

Big Chief Mica Deposit - Mabel Merrill, owner - Sec. 16, T. 25 N.,
R. 71 W. - School Section.

MR43-12

Visited with Mr. M. R. Merrill. Equipment here consists of compressor, separator, grinder, and jack hammer.

A shaft has been sunk about 23' to 24' deep - according to Mr. Merrill, but is now partly filled with loose debris and consequently is 15' deep. After sinking the shaft Mr. Merrill started down the hill and put in a 60' cut connecting with the shaft and running S. 60° E. The remainder of the workings consist of two small pits which show some muscovite.

The rock is a granite pegmatite with areas of muscovite and biotite. The muscovite is pink and the crystals vary from a fraction of an inch to several inches in diameter. A small percentage could probably be used for punch mica but most of it occurs as intergrown sheets and would be useful principally as scrap. Locally a small amount of black tourmaline is found. Much of the feldspar is in graphic intergrowth with quartz and is of no use therefore commercially. The mica zone at the principal workings is about 12' wide. About 5' from the end of the 60' cut, the pegmatite ends in contact with a biotite-chlorite schist which has been soaked with pegmatitic material.

The pegmatite is a fairly large one and contains mica scattered through much of it. The books of mica vary in thickness from less than 1/16" to over an inch - average perhaps 1/4".

A certain amount of biotite (lepidomelane?) occurs along with the muscovite. At the end of the cut is a narrow zone of vermiculite - now partly covered but apparently only a few inches wide (max. 1 ft.).

Several years ago - according to Mr. Merrill - the Rubberoid Corp. offered him \$40 per ton dry ground for all he could supply. It grinds a fine white color says Mr. Merrill.

The pegmatite dike in which the mica occurs is perhaps 50'-75' wide on the average and in general strikes S. 15° W. from the opening although it curves. Only parts of the dike contain areas of mica.

Quality of the talc is not very good. Also distance from railroad is probably too great for economic operation of the deposit.

Talc lens is probably over 1/4 mile long and varies in width from 30 plus ft. to about 100'. It appears to have formed by dynamo-thermal metamorphism of a schist. Where in contact with granite - pegmatite actinolite has been produced and the rock is soaked with pegmatitic material. Most of the lens, however, is talc. The talc appears to be of fair grade but should be tested. A large body!

Mica-Talc. 120 acres of patented land on this school section, belonging to Frank Robinson, was sold (mineral rights only) to the Platte County Investment Co. of Wheatland. The rest of the section belongs to the State. P.C.I. Co. is essentially John Pfeiffer.

Big Chief Mica Deposit -- Mabel Merrill owner. S16, T.24 N, R.7 W.

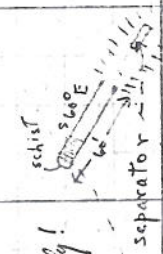
12-VII-43

Visited with Mr. M. R. Merrill. Equipment here consists of compressor, separator, grinders, and jack hammers.

A shaft has been sunk about 23 to 24' deep - according to Mr. Merrill - but is now partly filled with loose debris and consequently is 15' deep. After sinking the shaft Mr. Merrill tamped down the fill and put in a 60' cut connecting with the shaft and running S 60° E. The remainder of the workings consist of two small pits, which show some muscovite.

The rock is a granite of quartzite with areas of muscovite and biotite. The muscovite is pink and the crystals vary from a fraction of an inch to several inches in diameter. A small percentage could probably be used for punch mica but most of it occurs as intergrowths and would be useful principally as scrap. Locally a small amount of black tourmaline is found. Much of the feldspar is in graphic intergrowth with quartz and is of no use therefor commercially. The mica zone at the principal workings is about 12' wide. About 5' from the end of the 60' cut the pegmatite ends in contact with a biotite-schist which has been worked with pegmatite material.

S.				
Talc lens is probably over 1/4 inch long and wide in width from 20" to about 30". It appears to have formed by syngenetic mineral water evaporation. It is selected. It has a concentration of quartzite -	Granite	500-700 AB 500' Schist	50-300 Schist	Qal
Quartzite actually has been produced and the rock is soaked with pegmatite material.	Granite	500-700 AB 500' Schist	50-300 Schist	Qal
Most of the lens has even in talc. It has appeared, the hole of gas grade but should be stated.	Granite	500-700 AB 500' Schist	50-300 Schist	Qal
a large body!	Granite	500-700 AB 500' Schist	50-300 Schist	Qal



The pegmatite is a fairly large one and contains mica, scattered through, much of it. The rocks found are 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.				
along with the mica etc. At the end of the cut is a narrow zone of mica etc. now partly covered but apparently only a few inches wide (max 1 ft) here and there - according to Mr. Merrill - the red bed has appeared, but no further dry ground for all the world, apply. It is a fine, white color say Mr. Merrill.				
In the upper part of the talc the mica occurs in perhaps 50-70' wide on the average and is general strike S 15° W from the opening although it varies. Only part of the talc contains mica.				
Quality of the talc is not very good. Also due to the presence of the mica is probably too great for economic operation of the deposit.				

(Mica-Talc. 120 acres of patented land on this school section, belonging to Frank Robinson, was sold (mineral rights only) to the Platte County Investment Co. of Mica, Ind. The rest of the section belong to the State. P.C.I. Co. is essentially John Pfeiffer.)

Deposit = N.W. of the N.E. Sec. 16, T. 25N., R. 71W.
E. 1/2 of the N.W.