

engineer in charge is especially qualified for such undertaking, and the directors are good reliable business men.

LOCATING DEEP SHAFTS.

The proper location of a vertical shaft is even of more importance than the selection of the district, for in most districts a vertical shaft well located, with properly directed underground developments, may prove successful, while in the most promising districts the results may be otherwise if the shafts and developments are not well located.

IMPORTANCE OF CROSS-CUTS.

Second in importance to the location of the shaft, is the problem of properly planning out the system of underground developments to be carried out from each shaft, viz.: the direction and length of the cross-cuts and drifts to intersect the zone of pay-ore. It has been shown above that in the case of an inclined fold, much cross-cutting is required to intersect the pay-zone, otherwise the vertical shaft would be of little use. The necessity of cross-cutting is well shown in the section given of the vertical shaft sunk at Lazarus Mine, Bendigo.

CROSS CUTS UNDER CONTROL OF GOVERNMENT ENGINEER.

Thus to ensure success, the Provincial Government should retain the control of the underground developments, and it might be desirable that Government aid should be extended to necessary cross-cutting and drifts which might be driven at successive levels, a few hundred feet apart, as the case required, this to be determined by the Government engineer in charge.

TESTS.

The Government should also see that the veins intersected be carefully sampled and assayed and separate mill-tests made of the most promising, in order to determine the workable portions and pay-chutes. Such mill-tests should be under the direct supervision of the Government engineer, or some competent person appointed by him, who should take samples of the tailings at regular intervals during the mill run and have them assayed.

UNDERGROUND PLANS AND SECTIONS.

It is very desirable that the structure of the strata and veins intersected be recorded on a large-scale plan before the rock is concealed by the timbering of the shaft. A complete set of underground plans and sections should also be kept constantly up to date