

Senator MOSS. Do you have further questions?

Senator ALLOTT. The Secretary has only 5 minutes. I have not begun to cover what I want to ask, but I would, if I may, just take up one thing that has not been quite wrapped up, and it grew out of the statement of the Senator from North Dakota.

We are all concerned, of course, with water pollution, but actually one of the major problems that will arise from the conventional—now conventional—methods of extracting shale oil comes from the disposal of the residue, and I know my own State is giving this great consideration. I have actually seen some conservation practices that have been put into effect on a developmental basis to see what can be done on this.

I don't suppose anybody has the complete answer at this time, but this also is very much a part of what you are talking about when you say in your statement, or in substance, that your leases will contain firm assurances that good conservation practices will be observed in the commercial operation, is it not, Mr. Secretary?

Mr. UDALL. Senator, you again have a key point here and this is what we meant when we talked about some of the research that the Bureau of Mines must do in modern mining methods. The truth of the matter is that we are just on the edge really of what we think can be very dramatic changes in terms of modern mining methods to make it possible to do things that we have not been able to do heretofore.

The automated equipment that is used in coal mining is one example. You might very well evolve continuous systems, for example, that would take it in, retort it, take it back and deposit it in the same area rather than to have to spread it over the whole landscape. Learning how to solve the problem of spent shale from a conservation point of view is something that I think we can master.

Again, this brings me right back to the point I stressed earlier, that we have time to do it. That is one of the reasons that I think it is important to begin a lot of our research now so that when we are ready to go with a program, a big large-scale program, whether it is 8 years or 18, that we have the answers in terms of conservation of the other resources.

Senator MOSS. Maybe we don't have an excess of time. The Wall Street Journal this week reported that domestic production of crude oil and liquid natural gas would have to rise from about 9 to 13 million barrels daily by 1980. So that is almost a doubling, unless we are going to start oil importation. We have to move on with this resource.

Mr. UDALL. Well, Senator, to me the other very good thing in terms of the national interest that can be done here, if we do our job right, is that we can control and phase in oil-shale development so that it fits the national interest.

This is something that I think may prove very important in terms of the economics of the energy industry and the petroleum industry in the future, that it is possible here if we are wise enough to do it that way to phase it in so that we do not have disruptions and gluts and all the sort of things that make for disorder in the economic picture.

Senator MOSS. Thank you.

Senator ALLOTT. Mr. Chairman, as I have indicated, the time is short.