



NXT ENERGY SOLUTIONS INC

As at and for the three months ended March 31, 2009

MANAGEMENT'S DISCUSSION AND ANALYSIS

As used in this MD&A, the terms "we", "us", "our", "NXT" and "company" mean NXT Energy Solutions Inc.

Our reporting currency is the Canadian dollar. All references to "dollars" in this MD&A refer to Canadian or Cdn. dollars unless specific reference is made to United States or U.S. dollars.

Forward-Looking Statements

Certain statements in this document may constitute "forward-looking statements". These forward-looking statements can generally be identified as such because of the context of the statements including words such as "believes", "anticipates", "expects", "plans", "estimates" or words of a similar nature.

These forward-looking statements are based on current expectations and are subject to known and unknown risks, uncertainties and other factors that may cause the actual results, performance or achievements of the company to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. Except as required by law, the company assumes no obligation to update forward-looking statements should circumstances or the company's estimates or opinions change.

Description of Business

NXT is a Calgary based technology-driven company providing wide-area airborne exploration survey services for the oil and gas industry. The company utilizes its proprietary Stress Field Detection ("SFD®") survey system to offer its clients a unique survey service that rapidly identifies areas with oil and natural gas potential. As an airborne survey system, SFD® is environmentally non-invasive and unaffected by ground security issues or difficult terrain. Additionally, surveys can generally be conducted year round both onshore and offshore. NXT offers its services world-wide providing its clients an efficient, accurate and reliable method to explore for hydrocarbons. SFD® is a registered trademark of NXT Energy Solutions Inc.

On September 22, 2008 the company changed its name from Energy Exploration Technologies Inc to NXT Energy Solutions Inc. This change was approved by shareholders during the company's November 29, 2007 Annual General Meeting. The name change was implemented to better reflect our principal activities and now aligns with the NXT trademark. The trading symbol for the TSX-V (SFD.V) remained unchanged as does our trading symbol (EFW) for the Frankfurt exchange. In accordance with regulations, our NASDAQ OTCBB symbol was changed to NSFDF.OB (from the old symbol ENXTF.OB).

Overall Performance

Discussion of business and impact of recent worldwide financial crisis

Since the mid-point of 2008, NXT has been affected by adverse economic conditions that have diminished the demand for our services within the western Canadian sedimentary basin; the basin wherein all of NXT's revenue had been derived since 2006. As a consequence, NXT had no revenue in the fourth quarter of 2008 or in the first quarter of 2009.

Despite this lack of revenue we believe that we are in an enviable position when compared with our peers. We have the cash reserves to support our 2009 business plan, a superior survey system that offers significant advantages to our clients, a profitable business model as proven in 2007, an experienced management team and now, success in being awarded an SFD® survey contract in an important international market.

A key advantage of our position today as compared to just three years ago is that we can build upon the commercial and technical successes from our 2006 through 2008 Canadian surveys. These surveys provide invaluable case studies, client endorsements and industry recognition that are required to broaden the adoption of our services into international markets.

In 2009 we intend, through the implementation of new marketing, sales and technical strategies, to develop an international revenue base. To meet this objective we have expanded our geological and geophysical technical team and created a sales and marketing organization. Toward the last half of 2008 we began attending international oil and gas trade shows and conferences to both assess the attractiveness of alternative international markets as well as to demonstrate our SFD® technology to an international audience.

Core to our international strategy is discipline and focus. The world market is vast and our resources limited. Spreading resources too thin by attempting to concurrently pursue multiple markets throughout the world only invites failure. Success in any market depends upon dedicating enough time and resources to gain detailed knowledge of the marketplace, the industry players and their unique problems and challenges. This knowledge is then used to develop a complete SFD® product solution tailored for a market's needs.

A complete SFD® market solution requires a full suite of services to assist a client understand, accept and then apply the SFD® technology appropriately to achieve a tangible operational advantage.

- Client understanding requires technical reports and compelling geosciences explanations.
- Client acceptance also depends upon the credibility of NXT and its professional staff plus the credibility of the references received from other users of the service within their region.
- A successful application of the technology requires choosing the right application plus strong effective collaboration between NXT personnel and the client.

