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Proposed Sale of the Naval
Petroleum Reserves

Statement of
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Before the
President's Commission on
Privatization

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Mr. Chairman and Members of the Commission:

I am pleased to be here today to discuss GAO's work related to the federal government's proposed sale of Naval Petroleum Reserves 1 and 3 (NPR-1 and 3). While we have not taken a position for or against the sale of the reserves, we have conducted a number of studies of NPR-1 operations, including one that dealt directly with the question of valuation. We also have ongoing work on several aspects of the proposal which was requested by the Chairman, Subcommittee on Energy and Power, House Committee on Energy and Commerce. (NPR-3 is a relatively small reserve and has not been the subject of past or present GAO inquiries.)

In my testimony today, I would like to discuss our past work which relates to the proposed sale of NPR-1. Our work deals with the (1) adequacy of reserve and production information, (2) current operating contract between the federal government and NPR-1's co-owner, Chevron, U.S.A., and (3) impact of discount rates and oil prices on divestiture.

ADEQUACY OF RESERVE INFORMATION

NPR-1 is a geologically complicated oil field, consisting of four separate commercially productive zones and many productive oil pools. After years of exploratory drilling, consultant studies, and field operations, there is little agreement among experts on the full production potential of the field. Much of the disagreement centers around the remaining recoverable reserves, which are heavily affected by the actual production schedule.

Based on audit work that we have done at NPR-1, it is clear that there is insufficient up-to-date, accurate data on past production, estimated recoverable reserves, and appropriate production rates on which to base a sale of the NPR. We believe these data are critical for a prospective buyer's valuation decision and that unless better data are provided, bid prices may be reduced to reflect the uncertainty of what is being offered for sale. DOE acknowledges that the projected production levels and recoverable reserve estimates for the field are the most important variables in determining the value of NPR-1.

In our March 1987 report on data inaccuracies at NPR-1, we explained that inaccuracies and omissions in the production data and reports needed for determining the maximum efficient rate of production precluded us from reaching a definitive conclusion on the appropriateness of the production rates.[1] For example, we found 87 wells with production of over 50 million barrels of oil from two of the largest producing pools that required review for production data errors. We also reported that until the data errors are corrected and the magnitude of the problems is identified, DOE cannot accurately determine how much of the past production and remaining recoverable reserves belong to the government. Since our report, DOE has taken steps to correct these inaccuracies. We will be reporting on their progress to the Chairman, House Subcommittee on Energy and Power, in the spring of 1988.

THE UNIT PLAN CONTRACT

This brings me to the question of the distribution of revenues from production under the Unit Plan Contract (UPC). The UPC was signed by the Navy and Standard Oil Company of California (Chevron's predecessor) on June 19, 1944, and approved by the President on June 28, 1944, setting forth the terms and conditions under which NPR-1 would be operated. While provision was made for a unilateral termination of the contract by the government, the UPC did not make specific provisions for either partner selling its

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[1]Naval Petroleum Reserve-1: Data Inaccuracies Complicate Production and Ownership Issues, (GAO/RCED-87-105BR, March 1987).

share of the field. It is therefore apparent that prior to a sale of the government's NPR-1 interests, the government and Chevron will have to negotiate a settlement of the UPC.

One of the concerns expressed in our March 1987 report dealt with the UPC renegotiation issue. Production and cost distribution, under the UPC, is made on the basis of average zone ownership percentages. However, oil production from the various pools within a given zone has not necessarily matched the zone's ownership percentages. For example, ownership of the Stevens zone is divided, 79.6 percent government and 20.4 percent Chevron. Working from DOE production statistics, however, we estimated that about 82.6 percent of the Stevens zone production has come from government-owned shares of the pools. Because some pools naturally produce faster than others, this situation is not abnormal and will generally resolve itself by the time the field is depleted. In view of a proposed sale of the government's share of NPR-1, however, we believe that the 3-percent difference (representing about 12 million barrels of oil) between production and actual distribution reflects a potential imbalance that needs to be resolved with Chevron as part of the UPC negotiation.

Before too much attention is given to the 12-million-barrel estimate, Mr. Chairman, let me point out that while we believe the amount reflects a best estimate of the imbalance for the Stevens zone, it was calculated based on DOE-provided statistics which, as I mentioned earlier, contained a number of inaccuracies. Further, Chevron pointed out in comments on our 1987 report that other producing zones at NPR-1 may have compensatory differences depending on their production and distribution percentages. Consequently, the actual total imbalance could be higher or lower than our estimate for the Stevens zone. We are pleased that DOE is trying to correct the production data inaccuracies. We are concerned, however, that DOE has taken the position that it is not necessary to adjust the accounts to deal with a production imbalance if a purchaser of the government's interest succeeded to the government's percentage participation share in production. DOE further states that the imbalance will reverse itself as the field is depleted. DOE points out that the purchaser's bid would reflect the value of the government's share of all unproduced oil including an offset for the alleged past production "imbalance" and no loss would accrue to the government.

However, we believe that the better way to ensure a fair and equitable settlement is for the government to obtain any revenues resulting from an imbalance now rather than including this along with other factors which may negatively impact on a buyer's bid.

