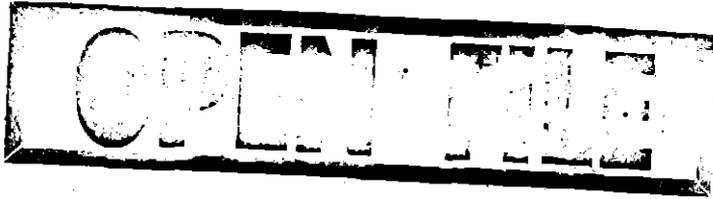


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EXPLORATION LICENCE 18/87 - ANDERSONS CREEK

ANNUAL REPORT : YEAR 1

(25 June 1987 - 24 June 1988)

MINES	
File Ref. E.L.18	87
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Action Officer	Initials
REFERS TO	TO
LETTER 28.6.88	
Resubmit to	Date

K.C. MORRISON

V. HOFTO

J.K. DAVIDSON

June 1988

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TENEMENT INFORMATION

EL 18/87 (Andersons Creek) is a 72 km² tenement in the Beaconsfield area, northern Tasmania (Figure 1 & Appendix 1). The licence was granted on the 23rd July 1987 for a licence year covering the period 25 July 1987 to 24 July 1988.

The licence is owned 100% by Placeco Australia Pty. Ltd. On 7th August 1987, Placeco entered an agreement with Rocky Mountain Resources Pty. Ltd. whereby Rocky Mountain Resources can earn a 25% interest in the Licence by expending \$100,000 on exploration prior to 24 July 1988, and can earn an additional 25% interest by expending a further \$200,000 on exploration within the licence area by 24 July 1990.

Eight mining leases are wholly contained within the EL and an additional five leases impinge in part into the tenement area (Appendix 1).

EXPLORATION PHILOSOPHY AND OBJECTIVES

The EL was pegged to resume title over the known ultramafic body and possible northerly and southerly subsurface extensions. The range of ultramafic and basic lithologies which have been mapped in the area, the existence of chromite and nickel concentrations on parts of the complex, and the reference to detrital osmiridium and gold occurrences in Andersons Creek justified an exploration programme designed to test for primary platinumium group metals (PGM) +/- gold mineralisation. A secondary target of paleo-placer PGM/gold/chromite enrichment in basal Ordovician, Permo-Carboniferous and Cainozoic sediments is valid.

To test the primary target, it was considered that the gross structure and stratigraphy of the complex needed to be resolved so that these lithologies with high magnesium and chromium contents, and which are known to be associated with PGM enrichment at Adamsfield and Bald Hill, could be isolated and explored. The aim was to achieve this by a combination of aeromagnetism, field geology, interpretation of previous mapping and by reconnaissance sampling of chromite concentrates and laterite/ferricretes.

SUMMARY OF WORK COMPLETED IN YEAR 1 (25 July, 1987 - 24 July, 1988)

Regional Surveys

Reconnaissance field geology was carried out over the EL and, when combined with existing maps and regional aeromagnetic data, led Placeco to the conclusion that the complex has been disrupted by thrusting in a manner similar to that reported by Legge (1979) and that the more prospective parts of the complex may not be preserved. Thrusting of Devonian age has created an eastward vergence with older rocks being thrust over younger lithologies. This has caused the interpreted lower ultramafic section to be thrust westwards over the presumed stratigraphically higher dolerites and gabbros, thus creating an incomplete section of ultrabasics, gabbros and dolerites. The area is therefore dissimilar to the Heazlewood Middle Cambrian ultrabasic occurrence.

