AAPG International Conference Barcelona, Spain September 21-24, 2003

Christopher J. Schenk¹ (1) U.S. Geological Survey, Denver, CO

Assesment of undiscovered oil and gas resources in Central America, South America, and the Caribbean

The U.S. Geological Survey (USGS) recently completed an assessment of undiscovered conventional oil and gas resources in 23 basins in South America, Central America, and the Caribbean area. In each basin the USGS (1) geologically defined Total Petroleum Systems, (2) defined Assessment Units within Total Petroleum Systems, and (3) assessed the volumes of undiscovered conventional oil and gas in each Assessment Unit. The USGS defined 28 Total Petroleum Systems and 55 Assessment Units in the 23 basins resulting in assessed mean totals of 105 BBO and 487 TCFG of undiscovered resource. The South and Central America region ranked third in the world for undiscovered oil and gas resources behind the Middle East and the Former Soviet Union. The potential for undiscovered giant oil and gas fields is expected to be greatest in offshore basins along the Atlantic margin of eastern South America, from the Santos Basin in the south to the Guyana-Suriname Basin in the north. The potential for additional giant oil fields in the Maracaibo and East Venezuela basins is considered to be much less, but these basins (and offshore Trinidad) were estimated to contain significant undiscovered natural gas resources. Offshore Barbados may contain significant undiscovered oil and gas resources. The assessment of Andean-related basins, including the Santa Cruz-Tarija, Neuquen, Magellanes, and San Jorge, indicates that the potential for undiscovered giant oil fields is low, but the potential for large natural gas fields is present in several of the Andean basins.