Ralston Divide, Placer County, Cal.

Written for the Mining and Scientific Press by A. Boriiead.x.

The Mining and Scientific Press devoted considerable space in the issue of July 30, 1898, to the Ralston Divide Gold Mining Co.'s property, in Placer county, Cal. The following will give further information regarding the work done during the two years since:

The property embraces ninety claims, about 15 miles in length of the Ralston Divide, between Long Canyon and the Middle Fork of American river. This divide is comparatively virgin ground, only sufficient work having been done to prove the presence of gold in many places; some of the old works date as far back as the early days of California in 1850. Besides the mining ground, the company acquired several miles of ditches, the longest or Lambert ditch being 25 miles in length, and starting from a big dam on the American river at French Meadows. Other ditches, like the Long Canyon ditch, are 10 to 12 miles in length. There is a wagon road between the Divide and Summit Station, the highest point where the overland Pacific Railroad crosses the Sierra Nevada mountains, at an elevation of over 7000 feet.

The property belongs to the Ralston Divide G. M. Co., a California corporation, representing a French company—the Compagnie des Mines d'or du Long Canyon—composed entirely of French capital, with headquarters at Paris, 5 rue Scribe. The California office is at 214 Pine street, San Francisco. The directors are F. Chappellet, president; A. Bordeaux, vice-president and manager ; H. W. Pulcifer, C. Rillict, H. Fabrigue ; George W. Dixon, secretary.

Following is a full list of early hydraulic works on the Ralston divide: Pat Goggins, extensive hydraulic pit ; Vaughn, small pits and shaft ; Willard, small pits and 500 feet of tunnels in bedrock and gravel; MacPherson, 500 feet of tunnels in blue gravel; MacAllister, small pits; Ramsey & Poland, two hydraulic pits, extensive; Blacksmith Flat, large pit; Quartz Point and Quartz Flat, two extensive pits in white gravel ; Marshall, Hillside and Red Cut, three pits in blue gravel ; Ralston Pennsylvania mine, large pits in upper blue and white gravels ; Diana, two pits and two tunnels in white gravel.

The Long Canyon's bed has been hydraulicked below Willard and below Blacksmith Flat.

From May, 1898, the following has been done :

At the Pat Goggins claim, 3500 feet of tunnels in full gravel, and breastings ; output of $5000 during the prospecting operations of 1899. Granite mine, 700 feet of tunnel in full gravel. Ramsey claim, 100 feet of tunnel in gravel. Blacksmith Flat claim, 100 feet of tunnel in gravel. Lynchburg claim, 3150 feet of tunnels, partly in bedrock, partly in gravel. Red Cut, 1000 feet of tunnels in blue gravel. Total, about 8500 feet of tunnels. Most of this development work has been done in order to locate a deep gutter or river channel inside the Divide; but so far the channels have proved to be very wide and flat, except for a few stretches of shallow and richer gravel. In order to work profitably such wide channels, with no special concentration of gold, it will be necessary to operate on a large scale, rather than to try extensive underground works by drifting. Piping underground has been tried successfully in some places—in El Dorado and Nevada counties. This is the case when the gold is scattered over the full width and height of the channel, with occasional pay leads, but lacking in a concentration of gold in deep gutters, as in many of the mines of Forest Hill Divide, in Placer county.

Two of the mines are, and a third one may be, equipped for producing this coming winter—Pat Goggins, Lynchburg and Blacksmith Flat.

At the Pat Goggins an elevator will raise up the gravel 40 feet high, as the ground is flat. The ditches, reservoirs and pipe lines were completed last summer. The elevator, furnished by the Risdon Iron Works of San Francisco, is able to pass 100 cars an hour with a pressure of 300 feet and 600 inches of

water. As the gravel inside was proving good last spring, work will be done by drifting at the same time as by hydraulicking outside.

Lynchburg is equipped with derricks and giants under a pressure of 350 feet of water. Ditches, reservoirs, pipe lines are ready.

