PACIFIC-NEVADA MINING PTY LTD
PO Box 7214
Cloisters Square
Perth WA 6850

EL26/97 NEASEY CREEK NORTH WESTERN TASMANIA

FINAL REPORT

Volume 1 of 1

Compiled by Sean Westbrook from a report prepared by:
N.J. Turner Geological Services Pty Ltd
65 Lochner Street, West Hobart Tasmania 7000

CONTENTS

LIST OF FIGURES

LIST OF PLANS

LIST OF APPENDICES

1 Disc - Neasey Creek data.

1.0 Summary

This is the final report for Exploration Licence 26/97, Neasey Creek, as the licence is to be relinquished. During the second year of tenure Pacific-Nevada Mining Pty Ltd did not conduct field exploration over this exploration licence. Please refer to Westbrook & Turner (1998) for detailed information on geochemistry and geology.

2.0 Introduction

This is the final report for Exploration Licence 26/97. Disappointing results returned from a resampling program around an area of anomalous gold in rock chips has downgraded the prospectivity of the license. No further work is recommended and the EL is to be relinquished.

The licence is located in north western Tasmania, ~12 km inland to the south west of the Rocky Cape – Sisters Beach area, within a thickly forested region, mainly classified as State Forest or Crown Land. Access is difficult in much of EL26/97, particularly south of the Arthur River. Permission is required from Australian Bulk Minerals to use the Savage River Pipeline Road.

3.0 Exploration Concepts

EL 26/97 contains deformed, low grade meta sedimentary rock sequences of Middle to Late Proterozoic age, which may be substantially overthrust onto the mafic, and other, rocks of the Arthur Metamorphic Complex which lies to the south east. Parts of the rock sequence display marked aeromagnetic response whilst other parts are subdued (Figure 2). There are strike-parallel and cross-cutting lineaments in the aeromagnetic data.

Pacific-Nevada has identified a series of structural target areas and a target area of possible buried granite. These target areas are numbered 1 to 5 and are to be assessed for gold, base metals and tin-tungsten mineralisation. EL26/97 contains the target areas 1, 3, 4 and 5, while target area 2 is situated to the north within EL24/97.

4.0 Previous work

Parts of EL26/97 have been the subject of previous reconnaissance exploration programs. Much of the combined area would have been stream sediment sampled by Pickands Mather (Anon, 1966) but results of this old work have not been located. Geopeko carried out water sampling for gold throughout much of EL26/97 (Virgoe and Mathison, 1990a; b). CRA used stream sediment and soil sampling in the southern part of EL26/97 to investigate an aeromagnetic anomaly and several Input EM anomalies reported by Esso ((Clementson, 1985; Neal, 1974).

