Is helium coming of age as an investment?

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Perhaps the best known use for helium is to levitate balloons at parties and the inevitable voice changing characteristic that occurs when someone invariably inhales the helium contained in one of those balloons. But contrary to popular belief, helium is not all fun and games. This non-toxic, inert gas (unless the temperature drops below -269 C where it becomes liquid) has many intriguing scientific and technological uses. In rocket propulsion it is used to pressurize liquid hydrogen fuel tanks, because only helium is still a gas at liquid-hydrogen temperature. But I'm sure Richard Branson and Jeff Bezos already knew that. Helium's inert nature makes it essential for creating controlled environments in semiconductor and fiber optics manufacturing and aerospace applications. Because liquid helium is the coldest substance it is used in cryogenics as a coolant and to cool the magnets in your local MRI machine. It is also used for more mundane things like an inert-gas atmosphere for welding metals such as aluminum, in high-pressure breathing operations like scuba diving (mixed with oxygen because of its low solubility in the bloodstream) and don't forget dirigibles.

Another helium fun fact, and part of the reason for its scarcity on earth, is the fact that it's the only element that can escape the earth's atmosphere. That's right, earth's gravity is not sufficient to prevent its gradual escape into space. So the helium that the world relies on for supply comes from traps in porous, sedimentary rocks that are capped by an impermeable seal of shale, halite or anhydrite. Sounds a lot like natural gas to me, and in fact, it is commonly produced as a byproduct of natural gas production.

I find all this stuff fascinating and could talk about it all day long but perhaps we'll change gears and get back to an investment thesis which is hopefully why you came to this website in the first place. So today we'll have a look at a company that is looking to secure helium supply to meet the growing global demand for this irreplaceable resource. Imperial Helium Corp. (TSXV: IHC) plans to expedite acquisition, production testing, resource certification, and monetization of helium resources in Western Canada, where we know a thing or two about drilling and exploiting valuable commodities. Driven by Canadian geoscience and engineering expertise, in combination with its proprietary helium well database, the Company is developing its asset base to meet the growing global helium demand.

The advantage of looking for helium in Alberta/BC is that there are already over 645,000 oil and gas wells drilled and 189,000+ of those have a gas analysis available. Using this information, Imperial Helium has developed a proprietary database of existing helium bearing well bores that are being evaluated for acquisition. The Company's target is focusing on wells with contingent concentrations of helium and existing infrastructure. The analytical geoscience and engineering approach undertaken to source these helium opportunities reduces the fiscal risk of finding uneconomic concentrations of helium in the exploration process. The first target identified in this process was the Steveville property, situated over a large basement dome feature with four-way closure. The property is approximately 200km east of Calgary providing easy access for drilling and development. The property includes land leased from Heritage Royalty Resource Corporation covering 24,635 hectares (95 square miles), with rights for natural gas (including helium) below the base of the Big Valley and Nisku formations.

Steveville was first drilled in the winter of 1940 with

production testing showing six million cubic feet a day (6MMCf/d) of non-burnable gas (87% nitrogen, 3.5% methane, 0.63% helium and 8% carbon-dioxide). This isn't much of a natural gas well but for helium there is potential. Correspondingly, the Company spud an appraisal well on July 5th to confirm helium concentrations and flow rates from the structure established by the historic well. The successful drilling, logging and casing of the first well confirmed their technical view of the Steveville structure and production testing will begin soon. A second appraisal well was spud on August 3rd with 3 weeks expected to drill and log the well and a further five to six weeks to complete and test it. And in case you were wondering, methane will either be used as fuel gas to run the facilities or sold into the well-established natural gas market, while carbon dioxide may be sequestered or sold and the nitrogen can be vented because the atmosphere is approximately 80% nitrogen, or it may be captured and sold if fiscally viable.

Helium is considered a critical raw material by the EU, the US and China. Important to the investment thesis for helium is the fact that the Bureau of Land Management in the U.S., which had been supplying in the range of 10-15% of the world production since 2016, had sold all the available federal volumes in inventory by 2020 making for a new global dynamic, putting upward pressure on helium prices. When you factor in the security of supply issue we've seen in several commodities (most helium production comes from just a few fields in the U.S., Qatar and Algeria), you have the makings of an intriguing opportunity. A scarce resource with increasing demand makes helium a commodity to watch. Imperial Helium may not be elephant hunting but with helium prices in the $400/MCF range, you don't need a lot to be profitable.