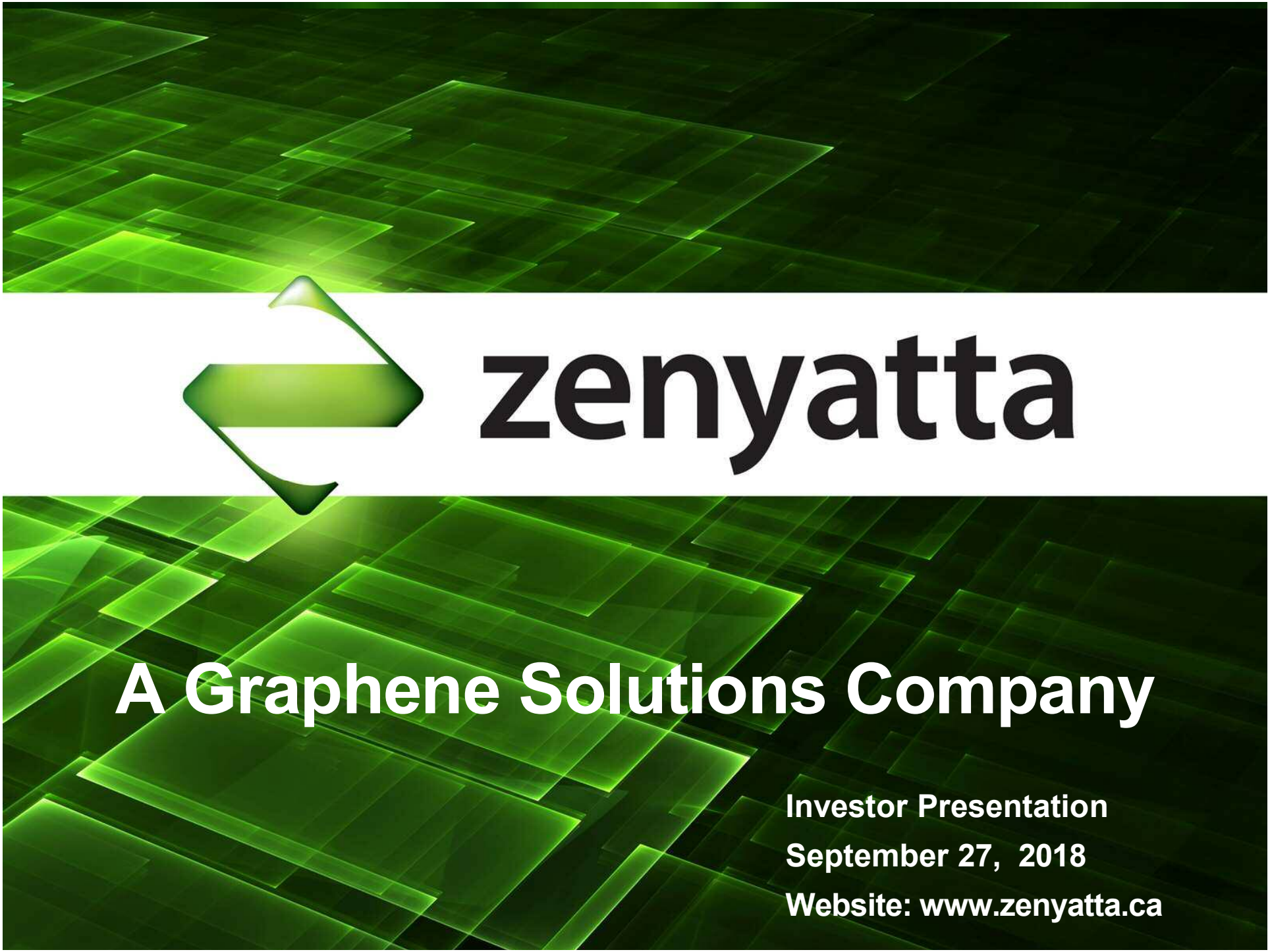

zenyatta
A Graphene Solutions Company
Investor Presentation
September 27, 2018
Website: www.zenyatta.ca

# Forward Looking Statements

This presentation contains "forward-looking information" within the meaning of applicable Canadian securities legislation and United States federal securities laws. Forward-looking statements include, but are not limited to, estimates and statements with respect to Zenyatta Ventures Ltd. future exploration and development plans, objectives or goals, to the effect that Zenyatta or management expects a stated condition or result to occur, including the PEA, expected timing for release of sample analyses and a resource estimate, the expected uses for graphite in the future, and the future uses of the graphite from Zenyatta's Albany deposit, the adequacy of Zenyatta's financial resources, business plans and strategy, and other events or conditions that may occur in the future. Generally, forward-looking information can be identified by the use of forward- looking terminology such as "potential", "plans", "expects", or "does not expect", "is expected", "budget", "scheduled", "estimates", "forecasts", "intends", "anticipates", or "does not anticipate", or "believes" or variations of such words and phrases or state that certain actions, events or results "may", "could", "would", "might", or "will be taken", "occur", or "be achieved". The following table outlines certain significant forward-looking information contained on this website provides the material assumptions used to develop such forward-looking statements and material risk factors that could cause actual results to differ materially from the forward looking statements.

| Forward-looking information | Assumptions | Risk factors |
|---|---|---|
| Zenyatta's properties may contain economic deposits of graphite and/or other metals | Financing will be available for future exploration and development of Zenyatta's properties; the actual results of Zenyatta's exploration and development activities will be favourable; operating, exploration and development costs will not exceed Zenyatta's expectations; the Company will be able to retain and attract skilled staff; all requisite regulatory and governmental approvals for exploration projects and other operations will be received on a timely basis upon terms acceptable to Zenyatta, and applicable political and economic conditions are favourable to Zenyatta; the price of graphite and/or other applicable metals and applicable interest and exchange rates will be favourable to Zenyatta; no title disputes exist with respect to its properties | Graphite & graphene price volatility; uncertainties involved in interpreting geological data and confirming title to acquired properties; the possibility that future exploration & processing results will not be consistent with Zenyatta's expectations; availability of financing for and actual results of Zenyatta's exploration and development activities; increases in costs; environmental compliance and changes in environmental and other local legislation and regulation; interest rate and exchange rate fluctuations; changes in economic and political conditions; Zenyatta's ability to retain and attract skilled staff |
| Zenyatta will be able to carry out anticipated business plans, including costs and timing for future exploration on its property interests | Zenyatta's exploration activities, and the costs associated therewith, will be consistent with Zenyatta's current expectations; debt and equity markets, exchange and interest rates and other applicable economic conditions are favourable to Zenyatta; Financing will be available for Zenyatta's exploration and development activities and the results thereof will be favourable; the Company will be able to retain and attract skilled staff; all applicable regulatory and governmental approvals for exploration projects and other operations will be received on a timely basis upon terms acceptable to Zenyatta; Zenyatta will not be adversely affected by market competition; the price of graphite and/or other applicable metals will be favourable to Zenyatta; no title disputes exist with respect to Zenyatta's properties | Graphite & graphene price volatility, changes in debt and equity markets; timing and availability of external financing on acceptable terms; the uncertainties involved in interpreting geological data and confirming title to acquired properties; the possibility that future exploration & processing results will not be consistent with Zenyatta's expectations; increases in costs; environmental compliance and changes in environmental and other local legislation and regulation; interest rate and exchange rate fluctuations; changes in economic and political conditions; Zenyatta may be unable to retain and attract skilled staff; receipt of applicable permits |
| Management's outlook regarding future trends | Financing will be available for Zenyatta's exploration and operating activities; global demand for the use and application of graphite will increase; the price of graphite and/or other applicable metals will be favourable to Zenyatta; | Graphite & graphene price volatility; changes in debt and equity markets; interest rate and exchange rate fluctuations; changes in economic and political conditions |

