

000

RENISON LIMITED

D.S.S

320001

77-1204

OPEN FILE

CONFIDENTIAL

SUMMARY REPORT

ON

BLUE TIER TIN PROSPECT

E.L. 79/76.

18th April, 1977

L.A. Newham
L.A. Newham,
CHIEF GEOLOGIST

001

1. SUMMARY

Hellyer Mining and Exploration Pty. Limited are the current holders of E.L. 9/76 of 65 sq. kilometres, which covers the main tin occurrences within the Blue Tier tin field in N.E. Tasmania.

Hellyer have indicated to Renison/C.G.F.A., that they would be interested in entering into a Joint Venture on this licence area.

A preliminary assessment of existing geological data on the area indicates that there is some potential for the possible development of sizable, low grade, tin-in-granite deposits within the area.

2. PREVIOUS WORK

The Blue Tier tin field is one of the oldest in Tasmania, and as such has been extensively explored since around 1880 to the present day. Thus the amount of literature and data existing on the area is considerable, and a thorough and detailed evaluation of it all has been outside the scope of this brief report.

The two most systematic exploration efforts in the area were undertaken by the Mt. Lyell Mining and Railway Co. Limited between 1904-1907, and Aberfoyle from 1964-1967. Most of the data produced during these surveys has been superficially assessed for this report, and re-drafted on the accompanying maps.

The Mt. Lyell work consisted of extensive costeaning and shallow diamond drilling of the line of tin workings in a "window" of stanniferous porphyry stretching from the Crystal Hill workings in the south to the Perennial workings in the north. The results of this work are presented on the accompanying plans BT 3A, BT 3B, BT 4, BT 5, BT 6, together with the attached D.D.H. sections.

The Aberfoyle work consisted essentially of a pattern of vertical diamond -drill holes to the N.E. of the Anchor Mine Open Cut, together with face sampling on the cut. Some of the results of the diamond drilling are shown on the accompanying plans BT 8, BT 9.

The Mines Department completed one hole North of the Anchor Open Cut in the late 1960's.

RENISON LIMITED

3. ASSESSMENT OF PREVIOUS WORK

The Mt. Lyell work succeeded only in showing the continuous nature over several kilometres of an exposure of stanniferous porphyry. Their work didn't really test this exposure to any meaningful depth below the overlying coarser grained tin-barren granite. There is a random scattering of samples averaging greater than 0.2% Sn all along this exposure but continuity of these grades was not demonstrated.

The Aberfoyle work at the Anchor succeeded in outlining a possible 2-3 million tonnes of 0.25% Sn material in a greisenised zone plunging north and possibly east and west. In assessing their drilling results, individual greisen zones in any one drill hole have, where appropriate, been bulked as one unit, which is probably how they would be mined in any sizable open cut. It is suggested that several of the Aberfoyle holes in the north didn't reach the mineralised zone.

4. POTENTIAL OF THE AREA

The most attractive target proposition in the Blue Tier area is a medium-large tonnage, low grade, disseminated tin-in-granite orebody. Preferably such a body should be open-cuttable, but this would not preclude the possibility of a large, low cost underground operation.

Most of the area between the Anchor and that area tested by Mt. Lyell is covered by outcropping medium grained non-stanniferous granite, which in turn is underlain in an irregular fashion by the so called "tin-granite". The outcrop pattern of the "tin-granite" is such that it suggests this granite is not particularly deep beneath the surface where it is not exposed.

The irregular relationship between the two granites may also cause and, or control the development and disposition of stanniferous greisen zones (as per various cupola theories, which have been applied successfully in various tin fields around the world).

5. FURTHER EXPLORATION SURVEYS

It is suggested that further exploration in the area is justified, and should be directed towards defining and testing, by drilling, the greisen zones developed near the irregular roof of the "tin bearing" granite.

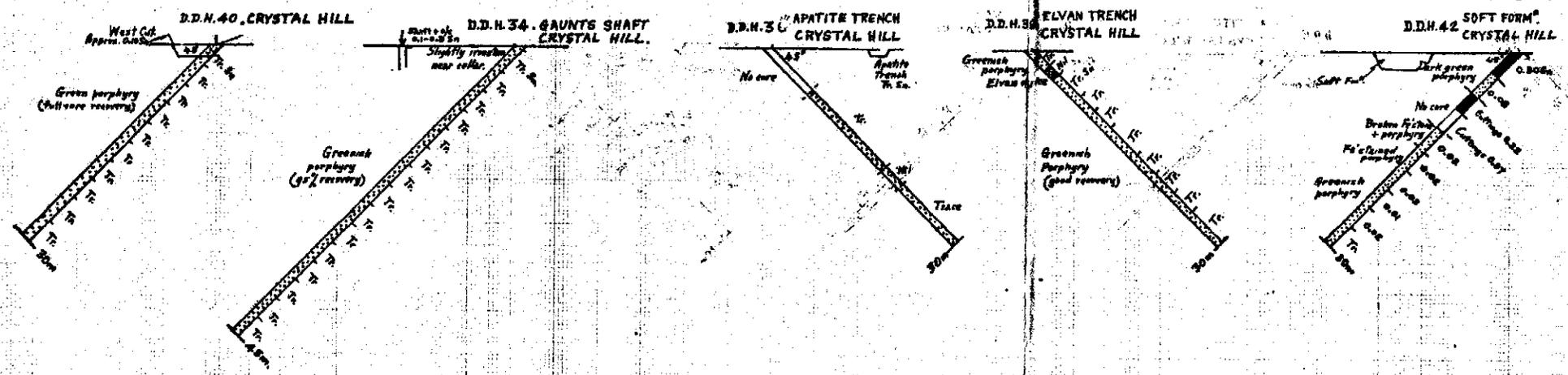
Because the results of such a program would most likely be complex to interpret, it would be vital to complete it in a series of small flexible steps, rather than one large drilling program.

