DEPARTMENT OF MINES
SOUTH AUSTRALIA

SERPENTINIZED MARBLE DEPOSIT NEAR COWELL

Part Section 116, Hundred Minbrie

- H.A. Schiller -

by

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Geologist
HYDROGEOLOGY SECTION

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FIGURES

Plan No.	Title	Scale
S4691	Serpentinized marble deposit Section 116, Hundred Minbrie. (H.A. Schiller).	1 inch = 1 mile

Rept. Bk. No. 61/83
G.S. No. 3263
D.M. 1012/65

23rd September, 1965

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LOCATION

Part Section 116 (formerly Section 2C) Hundred of Minbrie, County of Jervois, about 12 miles due north of Cowell and four miles west of the main highway to Port Lincoln. Mineral claims currently held by the landowner, Mr. H.A. Schiller.

INTRODUCTION

An inspection of a deposit of marble in the Cowell district was made on the 5th August, 1965 in company with Mr. Schiller. Serpentinized marble is required for a market in Melbourne for cutting into ornamental slabs, with the possibility that the marble chips may also be ultimately used.

REFERENCES

There are no previous reports on the marble deposit in Section 116; the marble has not been differentiated on the Glynn one mile geological sheet (Johns 1957). A similar deposit in Section 110, Hd. Minbrie some seven miles to the southwest has been the subject of several published reports, the latest being Mining Review 103, pages 81-82, 1955 by R.K. Johns.

GENERAL GEOLOGY

The ranges to the north and west of Cowell are composed

of Archaean metasediments - gneisses, schists, quartzites and marbles which have undergone varying degrees of regional metamorphism.

The beds of marble are generally thin and in this locality seldom exceed 100 ft. in thickness. They appear to be discontinuous and lenticular, although they can be traced at intervals over a distance of almost 10 miles near the margin of the Cleve Uplands west of Cowell.

The marble varies from coarsely crystalline white and pale grey rock to schistose, white cream, yellow and pale green sepentinous marble. The colours are often irregular and blotchy and this enhances their appearance and hence economic value as an ornamental stone. The marble often contains stringers of chrysotile asbestos, elsewhere green tremolite - actinolite, or dark green soapstone.

THE MARBLE DEPOSIT

In Section 116, Hd. Minbrie a bed of marble about 100 feet in thickness outcrops on the northern flank of a low rounded hill and extends for a distance of some 300 feet up the slope. This deposit has been tested in several small bulldozer cuts. The stone obtained varies from coarsely crystalline white marble to mottled white and yellow or white and green serpentinized marble; blocks of up to five tons in size have been recovered.

The marble appears to be more massive below the weathered surface, but this requires confirmation.

The deposit affords an almost ideal quarry site, as the marble rises from a flat plain allowing ready access along the length of the bed. Reserves cannot be accurately gauged without further exploration, but minimal reserves are assessed at 32,000 tons over a length of 200 ft., width of 80 ft., to a depth of 22 ft. and assuming that one ton of marble occupies 11 cub. ft.

In addition, two other bands of similar marble outcrop several hundred yards to the west of this deposit, and, although

not as accessible for quarrying, these could be worked without any great difficulty.

The price quoted for the marble is about £40 per ton landed In Melbourne, while production costs and freight charges would probably not exceed £20 per ton. Initially the demand is for ornamental facing stone, but later there is expected to be a demand for chips for terrazo ware.

ASSOCIATED ECONOMIC MINERALS

Associated with the marbles is a body of dark green talc (soapstone) 10 ft. in width and traceable for a distance of 200 ft. Several shallow bulldozer cuts have further exposed the deposit but its full extent is not determined. There is a market for this variety of talc. Asbestos which also occurs would be saleable provided fibre is of the required length and the veins are persistent.

CONCLUSIONS

On the property inspected are white and yellow-green serpentinous marbles suitable for provision of blocks, from which could be cut ornamental facing slabs. Reserves exceed 30,000 tons, access for quarrying is good, and, although transport costs will be high, its reported value in Melbourne should assure that the working of this marble is economic.

The talc and asbestos have some value, but further work would be needed to fully test these deposits.

