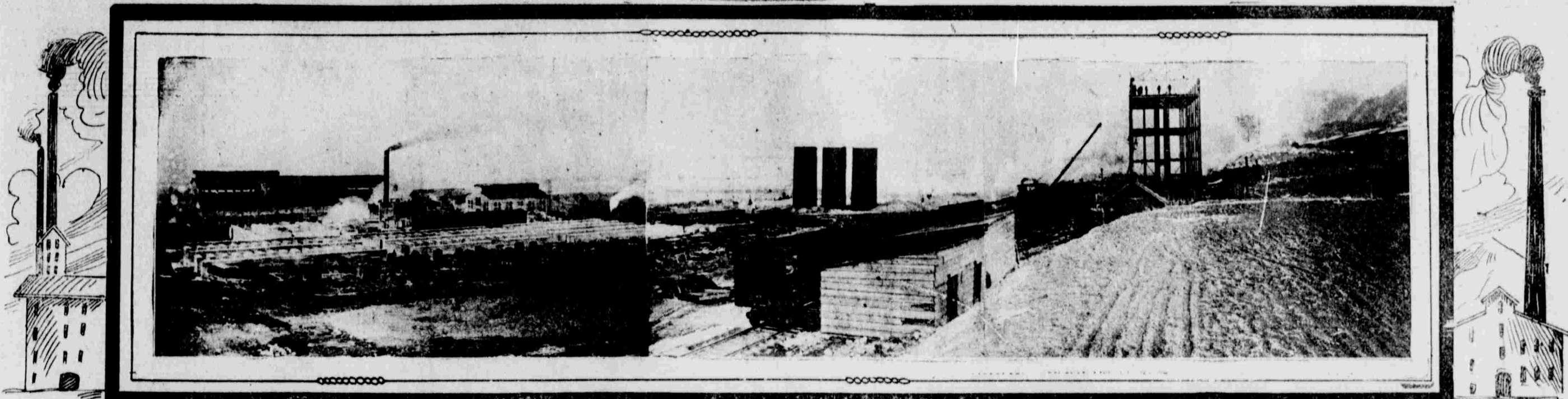
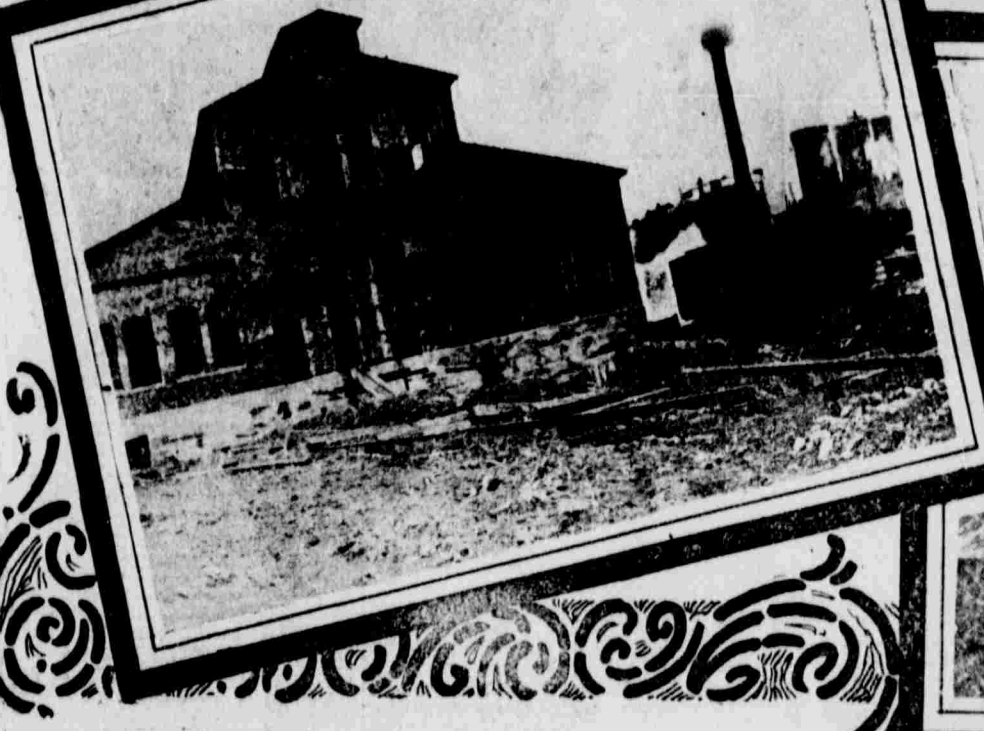


