

**Report on the
Resource Estimation
of the Nelson Bay River
Magnetite Deposit,
NW Tasmania**

Prepared for Zelos Resources NL

By

**Simon Tear
(BSc(Hons), PGEO, MAusIMM, MIOM³, EurGeol)**

Hellman & Schofield Pty. Ltd.

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5th January 2006



Hellman & Schofield Pty Ltd

Technical specialists to the minerals industry

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Executive Summary

This report discusses the magnetite resource at the Nelson Bay River prospect in NW Tasmania, currently held as part of an exploration licence by Zelos Resources NL of Sydney, Australia. Previous work by SMG Consultants in November 2005 identified an Inferred iron/magnetite resource of 4Mt @ 40% iron (Fe) for 600m of strike length and 225m of dip length with an estimated true width of 7.5m.

In 2006 Zelos completed additional exploration work on the deposit including:

- Three diamond drillholes totalling 564.4m with Davis Tube Recovery (DTR) tests for magnetite on the relevant intervals
- DTR tests on magnetite zones within old holes NBR001 and NBR002
- Surveying of all drillholes using a competent surveyor
- Acquisition of digital topography for the area
- A bulk sample for metallurgical recovery tests with results proving to be positive.

From the drilling results a revised geological shape was interpreted in both 2D and 3D. The resource shape measures 600m long by an average of 220m down dip with a range of true thicknesses from 2.2m at the southern end to 27m in the middle to 18m at its northern end. The deposit dips 65° to grid west. Modelling has also taken into account surface weathering of the resource, base of oxidation and topography.

This shape was used to reassess the previous resource estimation. Two methods were used, a sectional polygonal and inverse distance squared block model, with the former being the preferred choice. An estimated bulk density based on magnetite content in mafic rocks was used for the ID² method and a modified value based on the calculated grade was applied to the sectional polygonal data.

As a result, a new resource estimate was identified with a strike length of 400m, beginning at approximately 9925mN. At a 20% magnetite cut off the estimate is:

6.9Mt at 38.2% magnetite with the resources being in the **Inferred** category. This equates to a contained magnetite content of **2.63Mt**.

This amounts to a 70% increase in the resource compared with the previous estimate.

Bulk test sampling by Zelos has indicated favourable results for the production of a marketable magnetite concentrate for the heavy media market.

Before any further drilling is undertaken it is recommended that a scoping study be completed on the new resource estimate to assess potential mining methods (eg underground versus open pit).

Recommendations for further work include infill drilling (>2500m) and additional DTR work. It is also recommended that, before any new drilling is undertaken, proper core handling and assay procedures are in place.

This report has been prepared by Simon Tear, who is a competent person according to the JORC 2004 code. Details in the report have been prepared in accordance with the JORC guidelines 2004.

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1 Introduction

This report discusses the magnetite resource at the Nelson Bay River prospect in NW Tasmania currently held as part of an exploration licence by Zelos Resources NL of Sydney, Australia. Previous work by SMG Consultants ("SMGC") in November 2005 identified an Inferred magnetite resource at the prospect.

Following additional drilling on the property and reassaying of old drillcore by Zelos an updated database has been completed by Hellman & Schofield ("H&S"). This has been used to provide a new resource estimate for the magnetite mineralisation. Details of this work are provided in this report.

The resource estimate is based on diamond drilling completed by previous explorers over the past 40 years and by Zelos Resources in 2006.

2 Background

The Nelson Bay Magnetic anomaly (Figure 1) has been an item of geological interest for over 40 years, having first been drilled (only one hole has been located) in the late 1960s by Pickands Mather (Davis 1969). Their drilling identified the source of the magnetism to be localised zones of massive magnetite within an 'ultramafic' unit. Additional systematic exploration work by Geopeko in the early 1980's established a local grid and delineated the ground magnetic anomaly and base metal geochemical signature for the magnetite unit and its surrounding geology (Herrmann & Sumpton 1984). No drilling was undertaken by Geopeko. Pacific Nevada regenerated the local grid in 1999 and drilled the magnetic anomaly with two diamond holes looking for ironstone-related gold mineralisation. They also found and resampled the original Pickands Mather drillhole.. No significant gold mineralisation was reported.

Zelos resources NL (formerly Zinico Resources NL) acquired the Nelson Bay licence in 2004 and commissioned SMG Consultants in Brisbane to complete a literature study of the area. That work included a site visit by the author of that report (Simon Tear) who is also the author of this report for H&S. In the course of the data review it was noted that there were indications of a coherent magnetic body of significant proportions for which an Inferred resource could be identified. The data in Table 1 were used to generate a simple Inferred resource figure of 4Mt @ 40% total iron (Fe) for 600m of strike length and 225m of dip length with an estimated true width of 7.5m.

Table 1 2005 SMGC Resource Estimate Details (Tear 2005)

Drillhole	Width (m)	Estimated True Width (m)	Strike (m)	Dip (m)	Fe Grade %	Volume (m ³)	Tonnes (t)
N401	10	8.5	300	125	45.3	318750	1275000
NBR001	7.3	6	300	100	46.5	180000	720000
NBR002	9	7.5	300	225	34.7	506250	2025000
						Total	4020000

The resource estimation was based on the following:

1. A plausible geological model relating drillhole intercepts with surface mapping and ground geophysical magnetic anomaly.
2. The weighted average intercepts for Fe of the magnetite zone from the three drillholes

3. Relating total iron assays to magnetite (a notional 30% Fe was used as a cut off),
4. Interpolation between NBR001 and N401 to gain a measure of the down dip extent
5. The Geopeko mapping (for geological continuity and resource extrapolation),
6. The Geopeko ground magnetic survey (for geological continuity and resource extrapolation),
7. A density of 4t/m^3 was used (magnetite has an average density 5.12 t/m^3 – AusIMM Field Handbook 4th Edition)
8. Using a sectional polygonal interpretation
9. Pacific Nevada drill logs and sections

A key assumption in the resource calculation was that all the iron in the assays was due to magnetite. This was considered unlikely as there were reports of other iron-bearing minerals being present including actinolite, chlorite, pyrite and possibly siderite. There were no indications in the logs as to the relative abundance percentages of the iron minerals present.

A series of recommendations were made in Tear 2005 which included further drilling, mineralogical determinations and metallurgical recovery tests. To that end Zelos have now completed:

- Three more diamond drillholes totalling 564.4m with Davis Tube Recovery (DTR) tests for magnetite on the relevant intervals
- DTR tests on magnetite zones within old holes NBR001 and NBR002
- Surveyed in all drillholes using a competent surveyor
- Acquired digital topography for the area
- A bulk sample for metallurgical recovery tests with results proving to be positive.

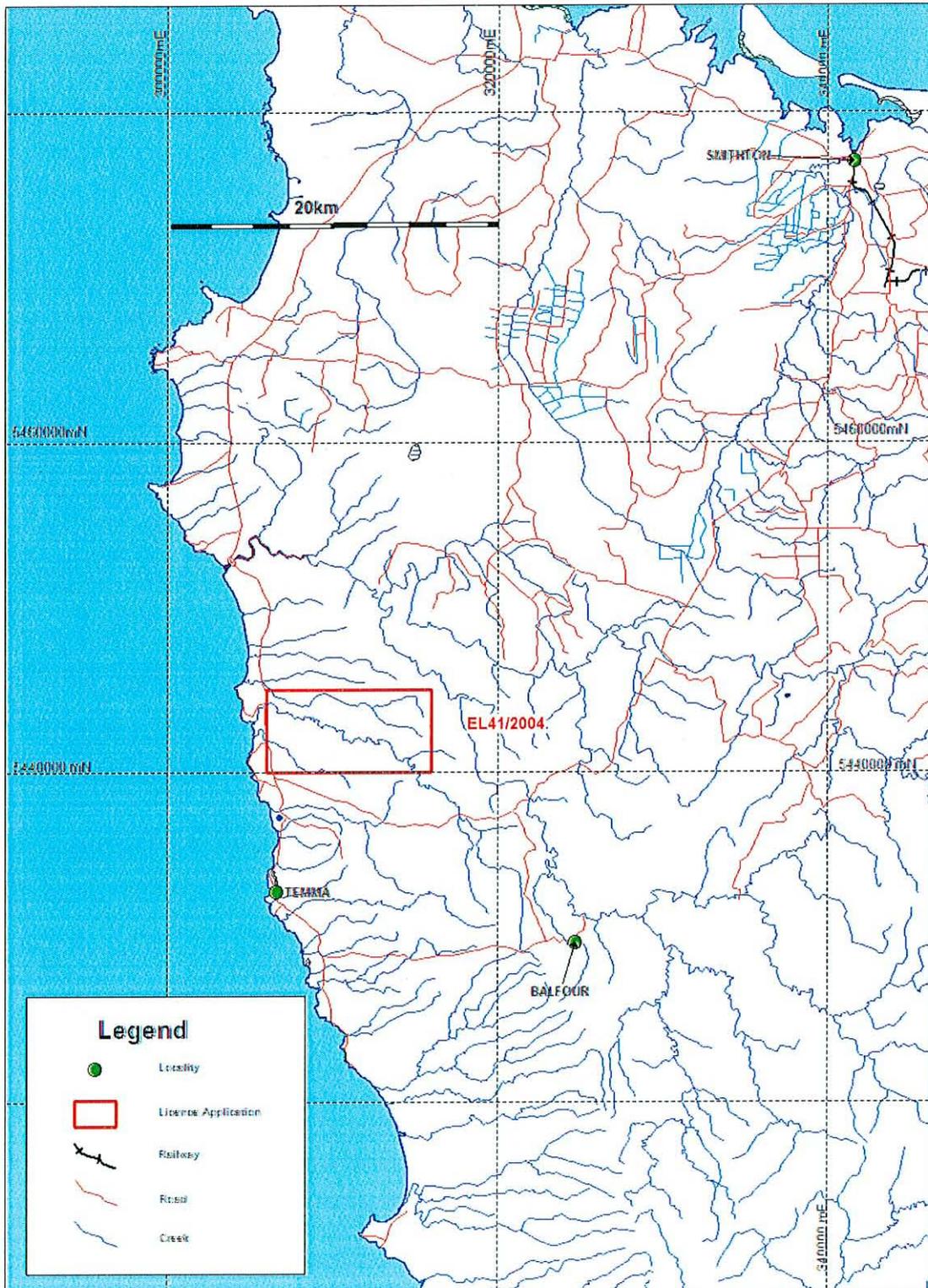
3 Location

The exploration licence EL 41/2004 measures 50km² and is located about 7km north east of the small township of Temma, and about 60kms southwest of Smithton, in North West Tasmania (Figure 2). The licence was granted by the Department of Mines in 2004 for 5 years.

Main road access to the property is via the Temma and Heemskirk roads, whilst parts of the licence can be accessed by the Wuthering Heights forestry roads. Off-road access is potentially very difficult, possibly requiring helicopter-supported access. Previous explorers have created 4WD tracks, some of which require refurbishment for access to target areas. The access road from the coast to the Nelson River Iron prospect was last used by Geopeko in the early 1980's but even then it "soon became very boggy and eventually it became necessary to use a bombardier to provide daily transport to the grid" (Tear 2005).

The Nelson River Iron Prospect is accessible from the Wuthering Heights forestry track and then by foot using a previous explorer's track. This track has been environmentally rehabilitated but requires relatively minor works to reactivate it in order to allow for machine access.

Figure 2 Location Map



4 Physiography & Vegetation

The west of the property lies within a peneplained hinterland to the coast with fossil sand dunes locally occurring. In the east the terrain becomes more undulating with incision by creeks. There are major rivers draining east to west, close to or through the property, including Sundown Creek, Sardine Creek and the Nelson Bay River.

Climate is temperate with substantial annual rainfall typical of Western Tasmania. Temperature ranges from just above freezing in winter to a likely maximum of 30°C in summer.

Vegetation cover is a mixture of low level heath in the west of the licence and plantation forestry in the east of the area

5 Land Tenure

The land tenure situation in Tasmania is based on a series of classifications that have resulted from the Regional Forestry Agreement (RFA). This act established, in conjunction with other stakeholders interests, which land is available for exploration and mining e.g. State Forest. Some of the main land use categories that are covered by the RFA, and which allow for mineral exploration and mining subject to a project activities review, are Nature Recreation Areas, Regional Reserves and Conservation Areas. These three categories can be regarded as the same for mineral exploration purposes; they have different objectives for other land users' e.g. hunting, forestry etc. An exploration work programme that is planned within any of the above three categories triggers the Mineral Exploration Working Group (MEWG) which reviews the planned work programme, making recommendations and/or modifications to the plan. This group is convened by MRT on behalf of any applicant with the review process undertaken in a timely manner. Other land categories which allow mineral exploration/exploitation include a Forest Reserve which is not available for forestry use; an MDC Informal Reserve is a forestry-related category that has a very minor impact on mineral exploration. The main areas where mineral exploration is not permitted are Nature Reserves, State Reserves and National Parks.

