DELTA GOLD NL

SHORT RANGE EL/8104

NORTH WARREGO EL/8105 ANNUAL REPORT FOR THE PERIOD 11 JULY 1996 - 10 JULY 1997



Tenemets

EL/8104, EL/8105

Owner

Delta Gold NL

Prepared By

J S Holmes

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Date

2 July 1997

Report No

774, 775

Project No

Delta Gold NL

Dstribution

Department of Mines and Energy, NT

Monthle

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SUMMARY

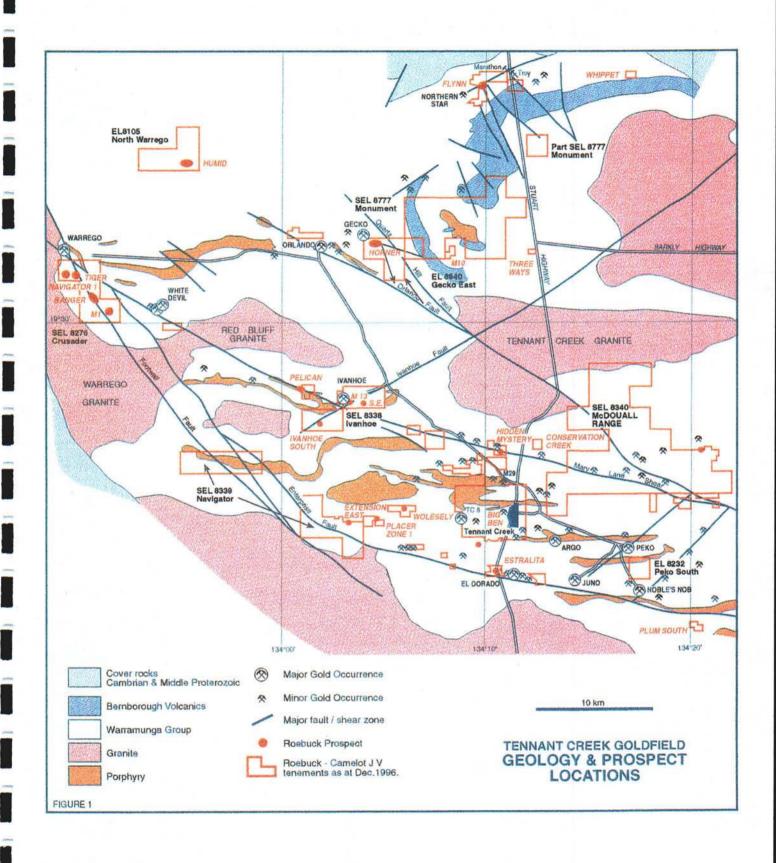
Exploration Licences 8104 (Short Range) and 8105 (North Warrego) are situated 50 kms northwest of Tennant Creek in the Northern Territory.

During the reporting period 12 June 1996 to 11 June 1997, the exploration licences were appraised by Roebuck Resources NL for possible acquisition.

Exploration carried out included compilation and assessment of previous exploration data and limited surface geochemistry. the geochemical survey utilised the mobile metal ion (MMI) soil sampling technique and was carried out over the previous RAB drill sites at the Humid Prospect.

Results from the MMI soil survey were not indicative of significant gold mineralisation at the Humid Prospect.

This report has been complied form an appraisal report prepared for Roebuck Resources NL by A. Romanoff.



1. INTRODUCTION

Exploration Licences 8104 (Short Range) and 8105 (North Warrego) were acquired by Delta Gold N.L. in 1993 on the basis of their considered prospectivity for classical Tennant Creekstyle ironstone-hosted mineralisation, as well as potential stockwork-type mineralisation as at Pine Creek, and Tanami-style shear-hosted mineralisation.

After systematic exploration from 1993 to mid-1996 the tenements had not yielded sufficiently encouraging results to warrant further expenditure by Delta, and were offered for joint venture to other explorers.

Commencing in July 1996, the tenements were appraised for possible acquisition by Roebuck Resources N.L. on behalf of the Tennant Creek Joint Venture comprising Roebuck Resources N.L., North Flinders Mines Ltd., and Tennant Creek Holdings N.L.

2. TENEMENT DETAILS

Exploration Licences 8104 (Short Range) and 8105 (North Warrego) were both granted to Delta Gold N.L. on 11 June 1993; EL 8104 for a period of six years expiring 10 June 1999, and EL 8105 for five years expiring 10 June 1998.

Project status combining the exploration licences was granted in late 1993, permitting lodgment of a single annual report on 10 July of each year.

