



NXT ENERGY SOLUTIONS INC
As at and for the three months ended March 31, 2010
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 company providing airborne hydrocarbon detection solutions that enable our clients to focus their exploration decisions concerning land commitments, data acquisition expenditures or prospect prioritization onto the areas with the greatest hydrocarbon potential. Utilizing its proprietary airborne Stress Field Detection ("SFD[®]") survey system, NXT provides a unique survey method that is environmentally noninvasive and unaffected by ground security issues or difficult terrain. Additionally, surveys can generally be conducted year round and are effective both onshore and offshore. The advantage to NXT's clients is an efficient and reliable method to explore for hydrocarbons.

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 at the November 29, 2007 Annual General Meeting. The name change was implemented to better reflect our principal activities and now aligns with the NXT trademark. SFD[®] and NXT[®] in Canada and the U.S. are the registered trademarks of NXT Energy Solutions Inc.

Overall Performance

Despite the lack of SFD[®] survey revenue in Q1 2010 we believe recent events provide evidence that we are making progress towards our objective of becoming a respected service provider in Colombia. With our growing stature we anticipate that we should see additional revenue contracts in the future from existing clients as well as expanding our client base in Colombia and nearby countries.

Several indicators support our confidence in the future:

- As of the date of this report we have earned over \$4 million of revenue in Colombia in approximately one year. The last revenue earned related to a U.S. \$431,000 SFD[®] survey as announced on February 2, 2010. We completed flight operation in Q1 2010 and the final report was delivered in early April and in accordance with U.S. GAAP the revenue will be recognized in Q2 2010. We believe that we can build on this success in our second year of operations in Colombia.
- NXT's existing clients operate, in aggregate, 43% of the land released for exploration in Colombia thereby indicating that we are securing contracts with clients that have a large market share in Colombia.
- In 2010 our technical explanations of the underlying physical science related to our SFD[®] survey system have improved substantially as evidenced by the level of acceptance by industry professionals. These explanations have improved through the collaboration of NXT's management, its board members and contracted geological and geophysical professionals. Throughout 2010 NXT has made a significant number of presentations to industry professionals in Colombia, Canada and other international locations. These explanations are well received during client presentations with generally fewer technical challenges than as experienced in prior years.
- There now exists an extensive body of SFD[®] survey data and reports prepared for Colombia that provide evidence on the effectiveness of SFD[®] as an exploration tool in frontier regions. The evidence includes data integration projects where the staff of both NXT and clients collaborates to integrate SFD[®] data with other available geological and geophysical data including drilling results. These projects demonstrate the strong correlation between SFD[®] recommendations and areas with reservoir potential.
- As a consequence of these SFD[®] survey activities in Colombia we now have a number of respected industry professionals within client organizations who are advocates for the SFD[®] technology. These individuals now provide valuable industry references not only to other companies, but also to the Colombian regulatory body.
- This industry support was instrumental for the National Hydrocarbon Regulatory Agency ("ANH") of Colombia ruling on May 13, 2010 that states that SFD[®] surveys qualify as a work commitment for the upcoming 2010 Bid Round in Colombia.
- Our growing industry and regulatory recognition continues to support sales initiatives not just in Colombia but now also recently in Peru as well as expressions of interest from other international locations. Currently we have several companies where key decision makers have expressed interest in utilizing SFD[®] surveys to support their exploration programs. The company's sales "hopper" is larger than ever experienced in prior years.

The impact of this growing industry stature on our 2010 revenue is not determinable at this time. The conversion of a potential client's interest into a SFD[®] contract is impacted by factors that we cannot directly control. The timing of their requirements, availability of capital budgets, issues with partners and protracted inter-departmental decision making processes are all factors that may delay or indefinitely postpone the execution of a contract despite a genuine interest by any company in our services.

However, despite the slow start for revenue in 2010 we are encouraged by the level of industry interest in our services and the number of quality survey programs we have been asked to provide quotes on. We believe we have entered into a new phase for our company where we now know how to gain industry acceptance of our technology.

Results of Operations

The company reported a net loss of \$1,322,472 for the period ended March 31, 2010 (Q1 2009 - \$1,047,081), representing an overall increase in loss of \$275,391 for the period. The increase is primarily the result of the increase in expenses associated with opening a Colombian branch in order to meet the legal requirements of continuing to do business in that country.

Revenue

	For the three months ended	
	March 31, 2010	March 31, 2009
SFD [®] survey revenue	\$ -	\$ -
Oil & natural gas revenue	1,395	228
Total revenue	\$ 1,395	\$ 228

SFD[®] Survey Revenue

In the first three months of 2010, NXT continued its work in Colombia with one SFD[®] contract. As at March 31, 2010 the contract was not complete therefore progress amounts invoiced are shown on the balance sheet as unearned revenue and expenses are on the balance sheet as work in progress. Both the revenue and expense will be recognized in the second quarter of 2010 upon completion of the contract.

Expenses

	For the three months ended	
	March 31, 2010	March 31, 2009
SFD [®] survey cost	\$ 118,056	\$ 12,831
Oil and natural gas operating expense	-	1,395
Administrative	1,148,084	1,021,882
Amortization and depreciation	44,291	39,823
	<u>\$ 1,310,431</u>	<u>\$ 1,075,931</u>

Expenses - for the three months ended March 31, 2010 and 2009

- **SFD[®] survey costs** - survey costs for the first three months of 2010 relate to non-revenue surveys. Revenue related survey costs were not completed until the second quarter, therefore survey costs are on the balance sheet as work-in-progress and will be recognized, along with the corresponding revenue, upon completion of the contract.
- **Administrative** - the increase of \$126,202 in the first quarter of 2010 as compared to the first quarter of 2009 is due to increases in salary, instituting annual directors' fees and to the establishment of a Colombian branch in January 2010 which entailed engaging branch personnel for administrative and sales purposes. We incurred additional travel costs in connection with the opening of the branch as well as for additional marketing initiatives.

