**FUTURE TRENDS**

During the past few years exploration and development of our mineral deposits has been more active than at any period since the last war and possibly even more active than then. Despite this activity, aided by recent technological improvements, it must be realized that the discoveries of new deposits have been disappointingly few in number and in importance. Practically all of our production, both from current producers and from new deposits now being brought to production, is from deposits known during the last war.

It must be realized that the surface of our western states has been rather thoroughly examined during the past fifty years of mining activity. There are very few districts in which a mineralized deposit of substantial size could be located and which had not been examined by one or more competent mining men. We no longer have great geologically unexplored and unexploited areas. Future discoveries will mostly be made either as extensions of known ore bodies or will be discovered by use of sub-surface methods, either geological or geophysical.

Our consumption of metals is on such a large scale that discoveries of new reserves must be made frequently and ore bodies of substantial size must be developed if we are going to maintain our present rate of consumption. It is evident that we have not done this during the past 25 years and during this emergency every effort is being made to stimulate production at the expense of exploration. Our rich deposits are rapidly being depleted and only the low grade ores left

---

**SEISMICITY OF CENTRAL AND SOUTH AMERICA**

**SUMMARY**

The seismic zones of Central and South America are part of the circum-Pacific belt of activity which includes a large majority of the shallow shocks of the world, a still larger fraction of those at intermediate depth (60 to 300 kilometers) and all those at great depth (300-700 kilometers). This belt has many narrow branches. One of these diverges in the region of Oaxaca (Mexico) and passes southward by way of the Galápagos Islands and along the Easter Island rise. Two others have the form of loops—one surrounding the Caribbean Sea, and the other following the "Southern Antilles" of Sues—South Georgia, the South Sandwich Islands, etc.

The area between the Easter Island rise and South America is one principally of continental structure. The Caribbean and South Antillan loops probably enclose outlying areas of Pacific structure.

For shallow shocks, the west coast of México is among the most active regions of the world, with frequent great shocks. The activity of Central America is lower, decreasing to a very minor level in eastern Panama. That of the West Indies has often been overestimated; it is only moderate. In South America, shocks at shallow depth are relatively infrequent, and occur chiefly close to the coast, except in the Mendoza region and in Perú. The high activity in the Andean zone is due mainly to shocks at intermediate depth, with epicenters usually distant from the coast. The great Chillán earthquake of January 1934 had a focal depth of about 70 kilometers. A belt of intermediate shocks crosses central México from west to east, and another passes southward through Central America. Shocks at depths greater than 600 kilometers occur in a few areas far inland in South America.