within the belt are of different size, age, and relief. Some contain oil and gas and account for almost one third of world oil production. These basins contain thick sedimentary sequences which form lens-like bodies. Sedimentary basins in which the sediments are more than 3-3.5 km thick generally contain oil and gas.

Tectogenesis is the leading process in the origin and formation of sedimentary basins and their transformation to oil and gas basins. Therefore, when classifying them, one should be guided by the tectonic setting of basins.

All basins in the Circum-Pacific belt can be divided into five groups. The first group includes basins at the junction of the Circum-Pacific belt with ancient platforms. Such basins are composed of thick Mesozoic, Cenozoic, and some Paleozoic sequences and contain oil and gas.

The second group is connected with intermountain areas. These basins usually are on continental-type crust and contain Mesozoic and Cenozoic sequences 3-5 or more km thick. This is the most numerous group including more than 70 basins.

The third group includes pericontinental folded basins at the junction of folded continental structures and oceanic floor. They are mainly along the American Pacific Coast and contain great thicknesses of predominantly Cenozoic deposits.

The fourth group includes perioceanic basins connected with island arcs. These basins may be between an island-arc uplift and an oceanic floor or in a deep-sea depression.

The fifth group includes intraplatform basins, which are rare and are chiefly within the East Australian Paleozoic folded belt.

The main criterion for oil and gas content is the thickness of sedimentary rocks. The function of the thickness is the degree of katagenetic transformation of dispersed organic matter in the subaqueous part of the sedimentary section. All sedimentary basins more than 3.5 km thick contain oil and gas fields, irrespective of their hypsometric position.

The thicknesses of the rock sequences, rather than faults, control oil and gas content. No distinct relation has been observed between oil and gas accumulation and the position of lithospheric plates defined by "the new global tectonics" concept.

BYKOVSKAIA, E. V.

MAIN FEATURES OF SOVIET FAR EAST ACID VOLCANISM

No abstract available.

CARRUTHERS, D. S., C.R.A. Exploration Pty. Ltd., Melbourne, Australia

PORPHYRY COPPER DEPOSITS OF SOUTHWEST PACIFIC—DISCOVERY AND DEVELOPMENT

In the Southwest Pacific, extending from the Philippines south, economic porphyry copper deposits are known in the Philippines, Sabah, Irian Jaya, Papua, and Bougainville. Other deposits, either uneconomic under present conditions or not yet proved to be economic, are known in Sulawesi, New Guinea highlands, New Britain, New Ireland, Manus, Guadalcanal, Fiji, eastern Queensland and New South Wales, and New Zealand.

The economic deposits are associated with Tertiary to late Quaternary intrusives of the western rim of the Circum-Pacific mobile belts, including the major west-northwest offset trending through the Solomons and New Guinea to Sulawesi.

The first significant mining opportunity was recognized in the Philippines in the mid 1950s. Since the early 1960s the rate of discovery and development of these deposits has increased rapidly as a result of a deliberate search in favorable geologic environments.

Favorable conditions of terrain and rainfall, and the size of the deposits have made geochemical stream-sediment sampling an ideal technique for exploration and delineation of porphyry coppers.

To varying extents in different parts of the region, remoteness, rugged terrain, high rainfall, shortage of skilled workers, shortage of local capital, and rapidly evolving political institutions have influenced the evaluation and development of these deposits.

Because of the large scale of the projects, their location, and the generally low-grade ore, economic evaluation has been expensive and has been carried out with great care. Porphyry copper projects are capital intensive and therefore investors require confidence in the political future.

Such projects can produce quick economic benefits to a developing country, such as capital inflow, export income, government revenue, and improved opportunities for employment and training. They can lead also to economic distortions such as local inflation and drawing away of the few skilled workers from other parts of the country.

The social and political impact of establishing a porphyry copper project in an underdeveloped community can be immense because of the requirement for access roads, the highly technical nature of the operations, introduction of expatriate workers, requirement for significant land areas, and extraction of natural resources.

The long-term success of any project will depend on the understanding with which such problems are handled by both the operating company and the host government.

CHUDOLEY, K. M., M. A. RZONSNICKAJA, O. I. NIKIFOROVA, *et al.*

PALEOBIOGEOGRAPHIC ATLAS OF PACIFIC MOBILE BELT AND PACIFIC OCEAN

No abstract available.

CLARK, A. L.

CIRCUM-PACIFIC MAP PROJECT

No abstract available.

CLEVELAND, H., President, Univ. of Hawaii, Honolulu, Hawaii

TRANS-PACIFIC CONSULTATION CRISIS

The discovery and technical development of hydrocarbons, minerals, geothermal energy, hydrogeology, and coal in the Pacific will be a technical challenge of great complexity. The total-systems consideration which will be faced in the development of any of these resources may match in complexity such things as the advance systems in weaponry and in space. These complexities, however, are far more manageable than the complexities of the institutions which must