



Deep Towed Streamer for Seismic Exploration of Shallow Gas-Hydrate Layers

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A new generation of a deep towed streamer has been developed in the framework of the German SUGAR project. Its nodes are interconnected by a single twisted pair cable, which powers the nodes and collects the data at the same time. As the primary sensor, each node is equipped with a hydrophone producing 24-bit data at a 0.25 msec sample rate. In addition, a compass delivers azimuth and pitch, and a pressure sensor delivers water depth at 10cm precision for each node. Up to 96 nodes may be connected in series and the distance between any two nodes may be up to 50m. As a lesson from an earlier system, a node that fails during operation will not disable the entire streamer; instead, all nodes preceding the failing node will still be operational making fault isolation trivial. The complete system consists of the deep towed streamer, the streamer controller, the bottom PC with local storage, the tow cable and cable telemetry, the shipborne control computer, and the seismic visualization computer. In the presentation, the technical features of the system, first experiences in its use and technical data examples will be presented.