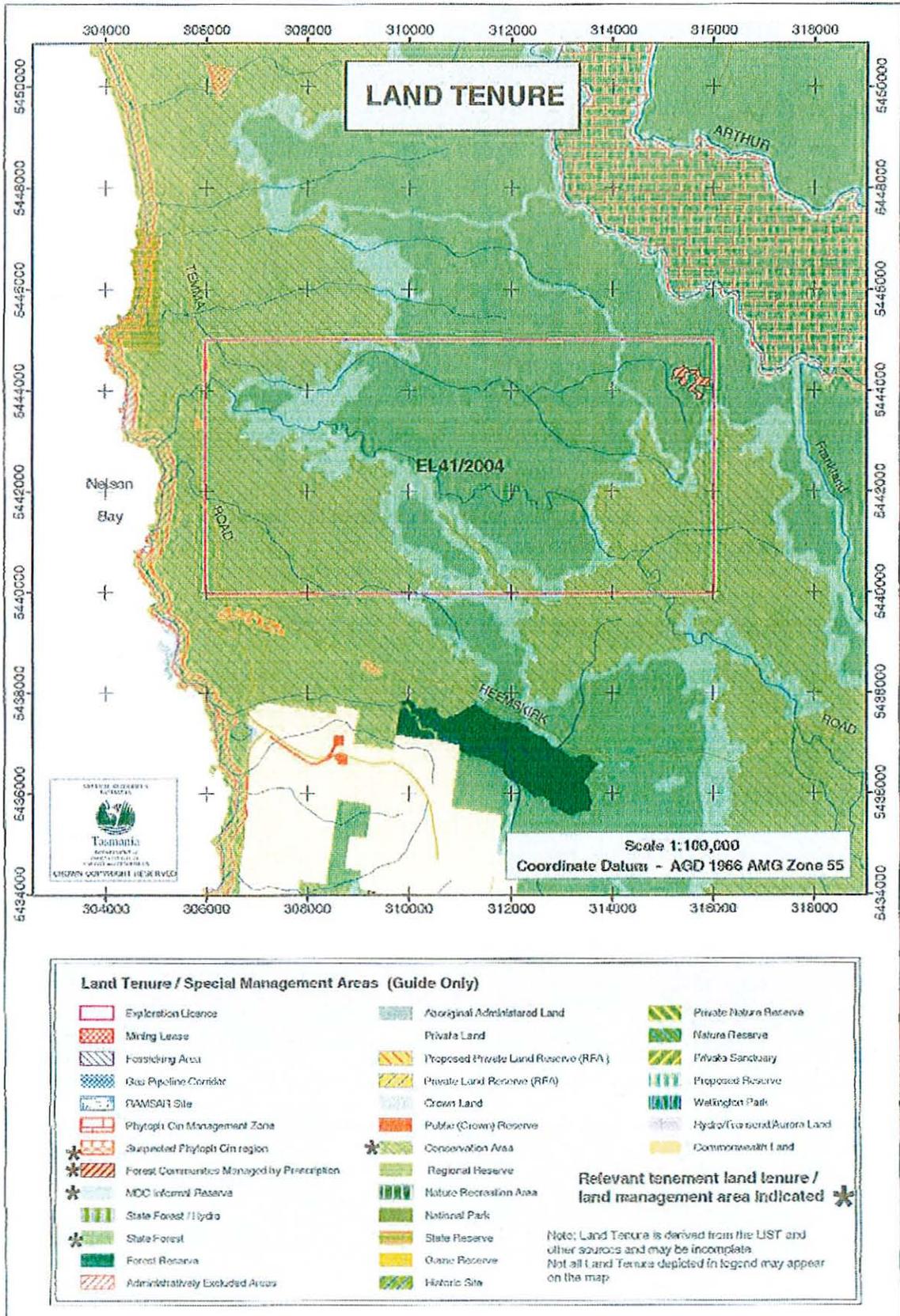
For the Nelson Bay River licence 55% of the tenement is State Forest with 40% classified as a Conservation Area with the remaining 5% as an MDC informal reserve. A small 'forest community managed by prescription' occurs in the northeast corner of the tenement but information supplied by MRT indicates that it is not likely to be an impediment to mineral exploration.

MRT have informed Zelos NL that there are no mining leases within the property (Tear 2004).

A map detailing the tenure and land use situation is included as Figure 3.

Peripheral to the south west corner of the licence there are recorded areas of the plant disease *Phytophthora Cinnamoni*. Care must be exercised when working near these areas to avoid spreading the infestation. This generally refers to washing all field gear ranging from gumboots to heavy plant machinery when moving to new sites/locations.

Figure 3 Land Tenure Map



6 Geology of the Magnetite Mineralisation

The description of the geology for the area is repeated from Tear 2004 and Tear 2005.

6.1 Regional Geology

The geology of the Nelson Bay River tenement consists of mixed siltstones, sandstones and carbonaceous mudstones of the Cowrie Siltstone, part of the Rocky Cape Stratotectonic Element. This element consists of Early Neoproterozoic autochthonous marine shelf clastic sequences, relatively unmetamorphosed to lower greenschist facies, overlain (outside the licence area) unconformably by various suites of younger Neoproterozoic rocks. There are suggestions (Tear & Russell 1998, Tear 2005) that the Proterozoic rocks were thrust over the Cambrian sequence.

6.2 Local Geology

Rocks in the Nelson Bay area comprise finely laminated, psammo-pelitic, Proterozoic-aged siltstones with medium grained sandstones/quartzites. The quartzites are clean, well sorted, and massive to thinly bedded and up to 200 m thick. Variable siltstones include finely laminated units to 'pyjama' siltstones, chloritic siltstones/schists and carbonaceous siltstones. The rocks strike northwest and generally dip between 55° and 65° east and face east. The Pacific Nevada drilling results (NBR001 and NBR002) confirm the northeast dip of the beds. The Geopeko work also indicates the oblique cross cutting nature of the iron formation, whilst the Pacific Nevada data confirms the steep (>60°) dip of the lode to the SW.

A geological map was interpreted by Tear 2005 based on a combination of structure from the West Tasmania Mineral Reconnaissance Programme (WTMRP) 1VD image and delineated magnetic-related units from the TMI image (figure 4 Tear 2005)

6.3 Mineralisation

The original Nelson River Iron occurrence is a 4km long, airborne magnetic feature confirmed in the 2001 WTMRP airborne survey. Follow up ground magnetic work by Geopeko in the 1980's showed that this feature splits into a northern and southern anomaly.

The northern anomaly, which has been drilled, comprises at surface an 800m long lode of granular aggregates of hematite and magnetite in an iron clay and/or siliceous matrix. At depth it becomes an "ultramafic dyke-like structure", up to 40m wide, containing a quartz-carbonate-magnetite-pyrite-garnet-chlorite-amphibole assemblage that dips 60° west and cross cuts stratigraphy at about 70° (Figure 5 - Newnham 2000). The dyke is sub-parallel to the lithological strike. Alteration associated with the dyke consists of a "white mineral and olive coloured silicate, fibrous amphibole and green silicates". In addition, dense clusters of garnet are reported at the ultramafic's contact with the sediments. This mineral style was linked in the past to Proterozoic iron formations similar to Tennant Creek (Newnham 2000).

No drilling has been completed on the southern anomaly.

Drill logs for NBR001, NBR002 and N401 (or NB401) showed that there is a magnetite-rich footwall zone to the dyke, which in NBR001 has yielded a 7.3m zone at 46.5% iron from 221.1m, within an overall zone of 31m @35.8% iron from 199.5m. The geological description for this lode is "magnetite-actinolite/chlorite skarn and...sulphide-poor...". Core recoveries for this interval are 100% with the core being described as very competent. This footwall zone appears to be repeated in N401 (140m up dip on the same section) and in NBR002 (200m to the south but appears to be more pyritic – Figure 6).

Figure 4 Geology Map
(from Tear 2005; descriptions of units' lithologies in Tear 2005)