188004

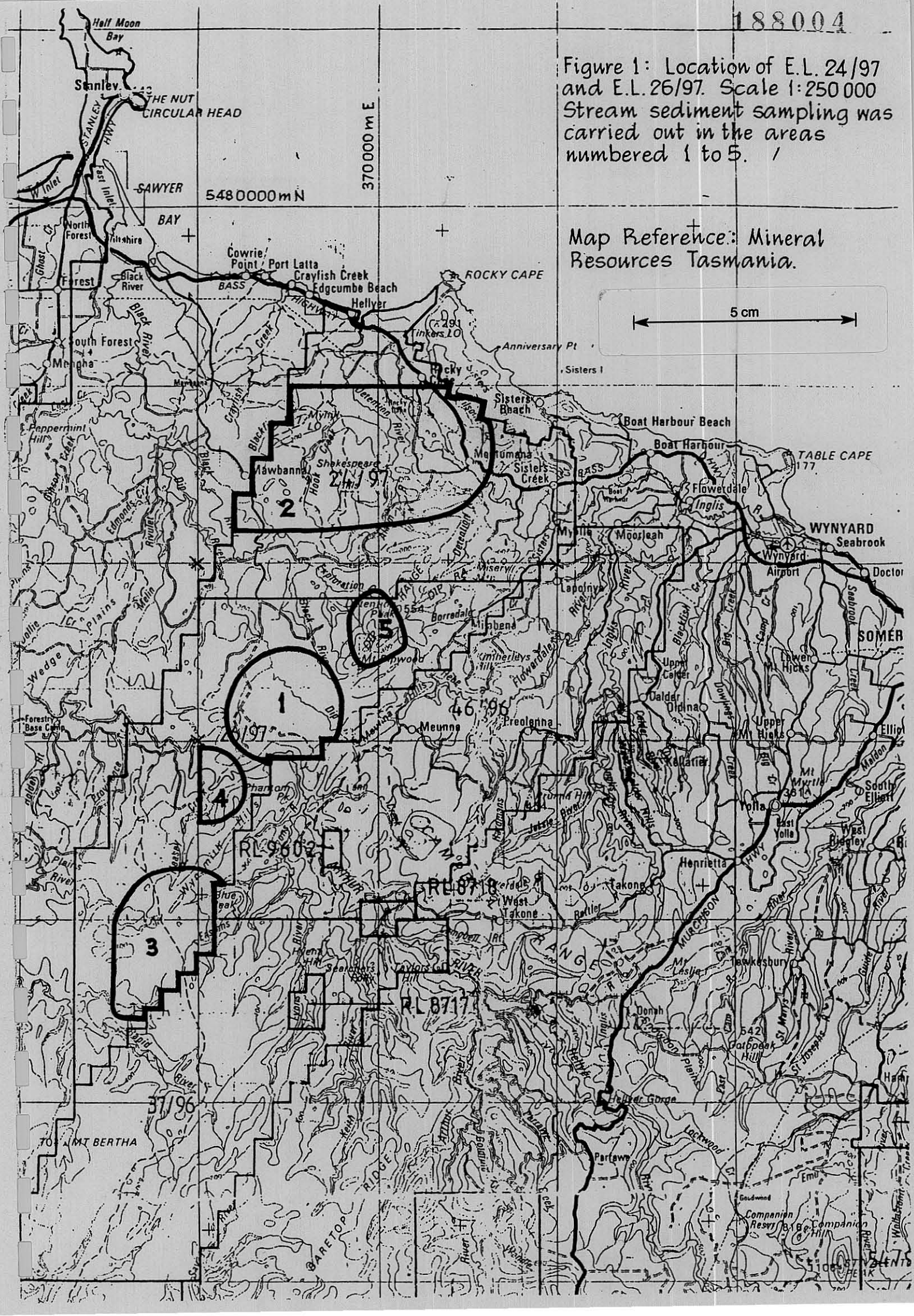


Figure 1: Location of E.L. 24/97 and E.L. 26/97. Scale 1:250 000 Stream sediment sampling was carried out in the areas numbered 1 to 5.

Map Reference: Mineral Resources Tasmania.

