KMS Technologies

Innovating Solutions

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What is new in KMS-820 Data Acquisition System

After receiving many requests from our clients to support their existing assets to be used with our Data Acquisition System, we are pleased to announce that KMS-820 system can be interfaced with EMI(SLB) magnetic field sensors BF 4/6/7. KMS new generation Array Acquisition Unit, KMS-820 has been tested with highly recognized EMI (SLB) magnetic coils. This allows the client significant saving in sensor cost and migration to new technology. EMI coils have been used in geophysical industry for some applications like Magnetotellurics (MT), Audio-magnetotellurics (AMT), Controlled-source magnetotellurics (CSMT), Controlled-source Electromagnetic (CSEM) and Induced polarization. The new system has undergone field-testing with EMI – BF4 induction coils to acquire MT data and it produced comparable results to KMS technologies own LEMI 120 sensors.. With this development, users have more freedom in their magnetic sensors selection and are not limited to certain manufacturer's induction coils. KMS will continue their open architecture policy.

The result of the field test of KMS-820 system with the EMI coils is summarized in the following figures. The figures describe the processed MT data acquired over a period of 1 day at the company test site. The company test site is located 4 miles south of Hockley, Harris County, Texas, on the eastern flank of the Hockley Salt Dome, west of Houston. The test site is approximately 30 miles from KMS laboratory. Forthcoming will be a 2 well test-drilling program to verify prospective oil reservoirs. Reservoir depths are between 2000 to 4000 feet on a 511acre lease located on the East flank of the Hockley Salt Dome. No wells have been drilled on this tract since 1928. A well log located 500 m away from the north of the test site is provided for model building.

We provide the examples of the apparent resistivity, the phase curves of the acquired MT data. The data was acquired at the South side of the survey area and sampled at 1 kHz.

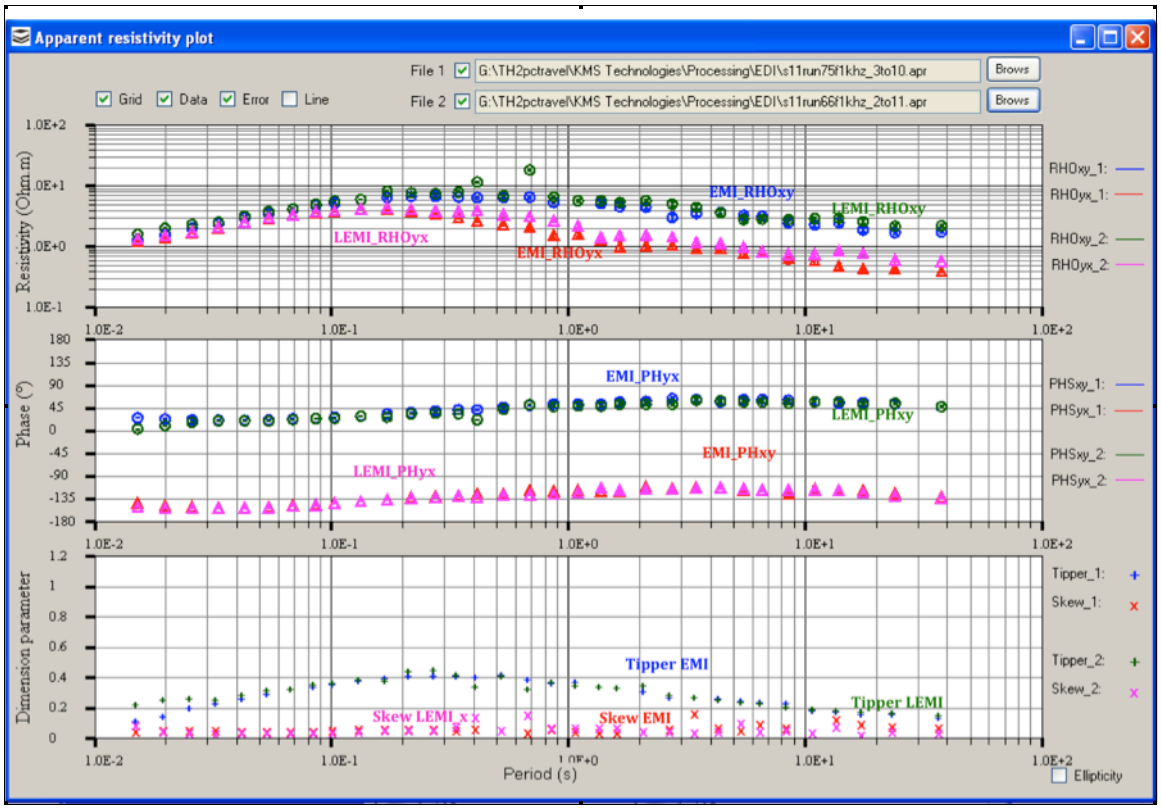

Figure 1: The comparison of the apparent resistivity of MT data acquired using EMI BF-4 coils and LEMI coils as a function of time sampling frequencies of 1 kHz. EMI coil is represented by blue and red curves while LEMI coil is represented with green and pink curves.