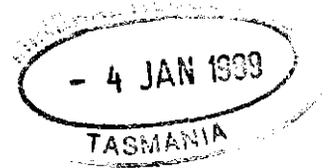


TOR 99-4260

**PACIFIC-NEVADA PTY LTD**  
PO BOX 7214 Cloisters Square  
Perth WA 6850



**EL29/97 CYGNET**

014979

**REPORT ON EXPLORATION ACTIVITY**  
**30-1-97 TO 30-1-98**

Volume 1 of 1

Prepared by: Robert Reid, Senior Geologist  
Pacific Nevada Mining Pty. Ltd. November 1998

Distribution: Pacific Nevada Pty. Ltd - Perth  
- Hobart  
Tasmania Development and Resources

**99-4260**

ANNUAL REPORT - EL 29/97  
CYGNET - PACIFIC NEVADA  
R REID

**557001**



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## Introduction

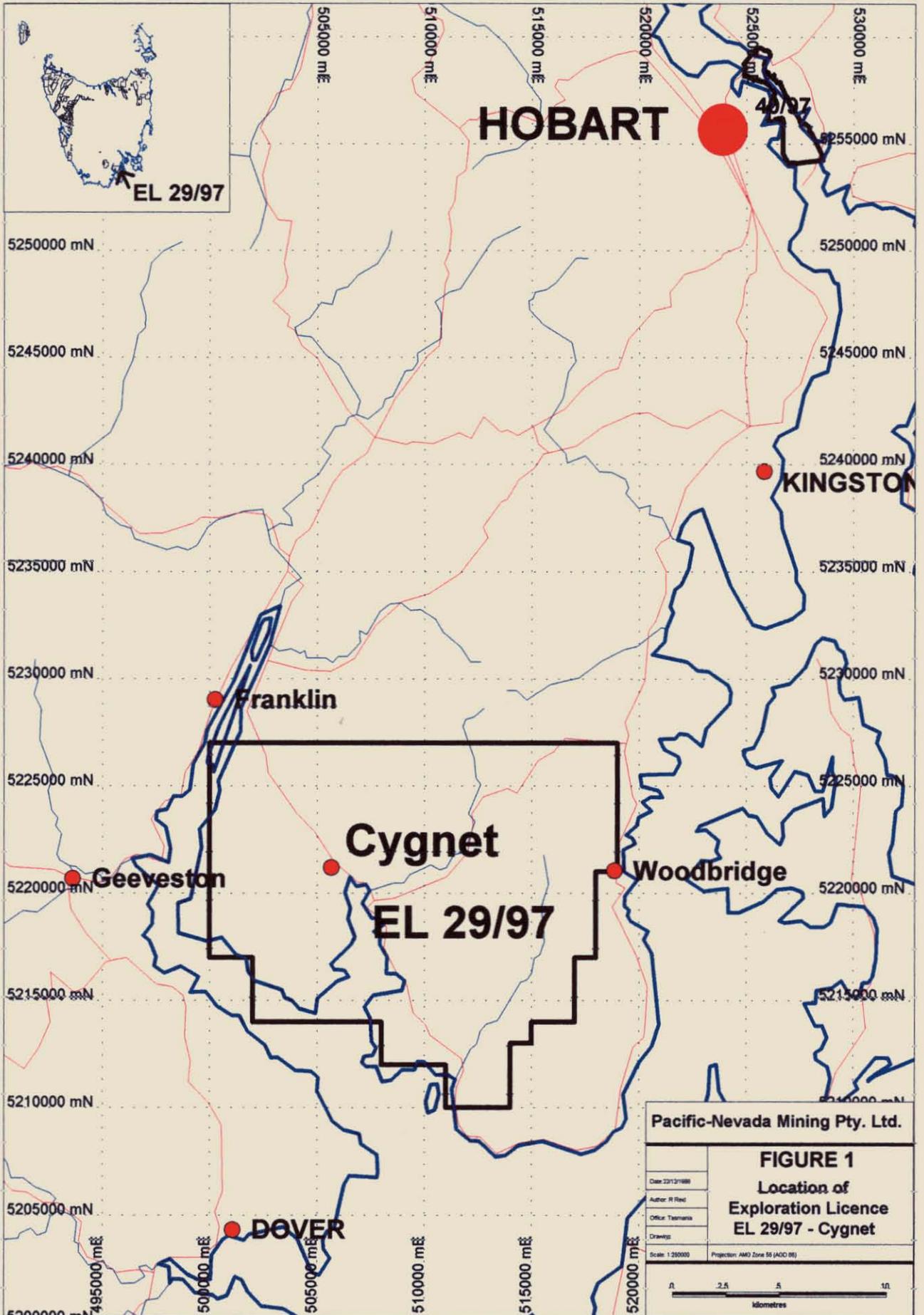
This annual report covers exploration activities by Pacific-Nevada Mining Pty. Ltd. on Exploration License 29/97 – Cygnet (Fig 1) during the period 30<sup>th</sup> January, 1998 to 30<sup>th</sup> January, 1999.

Exploration license 29/97 covers 245 km<sup>2</sup> centered on the town of Cygnet, in southeast Tasmania (Fig 1), approximately 40km south of Hobart. A network of all weather roads covers most of the licence area with foot access required for the steeper moderately vegetated areas. The licence is mostly covered by private land with limited areas of state forest and crown land. Included within the area is 2.9km<sup>2</sup> of Crown Reserves, 130 ha of Mining Leases and the 81 ha Port Cygnet Wildlife Sanctuary.

