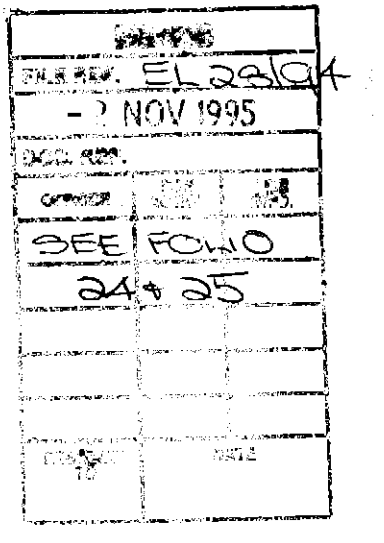
95-3790

749001

RESOLUTE SAMANTHA LIMITED

EL 28/94 "FINGAL"

ANNUAL AND FINAL REPORT ON EXPLORATION ACTIVITY OCTOBER 1994 - OCTOBER 1995



AMG REFERENCE POINTS ADDED

GRANT MACDONALD
OCTOBER 1995

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749003

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B	Stream Sediment Sample Location Descriptions and Assay Results	Grant MacDonald
C	Stream Sediment Sample Assays	Minlab
D	Soil Sample Assays	Minlab

1.0 SUMMARY

In the 12 months since EL 28/94 "Fingal" was granted, Resolute Resources Limited (now Resolute Samantha Limited) has both enhanced and interpreted the newly acquired aeromagnetics data as well as collecting stream sediment (BLEG) samples from streams draining prospective rocks.

It is considered that this data should reveal the presence of a shallow, 200,000 ounce plus gold deposit amenable to open cut mining.

A single weakly anomalous gold in stream sediment sample was collected in an area recognised as being structurally favourable from the aeromagnetics interpretation.

Reconnaissance follow-up soil sampling did not locate a source for this weak anomalism, however, such a source is likely to be small and not of the size/style targeted by Resolute Samantha.

It is considered that the work conducted has considerably downgraded the prospectivity of the area covered by EL 28/94.

2.0 INTRODUCTION

2.1 Location

Exploration Licence 26/94 "Fingal" is located in Tasmania's north-east, centred on Fingal in the South Esk River Valley.

2.2 Tenure

The Exploration Licence, originally NETGOLD tender area No 11, was won by Resolute Resources Limited in the tendering process overseen by Mineral Resources Tasmania as part of the Tasmanian Government's NETGOLD initiative. The licence was granted on 21 October 1994.

2.3 Land Status/Usage

The licence covers an area of 173 km^2 (see Figure 2). Approximately half of the licence is under State Forest with most of the rest of the area private land (light green and yellow respectively in Figure 2). There are some small areas of Crown Reserve in and around the Fingal township which are unavailable for exploration, however, all areas of prospective rocks are open for exploration activity.

Most areas of private land are under improved pasture.

749005

RESOLUTE RESOURCES LIMITED

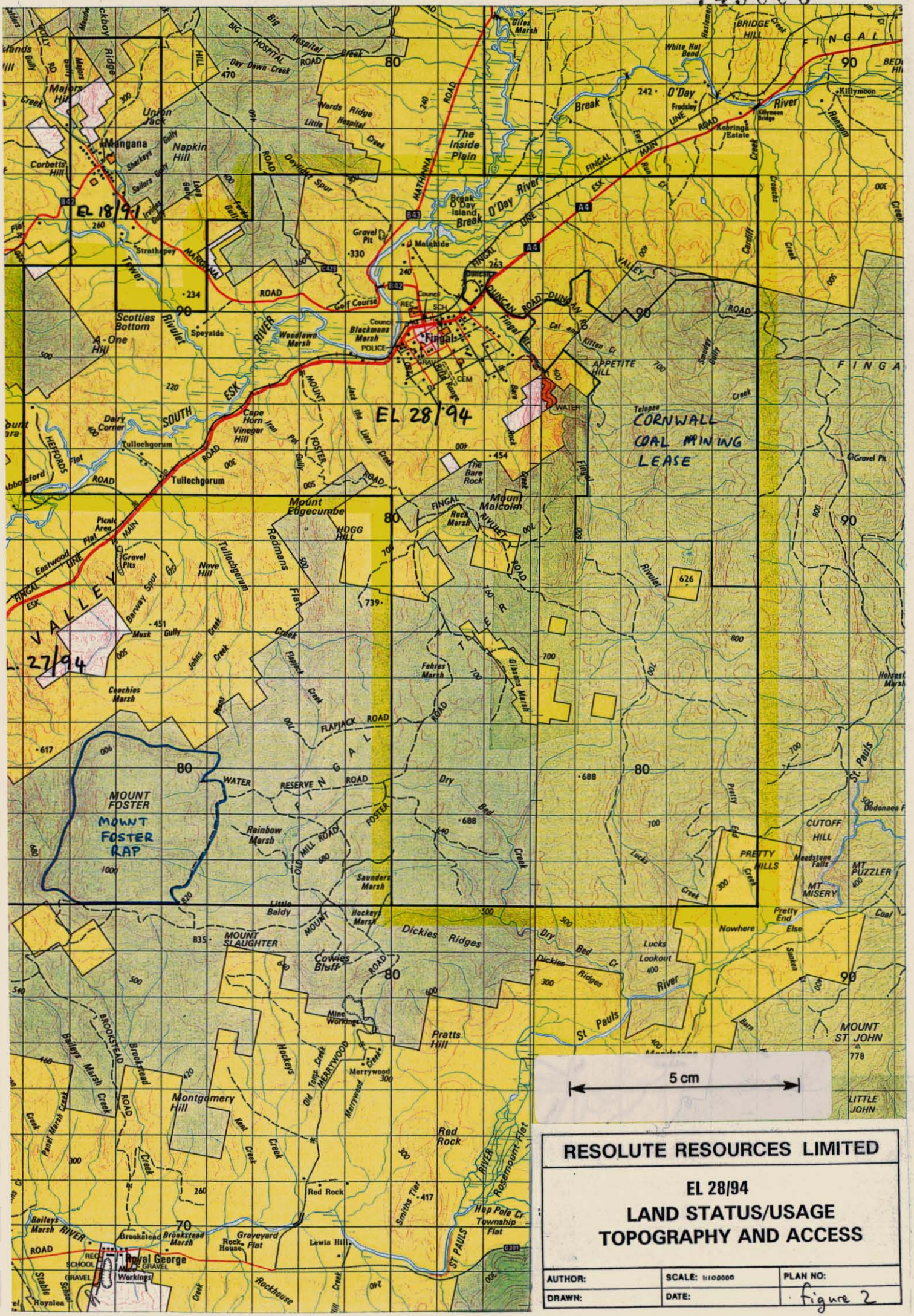
EL 28/94

"FINGAL"

LOCATION

AUTHOR:	SCALE: 1:250000	PLAN NO:
DRAWN:	DATE:	figure 1

749006


EL 18/91
EL 28/94
EL 27/94
CORNWALL COAL MINING LEASE
MOUNT FOSTER RAP
5 cm
RESOLUTE RESOURCES LIMITED
EL 28/94
LAND STATUS/USAGE
TOPOGRAPHY AND ACCESS
AUTHOR:
SCALE: 1:100000
PLAN NO:
DRAWN:
DATE:
figure 2

2.4 Topography and Vegetation

The south-eastern half of the licence is hilly with creeks and gullies incised into the plateau like Fingal Tier. The north-western half of the licence is predominantly river flats and low hills rising up to gentle hills on either side of the Tower Rivulet south of Mangana.

Apart from the improved pasture, essentially all of the rest of the licence is covered by wet or dry sclerophyll forest. Wet sclerophyll is usually found in gullies and on southerly facing slopes with dry sclerophyll vegetation in areas with some exposure to the sun.

2.5 Access

Access to the licence is by bitumen road through the north-western half of the licence. Within the licence access is generally reasonable with farm or forestry tracks through much of the licence.

3.0 GEOLOGY

The geology of the licence is shown in Figure 3 (Tasmania's Department of Mines mapping).

