

California Nanotechnologies Corp.  
For the period ended May 31, 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 May 31, 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 July 30, 2015.

### 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 transitioning to commercialization. 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 below.

### B. Markets

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

## C. Financial Results

**Revenue:** For the period ended May 31, 2015, the Company reported revenue of \$95,913 compared to \$159,198 from the prior period, a decrease of 40%. This decrease is due to a decrease in the oil and gas division and increases in all other divisions.

Sales by division is summarized below:

Division	Oil and Gas	Spark Plasma Sintering	R and D	Sport and Recreation
Q1 2015	3%	52%	26%	19%
Q1 2014	88%	8%	3%	1%

**Net Loss:** Net loss for the period ended was \$68,490. Salaries, wages and benefits, amortization and depreciation, and advertising and promotion 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 \$136,552 were lower by 25% when compared to the prior period. These expenses 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.

**Loss per share:** Basic loss per share was \$0.01. The weighted average number of shares was 31,230,296.

The diluted loss per share was \$0.01 compared to \$0.01 in 2014. At May 31, 2015, the diluted weighted average number of shares was 31,525,240. 1,050,000 (May 31, 2014 – nil) 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 loss per common share is calculated using net loss divided by the weighted-average number of common shares outstanding. The diluted loss per common share is calculated using net 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 May 31, 2015	For the period ended May 31, 2014	% Increase (Decrease)
Revenue	\$ 95,913	\$ 159,198	(40%)
Cash flow provided by (used for) operations	(54,131)	(69,931)	-
Net earnings (loss)	(68,490)	(54,218)	-
EPS (LPS) (US)	(0.01)	(0.01)	-

## Selected Quarterly Information

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

ALL FIGURES IN US DOLLARS UNLESS NOTED

	May 31, 2015	February 28, 2015	November 30, 2014	August 31, 2014	May 31, 2014	February 28, 2014	November 30, 2013	August 31, 2013
Revenue	\$ 95,913	\$52,957	\$80,495	\$59,486	\$159,198	\$175,172	\$79,919	\$61,855
Cash flow provided by (used for) operations <sup>(1)</sup>	(50,785)	(112,004)	(97,741)	(131,439)	(8,711)	(6,310)	(69,237)	(45,245)
Net earnings (loss)	(68,490)	(122,891)	(98,335)	(52,627)	(54,218)	(30,694)	(89,387)	(70,953)
EPS (LPS) (US)	(.002)	(.001)	(.003)	(.002)	(.002)	(.001)	(.004)	(.003)

<sup>(1)</sup> Cash flow used for 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, deferred taxes, asset write-downs and gains (losses) on sale of assets, if any.

## Liquidity and Capital Resources

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

	May 31/2015	May 31/2014
Net cash from (used for) operating activities	\$ (54,131)	\$ (69,931)
Net cash from (used for) financing activities	(1,180)	602,341
Net cash from (used for) investing activities	-	-
Net increase (decrease) in cash	(55,311)	532,410
Cash at the beginning of the period	185,089	4,234
Cash at the end of the period	129,778	536,644

At May 31, 2015, the source of liquidity was cash from operating activities. The cash balance was \$129,778. At the end of period, the Company's working capital deficiency (current assets less current liabilities) was \$931,567.

-Cash flow used for operating activities increased to \$54,131 due to the increase in the SPS and sports and recreation divisions and the reduction in the oil and gas division.

-Cash flow used for financing activities was \$1,180. 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 was extended to October 8, 2015.

-Cash flow used for investing activities was \$nil as the Company is utilizing previously purchased equipment to increase production and research capacity in response to the growth within the SPS and research and development divisions.

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.

Foreign Exchange: 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.

Off-Statement of Financial Position arrangements: 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.

Based on the positive SPS technical results and multiple customer relationships developed at Cal Nano over the last 7 years, the Company signed an official partnership contract in 2013, solidifying the relationship with the inventors and leading manufacturers of SPS equipment, Fuji-SPS. 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 developed by Cal Nano and 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.

