Tokyo Tech Identifies Key Reasons for the Ease & High-Yield Conversion of Zenyatta's Albany Graphite to Graphene

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THUNDER BAY, Oct. 19, 2017 - Zenyatta Ventures Ltd. ("Zenyatta" or "Company") (TSXV:ZEN) announces testing results from the Tokyo Institute of Technology ('Tokyo Tech') in Japan have identified key reasons for the ease and high-yield conversion of Albany graphite to graphene.

A photo accompanying this announcement is available at http://www.globenewswire.com/NewsRoom/AttachmentNg/7f9de6b6-c57e-48bf-9b66-6f8dd67908eb

One of the greatest challenges for commercializing graphene in various applications, since its discovery at the University of Manchester, is how to produce high-quality material, on a large scale at low cost, in a consistent manner.

Dr. Yoshihiko 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. We believe that this is an extraordinary, unique material and we would like to carry out further collaborative work with Zenyatta on graphene applications."

Research by Dr. Arao and Professor Dr. Masatoshi Kubouchi at Tokyo Tech has shown the following significant test results:

1. D-Spacing measurements of Zenyatta carbon material is relatively larger compared to three (3) other commercially available high purity graphite samples. D-spacing is unique to all crystals and described as the distance between two (graphene) atomic layers or interlayer spacing. The Albany graphite also exhibited some turbostratic structure or natural irregular stacking.

Importantly, these factors have contributed to the ease of conversion and greater yield of high quality graphene from Albany graphite. This can be attributed to the unusual geologic mode of formation (igneous hydrothermal process) which accounts for the superior purity, crystallinity and overall quality of the graphite found in this unique deposit.

2. Graphene exfoliated from Albany graphite showed the highest aspect ratio with an average thickness of 1.43 nanometres or 1-4 graphene layers. Also, the optical absorbance of the Zenyatta graphene dispersion was 2-10 times better than the other 3 tested reference samples which demonstrate concentrated graphene dispersion can be obtained.

This further confirms the reason for success on graphene development initiatives, especially in composites, from other collaborators in UK, Canada, USA and Israel. We have established that Zenyatta's graphite converts (exfoliates) easily to graphene, producing mono-layer to tri-layer material, has excellent dispersion properties and is highly suitable for many graphene and graphene-oxide applications.

Aubrey Eveleigh, President and CEO for Zenyatta, stated, "The obstacle to widespread use of graphene since discovery is the high manufacturing cost. A lower-cost and disruptive approach is to use high-purity natural graphite, like Albany material, as the starting point to get easier and higher yields of graphene in an environmentally friendly manner. We are eager to start another phase of testing at a world class facility like Tokyo Tech using our high-purity graphite material for various innovative graphene applications."

Tokyo Tech is the top national university for science and technology in Japan with a history spanning more than 130 years. It is the largest institution for higher education dedicated to science and technology, and is considered to be one of the most prestigious universities in Japan and the world. Tokyo Tech continues to develop global leaders in the fields of science and technology, and contributes to the betterment of society through its research, focusing on solutions to global issues. The Institute's long-term goal is to become the world's leading science and technology university. Characterization of Zenyatta's natural graphite was

completed at Tokyo Tech using a conversion of mechanical, liquid phase exfoliation, followed by testing methods comprised of SEM observation, X-ray diffraction, Raman spectroscopy, atomic force microscopy (AFM) and optical absorbance analysis.

Zenyatta Ventures Ltd. continues to develop its large and 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 30 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 and graphene at an affordable cost. High-purity and highly crystalline carbon material is gaining prominence in the cleantech sector at a time when Zenyatta discovered an extremely rare igneous hosted, fluid derived graphite deposit. Albany graphite can be upgraded with the optimum particle size 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.

Aubrey Eveleigh, P.Geo., President and CEO 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, please visit the website www.zenyatta.ca or contact the Company at info@zenyatta.ca or Tel. 807-346-1660.

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