

quently informed that the ore taken from the cross-cut proved on assay to be considerably richer than it was on the surface.

The great body of ore that is found in this company's lease—which contains by far the largest lode in the district, even although it should prove only of a poor quality—will make it a very valuable property.

The Pinnacles Company's mine is situated about eight miles in a south-west direction from the Broken Hill, and fifteen miles from Silverton. It is called after two conical hills, which stand from 300ft. to 400ft. above the level of the undulating plain surrounding them.

This company has several lodes in their lease, but nothing has been done to test their value below the depth of 7ft. At this depth one of the main lodes is about 4ft. in thickness, and consists of ferruginous crystallized quartzite with galena intermixed, and patches of yellow gossan. Assays have been made from average samples taken from the whole width of this lode, which gave at the rate of 78oz. 8dwt. of silver per ton, and 33½ per cent. of lead; and from the yellow gossan 22oz. 1dwt. of silver per ton, and 3 per cent. of lead, with traces of gold a little under 2dwt. Assays have likewise been made from samples taken from the whole width of the lodes at other places, which gave at the rate of 137oz. of silver per ton, with traces of gold; and some assays made from the lode stuff gave at the rate of 1,504oz. 6dwt. of silver per ton, and a percentage of lead.

The chief character of the ore is galena, argentiferous gossan, with very little chlorides, and the formation of the country where the lodes are found is mica schist, having, in some instances the hanging-wall of the lode of ferruginous chlorite rock. This company is at present making preparations to erect one of Messrs. La Monte and Kahlo's smelting furnaces (a great portion of which is on the ground) to treat the ores. Mr. Moore, the manager, who has had many years' experience in silver mining in Nevada, speaks highly of these furnaces, they being similar to those used in America; but the great drawback to smelting in this district is that coke for fuel will have to be brought from Adelaide, a distance of about 340 miles, 190 miles being by horse teams.

The May Bell Company's mine is situated about two and a half miles from the Mount Gibbs Station, and about thirty miles from Silverton. The character of the ore is entirely different from either the Broken Hill or the Pinnacles. The lode consists of quartz, gossan, chloro-bromides, chlorides, and ferruginous carbonate of lead, containing horn silver, and is extremely rich. A shaft has been sunk following the underlay for about 70ft., and at this depth the lode is about 8in. in thickness, but the lode averages from the surface downwards from 12in. to 15in. in width. On each side of the lode the formation is mica schist, but here the schist rocks are intersected in all directions by dykes of granite, passing from clay slates to mica-schist and gneiss. Assays have been made from mixed ore taken from this mine that gave 3,241oz. of silver per ton and 32 per cent. of lead. Mr. Wilson, who is legal manager of this company, informed me that they had sent 25 tons of ore to England, which realized £13,000 while they have not yet spent £1,000 on the mine and expenses connected with it.

The Day Dream Company's mine is situated about nine miles in an easterly direction from Silverton on a low hill of mica-schist and sandstone, traversed by granite dykes and quartz reefs. The lode differs in many respects from any others that I have seen on this field, as it lies very flat, dipping about 1 in 3, and in one place it appears as a saddle lode, dipping in opposite directions—it is about 4ft. 6in. in thickness; but it becomes broken in places, and splits into two lodes, having a horse of mullock between them. The lode is composed of argentiferous porous gossan, crystalline specular iron, galena, and carbonates of lead and copper, intermixed with rich chlorides, chromates, and grey ore. This company has worked down, following the underlay of lode for about 200ft., and they are employing the largest number of workmen on the field, having at the time of my visit 103 men employed. They have hitherto been sending their ore to England for treatment, but have now made arrangements to erect one of La Monte and Kahlo's furnaces on the ground.

The Apollyon Company's mine is situated about two miles northwards from the Day Dream. The lode runs very regularly, and is well defined by the hanging- and foot-walls, which are of mica schist. It varies in thickness from 2ft. to 5ft., consisting of quartz, brown iron ore and ferruginous mica schist, containing carbonate of lead, chlorides of silver, and grey ore. The company has followed the lode for about 130ft., but the quantity of water at that depth became troublesome to haul up the underlay. They have now sunk a shaft to the depth of 220ft., about 300ft. eastward from the outcrop of the lode, and they were engaged at the time of my visit in driving a tunnel from near the bottom of the shaft to cut the lode. As the shaft is sunk in the bottom of a gully, below the outcrop on the face of the hill, the tunnel will cut the lode about 300ft. below the surface. The dirt is hauled up by one of Tangye's steam-engines, which works the pumps in the shaft, and the water that is lifted is condensed for domestic purposes, it being slightly brackish.

This company has hitherto been sending their best ore to London and Freiburg for treatment, one parcel realizing in London £670 per ton; but they have now made arrangements for erecting one of La Monte and Kahlo's furnaces on the ground, where they will be able to treat the poorer lode stuff as well as the best ore. A considerable portion of the poorer stuff is stacked ready for treatment.

The Umberumberka Company's mine is situated about two miles west from Silverton, and was the first mine opened in the district, consequently a considerable amount of work has been done. They have worked down for 131ft. on the underlay of the lode, and stoped out a good portion of the reef. The country here is very broken, the strata being turned and twisted in all directions, and the lode is very irregular, it being in bunches here and there; in one place on the bottom level it splits and forms two parts, with a horse of mullock between. The width of the lode varies from 4ft. to 10ft., and it consists of mica schist, gossan, carbonate of lead, galena, and baryta. The ore yields from 50oz. to 120oz. of silver to the ton, the silver being principally in the galena, which is distributed in irregular masses through the lode. About 500 tons of ore have been raised from this mine, and Mr. Evans, the manager, informed me that they send it all home to Freiburg for treatment.