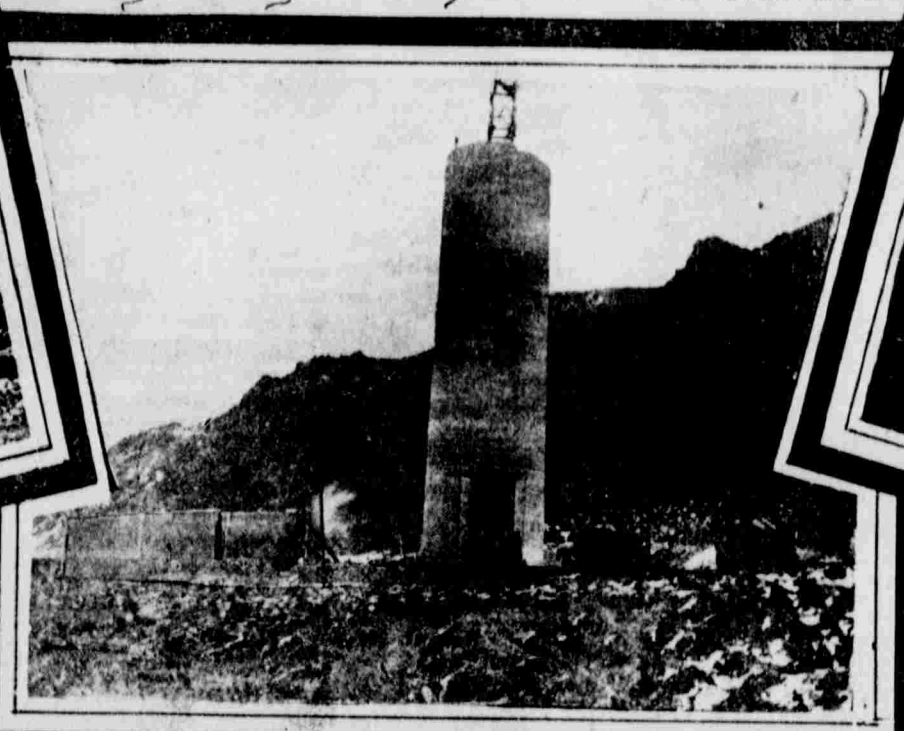
# The Building of Garfield, Utah's Newest Smelter City.



General View of New Garfield Smelters, Showing The Big Buildings Erected and Under Construction



Machine Shop Nearing Completion



New 300 Foot Stack



## SPECIAL PHOTOGRAPHIC VIEWS OF THE GREAT WORK OF BUILDING THE NEW SMELTERS AT THE FOOT OF THE OQUIRRH RANGE, SALT LAKE COUNTY.

ONE bright afternoon last September, the throngs of pleasure seekers who were at Salt Lake beach, heard a terrific explosion of giant powder. The noise came from the south and, immediately, hundreds of eyes were turned that way. Some took no notice of it, while others did so and they wondered what it all meant. At first, all that could be seen was a little cloud of dust; but when it cleared away a cluster of white tents came into view. Probably not one out of every hundred who visited the great lake resort on that day, gave the matter more than passing notice; but the sound from that blast announced to the people of Utah that ground had been broken for one of the largest smelting plants in the world.

A few days afterward, train loads of material began to arrive; the camp gradually grew larger and the spot where those first white tents were pitched became one of intense activity. Today there are employed out at this very place more than 800 people, and the accompanying illustrations will give the readers of the Christmas News a very good idea of what this army of men has been doing towards building this big smelter enterprise since that eventful September day.

### Ready Next April.

Daniel Guggenheim, the chief officer of the American Smelting & Refining company, made the statement not long ago that the first unit of 3,000 tons of this new plant would be ready for commission sometime during next April, and that the second unit, of the same size, would probably be ready for operation within one year. An enormous sum is being spent in its construction—

\$2,500,000, and before it is finished the chances are that new additions will be tacked on and that the original estimates will be found far lower than what the actual cost of the great plant will be.

### Garfield Smelting Company.

The Garfield Smelting company, organized recently, will operate the new smelter. At the time of the filing of the articles of incorporation of the smelting company, the Garfield Townsite company came into existence, it is to have charge of the disposition of the town property of the new town of Garfield, which is to be permanently located at a point about a mile and a half east of the location of the smelter. The Garfield Water company will attend to the water and lighting business.

