

out a blade of grass to be seen anywhere, though the hills on either side are not without a peculiar beauty of their own, due to their variegated colouring caused by the presence of rich copper ores. It is at Calama that the night train makes its first stop at five o'clock in the morning and the time table shows an hour which the traveller will eagerly avail himself of for a stroll in the delicious brisk morning air should it be in the warm season.

Calama even in the time of the Incas was a centre of copper mining and there is an interesting modern smelting establishment in the neighbourhood which obtains its power from the waters of the Loa. It is some 7,400 feet above the sea and many passengers to Bolivia prefer to stop at least a day here to accustom themselves to the altitude before going further.

At kilometre 252 is the short branch (10 kilometres long) up to the copper mines at Chuquicamata 8,846 feet above the sea. At kilometre 298, immediately at the north side of Conchi station, we come to the Loa Viaduct, which is one of the most interesting engineering structures in the world; the level of the rails on the viaduct is as nearly as possible 10,000 feet above the sea whilst their height above the surface of the waters of the Loa river rushing below is 336 feet or more than twice the height at which trains crossing the Forth Bridge are above the waters of the Firth of Forth. The viaduct is a most graceful steel structure, consisting of six lattice girder spans of 80 feet each, in the clear, supported on steel trestle towers.

From Conchi station, beside the viaduct, runs the branch line (20 kilometres long) to the copper mines of Conchi Viejo, the rail level at the end of this branch being 11,450 feet above the sea. At San Pedro station, kilometre 312 (193 miles) and 10,700 feet above the sea, are situated the collecting reservoirs, blasted out of the solid rock, of the waterworks which the Antofagasta Railway Company has constructed at a cost of some £750,000 to supply the town of Antofagasta, the Nitrate fields, and its own services, with water; for no other fresh water can be obtained except by condensing

sea water, and from these reservoirs pipes run the whole distance of 193 miles, delivering the pure snow water of the Andes at the sea level, which is no inconsiderable undertaking in itself. The water to fill the reservoirs is taken partly from the San Pedro river close by, and is partly brought by 6-inch pipes which run for a distance of some fifteen miles up the slopes of the mountains to springs of most beautiful water situated 16,000 feet above the sea. Shortly after leaving San Pedro station the railway skirts the base of the majestic snow-capped volcanos "San Pedro" and "San Paulo." From the crater of the former ascends a constant column of smoke, and though it has not shewn greater signs of activity than this in recent years, it is evident that in comparatively modern times it has been in eruption, for the railway cuts through a lava bed nearly a third of a mile wide which looks as fresh as if it had been deposited only a year ago. Climbing steadily up, at Ascotan, kilometre 360 (223 miles from Antofagasta) the summit of the main line is reached at a level of 13,000 feet above the sea, and from here it descends rapidly to a level of 12,200 feet at Cebollar, kilometre 387, where it runs alongside a wonderful lake of borax 24 miles long by four and one-half miles wide, owned and worked by the Borax Consolidated Company. The view as the train winds round the snow-capped mountains, whose slopes are bright with metallic hues is quite unique and the glistening surface of the borax lakes with occasional stretches of green water remind one very forcibly of Switzerland. From Cebollar station a short branch runs into the calcining establishment from which some 3,000 to 4,000 tons of borax are exported per month. This lake is said to be the largest single deposit of borax in the world, and the main source of the world's supply.

At Ollague Station, kilometre 435, is the Chilean Custom House, and also the junction of the branch line (96 kilometres long) which has recently been constructed by the Antofagasta Railway Co. to serve the important group of copper mines at Collahuasi, said to be amongst the richest known. This branch