locations of RAB holes JNRB 35-38, all of which showed detectable and anomalous bismuth geochemistry throughout. Drillhole JDH-026, angle drilled to 180 metres beneath these RAB holes, failed to intersect any favourable mineralisation or lithologies. Reference to the plot of the Juno orebody and on subsequent sections seems to indicate that shallow faulting has cut the top of the Juno body and that that top of the body may be displaced to the west. If this were the case, a potential target zone still exists beneath the RAB holes and could be easily tested by one 200 metre long RC hole collared at 350mN and angled 60 degrees to the south.

305E RAB holes JNRB 6-8,37-38, and diamond drillhole JDH-025 have been plotted onto this section, along with the position of the main shaft and the 400,600,700,800 and 900 feet levels.

Anomalous bismuth geochemistry in JNRB 37-38 as well as anomalous Au, Bi and Cu geochemistry at the top of JNRB 8 is suggestive of a small target zone at the water table. The target area forms a continuation of the targets identified of Sections 236E and 274E so a test of those targets on those lines would suffice. The following extract from the Statement of Ore Reserves at February 1973 is quite encouraging:

" During the year a programme to drill off the only remaining untested mineralized area in the mine, i.e. above 500RL, was commenced. The programme has been hampered by very poor recoveries in a very oxidized spewstone mineral channel, containing in some areas large amounts of water. Assay results to date have been disappointing, but the potential of the zone is far from exhausted. Copper secondary minerals have been recognised and assays up to 1.65% copper recorded. The potential of a secondary gold enrichment zone, normally at about 200 feet below the surface is still quite high. The mineral channel almost certainly extends above 370RL, where it appears to cross the shaft. Hematite boulders are present on the surface at approximately the position where the channel should outcrop."

320E This section shows that the upper levels of the Juno orebody remain untested above RL 170m and that a prospective zone of supergene enrichment at or above the water table may exist. This target could be easily tested by one 200 metre long RC hole collared at 410mN and angled 60 degrees to the south.

335E This section similarly shows that the upper levels of the Juno orebody remain untested above RL 180m and that a prospective zone of supergene enrichment at or above the water table may exist.

350E Detectable Au and Bi geochemistry in RAB holes JNRB 40-42 as well as high vacuum geochemistry at surface coincident with the F2 magnetic lineament enhance the potential for a substantial body of supergene Au, Cu and Bi mineralisation to occur at or above the water table above the Juno orebody. Two RC holes, 150 metres and 200 metres in depth and collared at 300mN and 375mN respectively and angled 60 degrees to the south will be an adequate test of this potential.

400E A plot of drillhole JDH -023 on this section shows that the Juno orebody has either petered out or has been faulted up to a higher and as yet untested RL. Two RC holes, 150 metres and 200 metres in depth and collared at 350mN and 400mN respectively and angled 60 degrees to the south will be an adequate test of an up-lifted extension of the Juno orebody as well as the possibility of a supergene Au-Cu blanket at or above the water table.

Based upon the above it can be concluded that there is a very high potential for the existence of a supergene chalcocite (copper sulphide) blanket at or near the intersection of the structure controlling the development of the Juno orebody and the water table. Higher-grade though patchy gold zones are possible, with a cumulative +100,000 ounce Au Equivalent potential within a 250 metre long target zone at or above the water table from 168E to 400E at a RL of 80-140 m below the surface.

A budget of \$ 100,000 to drill 11 RC holes totalling 2,000 metres to test this target area has been proposed

(iv) Juno East

The Juno East Prospect was identified as a small yet well defined magnetic anomaly. Evaluation of the area has included the drilling of six holes, JDH's15, 15WR01, 18,18A, 18AWR01, 22 and 22A.Drilling results indicated that the source of the magnetic anomaly is a steeply dipping ironstone body consisting of partially mineralised talc/dolomite/magnetite lode, similar to the upper portions of the main Juno lode system. Significant intersections returned from this drilling include:

Hole No.	Intercept (m)	Significant Results
15	317-326	9m @ 1.21% Cu, 0.41 g/t Au, 169 ppm Bi
	343-344	1m @ 3.4 g/t Au
	362-363	1m @ 9.1 g/t Au
18	229-239	10m @ 1.74% Cu