### Two Great Milling Plants.

But the building of the smelter and the town are not the only big enterprises being brought into existence along the western borders of Salt Lake county. Two immense concentrating mills are to be built; both closely allied to the smelting company. One of the mills is to be put up by the Utah Copper company, the control of which, a few months ago passed to the Guggenheim Exploration company, and which, like the Garfield companies, is a subsidiary concern of the American Smelting & Refining company. The Utah Copper company's shareholders met immediately after the formal passing of the control at Jersey City, N. J., and authorized an increase of the capital stock of the company from \$1,500,000 to \$5,000,000 and the sale of \$5,000,000 worth of bonds, redeemable in the stock of its company at \$20 per share. The proceeds from the sale of these bonds is to be used in liquidating the bonded indebtedness of the original company, and in the equipment of the company's mines with

greater facilities for ore treatment. The new mill is to have, exactly, when completed, for the treatment of 6,000 tons of ore per day. The concrete foundations upon which the massive buildings are to stand have been put in, or, at least the most of them, and the contracts are about to be let for the structural material and equipment. The site selected for the Utah Copper mill is about four miles east of the Garfield smelter. With the present plant handling an output of 1,000 tons a day and the new one 6,000 tons, the combined output of the Utah Copper mine will be brought up to 7,000 tons every twenty-four hours. The two plants should handle 200,000 tons per month and, if it is claimed, the earnings of the company can be brought up to somewhere between \$3,000,000 and \$4,000,000 per year.

It is said that the first unit of the new plant will handle about 1,100,000 tons of ore per annum. The recovery from this should be between 25 and 30 pounds of copper to the ton. The first unit of the new plant will be completed late in the coming year and the second will be ready early in 1907, if the present plans are carried out. After both units are in commission, it is expected the output will be over 600,000 pounds of copper per annum at the estimated cost of from seven to eight cents per pound.

### Great Boston Con. Plant.

The Boston Consolidated Mining company will build the second mill and work on it will commence as early in the new year as possible. Just when depends on the progress made at the experimental mill about to go into commission at Bingham, mention of which is made elsewhere in this paper. The management expects that the experiments will be concluded by April next, when construction will be ordered.

### Mines and Dividends

Output of Utah  
Mines, 1905. \$29,808,565.23  
Dividends . . . 3,948,000.00

Complete Particulars on Page 68.

were obtained in the early part of September and the awarding of contracts was begun. The first one was let to the Utah Construction company, for the excavations, and the camp of that company was the first established on the site chosen. The concrete men then followed in a few days; the structural steel men came next, then the stack builders and so on down the line as they were needed.

### Rio Grande's New Line.

The Utah Construction company was also awarded the contract to build a branch of the Rio Grande Western railroad from a point five miles out of Bingham Junction on the Bingham branch to the smelter site, a distance of about 18 miles. This work is almost completed and by the beginning of the new year, the road will be in shape to deliver freight to Garfield. Being the only line entering the camp of Bingham, that company will haul the ore from the mines of the West Mountain district to the mills and smelter, the railroad management having recently announced a favorable schedule of rates which will probably have the effect of heading off any immediate danger of competition in that field. But the Rio Grande has always been liberal in the treatment of its patrons at Bingham and it is not frequent that anyone is heard to complain.

### Other Roads There, Too.

The new Western Pacific will enter the new smelter town, the San Pedro, Los Angeles & Salt Lake is already there and up to the present time has had a monopoly on the business created by the new construction work; but when the Rio Grande comes in there will be a division of the patronage. The San Pedro Los Angeles & Salt Lake has operated a suburban train for several weeks and it has

proved to be a source of a whole lot of revenue to that company while an appreciative public, on the other hand, find the train a great convenience to them.

### Covers Thirty Acres.

Thirty acres of ground is a good deal for a single smelting concern to occupy in the operation of its works. But that is what the Garfield Smelting company will require for the great group of massive buildings, railroad tracks, ore bins and other appurtenances. This acreage would be equal to three city blocks in Salt Lake City.

### The Principal Buildings.

Aside from the three office buildings, now under construction, there will be nine big buildings. Of this number the Minneapolis Steel & Machinery company has undertaken the construction of seven of them. The blacksmith shop, practically completed, occupies space 45x75 feet and is constructed of steel and brick; the machine shop, to be equipped with every modern device, is also nearing completion and is the largest one of those shown in the accompanying illustrations. The dimensions of this building are 80x195 feet. The power plant, which is well under way, will cover 130x250 feet and is to contain all of the steam and electrical power equipment; the building that is to contain the McDougal roasters will cover ground space of 60x222 feet; there will be two sampling mills, each of 70x82 feet dimensions, while the main building of the lot, to contain the reverberatory, blast furnace, converter and bullion departments, will rest on concrete foundations within the area of 360x365 feet. The carpenter shop, a wooden structure, is completed and in use. The building is 20 feet wide by 50 feet in length; the store house of the company is also finished and is 44 feet wide by 119 feet in length.

