through until 1967 to supply essentially a thermal market. Meanwhile coal had been discovered in the Crowsnest Pass in the Rocky Mountains in 1873, and was first produced at the turn of the century for coking purposes. Coal production has grown in this area to become the sole supplier for today's export markets.

A notable increase has occurred in the production of coal since 1970, from 937,000 to 12,900,000 tons (850,000 to 11,700,000 MT) in 1981. Since the end of the moratorium on the issuance of coal licenses on February 10, 1978, a concentration of effort on exploration and development has taken place mainly in the southeast and northeast of British Columbia. Government policy was revised to meet present-day requirements with the passing of the Coal Act in 1974 and the Coal Act Regulations in 1979.

Based on the signing of contracts at the beginning of this decade, the projected production will increase to a total of about 27,500,000 tons (25,000,000 MT) in 1985 and possibly to 38,600,000 tons (35,000,000 MT) by 1990.

The coal measures are Cretaceous and Tertiary in age, the former is essentially coking whereas the latter is mainly thermal. The new mines will be in the Cretaceous measures in northeast and southeast British Columbia; some 85% of the production will be used for metallurgical purposes and the remaining 15% of oxidized coals will be used for thermal purposes.

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Preliminary Metallogenic Map of New Caledonia—Second Part: Mineral Deposits Nonassociated with Ultrabasic Rocks

In 1979, the Bureau de Recherches Geologiques et Minieres of the New Caledonia Territory launched a 5-year program to inventory mining activities and design strategies for prospecting and exploiting mineral resources. Its aim is to bring about diversification in an industry which is presently based mainly on the extraction of nickel, chromium, and cobalt associated with ultrabasic rocks. The island's most prospective areas have been investigated with the aid of a new 1/200,000 scale geologic map, published by the B.R.G.M. (J. P. Paris, 1981), and the results, combined with studies of about 300 showings, ancient mines, and new discoveries, are presented on a preliminary metallogenic map.

Ore bodies are concentrated in certain provinces or geologic units, or are aligned along major and minor tectonic features. The following are the most significant metallic mineral concentrations: the pre-Senonian mafic plutono-volcanic central units with Cu (Au) deposits, probably of the massive sulfide type; the Diahot Province, to the north with Cu, Pb, Zn (Au, Ag) deposits of volcano-sedimentary type, related to Senonian-Eocene mafic volcanic activity; the West Coast Basalts Province, with Cu (Au) deposits of massive sulfide type, and Mn deposits, related to Senonian-Eocene mafic volcanic activity; the East Coast Basalts Province, identical to the former western province; the mineral deposits related to major faults with Sb, Hb, W, and Cu deposits; the mineral occurrences related to Oligocene-Miocene granodioritic intrusions with Mo, W, Sb (Cu, Au) minor deposits.

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New Surficial Sediment Maps of Pacific Ocean: Circum-Pacific Map Project (1:10,000,000)

Surface-sediment maps, just completed, are the first depiction of sea-floor sediment distributions on a systematic and uniform scheme for the entire Pacific basin. Ten dominant sediment types are mapped, using a classification based on calcareous-biosiliceous biogenic components and conventional textural categories for nonbiogenic components (gravel/sand/silt/clay); three minor sediment types distinguish volcanic and organic-skeletal gravels/sands/silts. Primary data were from more than 4,000 Pacific Ocean cores in the Lamont-Doherty Geological Observatory collection. Qualitative smear-slid analyses were done on these cores, using petrographic microscopes combined with laboratory determinations of $CaCO_3$ for quantitative control; many additional data were taken from unpublished smear-slide descriptions, the World Data Bank, and published information on sea-floor deposits. The maps depict unconsolidated sediments exposed on the ocean floor, presumably at the sediment-water interface, recovered by coring and do not necessarily represent Holocene material. Additional maps showing details of sediment types and the enormous data base, with an explanation of sea-floor sampling techniques and core samples of all 13 sediment types are also available for viewing.

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Economic Geology and Mineral Resource Base of People's Republic of China

China's oil production, essentially stabilized at 2.1 million bbl per day, will climb again as offshore Eocene, Oligocene, and Miocene discoveries in the Neocathaysian graben system are developed and produced. Exploration onshore has discovered several new fields in such geographically diverse areas as the Tarim basin (Miocene-Jurassic), the Qaidam basin (Cretaceous–Lower Pliocene), the Junggar basin (Permian-Cretaceous), and the Sichuan basin (Proterozoic-Jurassic). Indigenous, but commercial Proterozoic gas is produced in the Sichuan basin.

Coal production, which reached a high of 700 million tons (635 million MT) in 1979, once again is increasing. Principal deposits are of Permian, Jurassic, and early Tertiary ages. China's coal-resource base is among the three greatest in the world, and China's principal source of energy continues to be coal (67% of China's energy mix).

Shale oil is exploited on a modest scale. Most of the shale oil currently being mined is of early Tertiary age.

China's wealth of non-hydrocarbon minerals is enormous. Huge Mesabi-type and sedimentary iron ores are widespread in the country. Other resources present in great abundance include bauxite, copper minerals, lead-zinc, antimony, chromium, cobalt, manganese, platinum metals, rare earths and rare metals, tin, tungsten, uranium, asbestos, barite, borates, fluorspar, jade, magnesite, pyrite, various kinds of salts, and talc. The country has the potential to produce large amounts of molybdenum, gold, nickel, diamonds, phosphates, and potash. Silver and titanium are in short supply. Although the country is by no means self-sufficient in all minerals, it is more richly endowed than all countries of the world outside of the USSR.

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Geology of Northern Thailand

Northern Thailand resembles the Great Basin of the western