The licence lies immediately to the south of, and along strike from, the major north-north-west trending linear of gold deposits which runs from Mangana in the south, through Mathinna and Alberton, to Lyndhurst on the north coast.

Gold in these deposits is hosted in mesothermal quartz ± sulphide (predominantly arsenopyrite and pyrite) veins which were formed in the Mid-Devonian Tabberabberan Orogeny, probably from deep seated metamorphic fluids, and occupy structures in the Ordovician - Devonian Mathinna Beds.

Two major north to north-west structures associated with the major structural linear were recognised in the interpretation of aeromagnetic data striking into the northern part of the licence before disappearing under recent alluvials and/or being truncated by the major north-east trending structure which both underlies, and controls the existence of, the South Esk River valley.

The Mines Departments mapping (Figure 3) indicates that the prospective Mathinna Beds, host to the auriferous veins, only outcrop in the north-western part of the licence. The large area of Jurassic dolerite over much of the rest of the licence prohibits exploration of the underlying Mathinna Beds.

The licence has some potential for a structurally controlled auriferous quartz vein(s) in the north-western part of the licence.

749CCS

Estate

RESOLUTE RESOURCES LIMITED

EL 28/94

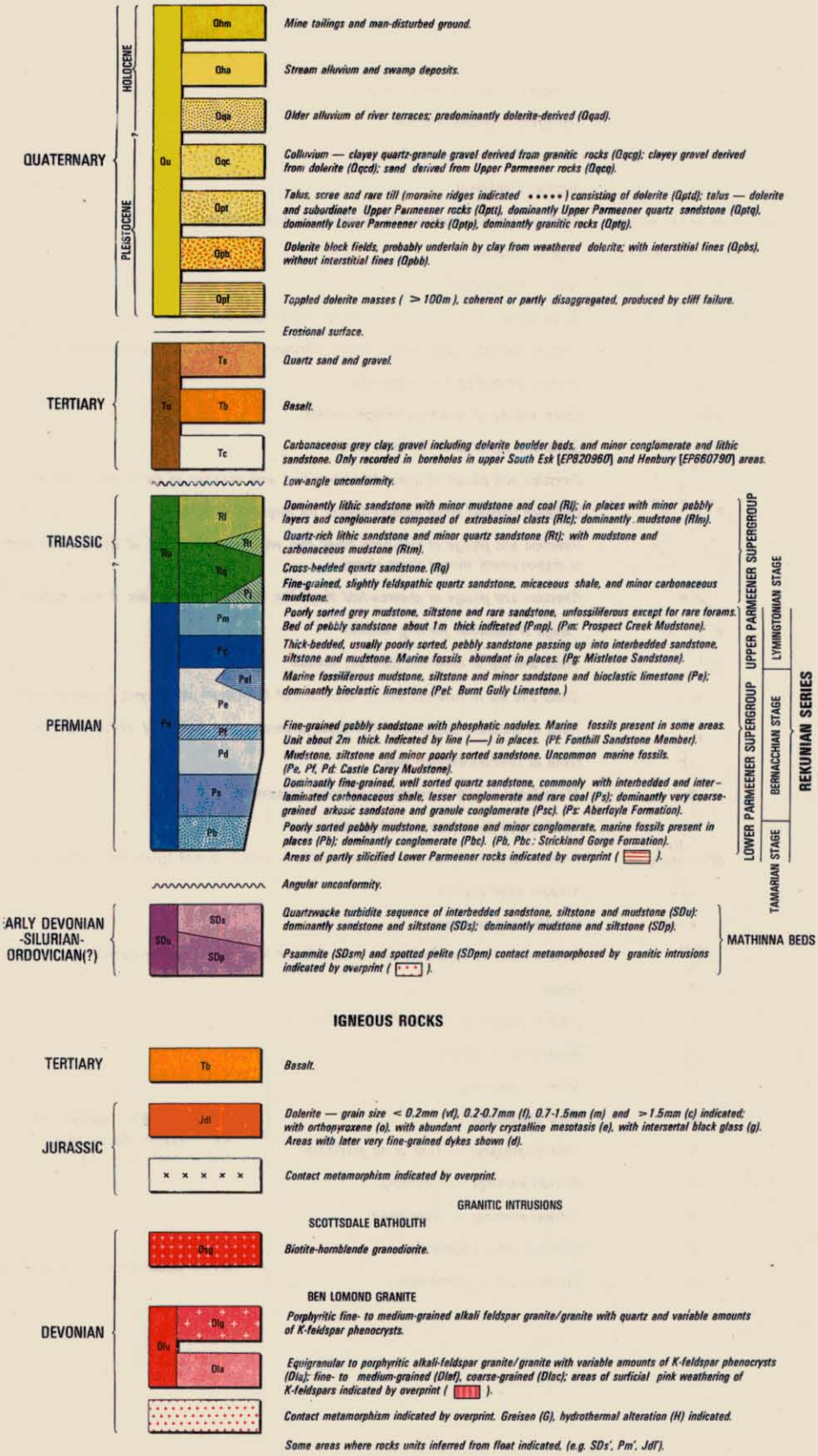
GEOLOGY

AUTHOR: Calver et al (1988)	SCALE: 1:50000	PLAN NO:
DRAWN:	DATE:	figure 3

5 cm

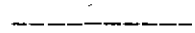
749009

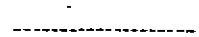
REFERENCE



IGNEOUS ROCKS

749010


Geological boundary-position approximate.


Geological boundary-inferred.

Geological boundary-transitional.

Airphoto Lineament.

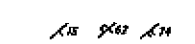
Fault — position approximate, downthrown side indicated

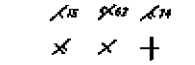

Fault — inferred.

Fault — concealed.

Strike and dip of beds — right way up, overturned, facing unknown

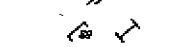
Vertical bedding, facing known, facing unknown, horizontal bedding, right way up.

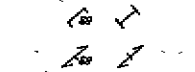

Generalised palaeocurrent direction.

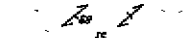

Strike and dip of primary cleavage, vertical.

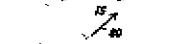

Strike and dip of later cleavage, vertical

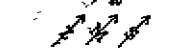

Direction and plunge of minor fold hinge line, with direction of dip of axial surface


Vergence (viewed down plunge)-dextral, no vergence, sinistral.

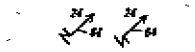

Direction and plunge of kink-band hinge line, with direction of dip of axial surface, and sense of displacement viewed down plunge


Direction and plunge of chevron-fold hinge line, with direction of dip of axial surface.


Plunge of columnar jointing, vertical.

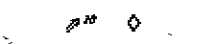

Strike and dip of dominant joint set, vertical.

Strike and dip of foliation due to alignment of K-feldspar phenocrysts in granitic rock.

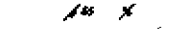

Trend of apparent lineation of K-feldspar phenocrysts on horizontal surfaces of granitic rock.


Trend of sulphide-bearing vein.


Macrofossil locality in poorly-fossiliferous sequences.


Field station for adjacent readings on map

Borehole with identification number, depths in metres to rock types encountered, and final depth.


Notable small outcrop.


Notable float occurrence.

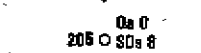

Talus concealing underlying rock type inferred from magnetometer survey.

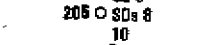
Cirque.

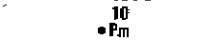

Limit of glacial smoothing of dolerite bedrock.


Major mine — closed.


Mine — operating


Mine abandoned

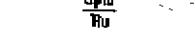

Mine or prospect — little or no production


Alluvial workings — operating.


Alluvial workings — abandoned.

(Sn — tin, W — wolfram, Pb — lead, Zn — zinc, Cu — copper, Ag — silver, U — uranium, C — coal) (Au — gold, Sn — tin)


Quarry or pit — operating.


Quarry or pit — abandoned.

