of the cavities conform to the arrangement of the circular magnesite pat amongst which they lie. The impression gained is that the magn patches have grown upwards and sideways forcing the boulders to one and finally rising above them. That this is the true explanation is fur indicated by the presence of slight overlaps of the magnesite on indivi boulders. On the borders of large deposits outcropping at the surf there seems in places to be an overlap of soil resting on the magnesite; t is, in places, excavations made just outside of the main deposit reve foot or so of soil resting on a thin bed of hydromagnesite evidently a proj ing part of the main mass.

At Kelly lake and at Clinton near the main masses of hydromagne are occurrences of impure earths, carbonates and sulphates of magnesi and calcium, which form nodules lying at or just under the surface or occur as beds interstratified with sand or clay. One such nodule has b exposed in pit No. 7 (Figure 3), at Clinton (Plate V, and analyse and 8, Table IV). It is overlain by 6 inches of black soil and consists nearly pure gypsum and calcite along its upper border, but in depth th minerals are mixed with gradually increasing amounts of the boulder c in which the nodule lies. Under the nodule, traversing the boulder cl are fine, thread-like streaks of cream-coloured earth identical in compositi with the materials of the nodule (Plate VI). Nodular deposits of gypsu also occur on the steep hillsides at Kelly lake (Table IV, analysis Bedded deposits of calcite admixed with some gypsum and hydrous ma nesium carbonate (Table IV, analysis 2), are present in the shallow parts Kelly lake where they lie within a few inches of the surface of the wat (Plate VII) and deposits of the same character (Table IV, analysis occur interstratified with sand and clay in the flat west of Kelly lake.

COMPOSITION.

In the following table, analyses are given of the better grades hydromagnesite found at Clinton, Meadow lake, Watson lake, and Risk creek. This table represents the composition of the material in the deposits that may reasonably be expected to yield a commercial produc The yellow, granulated material under it is too high in lime as a rule to l of value. Analyses 1, 2, 4, 6, and 7 are of samples taken in such a wa that they represent an average of the full thickness of the layer sample and as stated in the table, in most instances the sampled layer represent the whole of the upper white bed. With these analyses is presented th average value of eight analyses of Atlin hydromagnesites taken from th report by G. A. Young in the Summary Report of the Geological Survey Canada, for 1915 and also the average of sixteen analyses of Californi magnesites. Analysis 5 was made in the Geological Survey laboratory more than twenty years ago, on a sample which it is presumed was take from the cleanest material found near the surface of the deposit, but partic ulars as to the method of taking this sample are lacking. These results show the materials to be low in lime and other impurities. Analyses 2 and 4 reveal the presence of 4 and 4·6 per cent of silica respectively, which in all probability is derived from the fine, black specks scattered through the upper white hydromagnesite in many places. The composition of the spring waters (page 40) indicates that hydrated amorphous silica also may be present. The magnesia content runs from 41 to 43 per cent.