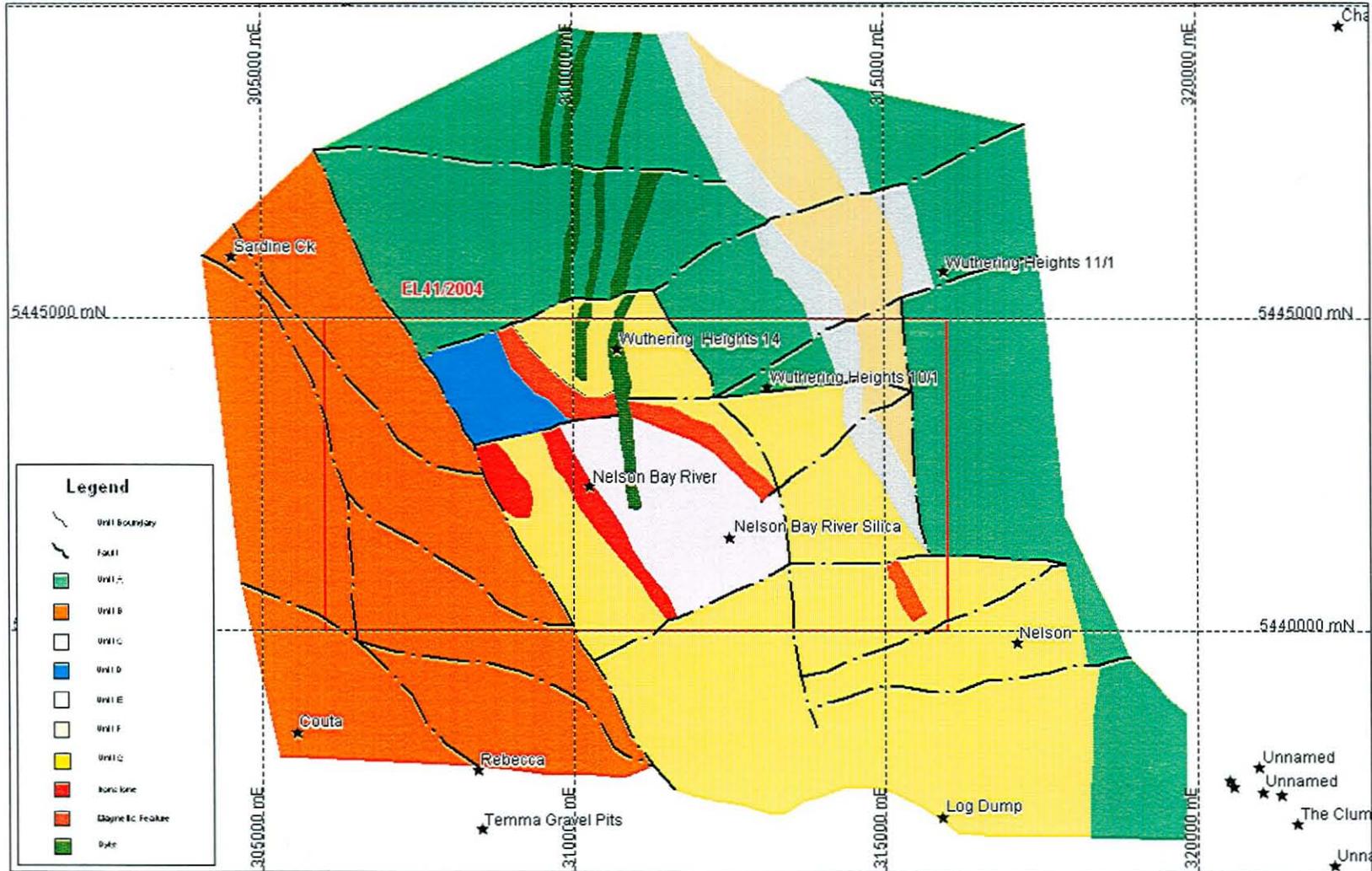
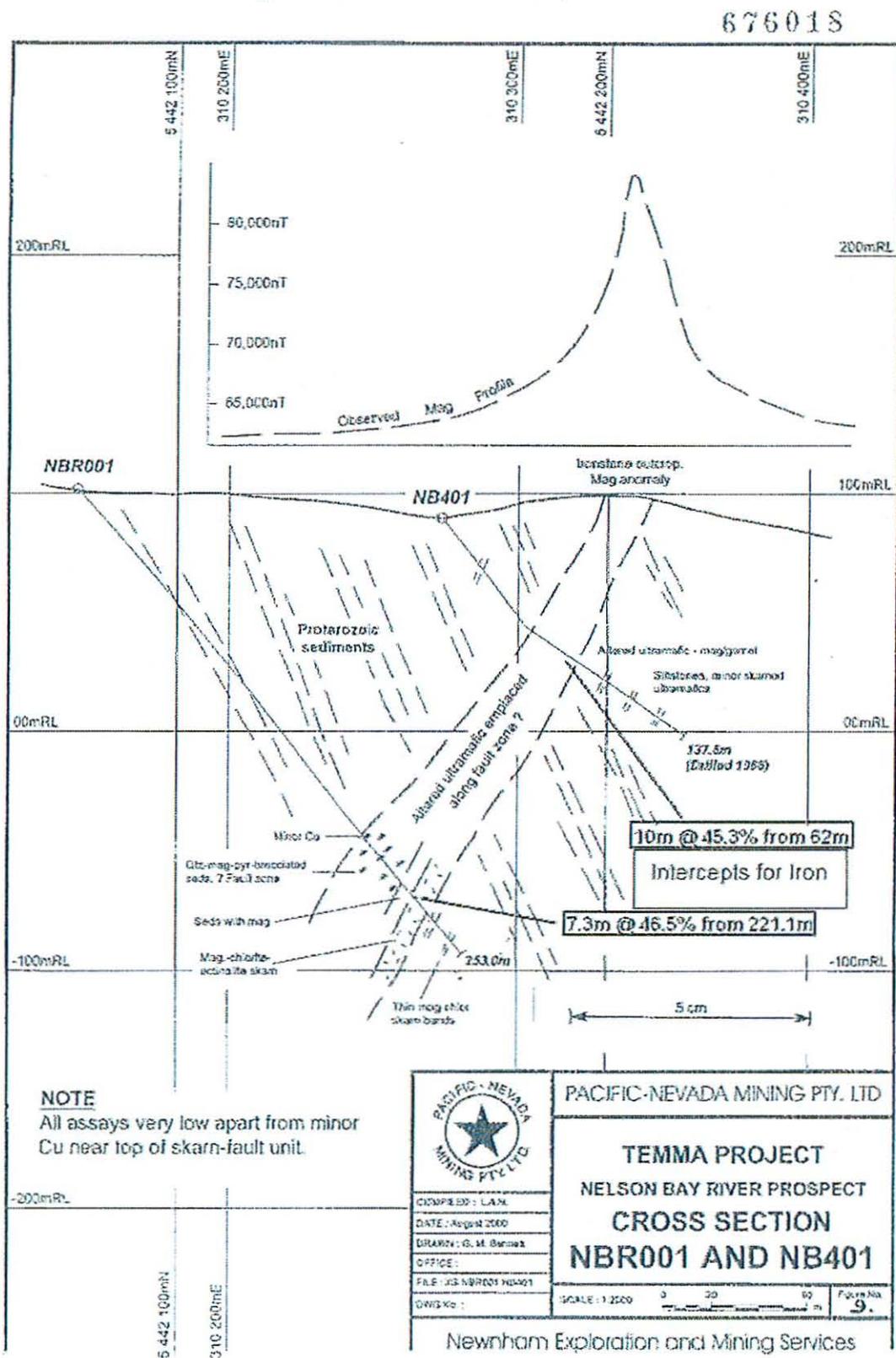
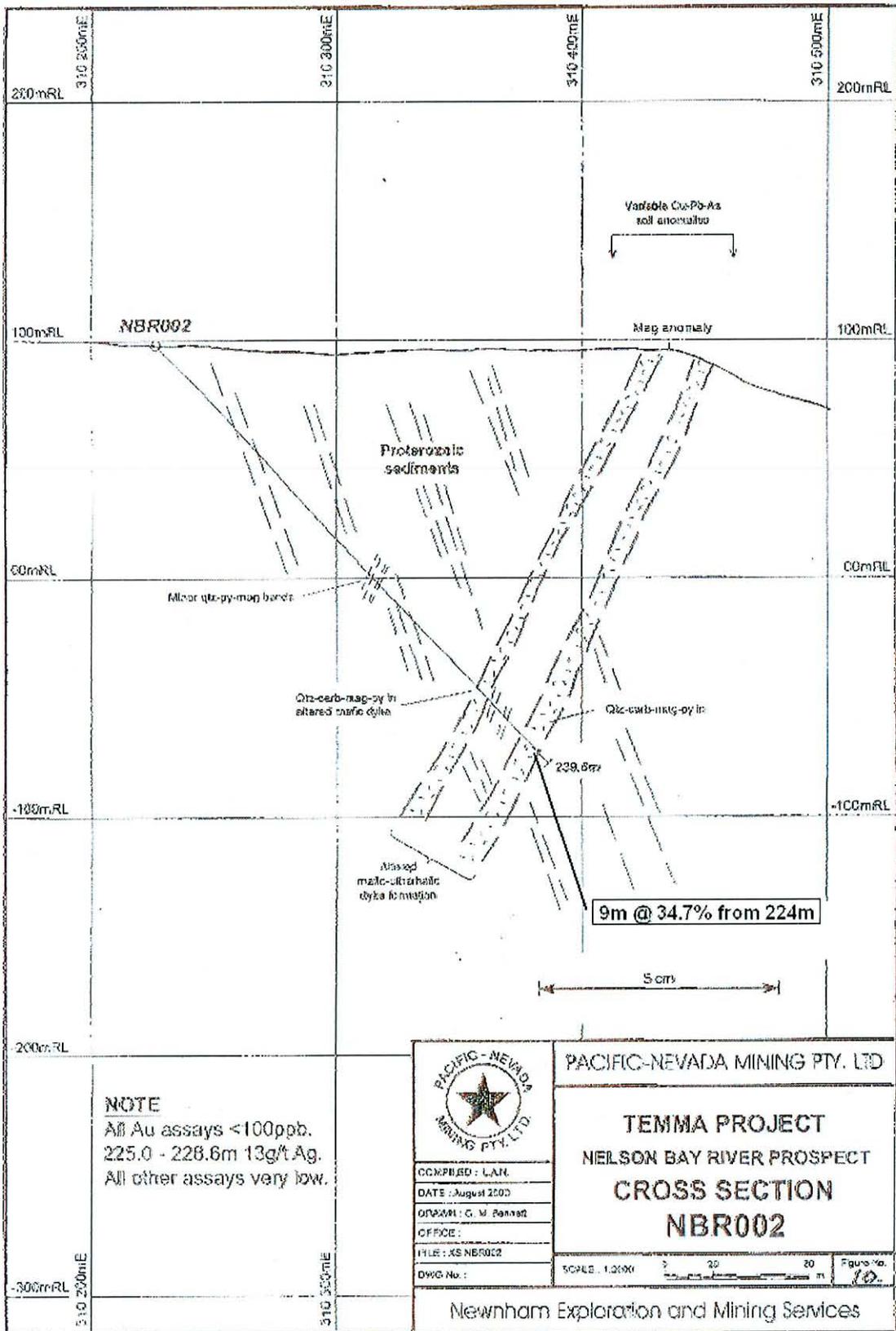


Figure 5 Cross Section 1 (Newnham 2000)



It is worth noting that the position of the apex of the magnetic anomaly in the Pacific Nevada sections appears slightly more to the east than would be expected. The current position of the anomaly lies over the weathered outcrop rather than over the high grade fresh zones. This may be due in part to potential drafting error noted with the Geopeko work.

Figure 6 Cross Section 2 (Newnham 2000)

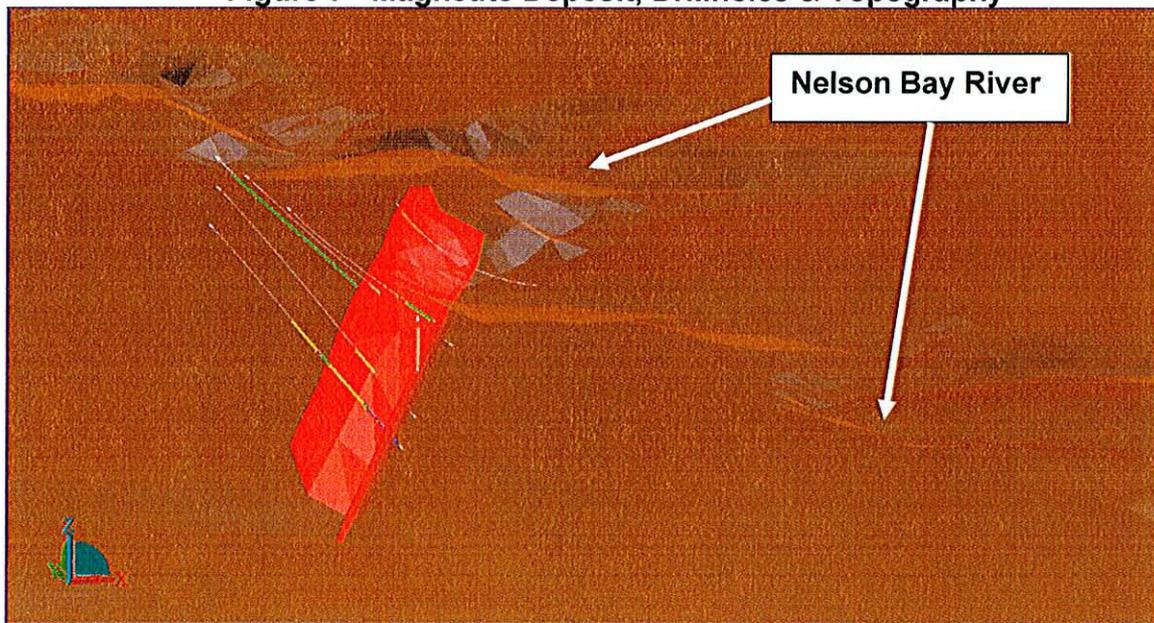


7 Recent Work By Zelos

The recent drilling of the Nelson Bay River magnetite deposit has increased the knowledge of the deposit (figure 7). In particular, holes NBR003 and NBR004 have indicated a wider magnetite zone than originally designed (Tear 2005). This zone is open to north but presumably is limited to the extent of the ground magnetic anomaly. The implication of this wider zone now suggests that the 7.5m magnetite zone in NBR001 used to calculate the original resource can be extended to include the other magnetite-rich zones in that hole, i.e. it becomes 28m wide from a down hole depth of 201m. However this extension of the potential ore zone has an associated core loss and variability in magnetite content. The recent DTR testwork shows that this core loss zone contains sections of high grade magnetite and this zone can be reasonably correlated with the intercept in the overlying drillhole N401. Thus north of the NBR001/N401 section line the quality and quantity of the resource has improved from the 2005 estimate, although it must be borne in mind that any mining method has to account for the impact of the Nelson Bay River which occurs about 50m north of NBR004.

Negative aspects of the recent work include drillhole NBR005, which was drilled 100m south of NBR001 (and 100m north of NBR002) and failed to reach its target position. This failure was compounded by the DTR results for NBR002, which despite having a 7.5m true width of high iron assays that implied high grade magnetite, yielded only a narrow magnetite zone of 2.2m true width at a modest magnetite grade of 20%. This severely impacts on the southern end of the magnetite body, substantially reducing its width and grade and thus its potential mineability.