The Cygnet area has a history of gold production (~3000oz) which was mostly derived from alluvials, principally Forsters Rivulet. A number of hard rock gold mines are also known in the area. The most significant being the Mt Mary Gold Mine which was worked from 1898 to 1927, returning erratic grades to 100g/t Au and 210g/t Ag. Other hard rock workings were located at the Livingston Mine, Kings Hill and Black Jack Ridge.

Pacific-Nevada is targeting gold mineralisation host within mineralised breccia, veins and contact zones of Cretaceous alkaline intrusive rocks within Permian sediments. Fieldwork was undertaken during the period January to April 1998.

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## Previous Exploration

The following is a summary of previous exploration: -

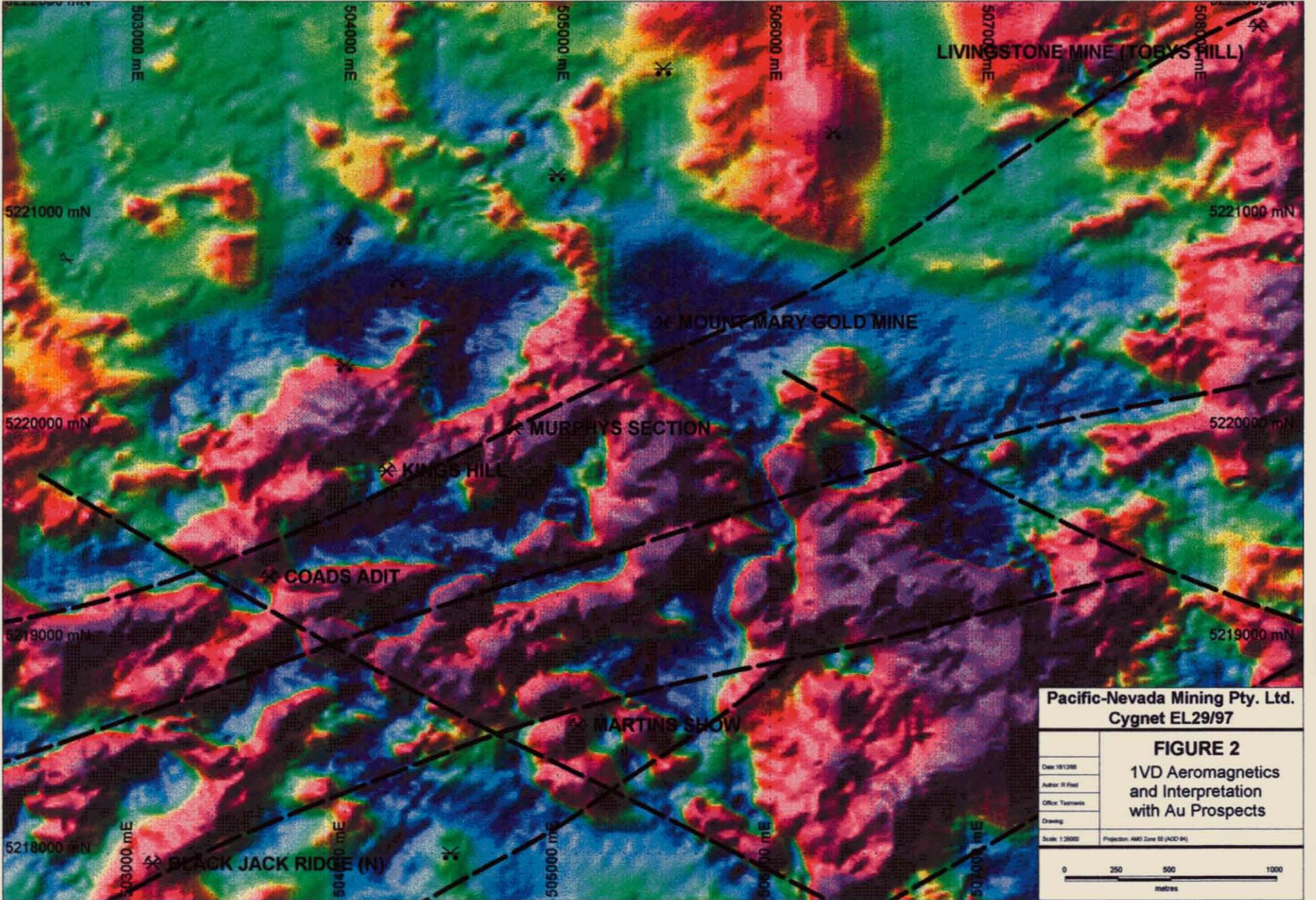
- ◆ **Petchiney (Aust) Exploration Pty. (1971)**
  - ◆ Geological and geochemical reconnaissance with a limited ground radiometrics survey.
- ◆ **BHP (1979, no lease held)**
  - ◆ Limited fieldwork to investigated the potential for carbonatite-type REE, low-grade bulk tonnage Au and Cu mineralisation.
- ◆ **Golden Apple Mining Syndicate (1980, EL8/80).**
  - ◆ Focused upon Mt Mary exploration.
  - ◆ Mt Mary drilling, 11m @ 0.25g/t Au from 74m within pyritic epidotised sediments.
- ◆ **Cyprus (1984 to 1986, EL36/82).**
  - ◆ Targeted Carlin and porphyry-related disseminated stockwork Au mineralisation models.
  - ◆ Extensive stream sediment sampling (143 -80# stream sediment and 154 panned concentrate samples).
  - ◆ Gridding, soil and rock chip sampling, geological mapping and trenching were undertaken at 3 principal prospects; Mt Mary, Black Jack and Toby's Hill (Livingston Mine).
  - ◆ Cyprus report up to 25g/t Au in rock chip and drill intercepts at Mt Mary included 17m @ 1g/t Au and 3m @ 4.1 g/t Au.

