

DOE/RA/50351--1300-Vol.3

DE83 001362

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**CROW TRIBE  
SYNFUELS PROJECT  
FINANCIAL FEASIBILITY STUDY**

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## **1.0 INTRODUCTION**

The Crow Tribe of Indians ("The Crow" or "The Crow Tribe") has abundant natural resource wealth. Much of this is in the form of coal. The Crow have leased some of the coal reserves to Westmoreland Coal Company and Shell Oil Company in exchange for royalty income received when coal is sold. Softness in world energy markets and reduced consumption of electrical power has led to surplus coal capacity in western regions of the U.S. As a result, the demand for coal from these leases is soft and coal sales to outside parties are likely to remain at low levels for a long period into the future.

In order to obtain significant Tribal income from sales of coal, the Crow must look to the development of energy projects on the Crow Tribal lands which would use this coal. To explore the uses for Crow coal, the Crow Tribe has conducted two feasibility studies; the first, which has been completed prior to this report, was for an electric powerplant project to be built on the Crow Tribal lands. The major focus of this second report is on the likely financial structure and financial results under this structure of a major synfuels project on Crow land.

The availability of Federal Government financial assistance allows for a project financial structure which is different from that set forth in the electric powerplant feasibility study. To help the Crow Tribe members understand the difference in these structures, this report also explains the nature of project financing and how the financial structures proposed for the two projects differ.

## 2.0 EXECUTIVE SUMMARY

The Crow Synfuels Project is one of the largest synthetic fuels projects currently active. The project is projected to cost \$3.15 billion in construction costs with capitalized interest of \$518 million. Total financing requirements will be \$3.66 billion including inflation.

The economics and risks of the Synfuels Project are such that the Project needs both loan guarantees and price guarantees from the Synthetic Fuels Corporation in order to be viable. The Project cannot produce substitute natural gas (SNG) competitively at today's prices and needs a price guarantee to be viable.

A price guarantee at a 1982 price of \$6.75 plus escalation would yield a 27% rate of return under the assumptions used in this study. However, because of the risks associated with the project, investors might demand an even higher return.

With this level of price guarantee, the Project exceeds the \$3 billion funding limit of the Synthetic Fuels Corporation. Therefore, the Project as proposed is not feasible unless private non-guaranteed financing is available for the Project or if it is financed with substantially greater equity than the 25% contemplated in this study. Without increased private participation in the Project, only a substantially smaller project can meet the limits of the Synthetic Fuels Corporation guarantees.

The Synthetic Fuels Corporation currently has 14.9 billion dollars in authority and cannot fund numerous large projects. The Board of Directors has decided to seek a diversity of projects. This Project is very similar to the Great Plains Project in size and technologies utilized. As a result it might be difficult to receive government assistance for the Project even at a smaller scale.

Although this particular project cannot be funded readily under the Government loan guarantee and price guarantee program, the Crow Tribe has one of the premier sites for a synfuels project. A smaller project could be accomplished under the existing Government program. The Crow Tribe should take those steps necessary to set up the mechanisms to attract other, smaller projects to this site.

### **3.0 FINANCING A MAJOR ENERGY DEVELOPMENT PROJECT**

Funds are advanced to a project or an enterprise by investors who provide equity and potentially by lenders who provide debt. Lenders who might be such parties as insurance companies, corporations, individuals, pension funds or the Federal Government provide funds at a predetermined return which can be a fixed interest rate or which can float with market conditions. Lenders will only provide funds if, from the activity financed, a clear stream of cash flow results which can provide for debt service (i.e., cash will be available to meet required interest and principal payments). Consequently lenders will require that debt be senior, in terms of payment priority, to the equity. In the case of a project the debt holders will require a lien on the project such that in the event of a payment default (i.e., non-payment of interest or principal) the lender can foreclose on the lien and, through foreclosure, will own the project.

Equity investors do not have a predetermined rate of return. Their return varies with the actual enterprise or project results, after any debt payments are made. Once the debt is paid, the balance is available to the equity investor. In determining whether a project is suitable for investment, potential equity investors will examine the risks of the project to determine if the risk is acceptable. If the risks are acceptable, the potential investors will then examine the potential return or range of returns to see if it meets a required return, given the level of risk.

While the Crow Tribe has wealth in the form of natural resources, unless the Crow could sell some of these resources, capital necessary for resource development must come from outside sources. The Crow, for example, cannot borrow funds against their coal reserves. The reserves alone do not provide a stream of cash to the Crow Tribe with sufficient certainty that a lender would be assured that the debt will be repaid.

The Crow must therefore obtain the capital necessary for resource development from outside parties. This capital must be, in part, in the form of equity or risk capital which will be invested by private parties seeking a return on the capital. These investors, on their own behalf or because of the way in which the project is structured, might be able to borrow some or all of the funds to develop these resources.

To effectively deal with potential investors who will provide the financial resources to develop coal resources, the Crow must understand the available feasible financial structures, potential returns to both investors and the Crow Tribe and what risks must be borne by potential investors. Understanding these factors, which an investor will study in determining whether or not to invest, defines the latitude which the Crow Tribe has in negotiating successfully to accomplish such a project. The returns and risks which characterize this project are outlined in this study.

### 3.1 GENERAL FINANCING CONSIDERATIONS

There are two general approaches to financing a major project of the type anticipated in the case of either the electric power plant or the synfuels project. The first approach is where the project sponsors raise capital on their own account and provide that capital to construct and operate the project. In the second approach, the project itself is used as the basis for raising some of the project's capital requirements. In this case, which is called "Project Financing", funds are borrowed against the project's ability to meet debt payments.

In project financing, the project, including specific project assets, and not the general credit of a corporation, serves as the collateral for the loan. In this case the project would typically be financed with a mixture of debt and equity funds. The focus of this study is on project financing of the synfuels project.

In true project financing, the project sponsors are not liable for the debt in the event of a default. Instead, lenders look to underlying contracts to provide assurance of repayment. The nature of the contracts and the financial strength of the parties who agree to purchase the project's output provide the credit in the transaction. Typically these contracts must provide for revenues, or working capital contributions to the project, under all circumstances, in amounts sufficient to pay debt service.

Project financing has specific benefits for investors. It can allow the investor to raise more debt relative to equity than the percentage of debt that the investor normally has available in financing his own operations. This is because the lenders will look at the specific cash flow, together with the underlying contracts to measure how much debt the project can service. In the extreme, projects can be financed through all debt.

3.1 (Continued)

Other benefits of project financing which are important to sponsors include the manner in which the project is recorded on the sponsor's balance sheet, in contrast to the case where the project is funded directly. This would result if the project is sufficiently limited with respect to recourse back to the investor in the event of default.

3.2 ELECTRIC POWER PLANT PROJECT

During the course of the electric power plant feasibility study, representatives of the utilities associated with the project indicated that they were interested in participating in the project only to the extent that the utilities would not have to advance equity funds. Under such circumstances the project must be financed only with debt. The only manner in which such a project can be accomplished is if the utilities would be willing to agree to power purchase contracts which stipulate that the utilities will make payment for the power under all circumstances, even if the power is not delivered. The utilities would also be required to make payments sufficient to retire the debt and pay interest if the project is not completed. These contractual requirements are frequently called "Hell or High Water" provisions and serve in the place of equity.

Although the power plant feasibility study set forth this structure, subsequent events make it less likely that this form of project financing can be accomplished for the power plant project. After the power plant feasibility study was completed, the Washington Public Power Supply System terminated construction of certain nuclear power plants which were financed in this manner. These cancellations have made utilities reluctant to provide credit in the form of such contracts. Because certain issues of these contracts will be subject to litigation to determine the exact liabilities of all parties, this form of major project financing could be limited in the future. Depending on the outcome, either lenders or rating agencies might be reluctant to purchase or rate such debt issues, or alternatively, utilities might be reluctant to enter into this form of contractual relationship.



### 3.2 (Continued)

Project financing in the true sense is at this time not a likely feasible alternative for the power plant project. To accomplish this project the Crow Tribe will need to work with a lead utility which will put together an investor group for the project as a joint venture.

### 3.3 SYNFUELS PROJECT

Although a number of financial structures are possible for the Synfuels Project, the most feasible is one where the U.S. Synthetic Fuels Corporation (SFC) provides loan guarantees and price guarantees to the project. Under a Government guarantee, lenders will look to the Government, and not to the project, in the event that the project cannot meet repayment of interest and principal. The Government in turn, under these circumstances, will foreclose on its collateral, the project itself. Project sponsors can therefore achieve true project financing with a SFC guarantee. Under this form of financing the purchase contracts for the project output do not need to be as stringent as in the case of the power plant project. This is because the credit to lenders is the Federal Government's full faith and credit guarantee and not the strength of the purchase contract for the synthetic fuel. However, the Federal Government, in the form of the SFC as ultimate creditor, will seek to assure that sponsors in the project are at risk and that the project is financially viable. The degree of project strength represented by purchase contracts will be negotiated with the SFC.

Under the Synthetic Fuels Corporation enabling legislation, the SFC can only guarantee up to 75% of the project costs. The balance of the funds estimated to be on the order of \$750 million must be provided by private participants.

The private participant would normally provide funds in the form of equity. To make this Project attractive to potential equity investors, the SFC would need to structure a transaction which provides sufficient return with limited risk to the equity investor. The Crow Tribe would also need to provide sufficient comfort to investors that the Project, as it might be proposed to the SFC, will be permitted to proceed as planned.

#### **4.0 REQUIREMENTS FOR PROCEEDING WITH THE PROJECT**

To accomplish a major energy project, the financial activities can be divided into four major time phases. In the first phase, the potential project sponsors study the financial and economic feasibility of the project. Once feasibility is determined and the sponsors decide to proceed, the second phase includes establishing the management organization of the project, identification of additional sponsors, if necessary, identifying lenders and obtaining financial commitments. This can proceed in tandem with detailed engineering and refining the cost estimates. During the second phase, the sponsors begin to order equipment with long lead times for procurement. In the third phase, construction and startup take place with the activities of the project monitored to anticipate cost overruns and delays. In the final phase the project commences operations and generates revenues.

As the project passes through each phase, the financial requirements increase. For the Synfuels Project, at the first phase the sponsors will spend \$5 to \$15 million. At the second phase, before construction is started, at least \$50 to \$100 million will be spent. To complete design and construct the project a total of approximately \$3 billion will be spent. The requirements for funds to be spent in this manner is a major obstacle for the project. The sponsors must spend in excess of \$50 million before they know with any certainty what the project will cost. Before the \$50 million is spent the sponsors will insist that they have clear rights to the project site and the relationship with the Crow Tribe is fixed. This means that all approvals and agreements will have been negotiated with the Crow Tribe in a manner such that the approvals and agreements cannot be reversed.

#### **4.1 OBTAINING EQUITY SPONSORS**

Current softness in energy markets and the perception that oil prices will not increase as rapidly as previously forecasted, have reduced industry interest in constructing major new energy projects. A large number of planned synthetic fuels projects have been cancelled or postponed. In addition, the massive synthetic fuels program envisioned in the Energy Security Act is evolving into a much more modest program where only a few projects of the size of the proposed Synfuels Project will be constructed.

4.1 (Continued)

These negative factors must be balanced by the fact that the Crow Tribal Lands and the control of the Crow Tribe over land, coal, and water make this one of the most attractive potential sites for a major power plant or synfuels project.

However, because of the slowdown in interest in synthetic fuels, potential project sponsors will weigh the attractiveness of the site versus other sites and consider what will be perceived as problems in dealing with an Indian Tribe. These problems particularly will center around tribal sovereignty and the ability of the Tribe to be sued.

In constructing and operating a project on Crow Tribal land, potential investors and lenders to the project will insist that the economics of the project and the ability to proceed with the project will not be altered by actions of the Crow Tribe, subsequent to the commencement of the second phase of activities previously outlined above. The details of accomplishing this are addressed in the legal study. However, to be successful in attracting a group of equity investors, the Crow Tribe must address the actions which the Tribe needs to take to make this project attractive to potential project sponsors at the end of this feasibility study.

The Crow Tribe needs to take the necessary steps in advance of negotiating with potential sponsors. These consist of: (1) establishing the legal framework for negotiating, approving and signing agreements which cannot be reversed by subsequent unilateral Crow Tribe action and allowing the Crow Tribe to be sued under these agreements; (2) establishing a legal mechanism where the Tribe agrees not to impose any subsequent tax on the project; and (3) establishing the manner in which the Tribe would be willing to participate in the project.

#### **4.2 ISSUES OF FINANCIAL RETURN AND PROJECT CONTROL FOR THE CROW TRIBE**

The issues of Crow direct financial returns and hence tribal revenues received directly from the project are a matter of negotiation. In viewing the benefits of any resource development project, the Crow must take the point of view of a government and not a private investor and examine the overall economic effects of the project on the people of the tribe.

Municipal and state governments frequently subsidize real estate purchases and provide tax abatements in order to attract businesses to their locality to obtain the benefits of development and employment. The Crow, in examining how it can make a major coal project attractive to outside venturers, need to consider the value of infrastructure development and the indirect effects on tribal members of employment, local business revenues and infrastructure development.

This financial study only addresses the economics of the Synfuels Project and does not address overall benefits to the Crow. To understand those benefits this financial report must be examined in conjunction with the sections of the study dealing with socioeconomic impacts.

Because of the size of the financial requirements necessary to accomplish this project, the Crow Tribe will not be able to exercise the degree of control that the Tribe might desire in developing Crow Tribe natural resources. This is particularly true at this point in time. In the current environment energy properties have changed dramatically from a "sellers market" to a "buyers market".

In this context, the proposed Synfuels Project will be perceived as very risky for investors even with the Government's financial assistance. In exchange for bearing this risk, investors will want to receive all available financial returns until at least their required rate of return is realized. Most of these returns in the early years are in the form of tax benefits (deductions and credits which reduce taxes on other income) which cannot be utilized by the Crow Tribe.

