72/178

MOUNT SCHANK VOLCANIC CONE
REPORT ON EFFECT OF EXISTING AND PROPOSED QUARRIES

Department of Mines
South Australia —

DEPARTMENT OF MINES
SOUTH AUSTRALIA

GEOLOGICAL SURVEY
ENGINEERING DIVISION

MOUNT SCHANK VOLCANIC CONE

REPORT ON EFFECT OF EXISTING AND PROPOSED QUARRIES

Sections 347, 425, Hundred of MacDonnell

by

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Rept.Bk.No. 72/178
G.S. No. 4943
D.M. No. 700/72
Hyd. No. 2433

12th September, 1972.

DEPARTMENT OF MINES
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SUMMARY AND CONCLUSIONS

Two sites on the side of Mount Schank have been examined with a view to their being developed for quarrying operations. Mt. Schank is a very well preserved volcanic cone and is one of very few in South Australia.

One site (A) is already being quarried, and a slight increase in the area of these operations is unlikely to damage the shape of the cone much, although any further damage is undesirable. This site is well hidden from view except from a minor road adjacent to the quarry itself.

The other site (B) is not recommended for quarrying. It is in full sight of the main road, visible for several miles, and operations there would spoil the symmetrical appearance of the cone.

Both sites border a Recreational Reserve, and there is danger of damage by erosion unless any proposed operations are carefully controlled.

INTRODUCTION

Mount Schank is a small, well preserved volcanic cone about 12 km south of Mount Gambier, near the main Mount Gambier to Port MacDonnell road. Although only 160 m high it is one of the few prominent landmarks in the area. (Plate 1).

It belongs to the younger phase of volcanic activity in the area, the most recent activity being approximately 1,400 years Before Present. The cone is essentially composed of well layered volcanic ash, with basaltic lava flows to the west.

The volcanic ash and cinders are being excavated in a quarry on the eastern flank of the cone itself (Plate 4), while the lava is being excavated in a quarry to the west of the cone (Plate 3).

PROPOSED FURTHER DEVELOPMENT

Further operations have been proposed at two sites on the side of the cone itself (Fig. 1).

Site A appears to be a slight extension of the quarry in section 347 (Plate 4), whilst site B is an entirely undeveloped site, at present used for pasture, on the northern flank of the cone (Plate 2).

The area enclosed by site B is shown on Plate 4.

Both sites border on land proclaimed a Recreation Reserve, shaded in inset (a), fig. 1.

DISCUSSION

The sides of the volcanic cone are steep (up to 35° - Plate 1) but in their natural state appear stable. However any slight disturbance of the slope is likely to result in some

instability. Erosion gullies (Plate 3) have already formed along a path used by tourists ascending the hill in an area where the slope is much less steep than elsewhere.

The near vertical quarry faces excavated in unconsolidated volcanic ash appear stable at present, but instability would occur in the long term. Collapse of the vertical face could spread well up the hill slope.

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12th September, 1972.

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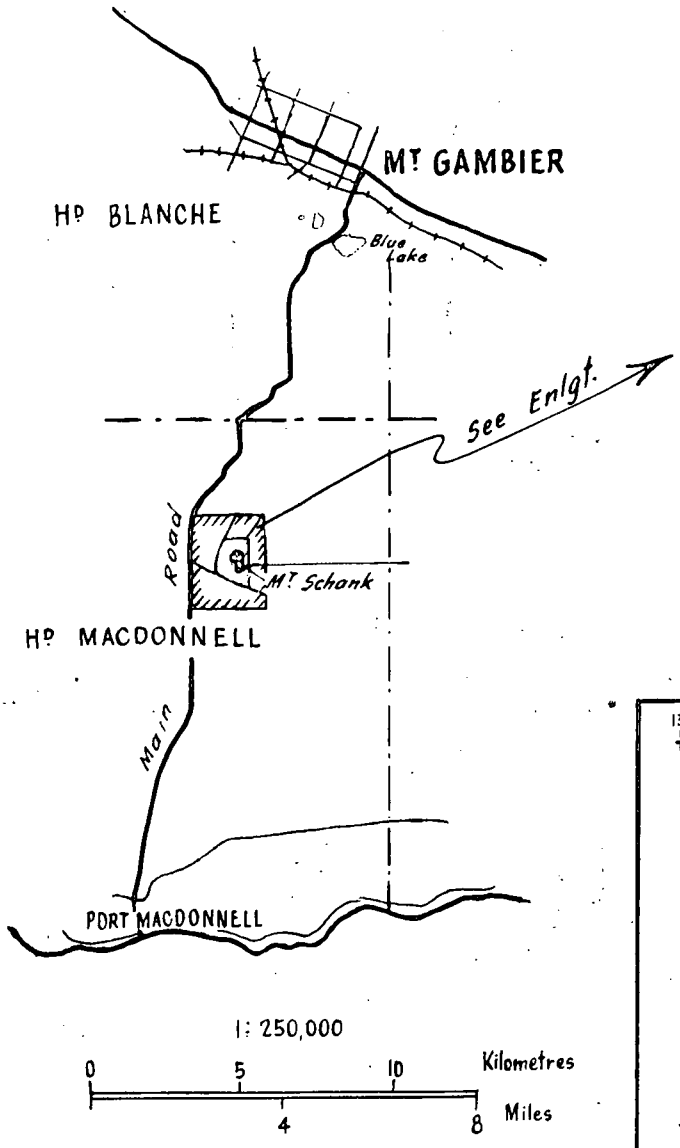

