Park City.

THE HOME OF THE GREAT SILVER KING.

Park City.

IT may safely be said that Park City has never been the scene of greater activity in a mining way than has been witnessed there during the present year. The bonanzas of the camp have made a good record, and some of them have disclosed exceedingly interesting developments. This is especially true of the Silver King and Daly-West mines. Very encouraging conditions also exist in a number of the youngsters of the camp and the prospect is that several new producers will shortly be added to the camp, as a result of the efficient work done during the past few months.

SILVER KING.

The Park City mine par excellence is the Silver King. This does not detract in the least from the merits of the other properties. But its ore bodies are so vast that no other mine in the camp makes the same showing either in the quantity or quality of the ore. Under the able direction of Supt. M. J. Dailey the mine is sending out from 2,700 to 3,000 tons of shipping ore monthly. The values run about 45 per cent lead and around 50 ounces silver. Nearly all of this ore is taken out above the 900-foot level, where an immense body of carbonate and galena ore has been followed down from the 700 level. The mine was opened up from this level and the ore body has been proved to pass down to the 1,200 level. It has been reached by drifts from the 900 and 1,100 levels of the shaft. A long drift has also been run in a southwesterly course from the 1,300, but the ore body has not yet been reached. The richest ore in the mine has been exposed this year in an upraise from the 1,200 level. With the completion of this upraise, which will connect with a 60-foot winze from the 1,100 level, the ore body would seem to be proved continuous for a vertical depth of 600 feet. This gives, however, no idea of the distance that the ore has been followed on its dip. The pitch of the vein varies within certain limits, but its course is very flat for the greater part of the distance from the 700 to the 1,200 levels. To show how flat it lies between the 1,200 and 1,300 levels, Supt. Dailey says it will be necessary to run back from the 1,200 level between 240 and 280 feet on the vein in order to reach a vertical depth of 40 feet, and connect with the winze from the 1,200 level, now down 60 feet. This shows the vein to be very flat, but it is nearly level in the big stope between the 700 and 900 levels, from which the present ore supply is being drawn. Between these levels the management is now working on its sixth stope of 50 feet width. This means that for 300 feet wide a splendid grade of ore has been stoped out. The height of the stope is as much as 45 feet. Probably when all the ore is extracted the stope will be much wider than its present width. The ore is a fine carbonate, interspersed with big bodies of solid galena, some of them showing 10 to 12 feet thick. The best showing in the mine is on the 900 level or the point to which the ore body has been stoped. It looks very strong there and promises great things for the lower levels. While no crosscutting or stoping has been done below the 900, some idea may be had of the size of the ore deposits when it is known that on the 1,000 level a drift has been run in ore from 600 to 800 feet before the hanging wall was found. But great as is the impression given by an inspection of the above drift, it becomes much greater when it is known that on the 1,100 level a similar drift penetrates the ore almost continuously for 1,100 feet before cutting the hanging wall. In only one place does a body of waste intervene and that, Supt. Dailey says, is comparatively small.

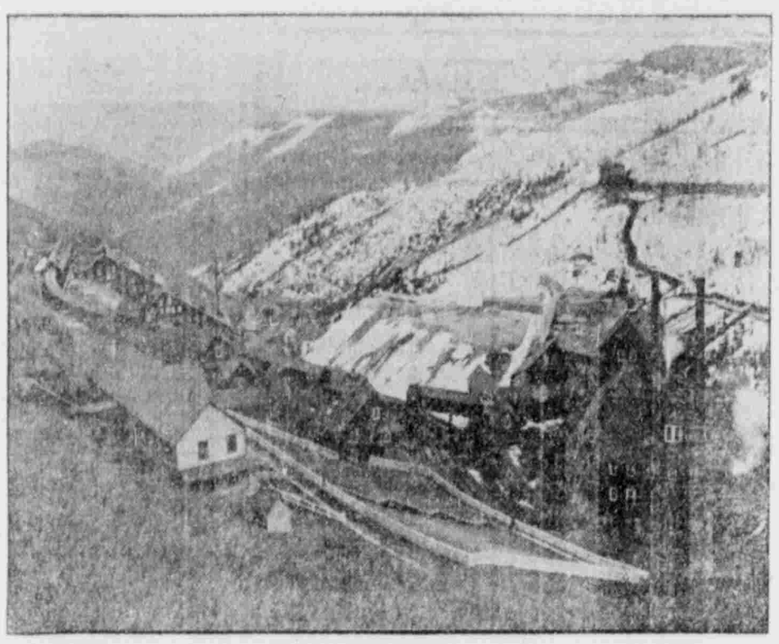
While the main ore chute with its limestone capping and quartzite foot wall goes on down to the depths from the 700, a fork in the ore occurs at the 900 and a force of miners is now engaged in stoping the ore which has turned and is running back towards the 700 level.

