

MINERALOGICAL SOCIETY (LONDON)

A meeting of the Society was held on Thursday, June 8, 1950, in the apartments of the Geological Society of London, Burlington House, Piccadilly, W 1 (by kind permission).

The following papers were read:

(1) THE PETROLOGY OF THE EVAPORITES OF THE ESKDALE NO. 2 BORING, EAST YORKSHIRE. PART II. THE MIDDLE EVAPORITE BED.

By Dr. F. H. Stewart

The middle of the three Permian evaporite beds is 286 feet thick, and is underlain by dolomite and overlain by salt clay. It has been divided into five main zones:—Upper halite zone (8 feet thick); Halite-sylvine zone (46 feet); Halite zone (142 feet); Halite-anhydrite zone (49 feet); Anhydrite zone (41 feet).

Petrographic descriptions of the rocks are given. Halite and anhydrite occur in all zones. Dolomite is restricted to the lower part of the succession; magnesite, sylvine, carnallite, quartz and haematite to the upper part. Small quantities of boracite, pyrite and magnetite have been found. Layers containing halite-anhydrite pseudomorphs after early gypsum occur in the upper part of the halite-anhydrite zone.

There is much evidence of replacement and recrystallisation, and some of these changes were probably due to the action of percolating brines during the formation of the evaporites, while others were effected later.

(2) A SERPENTINE MINERAL FROM KENACK COVE, LIZARD.

By Dr. H. G. Midgley

Chemical, thermal, *x*-ray and optical examinations have been made on a white mineral from the Lizard occurring as small flakes which are uniaxial negative with N_v 1.545, N_o 1.555. The mineral has a formula approximating to $Mg_6Si_4O_{10}(OH)_8$; a preliminary *x*-ray structure analysis of single crystal rotation photographs suggests that the mineral has a layered kaolinite structure with all the octahedral positions filled with Mg ions. It is monoclinic with probable space group *Cm*.

(3) A GABBRO-LIMESTONE CONTACT NEAR CAMPHOUSE, ARDNAMURCHAN.

By Dr. S. O. Agrell

The so-called augite-diorite E.S.E. of Camphouse (Ardnamurchan Memoir pp. 153–155) is shown to be a contaminated rock formed by the interaction of a gabbroic intrusion and Liassic limestones.

The contaminated series consists of pyroxene-rich gabbros, pyroxenites, pegmatitic ferrowollastonite pyroxenites and theralitic types. Secondary minerals: analcite, thomsonite, prehnite, xonotolite and hydrogarnets are abundant in most types.

The limestones have suffered extreme metamorphism with the extensive development of calcite, spurrite, rankinite, larnite, bredigite and gehlenite.

(4) NOTE ON GARNET CRYSTALS FROM CAIRNIE, ABERDEENSHIRE.

By Dr. F. H. Stewart

Exceptionally large crystals of garnet (110) (211) have been found in coarsely banded garnet-biotite-sillimanite-gneisses. Analysis shows the composition: almandine 76.47, pyrope 18.58, spessartine 3.42, grossular 1.35, andradite 0.18. Well-marked partings cut the planes of schistosity and gneissic banding at low angles.

The following papers were taken as read:

(1) ON A CUPRIFEROUS LEWISIAN PARA-GNEISS.

By Mr. W. T. Harry

A Lewisian meta-sediment bears 0.24% copper in minute disseminated cryptocrystalline malachite grains. Exposures of the rock are small and appear highly localised. No vein mineralisation is apparent.

(2) THE PSEUDOMORPHS OF PYRRHOTINE AFTER PYRITE IN THE BALLACHULISH SLATES.

By Dr. H. Neumann

(3) THERMAL STUDY OF SOME MANGANESE OXIDE MINERALS.

By Mr. J. Laurence Kulp and Mr. Jose N. Perfetti.

(Titles and abstracts kindly submitted by G. F. Claringbull, General Secretary.)