(Gr — gravel, Bs — building stone)

4.0 EXPLORATION PHILOSOPHY

Resolute Samantha Limited's target is a 200,000 ounce plus shallow deposit amenable to open cut mining. Such a deposit could consist of gold in stockwork/disseminations in the thermal aureole of a Devonian granitoid or in sheeted veins/stockwork on or near major north to north-west trending structures. Dilational north to north-east trending structures may be significant in focusing mineralising fluids. It is considered that such a deposit should be found using a combination of enhanced and interpreted aeromagnetics and stream sediment geochemistry, with follow up rock and soil geochemical sampling in anomalous areas or catchments leading to the definition of drill targets.

A secondary target is high grade gold in mesothermal quartz reefs of which the 250,000 ounce New Golden Gate mine at Mathinna is the best example.

5.0 PREVIOUS EXPLORATION

Given the intensity of prospecting late last century-early this century in the Mangana area, and the north east in general, it is almost certain that similar prospecting work, using the techniques of panning, loaming and dollying, was carried out on the prospective rocks in the area covered by EL28/94. As far as can be ascertained, that work was unsuccessful.

The only modern exploration for gold within the licence appears to be the single stream sediment BLEG sample taken in Fords Gully (see fig. 5) by Newcrest (Pearson, 1993) which assayed below detection (<0.10 ppb Au) and the four -80# stream sediment samples taken by Tasminex (Wolff, 1979) in the Fords Gully area and assayed for Cu, Pb, Zn and As.

6.0 WORK CONDUCTED, OCTOBER 1994 - OCTOBER 1995

Work in the first twelve months of the licence has consisted of the following:-

- Compilation of Historical data and previous exploration
- Image enhancement and interpretation of newly acquired (Tasmania Government survey) aeromagnetic data
- Stream sediment (BLEG) sampling in areas of prospective Mathinna Beds. A total of 14 samples were taken with all samples nominally 2 kg of - 2 mm active stream sediment. All samples were assayed for Au using the BLEG technique (24 hour bottle roll) with a split assayed for Ag, As, Sb, Cu, Pb and Zn.
- Soil sampling along a single contour traverse in the drainage basin of a weakly anomalous stream sediment BLEG result adjacent to a target zone recognised from the aeromagnetics interpretation. Thirteen soils were collected and assayed using the low level circuit with Au analysed using fire assay/AAS and As analysed using acid digest/AAS.

7.0 RESULTS

7.1 Compilation Historical Data and Previous Exploration

A thorough search of all reporting on old prospects in the Mangana-Fingal area indicates that no hard rock gold deposits were discovered or worked in the area covered by EL 28/94. Given the intensity of this prospecting it is reasonable to conclude that no significant payable reefs outcrop within the licence.

Modern exploration within the licence is extremely limited. None of the stream sediment samples taken by Newcrest or Tasminex is anomalous.

7.2 Image Enhancement/Interpretation of Aeromagnetics

The newly acquired (Tasmania Government survey) aeromagnetic data was enhanced and interpreted by John Ashley of Southern Geoscience Consultants of Perth WA.

John Ashley's interpretation (including 'Contours of Total Magnetic Intensity' and 'Interpretation Plan', each at 1:50,000) is included as Appendix A.

John Ashley recognises two north-north-west trending structures passing into the northern part of the licence (F4 and F6 on his interpretation plan). These disappear under magnetically noisy alluvial cover but would appear to be truncated by the major F2 north-east trending structure which runs along the South Esk River valley.

One of Ashleys target areas, defined by the convergence of a north-east trending dextral (dilational?) structure with the F4 fault, lies 0.5km's north-north-west of a 5.70 ppb Au stream BLEG sample (No. 279388).

7.3 Stream Sediment BLEG Sampling

Stream sediment sampling on EL 26/94 was carried out in conjunction with identical sampling on the other licences held by Resolute Samantha. Conclusions drawn from results elsewhere were used in analysing results from EL 26/94. Perhaps the two major conclusions to be drawn elsewhere are that:-

- anomalous steam sediment BLEG samples below old workings are of the order of 100 ppb Au or more, although,
- there is considerable variation in results with a sample returning 546 pp Au taken 500 m above a sample site from a previous survey which returned 7.2 ppb Au whilst a 99 ppb Au result repeated at 3.5 ppb Au.

The fourteen stream BLEG samples were all taken on the northern side of the South Esk River. No samples were taken in creeks draining Mathinna Beds south of the South Esk due to the relatively small area of outcrop.

749013

572500

573000

573500

5391000

5390500

280

260

300

350

400

450

337

379387
0·19
<10, <0·5, <2
5, 15, 13

379388
5·70
<10, <0·5, <2
10, 30, 50

380729 <1, <10
380728 <1, <10
380722 <1, <10
380730 1, <10
380731 2, <10
380723 <1, <10
380732 <1, <10
380724 <1, <10
380733 <1, <10
380734 <1, <10
380725 <1, <10
380726 <1, 30
380727 <1, <10

KEY

ROAD

CREEK -

379388
5·70
<10, <0·5, <2
10, 30, 50

STREAM BLEG SAMPLE
LOCATION / RESULT
Au (ppb)
As, Ag, Sb (ppm)
Cu, Pb, Zn (ppm)

•380729
<1, <10

SOIL SAMPLE NUMBER / RESULT (Au ppb, As ppm)

350

ELEVATION CONTOURS (METRES ABOVE SEA LEVEL)
CONTOUR INTERVAL - 10 METRES

A. M. G.
NORTH

5 cm

RESOLUTE RESOURCES LIMITED

EL 28/94

"SCOTTIES BOTTOM"
SAMPLE LOCATIONS/ RESULTS

AUTHOR:	SCALE: 1:5 000	PLAN NO:
DRAWN:	DATE: Oct '95	figure 4

Assay results for all samples are shown in figure 5. Results for Cu, Pb, Zn, Ag, As and Sb are invariably low, the only slightly anomalous result being 50ppm Zn from the "Scottie's Bottom" (sample No.379 388). Best gold results were 5.70, 4.45 and 2.80 ppb Au though these are not significantly anomalous when considered in the light of conclusions drawn from similar sampling in other adjacent and nearby licences.

The 5.70ppb Au sample was selected for follow-up soil sampling due to its favourable structural setting.

7.4 Soil Sampling, "Scottie's Bottom"

Sample locations and assay results for the thirteen soil samples collected on a single contour traverse in the headwaters of the small drainage basin which returned a stream BLEG result of 5.70 ppb Au are shown in Figure 4. All soils returned low gold and arsenic results.

8.0 CONCLUSIONS

It is considered that the combination of enhanced and interpreted aeromagnetics with stream sediment BLEG sampling should have been sufficient to locate those structures or intrusives with associated anomalous gold in stream sediments with the potential for the size and style of gold deposit targeted by Resolute Samantha Limited. The best and only target generated returned disappointing results from reconnaissance soil sampling.

No further work is warranted within the licence.

9.0 BIBLIOGRAPHY

McClenaghan M.P. *et al* (1993) Ben Lomond Map Sheet
Sheet 8414N (48) of 1:50000 series,
Dep. Mines Tasm.

Pearson D.F. (1993) Annual Report for Exploration
Licences 22/92, 23/92 and 34/92
October 1992 - October 1993
Newcrest Mining Limited
[TCR]

Turner N.J. *et al* (1984) St Marys Map Sheet
Sheet 8514N (49) of 1:50,000
Series, Dep. Mines Tasm.

Wolff G.C. (1979) Exploration Within EL17/78
30th October 1978
to 30th April 1979. Tasminex N.L.
[TCR 79-1344]

APPENDIX A

INTERPRETATION OF AEROMAGNETIC DATA

John Ashley, Southern Geoscience Consultants

Resolute/Samantha Group

Northeast Tasmania

'Mathinna Project'

Interpretation of Aeromagnetic Data

J.Ashley March 1995

TABLE OF CONTENTS

ILLUSTRATIONS

SUMMARY

Aeromagnetic data over and adjacent to the tenements in the Mathinna area have been interpreted to assist in exploration for gold mineralisation.

In the Tower Hill/Mathinna/Dans Rivulet zone eight target areas, based on dilation zones related to secondary fault structures, are outlined. A general zone of interest is outlined over a proposed 'structural repeat' of the Mathinna setting.

In the Mangana area general zones of interest are outlined adjacent to interpreted major fault structures. One specific target zone is outlined over a dilation zone.