18A	330-334 338-341 356-358	4m @ 1.30% Cu, 2.59 g/t Au 3m @ 2.37 g/t Au 2m @ 11.03 g/t Au, 424 ppm Bi
22A	233-234 240-241 259-262	1m @ 1.36% Cu 1m @ 2.7% Cu, 1.2% Zn 3m @ 1.56% Pb

Cross-sections through these holes show that these holes have intersected the lode at depths of 200-300 metres below the surface and that the lode is untested above these depths. It is postulated that a significant zone of supergene mineralisation, in particular, a supergene chalcocite (copper sulphide) blanket, will lie at or above the water table, 100 metres below the surface. High copper values in JDH 22A from 126-143m are also suggestive of a supergene blanket at the water table. At Nobles Nob, the best mineralisation lay within the supergene zone and the orebody became uneconomic below a depth of 100 metres below surface.

A plan view of the intersections in these holes suggests that the lode trends in a NE-SW trend passing through the high Cu-Bi vacuum geochemistry centred on NRB-010 and possibly passing through to Fence 3 as evidenced by magnetite-hematite chips being intersected by RAB hole JNRB-021.

A highly anomalous area of copper and bismuth vacuum geochemistry lies immediately east of Juno East. Three fences of RAB holes, JNRB 09-22, were drilled at 60-degree angle to the south to downhole depths of approximately 60 metres (40 metres vertically below the surface) on Fences 1,2 and 3. These were later followed up by RAB holes JNRB 46-53 on Lines 1 and 4 and two shallow RC holes, JNRC 12-13 on Fences 1 and 2. A study of the results of this drilling has shown that several holes are highly anomalous in copper and bismuth with increasing depth and further enhances the potential for significant copper-bismuth and possible gold mineralisation up plunge of the Juno East lode at or near the base of oxidation.

A budget of \$50,000 has been proposed to drill four RC holes, angled at 60 degrees to the south for downhole depths of 250 for a total meterage of 1,000 metres.

(v) Juno Geophysical

Electromagnetic (EM) Surveys

In 1996 Poseidon Gold Pty Ltd carried out Ground Electromagnetic (EM) surveying along three grid lines across the Juno mine. Line 350E was 45 metres east of the Juno mine shaft, and passed across the eastern extremity of the Juno and M10 bodies. Lines 250E and 150 E passed over the center and western extremity of the Juno orebody. Log Conductivity/Depth psuedosections for these three lines were found in Peko's Tennant Creek files. Subject to reprocessing and re-interpretation of this data by Southern Geoscience Consultants the following comments can be made about the current psuedosections for each line:

Line 150 This section shows a broad resistivity (represented by a conductivity low) capping from 200E-500E, which masks the underlying features.

Line 250E A large bulbous conductivity low is centered on the Juno body and probably reflects the resistive conductivity of the talc and dolomite alteration hales which envelop the Juno orebody. Its persistence with depth probably reflects the M10 body.

Line 350E A near vertical very well defined conductivity low centered on 250-350E almost certainly is a reflection of the Juno and M10 orebodies. A separate conductivity low at a much shallower depth between 50E and 150E is a possible target area. This area also forms part of the South Eastern Magnetic Residual Anomaly (discussed below), which is centered on 400E 100N and is yet to be tested.

Ground and Aeromagnetic Surveys

A 1994 report on the Juno Magnetic Residuals discusses the method of calculating the effect of the Juno orebody and removing this effect from the total magnetic field in order to reveal any magnetic residuals that may be associated with anomalous concentrations of magnetite (and gold). Three residual areas were identified. The Eastern and Western Residuals have both been drill-tested and have been discussed separately in this study. The South Eastern Residual does not appear to have been drill-tested. The closest hole, JDH21A, was drilled to target this residual but failed to reach its target depth due to excessive hole deviation. Of particular interest is the fact that this hole intersected quite a thick (10 metre) interval of hematite shales, which are known to pass along strike into Juno and Nobles Nob style bodies.

