

bined in the extraction of the values from the ore. In the successful prosecution of the work required to make a mine productive and remunerative to the owners, the use of timber is an absolute necessity. Its uses are varied. It is required to timber the shafts through which the ore is drawn to the surface. Heavy timbers are also required to take the place of the ore mined, to hold up the roof of the workings, and sustain the sides of the stopes and drifts. The place of every supporting atom taken from the interior of a mine must be filled by some other material which can carry the burden with safety to the lives of the miners employed. This requires timber from the forest. No other material can be substituted for it. The use of iron or steel posts and beams is prohibited by their cost, to say nothing about their inadaptability to the work of underground mining.

It can be truly said that a veritable forest has been used underground in the mines of the Black Hills during the few years they have been in operation, that no more of the forest has been used in their development than has been absolutely necessary, is doubtless true. The grade of the ore, the high wages paid, and the satisfactory returns received in most cases on the investment, prove that the mines have been most economically managed, the timbering being one of the heaviest items of expense in their operation.—*Seth Bullock, Supervisor of the Black Hills Forest Reserve, at American Forest Congress.*

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The report of the Swedish Forest Department, for the year 1903, gives the total area of the forests under charge of the department at the close of that year as 16,394,944 acres, or about half the area of England. Of this area, however, about 2,069,475 acres were woods in the hands of communes or other authorities who had the right to the revenue of these lands, so that only the proceeds of about 14,325,469 acres were paid in to the Department. From these 14,325,469 acres must also be deducted 862,023 acres, the revenues of which were handed over to the ecclesiastical authorities, leaving only 13,463,446 acres as the area of the State Forests proper. The latter gave a gross return of 8,673,224 kronor for the year 1903. The cost of management, which included the