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Waterspouts as Offshore-Tornadoes formed over Petroleum Deposits in Mississippi Delta

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Oil and gas offshore deposits may interact marine atmospheric environment. An offshore deposit of petroleum or oil/gas seems to induce localized severe meteorological phenomena in marine environment, such as an waterspout, as an offshore tornado, upon a thunderstorm front passage over the deposits, although little attention has been paid to geological interference on the meteorological phenomena. The occurrence of severe weather phenomena such as a tornado or a waterspout statistically is not evenly distributed in the continent of the North America, but rather highly concentrated in the South to the Midwest, such as states of Texas, Oklahoma, Kansas, etc., where the production of oil and gas is significant. Waterspout formation spots recorded over decades by NOAA are superposed over proven oil/gas deposits in offshore and swamp or marsh regions of Mississippi Delta, in Louisiana state, to find that waterspout occurrence may be attributed to petroleum deposits underneath.

This study proposes concepts that waterspouts are geology-bound events in conjunction with certain weather conditions such as thunderstorm passage.