Statements relating to "reserves" or "resources" in this Presentation are deemed to be forward-looking statements, as they involve the implied assessment, based on certain estimates and assumptions that the resources and reserves described can be profitably produced in the future. Inherent in forward-looking statements are risks, uncertainties and other factors beyond Zenyatta's ability to predict or control. Readers are cautioned that the above chart does not contain an exhaustive list of the factors or assumptions that may affect the forward-looking statements, and that the assumptions underlying such statements may prove to be incorrect. Actual results and developments are likely to differ, and may differ materially, from those expressed or implied by the forward-looking statements contained in this Presentation. Forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause Zenyatta's actual results, performance or achievements to be materially different from any of its future results, performance or achievements expressed or implied by forward-looking statements. All forward-looking statements herein are qualified by this cautionary statement. Zenyatta disclaims any intention or obligation to withdraw, update or revise any forward-looking statements whether as a result of new information, future events or otherwise, except to the extent required by applicable laws. If the Zenyatta does update one or more forward-looking statements, no inference should be drawn that it will make additional updates with respect to those or other forward-looking statements, unless required by law. An additional cautionary note to readers - no part of this Zenyatta presentation is intended to be deemed as an offering of its securities to investors outside of Canada or is to be relied on by residents of the United States of America or other jurisdictions outside of Canada. Certain terms such as "resource", "measured resource", "indicated resource" and "inferred resource" are recognized under Canadian securities laws, however, the United States Securities and Exchange Commission may not recognize such terms. All maps, information, data, diagrams etc. obtained from internet are believed to be reasonably accurate but can not be guaranteed. This information does not represent a statistically large sample size. Furthermore, these positive results do not mean that Zenyatta can extract and process Albany graphite for graphite or graphene applications on an economic basis. Without a formal independent feasibility study, there is no assurance that the operation will be economic.

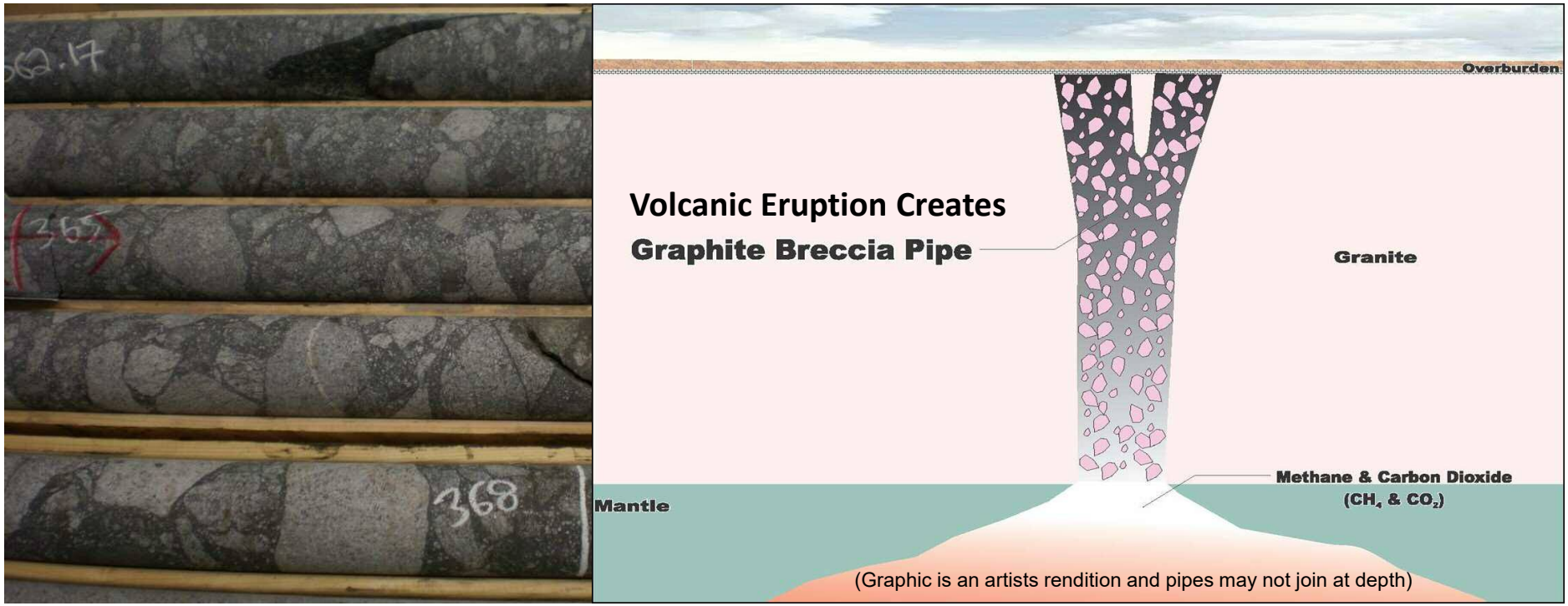
## Cautionary Note Regarding Mineral Reserve and Resource Estimates

