

LETTER XXXVIII.

MINING STATISTICS CONCLUDED.

Real del Monte, August, 1851.

FROM my desultory remarks and facts, you will gather how it comes that mining is the paramount interest of Mexico; and it has this farther important bearing on the country, that it gives a vigorous impulse to the other great interests of the state. It offers a market for an immense amount of national produce which could not, to any advantage, be exported. A large population is engrossed by the mines—thousands and tens of thousands of animals are required for their working. Produce is wanted, and lands are consequently cultivated to bring it forward. Every town and city (with a few notable exceptions, no doubt) depend on the mining industry and capital; and thus, both commerce and agriculture are vivified and expanded by mining interests.

The following summary is at once so complete

and so compact, that I cannot help giving it to you, somewhat compressed; because it not only completes appropriately what I had to say on Mexican mining, but because I could not possibly do the thing so well as Mr. Ward. My quotation is long, but too full of matter to be anything but interesting.

“The most fertile portion of the table-land—the Baxio—contiguous to Guanajuato, comprising a portion of the States of Guanajuato; the valley of Toluca, and the southern parts of the State of Valladolid, which supply both the capital and adjoining mining districts; the plains of Pachuca and Apáur, to the foot of the mountains, upon which the mines of Real del Monte and Chico are situated; Itzmiquilpan, which owes its existence to Zimapan; Aguascalientes, supplying Zacatecas; a considerable circle in the vicinity of Sombrerete and Fresnillo; the valley of the Jarol, and plains about San Luis de Potosi (rivalling the famous mines of Potosi, in Peru). A little farther north is Matuahala, with seven thousand inhabitants, created by the discovery of the Catórcé; while Durango has sprung from San Dimas and Guarisamey. Its population rose in twelve years

from eight to twenty thousand inhabitants, while whole streets and squares were added to its extent by the munificence of Zambrano, owner of the mines. Santa Eulalia gave rise to Chihuahua (to the north); Batopilas and El Parral are surrounded by vegetation; so is 'Jesus Maria'; Mapini, Cuencame, and Indee, served to develop the natural fertility of the banks of the Núzas; while in the low, hot regions of Sonóra and Cinaloa, almost every place, now designated a town, was originally and is still, a Real or district of mines."

An infinity of other places, Mr. Ward goes on to say, arose, which but for the mines never would have existed; some surviving, and others giving way with the mines which had called them into existence; in which case, however, they swelled the population of the more fortunate vicinities.

Mr. Ward then proceeds thus: "An examination into the sources of the wealth of the principal families of the Mexican nobility, will confirm what I have stated in regard to the towns, by leading us nearly to the same result. The family of Regla, which now possesses landed property to an immense extent, in various parts of the country, purchased the

whole of it with the proceeds of the mines of Real del Monte. The Fagoagas owe their present importance to the great *Bonanza* of the Pavellón at Sombrerete. The estates of the family of Vivánco proceeded from the mines of Bolaños. The houses of Valenciana, Ruhl, Perez Galvez, and Otero, are all indebted for their possessions to the mines of Valenciana and Villalpando, at Guanajuato. The family of Sardaneta (Los Marqueses de Rayas) takes its rise from the mine of that name. Cáta and Mellado gave to their first proprietor (Don Francisco Matias de Busto) the Marquisate of San Clemente, with immense wealth, a part of which has been transmitted to his descendants. The Cañada of Laborde at Tlalpujahuá, with the mines of Quebradilla and San Acasio, at Zacatecas, all contributed towards the three fortunes of Laborde. The family of the Obregones owes its beautiful estates (at Leon) to the mines of La Purisima, and Concepcion at Catórcé; as does the family of Gordoá the estate of Malpaso, to the mine of La Luz. The son of Zambrano (the discoverer of Guarisamey), wasted as his rightful property has been, is still in possession of four of the largest estates at Durango;

and Batopilas gave to the Marquis of Bustamante both the means of purchasing his title (for which he paid by a loan of three hundred thousand dollars to the Royal Treasury), during the revolution, and the affluence which he is now enjoying in the Peninsula."

Mr. Ward makes so few exceptions of families who have *not* owed their wealth and position to mines, that I think the circle might safely be enlarged; at least my impression in Mexico was, that there were many great *hacendados*, not only unconnected with mines, but who had not acquired their status and riches from mining ancestors. Mr. Ward adds, that "the mines furnished the means of building the vast *Présas de Agua*, or Reservoirs, without which agriculture can so seldom be carried on successfully on table land;" and this, I presume, may be taken, less or more, to be the fact.

My business being more especially with Real del Monte, I shall only further cull from Mr. Ward's conscientious review of the leading mining establishments of Mexico, his notice of the one named, as it existed in 1826.

