

In the presence of these background profiles the nature of probable future supply-demand relationships has been given a great deal of attention. A range of projections has been prepared for each commodity through 1985 and 2000. Projections are based upon econometric techniques after selecting an index considered best applicable to each topic. The projections have been modified to reflect the effects of foreseeable probable and possible technologic advances that would tend to lessen costs, reduce demands, increase supplies, or establish new markets. They have been further modified through introduction of the possible effects of nontechnologic changes like price incentives, import or export controls, international events, and the like.

Specifically the outlook section on each commodity in this study is addressed to:

*Future demand.*—In which high, median, and low projections of demand in 1985 and 2000, in the United States and in the rest of the world, are estimated.

I would like to emphasize that you can't look at the United States alone, you have to look at mineral supply and demand problems in the context of the entire world picture.

*Future supply.*—In which the resources likely to be important sources of raw materials in the future, even though noncommercial at present, are assessed and related to projected demands.

And again to deviate for a minute in our petroleum predictions, we believe that production from oil shale is absolutely essential by the year 1985. And in our documents here we have estimated this need at 400 million barrels per year.

Senator HANSEN. Mr. Chairman, if I may, I would like to ask a question.

I am delighted with the awareness that is so evident on these problems of great concern to our country and to our national security as evidenced by Dr. Hibbard's statement. And now he has mentioned oil shale.

Our attention earlier this morning was focused on our domestic needs for aluminum. Dawsonite, recently discovered in the Green River formation, may prove to be a significant domestic source for aluminum.

In January of 1967, Secretary Udall stated as point 1 of his 5-point program for oil shale development that "Pending sodium preference right lease applications"—which would offer one means for developing Dawsonite—"will be properly considered on their merit."

On September 14, 1967, the Secretary testified before this committee on the status of the oil shale development program. At that time, I addressed a question to the Secretary, which was as follows:

"I would observe that some of these applications have been filed with your Department for more than 15 months and I share your hope that there can be an early resolution of them. I think that the industry would certainly welcome the clearing up of the problem that is before you."

On December 12, I wrote to the Secretary and his reply of January 12, 1968, does not indicate to me that the question of pending sodium preference right lease applications is any closer to resolution within the Department.

I wonder if you can give the committee a status report on this question and, hopefully, indicate to the committee that the Department