In 1998, Normandy conducted low level close spaced (50 metre line spacing) helicopter borne aeromagnetic surveying over the Nobles Nob and Juno leases. Whilst Peko is in possession of maps showing the results of this surveying across the Nobles Nob leases (and has identified two target areas from such), it does not have any maps showing the results of the surveys across the Juno leases, although it does have the raw data. Reprocessing and reinterpretation of this data, including magnetic modeling of selected targets is highly recommended, especially across the South Eastern Residual Anomaly.

Gravity Surveys

Several ground gravity surveys have been carried out across the Juno leases and Peko is in possession of the raw data. A definite gravity high lies over the main Juno orebody, which lies within a pronounced north-south trending gravity corridor. Within this corridor, several other gravity highs exist and have yet to be tested. It is recommended that a re-interpretation of the gravity data as per Southern Geoscience Consultants proposal for Nobles Nob of 10 September 2003 (copy in Appendix 1) be carried out for Juno as well. This work will readily identify any hematite (as distinct from magnetite) bodies at shallow depth that have not yet been drill tested.

A budget of \$ 70,000 has been proposed for the following exploration items:

(a) Reprocessing and reinterpreting EM and gravity data by Southern Geoscience Consultants as per their proposal dated 10 September 2003. Total Cost = \$10,000.

(b) Reprocessing, interpreting and modeling the 1999 aeromagnetic data.

Total cost = 10,000.

(c) Depending upon the results of (a) and (b) above, provision made for 1,000 metres of RC drilling (holes to be 150-250 metres in length) to test any targets identified. Total cost at \$50/metre = \$50,000.

(vi) Eastern Residual

The Juno Eastern Residual Anomaly was identified through geophysical reconciliation of the residual magnetic field following the subtraction of the magnetic field known to be associated with the main Juno orebody. The anomaly has been tested by four diamond drillholes, JDH's 10,11,17A, and 28 along with three wedge runs, JDH's 10/1; 11/1; 17A/1. Whilst all holes intersected intervals of chlorite sediments, chlorite-magnetite, and chlorite-talc-magnetite, assay results were not significant and the only potential seem to lay in either the up dip, up plunge or strike extensions of the lode. Drillhole JDH 28 was designed to test such an extension but due to hole shallowing and deviation, it ended in a major strike-slip fault. All drilling has targeted the 200-400 metre level below surface, with no holes testing the up dip or up plunge extension into the base of oxidation at 100 metres below surface.

A reexamination of the drillhole sections for the above holes as well as a study of the results of RAB holes across vacuum geochemistry highs immediately southwest (Holes JNRB 029-033) and northeast (Holes JNRC 001-005,011) of the Eastern Residual Anomaly has been carried out. After making allowance for probable displacement and rotation along the major strike slip fault, the study points to the probability that the elongated bismuth (and copper) anomaly, aligned in a northeast direction (the Bismuth Trend), represents the up-plunge extension of the Eastern Residual Anomaly at the surface.

In addition, highly anomalous gold geochemistry at surface and in RAB holes JNRB 029-032 represents the up dip extension of the Eastern Residual Lode intersected by JDH's 10,11,17A, 28 etc. A highly prospective and valid target zone exists at and just above the water table at the 75-125m horizon.

Three RC holes, ER 1-3, each up to 250 metres in length, have been designed to test this up dip target zone, being a small supergene gold blanket, possibly amenable to open cut mining, with bismuth and copper credits. In addition two further RC holes, angled at 60 degrees to the south for downhole depths of 250 metres have been designed to test the probability of an up plunge extension of the lode into what is referred to as the Bismuth Trend by targeting the lode at a depth of 100-150 metres below surface. The target here is a supergene chalcocite (copper sulphide) blanket with bismuth and gold credits. Within these two bodies there may be higher-grade though patchy gold zones and each of them has the potential to contain plus 100,000 gold equivalent ounces. An exploration budget of \$62,500 has been proposed to drill these 5 RC holes for a total meterage of 1,250 metres.

