

02 March 2017, 6:15, at the Cedar City Recreation Center on the Hill, H. Roice Nelson, Jr., a geophysicist from Cedar, B.S. Geophysics 1974 University of Utah, with over 45 years working in oil, gas, & mineral exploration, will speak at the Southern Utah Rock Club Meeting.

Lightning Analysis, creating geo-frameworks

Geophysicists have used passive gravity, magnetic, and seismic measurements to understand the subsurface of the earth for decades. Dynamic Measurement has expanded these geophysical capabilities, developing and patenting ways to data mine electrical information in existing lightning strike databases in order to map faults, creating geo-frameworks of subsurface geology anyplace onshore and out to at least 100 meter (330 foot) water depths.

This presentation will review Dynamic's lightning technologies, and show examples from lightning analysis projects in Texas, Louisiana, Michigan, Arizona, and California. Examples will focus on resistivity maps and volumes derived from lightning databases, which are derived using methodologies defined in a recently issued U.S. Patent. Because Roice and Andrea moved back to Cedar City a couple of years ago, there will also be a review of ideas about how to use this technology in Southern Utah to map mineral deposits, define aquifers, predict where lightning strikes could start forest fires among all of the dead trees on Cedar Mountain, optimize real estate development to avoid concentrations of lightning strikes, predict areas needing additional cathodic protection along natural gas pipelines, identify areas where telluric and terralevis (shallow earth) currents are bleeding electricity off of high power transmission lines, and, most importantly to the rock club members, identify new places to find and to collect unique rocks.