The returns to the Crow Tribe are royalties on the coal, and payments for leasing the land and providing water rights. The amount of the payments for land and water are

#### 4.2 (Continued)

negotiable. It might also be possible to negotiate some form of long term net profits interest which would allow the Crow Tribe to share directly in the profits from the plant but only after the equity investors realized their expected return on investment.

Ultimate control by the Crow Tribe over the project will most likely be in the form of renewal provisions for the land and water agreements at the end of the nominal plant life. Careful negotiation of these provisions could allow the Crow Tribe at that point in time to be a significant owner and exercise major control over the project.

#### 4.3 STUDY OF JOINT POWER PLANT AND SYNFUELS PROJECT

Although the studies of the power plant and the Synfuels Project have been conducted separately, if either project were to proceed, it could dramatically enhance the economics of conducting the second project if both are constructed in tandem or sequentially. This results from two principal project savings. The first is that the infrastructure would be shared depending on the sites chosen. The second reason is that the synthetic fuels technology proposed cannot utilize coal fines. In the case of the synfuels plant, coal costs can be significantly higher if the fines are mined and cannot be sold economically. Sufficient engineering data is not available to examine the infrastructure savings achievable under both projects. However, at minimum the Project could be examined in terms of purchasing electricity and without a penalty for unutilized coal fines. This would involve some limited additional engineering cost analysis. This would then provide an assessment of the synfuels project, assuming that the power plant is built in a location where offsite facilities are not shared.

## **5.0 AVAILABLE FEDERAL FINANCIAL ASSISTANCE FOR SYNTHETIC FUELS**

### **5.1 ENERGY SECURITY ACT**

The economics of the Synfuels Project are such that the Project requires financial assistance from the SFC. The Government synthetic fuels program is currently embodied in the SFC which was authorized and established by the Energy Security Act passed in July 1980. Funding for the SFC is provided through Public Law No. 96-126 and a series of subsequent clarifying appropriations acts. The Energy Security Act provides specific forms of authority for providing financial assistance and sets goals and priorities for the SFC, which in some cases are conflicting.

The SFC may provide successful applicants with assistance in the form of price guarantees, loan guarantees, purchase commitments, direct loans and joint ventures. Additionally, the SFC has the authority to contract to construct and operate, for its own account, up to three SFC owned synthetic fuels projects. The law clearly sets priorities which stipulate that price guarantees, loan guarantees and purchase commitments are more attractive to the Government than direct loans. Providing an applicant with a direct loan, in turn, is given a higher priority than entering into a joint venture with a project sponsor. A project may be constructed directly by the SFC only if no acceptable financial assistance proposals are forthcoming. Potential sponsors and the SFC Board of Directors have focused on loan guarantees and price guarantees as the probable form of assistance which will be granted.

The maximum total financial liability of the SFC to a single project at any point in time is \$3 billion. This would include any past payments to the project. This \$ 3 billion limit includes awards made in the form of a single incentive type or more than one type of incentive such as a loan guarantee and a price guarantee provided to the same project. The authorizing legislation also provides that each contract for financial assistance specify the maximum liability of the SFC with respect to that individual award.

Projects receiving more than one form of financial assistance must meet a higher standard than those requesting a single form of financial assistance. The

## 5.1 (Continued)

Board of Directors of the SFC must determine that more than one form of financial assistance is required for the viability of that project, and further, that the specific project is necessary to achieve the purposes of the Energy Security Act.

This study anticipates that the Project will request two forms of financial assistance: loan guarantees to finance construction and product price guarantees following start-up. The loan guarantees are required to reduce the completion and performance risks in the project during the construction phase and to supplement the price guarantee during the operating period. Subsequent to construction, price guarantees assure a specified minimum price level.

### 5.1.1 Loan guarantees

The SFC has the authority to guarantee 100% of the principal of loans approved by the SFC. Such guarantees cannot exceed 75% of the initial estimated cost of the project. The SFC also has the authority to finance cost overruns beyond the amount of the total project cost specified in providing the initial award, but at a decreasing percentage of the amount of the overrun. The SFC can finance, through loan guarantees, up to 50% of cost overruns over the initial total estimated cost, provided that the revised total estimated cost does not exceed 200% of the initial cost. Once the revised cost exceeds 200% of the initial estimated cost, the SFC may finance only up to 40% of the additional overrun. If the overruns exceeds 250% of the initial estimated cost, the SFC may not provide any additional loan guarantee authority to the project unless the SFC indicates its intent to Congress and Congress does not disapprove this action.

Loan guarantees made by the SFC are full faith and credit guarantees. A full faith and credit guarantee is important to lenders in that the Federal Government is the ultimate creditor, beyond the SFC. The Energy Security Act further provides that the guarantee cannot have a maturity of more than 30 years, or the useful life of the synthetic fuels project, whichever is less. The enabling legislation also provides that a loan guarantee can be made to one and not all of the Project's sponsors.

### 5.1.1 (Continued)

An issue which was raised in the negotiation of loan guarantees with Tosco and the Great Plains Coal Gasification Project is that of the non-recourse nature of the loan guarantee and its effect on the risk of the Project sponsors. A recent Fifth Circuit Court of Appeals Case held that forgiveness of indebtedness income, in the event of a defaulted non-recourse loan, would be limited to the value of the collateral. This implies that Project sponsors can effectively receive the tax benefits of a project and avoid recapture of most or all of the tax benefits. This would occur if default occurs past the 5 year recapture period for tax credits which also is the depreciation period for most of the Synfuels Project's assets.

In order to keep the project sponsors at risk throughout the project life, the Department of Energy sought and received from Tosco a lien on assets beyond those of the Colony Project. The partners of the Great Plains Project provided for recourse by DOE to the Project sponsors, under specific circumstances, of an additional \$100 million in the event of default.

Under the loan guarantees to the Great Plains Project and to Tosco, the Department of Energy received a first and prior lien on all project assets. The second SFC solicitation includes a willingness to engage in co-financing under which private non-guaranteed lenders would presumably share in the project collateral.

### 5.1.2 Price Guarantees

The SFC is also authorized to enter into price guarantees. The law requires that price guarantees cannot be based on a cost-plus arrangement or any variation thereof which guarantees a profit to the project. The law specifically excludes a cost of service tariff from the definition of cost-plus types of loan guarantees. SFC is also required, in awarding price guarantee contracts, to establish a specified sales price at the level which would provide the minimum subsidy determined by SFC to be necessary to provide adequate incentive for the project.



### 5.1.2 (Continued)

The law provides that the SFC may require, as a condition of providing the price guarantee, that the SFC share in the profits of the project on a fair basis in awarding price guarantees. The Energy Security Act requires that any price guarantee include a provision to the effect that "the price guarantee or purchase agreement shall be subject to review and possible renegotiation within 10 years from the date of initial production by the synthetic fuels project, at which point the SFC shall specifically determine the need for continued financial assistance pursuant to such price guarantee or purchase commitment".

### 5.1.3 Purchase Agreements

Although the Energy Security Act gives the SFC the authority to enter into a purchase agreement, the effect of the act is that purchase agreements are similar to price guarantees. This results from a requirement that, under the legislation, the purchase agreement or commitment must provide that the SFC retain the right to refuse delivery of the synthetic fuel under such terms and conditions as will be specified in the purchase agreement. This contractual right to refuse delivery means that the SFC can effectively guarantee only price and not the market for the fuel.

Purchase agreements could be available from the Department of Defense or other government agencies with the price guaranteed by SFC. However, no government agency including the Department of Defense purchases natural gas on a centralized basis. Purchase agreements are not an option for this project.

### 5.1.4 Direct Loan Authority

In addition to loan guarantees the SFC is authorized to enter into direct loan agreements for a synthetic fuels project. Such loans have similar provisions to those of the loan guarantee authority except that direct loans are further limited to the lesser of 49% of the initial total estimated project cost or not more than a minority financial interest in the project, unless the Board of Directors of the SFC determines that the borrower has satisfactorily demonstrated that such limits would prevent the financial viability of the proposed project and therefore additional loan assistance is necessary.

#### 5.1.4 (Continued)

A direct loan would not necessarily be issued at an interest rate lower than that of a loan guarantee. Each loan is required to bear interest at a rate determined by the SFC taking into account the needs and capacity of the recipient and prevailing rates of interest. However, the law provides that such interest shall not be less than rates determined by the Secretary of Treasury, taking into consideration current yields on outstanding obligations of the United States.

The disadvantage to the SFC of a direct loan is that, when the SFC makes a direct loan, the amount counts as a budget outlay for the Government, contributing to the Federal Budget deficit. Loan guarantees do not count against the Federal Budget unless a payment is made against a defaulted loan.

#### 5.1.5 Joint Ventures

Joint ventures by the SFC are restricted to a synthetic fuel project module which (1) demonstrates the commercial feasibility of the technology; and, (2) can at the same time be expanded into a synthetic fuel project. The law further states that the initial contract may provide for purchase, pursuant to such joint venture agreement, of the equity interest by the project sponsor at an interval not to exceed 5 years after the date of operation. The law also provides that the SFC can not finance more than 60% of the total cost of the synthetic fuel module as estimated by the SFC as of the execution of the joint venture agreement.

The Synfuels Project would not be eligible for assistance under the joint venture approach, in that it uses technology which has been demonstrated in South Africa at the Sasol Plants and which is currently used in the Great Plains Project now under construction.

## **5.2 SYNTHETIC FUELS PROJECTS RECEIVING FEDERAL FINANCIAL ASSISTANCE**

Three synthetic fuels projects have been assisted by the Federal government. The terms and conditions under which each project received financial assistance has a bearing on the likely financing structure for the synfuels project.

Two of the Projects, the Union Oil Shale Project and the Tosco-Exxon Colony Project were funded under the Defense Production Act Amendments in the Energy Security Act. These amendments were provided to allow DOE to begin providing assistance to projects before the SFC became an operating entity.

The third project is the Great Plains Project which was financed under a separate law, the Federal Non-nuclear Research and Development Act. The Synfuels Project is similar to the Great Plains Project in size, technology and operations.

### **5.2.1 Union Oil Shale Project**

#### **5.2.1.1 Project Description**

The project is located in Garfield County, Colorado, and is adjacent to the now halted Exxon/Tosco Colony Project. Union Oil will conduct on-site underground room and pillar mining, retorting of the shale and upgrading of the shale oil. Project output will be in the form of upgraded syncrude, suitable for pipeline transportation and as refinery feedstock. This project was approved by the Department of Energy but was transferred to the SFC.

The project is in two phases, as follows:

Phase I - began construction in October 1980 and is scheduled for completion in 1983. Phase I consists of mining 12,500 tons per day of shale and producing 10,000 barrels per day of upgraded syncrude from a single retort. Phase I is estimated to cost \$500 million in 1980 dollars.

Phase II - will begin construction in 1983 and will be completed in 1988. The second phase will add four additional modules for a 50,000 barrel per day total output. Phase II is estimated to cost an additional \$1.5 billion in 1980 dollars.

#### 5.2.1.2 Contract Structure

The contract is in the form of a purchase agreement whereby the Department of Defense purchases refined products in the form of jet fuel (JP-4) and diesel fuel (DF-2 and DFM) from Union Oil in relationship to the output of upgraded shale from the project. The Department of Energy (DOE) pays a price guarantee to Union from funds appropriated to the Energy Security Reserve.

#### 5.2.1.3 Contract Pricing Terms

##### Major terms of the contract are:

- (1) Total payments to Union will not exceed \$400 million.
- (2) Union agrees to supply 9,900,000 bbl (247,000 bbl/quarter) of JP-4 and 23,100,000 bbl (577,500 bbl/quarter) of DFM and DF-2 to DOD.
- (3) DOD pays market price.
- (4) DOE will pay price differential payments on a quantity up to 20,000,000 barrels although the purchase contract is for 33,000,000 barrels.
- (5) Differential payments are computed on the difference per barrel of a reference price and a market price.
- (6) Reference price is a base price of \$42.50 per barrel adjusted for an index of 75% GNP deflator at a base date of June 30, 1981 and 25% of the indexed cost of natural gas to public utility generating plants with a June 30, 1981 base.
- (7) Market price is defined as 30% of the JP-4 price and 70% of the average price of DFM and DF-2.
- (8) Sales of refined products will be for 10 years through 1993, although the price support period will last only through 1990.
- (9) In any month where the market price exceeds 125% of the reference price, the difference between market price and 125% of the reference price will be paid back by Union to DOE.
- (10) DOE will maintain repayments in an escrow fund to be used for future payments or for commitment, together with any unpaid balance of the \$400 million for Phase II, as might be agreed in the future.
- (11) Repayment will only be required through the price differential period (through 1990) or as otherwise defined.

5.2.1.4 Commitments by Union

Union commits to perform the second phase subject to:

- (1) Meeting design capacity of the initial module.
- (2) Realizing a 15% real rate of return.
- (3) Availability of non-recourse financing on competitive terms.
- (4) No legal or regulatory barriers.

5.2.1.5 Default and Termination

The agreement may be terminated by the mutual written consent of Union and DOE.  
DOE may unilaterally terminate agreement if:

- (1) Union fails to complete construction of the synthetic fuel production facility by April 1, 1984. Construction is completed when the higher of the following expenditure is reached: \$500 million; the facility on or after January 1, 1984;
- (2) For any 24 month period beginning July 1, 1984 less than 300,000 barrels are shipped.
- (3) Union fails to deliver products on a timely basis (e.g. 60 days);

Union may terminate agreement if:

- (1) DOE fails to make price differential payments 30 days after due;
- (2) Construction delays by reason of force majeure shall extend the April 1, 1984 due date; or,
- (3) Force majeure includes delays directly related to the transportation of major components being uniquely manufactured for the synthetic fuel production facilities.

Union will front-end finance a new school by creating a non-profit corporation to sell tax-exempt bonds guaranteed by Union. Lease payments are based on revenue from a \$4 million levy on the assessed valuation of Union's Phase I Shale Oil Project.

Union is required to see that housing is available when needed for at least 80% of its workers.

