THE OIL SHALE PICTURE FROM THE INVESTMENT BANKER'S VIEWPOINT

THOMAS HILDT, JR.

First, I want to say that I have no personal economic interest in oil shale, nor does Bosworth, Sullivan & Company, Inc., of which I am an officer. All thoughts and recommendations which I will express today are objective. They are based on observations and study over the past several years and also result from discussions with other investment bankers and with people active in this beginning industry.

When and if oil shale is developed on a commercial-sized basis, very large sums of money will be required, and the investment banking industry will be called upon to raise a good part of these capital requirements. Therefore, we investment bankers are not only trying to educate ourselves in the problems and progress of oil shale but we also feel obligated to make available to the oil shale industry our thoughts and requirements in respect to its future financing. It is in this role that I stand before you today.

Now first, let's have a brief look at the present status of oil shale development as viewed through the investment banker's eyes. This is sort of like rounding up for appraisal, in one corral, animals that we have seen before one at a time.

We see enormous reserves of shale oil, measured in the trillions of barrels. There is so much oil shale of comparatively good quality in the Green River Formation that any reasonable portion of this shale used for research and initial commercial operations would be miniscule in relation to the total reserves. There is also so much that even a withdrawal rate far greater than optimistic hopes would last for many, many years.

Compared to other oil shale deposits and oil sand deposits, this Green River oil shale is favorably located. It is within economic transportation range of oil-hungry markets, and yet it lies in a thinly populated area where development will present minimal inconvenience to existing human activity.

We are stimulated by the fact that after several decades of waxing and waning of interest the last few years have evidenced serious and determined interest, as proven by substantial commitments of brains and money by many of our nation's large and outstanding corporations, as well as smaller but technically qualified companies.

We note that about 90 percent of these oil shale reserves are owned by

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the American people in the name of the United States Government and that recent widely published information regarding the potential of oil shale has alerted the public, which is waiting, perhaps with diminishing patience, for the inauguration of a leasing program by the Government.

Oil from shale now and in the future must compete with all other fuels and sources of energy, and its ability to compete successfully depends upon the cost and availability of these other sources of energy at the time shale oil is introduced commercially. Another speaker at this conference has detailed the supply and demand picture of energy, and I will only remind you of the increasing difficulty in finding additional domestic conventional crude to satisfy our continually increasing demand. As a prominent oil man said recently, "for an oil man to find oil today, he must comb territories that were unattractive in the 30's, 40's and 50's." Striving to meet this accelerating demand is, of course, foreign crude as well as increased production of domestic crude and natural gas, but also atomic power, the future extraction of liquid hydrocarbons from coal, commercial-sized development of Canadian oil sands presently underway, and the broadening application of solar energy. Obviously, timing of commercial introduction of shale oil is of the utmost importance because if neglected too long, it may lose out to other new sources of energy.

The problem of water availability in this area is well known. Water is becoming scarcer each year because of other demands. Also most waters must be collected during the spring run-off to serve the entire year, and reservoir sites for the storage of water are becoming in shorter supply. So here again, we see a reason for development of oil shale at the earliest practicable date.

A substantial community must be developed for employees, their families, and supporting services. The planning and creation of this community on a competitive and attractive basis is most important in order to draw the employees the industry will require. In fact, the ability to hire competent employees for the production of shale oil is an important component of the economic feasibility of the industry. Generating capital for community development is difficult because it is composed of several and usually many non-integrated projects, the future success of which defy close measure. Such financing will require more lead time than the financing of oil shale processing plants.

The disposal of spent shale and other unuseable waste from oil shale processing must be properly planned from aesthetic and health standpoints and, here again, timing is important because the design of the processing plant and the cost of operating it are, of course, influenced by requirements for handling this waste material.

