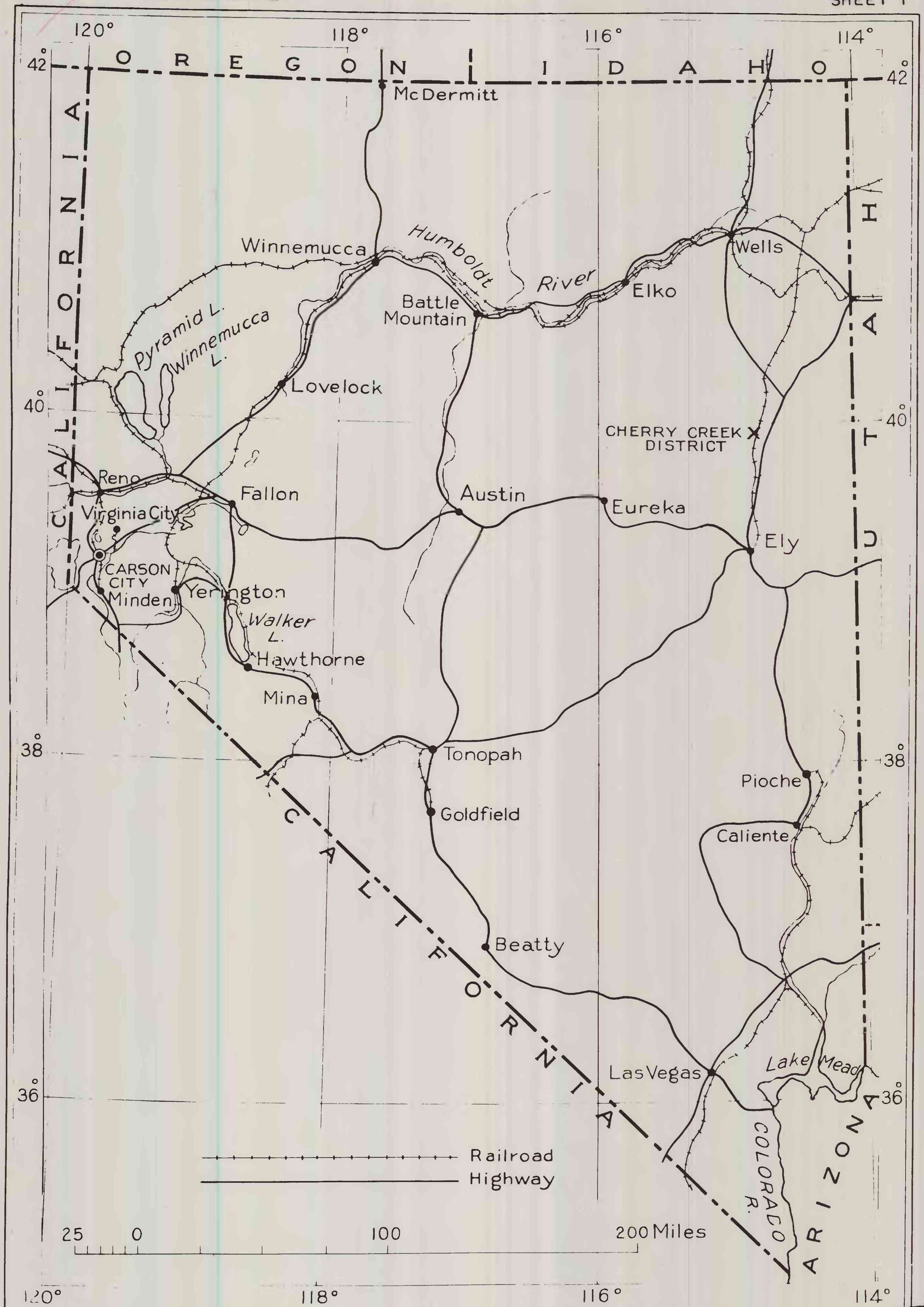

FIGURE 1—INDEX MAP OF NEVADA SHOWING LOCATION OF CHERRY CREEK DISTRICT

TUNGSTEN DEPOSITS OF THE CHERRY CREEK DISTRICT
WHITE PINE COUNTY, NEVADA

Deposits of scheelite (calcium tungstate) occur about 4 miles west and northwest of the town of Cherry Creek, White Pine County, Nev. The deposits occur in a northeastward-trending belt about 2½ miles long (fig. 1). Scheelite was first discovered in the area in 1915, and more than 100 units of WO_3 was produced during the first World War. A small mill was constructed in 1940, and a 50-ton mill was completed in 1941 to treat ore from a shoot lying about 200 feet east of the Ticup silver mine. About 3,000 tons of tungsten ore was mined from the area in 1941-42. A second ore body, approximately 300 feet southeast of the first, was discovered in mid 1942 and had been partly developed in May 1943. The 50-ton mill has been remodeled and now yields a high-grade concentrate, which is recovered by gravity methods, and a low-grade flotation concentrate which is shipped to the retreatment plant of the Metals Reserve Company at Salt Lake City, Utah.

The deposits were examined in 1942 by M. R. Klepper, for the Geological Survey, United States Department of the Interior, cooperating with the Bureau of Mines which explored the deposits by diamond drilling and trenching during the summer of 1942. Geologic and topographic maps of parts of the area were prepared by Mr. Klepper, who revisited the deposits in May 1943 to prepare maps of new underground workings.

A thick series of sedimentary rocks, dipping west-northwest, underlies the mapped area. This series was divided in the field into six units, numbered 1 to 6 in order of age: units 1 and 2 consist of quartzite and shale, respectively, and units 3, 4, 5, and 6, of black and gray limestone (fig. 2). The Ticup "vein," which is a zone of silicified limestone containing lenses of silver-bearing quartz, follows the sheared contact between units 5 and 6. A normal fault, with an east-northeast strike and a stratigraphic displacement of more than 2,000 feet, cuts units 3, 4, and 5 successively southward and, in the southern part of the area mapped, brings units 1 and 6 into contact. In places the zone of brecciation and silicification along the fault is 100 feet wide. North and west of this principal fault the limestone units 3, 4, 5, and 6 are traversed by thin, discontinuous stringers of calcite and are cut by short, steeply dipping faults that strike northwest. Two dikes, one of rhyolite and one of dacite, both apparently later than the Ticup "vein," cut the limestone in the northern part of the mapped area.

Scheelite occurs in the limestone units 4, 5, and 6, in calcite stringers that range in thickness from 1/64 inch to almost 12 inches. In the southern part of the triangular area between the Ticup "vein" and the principal fault, two zones contain lenses that are sufficiently numerous and whose content of WO_3 is sufficiently high to permit classifying the lenses as ore.

In the "A" ore body of the Cherry Creek Tungsten Mining Co. (fig. 3), a brecciated zone in partly silicified limestone is cemented with coarse calcite, a little quartz, and about 1 percent of scheelite. A second ore body of this type, designated the "B" ore body, was discovered by Bureau of Mines drilling and has been partly outlined by development work. Scheelite, with coarsely crystalline calcite and some quartz, cements a lens of brecciated limestone. Exploratory work suggests that this lens is similar to the "A" ore body in shape, size, and strike, but that it dips more steeply. The content of WO_3 is estimated as about 1 percent.

Scheelite, associated with quartz but not with calcite, also occurs in lenses that are scattered through the Ticup "vein" and other, mineralogically similar, silicified fault zones. The WO_3 content of this material is from 1 to 2 percent. More than a dozen of the lenses are known and the ore content of the individual lenses is estimated to range from a few tons to a few hundred tons.