

Aero Gravity and Magnetic Survey works at Block M have begun

Syed Rory Malai Hassan
BANDAR SERI BEGAWAN

BRUNEI National Petroleum's (PetroleumBRUNEI) onshore Block M project with TAP Energy (Borneo) officially began exploration works with a blessing ceremony of the new equipment yesterday.

The ceremony to bless the first flight for Aero Gravity and Magnetic Survey works was carried out at the Glamco Hangar at the Brunei International Airport yesterday.

According to Chief Geophysicist of TAP Energy (Borneo) Pty Ltd, Suni Sulaiman, the thumbs up for the aerial geophysical works signifies the continuous efforts and commitment shown by the Block M consortium in supporting the government's endeavours to open up the exploration activities into yet unexplored areas.

Block M covers an area of 3,011 sq km and is located in the western part of Brunei, covering the whole of Belait District (excluding BSP concession area) and also the southern part of Tutong District.

"These aerial geophysical activities will cover the whole of Block M and take about three to four weeks to be completed," said the chief geophysicist.

Geophysics is the application



Getting the feel: Hj Iskandar Hj Yahya, Business Asset General Manager for Petroleum Brunei getting a feel for the flight controls and mechanics of the plane used for the Aero Gravity and Magnetic Survey project for Block M. *Picture: BT/Jefrisalas*

of the laws of physics to the dynamics of the earth and involves studying the physical properties of the earth to learn more about its composition and structure. Airborne geophysics is simply the study of these physical properties from an airborne platform, usually an aeroplane or a helicopter.

Airborne geophysical surveys are commonly used to aid in the search for petroleum and, in general, airborne

surveys are used at the early stages of exploration to cover large areas rapidly in order to help define targets for more costly and time-consuming exploration activities such as seismic and drilling.

The most common airborne geophysical methods used in petroleum exploration are magnetics and gravity, which can both be used to develop a three-dimensional picture of the geologic structure within

the survey area.

Magnetic surveys measure the magnetic susceptibility of the underlying rock – essentially how much magnetic material there is in the rock. This in turn can be used to determine the thickness and structure of the different rock units.

According to the chief geophysicist, the company appointed to do the aerial surveys, Sander Geophysics Ltd, will carry out the operation in a Cessna 208B Grand Caravan, a single engine turbine fitted with a stinger that houses the magnetic sensor.

The aircraft will be flying in line spacings of 1 km North-South by 4 km East-West directions, with a total coverage of 3,745 line km of data.

The chief geophysicist also noted that although these operations involve the use of magnetic fields, the survey is a passive exercise and does not emit any radiation at all.

"The data acquired from such surveys will be processed, mapped, interpreted and integrated with the existing wells and 2D seismic data to help refine the interpretation of the prospective part of the basin and more importantly, help to focus future exploration efforts in the Block," he added.

The Brunei Times