**5.2.1.6 Community Impact Assistance**

**5.2.2 Colony Oil Shale Project**

**5.2.2.1 Project Description**

This Project has recently been cancelled by the Exxon Corporation. The Project was to be located in Garfield County, Colorado and is adjacent to the Union Oil Shale Project. The Project employs underground mining, surface crushing and retorting, on-site hydrotreating of crude shale oil, and pipeline transport to Utah for further movement through common carrier crude pipelines to the Southern U.S. The product output is premium refinery feedstock (principally jet and diesel fuel). Plant construction began in 1980; 75% capacity was expected by late 1986 (full capacity is 48,300 barrels/stream day). The partners were:

Oil Shale Corporation (40%) - a wholly owned subsidiary of Tosco Corporation.

Exxon Corporation (60%) - Exxon did not seek Government financial assistance.

**5.2.2.2 Contract Structure**

**Purchase Agreement major contract terms were:**

- (1) Purchase commitment is for 10 years dated from plant startup;
- (2) Oil Shale agrees to supply 2,000 barrels/day of JP-4 and 8,000 barrels/day of DFM to DOD; and
- (3) DOD pays market price.

**Loan Guarantee Agreement major terms were:**

- (1) The government will guarantee 75% of Oil Shale's 40% interest or \$1.112 billion. Oil Shale will provide the remaining 25% in the form of an equity contribution or \$0.371 billion.
- (2) Maximum government liability is \$1.232 billion.
- (3) Tosco will fund Oil Shale's share of Project costs up to \$0.371 billion.
- (4) Tosco will fund reasonable cost overruns and will provide DOE with quarterly and annual financial reports.

#### 5.2.2.2 (Continued)

- (5) A Project Fund to handle the proceeds from the sale of indebtedness is to be established, and monitored according to a disbursement milestone schedule by the Debt Servicing Agent (DSA).
- (6) The government is to have unlimited access to Oil Shale's records to sufficiently monitor the agreement.

#### Technology Agreement major terms were:

- (1) All inventions, technology, and other proprietary rights developed under the Project are the property of the borrower;
- (2) All of the technology interests (including licenses) of Oil Shale and Tosco in the above are collateral for the reimbursement obligations under the Guarantee commitment; and,
- (3) Oil Shale must surrender all proprietary rights in the event of default to anyone who completes and operates the Project, and provide them on equitable terms to the Government (even if no default occurs) for the purpose of developing similar projects.

#### Operating Agreement major terms were:

- (1) If Oil Shale fails to provide its share of funds in a timely manner, Exxon may "cover" the cash call. Exxon shall be reimbursed at an annual interest rate of 125% of the prime rate.
- (2) No disbursements from the Project Fund may be made to Oil Shale at any time it relies on covered funds.
- (3) Oil Shale may not make any payments to Tosco until 75% of production capacity is reached, and then only if funds have been set aside to service the repayment of principal and interest due for the following 12 month period.

#### 5.2.2.3 Default and Termination

Collateral pledged is in excess of project's collateral. All of Oil Shale's venture rights, capital, inventions, and proprietary interests are pledged along with some of Tosco's additional real property.

### 5.2.2.3 (Continued)

#### Termination (by DOE) events are:

- (1) Failure to achieve defined termination milestones;
- (2) A fundamental change in the project (e.g., a change in product);
- (3) If Oil Shale project participation is reduced to a level where in DOE's opinion Oil Shale may not service its debt obligations;
- (4) A default is not cured within 60 days; and,
- (5) In failure to meet termination milestones, DOE will allow for events beyond the control of the borrower (i.e., project schedule dates).

### 5.2.2.4 Community Impact

The Colony Oil Shale Project is committed to building a new community called Battlement Mesa. It will accommodate a population influx roughly twice that anticipated from the operation of the project.

### 5.2.3 Great Plains Gasification Associates

#### 5.2.3.1 Project Description

In size, technology used and operations, the Great Plains Project is almost identical to the proposed Synfuels Project. The Project currently under construction is located in Mercer County, North Dakota. Great Plains Gasification Associates ("GPGA") will use approximately 14,000 tons per day of lignite to produce:

137.5 million cubic feet/day (equivalent to 21,000 barrels oil/day);  
93 tons/day of ammonia;  
85 tons/day of sulfur; and  
200 million cubic feet/day of CO<sub>2</sub>.

GPGA has 125 million recoverable tons of lignite under contract and plans to start production late in 1984. American Natural Gas (ANG) Coal Gasification Company (a subsidiary of ANR) is the project manager. A subsidiary of Pacific Lighting Corporation is an investor in the Great Plains Project.



### 5.2.3.1 (Continued)

The gas is to be marketed through an interstate network of gas pipelines with some of the partners having pipeline affiliates. An additional 35 mile pipeline may need to be built from the facility to the interstate pipeline network.

### 5.2.3.2 Project Costs

	<u>Government Guaranteed Debt</u>	<u>Sponsor Equity</u>	<u>Total</u>
Estimated Project Cost	\$1,500	\$500	\$ 2,000
Overrun Contingency	400	200	600
Pipeline Contingency	<u>120</u>	<u>40</u>	<u>160</u>
	<u>\$2,020</u>	<u>\$740</u>	<u>\$ 2,760</u>

### Estimated Construction Expenditures (millions)

<u>Plant Mine</u>	<u>Total</u>		
Through 1981	\$ 270	\$ 30	\$ 300
1982	560	40	600
1983	560	40	600
1984	<u>460</u>	<u>40</u>	<u>500</u>
	<u>\$ 1850</u>	<u>\$150</u>	<u>\$ 2000</u>

### **5.2.3.3 Loan Guarantee Contract**

#### **Loan Guarantee Contract major terms are:**

- (1) Construction funding increments have differing requirements for the percentages of debt and equity (For example, the first billion dollars is funded by 70% debt and 30% equity, and the second billion dollars is funded by 80% debt and 20% equity);
- (2) Pipeline costs are to be financed by 75% guaranteed debt and 25% equity;
- (3) GP GA's equity must not be less than 25% of capitalization;
- (4) DOE determines the timing and the ratio of the amount of guaranteed debt drawn down with respect to equity on a dollar for dollar basis; and,
- (5) The guaranteed debt repayment of each issue is not to exceed 20 years or 90% of the expected useful economical life of the Project's major physical assets, whichever is higher.
- (6) The borrower shall submit a project management plan acceptable to DOE and shall also execute a project monitoring agreement with DOE.
- (7) Limits on partner distribution are imposed to maintain equity at 25% of capitalization and the amount is limited to "available cash."

#### **5.2.3.4 Federal Energy Regulatory Commission (FERC) Tariff**

The tariff provides for guaranteed sale of project substitute natural gas (SNG) to pipeline customers after project completion. In conjunction with the tariff, a FERC order assures the pipeline customers of their ability to flow through the contract prices to their customers.

#### **5.2.3.5 Gas Pricing Formula**

The tariff provides for a guaranteed price. The SNG is sold to pipelines at \$6.75/million btu plus quarterly escalations based on an average of the escalation of the Producers Price Index and the escalation of #2 Fuel Oil.

However, after commencement of operations the price cannot exceed:

- (1) During the first five years, the price of #2 fuel oil unless such price is regulated.
- (2) During the sixth through tenth years of operation, the higher of the average prices paid by the pipeline affiliates for the highest priced 10% of domestic natural gas or for Canadian and Mexican gas, but in neither case higher than the unregulated price of #2 fuel oil.
- (3) During the remaining life of the 25-year agreement, such domestic natural gas prices unless such prices are then regulated in which case the Canadian and Mexican price will set the ceiling.

#### **5.2.3.6 Default and Termination Provisions**

##### **Principal default and termination provisions are:**

GPGA can cease making equity payments if, due to governmental, legislative or judicial action, it believes projected first full year operating revenues will be less than \$300 million, or if GPGA estimates total Project costs to exceed \$2.64 billion.

In the event of termination, the loan is secured by the first and superior lien on all of the assets of the Project.

**5.2.3.6 (Continued)**

In the event of termination, all patents, technology, and inventions necessary to operate the Facility are available to DOE.

DOE has the right to seek up to \$100 million of payments from the project sponsors, under specified circumstances, in the event of default.

**5.2.4 Applicability to Crow Project**

The Great Plains Project is identical in size, technology and products to the proposed Synfuels Project. However, it is not likely that the Synfuels Project at this time can be financed in the same way in which the Great Plains Project was accomplished.

The Great Plains Project received a FERC tariff for the SNG. This tariff was issued by FERC under its general authority to provide incentives for research and development.

The original tariff was granted before the DOE program was funded. It had provisions which acted like the "Hell or High Water" power plant agreement where the gas customers would pay almost all costs even if the project were abandoned.

These provisions were opposed by a group of intervenors who successfully opposed the project through the judiciary process. The tariff was reviewed by an Appeals Court, after the DOE program had been funded. The Appeals Court found that Congress's intent in passing the Energy Security Act was that the government through the DOE or the SFC bear the risk of project failure.

5.2.4 (Continued)

The FERC could, however, under the Research and Development order, provide a tariff that would be effective after the plant was in operation.

Because the FERC tariff for the Great Plains Project is specifically for research and development it will be difficult to present a tariff application arguing that an identical project also needs similar assistance to encourage research and development. Consequently, to the extent that the project needs a price guarantee in addition to a loan guarantee, this price guarantee would most likely be available through the SFC.

A pricing methodology for a price guarantee agreement could be structured for the Synfuels Project similar to that of the Great Plains Project. The major differences between the guarantee that the FERC granted the Great Plains Project and what is available by law under the SFC are the requirement for review and possible renegotiation in 10 years by the SFC and the requirement that the SFC price guarantee fix in advance the maximum amount of assistance available. The Great Plains Project tariff allows the purchaser to roll in, or average, the SNG with other purchased gas. The tariff has no limit on payments over other gas costs and the price guarantee is available for the life of the Project.

Both of these differences are potential drawbacks to the Synfuels Project. The Project sponsors must take the risk that sufficient funds are available, as needed, and that, if necessary, price guarantees are available beyond the 10 years period. Depending on how the transaction is structured, the loan guarantee might protect the sponsor past the 10 year period. However, unless the loan guarantee agreement provides for continued project ownership when the funds required for price guarantees are depleted, the Project could be faced with default under the loan guarantee and through foreclosure the Project would become the property of the Synthetic Fuels Corporation.

The SFC staff and board members, through policy statements, have indicated that the form of the price guarantee they are willing to provide is similar to that granted by DOE to the Union Oil Shale Project. Under this guarantee, the Project would receive

#### 5.2.4 (Continued)

payments only for the amount of the SNG gas produced. The amount paid would be tied to the performance of two indices, one which measures market price and the other which bears a relationship to changes in the cost of producing the SNG.

### 5.3 ACTIONS TO DATE OF THE SYNTHETIC FUELS CORPORATION

The Synthetic Fuels Corporation ("SFC") was established as an independent Federal entity under the Energy Security Act (Public Law 96-294) on June 30, 1980. The Energy Security Act established a ceiling of \$20 billion for financial awards by the SFC and related DOE programs, although the ceiling could be raised to \$88 billion after 1984. Of the \$20 billion authorized, \$17.2 billion has been appropriated to synthetic fuels projects. The SFC directly received \$12.2 billion in funding and also received the balance of uncommitted funds from the \$5 billion originally made available to DOE. The SFC currently has total funds available of \$14.9 billion. Studies are currently being conducted by the SFC to determine if the approximately \$1 billion which was committed to the Colony Shale Oil Project, which was cancelled, can now be made available to other projects from the SFC appropriations.

#### 5.3.1 Solicitation Process

The SFC issued an initial solicitation for project proposals with the deadline of March 31, 1981 for submission. A total of sixty-three (63) projects responded to that initial solicitation. A second solicitation was set with a deadline of June 1, 1982 for additional proposals. Of those projects, two from the initial solicitation have proceed through the SFC review and are in the point of final negotiations. A total of nineteen projects which responded to either or both of the first and second solicitations are currently under active review by the SFC. Although the Energy Security Act requires that the solicitation process be competitive, the SFC has determined that the competition shall consist of the projects being screened against two sets of selection criteria.

### **5.3.2 Project Selection Criteria**

The Synthetic Fuels Corporation selection process first subject the Project to maturity criteria. These criteria are shown in Exhibit 5.3.2-1. Maturity criteria attempt to measure if a project is developed to a degree where there is sufficient information to determine if a larger commitment is warranted. Project maturity criteria are criteria similar to that which might be used by a project sponsor in making a decision to proceed beyond a feasibility study. The second set of criteria measure project strength. These are shown in Exhibit 5.3.2-2. The project strength criteria are intended to measure the viability of the project in terms of its management capability and technical soundness to operate as designed. Project strength also measures the contribution that this project will make to subsequent energy development through project or technological replication and the amount of financial assistance that the SFC must provide in order to accomplish the proposed project.

#### **EXHIBIT 5.3.2-1**

#### **SYNTHETIC FUELS CORPORATION**

#### **Project Maturity Criteria**

- 1) Rights to the plant site have been secured with no material encumbrances during the term of the proposed financial assistance;
- 2) Comprehensive financial viability and technical feasibility studies of the project have been completed;
- 3) The design work is sufficiently advanced that costs can be estimated with a high degree of accuracy during Phase II;
- 4) Access to necessary resource (feedstock), utility and water inputs has been obtained;
- 5) Rights to key technologies have been secured;
- 6) The estimated amounts and terms of commitments of each sponsor to the project have been outlined;
- 7) Permits are either in hand or can realistically be obtained on a schedule that would permit the project to begin construction upon the receipt of assistance from the SFC.

EXHIBIT 5.3.2-2  
SYNTHETIC FUEL CORPORATION

Project Strength Criteria

- 1) Technological soundness, including an examination of technology selection, data base, operating history, project design basis and philosophy, project operating basis and philosophy, cost basis and owner's risk perception;
- 2) Potential for replication;
- 3) Management capability;
- 4) Economic viability, including an examination of project viability, sponsor commitment and the forms of financial assistance sought;
- 5) Product marketability;
- 6) Regulatory compliance, including environmental, health and safety and regulatory acceptability, socioeconomic impact, water availability and quality and labor force.