A zone of interest is outlined 4km west of Mathinna over an inferred folded sequence overlying granitoid.

1.INTRODUCTION

An interpretation of aeromagnetic data over and adjacent to EL's 17 - 18/91, 22/92 and 26 - 28/94 has been made to assist in exploration for gold mineralisation.

The aeromagnetic data are from the Netgold Database of northeast Tasmania. Within the study area the data are from three surveys (Figure 1):

Fingal 1993 (Geoinstruments)
- 200m spaced east-west flight lines
- 400m spaced north-south tie lines
- mean terrain clearance 74m (range 24-319m)

Mathinna 1990 (Geoinstruments)
- 150m spaced north-south flight lines
- 400m east-west tie lines
- mean terrain clearance 95m (range 55-207m)

Alberton Manganna 1989 (Austirex)
- 500m spaced east-west flight lines
- 5000m spaced north-south tie lines
- mean terrain clearance 244m (range 38-858m)

These data have been merged, gridded and contour maps at scale 1:50000 have been produced (Figures 3A,B). The data have also been image processed with results being presented on 35mm slides; hardcopy of one image was produced at scale 1:50000.

Geological data made available were the following:

1:250000 Geology map of northeast Tasmania
1:50000 Geology maps for Ringarooma, Alberton, St Helens, Ben Lomond, St Marys, Snow Hill

1:25000 Maps of the Mangana, Mathinna-Tower Hill and Dans Rivulet Goldfields

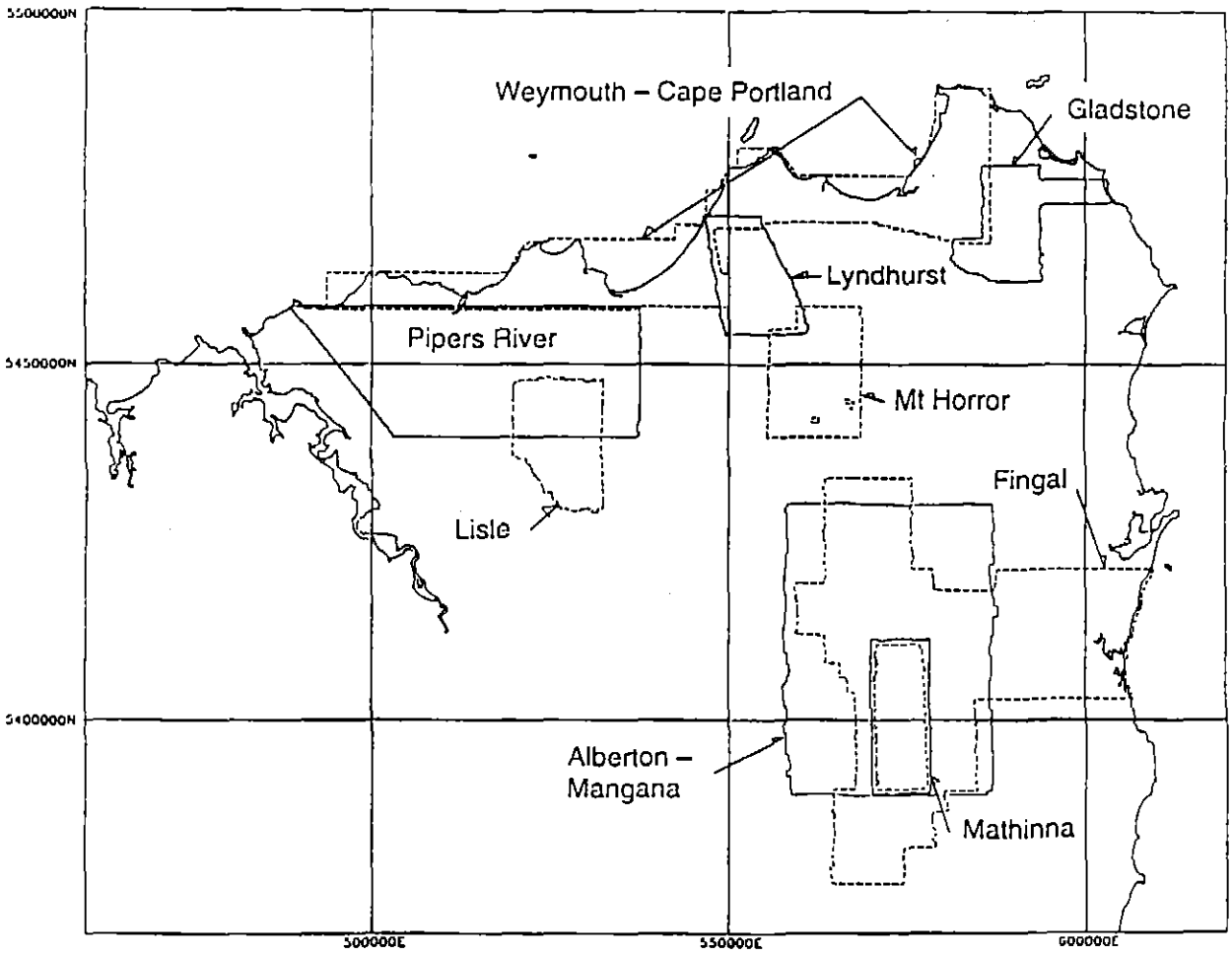

5500000N
5450000N
5400000N
500000E
550000E
600000E
Weymouth – Cape Portland
Gladstone
Lyndhurst
Pipers River
Mt Horror
Fingal
Lisle
Alberton –
Mangana
Mathinna

Figure 1

Mineral Resources Tasmania Reports:

1994/06 Structure and veining in the Devonian aged Mathinna-Alberton Gold Lineament, northeast Tasmania - R.A.Keele

1992/10 Northeast Goldfields: A summary of the Tower Hill, Mathinna and Dans Rivulet Goldfields - J.Tahieri

1994/05 A study of the nature and origin of gold mineralisation, Mangana-Forrester area, northeast Tasmania - J.Tahieri, R.S.Bottrill

1992/29 The Mangana Goldfield and adjacent gold mining areas - R.S.Bottrill

1994/08 An interpretation of recent geophysical surveys, northeastern Tasmania - R.G.Richardson, M.J.Roach

Sundry reports:

Aeromagnetic survey EL 55/83 Mangana - Acquisition Report.....Dr.DE.Leaman, 1990

Gold Exploration and the use of magnetic methods in northeast Tasmania - Dr D.E.Leaman 1992

Regional geophysics of the Alberton-Mangana goldfield, northeast Tasmania - M.J.Roach 1992

An interpretation of the aeromagnetic data is presented at scale 1:50000 in Figures 2A,B.

2. DISCUSSION

The magnetic characteristics of most of the rocks within the study area have been documented by Roach (1992) and Richardson and Roach (1994). The data in the table below are taken from Roach:

	Magnetic Susceptibility ($x10^{-3}$ SI)	
	Range	Mean
Tertiary Basalt	variable	>10
Jurassic Dolerite	variable	10
Permian Sediments	0 - 0.02	~0
Blue Tier Granite	0.02 - 0.15	0.05
Scottsdale Granite	0.02 - 0.20	0.12
Pyengana Granodiorite	3.0 - 10.0	8.0
	0.15 - 0.3	0.22
Mathinna Metasediments	0.06 - 0.32	0.15

(The distribution of the magnetic rocks is best seen in the slide of the coloured, linear, total magnetic intensity).

The highest magnetic relief in the area is produced by sills of Jurassic and Tertiary volcanics; these rocks also occur as talus deposits and in drainage channels where they produce variable, erratic, magnetic relief. The magnetic phase of the Pyengana granodiorite produces a prominent magnetic response. Sediments adjacent to the Blue Tier granite (adamellite) are 'magnetic' as a result of (inferred) contact metamorphism (seen on the St Helens map sheet). Northeast trending dykes (Devonian?) are evident on the St Helens and St Marys map sheets; one southeast trending Jurassic dyke is located just to the west of the Tower Hill gold mining centre. The Mathinna Beds contain some magnetic lithologies which exhibit magnetic relief up to about 40nT (eg adjacent to the Scottsdale batholith). Some of the relief is very low and on the interpreted plans these anomalies are shown as 'trend lines'. The latter are probably very difficult to identify in the field; the former should be recognisable.

