cial as well as chemical results. If the pig

Some Smelting Problems. lead which he turns out is low in silver and gold, it costs quite as much for transportation to the refineries, and

also for refining, as if it were rich in precious The richer his blends the lower is metals. his proportionate outlay for the subsequent process of refining or separating the precious metals from the lead. The limit of richness in his blends is fixed by the ore available, and by the necessity of making a mixture that will melt without wasting fuel. Another difficulty in regard to blending Canadian wet and dry ores is that the latter frequently contain copper, which makes an undesirable mixture with silver-lead ores. The fact that many Canadian dry ores are low-grade and contain copper is not said in disparagement of them. It merely shows that they are not the ores required for a profitable blend with the lead ores of the Kootenay country. They will be required by smelting experts, and will find markets where their special ingredients happen to be in demand. Canadian ores now find a market not only at various points in the United States but as far south as Peru. Markets must be as varied as the chemical composition of the ores from different mines. Ore from one mine may find a market close at hand, whereas from another mine adjacent it may have to be transported to another continent. This shows the absolute need of freedom in transportation and commerce for the adequate development of mining and smelting.

The dry ores required to make a profit--26-

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