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PLACER PROSPECTING PTY. LIMITED

Shell House,
Carrington Street,
SYDNEY

PROGRESS REPORT

Special Prospectors Licence No. 11

for
Director of Mines

by
A. B. CIARK

first 7 plates, 228 only (add)

MICROFILMED

Sydney
13th September, 1965.

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CONTENTS

	<u>Page No.</u>
<u>INTRODUCTION</u>	1
<u>REGIONAL GEOLOGY</u>	1
<u>DETAIL GEOLOGY</u>	2
Razorback	2
Grand Prize	2
<u>DIAMOND DRILLING PROGRAMME</u>	3
Razorback	3
Grand Prize	4
<u>MINING PROGRAMME</u>	4
Razorback	4
Grand Prize	5
<u>CURRENT CONCLUSIONS</u>	5

PLATES

<u>No.</u>	<u>Description</u>	<u>Scale</u>
1.	General Geological Map	1 inch = 200 feet
16.	✓ Razorback - Grand Prize Area ✓	✓ 1 inch = 200 feet ✓
2.	General Geological Compilation	1 inch = 40 feet
	Razorback Mine Area	
3.	Drill Sections	1 inch = 100 feet
	Razorback Mine Area	

INTRODUCTION

Placer Prospecting Pty. Limited holds Special Prospector's Licence No. 11 over 3200 acres within the Dundas Mineral Field. The private mining leases within this large area are leased by Mr. J. Hodge and party, but these private mining leases are held under option by Placer Prospecting Pty. Limited.

REGIONAL GEOLOGY

About the Grand Prize Area, plate 1, a succession of grits, pebble conglomerates, massive tuffaceous sandstones, agglomerates and thinly bedded tuffaceous shales dip south under the Razorback rock unit. The Razorback rock unit comprises black tuffaceous shales, grit, pebble conglomerate, dolomite, chert and serpentine.

The Grand Prize rocks form the southern edge of a regional domal structure which extends across the northern licence boundary. The fold is broad and dips are fairly regular. To the south through the Razorback Area the limb has plunged and several synclines have resulted.

A major fault has displaced the Grand Prize rocks and significantly the mineralisation of this area is located within and parallel to the fault zone. The mineralisation at Razorback is of a replacement form. At this point of the investigations additional mapping on the remainder of the unmapped area is required before the full regional geological structure is enunciated.

It is important to note that about the Razorback Area the results of the regional mapping do support the belief that the rocks behave as layered rocks. Typically an injected origin could be ascribed to the serpentine with dolomitic differentials; this is not so at Razorback. There does exist excellent prospects for re-locating the Razorback rock environment, plate 1, elsewhere. This is a direct original result from the regional geological mapping.

DETAIL GEOLOGYRazorback

The Razorback ore body has a folded replacement form. The ore is located at the contact of grits and dolomites and within the dolomites. Cassiterite is associated with pyrrhotite, arsenic and accessory minerals. The ore, superficially is gossan material but primary mineralisation is located at the Placer Adit level, plate 2. The soft serpentine and harder dolomite have been folded against the tough footwall grits, so that flowage folds occur within the serpentine and dolomite.

The host rocks form part of the flank rocks of an east dipping syncline, although further work is required upon this point.

Plates 2 and 3 are general compilations of the work completed. The individual results of each diamond drill hole have been listed on the drill logs previously forwarded to the Mines Department. The sections across the drill profiles indicate a steep south plunge of the ore body, but from the line 1000N, plate 1, inflection of plunge will occur.

The field mapping about Brock's Adit 500W 2700N has been difficult. An inflection of plunge north from this area is possible through conjugate plunge relationships; to date, due to poor core recovery from holes R3 and RI 3, this point is not proven.

South from 1000N, 600W, plate 1, the dolomite facies into chert which contain sulphide. An attempt was made to bore the cherts, R8, but the core recovery was low. Low tin values occur in the area of dolomite and chert rocks.