Upon commercial development of oil shale, there will be several substantial benefits to the American people. First, they will receive through their Government sizeable income in the form of royalties and income taxes from production and earnings. Second, total imports of crude and products into the United States are currently costing over $2 billion a year, and while some of this cost remains in the United States in the form of payments to American owners when they share in ownership of foreign production, a large portion obviously leaves our shores as payments for oil or high royalties, labor, and tanker transport in foreign bottoms, and these payments contribute to our unfavorable balance of payments problem. Even if shale oil does no more than help stem an increase in import oil, it will have a beneficial effect upon our balance of payments problem, which last year were about $1.3 billion in the red. And third, shale oil can alleviate the acute petroleum shortage which is bound to occur during time of war. Perhaps you share my concern about transporting oil in ocean tankers in war-time when the enemy has in his hands the missiles and atomic submarines that did not exist in World War II.

In fact, I can think of no other undeveloped natural resource which offers such great potential financial and other benefits to the American people.

What do these basic facts mean in relation to each other, and what course of action do they dictate?

Obviously, we are looking at a sleeping giant. From reports published and unpublished, it is apparent that the gap between cost of shale oil and conventional crude is fast closing, and that is why a number of the largest oil companies are active in oil shale. It is reasonable to anticipate that, given a favorable atmosphere in which to incubate, oil shale can emerge on a commercial basis within ten years. This may seem like a long time, but we must consider that even after final decisions are made and the financing committed, at least two years will be required for construction and start-up. It is also a reasonable assumption that the production of a million barrels per day should be attained in ten years, or less, after commercial production commences, and this represents sales in the area of $1 billion a year. It also, incidentally, represents only a portion of the increased demand which will have occurred by that time, rather than an encroachment upon current production of domestic crude. Certainly, the investment banking industry stands ready to provide the necessary capital to start and expand an oil shale industry. I will expand on this statement a little later, but in the meantime, I want to discuss the need for improvement in the climate in which the oil shale industry is presently striving to grow.

It seems to me there are several clouds which individually, and certainly collectively, are acting as a handicap or a deterrent to the orderly and prompt development of this tremendous resource. We have mentioned all of these—namely, the scarcity of water and reservoir sites, the need for advance community planning, the waste disposal problem, and the lack of any leasing policy by the Federal Government. I will not make any attempt to get into the complicated and controversial question of depletion allowance, which is a matter for entirely separate study. The elimination or alleviation of these impediments is quite important to the orderly progress of oil shale development, and to this end I have some recommendations to both industry and government.

First, my suggestions to industry:

It is my opinion and the opinion of other investment bankers that those active and interested in oil shale development should cooperate more closely by working together on such matters of common interest as water needs, community development, and waste disposal. Certainly, we would not expect anybody to disclose processing secrets or similar privileged information. However, I think it would be of enormous help to the industry and therefore to you industry participants to jointly estimate your needs, scheduled by years, as to housing for employees, water, power, transportation, communication and similar related needs. For example, Federal Highway 70 will serve this area, and you should jointly be in on the planning for its exact route, and where its interchanges should be. This type of essential information will give those who will serve your industry the data they need to start planning, and as your estimated requirements transform into firm needs in the future, these necessities can be made available to you. But don't forget that plenty of lead time is required here and you must continually update your requirements as your plans take more concrete form. Also, industry should jointly recommend to and work with the proper government authorities for the handling of solid, liquid, and gaseous wastes. And this includes cooperation and peace-making with the nature lovers who vocally worry about the aesthetic and pollution problems of waste disposal. Maybe you should start an oil shale institute, supported by you as a group, and directed by a man who has the gumption and authority to shake this vital non-secret information from you and correlate it into useable condition. If you in the industry will cooperate with each other to this extent, you will find the benefits more than worth the effort.

Now I will address myself to our government.

