



# AMERICAN MANGANESE INC.

A Critical Metal Company Focusing on  
Recycling Lithium Ion Electric Vehicle Batteries

## AMERICAN MANGANESE INC. DESCRIBES LITHIUM ION BATTERY (LIB) RECYCLING OPPORTUNITIES

July 25, 2017 - Vancouver, B.C.

Larry W. Reaugh, President and Chief Executive Officer of American Manganese Inc. (“American Manganese” or “AMI” or the “Company”), (TSX.V: AMY; Pink Sheets: AMYZF; Frankfurt: 2AM), is pleased to announce that the Company has successfully completed the recycling of 100% of Cathode Materials (Co, Ni, Mn, Al) and 92% of Lithium from its US Patent Pending recycling application. Also, the Company produced rechargeable Lithium Ion Cobalt and Lithium Nickel Manganese button cell batteries from its recycled cathode material.

On January 19, 2017, the company posted the values per 500 kg electric vehicle battery for lithium cobalt, lithium nickel manganese & cobalt aluminum Lithium Ion Batteries (‘LIBs’). The Company updates the gross value as follows:

| Battery Chemistry             | Date    | Value/Battery |
|-------------------------------|---------|---------------|
| Lithium Cobalt (LCO)          | Jan 19  | \$3,745.00    |
|                               | July 25 | \$5,947.00    |
| Nickel Manganese Cobalt (NMC) | Jan 19  | \$1,702.00    |
|                               | July 25 | \$2,347.00    |
| Nickel Cobalt Aluminum (NCA)  | Jan 19  | \$1,327.00    |
|                               | July 25 | \$1,585.00    |

The significant increase in spent electric vehicle battery value is due to the increase in the price of cobalt from \$35.02 to \$58.50/kg. Cobalt is currently under severe supply side pressure. According to the Cobalt Development Institute the battery industry has 41% of global cobalt supply. Over the next ten (10) years that usage will increase 65%. Where will the supply be coming from? Recycling seems to be a partial answer to the emerging cobalt shortage.

Management has been studying ways to capitalize on the company’s technologies working toward developing a cash flow. Early in 2018 the company will be building and operating a pilot plant to prove continuous recovery of cathode material and the ability to scale up and design a full-scale recycling plant.

Industry sources have shown that up to 10% of the manufactured lithium ion battery cathodes are rejected for use. The rejected cathodes termed “scrap” consisted of the aluminum foil backing and the cathode metal powder.

The company has been offered these scraps (at a cost) by recyclers. Management intends to initially build a hydrometallurgical plant capable of recycling scraps. This approach has the following advantages:

1. Mathematically up to 4,000 tons of cobalt would become available increasing each year.
2. Resource metal, such as Ni, Al, Li and M from the various cathode chemistries.
3. Capital and labor required for the initial plant would be much less as no disassembly of batteries is required.
4. Recycling cathode metals leaves a much smaller footprint than a traditional mining plant for recovering metals from ores.
5. No battery disassembly would be required.
6. The closed loop process conserves water and no waste streams would be released into the environment.
7. The process would be demonstrated on a commercial scale so that full scale industrial facilities can be engineered and costed.

The process plant could be located anywhere in the world where EV battery manufacturing is occurring.

#### **About Kemetco Research Inc.**

[Kemetco Research](#) is a private sector integrated science, technology and innovation company. Their Contract Sciences operation provides laboratory analysis and testing, field work, bench scale studies, pilot plant investigations, consulting services, applied research and development for both industry and government. Their clients range from start-up companies developing new technologies through to large multinational corporations with proven processes.

Kemetco provides scientific expertise in the fields of Specialty Analytical Chemistry, Chemical Process and Extractive Metallurgy. Because Kemetco carries out research in many different fields, it is able to offer a broader range of backgrounds and expertise than most laboratories.

#### **About American Manganese Inc.**

American Manganese Inc. is a diversified specialty and critical metal company focused on capitalizing on its patented intellectual property through low cost production or recovery of electrolytic manganese products throughout the world, and recycling of spent electric vehicle lithium ion rechargeable batteries.

Interest in the Company's patented process has adjusted the focus of American Manganese Inc. toward the examination of applying its patented technology for other purposes and materials. American Manganese Inc. aims to capitalize on its patented technology and proprietary know-how to become and industry leader in the recycling of spent electric vehicle lithium ion batteries having cathode chemistries such as: Lithium-Cobalt, Lithium-Cobalt-Nickel-Manganese, and Lithium-Manganese ([Please see the Company's January 19, 2017 press release for further details](#)).

On behalf of Management

**AMERICAN MANGANESE INC.**

Larry W. Reaugh  
President and Chief Executive Officer

**Information Contacts:**

Larry W. Reaugh  
President and Chief Executive Officer  
Telephone: 778 574 4444; Email: [lreaugh@amymn.com](mailto:lreaugh@amymn.com)

[www.americanmanganeseinc.com](http://www.americanmanganeseinc.com)

Neither the TSX Venture Exchange nor its Regulation Services Provider (as that term is defined in the policies of the TSX Venture Exchange) accepts responsibility for the adequacy or accuracy of this release. This news release may contain "forward-looking statements", which are statements about the future based on current expectations or beliefs. For this purpose, statements of historical fact may be deemed to be forward-looking statements. Forward – looking statements by their nature involve risks and uncertainties, and there can be no assurance that such statements will prove to be accurate or true. Investors should not place undue reliance on forward-looking statements. The Company does not undertake any obligation to update forward-looking statements except as required by law.