004

BLUE TIER DIAMOND DRILL HOLES

Scale = 1:1000

320005

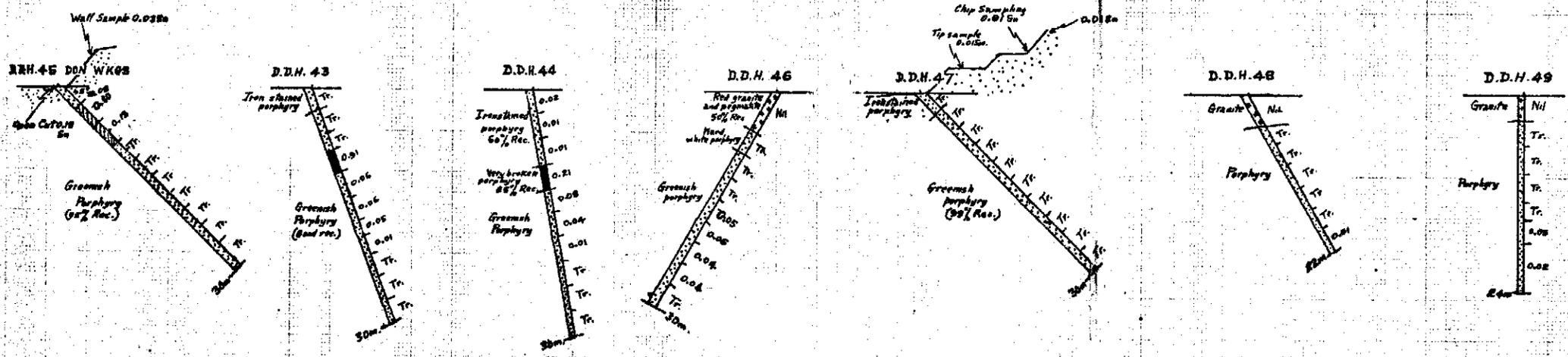


5 cm

CRYSTAL HILL AREA

NOTE: DRILL HOLES NOT IN CORRECT RELATIVE POSITIONS

Approx: 450m. above S.L.

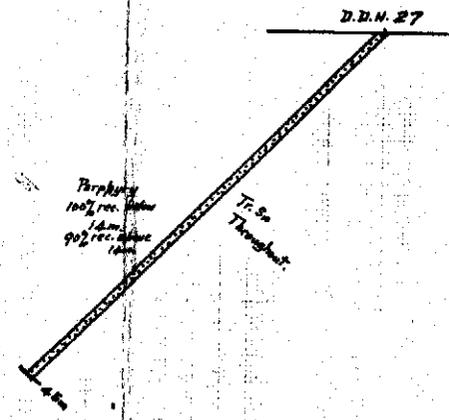
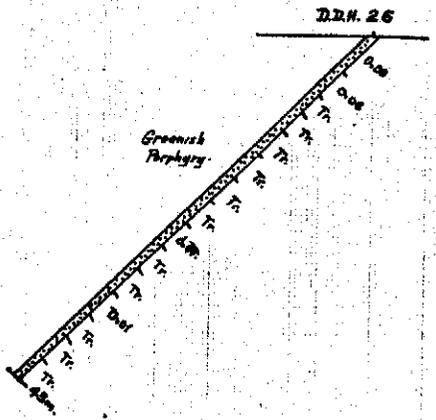
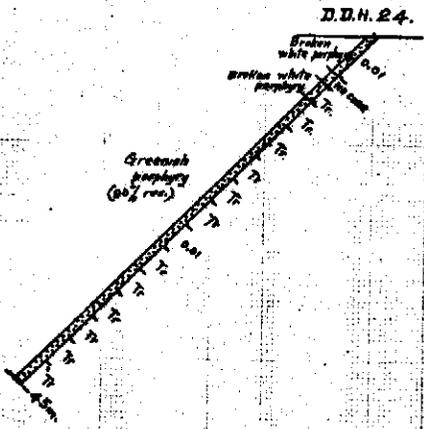


DON WORKINGS.

NOTE: DRILL HOLES NOT IN CORRECT RELATIVE POSITIONS.

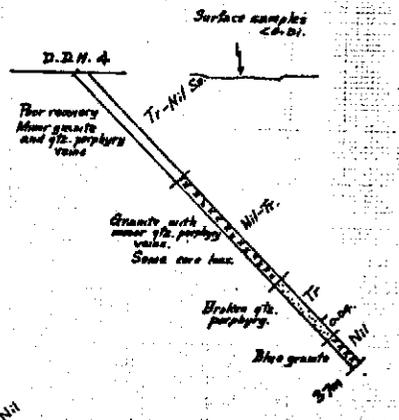
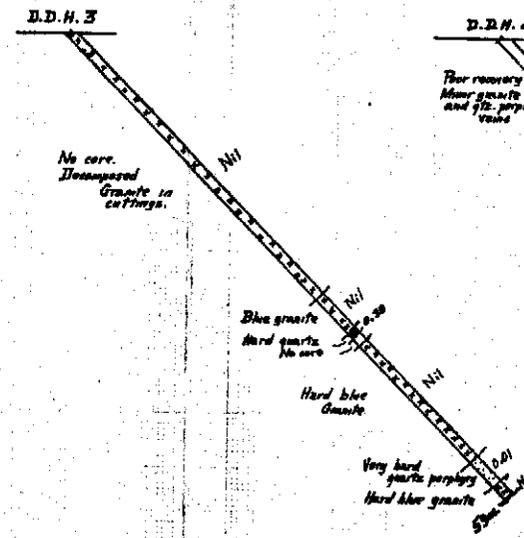
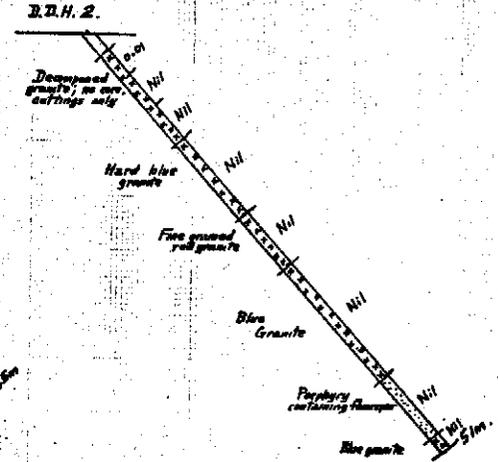
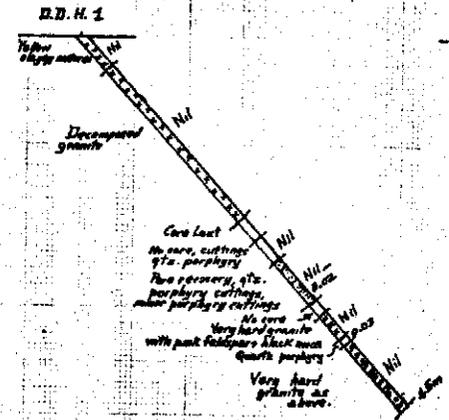
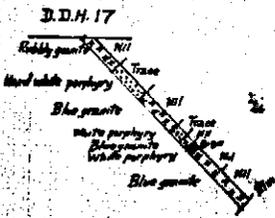
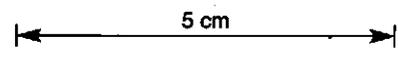
Approx. 390m. above S.L.

