

ENCAMPMENT MICA

The mica about one mile south of Encampment is not a true mica but is a chlorite. I have no information as to its electrical properties but see no reason why it should not be used for roofing and a number of other purposes just as well as other properties and in fact, probably would be termed mica by the trade. At the time of my visit in June, an opening had been made on a vein of this material about three feet wide and was apparently absolutely pure. At the time of my visit this mica was being hauled to Encampment for shipment to Chicago. It was apparently favorably received there and if so, there is no reason why future shipments should not continue.

In the case of this deposit, development work showed a commercial amount of pure material and there is no doubt that future developments should disclose a great deal larger tonnage although it is impossible to give an estimate of this tonnage in the absence of development work.

A few miles south of this point the deposits held by Frank Houston and associates consists of an immense quantity of high grade chlorite mica grading into talc. The amount of development work done on these deposits has been very small but I am under the impression that the quantity of minerals available would justify mining by steam shovel methods wherever the market is sufficiently developed. This property is about four miles from the railroad at Encampment.

There are two very promising phlogopite mica deposits in the Baggott hills ^{about} about 7 miles north of Encampment, one of them ^{is} adjacent to the railroad, the other ~~is~~ one ^{is} across the river about one half mile distant. A tunnel about 200 feet long has been driven into the deposit near the railroad showing mica through its entire length, the last 100 feet showing a mica content of probably 50%. From surface workings along this deposit, it is evident that it covers considerable territory and from the nature of the formations, there is no reason to doubt that it continues with depth. On the surface above this tunnel a pit has been sunk about 10 feet in talc of a very high grade.

The milling and shipping of mica from this deposit should, in my opinion, offer very good returns on the capital invested, provided a proper market is developed.

The deposit a half mile east of the railroad consists of a surface pit showing a ledge about 50 feet wide for a distance of some 200 feet. Some development work would be justified in determining more about the tonnage of mica available although there is little question that sufficient tonnage would be found to present a commercially attractive proposition as the rock could be easily milled and loaded on freight cars.

C O P Y
UNION PACIFIC SYSTEM

Department of Traffic

1416 Dodge Street
OMAHA, NEBRASKA

November 11, 1927
H-2404-3641-1

SUBJECT: Industrial Development - Mica - Wyoming.

Mr. T. Joe Cahill,
Executive Manager,
Department of Commerce & Industry,
Cheyenne, Wyoming.

Dear Sir:

Around Encampment, Wyo. are numerous undeveloped deposits of various kinds of mica.

In Section 9 T-15-N R-83-W, near Baggot's Rock at the head of Rainbow Canyon on Encampment River, about 6 miles north of Encampment, are a number of deposits. Analyses No. 115 on the enclosed sheet is of some samples from these deposits. Mr. H. L. Kuykendall of Rawlins has written us recently that he will soon have a complete plant of machinery in operation on one of these properties. The location is an ideal one for a plant of this kind in that the handling of all materials from the mines through a mill to the railroad (Saratoga & Encampment R.R.) would be by gravity. It is my understanding that he contemplates the grinding or processing and separating of the various micas.

Adjoining the foregoing property and immediately adjoining the railroad is what appears to be a large deposit of quartz, both water white and milk white in color, analyses being given under numbers 78, 83, 84 and 86 on attached sheet.

Those owning or interested in mica deposits around Encampment are Messrs. F. C. Huston, L. W. Tennant, C. H. Ashley, Mike Hanley, Frank Boyd and a Mr. Culletin, all of Encampment, the latter two having asbestos prospects. Messrs. Ashley and Huston are now doing some work on a property to determine whether it may contain kyanite, a refractory, in commercial quantities.

Undoubtedly, there is scattered over the immediate territory around Encampment an immense tonnage of various sorts of mica and mica schists that could be made available to a centrally located plant. Some of it, under heat, exfoliates, producing various attractive colors.

On the Encampment River are undeveloped hydro-electric possibilities. (See report of power site withdrawal 169, Encampment River, Wyo., by E. E. Jones, U.S.G.S. dated June 21, 1924, unpublished, copy on file at U.S.G.S. office Federal Bldg., Denver).

An opinion has been expressed that a grinding plant beginning with a conservative investment, in the hands of those with sufficient capital, also thoroughly familiar with the business and market conditions, might eventually build up a substantial business.

The territory is certainly worth looking over by any one interested in developing deposits of mica.

In connection with this subject, you would probably be interested in obtaining Bureau of Mines serial No. 2357 - May, 1922, also serial No. 2798 - March, 1927. Some very interesting articles on mica were recently given in Pit & Quarry published in Chicago in their publications of August 3rd and 31st, 1927. U.S.G.S. Bulletin No. 740, which is quite a comprehensive survey of mica deposits of the United States, no being so complete covering those of the West, but the general information contained therein is valuable. This bulletin, I believe, is available at most public libraries. A book published by McGraw-Hill Book Co., 370 Seventh Avenue, New York City, entitled "Non-Metallic Minerals" (Ladoo) "Their occurrence, preparation and utilization", contains good information on the subject of mica. Also the Engineering and Mining Journal of December 4th, 1926, published by the McGraw-Hill Book Co. Contains a very interesting article on mica mining and milling methods. If this publication is not available at your public library, would suggest you obtain a copy of the issue as the article is currently applicable to the mica grinding industry.

If you should enter into correspondence with any of those whose addresses are given, won't you kindly credit the source of your information and if any information in regard to mica deposits is developed, would appreciate very much being supplied with it.

Yours truly,

(Signed) E.C. Hoag.

Mica

MICA SCHISTS

No. 115

	%	%	%	%
Silica	36.00	41.00	47.22	60.50
Ferric Oxide	8.72	5.90	10.23	3.92
Aluminum Oxide	23.88	16.26	10.46	112.25
Calcium Oxide	0.80	6.77	8.48	9.34
Magnesium Oxide	24.20	25.89	13.59	9.05
Alkalies	6.15	4.18	9.35	4.94
Loss on Ignition	0.25		0.67	
	<u>100.00</u>	<u>100.00</u>	<u>100.00</u>	<u>100.00</u>

ANALYSES

SILICA QUARTZ

	No.83	No.84	No. 86	No.78
Silica	98.60%	98.20%	98.60%	98.75%
Iron Oxide	1.40	1.80	1.40	0.20
Alumina	0.00	0.00	0.00	0.60
Loss on Ignition	0.00	0.00	0.00	0.45
	<u>100.00%</u>	<u>100.00%</u>	<u>100.00%</u>	<u>100.00%</u>

	No.119
Silica	98.51%
Ferric Oxide	0.04
Aluminum Oxide	0.72
Calcium Oxide	0.20
Magnesium Oxide	0.43
Loss on Ignition	0.10
	<u>100.00%</u>