## Work Conducted

Initially Pacific Nevada Mining Pty. Ltd. conducted an aeromagnetic survey (Plates 1 & 2) over most of the Cygnet EL29/97 area. This survey was intended to define potentially gold-bearing structure and the distribution of the alkaline intrusive porphyries. The aeromagnetic survey covered the majority of the year 1 budget with concerted ground follow being planned for year 2 of tenure.

Flight lines were flown in an N-S direction at 50m spacing with an average terrain clearance of 30m and sample interval of 4 to 5m. A total of 2400 line kilometers covering 120km<sup>2</sup> were flown (Plate 3).

The aeromagnetic survey revealed that the distribution of known hard rock Au mineralisation is controlled by ENE aligned structures. This correlation is particularly evident when the distribution of Au prospects is compared to the 1<sup>st</sup> and 2<sup>nd</sup> vertical derivative magnetics (Figure 2). Interpretation is on going.



557007

5 cm

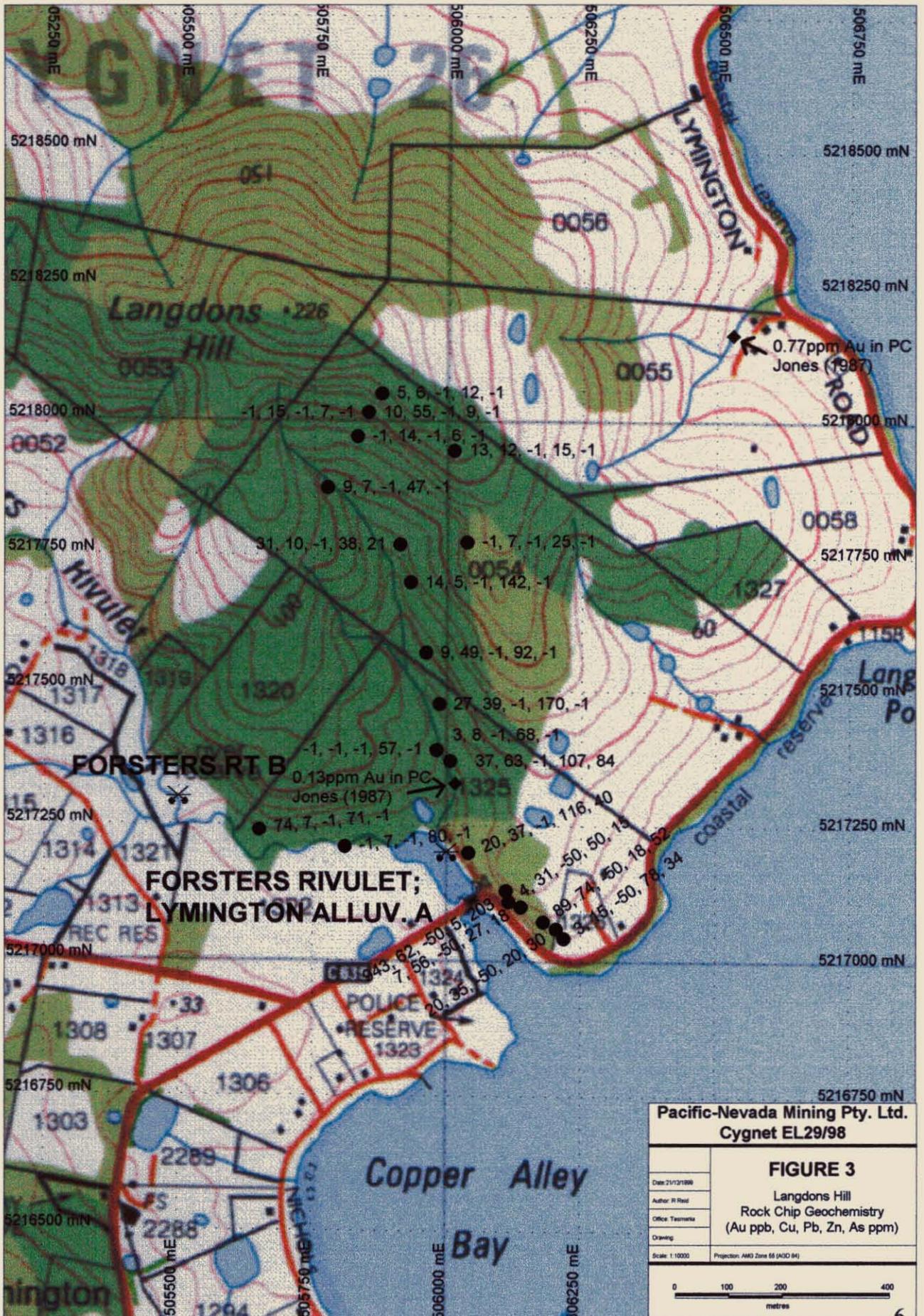
Limited geochemical sampling (8 stream sediment sites and 27 rock chips) was undertaken to assess previous explorers work. In particular, the data from the 1986 area-wide stream sediment survey (Jones, 1987) was assessed via repeat sampling at key locations with limited in fill elsewhere. Sample location and analysis data are appended.

The focus of ground-based exploration activities was Langdons Hill. Drainage from this hill returned high stream sediment survey results (0.77 and 0.13ppm Au in panned concentrate) in previous explorers work (Jones, 1987). This area was assessed via repeat stream sediment sampling and rock chip sampling. A significant rock chip assay of 943ppb Au was returned from a pyrite-hematite vein within silica-pyrite altered sediments at Copper Alley Bay/Langdons Hill. Most rock chip analyses ranged up to 89ppb Au (Figure 3 & 4).

