Tuesday, October 19, 2010

Black Lab Pub, Churchill Room • 4100 Montrose Blvd.

Social 5:30 p.m., Dinner 6:30 p.m.

Cost: $25 Preregistered members; $30 non-members & walk-ups

The HGS prefers that you make your reservations on-line through the HGS website at www.hgs.org. If you have no Internet access, you can e-mail reservations@hgs.org, or call the office at 713-463-9476 (include your name, e-mail address, meeting you are attending, phone number and membership ID#).

Chi Dong
Seismo Electronics LLC

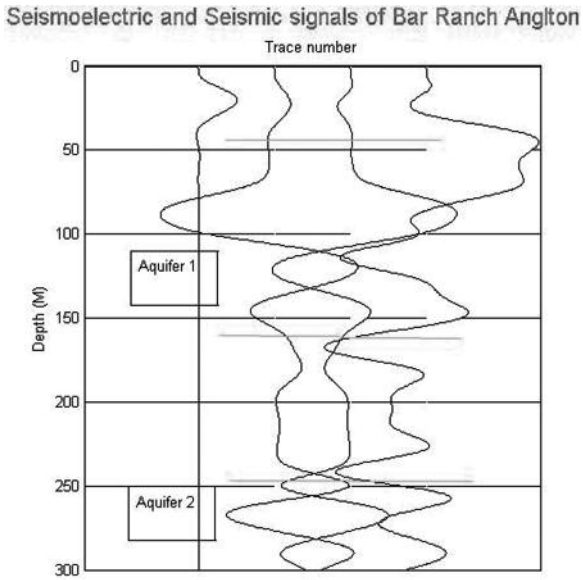
The DC-4500 Seismoelectric Groundwater Locator

A new concept for locating groundwater with exceptional accuracy, low cost, and simple operating procedure: the seismoelectric survey is the only geophysical survey method that can measure groundwater conductivity directly. This method is different from seismic or electric surveys, which register only seismic velocity or resistivity data for the aquifer. The seismoelectric theory, assumes that a seismoelectric signal is produced by seismic waves traveling through a water-saturated formation. The signal travels with seismic wave velocity and frequency and is related to permeability of the aquifer.

The seismoelectric survey is the only geophysical survey method that can measure groundwater conductivity directly.

The seismoelectric signal is an indicator of groundwater. Where there is a seismoelectric signal, there must be groundwater. If there is no seismoelectric signal, there will be no groundwater.

The DC-4500 Seismoelectronic Groundwater Locator is designed to receive both seismic and seismoelectric signals from the same seismic source in a signal instrument. It can provide the depth and thickness of an aquifer and estimate groundwater conductivity directly. It also records the 2-D seismic refraction or reflection data in order to obtain geological information around aquifers.



DC-4500 water locator can also be used in civil engineering for determining the depth, thickness, and conductivity of underground aquifer.

The DC-4500 is patented in US and China.
• US Patent (US 6,476,608 http://www.patentstorm.us/patents/6476608.html)
• International Patent (CN 1392420A) ■

Biographical Sketch

Chi Dong, founder and owner of Seismo Electronics LLC earned a B.S. degree from China Petroleum University in 1982 and an M.S. at Colorado School of Mines in 1990.

He started his professional career in 1970 as an reservoir technician at Jilin oil field in China. He then worked as a geophysicist in civil engineering in Beijing. After moving to the US, he worked as a geophysicist in mining, environment, and oil exploration, including numerous foreign assignments.

Chi Dong started doing seismoelectric research in 1988 at Colorado School of Mines under the aegis of Dr. J. E White, Dr. George Keller, and Dr. Skokan. He completed his master's thesis, "Seismoelectric Effect" in 1990. He continued seismoelectric research in a Ph.D. program in CSM until 2000. Most of the theory and practice supporting his invention of the DC-4500 seismoelectronic groundwater locator are based his unpublished Ph.D. thesis *Using Finite Difference Numerical Models of Visco-Elastic Seismic Wave Forms to Model Seismoelectrics Signals.*

He is working for Seismo Electronics LLC. to develop business and research on the groundwater locators.