### **5.3.3 Available Financial Resources**

The SFC currently has \$14.9 billion of total budget authority. This authority can be used in any of the forms of financial assistance that were described previously. The total financial exposure of any one project is counted against this total amount and is not available for other projects. If a project receives both loan guarantees and price guarantees the maximum exposure by the SFC under the combined forms of assistance must be set aside for each project.

At a recent board meeting, the Synthetic Fuels Corporation set an allocation of \$10 billion of its funds as follows: the first \$6 billion would be available for coal liquification and gasification as is proposed for the Synfuels Project. A total of \$3 billion would be allocated to oil shale and an amount of \$1 billion would be available for heavy oil and tar sands. The remainder of the \$4.9 billion would be allocated later and might be used to fill in amounts necessary to demonstrate a broad range of technologies in any of the previous categories.

### **5.3.4 Likelihood of Receiving Financial Assistance**

The Synthetic Fuels Program was originally conceived as a massive effort to result in production of 2 million barrels of oil equivalent per day by 1992. This would be equivalent to 100 projects of the size of the proposed Synfuels Project operating by 1992. The program was to begin with an initial \$20 billion. An additional \$68 billion was to be available after the SFC had studied how best to accomplish the goals of the legislation.

Only a portion (\$17.2 billion) of the initial funds has been appropriated. Of this amount \$14.9 billion is currently available with \$6 billion currently allocated for coal gasification and liquefaction projects. Each project of the size contemplated here is likely to seek the maximum limit available \$3 billion per project. This indicates that very few large projects will be initially funded by the SFC.

The SFC has determined that technological diversity should be a principal goal of its early activities in contrast to large production goals. The fact that the Great

5.3.4 (Continued)

Plains Project is virtually identical to the Synfuels Project suggests that this Project might be considered of less importance to achieve overall diversity of technologies.

An alternative project mode is examined in this feasibility report where methanol and SNG are jointly produced. Methanol can be sold, as produced, or used as the feedstock for synthetic gasoline through the Mobil M process. The Hampshire Project, a somewhat similar project to both the Synfuels Project and the Great Plains Project, but which makes gasoline, is currently under active consideration by the SFC. In the event that the Hampshire project is not funded by the SFC, the SFC should favorably consider a project co-producing synthetic natural gas and methanol (or gasoline).

## **6.0 CROW SYNFUELS PROJECT FINANCIAL STRUCTURE**

The following sections of this study examine the Projects' potential returns and risks. The conclusions drawn are that the project needs financial assistance from the Synthetic Fuels Corporation to make the project financially viable.

Because of the priorities set in the Energy Security Act, this assistance is most likely in the form of loan guarantees, price guarantees or loan guarantees in conjunction with price guarantees. An examination of the financial characteristics of the project in today's energy pricing environment suggests that the project needs price guarantees, at minimum, for the project to be financially viable. The risks of a project of this magnitude are such that only the largest few corporations in the United States have the financial resources to conduct a project of this magnitude without government loan guarantees.

This section of the study discusses the organizational options available to project sponsors and financial assistance in the form of price guarantees only with private financing of the project and financial assistance in the form of loan guarantees and price guarantees.

### **6.1 FINANCIAL STRUCTURE OPTIONS**

The Project organizational structure options are principally determined by the tax benefits of the Project. If the Project is financed on a non recourse basis with a government guarantee, the interest deductability contributes to the tax benefits without liability for the debt appearing on the firms' financial statements.

#### **6.1.1 Tax Benefits**

The tax benefits under the Project are the 10% Investment Tax Credit, interest deductions during construction (if the project is leveraged) and accelerated depreciation deductions during operations. Most of the project's assets would be "5 year property" under the recently enacted tax law changes.

### 6.1.1 (Continued)

The 10% Energy Tax Credit is only available if by January 1, 1983 if (1) all engineering studies were completed in connection with construction and (2) the Project has applied for all environmental and construction permits also by January 1, 1983 and (3) before January 1, 1986 the Project has entered into binding contracts for the acquisition, construction or erection of equipment specially designed for the Project and the aggregate cost of that equipment is at least 50 percent of the cost for all such Project equipment. The Synfuels Project cannot meet this timetable.

### 6.1.2 Organizational Options

The Project can be organized as a corporation, a partnership or a joint venture. A corporation is not a recommended form of organization given that no sponsor will own the 80% share required to file a consolidated tax return and hence take the Project's tax benefits when they are available. A partnership could be appropriate for the Project if, by virtue of the tax status of participants or the changing role of a participant, there is a need to enter into a formal partnership agreement. Under this structure, the partners would be 80%-100% owned subsidiaries of the Project sponsors. However, at present there is no need for a partnership structure. The typical form of a Project of this nature is a joint venture of the participants.

Under this joint venture, a subsidiary corporation of each of the sponsors would typically be the venturer. The obligation of each of the sponsors would be set forth in an operating agreement which would appoint one sponsor as the project operator. This agreement would provide for sharing of expenses, allocations of production or revenues, assumptions of the obligations of a defaulting partner and a voting method for making major project decisions and changes. The existence of this operating agreement is one measure of project maturity under the SFC evaluation process.

### 6.1.3 Private Financing

Under this approach the Project sponsors would be required to advance, individually, the funds necessary for their pro rata share of the Project costs. The SFC price guarantee would provide assurance that the price received for the Project's output met the formula negotiated. However, in addition to all other risks, the Projects' sponsors

### 6.1.3 (Continued)

would continue to bear the price risk that (1) the limited maximum price guarantee authority might be utilized faster than expected, due to lower than anticipated natural gas prices and (2) any price subsidy or support beyond the tenth year is subject to renegotiation by the SFC.

An alternative to direct investment by the Project sponsors would be a leveraged "project financing" structure where lenders look to the underlying contractual relationships of a project to provide the credit to support the project. No true project financing is feasible unless all of the separate risks (which will be enumerated in Section 8) are assumed contractually by the Project sponsors. To accomplish this the sponsors would need to provide completion and performance guarantees and possibly agreements to meet cash deficiencies if they occur. Long term take or pay contracts would be needed for the Project's output.

The price guarantees available from SFC are effectively assured for a limit of 10 years. This is less than the probable financing period for the Project. Therefore, separate price guarantees beyond the tenth year might also be necessary from a purchaser or project participant under a leveraged project finance structure.

There are numerous suboptions available to the Project sponsors under private financing which have different implications for the risk sharing and capital requirements of the sponsors. Certain Project assets can be separately owned or leased with feed stock or services provided to the Project under long term contract. The most obvious of the Project assets for separate ownership and financing are the air separation plant and the coal delivery system. Risk sharing between the Project and the owners of this equipment would depend on the nature of termination charges and recourse to the individual sponsors in the event of non-payment or project abandonment.

#### 6.1.4 Project Structure with Loan Guarantees

Under a project structure with loan guarantees, more of the risk is transferred to the Government. The ultimate degree of risk to the sponsors is dependent on the nature of the sponsors' commitment to the Project and recourse, if any, back to the Project sponsors in the event of default. With a loan guarantee, true non-recourse financing is feasible unless the SFC requires limited or full recourse as a condition of granting the loan guarantee.

In negotiating a loan guarantee contract, the SFC will adopt the role of creditor and examine all elements of the project structure as it pertains to the risk of default. SFC will seek to limit its risk in negotiation by obtaining guarantees or warranties similar to that a private lender would require. The major difference is that the SFC has the clear authority to take more of the risk than any private lender will take.

Under a loan guarantee structure, it is possible to transfer a major portion of any of the risks previously enumerated to the SFC. This structure can also be selective with some of those risks taken by the private sponsors in providing parallel agreements, such as completion guarantees, performance bonds, or other agreements.

Project variations can also take place with a loan guarantee similar to those discussed above, including separate ownership or leasing of individual Project assets. The SFC will encourage this form of project structure to the extent that it lowers the SFC authority which would be utilized. The key issue in this structure is the liability for termination charges under leases, or take or pay contracts, and whether the SFC will allow these charges under the guaranteed loan.

If the Project sponsors proceed to seek loan guarantees, the percentage of the project assets financed through the loan guarantee will be critical. Under a higher percentage loan guarantee, with flow through of tax benefits, the net equity invested in the project is reduced substantially by interest deductions and tax benefits during the construction period. Because of this factor, the net equity can be substantially reduced during the construction period before the project is in service. Full repayment of equity will occur during the accelerated depreciation period which is the

#### 6.1.4 (Continued)

first five years of operations. As a result, SFC will seek to keep the project sponsors at risk through either a higher percentage of the project financed through equity, or through pledges to recontribute tax benefits back to the project.

The Government's involvement in overseeing the project will be much greater than that of a private lender. The experience with Government loan guarantees, in this and other areas involving major facilities, indicates that, where the Government takes risks not borne by private lenders, the Government also takes an active role in closely monitoring the project's performance. This will sometimes involve the Government's approving disbursements to the project at individual project milestones.

## 6.2 PROJECT DEBT STRUCTURE

Three alternatives are available for the short-term construction period. The first alternative would be a straight commercial bank loan with the Government guaranteeing the bank. Traditionally this option has been more expensive than the other alternatives but with a Government guarantee for a project of this size commercial banks might well be willing to offer competitive rates.

The second structure involves the establishment of a project finance company. This structure is shown in Figure 6.2-1. This finance company issues commercial paper which in turn is backed up by a commercial bank line of credit. The bank is necessary in this transaction because in default the Government will not honor the guarantee immediately but will specify some period, typically 60 days, to make payment. The Government guarantee would be to the commercial bank. The lines of credit would be exercised only in default or, if there were a crisis in the commercial paper market such that commercial paper could not be sold.

The cost of three month commercial paper in relationship to the U.S. Treasury Bill rate is shown in Figure 6.2-2. This rate most recently has been approximately 130-140 basis points (1.30-1.40 percentage points) over the equivalent Treasury Bill rate. Additional costs of this financing would be a 1/4%-3/8% annual fee to the commercial bank and 10 basis points for the commercial paper dealer.

The third alternative financing structure for the construction debt would be the same as the structure which would be used for the long-term debt. This is shown in Figure 6.2-3. Under this structure the project itself sells short-term notes which directly bear the Government guarantee. In this case a trustee, typically a commercial bank, acts on behalf of the noteholders. The trustee collects interest and principal payments from the Project sponsor, forwards payments to the noteholder and acts on the debtor's behalf in the event of bankruptcy.

Both long and short-term Synthetic Fuels Corporation directly guaranteed debt are likely to be priced similarly to existing Government guaranteed securities. The principal issues currently in the market are the Chrysler Corporation Notes,



