

Facing Challenges with New Techniques: Southeast Alaska to the Aleutian Islands

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In 2006, Fugro Pelagos Inc. (FPI) was awarded the largest single task order for contract hydrographic surveys in Alaska by the National Oceanic and Atmospheric Administration. The primary objective of these surveys was to provide data in support of nautical charting. The challenge was to survey more than 600 square nautical miles, in two areas, separated by approximately 1100 nautical miles, during the 2007 field season. In the Aleutian Islands, the hydrographers faced tidal currents up to 9.5 knots, whirlpools, rapidly changing weather, and dense impassable kelp beds along the shoreline. The survey area along Chatham Strait in Southeast Alaska included numerous uncharted rocks, kelp and dangers to navigation. The surveyors also faced extreme currents and tides in and around Mitchell Bay, a very complex area that was last surveyed in 1895. To successfully complete this task, FPI utilized four survey vessels operating Reson 8111, 8101, and 8125 multibeam systems and two unique operational methods. First, the multibeam system on the shoreline vessel was operated with a tilted sonar head. Additionally, a SHOALS 1000T Airborne Lidar Bathymetry system with a Duncan Tech DT4000 digital camera was used to collect reconnaissance data in Mitchell Bay; this dramatically accelerated the survey schedule.