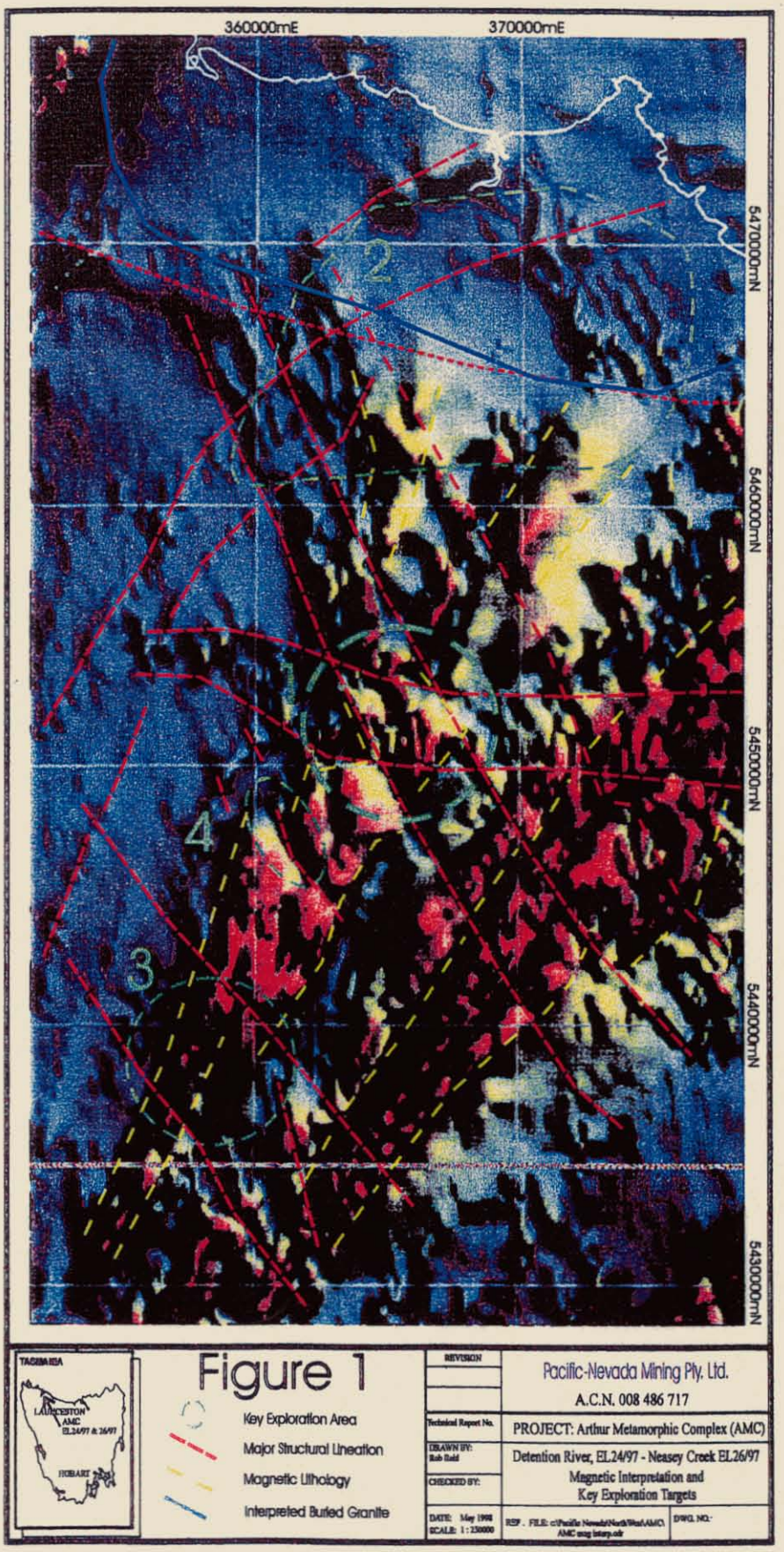