FIGURE 6.2-1  
CONSTRUCTION FINANCING WITH COMMERCIAL PAPER

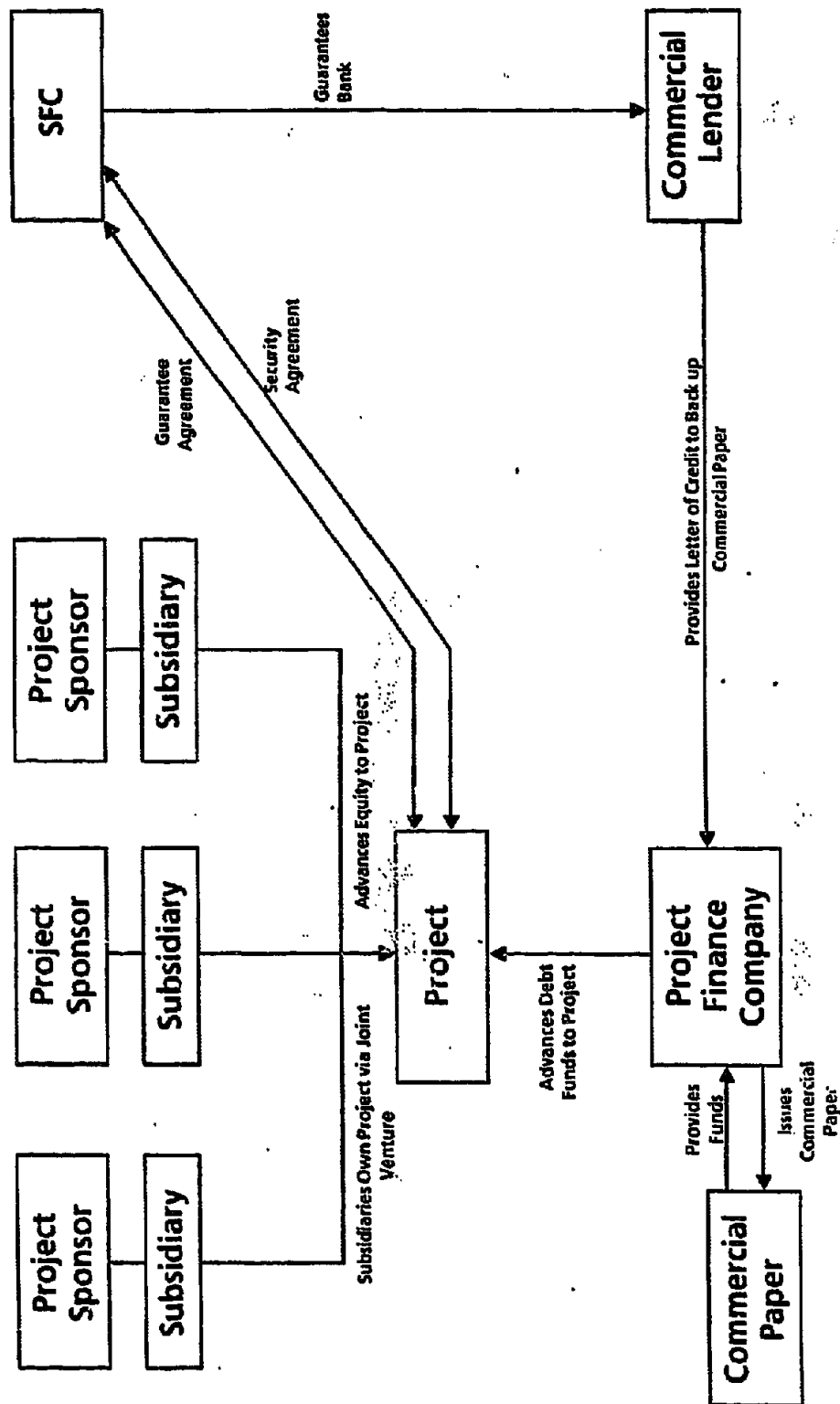
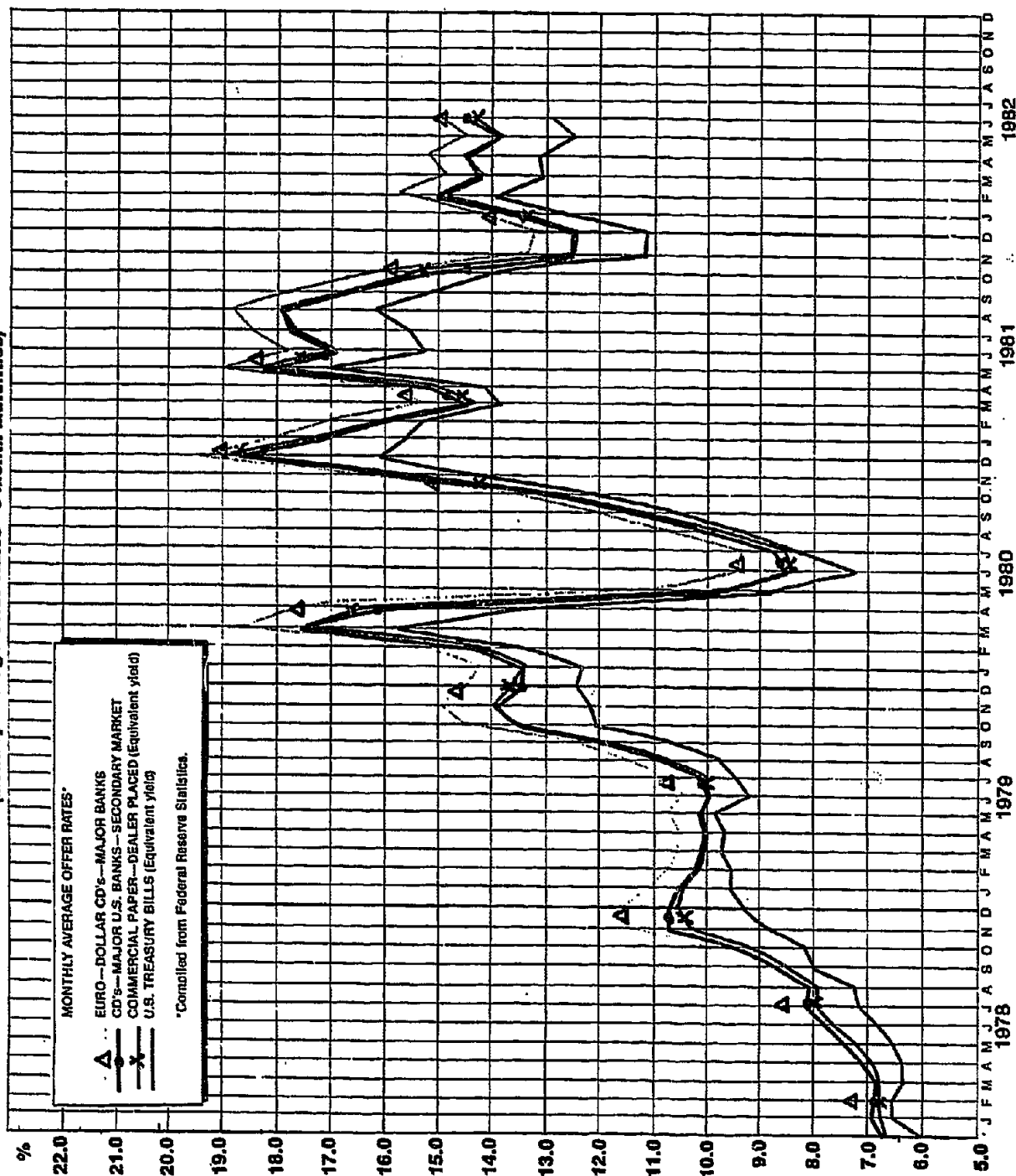


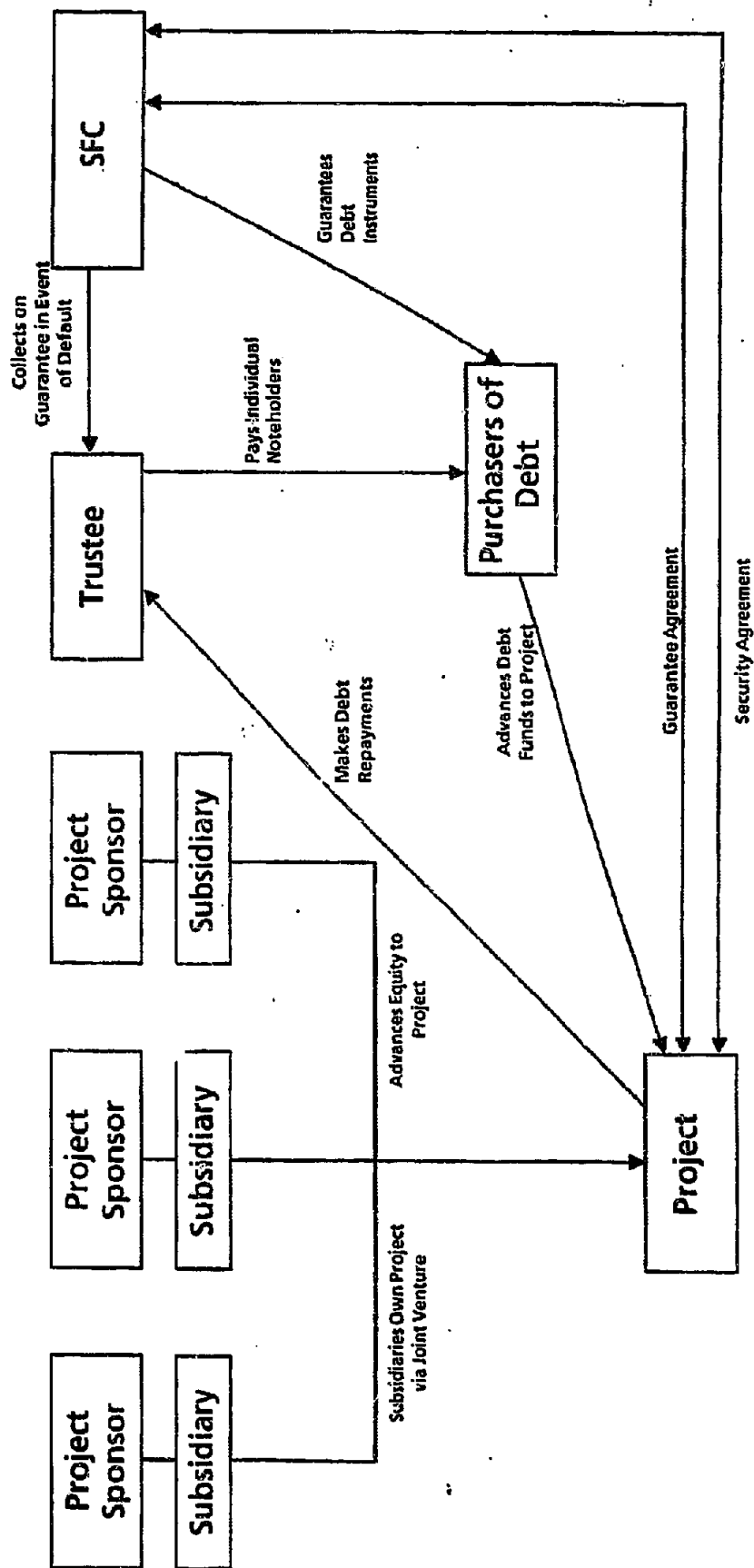
FIGURE 6.2-2

**MONEY MARKET RATES**  
(Monthly Average Offer Rates—3 Month Maturities)



USE OR DISCLOSURE OF REPORT DATA  
IS SUBJECT TO THE RESTRICTION ON THE  
NOTICE PAGE AT THE FRONT OF THIS REPORT

FIGURE 6.2-3  
PROJECT FINANCING WITH DIRECT DEBT INSTRUMENTS



6.2 (Continued)

Title XI Ship Financing Notes, and AID (Agency for International Development) Notes. The spread from comparable Treasury issues for initial SFC financing might be wider than the existing guaranteed issues, if this project were to be first in the market with SFC debt. The wider spread would be necessary to compensate for the market's unfamiliarity with the SFC as issuers of debt.

However, given an initial and continuing effective distribution of information to the market, future issues of SFC guaranteed debt should trade at narrower spreads with these spreads estimated to be approximately 100 basis points. At present, spreads vary from 65 to 100 basis points for the publically traded Chrysler Notes, to 100 to 170 basis points for the AID Notes. Title XI Notes are privately placed and, therefore, do not trade in secondary markets.

Recent new issue Title XI notes should give some indication of likely new issue spreads. Recent larger Title XI issues are given in Table 6.2-1 which shows amounts, maturities, average life, comparable issues and spreads. The recent level of comparable Treasury securities and longer term Title XI issues are shown in Figure 6.2-4. These spreads varied historically from as little as 35 basis points to over 100 basis points.

Bond traders contacted recommend that the initial issue be in the \$100 to \$200 million range. The problem most frequently cited by traders in discussing Government guaranteed debt issues is the general lack of understanding of this type of issue by the market. (The traders believe that few investors, if any, understand the meaning of default and the involvement of the Federal Government in the event of default). Furthermore, Government guaranteed security issues have most recently come to market as numerous small issues with limited marketability and little marketing effort has been expended on the part of the issuer. A larger issuer could avoid these problems by generating greater market interest and, hopefully, by eliciting a greater marketing effort than that accompanying smaller issues.

The market for this type of security appears large enough to comfortably accomodate a \$2-3 billion issue. From the point of view of marketing this debt the greatest obstacle in issuing Government guaranteed debt is obtaining the

## 1982 U.S. GOVERNMENT GUARANTEED SHIP FINANCING BONDS AND NOTES

## ISSUES OVER \$5 MILLION

Issuer	Size of Issue	Rate	Maturity	Average Life (Years)	Comparable Treasury Issue		
					Maturity	Rate	Spread (basis points)
Baker Shipping Company	\$22,677,000	13%	02/11/82	N.A.	T-Bill due 02/25/82	11.38%	+162
Waterman Steamship Corporation	\$55,000,000	14.55%	07/22/82	N.A.	T-Bill due 07/22/82	14.02%	+53
G&A Limited I	\$21,642,000	15.55%	02/15/97	7.5	14 1/4s 11/15/91	14.43%	
					14 1/4s 02/15/02	14.40%	+113
Baker Shipping Company	\$22,677,000	15.30%	08/12/82	N.A.	T-Bill due 08/05/82	14.78%	+52
G & A Limited I	\$ 7,170,000	15.90%	02/15/87	2.50	12.75s 02/15/87	14.67%	+123
	\$14,297,000	15.90%	02/15/97	10	14.625s 02/15/92	14.70%	
					14.25s 02/15/02	14.76%	+117
Andover Shipping Co., Inc.	\$29,000,000	16.10%	08/19/82	N.A.	T-Bill due 08/12/82	15.65%	+45
National Marine Service Incorporated	\$29,800,000	15.875%	02/24/83	N.A.	T-Bill due 01/27/83	15.30%	+58
Connecticut Bank & Trust Co. (Dravo Mechling Corp.-charterer)	\$ 8,666,000	15.05%	12/31/03	12.50	14.25s 02/15/02	13.91%	+114
Ocean Barge Corporation	\$15,432,000	14.25%	09/17/82	N.A.	T-Bill due 9/16/82	13.80%	+45
Radclyff Materials, Inc.	\$ 6,975,000	14.95%	04/01/97	7.75	14.25s 02/15/02	13.72%	
					14.625s 02/15/92	13.86%	+116
Bay-Houston Maritime Industries, Inc.	\$ 7,229,000	14.85%	03/31/02	11.75	14.25s 02/15/02	13.59%	+126

TABLE 6.2-1

## 1982 U.S. GOVERNMENT GUARANTEED SHIP FINANCING BONDS AND NOTES

## ISSUES OVER \$5 MILLION

Issuer	Size of Issue	Rate	Maturity	Average Life (Years)	Comparable Treasury Issue		
					Maturity	Rate	Spread (basis points)
Tractug Associates	\$18,890,000	14.05%	12/31/82	N.A.	T-Bill due 12/30/82	13.70%	+35
Interlake Steamship, Co.	\$ 8,067,000	15.20%	06/20/85	N.A.	14.625s 02/15/85	14.41%	+79
Baker Shipping Co.	\$ 7,032,000	14.40%	08/12/82	N.A.	T-Bill due 08/12/82	14.07%	+33
American President Lines, Ltd.	\$30,000,000 \$30,000,000	14.40% 14.40%	10/15/82 10/15/82	N.A.	T-Bill due 6 Months	14.07%	+33
First Interstate Bank of California (Matson Navigation Co., Inc.-charterer)	\$31,000,000	14.375%	08/01/98	10.00	14.625s 02/15/92	13.94%	+67
New England Collier Co.	\$25,000,000	14.40%	01/15/10	19.50	14.25s 02/15/02 14s 11/15/11	13.56% 13.38%	+100
Huthnance Drilling Co./Charger I	\$20,500,000	14.50%	06/01/97	7.71	14.625s 02/15/92	13.90%	+75
Chilbar Shipping Company	\$17,200,000	14.50%	07/15/01	13.50	14.25s 02/15/02 14.625s 02/15/92	13.56% 13.94%	+90
Falcon I Sea Transport Co.	\$14,000,000	13.75%	11/12/82	N.A.	6 Month T-Bill	13.40%	+35
Falcon II Sea Transport Co.	\$11,000,000	13.75%	11/12/82	N.A.	6 Month T-Bill	13.40%	+35

