

# Zenyatta receives positive results from Ben Gurion University testing of Albany graphite

**Zenyatta Ventures Ltd.** {TSX V: ZEN} have received a positive review of a sample of their Albany property graphite undertaken by the Ben Gurion University of the Negev, based in Israel.

In particular one attribute that favours a specific application, with ore news on that subject to come int he future.

THUNDER BAY, ON— **Zenyatta Ventures Ltd.** {TSX V:: ZEN} is pleased to announce positive results related to the characteristics of the Albany graphite from testing at Ben-Gurion University of the Negev (“BGU”), Israel.

BGU has identified properties of Zenyatta’s Albany graphite that show positive attributes for use in multiple graphene applications.

Dr. Oren Regev, Associate Professor in the Department of Chemical Engineering at BGU, stated, “Zenyatta’s purified graphite material was tested by our R&D team on dispersion and application for composite property enhancement on drug delivery and hydrogen storage devices. BGU regularly uses various types of commercially available natural flake graphite but found Albany graphite to exfoliate under sonication much

*easier and with higher yields of graphene nano-particles than any other natural graphite types that we have tried. Sonication is a highly effective process using sound energy to agitate the graphene layers for separation. The Zenyatta graphite appears to be composed of smaller and cleaner particles with a narrower particle size distribution. We believe that this is a high value special material with unique characteristics that could make Albany graphite the preferred material for conversion to valuable graphene applications.”*

BGU is a research leader in alternative energy, robotics and nano-technology while playing a critical role in transforming Israel's high-tech growth. Specifically, the BGU research group focuses on carbon nano tubes and graphene product derivatives for new applications.

**The Advanced Technologies Park (ATP), adjacent to BGU is home to many multi-national high-tech companies, such as EMC, Oracle, Hewlett Packard, and Deutsche Telekom, which are leveraging the R&D expertise of BGU mainly through B. G. Negev Technologies and Applications Ltd. (“BGN”). BGN is the technology transfer and commercialization company for development of university technologies with industry partners.**

BGU's expertise in nanoscience is advancing new materials to convert light and heat into electrical energy, to produce lightweight cars and planes of unprecedented strength. Researchers are developing incredibly small transistors to power computers, membranes for desalinating water, graphene surfaces loaded with specific drugs for delivery to targeted diseased cells, graphene reinforcement in cement-based materials and hydrogen storage device as a key enabling technology for the advancement of hydrogen and fuel cell

technologies.

Dr. Regev further stated, “*Thermogravimetric Analysis (‘TGA’) by BGU on Zenyatta material found it to be completely different from any other natural graphite flake products studied so far in our lab. As a matter of fact, it is the same order of magnitude as commercially available Graphene Nano Platelets (GnP) derived from more expensive sources. These ideal properties probably stem from the unique geological process by which the Albany graphite deposit was formed.*”

***Zenyatta and BGU (through BGN) have identified funding support opportunities and are presently in discussions with governments and private corporations to secure these arrangements for scaling up our collaboration.***

Additionally, BGN is in discussions with a commercial partner in Israel that will collaborate with them on the research and development of graphene products from Albany graphite in a specific application that will be discussed in future news releases.

**BGN believes the project will also identify other methods and uses for commercially viable graphene products from Zenyatta’s Albany graphite deposit.**

Dr. Bharat Chahar, VP of Market Development for Zenyatta stated, “*The Company is excited with these results and is very pleased to learn that BGU has expressed a strong interest in the potential of our material. It provides further evidence of*

*the suitability of this unique material for many applications. Zenyatta is convinced of the importance of this new and superior (graphene) material and recognizes the \$billions spent globally on R&D by large corporations and academics. It is important for Zenyatta to play an active role in R&D related to graphene research but at this point it will supply limited resources and Albany graphite samples to research facilities and receive results in return. We still believe that graphene requires technological development before the world sees large scale commercial viability but are delighted to play a prominent part in the advancement of a new innovative material.”*

Graphene is a single sheet of pure graphite that is one atom thick, flexible, transparent, stronger than diamonds or steel and is highly conductive. This one material could prove more revolutionary than plastic or the silicon chip. Experts believe that graphene will enable many innovative applications, including low-cost solar cells, super computers and rapid charge batteries. So far, one obstacle to its widespread use is the high manufacturing cost for high-quality graphene. A lower-cost approach is to use high purity natural graphite as the starting point.

Zenyatta continues to develop its unique Albany graphite deposit in Ontario, Canada. The Company's highly crystalline graphite deposit is situated 30 km north of the Trans-Canada Highway, power line and natural gas pipeline near the communities of Constance Lake First Nation and Hearst. A rail line is located 70 km away with an all-weather road approximately 10 km from the graphite deposit. The world trend is to develop products for technological applications that need extraordinary performance using ultra-high purity graphite powder at an affordable cost. High purity and highly

crystalline graphite material is gaining prominence in the clean-tech sector at a time when Zenyatta discovered an extremely rare (one of a kind – hydrothermal) graphite deposit. Albany graphite can be upgraded with very good crystallinity without the use of aggressive acids (hydrofluoric) or high temperature thermal treatment therefore having an environmental advantage over other types of upgraded high purity graphite material.

Zenyatta embarked on a market development program over a year ago to initiate validation of Albany graphite in high purity graphite applications. Since the start of this program, the Company has had detailed conversations with more than 35 graphite end-users, academic institutions and third party testing facilities in Europe, North America and Asia under confidentiality agreements. Many of these organizations were provided a small amount of purified graphite material produced at SGS Canada Inc. ('SGS'). This testing does not represent a statistically large sample size. Furthermore, these positive results do not mean that Zenyatta can extract and process Albany graphite for high purity graphite applications on an economic basis. Without a formal independent feasibility study, there is no assurance that the operation will be economic.

Dr. Bharat Chahar, P.E., VP Market Development for Zenyatta, is a Qualified Person for the purposes of National Instrument 43-101 and has reviewed, prepared and supervised the preparation of the technical information in this news release. To find out more on Zenyatta Ventures Ltd. or graphene and its end-use markets.

## Contact

Website: [www.zenyatta.ca](http://www.zenyatta.ca)

Email [info@zenyatta.ca](mailto:info@zenyatta.ca)

Tel. +1 807 346 1660.

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Zenyatta Ventures Ltd.

[www.zenyatta.ca](http://www.zenyatta.ca)

[info@zenyatta.ca](mailto:info@zenyatta.ca)

Tel. 807-346-1660

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