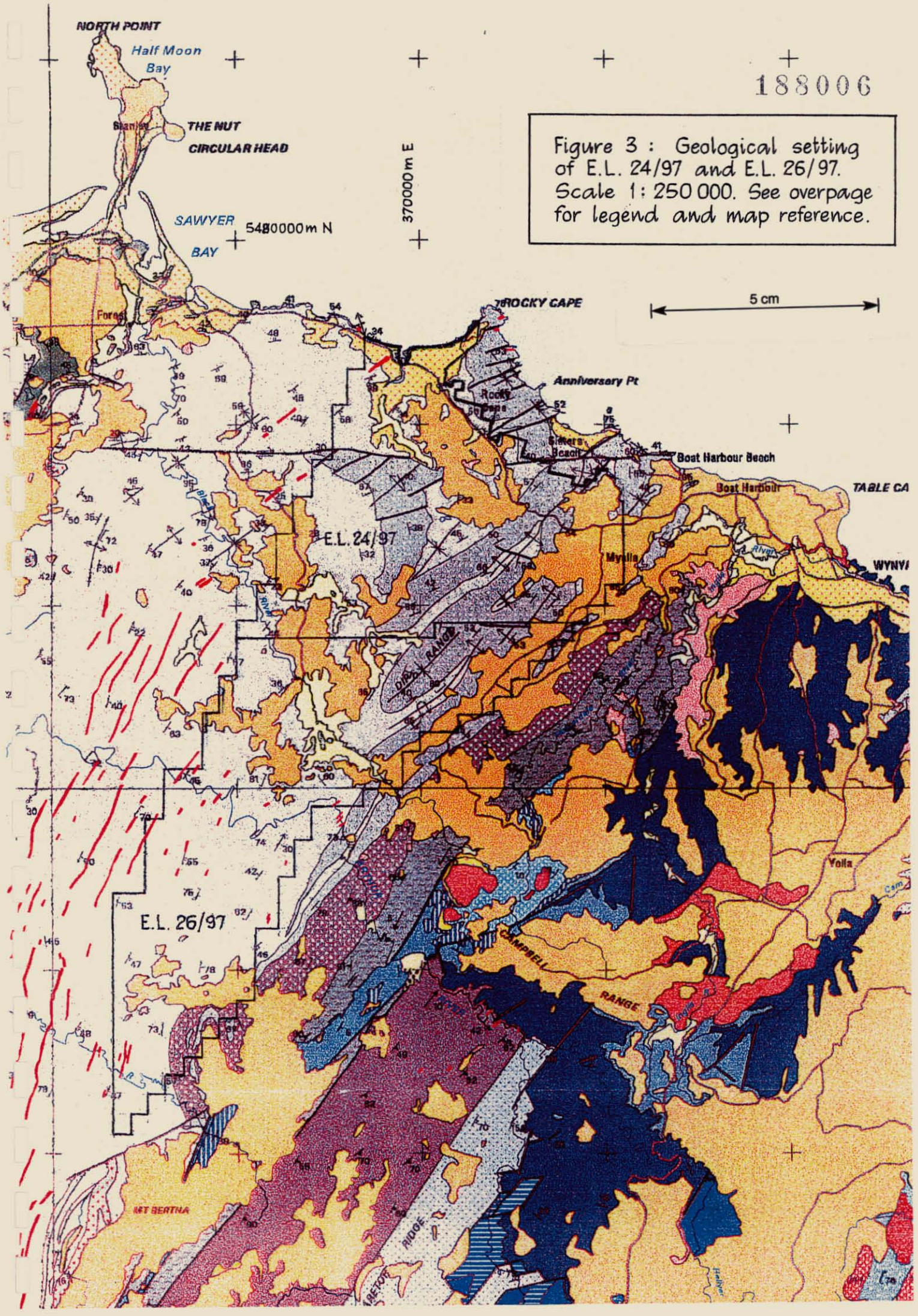