T. M. Steel

TMS:AWK
23.9.65

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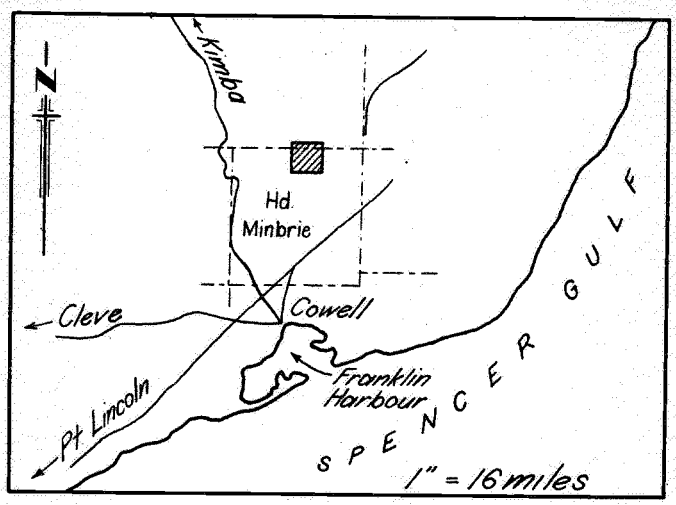
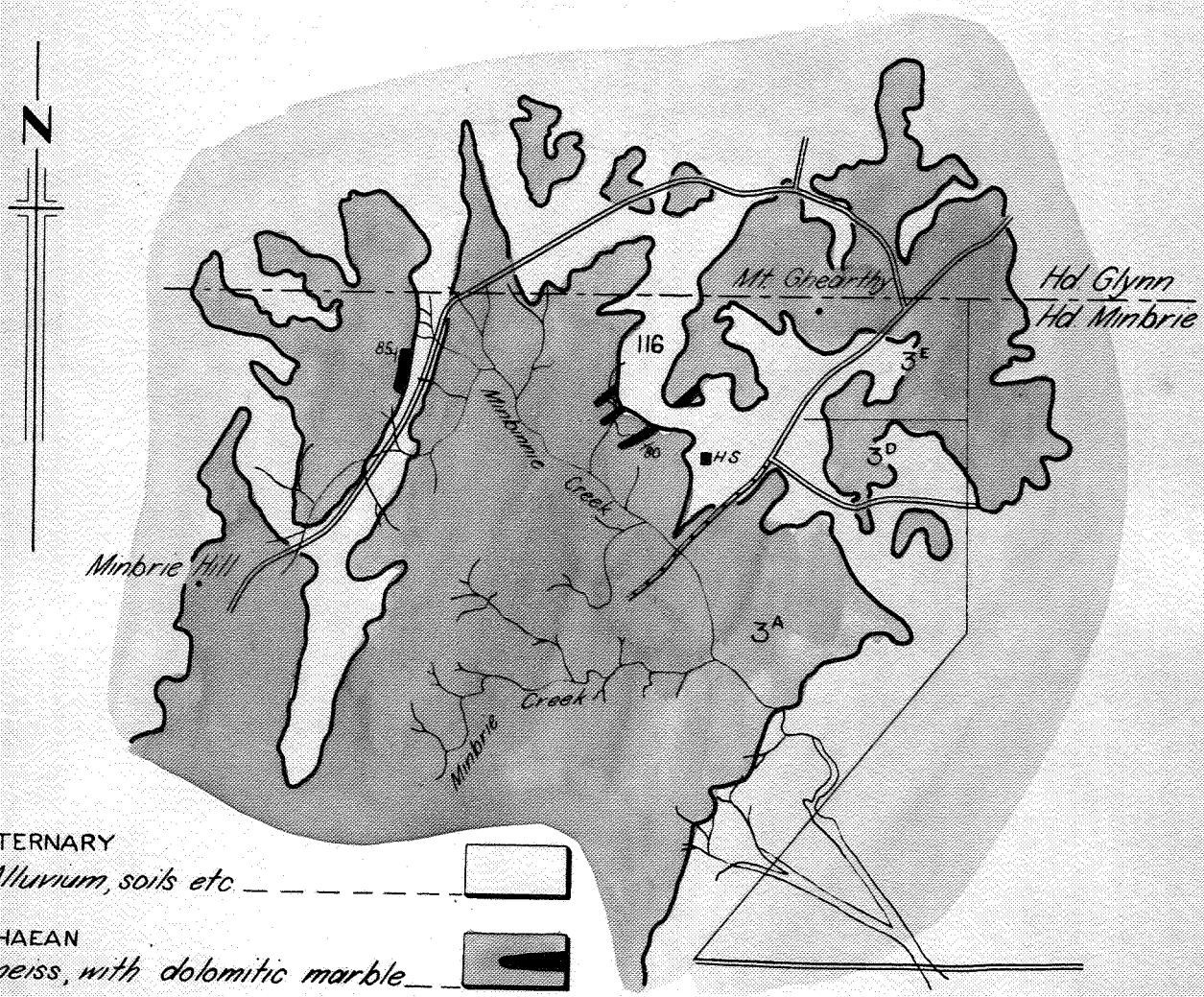
LOCALITY PLAN





QUATERNARY
Alluvium, soils etc _ _ _ _ _ _ _ _

ARCHAEAN
Gneiss, with dolomitic marble _ _

SCALE

MILES 1 ½ 0 1 2 3 MILES

To accompany report by T.M. Steel

S.A. DEPARTMENT OF MINES

Approved	Passed	Drn. T.M.S.	SERPENTINIZED MARBLE DEPOSIT SECTION 116 Hd MINBRIE H.A. SCHILLER	D.M.	Scale 1inch = 1mile
		Tcd. R.H.		Req.	S4691
		Ckd.			Dm 14
Director		Exd.			Date 15-9-65