# California Nanotechnologies Corp.
# For the interim period ended November 30, 2015

# MANAGEMENT DISCUSSION AND ANALYSIS

This Management Discussion and Analysis ("MD&A") should be read in conjunction with the Condensed Consolidated Financial Statements of California Nanotechnologies Corp. (the "Company" or "Cal Nano") for the period ended November 30, 2015 and the related Notes. The Company's reporting currency is in United States ("US") dollars and all amounts in this MD&A are expressed in US dollars. The Company reports its financial position, results of operations and cash flows in accordance with International Financial Reporting Standards ("IFRS"), as issued by the IASB. This discussion has been completed as of January 14, 2016.

## A. Company Overview

Cal Nano's mission is to pioneer and commercialize next-generation Nanophase materials and products to fulfill rising industry demand. Cal Nano's technologies enhance material performance by improving engineering properties. The Company is now focusing on commercialization efforts. Target markets are the sports and recreation, consumer electronics, aerospace, defense, automotive, medical, and the Oil and Gas industries.

As the Official North American Technical and Training Partner of Fuji-SPS, pioneer of Spark Plasma Sintering ("SPS") technology, Cal Nano offers both SPS services and equipment support. SPS is the leading technology for sintering Nanophase, Functionally Graded, Thermoelectric, and other advanced materials. The Company is enhancing the technology and exploring more potential commercial opportunities via extensive collaborations and partnerships with select universities and tier one production suppliers.

Since inception, Cal Nano has been actively building industry recognition through published papers and other scientific endeavors. A listing of recent published papers, patents and trade show activities are included at the end of this document.

## B. Markets

Cal Nano currently services customers in the aerospace, defense, academia, automotive, medical, oil & gas, resource development and sporting industries. A related company, Omni-Lite Industries, has many long-standing relationships in these areas, providing further access to future commercial customers.

## C. Financial Results

**Revenue**: For the period ended November 30, 2015, the Company reported revenue of $330,216 compared to $299,179 from the prior period for an increase of 10%. This is due to an increase of revenues in the research and development, as well as in the sport and recreation divisions.

Sales by division are summarized below:

| Division | Oil and Gas | Spark Plasma Sintering | Research and Development | Sport and Recreation |
|---|---|---|---|---|
| **Q3 2015** | **-** | **13%** | **82%** | **5%** |
| Q3 2014 | 12% | 19% | 69% | - |

**Net Loss**: Net loss for the period ended was $90,718. Salaries, wages and benefits, amortization and depreciation – equipment and intangible assets, research and office expenses were the greatest expense items. Salaries, wages and research may increase as the Company services the growth in several divisions.

**Operating Expenses**: Overall operating expenses of $360,631 were lower by 34% when compared to the prior period. These expense reductions are related to a reduction in salaries, wages and benefits, consulting and supplies in response to the decrease in the oil and gas division of the Company.

**Gain (loss) per share**: Basic loss per share was $nil. The weighted average number of shares was 31,230,296.

The diluted loss per share was $nil, which was the same as in 2014. At November 30, 2015, the diluted weighted average number of shares was 31,508,543. 1,730,000 (February 28, 2015 – 1,430,000) options were excluded in calculating the weighted-average number of diluted common shares outstanding, because their exercise price was greater than the annual average common share market price in the year.

The basic gain (loss) per common share is calculated using net income (loss) divided by the weighted-average number of common shares outstanding. The diluted gain (loss) per common share is calculated using net income (loss) divided by the weighted-average number of diluted common shares outstanding.

**SUMMARY OF FINANCIAL HIGHLIGHTS (US $)**
All figures in US dollars unless noted.

| **Basic Weighted Average Shares Issued And Outstanding : 31,230,296** | **For the period ended November 30, 2015** | **For the period ended November 30, 2014** | **% Increase (Decrease)** |
|---|---|---|---|
| Revenue | $ 330,216 | $ 299,179 | 10% |
| Cash flow from operations [1] | (29,047) | (237,891) | - |
| Net Loss | (90,718) | (205,180) | - |
| LPS (US) | (0.00) | (0.01) | - |
| LPS (CAD) | (0.00) | (0.01) | - |

(Note: at 11/30/15, $1US = $1.337 CAD; 11/30/14, $1US = $1.141 CAD)

(1) Cash flow from operations is a non-GAAP term requested by the oil and gas investment community that represents net earnings adjusted for non-cash items including depreciation, depletion and amortization and deferred taxes.