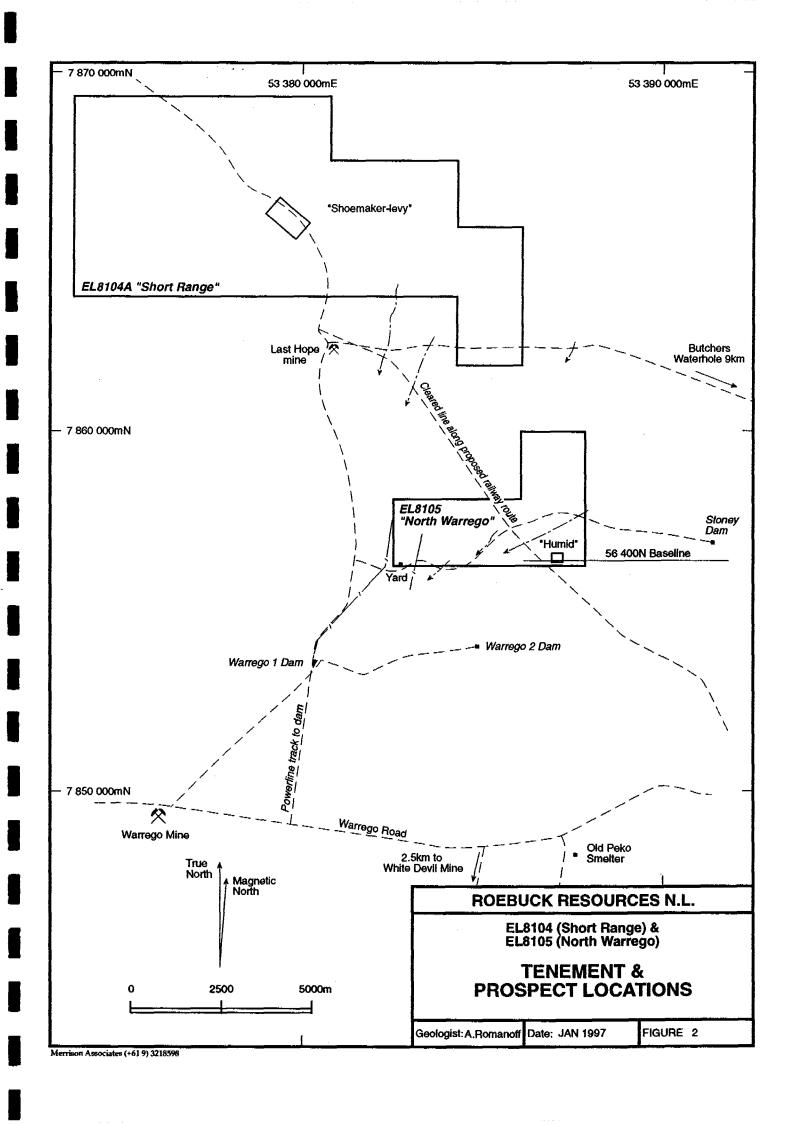
3. LOCATION AND ACCESS

ELs 8104 and 8105 are situated 50 kms northwest of Tennant Creek, Northern Territory, in the vicinity of the Warrego gold and copper mine. The tenements lie 15 kms north, and 10 kms northeast of Warrego respectively.

The tenements can be reached from the sealed Warrego Road by several pastoral and mineral exploration tracks, the most convenient being the formed gravel power line track to Warrego 1 dam and pump station, and the Last Hope Mine as shown on Figure 2. The Humid grid area is reached by a track along the surveyed route of the proposed Darwin to Alice Springs railway line which runs northwesterly across EL 8105.

The Humid grid is then reached along a cleared east-west baseline which extends into EL 8105 along AMG 856400N as part of a regional system of AMG-controlled reference lines installed by Posgold Ltd on that Company's adjacent tenements.

The area is inaccessible during wet weather.



4. REGIONAL GEOLOGY AND MINERALISATION

For the sake of brevity, only a short summary of the regional geology and mineralisation of the Tennant Creek field is given here.

For more detailed descriptions the reader is referred to the numerous Government, mining industry and academic publications which are available to the public. Authoritative sources include Le Messurier, Williams and Blake (1990) in AusIMM Monograph No. 14 (Geology and Mineral Deposits of Australia and Papua New Guinea), and more recently Donnellan, Hussey and Morisson (1995) in NTGS 1:100,000 Geological Map Series, FLYNN 5759, TENNANT CREEK 5758.

The Tennant Creek Goldfield lies within a Proterozoic basin environment of variably folded turbiditic sediments, intruded by felsic porphyry bodies, granites, some dolerites and minor lamprophyres. Due to the homogeneity of the turbidite sequences, assignment of stratigraphic units remains to some extent equivocal. Previously, all known mineralisation at Tennant Creek was assigned to the Warramunga Group of folded turbiditic arenites, greywackes and siltstones.

More recently, Donnellan et al have subdivided the Warramunga Group, on the basis of compositional differences, into an older Warramunga Formation of intensely folded turbidites, and an overlying Flynn Subgroup of the Churchill's Head Group comprising felsic crystal-lithic tuffs, some felsic volcanics, and interbedded clastic sediments in the upper levels.

The Tennant Creek area hosts a virtually unique style of gold-copper-bismuth mineralisation associated with lenses of magnetite to haematite ironstone bodies, generally forming steeply-dipping ellipsoidal, flattened lodes within the plane of S2 cleavage. Economic gold-copper-bismuth mineralisation associated with ironstones occurs in cross-cutting fractures within ironstone lenses, and/or breccia stringer zones along their margins. It is generally accepted that the mineralisation postdates the formation of the ironstone lenses.

The high magnetic susceptibility of the ironstones has led to much dependence on magnetic prospecting methods at Tennant Creek, utilising regional aeromagnetics with detailed ground magnetic follow-up. Most of the major mines found to date have therefore been associated with readily-detectable magnetic bodies.

More recently the scope of exploration has been broadened to include a greater variety of potential targets including non-magnetic haematite ironstones, Pine Creek-style stockwork targets and Tanami-style shear-hosted mineralisation. This approach has resulted in greater reliance on gravity surveys and regional soil geochemical surveys, in addition to the traditional magnetic methods, for initial target definition.

5. TENEMENT AREA GEOLOGY

The redefined stratigraphy of the Tennant Creek field locates virtually all of the known mines within the older Warramunga Formation folded turbidite sequence. The published mapping which supports this redefinition does not extend as far west as the White Devil and Warrego mines, so the host rocks of these major deposits cannot be given at this time. It is likely however that they will be shown to be salients or windows of Warramunga Formation, surrounded by Flynn Subgroup rocks.

Roebuck Resources N.L.'s appraisal of Exploration Licences 8104 and 8105 did not include extensive field examinations except for the Humid grid area of EL 8105. At Humid, some low east-west ridges of outcrop have been exposed along the southern margin of a broad drainage plain which occupies the northern sector of the EL. These outcrops were described in field notes as "feldspathic tuffs" and do not show the typical pervasive cleavage of Warramunga Formation rocks elsewhere around Tennant Creek. On the whole, these rocks are consistent with the Flynn Subgroup.

Delta gold N.L.'s RAB drilling of targets within both ELs 8104 and 8105 encountered coarse, gabbroic dolerites which appear more prevalent in this area than in other parts of the field.

6. PREVIOUS EXPLORATION AND MINING HISTORY

Delta Gold N.L. reviewed open file reports submitted by various corporate explorers between 1972 and 1991 and in their report present a brief summary of work carried on areas some of which are now included in ELs 8104 and 8105. All explorers utilised aeromagnetics and regional soil geochemistry to search for anomalous targets. Poseidon located a gold-in-soil anomaly with gold up to 50 ppb called the Wren within current EL 8104. Seven RAB holes were drilled by Poseidon, but Delta makes no further reference to this target.

The most detailed work is that carried out by Delta during 1993 to early 1996. Targets were selected by two methods:

- 1- From regional aeromagnetic compilations and air photo interpretation.
- 2- By systematic regional surface geochemical soil sampling along north-south lines 500m apart and sample intervals from 100m to 500m. Both soils and lags were sampled, and assayed for Au, Cu, Pb, Zn, Bi and Co.

In due course three prospects were identified within EL 8104 (Jupiter, Shoemaker-Levy and Mercury), and three within EL 8105 (Windy, Jewel and Humid) from aeromagnetics and surface geochemical results. All were followed up by detailed gridding, soil geochemistry, ground magnetic and gravity surveys.