There are several low-amplitude 'broad' magnetic anomalies over the sediments (most clearly seen in the slide of the non-linear total magnetic intensity). These have been attributed (Roach 1992) to sub-surface granodiorites similar to the magnetic phase of the Pyengana granodiorite. This is considered to be a valid interpretation; an alterative source could be metamorphosed sediments overlying non-magnetic granitoids. The strongest of these 'deep' anomalies (~80nT) is in the extreme southwest. The source is interpreted to be at depth of 1 - 2km; sediments overlying this, and other 'deep' features, are inferred to be 'grossly' anticlinally folded ie along axes f_1 - f_7. Smaller scale fold structures are evident in the

sediments adjacent to the Blue Tier batholith; a northwest fold axis (f8) is interpreted west of Mathinna where arcuate, weak, magnetic trends are observed.

Several 'major' and many minor (secondary) fault structures are interpreted. 'Major' structures trend north-northwest and northeast (the confidence in the interpretation is indicated by the 'length' of the fault symbol on the maps). The northeast dextral fault (F1) through the Pyengana granodiorite is an obvious feature where it transects the pluton but is not obvious to the southwest. A northeast fault (F2) is interpreted along a 'magnetic contact' adjacent to the South Esk river and is inferred to contain dyke rocks to the northeast (on the St Helens map sheet). Displacement on this fault may be sinistral.

North-northwest faults are mostly interpreted in the west of the area. The fault F3 is based largely on a contact displacement of the 'deep' granitoid south of the Scottsdale batholith - it is not a well defined feature.

The zone bounded by faults F4/F10 contains the bulk of the linear magnetic lithologies in the Mathinna Beds. These faults are rarely well defined and are largely positioned to outline 'packages' of rocks of similar character or, in some places, they are positioned between zones of differing 'magnetic' trends eg parts of F6, F7. The zone bounded by F6 and F9/F10 contains distinctive ovoid magnetic 'lows' (axes L1 - L3).

To the east a north-northwest fault (F11) is inferred along the margin of a tongue of 'non-magnetic' granite. The parallel fault F12 is inferred along a 'magnetic contact'.

From the imaged data additional 'major' faults or deformation zones can be inferred. These are 'weak' features and hence may relate to the earliest stages of deformation.

Such features trend east-southeast (Z1, Z2), east-northeast (Z3, Z4), north-south (Z5) and northeast (Z6, Z7).

Numerous minor or secondary fault structures are interpreted from offsets of magnetic lithologies or from trends seen in the imaged data.

3. TARGET AREAS

Some general observations relating to the distribution of gold mineralisation can be made based on this interpretation of the aeromagnetic data.

The Mathinna, Dans Rivulet and Alberton Goldfields are within a north-northwest structural zone defined here by faults F6 and F9/F10. The gold mines/prospects are grossly aligned at ~345° ie obliquely to the trend of the interpreted structural zone. The Tower Hill goldfield is on the west margin of this zone.

The Mangana Goldfield is interpreted to be within a separate, parallel, structural zone defined here by faults F4 and F5.

Within the Mathinna/Alberton zone the Mathinna mineralisation is located over the northern end of an ovoid magnetic 'low' (axis L1). This 'low' is bounded to the north by an east-southeast magnetic 'high' (the Z2 zone) which is flanked to the north by an east-southeast magnetic 'low' (axis L2). The Alberton mineralisation is more or less over the axis of a near north trending magnetic 'low' (axis L4). The sources of these magnetic 'lows' are not clear but they may represent alteration zones within or beneath the Mathinna Beds.

The Mangana Goldfield and Alberton Goldfield are over inferred 'deep' granodiorites. Similar rocks are inferred beneath the f_2 axis west of Mathinna. This axis more or less coincides with favourable stratigraphy outlined by Keele. This stratigraphic unit was interpreted (Keele) to be the Mathinna unit sinistrally offset by a northeast transfer fault - the latter is not evident in the magnetic data.

In detail, at Mathinna, there is some evidence for a dextral north-northwest fault (F13), along strike, to the south-southeast of the Golden Gate deposit. This is inferred to extend to the north into the Dans Rivulet Goldfield where it merges with F9. Assuming that north-northeast secondary structures are dilational (Reidel faults) then target zones T1 - T3 can be defined where such structures intersect F13/F9. A dextral north-northeast fault is interpreted 1km to the northwest of Golden Gate; a target zone (T4) is outlined along the presumed extension of this fault beneath the alluvium.

A similar fault is well defined in the Tower Hill area thus defining target zone T5. To the south-southeast similar targets (T6 - T8) are outlined.

In the Mangana area specific targets are not defined since specific dilation zones have not been recognised. The vein direction here is dominantly north-northwest and a general zone of interest extends to the north and south adjacent to fault F5. A similar general zone of interest is adjacent to fault F4; a specific target (T9) is outlined where a dextral secondary fault is interpreted.

A structural setting, somewhat similar to that in the Brilliant area, occurs within the tenements over, or adjacent to, the f_8 fold axis west of Mathinna. The f_8/Z3 intersection is suggested as a more specific zone of interest.

If the ovoid magnetic 'low' (axis L1) is a component in the mineralising process then the southern end of the 'low' is considered to be a 'look alike' setting of the Mathinna area. Hence a general zone of interest T10 is postulated.


Alberton
Scottsdale Batholith
Pyengana Pluton
Blue Tier Batholith
Brilliant
LEGEND
'Magnetic' granitoid
Inferred 'magnetic' granitoid at depth
'Non-magnetic' granitoid
Inferred 'non-magnetic' granitoid at depth
Magnetic lithologies in sediments
Very weakly magnetic units in sediments
Inferred hornfelsed sediments
Discrete magnetic 'highs' in sediments
Jurassic volcanics
Triassic volcanics
Tertiary volcanics
Volcanics in talus deposits
Inferred dyke (magnetic low)
" " (" high)
Magnetic rocks in drainage channels/flood plains
Axis of magnetic 'low'
" " " 'high' (over topo. ridge)
'Magnetic contact' (relatively more magnetic on hatched side)
Inferred fold axis
" anticline axis
Interpreted major fault/shear zones
" minor/secondary faults
'Vague' faults/deformation zones (from imaged data)
Fractures in granitoid
Drainage channel/flood plain
Gold mines
Major gold mine
Tenement boundary
Target zones
PROCESSING DETAILS
Processing : Southern Geoscience
Supervision : J. Ashley
95-3790
ANNUAL AND FINAL REPORT EL 28/94
FINGAL 1994-95 - MACDONALD, G -
RESOLUTE SAMANTHA LTD
N
749027
1 000 0 1 000 2000 3000
AUSTRALIAN MAP GRID
AGD84 SPHEROID
SOUTHERN HEMISPHERE
SOUTHERN GEOSCIENCE CONSULTANTS
RESOLUTE/SAMANTHA GROUP
NORTH EAST TASMANIA
AEROMAGNETIC SURVEY
INTERPRETATION PLAN
SCENE 1 OF 2 (NORTH)
SCALE: 1: 50, 000
DATE: 17-03-1995
FIGURE 2A
5 cm

LEGEND

- 'Magnetic' granitoid
- Inferred 'magnetic' granitoid at depth
- 'Non-magnetic' granitoid
- Inferred 'non-magnetic' granitoid at depth
- Magnetic lithologies in sediments
- Very weakly magnetic units in sediments
- X_h Inferred hornfelsed sediments
- Discrete magnetic 'highs' in sediments
- V_J Jurassic volcanics
- V_{TR} Triassic volcanics
- V_T Tertiary volcanics
- T_v Volcanics in talus deposits
- Inferred dyke (magnetic low)
- " " (" high)
- Magnetic rocks in drainage channels/flood plains
- Axis of magnetic 'low'
- " " " 'high' (over topo. ridge)
- 'Magnetic contact' (relatively more magnetic on hatched side)
- Inferred fold axis
- " anticline axis
- Interpreted major fault/shear zones
- " minor/secondary faults
- 'Vague' faults/deformation zones (from imaged data)
- Fractures in granitoid
- Drainage channel/flood plain
- Gold mines
- Major gold mine
- Tenement boundary
- Target zones

