

Harrow & Hillingdon Geological Society

Monthly Meeting 14 July 2021

“Salt from the frozen wastes: An introduction to the global potash industry” (Abstract)

Humphrey Knight

Senior Analyst, Potash
CRU International Ltd

Along with nitrogen (N) and phosphate (P), potassium (K) is one of the three primary “macronutrients” plants need to grow. Consumers use a wide range of potassium-bearing minerals for their potassium requirements, all of which fall under the umbrella term “potash”. However, the industry is dominated by potassium chloride (also known as “muriate of potash” or “MOP”) which accounts for around 85% of global demand. It occurs naturally in solid rock deposits as the mineral “sylvite”, most commonly with salt (halite) in the rock “sylvinite”, in sedimentary evaporate basins, or is processed from other potassium-bearing minerals extracted from natural brines. While not an uncommon mineral, large economic deposits are few and far between making supply highly consolidated. Canada, Russia and Belarus (and only a handful of companies) account for around 80% of global MOP production, with recent developments in the latter putting the potash industry in the political spotlight.

Potash is one of the few extractive industries in which the United Kingdom is currently involved. The Boulby mine near Whitby in North Yorkshire continues to operate to this day under the ownership of Israel Chemicals Ltd (ICL) UK, formerly known as Cleveland Potash. The mine produced MOP for nearly 50 years until 2018 when the company switched production to a much less common form of potash called “polyhalite”. This is one of a number of minerals which form make up the remaining 15% of global potash demand (loosely grouped as the “specialty potash” sector). Despite polyhalite’s previous obscurity, it has been thrust into the limelight in recent years due to the marketing exploits of Sirius Minerals and its ambitious “Woodsmith” project. Mining giant Anglo American acquired Sirius in March 2020 and continues development at Woodsmith. But Anglo has also taken on the associated substantial risks, with the future of the project – and that of the UK’s role in the global potash industry – still unclear.