Figure 2: Magnetic interpretation and key exploration targets. Scale 1:250 000.

5 cm



188006

Figure 3 : Geological setting of E.L. 24/97 and E.L. 26/97. Scale 1: 250 000. See overpage for legend and map reference.

Reference this map as:
CALVER, C.R.; CORBETT, K.D.; EVERARD, J.L.; GOSCOMBE, B
PEMBERTON, J.; SEYMOUR, D.B.; (comp.). 1995.
Geological Atlas 1:250,000 digital series.
Geology of Northwest Tasmania.
Tasmanian Geological Survey.

5 cm

188007

CAINOZOIC

HOLOCENE

PLEISTOCENE

Sand, gravel, and mud of alluvial, lacustrine and littoral origin (Qh).

Talus, vegetated and active (Qpt).

Glacial, periglacial and fluvioglacial sediments including till and interglacial deposits (Qp); some glacial deposits (Qpg), coastal sand and gravel (Qps), and limestone (Qpl) indicated.

Erosional surface

MESOZOIC

TERTIARY

Dominantly non-marine sequences of sand, gravel, silt and clay (Ts); marine sequences of limestone (Tm); basalt and related igneous and pyroclastic rocks (Tb).

Erosional surface.

TRIASSIC

PERMIAN-LATE CARBONI-FEROUS

Fluviolacustrine sequences of sandstone, siltstone and mudstone (R).

Upper glaciomarine sequences of pebbly mudstone, pebbly sandstone and limestone (Pu).

Freshwater and paralic sandstone and mudstone with some coal measures (Plc).

Lower glaciomarine sequences of mudstone, pebbly mudstone, pebbly sandstone, minor limestone and Tasmanite oil shale (Pl).

Basal tillite (Pt).

LOWER PARMEENER SUPERGROUP — UPPER

Erosional surface

LATE MIDDLE DEVONIAN

EARLY DEVONIAN-SILURIAN

ORDOVICIAN

LATE CAMBRIAN

SMITHTON - ROCKY CAPE REGION

Middle to Late Cambrian marine conglomerate, lithicwacke and siltstone. (Cm).

MIDDLE CAMBRIAN

EARLY CAMBRIAN

PALAEOZOIC

Structural conformity

PROTEROZOIC

NEOPROTER-OZOIC

Shallow marine dolomite and minor limestone (Psd: Smithton Dolomite).

Turbiditic volcaniclastic - mafic volcanic rocks and minor diamictite (Psv) with some tholeiitic basalt indicated (Psb).

Shallow marine dolomite, chert, shale and diamictite (Pss); basal siliceous conglomerate and sandstone (Psc). (Ps: Togari Group, Ahrberg Group and correlates).

Angular unconformity.

Successions of mudstone, siltstone and minor carbonate (Prp) and orthoquartzite (Prs). (Pr: Rocky Cape Group).

ARTHUR METAMORPHIC COMPLEX

(in part metamorphic equivalents of Pr, Po and Ps).

Chloritic schist, with minor phyllite, dolomite and magnesite (Pac); amphibolite (Pma).

Quartz mica schist, quartzite, phyllite and rare dolomite (Pal) (Keith Schist and correlates).

Phyllite with minor pelitic schist, foliated quartzite and dolomite, and rare conglomerate (Pap).

IGNEOUS ROCKS

TERTIARY

Basalt and related igneous and pyroclastic rocks (Tb).

JURASSIC

Dolerite and related igneous rocks

Dolerite dykes (Dd).

LOWER CARBONIFEROUS -DEVONIAN

Dominantly alkali-feldspar granite (

Dominantly adamellite/granite and associated dykes (Dgaa).

Dominantly granodiorite/adamellite (

Dominantly granodiorite (Dgr).

Basalt (Cvb) ('Cleveland-Waratah association').

Tholeiitic basalt (Psb: Smithton-Rocky Cape), (Pvb: Crimson Creek Formation).

Basalt (Pob) (Burnie/Oonah Formations and correlates).

PROTEROZOIC

Felsic and mafic dykes (Pd).

Granitic rocks (Pg).

Amphibolite (Pma).

BHP's program targeted Sn-W though gold, diamonds, Pb-Zn and copper were also considered. Granitic veins carrying cassiterite and wolframite had been reported previously on Hilders Road (Longman and Mathews, 1961), a few kilometres to the east. The company carried out regional stream sediment sampling and found that the Arthur River is strongly anomalous in tin, thought to be derived from Mt Bischoff. Metal values in locally sourced streams were considered to be uninteresting.

BHP investigated an aeromagnetic anomaly in a locality just west of Area 4 (Figure 1) in EL26/97. They also followed up one of Esso's Input EM anomalies in the northern part of Area 3. Neither anomaly produced encouraging results. Difficulties of access restricted BHP's overall coverage of their ground.