A number of inclined RAB holes were drilled in all but the Mercury prospect, on specific targets identified by the detailed work. The only significant results were some low-order gold intercepts on the Humid grid which included H7 with 3m @ 1.35 g/t in weathered felsic tuffs, and H2 with 6m @ 0.23 g/t associated with quartz stringers in dolerite.

7. APPRAISAL BY ROEBUCK RESOURCES N.L.

7.1 DATA REVIEW AND TARGET SELECTION

Systematic exploration from 1993 to mid-1996 by Delta Gold N.L. had not yielded sufficiently encouraging results to warrant further expenditure, and in June 1996 the tenements were offered for joint venture to other explorers.

Commencing in July 1996, the tenements were appraised for possible acquisition by the Tennant Creek Joint Venture comprising Roebuck Resources N.L., North Flinders Mines Ltd., and Tennant Creek Holdings N.L.

A review of Delta's exploration results showed that only the Humid prospect was of some interest on the basis of the low-order gold results obtained in RAB holes H2 and H7. The holes had been sited to test a narrow coincident gravity and ground magnetic ridge running east-west along the southern boundary of the tenement.

When the Humid prospect was located in the field, the old grid pegs had largely disappeared, but the RAB holes were identified. For control purposes a new 50m x 50m grid based on AMG coordinates was established around the drill sites by extending from a cleared east-west baseline which extends into EL 8105 along AMG 856400N from the east. The baseline was part of a regional system of AMG-controlled reference lines installed by Posgold Ltd on that Company's adjacent tenements.

7.2 MOBILE METAL ION SOIL GEOCHEMISTRY

During 1996 Roebuck Resources N.L's field work at Tennant Creek consisted mainly of resampling the Company's existing prospects by the newly-marketed proprietary technique of Mobile Metal Ion (MMI) soil geochemistry. MMI soil geochemistry is based on a discovery that metal ions can migrate vertically from a concentrated source at depth (i.e. an ore body) through the weathered zone, to bond loosely to soil particles near the surface.

Assaying for mobile metal ions differs from conventional assaying in that a weak partial digest is used to strip only the loosely bonded ions from the surfaces of soil particles, leaving any strongly bonded, immobile ions within silica and limonite lattices in place. The leach liquor is then analysed by ICPMS to yield ion concentrations at ppb levels. At present two proprietary leaches are available, one for Cu, Pb, Zn and Cd, the second for Au, Ag, Ni, Pd and Co.

Mobile metal ion concentrations in soils are generally very low, so care is required in collecting and screening samples to avoid contamination from tools, and through cross-contamination between samples.

MMI data is analysed by calculating the peak-to-background ratio (response ratio) for each element of each sample. The background can be calculated by averaging the lower quartile of all samples of a particular batch.

Response Ratios in excess of 5 times above background may be significant, while those in excess of 20 or 30 are considered to indicate samples above buried mineralisation.

7.3 HUMID GRID - MMI SOIL SAMPLING

A total of 42 MMI samples were taken at 50m x 50m centres about the Delta RAB holes on a newly established 300m x 250m grid. The relation of the new grid relative to the old Delta grid is shown on Figures 3 to 11. An additional 2 repeat samples were taken as checks, for an overall total of 44.

The samples were analysed by Amdel Laboratories in Perth who are licensed by the proprietors of the MMI process. Both leachates were utilised, providing assays of Cu, Pb, Zn, Cd, Au, Ag, Ni, Pd and Co. In practice only Cu, Au, and Pb are considered useful elements for exploration purposes at Tennant Creek, but as the ICPMS process provides simultaneous readouts of all the target elements, all are presented.

The assays for each element were reduced to response ratios, and individually computer-contoured. For the sake of completeness, the response ratios of all nine elements have been plotted, as shown in Figures 3 to 11 of this report.

8. CONCLUSIONS

Figure 7 shows that the MMI gold response at Humid is at flat background levels only, indicating that no concentration of gold is present beneath the area of the Delta RAB holes.

The copper response ratio contours shown in Figure 3 indicate a northeast-trending high up to 11 times background to the south of the Delta RAB holes. This coincides closely with the combined magnetic and gravity ridge reported by Delta. As holes H1 and H5 encountered dolerite in this area, it is likely that all these features are associated with a dolerite body.

Various contours are generated for all other elements except cadmium and zinc, both of which registered below detection level in nearly all of the samples. The geological significance of these contours is not known at this time.

A strong response in gold would have been required to revitalise the Humid prospect. In the absence of such a response Roebuck Resources N.L. expresses no further interest in the Delta tenements.

9. REFERENCES

COLLIS, G.D., June 1994

First Annual Report

Exploration Licences 8104 - SHORT RANGE/8105 - NORTH WARREGO

8106 - MARION/8238 - DINGO DAM

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Second Annual Report

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Third Annual Report

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DONNELLAN, N., HUSSEY, K.J., MORRISON, R.S. 1995

Northern Territory Geological Survey, 1:100,000 Geological Map Series, Flynn 5759,

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LE MESSURIER, P., WILLIAMS, B.T., and BLAKE, D.H., 1990

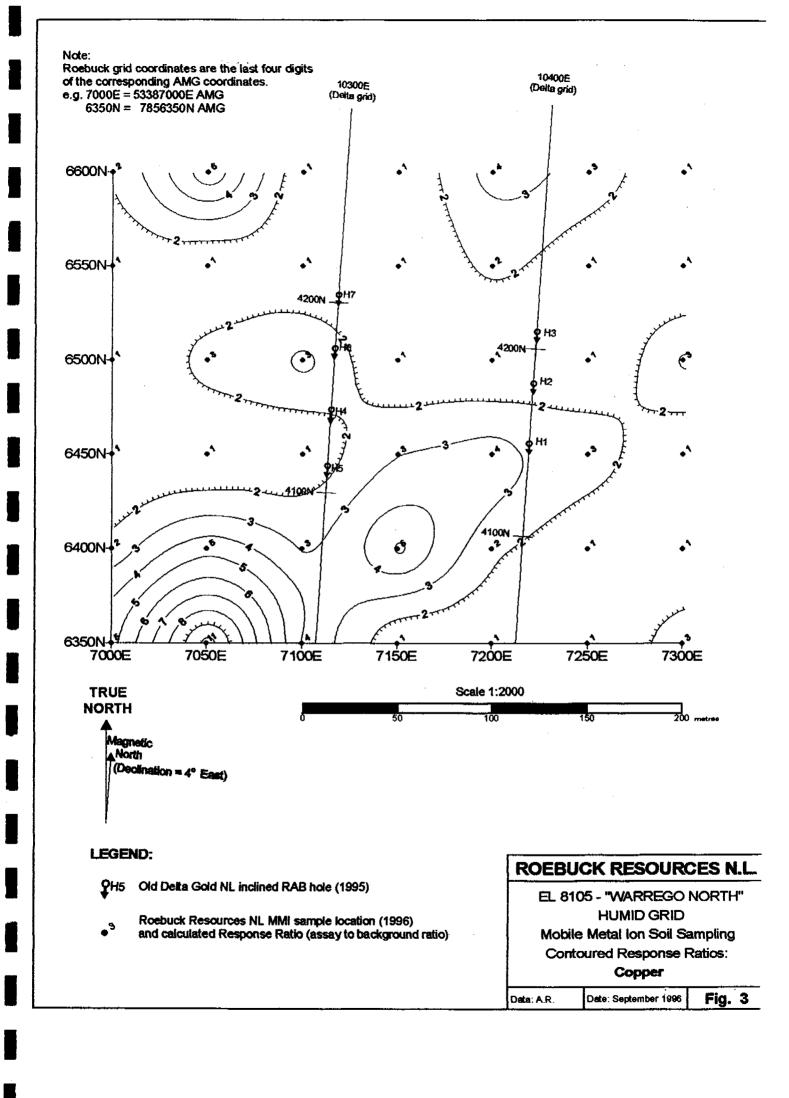
Tennant Creek Inlier - Regional Geology and Mineralisation in Geology of Mineral

