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**EXAMINATION OF RADIOMETRIC  
ANOMALIES BETWEEN GLADSTONE  
AND ST. HELENS**

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**SUMMARY**

In 1958 the Bureau of Mineral Resources airborne scintillograph recorded six anomalies in three areas between Gladstone and St. Helens in north-eastern Tasmania. These were recently investigated on the ground by geiger counter but no readings were noted greater than twice background.

## INTRODUCTION

In the period January to March 1958, a scintillograph survey was carried out by the Bureau of Mineral Resources using an Auster aircraft over selected areas of country between Launceston and St. Helens in north-eastern Tasmania. The aircraft flew at an average altitude of 200 feet and the scintillograph effectively scanned strips of ground 500 feet wide. Six anomalies were detected, two near Ansons River about five miles apart and the other four close together near the Mussel Roe River. A map G283-3, showing the position of these anomalies has been published by the Bureau.

## EXAMINATION

### *Anomalies 1-4*

These are located about seven miles south-south-east of Gladstone along one of the headwaters of the Mussel Roe River and form a line a mile long in a south-easterly direction. The area consists of granitic gravel with no granite outcrop of importance. The background count was 75 c.p.m. and this was not exceeded at any of the positions of anomalies shown. Readings on actual granite outcrops were 110 c.p.m.

However one mile to the south-west is a belt of red granite, showing abundant orthoclase and bounded to the north-east by greisen and to the south-west by coarse white granite. The direction of this belt is north-west and it is thus parallel to the line of anomalies and about the same length. Readings along this belt show uniform values of 180-190 c.p.m. which drop to 110-120 c.p.m., when passing on to the white granite. The greisen gives similar readings to the red granite but they are more irregular. It would thus appear that the position of the anomalies should be one mile further west than shown on the map.

### *Anomaly 5*

This is located on the western bank of Ansons River just below the junction of Spurr Rivulet and about midway between St. Helens and Gladstone. Background reading in this area was 65 c.p.m. and readings on granite outcrops 100-110 c.p.m. The granite is the fine-grained white variety and outcrops to the north and west as far as the Fraser Rivulet. To the north and west the granite is gradually covered by gravels and broken blocks of the same rock. To the south and east the granite becomes a little coarser until about half a mile from the Spurr Rivulet bridge the rock grades into a grey, intermediate type. This rock outcrops in two hills, about one and a half miles long and a mile wide. Half a mile north-west of the bridge, the normal granite contains dykes of sheared porphyritic granite containing some sulphide mineralisation. Nowhere in this area was a count obtained more than 120 c.p.m.

### *Anomaly 6*

This is located five miles closer to St. Helens (south) than Anomaly 5 and round the headwaters of Ansons Rivulet. On the photo-map supplied by the Bureau, it is shown near the centre of a small partly developed farm. On both sides of the river, normal white granite outcrops. Background reading was 75 c.p.m. and the

granite outcrops showed 105 to 110 c.p.m. Nine hundred feet south of the anomaly and 300 feet east of the river are outcrops of pegmatite which give a slightly higher reading, 150 c.p.m. A reconnaissance of an area of radius of over two miles around the anomaly and stretching from the Last River to the Spurr Rivulet was made with the geiger counter (P.R.M. 200) but nothing of interest was recorded.