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GEOPHOTO RESOURCES CONSULTANT'S
RADIOACTIVE OCCURRENCE -
GLADSTONE, TASMANIA.

Radioactive Occurrence
Gladstone, Tasmania
by ~~Robert~~ Ford 1967
J.H. ~~Robert~~

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M E M O

February 7, 1969.

TO : R.H. BARTON

FROM : J.H. RATTIGAN

SUBJECT : RADIOACTIVE HOT SPOT, GLADSTONE, TASMANIA.

Attached is a brief report by B. Herd on a radiometric survey of a localised "hot spot" near Gladstone.

This "hot spot" while not indicating anything of economic importance in itself was of some interest in that it might indicate that uranium has been mobilised from granitic areas and concentrated in the relatively thick Cainozoic section. It was not entirely clear from Herd's report whether an excavated bedrock (granitic) hummock is responsible for the anomaly or whether it is located in Cainozoic sediments. The material submitted by the field party for analysis comprised clayey grits with carbonaceous strata seemingly typical of the superficial Cainozoic. The spectrum obtained by Gamma Ray Spectrometer analysis of this material definitely showed that uranium was the source of radioactivity and not thorium which might otherwise be suspected from the occurrences of monazite in the alluvial deposits of the district.

On February 6th I made an inspection of the occurrence in company with B. Herd. The workings for this are located in a very shallow (variable thickness to 3 feet) podsollic soil profile with a dark humic near surface layer over grits derived from granite and lying on soft weathered granite which was sliced for cassiterite.

The radioactive "hot spots" appear to be concentrated on old carbonaceous rocks and rootlets of scrubby trees which penetrated the weathered granite and served to precipitate uranium. They are biogeochemical uranium accumulations of very restricted extent and of no economic importance other than indicating the granitic areas are possible sources of trace uranium which may accumulate on degradation in superficial deposits.

The granite areas revealed several anomalies on old total count scintillometer surveys.

J.H. RATTIGAN.

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MEMORANDUM REPORT ON A RADIOACTIVE OCCURRENCE

NEAR GLADSTONE, TASMANIA

INTRODUCTION

A radioactive anomaly near Gladstone was brought to our attention by Mr. Calvert, the local police officer, during November 1968. The occurrence is located 2.1 miles south of Gladstone, adjoining the main Pioneer-Gladstone road, in workings about an old tin show about 30 feet east of the road.

The tin workings were cut in a stream bank by hydraulicing. The stream originates some 3000 feet uphill at the roadside and its drainage area is quite limited. Flowing on a gentle gradient it meets the Ringarooma River to the east.

The country consists of gently sloping plains covered by gum trees but very little undergrowth.

The workings are about 200 feet in length, 70 feet in width and about 20 feet deep. The material in the wash is mainly a poorly consolidated granite derived grit containing large fragments of quartz and mica.

RADIOMETRIC SURVEY

A survey was carried out by P. Vukotich and H. Summers in the area with a scintillometer. The instrument (a PRI 111B) was calibrated at .05 full scale deflection. Ground at the southern and northern ends of the workings gave only a background reading of the order of .003. The anomaly appears to be confined to a small area about 2 feet by 15 feet striking 150°. A small shaft, a few feet to the west of the anomaly, gave no significant reading and it is doubtful that the uranium came from excavated material at this point. The instrument was run around the outside of the workings. On the western edge no reading was recorded. The instrument reading .000 at every point. On the eastern edge a reading of .002 was held quite steady, even near the anomaly. As any small thickness of material will mask gamma radiation we were unable to make useful reading on the outside of the workings.

CONCLUSION

It would seem that the uranium occurs in the stanniferous sediments. The anomaly might be caused by a further concentration of uraniumiferous minerals during the hydraulic mining or from a sluice being set up at this point as it occurs in the original stream bed and consists of two mounds.

GEOPHOTO RESOURCES CONSULTANTS,
Geologist : B.R. HERD
Date : 28.12.68.

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TABLE 1

The radioactive occurrence at Gladstone, Tasmania.

