

DEPARTMENT OF MINES
SOUTH AUSTRALIA

Progress Report
on
PROSPECTING FOR ASBESTOS AND PHOSPHATE ROCK
IN THE KAPPA-ROBERTSON AREA

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1. ABSTRACT

Prospecting for asbestos and phosphate rock on the Kapunda sheet has been completed, and work begun on the Floriston sheet. Although 42 possible phosphate occurrences have been sampled, no economic deposit has been found. Small deposits of tremolite have been found in the altered upper part of the Kapunda marble north-east of Kapunda.

2. INTRODUCTION

From the Kapunda district has come in the past much of the State's phosphate rock, while in the nearby Robertstown region are many small asbestos deposits. At the conclusion of his report (1957, Mining Review 103, pp. 58-73) on the asbestos of the Robertstown and Truro districts, D. King recommended that systematic prospecting for phosphate rock and asbestos be carried out. Prospecting for the two minerals can be carried out simultaneously since they are both associated with limestone.

Since October 13, 1958, Departmental prospector T. Antmanis has been searching for these two minerals on the Kapunda and Floriston military sheets. This report briefly summarizes his activities.

3. WORKING METHODS

The prospector was initially shown some of the known phosphate and asbestos deposits. Phosphate rock is difficult to recognize, hence specimens and soil samples are collected from all ferruginous and manganiferous areas within limestone. Much of the ground is covered in a short Land Rover. A geological map or aerial photographs (with limestone areas marked) serve as a base map.

Periodically the prospector shows a geologist the areas which might merit more detailed examination.

4. RESULTS

Between October 13 and November 5 all limestone areas on the Kapunda one-mile geological sheet were examined. Small occurrences of tremolite, not previously recorded, were found near old copper workings on sections 1510, 1511 and 1514, Hd. Kapunda. The tremolite is mostly brittle and has a fibrous texture. The length of fibres is about one inch. The outcrop may be related to the faulting at the top of the Kapunda marble. Petrologic reports indicate that the tremolite is associated with dolomite and scapolite-bearing rocks. Thirty possible phosphatic areas on the Kapunda sheet were sampled but found to carry no or very little phosphate.

On November 8, prospecting was started on the Floriston sheet, using aerial photographs. This sheet includes many of the blue asbestos deposits north of Robertstown. No new occurrences of asbestos have yet been found. Twelve possible phosphate occurrences were sampled but analytical results do not indicate any economic concentrations of phosphate.

It will probably take a further month to complete the coverage of the Floriston sheet.

5. CONCLUSIONS

Although results have so far been disappointing, it is recommended that prospecting of the Floriston sheet be completed.

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