005



MADDOX WORKINGS IN ETHEL SHAFT AREA.

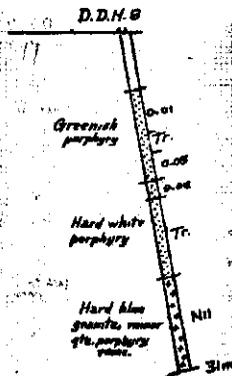
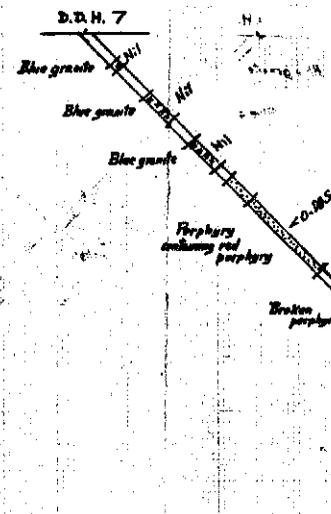
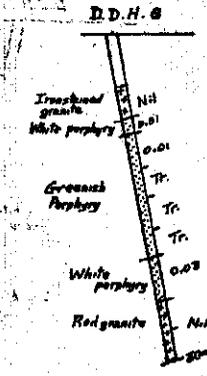
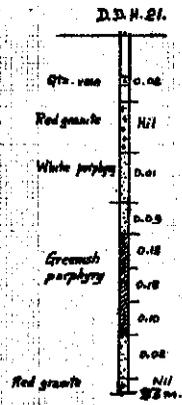
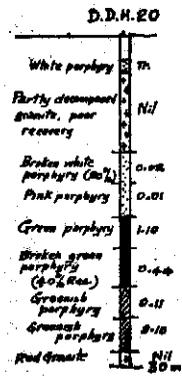
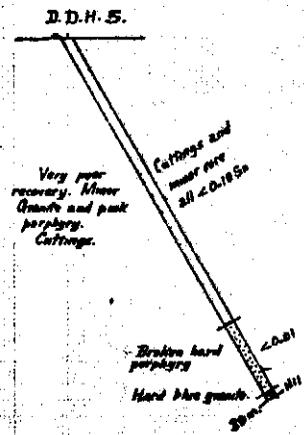
Scale 1:500



HALEY WORKINGS

Scale 1:500

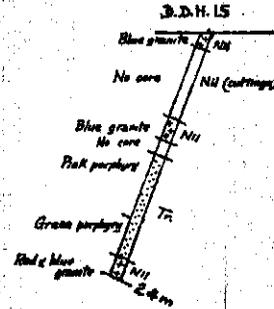
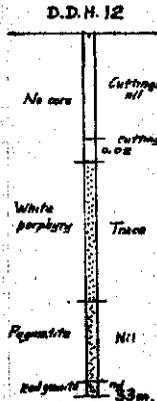
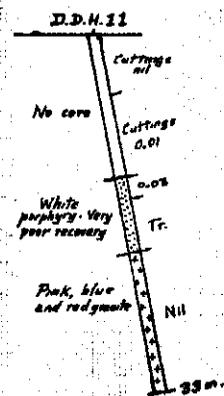
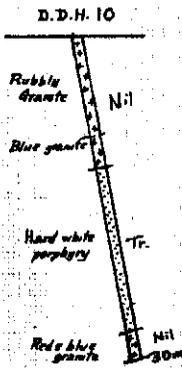
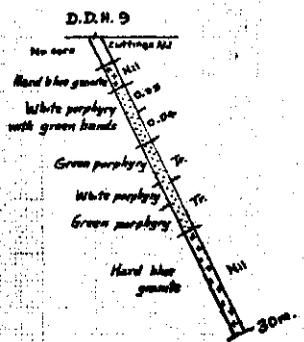
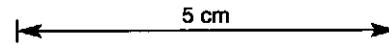
NOTE: HOLES NOT IN CORRECT RELATIVE POSITIONS.



