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Southwest Electronic Energy Corp.

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President & CEO: Len Benckenstein

Since 1964, SWE has been a pioneer in innovative energy solutions serving the needs of original equipment manufacturers in diverse fields such as oil and gas, oceanographic, military and remote. SWE has changed the game in subsea and oceanographic applications with SWE SeaSafe, SeaSafe II and SeaSafe-Direct, lithium-ion battery solutions that power subsea vehicles, control systems and oceanographic equipment safer and longer with four times the energy of a sealed lead acid battery. SWE leads downhole battery solutions with Lithium primary battery packs for high temperature Measurement While Drilling (MWD) and

Logging While Drilling (LWD) applications. SWE also provides custom battery solutions for the exploration of the earth's oceans by powering the infrastructure, vehicles and buoys that collect needed data.

To provide safe and reliable subsea battery solutions, SWE designed the SeaSafe Direct Battery Module, which can go directly into the water leaving the subsea pressure vessel and oil case behind. The battery is engineered pressure tolerant to 6000 meters depth, enclosed in flame-retardant urethane, and ready for complete water submersion, with built-in subsea connectors for power and communications. SeaSafe can reliably power subsea AUVs, ROV sleds, control electronics, electric motors, and sensors supporting subsea surveys, workovers, inspections, and maintenance operations. SeaSafe batteries include SWE's patented battery management system (BMS). The BMS within each module has the brainpower to assure safe, reliable operation and prolong battery life with automatic and continuous safety protection, charge control, balancing, and available state of health reporting. Rechargeable with a standard power supply, SeaSafe Smart modules are easy to use battery system building blocks. The modules are easily connected in series and parallel to meet voltage and capacity (Ah) needs. Additional components to support SWE SeaSafe include the Diode OR-ing Module and the SeaSafe Observer Software, to observe the status of the battery in real time. Woods Hole Oceanographic Institution worked with SWE during SeaSafe development, utilizing it in the Nereid UI Hybrid ROV and other vehicles. SeaSafe II and SeaSafe-Direct received a Certificate of Design Assessment from ABS in December 2017.