

Subterranean Petroleum Deposits in Correlation to Induce Tornado Formation

Shuji Mori[1]

[1] AmericanChemicalSociety(ACS)
AmericanGeophysicalUnion(AGU)

<http://www.geodyneone.com>

Oil and gas deposits may interact atmospheric environment. A deposit of petroleum or oil/gas seems to induce localized severe meteorological phenomena, such as tornado, upon a thunderstorm front passage over the deposits. There are approximately average one thousand annual incidents of tornadoes in the United States, mostly associated with thunderstorms. However, the occurrence of severe weather phenomena such as a tornado or a waterspout statistically is not evenly distributed in the continent of North America, but rather highly concentrated in the South to the Midwest, such as state of Texas, Oklahoma, Kansas, etc. where the production of oil and gas is significant. Probability and statistic massive data reduction are demonstrated by employing continental U.S. proven oil and gas deposit distribution provided by DOE and more than 40000 tornadoes occurrences recorded by NOAA over decades, to find that tornado occurrences may significantly be attributed to petroleum deposits underneath. Also, a localized superposition of the both data by state and by county level is demonstrated for validity of the concept, although some geological features such as subterranean faults and fractures may interrupt and dislocate the correlation. Natural gas fields seem to be more feasible in tornado formation than oil fields do.

This study proposes concepts that (1) tornadoes and waterspouts may be geology-bound events in conjunction with certain weather conditions such as thunderstorm passage and (2) the exploration of petroleum and natural gas may be possible by determination of sites which indicate such severe weather phenomena.