The showing on the 1,200 level is probably the richest ore exposed in the whole camp. It assays as high as 600 ounces silver with 5 to 15 per cent copper, 25 to 50 per cent lead and as high as $30 in gold per ton. By the carload the assays are lower of course, but even then some of the stuff has been proved to be worth close to $150 per ton.

Considerable attention is being given to the southwest drift on the 1,300 level, which is now about 3,000 feet from the shaft. It is the intention of the management to push the drift about 1,200 feet further to connect with shaft No. 2, on which work will be started in the near future. A force of men is now engaged in pushing the Alliance tunnel to a point where a 1,500 foot crosscut is to be started towards the big drift on the 1,300 of the King. It is the intention to then sink about 700 feet and connect with the above drift which is not expected to intercept the vein sooner than four months.

THE MILL.

The splendid management of the Silver King is nowhere better seen than in the condition and appearance of its hoisting plant and mill. Nothing with a ramshackle appearance is permitted by the management. The appearance of the buildings outside is very pleasing to the eye, but it is no less so inside, where whitewash and paint are used very effectively. The floor of the hoist is painted and the footpaths around the big Bullock engines are covered with strips of rubber. Everything here as in the mill and mine shows a commendable attention to appearance. The inside of the mill, under the direction of J. B. Fleming, is nicely whitewashed. The machinery looks well in its coat of fresh looking black paint, while the elevators and woodwork connected with the machinery looks well in its coat of red. The capacity of the mill is about 225 tons per day, but it is not run at any like its full capacity owing to the fact that so much of the ore extracted is of shipping grade. In the output of from 90 to 100 tons per day about 65 tons of milling ore is extracted. This is conveyed from the shaft through a covered track 900 feet to the ore bins at the top of the mill. This bin has a capacity of 2,500 tons. At the bottom of the bin twenty-two chute gates unload the ore into cars which are weighed and then dumped in front of the crushers. The fine material passes to a 250-ton bin which also receives the discharge from the crushers. From this bin the ore passes to a half-inch revolving screen. The coarse goes to the first set of rolls, after which the ore is elevated 40 feet and passed through four revolving screens varying in size from half an an inch to one-twelfth of an inch. Here the ore is sorted and passed to Hartz jigs varying in size between the figures stated above. The mill is fitted with sixteen double compartment jigs, which handle, as shown above, four different sized products. That which is too fine for the last jig passes through Huntington mills of which there are four. It then passes to four compartment hydraulic classifiers, by which on the basis of specific gravity the pulp is divided between the sand jigs and filter presses. The coarsest goes to the sand jig, the next finest size is caught by six Wilfley tables and the slimes, which look like muddy water only, are passed over Frue vanners on which Superintendent Fleming has a new device for taking off the values. The apparent muddy water from the jigs, tables and vanners contains values, to save which a new device was put into effect this year. The slimes are all passed into long settling tanks, in which a great deal of the values settle. Much, however remains suspended in the water after passing along two of these tanks. This is passed over canvass tables having a gentle slope. By this means more of the fine sediment is deposited. The water, which is now pretty clear, is passed over the second set of canvass tables and another small deposit occurs, when the water passes away into the canyon. On its way it passes through a device which takes a sample of the tailings every ten minutes. A new device has been introduced this year in the shape of two Smith-Valle presses, through which the slimes are passed with good effect. The savings of the two presses, Mr. Fleming says, pays the expenses of the mill. The present saving of the mill is between 90 and 95 per cent of the values. The mill is operated by a compound Corliss engine of 150 horse power. An auxiliary Corliss tandem of 125-horse power is also placed in reserve. The 500-light dynamo in the mill supplies the light above the ground.



