

California Nanotechnologies Corp.  
For the period ended November 30, 2016

## 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, 2016 and the related Notes. The Company’s reporting currency is in U.S. dollars and all amounts in this MD&A are expressed in U.S. 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 International Accounting Standards Board (“IASB”). This MD&A has been completed as of January 27, 2017.

### 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 microchip fabrication, aerospace, sports and recreation, 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 trade show activities is included at the end of this document.

### B. Markets

Cal Nano currently services customers in the micro-chip fabrication, aerospace, academic, automotive, 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 nine month period ended November 30, 2016, the Company reported revenue of \$465,463 compared to \$330,216 from the prior period, an increase of 41%.

Sales by division are summarized below:

<b>Division</b>	<b>Oil and Gas</b>	<b>Spark Plasma Sintering</b>	<b>Research and Development</b>	<b>Sport and Recreation</b>
<b>2016 (9 months)</b>	-	<b>57%</b>	<b>18%</b>	<b>25%</b>
2015 (9 months)	-	13%	82%	5%

**Net Loss:** Net loss for the period ended was \$107,591 compared to \$90,718 in the prior period. Salaries, wages and benefits, and consulting expenses were the greatest expense items. Research may increase as the Company services the growth in several divisions.

**Operating Expenses:** Overall operating expenses of \$360,023 remained level when compared to the prior period.

**Other income:** In the prior year, an insurance recovery resulted in cash proceeds of \$43,500.

**Gain (loss) per share:** Basic loss per share was \$0.01. The weighted average number of shares was 31,430,296.

The diluted loss per share was \$0.01, which was the same as in 2015. At November 30, 2016, the diluted weighted average number of shares was 31,430,296.

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 (U.S. \$)

All figures in US dollars unless noted.

	<b>For the period ended November 30, 2016</b>	<b>For the period ended November 30, 2015</b>	<b>% Increase</b>
Revenue	\$ 465,463	\$ 330,216	41.0%
Cash flow used for operations	(89,565)	(92,419)	-
Net Loss	(107,591)	(90,718)	-
LPS	(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

	November 30, 2015	August 31, 2016	May 31, 2016	February 29, 2016	November 30, 2015	August 31, 2015	May 31, 2015	February 28, 2015
Revenue	\$261,996	\$107,272	\$96,195	\$101,547	\$143,567	\$90,736	\$95,913	\$52,957
Cash flow from operations <sup>(1)</sup>	27,636	(13,542)	(82,292)	(65,732)	65,837	(45,700)	(50,785)	(112,004)
Net income (loss)	(13,623)	(24,287)	(69,681)	(78,061)	33,309	(57,137)	(68,490)	(122,891)
EPS (LPS)	(.001)	(.001)	(0.002)	(.001)	.001	(.003)	(.002)	(.001)

<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.

	November 30, 2016	November 30, 2015
Net cash used for operating activities	\$ (89,565)	\$ (92,419)
Net cash provided by financing activities	47,069	13,683
Net cash used for financing activities	-	(4,235)
Net increase (decrease) in cash	(42,496)	(82,971)
Cash at the beginning of the period	108,687	185,089
Cash at the end of the period	66,191	102,118

At November 30, 2016, the sources of liquidity were cash from operating activities. The cash balance was \$66,191. At the end of period, the Company's working capital deficiency (current assets less current liabilities) was \$1,067,080.

Cash flow used for operating activities decreased to \$89,565.

Cash flow provided by financing activities was \$47,069. Effective July, 2016, the Company established a commercial advance line of up to \$30,000 for operating purposes, bearing interest at 8%, repayable in monthly principal and interest installments. The credit line is personally guaranteed by a director of the Company.

Effective September 2016, the Company established a new long-term primary credit facility (the "Credit Agreement") with total credit facilities of up to \$250,000, comprised of a commercial advance line in the amount of \$250,000, bearing interest at the Prime Rate plus one-half of one percent (0.50%) maturing on January 30, 2017. The Credit Agreement is secured by all the accounts, inventory, equipment, and general intangibles of the Company and guaranteed by a related party.

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 had 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. Since April 9, 2014 various extensions of the warrants' expiration date have been approved by the TSV Venture Exchange with a current extension of the share purchase warrants to October 8, 2017.