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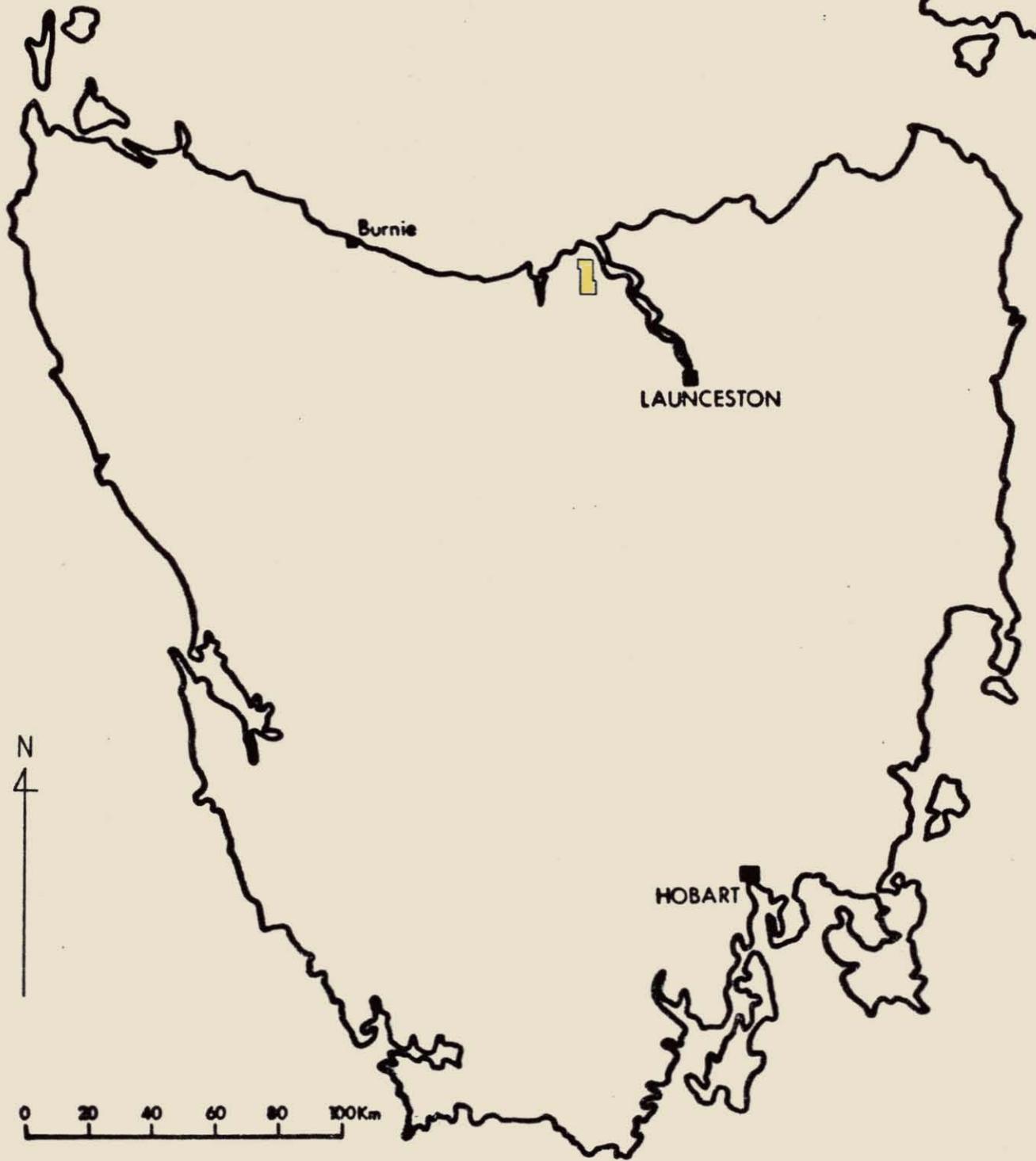
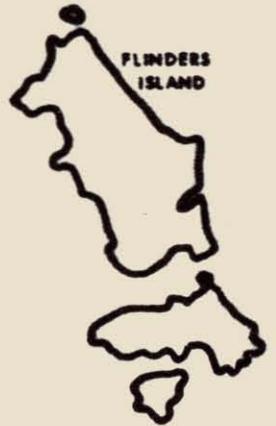
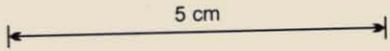
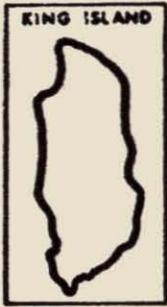