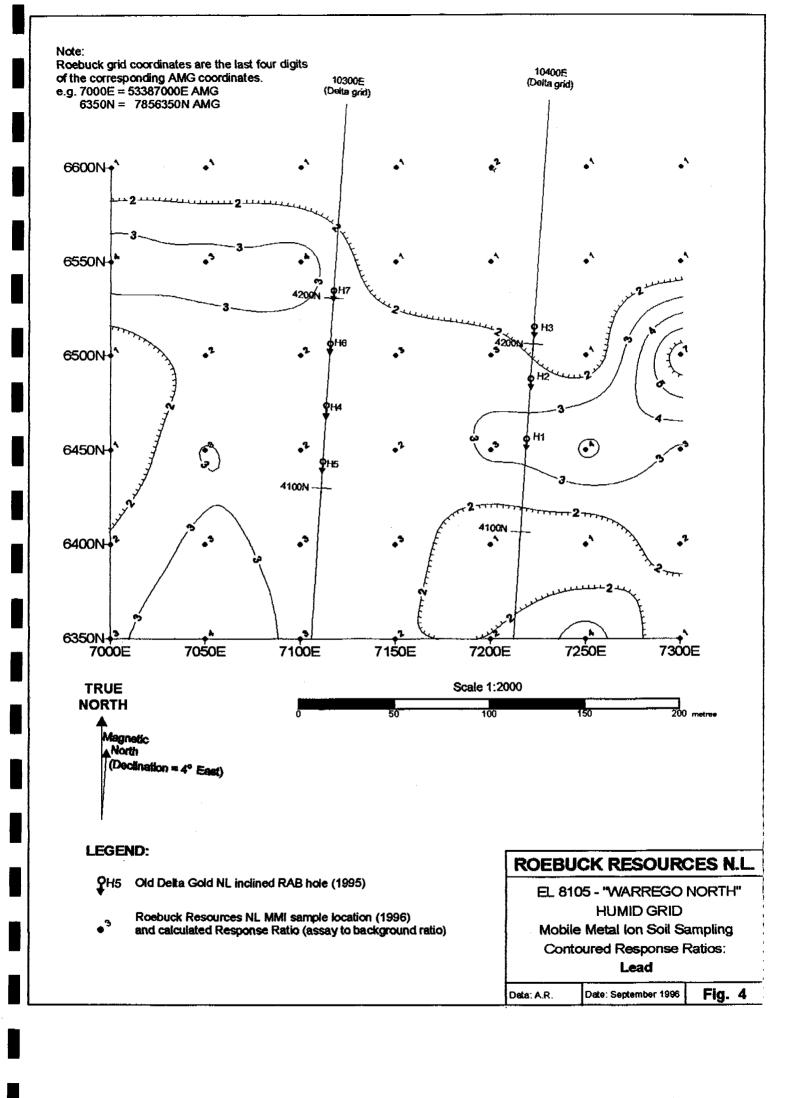
Deposits of Australia and Papua New Guinea, AusIMM. Melbourne

