THE UNIVERSITY OF TEXAS
Bureau of Economic Geology
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MINERAL RESOURCE SURVEY
Circular No. 9

A mineral resource survey of Texas has been started by the Works Progress Administration, the Bureau of Economic Geology of The University of Texas acting as sponsor. The purpose of the survey is to assemble information and make it available to the public. Through a separate project, sponsored by the State Planning Board, the results of the survey, as they are received in Austin, are being assembled for publication. The mineral resource survey is helping in the location of mineral products, from some of which it is reasonable to suppose industries of value to the State may be developed. The following report is based on work in Burnet County.

REPORT ON THE SHERIDAN COPPER PROSPECT IN BURNET COUNTY, TEXAS
by Virgil E. Barnes, Supervisor

This property is located 6.3 miles due west of Burnet. Its latitude is 30°46.10' and its longitude is 98°20.75'. By road it is about 10 miles to the property, 6 miles of which is Texas highway No. 29 and the other 4 miles of which is private road and very rough at present.

The property has not been operated for many years and the underground workings were not accessible for study. The dumps were examined for rock and mineral types and the structure of the area determined.

The workings are in Packsaddle schist. In this area the schist is surrounded by Valley Spring gneiss. A section from west to east starting in Valley Spring gneiss goes through Packsaddle schist and back into Valley Spring gneiss.

The Valley Spring gneiss of the western area is a hard, massive, uniform-textured, pink granitoid rock that has gneissic structure. The strike of the gneiss is N. 32°W., and the dip is vertical.

The Packsaddle schist is about 460 feet thick, well bedded, very little crumpled, ranges in color from black through gray to white, and is hardened as though permeated by silica. This schist is similar to that in contact with gneiss near the Southwestern Graphite Company mine. The structure of the schist conforms to that of the gneiss.

The eastern area of Valley Spring gneiss is of about the same color tone as that of the western gneiss but is not uniform in character. The rock is more or less banded with some bands showing very little gneissic structure. The origin of this type of gneiss is difficult to determine by field examination alone. It may be in part sedimentary and in part igneous.

Between the Packsaddle schist and the eastern gneiss is a 5-foot zone of white schist that appears to be composed predominantly of tremolite, sericite, and quartz. The mineral alignment is about N. 34°W. with a dip of 22° in a southern direction. This rock is so much more altered than the surrounding rocks that it is believed faulting during early metamorphism produced a mylonite which later recrystallized. Granite dikes and pegmatites are present cutting all formations. The country rock found on the dump is mostly a dark-colored amphibolite with poor banding. Lighter bands, white and pink in color, are found, rich in quartz and feldspar. Some of the amphibolite which contains pink feldspar stringers has the appearance of an injection gneiss. Ranging from the amphibolite into the vein material proper is a series of pegmatitic-appearing rocks containing varying amounts of hornblende, biotite, feldspar, and quartz. Some of the hornblendes exceed an inch in length.

The mineralized vein material found on the dump and in the ore bins contains chalcopyrite, tetrahedrite, malachite, azurite, and pyrite in a gangue of fluorite, quartz, and amphibolite. Some specimens were found containing molybdenite associated with chalcopyrite but not with other metallic minerals or with fluorite. The vein, so far as could be determined from surface examination, parallels the bedding of the schist and is a fracture zone along which mineralized solutions were able to penetrate.

The mineral association places this vein in the same class with the Pavitte vein[1] and the origin is probably similar even though the enclosing rocks are different. It is regrettable that the underground workings were flooded, thus preventing the vein from being investigated in detail.

So far as could be ascertained, no production of copper has been recorded from this property.

[1] Barnes, V. E. (April 29, 1936) Report on the Pavitte silver-copper prospect in Burnet County, Texas: Univ. Texas, Bur. Econ. Geol., Min. Res. Survey Cir. 5.