

# Pueblo Mt. Reconnaissance



## STATE DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES

BAKER FIELD OFFICE  
2033 FIRST STREET  
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STATE DEPT. OF GEOLOGY  
& MINERAL INDS.

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State Department of Geology  
And Mineral Industries  
702 Woodlark Building  
Portland 5, Oregon

Dear Fay:

The Denio investigation proved to be one of the most interesting investigations I have participated in in a long time. I enjoyed working on it very much not only because of the nature of the work itself, but also because of the element of stimulation that came from working with Dave. It is both enlightening and inspiring to be able to argue and discuss problems with an informed person, and I think it would be advantageous for the Department to engage in the practice of doubling up on personnel in this manner more frequently.

The way things stand I have a pretty good idea of what Dave reported to you concerning the results of our investigation. On this he and I are in complete accord, but since it was I who recommended this particular project as one of seemingly especial pertinence, I wish to make an independent summary of my own.

We worked with the very definite objective of appraising the overall geologic picture relative to (1) the possibility of making a detailed geologic map of the area, (2) the problems to be faced in the making of such a map, (3) the results to be anticipated, and finally, (4) the feasibility of undertaking the task, or of recommending the undertaking thereof, insofar as the economic value of so doing is concerned.

Briefly stated, our investigation showed that the principal formations described by Ross are logical and sound reconnaissance subdivisions of the rock types prevailing in the Pueblo Range, and furthermore, his map is quite accurate insofar as the indicated details of distribution of the rock types are concerned. Our work also showed that it might be possible to effect the mapping of certain significant refinements in the form of lithologic sub-types in the case of Ross' "crystalline" series in particular, and to a lesser extent, in the volcanics. To do such mapping it would be necessary to have accurate, large-scale base maps. It would also require a very considerable amount of petrographic

study. We estimated the field work would entail the undivided time of a party of two geologists for a period of at least two months duration. This estimate covers field work only and does not include the laboratory time needed for the preparation and petrographic study of samples, etc. Such mapping endeavor could be expected to result in (1) the description of three or four lithologic sub-units within Ross' "crystalline" series, and the mapping of the distribution thereof, (2) description and mapping of a possibly distinctive sub-unit within Ross' volcanic series, (3) the assembling of structural data, and (4) observations on mineral prospects, including notes on their relationship to existent bedrock types and to the prevailing structural pattern of things. In short, the end product would be far more comprehensive in its coverage than Ross' report, and it would afford essential background data bearing on ultimate interpretation and appraisal of any mineral concentrations of economic worth in the area.

The question of whether or not the nature of the existent mineral prospects is such as to justify the making of a study on the scale just outlined, is another matter entirely, and one worthy of separate discussion. The answer as I see it is NO, and unconditionally so. In the first place, the so-called "copper prospects" which constituted the chief objective of our project, turned out in many cases to be one and the same thing as Ross' reported mercury prospects. They are not separate and distinct prospects in their own right. To the extent to which this is so the region does not contain individual prospects of both mercury and copper as I had been led to presume by my various informants reports. Furthermore, in no observed instance does any single mineral showing give evidence of anything even remotely resembling a vein or body of any appreciable size. As for mineralogical value, sure chunks of chalcopyrite and tetrahedrite are to be seen occasionally, but they are as infrequent as the mineralized areas are small. Nor does evidence exist from which it could be justly surmised that the area has been subjected to leaching and hence that large, widespread porphyry deposits of mineable grade might be found at depth. On the contrary, various evidence serves to suggest just the opposite, namely, that the mineralized areas are very localized in nature and restricted to narrow zones of apparently structural origin.

In saying the foregoing, I'll grant the most extensive workings were generally inaccessible and that it may seem presumptive therefore for me to make such sweeping conclusions as I did in view of my inability to see all portions of these particular workings in a firsthand manner. As against this I point out that (1) it is obvious from cursory examination that many of the more extensive workings owe their extensiveness to the length of access tunnels through barren country rock rather than to development work on any mineralized body they may contain, (2) natural outcrops tend to be sufficiently abundant to show the lack of existence of large mineralized bodies surrounding these workings, (3) many of the smaller workings are clean and open for observation, and these serve as a key for determining the general pattern of mineralization in the region at large, and finally (4) no property has any record of shipment of anything even resembling an interesting production of either mercury or copper. At best all we could learn of in the case of copper was that while he was engaged in shipping some ten carloads of copper-gold ore from a property in Nevada, Harrison Grove did gather up, and composite with his Nevada shipments, five tons of ore from one Oregon prospect;

and this had been previously mined and packed out of the hills by some sucker before he learned that it wasn't shippable gold ore.

