

the augite porphyrites in the carboniferous. Some of the granites appear to be comparatively recent, but the youngest rocks of the vicinity occur in dikes of blackish to dark grey colour, varying much in tex-



Ymir Mine—Another View.

ture and composition, and piercing the rocks above named, and I believe, most of the veins of the district. Generally these dikes may be described as mica diabase, the biotite probably being a first product of alteration, while frequently the whole mass has become completely kaolinized.

Coming to the Ymir mine itself, we find it on the west side of the valley of a North Fork of Wild Horse Creek. This valley lies in a slate area several miles in length and about 4,000 or 5,000 feet wide. The slates are limited on the east by granite and on the

west by porphyrite. They strike about N. 35 E. and stand on edge, the line of contact with the porphyrites being approximately parallel to the strike. Extending from a point near the contact in a direction about N. 65 E. is a fracture in the slates which is traceable several thousand feet, but within the distance along which this one fracture can be identified there are no ore bodies known other than that which has become the Ymir mine.

This property was taken over by its present owners in November of 1896, since which time 5,000 feet of development has been done, resulting in showing an ore body about 500 feet in length, with its end limits practically parallel and vertical. A depth of nearly 500 feet has been attained, but very little water has been encountered, in fact barely sufficient to justify running a pump for sinking.

In plan this ore body shows a decidedly lenticular shape, with a maximum width of ore of about 30 feet. No disturbances of importance have shown themselves, but there are many slips and several partially open narrow fissures, while two principal dikes with



Tramway Loading Station at Ymir.

a number of branches cross the deposit generally nearly at right angles to the latter. From a structural standpoint these dikes form one of the most interesting features of the mine, and will be alluded to again. Beside the numerous horses of slate, which in so wide a fissure must be frequent, the vein filling is quartz, impregnated with pyrite, galena and blende, no copper mineral having ever been found.

The ore appears to have been deposited at two different periods or else derived from different sources, for the eastern 300 feet shows a perfectly white quartz, and the sulphides contained are coarser in structure and brighter in colour than in the western 200 feet of the ore chute, where the quartz is not only frequently of dark smoky blue colour and often nearly opaque, but the gold tenure is considerably higher. Near the region where these two varieties of quartz join they are curiously intermixed, but may be easily distinguished. Throughout the mine the walls are usually very free, but in places along the hanging of



Office, Compressing Plant and Storehouse at Ymir Mine.