We are committed to the creation of these complete market solutions to gain industry acceptance of our technology in an international market through a focused market-specific effort. Market success, at least initially, depends upon making a very deliberate strategic choice to focus our resources and develop a strong track-record in one international region.

Our evaluation of potential markets to focus our international efforts has identified Colombia as offering several advantages. Colombia has evolved quickly to become one of the more attractive oil and gas exploration opportunities in the world. The Colombia government has undertaken effective measures to implement fair and predictable fiscal terms and energy policies to attract foreign investment. These measures, coupled with greatly improved security and an abundance of underexplored yet prospective basins, has resulted in a large increase in 2008 exploration activities over prior years; this trend is projected to continue throughout 2009. In 2010 ANH, the Colombian national hydrocarbon agency, proposes to release in excess of 300,000 square kilometers for open round bidding. Our SFD® survey system is well suited to meet the technical, logistical and financial challenges associated with surveying these large under-explored basins of Colombia.

Our interest in Colombia was verified with NXT being awarded a contract to provide U.S. \$2.3 million of SFD® survey services in Colombia for a Canadian-based international oil and gas company. In May of 2009 we commenced operation in Colombia and anticipate delivering the initial survey results to the client prior to the end of the second quarter of 2009.

We are encouraged by our early success in obtaining this preliminary contract in Colombia. We intend to demonstrate the effectiveness of our SFD® survey system with our initial client, continue to build complete market solutions, build solid relationships and industry credibility in Colombia and then build on this success to attract additional clients within the country and then the region.

Results of Operations

The company reported a loss of \$1,061,138 for the period ended March 31, 2009.

Revenue

	For the three months ended March 31,	
	2009	2008
SFD® survey revenue	\$ -	\$ -
Oil & natural gas revenue	228	6,583
Total revenue	\$ 228	\$ 6,583

SFD® Survey Revenue

In the three months ended March 31, 2009 and 2008 the company had nil survey revenue.

Oil & Natural Gas Revenue

Effective April 1, 2008, the company sold its 22.5% working interest in a well at Entice, Alberta for net proceeds of \$47,400. Following the effective date, the company ceased to hold working interests in any producing wells. The company's interests in oil and gas properties consist of undeveloped land and gross overriding royalty ("Royalty") interests.

Currently, the company holds Royalty interests in two producing wells in Alberta and an entitlement to Royalties on future production on much of the land where we have conducted surveys for clients. We are optimistic on generating additional Royalty income from these surveyed areas as one of our clients has announced anticipated production on wells drilled on SFD® prospects and is actively pursuing exploration programs on other surveyed areas. There is no certainty Royalties will be earned from these entitlements.

	For the three months ended March 31,	
	2009	2008
Gross overriding royalty rights (GORR)	\$ -	\$ 1,134
Oil and natural gas revenue; net of royalty expense	228	5,449
Revenue; net of royalty expense	\$ 228	\$ 6,583

Income from Operations

We had an operating loss of \$1,089,760 in Q1 2009 (Q1 2008 - \$815,066) representing an overall increase in loss of \$274,694 for the period.

Expenses

	For the three months ended March 31,	
	2009	2008
SFD® survey cost	\$ 12,831	\$ -
Oil and natural gas operating expense	1,395	550
Administrative	1,035,939	780,943
Depletion of oil and natural gas properties	-	2,852
Amortization and depreciation	39,823	37,304
	\$ 1,089,988	\$ 821,649

Expenses - for the three months ended March 31, 2009 and 2008

- The administrative cost increase of \$254,996 in the first three months of 2009 in comparison to the same period in 2008 is largely due to hiring of additional staff, increased stock-based compensation expense, increase in rent from office expansion and travel costs for industry conferences.
- The company sold the last of its working interest in wells in 2008 and therefore will no longer have depletion of oil and natural gas properties.

Other Expense (Income)

	For the three months ended March 31,	
	2009	2008
Interest income	(44,319)	(71,108)
Loss (gain) on foreign exchange	12,382	(32,081)
Gain on sale of property	(1,016)	-
Abandonment	4,331	-
Other expense (income)	\$ (28,622)	\$ (103,189)

- Interest income is offset by interest expense resulting in \$44,319 net interest income in Q1 2009 (\$71,108 - Q1 2008). The decrease in income is due to less monies held in short term investments in 2009.
- The company sold its sole vehicle in the first quarter of 2009 and realized net income of \$1,016.