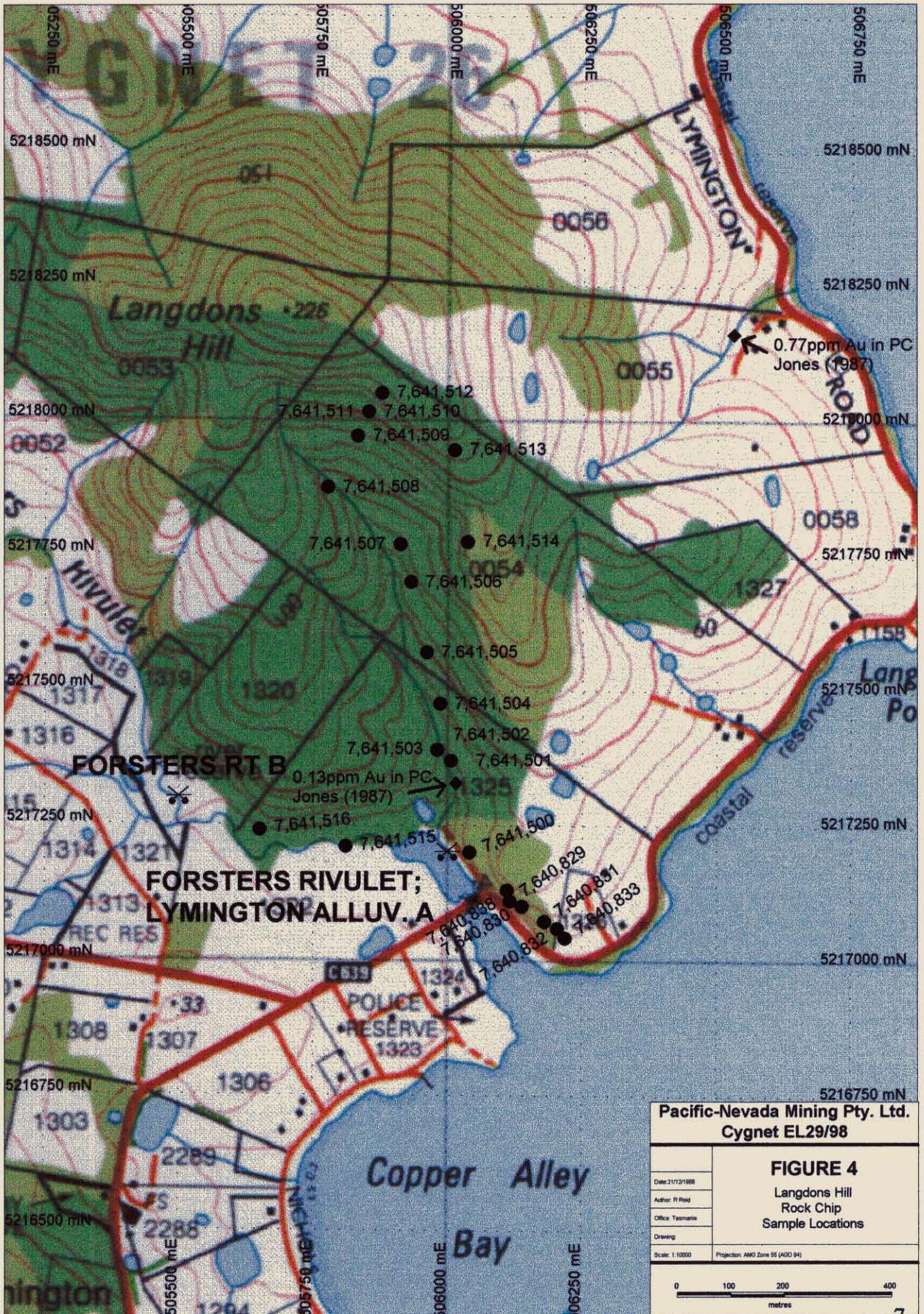
During year 2 (1999) of licence tenure, Pacific-Nevada plan to review and drill the existing Au target at Mt Mary. A regional review involving evaluation of existing core and prospects with collation of all previous explorer's data is also planned. This review will involve geological mapping and select geochemical and geophysical traverses, focused upon potentially Au mineralised structural corridors identified from the aeromagnetics survey flown in 1998. Drill testing of at least one target identified from this work is planned (eg. Langdons Hill or the existing target at Black Jack).

## **Expenditure**

Geology	\$21,718
Geophysics – air	\$77,636
Geochemistry	\$5,101
Administration	\$11,606
 Total Expenditure	 \$116,061



5 cm



Pacific-Nevada Mining Pty. Ltd.  
 Cygnet EL29/98

**FIGURE 4**  
 Langdons Hill  
 Rock Chip  
 Sample Locations

Date: 31/12/1998  
 Author: R. Reed  
 Office: Tasmania  
 Drawing  
 Scale: 1:10000  
 Projection: AMG Zone 55 (AGD 84)

0 100 200 400  
 metres

5 cm

## References

- Bottrill, R. S. 1995b. A compilation of unpublished reconnaissance mineral exploration data for the Cygnet area, undertaken by BHP. (TCR 95-3742).
- Jones, P. A., 1986. Progress Report December 1985 to December 1986, Kettering, Exploration Licence 36/82, Tasmania. Cyprus Minerals Australia Company Report 497 (TCR 86-2601).
- Jones, P. A., 1987a. Progress Report October 1986 to October 1987, Kettering, Exploration Licence 36/82, Tasmania. Report Phil Jones and Associates for Cyprus Minerals (TCR 87-2743).
- Jones, P. A., 1987b. Progress Report December 1985 to December 1986, Kettering, Exploration Licence 23/83, Tasmania. Cyprus Minerals Australia Company Report 512 (TCR 87-2638).
- Jones, P. A., 1988. Progress Report October 1987 to October 1988, Kettering, Exploration Licence 36/82, Cygnet, Tasmania. Cyprus Gold Australia Corporation (TCR 88-2880).
- Wall, J. R., 1980. Geological report of EL8/80, Cygnet. Golden Apple Mining Syndicate (TCR 81-1527).
- Wall, J. R., 1981. Final report of EL8/80, Cygnet. Golden Apple Mining Syndicate (TCR 82-1799).

