



PyroGenesis Announces Significant Commercial Milestones with the Gen2 PUREVAP™ System for HPQ Silicon Resources Inc.

MONTREAL, Quebec (GlobeNewswire – April 19th, 2018) - PyroGenesis Canada Inc. (<http://pyrogenesis.com>) (TSX-V: PYR), (the "Company", the "Corporation" or "PyroGenesis") a Company that designs, develops and manufactures plasma waste-to-energy systems and plasma torch systems, is pleased to announce significant commercial milestones with the GEN2 PUREVAP™ system for HPQ Silicon Resources Inc ("HPQ").

The Company confirms that improvements and design modifications with GEN2 are generating significantly better results in terms of yield (total mass of Si Produced during one test) and production yield (conversion efficiency of quartz into silicon metal). The results to date have been summarized in a progress report which has recently been submitted to HPQ.

These recent results are positive indicators of the commercial scalability of the PUREVAP™ process. Significantly increasing the yield, and the production yield, with the GEN2 PUREVAP™ are both examples of such indicators. Of note, the results reported exceed not only those obtained previously, but more importantly, exceed the theoretical yields.

Results of yield and conversion efficiency achieved from tests done on the GEN2 PUREVAP™ are described as follows:

- Yield:
 - Total mass of Si produced was 101.45g;
 - 11.5 times greater than GEN1 best result of 8.8g and 3.6 times greater than GEN2 previous result of 28.1g.
- Production Yield (Conversion Efficiency):
 - 34.3%;
 - Astounding accomplishment considering the GEN2 PUREVAP™ physical limitations of the reactor;
 - Best efficiency to date and 2.5 times (+156%) greater than previous record production yield of 13.4%.

Additional testing continues with the expectations of further improvements.

“The results we have achieved recently with the GEN2 PUREVAP™ give us increased confidence and assurance that at pilot scale, we will be able to reach significant higher production yields of high purity silicon metal that we are targeting,” said Mr. Pierre Carabin, Chief Technology Officer of PyroGenesis. “We are extremely pleased with the GEN2 PUREVAP™ progress results so far, and expect further improvements in the near term.”

About PyroGenesis Canada Inc.

PyroGenesis Canada Inc. is the world leader in the design, development, manufacture and commercialization of advanced plasma processes. We provide engineering and manufacturing expertise, cutting-edge contract research, as well as turnkey process equipment packages to the defense, metallurgical, mining, advanced materials (including 3D printing), oil & gas, and environmental industries. With a team of experienced engineers, scientists and technicians working out of our Montreal office and our 3,800 m² manufacturing facility, PyroGenesis maintains its competitive advantage by remaining at the forefront of technology development and commercialization. Our core competencies allow PyroGenesis to lead the way in providing innovative plasma torches, plasma waste processes, high-temperature metallurgical processes, and engineering services to the global marketplace. Our operations are ISO 9001:2008 certified, and have been since 1997. PyroGenesis is a publicly-traded Canadian Corporation on the TSX Venture Exchange (Ticker Symbol: PYR) and on the OTCQB Marketplace. For more information, please visit www.pyrogenesis.com

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