In the construction of the foregoing buildings, 4,000 tons of steel structural material will be used and from 65 to 75 skilled mechanics are given employment.

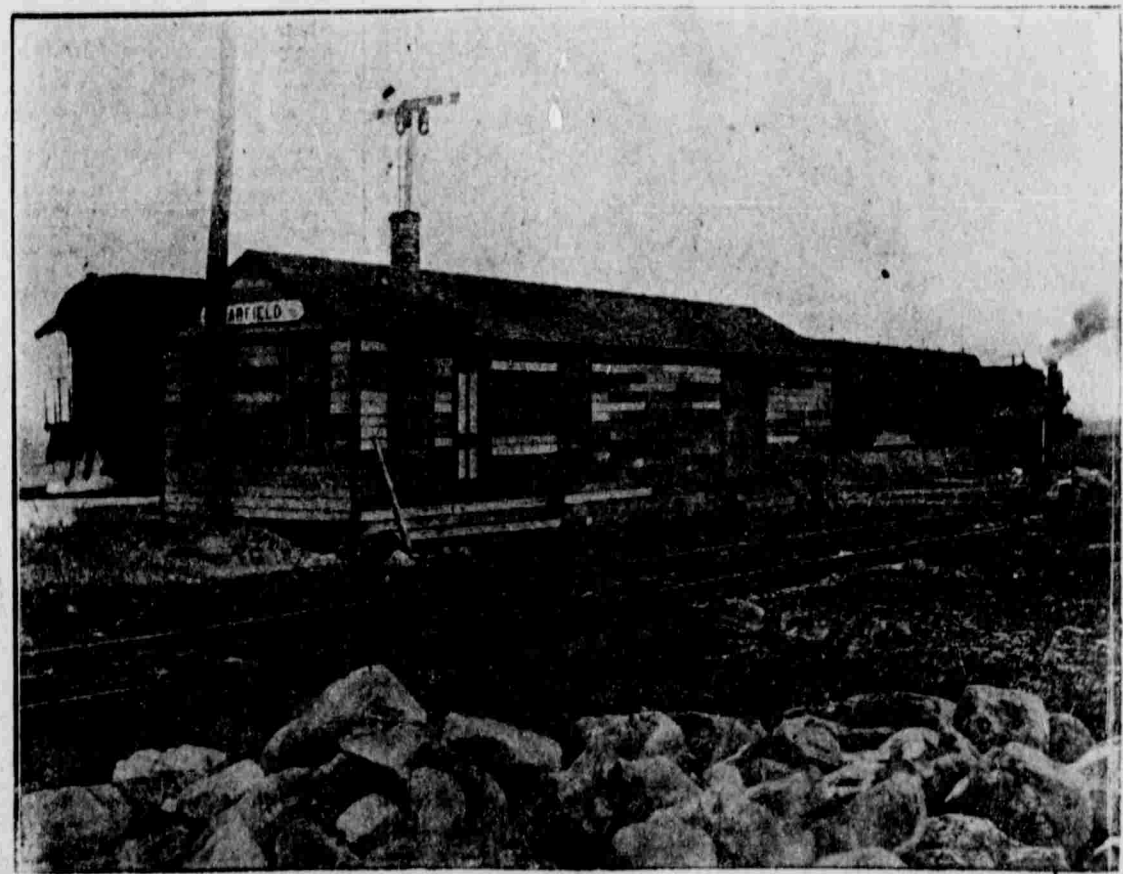
The stack, which is to stand at an elevation above its base of 200 feet, is to be connected by a large system of chutes, 2,000 feet in length to which will be attached bins for the collection of the dust. The inside measurement of the stack at the base is 30 feet, tapering gradually towards the top.