"The possessions of the Real del Monte

Company on the two great veins of Santa Brigida and La Biscaina (which are usually regarded in England as *one* mine), cover a space of 11,800 yards, and are intersected at intervals by 33 shafts, varying in depth from 200 to 270 yards,* but all sunk with a magnificence unparalleled in Europe. The whole of these shafts, together with the great *adit*, which follows the direction of the two veins, branching off from the Santa Brigida vein at the point where it intersects that of the Biscaina, and from which the wealth of the Regla family was principally derived, were delivered over to the company in July 1824, in a state of absolute ruin. Many of the shafts had fallen in (though cut, at intervals, in the solid porphyritic rock); in others, the timbers had given way; and in all, as the *adit* was completely choked up, the water had risen to an enormous height. In July 1826, when I visited Real del Monte, the

* The lowest is the Dolores, given, in 1848, as 320 *varas* (a measure of two feet nine inches) deep. Cayetano is 347; Santa Teresa is 335; Terrero, 370; Guadalupe, 210. Santa Agatha and San Francisco are the highest. The great *adit* is 242 *varas* below the mouth of the Terreros shaft, being 2½ *varas* high, and 1½ wide, throughout; and, with a very gentle fall, runs for 2½ miles, to the opening in Moran, below.

adit was cleared and re-timbered, from the mouth (near the mine of Moran), to the shaft of Dolores (a distance of 2,807 yards; seven of the great shafts on the Biscaina vein, and two on that of Santa Brigida, were repaired down to the *adit*-level (213 *varas*), forming, in all, a space of 12,439 feet that had been re-timbered, and 5,921 feet that had been actually dug out anew, in order to free it from rubbish, in the course of two years: 45,400 yards of road were likewise made during the same time, by which a communication by waggons was opened from the different shafts to the farms on the mountains, as well as to the great *hacienda de Regla*, between which and the mines 600 mules were formerly employed daily, in the conveyance of ores. At all the principal shafts, buildings were erected, with magazines, and workshops for carpenters and smiths, enclosed by lofty stone walls. At Regla, a 36-foot water-wheel had been made; and a wheel-pit built for its reception. Eight of the old *arrastres* (crushing-mills), worked by water, had been repaired; dwelling-houses for miners built; smelting-furnaces erected; stabling completed for 500 mules and horses; and every preparation made for

putting the whole establishment into activity, the instant that the drainage of the mines could be effected.

“To accomplish this, five large steam-engines, a steam stamping-engine, and two small saw-mill engines, amounting, in all, to 1,500 tons of machinery, were sent out from England, all of which have been transported from the coast to Real del Monte by the party under the orders of Captain Colquhoun, whose exertions on this most arduous enterprise, had they been made in the field, would have excited both the surprise and the gratitude of the country. Seven hundred mules were employed, during five months, upon this great work, with from seventy to one hundred men, without including those who had been previously occupied in repairing such parts of the road, between Vera Cruz and Perote, as must have proved impassable for loaded waggons.

“Nothing could be more honourable to the director, Captain Vetch, than the flourishing state of the establishment at the period of my visit; nor do I think that the most timorous of the shareholders would have murmured at the expense, had they seen the ability with which

the whole plan had been traced, and witnessed all that two years had enabled their agents to effect."

Real del Monte continued to languish; for, after a struggle of twenty years, it never got to the point of paying its own expences and improvements, estimated at 30,000 dollars monthly. But not a shadow of this untoward result is to be attributed to the principal managers at Real del Monte. They were enabled to lay a splendid foundation; and then, I may say, were given bricks without straw to rear the edifice. "The energy and skill of our countrymen," justly remarks Mr. Latrobe, "in the construction of new shafts, and the substitution of steam for animal power; the great roads constructed to Pachuca, Regla, and to Vera Cruz, whence all their machinery has been transported on its arrival from England; and the order and wisdom evident in all the operations, are not unworthy of the British name."

As none of our party descended any of the shafts, and as I want you to gather a general notion of the best Mexican mines, from my account of Real del Monte in particular, the

following extract, from Latrobe's "Rambler," you will find interesting.

"But now, if you choose, you may accompany us to the mouth of the Dolores shaft, when, having been garbed in miner's dresses, with heads well defended with a kind of felt helmet, we began our descent by ladders, accompanied by two of the English captains or overseers, and went down, down, down into the bowels of the earth. We passed the mouth of the *adit*; and reaching the bottom of the mine, in our progress from one shaft to another, visited every part of the 'workings.' To gain and examine some of these required a certain degree of strength and resolution, from the dangerous nature of the descent and exit. They were various in appearance; sometimes a shapeless excavation, and at other times wrought into the form of a gallery, according as the rock had been rich or poor in the ore, which is found in a quartz matrix, embodied in the porphyry rock, of which the whole chain consists.

"The system of mining struck me as peculiar. The common miners are, for the most part, of the Indian race. A few of them band together,

to work in company, and take their equal share of the proceeds. They are paid four rials a day by the company, and take, as their perquisite, one-eighth of the ore extracted.

“On issuing from the mouth of the mine, the confederates themselves divide the lumps of ore, rich and poor, into eight heaps, in the presence of one of the overseers, and that overseer determines which of the eight shall be given up to them. There are subterranean offices, where the tools and candles are kept, and regularly served out and reclaimed, by an officer charged with that particular duty. Blasting, and other operations, are carried on, as in other mines.

“There are, upon an average, about three hundred Indians constantly thus engaged in the different parts of the mine, and the scenes presented in those gloomy caves, where they work by the red light of their tapers, with scarcely any covering, are far beyond my describing.

“The ascent of the great shaft of the Terreros, from the depth of nearly a thousand feet, by means of a series of perpendicular ladders, thirty-two in number, was one of the most fatiguing

exploits I ever undertook. We were, nevertheless, highly gratified by our adventure.”

Any further notice I have to take on mining operations, you will find in my own personal narrative.