Geopeko's water sampling program was dogged by uncertainty as to the validity of analytical results. This was a major factor causing the program to be abandoned. Initial results for a number of areas were encouraging but could not be substantiated by resampling. These areas included streams along the northern side of Wynsmith Hills, close to the eastern boundary of EL26/97.

CRA's work was in the southern part of Area 3 in EL26/97 (Figure 1). Soils were analysed for Cu, Pb, Zn, Co, Ag, Mn, As and some for Sn, W, Fe, Ba. Low values were generally found. Tungsten in soils ranged up to 130ppm and one anomalous arsenic value of 180ppm was reported. Cobalt values of up to 70ppm occur in soils in a locality east of the Pipeline Road.

5.0 Regional Geology

The Proterozoic rocks in EL26/97 are assigned to the Rocky Cape Group (Figure 3). Most of EL26/97 are occupied by the lowest formation in this group, called the Cowrie Siltstone. The Cowrie Siltstone comprises siltstone with subordinate quartzose sandstone and mudstone.

The Detention Subgroup of mainly orthoquartzite overlies the Cowrie Siltstone. A series of anticlines and synclines in this subgroup occupy much of the north eastern part of EL26/97. The overlying formation (Irby Siltstone) forms the core of synclines to the north of EL26/97 (Figure 3). The Irby Siltstone consists of siltstone, mudstone and subordinate dolomite.

Overlying the Irby Siltstone is orthoquartzite of the Jacob Quartzite, the uppermost unit in the Rocky Cape Group. Between the Arthur River and Myalla the Jacob Quartzite runs along the south eastern edge of the exploration licences (Figure 3). In the southern part of EL26/97 the unit shown as orthoquartzite in Figure 3 may be laterally equivalent to

the Jacob Quartzite (Everard et al, 1996). However, the unit is characterised by deformed pebble to boulder conglomerate, carbonaceous siltstone and fine grained quartrzite rather than by orthoquartzite. Thus, it may be a correlate of the Ahrberg Group which overlies the Rocky Cape Group.

There are numerous hypabyssal dykes in the Rocky Cape Group. They range from mostly basic compositions to subordinate intermediate compositions. Some varieties display strong alteration.

Deformation becomes progressively stronger across the exploration licence, from north west to south east. Folds in the Detention Subgroup change from open in the central part of EL24/97 (north of EL26/97) to tight and overturned to the east along the south eastern edge of the tenements (Figure 3). Steep thrust faults with a similar sense of west-over-east transport are present. The fabric of pelitic rocks changes from moderately cleaved or slaty in the north west to slaty or phyllitic in the south east.

Although the intensity of deformation and metamorphism increases progressively across the licences, the nominal boundary of the Arthur Metamorphic Complex is just outside the licence. It corresponds to the eastern boundary of the Jacob Quartzite which is interpreted as a thrust fault (Everard et al, 1996). The presence of conglomerate in places along the boundary suggests that it is also a structurally modified stratigraphic boundary.

6.0 Work carried out by Pacific-Nevada

EL 26/97 has received little attention during it's second year of tenure by Pacific-Nevada Mining. A re-sampling program was conducted in an area north west of Wynsmith Hills where anomalous gold, up to 720ppb, in Cowrie Siltstone was sampled during reconnaissance sampling in 1998. A total of 12 rock chip samples were taken around the original gold anomalous location.

7.0 Results

Results returned from the re-sampling program were disappointing. The highest gold assay result was 14ppb (42112). Re-sampling at the original 720ppb Au site returned a low order gold result of 5ppb Au. Base metal results were of low order, background levels. Rock chip sample numbers, coordinate, descriptions and assay results are given in Appendices 1 A and B.