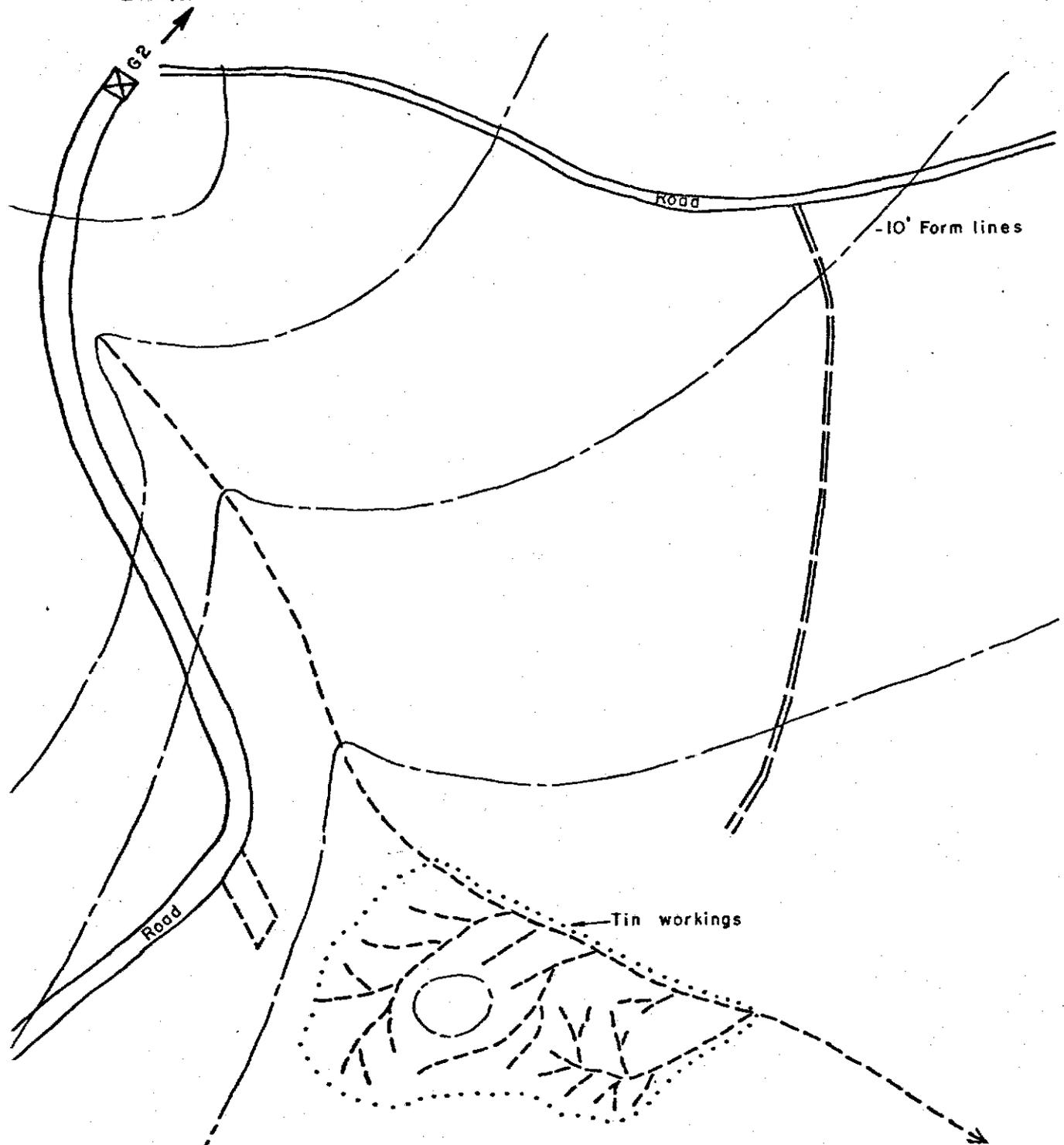
Data : Radiometric, Scintillometer PRI 111B De Luxe

Survey Record;

<u>Station</u>	<u>Reading</u>				
00+00	.025				
00+1S	.006				
00+1N	.007				
00+3N	.004				
00+5N	.006				
1S+1E	.024	1N+1E	.003	5N+1E	.005
+1W	.005	+1W	.004	+2W	.004
+2W	.005	+2W	.003	+4W	.003
+3W	.003	+4W	.003	+5W	.003
+4W	.002	+6W	.003		
+5W	.002				
+6W	.003				
00+1E	.003	3N+1E	.003		
+1W	.004	+2W	.004		
+2W	.002	+4W	.003		
+3W	.002	+5W	.005		
+4W	.002	+6W	.004		
+5W	.003				
+6W	.003				

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Gladstone
2 miles.



SKETCH OF TIN WORKINGS GLADSTONE
RADIOACTIVE ANOMALY
(Not to scale)



002.

SKETCH OF AREA RADIOMETRICALLY SURVEYED

093007

AT TIN WORKINGS NEAR GLADSTONE