See "Technical Report on the Albany Graphite Deposit, Northern Ontario, Canada", authored by David Ross, P.Geo., and Katharine M. Masun, P.Geo., of Roscoe Postle Associates Inc., who are independent "qualified persons" as defined by National Instrument 43-101. The Technical Report was issued on January 16, 2014 and may be found under the Company's profile on SEDAR at www.sedar.com and at www.zenyatta.ca. This presentation has been prepared in accordance with the requirements of Canadian securities laws in effect in Canada, which differ from the requirements of United States securities laws. Unless otherwise indicated, all mineral resource and reserve estimates included in this presentation have been prepared in accordance with NI 43-101 and the Canadian Institute of Mining and Metallurgy Classification System. NI 43-101 is a rule developed by the Canadian securities regulatory authorities that establishes standards for all public disclosure an issuer makes of scientific and technical information concerning mineral projects. Canadian standards, including NI 43-101, differ significantly from the requirements of the U.S. Securities and Exchange Commission (the "SEC"), and resource and reserve information contained herein may not be comparable to similar information disclosed by U.S. companies. In particular, and without limiting the generality of the foregoing, the term "resource" does not equate to the term "reserves." Under U.S. standards, mineralization may not be classified as a "reserve" unless the determination has been made that the mineralization could be economically and legally produced or extracted at the time the reserve determination is made. The SEC's disclosure standards normally do not permit the inclusion of information concerning "measured mineral resources," "indicated mineral resources," or "inferred mineral resources" or other descriptions of the amount of mineralization in mineral deposits that do not constitute "reserves" by U.S. standards in documents filed with the SEC. U.S. investors should also understand that "inferred mineral resources" have a great amount of uncertainty as to their existence and great uncertainty as to their economic and legal feasibility. It cannot be assumed that all or any part of an "inferred mineral resource" will ever be upgraded to a higher category. Mr. Peter Wood, P.Geo., VP Exploration for Zenyatta Ventures Ltd., is the "Qualified Person" under National Instrument 43-101 – Standards of Disclosure for Mineral Projects and has reviewed and approved the technical information contained in this presentation.

# The Opportunity

- ✓ In 2011, Zenyatta discovered a Large & Unique High-Purity, Crystalline GRAPHITE Deposit
- ✓ Zenyatta CARBON Easily Converts to High-Quality, High-Value GRAPHENE nano-material
- ✓ Very Strong, Rapidly-Growing Market Exists for GRAPHENE in NEW Applications related to clean technology
- ✓ Potential to create a HIGH-MARGIN HIGH-GROWTH new nano-material technology business with intellectual property incubator

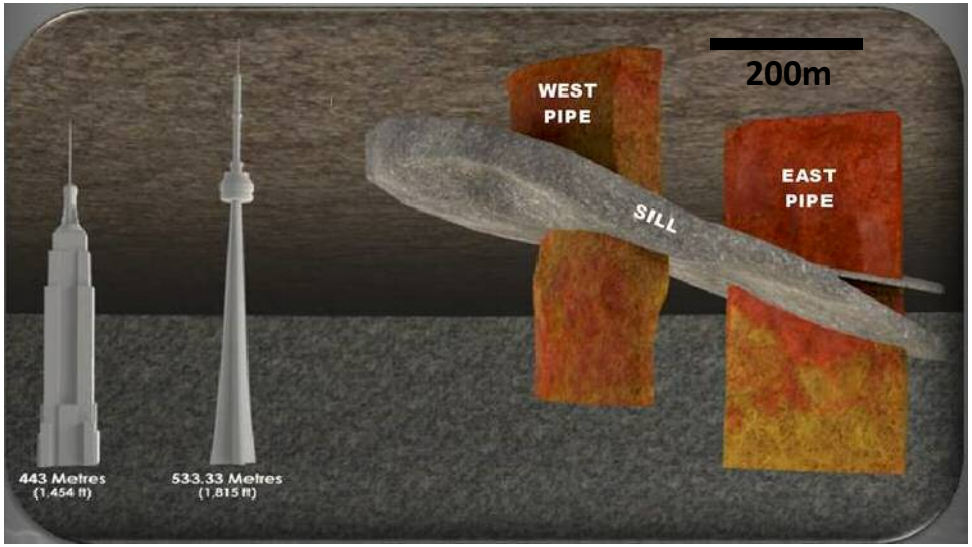
# Zenyatta's Albany Graphite Deposit
## A globally unique high-purity graphite resource




- **Eruptive process released high volumes of $CO_2$ and methane gas**
- **Flash precipitation process resulted in unusually fine graphite crystals, proving to be ideal for making mono-layer graphene**
- ***Model developed by Dr. Andrew Conly, Lakehead University***

# Zenyatta's Albany Graphite Deposit
## 2015 Mineral Resources

**A large graphite resource open to depth containing sufficient graphene precursor material to sustain production for decades!**