Essentially no new development work at all, and certainly none of any consequence, has been done in the area since Ross made his examination. This in itself is also significant, for Nevada is full of sharp operators who most certainly would have moved in and at least done some work during the last war when the price of copper was high if the Pueblo prospects showed any merit at all. After all, those guys didn't leave many stones unturned then, even in remote and isolated places.

As I now see it, the Pueblo area has copper prospects of value only in the minds of a few prejudiced and wishful thinking individuals; (2), the same can probably be said for mercury judging from Ross' report and the subsequent history of activity in the area; (3), reports to the effect that porphyry-like copper deposits might occur in the area originate from person unqualified to make such judgement; (4), even the reported existence of small high-grade copper lenses is to a large extent unfounded and based upon childish unrealistic sampling, and (5), the prospects in the area have by and large, already had more development work done on them than they merited in the first place. In short, while it would be very interesting to make a detailed and comprehensive-in-its-coverage sort of geologic study of the area, and while the making of such a geologic study would definitely be of long range value from the standpoint of increasing our knowledge of the general geology in this part of Oregon, I can no longer recommend the project as one having basic value with respect to the ultimate development of copper prospects. ←\*

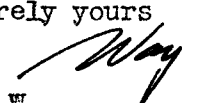
The foregoing is a highly condensed summary of my version of the conclusion resulting from our investigation. Write up of my version of these conclusions was begun immediately upon my return to Baker, but completion of my report was delayed by a greater than usual amount of office routine, including the revision of the travertine report and study of the Howell Williams report on the Pueblo Mountain area. The original outline was, however, completed in all important details before I received the copy of the Howell Williams report which Dave sent to me. Such comments as I have made represent, therefore; independent conclusions of our own.

It was indeed gratifying to read the read the Williams' report and to see how closely our observations and conclusions and suppositions corresponded with his findings. Otherwise, however, it is unfortunate that a copy of the Williams' report was not made part of this office's library long ago. I certainly would never have recommended this project had I been acquainted with Williams' report because it is clear that Williams covers all important aspects of the prevailing geologic situation in a very comprehensive and conclusive manner, especially so the situation with respect to the mineral prospects. With his report to go on, it would have been presumptuous on my part, to say the least, to have either recommended the area as worthy of more study, or to have inferred that any short-time project we might make could result in any material improvement to his reported findings for the area. After all my original recommendation was predicated on the supposed lack of any information for the area other than Ross' reconnaissance which by its very title appeared to be limited to a specialized consideration of quicksilver deposits only.

As is, I am having a copy of the Williams' report made for our office library, and my final conclusions on the subject of the Pueblo Mountain project are that, (1) we abandon the idea of further work for the dual reason that, (a) the Williams' report already covers the subject adequately and in such manner that we would be able to add little of significance to it by continued independent work of our own, and (b) because the mineral prospects don't appear of such quality as to justify it anyway; (2) Instead of continuing a duplication of Williams' work, we should exert pressure on both Williams and the U.S.G.S. to publish the existent Williams report for the reasons that it is a truly excellent report on a region about which there is much public interest and; (3) As a substitute to the Pueblo Range project, it might be worth the Department's while to make a reconnaissance study equivalent to Ross in scope, of the mountainous country lying east of the Denio Valley for the reasons that, (a) windows of the same general series of pre-Tertiary rocks are exposed there as are exposed in the Pueblos, (b) the mapping of the area would constitute a step forward in line with supplying geologic data for a heretofore unmapped area, (c) the making of such a reconnaissance map is something we could do and do well, and (d) the doing thereof before the U.S.G.S. steps in and does it would gain for the Department a maximum amount of credit and publicity per dollar spent and conclusion hazarded as compared to attempting work of a "finished" caliber on an area already covered by more than ordinary reconnaissance as is the case with the Pueblos.

Again I repeat that I enjoyed working on this project very much indeed and I feel both Dave and I have gained a great deal of useful knowledge from the experience even though our results are disappointing insofar as our original objective and hopes are concerned.

Sincerely yours

  
N. S. Wagner  
Geologist

NSW:mb  
cc Dave White