THE SILVER KING HOIST AND MILL.

THE TRAMWAY.

At present the ore is hauled about two miles to the railroad by wagon. This method will be replaced, however, early in the year by the aerial tramway which will convey the ore from the new sampling mill in course of construction to the terminal in Park City which has a capacity of 1,000 tons. The towers of the tramway are made of steel, the highest one being 85 feet. They are set on substantial rock foundations. Thirty two of them are now in place and the remaining ones will shortly be installed. Besides taking the ore to the railway, the tramway will bring back coal which will be dropped into big bins near the mill and thence conveyed by cars to the mine and mill. Everything about the tramway and sampler has been made as automatic as man can make it. A device has been arranged at the terminal by which the ore will be evenly distributed over the bottom of the cars. The sampler is the result of Mr. Fleming's plans in connection with Manager Kearns and Secretary Lamb. It is fitted with four receiving bins of 250 tons each. Automatic feeders connect with the bins by which the ore passes to a 24-inch Robbins belt conveyor which will discharge into a large Commett crusher. After being crushed the ore will be raised to the top of the building where the first sample—20 per cent of the entire lot—will be taken. The rejections will go to the shipping bin and the sample will pass to the first set of rolls, after which another 20 per cent sample will be taken the rejections going to the shipping bin and the sample going to the second set of rolls. This is repeated four times when the last 20 per cent sample goes to the sample grinder from which a 25-pound sample will be taken to the assay office. One good feature of the sampler is that the rolls are all on the same floor. An ingenious device also makes it possible to transfer the rejections to either of the shipping bins.

DALY-WEST.

No one who has not visited the Daly-West can appreciate the amount of work done there or the quantity of ore that is now in sight; and no one, it is safe to say, who has not made a trip to the mine in the worst storm seen in the Park in years, can thoroughly appreciate the facilities for ore transportation through the great Ontario-Daly tunnel, which connects with the 1,200 level at one of the Daly-West shaft about two and one-fourth miles from its entrance. It makes a road for the transportation of the Daly-West ores that storms and snow drifts cannot interfere with. It may take a man three hours to ride horseback from Park City to the mine—a distance of two and a half miles—or it may take seven hours to get a sleigh to the hoist from town, as it did in the recent storm, but the extraction and marketing of Daly-West ores goes on serenely.

As is widely known, the mine is opened up by a shaft 1,400 feet deep. The ledge is also cut from the 1,200 and 900 levels of the shaft. The biggest ore bodies at present determined lie on and above the 900 level, where they have been developed on two levels above the 900. The first of these two levels is about 160 feet above the 900 level and may be said to be the 700 level of the mine. At this point occurs the largest deposit of shipping ore in the mine. For an average distance of 200 feet above the 900 the ore has been stoped out for about 800 feet in length. As the vein lies very flat on and above the 900 a 200-foot stope on the vein does not amount to a great height vertically. What is probably the finest showing in the mine is present on the 700 level, or what is called 01 level, 160 feet above the 900. A magnificent body of fine ore has been upraised in just east of the Anchor lines. Near the Anchor property an upraise has been run in the ore chute about 25 feet without reaching the hanging wall. At this point the ore appears to be similar to the Silver King about the same level. For a distance of about 300 feet a drift has been run east from the Anchor lings, where the chute has again been proved to be from 20 to 25 feet thick. The management has stoped on the 700 level, or 01, about 25 feet. About 40 feet above 01, or 200 feet above the 900 level, another level has ben opened up which is called 02. A big body of good ore has been developed there which, owing to the flatness of the vein insures a good deal of the 900 level, the condition on the 1,400 level gives, perhaps, the biggest promise for the future of anything in the mine. The developments on this level are of much interest because the greater part of the work has been done this year. After running 725 feet in a westerly direction the vein was intercepted. At this point and east of the intersection a very good drade of milling ore is now being stoped. The stope is now about fifty feet above the 1,400 level. In passing it might be said that the best ore bodies in the mine lie west of the crosscut from the shaft, or in the direction of the Anchor lines. Some good bodies of silver ore lie east the point where the crosscut from the shaft intersects the vein, but the mill is not prepared to handle that class of ore at present, consequently the greatest attention is being given to the west end. For a distance of 1,600 feet a drift has been run west on the vein from the crosscut on the lowest level. In that distance four chutes of ore have been cut through. The first three are not very large, but it is believed that they will develop into large proportions with depth. The last chute has now been cut through a distance of 350 feet. Nothing is known as to the width of the ore body for no crosscutting has yet been done. It is believed, however, that it will open up big. The ore is of very good grade, though most of it may be called first class milling ore. Connection was recently made with a winze from the 200 level, and the drift is being pushed in ore towards the Anchor lines which are between 500 and 600 feet distant. A winze has been started from the 1,400 level near the crosscut. It is also the intention to sink on the big ore chute west on the 140.

