FIG 3

Coarse-grained granite & greisen highly foliated, imparted by close fractures (f_2) spaced ⅛"-½" apart, which provide a structural control for both cassiterite (C2) & sulphides (S) irregularly disseminated along these planes. Fractures cut both rock types but (C2) and (S) especially rich in greisen which lies underfoot & dips north at base of excavation beneath granite face. Intersecting sets C1 & C2 stringers form diamond pattern of emplacement & are related to two separate generations of tin.

Greenish-grey greisened granite. Relic feldspars much altered to green talc-sericite aggregate. Rock is seamed with veinlets of chert, chert & fluorite or fluorite ranging from a hairline to ¼" in width. Irregular, disseminated sulphides generally ½"-1" across; but sporadic Zn patches may attain 6" in size. Greisened rock 3' wide capped by 3'-4' of unmineralized coarse-grained granite, & appears to dip northward beneath it.

Joint planes spaced ½"-1' apart. Some contacts of greisened rock with granite controlled by joints of this set; otherwise irregular contact.

Succession of joint planes (up to 2' apart) which exercise a rough control on the formation of greisened rock. Area of greisened rock very irregular, grading into coarse-grained granite.

Fluorite-coated joint planes.

The crystal quartz body consists of green, fine-grained greisened rock traversed by coarsely crystalline linear quartz bands up to 6" wide, & also contains lenses of crystalline quartz 2' wide. Irregular, massive sulphide (galena, Zn) pockets intimately associated with crystal quartz areas, or in tabular bands between them. Disseminated sulphides (<¼" in size) spattered through greenish greisen host rock. Quartz-fluorite stringers traverse greisen. Fluorite later than quartz.
The crystal quartz body apparently sheared but dip variable. Pug zones up to 4" wide filled with granular sulphides (mostly Pb & Fe), resembling buckshot sulphide metallization.

Base of face in sheared, brecciated material (maximum width 3'), grading upwards over 3' into very siliceous greisen carrying disseminated, irregular patches of sulphides <½" in size & fluorite blebs up to 1" long. Greisen grades into coarse-grained granite about 5' above floor level. Contact highly irregular. Sulphides comprise disseminated Fe, Cu, Pb, & Zn.

Fluorite veinlets ⅛" wide filling joints of this set.

Quartz crystals in greisen intergrown with sulphides, mainly Zn, in interstices

Closely spaced jointing over 8' section. Sulphides & cassiterite emplaced in & controlled by joints of this system which do not extend into overlying crystal quartz greisen body.

⅛" wide cassiterite (C2) stringers in coarse-grained granite, localized by closely spaced foliation.

Joint wall lined with 3"-4" thick crystal quartz selvage adhering to 1'-2' wide quartz-greisen zone which grades sharply but irregularly into coarse-grained granite. Quartz crystals & sphalerite intergrown in the crystalline selvage.

Prominent jointing traverses granite, quartz greisen bordering open cut and crystal quartz body.

Cu stained

Cu stained

VENTILATION SHAFT

Rubble

Ore

Rubble

Covered

qtz

qtz

qtz

ORE PASS

MAG.

LEGEND

- Coarse-grained granite.
- Quartz greisen aureole.
- Crystal quartz / greisen core.
- qtz. Quartz.
- Pb. Galena.
- Zn. Sphalerite (marmatite?)
- Cu. Chalcopyrite
- Fe Pyrite
- S ═══ S Sulphide vein.
- Cassit. (C1 or C2) Cassiterite of 1st. or 2nd. generation, in greisen & granite fractures f_1 & f_2 respectively.
- Outline of open cut on surface.
- Corresponding outline at base of face.
- Geological boundary
- Top outline of lower bench.
- Corresponding outline at base of bench.
- 70 Strike & dip of inclined & vertical joints.
- 70 / f_2 Strike & dip of close fractures f_2 in foliated (fol.) rock.
- 80 / f_1 Strike & dip of healed fractures (f_1)
- Trace on surface & apparent dip of fault or shear.
- 40 F True strike & dip of fault or shear.
- ~ ~ ~ Sheared pug zone.

DEPARTMENT OF MINES — TASMANIA

REX HILL MINE — OPEN CUT

DATE AUGUST 1966	0 5 10 15 SCALE OF FEET
GEOLOGIST G. URQUHART	
DRAUGHTSMAN P. NANKIVELL	MAP SHEET & N° BEN LOMOND 48
REVISIONS	FILE N° 2928

5 cm

2928

765

Reduce to 4"

36