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## Experimental Study Of Phase Relations In The Ca-Ongonite From Ary-Bulak Massive (Transbaykal Region, Russia) at 700–800 °C

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An experimental study of three examples of the sub-volcanic body of Ary-Bulak ongonite was carried out to determine the composition of the liquidus phases and the order of crystallization of minerals. Phase relations in the samples of porphyritic ongonites (1), porphyritic ongonites with a high content of Ca and F (2) and aphyric rocks with a high content of Ca and F (3) were studied at temperatures of 700–800 °C, a pressure of 1 kbar in Ni-NiO and Mt– Hem buffer conditions.

Rock samples have specific petrochemical aspects. In this series of rocks from (1) to (3), the general tendency is directed towards a decrease in the content of alkalis and silicon and an increase in the content of F and Ca.

Liquidus is achieved for porphyritic and aphyric ongonites with a high content of Ca and F. The liquidus phases for them are fluorite, topaz and plagioclase. Crystallization of porphyry ongonites begins at a temperature below 700 °C.

The phase relationship and composition of the liquidus phases are independent of oxygen fugacity.