We recommend that the Federal Government should change its role from a passive to an active one to foster and accelerate oil shale development. It is understandable that an owner of some of the 10 percent oil shale reserves owned privately would be reluctant to commence commercial development under the overhanging shadow of the very large reserves in government hands without any leasing or other development policy attached to them. It is axiomatic that one does not plan a business venture unless competition can be measured. How can one measure now the terms under which oil shale might be leased from the government in the future? I feel that the government should promptly formulate an initial, modest leasing policy on a competitive bid basis. In my opinion an initial leasing policy should include provisions which would force research or development, with forfeiture of lease as penalty for non-performance and would prevent speculation or windfall profits by resale. The government does not have to bind itself to this initial policy forever, nor does it have to make available a great deal of its reserves, but such a policy would serve as a very effective guide to what competition private land can expect from public land in the future, and may stimulate interest and activity by companies presently sitting on the sidelines. This recommendation may sound like a broken record to some of you, because it has been voiced before by many people, including some of national prominence and respect. But I sincerely and objectively believe in it, and I trust you will not take offense by my repeating it. Once this initial leasing policy is established, the government should assist industry and others in determining the needs and plans for supporting services and activity. Also it should continue and expand its contributions toward the research of the various processing or extraction methods in cooperation with industry, or supplementary to industry. It is reasonable to expect the government to clarify its future interest or policy in respect to the importation of foreign crude and products, so that the oil shale industry as well as conventional crude will know the ground rules and can make long range plans accordingly. These actions by our government are obligatory, in our opinion, because the government is acting not only as government but in this case as trustee for the American people who own this enormous and valuable resource.

All of us should guard against those people or blocs who would place barriers in the path of the shale oil industry. I take the view that once this resource is made available from public lands, it becomes available to all responsible interests who want to remain in or enter into the energy field, be it an oil, chemical, mining or other type company. So it is open to all industry on a competitive basis, and there is no decent reason or even excuse for any one segment to attempt to torpedo it. We should not let the industry die by default—we should feed the goose that appears to be sitting on the golden egg.

Earlier I mentioned that the investment banking industry is ready to finance an oil shale industry. You would be surprised how many investment bankers are watching developments to the best of their ability and trying to prepare themselves for the demands for capital expected to materialize before very long, and hopefully within ten years. Now let's look at what kind of economics the oil shale industry should show on a forecast basis in order to attract the necessary capital, using today's investment and money market as a background. Most responsible oil companies are currently selling in the area of 12 to 15 times earnings which averages out to about 7 percent earnings on an investment made today. Cash dividends run about 4 percent or better. Because oil shale processing is a new-venture type of investment and because there is a period of about two years, or more, of construction and start-up expense, and no early dividends expected, I would say that an oil shale processing company standing on its own, should show, on a projected basis, about a 15 percent return after taxes on the equity investment, after its first full year of operation, to be competitive in the capital money market. Naturally, it would need to show complete technical feasibility, a market for its products at the sales price contemplated, favorable management, and the availability of employees, water, power, transportation, etc. Very probably a substantial portion of the funds required for construction and operation can be raised through borrowed money on a long-term basis, and my objective of at least 15 percent return is on the equity money after allowing for the interest charges on borrowed money.

We investment bankers will, of course, need to be kept informed of the progress of oil shale development which I hope will proceed at a rapid pace, but I assure you that we are ready when you are. We will even help you feed the goose on the golden egg if you will feed her yourself and tell us how to help you.

DISCUSSION

QUESTION: How much interest will the investment banker charge on money loaned on an oil shale venture?

HILDT: We don't generally loan money ourselves. We act as agents for companies in arranging financing from public or private sources, including institutions such as life insurance companies. We charge fees, rather than interest. In today's market, I'm sticking my neck out because it changes almost every day. I would say that on a straight loan, with no options or conversion features, you're probably looking at at least 6½ percent interest on a loan.

THOMAS HILDT, JR.

Thomas Hildt, Jr., after graduating from Yale University with a B.A. degree in 1936, entered the banking business in New York City with the New York Trust Company.

After World War II service as an Air Force officer and return to the New York Trust Company, he resigned his position as Vice President in 1951 to become a Vice President of the U. S. National Bank (now the Denver U.S. National Bank).

Shortly thereafter, he joined the investment banking firm of Bosworth, Sullivan & Company, Inc., in Denver to organize its Corporate Finance Department, which he still heads as Senior Vice President of this company.