3D Deposit Model

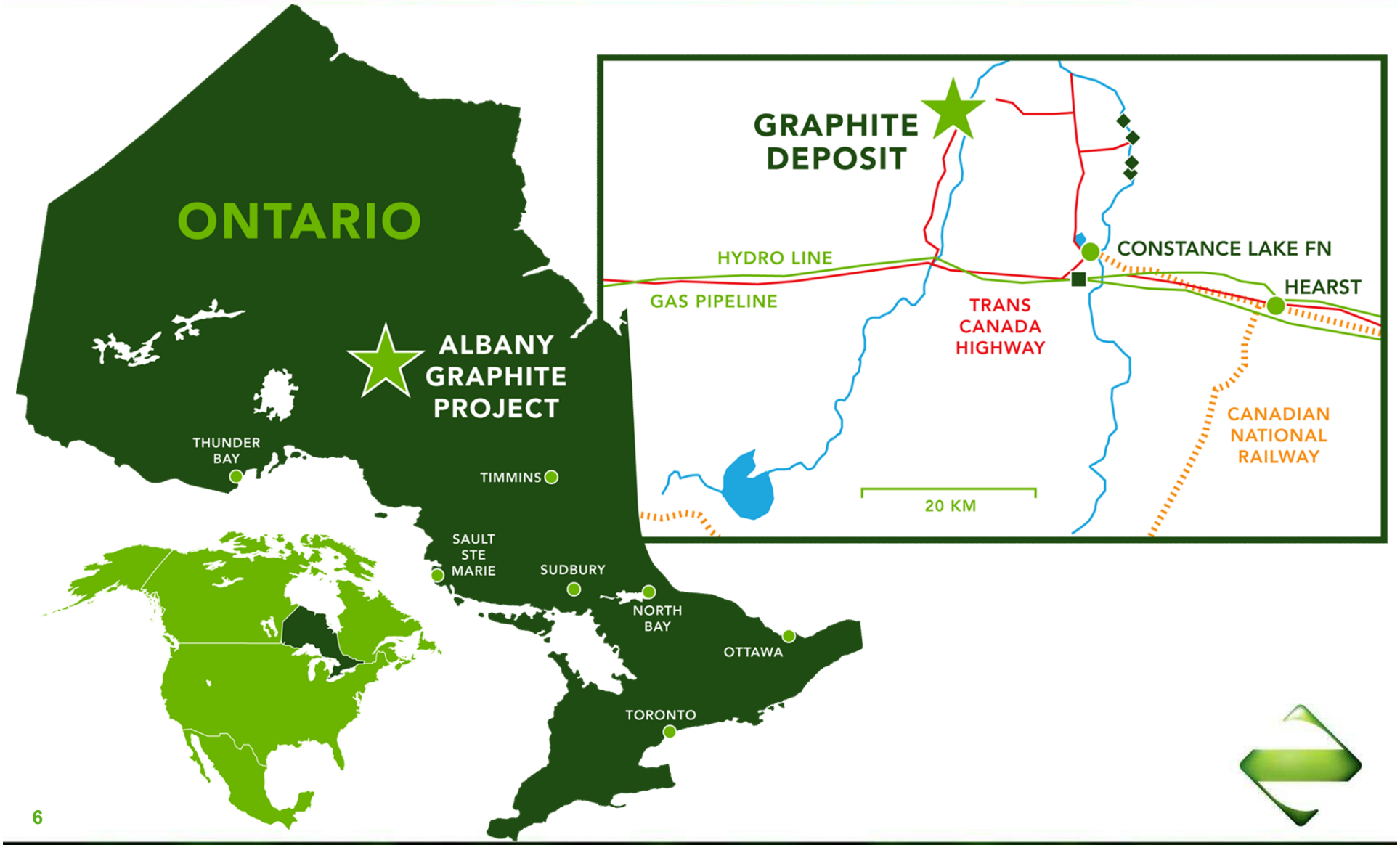
Deposit Open At Depth

| | Tonnes (Mt) | Grade (% Cg) | Contained Graphitic Carbon (t) |
|---|---|---|---|
| **Open Pit Mining** | | | |
| Indicated | 24.3 | 3.98 | 968,000 |
| Inferred | 5.4 | 2.58 | 138,000 |
| **Underground Mining** | | | |
| Indicated | – | – | – |
| Inferred | 11.5 | 2.67 | 307,000 |
| Total Indicated | 24.3 | 3.98 | 968,000 |
| Total inferred | 16.9 | 2.64 | 445,000 |

*per RPA 2015 PEA Report (This does not include mineralization below the sill)

RPA Inc. Mineral Resource Estimate – June 1, 2015 (see July 9, 2015 PEA report at www.zenyatta.ca)

# Zenyatta's Albany Graphite Deposit
## Location & Infrastructure



# Zenyatta's Albany Graphite Deposit
## First Nation Relationships

- The Albany Graphite deposit (discovered in 2011) occurs in the traditional territory of the Constance Lake First Nation (CLFN)
- July, 2011 - Initial Exploration Agreement signed
- 2013-15 CLFN members actively involved in exploration
- 2016-17 Periodic consultation as model evolves
- 2018 – New Board restarts dialogue with CLFN

- September, 2018 – Signed MOU toward creating a new business partnership for project development to ensure:
    - Support in completing environmental work and permitting
    - Shared economic objectives, expectations and benefits
    - Shared governance and decision-making

# Zenyatta's Albany Graphite Deposit
## Exploration and Discovery History

- 2009-2010 - Albany Property claim blocks staked in by Cliffs
- 2010 - Helicopter-borne magnetic and TEM survey flown
- December 2010 - Zenyatta IPO closes and begins trading on TSX-V
- February 2011 - Albany Project drilling commences
- September 2011 - "Discovery hole" (Z11-4F01) drilled on Block 4F
- 2012 - 8 additional holes drilled (Z12-4F02 to Z12-4F09)
- 2013 – Completed large loop TEM survey, 48 additional NQ holes and 6 HQ holes (Z13-4F10 to Z13-4F57 & Z13-4FM01 to Z13-4FM06)

# Zenyatta's Albany Graphite Deposit
## Recent Development History

- **2013 – Major resource and bulk sample drilling program completed (48 NQ resource holes & 6 HQ mini-bulk sample holes)**
- **December 2013 - Maiden resource estimate announced**
- **June 2015 – Initial PEA completed on high purity graphite model**
- **2016-17 – Academic research collaborations recognize exceptional graphene market potential for Albany Graphite**
- **May 2018 – Shareholders elect new Board which decides to focus future work on graphene market opportunity**

# Graphene - A Carbon Nanomaterial with Extraordinary Properties

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| Properties | Facts | Applications |
|---|---|---|
| Strength | 200 x stronger than steel | Composite materials - rubber, plastic, aluminum & concrete |
| Flexibility | Bend & stretch to 120% of original size | Coatings, additives & wearable technologies. |
| Thermal | 10 x conductivity of copper | Composites - concrete, coatings, polymers. |
| Electrical | 1000 x current capacity of copper | Longer battery life, semiconductors |
| Impermeable | Hydrogen atoms cannot penetrate structure | Filters, water purification, gas storage and hydrogen fuel cells |
| Electronic | Electrons move at near light speed | Improved speed & efficiency of computer chips |

**Graphene opens the door to the next generation of advanced composite materials that are stronger, ultra-light and more flexible with higher thermal / electrical conductivity.**

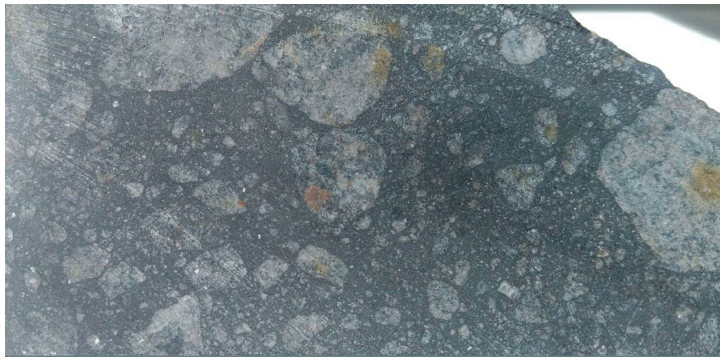
***Scientists at University of Manchester discovered graphene in 2004 for which they won 2010 Nobel Prize for Physics***