Loss (Gain) on Foreign Exchange

Loss or gain on foreign exchange is caused by changes in the relative exchange values of the U.S. and Canadian dollars. For example when the Canadian dollar trades higher relative to the U.S. dollar, cash held in U.S. dollars will decline in value and this decline will be reflected as a foreign exchange loss in the period.

The equivalent Canadian dollars for a U.S. dollar changed from \$1.2156 on January 1, 2009 to \$1.2613 as at March 31, 2009 resulting in a first quarter loss of \$12,382 in 2009; whereas the change was from \$0.9928 as at January 1, 2008 to \$1.0265 as at March 31, 2008 resulting in a first quarter 2008 gain of \$32,081.

Summary of Quarterly Results

	Mar 31, 2009	Dec 31, 2008	Sep 30, 2008	Jun 30, 2008
Revenue	\$ 228	\$ 6,153	\$ 1,193,250	\$ 1,749,076
Net income (loss) from continuing operations	(1,061,138)	(945,394)	(290,639)	806,619
Basic earnings (loss) per share	(0.03)	(0.04)	(0.01)	0.03
Diluted earnings (loss) per share	\$ (0.03)	\$ (0.04)	\$ (0.01)	\$ 0.02
	Mar 31, 2008	Dec 31, 2007	Sep 30, 2007	Jun 30, 2007
Revenue	\$ 6,583	\$ 2,350,492	\$ 507,184	\$ 2,772,807
Net income (loss) from continuing operations	(711,877)	208,307	(642,075)	1,665,080
Basic earnings (loss) per share	(0.02)	0.01	(0.02)	0.06
Diluted earnings (loss) per share	\$ (0.02)	\$ 0.01	\$ (0.02)	\$ 0.05

The company is in the early stage of commercializing its SFD® technology. Its ability to generate cash flow from operations will depend on its ability to service its existing clients and develop new clients for its SFD® services. Management recognizes that this early commercialization phase can last for several years. Consistent with this early stage of commercialization, the company has a significant economic dependency on a few clients. In 2006, we had two clients who accounted equally for 100% of our survey revenue. In 2007, the company's largest client accounted for 81% of its survey revenue and three clients accounted for 100% of survey revenue. For the year ended December 31, 2008 we had survey revenue of \$2,944,470 from two existing clients. While the company is in this early stage of commercialization, the company's financial position is materially impacted by the loss or gain of any one client. The company's ability to continue operations is dependent on attracting future customers through demonstrating the value that the company can bring to their exploration activities.

In comparing Q1 2009 to Q4 2008; the increased net loss in Q1 2009 over Q4 2008 of \$115,744 is due to additional salary costs incurred with the hiring of a COO to augment our senior management staff, fees for a geosciences consultant, higher stock-based compensation costs and costs incurred for the NAPE conference in Houston, Texas.

In comparing Q4 2008 to Q3 2008; the company recognized nil in survey revenue in Q4 (\$1,200,000 in Q3 from one completed survey contract) and recognized \$207,457 in stock-based compensation expense (\$144,843 - Q3).

In comparing Q3 2008 to Q2 2008; the company recognized \$1,200,000 in SFD® survey revenue for one completed survey contract in the third quarter (\$1,744,470 in Q2) resulting in net income. We settled a Statement of Claim from 2002 for \$90,000 wherein the plaintiff was a past president and director. Management conducted a review in 2008 of all wells for which NXT had a historical participation and determined a net 1.1 (8 actual) wells drilled from 2000 through 2004 that still require abandonment. The asset retirement obligation is based upon estimates of the costs to remediate, reclaim and abandon the wells and the estimated timing of the costs to be incurred. The abandonment expense recorded in Q3 2008 is \$28,338. In addition, the company recorded an obligation of \$160,148 in respect to a well drilled in 2000 and abandoned in 2008 for which no previous abandonment obligation had been anticipated.

