

DEPARTMENT OF MINESSOUTH AUSTRALIA.MAGNESITE DEPOSIT ON BALCANOONA STATION.

Following a request for geological advice on a deposit of magnesite on Balcanoona station by Mr. C. F. C. Crisp of Netherby, an inspection was made on January 13th, 1955. Claim No. 1933 is pegged over a bed of magnesite which forms part of the Upper pre-Cambrian Tapley Hill Series in this part of the Flinders Ranges.

LOCATION AND ACCESS.

The deposit is situated in rugged country eight miles West of Balcanoona H.S. on the western flanks of Mt. McTaggart ridge. Balcanoona lies on the western edge of the Lake Frome Plains at the foot of the Northern Flinders Ranges 60 miles by road from Copley. The deposit is approached from Balcanoona H.S. via a rough track along the bed of Balcanoona Creek for a distance of about eight miles, the last $2\frac{1}{2}$ miles beyond Weetootla Well being difficult of access even with 4-wheel drive vehicle. A claim is held in the vicinity of Weetootla Spring.

PLANS.

The accompanying plans show the location and geological features of the magnesite deposit.

GEOLOGY.

A thick bed of sturtian tillite which carried an assortment of large erratics forms the backbone of the rugged Mt. McTaggart ridge trending here in a north easterly direction. It is successively overlain on its western aspect by 400 feet of laminated slates, 90 feet of dolomite, 90 feet of calcareous ribbon slates, 1200 feet of magnesite, with dolomites and these by calcareous slates — being the lowest members of the Tapley Hill Series.

Detailed sampling of the magnesite beds followed by partial analysis of the samples would be necessary before a

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reliable assessment of the grade of the material could be made. Partial analyses made on several specimens indicate that the white coarse grained magnesite is fairly pure; partial analyses of two 'grab' samples are as follows:—

- (1) 97.9% MgCO_3 0.6% CaCO_3
- (2) 98.1% " 0.9% "

Interbedded with the magnesites are fine grained, white and dense dolomite bands, a typical analysis being as follows:— 54.4% CaCO_3 45.0% Mg CO_3

This deposit of magnesite is most unusual in its crystal form and in its occurrence in Tapley Hill Slates. The only deposits of magnesites previously exploited commercially in the Flinders Ranges are fine grained (Cryptocrystalline) beds of the "Magnesite Series".

CONCLUSIONS.

There is obviously a large quantity of magnesite present on the claim with extensions along the strike of the beds. Detailed sampling of the deposit is necessary for an assessment of grade to be made.

F. H. Faulding and Co. Ltd. are the only Adelaide buyers of magnesite, the raw material being valued at £2.10.0—£3.10.0 per ton on trucks, Copley. There are other deposits of magnesite nearer Copley being worked at the present time.

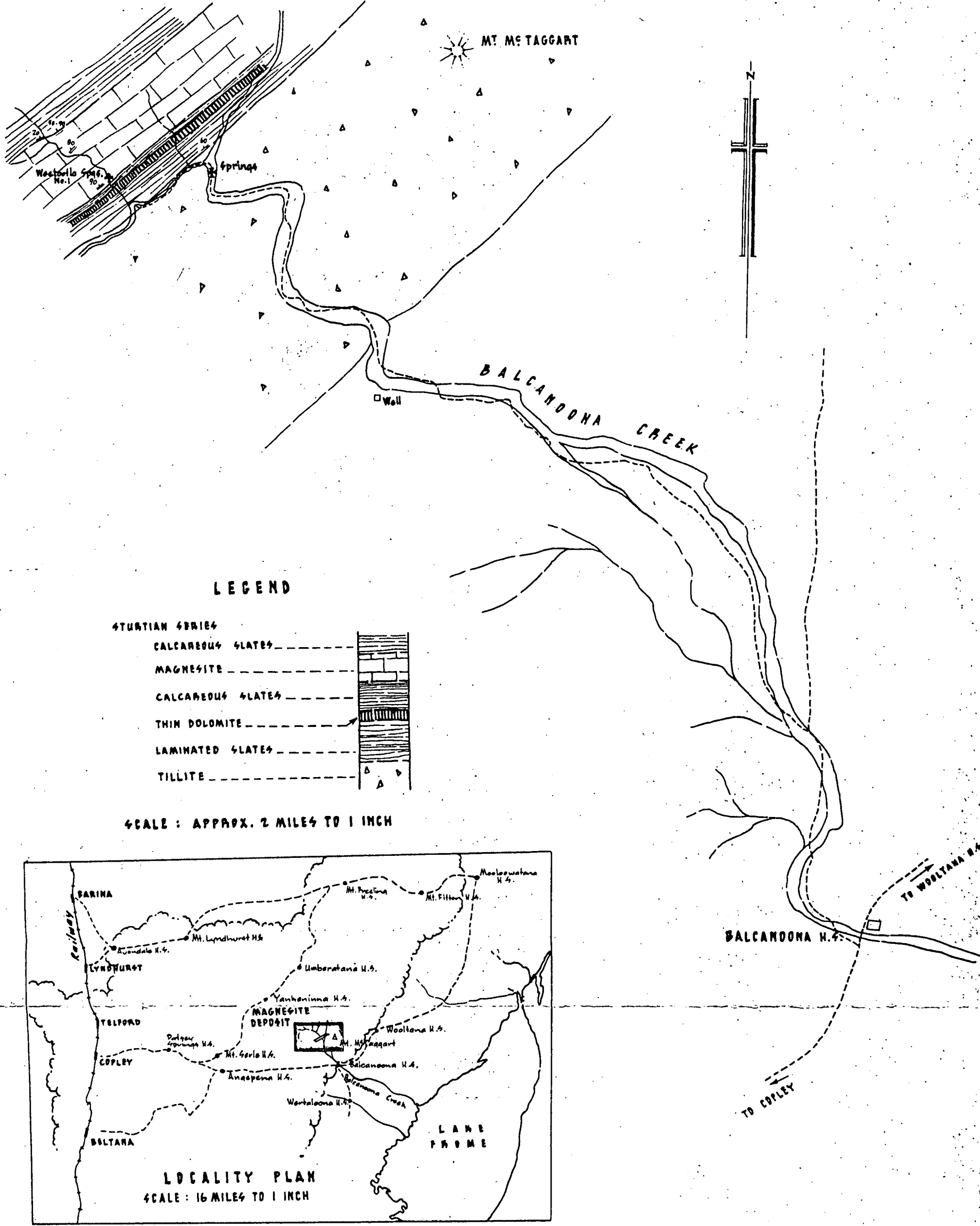
If the grade proves to be uniformly high over the whole deposit its value will depend on the economics of road construction into the deposit and road haulage of the mineral 70 miles to the Copley rail siding.

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R. K. JOHNS.

GEOLOGIST.

7/2/55.

RKJ/JBA



TO ACCOMPANY REPORT BY R.W. JOHNS

S.A. DEPARTMENT OF MINES			
BALCANDONA STATION MAGNESITE DEPOSIT			
SKETCH PLAN SHOWING LOCATION & GEOLOGICAL FEATURES			
Approved	Passed	Scale: 1" = 2 M.	55-27 Cd Date: 22. 1. 65
	Drn. Tcd. Ctd. Exd.		
Director			
Amendment	Exd.	Date	