Source: The Graphene Handbook 2016 edition - www.graphene-info.com

# Our Advantage – Our Unique Source of Carbon

- **Albany's unique igneous origin, resulting in very fine grained graphite crystallites, yields an ideal graphite product for conversion to graphene and graphene oxide**



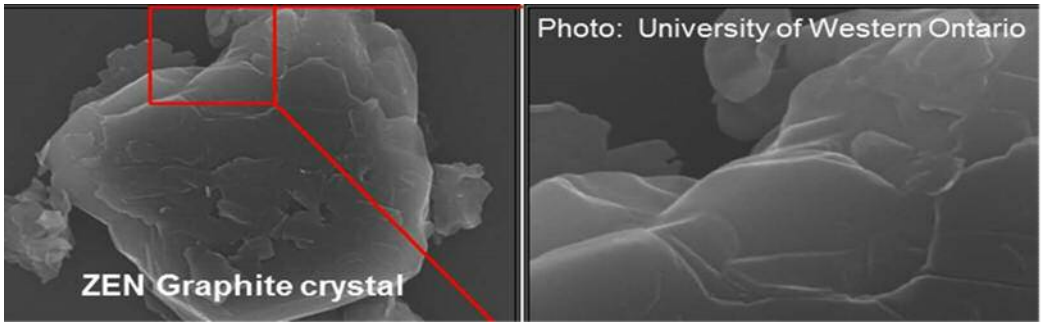
- **Allows for complete vertical integration of the business from recovering high purity Albany Graphite to downstream graphene and graphene oxide end products and applications**

- **Many opportunities to participate in development of new graphene technology and the resulting intellectual property**

- **Current end uses include composites (concrete, rubber and plastics), energy storage and environmental applications but many more are under development**

# Our Strength – Ease of Conversion to Graphene

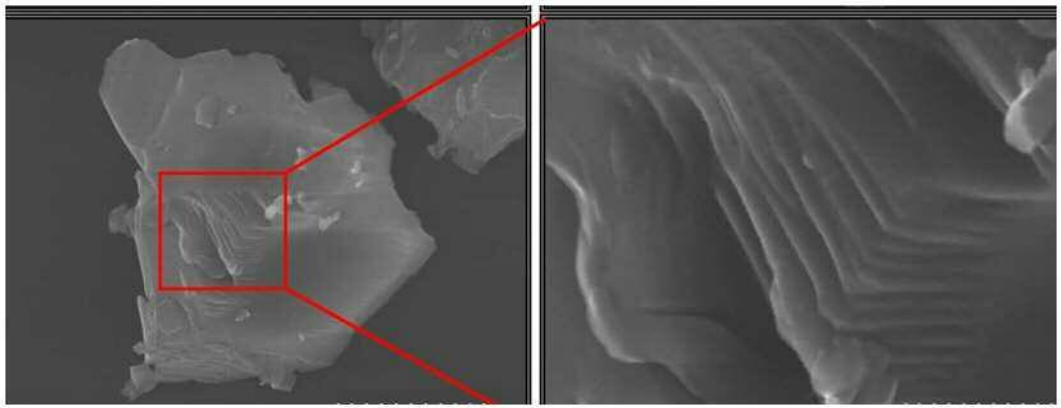
**High-Purity Carbon** → **Mechanical** (sonication) → **Graphene** (Israel, Japan, UK, USA, Canada)
- Easily dispersible in water




**Dr. Arao, Assistant Professor in the Department of Chemical Engineering at Tokyo Tech, stated "Zenyatta's high-purity graphite material was tested by our scientific team on mechanical conversion to graphene and discovered it converted much easier and with higher yields of graphene than our reference material. We have tested many types of natural graphite but found Zenyatta's graphite material to have better exfoliation performance and produce better graphene particles than the reference material."**

# Our Strength – Ideal for Graphene Oxide Production

**High-Purity Carbon** → **Chemical** (modified hummers method) → **Graphene Oxide** (Canada)
- Excellent yields, Powder or dispersion



**Dr. Chen of the University of Guelph commented, "We found Zenyatta's high-purity Albany graphite to be an ideal material for the production of graphene oxide and subsequent application development. Interestingly, it appears that the distinct particle size and morphology of Albany graphite are important factors in the ease of production of high-quality graphene and GO. These properties are likely the result of the deposit's unique geological genesis first identified by Lakehead's geology professor Dr. Andrew Conly in 2012."**

# Graphene Applications

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## Technology

**Strong market demand for high-quality graphene, especially for CLEANTECH uses:**

- **Graphene – Additive for enhancing concrete, rubber & plastic composites.**
- **Graphene-Oxide ('GO') – New advanced next-generation batteries for grid storage, transportation & electronics.**

https://mms.businesswire.com/media/20180705005295/en/666614/5/Bridge_view_1.jpg

# Graphene Infused Concrete

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## Ben-Gurion University in Israel used Zenyatta Graphene & Graphene Oxide material in tests to show:

- **Faster curing time - from 28 to 8 days** (accelerates the hydration process; large surface area of graphene reacts with cement paste)
- **Use 25% less cement therefore reduce $CO_2$ by same amount** (present environmental issue; 1 tonne of cement production = 1 tonne of $CO_2$)
- **Enhanced compressive strength by 34%** and **tensile strength by 62%** (elastic properties; 130 GPa versus steel of 0.5 GPa)

Preliminary from bench-scale testing for cement paste – additional larger scale testing will be required to yield data for mortar and concrete

# Silicon-Graphene Battery Technology

- Testing has shown Zenyatta's graphene oxide combined with silicon performs well as an anode material in this new advanced battery technology
- Graphene can make batteries that are potentially lighter, more durable, safer, with higher energy storage capacity and shorter re-charging times
- Material was tested by an innovative materials company in the United States with encouraging results - project waiting on more material for the next level of testing

# Other Potential Market Opportunities

- Graphene in composites for vehicle manufacturing
- Graphene or Graphene Oxide as additive in jet fuel, bio-diesel
- Graphene in ceramics for military applications
- IC-rGO in fuel cell applications
- Graphene in coating applications
- Graphene in environmental monitoring
- Graphene in wastewater treatment
- Graphene in solar cells
- Graphene in aerospace application
- Graphene in ultrathin films and lubricants
- Quantum Dots for medical imaging applications

# $$$$$ How much is our graphene worth?

- Graphene, being a relatively new nano-material, has no well-established market or a quoted “market price”
- Albany Graphite converts easily into 1-4 layer Graphene, the higher value segment of the market
- Like most specialty materials, prices vary considerably depending on product specifications and quality. Pricing in Dollars per gram has been offered