PROCESSING DETAILS

Processing : Southern Geoscience
Supervision : J. Ashley

N

1 000 0 1 000 2000 3000

AUSTRALIAN MAP GRID
AGD84 SPHEROID
SOUTHERN HEMISPHERE

749028

5cm

SOUTHERN GEOSCIENCE CONSULTANTS

RESOLUTE/SAMANTHA GROUP
NORTH EAST TASMANIA
AEROMAGNETIC SURVEY
INTERPRETATION PLAN
SCENE 2 OF 2 (SOUTH)

SCALE 1:50,000	
DATE 17-03-1995	FIGURE 25

95-3790

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PINGAL 1994-95 - MACDONALD, G.
RESOLUTE SAMANTHA LTD

PROCESSING DETAILS

Processing : Southern Geoscience
Supervision : J. Ashley

PLOT SPECIFICATIONS

Contours:
Lower Level : 1 nT
Middle Level : 5 nT
Upper Level : 20 nT

Grid Cell Size : 50mE x 50mN

1 000 0 1 000 2 000 3 000

749029

AUSTRALIAN MAP GRID
AGD84 SPHEROID
SOUTHERN HEMISPHERE

5cm

SOUTHERN GEOSCIENCE CONSULTANTS

RESOLUTE/SAMANTHA GROUP

NORTH EAST TASMANIA

AEROMAGNETIC SURVEY

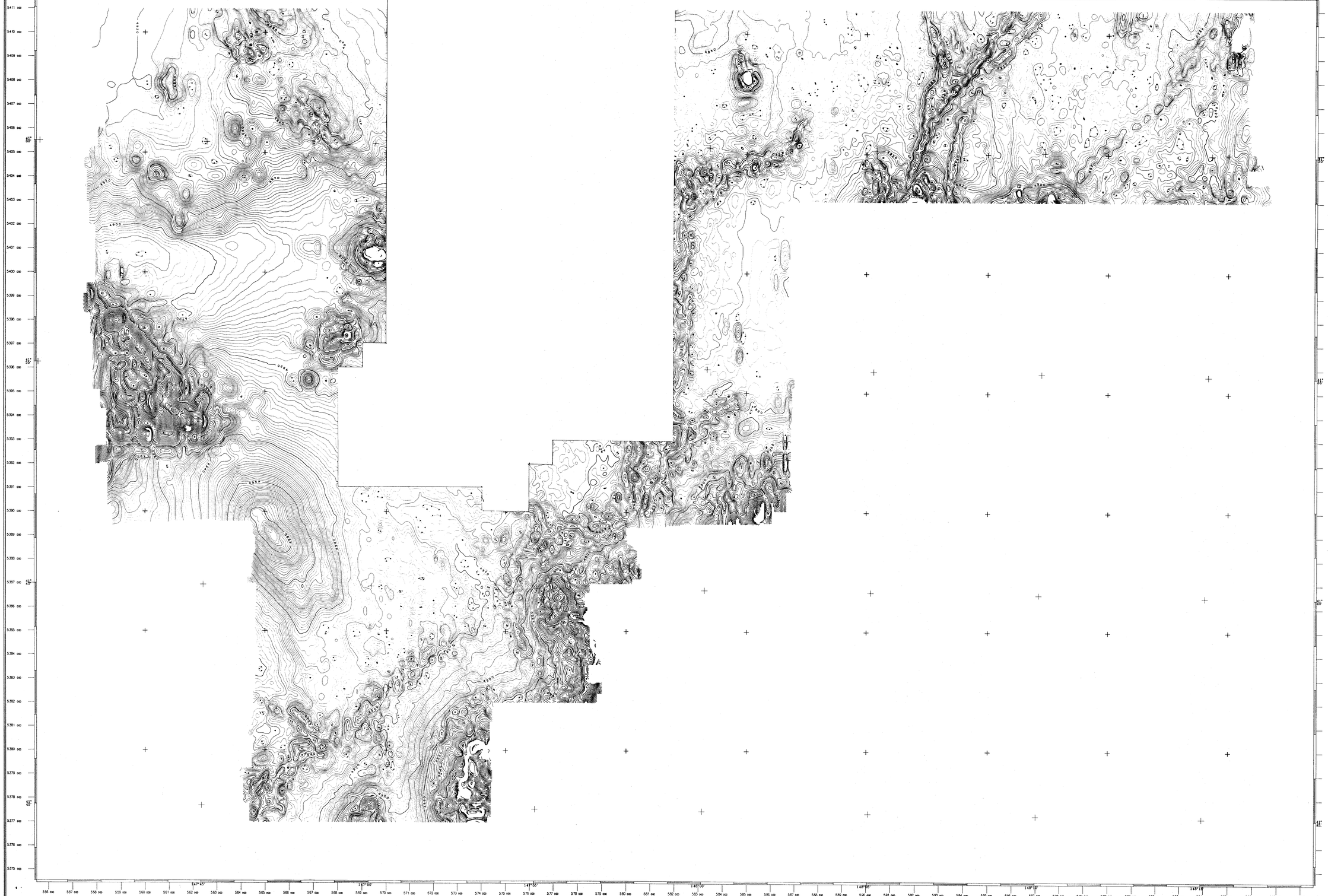
CONTOURS OF TOTAL MAGNETIC INTENSITY

SCENE 1 OF 2 (NORTH)

SCALE 1: 50,000		
DATE 17-03-1995	FIGURE	3A

95-3790

ANNUAL AND FINAL REPORT EL 28/94
FINGAL 1994-95 - MACDONALD, G -
RESOLUTE SAMANTHA LTD



PROCESSING DETAILS

Processing : Southern Geoscience
Supervision : J. Ashley

PLOT SPECIFICATIONS

Contours
Lower Level : 1 nT
Middle Level : 5 nT
Upper Level : 20 nT

Grid Cell Size : 50mE x 50mN

N

1 000 0 1 000 2000 3000

749030

AUSTRALIAN MAP GRID
AGD84 SPHEROID
SOUTHERN HEMISPHERE

5 cm

SOUTHERN GEOSCIENCE CONSULTANTS

RESOLUTE/SAMANTHA GROUP

NORTH EAST TASMANIA

AEROMAGNETIC SURVEY

CONTOURS OF TOTAL MAGNETIC INTENSITY

SCENE 2 OF 2 (SOUTH)

SCALE 1:50,000	
DATE 07-03-1995	FIGURE 35

95-3790

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749031

APPENDIX B

STREAM SEDIMENT SAMPLE LOCATION DESCRIPTIONS AND ASSAY RESULTS

Grant MacDonald

RESOLUTE RESOURCES LIMITED - STREAM BLEG SAMPLE **LOCATION / SITE DESCRIPTION / ASSAYS**

SAMPLE NO.	AMG CO-ORDINATES		SAMPLE SITE DESCRIPTION	ASSAYS - Au ppb, all other in ppm						
	NORTHING	EASTING		Au	As	Ag	Sb	Cu	Pb	Zn
379387	5390810mN	572760mE	dry creek bed, 0° gradient, 1m wide, flat banks, dry sclerophyll + grass, minor bucky quartz in bed load.	0.19	<10	<0.5	<2	5	15	10
379388	5390390mN	573170mE	dry creek bed, 0° gradient, ½ m wide, gradual banks, dry sclerophyll + grass, minor bucky quartz in bed load.	5.70	<10	<0.5	<2	10	30	50
379389	5390490mN	573960mE	dry creek bed, 0°-5° gradient, 1 m wide, flat banks, dry sclerophyll, minor bucky quartz in bed load.	0.86	<10	<0.5	<2	5	15	10
379390	5389910mN	572960mE	dry creek bed, 0° gradient, 3 m wide, gradual banks, dry sclerophyll, abundant quartz in bed load.	0.57	<10	<0.5	<2	<5	10	5
379395	5391180mN	578720mE	dry creek bed, 0°-5° gradient, 2-3 m wide, steep banks, dry sclerophyll, minor quartz in bed load.	0.28	<10	<0.5	<2	<5	10	15
379396	5391290mN	578760mE	dry creek bed, 0°-5° gradient, 4m wide, steep banks, dry sclerophyll, minor quartz in bed load.	0.13	<10	<0.5	<2	5	15	20
379397	5392480mN	579140mE	dry creek bed, 0° gradient, 2m wide, gradual banks, dry sclerophyll, trace quartz in bed load.	0.27	<10	<0.5	<2	<5	10	5
379398	5392610mN	579180mE	dry creek bed, 0° gradient, 4m wide, gradual banks, dry sclerophyll, minor quartz in bed load.	0.54	<10	<0.5	<2	10	20	30