## Selected Quarterly Information

The following table summarizes selected quarterly information from the last eight quarters.

ALL FIGURES IN US DOLLARS UNLESS NOTED

| | November 30, 2015 | August 31, 2015 | May 31, 2015 | February 28, 2015 | November 30, 2014 | August 31, 2014 | May 31, 2014 | February 28, 2014 |
|---|---|---|---|---|---|---|---|---|
| Revenue | $143,567 | $90,736 | $95,913 | $52,957 | $80,495 | $59,486 | $ 159,198 | $175,172 |
| Cash Flow from operations [1] | 65,837 | (45,700) | (50,785) | (112,004) | (97,741) | (131,439) | (8,711) | (6,310) |
| Net Gain (Loss) | 33,309 | (57,137) | (68,490) | (122,891) | (98,335) | (52,627) | (54,218) | (30,694) |
| EPS (LPS) (US) | (.007) | (.003) | (.002) | (.001) | (.003) | (.002) | (.002) | (.001) |

## Liquidity and Capital Resources

The following table summarizes the Company’s cash flows by activity and cash on hand.

| | November 30, 2015 | November 30, 2014 |
|---|---|---|
| Net cash used for operating activities | $ (92,419) | $ (169,133) |
| Net cash from financing activities | 13,683 | 521,743 |
| Net cash used for investing activities | (4,235) | (53,913) |
| Net increase (decrease) in cash | (82,971) | 298,697 |
| Cash at the beginning of the period | 185,089 | 4,234 |
| Cash at the end of the period | 102,118 | 302,931 |

At November 30, 2015, the sources of liquidity were cash from financing activities. The cash balance was $102,118. At the end of period, the Company’s working capital deficiency (current assets less current liabilities) was $931,899.

Cash flow used for operating activities decreased to $92,419 due to an increase in accounts receivables.

Cash flow from financing activities was $13,683. On April 9, 2014, the Company completed a private placement of 5,290,296 units, with each unit consisting of one common share and one-half of one common share purchase warrant, at a price of $0.135 CAD. The purchase warrants have a one year term with an exercise price of $0.225 CAD. The private placement resulted in the Company receiving total gross proceeds of $714,190 CAD. On March 17, 2015, the warrants' expiration date, included in each unit of the April 9, 2014 private placement was extended to October 8, 2015. On October 6, 2015, the warrants' expiration date was extended another 12 months to October 8, 2016.

Cash flow used for investing activities was $4,235 as the Company applied for another patent focusing on commercial scale material production.

The Company's functional and reporting currency is in US dollars; however, the calculation of income tax expense is based on income in the currency of the country of origin. As such, the Company is continually subject to foreign exchange fluctuations, particularly as the Canadian dollar moves against the US dollar.

The Company manages its exposure to foreign currency fluctuations by maintaining foreign currency bank accounts to offset foreign currency payables and planned expenditures. The Company reports in its functional currency, the United States dollar.

The Company does not have any off-statement of financial position arrangements.

## D. Future Developments

The developments made at Cal Nano have made milled "nano alloys" significantly more feasible for a large array of performance components and applications. Cal Nano plans to pursue commercialization of "nano alloys" via several production techniques including bulk consolidation, thermal spray and the cold heading of individual nano components. To help develop these products, several renowned industry experts have joined the Cal Nano team to assist in executing these opportunities.

In 2013, the Company became the exclusive marketing partner of Fuji-SPS, the leading manufacturer of SPS equipment. This relationship places Cal Nano as exclusive Technical and Marketing Partner in North America. To complement the existing equipment at Cal Nano, larger production scale equipment is being evaluated as customers for potential production products are being evaluated by Cal Nano, its partners, and collaborators. The Company has successfully installed several new SPS systems in the US and Mexico for which it received commission and services revenue and has several more installations planned in the upcoming quarters, including 2 units in Canada.

The growing application and volume requirements for cryo-milled materials have refocused Company plans and developments, requiring the Company to scale up towards commercialization while reducing the cost of cryo-milled materials. In this regard in June 2014, the Company purchased a larger mill, increasing its milling capacity by a factor of six, which is now operational. Since March 2015, the Company has received several larger development orders from a large, Seattle-based airframe manufacturer (totaling over $130,000), which will require Cal Nano to utilize its new larger milling capacity. Under this program Cal Nano will subcontract major portions of the analytical work to its growing academic partners. This new order is indicative of the new scale of development programs that the Company is now capable of undertaking.

