

DEPARTMENT OF MINES

SOUTH AUSTRALIA

REPORT ON OCCURRENCE OF CHROMITE

AT MT. DAVIES, TOMKINSON PAS.

LOCATION:

Mt. Davies is situated in the eastern Tomkinson Pas., in the extreme north-west of the state and approximately 400 miles WNW of Oodnadatta. The mineral deposit occurs approximately 1 mile NNE of Mt. Davies.

This locality was visited in October 1953, when specimens of chrysoprase were obtained and again during a reconnaissance survey in August, 1954, when the chromite lode was discovered.

DESCRIPTION OF LORE:

Chromite was observed in veins up to $\frac{1}{2}$ " in width in a gangue of cryptocrystalline silica. A representative sample (P258/54) gave an assay of 16.9% Cr_2O_3 . Chrysoprase, containing 0.2% NiO is associated with the chromite.

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GENERAL GEOLOGY OF THE AREA:

The chromite is associated with regular alternating sills of "pyroxenite" and olivine gabbro. It occurs in the "pyroxenite" and its serpentinised equivalent as subhedral crystals and rarely as minute octahedra, showing translucent brown edges. Masses of magnesite, chalcedonic silica and veins of garnet (pyrope) were also encountered.

The sills of "pyroxenite" rarely exceed 20' in thickness but those of olivine gabbro are, on the whole, much thicker, one in particular being in excess of 1,000'. At Mt. Davies these sills strike 270° and dip 70° to the north.

The gneissic complex to the north and south consists essentially of gneissic granite with minor developments of pyroxene granulite, amphibolite and garnet rock. A contact with the olivine gabbro occurs 9 miles W.S.W. of Mt. Davies. Here the gneissic granites strike 265° and dip 80° to the north.

POSSIBLE EXTENSION OF LODE:

As these rocks outcrop over such a great distance it might be expected that similar lodes would occur. However, detailed mapping and prospecting is necessary in order to locate such lodes.

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