All of the shipping ore extracted is raised or lowered to the 1,200 level as required. It is thence trammed to the big shed at the mouth of the tunnel 2¼ miles away. This shed is about 150 feet long and the ore is dropped from the mine cars to a floor 4 feet lower. This floor is about 15 feet wide and is on a level with the floors of the railroad cars which are run into the building close to the ore floor. This prevents storms interfering with the loading of ore and makes it also quite economical.

The milling ore is all hoisted to the surface and goes to the mill which is similar to the Silver King, except in its treatment of slimes. It consists of a crusher, two sets of rolls, two Huntington mills and fourteen Wilfley tables. A good extraction is made and the concentrates uniformly assay about 30 per cent lead, 45 to 50 ounces silver, $1.00 in gold with 2½ to 3 per cent copper. All of the Daly West ores contain zinc. The shipping ore carries about 20 per cent which is the penalty limit. The mill ore carries from 16 to 17 per cent. Of this amount two tons of concentrates daily are stored which carry 35 per cent zinc with 40 to 45 ounces silver. By thus extracting some of the zinc and shipping equal lots of concentrates and crude ore the penalty is avoided.

The future of the Daly West appears very roseate. After being opened by John McSorley under Mr. J. J. Daly's direction it is fast developing into one of the biggest bonanzas in the West under Superintendent John A. Kirby's management. Its reserves are now very large and in the hands of the present skillful and careful management it is not a very uncertain guess to say that the company will increase its dividend to 30 cents per share next year.

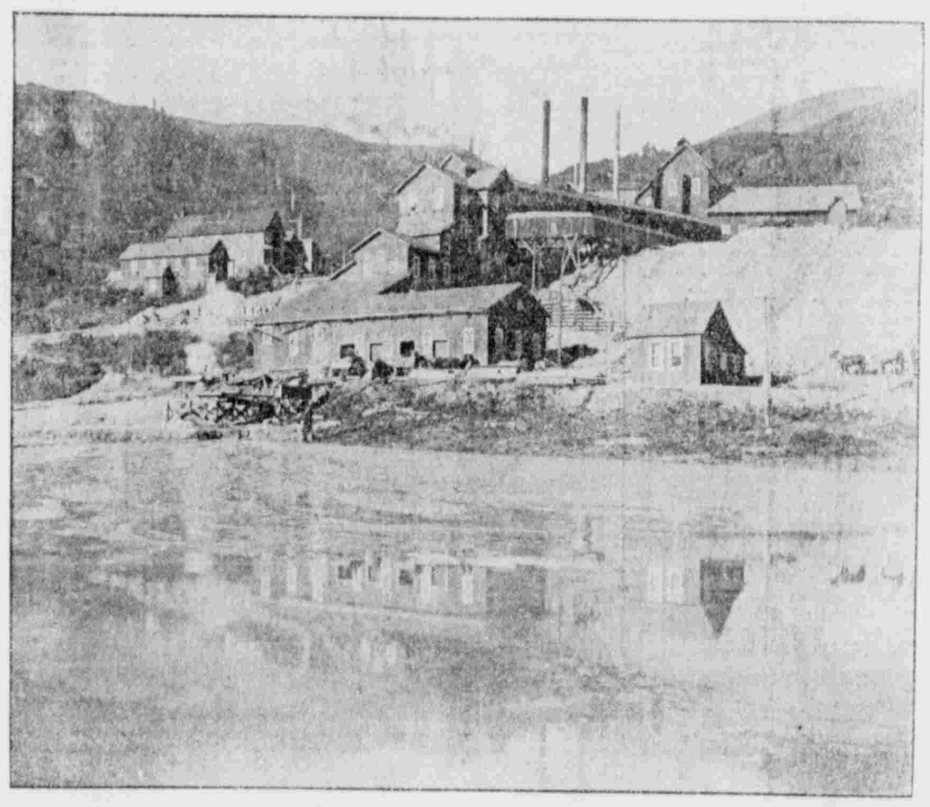
THE ONTARIO.