Figure 1. Location Map, EL 18/87 - Andersons Creek

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Specific Surveys

(a) Precious Metal Assays

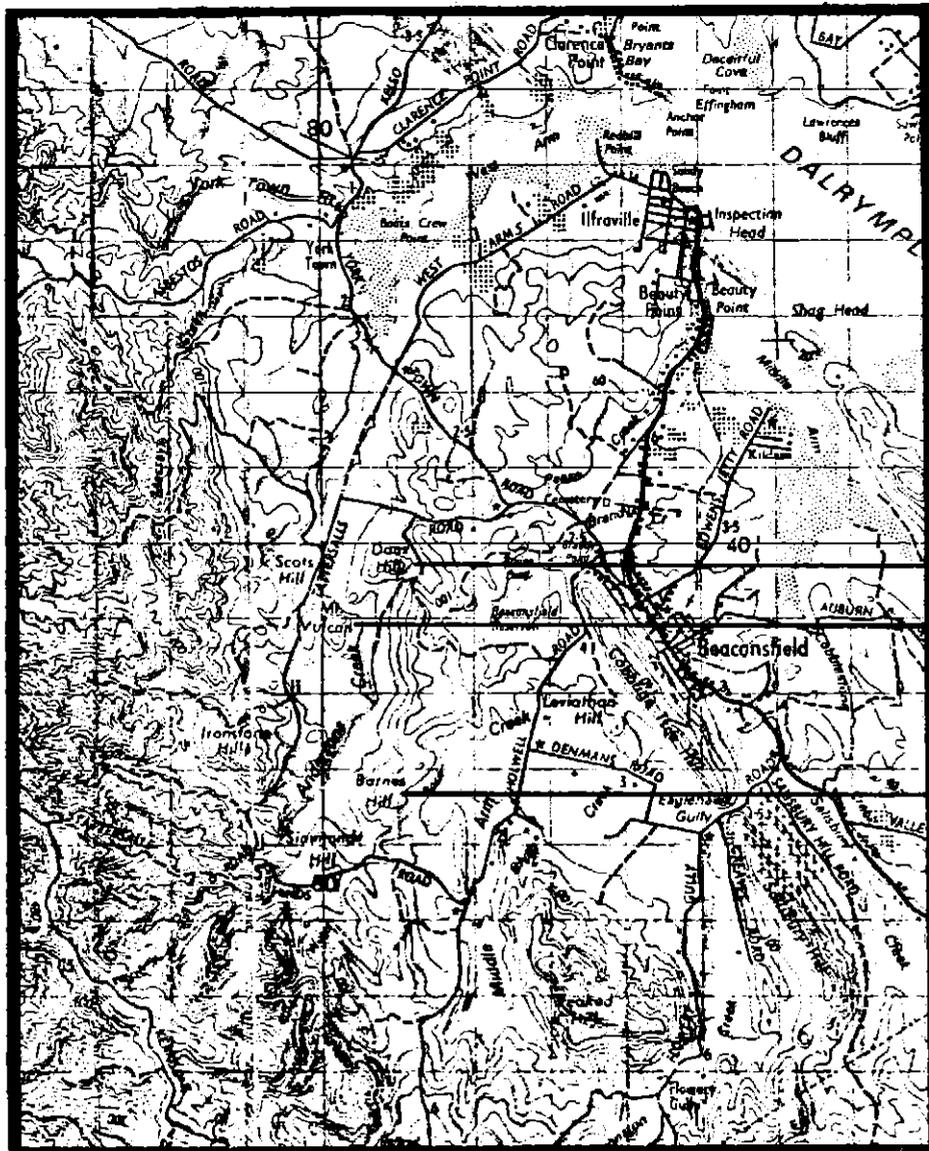
Rock chip and composite sand samples were taken from several key sites in the Barnes Hill, Dans Hill and Mt Vulcan areas (Figure 2), the results of which are summarised in Table 1.

