

commonly, in spite of their industry, they do not in a week find particles of gold of the value of two piastres. Here, however, as in every place where native gold and auriferous pyrites are disseminated in the rock, or by the destruction of the rocks, are deposited in alluvial lands, the people conceive the most exaggerated ideas of the metallic riches of the soil. But the success of the workings, which depends less on the abundance of the ore in a vast space of land than on its accumulation in one point, has not justified these favourable prepossessions. The mountain of Chacao, bordered by the ravine of Tucutunemo, rises seven hundred feet above the village of San Juan. It is formed of gneiss, which, especially in the superior strata, passes into mica-slate. We saw the remains of an ancient mine, known by the name of *Real de Santa Barbara*. The works were directed to a stratum of cellular quartz,\* full of polyhedric cavities, mixed with iron-ore, containing auriferous pyrites and small grains of gold, sometimes, it is said, visible to the naked eye. It appears that the gneiss of the Cerro de Chacao also furnishes another metallic deposit, a mixture of copper and silver-ores. This deposit has been the object of works attempted with great ignorance by some Mexican miners under the superintendance of M. Avalo. The gallery† directed to the north-east, is only twenty-five toises long. We there found some fine specimens of blue carbonated copper mingled with sulphate of barytes and quartz; but we could not ourselves judge whether the ore contained any argentiferous *fahlerz*, and whether it occurred in a stratum, or, as the apothecary who was our guide asserted, in real veins. This much is certain, that the attempt at working the mine cost more than twelve thousand piastres in two years. It would no doubt have been more prudent to have resumed the works on the auriferous stratum of the *Real de Santa Barbara*.

\* This stratum of quartz, and the gneiss in which it is contained, lie hor. 8 of the Freyberg compass, and dip 70° to the south-west. At a hundred toises distance from the auriferous quartz, the gneiss resumes its ordinary situation, hor. 3-4, with 60° dip to the north-west. A few strata of gneiss abound in silvery mica, and contain, instead of garnets, an immense quantity of small octohedrons of pyrites. This silvery gneiss resembles that of the famous mine of Himmelsfürst, in Saxony.

† La Cueva de los Mexicanos.