Vertical Integration is all the Rage in the EV Industry, is Musk the New Ford?

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Last week, Bloomberg news reported that Tesla, Inc. (NASDAQ: TSLA) was in talks to buy Sigma Lithium Corporation (TSXV: SGML | NASDAQ: SGML), a company that is focused its 100%-owned Grota do Cirilo project, a large hard-rock lithium deposit in Brazil with lithium production aiming for 2024.

The stock price of Sigma Lithium was up 16% after the news was released and is up almost 250% over the past year in lockstep with other lithium miners. Electric vehicle ("EV") manufacturers want to lock up lithium supplies as the metal increases since it is a key component in EV batteries and there are worries that demand will soon outstrip supply.

Neither Telsa nor Sigma Lithium released any news release on the subject nor provided any comment to the media. Tesla, led by Elon Musk, is looking at various options to secure its lithium sources, including potentially its own mining and refining.

Previously to fund its exploration and development, Sigma Lithium had signed a funding and 6-year offtake agreement with Mitsui & Co., Ltd. (TSE: 8031) of Japan and also signed a six-year lithium offtake agreement with Korean-based LG Energy Solution (KOSE: A373220).

In the past, Tesla signed contracts for lithium with Ganfeng Lithium Group Co. (SZSE: 002460), one of the largest lithium suppliers in the world, and more recently, Liontown Resources Limited (ASX: LTR), an Australian miner.

Is Elon Musk the New Henry Ford?

The reappearance of Henry Ford-style vertical integration in car manufacturing marks a big 180-degree turn from the late 1990s when outsourcing to sub-contractors began.

In the early 1900s (over 100 years ago!), Henry Ford had a keen interest in acquiring and controlling the sources of raw materials for his company to achieve manufacturing self-sufficiency for his automobile operations. By achieving vertical integration, a business strategy in which a company controls all aspects of production, from raw materials to finished products, Henry Ford believed he would ensure a reliable supply chain and potentially reduce costs.

To achieve this desire, Henry Ford bought vast tracts of timberland and built sawmills in Michigan to control the wood required in his vehicles but also used to create shipping containers and for heating his factories. Henry Ford had a strong interest in controlling other sources of raw materials for his company, such as iron ore for steel production, a key component of automobiles, and also coal for his factories.

But Henry Ford also went further afield as he sought to secure a reliable source of rubber for his company. In the mid-1920s, he purchased a large tract of land in the Brazilian Amazon rainforest and established a rubber plantation and community called Fordlandia. Unfortunately, it was abandoned in the late 1930s due to challenges with the workers and the physical environment.

The New Vertical Integration Trend

Continues…

Not to be outdone by Tesla, earlier this month, General Motors Co. (NYSE: GM) announced the closing of the initial tranche, a $320 million investment, of a previously announced $650 million investment and offtake agreement with Lithium Americas Corp. (TSX: LAC | NYSE: LAC). Lithium Americas is advancing the Caucharí-Olaroz lithium project in Argentina towards first production and is also developing the Thacker Pass lithium project in Nevada which is advancing towards construction.

Last year, Rio Tinto Group (NYSE: RIO | LSE: RIO) and the Ford Motor Company (NYSE: F) signed an agreement whereby Rio Tinto would supply Ford with materials including lithium, low-carbon aluminum, and copper and Ford would become the initial customer for Rio Tinto's Rincon lithium project in Argentina.

It's also happening with the smaller technology components in EV batteries. In June 2022, Nano One Materials Corp. (TSX: NANO), a company with patented processes for the low-cost, low-environmental footprint production of high-performance cathode materials used in lithium-ion batteries, announced a strategic US$10 million equity investment and collaboration agreement with Rio Tinto. The two companies entered into an agreement under which they would work together to support the acceleration of the commercialization of Nano One's patented cathode technology.

Also in June of last year, NEO Battery Materials Ltd. (TSXV: NBM | OTCQB: NBMFF) announced a C$3 million strategic investment from Automobile & PCB Inc. (KOSE: A015260) into its Korean subsidiary for the first phase of its commercial plant project. NEO focuses on producing silicon anode materials for lithium-ion batteries through its proprietary single-step nanocoating process.

Final Thoughts

Ford’s attempts to control raw materials were not always successful, and he faced challenges such as labor disputes, market fluctuations, and supply chain issues.

Nonetheless, his focus on vertical integration and self-sufficiency had an impact on the American manufacturing industry.

Perhaps what is old is new again.