RESOLUTE RESOURCES LIMITED - STREAM BLEG SAMPLE **LOCATION / SITE DESCRIPTION / ASSAYS**

SAMPLE NO.	AMG CO-ORDINATES		SAMPLE SITE DESCRIPTION	ASSAYS - Au ppb, all other in ppm						
	NORTHING	EASTING		Au	As	Ag	Sb	Cu	Pb	Zn
379399	5390500mN	578020mE	dry creek bed, 0°-5° gradient, 1m wide, gradual banks, dry sclerophyll, trace quartz in bed load.	4·45	<10	<0·5	<2	5	15	20
379429	5389790mN	575080mE	dry creek bed, 0°-5° gradient, 1m wide, gradual banks dry sclerophyll (open), minor quartz in bed load.	<0·1	<10	<0·5	<2	10	15	25
379430	5389910mN	574990mE	dry creek bed, 0°-5° gradient, 2m wide, gradual banks, dry sclerophyll (open), minor quartz in bed load.	<0·1	<10	<0·5	<2	<5	10	15
379432	5389030mN	574900mE	dry creek bed, 5° gradient, 1m wide, steep banks, dry sclerophyll, minor quartz in bed load.	0·3	<10	<0·5	<2	<5	15	5
379433	5388660mN	574570mE	dry creek bed, 0° gradient, 1m wide, gradual banks, dry sclerophyll (open), minor quartz in bed load.	0·2	<10	<0·5	<2	10	15	20
379434	5388120mN	574130mE	dry creek bed, 5° gradient, 3m wide, steep banks, dry sclerophyll, minor quartz in bed load.	2·8	<10	<0·5	<2	<5	15	5

APPENDIX C

STREAM SEDIMENT SAMPLE ASSAY RESULTS
Minlab

MinLab

749035

MINCULTURE LABORATORIES PTY LTD ACN 008 660 174 TRUSTEE FOR THE MINLAB UNIT TRUST TRADING AS MINLAB

18A Denninup Way
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Lot 484 Criddle St
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Fax: (099) 634 531

ANALYTICAL REPORT

Reference No: P60654

Date: 09 MAY 95

Samples Received: 26 APR 95
Order Number : K9420B
Project Number : N/A
Samples in Batch: 22

THIS REPORT HAS BEEN PREPARED FOR

RESOLUTE RESOURCES LIMITED

AND SHOULD BE READ IN CONJUNCTION WITH THE FINAL PAGE

Authorised by: A Ferguson
(A.J. Ferguson)

ATTN: G McDONALD
THE RESOLUTE SAMANTHA GROUP
MANGANA RD
FINGAL TAS 7214

Reference No: P60654 **ATTN: G McDONALD** Page: 1

	Au 24hr ppb
Detn Limit	0.05
379378	
379379	
379380	
379381	
379382	
379383	
379384	
379385	
379386	
379387	0.19
379388	5.70
379389	0.86
379390	0.57
379391	
379392	
379393	
379394	
379395	0.28
379396	0.13
379397	0.27
379398	0.54
379399	4.45

****

Au 24hr,
Determined by cyanide leaching on bulk sample

END OF REPORT

749038

MinLab

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Tel: (099) 634 532
Fax: (099) 634 531

ANALYTICAL REPORT

Reference No: P60963

Date: 07 JUN 95

Samples Received: 25 MAY 95
Order Number : K9421A
Project Number : TAS
Samples in Batch: 19

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THE RESOLUTE SAMANTHA GROUP

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Authorised by: A.J. Ferguson
(A.J. Ferguson)

ATTN: G McDONALD
THE RESOLUTE SAMANTHA GROUP
MANGANA RD
FINGAL TAS 7214

Reference No: P60963 **ATTN: G McDONALD** Page: 1

	Au 24hr ppb
Detn Limit	0.1
379425	
379426	
379427	
379428	
379429	<0.1
379430	<0.1
379431	
379432	0.3
379433	0.2
379434	2.8
379435	
379436	
379437	
379438	
379439	
379440	
379441	
379442	
379443	

****

Au 24hr,
Determined by cyanide leaching on bulk sample

END OF REPORT

749041

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Lot 484 Criddle St
MT MAGNET WA 6638
Tel: (099) 634 532
Fax: (099) 634 531

ANALYTICAL REPORT

Reference No: P61139

Date: 20 JUN 95

Samples Received: 12 JUN 95
Order Number :
Submission Sheet: N/A
Project Number : N/A
Samples in Batch: 73

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Authorised by: _____
(A.J. Ferguson)

ATTN: G McDONALD
THE RESOLUTE SAMANTHA GROUP
MANGANA RD
FINGAL TAS 7214

749042

Reference No: P61139 **ATTN: G McDONALD** Page: 1

	Ag ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm
Detn Limit	0.5	5	5	2	5
379501					
379503					
379507					
379507 Rpt					
379509					
379510					
379510 Rpt					
379511					
379512					
379513					
379378					
379379					
379380					
379381					
379382					
379383					
379384					
379385					
379386					
379387	<0.5	5	15	<2	10
379387 Rpt	<0.5	5	15	<2	15
379388	<0.5	10	30	<2	50
379389	<0.5	5	15	<2	10
379390	<0.5	<5	10	<2	5
379391					
379392					
379393					
379394					
379395	<0.5	<5	10	<2	15
379396	<0.5	5	15	<2	20
379397	<0.5	<5	10	<2	5
379397 Rpt	<0.5	<5	10	<2	5
379398	<0.5	10	20	<2	30
379399	<0.5	5	15	<2	20
379399 Rpt	<0.5	5	15	<2	20
379425					
379426					
379427					
379428					
379429	<0.5	10	15	<2	25
379430	<0.5	<5	10	<2	15
379430 Rpt	<0.5	<5	10	<2	15
379431					
379432	<0.5	<5	15	<2	5
379433	<0.5	10	15	<2	20
379434	<0.5	<5	15	<2	5
379435					
379436					
379437					
379437 Rpt					
379438					
379439					

Reference No: P61139 **ATTN: G McDONALD**

	Ag ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm
Detn Limit	0.5	5	5	2	5
379440					
379441					
379442					
379443					
379488					
379489					
379490					
379491					
379492					
379493					
379493 Rpt					
379494					
379495					
379496					
379497					
379497 Rpt					
379498					
379499					
379500					
380636					
380637					
380638					
380638 Rpt					
380639					
380640					
380640 Rpt					
380641					
380642					
380643					
380644					
380645					
380646					
380646 Rpt					

****

Ag, Cu, Pb, Sb, Zn,
Technique - AAS

END OF REPORT

749045

MinLab

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ANALYTICAL REPORT

Reference No: P61197

Date: 27 JUN 95

Samples Received: 26 JUN 95
Order Number : N/A
Submission Sheet: N/A
Project Number : N/A
Samples in Batch: 65

PART K09420
" K09421
" K09422.

