



STATE DEPARTMENT OF GEOLOGY
AND MINERAL INDUSTRIES

BAKER FIELD OFFICE
2033 FIRST STREET
BAKER, OREGON

August 11, 1949

Paisley Perlite

Mr. F. W. Libbey
State Department of Geology
And Mineral Industries
702 Woodlark Building
Portland 5, Oregon

Dear Fay:

Judge Combs accompanied me to the perlite property, furnished me with a sketch map showing claim distribution, pointed out a corner, but did not attempt to go over the ground with me. For my part I spent better than half a day going over the hills by way of familiarizing myself with the general situation. My observations may be summarized briefly as follows:

1. Practically the entire range of Tucker hills is composed of perlite material. I covered all but the northwest portion of the hills.
2. There are several very distinct types of perlitic material ranging from typical textbook perlite to a rhyolite containing an abundance of perlitic glass.
3. One variety of the better grade (mineralogically speaking) material resembles the Arizona-Nevada so called "pitchstone." None resembles the Dooley Mountain or Jordan Valley perlite.
4. Some of the lesser, or at least less typical varieties, have a texture of their own. This is often very dense and stoney in appearance on weathered surfaces although the glassy nature of the rock is readily apparent on fresh breaks. Other varieties bear a superficial textural resemblance to a schist - a feature undoubtedly due to flow.
5. The material sampled by the owners (the two ton sample sent to Arizona) originated from areas of the truly typical pearly perlite only according to my understanding. Other, and more abundant varieties were not sampled.
6. The truly typical variety of perlite is not abundant as far as the mass at large goes. While some individual occurrences thereof appear to be of appreciable size, other occurrences of this grade of perlite are small in size and local in extent.

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Paisley Perlite
+ cross file under
Lake County Perlite

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7. The so-called "Arizona-like pitchstone" variety seems quite abundant judging from float fragments on the flat portion of the hill above the rim. (Note: My use of the term Arizona pitchstone is based on samples of such material sent to me by Ladoo after the occasion of which he and I went over the Dooley Mountain occurrence. It has a granular, sugary texture, and the Arizona specimens supposedly represent material of super grade).
8. While much of the material seems to lie relatively flat, strong dips are to be noted. In places these are in opposite directions. Beyond this no comment on structure, or its significance, is in order, nor can be made short of more detailed study and mapping.

As a result of the foregoing reconnaissance it was readily apparent that a base map was necessary before even a significant reconnaissance report could be made. This is so with respect to the extensiveness of the deposit at large, and also with respect to mapping and evaluating the extensiveness of individual variations. Since both the Soil Conservation Service and the Forest Service are both very active in this area I figured that maybe I could get at least aerial photos of the hills. My endeavors and the results thereof are summarized in the attached copy of a letter to Judge Combs. The damp pictures came right up to the hills on the north, south and west, but didn't include them. The attached contour map which I succeeded in digging up elsewhere likewise shows contours right to Combs' east claim lines, and also surrounds the hills on both the north and south without covering them.

My initial reaction after I secured the contour map was that I could go up on the hills and, with my Brunton on the tripod, triangulate in the location of key points along the rim and thereby with aneroid elevations make a reasonably fair sketch accuracy contour map of the hills. With this objective in mind I spent better than half a day in leg work in agricultural area below the ditch in an attempt to identify line fences and section corners which I could shoot to from the hill. The result of this phase of my activity proved wholly negative as what few fences there were proved not to be line fences. It was therefore necessary to abandon my objective of making a reconnaissance contour map as planned. The attached copy of the adjoining contour coverage together with the copy of my letter to Judge Combs supplement this letter and complete the picture as far as summarizing my activity in connection with this examination.

My conclusions and recommendations are as follows:

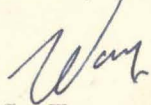
1. The occurrence is large. It may well represent the largest single mass of perlitic material within the state -- at least so far as currently known occurrences go. It will have to be mapped and sampled before this can be said authoritatively, however.
2. As only one of the existent varieties of perlitic material has been sampled and tested to date (the truly textbook-typical variety) the occurrence from an economic standpoint can at present be judged on the basis of said material only.

3. Since the above mentioned variety is relatively limited in extent in comparison with other varieties, any appraisal of the occurrence on the basis of said material alone would be an appraisal of limited value. And likely also of misleading value, for until the associated varieties of perlitic material are PROVEN to possess good expansion capacities, problems of stripping, underground workings, and selective mining exist in connection with mining operations on the single variety of currently established grade.

4. To be properly described geologically in a comprehensive manner, the mass at large (the entire group of hills) should first be mapped if only to sketch accuracy. This will require rather extended work in connection with the establishing of section corners mostly. The different perlitic varieties should then be studied individually, first by sampling to establish expansion capacities between grades, and then by individual mapping as indicated and warranted by the test results. In this latter connection the question of whether or not it is either desirable or expedient to map individual varieties, will depend upon the grade of individual varieties as follows. Should some of the closely associated varieties be notably poor in expansion capacity, then mining problems exist and individual mapping of varieties is essential. Conversely, should closely associated varieties prove equally good in expansion capacity, then extraordinary mining problems due to close association and intermingling of perlitic varieties, would be eliminated and there would be no need of selective mapping of individual varieties accordingly.

From the foregoing resume of my observations and conclusions, you can readily gather that any report I can make with the data at hand will necessarily be generalized and somewhat superficial in nature. The question at hand therefore is do you wish me to write a report under the circumstances, or would you deem it worthwhile to make a more extensive examination along the lines outlined above? My feeling would be to make the more thorough field study, but to do so only on a cooperative basis with the owners -- meaning that they stand the expense of establishing section corners close to the property which we can use in plane tabling the hill, and that they stand the expense of having finished tests of more samples run at Arizona. After all the property is situated rather far from rail transportation so that we are not necessarily justified in making more than superficial report unless they are interested enough in developing their property to contribute some incentive in the form of assistance. I shall await your reply before proceeding further with any work on this project -- meaning the writing of any report.

Sincerely yours,



N. S. Wagner
Geologist