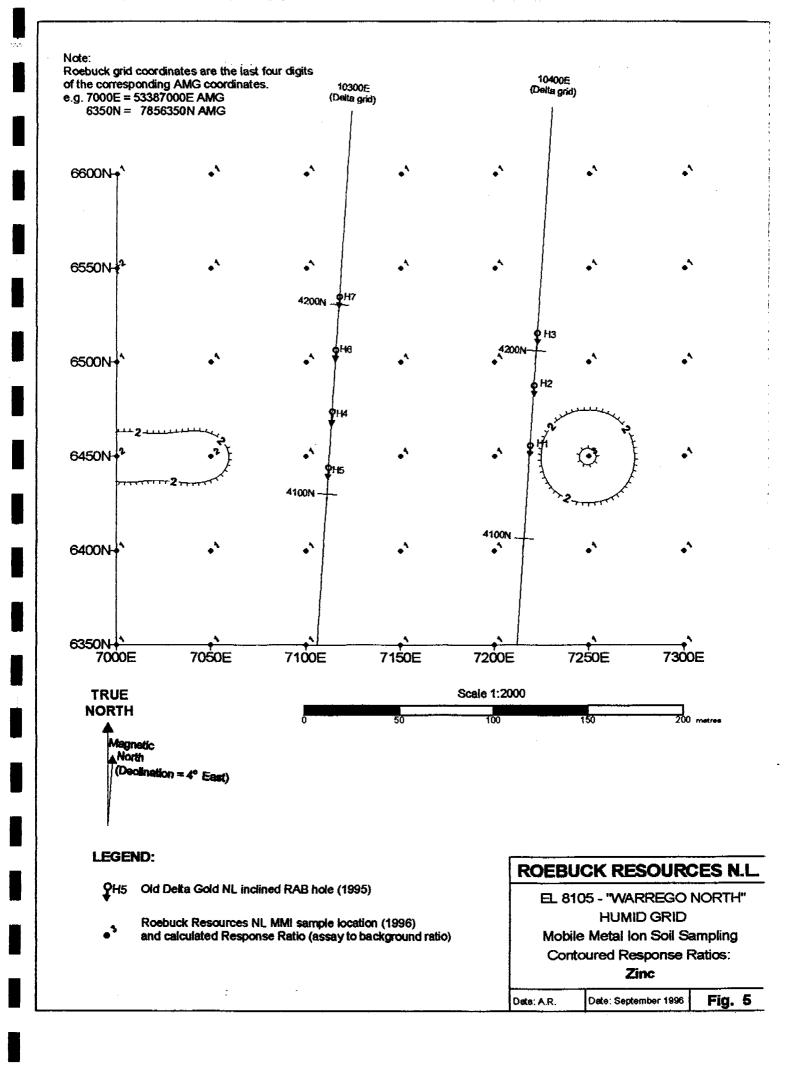
TABLE 1

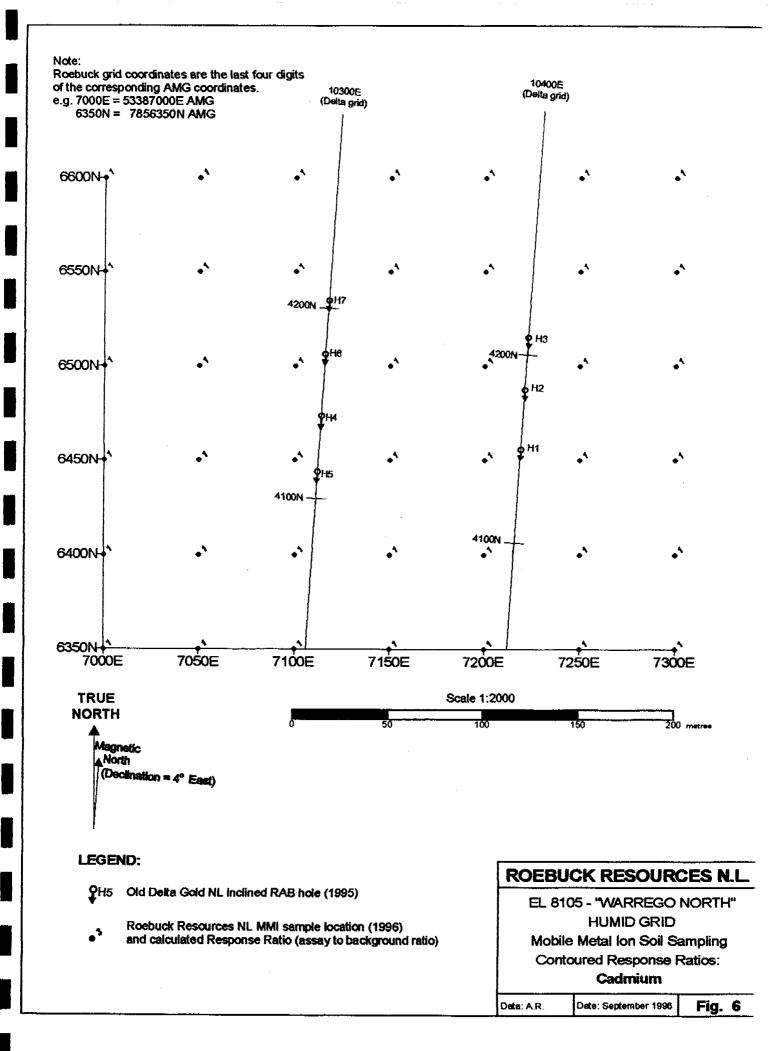
EXPENDITURE STATEMENT 30 AUGUST, 1996 TO 31 MARCH, 1997

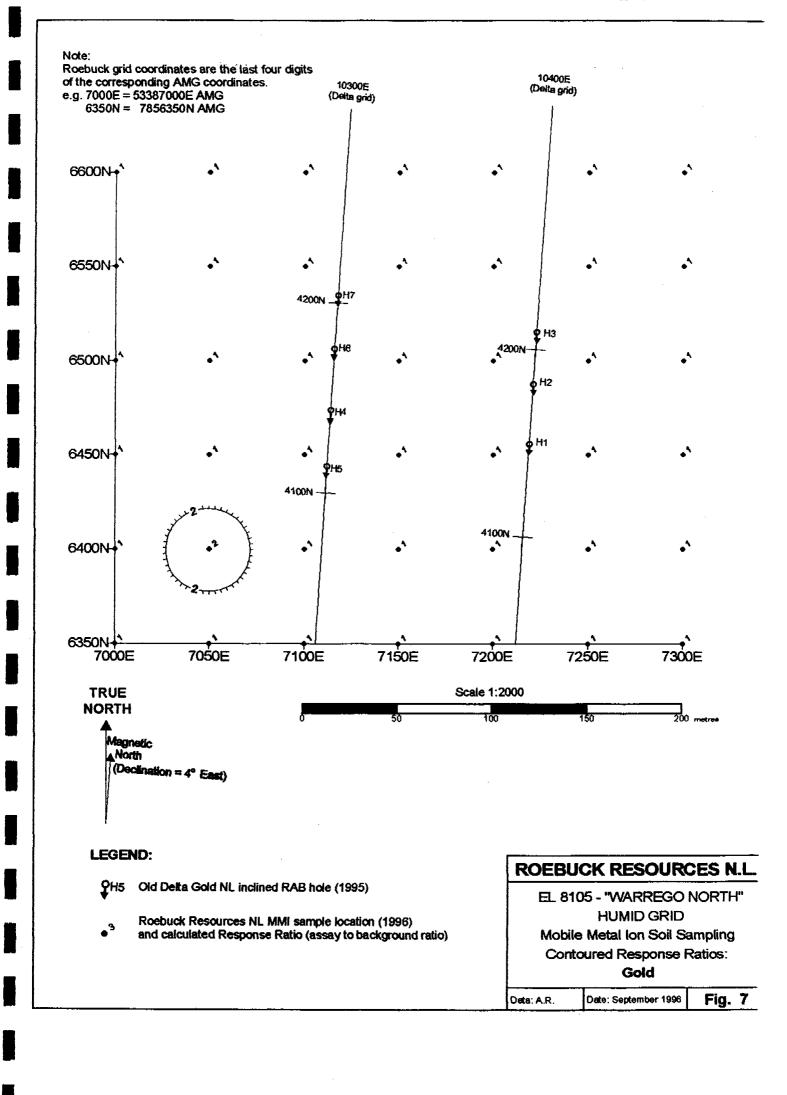
	EL 8104	EL 8105
Assaying	1,406	1,406
Cophtractors - Geological	3,396	3,396
Lease & Rental Hire	8	8
Legal Fees	140	140
Loose Tools & Equipment	10	10
Mining Tenement Administration	93	93
Printing & Stationery	2	2
Telephone & Postage	10	10
Travel & Accommodation	104	104
Vehicle Expenses	267	267
Wages reltaed expenses	70	70
Overheads	791	791
	6,297	6,297