We note that DOE has contracted with a petroleum engineering firm for a detailed reserve study. This effort is expected to be completed by August 1988, and result in an independent assessment of original oil in place, past production, and estimated remaining recoverable reserves. However, equitable resolution of the ownership of the remaining reserves--and therefore the amount available for sale--will require additional time after the study is completed.

IMPACT OF DISCOUNT RATES AND OIL PRICES ON NPR DIVESTITURE

Our last observation is primarily concerned with the effect of the discount rate and oil prices on NPR valuation and the timing of an NPR sale. In June 1986, we issued a report on our preliminary analysis of future net revenues from NPR-1 production.[2] In calculating alternative present values of the net revenues from this production, we found these values to be very sensitive to discount rates and to oil price forecasts.

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[2]Naval Petroleum Reserves: Preliminary Analysis of Future Net Revenues From Elk Hills Production, (GAO/RCED-86-169BR).

Discount rate

Selecting an appropriate interest rate for discounting in present value analysis has been the subject of some debate. For federal government investment analyses and decisionmaking, arguments have been presented for interest rates ranging from the cost of borrowing by the Treasury to rates of return that can be earned in the private sector of the economy. Because the rate applied has a direct effect on the results of an analysis, the choice of a rate can be very important.

In our June 1986 report, we used three different interest rates to calculate a range of possible present values for NPR-1 net revenues. GAO favors using the average yield on outstanding marketable Treasury obligations with remaining maturities comparable to the period of the analysis. We use this basis because we believe decisions concerning government investments or divestitures must be viewed economically from a government-wide perspective. Interest is a cost related to all government expenditures. Because most government funding requirements are met by the Treasury, the government's estimated borrowing cost is a reasonable basis for establishing the interest rate to be used in a present value analysis. As a consequence, our initial interest rate was the 7.5-percent rate that approximated the yield in early 1986 on long-term government securities maturing in 30 years.

To test the sensitivity of the present value calculation to changes in the discount rate, we used an 11-percent rate. This rate was Data Resources, Inc.'s (DRI), projection of the average yield on 30-year government securities under a high energy price scenario. We also used the 14-percent rate used by DOE which allowed for a 10-percent real rate of return plus a 4-percent inflation rate. Using DOE's production and cost forecasts and DRI's low, medium, and high oil price forecasts, we calculated that increasing the interest rate from 7.5 percent to 11 percent reduced the present value of net revenues an average of 24 percent over these price scenarios. Increasing the interest rate from 11 percent to 14 percent reduced the present value an average of 19 percent.

We are aware that a private sector bidder will likely have a different discount rate than the government, based on a higher opportunity cost of capital. We are currently examining the consequences of this difference for the Energy and Power Subcommittee and expect to report on the results of that work by spring, 1988.

Oil Prices

As DOE pointed out in its June 1987 divestiture report, the value of the NPR to both the government and to a prospective owner is heavily influenced by forecasted prices for the crude oil and other petroleum products produced.[3] This confirms what we found in calculating present values of NPR-1 net revenues under various scenarios in our June 1986 report. We also found that the forecasts themselves can be influenced by current market conditions. For example, forecasters are currently predicting lower future oil prices based in part on lower current market prices. We believe, therefore, that current prices and short-term market conditions will influence bidders' perceptions of the value of the NPR.

In our initial calculations of present values for NPR-1, we used DRI's oil price forecasts prepared in the spring of 1986 as our base. Using DRI's high price forecasts from 1987 to 2023, an 11-percent discount rate, and DOE's production and cost forecasts, we estimated that the net revenues of NPR-1 would have a present

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[3] Divestiture of the Naval Petroleum Reserves, (U.S. Department of Energy, June 1987).

value of $6.1 billion. To show the importance of the timing of a potential sale of the NPR in relation to perceived values, we substituted DRI's spring 1985 high price forecasts, which reflected the petroleum price outlook at a time when oil prices were considerably higher than in 1986. Using the 1985 oil price forecasts, a slightly higher forecasted 30-year bond rate as the discount rate (11.5 percent), and the same production and cost forecasts, we calculated a net present value for NPR-1 net revenues of $9.1 billion.

This view is further supported by our work in assessing the Department of the Interior's leasing of offshore lands.[4] In examining the relationship among several variables that influence the number of bids received and the prices offered, we found that as oil prices go down, there is a decrease in both the number of bids tendered and the per-acre price offered for the offshore tracts. Higher oil prices elicit more bids and higher bid prices.

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In summary, Mr. Chairman, the NPR is a valuable asset to the federal government with unique characteristics and, as such, prior to any sale, the government should ensure that

-- current, accurate reserve and production data are readily available to all potential bidders;

-- any differences over past production imbalances and ownership shares of remaining recoverable reserves are satisfactorily resolved with Chevron; and

[4]Early Assessment of Interior's Area-Wide Program For Leasing Offshore Lands, (GAO/RCED-85-66, July 15, 1985).

-- full consideration is given to the impact of (1) discount rates on the valuation of the reserve and (2) oil market conditions on the timing of a sale.

This concludes my prepared statement. Thank you for this opportunity to appear before you today. I would be happy to answer any questions you or Members of the Commission may have.