8.0 Conclusions and recommendations

Results from the rock chip resampling program around previously assayed anomalous gold in Cowrie Siltstone were disappointing. The

prospect has been downgraded and no further work is warranted. Relinquishment of EL 26/97 is recommended.

9.0 Environmental matters

No work requiring environmental rehabilitation has been undertaken.

10.0 References

Anon. 1966. Interim report for the northwest Tasmania Exploration Project. Pickands Mather and co. International. MRT Library 66-439.

Anon. 1980. Exploration Licence 18/80 Arthur River, Tasmania. BHP Exploration Department. MRT Library 83-2001.

Calver, C.R;Corbett, K.D; Everard, J.L; Goscombe, B.A; Pemberton, J; Seymour, D.B; (comp.) 1995. Geological Atlas 1:250,000 digital series. Geology of Northwest Tasmania. Tasmanian Geological Survey.

Clementson, I.M. 1985. Rapid River EL1/79. Report on reduction of licence. CRA Exploration Pty Ltd MRT Library 85-2340.

Everard, J.L; Seymour, D.B; Brown, A.V. 1996. Geological Atlas 1:50,000 series. Sheet 7915N Trowutta. Tasmanian Geological Survey.

Gee, R.D. 1966. Geological Atlas 1 mile to 1 inch series. Sheet 8016S Table Cape. Geological Survey of Tasmania.

Lennox, P.G; Corbett, K.D; Baillie, P.W; Corbett, E.B; Brown A.V. Geological Atlas 1:50,000 series. Sheet 7916S Smithton. Geological Survey of Tasmania.

Longman, M.J; Mathews, W.L. 1961. The geology of the Bluff Point and Trowutta quadrangles. Tasmania Department of Mines Technical Reports 6:48-54.

Neal, R.C. 1974. EL2/73 Pieman River, Tasmania. Completion report. Esso Australia Ltd.

Virgoe, K; Mathison, I. 1990a. EL43/89 Holder Rivulet. Report on exploration activity Jan1990-Nov. 1990. Geopeko. MRT Library 91-3215.

Virgoe, K; Mathison, I. 1990b. EL44/89 Wedge Plains. Report on exploration activity Jan. 1990-Nov. 1990. Geopeko. MRT Library 91-3220.

Pacific-Nevada Mining Pty Ltd

EL26/97

Final Report

APPENDIX 1

A ROCK CHIP SAMPLE NUMBERS, AMG CO-ORDINATES AND DESCRIPTIONS

B ROCK CHIP SAMPLE NUMBERS AND ANALYTICAL DATA

Laboratory Methods – Analabs

Dry, jaw crush, pulverize (S033); Au by 50gm fire assay (F614); total acid digest (G104) with Cu Pb Zn Co Ni Mn As Ag Fe by ICP-OES (I104).

A Rock chip sample numbers, AMG co-ordinates and descriptions
Resampling near Wynsmith Hills

Sample	Easting	Northing	Description
42105	358900	5442340	Collected 10m upstream of flagging marking stream sediment samples 12176, 32179.
42106	358900	5442340	Collected 1.5m downstream of flagging marking stream sediment samples 12176, 32179. Same site as previous rock chip sample 42099. Cleaved, dark grey, banded siltstone and mudstone with a 4cm band of cream, fine grained, micaceous sandstone. Disseminated cubic pyrite throughout comprises <5% by volume of rock. Pyrite smeared on fractures.
42107	358815	5442360	Collected 30m upstream of flagging marking stream sediment samples 12177, 32180. Cleaved, pale, micaceous siltstone (phyllitic). Minor iron staining, no pyrite.
42108	358815	5442360	Collected 10m downstream of flagging marking stream sediment samples 12177, 32180. Slaty, dark grey siltstone/mudstone with pyrite smeared on cleavage and fractures. Disseminated cubic pyrite present. One vuggy, 2-3mm wide, quartz-pyrite veinlet cuts across cleavage. Pyrite ≤5% by volume of rock.
42109	358970	5442640	Collected 10m upstream of flagging marking stream sediment samples 12178, 22088, 32181. Same site as previous rock chip sample 42100. Relatively massive, very dark grey mudstone with minor disseminated cubic pyrite and pyrite smeared on fractures.
42110	358970	5442640	Collected 2m downstream of flagging marking stream sediment samples 12178, 22088, 32181. Cleaved, cream, fine grained micaceous sandstone.
42111	356450	5441075	Collected at flagging marking stream sediment samples 12178, 22089, 32182. Soft, cleaved, cream rock, comprising micaceous laminae and powdery quartz laminae.
42112	356450	5441075	Collected 15m upstream of flagging marking stream sediment samples 12179, 22089, 32182. Same site as previous rock chip sample 42101. Tough, relatively massive, cream, very fine grained silica rock with 1-2mm wide irregular veinlets of grey translucent quartz. No carbonate by acid test.
42113	356450	5439525	Same site as previous rock chip sample 42097. Cleaved, dark grey siltstone with <1% by volume of disseminated cubic pyrite.