# Metallurgical Process Development

- **Since the 2015 PEA, process optimization work has focused increasing graphite recoveries and simplifying the purification process. Recent test work confirmed:**
  - **improved flotation recoveries of 90% compared to 75.4% in 2015**
  - **reduced costs due to lower reagent and energy consumption**

- **Purified concentrate yielded minimum purity of 99.8% Cg - suitable as a high-end graphene precursor material**

# Zenyatta's Albany Graphite Deposit
## Project Development Plans for 2018-2019

- **September-October 2018 - Complete purification metallurgical studies at SGS and commence purification plant design and engineering.**
  - **Consider underground mining scenarios to reduce footprint**
- **Fall 2018 - Initiate environmental baseline studies**
- **December 2018 – Prepare winter road for bulk sample program**
- **January 2019 – Commence 990 tonne bulk sample drilling program for graphene product market development**
- **March 2019 – Complete updated Preliminary Economic Assessment**
- **Mill and purify bulk sample in batches to produce 99.8% concentrate for feedstock of graphene or graphene oxide material**
- **Establish initial graphene demonstration production facility**

# 2019 Updated PEA

- **2015 PEA based on open pit, large scale High Purity Graphite model had attractive economics selling graphite at $7,500 per tonne.**
  - **CAPEX estimated at $410 million**
  - **After tax NPV of $590M at 8% Discount rate**
  - **After tax IRR of 24% and 4 year payback period**

- **2019 Updated PEA based on the Graphene market opportunity can be smaller scale but have even better economics due to:**
  - **Higher pricing for Graphene and graphene oxide**
  - **Increased recoveries from 75% to 90%**
  - **Simplified, lower cost process flowsheet**

- **The Graphene market offers a *high-margin, high-growth* technology business opportunity for Zenyatta**

# 2019 Bulk Sampling Program



- Planning to recover a 990 tonne bulk sample by large diameter core drilling
- Could yield up to 40 tonnes of 99.8% Graphite for conversion to Graphene & Graphene Oxide

- Graphene products from the bulk sample may be saleable at attractive current prices of Graphene
- Program planned for Jan.-Feb., 2019 to take advantage of winter conditions for ease of access
- Permitting process underway with support of CLFN

# Zenyatta's Albany Graphite Deposit
## Environmental Responsibility

- Zenyatta is committed to developing the Albany Graphite Project to high standards of environmental and social responsibility in consultation with its local community partners
- Zenyatta is also committed to minimizing the environmental footprint of the project and impacts on the watershed and wildlife
- Albany mineralization contains no toxic elements and has a very low content of iron sulphides reducing the risk of significant acid rock drainage
- The current graphene development model contemplates under ground mine development with a greatly reduced environmental footprint compared to the PEA open pit model
- Environmental baseline studies will be initiated in co-operation with CLFN in the fall of 2018

# Graphene Academic Research Partners

## Canada

- University of Guelph:  Dr. Chen and The Chen Group
- University of Toronto:  Dr. Kumacheva, Dr. Panesar, Dr. Filleter
- University of Western Ontario:  Dr. Fanchini, Dr. Kuboki
- University of British Columbia: Dr. Bichler, Dr. Kheirkhah
- University of Waterloo:  Dr. Pope
- Simon Fraser University:  Dr. Adachi

## International

- Ben Gurion University, Israel: Dr. Oren Regev and Dr. Alva Peled
- Tokyo Institute of Technology, Japan: Dr. Arao
- University of Sussex , UK:  Dr. Alan Dalton

# Zenyatta's Albany Graphite: A Graphene Market Disruptor

- Zenyatta has received interest from multiple graphene production companies to provide Albany Graphite as a precursor material for their graphene production

- Very significant emerging market in terms of both size and value with enormous growth potential

- Potential for off-take agreements and partnerships with both end-users and product developers

- Due to Zenyatta's potential economies of scale and the unique inherent qualities of Albany Graphite, the company can be a disruptor in the graphene space

# ZEN Team

## Management & Board

**Dr. Francis Dubé** OD, BSc **Co-CEO, Chairman**

**Donald Bubar** MSc, P.Geo. **Co-CEO, Director**

**Brian Bosse** CFA **CFO, Director**

**Peter Wood** MSc, P.Eng., P.Geo. **President & COO**

**James Jordan** BSc, P.Eng. **Project Manager**

**Greg Fenton** CFA **Director**

**Frank Klees** **Director**

**Eric Wallman** CPA, CA **Director**

## Graphene Product Development Team

**Dr. Colin van der Kuur** BSc, Mdiv, DMin

**Philippe Chataigneau**

**Monique Manaigre**

## Consultants & Advisors

**Dr. Bharat Chahar** PhD, P.E.

**Don Hains** BSc, MBA, P.Geo.

**Tadashi Yamashita** MSc

**Dr. Andrew Conly** PhD

# Capital Structure

| | |
|---|---|
| **Shares Issued** | **64,909,054** (as at September 11, 2018) |
| **Warrants** | **982,567 @ $0.83 (expiry 11 Jun 2019)** |
| **Warrants** | **845,000 @ $1.65 (expiry 11 Aug 2019)** |
| **Warrants** | **368,157 @ $1.00 (expiry 17 Dec 2019)** |
| **Warrants** | **655,848 @ $0.80 (expiry 22 Jun 2020)** |
| **Options** | **4,440,000 @ avg. weighted price $0.69** |
| **Fully Diluted** | **72,200,626** |

**Listing: TSXV: ZEN**

**US: OTCQX: ZENYF**

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**For more information please contact:**

**Dr. Francis Dube**

**Co-CEO, Chairman**

**Tel: +1 (289) 821-2820**

**fdube@zenyatta.ca**


**TSX.V ZEN**

**OTCQX: ZENYF**

**www.zenyatta.ca**

# Zenyatta's Albany Graphite Deposit
## East and West Pipe Differences



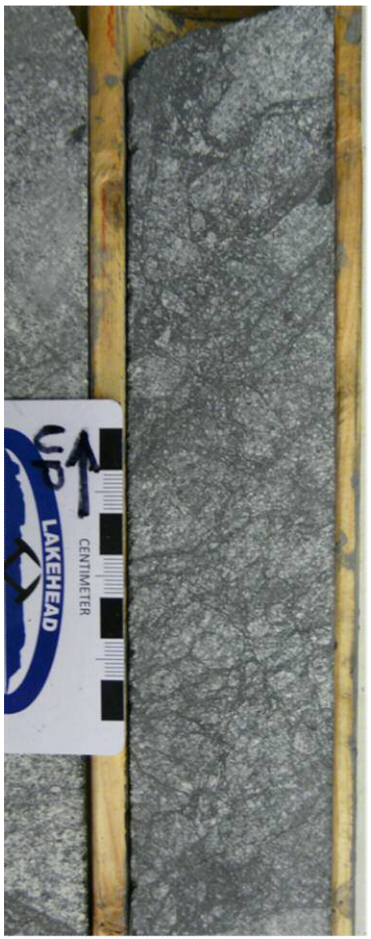
(Images - Conly, 2014)