TABLE 6.2-1

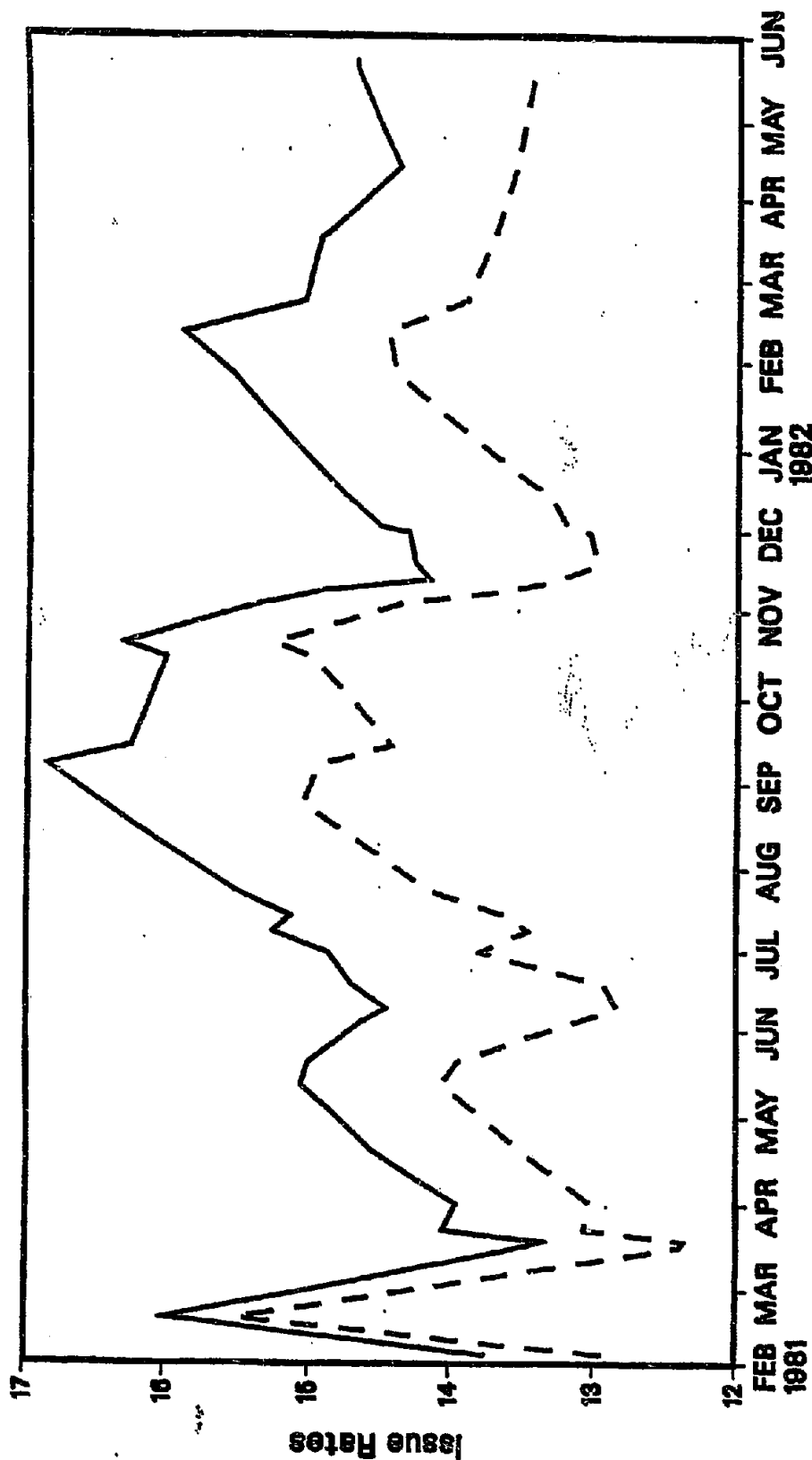
## 1982 U.S. GOVERNMENT GUARANTEED SHIP FINANCING BONDS AND NOTES

## ISSUES OVER \$2 MILLION

Issuer	Size of Issue	Rate	Maturity	Average Life (Years)	Comparable Treasury Issue	
					Maturity	Spread (basis points)
Hartford National Bank & Trust Company (Carlisle Dredging, Inc.-charterer)	\$22,450,000	14.00%	05/20/83	N.A.	T-Bill due 5/19/83	+45
Hartford National Bank & Trust Company (Carlisle Dredging, Inc.-charterer)	\$12,550,000	14.05%	05/20/82	N.A.	T-Bill due 05/19/83	+60
Artemis Marine Company, L.P.	\$ 4,408,000	14.50%	03/01/07	12.50	14.25s 02/15/02	+121
					14s 11/15/11	
Second Attransco Tanker Corporation	\$15,000,000	14.60%, not later than 5/31/09		14.00	14.25s 02/15/02	+122
					14s 11/15/11	
Waterman Steamship Corporation	\$10,000,000	13.60%	11/18/82	N.A.	T-Bill 6 Month	+39
Goldrus Marine Drilling Company	\$14,850,000	14.70%	02/28/96	7.18	13.75s 05/15/92	+117
					14.25s 02/15/02	
BancTexas Houston (Coastal Towing, Inc., Texas-charterer)	\$5,000,000	14.70%	06/10/95	8.13	13.75s 05/15/92	+119
					14.25s 02/15/02	
Manatee Towing Company	\$47,689,000	13.60%	12/09/82	N.A.	T-Bill due 12/07/82	+45

FIGURE 6.2-4

**INTEREST RATES OF LARGE NEW ISSUE TITLE XI  
AND COMPARABLE TREASURY SECURITIES**



Pricing Dates

Title XI Issue Rate

Comparable Treasury Issue Rate

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**6.2 (Continued)**

necessary final Government approval for the terms and conditions while maintaining the terms demanded by the market as the issue is offered.

A typical term sheet for this debt is shown in Exhibit 6.2-1. Marketability of the debt would be enhanced by a pro rata sinking fund, 10 year call protection, a good trustee and minimal documentation to traders.

EXHIBIT 6.2-1

SYNTHETIC FUELS PROJECT

Government Guaranteed Debt  
(representative terms)

<u>AMOUNT</u>	\$100-\$200 million parcels. (Denominations of \$1,000 or \$5,000, or integral multiples thereof).
<u>MATURITY</u>	20 to 25 years; 10 year average life; level principal payments.
<u>INTEREST RATE</u>	Semi-annual payments; interest set at approximately 100 basis points above comparable Treasury maturity.
<u>REDEMPTION</u>	Non-callable for 10 years; redeemable at 100% of principal plus accrued interest to the date of redemption.
<u>SINKING FUND</u>	Pro Rata (if not, add 20 basis points at issue).
<u>EVENTS OF DEFAULT</u>	Default is defined as: (a) default in the payment of principal or interest on the Note and the continuation of such default for 30 days, or (b) failure by the Project to observe various financial covenants and conditions.
<u>U.S. GOVERNMENT GUARANTOR</u>	The Synthetic Fuels Corporation ("SFC") established under the Energy Security Act, enacted as Public Law 96-294 on June 30, 1980; appropriations for the SFC made available through P.L.-96-304.
<u>TRANSFER AND EXCHANGE</u>	The Notes would be transferable or exchangeable for Notes of other authorized denominations of like principal amounts without charge except for taxes or other governmental charges, if any, payable in connection therewith.
<u>LIKELY INVESTORS</u>	State and municipal pension funds, as they are required to invest part of their portfolios in either Treasury Notes of Government Guaranteed securities. A private investor would be discouraged from investing in these securities as higher rates are obtainable in purchasing corporate bonds.

## 7.0 FINANCIAL CHARACTERISTICS OF THE PROJECT

This section of the report examines the Project to determine if it is a viable financial investment. The conclusion drawn is that the Project needs price guarantees to make it financially viable. The positive effect of financial leverage through a guaranteed loan is also necessary to improve the Project economics. Therefore both loan guarantees and price guarantees are needed for the Project.

A price guarantee at today's deregulated natural gas price is not sufficient to provide necessary incentive to investors. The price guarantee would need to be at least \$6.00-\$7.00 per million btus (beginning 1982 dollars) escalated by some general inflation index.

The Synthetic Fuels Corporation has a limit of \$3 billion in total financial assistance for an individual project. This amount is insufficient to provide for full loan guarantees and price guarantees for this Project. Unless private financing is available for some of the project debt, this Project is not feasible at this size.

### 7.1 PROJECT COSTS

The project capital costs for each of the cases studied are in the Cost Study and again in Table 7.1-1. Operating costs and the timing of capital investment are shown in Tables 7.1-2 and 7.1-3. These costs are expressed in 1982 dollars and are escalated for the financial evaluation to determine actual dollars to be spent. In the case where the project is financed through loan guarantees, the project costs will reflect these capital costs plus interest during construction.

The four cases examined are divided into two sets. The first three cases examine projects with SNG as the principal product. The fourth case examines co-production of methanol and SNG. The three SNG Cases are: the Base Case in which the project would utilize Westmoreland Coal and produce excess electricity; the Self-Sufficiency case, where the project is assumed to produce only enough electricity for self use; the third case examines an alternative site for the project utilizing Shell Coal.

TABLE 7.1-1

CAPITAL COST SUMMARY

	Base Case @ Site 1 (\$ Million)	Self-Sufficiency Case @ Site 1 (\$ Million)	Coproduction Case @ Site 1 (\$ Million)	Shell Coal Case @ Site 23 (\$ Million)
Direct Field Costs	884.4	711.2	888.2	921.3
Material Transport Costs	70.0	56.0	70.6	74.0
Indirect Field Costs	351.6	289.1	348.2	352.7
Home Office Costs	<u>160.0</u>	<u>132.2</u>	<u>170.0</u>	<u>165.0</u>
Total Field and Office Costs	1,466.0	1,188.5	1,477.0	1,513.0
Other Capital Costs	<u>570.4</u>	<u>483.0</u>	<u>570.7</u>	<u>580.9</u>
Total Capital Costs	2,036.4	1,671.5	2,047.7	2,093.9

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TABLE 7.1-2

OPERATING COST SUMMARY

	Base Case @ Site 1 (\$ Million)	Self-Sufficiency Case @ Site 1 (\$ Million)	Coproduction Case @ Site 1 (\$ Million)	Shell Coal Case @ Site 23 (\$ Million)
Coal Cost	88.1	64.6	88.1	92.6
Catalysts and Chemicals	13.6	11.0	11.0	12.8
Plant Management Staff	1.6	1.6	1.6	1.6
Operating Labor and Materials	16.0	15.1	16.4	16.0
Maintenance Labor and Materials	36.1	28.8	36.3	36.4
Electricity	.5	.3	.5	2.5
Ash Disposal	2.2	1.5	2.2	2.1
Taxes and Insurance	37.0	29.7	37.2	38.5
Annual Operating Costs	195.1	152.6	193.3	202.5
Byproduct Credits	(115.2)	(25.1)	(83.5)	(135.3)
Net Annual Operating Costs	79.9	127.5	109.8	67.2

TABLE 7.1-3

CASH FLOW SCHEDULE

	Base Case @ Site 1 (\$ Million)	Self-Sufficiency Case @ Site 1 (\$ Million)	Coproduct Case @ Site 1 (\$ Million)	Shell Coal Case @ Site 23 (\$ Million)
4th Quarter 1982	1.7	1.5	1.8	1.8
1st Quarter 1983	2.6	2.3	2.7	2.7
2nd Quarter 1983	3.1	2.7	3.2	3.1
3rd Quarter 1983	5.0	4.3	5.2	5.1
4th Quarter 1983	6.8	5.9	7.1	6.9
1st Quarter 1984	8.3	7.2	8.7	8.5
2nd Quarter 1984	9.0	7.7	9.4	9.2
3rd Quarter 1984	9.5	8.0	9.9	9.7
4th Quarter 1984	9.7	8.2	10.0	9.9
1st Quarter 1985	10.8	9.5	11.4	11.0
2nd Quarter 1985	12.4	11.0	13.1	12.6
3rd Quarter 1985	12.9	11.4	13.6	13.1
4th Quarter 1985	39.3	33.1	40.3	40.2
1st Quarter 1986	66.9	55.7	68.3	69.2
2nd Quarter 1986	99.8	82.3	101.2	103.4
3rd Quarter 1986	131.1	107.1	132.5	135.7
4th Quarter 1986	156.0	128.0	157.4	161.2
1st Quarter 1987	182.3	149.2	183.4	188.2
2nd Quarter 1987	200.4	164.0	201.1	206.5
3rd Quarter 1987	204.8	167.7	205.2	210.8
4th Quarter 1987	191.8	157.2	191.8	197.0
1st Quarter 1988	184.1	151.2	183.7	188.6
2nd Quarter 1988	171.1	139.8	170.7	175.3
3rd Quarter 1988	136.5	110.7	136.1	139.5
4th Quarter 1988	106.4	85.8	106.0	108.7
1st Quarter 1989	68.7	55.2	68.5	70.4
2nd Quarter 1989	5.4	4.2	5.4	5.6
Total	2,036.4	1,671.5	2,047.7	2,093.9

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## 7.2 COST OF SUBSTITUTE NATURAL GAS

The overall economic viability of this project depends on the cost of gas at the synfuels plant site (called the plant tailgate price) and the cost of delivering the gas to California. If this cost is competitive with alternatives, then the Project is economically viable.

