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MINERAL RESOURCE SURVEY
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The information contained in this circular was gathered by a unit of the WPA State-wide Mineralogical Survey of Texas, a project sponsored by The University of Texas Bureau of Economic Geology. The purpose of this survey is to assemble information concerning mineral products and to gather other geological data and make them available to the public. With this information in the hands of the public, it is reasonable to suppose that industries of value to the State may be developed. The following report is based on work done in Llano County by Work Project No. 18047.

THE CRUSHED QUARTZ INDUSTRY OF LLANO COUNTY*

by Carl Chelf, Supervisor

Numerous large pegmatite dikes cut the pre-Paleozoic schists, gneisses, and granites in the Llano region of Texas. Many of these are locally made up largely of quartz. Most of them contain feldspar and smaller amounts of accessory minerals, but rather pure concentrations of either feldspar or quartz are not uncommon. Some pegmatites carry well developed somewhat clear to dark smoky quartz crystals, but the most common occurrence in the region is the well consolidated milky-colored "sugar" quartz. Such dikes are very resistant to erosion and stand as prominent "cores" of hills. Weathering litters the slopes with large fragments, giving the appearance of entire hills of quartz when in reality the dike may be very narrow. Concentrations with great tonnages are rare.

Until recently the quartz of these dikes has been almost, if not entirely, unused. However, within the past year a plant has been established to crush and market quartz from one of these dikes. The company operating is Rocks, Incorporated. The quarry is located on the Ligon property one-half mile northwest of Packsaddle Mountain, 9 miles from the railway at Kingsland. The quarry and mill are located on a prominent northeast-southwest trending hill formed by a series of closely intruded dikes of relatively pure quartz. The visible outcrop is from 150 to 200 yards wide and about 300 yards long. The depth of the quartz is undetermined, but surface exposures show sufficient quantities for many years to come. The quarry is about 200 feet from the mill, making the chip haul by truck as short as possible outside of the danger zone created by blasting. The overburden is small but consists of clays derived from feldspar which must be carefully cleared away in order to get a clean crushing chip.

At the plant the chips are thrown into a gyratory mill, and the crushed quartz falls into a cellar where it is picked up by a vertically set chain-bucket hoist. It falls from the buckets onto a rotary screen which separates granules of from ¼ to ⅝ inch from all others. This range of particles is the finished product, and it is sacked at a tube below the screen hopper, weighed, and shipped by truck to the railway at Kingsland. The material passing the ¼-inch screen is not utilized at the present. The mill is capable of handling 2½ tons of material per hour.

The crushed quartz is sacked for shipment at the quarry in 100-pound bags, and the entire output at present is sold as roofing granules for flat or low-pitch roofs. Being less porous than some softer materials, the ground quartz does not absorb discoloring humic acid stains from vegetable matter on the roofs. It is claimed also that by reason of its light color it absorbs less light than darker materials and hence helps in keeping the interior of buildings cool. The trade name of the material is ROCKSNOW, and the market area, Texas and adjoining states.

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