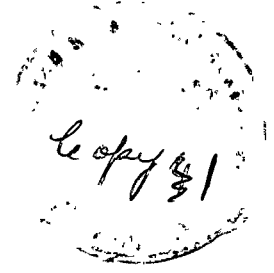


COMMONWEALTH OF AUSTRALIA.



DEPARTMENT OF SUPPLY AND DEVELOPMENT.
BUREAU OF MINERAL RESOURCES
GEOLOGY AND GEOPHYSICS.

REPORT No. 1944/50

Plan No. 1171

REPORT ON

ANTHOPHYLLITE IN HARTS RANGE.

N. TERRITORY

BY

H.B. OWEN
Geologist.

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CANBERRA.

29th December, 1944.

DEPARTMENT OF SUPPLY AND SHIPPING.

MINERAL RESOURCES SURVEY BRANCH

NOTES ON ANTHOPHYLLITE IN HARTS RANGE, N. TERRITORY.

Report No. 1944/50. Plan No. 1171.

The presence of asbestos at various places in Harts Range has been reported from time to time, and, in recent months, it was reported that the largest of these deposits consisted of Chrysotile. A brief examination of this deposit was made in October, 1944, and specimens of the asbestos then collected were specifically identified as anthophyllite.

The deposit occurs in rough country half a mile north from the Rex mica mine and is 140 miles by road northeast from Alice Springs. The principal features of the occurrence and its locality are shown on the accompanying plate.

The area is occupied by rocks of the Arunta Complex which in the immediate vicinity are dominantly dark hornblende schist with strike ranging from east to southeast. The schist has been invaded by a wide range of intrusives, acid rocks ranging from coarse granite pegmatite to comparatively fine-grained uniform mixtures of felspar and quartz are common. This latter rock is well developed on the margins of the serpentine body which contains the anthophyllite. The anthophyllite is associated with a lenticular body of serpentine 500 feet long by an average of 60 feet wide and which strikes southeast concordantly with the surrounding schist.

The northeastern boundary of the serpentine is not well-defined and is partly obscured by talus. Two narrow veins of asbestos, one cross-fibre and the other slip-fibre, extend from the north-eastern edge the serpentine into the enclosing schist. At other points, the boundaries between the serpentine and schist are sharply defined and are not transgressed by the asbestos.

The serpentine is a dull grey-green rock containing veins of siliceous magnesite and talc; the latter is commonly mixed with anthophyllite.

The anthophyllite occurs mainly as slip-fibre and mass-fibre, but narrow veins of cross-fibre are common. The latter are generally about 1 inch wide and may occur within, or at the edges of, wider veins of mass-fibre, or independently as narrow veins in the serpentine. The slip and mass-fibre occurs in veins from about 6 inches to 2 feet wide and probably as irregular masses. There does not appear to be any common orientation of the veins which are ramifying and branched. They commonly intersect each other.

The asbestos is exposed at numerous places on the surface and in 14 shallow pits and costeans. The deepest pit is about 7 feet deep, but the others range from 1 to 3 feet in depth.

All the fibre recovered from these pits is weak and brittle and there is no apparent improvement in quality at the shallow depth so far reached.

