

generation by government corporation.

The paper will outline a scenario for accelerated development of geothermal energy resulting in less dependence on fossil fuels.

PARCHMAN, W. L., JR., and JOHN W. KNOX, Sunoco Energy Development Co., Dallas, Texas

Exploration for Geothermal Resources in Dixie Valley, Nevada—A Case History

After several years of reconnaissance geology in Nevada, an exploration program to evaluate the geothermal resource potential of Dixie Valley was begun in 1974.

Between 1974 and 1978, Sunoco Energy Development Co. conducted two heat flow drilling programs, a resistivity survey, a seismic emission study, a ground noise survey, two magnetotelluric surveys, a hydrology study, and a surface geology survey.

The synthesis of the data resulting from these projects into the regional geologic framework led to the acquisition of geothermal resource leases from fee property owners, through open file application of federal lands, and by participation in the federal KGRA competitive lease sale of May 1976.

On September 15, 1978, Sunedco began drilling the S.W. Lamb 1 which became the discovery well. Development drilling continues.

PARIS, J. P., and A. COLLEAU, Bur. Recherches Géologiques et Minières, Noumea, New Caledonia, and M. ESTERLE, S.L.N., Noumea, New Caledonia

Preliminary Metallogenic Map of New Caledonia: First Part—Mineral Deposits Associated with Overthrust Ophiolite

The economic development of New Caledonia is almost entirely dependent upon the exploitation of ore bodies emplaced within an overthrust ophiolite complex which covers about one-third of the island. The overthrust was an Eocene event and the ores are associated with its ultramafic rocks, including peridotites which have been exposed and weathering since that time. One of the world's three largest nickel deposits (with accessory cobalt) occurs in the weathering peridotite and the ultramafics have yielded 3.5 million tons of chromite.

A research project financed by the Delegation for Scientific Research of the French Ministry of Industry (DGRST) has provided an understanding of the geology of the ophiolite complex and the phenomena conducive to chromite mineralization. Economic and geologic data are being synthesized to produce a metallogenic map of the island. This will be a contribution to the metallogenic map of the ophiolite belt of the world (part of the IGPC project: ophiolites).

PARKER, JOHN M., Consultant, Englewood, Colorado

Finding the Undiscovered Petroleum of the Circum-Pacific

(No abstract)

PARTEL, WILLIAM S., Ministry of Energy, New Zealand

Coal in New Zealand Energy Scene

(No abstract)

PECK, DALLAS, U.S. Geol. Survey, Reston, Virginia

The Role of the United States Geological Survey in Pacific Basin

(No abstract)

PHILIPPI, BRUNO, Comisión Nacional de Energía, Santiago, Chile

Chilean Energy and Mineral Resources for the 80s

This presentation gives an account of the general approach adopted by the Chilean government for the utilization of the country's natural resources. This approach stresses the role of the private sector in the exploration, exploitation, and commercialization of the resources, within the framework of a free and competitive market. In a small country like Chile with an open economy, the economic development of resources, such as energy and minerals, should be based on foreign investment and free access to the external financial market.

PIGOTT, JOHN D., and NANCY I. TRUMBLY, Univ. Oklahoma, Norman, Oklahoma

Northern New Guinea Wrench Fault System: A Manifestation of Late Cenozoic Interactions Between Australian and Pacific Plates

Cenozoic plate interactions between the Australian and Pacific plates have yielded a variety of convergent tectonic styles. Two major products of this convergence are the Sorong fault zone of Irian Jaya and the Ramu-Markham fault zone of Papua.

The Sorong fault system has been documented to extend westward more than 500 mi (800 km) from Teluk Sarera to Kep Banggai as a left-lateral strike-slip fault. The Ramu-Markham fault system is of disputed displacement and has been previously interpreted to extend from over 310 mi (500 km) just east of the Sepik River into the Huon Gulf.

A consideration of Australian-Pacific Cenozoic plate kinematics, Holocene vectors, earthquake focal mechanisms, photogeologic lineation analyses, and the assimilation of other pertinent geologic data suggests that the Ramu-Markham fault zone is an extension of the Sorong fault system and that together they represent significant left-lateral strike-slip motion in rigid crustal basement. This motion has produced large scale en echelon surface expressed faults and folds in detached overlying Neogene sediments. Furthermore, this wrench fault system has led to the transcompressional development and deformation of the Meervlakt, Piore, Sepik, and Ramu basins of northern New Guinea. An understanding of the tectonic evolution of these basins is tantamount to an assessment of their evolving hydrocarbon potential.

PIPER, D. Z., T. R. SWINT, and V. E. MCKELVEY, U.S. Geol. Survey, Menlo Park, California, and L. SULLIVAN, Lamont-Doherty Geol. Observatory, Palisades, New York

Distribution of Manganese Nodules in Pacific Ocean

The distribution of deep-ocean manganese nodules within the Pacific Ocean has been ascertained from bottom photographs and sediment cores. In the northeast quadrant of the Pacific Ocean, three areas exhibit a sea-floor coverage that commonly exceeds 50%. One area lies between the Clarion and Clipperton