To determine what this cost would be, a series of assumptions were developed and the economics of the project were examined under these assumptions. In addition to the capital and operating costs, additional assumptions used in the model are shown in Table 7.2-1. Escalation assumptions used are those provided in the 1982 California Gas Report's forecast shown in Table 7.2-2.

The economic scenario reflected in these assumptions is one of gradually declining inflation. Interest rates are assumed to stay generally at today's assumed spread over inflation and gradually reduce with the decline in inflation.

To determine whether this project is financially attractive to potential investors, a financial model was created to examine the overall economics of the Project. Extensive computer analysis was performed on this model to examine the Project under the alternative cases identified.

The three cases producing natural gas were examined to consider the comparative economics of each plant. This was done by examining how the returns to investors vary if different assumptions about gas prices are used.

This analysis, which is sometimes called life cycle cost analysis, uses the computer model to find alternative base prices in either 1982 or 1990 (the second year of operations) and determines the rate of return to investors. Where a 1990 cost is found, the inflation assumptions used can be applied to determine the equivalent 1982 price. The rate of return is net of all tax benefits and assumes that all tax credits and deductions are used to offset other tax liabilities and taxable income of the investor.

This analysis does not consider other financial characteristics of the Project which are important to equity investors. These include the effect on corporate reported

TABLE 7.2-1

**CROW SYN FUELS PROJECT**  
**ASSUMPTION USED IN INVESTMENT ANALYSIS**

**I. Gasification Plant**

In-service - Jan. 1, 1989

Plant life - 25 years

Book Depreciation - 25 years (life of plant)

Tax Depreciation - 5 years - ACRS

Debt/Equity - 75/25

Debt Term - 20 years (fixed rate)

Debt Interest - 150 basis points above 20-year Treasury bills at time of drawdown

Return on Equity - 15 percent real rate based on DCF-ROE calculation

Income Taxes - Federal - 46 percent  
Montana - 6.75 percent

Ad Valorem Taxes and Insurance - 2.5 percent of plant investment (included in operating costs)

Tax Credits - ITC - 10 percent  
ETC - none

Working Capital - 2 months O & M

Loan guarantee fee - 1/2 percent of outstanding principal

Start-up Production:

First testing - Oct. 1, 1988

First sale to pipeline - Jan. 1, 1989

Maximum operating efficiency (91%) - July 1, 1989

Total 1989 SNG production 30,688 MMCF

Construction Schedule

Procurement release	12/1/85
Site Preparation	1/1/86
Effective Start of Construction	7/1/86

Feedstock Requirement - 5.976 MM Tons Coal/yr.



## II. SNG Pipeline

In-service date - January 1, 1989

Construction period - 18 months

Plant life - 25 years

Average daily flow after July 1, 1989 - 125 MMCFD

### Definitions:

1A - Site 1, Western Leg

1B - Site 1, Rocky Mtn. Sys.

2A - Site 23, Western Leg

2B - Site 23, Rocky Mtn. Sys.

### Cost Data (Thousands of 1982 \$'s)\*

	1A	1B	2A	2B
Capital Investment	157,500	260,700	165,900	266,700
Annual Operating Exp.	300	500	300	500
Working Capital	37.5	62.5	37.5	62.5

### Financial Data

Federal Income Tax - 46 percent

Montana Income Tax - 6.75 percent

Debt/Equity = 70/30

Debt Interest - 100 basis points above 10-year Treasury Notes

Equity Return - 2.5 percent above debt interest

ITC - 10 percent of construction cost

Ad Valorem Taxes - 1.5 percent plant investment

Book Depreciation - 20 years-straight line

Start-up production - see Gasification Plant

\*Source - Transportation Study

### III. 3rd Party Transportation Costs\*

	<u>1A</u>	<u>1B</u>	<u>2A</u>	<u>2B</u>
Capital Cost	-	21,100	-	21,100
Annual Operating Exp.	56,700	50,300	56,700	50,300
Gas Consumption	10%	1.4%	10%	1.4%

### IV. By Product Sales

	<u>Unit Price</u>	<u>Annual Output*</u>
Ammonia	\$235/Ton	25,500 Tons
Naphtha	\$268/Ton	65,100 Tons
Sulfur	\$ 60/Ton	28,900 Tons
Electricity	\$ 4¢/Kwh	2.25 x 10 <sup>6</sup> Mwh

First year's (1989) estimated revenue from by-products - \$115.2 million (1982 \$'s)

\*Source - Transportation Study

\*\*Based on 125 MMCF/CD.

TABLE 7.2-2

GAS PRICE FORECAST  
CFM IV  
NGPA AS ENACTED  
INFLATION ASSUMPTIONS

	PGNP* Annual Percentage Increase	Oil Price Annual Percentage Real Increase	Crude Oil Price \$/Bbl**	No. 6 .5% Sulphur \$/Bbl***	NO. 6 .25% Sulphur \$/Bbl***	No. 2 Distillate Oil \$/Bbl***
1982	8.00	-13.36	32.75	32.75	36.03	40.94
1983	8.00	-3.87	34.00	35.70	38.42	44.20
1984	8.00	0.00	36.72	39.81	42.23	47.74
1985	7.00	1.00	39.69	43.02	45.64	51.59
1986	7.00	1.00	42.89	46.49	49.32	55.75
1987	7.00	1.00	46.35	50.24	53.30	60.25
1988	7.00	1.00	50.09	54.30	57.60	65.12
1989	7.00	1.00	54.13	58.68	62.25	70.37
1990	6.00	1.50	58.24	63.13	66.98	75.71
1991	6.00	1.50	62.66	67.92	72.06	81.46
1992	6.00	1.50	67.42	73.08	77.53	87.64
1993	6.00	1.50	72.53	78.63	83.41	94.29
1994	6.00	1.50	78.04	84.59	89.74	101.45
1995	6.00	1.50	83.96	91.01	96.56	109.15
1996	6.00	1.50	90.33	97.92	103.88	117.43
1997	6.00	1.50	97.19	105.35	111.77	126.35
1998	6.00	1.50	104.57	113.35	120.35	135.94
1999	6.00	1.50	112.50	121.95	129.38	146.26
2000	6.00	1.50	121.04	131.21	139.20	157.36
2001	6.00	1.50	130.23	141.17	149.76	169.30

\* Implicit Price Deflator, Gross National Product  
 \*\* Refiner's Average Acquisition Cost  
 \*\*\* Wholesale Price

## 7.2 (Continued)

profitability, the timing of equity returns, the magnitude of the cash requirements and the financial risks. These elements are addressed below.

Alternative forms of this analysis were studied. In the first case, the Project was examined to determine what the real rate of return would be under different gas price assumptions for private (i.e. all equity) financing of the project. A real rate of return is the return after adjustment for inflation (i.e. a 22% return with 7% inflation assumed would be approximately a 15% real rate of return).

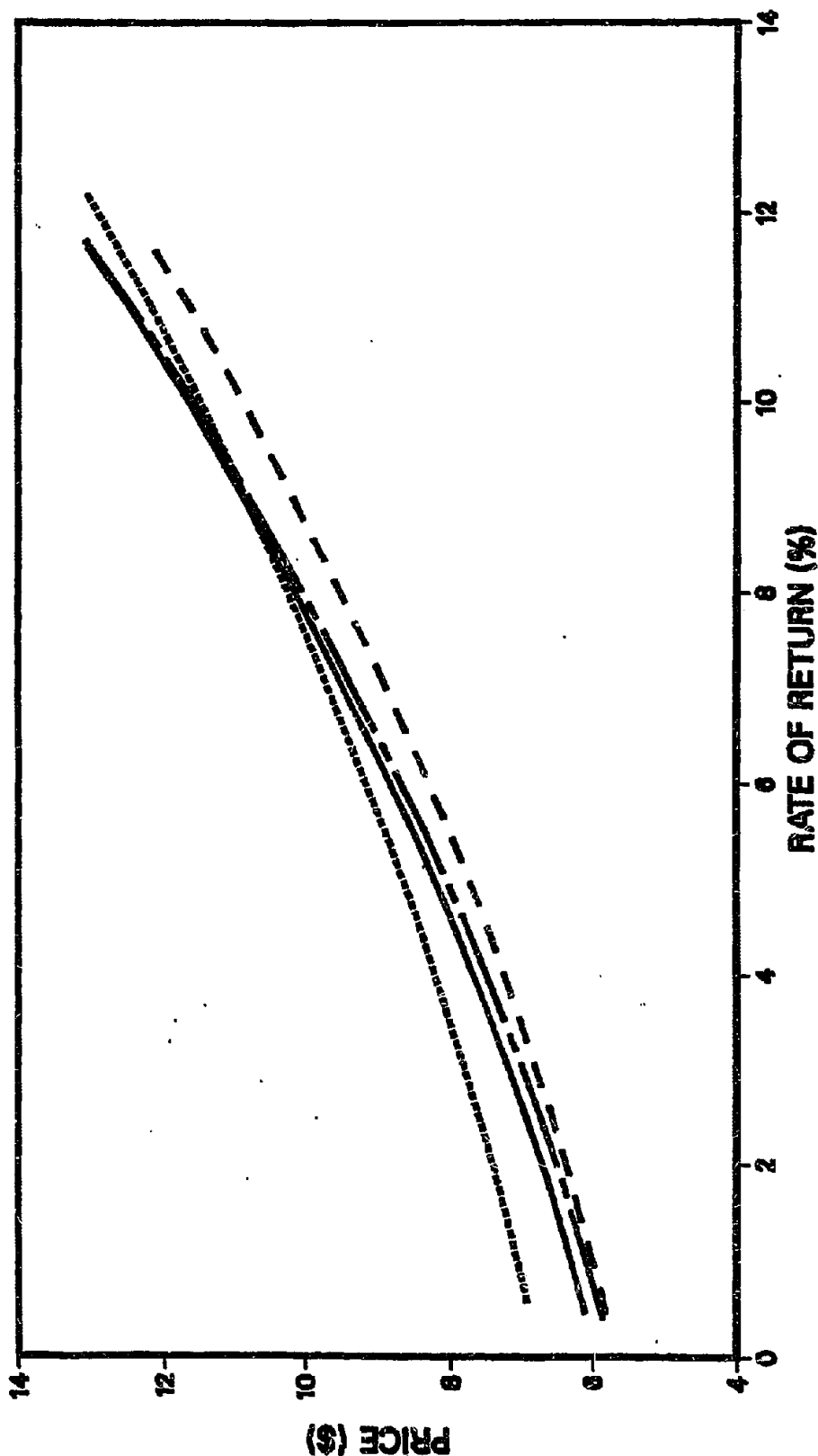
The results of this analysis are shown in the following two exhibits. Figure 7.2-1 shows the delivered price of synthetic natural gas to California under the Base Case, under the Self Sufficiency Case and the Shell Case. The Base Case is shown with the two alternative transportation routes studied. The Shell Case has a marginally less expensive life cycle cost than the Base Case in the range of prices shown. The Rocky Mountain System, which was reported as less certain in the near term than the Base Case route, is clearly less expensive than the Western Leg route.

The rate of return shown in this analysis is the after tax return on the Project alone without the pipeline expenses. For investors to be attracted to a project of this size, the after tax real rate of return on equity must be at minimum in the 15-20% range, with equity sponsors most likely requiring returns at least at the high end of this range. To meet this requirement the delivered California price must be in excess of \$14 per mmbtu (in 1982 dollars).

The constant dollar all equity case, varying plant tailgate prices only, is shown in Figure 7.2-2. This exhibit shows how the returns vary if the price begins in 1982 at some base price and real prices grow at differing rates. For example, under all equity financing if real prices were expected to rise at an annual rate of 3% from a 1982 plant tailgate price of \$10, the real return on equity would be approximately 15%. If prices were expected to rise at 1% in real terms, the price today would need to be at least \$12 to yield approximately 15 percent after taxes.

FL RE 7.2-1

# DELIVERED PRICE CONSTANT DOLLARS; ALL EQUITY



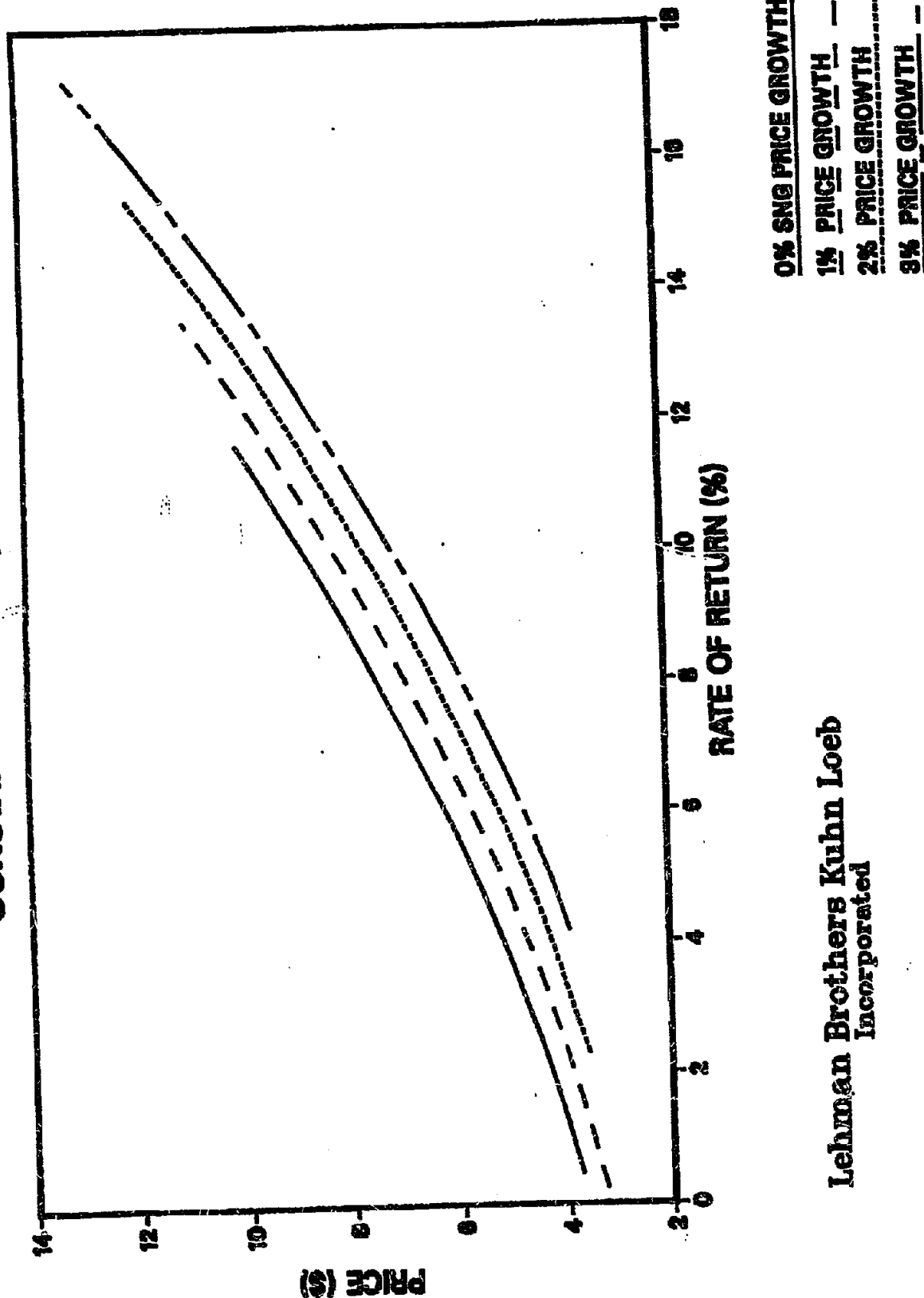
BASE CASE: WESTERN LEG  
BASE CASE: ROCKY MOUNTAIN SYSTEM  
SELF-SUFFICIENCY CASE: WESTERN LEG  
SHELL CASE: WESTERN LEG

