

Yancoal Southey Project



Conventional Mining uses underground mining practices where rock is cut with machines and transported to the surface for processing and sylvite is then extracted. The construction of expansive mineshafts and underground mine workings are required, as well people must work underground. **Solution Mining** involves pumping water/brine underground and selectively dissolving sylvinite and then transporting it to the surface via pipelines where it is processed. Potash mining began in Saskatchewan in 1962, and the first solution mine (Belle Plaine) came into operation in 1964.

Reduced Tailing / Waste Material Storage: Solution mining allows for the removal of almost no insoluble rock or mineral. Whereas, conventional mining requires large quantities of rock that is not potash to be removed. Therefore, with solution mining the waste to be stored on surface is almost entirely salt (NaCl or MgCl_2) and the volumes are substantially less. The height of the salt storage area will fall within 40 and 70 metres (m), which fits within the elevation range within the area (approximately 100 m).

Reduced Risk: Due to the larger openings underground and the presence of underground workers, conventional mining requires a number of ground stability measures.

Reduce Subsidence: The potential for subsidence is greatly reduced because material is selectively removed, pillars (80 metres wide) of unmined material are left between caverns, and caverns are designed (elevation and dimensions) and laid out in a manner to control subsidence.

Solution vs Conventional Mining

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