

some to feet of open cut preceding it. This tunnel is in a fine-grained, igneous rock, which appears to be generally mineralised more or less as indicated but with patches of copper pyrites extending over a width of two or three feet. In this width the copper pyrites were estimated as forming about 5 per cent. of the whole, which would represent a copper assay value of about from 1.5 to 2 per cent. The manager reported that no gold or silver values of importance had been obtained, which seemed to be confirmed by subsequent assays.

The work done exhibited an extensive mineralisation but failed to discover a sufficient concentration of values to entitle the property to be classed as workable in the absence of gold and silver values. The claim has been worked from Olalla, and no buildings have been erected in connection with the property.

The Opulence mineral claim, owned by the same syndicate, is situated near the summit of the hill directly to the east of Keremeos post-office. It is approached by a trail ascending from Richter's, up the flank of the hill. The claim is at an altitude of 4,200 feet, on a grass-covered knoll, through which the rock crops out in places, appearing to be a dark-coloured hornblende, probably considerably altered and impregnated with iron and copper sulphides.

The surface rock presents the appearance of having been cindered, looking like a black iron slag, and is probably an altered hornblende, in which occurs a certain amount of copper oxide and probably some silicate of copper. Selected samples of this material, showing pronounced mineralisation, were taken for assay and gave 10.9 per cent. copper and 1 oz. silver. The claim is supposed to contain native copper, but no samples could be found carrying such.

The principal work done on the property consists of a couple of shafts. The deepest of these was reported to be down 45 feet, with a 15-foot drift to the south at 20 feet depth, while the other shaft was down about 30 feet. These workings were partly filled with water and, consequently, could not be inspected, but, judging from the dump and from report, the shaft had continued down for some 30 feet through the surface rock with its oxidised ores, and had here struck into what appeared to be a diorite impregnated with sulphides of copper.

On the Eldorado mineral claim, a continuation down the hill, somewhat similar mineralisation was observable, but not seemingly so strong.

On the Surprise mineral claim, also held by the Keremeos Mining Syndicate, a tunnel had been driven in for some 110 feet, showing a lead from 2 ft. to 2 ft. 6 in. wide with an ore streak from 4 to 8 inches, reported as carrying good values in gold.

On the Searchlight a 45-ft. tunnel followed in a dyke of hornblende material impregnated with small quantities of copper pyrites.

On the Magdala mineral claim, situated on the mountain above Richter's and owned by R. W. Northey *et al.*, an open pit some to feet deep shows the diorite country rock to be mineralised with pyrrhotite and a little copper, while the weathering of the face white denoted the presence of considerable arsenical pyrites. The work done did not show what the deposit might be, nor enough of its occurrence to form an opinion as to its origin or probable value. A sample of the pyrrhotite taken for assay gave only traces of gold and silver and half per cent. of copper.

FLAGSTAFF MINERAL CLAIM.

This claim, also owned by the Keremeos Mining Syndicate, lies above and adjoining the Searchlight. There appears to be here a zone in the country rock, of which no limiting boundaries could be noted, but which was observed over a width of from 100 to 200 feet, and consisted of hornblende, black mica, and a cementing material of a light green colour, probably felsitic. This zone has a trend N. W. and S. E. In certain places the hornblende seemed to be replaced by magnetite, which occasionally occurred in solid masses, showing in places evidences of copper.

This zone was noted at an elevation of 2,700 feet, and at 2,000, or 200 feet higher up the hill, a tunnel had been driven easterly for 15 feet into the hillside at the base of a steep rocky bluff. A carefully taken average sample from the sides, roof and face of this tunnel, which was supposed to be in the ore body, failed to give upon assay any values in gold, silver or copper, while an average sample of the ore pile on the dump gave an assay of three-quarters per cent. copper and traces of gold and silver.

The most important of these properties, certainly as far as development goes, is the Apex group, owned by McMillan *et al.*, and consisting of the Keystone, Australian, Alpha, Apex and Standard mineral claims. Here there have been several surface cuts made, showing in fissures in the limestone a replacement of the lime by pyrites, arsenical pyrites and chalcopyrite, which certainly gives considerable promise for the amount of work done. A picked sample of the ore herein exposed was taken for assay and gave 7.7 per cent. copper, \$12 in gold and 2.8 oz. in silver per ton.

DIVIDEND GROUP.

This group consists of the following six mineral claims, which are adjoining, viz., Dividend, Dividend Nos. 1, 2 and 3, Juno and Diana, and is held by the Keremeos Mining Syndicate. The property is situated on the summit of Dividend mountain and extends down the east slope of the hill for some distance. The country rock here is, generally speaking, a fine-grained igneous variety, probably a diorite and would appear from the indications found on the previously mentioned claims to be in all likelihood underlain, at no great depth, by a band of limestone, although such could not be found on the property. Much of the surface of this group is covered, under a light surface wash with an iron capping which is seemingly the result of oxidation of pyrrhotite, the extent of which has not been determined. The development consists of the West workings, where a pit, 6 to 8 feet deep, has been sunk, in which, along a dip in the country rock, there is apparently a replacement lead about 6 feet wide, striking S. W. and dipping 60 degrees to west. The lead matter consists of garnet rock, fine-grained and coarse and associated with fairly solid pyrrhotite and white iron, the garnets, in places, being perfect crystals of three-quarters of an inch in diameter. In another place on this part of the claim an open cut 30 feet by 8 feet by 2 to 3 feet deep has been made, exposing a mass of the same class of mineral. In this cut a 6 by 8-foot shaft had been sunk for about 10 feet and had cut through the surface deposit of mineral and into the diorite country rock. The distance between these two openings is about 150 feet and the surface between them indicates the mineral as shown in each to be continuous, but it has not been broken into at any point.

Some 500 feet distant from these prospect holes a pit has been sunk for 18 feet. This, at the surface, was in pyrrhotite, said by the management to have assayed \$4 per ton, gradually passing into bands of quartz carrying copper pyrites. The bottom of the shaft appeared to be in the diorite country rock, here mineralised with copper pyrites. The showing of mineralisation on the surface is certainly very large, but the fact of its not being overlaid by rock, combined with the fact that two shafts cut through it in a very short distance, leads to the belief that the deposit is, here at least, an over-flow surface sheet, the origin of which has still to be found. A sample of the pyrrhotite taken for assay did not show any values of commercial importance.

Still another authority was the ridiculous and extravagant statements made by the company in their advertisements in some of the New York daily papers. In fact these statements were so thoroughly ridiculous that when I was spoken to on the subject I at first considered it entirely unnecessary to sound any note of warning because to my mind it hardly seemed reasonable that any investor would be sufficiently green and glib to purchase stock after even a casual perusal of the advertisement. But as they say "a sucker is born every minute" on second thoughts I concluded to send the communication to the *Engineering and Mining Journal*.

I did not visit the properties myself during the winter because I would have encountered the same insurmountable difficulties with regard to examining the surface as Mr. Watson very frankly states in his report, he found. I have not visited the property since, for one reason because although Mr. McDougal was in Victoria during the spring and had ample opportunity to interview me on the subject, yet did not do so, I considered the whole matter one of past history, and another reason, because I have not since had the time to spare from my own business to make the trip,