Other Expense (Income)

	For the three months ended	
	March 31, 2010	March 31, 2009
Interest income	(947)	(44,319)
Loss on foreign exchange	12,312	12,382
Loss (gain) on sale of property	1,074	(1,016)
Abandonment of oil and natural gas properties	997	4,331
Other expense (income)	<u>\$ 13,436</u>	<u>\$ (28,622)</u>

Interest income - interest income is offset by interest expense resulting in \$947 net interest income in Q1 2010 (\$44,319 - Q1 2009). Interest income is generated by short term investments; the decrease in interest income is due to investments being redeemed for ongoing operations and the remaining investments earning less interest due to lower interest rates available from financial institutions.

Loss on foreign exchange - loss or gain on foreign exchange is caused by changes in the relative exchange values of the U.S. dollar, Canadian dollar and Colombian peso. For example when the Canadian dollar trades higher relative to the U.S. dollar or COP, cash held in U.S. dollars or COP 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 \$1.0378 (COP .000517) on January 1, 2010 to \$1.0156 (COP .000529) as at March 31, 2010 resulting in a first quarter loss of \$12,312 in 2010; whereas the change was from \$1.2156 (COP n/a) as at January 1, 2009 to \$1.2613 (COP n/a) as at March 31, 2009 resulting in a first quarter 2009 gain of \$12,382.

Loss (gain) on sale of property - the company sold its sole vehicle in the first quarter of 2009 and realized net income of \$1,016; in the first quarter of 2010 the company disposed of two older computers that had not yet fully depreciated.

Summary of Quarterly Results (Unaudited)

	Mar 31, 2010	Dec 31, 2009	Sep 30, 2009	Jun 30, 2009
Revenue	\$ 1,395	\$ 1,044,889	\$ 447	\$ 2,638,759
Net income (loss) from continuing operations	(1,322,472)	(657,401)	(969,591)	283,005
Basic earnings (loss) per share	(0.04)	(0.02)	(0.03)	0.01
Diluted earnings (loss) per share	\$ (0.04)	\$ (0.02)	\$ (0.03)	\$ 0.01
	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	(1,047,081)	(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

Q1 2010 to Q4 2009 comparison: the company recognized nil survey revenue, \$69,356 in stock-based compensation expense and recorded nil in survey costs in Q1 (respectively \$1,044,766, \$187,343 and \$508,308 - Q4).

Q4 2009 to Q3 2009 comparison: the company recognized \$1,044,766 in survey revenue in Q4 (nil - Q3) and recognized \$187,343 in stock-based compensation expense (\$112,254 - Q3).

Q3 2009 to Q2 2009 comparison: the net loss in Q3 is due to the company recognizing no survey revenue in Q3 (\$2,638,560 - Q2).

Q2 2009 to Q1 2009 comparison: the company recognized \$2,638,560 in survey revenue in Q2 (nil - Q1) for one completed international survey contract resulting in net income. Our expenses in the second quarter are higher due to the ramp up required for executing an international survey contract as well as increased costs as we pursue marketing to foreign markets.

Q1 2009 to Q4 2008 comparison: 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.

Q4 2008 to Q3 2008 comparison: 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).

Q3 2008 to Q2 2008 comparison: 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.

Liquidity and Capital Resources

The company's cash position at March 31, 2010 continues to be healthy. Our cash and equivalents and short term investments held on account as of May 27, 2010 is \$3,438,914.

With cash and short term investments and the proceeds of U.S. \$344,826 for one SFD® survey contract that completed in the second quarter of 2010, we forecast having the required cash to operate for the balance of the year 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, 2010 and 2009:

	For the three months ended	
	March 31, 2010	March 31, 2009
Cash used in operating activities	\$ (374,239)	\$ (882,946)
Cash generated (used) by financing activities	18,834	(1,932)
Cash generated (used) in investing activities	(41,036)	1,045,421
	\$ (396,441)	\$ 160,543

Operating Activities

- Q1 2010 - the \$374,239 cash balance used in operating activities reflects our net loss of \$1,322,472 adjusted for \$114,644 of non-cash or non-operating deductions and a \$833,589 net increase in non-cash working capital.
- 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.

Financing Activities

- Q1 2010 - we raised \$20,936 through the exercise of options and reduced our capital lease by \$2,102.
- Q1 2009 - we reduced our capital lease by \$1,932.

Investing Activities

- Q1 2010 - the primary use of cash was for ongoing day to day operating expenses. We used \$41,036 for other property and equipment.
- 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 \$31,871.

Transactions with Related Parties

An officer of the company exercised 50,000 options in the first quarter of 2010.

Additional Disclosures

Outstanding share data

	As at May 27, 2010	As at December 31, 2009
Outstanding securities		
Common shares	30,751,796	30,701,796
Preferred shares	10,000,000	10,000,000
Options	2,707,204	2,757,204
Warrants	-	-
Total	43,459,000	43,459,000

Critical Accounting Estimates

Factors are substantially unchanged; refer to annual MD&A as at December 31, 2009.

Change in Accounting Policies

Factors are substantially unchanged; refer to annual MD&A as at December 31, 2009.

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, 2010 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, 2010.

During the period ended March 31, 2010 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 policies or procedures may deteriorate.

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>.