Figure 7 Magnetite Deposit, Drillholes & Topography

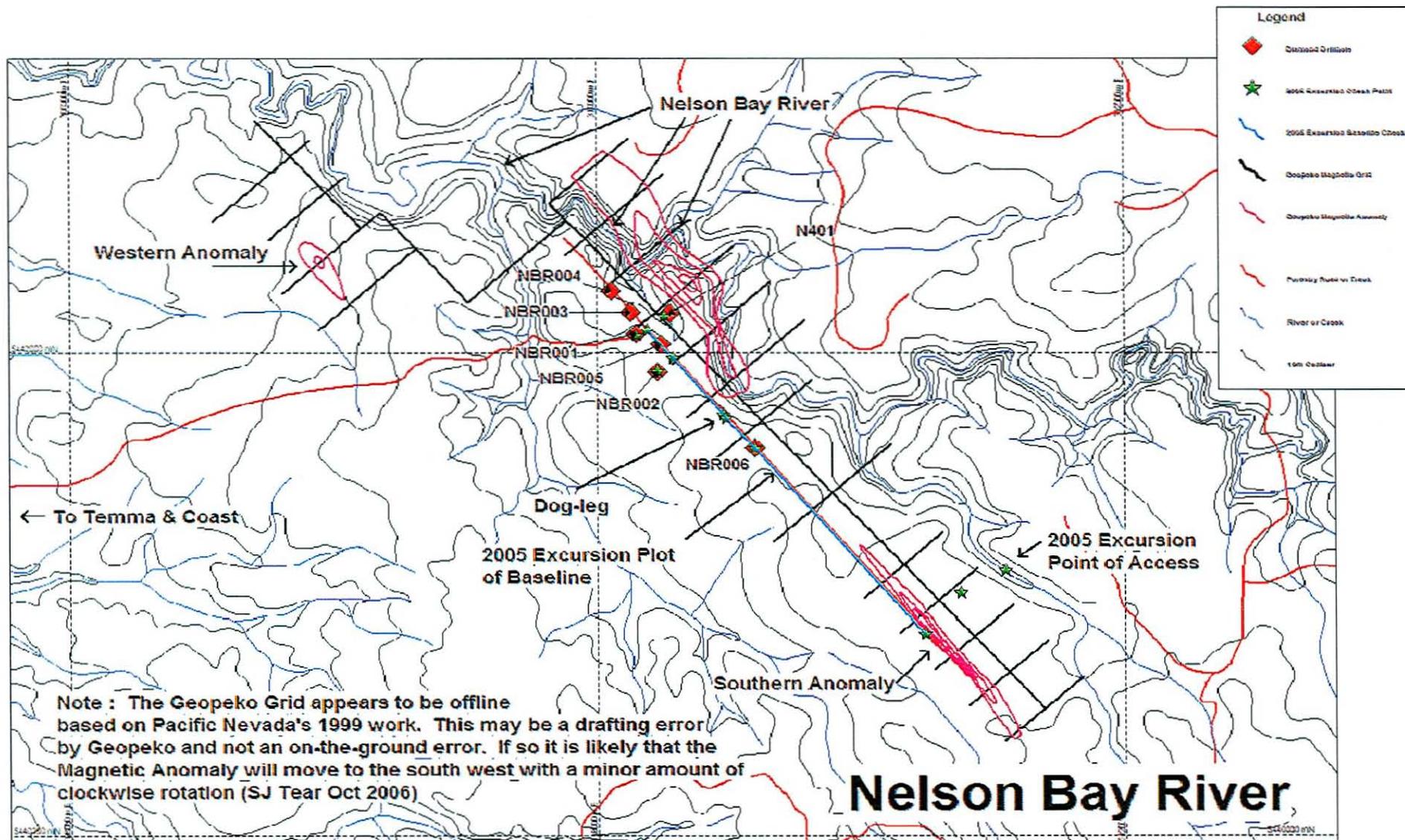


(viewed from slightly above and from SSW)

The surveying programme was unable to relocate the old Geopeko grid. Reviewing of maps published by Geopeko in open file reports and GPS measurements of drillhole collars has indicated an approximate 100m error for the grid relative to current ground relationships (figure 8). This means that there is an uncertainty in the location of the ground magnetic anomaly which was central to the original resource interpretation.

The digital topographic data was supplied by an agency of the Tasmanian Government. This data was used to create a ground surface. Discrepancies between the surveyed heights and the topographic data occur for the drill collars.

Figure 8 Summary Map of Recent Work



8 Sampling Techniques and Data

8.1 Sampling Techniques

Sampling of diamond drillcore for the recent drillholes NBR003 and NBR004 consisted of sawn half core cut again to give quarter core samples, one quarter was amalgamated with other samples to produce a bulk sample and the other quarter was sent for assay and DTR measurements.

Sampling of diamond core for DTR work from holes NBR001 and NBR002 consisted of existing half core (sawn) halved again to give quarter core and based on the same intervals as used by Pacific Nevada. There was some difficulty in locating sample intervals due to suspected movement of core blocks. There was insufficient sample due to core loss. The DTR work was carried out by SGS Laboratories in Perth.

Sample preparation consisted of cone crushing to -4mm followed by riffle splitting for 150g. This material was then pulverised for 1.5 minutes to give a 20g sub-sample which had P80 at 86µm. The 20g sample had its magnetic component reported as a percentage of the sample with XRF used to assay the magnetic component for a range of elements including iron, sulphur and phosphorous to determine its make up.

No DTR determinations of N401 were undertaken.

8.2 Drilling Techniques

Drilling of the deposit comprised mainly of wireline diamond drilling using an initial HQ size, reducing down to NQ core size. For drillhole N401 a combination of NX, BX and AQ sized core was produced.

A RB37 drill rig owned by Tasgold was used by Zelos. Pacific Nevada used a skid-mounted LF70 belonging to Almac Drilling.

Plastic core trays were used by both Pacific Nevada and Zelos with plastic core blocks securely placed in the trays. The core was then transported to a logging facility where the geological logging was undertaken. Re-sampling of NBR001 and NBR002, originally drilled by Pacific Nevada, was slightly hampered by the possible movement of core blocks during the original sampling and any subsequent transportation.

8.3 Drill Sample Recovery

Core recoveries were recorded by both Pacific Nevada and Zelos. Recoveries were also supplied for the re-sampling of NBR001 and NBR002 drillholes.

Core recovery is mixed, with NBR003 at 75% for the mineralised zone and NBR004 at 95%. Recovery in the high grade footwall part of the NBR001 mineralisation is 100%, but the mixed good and bad recoveries of the hangingwall and central part for the NBR001 mineralisation reduces the overall average to 75%. This will obviously impact on the confidence of the resource continuity and be reflected in the resource classification.

8.4 Logging

Drill logs were supplied to H&S by Zelos as rather sparse geological data in an Excel spreadsheet.

No core photographs were taken by Zelos.

8.5 Location of Data Points

A qualified surveyor, Len Mackenzie of Wynyard, Tasmania, completed a survey to pick up all the drillhole collars. Data was supplied in the map projection AGD66 Zone 55.

Down hole surveys for the Zelos drilling used a single shot Eastman down hole camera with shots generally taken at 50m intervals.

8.6 Verification of Data

All drilling data has been combined into a single Access database for use with Surpac software. Geological data from the recent drilling was supplied as Excel spreadsheets by Zelos personnel. H&S have not verified this data. No viewing of the core has been made by H&S personnel. Pacific Nevada assay and geological data were digitally entered by H&S personnel. Geological logs have not been checked against actual drill core by H&S.

Recent assay and DTR results have been supplied as laboratory-direct Excel files which were loaded into the database. Sample intervals were supplied by Zelos personnel.

8.7 QA/QC

No QA/QC programme for the assays was implemented by either Zelos Resources or Pacific Nevada.

9 Estimation & Reporting of Mineral Resources

For the resource estimation work an initial review of the data indicated that a sectional polygonal method would provide the most reliable results.

9.1 Database Integrity

All drilling information was compiled into an Access database maintained solely by H&S.

A series of error queries and software-based database auditing has removed numerous data entry errors, typos etc.

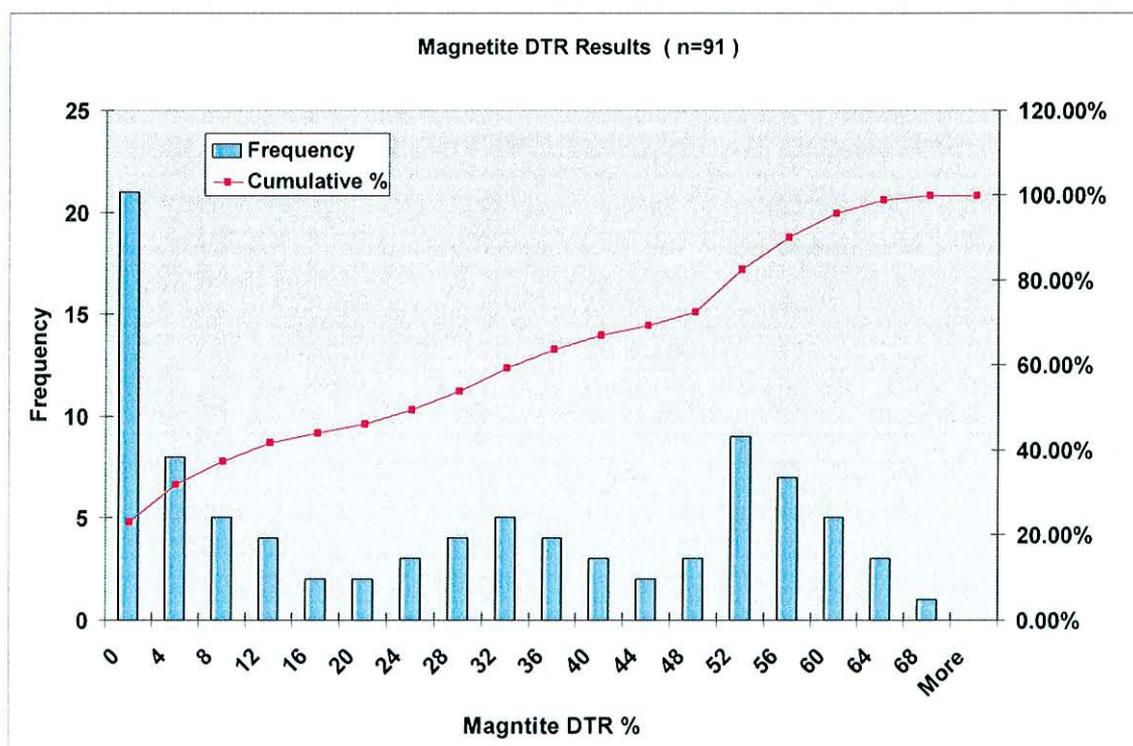
For the DTR magnetite data there are no below detection values but there are zero values in the database where no magnetite was recorded. Any below detection values from the assay data were substituted with half the detection value.

9.2 Geological Interpretation

For the ease of geological interpretation the drillhole collar data was converted to local grid coordinates, which has taken into account the potential error between the local grid and the AMG measurements.

A review of the magnetite DTR data indicated that there were possibly four populations, comprising background, ultramafic, and two magnetite zones (Figure 9). 20% magnetite was decided as an arbitrary cut off for the resource shape.

Figure 9 Magnetite Abundance Data from DTR Tests



3D viewing of the drilling combined with 2D sectional interpretation has allowed for the creation of a geological shape for the magnetite body (figures 10 & 11). This magnetite unit is hosted within very iron-rich material that has been designated an ultramafic by previous

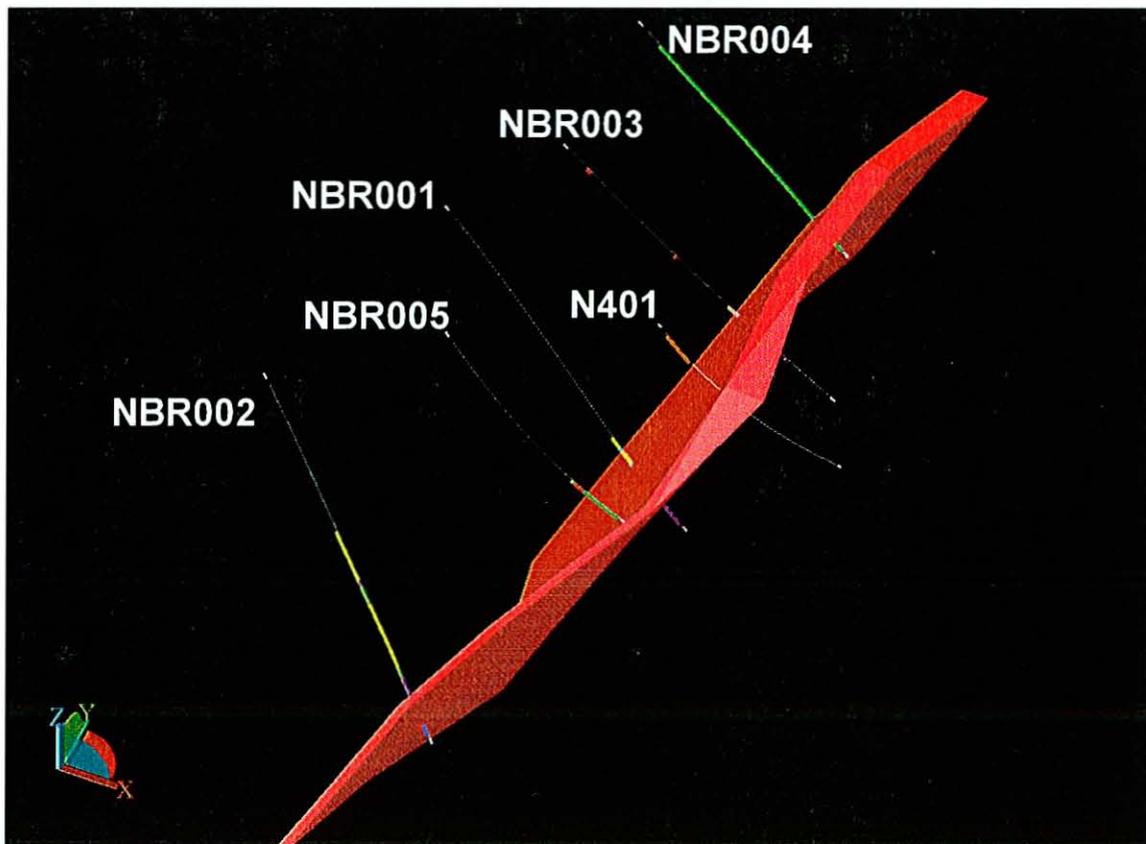
explorers (Turner 1999 and Newnham 2000) and Zelos personnel (L. Vanzino pers comm.). The digitising of the magnetite shape was based on snapping to drillholes for a notional 20% magnetite cut off. Section spacing was 100m in order to match the drillhole spacing. An extrapolation of 100m was added to the end drillholes i.e. NBR004 and NBR002.