Grand Prize

A major fault has displaced a series of grits, agglomerate and tuffaceous shales. The horizontal displacement varies from 600 feet to 300 feet but as the dip of the rocks varies from 25° to 60° the vertical displacement is less. The Grand Prize type of mineralisation occurs in this fault zone, plate 1.

The mineralisation superficially, is gossan material which contains cassiterite; some pyritic sulphide is visible in the adit level 100S, 600E. The fault zone has been traced for 3000 feet on the surface

and varies in width from 30 feet to 1 foot. The gossan extends from the surface downwards to a depth of about 400 feet, with an obvious topographical control. At 2400 N, 1700 E, plate 1, the gossan assayed 4% Sn over 2 feet; at 200 N, 650 E the gossan assayed +0.6% Sn, over 25 feet; at 600 S, 650 E the gossan assayed 0.1% Sn over 1 foot. The assay results are variable and the width of gossan need not have any relation with grade. The ideal general ore control is related to a particular wall rock. This would appear to be the massive grey tuff in the adit at 200 N, 650 E.

The shoots of economic ore (+0.5% Sn) will plunge in relation to the general dip of the wall rocks, i.e. south at 45° but the continuous fault zone dips to the west at 75°. It may be possible to mine the whole zone if the results of the current bulk sampling programme prove a higher degree of economic ore continuity than what has been revealed by the results from early chip samples. A grade of +0.8% Sn is recorded in the mining history of Grand Prize production figures.

DIAMOND DRILLING PROGRAMME

Razorback

Thirteen surface drill holes have been completed for a total depth of 8,214 feet, plates 1 and 2. The major decisions made from the initial drill results were:-

1. Failure of conventional boring techniques to recover core from gossan lodes. Hence the necessity to use wire line equipment collared in hard ground. This step was not completely satisfactory hence it was decided to make use of adits.
2. The decision to balance the diamond drill programme with the use of adits has been proven to be correct. A drill hole is a guide, an adit is time consuming but the combined technique is successful.

A programme of underground bore holes is currently being completed off the Placer Adit at Razorback, plate 2. The results will give a refined interval of the early broad values. Poor core recovery under Brock's Adit off the Placer Adit level was again experienced so that further underground mining will be necessary at the adit level. The results of this

underground programme are available for field inspection and will be the subject of a latter report.

Grand Prize

One drill hole was completed at the Grand Prize, plate 1, 670 E, 170 S. The hole bored to 152 feet was designed to test the lode directly below the adit level. A mixture of gossan and sulphide was intersected between 131 feet and 150 feet but the core recovery was 10% which assayed trace tin.

It was apparent that the same drilling difficulties as was experienced at Brock's Adit Razorback would be repeated. To ensure that a lode could be recovered and tested the exploration of this area about Grand Prize was subsequently restricted to adit work. Deep diamond drill holes would be held over to a later stage.

MINING PROGRAMME

Razorback

Plate 2 shows the extent of the adit driven under the Razorback Lode. The approach cross-cut was driven 570 feet to intersect the lode, thence the lode was driven on for 500 feet which includes cross-cuts across the lode. This work exposed a level of lode 350 feet long with a lode thickness of 1 foot at the north and south headings, to a maximum thickness of 40 feet across No. 1, north cross-cut. A grade of +0.75% Sn has been indicated.

A programme of bulk sampling has to be completed. Initially a method of 1 shovel in 20 shovels of lode was used but the results were unsatisfactory. A crushing plant was installed and now each round is crushed and sampled through a system of Jones Samplers. The sample is then assayed at the company laboratory installed at Zeehan; check samples are sent to the Mines Department at Launceston.

The ore body exposed is related to the main open cut and mining operations off the north heading of the Placer Adit will test the Brock's Ore Shoot.

Grand Prize

The aditing programme, plate 1, was facilitated by the existence of old mine workings.