HALEY'S WORKINGS

Scale 1:500

NOTE: HOLES NOT IN CORRECT RELATIVE POSITIONS

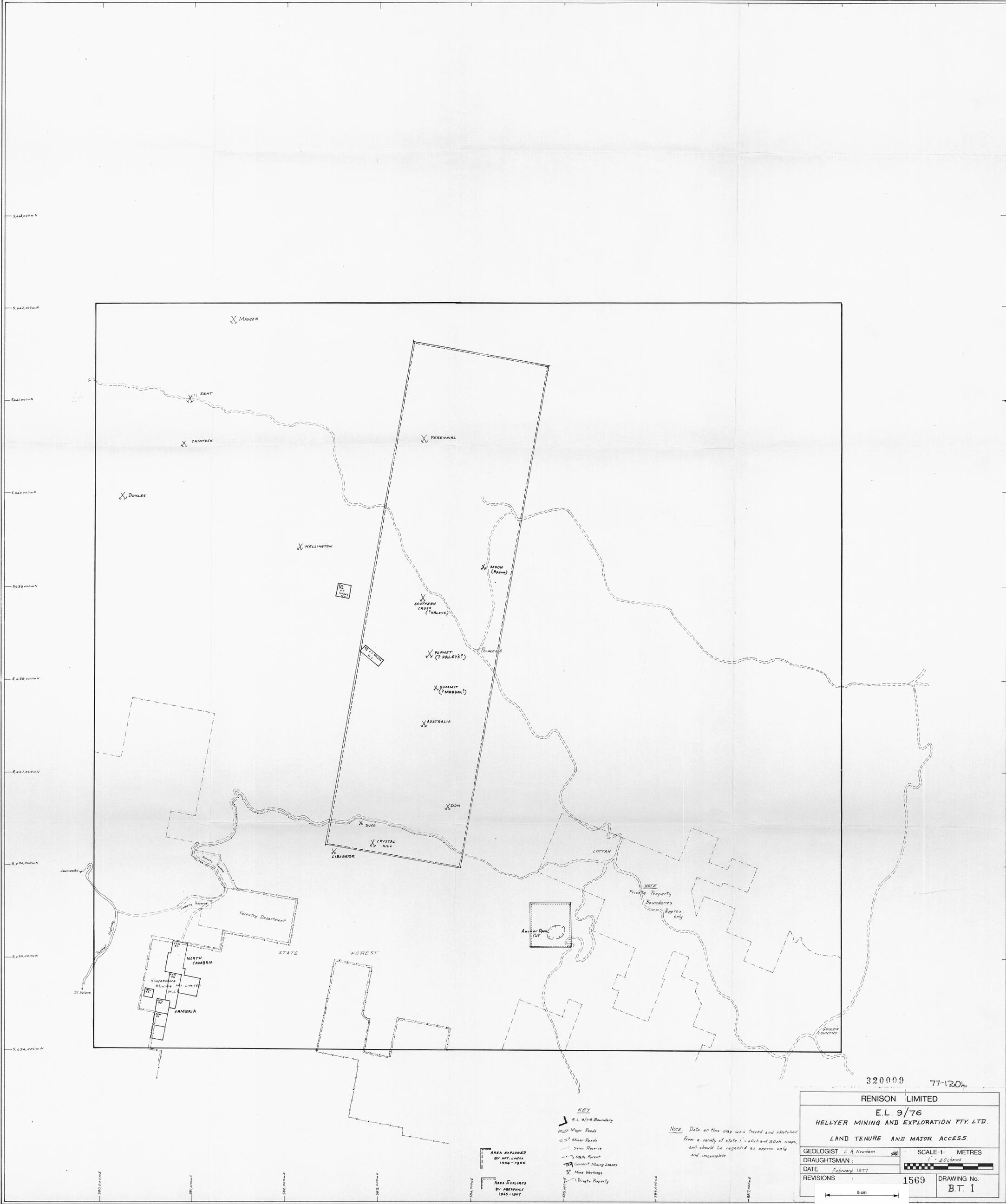


**DIREENS
LODE**

NORTH HALEY WORKINGS

Scale 1:500

HOLES NOT SHOWN IN CORRECT RELATIVE POSITIONS



320009 77-1204

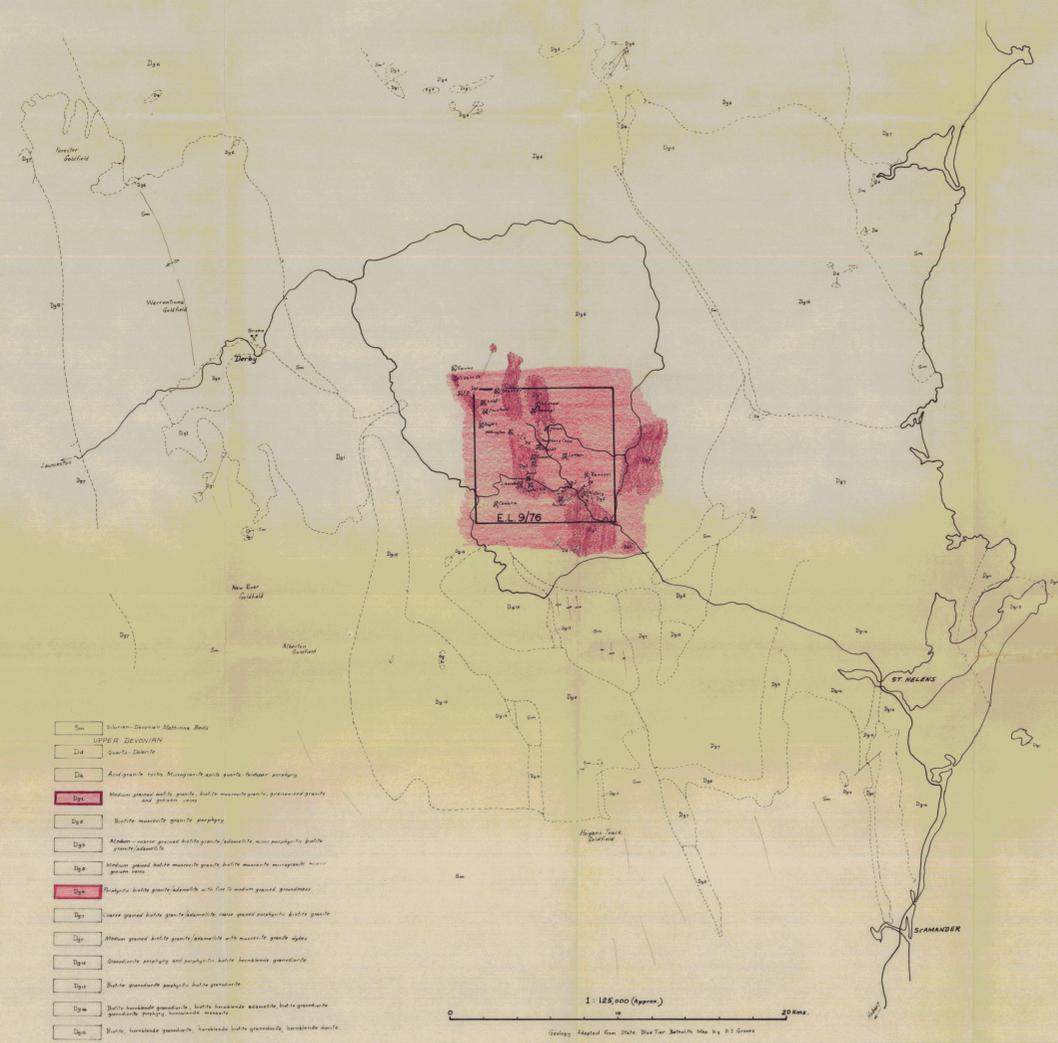
RENISON LIMITED	
E.L. 9/76	
HELLYER MINING AND EXPLORATION PTY. LTD.	
LAND TENURE AND MAJOR ACCESS	
GEOLOGIST: L. A. Newsham	SCALE: 1: METRES
DRAUGHTSMAN:	1" = 20 chains
DATE: February 1977	
REVISIONS:	1569 DRAWING No. B.T. 1
5 cm	

- KEY**
- B.L. 9/76 Boundary
 - Major Roads
 - Minor Roads
 - State Reserve
 - State Forest
 - Current Mining Leases
 - Mine Markings
 - Private Property

Note: Data on this map was traced and sketched from a variety of state 1" = 40 chain and 20 chain maps, and should be regarded as approx only and incomplete.

