

in the smelter shed, the power being transmitted by means of a rope drive. All the machinery and power plant was supplied by the Allis-Chalmers Co. The engine, blower and boiler are set on concrete foundations of ample dimensions. An electric light engine and dynamo furnishes light for the plant, office and assay office, bins, etc., while a complete system of fire hydrants has been installed in each department.

The assay office is located to the east of the smelter, having a frontage of 46 feet, divided into three rooms, while in the rear is the furnace room, 20x16 feet. The front building is divided into balance room, assay room and analytical room, each 16 feet deep and heated with hot water. The interior fittings are polished cedar and plastered throughout. The furnishings and chemical apparatus are of the most complete kind, consisting of analytical and bullion balances, scales, platinum ware for the electrolytic determination of cop-



The Manager's House.

per and binettes, etc. In the furnace room stands the 30-foot stack divided into four compartments, while on either side are located the muffle furnace of the most improved type and a sand bath with hot air oven; all being fired from one side, while the openings are in the assay and analytical rooms respectively. In front of the stack stands a melting furnace, 16 inches square inside, used for experimental purposes. Abundance of light and ventilation are provided in each room, every detail being worked out for convenience of manipulation, making it one of the most complete, if not the largest, in British Columbia.

The works were built from the designs of the smelter manager, Mr. Thos. Kiddie, his son, Mr. John

Kiddie, C.E., being in charge of the construction, and Mr. Geo. Williams as mechanical engineer.

## THE HISTORY AND PROGRESS OF MINING IN THE BOUNDARY DISTRICT.

(By E. Jacobs.)

(Continued from last month.)

### SUNSET AND CROWN SILVER.

THE Sunset group is owned by the Montreal & Boston Copper Co., Ltd., of Montreal, Quebec, which was organized in 1901 to acquire the mining properties and other assets of the Montreal-Boundary Creek Mining Co., Ltd. The group consists of the Sunset, Crown Silver, C. O. D., and the Florence fractional claim, all adjoining and situate in Deadwood camp, about three miles west of Greenwood. The Sunset and Crown Silver were both located on June 2, 1891. They were bonded in 1897 by Mr. W. L. Hogg, of Montreal, who with his associates did a lot of development work on them, and organized the Montreal-Boundary Creek Mining Company to further develop them. The other two claims were acquired later. In the summer of 1899 Captain Harry Johns, who had previously been superintendent at the adjoining Mother Lode mine, assumed charge at the Sunset and ever since has directed operations on the group. The number of lineal feet of work done in development on the Sunset and Crown Silver totals 7,155 feet, of which 1070 feet represent sinking and raising done on the properties and the remaining 6,085 cross-cutting and drifting. The main shaft of the Sunset is 412 feet in depth and levels have been run at 100, 176 and 300 feet depth respectively. The Crown Silver shaft is 265 feet in depth and from this about 880 feet of cross-cutting and drifting have been done. The 300-foot level of the Sunset is a long tunnel driven to cut an ore shoot of higher grade than the main ore body and with the ultimate object of connecting with the Crown Silver workings. Owing to the rise in the hill the 300-foot level of the Sunset will be about 400 feet below the surface by the time it shall be under the Crown Silver shaft. A feature on the Sunset is a knoll of rock, the weathered exterior of which was much copper-stained. A tunnel driven through this knoll disclosed the occurrence here of a big body of low-grade ore, approximately 300 feet in length by 115 feet in width and estimated to contain above the 100-foot level about 250,000 tons of ore. The method of mining this is by opening underground a large stope or "glory hole" connecting with the 100-foot level by a series of chutes down which the broken ore is shot to be trammed to the main shaft and hoisted thence to the surface above the ore shipping bins. The power plant installed at the Sunset includes two 80-h.p. boilers, half of a 20-drill duplex Ingersoll-Sergeant air compressor, two air receivers, ten Ingersoll-Sergeant 3 1/4 machine drills, Jenckes double hoisting engine with 14 by 20 inch cylinders, two