	Feet.
Mount Davidson (the highest point of the region)	7,941
Outcrop at the Gould and Curry Mine (the datum-line for measurements of depth)	6,400
The Sutro Tunnel, at different points, 1,840ft. to 1,865ft. below datum-line	{4,560 {4,535
The deepest point in the Belcher and Crown Point shaft, 3,414ft. below datum	2,986

These figures alone indicate the immense extent of the eruptive material.

The stratified rocks occur in a considerable continuous body at Gold Hill, in the southern part of the district, while in the northern part only a small body enclosed in eruptive rocks is found in the Sierra Nevada shaft.

The several eruptive rocks have been differently defined at different times, according to the changes in petrography and in the methods of investigation pursued. Becker distinguishes: 1. Basalt (B). 2. Later hornblende-andesite (LHA). 3. Augite-andesite (AA). 4. Earlier hornblende-andesite (EHA). 5. Later diabase or black dyke (LDb). 6. Earlier diabase (EDb). 7. Quartz-porphyries (QP). 8. Metamorphosed diorites (MDr). 9. Porphyritic diorites (PDr). 10. Granular diorites (GDr). 11. Metamorphic rocks (M). 12. Granites (G). This classification is based upon careful microscopic examination.

The two principal veins (the Comstock and the Occidental) strike N. to S., and the Comstock has been traced three or four miles, according as its branches are omitted or included in the measurement. The position and the branching of the veins are shown in the sketch-map, Fig. 58, in which the two most important eruptive rocks, the diorite and the diabase, are emphasized by shading, the others being indicated by letters, as in the above list. The diorite forms the foot-wall from Gold Hill to Virginia City. South of Gold Hill metamorphic slates form the foot-wall, and even extend across in part to the hanging-wall side, as does the diorite to the north of Virginia City. Moreover, in one place a dyke of diabase—the so-called "black dyke,"—occurs immediately on the foot-wall.

The hanging-wall is principally diabase, at least in depth. In the upper region it is sometimes covered with other eruptives, most frequently with hornblende-andesite.

On the whole (with variations at some places), the Comstock presents wide, gently-dipping masses, predominantly of crushed and decomposed country-rock, and enclosing large flat "horses" of the same. The filling is, as a rule, saccharoidal granular quartz (sometimes more compact), in which the ores are very finely disseminated. At some points they have occurred concentrated, forming the bonanzas to which the colossal gold- and silver-production of the district is due. The ores are silver-ores (stephanite, polybasite, argentite), with sometimes galena and zinc-blende. The bullion produced from them contains about half its value, or 6 to 7 per cent. of its weight, in gold.

Some of these bonanzas were in the upper region and came to the surface. Others (like the richest one of all, in the Consolidated Virginia and California Mine) were found in the deep region; and it is asserted that they were limited on all sides, without connection with other ore-bodies. This would make them unlike our ore-channels or chimneys, which usually do have interconnection. But it is difficult to conceive of their formation in any other way than upon the hypothesis that in such places more open spaces existed, through which larger quantities of dilute metallic solutions passed and made deposits.

The distribution of the bonanza-areas upon the vein-area is quite irregular; and it has not been possible hitherto to trace any connection between the bonanzas and the petrographic or structural conditions in their vicinity. In form they are equally without any law, as far as has yet been observed. The bonanzas of the Consolidated Virginia and California consisted of a main body and three lenticular masses higher up, which, taken together, have a flat pitch to the north. The bonanza between Belcher and Yellow Jacket, on the other hand, followed the true dip of the vein; while the bonanza in Justice—a mine on the N.W. to S.E. branch, which dips north-east much less steeply than the main lode—shows again a north pitch.

This N.W. to S.E. branch of the Comstock shows a filling different in some respects from that of the main lode, and may be considered as a cross-vein running into the Comstock, or into the black dyke which accompanies its foot-wall.

In the Justice Mine the filling is mostly calcite, with little quartz, instead of quartz with very subordinate calcite, as in the main lode. According to Becker the calcitic filling is characteristic of the whole south-east branch. According to Church, compact crusts of calcite alternate in the Justice Mine with their quartz crusts. This is the only clear report of crustification anywhere on the Comstock.

A comparison of the many cross-sections of the Comstock, published by King, Church, and Becker, and representing, of course, various stages of knowledge of the vein, shows that no normal or average section can be given, because the condition at different points on the strike are so different; and at some places—*e.g.*, the junctions of the branches—developments have not given satisfactorily complete exposures. The sections, Figs. 59 to 63, are given (on a scale too small to show much) merely to illustrate the distribution of the country-rocks. They are reduced from Becker's monograph. In the three northerly sections the foot-wall is granular diorite; in the two southern (Yellow Jacket and Belcher), and along the south-eastern branch, it is metamorphic slate. In the southern portion, the so-called black dyke (according to Becker, later diabase) appears on the foot-wall, and follows the vein beyond the point where the south-eastern branch leaves it. The hanging-wall is diabase, except at the northern end, where diorite becomes the hanging-wall as well as the foot-wall. In the upper region, however, earlier diabase is covered by other eruptives. Diabase is the hanging-wall of the south-eastern branch also; but in the foot-wall of that branch, besides the metamorphous slates, granular diorite and quartz porphyry appear.