AREA EXPLORED BY HELLER 1906-1906

AREA EXPLORED BY ABERVILLE 1965-1967



LOWER CARBONIFEROUS - UPPER DEVONIAN INTRUSIVES

LM-10	Lower Devonian - Lower Carboniferous	Ca	Granite
LM-11	Lower Devonian - Lower Carboniferous	Cb	Granite
LM-12	Lower Devonian - Lower Carboniferous	Cc	Granite
LM-13	Lower Devonian - Lower Carboniferous	Cd	Granite
LM-14	Lower Devonian - Lower Carboniferous	Ce	Granite
LM-15	Lower Devonian - Lower Carboniferous	Cf	Granite
LM-16	Lower Devonian - Lower Carboniferous	Cg	Granite
LM-17	Lower Devonian - Lower Carboniferous	Ch	Granite
LM-18	Lower Devonian - Lower Carboniferous	Li	Granite
LM-19	Lower Devonian - Lower Carboniferous	Lj	Granite
LM-20	Lower Devonian - Lower Carboniferous	Lk	Granite
LM-21	Lower Devonian - Lower Carboniferous	Ll	Granite
LM-22	Lower Devonian - Lower Carboniferous	Lm	Granite
LM-23	Lower Devonian - Lower Carboniferous	Ln	Granite
LM-24	Lower Devonian - Lower Carboniferous	Lo	Granite
LM-25	Lower Devonian - Lower Carboniferous	Lp	Granite
LM-26	Lower Devonian - Lower Carboniferous	Lq	Granite
LM-27	Lower Devonian - Lower Carboniferous	Lr	Granite
LM-28	Lower Devonian - Lower Carboniferous	Ls	Granite
LM-29	Lower Devonian - Lower Carboniferous	Lt	Granite
LM-30	Lower Devonian - Lower Carboniferous	Lu	Granite
LM-31	Lower Devonian - Lower Carboniferous	Lv	Granite
LM-32	Lower Devonian - Lower Carboniferous	Lw	Granite
LM-33	Lower Devonian - Lower Carboniferous	Lx	Granite
LM-34	Lower Devonian - Lower Carboniferous	Ly	Granite
LM-35	Lower Devonian - Lower Carboniferous	Lz	Granite

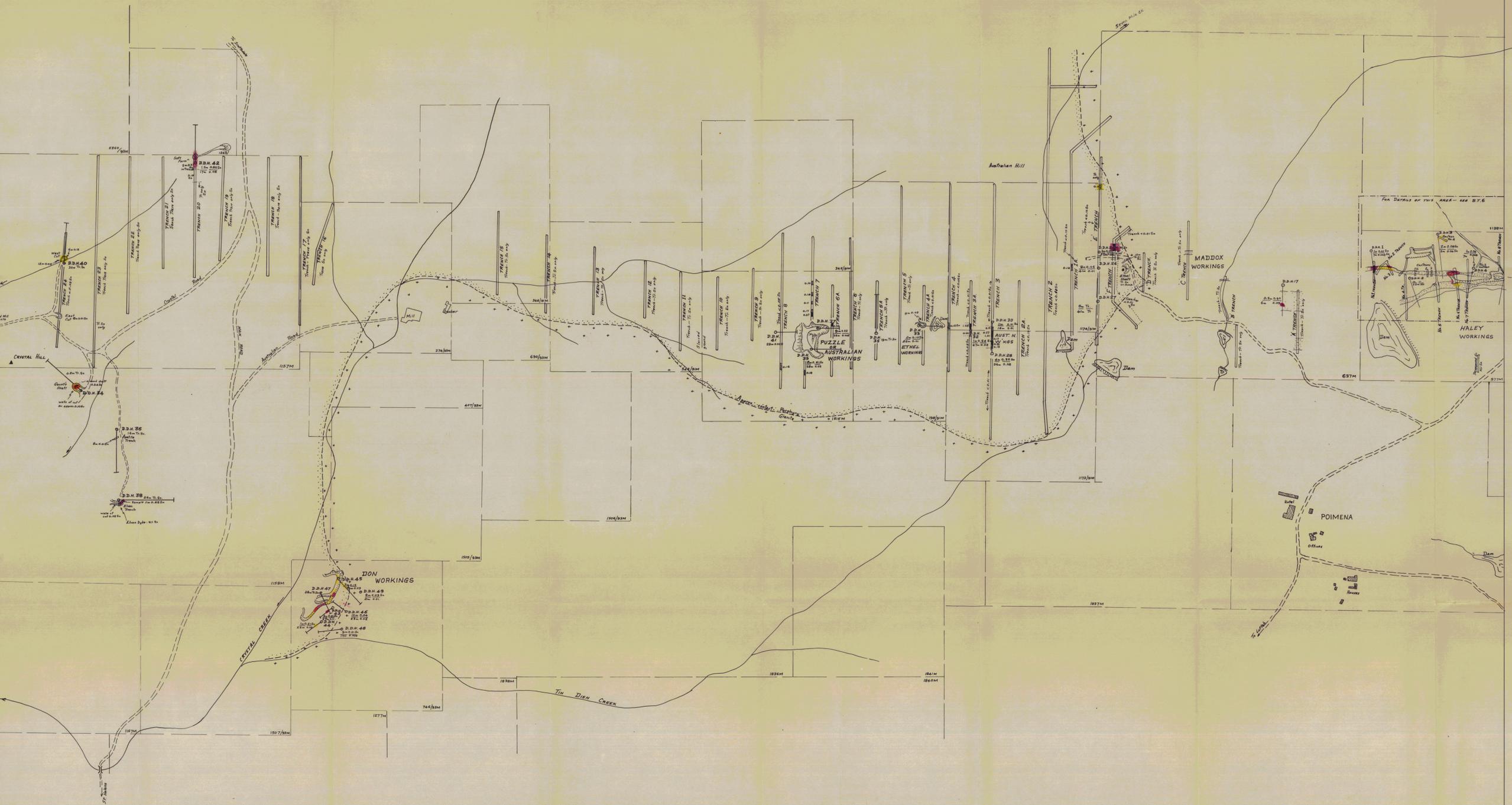
Sm	Sturt-Darwin Batholith
Dm	Devonian Intrusives
Dd	Devonian Intrusives
Dc	Devonian Intrusives
Db	Devonian Intrusives
Da	Devonian Intrusives
D9a	Devonian Intrusives
D9b	Devonian Intrusives
D9c	Devonian Intrusives
D9d	Devonian Intrusives
D9e	Devonian Intrusives
D9f	Devonian Intrusives
D9g	Devonian Intrusives
D9h	Devonian Intrusives
D9i	Devonian Intrusives
D9j	Devonian Intrusives
D9k	Devonian Intrusives
D9l	Devonian Intrusives
D9m	Devonian Intrusives
D9n	Devonian Intrusives
D9o	Devonian Intrusives
D9p	Devonian Intrusives
D9q	Devonian Intrusives
D9r	Devonian Intrusives
D9s	Devonian Intrusives
D9t	Devonian Intrusives
D9u	Devonian Intrusives
D9v	Devonian Intrusives
D9w	Devonian Intrusives
D9x	Devonian Intrusives
D9y	Devonian Intrusives
D9z	Devonian Intrusives