(vii) Western Residual

A residual anomaly magnetic anomaly analysis in the 1970's defined small magnetic anomaly approximately 350 metres west of the Juno Mine. Four holes, JDH 12,13, 13WR01, 14 were drilled into the prospect, with the best intercept being 4.9m (*a*) 18.22 g/t Au in JDH 13 from 343.1 – 348.0 metres. The limited drilling suggested an ellipsoidal shaped body between 250-300 m RL, narrowing with height and plunging steeply to the north. Poseidon carried out further drilling in the 1990's to test the up plunge and along strike extensions to this mineralisation. JDH 20 was drilled to 218 m to test the up dip extension of the mineralisation intersected in JDH 12. No significant mineralisation or suitable lithologies were found. JDH 19 was drilled to 420 m to test the down dip and western extension (approx. 150m west) of the mineralisation intersected in JDH14. A narrow intercept of magnetite-talc-dolomite

altered rocks from 399-406 metres returned only traces of gold mineralisation. A broad intercept of hematite shales was intersected further up the hole but was not assayed. Similarly JDH029, drilled to 363 metres to test the eastern extension (approx 150 m east) of the mineralisation intersected in JDH's 12-14 returned only a narrow, but barren intercept of favourable lithology.

Vacuum drilling produced several geochemical anomalies, which were followed up by shallow RAB and RC drilling. RAB holes JNRB24-27 were angle drilled to downhole depths of 60-66 metres across a significant gold anomaly centered on the major NW-SE trending F1 structure. Despite drill logs showing intervals of hematite stringer alteration, assays showed these holes to be barren. RC holes JNRC 8-9 were drilled to target a significant gold and copper geochemical anomaly immediately east of JDH 29.Hematitic altered siltstones were intersected to downhole depths of 50 metres but assays showed the holes to be barren.

Based on the above it was concluded that the Western Residual area holds little, if any, remaining potential for economic gold-copper mineralisation to occur within this area. Reprocessing and reinterpretation of gravity data covering the area is recommended as a final test of the area. A budget of \$5,000 has been proposed to carry out this work

Other

The Juno leases form an integral part of the Peko Tailings Project, managed by Peko Rehabilitation Project Pty Ltd. All non-exploration activities carried out on the Peko leases are reported in the Mining Management Plan, which is submitted, on an annual basis. Peko Rehabilitation Project Pty Ltd submitted the most recent Mining Management Plan in October 2003.

EXPENDITURE FOR THE 12 MONTH PERIOD ENDING 31/12/2004

Approximately \$131,000 has been spent on data review, travel and fieldwork on the 9 Juno tenements. This equates to approximately \$14,500 per tenement. These costs are exclusive of costs associated with the Peko Tailings Project, of which the Juno tenements form an integral part of the tenement package. This expenditure is reported separately within the Annual Reports for the Peko Tailings Project as prepared and submitted by Peko Rehabilitation Project Pty Ltd for the years 2003-2004. Tenement rental for the 9 Juno tenements for the year ended 31 December 2004 was \$ 1,078.

Exploration	\$
Geological staff	12,000
Geological consultants	12,000
Geophysics consultants	12,075
Mining consultants	5,000
Metallurgical consultants	51,250
Assays	3,000
Travel and accommodation	20,000
Other	
General	
Administration	16,571
Total	131,896

Table 2. Annual expenditure on Juno Tenements

RECOMMENDED WORK PROGRAMME & EXPENDITURE

Proposed exploration activities for the 12-month period ending 31 December 2004 include the following:

- Geophysical reprocessing and modelling of the 1999 Normandy aeromagnetic and radiometric survey.
- Geophysical reprocessing and 3D modelling of gravity data acquired by Poseidon and Normandy
- RC drilling of at least 5-10 holes totalling up to 2,000 metres on the most prospective target areas identified on the lease. Table 3 summarises the total drilling meterage and budget required to test all 7 target areas, although it is not proposed to carry out all of this drilling in 2004. Table 4 is a risk/reward table showing which target areas offer the greatest reward for the lowest exploration risk. It is anticipated that these will be the targets first drilled in 2004.

The following table summarises the estimated proposed expenditure on the leases for the 12 month period ending 31 December 2004.

EXPENSE	COST
Geological	\$10,000
Geophysical	\$10,000
Drilling	\$30,000
Assay	\$20,000
Other Costs	\$ 1,000
TOTAL	\$ 71,000

Exploration program outcomes are unpredictable and most of the planned expenditure is contingent of outcomes from earlier work in the program. Actual expenditures may vary from the budget outlined above as a result of unexpected outcomes from the early work.

APPENDIX 1