In comparing Q2 2008 to Q1 2008; the company recognized \$1,744,470 in SFD® survey revenue for one completed survey contract in the second quarter (nil in Q1) resulting in net income. We sold our producing well for net proceeds of \$47,400 which generated a gain on disposal of \$20,325.

In comparing Q1 2008 to Q4 2007; there is no survey revenue recognized in the first quarter of 2008 (Q4 2007 - \$2,344,812 for two surveys). \$1,220,940 of invoiced services was recorded as unearned revenue at March 31, 2008 and was recognized as revenue in Q2 2008 in addition to the final invoice of \$523,530 that was billed in Q2 2008.

In comparing Q4 2007 to Q3 2007; revenue of \$2,344,812 for the completion of two SFD® survey contracts was recognized in the fourth quarter of 2007 (Q3 - \$500,000 from one contract) resulting in a net income. Survey costs were correspondingly higher in the fourth quarter (\$439,282) than in the third quarter (\$27,317). In addition \$174,500 in bonuses were paid out in Q4 (Q3 - nil).

In comparing Q3 2007 to Q2 2007; revenue of \$500,000 for the completion of one SFD® survey contract was recognized in the third quarter of 2007 while Q2 had survey revenue of \$2,763,620 from two contracts. The administrative cost increases in the third quarter over the second quarter of \$160,600 are due to increases in stock based compensation plus increased accruals in interim audit and review fees. As well, other expenses increased by U.S. \$193,234 on unrealized exchange losses on U.S. denominated cash and short term investments that was partially offset by exchange gains related on the accrued U.S. dollar convertible debentures registration penalty.

Liquidity and Capital Resources

The company's cash position at March 31, 2009 continues to be healthy. Our cash and equivalents and short term investments held on account as of May 25, 2009 is \$5,240,649. Pursuant to the terms of the SFD® contract executed, we anticipate receiving U.S. \$1 million dollars prior to the end of June with the balance of U.S. \$1.3 million expected to be received in the third quarter of 2009.

With cash and short term investments and the anticipated proceeds from the U.S. \$2.3 million contract, we forecast having the required cash to operate for up to two years without any additional sources of cash. However, our ability to continue as a going concern will ultimately be dependent upon our ability to sustain positive cash flow from operations and/or obtain additional financing. The outcome of these matters cannot be predicted with certainty at this time.

The following table summarizes the change in cash flow for the three months ended March 31, 2009 and 2008:

	For the three months ended March 31,	
	2009	2008
Cash generated (used) in operating activities	\$ (882,946)	\$ (219,322)
Cash used by financing activities	(1,932)	(96,713)
Cash generated (used) in investing activities	1,045,421	(536,280)
	\$ 160,543	\$ (852,315)

Operating Activities

Q1 2009 - the \$882,946 cash balance used in operating activities reflects our net loss of \$1,061,138 adjusted for 283,584 of non-cash or non-operating deductions and a \$101,786 net decrease in non-cash working capital.

Investing Activities

Q1 2009 - we decreased our short term investments by \$1,082,851; the primary use of cash was for ongoing day to day operating expenses. We used \$37,430 for other property and equipment.

Contractual Commitments

The company has an office lease until October 31, 2012 which requires minimum monthly lease payments of \$29,483.

On May 8, 2009 the company executed an aircraft charter agreement with a Calgary based aircraft charter company to provide aircraft, crew and maintenance services for SFD® survey operations utilizing a fleet of Cessna Citation 560 series jet aircraft. NXT's minimum aircraft charter commitment under this agreement is Cdn. \$396,250 prior to the anniversary date of the agreement.

Transactions with Related Parties

150,000 incentive options were issued in the first quarter of 2009 to an officer of the company and 100,000 options were issued in the second quarter of 2009 to two directors of the company.

Additional Disclosures

Outstanding share data

	As at May 25, 2009	As at December 31, 2008
Outstanding securities		
Common shares	30,676,796	30,676,796
Preferred shares	10,000,000	10,000,000
Options	2,520,204	2,270,204
Warrants	150,000	150,000
Total	43,347,000	43,097,000

Critical Accounting Estimates

Factors are substantially unchanged; refer to annual MD&A as at December 31, 2008.