1570

320010 77-1204

RENISON LIMITED
E.L. 9/76
RELLYER MINING AND EXPLORATION PTY. LIMITED
LOCATION AND REGIONAL GEOLOGY

GEOLOGIST :
DRAUGHTSMAN :
DATE :
REVISIONS :
SCALE 1:125,000 METRES
DRAWING No. BT 2



- Tin bearing porphyry or bastion
- Granite - generally considered non-tin bearing
- 0.1-0.2 Dm } In trenches
- 0.2-0.5 Dm } In trenches
- DDH Completed 1964 by Mt. Lyell

320011 77-1204

RENISON LIMITED
 BLUE TIER AREA N.E. TAS.
 SAMPLING COMPLETED BY MT. LYELL
 1904 - 1906

GEOLOGIST
 DRAUGHTSMAN
 DATE
 REVISIONS

SCALE 1:24000 METRES
 1571
 DRAWING No.
 BT 3A

SHEET 3A SHEET 3B

1571



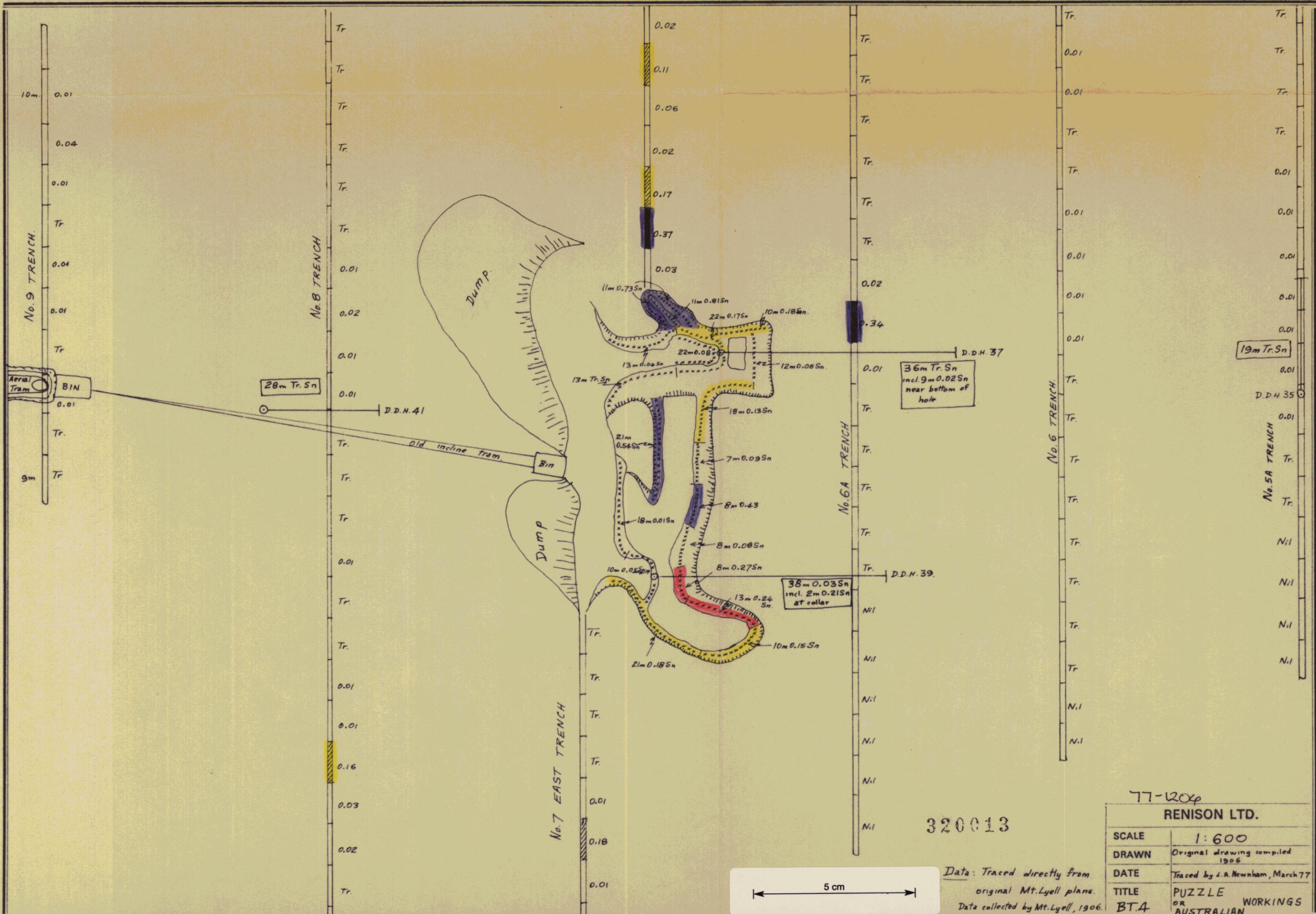


1572

* Tin bearing porphyry or fine flow
 * Granite, generally considered non-tin bearing
 0.1-0.2 gm } In Trenches
 >0.2 gm }
 1:250 Completed by Mt. Lyell 1906.

320012
 77-1204
 RENISON LIMITED
 BLUE TIER AREA, N.E. TASMANIA
 SAMPLING COMPLETED BY MT. LYLELL
 1904 - 1906 1572
 GEOLOGIST
 DRAUGHTSMAN
 DATE
 REVISIONS
 SCALE 1:2500 METRES
 Completed from
 original by S.A.L.
 Original 1906
 Tracing 1977
 DRAWING No.
 B.T. 3 B
 5cm