The growing application and volume requirements for cryo-milled materials have refocused Company plans and developments, requiring the Company to scale up towards commercialization and the resulting cost reduction 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. Subsequent to the year end, the Company received a large (approximately \$72,000) order from a large Aerospace Research and Technology Company that is associated with a large airframe manufacturer, which will require Cal Nano to utilize its new larger milling capacity. Under this program Cal Nano will subcontract major portions of analytical work to its growing academic partners. This new order is indicative of a new scale of development program which 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. 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 completed and is submitting a patent application which outlines equipment designs and concepts which make the milling economically feasible on a large scale.

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

## **E. Risk Factors**

The Company is subject to a number of risks as outlined below.

### **Experimental Field**

Cal Nano is engaged in the research and development of new materials with the goal of commercializing viable products. The nanotechnology industry and specifically the production of nanocrystalline materials require extensive experimental effort and can require significant investment. Customers may be hesitant to implement any new materials developed without extensive and time-consuming testing.

### **No Assurance of Commercial Production**

Cal Nano is a research and development firm with limited history of production or sales. There is no assurance that it will achieve commercial levels of production or sales for any product.

### **Relationships with Customers**

The success of Cal Nano is directly related to the strength of its relationships with and the economic success of its larger customers. Should Cal Nano's relationships with these customers become strained or the profitability of these customers become negatively affected, the Company's profitability may be impacted.

### **Competition**

Cal Nano is engaged in the technology industry. There is a high degree of competition in these industries which could impact Cal Nano's ability to find and keep customers.

### **Potential Fluctuations in Financial Results**

If Cal Nano's future anticipated revenues are not realized on a timely basis, Cal Nano's financial results could be materially adversely affected.

Financial results in the future may be influenced by these or other factors.

### **Management of Growth**

Any expansion of Cal Nano's business may place a significant strain on its financial, operational and managerial resources. There can be no assurance that Cal Nano will be able to manage its operations and financial assets successfully in order to manage any growth it undertakes. Any inability of Cal Nano to manage growth successfully could have a material adverse effect on Cal Nano's business, financial condition and results of operations.

### **Government Regulations**

Cal Nano may be subject to various laws, regulations, regulatory actions and court decisions that may have negative effects on Cal Nano. Changes in the regulatory environment imposed upon Cal Nano could adversely affect the ability of Cal Nano to attain its corporate objectives.

### **Reliance on Key Personnel and Consultants**

There can be no assurance that any of Cal Nano's directors, officers or employees will remain with Cal Nano or that, in the future, directors, officers or employees will not organize competitive businesses or accept employment with companies competitive with Cal Nano.

### **Additional Financing Requirements and Access to Capital**

Cal Nano may require additional financing to implement its business plan. The ability of the Company to arrange such financing in the future will depend in part upon the prevailing capital market conditions as well as the business performance of Cal Nano. There can be no assurance that Cal Nano will be successful in its efforts to arrange additional financing, if needed, on terms satisfactory to Cal Nano. If additional financing is raised by the issuance of shares from the treasury of Cal Nano, control of Cal Nano may change and shareholders may suffer additional dilution. There can be no assurance that Cal Nano will generate cash flow from operations necessary to support the continuing operations of Cal Nano.

## **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 May 31, 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 July 30, 2015:

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

<b>Description</b>	<b>Number</b>
Options outstanding at May 31, 2015	2,580,000
Options - granted	-
- exercised	-
- forfeited	-
- expired	-
Options outstanding at July 30, 2015	2,580,000
Options exercisable at July 30, 2015	1,621,664

## H. Transactions with Related Parties

Advances from related parties are from a related 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. Interest in the amount of \$3,328 (2014 - \$nil) was paid on the advances with accrued interest in the amount of \$130,700 (2014 - \$128,847). The related party engaged with the Company for revenue of \$9,725 (May 31, 2014 - \$4,814) and incurred expenses of \$2,574 (May 31, 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. 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.

