Preface

After my presentation last Thursday, I realized how different my language is compared to what the CICWCD Board normally uses. For instance, Meander Scrolls are ancient river channels, which channels we are mapping in Louisiana with lightning attribute maps.

Yes, I think it is possible water witches are picking up on the same shallow-earth currents which DML has demonstrated control lightning strike location. I am not aware of a way to scientifically demonstrate this, other than the obvious success some water witches, like Eldon Schmutz, have had over long periods of time.

Methane is very resistive in the subsurface, and as it seeps into the atmosphere, it becomes electrostatically charged and lowers the dielectric constant of the atmosphere (making the atmosphere more conductive). Resistivity (impedance to electric flow) and permittivity (the property of a material allowing it to store an electric charge) are electrical measurements of rocks or geologic layers, which properties DML calculates from lightning databases.

Some other terms I used, which you may not be familiar with, include: faults (breaks in layers of rock similar to a vertical crack through a stack of glass); stratigraphy (horizontal layers of sedimentary rocks); lithology (the type of rock, e.g. sandstone, limestone, clay, volcanic rock, iron ore, etc.); fluids (oil, gas, fresh water, brines, geothermal water, etc.). So I wrote these notes out for each page, hoping it helps get my message across.

Lastly, geologists explain concepts by showing examples of modern processes or examples from other places, where these examples demonstrate the concept being presented. These examples are an analog. So an analog map, is an example map pattern, which when this pattern is found elsewhere predicts similar geology.
Optimizing West Desert Drilling Locations with Maps and Rock Property Volumes derived from Lightning Databases

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18 June 2015
Lightning recorded for early storm warning, safety, **insurance**, and meteorological purposes
Lightning density regionally controlled by meteorology, and locally controlled by terralevis (shallow earth) currents.
Patented Lightning Data Analysis shows strikes are tied to geology.
Relaxation Oscillator Physics
(think Neon Signs)
Lightning bridges a Natural Capacitor

• The atmospheric capacitor is nearly the same physics
• Just an additional resistance \( (R_2) \) limiting the current
• \( R_2 \) is the resistance between the lightning strike point and the bottom plate of the capacitor
• Location
• Time and Duration
• Rise Time
• Peak Current
• Polarity
• Peak-to-Zero
• Density
Topography and Lightning Density, Arizona
Lightning Attribute Maps are related to a major copper mine being developed in Arizona.
Resolution Copper Mine
Thermal-Halos interpreted from Lightning Data
Resistivity & Permittivity Volumes
Resolution Copper Mine, Arizona
Michigan Basin Topography & Strike Density
Michigan Limestone Reefs & Resistivity Volumes
Carbonate Aquifers in Pine Valley & Wah Wah Valley
Iron County: lower than normal hydrostatic pressure

Formation Pressure as a Potential Indicator of High Stratigraphic Permeability
Rick Allis
Utah Geological Survey
Faults Draining to Grand Canyon
Lower Hydrostatic Pressure

Possible Fault Geopressure Leak Pathways from Cedar Valley to the Colorado River
Upward Lightning tied to geology

http://www.walden3d.com/IronCounty

http://www.walden3d.com/IronCounty/CedarValleyWater
Quartz Monzonite Aquifer to the West

Cretaceous Aquifer to the East
Cretaceous Aquifer east of Cedar City

Straight Cliffs Formation over Dakota Formation, north of Highway 14 at Mile 8, east of Cedar City

Photo by Gary P. Player, Utah Professional Geologist 5280804. 2220, March 14, 2015

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A 3-D Seismic Survey over 2,000 square miles costs $160 million.
Technical Merit & Economic Benefits

- Maps, Sections, and Volumes
- Evergreen Data
- 17 year database US & Canada
- Integrates with other data
- Simple Solution
- Patented, & Patent Pending

- 2 month project turnaround
- Larger Area – Less Expense compared to other geophysical tools
- **Provides a scientific basis for the location of west desert test wells**
See Lightning, Think DML

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