Blacksmith Flat cannot dispose for the present of more than SO feet of pressure, but there is another ditch to be completed next year, at which work was started already last summer, that will give about 250 feet of pressure and large capacity of water. Subsequently the other mines will be opened up and developed according to the first results obtained. A large undertaking like this cannot succeed without large expenses, as everything is to be done in a new and remote country. The locating of the Forest Hill channels has entailed an immense amount of expenses in prospecting tunnels by hundreds, and the Ralston divide is scarcely less extensive than the Forest Hill divide.

Channels.—The development works by tunnels, and the different surveys have proved the existence of and located two different kinds of gravel, which, as it seems, belong to two different channels. So far there are no indications of any deep and narrow channels; on the contrary, all the gravel tunnels met with only wide stretches of flat river beds, between far distant and slow-grade rims. At the same time, the depressions along the exterior contact line of gravel and bedrock are of considerable length with a corresponding depth pointing conclusively to the sole existence of some broad outlets. As there do not appear to exist any deep and narrow outlets in any place all around the Divide, it is fairly probable that there are no deep or narrow channels.

As both the white and the blue gravel belong to some wide and flat channels, it would seem as if they were two stratas in the same channel, and this opinion was expressed in a report of W. Lindgren on. The old Yuba and American river channels. The white gravel is always at a slightly superior level above the blue gravel, and might possibly be its upper lead, now resting upon the cement, but now resting upon the bedrock, thus proving to be an independent channel. In the Forest Hill Divide the same white and blue gravels exist, with the same difference of level, and yet, according to Ross Browne's map, their channels are different altogether; the deepest one is the youngest. According to W. Lindgren, on the contrary, the deepest one would be the oldest; this is adverse to the facts, as, for instance, the modern rivers, being the youngest ones, have cut the deepest bed across the bedrock.

I am disposed to believe that on the Ralston divide the white and blue channels are different, but they may have run parallel, and even between the same rims in some places, and this still better explains the sole existence of very wide depressions of bedrock along the,' contact line.

In the Forest Hill divide there is a similar phenomenon, the parallel existence of a white and of a blue channel, at a slightly different level. The white Pond channel is different from the blue Mayflower channel, and is considered to be the oldest one; yet they run close by each other, even with an intersection right below Forest Hill.

If there are no deep and narrow channels in the Ralston divide, there may be some pay leads. Even in the widest rivers there are generally some deeper gutters, and such gutters in California are the regular channels of the miners, being the richest pay leads. To locate them is a much more difficult task than to locate the old river itself, and this was only done in the Forest Hill divide many years later, after the discovery of the auriferous gravels, and after the hydraulicking of the inlets, outlets and breakouts of the channels. Subsequently only to the discovery of a gutter in these inlets and outlets was it possible to discover a pay lead in a channel by tunneling across the bedrock, and by drifting. Drifting always follows hydraulicking. The Mayflower rich channel was detected after its very existence was demonstrated at Bath and Dardanelles.

This last period has not yet been reached in the Ralston divide, but the second period, the discovery of a pay lead in a wide river bed, seems to have been attained in the wide outlet of the Pat Goggins blue channel by drifting, familiar work is now undertaken at the Blacksmith claim. Elsewhere drifting under ground will be possible only after the development on a large scale of the big hydraulic mine at Lynchburg. There is a prosperous future for the Ralston divide mines. When the hydraulic mines are exhausted, then will start the drift mines.

It is exceedingly probable that the white and blue channels of this divide are the upstream course of the white and blue channels of the Forest Hill and Georgetown divides, their connections being Kentucky Flat and Michigan Bluff.

Before closing, I can not refrain from saying a few words on the old theory of an ocean beach to explain the California channels. An upheaval of the Sierras has not been proven as non-existing, and an ocean beach only seems able to explain certain difficulties, like the close vicinity of the very wide channels at North Bloomfield, Dutch Flat and Iowa Hill, some running to the Yuba, some running to the American river. The local miners and the geologists disagree as to the course of these channels. We are still far from knowing everything about the California channels.

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