The magnetite shape in plan matches the contoured ground magnetic anomaly produced by Geopeko, including a bend to grid west between holes NBR001 and NBR002. The apex of this bend coincides with the projected drillhole trace of NBR005 and is used to suggest that this drillhole stopped short of the main target. This is confirmed by verbal reports from Zelos personnel (L. Vanzino pers comm.).

The declining intensity of the magnetic anomaly appears to provide a limit to potential mineralisation at both ends of the resource shape. Down dip interpolation between drillholes N401 and NBR001 has allowed for some down dip extrapolation to the resource shape. This has resulted in a down dip length of approximately 225m being nominated. This down dip length has been applied as an extrapolation to sections with single drillholes.

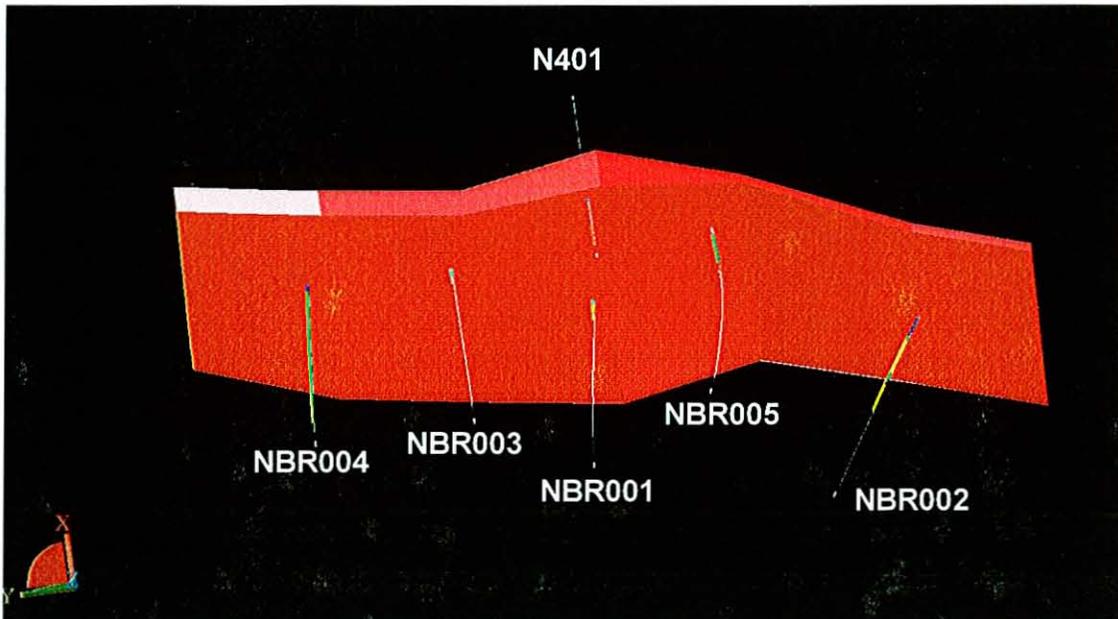
The resource shape measures 600m long by an average of 220m down dip with a range of true thicknesses from 2.2m in the southern end to 27m in the middle to 18m at its northern end. The deposit dips 65° to grid west. The shape, and hence what is excluded from the resource estimation, has also taken into account surface weathering of the resource and the base of oxidation, the latter of which has been recognised at around 30m down hole, approximately 20m in a vertical sense from the plateau level (the Nelson Bay River has incised this plateau up to 20m). The effect of topography has also been accommodated for in the shape design.

Figure 10 Magnetite Body & Drillholes



Note : view from above and SSE

Figure 11 Magnetite Body & Drillholes

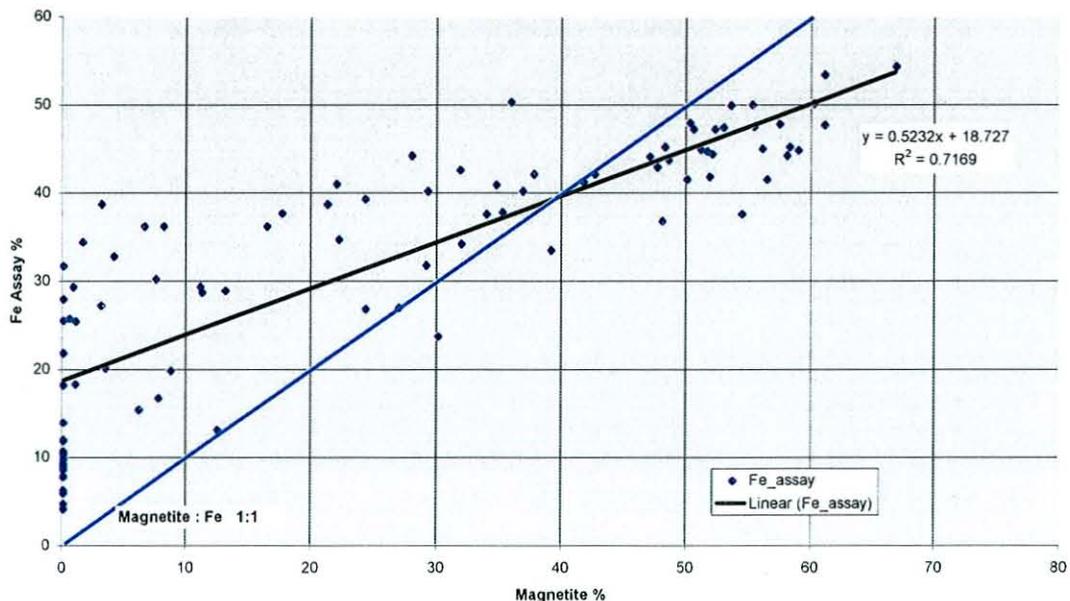


Note : view from above and west

The initial assumption in the SMGC resource model that total Fe grade could be used to infer magnetite is only partly correct. The assay results and DTR tests for NBR001 show a good correlation with the implication that an additional 13% of the actual Fe assay could be allocated to other ferrous/ferric minerals e.g. siderite, chlorite etc. The assay results from NBR002 showed a distinctive iron-rich zone in the footwall of the ultramafic dyke with a 9m at 34.7%Fe from 224m. The DTR work indicated a 2.6m wide zone at roughly 20.5% magnetite from 224m. In the graph below (figure 12) parts of the drillcore have very significant total iron assays that do not indicate magnetite present and thus use of iron assays to imply a magnetite presence in this geological environment is invalid.

Figure 12 Magnetite & Fe Assay Correlation Graph

Magnetite vs Fe_assay (n=92)



The impact of surface oxidation on the quality of the resource is difficult to gauge. Recent Zelos drilling has indicated weathered material up to 30m downhole, which equates to roughly 20m vertical depth and is not unusual in West Tasmania. Most of these holes are on the Nelson Bay plateau, up to 20-25m above the Nelson Bay River which is cutting into the plateau and where the depth of weathering may not be so great. In addition, magnetite is generally a resistate mineral and, therefore, it is uncertain what effects weathering may have on grade and beneficiation. In partially oxidised outcrop, there are substantial amounts of magnetite associated with the ultramafic-hosted lode. As a result a 'best guess' position has been located for the top of the lode shape in the geological interpretation that attempts to reconcile the competing data.

9.3 Resource Data

For the sectional polygonal interpretation simple weighted averages for the magnetic component from the assay data were used with the digitally measured true widths for individual holes using Surpac software.

For the Inverse Distance Squared method Surpac software was used to produce 1m composites of the magnetite fraction from the drillholes which intersected the magnetite shape (string file [nbrmag1.str](#) Appendix 1). A statistical summary of the composited intervals is listed below in Table 2. In this instance NBR002's assays results were removed from the summary as the interval was considered uneconomic.

Table 2 Statistical Summary of Magnetite Content (Composited DTR values)

Summary Statistics	Magnetite
Mean	38.27
Standard Error	2.19
Median	44.33
Mode	50.22
Standard Deviation	17.66
Sample Variance	311.98
Kurtosis	-0.72
Skewness	-0.63
Range	66.83
Minimum	0
Maximum	66.83
Sum	2487.45
Count	65
Confidence Level(95.0%)	4.38

No top cut was applied to the magnetite data.

9.4 Densities

Zelos has not conducted any bulk density measurements on drillcore.

For the sectional polygonal resource an arbitrary $4t/m^3$ density figure was used initially to calculate a resource tonnage for comparison with the SMGC model.

For the ID² method a density figure of $4t/m^3$ was again used for comparison purposes. In addition a calculated bulk density field was added to the block model. This value was based

on the magnetite grade and its contribution to density for each block. It used the equation below:

Calculated bulk density =

$((\text{magnetite grade}/100) \times 5.12) + (((100 - \text{magnetite content})/100) \times 2.9)$ where

5.12 is the average density of magnetite

2.9 is the base value based on an approximate average for mafic igneous rocks (AusIMM Field Handbook 4th Edition)

This block density was used in the resource reporting for the ID² method. A modified number based on the calculated grade was re-applied to the sectional polygonal data. This resulted in the sectional polygonal data having a density slightly less than the 4t/m³ used previously.

9.5 Estimation Methods

The sparse amount of drilling data means that an appropriate technique for resource estimation is a sectional polygonal method. As a check, an inverse distance squared model was tried using an interpreted 3D geological shape for the magnetite distribution.

9.5.1 Sectional Polygonal

This method involves ascribing a strike length, a down dip length and a true width to each drillhole intercept. The strike length is half the distance between each drillhole except for the end holes which had two options of a 50 and a 100m extension. The down dip length was based on the interpolation between the intercepts in drillholes N401 and NBR001 (distance between the two is 140m) with a 50m extrapolation below the lower intercept. The upper extrapolation was taken to an approximate base of weathering i.e. 35m. The true width was measured off the sections.

Results of the work are included in Table 3 below.

Table 3 Inferred Sectional Polygonal Resource (500m strike)

Section	Width (m)	Estimated True Width (m)	Strike (m)	Down Dip (m)	Volume (m ³)	Tonnes	Magnetite Grade (%)
N401	22.0	21.1	151.2	125	398,790.0	1,595,160	30.6
NBR001	28.5	27.1	151.2	100	409,752.0	1,639,008	30.6
NBR002	2.6	2.2	149.3	225	739,03.5	295,614	20.0
NBR003	18.0	18.0	102.2	225	413,910.0	1,655,640	43.2
NBR004	18.0	17.0	100.3	225	383,647.5	1,534,590	45.2
503.2 Totals					1,680,003	6,720,012	36.6

Note : N401, which has not DTR magnetite results, is given the same grade as for NBR001

This gives an Inferred Resource of 6.7Mt at 36.6% magnetite at a 20% magnetite cut off with a density of 4t/m³. This compares to the SMGC figure of 4Mt at a 30%Fe cut off using a density of 4t/m³.

If an additional 50m extrapolation is added to the strike length at both northern (NBR004) and southern ends (NBR002) of the interpretation then the resulting figures are seen in Table 4:

Table 4 Inferred Sectional Polygonal Resource Figures (600m Strike)

Section	Width (m)	Estimated True Width (m)	Strike (m)	Dip (m)	Volume		Magnetite Grade
					(m ³)	Tonnes	
N401	22.0	21.1	151.2	125	398790.0	1595160	30.6
NBR001	28.5	27.1	151.2	100	409752.0	1639008	30.6
NBR002	2.6	2.2	199.3	225	98653.5	394614	20.0
NBR003	18.0	18.0	102.2	225	413910.0	1655640	43.2
NBR004	18.0	17.0	150.3	225	574897.5	2299590	45.2
603.2 Totals					1896003	7584012	37.2

Note : N401, which has not DTR magnetite results, is given the same grade as for NBR001

This gives a resource of 7.6Mt at 37.2% magnetite for a 20% magnetite cut off with a density of 4t/m³.