## West Pipe

**Typically coarse breccia texture of cm size angular to rounded fragments. Average grade of Indicated Resource 2.76% Cg*.**

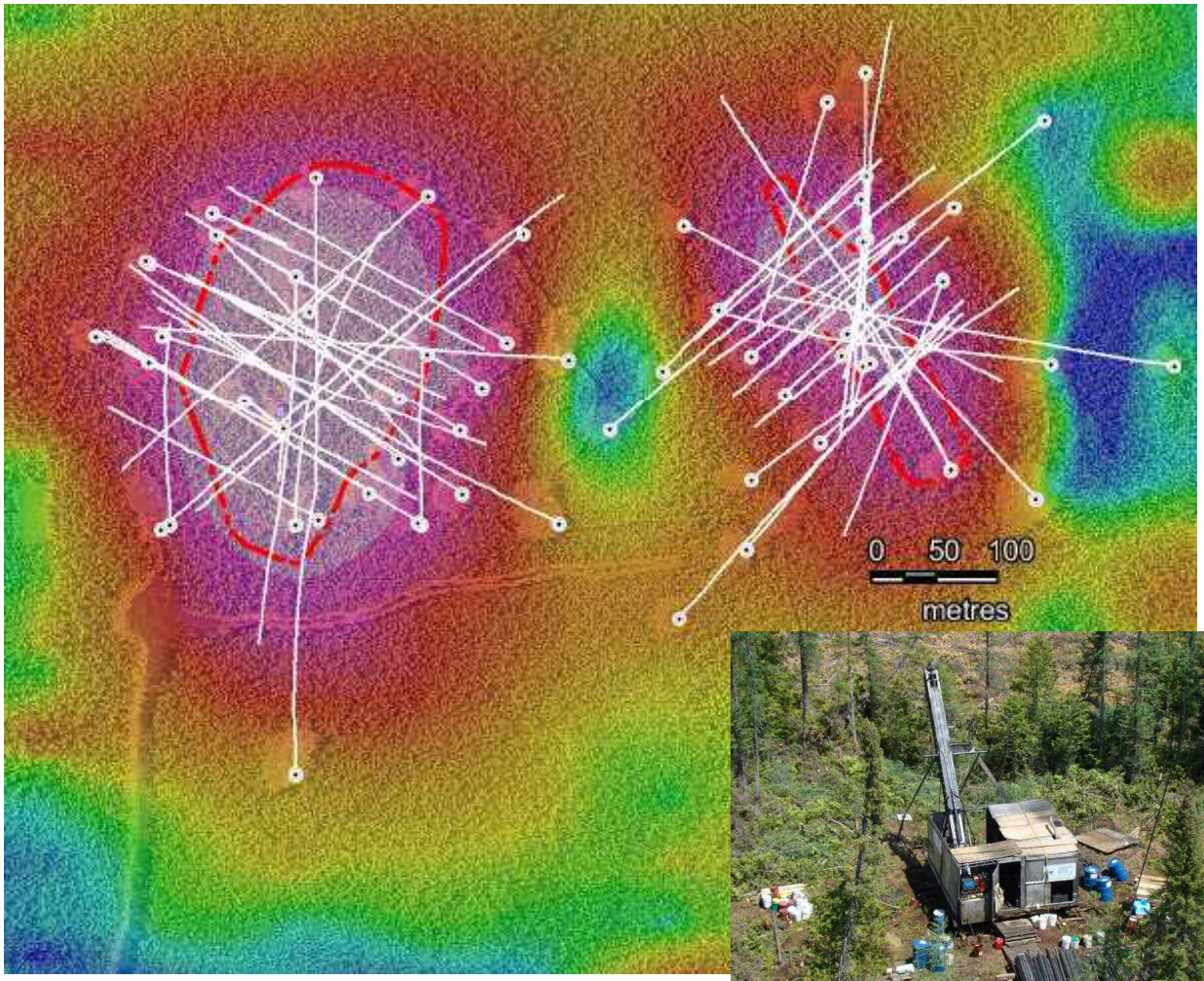
## East Pipe

**Higher grade averaging 5.60% Cg* in Indicated Resource. Finer-grained breccia with overprinting of fragments.**




(*RPA, 2014)

