

Senator ANDERSON. It was fast enough before, was it not?

Dr. BATES. Dr. Hibbard has pointed out that in the case here in the District of Columbia we could probably show that it would be possible to move forward more rapidly with regard to moving the excavated material if we could use boring machines; and we could get those trucks out of Senator Moss' way.

Dr. HIBBARD. The reason the nine agencies got together to discuss this problem was that this technology is not developing fast enough and the savings from such technology are not reflected in contract prices. In our opinion there must be a response to these needs, a meeting of these requirements. The plan for the District of Columbia subway is to drill and blast. But it would be much faster and more efficient if it could be bored. We do not have the equipment to bore it. No contractor is coming forward willing to take a risk to do it. I think all these agencies feel a certain amount of stimulation by the Federal Government will be a good investment and will pay back many times this amount to the taxpayers.

The CHAIRMAN. Senator Hansen.

Senator HANSEN. I would like to add a word in support of Senator Anderson's statement here today. I know very little about mining. I have been down in a few of the tungsten mines in Wyoming. I suspect, though I do not know, that the development of that machinery there would be largely through the efforts of private industry. I would venture the opinion that some of the important discoveries that are going to be hit upon in the days ahead and weeks and years ahead will be innovation by practical people down there who are concerned with lessening costs and increasing profits, that sort of thing. I would suggest also they are having considerable experience. I would expect in the order of hardness that would be soft rock, would it not? Yet this provides an easy and fruitful area, in my judgment, Senator Anderson, to gain some valuable experience in the ways a man can propel a machine into the face of a rock wall and to bring the material back. I know this part of the operation down there. I raise this point because I think it lends credence to the point you are trying to make.

Dr. BATES. It is the role of the Bureau of Mines to work with industry in cooperative ventures. I do not think it is an either/or situation. We need some of both.

The CHAIRMAN. I do not think there is any question but what there is great opportunity here. The metropolitan areas are just one part of it. Obviously the applications go beyond that. I think we can all agree we need to exploit the opportunities. I think the problem, in part, is whether industry could not do a little more. Maybe if they are more effectively exposed to the opportunities that lie ahead they would show a little more initiative. I understood, Dr. Hibbard, you have done this by meeting with large equipment manufacturers to discuss this whole program.

Dr. HIBBARD. Yes. In fact, part of this program is specifically to go to them on a joint venture or cost-sharing basis to stimulate them to do research, develop research.

The CHAIRMAN. Senator Moss.

Senator MOSS. No questions.

The CHAIRMAN. Thank you, Dr. Hibbard. We appreciate having your very fine presentation.