



NXT Announces Royalty Agreement

CALGARY, ALBERTA, August 10, 2011- NXT Energy Solutions Inc. ("NXT" or "the Company") (TSX-V:SFD; NASDAQ-OTCBB:NSFDF), today announced the execution of a gross overriding royalty agreement ("GORR") as part of the consideration earned by NXT on a 10,000 km² aerial based survey that was conducted in 2008 using NXT's proprietary SFD® survey system. NXT's GORR averages 1.5% on future production that may be developed on a sizeable prospect in the Horn River Basin of north-east British Columbia, an area which has become one of North America's largest new shale gas resource plays.

"This agreement demonstrates growing industry acceptance of our technology, which helps our clients focus their land acquisition strategies and exploration budgets, and make oil and gas discoveries," said George Liszicasz, NXT's President and CEO. "The ability to include success-based royalties in our traditional fee-for-service model gives NXT the flexibility to diversify and expand our revenue stream, and as our technology gains wider industry acceptance, we plan to further leverage the use of such royalties, which can be significant."

The SFD® survey enabled NXT's client, a mid-sized Canadian exploration and production company, to high-grade its participation in the Horn River Basin, by acquiring lands that displayed SFD® anomalies. Such SFD® anomalies have a high level of correlation with seismic based anomalies, and enable NXT clients to acquire competitive information rapidly at a relatively low cost.

The client has disclosed in various public forums (investor presentations, and on its website) a preliminary internal estimate of up to 9.5 tcf (trillion cubic feet of natural gas) of "Discovered petroleum initially-in-place" on its 110 section Horn River play (of which 21.75 net sections, or approximately 20% of the lands, are subject to NXT's GORR). NXT was not involved in the preparation of the presentations or the resource estimates contained therein.

The value of the GORR will ultimately be dependent upon various factors (including future natural gas prices, and access to drilling and completion services, and pipeline infrastructure) that will affect the timing and extent of development of the Horn River Basin.

NXT is a Calgary based company providing a unique airborne detection technology that enables our clients to focus their hydrocarbon exploration decisions concerning land commitments, seismic data acquisition expenditures and prospect prioritization onto the areas with the greatest potential. NXT's proprietary airborne Stress Field Detection ("SFD®") survey system provides a unique method that remotely identifies potential traps and reservoirs. SFD® is environmentally friendly and unaffected by ground security issues or difficult terrain and is effective both onshore and offshore. NXT provides its clients an efficient and reliable method to reduce time, costs, and risks in conducting frontier exploration surveys. SFD® is the registered trademark of NXT Energy Solutions Inc.

Forward-Looking Statements

This news release includes forward-looking statements. When used in this document, words such as "may", "anticipate", "development", "could" and "potential" 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 forward-looking statements 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. There is a specific risk that the GORR could produce no revenue for NXT if the lands which are subject to the GORR are never explored or developed or if hydrocarbons are not found or produced in economic quantities. NXT is not in the oil and gas exploration and development business and as such has not reviewed or engaged an independent professional to review the client's resource estimate, which may prove to be inaccurate.

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