SHEET 3A
 SHEET 3B

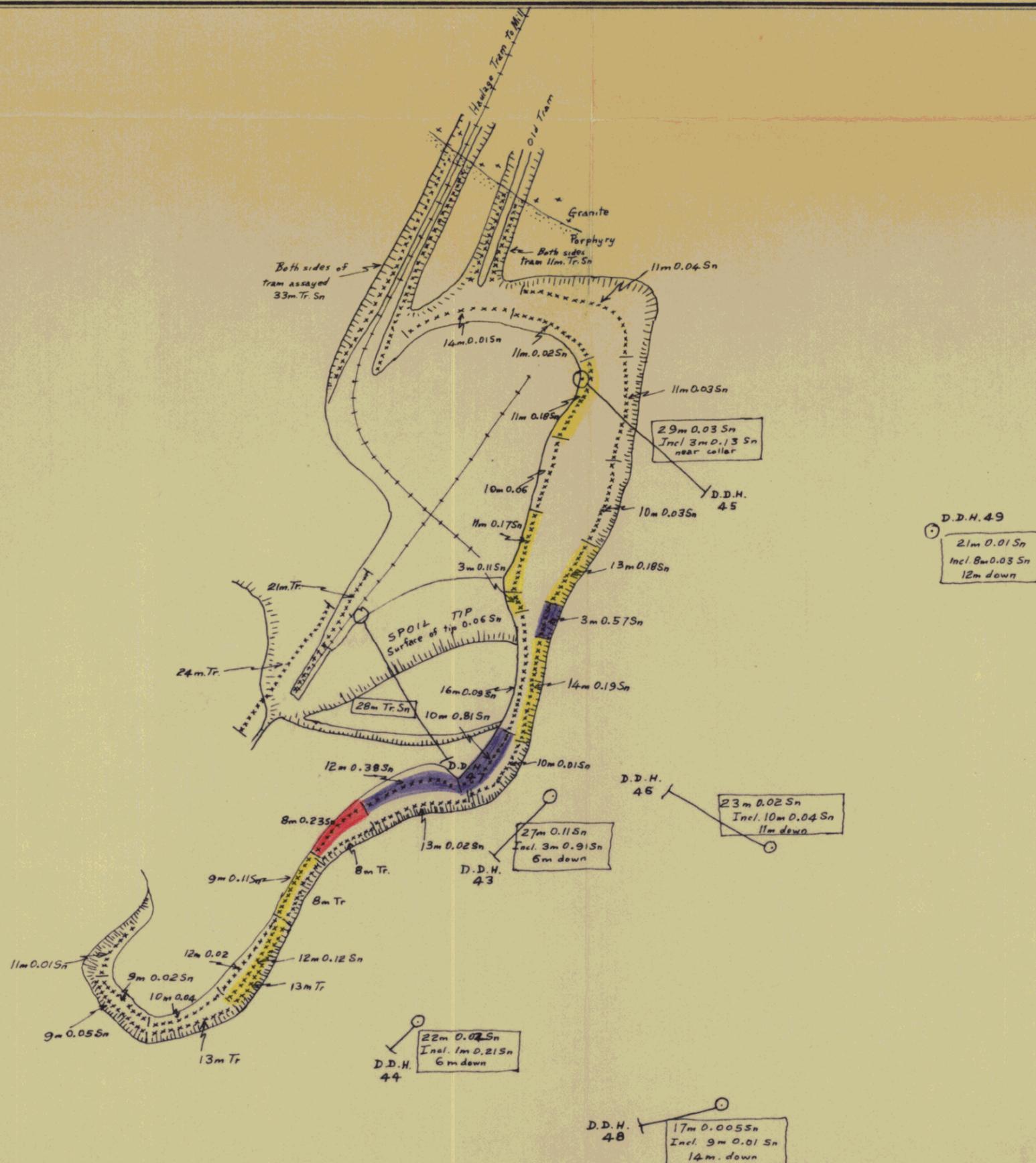


320013

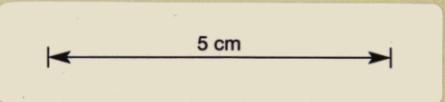
Data: Traced directly from original Mt. Lyell plans. Data collected by Mt. Lyell, 1906.

77-204

RENISON LTD.	
SCALE	1:600
DRAWN	Original drawing compiled 1906
DATE	Traced by L.A. Newnham, March 77
TITLE	PUZZLE WORKINGS OR AUSTRALIAN
BT.4	



