

ably from cores with core drilling. It may be that if someone wants to block up, that we would impose on the person who wants that benefit, the task of having them do the drilling and furnish us with the information. But since there are these other mineral values present, we cannot dismiss them. So that probably the exchange program, the blocking up program—I am just giving you my own layman's horseback opinion here—is going to work best where you are trying to block up lands in an area that have similar mineral values.

Senator ALLOTT. The point I wished to bring out is that the problem of blocking out oil shale as such is a relatively—and I underscore that word—simple problem compared with the problem of ascertaining values when you get into the questions of intermix dawsonite and nahcolite; correct?

Mr. UDALL. This is correct, and there is one other thing we might as well get on the table here, too, and that is the difference in the thickness of the beds. In other words, if you take a particular region, there may be a 600-foot thickness here and you move 3 miles down the road and it shrinks; that is obviously measurable and has to be taken into account.

Senator ALLOTT. I think we brought all of this out at the hearing 2 years ago, the thickness of the beds, the depth of the beds under the surface of the earth, and also the richness of the beds. I think that is pretty well understood by everybody.

Now, in this blocking up, what provision do you contemplate for permitting owners of the scattered land to evaluate Federal holdings to be received in exchange that you would have a mutual opportunity to core drill, for example?

Mr. UDALL. I think it would have to be mutual because otherwise you could not really appraise the values and it is the matter of appraisability that is the difficult problem.

Senator ALLOTT. In other words, if a man owns a piece of land you have no right to go on it per se to drill, and certainly he has no right to go on Federal lands and core drill without your permission, and you envision a mutual consent to ascertain values and the drawing of proper rules for this?

Mr. UDALL. That is right, and this is what we will cover in our regulations, I would assume in the usual way.

Senator ALLOTT. Well, I might say there is one exception to this. A man who owns an oil and gas lease in this area, and there are some, has the power to drill, but this would not apply to everything.

Will the Department of the Interior permit the owners of the private acreage to select specific location of the land to be received in exchange?

Mr. UDALL. Yes, that is probably the way the exchange process would work as we envision it, because the nature of the *in situ* process and the nature of either underground or open pit mining will be such that a person or an owner may very logically want to assemble a contiguous tract that is mineable in the most economical fashion. Really economics determine many of these issues. Therefore, he will, if he has a series of claims strung up a particular valley, and that is where many of the patented oil shale lands happen to be, want to consolidate them into a much more contiguous unit where he can get the advantage