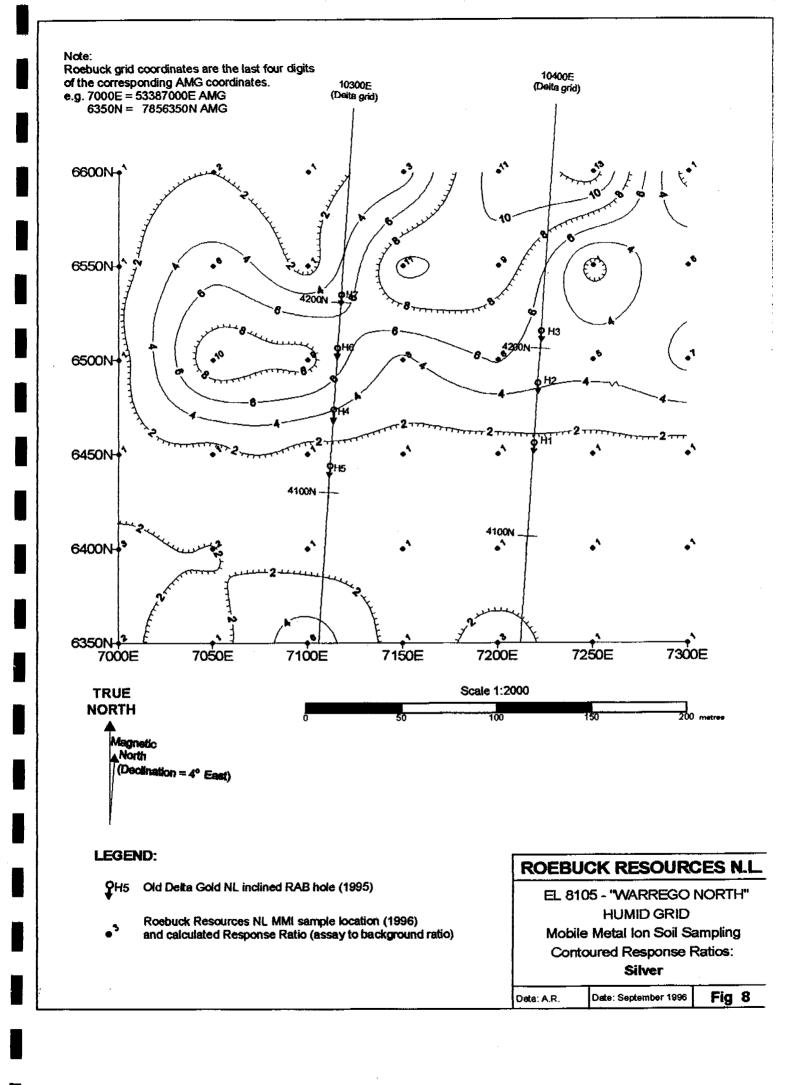


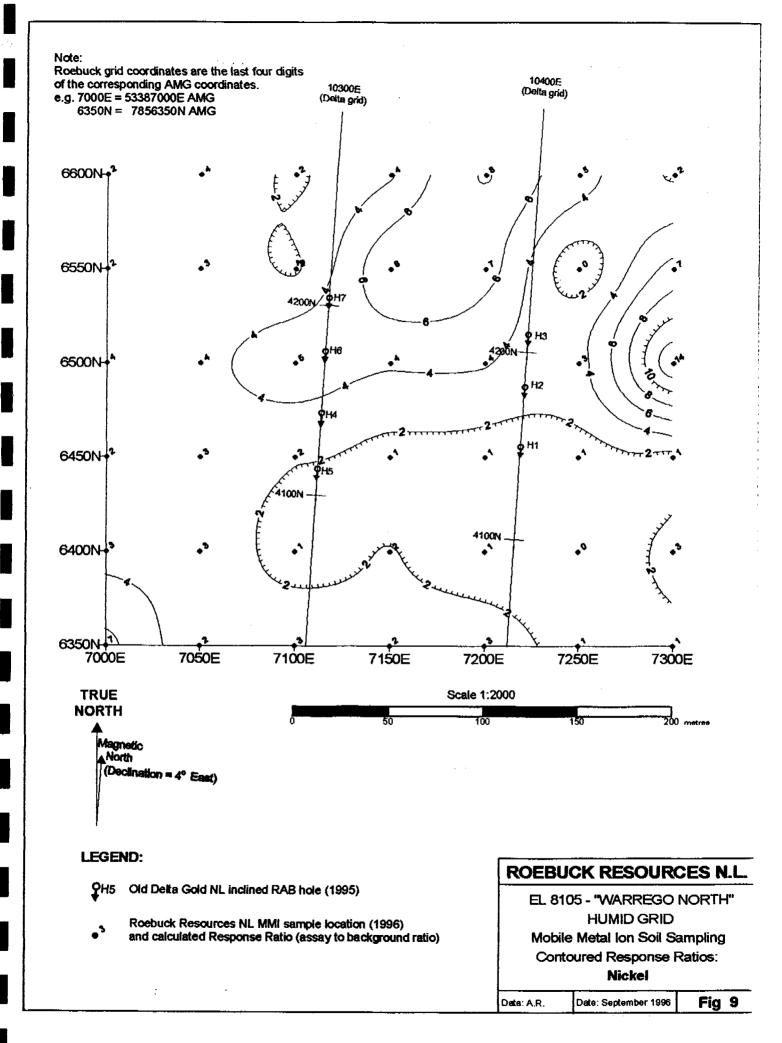


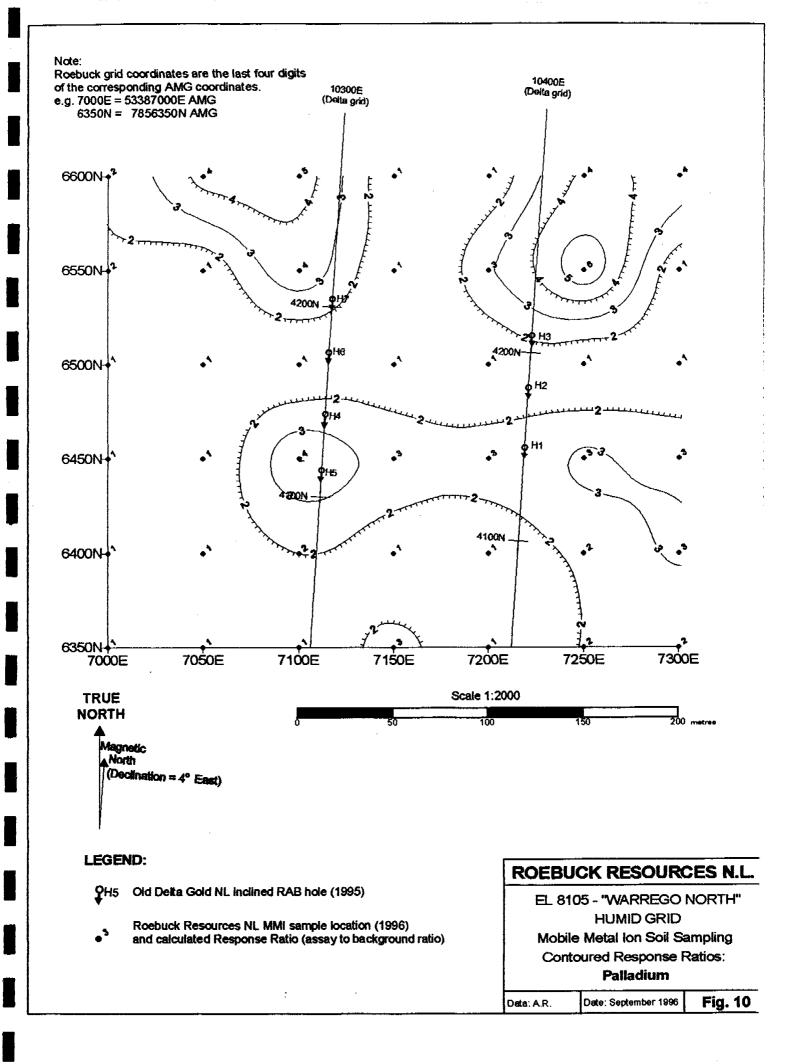


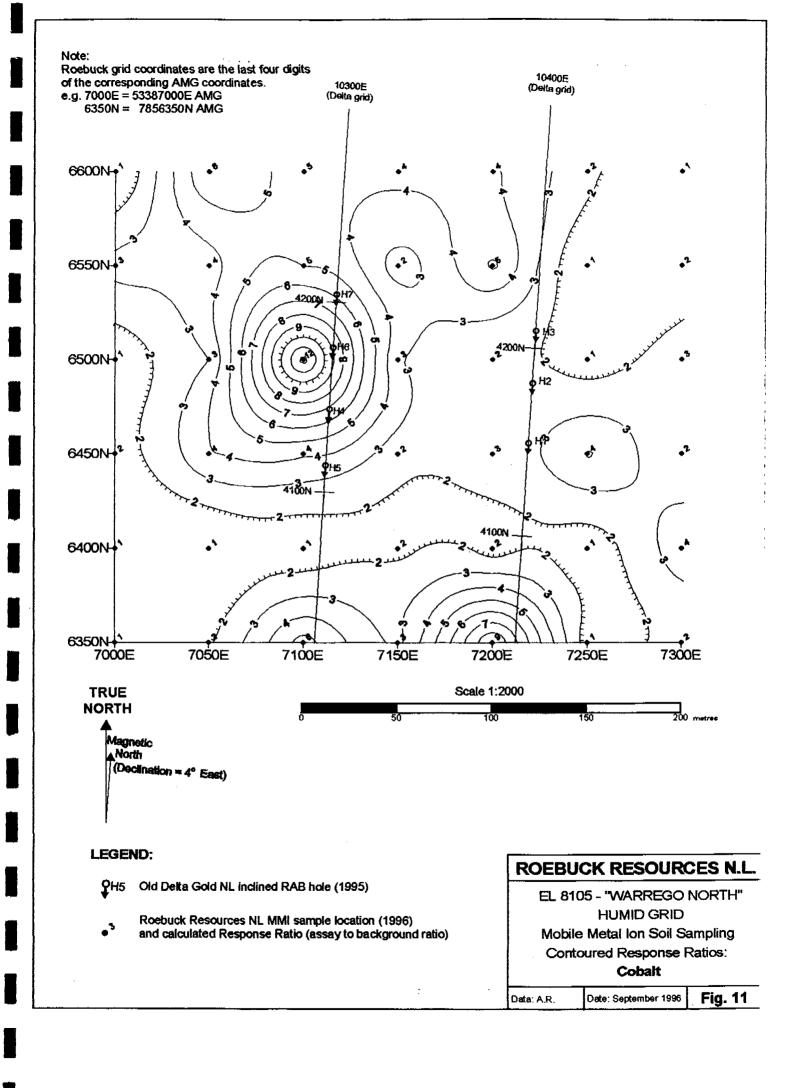












APPENDIX I

AMDEL LABORATORIES

ANALYTICAL REPORT: Job number 6PE3974

EL8105 - WARREGO NORTH

HUMID PROSPECT

WNHMMI-series Mobile Metal Ion Soil Samples



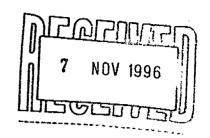
AMDEL LABORATORIES LTD

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Quality System Certified - ISO9002 Reg No.6253

Keith Fox Roebuck Resources N.L.

PO Box 690 WEST PERTH WA 6872 WA 6872



FINAL ANALYSIS REPORT

Your Order No: 00253

Our Job Number : 6PE3974 Sample advice rec'd : 14/10/96 Results reported : 30/10/96 No. of samples : 44

This Report comprises a cover sheet and pages 1 to 4

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

Note:

If you have any queries or wish to discuss any aspect of this report please do not hesitate to contact Mr. Alastair Inglis quoting the above job number.

Approved Signafure:

for

Alastair Inglis

Manager

AMDEL LABORATORIES PERTH

Report Codes:

N.A. - Not Available.

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

I.S. - Insufficient Sample.