No encouraging platinum group metal concentrations or gold values were encountered. A sample of detrital chromite and heavy mineral concentrate taken from the old workings at Barnes Hill (BH 3) was expected to yield higher concentrations of iridium but returned a disappointing assay of <160 ppb. This is particularly low when an unconcentrated sample of weathered ultrabasic (BH 4), the parent of the chromite concentrate, yielded <280 ppb. These data indicate extremely low concentrations of this element over the area as a whole.

Table 1. Description and assays for Ni, Au, Pt and Ir of samples from Barnes Hill (BH), Dans Hill (DH) and Mt Vulcan (MV).

Sample No:	Description	Ni ppm	Au ppm	Pt ppm	Ir ppb
BH 1	Weathered, serpentinised ultramafic with common silica and localised chromite seams (Plate 5).	-	0.005	<0.008	<20
BH 2	As for BH 1 but opaline silica content exceeds ultramafics content.	-	0.010	<0.008	<25
BH 3	Detrital chromite with heavy mineral concentrate.	-	0.010	<0.008	<160
BH 4	Black, chromite rich, very weathered ultramafic (source of BH 3).	-	0.010	0.038	<280
BH 5	Weathered, serpentinised dunite with abundant clots and trails of chromite (Plate 6).	2500	0.010	<0.008	<20
BH 6	Tailings dam clay.	1250	0.005	<0.008	<20
BH 7	Tailings dam clay.	1200	<0.005	<0.008	<20
BH 8.1	Chromite concentrate.	-	0.005	0.009	<150
BH 8.2	Chromite concentrate.	-	<0.005	<0.008	<110
BH 8.3	Chomite concentrate.	-	0.010	0.017	<160
BH 8.4	Chromite concentrate	-	0.005	<0.008	<180

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Dans Hill

Mt Vulcan

Barnes Hill

Figure 2. Location of sampling sites at Barnes Hill, Dans Hill and Mt Vulcan.

5 cm

1:100 000

Table 1. Continued

Sample No:	Description	Ni ppm	Au ppm	Pt ppm	Ir ppb
BH 9.1	Chromite concentrate.	-	0.010	<0.008	<190
BH 9.2	Chromite concentrate.	-	0.005	<0.008	<140
BH 9.3	Chromite concentrate	-	0.005	<0.008	<180
BH 9.4	Chromite concentrate	-	<0.005	<0.008	<180
DH 1	Opaline silica. Gold shaft mullock heaps.	-	-	-	-
DH 2	Ferrichrete on ultramafics.	1100	0.015	<0.008	<20
MV 1	Laterite soil from tree roots.	245	0.010	<0.008	<20
MV 2	Lumps of ironstone.	520	<0.005	<0.008	<20
MV 3	Lumps of ironstone.	255	0.005	<0.008	<20
MV 4	Top of pisolith rich lateritic material.	310	0.005	<0.008	<20
MV 5	Bottom of pisolith rich lateritic material.	330	<0.005	<0.008	<20

(b) Environmental Considerations

Subsequent to advertising the application area in *The Examiner* newspaper on 1 April 1987, Placeco received four formal objections to the granting of the EL, two of which related to the occurrence of several rare plants within the proposed tenement area. Placeco took the view that there was no question about the plants being limited in numbers and aerial extent, as indicated by the objectors, the Tasmanian Conservation Trust and the Society for Growing Australian (Native) Plants. Placeco's approach was that exploration could be undertaken without any lasting disturbance to the habitat of these plants and a very co-operative dialogue was established between the Department of Mines, Department of the Environment, Parks and Wildlife and ourselves. The result was that the EL was granted in a normal time frame on 22 July 1987.

As part of this co-operative effort, the director of Placeco Australia, Mr J.K. Davidson, and a consultant geologist, Mr K.C. Morrison, visited the site on 16 October 1987 with the following government representatives: David Jennings from the Tasmanian Department of Mines; Steve Harris from the National Parks & Wildlife; Greg Stewart and David Hinchley from the Forestry Department; and Tim Johnstone from the Department of Main Roads.