Change in Accounting Policies Including Initial Adoption

SFAS No. 141(R) replaces SFAS No. 141, "*Business Combinations*". SFAS No. 141(R) retains the fundamental requirements of SFAS No. 141 that the acquisition method of accounting be used for all business combinations and for an acquirer to be identified for each business combination, with the objective of improving the relevance and comparability of the information that a reporting entity provides in its financial reports about a business combination and its effects. SFAS No. 160 clarifies the classification of non-controlling interests in consolidated statements of financial position and the accounting for and reporting of transactions between the reporting entity and holders of such non-controlling interests. The requirements of these standards will be applied to business combinations subsequent to December 31, 2008.

SFAS No. 161, which amends SFAS No. 133, "*Accounting for Derivative Instruments and Hedging Activities*", requires companies with derivative instruments to disclose information about how and why a company uses derivative instruments, how derivative instruments and related hedged items are accounted for under SFAS 133, and how derivative instruments and related hedged items affect a company's financial position, financial performance, and cash flows. The required disclosures include the fair value of derivative instruments and their gains or losses in tabular format, information about credit-risk-related contingent features in derivative agreements, counterparty credit risk, and the company's strategies and objectives for using derivative instruments. SFAS 161 is effective prospectively for periods beginning on or after November 15, 2008. SFAS No. 161 does not impact our financial statements as we do not have any derivative instruments or hedging activities.

We have consolidated the accounts of our wholly owned subsidiaries in the course of preparing these consolidated financial statements. All significant inter-company balances and transactions amongst NXT and its subsidiaries have been eliminated and are therefore not reflected in these consolidated financial statements. On December 22, 2008 the company's fully owned Canadian subsidiaries, NXT Energy Canada Inc. and NXT Aero Canada Inc., were dissolved and all assets and liabilities were wound up into the company. As of March 31, 2009 and December 31, 2008 the company consisted of NXT Energy Solutions Inc. and two inactive subsidiaries in the United States.

Disclosure Controls, Procedures and Internal Controls over Financial Reporting

The company's Chief Executive Officer and Chief Financial Officer (the "Responsible Officers") are responsible for establishing and maintaining disclosure controls and procedures, or causing them to be designed under their supervision, for the company to provide reasonable assurance that material information relating to the company is made known to the Responsible Officers by others within the organization, particularly during the period in which the company's quarterly and year-end financial statements and MD&A are being prepared. However, any internal control system, no matter how well conceived or operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met.

Disclosure controls and other procedures are designed to ensure that information required to be disclosed in reports filed or submitted is recorded, processed, summarized and reported within the time periods specified by the relevant security authority in either Canada or the United States of America. Disclosure controls and procedures include controls and procedures designed to ensure that information required to be disclosed in our reports is accumulated and communicated to management, including our Responsible Officers, to allow timely decisions regarding required disclosure.

As of March 31, 2009 an evaluation was carried out under the supervision of, and with the participation of management, including the Chief Executive Officer and the Chief Financial Officer, of the effectiveness of the company's disclosure controls and procedures as defined under the rules adopted by the Canadian securities regulatory authorities and by the SEC. Based on this evaluation, the Chief Executive Officer and the Chief Financial Officer concluded that the company's disclosure controls and procedures were effective as at March 31, 2009.

During the quarter ended March 31, 2009 there have been no changes in the company's internal control over financial reporting that have materially affected, or are reasonably likely to materially affect, the company's internal control over financial reporting.

We continue to monitor the following areas that we believe are most susceptible to control weaknesses common to many companies of our size:

- Due to the limited number of staff at the company it is not feasible to achieve complete segregation of incompatible duties. The company has mitigated this concern in controls by adding management review procedures of the areas where segregation is an issue; and
- The company does not retain staff with specialized and current income tax, financial reporting and complex accounting expertise. The company prepares their best estimate of complex accounting calculations and relies on reviews by management, external consultants and the audit committee for quality assurance.

Notwithstanding the foregoing, all internal control systems, no matter how well designed, have inherent limitations. Therefore, even those systems determined to be effective may not prevent or detect misstatements and can provide only reasonable assurance with respect to financial statement preparation and presentation. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the

For additional information on NXT Energy Solutions Inc. please consult our web page at www.nxtenergy.com, or the SEDAR webpage at <http://www.sedar.com>.