Distribution Codes:

CC - Carbon Copy EM - Electronic Media

MM - Magnetic Media



Final Job Number:6PE3974 O/N :00253

	ANALYTICAL REPORT				
	SAMPLE	Cu	Pb	Zn	Cd
WNHMMI	7000E/6350N	48	56	<40	<5
WNHMMI	7000E/6400N	23	42	<40	<5
WNHMMI	7000E/6450N	<20	<40	46	<5
WNHMMI	7000E/6500N	<20	<40	<40	<5
WNHMMI	7000E/6550N	<20	77	41	<5
WNHMMI	7000E/6600N	21	< 40	<40	<5
WNHMMI	7050E/6350N	105	76	<40	<5
WNHMMI	7050E/6400N	47	65	<40	<5
WNHMMI	7050E/6450N	<20	62	47	<5
WNHMMI	7050E/6500N	25	45	<40	<5
WNHMMI	7050E/6550N	<20	67	<40	<5
WNHMMI	7050E/6600N	58	< 40	<40	<5
WNHMMI	7100E/6350N	38	55	<40	<5
WNHMMI	7100E/6400N	29	51	<40	<5
WNHMMI	7100E/6450N	<20	43	<40	<5
WNHMMI	7100E/6500N	28	44	<40	<5
WNHMMI	7100E/6550N	<20	71	<40	<5
WNHMMI	7100E/6600N	<20	<40	<40	<5
WNHMMI	7150E/6350N	<20	41	<40	<5
WNHMMI	7150E/6400N	52	51	<40	<5
WNHMMI	7150E/6450N	30	45	<40	<5
WNHMMI	7150E/6500N	<20	55	<40	<5
WNHMMI	7150E/6550N	<20	<40	<40	<5
WNHMMI	7150E/6600N	<20	<40	<40	<5
WNHMMI	7200E/6350N	<20	41	<40	<5
WNHMMI	7200E/6400N	22	<40	<40	<5
WNHMMI	7200E/6450N	35	64	<40	<5
WNHMMI	7200E/6500N	<20	52	<40	<5
WNHMMI	7200E/6550N	23	<40	<40	<5
WNHMMI	7200E/6600N	35	41	<40	<5
WNHMMI	7250E/6350N	<20	73	<40	<5
WNHMMI	7250E/6400N	<20	<40	<40	<5
WNHMMI	7250E/6450N	28	85	70	<5
WNHMMI	7250E/6500N	<20	<40	<40	<5
WNHMMI	7250E/6550N	<20	<40	<40	<5
WNHMMI	7250E/6600N	27	<40	<40	<5
WNHMMI	7300E/6350N	27	<40	<40	<5
WNHMMI	7300E/6400N	<20	49	<40	<5
WNHMMI	7300E/6450N	<20	55	<40	<5
WNHMMI	7300E/6500N	32	139	<40	<5

UNITS ppb ppb ppb ppb DT.LIM 20 40 40 5 SCHEME WAMAMWAMAMWAMAMWAMAMWAMAM

4



Final

Job Number:6PE3974 O/N :00253

ANALYTICAL REPORT

SAMPLE	Cu	Pb	Zn	Cd
7300E/6550N	<20	<40	<40	<5
7300E/6600N	<20	<40	<40	<5
100E/6500N(A)	38	50	<40	<5
250E/6450N(A)	23	86	60	<5

UNITS ppb ppb ppb ppb DT.LIM 20 40 40 5 SCHEME WAMAMWAMAMWAMAMWAMAMWAMAM



Final Job Number:6PE3974 O/N:00253

ANALYTICAL REPORT

	SAMPLE	Au	Ag	Ni	Pd	Co
WNHMMI	7000E/6350N	<0.25	0.30	104	<0.25	22
WNHMMI	7000E/6400N	<0.25	0.33	50	<0.25	14
WNHMMI	7000E/6450N	<0.25	<0.25	32	<0.25	35
WNHMMI	7000E/6500N	<0.25	<0.25	55	<0.25	27
WNHMMI	7000E/6550N	<0.25	<0.25	35	0.25	75
WNHMMI	7000E/6600N	<0.25	<0.25	31	0.26	12
WNHMMI	7050E/6350N	<0.25	<0.25	38	<0.25	41
WNHMMI	7050E/6400N	0.26	0.27	51	<0.25	18
WNHMMI	7050E/6450N	<0.25	<0.25	44	<0.25	87
WNHMMI	7050E/6500N	<0.25	1.27	58	<0.25	66
WNHMMI	7050E/6550N	<0.25	0.72	47	<0.25	78
WNHMMI	7050E/6600N	<0.25	0.26	57	0.57	134
WNHMMI	7100E/6350N	<0.25	0.74	52	<0.25	122
WNHMMI	7100E/6400N	<0.25	<0.25	19	0.26	29
WNHMMI	7100E/6450N	<0.25	<0.25	33	0.53	91
WNHMMI	7100E/6500N	<0.25	1.14	76	<0.25	152
WNHMMI	7100E/6550N	<0.25	<0.25	25	0.51	110
WNHMMI	7100E/6600N	<0.25	<0.25	26	0.60	100
WNHMMI	7150E/6350N	<0.25	<0.25	37	0.33	61
WNHMMI	7150E/6400N	<0.25	<0.25	33	<0.25	40
WNHMMI	7150E/6450N	<0.25	<0.25	18	0.37	51
WNHMMI	7150E/6500N	<0.25	0.45	65	<0.25	69
WNHMMI	7150E/6550N	<0.25	1.39	123	<0.25	54
WNHMMI	7150E/6600N	<0.25	0.37	58	<0.25	93
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WNHMMI	7200E/6400N	<0.25	<0.25	10	<0.25	34
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WNHMMI	7250E/6350N	<0.25	<0.25	20	0.27	31
WNHMMI	7250E/6400N	<0.25	<0.25	6	0.29	29
WNHMMI	7250E/6450N	<0.25	<0.25	9	0.40	90
WNHMMI	7250E/6500N	<0.25	0.60	50	<0.25	33
WNHMMI	7250E/6550N	<0.25	<0.25	< 5	0.78	14
WNHMMI	7250E/6600N	<0.25	1.71	78	0.55	50
WNHMMI	7300E/6350N	<0.25	<0.25	22	0.28	52
WNHMMI	7300E/6400N	<0.25	<0.25	44	0.41	82
WNHMMI	7300E/6450N	<0.25	<0.25	19	0.36	50
WNHMMI	7300E/6500N	<0.25	0.87	218	<0.25	56

 $\begin{array}{cccccc} UNITS & ppb & ppb & ppb & ppb \\ DT.LIM & 0.25 & 0.25 & 5 & 0.25 & 1 \\ SCHEME & WAMBMWAMBMWAMBMWAMBMWAMBM \end{array}$



Perth W.A.

Final .

Job Number:6PE3974 O/N :00253

ANALYTICAL REPORT

	SAMPLE	Au	Ag	Ni	Pd	Co
WNHMMI	7300E/6550N	< 0.25	0.76	105	< 0.25	37
WNHMMI	7300E/6600N	< 0.25	< 0.25	26	0.46	15
WNHMMI7	100E/6500N(A)	< 0.25	1.14	94	< 0.25	398
WNHMMI7	250E/6450N(A)	< 0.25	< 0.25	10	0.46	92

ppb 0.25 ppb 0.25 ppb 5 ppb 0.25 ppb UNITS SCHEME WAMBMWAMBMWAMBMWAMBM