320014

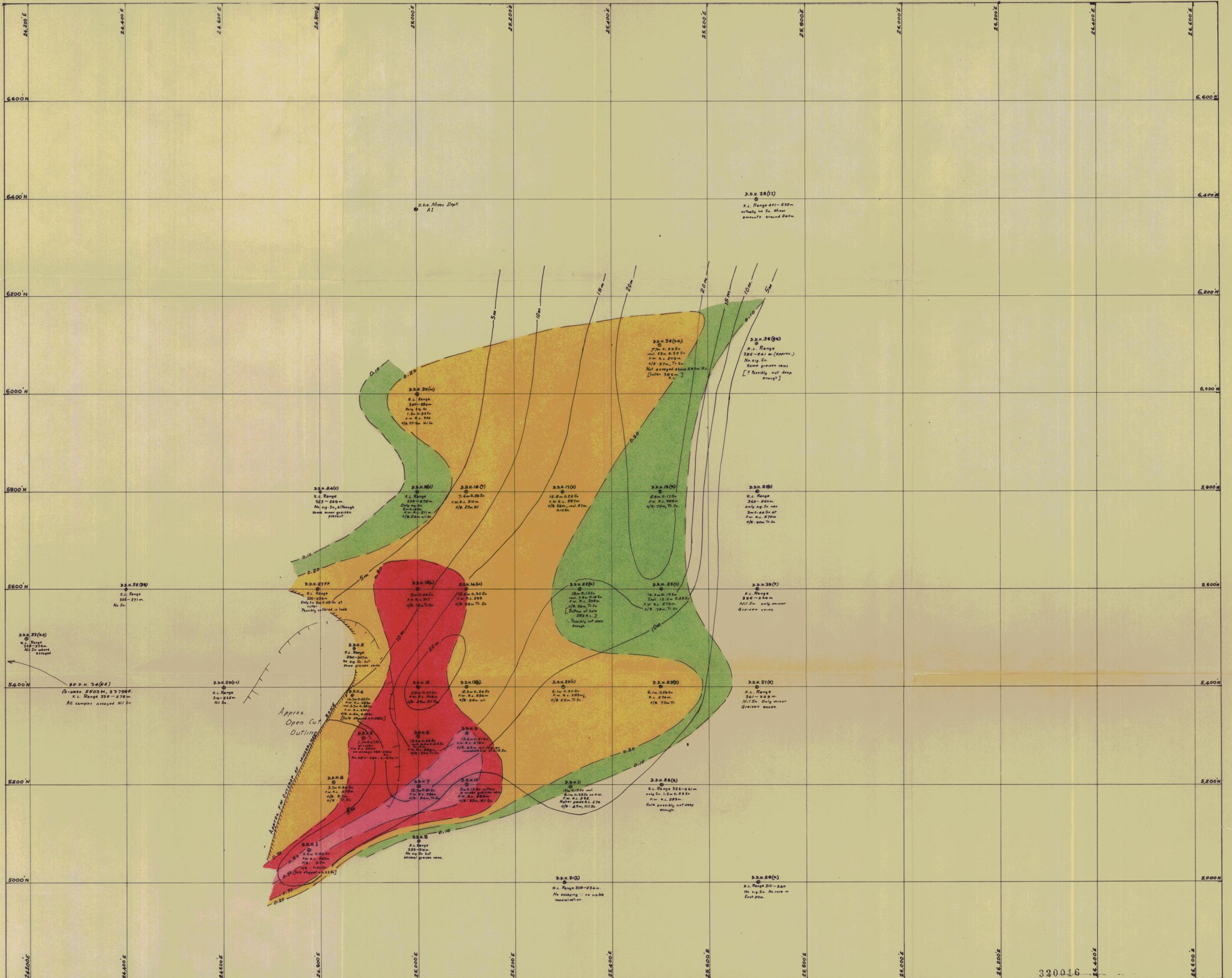


77-1204

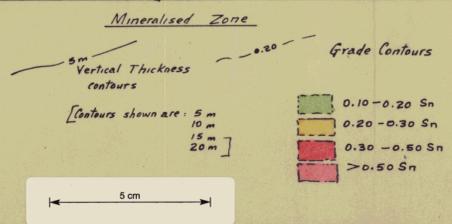
RENISON LTD.

SCALE	1:600
DRAWN	Original drawing compiled 1906
DATE	Traced by L.A. Newham, Mar. 1977
TITLE	DON WORKINGS
BT. 5	

Data: Traced directly from original Mt. Lyell plans. Data collected 1906 by Mt. Lyell

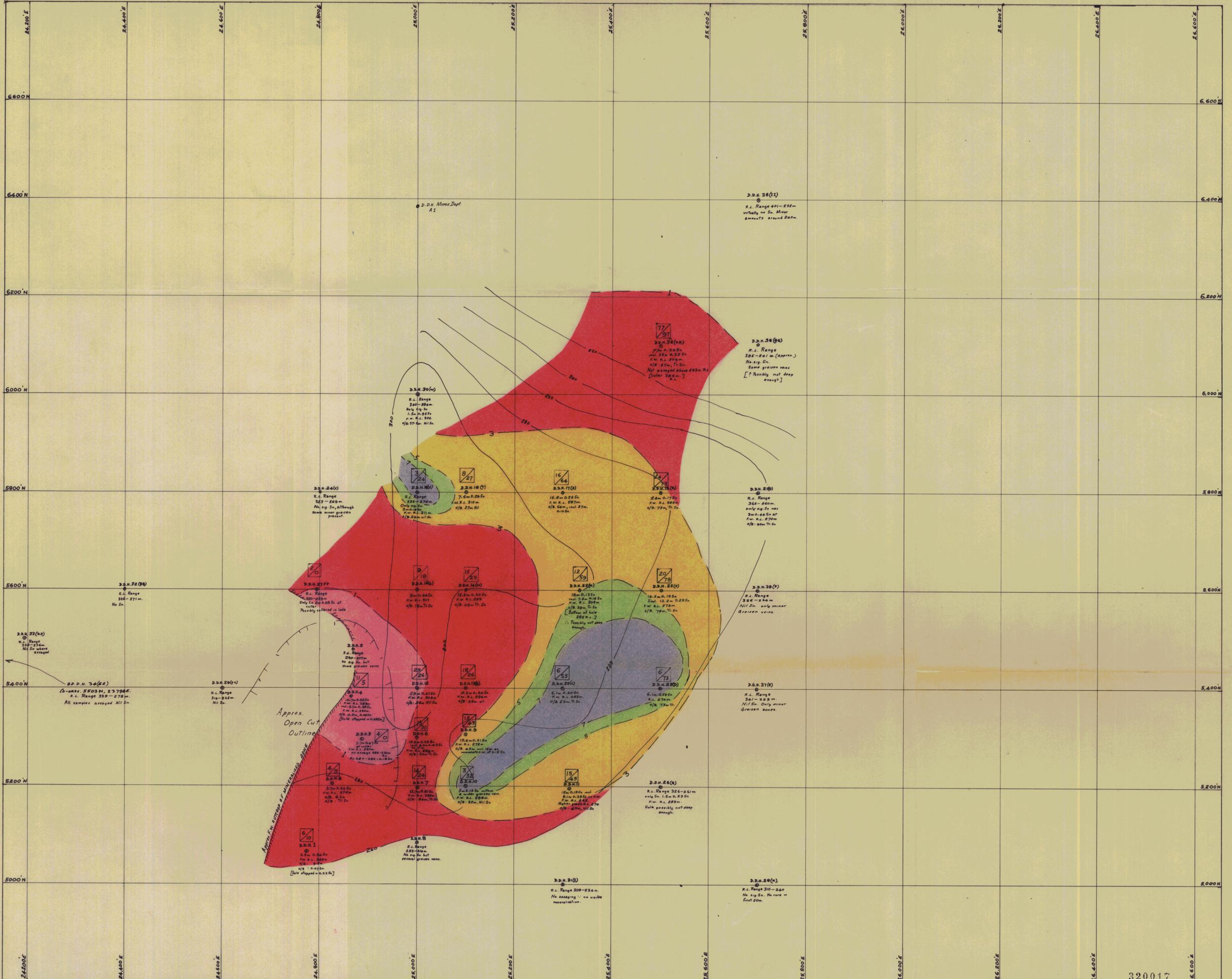


Drilling performed by Aberfoyle 1965-66



320016

RENISON LIMITED	
ANCHOR MINE - BLUE TIER AREA	
DIAMOND DRILLING RESULTS	
GRADE AND THICKNESS CONTOURS	
GEOLOGIST : L. A. Newham,	SCALE 1:1000 METRES
DRAUGHTSMAN :	
DATE : Apr 77	REVISIONS
1576	DRAWING No. B.T. 8
Fig 8	77-204



Drilling performed by Aberfoyle 1965-66.

Ratio of vertical ore thickness / vertical overburden thickness for a given drill hole

MINERALISED ZONE

3 - Overburden - Ore Ratio Contour

Footwall Contours R.L. Shown is metres above s.l.

> 7:1
 5-7:1
 3-5:1
 1-3:1
 < 1:1

320017

REINSON LIMITED	
ANCHOR MINE - BLUE TIER AREA	
DIAMOND DRILLING RESULTS	
FOOTWALL CONTOURS AND OVERBURDEN RATIOS	
GEOLOGIST : L. A. Newham	SCALE 1:1000 METRES
DRAUGHTSMAN :	
DATE : Apr 77	
REVISIONS	77-1204
Fig 9	1577
DRAWING No.	B.T. 9