TORONTO, ONTARIO--(Marketwired - Jul 23, 2015) - Energizer Resources Inc. (TSX:EGZ)(OTCQX:ENZR)(WKN:A1CXW3) ("Energizer" or the "Company") is pleased to announce that UK-based Haydale Graphene Industries PLC ("Haydale") (AIM:HAYD), a global leader in the processing and application of graphene nanomaterials, has verified that the Company's Molo flake graphite has passed initial testing to be a viable source of graphene nanoplatelets for development of graphene inks for printed and flexible electronics.

Using Haydale's patent-pending plasma treatment process and ink formulation expertise, Molo flake graphite concentrate was successfully functionalized into graphene nanoplatelets, which were then used to successfully produce a prototype graphene ink.

Haydale's CEO Ray Gibbs, stated, "The purpose of these initial tests was to ascertain if Energizer's flake graphite concentrate could successfully create a graphene printing ink using our plasma functionalization technology. Initial test results were very positive, showing the Molo concentrate had improved bulk density, particle size distribution, surface area and enhanced sheet resistivity when compared to conventional carbon inks. The next stage of testing is to conduct performance testing but these initial tests would indicate an enhanced product. This is promising material".

The testing procedure involved processing flake concentrate produced from Energizer's pilot plant, which was then plasma treated and analyzed in accordance with Haydale standard operating procedures and conditions. Testing also revealed that the best performance results were achieved using Molo's smallest flake (-200 mesh), which is significant because -200 mesh material is the least saleable flake size. As per Company's February 5, 2015 news release titled, *Energizer Resources Inc. Announces Positive Results of its Feasibility Study,* only 21.1% of the Molo flake distribution is classified as -200 mesh (small flake), at a purity of 97.5% carbon that can be achieved with simple flotation alone. 78.9% of the Molo flake distribution is classified as medium, large and jumbo flake (+200 mesh to +48 mesh), with 46.4% specifically being classified as the premium large and jumbo flake (+80, +65 and +48 mesh).

The resulting data was evaluated against a myriad of metrics, including particle size distribution, tapped bulk density and titration (acid measurement).

Table 1 shows the resulting analysis of the plasma-functionalized powders, which passed 100% of Haydale's standard analysis procedures.

Table 1. Powder Data Summary

Energizer concentrate	PSD			Tapped bulk density	Acid Number
	D10 (µm)	D50 (µm)	D90 (µm)	(kg/m^3)	(mg/KOH)
Raw	20.63	54.66	107.91	417	0.71
Processed	20.19	60.97	118.21	366	3.44

The ink was screen printed in accordance to Haydale's ISO 9001 quality control protocols. The ink was analyzed using a 4-point probe to measure electrical conductivity. Solids content and rheology were also measured. Table 2 shows typical improvements in normalized sheet resistivity of the Energizer graphene ink. These results exceeded those of standard carbon-only based inks available in the market today.

Table 2. Graphene Ink Data Summary

Energizer Ink	Solids	Viscosity	Sheet Resistivity (normalized to 25 microns)	
	%	Pa.s	Ohm/sq. (avg.)	Ohm/sq. (standard deviation)
INKENRG01	39.3	2.9-3.8	27.6	4.6

Conductive Graphene Inks

Graphene is a single-atom-thick sheet of flake graphite and is the lightest, thinnest and strongest material ever discovered in addition to being chemically stable, flexible and extremely conductive.

One of the first commercial products manufactured from graphene is conductive inks. A conductive ink results in a printed object that conducts electricity. These inks can be used to print circuits and other electronic components onto cheap, flexible materials such as paper, plastic and fabrics, for wearable electronics.

One example where printable graphene inks are now ready for commercial use is in low-cost radio-frequency identification (RFID) tags and wireless sensors, where the antennas can be flexible, environmentally friendly and cheaply mass-produced.

ABOUT HAYDALE GRAPHENE INDUSTRIES

Haydale Graphene Industries PLC, based in South Wales UK, is a global leader in the facilitation and application of graphenes

and other nanomaterials in fields such as inks, sensors, energy storage, photovoltaics, composites, paints and coatings. Leveraging their expertise in identifying and enabling graphene-based technologies, Haydale works with raw material producers to add value to their base products and assist in tailoring graphene-based applications to the end user.

Haydale has developed a patent pending proprietary scalable plasma process to functionalize graphene and other nanomaterials. This enabling technology provides Haydale with a rapid and highly cost efficient method of supplying tailored solutions to enhance applications for both raw material suppliers and product manufacturers.

Haydale's functionalization technology is low-energy and environmentally friendly, using a low pressure plasma process that treats both organic mined fine powder and other synthetically produced nanomaterial powders producing high quality few-layered graphenes and graphene nanoplatelets. The process can functionalize with a range of chemical groups, where the amount of chemicals can be tailored to the customer needs.

For more information on Haydale, please visit www.haydale.com.

ABOUT ENERGIZER RESOURCES

Energizer Resources is a mineral exploration and mine development company based in Toronto, Canada, that is developing its 100%-owned, feasibility-stage flagship Molo Graphite Project in southern Madagascar.

Qualified Person

Craig Scherba, P.Geo., President and COO of Energizer is the qualified person who reviewed and approved the technical information provided in this release.

Safe Harbour: This press release contains statements that may constitute "forward-looking statements" within the meaning of applicable Canadian and United States securities legislation. These statements relate to the uses of graphene, whether the Molo flake graphite is a viable source of graphene and the next stages of graphene testing, Readers are cautioned not to place undue reliance on such forward-looking statements. Forward-looking statements are based on current expectations, estimates and assumptions that involve a number of risks, which could cause actual results to vary and in some instances to differ materially from those anticipated by the Company and described in the forward-looking statements contained in this press release. No assurance can be given that the Molo flake graphite is a viable source of graphene or the that future test results will be positive or that any of the events anticipated by the forward-looking statements will transpire or occur or, if any of them do so, what benefits the Company will derive there from. The forward-looking statements contained in this news release are made as at the date of this news release and the Company does not undertake any obligation to update publicly or to revise any of the forward-looking statements, whether as a result of new information, future events or otherwise, except as may be required by applicable securities laws.

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