
INTERNATIONAL EXPLORATIONISTS

INTERNATIONAL EXPLORATIONISTS— DINNER MEETING—SEPTEMBER 19, 1990 MARY MICHAEL PAGE—Biographical Sketch



Mary Michael Page received her B.S. in Chemistry from UCLA, an M.S. in Geology from USC, and a Ph.D. in Geochemistry from the University of Tulsa. As a student, she worked as a free-lance technical Russian translator and spent a year at the Amoco Production Research facility in Tulsa.

In 1978, Mary was employed as an organic geochemist with Robertson Research International. She

held a variety of positions in the development, execution, and marketing of regional geological studies and eventually became general manager of the South American operations in Bogota, Colombia.

In 1986, she opened an office in Houston for Barringer Geoservices and then in 1988 started her own consulting company, Geo-Pro Services. She currently works as a technical consultant for the Geochemical and Environmental Research Group of Texas A&M University and for Exploration Associates International of Texas. It was with the latter company that the work in Mongolia was carried out.

GEOLOGY AND PETROLEUM POTENTIAL OF MONGOLIA

Mongolia is a small country located between Russia and China and has been under Russian domination for 70 years. The glasnost and shinurchlit (rebuilding) which has swept through Russia and Eastern Europe is being embraced in a significant way by the Mongolians. This has led to an increased interest in the evaluation and exploitation of natural resources, including petroleum.

Virtually all of the early geological exploration was conducted by the Russians in the 1940's and 1950's, as described by a series of 150 proprietary reports archived at The Mongolpetroleum Company of the Ministry of Heavy Industry. Fifty of the most important reports are being reviewed and the data reevaluated, prior to opening areas up for joint exploration by Western companies.

A brief review will be given of the complex tectonic

history of the area. However, the principal focus will be on a series of 60 narrow, arcuate intermontane Mesozoic basins which occur in the western, southern, and eastern portions of the country. The most significant of these seem to be associated with the Principal Mongolian Lineament. This lineament divides the northern tectonic area, formed during the Baikalian and Caledonian epochs, from the southern area, formed during the Hercynian. Intense tectonic activity during the Mesozoic significantly reshaped the Paleozoic and older basins. The pre-plate stage of the Jurassic-Lower Cretaceous time was followed by a platform stage beginning at the end of the Lower Cretaceous and extending to the Paleogene followed by a stage of reactivation in the Cenozoic.

The sediments that have been identified as pertinent to hydrocarbon exploration are post-Upper Jurassic-Lower Cretaceous sand-shale sequences. Most of the known pre-Upper Jurassic sequence is effusive or conglomeratic rock. The Zunbain Formation contains a lower asphalt-impregnated sandstone and an organic-rich dark grey "burning" shale member. The Upper Zunbain Formation contains members with average reservoir properties.

Four basinal areas (out of thirteen) contain oil seeps, tar-saturated pores in cores or other evidence of hydrocarbons. The Eastern Gobi Basin contains one developed and one undeveloped oil field which were discovered in the 1940's. Current activity in Mongolia is the first significant exploration effort since the mid-1950's.