THIS REPORT HAS BEEN PREPARED FOR

THE RESOLUTE SAMANTHA GROUP

AND SHOULD BE READ IN CONJUNCTION WITH THE FINAL PAGE

Authorised by: A Ferguson
(A.J. Ferguson)

ATTN: G McDONALD
THE RESOLUTE SAMANTHA GROUP
MANGANA RD
FINGAL TAS 7214

749046

Reference No: P61197 **ATTN: G McDONALD** Page: 1

	As ppm
Detn Limit	10
379378	
379378 Rpt	
379379	
379380	
379381	
379382	
379383	
379384	
379385	
379386	
379386 Rpt	
379387	<10
379388	<10
379389	<10
379390	<10
379391	
379392	
379393	
379394	
379395	<10
379396	<10
379396 Rpt	<10
379397	<10
379398	<10
379399	<10
379425	
379426	
379427	
379428	
379428 Rpt	
379429	<10
379430	<10
379431	
379432	<10
379432 Rpt	<10
379433	<10
379434	<10
379435	
379436	
379437	
379438	
379439	
37944C	
379441	
379441 Rpt	
379442	
379443	
379488	
379489	
379490	
379490 Rpt	
379491	

	As ppm
Detn Limit	10
379491 Rpt	
379492	
379493	
379494	
379495	
379496	
379497	
379498	
379499	
379499 Rpt	
379500	
380636	
380637	
380638	
380639	
380640	
380641	
380642	
380643	
380643 Rpt	
380644	
380645	
380646	

****

As,
Technique - AAS

END OF REPORT

APPENDIX D

SOIL SAMPLE ASSAY RESULTS
Minlab

MinLab

749050

MINCULTURE LABORATORIES PTY LTD ACN 008 980 174 TRUSTEE FOR THE MINLAB UNIT TRUST TRADING AS MINLAB

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MT MAGNET WA 6638
Tel: (099) 634 532
Fax: (099) 634 531

ANALYTICAL REPORT

Reference No: P61575

Date: 06 SEP 95

Samples Received: 31 AUG 95
Order Number : KO9425B
Submission Sheet: KO9425B
Project Number : TAS
Samples in Batch: 13

THIS REPORT HAS BEEN PREPARED FOR

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Authorised by: C.A. Jenkins

ATTN: G McDONALD
THE RESOLUTE SAMANTHA GROUP
MANGANA RD
FINGAL TAS 7214

Reference No: P61575 **ATTN: G McDONALD** Page: 1

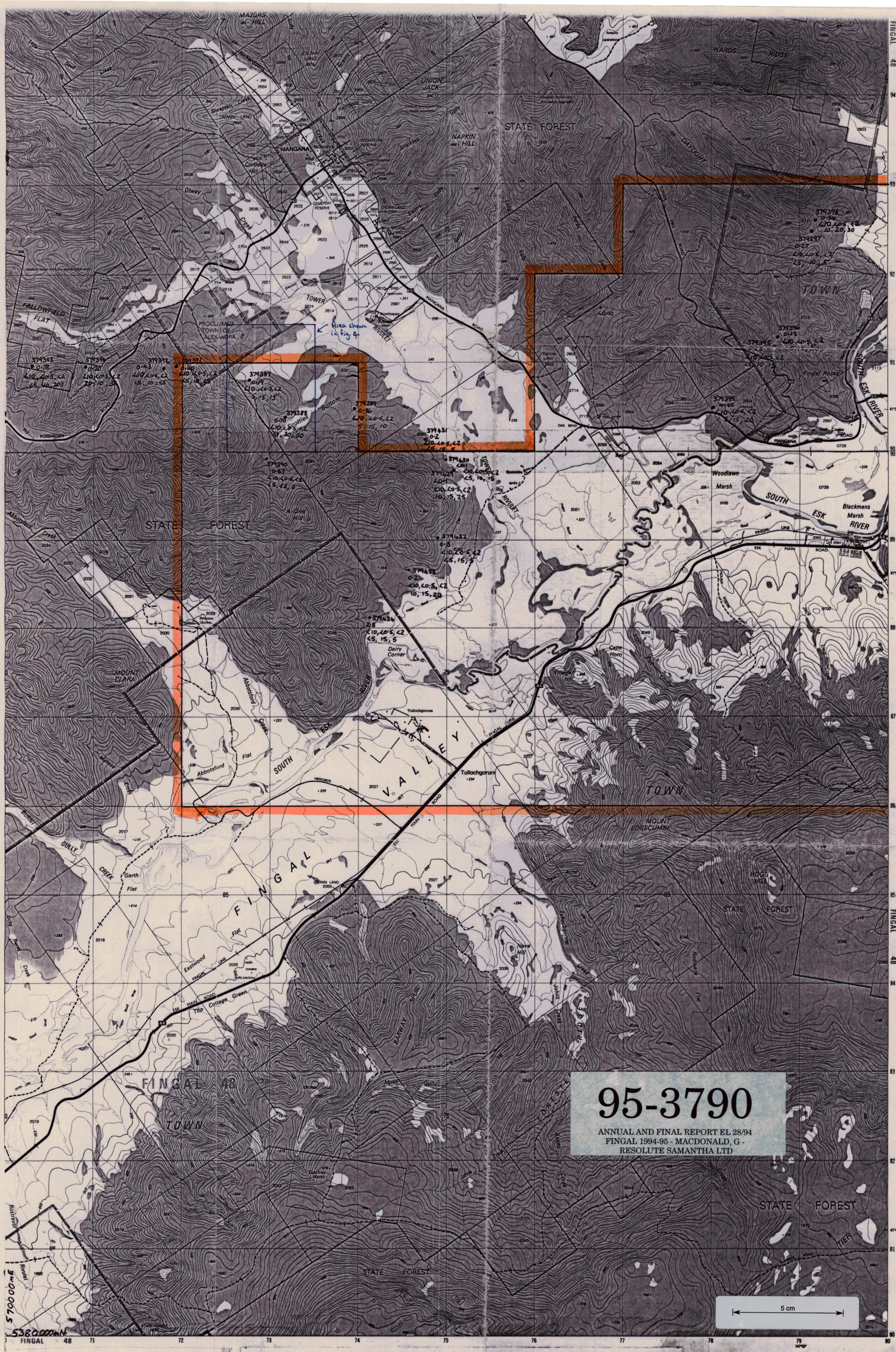
	Au ppb	As ppm
Detn Limit	1	10
380722	<1	<10
380722 Rpt	<1	<10
380723	<1	<10
380724	<1	<10
380725	<1	<10
380726	<1	30
380727	<1	<10
380728	<1	<10
380729	<1	<10
380729 Rpt	<1	<10
380730	1	<10
380731	2	<10
380732	<1	<10
380733	<1	<10
380734	<1	<10

****

Au,
Technique - Fire Assay on a 50 gram charge followed by solvent extraction

As,
Technique - AAS

END OF REPORT



PROJECTION: Universal Transverse Mercator (UTM).
HORIZONTAL DATUM: Australian Geodetic Datum 1966.
VERTICAL DATUM: Australian Height Datum (Tasmania) excepting offshore islands whose datum is mean sea level.
GRID: 1000 metre intervals of the Universal Transverse Mercator Grid, Zone 55 (Australian Map Grid), Australian National Spheroid. Grid values are shown in full at the south west corner of the map.
CONTOUR INTERVAL: 10 metres with 50 metre index contours.
WORLD GEODETIC SYSTEM 1972: To convert co-ordinates from this system to Australian Geodetic Datum 1966, increase the value of latitudes by 5.3", equivalent to 164 metres, and decrease the value of longitudes by 4.3", equivalent to 98 metres. To obtain heights decrease satellite heights by 1 metre.
MAGNETIC VARIATION: True, Grid and Magnetic North are shown diagrammatically for the centre of this map. Magnetic North is correct for 1986 and moves easterly about 0.1° every two years.

GN
TN MN
GRID CONVERGENCE 0.8°
GRID/MAGNETIC ANGLE 14.3°

KEY

STREAM BLEG SAMPLE LOCATION • 379433 / 2·8 / <10, <0·5, <2 / 10, 15, 20 ← SAMPLE NUMBER; Au (BLEG, ppb); As, Ag, Sb, (ppm); Cu, Pb, Zn (ppm); ASSAYS

NEWCREST STREAM BLEG SAMPLE LOCATION • <0·10

E.L. BOUNDARY.

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EL 28/94
STREAM SEDIMENT
SAMPLE LOCATIONS/ RESULTS

AUTHOR:	SCALE: 1:25000	PLAN NO:
DRAWN: CO-ORDINATED DRAFTING	DATE: FEB '95	figure 5

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