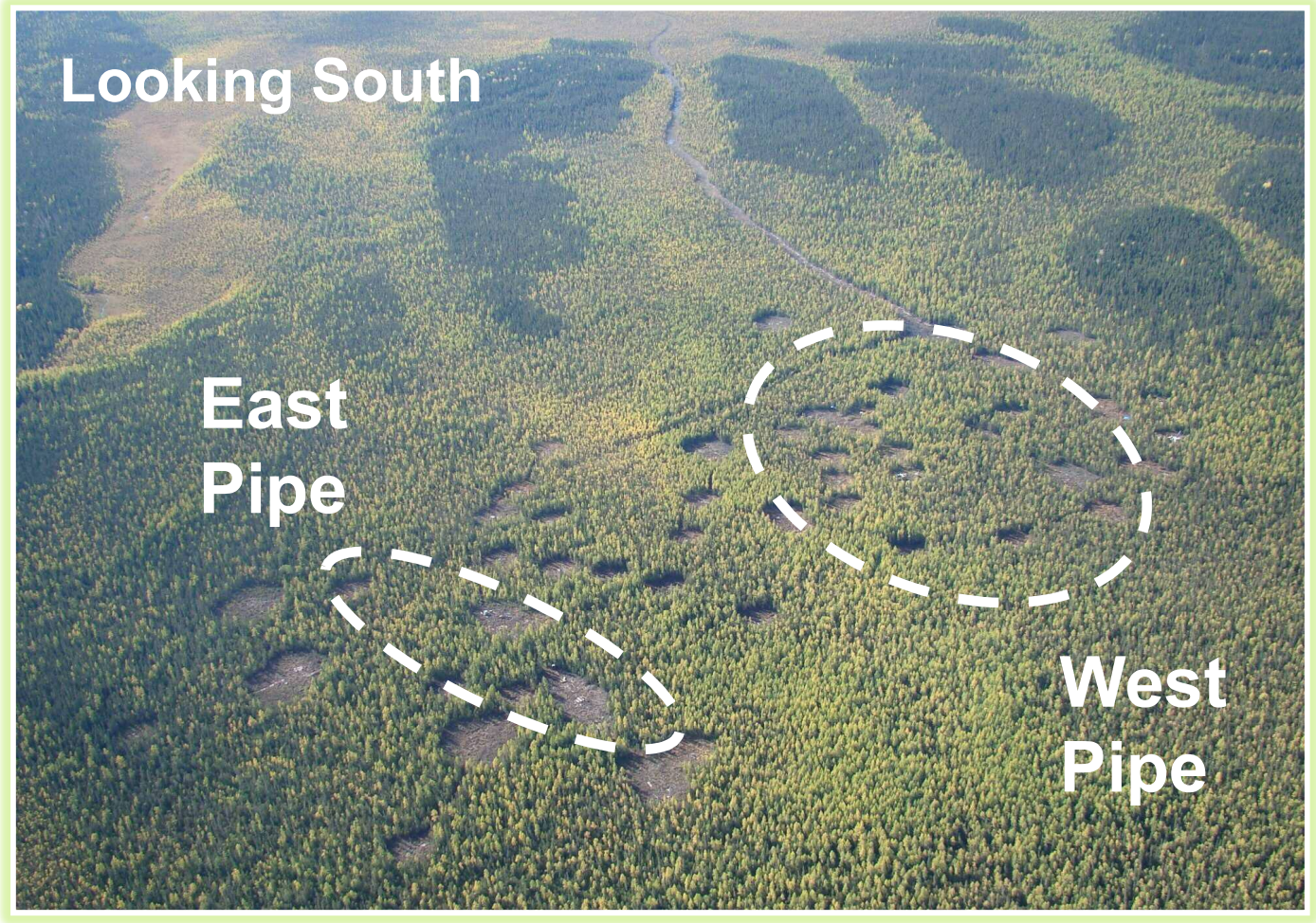
# Zenyatta's Albany Graphite Deposit
## Resource Drilling



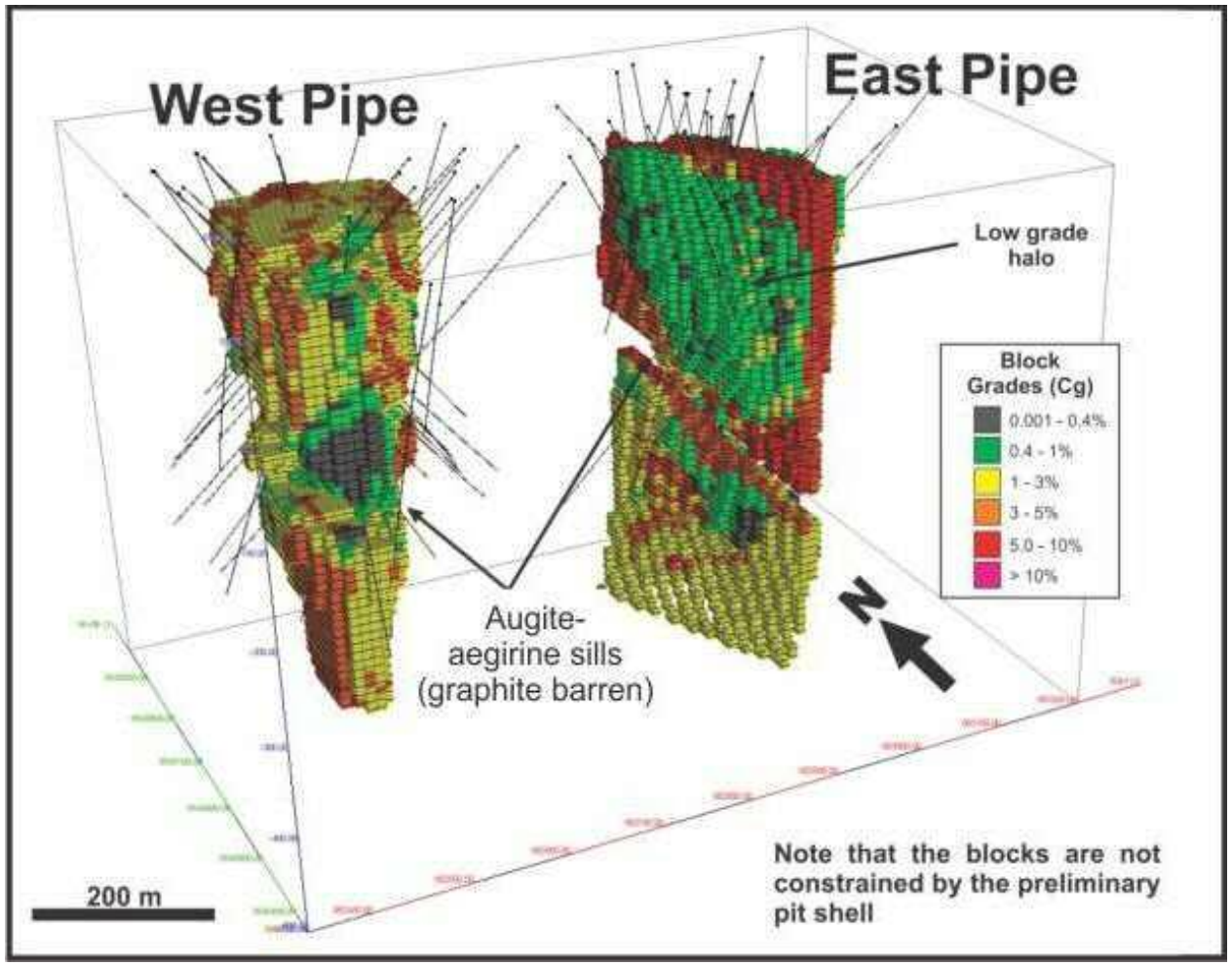

(Surface TEM image by Crone, 2013)

- Drilled 57 NQ holes for a total of over 22,500m (48 in 2013)
- Over 22,000 assays including 4 CRMs
- 6 HQ metallurgy holes for a total of ~3,000m

# Zenyatta's Albany Graphite Deposit
## Aerial View of Project Area



# Zenyatta's Albany Graphite Deposit
## Grade Distribution




(RPA, 2015)