# APPENDICES

## Appendix 1a - Cygnet EL29/97 Rock Chip Analyses Data.

Sample Number	East (AMG m)	North (AMG m)	Description	Magnetic Suseptibility SI (10 E-5)
7640829	506115	5217110	pgn fg sst, sil(w/m) locally, py(dss, <0.5%), ser(w)	241
7640830	506138	5217100	crm fg sst, black specks(mag?), py(tr), sil(w, locally)	9670
7640831	506180	5217073	crm cg q-arenite, sil(m, pervassive), py(dss, 1%), q-py-vnd(tr)	0
7640832	506204	5217060	crm cg sst, py(0.5%, but %%+ on frac planes to 5mm), sil(w/m)	0
7640833	506218	5217042	crm cg q-f-sst, sil(w), py(tr)	0
7640834	503600	5220350	grey sanadine syenite, mag(dss, 4%)	11
7640835	503600	5220360	crm weakly porphyritic syenite	168
7640836	503600	5220375	crm strongly porphyritic syenite	0
7640837	503600	5220390	crm strongly porphyritic syenite	5455
7640838	506110	5217130	pyrite-hematite vein (5cm wide)	
7641500	506040	5217200	grey slst, fossiliferous, FeO stained fault zone (30cm)	0
7641501	506005	5217370	lht gn sanadine porphyry, sil(s), ser, py(3-5%), aspy?(tr), cpy?(tr), float	115
7641502	505980	5217390	grey cg sst/wacke, FeO vein-like zones, float	0
7641503	505980	5217390	grey/cm mg/cg sst, float	0
7641504	505985	5217475	pgn sil(s), ser(m), py(2%) sst?, float	0
7641505	505960	5217570	pgn sil(s), ser(m), py(2%), sst? float	280
7641506	505930	5217700	sanadine porphyry, sil(w), py(1-2%), float	0
7641507	505910	5217770	bn mg/cg sst, boxwork fine qtz-veins, float	0
7641508	505775	5217875	grey, chert(after fossiliferous sst?), sil(s), py(1-2%, dss), qtz-py-act-vnd(<1%)	0
7641509	505830	5217970	rd/bn pebbly sst, sil(m), FeO(m) (Trurro Tillite?), float	0
7641510	505850	5218015	crm&gn silicified sanadine porphyry, py(0.5%), float	0
7641511	505850	5218015	rd&crm haematitic cg sst, mag(w), float	350
7641512	505875	5218050	grey pebbly arkose (Trurro Tillite?), hm(w/m), float	0
7641513	506010	5217945	grey slst, sil(s, locally), py (fg, dss, <0.5%), subcrop	0
7641514	506035	5217775	grey slst, sil(m), py(fg, dss & frac plating, 5-6%)	0
7641515	505810	5217210	pgn mg feld-porphyry, ch flecks	218
7641516	505650	5217240	rd/bn weathered porphyry, FeO filled pits after py?, float	0

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## Appendix 1b - Cygnet EL29/97 Rock Chip Analyses Data.

Sample Number	East (AMG m)	North (AMG m)	Au (ppb)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	As (ppm)	Ba (ppm)	Co (ppm)	Ni (ppm)	Mo (ppm)
7640829	506115	5217110	4	31	-50	50	-5	15	947	-5	-10	
7640830	506138	5217100	7	56	-50	27	-5	18	546	-5	-10	
7640831	506180	5217073	89	74	-50	18	-5	52	340	12	20	
7640832	506204	5217060	20	35	-50	20	-5	30	469	6	13	
7640833	506218	5217042	3	15	-50	78	-5	34	496	-5	22	
7640834	503600	5220350	2	22	40	58	-5	30	1960	-5	-10	
7640835	503600	5220360	2	8	-50	17	-5	25	589	-5	-10	
7640836	503600	5220375	7	21	20	29	-5	55	1330	-5	-10	
7640837	503600	5220390	23	25	-50	8	-5	15	1370	-5	-10	
7640838	506110	5217130	943	62	-50	5	-5	203	125	46	12	
7641500	506040	5217200	20	37	-1	116	-1	40	421	8	21	-1
7641501	506005	5217370	37	63	-1	107	-1	84	482	16	13	11
7641502	505980	5217390	3	8	-1	68	-1	-1	359	-1	-1	-1
7641503	505980	5217390	-1	-1	-1	57	-1	-1	361	-1	-1	-1
7641504	505985	5217475	27	39	-1	170	-1	-1	2180	10	18	-1
7641505	505960	5217570	9	49	-1	92	-1	-1	854	8	22	-1
7641506	505930	5217700	14	5	-1	142	-1	-1	1040	29	55	-1
7641507	505910	5217770	31	10	-1	38	-1	21	190	-1	-1	-1
7641508	505775	5217875	9	7	-1	47	-1	-1	394	5	21	-1
7641509	505830	5217970	-1	14	-1	6	-1	-1	264	-1	-1	-1
7641510	505850	5218015	10	55	-1	9	-1	-1	381	-1	-1	-1
7641511	505850	5218015	-1	15	-1	7	-1	-1	300	-1	-1	-1
7641512	505875	5218050	5	6	-1	12	-1	-1	281	-1	-1	-1
7641513	506010	5217945	13	12	-1	15	-1	-1	402	6	-1	-1
7641514	506035	5217775	-1	7	-1	25	-1	-1	393	5	-1	-1
7641515	505810	5217210	-1	7	-1	80	-1	-1	1830	5	-1	-1
7641516	505650	5217240	74	7	-1	71	-1	-1	1030	-1	-1	-1