The adit portal at 700 E, 170 S was cleared from the portal to 200 N, 670 E then advanced to 450 N, 600 E. The new drive was advanced with cross-cuts for 350 feet. South from 700 E, 170 S, 30 feet across Nevada Creek the lode level was continued to 720 E, 500 S. Hence a body of gossan 900 feet in length with width variables of 1 foot to 30 feet, was exposed for testing by a bulk sample method.

An old ball mill and table at the portal were repaired for the test work. The initial cut at 200 N, 650 E over 25 feet had a head grade of +0.6% Sn. It is intended to bulk sample the lode every 50 feet with a cross cut along the 900 feet length. The initial mining difficulties were overcome but certain assay techniques re the digestion of a mixed gossan and sulphide sample have as yet to be reconciled.

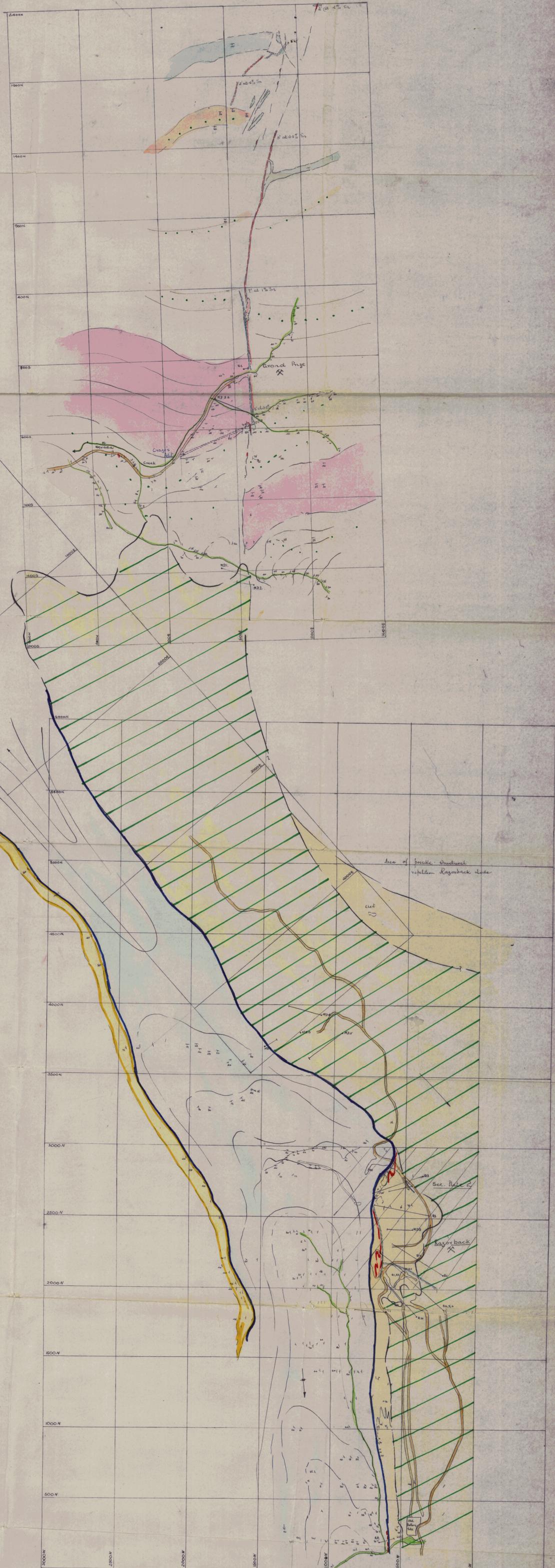
The results of the one drill hole justified the exploration of the lode at a lower level by means of an adit. An adit 100 feet below the above mentioned adit exists from the portal point 800 S, 150 E; it is known as Craze's Adit. The approach cross-cut was dewatered for 500 feet. The drive was re-timbered to 500 S, 700 E and then advanced 150 feet. One cross-cut was made for a lode intersection of 2 feet but to test the structural theory the drive will be advanced to 200 N, 650 E with cross-cuts every 50 feet. This new drive extension is parallel to, but 30 feet off the lode.