Steve Harris showed examples of the various rare plants which were photographed so as to familiarise Placeco's staff and consultants with their appearance. As indicated by the Tasmanian Conservation Trust, the three rarest endemic species occurring within the EL are as follows:

Tetratheca gunnii - recently re-recorded after remaining unlocated since 1843. It is a rare endemic restricted to four very small populations (as far as is known) in the Mt Vulcan area (presumed extinct until re-found 1985) (Plates 1, 3 & 4).

Epacris virgata - an unreserved endemic restricted to the Andersons Creek area (Plates 2 & 4).

Spyridium obcordatum - the major populations of this endemic species are within this immediate area. It also occurs in minor populations in other scattered locations between Mt Vulcan and Badgers Head. It does occur within the Asbestos Range National Park but is threatened there by the fungal disease *Phytophthora cinnamoni*. It would be classed as a threatened species (Plates 3 & 4).

Consequent to the efforts by the company to familiarise itself with the appearance and spatial extent of these plants, Placeco is able to conduct its exploration without causing any permanent damage to any part of the habitat of these plants.

CONCLUSIONS & RECOMMENDATIONS

1. Initial exploration does not support the prognosis of an intact layered ultramafic complex which is prospective for platinum group mineralisation.
2. Placeco concludes that future effort should be concentrated on the nickel, cobalt and chrome targets, with precious metals being a secondary consideration.

PROPOSED FUTURE EXPLORATION

The Year 2 programme will test the Cainozoic laterites, conglomerates and sands in the Scotts Hill/Mt Vulcan, Rifle Range, Tattersalls Hill, Barnes Hill and Andersons Creek areas. Metallurgical aspects of the nickeliferous clays and chrome spinel sands will be re-examined and the laterite/ferricretes will be systematically sampled for a possible enrichment in gold and/or platinum group metals.

REFERENCES

- Gee, R.D., & Legge, P.J., 1979: *Geol. Surv. Explan. Rept.*, Sheet 30 - Beaconsfield. Tasm. Dept. Mines.



Plate 1. *Tetratheca gunii*.



Plate 2. *Epacris virgata*



Plate 3. *Spyridium obcordatum* (foreground) together with *Tetratheca gunii*.



Plate 4. *Spyridium obcordatum* (foreground) together with *Tetratheca gunii* (centre) and *Epacris virgata* (top).

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Plate 5. Weathered, serpentinised ultramafic with common opaline silica and localised chromatite seams.



Plate 6. Weathered, serpentinised dunite with abundant clots and trains of chromite.

PLACECO AUSTRALIA PTY LTD

Incorporated in Tasmania

MINES	
File Ref.	EL 18/87
25 AUG 1988	
Doc. Ref.	2446
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11 Midlan
Brighton TAS 7
Ph: 61-0
Fax: 61-
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for you Hal

24 August 1988

The Director,
Department of Mines,
PO Box 56,
ROSNY PARK 7018
Tasmania

Attention : Mr P. Wrigley, Administrative Geologist

Dear Sir,

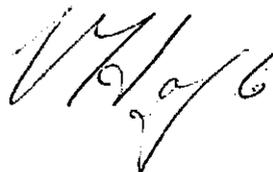
Re : Your ref - EL 18/87 TCR 88-2831

Further to your enquiry we enclose the following information.

