

Welcome to Volume 1 of the Bright Spot – Quantec’s newsletter devoted to geophysical services in the Oil & Gas exploration sector.

In this issue, we provide the abstract for our paper presentation being presented at an upcoming Non-Seismic workshop; we also highlight employment opportunities currently available at Quantec.

Oil & Gas Exploration: Quantec’s Presentation

Quantec Geoscience will be attending an upcoming Non-Seismic workshop in London during the first week of October 2009. Below, we have included the abstract for our paper presentation.

Seismic methods are the dominant geophysical method employed in the search for oil and gas worldwide today. However, there are a number of key scenarios in which seismic methods may not deliver the results that explorationists expect.

Common scenarios include exploration in regions of volcanic cover and beneath salt domes— which degrade seismic results due to energy dispersion. They may also include other specialized situations such as prospecting in ice-covered terrains – an application that will become more important as the search for oil and gas in the North accelerates.

MT also has a “small footprint” and is applicable in environmentally sensitive areas where seismic acquisition is not possible, or feasible.

Reliable and productive exploration in these challenging terrains requires additional input from deep penetrating geophysical methods that can serve both to augment seismic results and to provide new information.

One technique of interest is ground-based magnetotellurics (MT) which probes the earth to depth using passive electromagnetic fields generated by lightning strikes, solar flares and ionospheric resonances.

Depths of investigation may be from near surface to 10+ km or more, depending on reading intervals. MT has been used very

effectively in exploration, particularly in Russia and East Asia where the method has been relied on since the 1950s and 1960s. With the challenges in prospecting outlined above, explorationists around the world are also taking a renewed look at MT for resolution of a variety of challenges associated with seismic data.

This paper provides an in-depth look at an MT prospecting system which acquires full tensor data to depth. The system has a number of advantages in exploration, including providing flexible survey logistics (200 m stations for detail, or 500 m or 1000 m stations for reconnaissance), excellent depth of exploration; random locations that allow recording sites to be positioned over optimal geology or topography, etc., and tensor measurement to provide highly accurate data.



Finally, we look at several case histories from the literature and other sources which illustrate the benefits of MT in the search for economic oil and gas reservoirs. Benefits include complementary data to seismic, data acquisition in areas that are problematic for seismic, data acquisition at a lower cost than seismic, imaging of structure, alteration and geology to depth, direct detection of hydrocarbon traps, discriminating targets (such as saltwater), and others.

For more details on the Non-Seismic workshop, please visit: www.pesgb.org.uk/pesgb/S4pesgb_non_seismic_geophysics_ttable.htm

Where We’ll Be

Quantec regularly travels the globe to keep in touch with our fellow geoscientists. See you at the following:

SEG Conference, Houston
October 25—28, 2009

Quantec Growing Again

Quantec Geoscience, a leading global ground geophysical services group, is pleased to announce a number of openings to join our expanding team of professional geoscientists. At Quantec, you will be exposed to proven deep exploration technologies, including the Titan 24 Deep Earth Imaging system, and the Spartan Magnetotelluric system. Quantec is also a leader in conducting conventional Ground Geophysical surveys using a variety of methods.

As an employee at Quantec, you will be working in one of the company’s three focus areas, including Mineral Exploration, Oil & Gas Exploration, and Geothermal Exploration. The company has openings for the following positions:

- **Sales Representative**
(Oil & Gas / Geothermal)
- **Senior Geophysicist**
(Oil & Gas / Geothermal)
- **Senior Geophysicist / Interpreter**
(2 positions)

Quantec is an equal-opportunity employer with a focus on maximizing employee growth and development throughout their work with Quantec. Successful candidates will possess strong communication skills, requisite sales or technical skills, and a keen desire to excel and ensure customer satisfaction – an important element of Quantec’s success. Educational credentials are flexible, although candidates with advanced degrees, particularly, in technology, may be preferred.

Interested candidates are requested to visit www.QuantecGeoscience.com/careers for more information.

Quantec is also pleased to announce the opening of a new office in **Mumbai** to serve India; Yatendra Agrawal is the new office manager.

The company has also partnered with TerraCorp in **Brazil** with the objective of providing Deep Imaging geophysical surveys throughout Brazil.