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## Appendix 1c - Cygnet EL29/97 Rock Chip Analyses Data - "Majors"

Sample Number	East (AMG m)	North (AMG m)	Fe (ppm)	Ca (ppm)	K (ppm)	Mg (ppm)	Mn (ppm)	Na (ppm)	P (ppm)	Ti (ppm)	Zr (ppm)
7640829	506115	5217110	28100	8250	27400	5630	142	17900	550	3680	70
7640830	506138	5217100	38200	750	26900	1680	39	4700	200	1870	52
7640831	506180	5217073	70600	1600	31800	1400	102	8500	350	1000	50
7640832	506204	5217060	42300	800	38400	1530	86	6950	250	1770	60
7640833	506218	5217042	28400	950	23900	760	52	8550	300	1730	47
7640834	503600	5220350	31600	300	102000	1630	98	14300	200	3890	203
7640835	503600	5220360	19500	1750	66200	550	22	41000	450	817	294
7640836	503600	5220375	22100	10300	37900	1320	43	35100	550	2090	50
7640837	503600	5220390	20900	3250	47500	1050	60	37000	400	2160	47
7640838	506110	5217130	274500	350	13900	280	51	3050	250	715	29
7641500	506040	5217200	115000	700	13300	7330	97	7500	2050	2780	35
7641501	506005	5217370	72800	51800	46300	11500	2340	20800	1700	5620	125
7641502	505980	5217390	19500	850	15300	1820	44	4950	100	2240	41
7641503	505980	5217390	21000	800	20600	3110	66	6500	100	2860	57
7641504	505985	5217475	28000	12200	69000	1640	772	25900	500	2130	187
7641505	505960	5217570	46000	29500	38000	5970	1310	29300	950	3060	163
7641506	505930	5217700	39100	20000	43800	4290	1090	32500	700	2760	147
7641507	505910	5217770	46000	650	9600	1200	638	5800	150	1220	25
7641508	505775	5217875	26800	28700	23300	9090	534	15300	300	2720	60
7641509	505830	5217970	35700	300	21700	200	67	2750	250	1160	31
7641510	505850	5218015	13100	5250	23200	340	21	19000	200	2480	146
7641511	505850	5218015	27300	250	25500	170	51	1900	100	825	14
7641512	505875	5218050	22800	250	25400	3810	34	2450	100	2210	68
7641513	506010	5217945	16900	7050	10900	4200	104	34100	200	2910	74
7641514	506035	5217775	16000	2800	19200	7350	75	23300	150	1990	56
7641515	505810	5217210	30200	2950	38100	6160	570	33300	750	460	54
7641516	505650	5217240	23900	300	69300	1280	74	28700	100	1450	264

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## Appendix 2 - Cygnet EL29/97 Stream Sediment Analyses Data.

-80#	East (AMG m)	North (AMG m)	Au (ppb)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ni (ppm)	Fe (ppm)	Mn (ppm)	Co (ppm)	As (ppm)
7630830	506020	5217300	5	14	11	23	6	1	62	-2	-1
7630831	506180	5217073	4	56	18	47	3	2.16	838	-2	4
7630832	506204	5217060	2	21	11	55	16	1.93	199	11	2
7630833	501640	5217000	6	68	94	74	5	1.55	529	-2	19
7630834	503580	5215420	1	10	27	54	3	1.13	61	-2	3
7630835	503920	5219460	5	15	14	64	6	0.9	98	-2	-1
7630836	503900	5219420	8	33	10	35	7	2.07	184	7	4
7630837	504170	5217830	10	28	12	43	3	1.39	74	2	5

Bulk(BLEG)	East (AMG m)	North (AMG m)	Au (ppb)	Cu (ppm)	Pb (ppm)	Zn (ppm)
7620830	506020	5217300	2	0.13	-0.3	0.8
7620830	506020	5217300	4.27	0.29	4.2	4.4
7620831	506180	5217073	3.22	58.58	-0.3	15.7
7620832	506204	5217060	11.4	0.81	-0.3	1.9
7620833	501640	5217000	4.59	30.75	-0.3	25
7620834	503580	5215420	2.91	0.39	0.7	6.2
7620835	503920	5219420	2.6	1.42	-0.3	1.5
7620836	504170	5217830	6.99	5.63	0.4	8.7

Panned Concentrates	East (AMG m)	North (AMG m)	Au (ug)
7610830	506020	5217300	-1
7610831	506180	5217073	-1
7610832	506204	5217060	-1
7610833	501640	5217000	155

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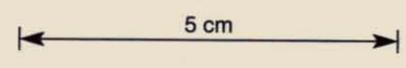
Pacific Nevada Mining Pty. Ltd.

