

cussing that with the Atomic Energy Commission, I understand it would require about one mill power.

Secretary UDALL. Congressman, I have the feeling the oxygen might be needed for breathing in southern California.

Mr. HOSMER. I think you just got yourself a triple purpose project which also solves the smog problem.

At any rate, I understand that one mill power will do this and that the saving on pumping costs between liquid and gas over these long distances might make the idea economically feasible.

Another thing along this line, at the present time, at the University of Arizona at Tucson, Dr. Norman Hillberry and some of his associates are speaking seriously of the application of underground engineering to the Arizona water problem. By underground engineering, we mean the use of nuclear explosives beneath the ground for a number of purposes. In Arizona, the first purpose would be to create large underground catch basins, where a more efficient recovery of rainfall could be obtained. The second purpose would be for fracturing conduits so that the collected underground water could get into the aquifers. The third purpose would be, like up where you have that secret water bank in the Chino Valley or wherever it is, to fracture that underground volcano cavity so that the millions of acre-feet of water could get out into your aquifers and the underground reservoir level would be reduced at the same time and thereby provide capacity to receive fresh rain waters.

You did not discuss those in your submission, but would they be possibilities?

Secretary UDALL. Congressman, this is very advanced thinking. I have asked my scientific people, within the last 2 or 3 weeks, in relation to the water pollution control program, if it would be feasible to use the plowshare program. For example, where very saline water gets into water systems, would it be possible to force it underground or desalt it.

Well, the geologists are giving a lot of thought to what you might do with the plowshare program.

None of us really know. I have not talked to any geologists in my Department that really know. I think the most interesting thing is that with the peaceful uses of atomic energy, maybe we can come up with some solutions. We are just beginning to consider them. Project Gas Buggy is the first one.

We hope to put together an oil shale project, Project Bronco, to see what the application may be made there.

I would not venture to say where plowshare will lead us, what we will be doing 30 years from now. It may be a very exciting future. It may be that there are problems that make it not as promising. But I would not want to discuss it in any other than that context here.

Mr. HOSMER. I understand that, Mr. Secretary. But I am optimistic that these techniques will, in fact, make a substantial increase in available water supply.

Secretary UDALL. They might; I hope they do.

Mr. HOSMER. I am wondering whether or not we should anticipate it in this legislation, at least by deciding what happens.

Suppose Arizona picks up 3 to 5 million acre-feet of water in this manner. Should that be credited to all the Colorado River or shouldn't it?