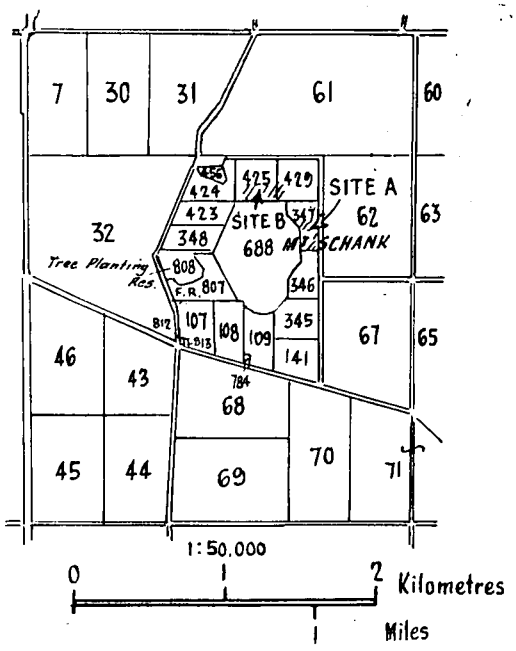

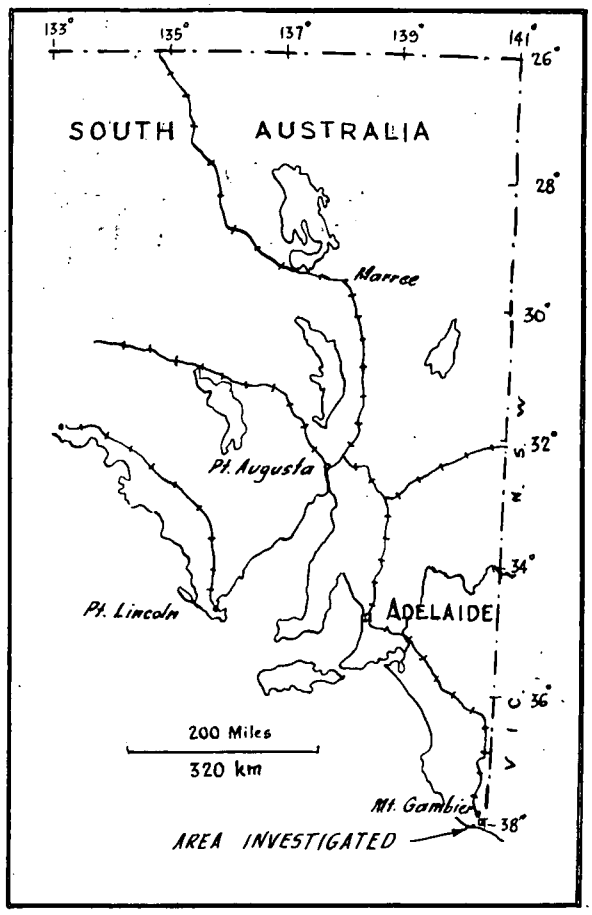

FIG. 1

HYDROGEOLOGY SECTION	**DEPARTMENT OF MINES – SOUTH AUSTRALIA**	Scale: –
Compiled: J. Waterhouse	SOUTH EAST WATER RESOURCES MT. SCHANK AREA LOCALITY PLAN	Date: 11th Aug. 72.
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PLATE 1 Mt. Schank (viewed from the north)

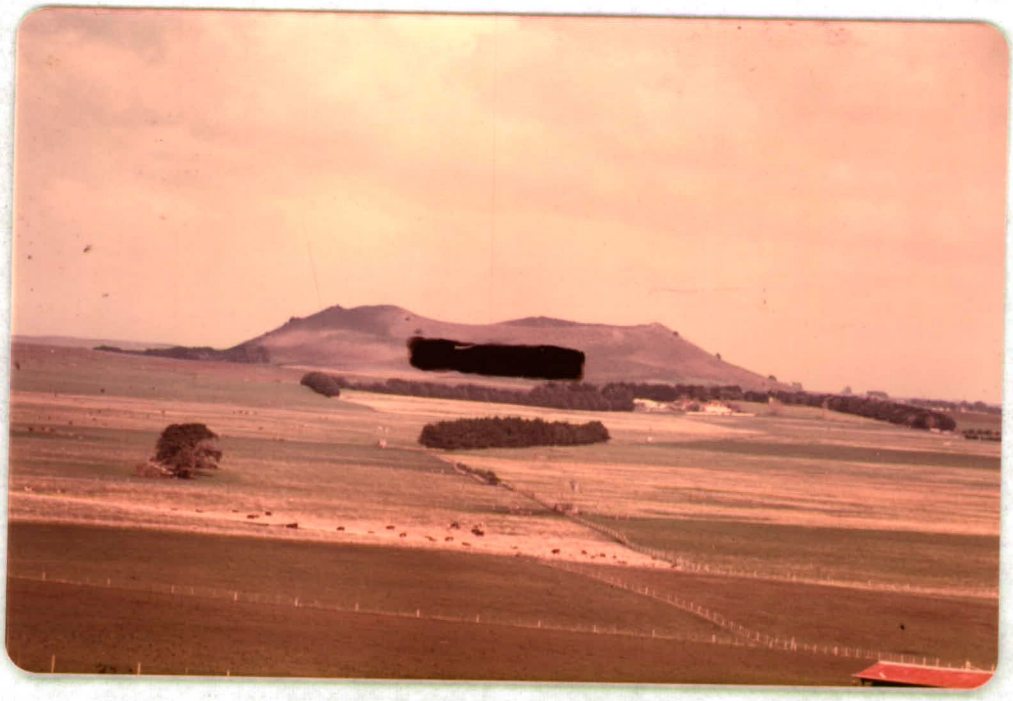

PLATE 2 Showing the area covered by site B

PLATE 3 Mt. Schank from the main road to the west, showing quarrying operations and erosion gullies (arrowed).

PLATE 4 Quarry at site A