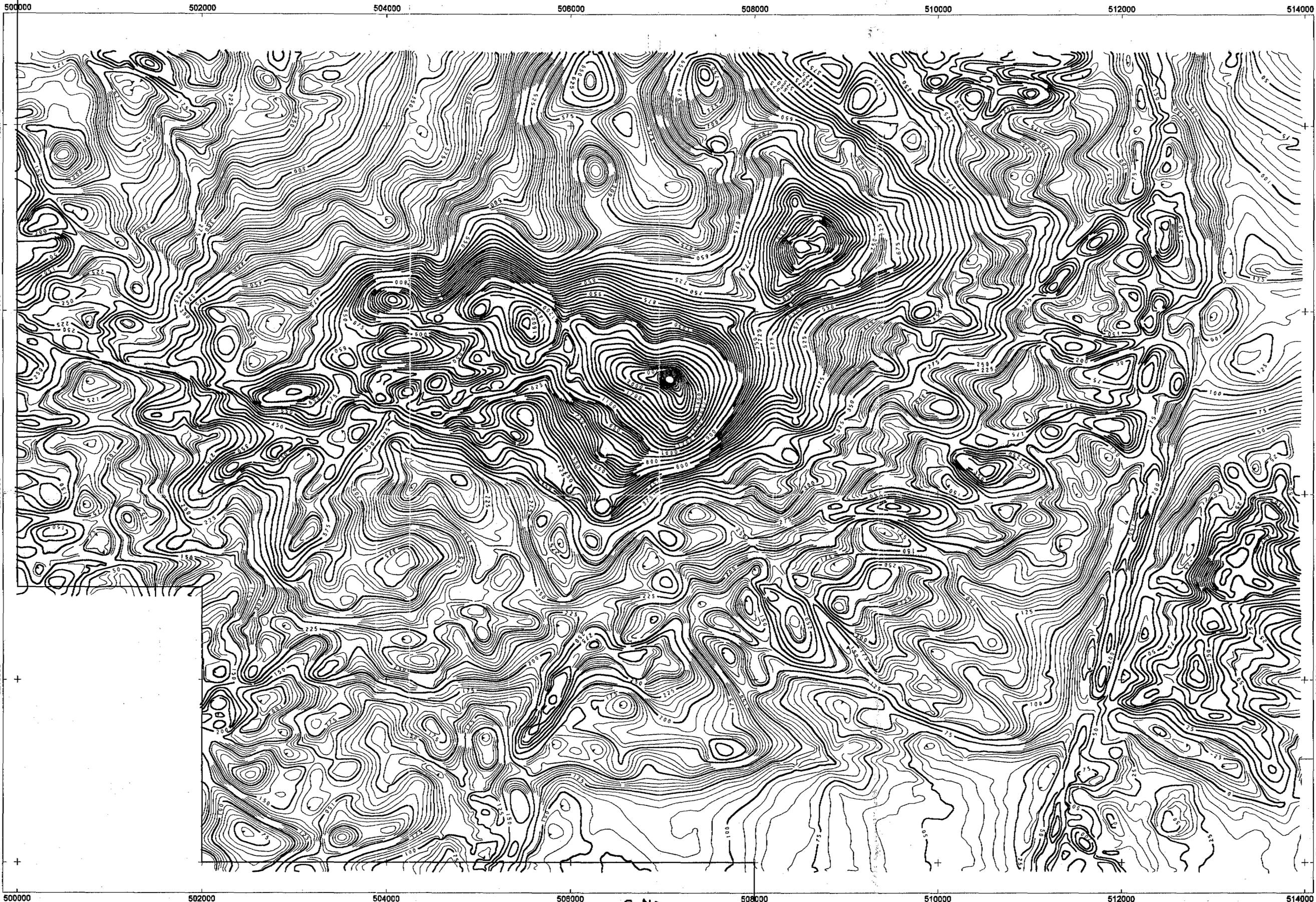
**FIGURE 5**  
**EL 29/97**  
**Stream Sediment**  
**Sample Locations**

Date: 24/1/99	
Author: SW	
Office: TASMANIA	
Drawing:	
Scale: 1:2000	Projection: AMG Zone 55 (AGD 84)

0 250 500 1000 metres

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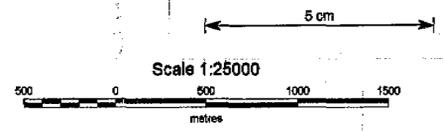


PLATE 1

<b>PACIFIC NEVADA MINING</b> <b>CYGNET, SE TASMANIA</b> <b>AEROMAGNETICS FLOWN BY UTS, 5/98</b>	
TOTAL MAGNETIC FIELD; SUN FROM EAST CONTOURS: 5, 25, 100nT LINE SPACING-50m; LINE DIRECTION: 0-180deg AMG ZONE 55; AGD84	
<b>FALGSTAFF GEO-CONSULTANTS (NH); 12/98</b>	