The great Ontario of Park City, with its dividend record of nearly $16,000,000, closes the year 1900 with little change in its condition as compared with 1899. During the first ten months of the year, or up to Oct. 31st, 19,500 tons of ore had been mined. The output for November and December will increase this amount some 4,500 tons. Of this amount about 19,500 tons of ore have been treated this year in the Marsac mill, which was fitted up in the beginning of the year for the treatment of the Ontario ores. The first run was made early in February, and since then the above amount has been put through. The ore contains about forty ounces in silver per ton on an average, besides a little gold.

The company has sold to the smelters about 5,700 tons of ore during the year, some of which was on hand previously. The sales of crude ore up to Sept. 30th amounted to $135,000 in round numbers, and the sales for the year are estimated at $181,000. Conditions at the mine are about as usual. Most of the ore extracted has come from the 1,100 to 1,500 levels inclusive, but a certain percentage of the ore has been taken from various places between the 300 and 900 levels. The management has just started to sink the No. 3 shaft below the 1,500 level. In all probability it will be run down to the 1,700, at which level it is expected that the vein will be crosscut within 60 feet. As usual the development work has been kept away ahead of the extraction, which insures about the same reserve as at this time last year. The mill extraction is about 89 per cent. About 250 men are employed at the mine and mill. In connection with the Ontario it might be said the water from the drain tunnel is still being used to advantage in generating electricity to light Park City, but the stream is said to be steadily diminishing. A streak of ore has been followed some distance off from the drain tunnel, but it is said to be unimportant.

THE ANCHOR.

The Anchor of Park City is employing about 130 men in the development of its property, which joins the Daly-West on the west. The Daly West ore bodies extent across the Anchor lines, and the showing in several places near the line, above the 900 level, would seem to indicate that there is a great deal of ore in other places than those in which the Anchor company has worked up to the Daly West lines. A very good record was made by the 60-ton mill during the year, when about 24,000 tons of ore were concentrated. The production was 5,200,000 pounds of lead, 155,501 ounces silver, 330 ounces gold and 3,800 pounds of copper. Most of the ore treated was taken from the 1,200, 1,300 and 1,400 levels. The condition of the mine is said to be quite encouraging. The directorate is composed of E. F. Holmes, R. T. King, D. C. McLaughlin, F. A. Nims, S. C. Tewksbury, H. E. Myers, W. V. Rice, D. D. Erwin and Henry Newell.



DALY-WEST HOIST AND MILL.

THE DALY.

A little work has been done at the Daly during the past few months, but thus far nothing of special interest has been developed. The present work was undertaken at the request of the minority stockholders at the meeting held in the spring. In the summer Supt. R. C. Chambers considered the 1,200 level presented the best place for a start, and accordingly a force of eleven men has since been kept at work on a drift running west towards the Daly West. Some ore has been followed all the way for a distance of 300 feet. The grade is at present a little better than it has been, and Supt. Chambers considers the prospect good that a larger body will be encountered. Some ore has been extracted and the outlook at least warrants further work.

CRESCENT HILL.