If densities based on the calculated density figures from the ID² model are substituted for the nominal 4t/m³ the following results are produced (Tables 5 and 6).

Table 5 Inferred Sectional Polygonal Resource Figures (500m strike)

(Density = 3.8)

Section	Width (m)	Estimated True Width (m)	Strike (m)	Dip (m)	Volume		Mag Grade
					(m ³)	Tonnes	
N401	22	21.1	151.2	125	398790	1515402	30.6
NBR001	28.5	27.1	151.2	100	409752	1557058	30.6
NBR002	2.6	2.2	149.3	225	73903.5	280833.3	20
NBR003	18	18	102.2	225	413910	1572858	43.2
NBR004	18	17	100.3	225	383647.5	1457861	45.2
503.2 Totals					1680003	6384011	36.6

Note : N401, which has not DTR magnetite results, is given the same grade as for NBR001

Table 6 Inferred Sectional Polygonal Resource Figures (600m Strike)

(Density = 3.78)

Section	Width (m)	Estimated True Width (m)	Strike (m)	Dip (m)	Volume		Mag Grade
					(m ³)	Tonnes	
N401	22	21.1	151.2	125	398790	1507426	30.6
NBR001	28.5	27.1	151.2	100	409752	1548863	30.6
NBR002	2.6	2.2	199.3	225	98653.5	372910.2	20
NBR003	18	18	102.2	225	413910	1564580	43.2
NBR004	18	17	150.3	225	574897.5	2173113	45.2
603.2 Totals					1896003	7166891	37.2

Note : N401, which has not DTR magnetite results, is given the same grade as for NBR001

If the results from NBR002 and NBR005 are removed then the results are indicated in Tables 7 and 8 below

Table 7 Inferred Sectional Polygonal Resource Figures (350m Strike)

(Density = 3.83)

Section	Width (m)	Estimated True Width (m)	Strike (m)	Dip (m)	Volume		Mag Grade
					(m ³)	Tonnes	
N401	22	21.1	151.2	125	398790	1527366	30.6
NBR001	28.5	27.1	151.2	100	409752	1569350	30.6
NBR003	18	18	102.2	225	413910	1585275	43.2
NBR004	18	17	100.3	225	383647.5	1469370	45.2
353.7 Totals					1606100	6151361	37.3

Note : N401, which has not DTR magnetite results, is given the same grade as for NBR001

Table 8 Inferred Sectional Polygonal Resource Figures (400m Strike)

(Density = 3.83)

Section	Width (m)	Estimated True Width (m)	Strike (m)	Dip (m)	Volume (m ³)	Tonnes	Mag Grade
N401	22	21.1	151.2	125	398790	1527366	30.6
NBR001	28.5	27.1	151.2	100	409752	1569350	30.6
NBR003	18	18	102.2	225	413910	1585275	43.2
NBR004	18	17	150.3	225	574897.5	2201857	45.2
		403.7	Totals		1797350	6883849	38.2

Note : N401, which has not DTR magnetite results, is given the same grade as for NBR001

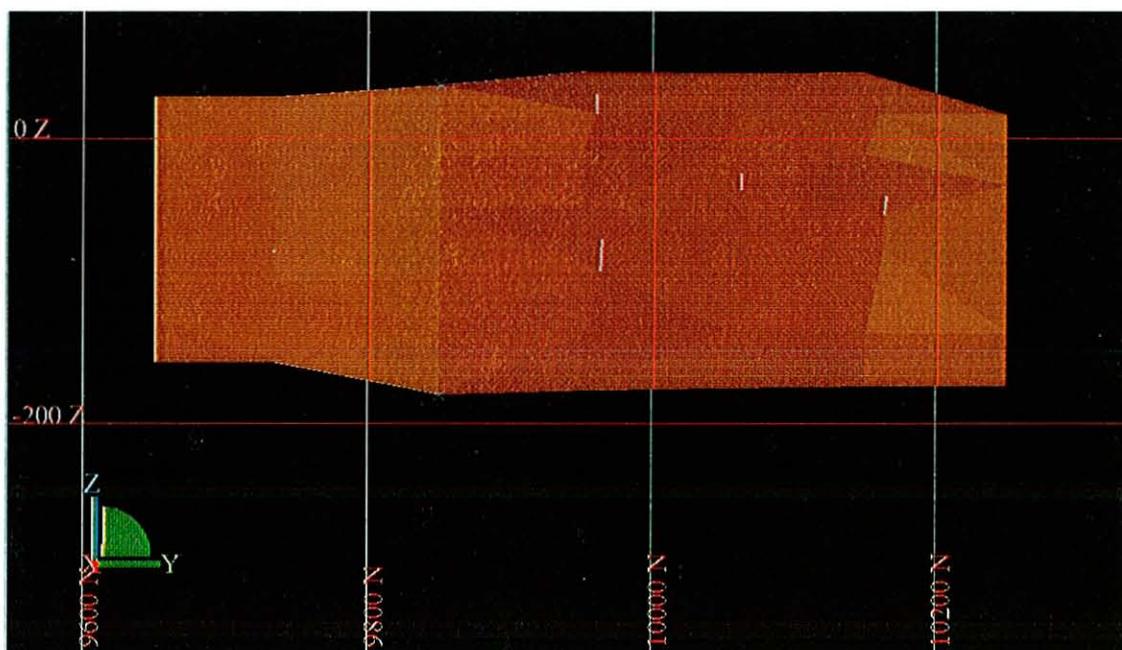
9.5.2 Inverse Distance Squared (ID²)

The number of magnetite DTR samples from the diamond drilling is considered low (68) for estimation purposes and not sufficient for any geostatistical analysis, hence kriging is not considered a suitable method for the resource estimation. A simple method such as Inverse Distance Squared, in these circumstances, is appropriate. This method estimates block grades based on surrounding samples, giving the greatest weight to samples nearest to each other. However it does mean that there is no facility for a measuring the error associated with the estimation technique. ID² does tend to promote 'bulls-eye' features, which do not realistically reflect the actual magnetite mineralisation.

Attempts were made in the ID² modelling to mimic the sectional polygonal scenario. Thus noting the drillhole spacing and acknowledging the sectional polygonal shape it was considered that 25m by 25m by 5m was a suitable block size with sub-celling to 6.25 by 6.25 by 1.25m. Details of the block model ([nbrmag.mdl](#)) are provided in Appendix 2

The composite string file [nbrmag1.str](#) was used for the block grade estimation (Figure 13). Details of the estimation parameters are supplied in Appendix 3. A search ellipse comprised a 150m search radius with the relative dimensions of the resource shape ie similar length major and semi-major axes that are 10 times greater than the minor axis.

Figure 13 Drill Intercepts for the Resource Shape



Notes

Looking west

The uppermost central intercept is N401 which has no DTR results

The resource shape that is used to constrain the block grade estimation comes from the geological interpretation mentioned in 9.2. The volume of this shape is 1880144m³ compared to the sectional polygonal volume of 1896003m³. Hence there is a very small difference in volume between the two shapes of 15859m³.

The results for the ID² estimation constrained within the resource shape for a density of 4t/m³ is 6.8Mt at 38.7% magnetite.

If the calculated bulk density (average 3.78t/m³) is used then the resource figure is 6.4Mt at 39.1% magnetite.

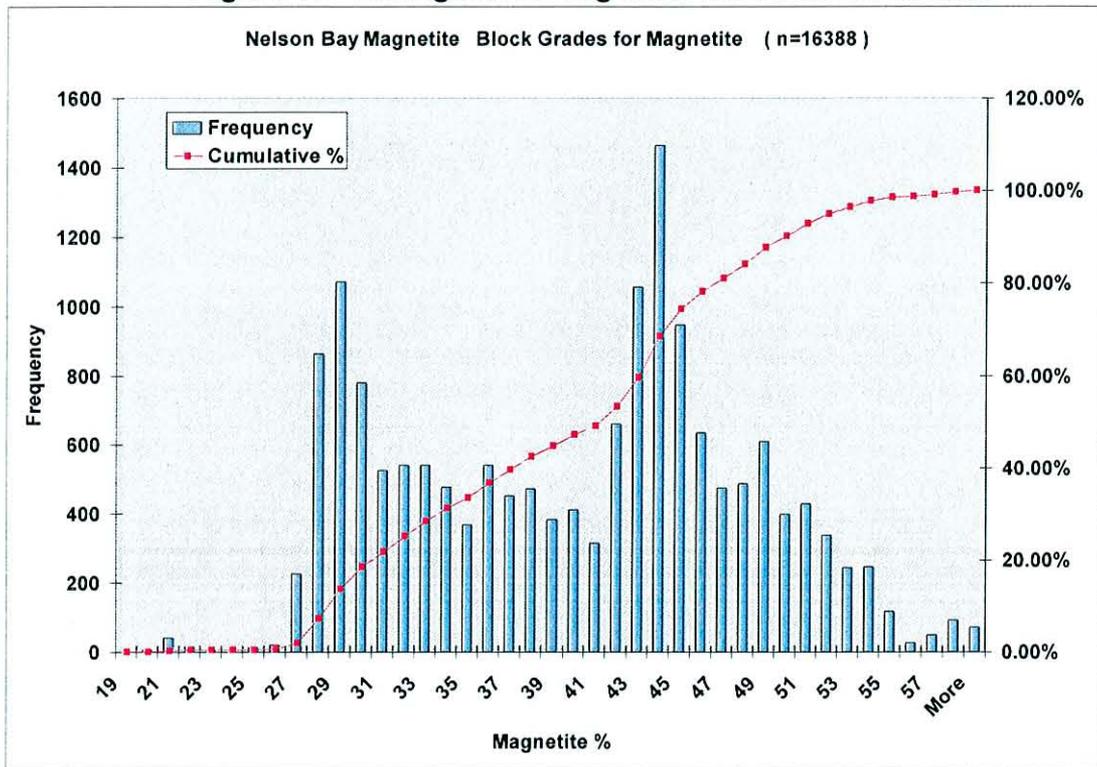
Table 9 Statistical Comparisons for ID² Model

	<i>Composite Magnetite</i>	<i>Block Magnetite</i>	<i>Block Density</i>
Mean	38.27	39.53	3.78
Standard Error	2.19	0.06	0.001
Median	44.33	41.2	3.82
Mode	50.22	28.05	3.86
Standard Deviation	17.66	8.06	0.18
Sample Variance	311.98	65.01	0.03
Kurtosis	-0.72	-0.99	-1.00
Skewness	-0.63	-0.008	-0.01
Range	66.83	38.41	0.85
Minimum	0	19.83	3.34
Maximum	66.83	58.24	4.19
Sum	2487.45	647830.8	61906.8
Count	65	16388	16388
Confidence Level(95.0%)	4.38	0.12	0.003

The slight increase in the average magnetite block grade in Table 9 is probably due to the high grade zone in NBR004 which is unconstrained to the north and therefore has a greater influence on the block grades to the north than would otherwise be normal.

A histogram plot of the block model magnetite grades (Figure 14) demonstrates two populations which is observable for the original composite values (despite the low sample number) and the raw magnetite DTR data. The higher grade population is believed to come from the footwall zone previously identified from Tear 2005. The lower grade population is attributed to the variable magnetite content zone in NBR001.

