

EVENING MEETING—FEBRUARY 8, 1982

MADHURENDU B. KUMAR—Biographical Sketch



Madhurendu B. Kumar is a Senior Research Associate with the Institute for Environmental Studies, Louisiana State University, Baton Rouge. He is an Associate of the Indian School of Mines, India, and holds a M. Sc. degree (1962) in applied geology from Ranchi University, India and a Ph. D. degree (1972) in geology (minor in petroleum engineering) from Louisiana State University. He has spent eight years in

exploration and exploitation of energy resources, and eleven years in research and teaching in geology at City University in New York, Louisiana State University, and other universities. He has authored and co-authored thirty or more papers on petroleum geology, salt dome geology, mine hydrology, geothermal-geopressure energy, and computer applications. His current research interests are in geohydrology of salt domes and geothermal patterns of petroliferous regions. He is a certified petroleum geologist (A.A.P.G.), a certified professional geological scientist (A.I.P.G.) and a member of Geological Society of America, Society of Petroleum Engineers, and Sigma Xi.

THE RECENT INUNDATION OF THE JEFFERSON ISLAND MINE: IMPLICATIONS (Abstract)

Jefferson Island in Iberia Parish, Louisiana, is the most northwesterly member of the well-known Five Islands Trend of South Louisiana. Each of the five islands is a manifestation of the uplifting of landscapes by a rising salt stock from bedded (Louann) salt, perhaps as deep as 50,000 feet. In contrast to the other four islands of the trend which are surrounded by swamps, Jefferson Island is a topographic eminence on a dry plain, its crest (maximum elevation 75 ft. above MSL) being a peninsula of land extending into Lake Peigneur with its south, west and northwest sides exposed to the lake.

Jefferson Island has had a history of industrial activities pertaining to exploitation of salt, sulfur and petroleum, in addition to fishery and recreational facilities.

On November 20, 1980, Lake Peigneur drained into the Jefferson Island salt mine beneath it. This disaster was preceded by two types of concurrent mineral activities: petroleum drilling on the surface by Texaco, and underground salt mining by Diamond Crystal Salt co. This disaster underscores the hazard of human activities interfering with the natural environment.

The author's presentation will include a brief chronologic overview of the events related to the lake bottom collapse and the mine flooding, and will focus on the surficial changes resulting from the accident. Additionally, it may be possible to throw some light on possible causes of the mine inundation, and the storage potential of salt domes.