

Mr. COLE: Well, they are operating at the present time down in New Mexico beds of potassium chloride, that is sylvite, that has an average grade for 1945 of around 21.34 per cent  $K_2O$ ; that is, working around anywhere from a thousand to sixteen hundred feet in depth. We would have to work at double that depth.

Hon. Mr. CRERAR: How do they take those out in New Mexico?

Mr. COLE: It is mining.

Hon. Mr. CRERAR: Straight mining.

Mr. COLE: Straight mining process.

Hon. Mr. CRERAR: Shaft?

Mr. COLE: Shaft and chambers and pillars, and then afterwards it is beneficiated by flotation and other means to bring up the grade to 96 and 98 per cent potassium chloride.

Hon. Mr. DAVIES: Do you know by the soil, or how do you decide where to investigate those things? I was wondering, for instance, if you would be liable to find any of these fertilizers in northern Quebec, or in Alberta, or is it just in the prairie provinces that you look for it?

Mr. COLE: Well, it is more in the sedimentary deposits in the west that we are looking for them at the present time, although we have got a tremendous amount of salt all through Canada except in one province, the province of Quebec. There is no salt, as far as I know, in the province of Quebec that we have come across. That does not say that we won't find it at some time.

Hon. Mr. DUFFUS: Do you use some salt in producing fertilizer?

Mr. COLE: I don't think we use any salt at all in fertilizer. That is, the ordinary sodium chloride, the common salt.

The CHAIRMAN: Mr. Cole, as I understand from you, potash and salt are practically side by side. Would the way to mine that be by making some arrangement with the salt company to bring the potash up, and divide the product later on?

Mr. COLE: Well, they are doing it by the solution method. They are dissolving their salt out, and it is not known how much they will get in the way of potash in their brines. Of course there would be that recovery, when they start.

The CHAIRMAN: As far as you are concerned it is only in the experimental stage so far.

Mr. COLE: It is only in the experimental stage. We do not know how much we have there, or anything about it except that we have a few analyses of these salts, and we have encountered the potash in a number of wells at widely separated points, but we have no knowledge of whether they are continuous beds or just isolated occurrences.

The CHAIRMAN: Well, perhaps we can hear from Mr. Goudge.

Mr. M. F. GOUDGE: In connection with our fertilizer resources in this country, we have to consider supplies of nitrogen, phosphate, potash, and sulphur, as well as the liming materials—limestone, dolomite, magnesite, and so on. We are well off in respect to nitrogen. Although we have no deposits of soluble nitrate minerals we have those tremendous plants at Trail, Calgary, Niagara Falls, and elsewhere, that extract nitrogen from the air, so we did not have to worry in that respect. In phosphates, though, we are not so well supplied. As Mr. Timm said, we have hunted around quite a bit for phosphate. The largest deposits of phosphate rock are in western Canada, in the Crows Nest Pass; they were found by the Consolidated Mining and Smelting Company, and that Company has done a lot of work on them with the object of using the material for fertilizer, but it is too low grade and they have been by-