	May 31, 2015		February 28, 2014	
	Carrying Value	Fair Value	Carrying Value	Fair Value
<b>At fair value through profit or loss</b>				
Cash	\$ 129,778	\$ 129,778	\$ 185,089	\$ 185,089
Share purchase warrants	2,571	2,571	2,477	2,477
<b>Loans and receivables</b>				
Accounts receivable	44,494	44,494	46,547	46,547
<b>Other liabilities</b>				
Accounts payable and accrued liabilities	81,782	81,782	90,390	90,390
Finance lease obligation	3,808	3,808	3,974	3,974
Advances from related parties	1,030,312	1,030,312	1,031,326	1,031,326

The table below sets out fair value measurements using fair value hierarchy.

	Total	Level 1	Level 2	Level 3
<b>Assets</b>				
Cash	\$ 129,778	\$ 129,778	\$ -	\$ -
Share purchase warrants	2,571	-	2,571	-

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

The carrying values of accounts receivable, investment, accounts payable and accrued liabilities approximate their fair value due to their short-term nature.

The fair value of the Company's advances from related parties and finance lease obligation approximate their fair values due to the interest rates applied to these instruments, which approximate market interest rates.

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 May 31, 2015, the Company had a working capital deficiency of \$931,567 (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 May 31, 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.

	<b>USD</b> <b>May 31, 2015</b>	<b>USD</b> February 28, 2015
Cash	\$ 1,070	\$ 166,185
Accounts Payable	31,824	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:

	<b>Impact on Net Loss</b>
U.S. Dollar Exchange Rate – 10% increase	\$ 3,075
U.S. Dollar Exchange Rate – 10% decrease	(3,075)

### 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 May 31, 2015, the Company was engaged in contracts for products with four (May 31, 2014 – one) customer in excess of 10% of revenue, which accounted for \$48,562 (May 31, 2014 - \$131,643) or 51% (May 31, 2014 – 83%) 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 (May 31, 2014 – \$nil). The table below provides an analysis of our current financial assets and the age of our past due but not impaired accounts receivables by type of credit risk.

<b>Total</b>	<b>Current</b>	<b>≤ 30 days</b>	<b>&gt; 30 days ≤ 60 days</b>	<b>&gt; 60 days ≤ 90 days</b>	<b>&gt; 90 days</b>
\$ 44,494	\$ 30,511	\$ 11,929	\$ 2,054	\$ -	\$ -

## L. Journals, Patents and Conferences

### **Technical Paper for Journals, etc.**

[1] C. Melnyk, A. Maxin, B. Weinstein, D. Grant, R. Gansert, Coatings to Extend Equipment Service Life, Fastener Technologies, Inc., Oct./Nov. 2013, pg. 60;

[2] S.S. Dheda, Y.K. Kim, C. Melnyk, W. Liu, F.A. Mohamed, Corrosion and in vitro biocompatibility properties of cryomilled-spark plasma sintered commercially pure titanium, *J. Mater. Sci.: Mater. Med.*, vol. 24, pp. 1236-1249 (2013)

[3] S.S. Dheda, C. Melnyk, F.A. Mohamed, Addition of titanium nitride nanoparticles for grain size stabilization of cryomilled spark plasma sintered commercially pure titanium, *Materials Science and Engineering A*, vol. 584, pp. 88-96 (2013)

[4] C. Melnyk, B. Weinstein, D. Grant, R. Gansert, Improved Properties of Light Alloys for Medical Devices Using Near-Nano and Nano-Based Materials, *Materials & Processes for Medical Devices (MPMD)*, Nov. 2011;