An old adit has also been advanced at North Grand Prize, plate 1, 2100 N, 1050 E. This adit has been driven 150 feet to intersect lode. The lode in two old adits 100 feet above the current driving assayed 5% Sn over 2 feet.

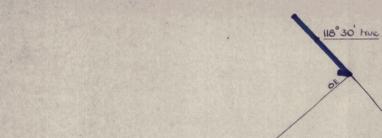
CURRENT CONCLUSIONS

The results of the work have been difficult to obtain due to technical difficulties. It is apparent, however, that studies are now required for the minimum tonnage figures which will justify a mining operation. These studies have begun.

A. B. Clark
A. B. CLARK
Consulting Geologist



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Legend

- soft, well-sorted, medium grain, light color
- tuffaceous shale, massive, jointed
- argillaceous, massive, jointed
- tuffaceous shale, fine bedded, black, grey
- conglomerate pebbles, massive jointed white-grey
- dolomite - chert facies - microfractured shales
- reef platform
- green

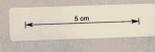
Reference

- river
- geological boundary
- dip, strike
- fault direction
- structure
- well investigation - Placer Exp. Pt. 114
- well aqueduct - M.D. Mine, E. Razorback Basin
- geological trend line

Note

This compilation does not represent a final structural interpretation of the area.

65-403			
Placer Prospecting Pty Limited General Geological Map Razorback-Grand Prize Area			
Scale	Date	Compiled by	Plate No
1 inch = 200 feet	3/9/65	A.B. Clark	1



EASTERN BOUNDARY
SPECIAL PROSPECTOR'S LICENCE AREA
ELECTROLYTIC ZINC CO., LTD., ROSEBURY

INTERMEDIATE
GRID

GRAND PRIZE
GRID

RAZORBACK GRID

ALLUVIAL TIN

AREA N#2

Area of possible structural
repetition Razorback Lode

chert with gossan

AREA N#1

LEGEND:

- GRT, WELL SORTED, MEDIUM GRAIN, LIGHT COLOUR
- TUFFACEOUS SANDSTONE, MASSIVE, JOINTED
- AGGLOMERATE, MASSIVE, JOINTED
- TUFFACEOUS SHALE, GREY
- TUFFACEOUS SHALE FINELY BEDDED, BLACK
- CONGLOMERATE PEBBLE, MASSIVE, JOINTED, WHITE, GREY, GREEN
- DOLOMITE, CHERT FACIES, INTRAFORMATIONAL SHALES
- SERPENTINE
- GOSSAN

REFERENCE

- CREEK
- ROAD
- GEOLOGICAL BOUNDARY
- DIP STRIKE
- PLUNGE DIRECTION
- STRUCTURE
- ADT INVESTIGATION, PLACER EXP. PTY. LTD.
- DRILL AZIMUTH, N.D. MINES, R.A. - RAZORBACK PLACER
- GEOLOGICAL TREND LINE
- FAULT