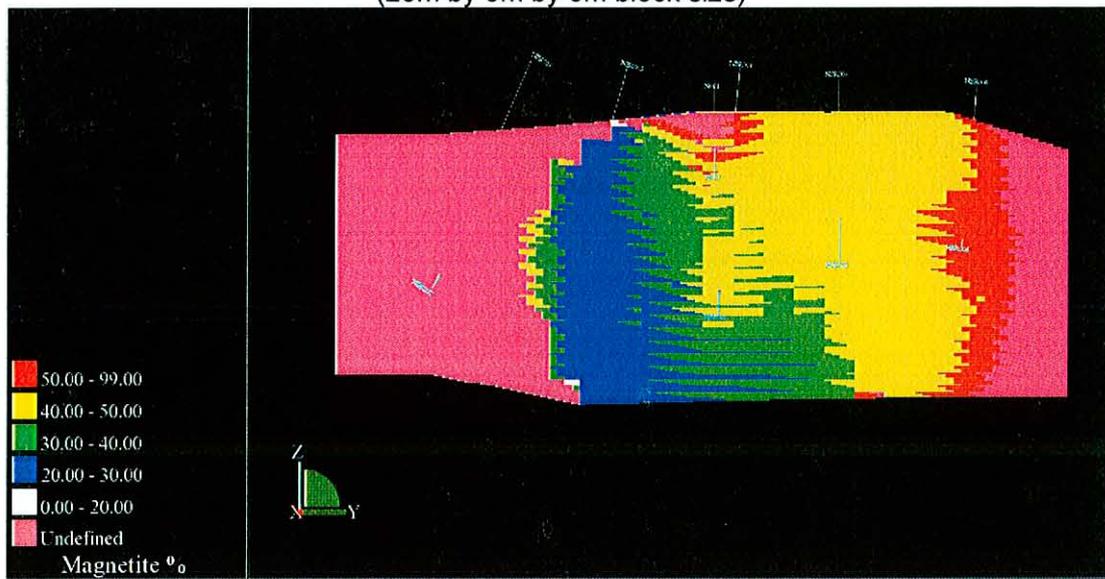
Figure 14 Histogram of Magnetite Block Model Grades



If the relatively negative results associated with NBR005 and NBR002 are excluded by reporting the resource north of section line 9925N then the resource becomes 5.4Mt at 40.6% magnetite (using the calculated bulk density value).

As an additional check a second block model was created using a smaller block size of 25m by 5m by 5m. This was filled with block grades estimated as for the larger block size block model. Block model grade distribution is displayed in Figure 15.

Figure 15 Block Grades for the Magnetite Resource (25m by 5m by 5m block size)



From the above figure a resource of 6.1Mt at 37.5% magnetite is generated using the calculated density field.

As can be seen from the figure above there are substantial areas with undefined grade, this is due to a lack of data points for interpolating. Whilst the undefined zone to the south is associated with NBR002 and is quite acceptable given the poorly mineralised nature of this zone. However the model has perhaps harshly dealt with the high grade material present in NBR004 at the northern end of the resource given that the magnetic anomaly and its tenor continue at least to the northern boundary of the interpreted resource shape. Therefore the ID² block model is under reporting the tonnage for the resource and potentially the grade is slightly under reported.

The two resource estimation methods used in this report indicate some degree of consistency with the data. A summary of the resource figures (Inferred) is given in Table 10

Table 10 Summary Resource Figures (Inferred)

Method	Strike	Density	Volume	Tonnes	Magnetite	Magnetite Tonnes	Comment
Sec Poly	500	4	1680003	6720012	36.57	2457649	
Sec Poly	350	4	1606100	6424398	37.33	2398527	Without NBR002
Sec Poly	600	4	1896003	7584012	37.23	2823229	
Sec Poly	400	4	1797350	7189398	38.17	2744307	Without NBR002
Sec Poly	500	3.8	1680003	6384011	36.57	2334767	
Sec Poly	350	3.83	1606100	6151361	37.33	2296589	Without NBR002
Sec Poly	600	3.78	1896003	7166891	37.23	2667952	
Sec Poly	400	3.83	1797350	6883849	38.17	2627674	Without NBR002
ID2 LBS	600	4	1696045	6784180	38.67	2623442	
ID2 LBS	600	3.78	1696045	6374545	39.06	2489897	
ID2 LBS	400	3.83	1430615	5426612	40.59	2202662	
ID2 SBS	600	3.77	1643066	6111033	37.45	2288582	

Note LBS is large block size, SBS is small block size

The preferred figure is from the sectional polygonal work giving 6.9Mt at 38.2% magnetite for a strike length of 400m beginning at approximately 9925mN local grid.

9.6 Resource Classification

In the SMGC report (Tear 2005) the resource category was stated as Inferred. This was mainly due to:

- A lack of drilling
- No surveyed drillhole collars
- No density data available
- The use of iron assays to indicate a qualitative amount of magnetite.
- Potentially uncertain mineralogy
- No measure of metallurgical recovery

Whilst a lot of the above items have been addressed there is still a lack of drilling. The current resource is based on 4 drill holes generally on single cross sections. There is considerable uncertainty regarding down dip continuity of the resource as N401 has not been subjected to DTR tests. Strike continuity is better defined over the 200m or so represented by holes NBR001, NBR003, NBR004 (and to some extent N401). Results from

the DTR work on NBR002 have had a serious negative impact on the resource (this hole accounted for roughly 33% of the resource in the SMGC model). Core recoveries, where recorded, can be poor e.g. the upper part of NBR001 which again introduces uncertainty in magnetite grade. The impact of the drilling results for NBR005 is ambiguous due to uncertainty as to whether the hole reached the ore horizon.

It is important to note that for all the calculations involved in the resource estimation it has been assumed that the magnetic recovery fraction is magnetite. There are no reports in the logs or from verbal communications of any pyrrhotite being present.

As a result the current resource is classified as Inferred

Thus the Nelson Bay River Magnetite resource is currently estimated to be:

6.9Mt at 38.2% magnetite with the resources being in the **Inferred** category. This equates to a contained magnetite content of **2.63Mt**.

9.7 Metallurgical Recoveries

Phase 1 of a test programme for the magnetite has been completed. The main purpose of the tests was to establish whether a heavy media material could be produced from the proposed ore. The testwork included composite chemical analysis, dry magnetic separation at 600 Gauss, Davis Tube analyses at 1000 Gauss (wet magnetic separation), bond work index, and liberation sizing assessment for waste rejection. The additional testwork for the magnetite assessment was conducted to provide information for future scoping and feasibility studies.

The chemical analysis of the bulk composite is shown in Table 11.

Table 11 Assay Values of Magnetiferous Composite Sample

Component	%
Fe	40.9%
SiO ₂	22.6%
Al ₂ O ₃	1.15%
MgO	3.46%
S	1.75%
P	0.01%

The coarse dry magnetic separation and Davis Tube analyses (wet magnetic separation of dry mags) and recoveries are shown in Table 2.

Table 12 Composition & Recovery of Magnetic Fraction

Sample particle size [dry magnetic separation]	Sample particle size [DTR]	Magnetic fraction recovery (%)	Fe (%)	SiO ₂ (%)	Al ₂ O ₃ (%)	S (%)	P (%)
-3.35 mm	95% - 75um	57.0	69.9	1.58	0.05	0.08	0.00
-2.0 mm	95% - 75um	61.3	70.1	1.57	0.06	0.10	0.00
-0.5 mm	95% - 75um	61.1	70.4	1.49	0.05	0.08	0.00

The Phase 1 testwork indicated that a recoverable magnetite concentrate by weight should be in the range 57 – 61% with Fe grade >69.0% and SiO₂ <1.6%, Al₂O₃ <0.05%, S <0.1% and P <0.01%. This implies that >96% of the magnetic material is magnetite

The above results indicate that material equivalent to the composite sample from Nelson Bay River deposit can be ideally suited for the production of a marketable magnetite concentrate for either heavy media markets or pellet production.

9.8 Mining Methods

The first Nelson Bay River Iron Ore Conceptual Mining Study was commissioned by Zelos to look at the open cut mining potential of the Inferred resource of 4Mt of ore to a depth of 225m detailed in the SMGC report, November 2005 (Tear 2005). The study was prepared by the Minserve Group Pty Ltd, which was asked to look at the resource and develop an open cut design to produce a ROM product that would undergo beneficiation to a saleable product. Three process options were nominated by Zelos and an indicative order of magnitude costing of the perceived best case was to be used to provide order of magnitude project costs. Two options involved smelting to produce pig iron and one was the production of magnetite for use in coal washeries.

The conceptual study mine design shows that open cut mining can proceed to a depth of 225m but that all waste would need to go to out-of-pit waste dumps due to the limited strike length of the pit and the need to keep a 1 in 10 access ramp open to the pit bottom. No waste dump design or location has been attempted for this conceptual study.

The conceptual study concluded that production of magnetite products for use in Australian (and Indonesian) coal mine washeries is the highest value market for Nelson Bay River magnetite. Currently central Queensland coal mines pay prices around \$250 to \$260 per tonne for delivered magnetite which is used in the coal washery heavy media separation process.

Annual magnetite supply requirements are limited and mining generally occurs on a small scale with mines producing around 50,000t/a to 100,000t/a. This would suit production from the Nelson Bay River Iron Ore resource. The small scale of the proposed operation is suited to contract mining and processing. The mining production rate will be determined by the level of sales that can be sustained and the ability of a new supplier to break into the market. Current assessment is that 30,000t/a to 100,000t/a could achieve penetration targets.

The order of magnitude costing showed that based on the broad assumptions used, producing around 100,000t/a of magnetite is likely to be viable once all capital and operating costs have been taken into consideration. A pit depth of around 150m is also likely to give a better return than a 225m deep pit based on the high incremental stripping ratio and the increased costs required to deepen the pit.

The conceptual study concluded that an open cut magnetite mine with a processing/treatment plant providing 100,000tpa of coal washery product has potential to generate in excess of \$10M surplus cash flow per year over a 10 to 15 year mine life. Capital costs are estimated to range between \$10M to \$20M.

10 Recommended Exploration Programme

The following work needs to be completed in order to improve the confidence classification and possibly enlarge the resource.

1. Diamond drilling to define the strike limits of the resource (1000m)
2. Infill drilling to allow for more interpolation between drillholes rather than extrapolation from known holes (2500m)
3. Locate the core from Pickands Mather drillhole N401 and undertake DTR tests. If the core cannot be found then try and locate the pulps from Pacific Nevada's work.
4. Undertake density tests on recent drillcore to prove the acceptability of calculated bulk densities for use in resource estimation.
5. Any new drilling programme must have :
 - Detailed & meaningful geological logs in a format suitable for digital data entry
 - Photography of all core
 - Core recoveries of sampled intervals measured and documented
 - Geotechnical measurements recorded for potential mining studies
 - QA/QC protocols (eg check assaying/sampling and the insertion of standards)
 - Davis Tube Recovery tests of all relevant mineralised intervals..

Before any further drilling is undertaken it is recommended that a scoping study be completed on the newly designed resource to assess potential mining method re underground versus open pit. It should be remembered that NBR004 comes very close to drilling beneath the Nelson Bay River, hence open pitting the resource to include NBR004 related material is not likely to be possible. The much wider ore zone associated with the northern half of the deposit may encourage open pit mining initially before changing to an underground operation. Economic considerations must be made as to how the resource is likely to be mined.

11 Conclusions

Recent drilling work by Zelos Resources NL on their Nelson Bay Licence EL 41/2004 has increased the Inferred Resource for the Nelson Bay Magnetite deposit in NW Tasmania.

Drilling has shown that the deposit increases in quality to the north of previous drilling. Davis Tube Recovery tests show that the magnetite content is high grade in this zone. Conversely in the south of the deposit additional DTR results have downgraded the quality of the resource.

A reinterpretation of the old drilling in conjunction with the new drilling results has been undertaken. An ore shape has been designed and a resource estimation carried out. A section polygonal interpretation was considered the most apt method for estimation based on the data available.

The Inferred Resource now stands at:

6.9Mt at 38.2% magnetite, using a 20% magnetite cut off, equating to **2.8Mt of magnetite**

This amounts to a 70% increase in the resource size from the previous resource estimation work conducted in 2005.

Bulk test sampling by Zelos has indicated favourable results for the production of a marketable magnetite concentrate for the heavy media market.

Recommendations for further work include infill drilling (>2500m), additional DTR work and a scoping study on the mineability of the newly designed resource. It is also recommended that before any new drilling is undertaken that proper core handling and assay procedures are in place.

This report has been prepared by Simon Tear, who is a competent person according to the JORC 2004 code. Details in the report have been prepared according to the JORC guidelines 2004.

12 Expert Competency

Hellman & Schofield Pty Ltd ("H&S"), a geological consulting company based in Sydney, Brisbane and Perth, Australia, prepared this geological report at the behest of the directors of Zelos Resources. Simon Tear, a Consulting Geologist, has a BSc (Hons) in Mining Geology from The Royal School of Mines, London, U.K. and has over 23 years worldwide experience in the mineral exploration industry. He is a member of the IMM (19 years), the AusIMM (10 years) and the Institute of Geologists of Ireland (PGEO and EurGeol, both 13 years).