[5] C. Melnyk, B. Weinstein, D. Lujan, D. Grant, R. Gansert, M. Watson, Investigation of Mechanical Properties of Coatings and Bulk Components of Various Grain Sized Tungsten-Carbide-Cobalt Based Materials, *Proceeding of International Thermal Spray Conference*, Sept. 2011, Hamburg, Germany;

[6] C. Melnyk, B. Weinstein, D. Lujan, D. Grant, R. Gansert, Cold Forged Nano-based Light Alloys and Composites Components, *Fastener Technology Int.*, Aug. 2011;

[7] C. Melnyk, B. Weinstein, D. Lujan, D. Grant, R. Gansert, Production of Nano-based Light Alloys and Composites for Aerospace Fasteners, *Adv. Mat. & Proc.*, Vol. 169, No. 5, May 2011, pp. 42-44;

[8] C. Melnyk, S. Schroeder, D. Grant, S. Keener, and R. Gansert, Improved Properties of Cryomilled Light Alloys Consolidated Using Spark Plasma Sintering and Hot Isostatic Pressing, *JOM*, Vol. 63, No. 2, pp. 65-68, 2011; (Collaboration with Boeing Phantom Works);

[9] M. Pozuelo, C. Melnyk, W. Kao, J.-M Yang, Cryomilling and Spark Plasma Sintering of Nanocrystalline Magnesium-Based Alloy, Submitted to *Journal of Materials Research*, Submission, Oct. 2010; (Collaboration with UCLA);

[10] C. Melnyk, B. Weinstein, D. Lujan, D. Grant, R. Gansert, Improved Mechanical Properties of WC-10%Co-4%Cr and WC-12%Co Coatings as a Function of Grain Size, *Proceeding of International Thermal Spray Conference*, 2011, Germany, Submission Oct. 2010;

[11] C. Xu, S. Schroeder, P. Berbon, T. Landgon, Principles of ECAP-Conform as a Continuous Process for Achieving Grain Refinement: Application to an Aluminum Alloy, *Acta Materialia*, Vol. 58, (4), 1379-1386;

[12] C. Melnyk, S. Schroeder, D. Grant, R. Gansert, and M. Watson, "Improved Mechanical Properties of Coatings and Bulk Components as a Function of Grain Size", *International Thermal Spray Conference Proceedings*, ASM International, Materials Park, OH., USA 2010;

[13] S. Schroeder, C. Melnyk, D. Grant, S. G. Keener, and R. Gansert, "Improved Properties of Light Alloys produced by Cryomilling (Nano) and Bulk Consolidation Processing", Proceedings of Aeromat 2009, Dayton, OH, USA;

[14] S. Schroeder, C. Melnyk, D. Grant, R. Gansert, G. Saha, and L. Glenesk, "Properties of Powders, Coatings, and Consolidated Components Produced from Nano-, and Near-Nano Crystalline Powder", Expanding Thermal Spray Performance to New Markets and Applications, Ed. R. Maple, M. Hyland, Y. Lau, R. Lima, G. Montavon, ASM International, Materials Park, OH., USA 2009;

[15] C. Melnyk, S. Schroeder, D. Grant, G. Saha, L. Glenesk, and R. Gansert "Nano Powders Produce Improved Wear Resistant Thermal Spray Coatings", American Welding Journal, July, 2009, pp. 50 – 55.

#### PATENTS

[1] US Patent 7,481,091 B1, January 27, 2009, Material Processing System, D. Grant, P. Berbon, T. Wang, P. Burkey.

#### CONFERENCES ATTENDED IN 2014

[1] TMS 2014, San Diego, CA, exhibitor and presented "Improved Properties of Cermet Coatings as a Function of Grain Size," February 16-20, 2014

[2] MRS 2014, San Francisco, CA, exhibitor, April 21-25, 2014

[3] MS&T 2014, Pittsburgh, PA, exhibitor and presented "Production of Nanostructured Materials with Controlled Microstructural Architectures," October 12-16, 2014

#### 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

#### M. 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.

#### **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](http://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.*