No great amount of work has been done at the Crescent Hill during the year, but the recent change of ownership will, it is believed, lead to important changes early next year. The control of this property was recently tied up by Mr. Henry G. McMillan, who says that a great deal of money will shortly be spent in opening up this old property on a large scale. The property consists of over twenty locations, but nothing has been done for so long that much expense will doubtless be incurred before the mine can be put in shape for further development. It is stated that early in the new year a pumping plant and other machinery will be installed with which to sink several hundred feet below the present level. It would not be surprising if the new owners should open up a new mine when greater depths are secured.

THE CALIFORNIA.

The California continues to give a good account of itself under the management of Thomas Roscamp. A great deal of ore has been blocked out this year through the new raise, which was run to connect with the upper workings, where a large body of ore is exposed. The mill has done well during the year. Everything has worked smoothly. The management is pushing work in the lower workings, where a drift is being run south in a strong copper vein, which is said to be free from zinc.

THE JUPITER.

Under the direction of Oscar Lawrence the tunnel has been driven over 1,500 feet on the Jupiter, and the management has found seams of good ore from which some first class ore has been extracted, the remainder going to the dump. The management has reached the main vein, where a small chute of ore encountered is being raised on. At the same time the drift is being run to reach the main ore chute farther ahead. There is every reason to believe that the vein goes down as the company has now developed the main vein some 300 feet on its dip by an incline, from which some very high grade ore has been obtained.

THE CREOLE.

The Creole Mining company has pushed work on its property during the past year with very good success. The company has continued the drift from the 265 level, where recent assays showed 57 ounces silver, 40 per cent lead and $2 in gold per ton. It is thought that when the contact is reached the company will expose a still better showing.

THE VALEO.

Notwithstanding the fact that the anticipated body of high grade ore has not yet been tapped in the Valeo, it is confidently expected by some of the larger stockholders that it will yet make a paying mine. A quantity of low grade ore exists in the upper workings, which is variously estimated at from 15,000 to 20,000 tons. Secretary Lamb says it is an ideal ore for treatment. In addition to it copper values, it carries an excess of iron and little or no silica. The high perentage of moisture in the ore—running as high a 20 and 25 per cent, makes the long ore haul very expensive. Every five tons of ore marketed represents practically only four tons of ore. For these reasons it was decided to erect a 50-ton smelter. The mine was leased early in the year, when the lower tunnel failed to disclose any large ore bodies, and the leasers, with some assitance from Mr. Kearns, have erected a smelter, which is expected to save $5 per ton on the second class ores of the upper workings. The smelter has been constructed midway between the upper and lower tunnels.
add Park City Blue ledge,

THE GLENCOE.

For the past few months a force of men has been engaged in repairing the old tunnel of the Glencoe mine, a very promising property located in Glencoe gulch. With this work done, W. M. Johnson, who is in charge of the work, is sinking on the vein about 1,600 feet in the tunnel. Some very good ore is here being extrated from a three-foot ledge, and a little ore has been screened for jigging, which may be done when sufficient water is obtainable—probably in the spring. The prospects of the Glencoe making a mine are considered very good by mining men in the district.

THE WASATCH.

At the Wasatch, Herman Berg is working in a tunnel which is being driven in the ledge. The tunnel is now in about 300 feet, and a 9-inch streak of galena is being followed, which is expected to shortly develop in a good ore body. Some very good ore is being extracted and stored in a crosscut from the tunnel.

THE NAILDRIVER.

The Blue Ledge district has been the scene of a great deal of activity during the present season. Several very promising prospects are there seen, among which is the Naildriver, being developed under Jack Green's direction.

Mr. Green has just installed a windlass 1,000 feet from the mouth of the tunnel, and expects to sink on the ore which lies in a vein some seven feet wide at this point. Some very good ore was recently opened up there, assays of which run about 200 ounces silver, with a high percentage of lead and several dollars in gold. With greater depth there seems every indication that Mr. Green will open up a paying mine in the Naildriver.

BUILDING STONE.