In order to pursue the ultimate scale up of this technology, significantly larger equipment will be required to produce commercial quantities of material. It is anticipated that up to 3 larger mills may be necessary to reach the output levels required for some products. Management of Cal Nano anticipates that these tasks could cost up to US $900,000 to complete and will require a larger facility or joint venture relationship with a major partner in this industry. The Company has submitted a patent application which outlines equipment designs and concepts which make the milling economically feasible on a large scale.

The successful launch and continued success of the world's highest performance commercial track shoe, Adidas' flagship, "adiZero Prime", has increased "nano alloy" product sales overall. Continuous efforts to reduce the cost of nano-engineered alloys could allow the current and developmental technologies to be applied to the much larger volume "replaceable spike" market, in which several large customers have expressed significant interest.

## E. Risk Factors

Cal Nano's risk factors are set out in Note E of the Company's audited management discussion and analysis for the year ended February 28, 2015.

## F. Disclosure Controls and Procedures

Disclosure controls and procedures have been designed to ensure that information required to be disclosed by the Corporation is accumulated and communicated to our management as appropriate to allow timely decisions regarding disclosure. The Company's Chief Executive Officer and Chief Financial Officer have concluded, based on their evaluation at November 30, 2015, that the Company's disclosure controls and procedures are effective to provide reasonable assurance that material information related to Cal Nano, is made known to them by employees or third party consultants working for the Company. It should be noted that while the Company's Chief Executive Officer and Chief Financial Officer believe that the disclosure controls and procedures will provide a reasonable level of assurance and that they are effective, they do not expect that the disclosure controls and procedures will prevent all errors and fraud. A 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.

## G. Outstanding Share Capital

At January 14, 2016:

- Common Shares issued and outstanding: 31,230,296
- Stock options:

| Description | Number |
|---|---|
| Options outstanding at February 28, 2015 | 2,605,000 |
| Options - granted | 300,000 |
| - exercised | - |
| - forfeited | 225,000 |
| - expired | - |
| Options outstanding at January 14, 2016 | 2,680,000 |
| Options exercisable at January 14, 2016 | 2,004,994 |

## H. Transactions with Related Parties

Advances from related parties are from a non-arms length entity. The advances bear interest at 2% per annum and are due upon demand. There are no set terms for repayment and the loan is secured by all the assets of the Company. No interest has been paid on the advances (February 28, 2015 - $nil) with accrued interest at 2%, in the amount of $141,160 (February 28, 2015 – $128,847). The related party contracted the Company for a total of $24,298 (November 30, 2014 – $28,588) and the Company incurred expenses of $2,820 (November 30, 2014 – $608). The transactions are considered to be in the normal course of operations and are initially recognized at their fair value.

## I. Third Party Investor Relations Contracts

On May 12, 2014, the Company entered into a twelve month consulting agreement with QIS Capital (547853 BC Ltd.) to direct Cal Nano's public and investor relations activities. This twelve month contract expired in May 2015. No other third party investor relations arrangements were made in 2015 or 2014.

## J. Board of Directors

The Company’s directors are material shareholders.

## K. Financial instruments

As part of its operations the Company utilizes a number of financial instruments. It is management's opinion that the Company is not exposed to significant interest, currency or credit risks arising from these financial instruments except as otherwise disclosed. The Company manages these risks by operating in a manner that minimizes risk exposure to the extent practical.

Financial instruments of the Company consist of cash, accounts receivable, share purchase warrants, accounts payable and accrued liabilities, finance lease obligation and advances from related parties.

| | **November 30, 2015** | | February 28, 2015 | |
|---|---|---|---|---|
| | **Carrying Value** | **Fair Value** | Carrying Value | Fair Value |
| **At fair value through profit or loss** | | | | |
| Cash | **$ 102,118** | **$ 102,118** | $ 185,089 | $ 185,089 |
| Share purchase warrants | **20,028** | **20,028** | 2,477 | 2,477 |
| **Loans and receivables** | | | | |
| Accounts receivable | **81,891** | **81,891** | 46,547 | 46,547 |
| **Other liabilities** | | | | |
| Accounts payable and accrued liabilities | **83,155** | **83,155** | 90,390 | 90,390 |
| Finance lease obligation | **2,724** | **2,724** | 3,283 | 3,283 |
| Advances from related parties | **1,045,522** | **1,045,522** | 1,031,326 | 1,031,326 |

The table below sets out fair value measurements using fair value hierarchy at November 30, 2015.

| | Total | Level 1 | Level 2 | Level 3 |
|---|---|---|---|---|
| Assets | | | | |
| Cash | $ 102,118 | $ 102,118 | - | - |

There have been no transfers during the year between Levels 1, 2 and 3.