Relevant experiences include:-

- 13 years base metals experience including work on Irish-type Carbonate Hosted Pb/Zn deposits in Ireland and Tasmania
- Senior Development Geologist for the Mt Gordon Copper Mines with responsibility for resources
- Member of the Lady Loretta Feasibility Study Team for Noranda Pacific, NW Queensland
- Resource Definition for the Lady Annie Copper Oxide Deposit, NW Queensland
- 7 years involvement in the resource estimation process.
- Resource estimation for carbonate hosted lead/zinc deposits in West Tasmania
- Part of a resource evaluation team into vein-style gold mineralisation
- Experienced with ultramafics in Tasmania and Scotland

Tasmania-Specific Experience

- Resource statement and block model report for Oceania Tasmania's Allison's Lode Zinc Project including geological interpretation (2005),
- Geological interpretation and resource estimation for the Oceana and Mariposa Pb/Zn Deposits for Zeehan Zinc Pty Ltd (2005),
- Led the CRAE field team in the discovery of the Avebury Nickel deposit (now with Allegiance Mining NL) (1996/7),
- Devised and executed CRAE's and Noranda Pacific's carbonate hosted base metal programme in the Gordon Limestone near Zeehan (1995-6 and 2001 respectively),
- Undertook exploration on CRAE's Balfour copper licences in NW Tasmania (1996/7),
- Project generation for sediment hosted gold targets for CRAE in Northern Tasmania (1996/7),
- Consulting geologist for the Zeehan Zinc Comstock project (1999-2003); and
- Nickel project generation for Tasmania for Falconbridge (2002).

The above experiences and qualifications make Simon Tear adjudged to be a competent person under the JORC Code.

This report has been peer reviewed Arnold van der Heyden, an H&S consultant, who has substantial experience in iron ore resources including experience of the Savage River Iron Ore Mine in NW Tasmania.

The digital geological information used in this report was supplied by the directors of Zelos. H&S has relied upon and assumed without verification the accuracy and completeness of all information provided and cannot take any responsibility to guarantee its accuracy.

Limitations and Consent

This assessment has been based on data, reports and other information made available by Zelos. A draft copy of this report has been provided to Zelos for comment as to errors of fact, omissions or incorrect assumptions. H&S has no reason to believe that the information provided by Zelos is misleading or that any material facts have been withheld.

The opinions expressed herein are given in good faith and H&S believes that any assumptions or interpretations are reasonable.

This report is provided to Zelos for the purpose of assessing its magnetite resource at the Nelson Bay River Iron Prospect. Neither the whole nor any part of this report, nor any reference thereto, may be included in, or with, or attached to any document or used for any purpose without H&S's written consent to the form and context in which it appears.

Respectfully submitted,

Simon Tear

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Consulting Geologist
Hellman & Schofield Pty Limited

5th January 2007

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Appendix 1
Drill Hole Composites for Resource Estimation

Drill Intercepts for ID² Resource Estimation

Hole_ID	Depth From	Depth To
N401	50	74
NBR001	199.5	228
NBR002	224	226.6
NBR003	149	167
NBR004	159.7	177.7

Composite Samples

North	East	RL	Magnetite	Dhole	From	To
9964.207	10013.04	-71.092	29.08	NBR001	199.5	200.5
9964.152	10013.68	-71.858	61	NBR001	200.5	201.5
9964.097	10014.32	-72.624	48	NBR001	201.5	202.5
9964.044	10014.96	-73.39	30.22	NBR001	202.5	203.5
9963.991	10015.6	-74.156	12.44	NBR001	203.5	204.5
9963.94	10016.24	-74.922	12.44	NBR001	204.5	205.5
9963.89	10016.88	-75.688	61.391	NBR001	205.5	206.5
9963.841	10017.52	-76.454	66.83	NBR001	206.5	207.5
9963.793	10018.16	-77.221	31.811	NBR001	207.5	208.5
9963.746	10018.8	-77.987	13.96	NBR001	208.5	209.5
9963.7	10019.45	-78.753	0	NBR001	209.5	210.5
9963.655	10020.09	-79.519	3.845	NBR001	210.5	211.5
9963.611	10020.73	-80.286	7.69	NBR001	211.5	212.5
9963.568	10021.37	-81.052	19.228	NBR001	212.5	213.5
9963.526	10022.01	-81.818	39.78	NBR001	213.5	214.5
9963.486	10022.65	-82.584	46.51	NBR001	214.5	215.5
9963.446	10023.29	-83.351	37.69	NBR001	215.5	216.5
9963.407	10023.93	-84.117	24.455	NBR001	216.5	217.5
9963.37	10024.57	-84.883	11.22	NBR001	217.5	218.5
9963.333	10025.22	-85.65	6.105	NBR001	218.5	219.5
9963.298	10025.86	-86.416	0.99	NBR001	219.5	220.5
9963.264	10026.5	-87.182	9.438	NBR001	220.5	221.5
9963.23	10027.14	-87.949	25.247	NBR001	221.5	222.5
9963.198	10027.78	-88.715	46.428	NBR001	222.5	223.5
9963.167	10028.42	-89.481	41.9275	NBR001	223.5	224.5
9963.137	10029.07	-90.248	59.166	NBR001	224.5	225.5
9963.108	10029.71	-91.014	50.22	NBR001	225.5	226.5
9963.08	10030.35	-91.78	50.22	NBR001	226.5	227.5
9963.053	10030.99	-92.547	50.22	NBR001	227.5	228.5
9734.324	9972.311	-78.287	21.21	NBR002	224	225
9733.963	9972.889	-79.018	17.59	NBR002	225	226
9733.601	9973.467	-79.75	21.94	NBR002	226	227
10062	10041.74	-25.025	31.9	NBR003	149	150
10062	10042.51	-25.659	56	NBR003	150	151
10062	10043.29	-26.292	51.1	NBR003	151	152
10062	10044.06	-26.925	24.2	NBR003	152	153
10062	10044.84	-27.558	57.4	NBR003	153	154
10062	10045.61	-28.19	55.2	NBR003	154	155
10062	10046.39	-28.821	16.4	NBR003	155	156
10062	10047.16	-29.452	31.8	NBR003	156	157

North	East	RL	Magnetite	Dhole	From	To
10062	10047.94	-30.082	52.9	NBR003	157	158
10062	10048.71	-30.712	29.2	NBR003	158	159
10062	10049.49	-31.342	34.7	NBR003	159	160
10062	10050.27	-31.971	48.2	NBR003	160	161
10062	10051.05	-32.599	47	NBR003	161	162
10062	10051.83	-33.227	35.2	NBR003	162	163
10062	10052.6	-33.854	51.6	NBR003	163	164
10062	10053.38	-34.481	58.9	NBR003	164	165
10062	10054.16	-35.107	47.6	NBR003	165	166
10062	10054.94	-35.733	47.6	NBR003	166	167
10164.48	10047.01	-40.679	52	NBR004	159.7	160.7
10164.41	10047.72	-41.374	49.55	NBR004	160.7	161.7
10164.33	10048.44	-42.068	44.37	NBR004	161.7	162.7
10164.26	10049.15	-42.763	41.97	NBR004	162.7	163.7
10164.18	10049.87	-43.457	49.05	NBR004	163.7	164.7
10164.11	10050.59	-44.152	41.42	NBR004	164.7	165.7
10164.03	10051.3	-44.847	46.04	NBR004	165.7	166.7
10163.96	10052.02	-45.541	42.37	NBR004	166.7	167.7
10163.88	10052.73	-46.236	12.29	NBR004	167.7	168.7
10163.81	10053.45	-46.931	19.07	NBR004	168.7	169.7
10163.73	10054.16	-47.625	44.33	NBR004	169.7	170.7
10163.66	10054.88	-48.32	50.89	NBR004	170.7	171.7
10163.58	10055.59	-49.015	55.89	NBR004	171.7	172.7
10163.51	10056.31	-49.709	41.19	NBR004	172.7	173.7
10163.43	10057.02	-50.404	48.25	NBR004	173.7	174.7
10163.36	10057.74	-51.099	55.8	NBR004	174.7	175.7
10163.28	10058.45	-51.793	59.62	NBR004	175.7	176.7
10163.21	10059.17	-52.488	58.9	NBR004	176.7	177.7

Appendix 2
Block Model Parameters

Block Model Summary				
nelson bay block model	nbrmag.mdl			
Type	Y	X	Z	
Minimum Coordinates	9300	9800	-300	
Maximum Coordinates	10600	10200	100	
User Block Size	25	25	5	
Min. Block Size	6.25	6.25	1.25	
Rotation	0	0	0	
Total Blocks	48668			
Storage Efficiency %	98.85			
Attribute Name	Type	Decimals	Background	Description
avs	Real	3	-99	
bdcalc	Calculated	-	-	$((\text{magnetite}/100)*5.12)+(((100-\text{magnetite})/100)*2.9)$
dns	Real	3	-99	
magnetite	Float	2	-9999	
nos	Integer	-	-99	

Appendix 3
Inverse Distance Squared Search Parameters

MODEL NAME : nbrmag.mdl

CONSTRAINT VALUES USED

Data Constraints

Unconstrained

Model Constraints

a. INSIDE 3DM solid_models/magnetitebody 3

Keep blocks partially in the constraint : False

SEARCH PARAMETERS

ROTATION CONVENTION

Surpac ZXY LRL

ANGLES OF ROTATION

First Axis 0.00

Second Axis 0.00

Third Axis 65.00

ANISOTROPY FACTORS

Semi_major axis 1.00

Minor axis 10.00

OTHER INTERPOLATION PARAMETERS

Max search distance of major axis 150.000

Max vertical search distance 1000.000

Maximum number of informing samples 15

Minimum number of informing samples 3

**Appendix 4
ASX Release Statement for Metallurgical Test
Sampling**



ASX Release 25 September 2006

**METALLURGICAL TEST RESULTS FROM RECENT DRILLING PROGRAM
AT NELSON BAY**

Zelos Resources NL (ASX Code:ZCO) is pleased to announce that the results of a test on a bulk composite core sample from its Nelson Bay River Magnetite Project have indicated that the deposit can be ideally suited for the production of a marketable magnetite concentrate for the heavy media market.

The samples were prepared and analysed by SGS Lakefield Orestest. The test included composite chemical analysis, dry magnetic separation, Davis Tube analyses (wet magnetic separation), bond work index, and liberation sizing assessment for waste rejection. The bulk composite sample is considered representative and this will be confirmed at feasibility stage by systematic testing of bulk samples taken from multiple sample sites within the ore body.

The main purpose of the test was to establish whether a heavy media material could be produced from the ore. Additional experiments were also conducted to provide information for future scoping and feasibility studies.

The drilling to obtain the core samples is expected to provide an increase in the size of the resource which is expected to be announced in the near future.

The tests carried out by SGS Lakefield Orestest will now allow the Company's geological consultant to complete the resource upgrade of the deposit.

EDITORIAL NOTE

The bulk composite chemical analysis shown in Table 1 after dry magnetic and Davis Tube analyses (DTR) (wet magnetic separation of the dry magnetic separation product) produced material of the composition shown in Table 2.

Table 1. Composition of Nelson Bay River composite sample

Component	%
Fe	40.9%
SiO ₂	22.6%
Al ₂ O ₃	1.15%
MgO	3.46%
S	1.75%
P	0.01%

Table 2. Composition and recovery of magnetic concentrate

Sample particle size [dry magnetic separation]	Sample particle size [DTR]	Magnetic fraction recovery (%)	Fe (%)	SiO ₂ (%)	Al ₂ O ₃ (%)	S (%)	P (%)
-3.35 mm	95% - 75um	57.0	69.9	1.58	0.05	0.08	0.00
-2.0 mm	95% - 75um	61.3	70.1	1.57	0.06	0.10	0.00
-0.5 mm	95% - 75um	61.1	70.4	1.49	0.05	0.08	0.00

Phase 1 testwork indicated that recoverable magnetite concentrate should be in the range 57 – 61% with Fe grade >69.0% and SiO₂ <1.6%, Al₂O₃ <0.05%, S <0.1% and P <0.01%.

Yours faithfully
Raymond Schoer



Chairman

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About Zelos Resources (formerly Zinico Resources NL)

Zelos Resources NL (ZCO) is an exploration company with projects located in Tasmania. Zelos now has a portfolio of nine exploration areas in Tasmania including Cethana (gold) Sulphide Creek (gold), Catamaran (coal) and Nelson Bay (iron ore). Zelos has just signed an agreement for the acquisition, subject to shareholder approval, of the Avondale coal resource.

Directors of Zelos Resources NL: Raymond Schoer (Chairman), Arun Kumar Jagatramka, Neville Wran, Albert Wong, Wesley Harder (CEO), Andrew Firek.

"This statement is prepared by Andrew Firek who is a Fellow of the AusIMM and has a minimum of ten years experience in mineral processing and exploration".