### "Tearing Down" a Mountain.

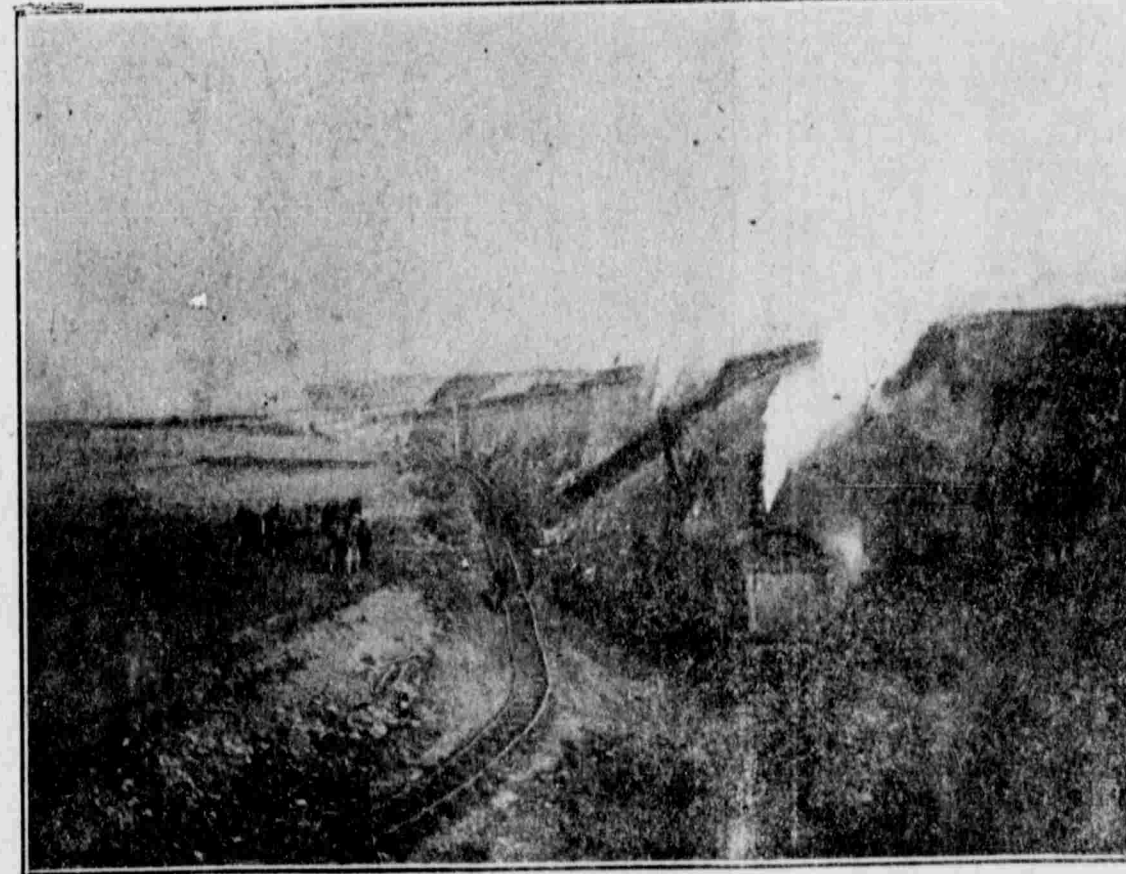
In making the excavations for the smelter, it has been necessary to tear down a portion of the mountain side. For more than three months the steam shovels of the Utah Construction company have been at this work; so have scores of men with teams wagons and scrapers been moving the dirt and rocks from where nature left it.

### Will Smash Old Records.

It is the intention of the management to do some record breaking in the construction of the Garfield smelter and when the work is done it will probably be said that no plant of anywhere near the proportions that this one will be was ever erected in so short a time. But the producers have demanded equipment for the treatment of their ores and the Garfield Smelting company is going to give it to them just as quickly as money can do it. Time was essence in this case. Had it not been for the promptness with which the smelting people got into action the chances are that the Nevada producers would not have permitted their ores to come to Salt Lake for treatment; but would have built plants of their own somewhere out on the coast. The way things have turned out Salt Lake retains its prestige as the greatest smelting center of the world.



TEMPORARY DEPOT OF THE SALT LAKE ROUTE AT GARFIELD.



CUTTING DOWN THE MOUNTAIN SIDE AT GARFIELD.

The agitation over the "smoke" question came up and the multiplicity of damage suits instituted by the farmers of the Salt Lake valley made it inadvisable to continue to fight them, so it was decided to look up another location than the one at Murray for the proposed copper smelter.

The Garfield site had many advantageous features. It was believed that the wind currents were such at the point of the mountain that if a few of the farmers in the vicinity of Black Rock and this side of there could be induced to part with their lands, the chances of any damage being done to vegetation was remote. Accordingly, agents of the smelting people were instructed to proceed with the task of securing options on the ground and the water sites needed. It was necessary to work quietly. It therefore, consumed a whole lot of time to round out the 19 sections of ground required before the enterprise could go ahead. Another favorable feature was the abundance of water in the vicinity of Black Rock, the close proximity to the mines of Bingham and to Salt Lake City, where all the railroads in the state center, carried with it advantages which other sites that had been squandered did not have.

Awarding of Contracts.  
Practically all the options required