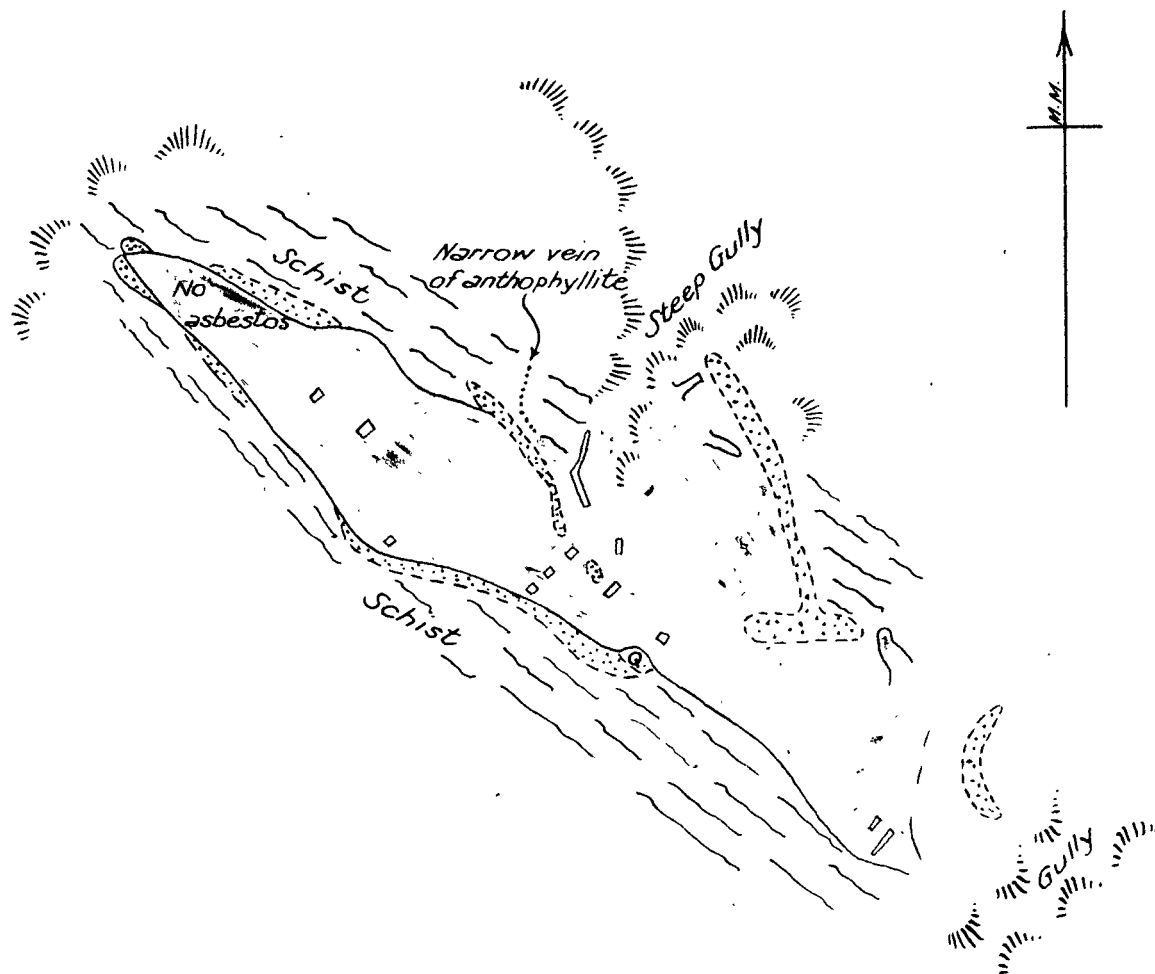
Anthophyllite occurs at a point about 300 yards from the deposit described above and on the same line of strike. This occurrence may be traced back as a narrow vein towards the main body for at least 100 yards at which position it disappears under a wide sandy creek bed. This vein is intersected by a muscovite-bearing pegmatite dyke.

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

Anthophyllite is in little demand in industry owing to weakness of the fibre. The consequent low value of the mineral combined with the remoteness of the locality in which it occurs renders the deposit of no commercial value.

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Geologist.

CANBERRA. A.C.T.
29th December, 1944.



SKETCH PLAN OF ANTHOPHYLLITE DEPOSIT NEAR
REX MINE, HART'S RANGE, NORTHERN TERRITORY
Scale 1" = 100 ft.

- | | | | |
|---|------------------------------------|---|--------------------------|
|  | Serpentine rock with Anthophyllite |  | Felspar-quartz dyke rock |
|  | Schist | Q | Quartz |

[Signature]
 Jan 1945.

