inclusion-free, nonorogenic granite. A close link is proposed between type of magmatism and type of tectonic activity.

PIWINSKII, A. J., and Duba, A., The permittivity and electrical conductivity of oil shale, Int. J. Rock Mech. Min. Sci. and Geomech. Abstr. 13, 165-66 (1976). [UCRL-76789, Preprint]

The real part of the complex permittivity (ε') and electrical conductivity (σ) of oil shale from Piceance Creek Basin, Colorado, were measured under ambient conditions. The three-electrode technique with a guard ring was used over the frequency range 50 Hz to 10 kHz. A linear correlation was found to exist between ε' and grade of oil shale, as well as between the σ and grade. These new data indicate that ε' and σ may be used to infer oil content of shales from field geophysical measurements.

PIWINSKII, A. J., Lilley, E. M., and Smith, G. S., Stoichiometry and structure of LiH to 6.0 GPa and 820 K, Lawrence Livermore Laboratory, Rept. UCRL-77111, Preprint (1975).

We have investigated the stoichiometry of LiH in the temperature interval 500 to 820 K at hydrogen pressures between 2.5 and 6.0 GPa. We conclude that in this pressure-temperature regime no change can be produced either in the normal 1:1 LiH stoichiometry or in the NaCl-type structure.

PIWINSKII, A. J., Duba, A., Santor, M. L., and Weed, H., The dielectric properties of sandstones, limestone, and granite, Eos Trans. AGU 56, 976 (1975). [UCRL-77314, Abstract]

The dielectric properties (ε' = real part of complex permittivity, and tan δ = loss tangent) of cylindrical cores of Westerly granite; Nugget, St. Peter, and Kayenta sandstones; and Indiana Limestone having length (L) / diameter (D) from 2.00 to 0.25 were measured *in vacuo*, in air, and after saturation in distilled water, tap water, and 0.1M NaCl solution. The three-electrode technique with a guard ring was employed in the frequency (ν) range from 50 Hz to 10 kHz. Values of ε' and tan δ for specimens measure *in vacuo* and in air are independent of porosity (ϕ) but decrease as ν increases. For all sandstones, ε' decreases with decreasing L/D, especially at low ν. For all rocks measured, tan δ shows no consistent correlation with L/D. For specimens investigated *in vacuo* and in distilled water, log tan δ = A (L/D) + B, where A and B depend on rock type, ϕ, ν, and the medium in the pores. Samples saturated with water and salt solution display no consistent correlation between ε' and L/D. They have a large range of ε' at low ν; ε' decreases as ν increases. Tan σ for Westerly granite ($\bar{\phi}$ ≃ 1%) and Kayenta sandstone