THE distinction has often been claimed for Utah by architects and builders that it has a greater variety of building stone than any other State in the Union. Whether this contention is correct or not is not important enough to justify an argument, but it is probably true. Certainly it has enough to be almost bewildering—so much so that when a man of wealth concludes to erect a fine business block or palatial home he is well nigh nonplussed when it comes to making a selection of the kind and color of stone to be used. Conspicuous among the stones used for building purposes in Salt Lake City are the granite, from which the great Temple was reared; the gray kyune, which forms the walls of the city and county building; the hard laminated red sandstone, from which the Dooly block was built; the variously shaded cream grays used in the construction of the beautiful Salisbury and Weir residences; the polished white that has given walls to the magnificent Keith and Kearns residences, and the superb brown stone—the most flawless and perfect in the west, out of which the new Deseret News building is being constructed. In addition to these there are numberless varieties of granite and sandstone of almost every shade and hue.

And the finer building and ornamental stones also abound here. There are marbles which cover the range of colors from snowy whiteness to darkest black, including all the motteled and veined kinds. The same may be said as to onyx which abounds in great richness and abundance. There is also much native slate for roofing. In fact, every necessary material for building purposes.

Mud Mountain.

The principal railroad of Costa Rica, now but 117 miles long, is just being extended to reach from San Jose to the Pacific Coast. The general manager of the road, speaking of the enterprise recently, said:

"There is one place on the road which has given the engineers a great deal of trouble, and which has cost many thousands of dollars every year since the road was built. This place is about 45 miles from Port Limon, and is called Bluemud. For about 600 feet the track runs along a ledge on the side of a mountain, with the river Reventa Zon below. The mountain is composed of a bluish clay, which turns into mud during the rainy season and keeps constantly sliding down on the tracks. We have to keep a big gang of men at work day and night cleaning the road of this blue mud, and when the rains are very heavy traffic has to be suspended. In July so much of the mud slid down over the roadbed that we could not run trains there for three weeks.

"To add to the difficulty there is a lake back of the mountain, and the water from this lake percolates through the mountain and keeps it constantly wet. The lake was drained by the engineers, but they discovered that it was fed by springs, and still the mountain was kept in a wet state and the mud kept sliding down over the tracks.

"At last they obtained what is known in the mining region of California as a hydraulic giant, and which throws a very powerful stream of water with great force. They rigged up this hydraulic giant, and when I left Costa Rica they were actually washing the mountain away with it into the river."

Long Life.

To discover the seceret of long life about a hundred professional and scientific men and women of New York City have organized what they term the Hundred-Year Club. These people believe that under present conditions life should be prolonged for a century. They do not seek to keep man alive merely as an exhibit, but to make him a useful member of society up to the day of his death.

They have not pledged themselves to live in accordance with any particular set of rules or to apply the secret of longevity to themselves if it be discovered. They do not pretend to say they will live to be centenarians, but they hope they may.

Prominent among the members of the Hundred Year Club are Mrs. Ella Wheeler Wilcox, Theodore Sutro, Dr. Carleton Simons, Dr. H. W. Wiley, Director of the United States pure food display at the Paris exposition; G. W. Smith, Albert Turner, Mrs. May Banks Stacey, John De Witt Warner, Dr. John R. Hayes of the United States pension bureau, Washington and Colonel E. P. Vollum, U. S. A. retired.

Dr. Simon, chairman of the committee on statistics, has secured the names of 12 citizens of New Yory City who are over 100.

Incidentally the club has learned that in Ireland there are 575 centenarians; in Germany, with its vastly greater population, but 75, while Servia has fully 600 over 100, 120 over 125 and three over 135. Dr. Simons is trying to discover whether these figures can be attributed to the difference in the diets of these people. China is the only nation, so far as known to the club, that sets a premium on old age, granting special honors to persons who are 90 or over.

Albert Turner, in discussing the mental phase of longevity, said:

"One of the elements in long life is a conviction that it is our duty to live; that it is not right in itself, aside from other motives, for us to shuffle off this mortal coil until we have filled out a long term. It will, I think, be seen that the importance of this instinctive love of life cannot be overestimated in its relation to health, disease and long life.