

Place Burns, Oregon  
Date 9/22/42

Mr. W. H. Lynch, District Engineer, Public Roads Administration,  
Post Office Building, Portland, Oregon

Dear Sir:

The provision of access road(s) to a source of raw materials in Harney County, Oregon, is considered to be of importance to the war effort. The raw materials source is known as The Juniper Mine and is situated Sec. 30, T. 34 S., R. 34 E., W.M. Information can be obtained locally from Harry Alexander, owner, Andrews, Oregon or Kenneth B. Platt, Regional Range Examiner, U. S. Grazing Service, Burns, Oregon.

Investigation by U. S. Bureau of Mines showed that property is producing about one flask mercury per week and that sufficient ore is in sight for a total production of 100 to 200 flasks.

Study by U. S. Grazing Service shows that approximately 3 miles of standard truck trail, Category No. 2 type road between existing road and Juniper Mine will be required, estimated to cost \$500.00.

Upon completion of the access road, the property will be developed by Harry M. Alexander & Donald Alexander, owners, Andrews, Oregon.

Request is made for cooperative construction by the U. S. Grazing Service.

By Nic W. Monte Name  
Regional Grazier Title  
Burns, Oregon Address

The Bureau of Mines considers the proposed work to be justified by the potential production from this source of raw material.

By Paul T. Alleman, Principle Mining Engr.  
Name Title  
For S. R. Zimmerly, Regional Engineer,  
Western Region  
Salt Lake City, Utah

C O P Y

October 22, 1942

MEMORANDUM TO Mr. W. H. Lynch, District Engineer

SUBJECT: Juniper Mine Access Road

On October 16, 1942, Mr. R. E. McMullen of the Public Roads Administration and Messrs. Kenneth B. Platt, Regional Range Examiner, and Paul R. Revis, Regional Engineer of the U. S. Grazing Service, made an inspection of the proposed Juniper Mine Access Road.

Prior investigation by the U. S. Bureau of Mines showed that the property is producing about one flask of mercury per week, and that sufficient ore is in sight for a total production of 100 to 200 flasks of mercury.

The project contemplated begins opposite the Alvard Desert on the county road between Andrews, Oregon and Holly Farm, Oregon and extends northwesterly approximately 1.75 mile, rising approximately 800 feet in elevation above this point. The proposed work consists of betterment of the existing road by improving alignment and easing two sections of several hundred feet in length of adverse grade in excess of 16% and provision of drainage at an estimated cost of \$500.00. Provision was not made for surfacing at this time, as it was felt that the improvement in line, grade, and drainage would take care of hauling requirements under the present plan of development and operation.

The present operation of the mine necessitates hauling the soft grades of cinnabar ore by pack-horse, to a retort located in the timber two miles distant from and approximately 1,000 feet above the mine shaft, which is the only economical source of fuel available at the present time. This operation with crude retort equipment and wood fuel results in possibly 50% recovery of available mercury from the softer grades of ore, which percentage could be increased with larger equipment and better fuel such as coal or oil. The present equipment can handle a charge of about 750 pounds of ore with recovery of about 25 pounds of mercury per charge. The harder, higher grades of ore are being saved in stockpile at the mine shaft until better methods of refinement are available. About 20 - 25 tons of such ore are now stockpiled.

Operations have been carried on in this manner for one year. Three weeks ago the owner applied for an R.F.C. loan to purchase a larger burner and retort (available at Goldendale, Washington), to be installed near a new horizontal tunnel, to tap the ore vein below the present shaft, and to use oil or coal for fuel. Operations would be speeded up with larger equip-

ment and better fuel, permitting refining of the harder, but higher grades of cinnabar ore and also result in a higher percentage recovery of mercury. Mining by horizontal tunnel at lower elevation would be more economical and would result in increased ore production over that obtained in the present operations.

The latter operation will require the construction of 1.25 mile of new road beyond the end of the proposed betterment, costing about \$1,000, in order to haul in the new equipment to a site in the vicinity of the new tunnel and as a haul road for fuel.

The expenditure of \$500.00 is recommended to construct the betterment project to minimum standards, using a 9 ft. minimum width with turnouts, 40 ft. minimum radius curvature and 15% maximum grades, and using native round logs for drainage structures.

The Bureau of Mines has verbally expressed willingness to consider an application for 1.25 mile of new construction at \$1,000, should the owner obtain his R.F.C. loan and recommendation will be made for such improvement at that time.

The Grazing Service has equipment and personnel available to do this work.

R. E. McMULLEN  
Assistant Highway Engineer