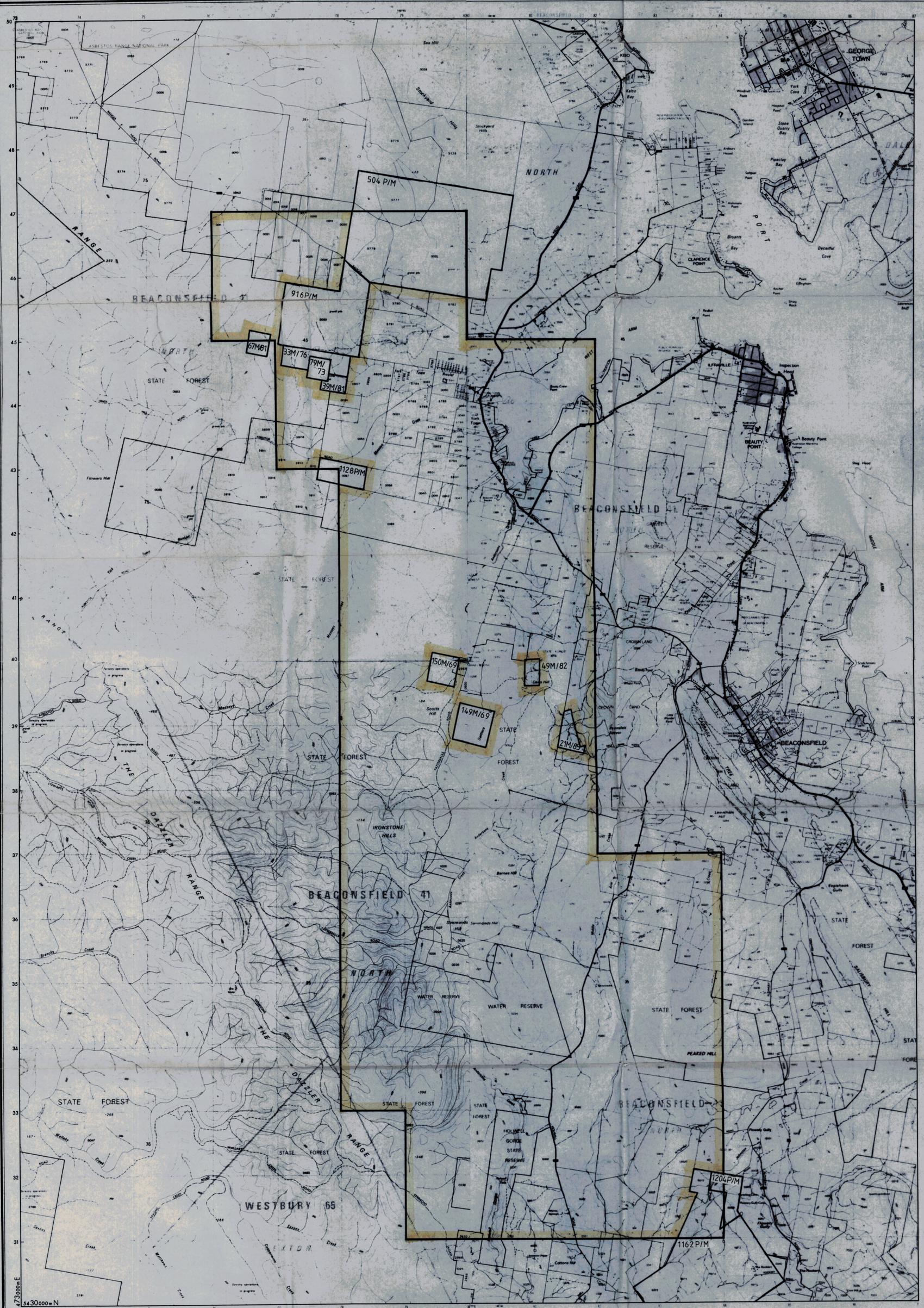
Sample Sites	AMG Co-ordinates
BH 9.1 - 9.4	480 500mE, 5 437 100mN
DH1	480 900mE, 5 439 700mN
DH2	480 800mE, 5 439 700mN
MV 1-5	480 000mE, 5 438 000mN

Regarding our interpretation of the prospectivity of this area, the thrust model proposed by Gee & Legge, 1979 (*Geol. Surv. Explan. Rept., Sheet 30*), was supported by the aeromagnetic data of Newman, 1965 (*Open File Rept., 30/9*), and by reconnaissance traverses over those parts of the complex exposed through the laterite cover, by Placeco geologists and post graduate students working on PGE projects at Melbourne University. The general consensus was that the original stratigraphy of the complex had been sliced up by thrusting and consequently the detailed magnetic and lithological analysis of the stratigraphically lower ultramafic units, as proposed by Placeco at the time of the application, may not be effective in defining PGE host rock targets.

Yours faithfully,



V. HOFTO
for K.C. MORRISON



LEGEND

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