The Company's functional and reporting currency is in U.S. 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 U.S. 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 U.S. 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 developed by Cal Nano, its partners, and collaborators. Cal Nano has recently completed a working proto-type for one of these Customers.

The Company has successfully installed several new SPS systems in the U.S., Mexico and Canada 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 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. 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**

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 a Director have concluded, based on their evaluation at November 30, 2016, 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 a Director 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.

## Outstanding Share Capital

At January 27, 2017:

- Common Shares issued and outstanding: 31,430,296
- Stock options:

<u>Description</u>	<u>Number</u>
Options outstanding at January 27, 2017	2,650,000
Options exercisable at January 27, 2017	1,141,664

## 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 \$15,593 (2015 - \$nil) was paid on the advances with accrued cumulative interest in the amount of \$137,541 (2015 - \$141,160). The related party contracted with the Company leading to revenue of \$159,993 (November 30, 2015 - \$24,298) and provided services in the amount of \$44,955 (November 30, 2015 - \$2,820). 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. Mikel Damke was engaged in a one year contract, as executive assistant to the CEO for investor relations on November 24, 2016.

## J. Board of Directors

Some of 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, line of credit and advances from related parties.

	November 30, 2016		February 29, 2016	
	Carrying Value	Fair Value	Carrying Value	Fair Value
<b>At fair value through profit or loss</b>				
Cash	\$ 66,191	\$ 66,191	\$ 108,687	\$ 108,687
Share purchase warrants	30,802	30,802	20,963	20,963
<b>Loans and receivables</b>				
Accounts receivable	26,016	26,016	46,860	46,860
<b>Other liabilities</b>				
Accounts payable and accrued liabilities	59,785	59,785	96,551	96,551
Finance lease obligation	2,659	2,659	3,283	3,283
Line of credit	40,000	40,000	-	-
Advances from related parties	1,045,522	1,045,522	1,045,522	1,045,522

The table below sets out fair value measurements using fair value hierarchy at November 30, 2016.

	Total	Level 1	Level 2	Level 3
<b>Assets</b>				
Cash	\$ 66,191	\$ 66,191	\$ -	\$ -
Share purchase warrants	30,802	-	30,802	-

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

The fair value of the Company's advances from related parties, finance lease obligation and line of credit 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 November 30, 2016, the Company had a working capital deficiency of \$1,067,080 (February 29, 2016 – \$996,126).

### Foreign currency risk

A portion of the Company's operations are located outside of the U.S. 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 U.S. dollar. At November 30, 2016, the Company had the following balances denominated in Canadian dollars. The balances have been translated into U.S. currency in accordance with the Company's foreign exchange accounting policy.

	<b>U.S. Dollar</b> <b>November 30, 2016</b>	U.S. Dollar February 29, 2016
Cash	\$ 2,344	\$ 2,766
Accounts Payable	17,867	29,554

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	\$ 1,552
U.S. Dollar Exchange Rate – 10% decrease	(1,552)

### 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, 2016, the Company was engaged in contracts with three (November 30, 2015 – one) customers in excess of 10% of revenue, which accounted for \$232,666 (November 30, 2015 - \$109,437) or 50% (November 30, 2015 – 77%) of the Company's total revenue. The maximum exposure to credit risk is the carrying value of accounts receivable. Three (February 29, 2016 - three) customers had outstanding balances in excess of 10% of accounts receivable, which accounted for \$17,934 (February 29, 2016 - \$36,488) or 69% (February 29, 2016 – 81%) of the Company's total accounts receivable balance. No allowance for doubtful accounts was recorded. The table below provides an analysis of our current and past due but not impaired accounts receivables.

	<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>
<b>November 30, 2016</b>	<b>\$ 26,016</b>	<b>\$ 19,897</b>	<b>\$ 4,622</b>	<b>\$ 105</b>	<b>\$ 82</b>	<b>\$ 1,310</b>
February 29, 2016	46,860	42,096	4,124	640	-	-

## 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 period ended November 30, 2016.

## M. Conferences

### CONFERENCES ATTENDED IN 2016

[1] Ceramics Expo 2016, Cleveland, OH, exhibitor, April 25-27, 2016

### 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](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.*