



NXT ANNOUNCES OPERATIONS UPDATE

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CALGARY, ALBERTA, May 23, 2012 - NXT Energy Solutions Inc. ("NXT" or the "Company") (TSX-V:SFD; OTCBB:NSFDF), today provided an update on operating and other activities.

Operations

NXT advises that SFD® data interpretation operations are well underway on its US \$0.7 million Guatemala survey contract. Data interpretation on our prior US \$1.65 million Argentina survey contract have now been completed and final recommendations have been provided to the Argentina based Client. NXT and the Client will undertake the integration of SFD® results with known geological and geophysical data, including seismic, covering the exploration prospect block. The final progress billing to be issued under the contract is US \$450,000.

Also, NXT has recently extended its aircraft supply agreement with a Calgary air service provider for an additional one year term to January 2013. This agreement gives NXT priority access to multiple Citation 560 jet aircraft, and pilots, for use in worldwide SFD survey operations. The agreement has a minimum annual charter hour requirement, which NXT has already fulfilled for 2012.

NXT also advises that it has engaged Patton Boggs LLP, a leader in Intellectual Property Protection, headquartered in Washington DC, USA with additional offices throughout the United States of America and worldwide, to assist with designing and implementing the Company's Intellectual Property strategy. This process has resulted in filing the first of a number of applicable patent applications.

Marketing and other initiatives

NXT will be presenting at the following conferences:

1. Grafton Withers, VP Sales & Marketing and Greg Leavens, CFO will be presenting at 13th Annual B. Riley & Co. Investor Conference, on Wednesday, May 23, 2012 at the Loews Santa Monica Beach Hotel in Santa Monica, Southern California. NXT presenters will be.
2. Azer Mustaqeem, Senior Geoscientist, will be presenting at the 36th Annual Indonesian Petroleum Association ("IPA") Convention and Exhibition in Jakarta on May 23-25, 2012.

3. George Liszicasz, CEO and Grafton Withers, VP Sales & Marketing, will be presenting at the NGO CIS Summit 2 in St. Petersburg, Russia on July 3-5, 2012.

4. Andy Steedman, VP-Operations, Grafton Withers will presenting at the XI Bolivarian Symposium in Cartagena, Colombia, on July 29 –August 01, 2012.

NXT is a Calgary based company whose proprietary airborne Stress Field Detection ("SFD®") survey system provides a proprietary survey method that can be used both onshore and offshore to remotely identify potential hydrocarbon traps and reservoirs. The SFD® survey system enables our clients to focus their hydrocarbon exploration decisions concerning land commitments, data acquisition expenditures and prospect prioritization on areas with the greatest potential. SFD® is environmentally friendly and unaffected by ground security issues or difficult terrain, and is the registered trademark of NXT Energy Solutions Inc. NXT provides its clients with an effective and reliable method to reduce time, costs, and risks related to exploration.

Forward-Looking Statements

This news release includes forward-looking statements. When used in this document, words such as "intends", "plans", "anticipates", "expects" and "scheduled", are forward-looking statements. Forward-looking statements are subject to a wide range of risks and uncertainties, and although the Company believes that the expectations represented by such a forward-looking statement are reasonable; there can be no assurance that such expectations will be realized. Any number of factors can cause actual results to differ materially from those in the forward-looking statements.

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