As disclosed above, the Company holds various forms of financial instruments. The nature of these instruments and the Company's operations expose the Company to foreign currency risk. The Company manages its exposure to these risks by operating in a manner that minimizes its exposure to the extent practical. The Company does not use off balance sheet contracts to manage these risks.

Liquidity Risk

The Company defines liquidity risk as the financial risk that the Company will encounter difficulties meeting its financial obligations. The Company’s objective for managing liquidity risk is to ensure that it will have sufficient liquidity to meet liabilities when due. This risk is partially mitigated by managing the cash flow through controlling receivables and payables to vendors and related parties. At November 30, 2015, the Company had a working capital deficiency of $931,899 (February 28, 2015 – $880,506).

Foreign currency risk

A portion of the Company’s operations are located outside of the United States and, accordingly, the related financial assets and liabilities are subject to fluctuations in exchange rates.

The Company manages its exposure to foreign currency fluctuations by maintaining foreign currency bank accounts to facilitate foreign currency payables and planned expenditures. The Company reports in its functional currency, the United States dollar.

At November 30, 2015, the Company had the following balances denominated in Canadian dollars. The balances have been translated into United States currency in accordance with the Company's foreign exchange accounting policy.

| | **USD November 30, 2015** | USD February 28, 2015 |
|---|---|---|
| Cash | **$ 334** | $ 166,185 |
| Accounts Payable | **11,843** | 27,069 |

The Company operates with a U.S. dollar functional currency which gives rise to currency exchange rate risk on the Company's Canadian dollar denominated monetary assets and liabilities, such as Canadian dollar bank accounts and accounts payable, as follows:

| | **Impact on Net Loss** |
|---|---|
| U.S. Dollar Exchange Rate – 10% increase | **$ (1,218)** |
| U.S. Dollar Exchange Rate – 10% decrease | **1,218** |

Credit risk

The Company manages credit risk by dealing with financially sound customers, based on an evaluation of the customer's financial condition. For the period ended November 30, 2015, the Company was engaged in contracts with one (November 30, 2014 – two) customer in excess of 10% of revenue, which accounted for $109,437(November 30, 2014 - $207,206) or 77% (November 30, 2014 – 69%) of the Company's total revenue. The maximum exposure to credit risk is the carrying value of accounts receivable. No allowance for doubtful accounts was recorded (November 30, 2014 – $nil). The table below provides a summary of the aged but not impaired accounts receivable.

| **Total** | **Current** | **≤ 30 days** | **> 30 days ≤ 60 days** | **60 days ≤ 90 days** | **> 90 days** |
|---|---|---|---|---|---|
| $ 81,891 | $ 74,165 | $ 2,000 | $ - | $ 658 | $ 5,068 |

## L. Capital Disclosures

The Company manages its capital to maintain its ability to continue as a going concern and to provide returns to shareholders and benefits to other stakeholders. The capital structure of the Company consists of cash and equity comprised of issued capital, contributed surplus and deficit.

The Company manages its capital structure and makes adjustments to it in light of economic conditions. The Company, upon approval from its Board of Directors, will balance its overall capital structure through new share issues or by undertaking other activities as deemed appropriate under the specific circumstances.

The Company is not subject to externally imposed capital requirements and the Company's overall strategy with respect to capital risk management remains unchanged from the year ended February 28, 2015.

## M. Conferences

CONFERENCES ATTENDED IN 2015

[1] TMS 2015, Orlando, FL, exhibitor, March 15-19, 2015

[2] Ceramics Expo 2015, Cleveland, OH, exhibitor, April 28-30, 2015

[3] MS&T 2015, Columbus, OH, exhibitor, October 4-8, 2015

**Intention of management's discussion and analysis**

This MD&A is intended to provide an explanation of financial and operational performance compared with prior periods and the Company's prospects and plans. It provides additional information that is not contained in the Company's financial statements.

**Additional information**

Further information regarding California Nanotechnologies Corp. can be accessed under the Company's public filings found at www.sedar.com.

*The information contained in this discussion may be considered to contain forward-looking statements. Such forward-looking statements address future events and conditions and are subject to risks and uncertainties that could cause actual results to differ materially from those contemplated. There is no representation by the Company that actual results will be the same in whole or in part as implied by the forward-looking statements provided.*