Sample	Easting	Northing	Description
42114	355985	5439760	Same site as stream sediment samples 12171, 32174 and previous rock chip sample 42098. Thin, darker and lighter bedding lamination in medium grey rock with lustrous oblique cleavage. Mainly silty mudstone with disseminated fine grained black mineral.
42115	355985	5439760	Collected 10m upstream of flagging marking stream sediment samples 12171, 32174. Similar 42114.
42116	356140	5439675	At site of stream sediment samples 12172, 22086, 32175. Cleaved, glossy, medium grey siltstone and subordinate grey mudstone.

Note: Previous rock chip sample 42099 gave 689 (repeat 720) ppb Au.
The values have not been repeated in sample 42106.

B Rock chip sample numbers and analytical data
Resampling near Wynsmith Hills

Sample	Au	Cu	Pb	Zn	Ag	As	Fe	Ni	Mn	Co
Units	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DL	1	5	10	5	0.5	5	100	10	10	5
42105	3	43	15	51	<0.5	22	31100	25	258	16
42106	5	20	10	49	<0.5	36	31500	<10	326	7
42107	5	16	17	150	<0.5	59	89400	65	822	8
42108	1	14	<10	28	<0.5	35	27200	11	333	10
42109	3	13	10	82	<0.5	13	27100	12	631	5
42110	2	<5	35	59	<0.5	23	16300	<10	194	<5
42111	2	<5	<10	50	<0.5	10	22100	11	121	7
42112	14	<5	<10	5	<0.5	47	4550	<10	78	<5
42113	4	5	21	39	<0.5	40	32500	28	356	28
42114	<1	<5	<10	155	<0.5	9	50100	20	586	30
42115	<1	<5	<10	158	<0.5	15	46400	24	367	24
42116	3	<5	<10	146	<0.5	25	44700	18	220	16

5 460 000mN
355 000mE
360 000mE
365 000mE
370 000mE
375 000mE
5 455 000mN
5 450 000mN
5 445 000mN
5 440 000mN
5 435 000mN
5 430 000mN

42109,10
42107,08
42105,06
42111,12
42114,15
42116
42113

EL 26/97

99-4330

FINAL REPORT – EL 26/97
NEASEY CK-PACIFIC-NEVADA
S WESTBROOK

× 6140707 *Rock Chip sample location and number*

188016

AMG North
Mag. North
11.8°

GRID/MAGNETIC ANGLE 11.8° @ 1999

AMG Map Zone 55.

5 cm

Pacific Nevada Mining

PLATE 1	EL 26/97 NEASEY CREEK Rock Chip Sample Locations Relinquishment
Date: 31/5/99	
Author: J Glasgow	
Office: Hobart	
Drawing: 2697rock	
Scale: 1:50,000	Drawn: Rocco Traviersa ART Carto-Graphics

0 1 2 3 4
kilometres