

TR 10-49-51

## 9. FLINDERS ISLAND TIN DEPOSITS

by R. Jack

Following my recent visits to Flinders Island to investigate the tin deposits there, I now recommend that further investigation by boring of these deposits is warranted in the following areas:

1. Tanners Bay Tinfield.
2. Pats River Tinfield near the junction of North Pats River and Officers Creek.
3. The headwaters of Officers Creek.
4. The headwaters of Leventhorpe Creek.

This preliminary testing of the four areas involves approximately 2000 feet of boring. Access to most of the areas recommended is good but the flats on Leventhorpe Creek may be difficult of access in wet weather. It is suggested that the areas be drilled in the order listed.

### **Tanners Bay Tinfield**

The Tertiary lead here appears to be about 15 feet deep, and consists mainly of fine gravel and grit with some thin interbedded clay bands. At the bottom of this sequence there is a 6 inch gravel bed with pebbles to 2 inches diameter. Carbonaceous matter is common in the lower grits and pyrite is also present; the lead bottoms on granite. The lead apparently heads in a NW-SE direction across the present drainage and has been worked on both sides of the creek. It appears that the workings ceased mainly because of the trouble in disposing of the tailings and some of the workings E of the creek do not appear to have been bottomed so it is possible that depths of more than 15 feet could be met in boring. Two short lines of bore holes are recommended here to test the ground ahead of and below the old workings; drilling at 50 feet spacing is suggested as the lead is narrow and only short drill lines proposed. Approximately 350-400 feet of drilling would be involved in this initial investigation, further boring being necessary if this preliminary boring is encouraging.

### **Pats River Tinfield near the Junction of North Pats River and Officers Creek**

Tin-bearing gravels show on the surface and can be followed for  $\frac{3}{4}$  of a mile from the creek and river junction to the council gravel pits. Locally the gravels are well cemented and are estimated to be 20-25 feet deep where they are cut by North Pats River. The topmost gravels are fine,  $\frac{1}{4}$  to 1 inch, with some beds of clayey gravel; below this fine gravels continue to within 6 inches to 1 foot of the granite bedrock which is overlain by a bed of coarse 2-4 inch gravel.

Two drill lines are recommended between the old workings and the gravel pits, and 50 feet spacing of bore holes is again suggested as the drill lines are short and the lead fairly narrow. An estimated 500 feet of boring would be necessary in this initial testing.

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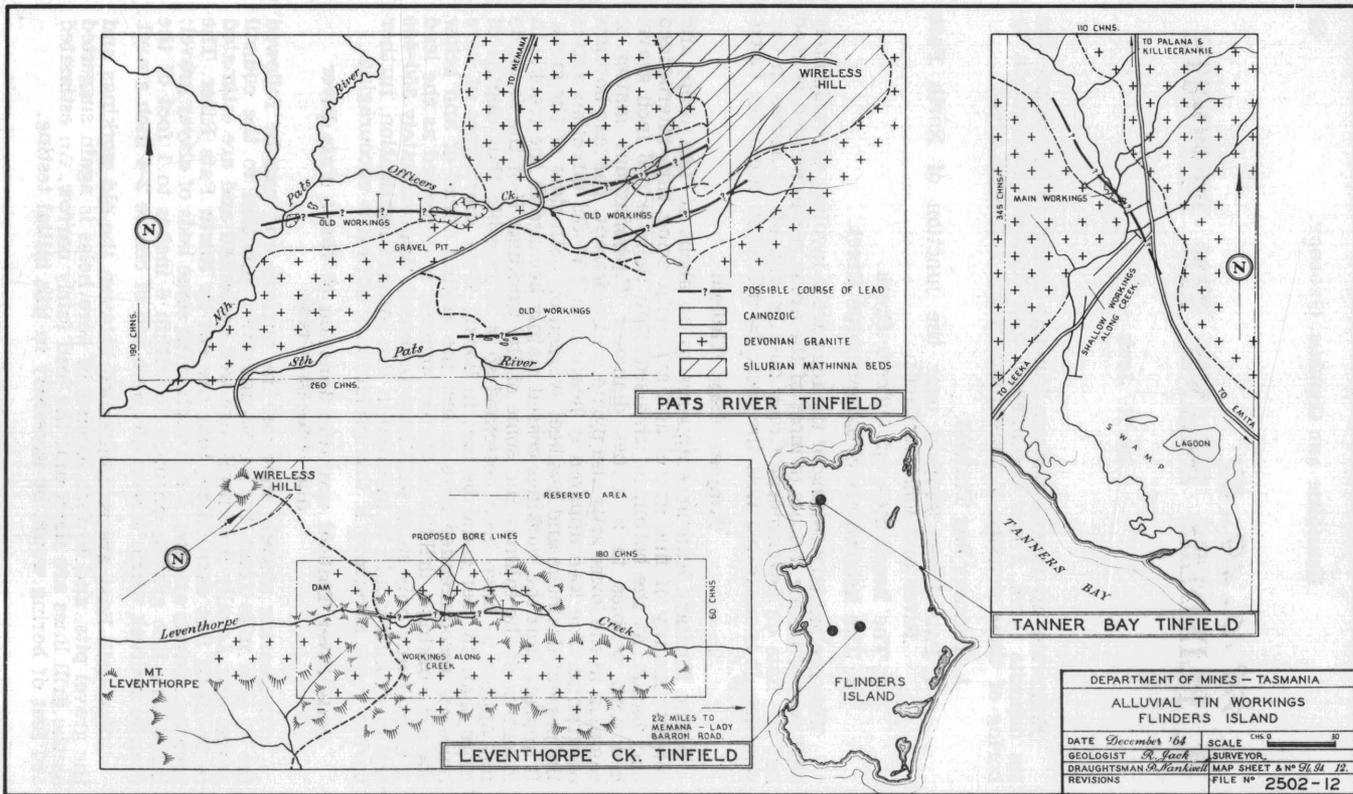


FIGURE 13.

### Officers Creek Headwaters

The alluvials here are 10-15 feet thick and consist of 12-18 inches of heavy wash overlain by grit and some clay. They occupy a broad flat valley at the base of the Darling Range. The granite-Mathinna Beds contact occurs in this valley and it is thought that most of the tin has been shed from near this contact.

It is suggested that one line of holes be bored across this valley, which is approximately  $\frac{3}{4}$  of a mile wide. The spacing of the holes could be varied from 50 to 200 feet apart depending on any tin being encountered; some 500-600 feet of drilling would be necessary.

### Leventhorpe Creek Headwaters

This area lies on the E side of the Darling Range and is opposite the headwaters of Officers Creek. The old workings show a maximum of 12 feet of sediments, mainly of fine gravel and grit but with a coarse gravel bed of 9-12 inches beneath the fine gravel and on top of the granite bedrock. The area is near land already developed by the Agricultural Bank and some testing is warranted here before releasing any of the land for future purchase.

Three short drill lines are proposed, one on each of the flats below the old workings with 50 feet spacings. Approximately 450 feet of boring would be sufficient to test this potentially tin-bearing ground.