NOTE:
THIS COMPILATION DOES NOT REPRESENT
A FINAL STRUCTURAL INTERPRETATION OF THE AREA

AREA N#2
for structural interpretation for tin

RAZORBACK HILL

RAZORBACK

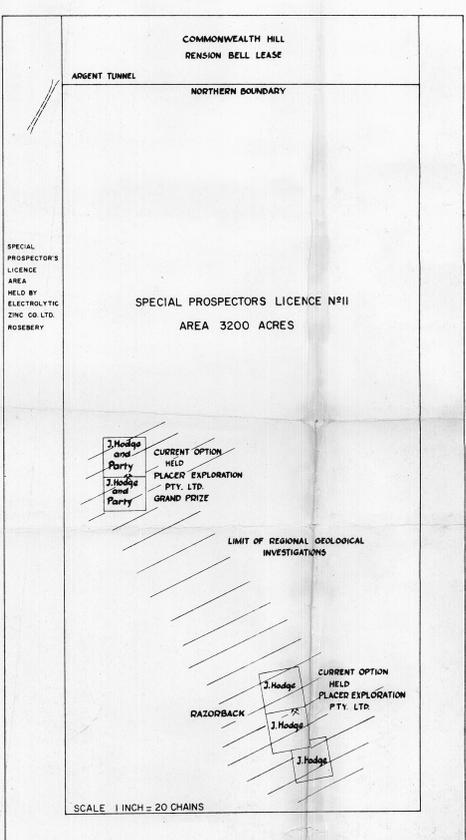
Mining Lease 2M/40
20 acres
J. Hodge

See Plate 3

Mining Lease 3M/40
20 acres
J. Hodge

Mining Lease 30M/50
20 acres
J. Hodge

Mining Lease 25M/38
15 acres
J. Hodge



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PLACER PROSPECTING PTY. LTD.			
GENERAL GEOLOGICAL MAP RAZORBACK-GRAND PRIZE AREA 1B			
SCALE	DATE	COMPILED BY	PLATE N#
1 INCH = 200 FT.	3/9/65	A.B. CLARK	2



