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Intent on resolving the Faroe basalt problem

The Norwegian company EMGS, which among other things conduct electromagnetic surveys on behalf of oil companies, last year conducted such surveys in the Faroes. Oljan.fo has interviewed representatives for the company. Although many surveys have been conducted and wells drilled in Faroe waters, in order to establish what lies beneath the thick basalt layering, nobody has yet been able to firmly establish the final answer. In order to hit the right target, when drilling, hundreds of millions have been used to resolve the basalt problem. Although exploration technology has made considerable advances over the years, seismic is still not able to create a clear picture of what lies beneath the basalt. This hurdle has more or less forced the companies to turn to other surveying methods, e.g. electromagnetics for example. It is still not possible to say or predict anything with any degree of certainty if oil or gas is present in the Faroe subsoil, by utilising conventional seismic techniques used to date in the Faroes. In Norway at the moment, a debate on exactly the same topic is on-going, e.g. how to discover oil under the basalt. Although no simple task to see through the basalt, experts are of the opinion that oil is present beneath the basalt in Norway. Jarðfeingi regularly receives applications from foreign companies, wishing to conduct surveys, intended to reveal what lies beneath the Faroe basalt. One such company is EMGS, which lately has been conducting electromagnetic surveys off mid-Norway, west of Shetland and east of the Faroes. The seismic vessel the Arcadian Searcher entered Faroe waters on several occasions last summer to conduct surveys near the Brugdan 1 well and to the Brugdan 2 well exploration drilling. Mr Bjørn Petter Lindholm confirms that EMGS last year conducted surveys for Chevron, both west of Shetland and in the Faroes. The objective was to establish if it was possible to use

electromagnetics to see how thick the basalt is and also to indicate if sediments were present under the basalt. The company conducted a survey line from the Brugdan 1 well to the Rosebank well west of Shetland. These are two of just a very few prospect wells, which have successfully penetrated the basalt. Seismic is excellent to establish and map so-called top-basalt, but is completely unsuitable for deeper penetration purposes. It is even more difficult to see where the base rock is. The original idea with these surveys was to establish if electromagnetics could create a picture of the bottom basalt layer, in order to create an improved seismic model, which could reveal sub-basalt structures, which were previously unnoticed.