in the metamorphic complex. The ore seems to have ced sandy shale, and the foot-wall appears to follow edding plane of the strata.

About half a mile north of the Rio Tinto mine is a area of light colored intrusive granodiorite, in notice- contrast with the dark colored sedimentary rocks ning it. The granodiorite is presumably of Cretaceous and in it are the gold-silver veins, the discovery of by Jesse Cope in 1869 caused a mining boom and unding of the town of Mountain City.

Some of these veins traverse both the granodiorite the sedimentary rocks, as at the Nelson (Silver Ban- mine. In the Nelson vein, which is from one foot to feet wide, the best ore is said to have occurred e granodiorite.

Early-Day History Secured from Pioneer

The history of the early day mines of Mountain City now be largely gleaned from old men who heard tory from miners now passed on. It was our good ne to have spent a few hours in the hills with W. W. er, who had been intimately acquainted with pioneer tions. Mr. Walker supplied many dates, names and ls. A few days later this pioneer was stricken and and no one seems to remain who is as well informed.

The history of a number of now dead and almost own mines was related by Walker, and thus preserved he files of the State Mining bureau. Among these old s is the Resurrection, which produced $45,000 between and 1892, and, on the same vein, the Independent, yielded $75,000; the Excelsior, which had a stamp and chlorination plant and in the nineties produced ssaying $40 in gold and 400 ozs. in silver; the Argenta, vered and operated in 1869 by Louis Cope, from which er years $200,000 was taken. He told of the Green- which was optioned to Samuel Newhouse of Utah 55,000, who allowed the option to lapse, after which rich ore was taken out by the owners; and of the er Mine, from which ore containing $200 in gold and zs. of silver per ton was shipped to Swansea, Wales, 73; and of the Silverado, the Protection and others, which passed due to the loss of the veins by faulting. the decline in the value of silver interest in the dis- dwindled, and search for the lost veins ceased entirely. All of the stories end the same way—the vein termin- against a fault, and was not found again.

t seems probable that where block faulting has been iform as it seems to be in this district, a study of tructural geology might lead to the recovery of some ese rich veins. It is hardly conceivable that they all been either exhausted or irretrievably lost at s of less than 200 feet.

Silver Banner Mining Company's Mines

The Silver Banner Mining Company owns a group of ims about two miles south of Mountain City, includ- he well known Nelson mine, in which is located the lard vein. The Nelson mine production is not ely known, but it has been variously estimated up to $1,000,000. Most of the ore came from near the surface and was very rich in silver and gold.

Fissure veins cross the contact of the granodiorite and sedimentry rock and the latter is principally limestone. The property is developed by over 4000 feet of workings, including a main tunnel 2400 feet long, and a shorter tunnel 100 feet vertically above.

About the year 1906 a nine-stamp amalgamation mill with Wilfley concentrators was built at the mouth of California creek. The mill operated intermittently. In 1921 flotation units were added and the capacity increased to 50 tons per day. There has been some activity at this mine every year, and this year the owners are preparing to drive the main tunnel ahead to intersect an east-west fissure which may prove to be the principal vein of the group.

The history of the Hunter and the Greenback mines, in which the profitable veins were abruptly cut off by faults would indicate post mineral faulting in these old mines.

About 12 miles northeast of Mountain City on Merritt creek is a remarkable series of six large quartz fissure veins. They strike westerly and cross the Mountain City-Rowland road. Three of them can be traced by unbroken outcrops for several hundred feet, and are from six to 15 feet wide. They have been sampled and assayed at the surface many times, and show low gold and silver value in places. A sample taken from one vein 10 feet wide was assayed by the state analytical laboratory, gave a trace of gold and 6.3 ozs. silver per ton.

About a mile southwest of the above location is an outcrop of manganese ore, the mineral being hard psilomelane in quartz.

Placer Mining Again Perking Up

Placer gold was first observed in the Owyhee river at Mountain City about the time of the first lode discovery, but very little attention was paid to it, as prospecting and mining in the early days was confined to lode quartz veins.

In the middle seventies placer gold was discovered in Grasshopper gulch north of Sugar Loaf peak, and considerable gold was taken out of a section of the gulch about one-half mile long. Many small stacks of gravel tailings remain as evidence of this work. The biennial report of the Nevada State Mineralogist, R. H. Stretch, for the years 1875 and 1876, states that the placer mines on both