500000 502000 504000 506000 508000 510000 512000 514000

5222000

5222000

5220000

5220000

5218000

5218000

5216000

5216000

5214000

5214000

500000 502000 504000 506000 508000 510000 512000 514000

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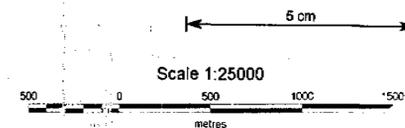
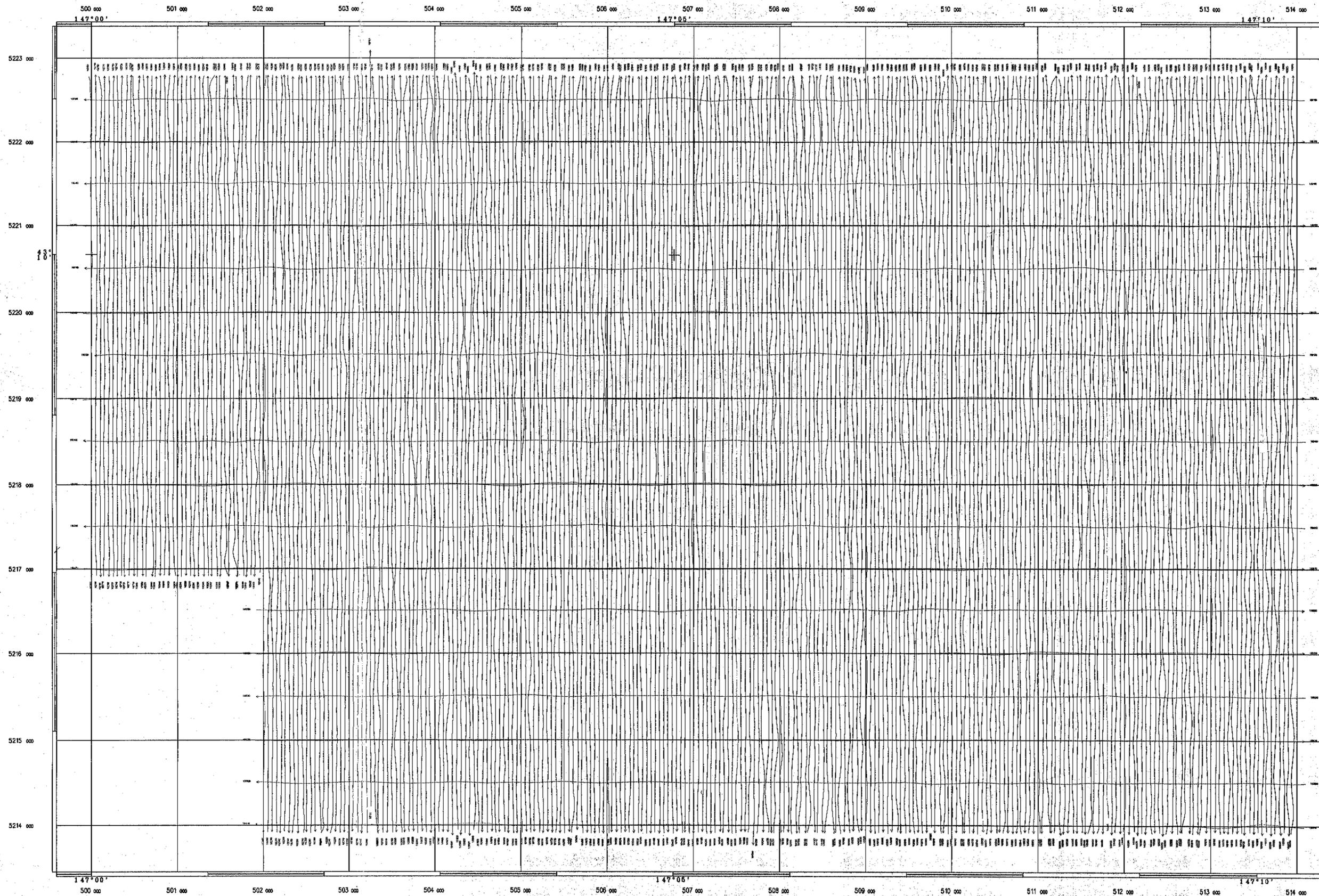


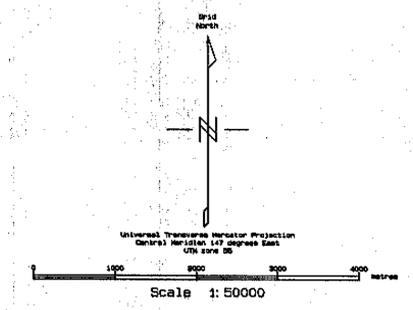
PLATE 2

<b>PACIFIC NEVADA MINING</b>
CYGNET, SE TASMANIA AÉROMAGNETICS FLOWN BY UTS, 5/9P
1st VERTICAL DERIVATIVE OF TMI CONTOURS: 25, 12.5 nT LINE SPACING=50m; LINE DIRECTION=0 18° 1eg AMG ZONE 55° AGD84
FALGSTAFF GEO-CONSULTANTS (NH); 12/98



AIRBORNE SURVEY SPECIFICATIONS	
Flight Line Direction:	000 - 180 degrees
Flight Line Separation:	50 metres
Tie Line Direction:	090 - 270 degrees
Tie Line Separation:	500 metres
Mean Terrain Clearance:	30 metres
Sample Interval:	4-8 metres
Navigation:	Differential GPS
Survey Flown:	April 1998

AIRBORNE SURVEY EQUIPMENT	
Acquisition:	UTS Geophysics
Aircraft:	Squirrel AS-350B Helicopter
Magnetometer:	Scintrex Casium Vapour CS-2
Resolution:	0.001 nT
Sensitivity:	0.001 nT
Recording Interval:	0.1 sec
Compensation:	RMS AADC II Compensator



UTS Geophysics  
**99-4260**  
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 CYGNET - PACIFIC NEVADA  
 R REID 557020

<b>PACIFIC-NEVADA MINING PTY LTD</b>	
CYGNET PROJECT (TAS) DETAILED AERO-MAG SURVEY FLIGHT PATH MAP	
← 5 cm →	
<b>PLATE 3</b>	
DRAWN: UTS GEOPHYSICS	SCALE: 1:25000
DATE: 18th DECEMBER 1998	JOB: A255 - AREA 1