Legend.
 ● gits
 ● dolomite
 ● serpentine
 — lode

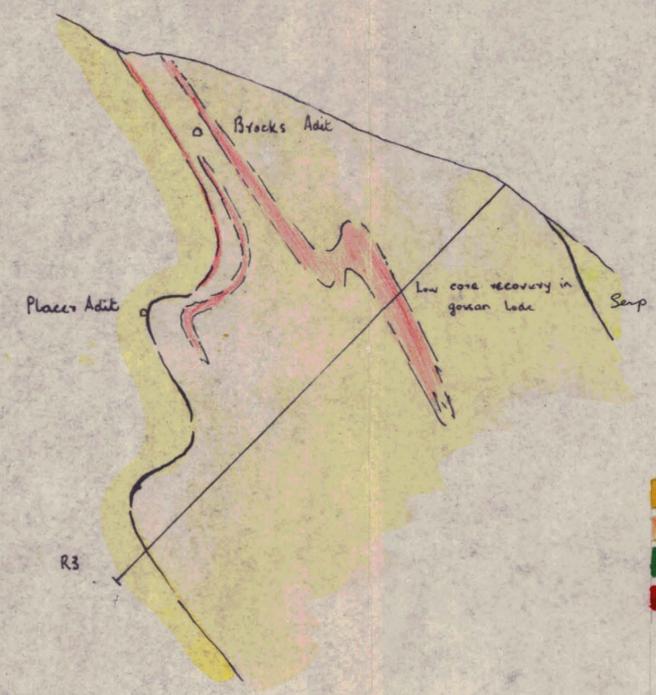
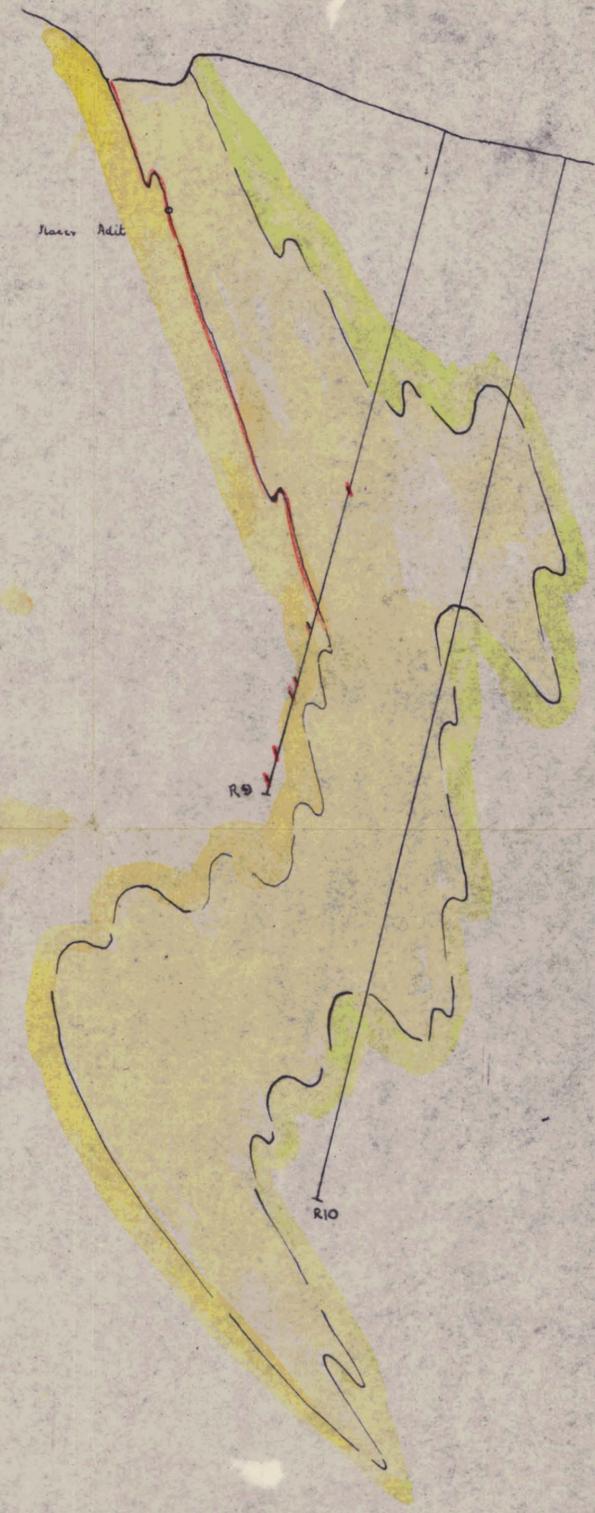
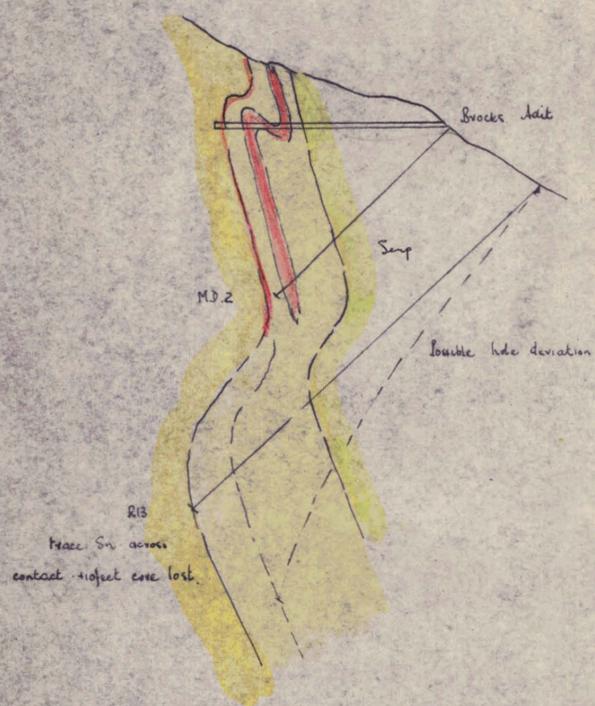
Reference.
 R4 — Drill Azimuth
 — Old adit
 — New adit - 'Placer'

Note 1. Bulk sampling programme to be completed
2. Under ground drill programme to define reserves in progress
3. Lode drill intersections listed on drill logs.

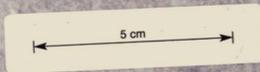
Placer Prospecting Pty Limited
 General Geological Compilation
 Razorback Mine Area

Scale 1 inch = 40 feet
 Date 2/9/66
 Compiled by A.B. Clark
 Plate No 2

236010
 5 cm
 4272



- Reference
- gneiss
 - dolomite
 - serpentine
 - lode > 0.5% Sn



236011

65-403

Placer Prospecting Pty Limited			
Drill Sections Razorback Mine Area			
Scale	Date	Compiled by	Plate No
1 inch = 100 feet	3/9/65	L.B. Cook	3