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JRE 7.2-2

# PLANT TAILGATE PRICE CONSTANT DOLLARS; ALL EQUITY



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0% SNG PRICE GROWTH  
1% PRICE GROWTH  
2% PRICE GROWTH  
3% PRICE GROWTH

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## 7.2 (Continued)

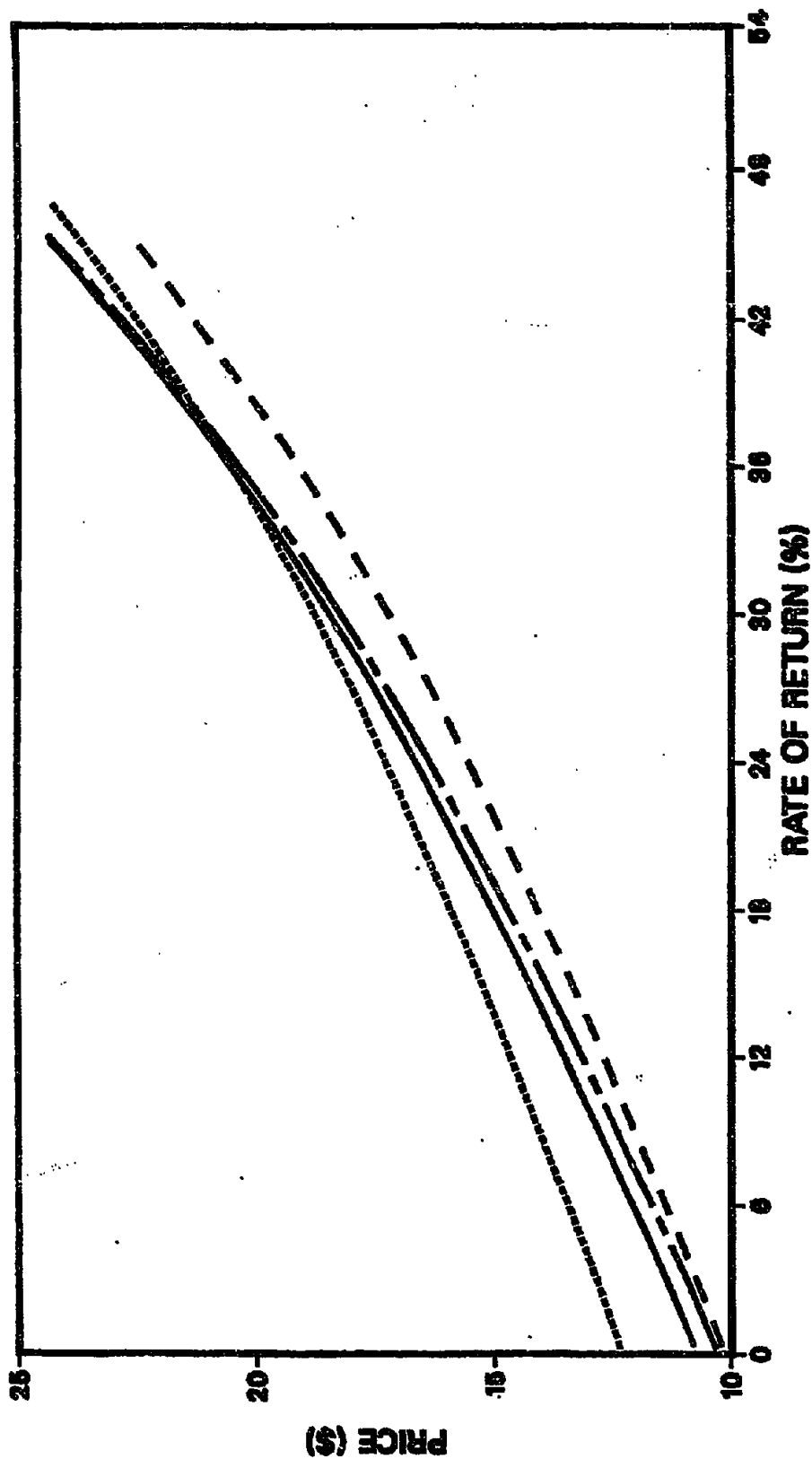
This Project is not economic on an all equity basis. Although corporations typically examine project economics on a non leveraged basis, in this case it is valid to examine the leveraged case because the guaranteed debt is assumed to be non-recourse. The following two exhibits examine the Project on a leveraged basis with escalated prices.

The delivered price in 1990 is shown in Figure 7.2-3 where prices and costs are escalated according to the previously stated assumptions provided by the 1982 California Gas Report. The year 1990 is used because it is the first full year of operations. The equivalent plant tailgate price is shown in Figure 7.2-4.

These results are shown in tabular form in Table 7.2-3 for the Base Case. In order to meet a minimum required real rate of return on equity of 15-20%, the escalated rate must be in the range of approximately 23-28%. Equivalently, to meet this return the 1982 plant tailgate SNG price must be in the range of \$6.00-\$7.00 at the beginning of 1982. This assumes that the real price escalation projected by the 1982 California Gas Report holds true together with the other assumptions used. The risks of this project could require a higher expected return by some sponsors and a higher 1982 gas price.

FIGURE 7.2-3

## DELIVERED PRICE INFLATED DOLLARS; LEVERAGED CASE



BASE CASE: WESTERN LEG  
BASE CASE: ROCKY MOUNTAIN SYSTEM  
SELF-SUFFICIENCY CASE: WESTERN LEG  
SHELL CASE: WESTERN LEG

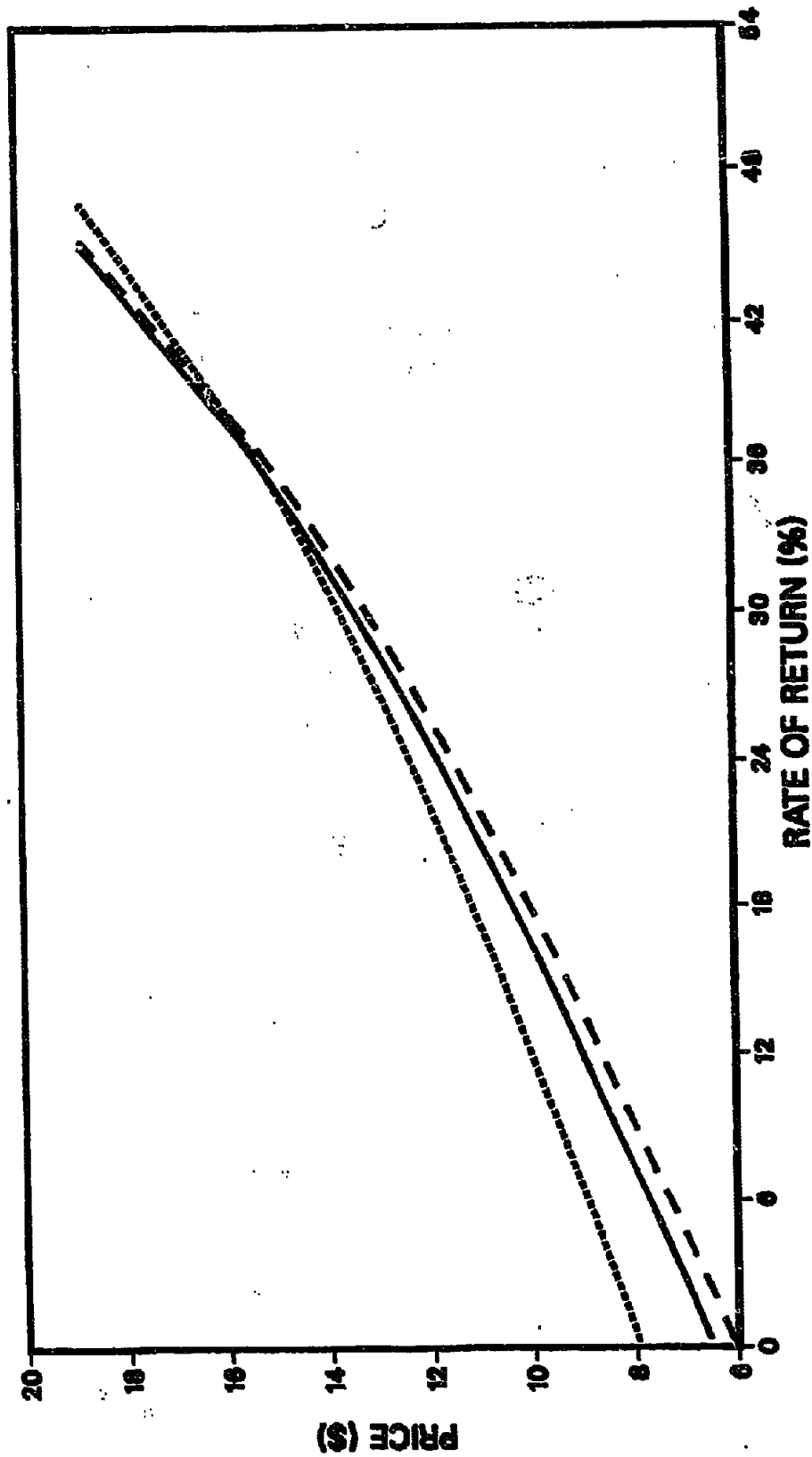
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URE 7.2-4

# PLANT TAILGATE PRICE INFLATED DOLLARS; LEVERAGED CASE



BASE CASE  
SHELL CASE  
SELF-SUFFICIENCY CASE

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TABLE 7.2-3

**SNG PRICE VERSUS RATE OF RETURN  
BASE CASE WITH WESTERN LEG TRANSPORTATION**

<u>Tailgate Price 1982(a)</u>	<u>Tailgate Price 1990</u>	<u>Delivered Price 1990</u>	<u>Rate of Return</u>
\$ 3.75	\$ 7.02	\$11.31	2.7%
4.00	7.49	11.83	4.9
4.25	7.96	12.35	7.1
4.50	8.43	12.87	9.3
4.75	8.90	13.39	11.5
5.00	9.36	13.91	13.6
5.25	9.83	14.42	15.7
5.50	10.30	14.95	17.8
5.75	10.77	15.47	19.8
6.00	11.24	15.99	21.8
6.25	11.71	16.51	23.7
6.50	12.17	17.03	25.4
6.75	12.64	17.55	27.2
7.00	13.11	18.07	28.9
7.25	13.58	18.59	30.5
7.50	14.05	19.11	32.1
7.75	14.51	19.63	33.6
8.00	14.98	20.15	35.0
8.25	15.45	20.67	36.4
8.50	15.92	21.19	37.8
8.75	16.39	21.71	39.0
9.00	16.86	22.23	40.3

(a) Price at the beginning of 1982.

### 7.3 PROJECT FINANCING

The financing requirements for the project are shown in Table 7.3-1. The assumed inflation rate for construction costs is the overall general price level escalation shown previously in Table 7.2-2. With inflation, total construction costs equal \$3.15 billion. The analysis assumes that 75% of total project costs are financed by debt. Total project costs include capitalized interest of \$518 million. Therefore, the total financing requirements are approximately \$3.66 billion. Of this total amount, 75% is funded by debt with the balance paid by the equity investor. The equity requirements total \$916 million spread out over the construction period as shown in Table 7.3-1.

Under present tax law, interest deductions and tax credits for qualified construction costs are eligible for use during the construction period. The availability of these tax benefits reduces the net equity investment during the construction period from \$916 million to \$394 million.

### 7.4 PROJECTED OPERATING RESULTS

The projected operating results of the plant are completely dependent on the price at which the SNG can be sold. Because the SNG would be sold in California, the available price in California will dictate the plant economics, unless some external price guarantee from the SFC is provided.

The Appendix to this volume, which follows section 8, shows four differing cases under which the plant economics can be viewed. Case A assumes that the SNG delivered price in California is the 1982 California Gas Report forecasted crude price. The transportation cost, using the Western Leg Base Case alternative, is subtracted from the California price to determine the plant tailgate price. Using the California forecasted crude price, results in a projected rate of return of 6%, which is a negative real rate of return. Under this case, the after tax initial investment is not recovered until the year 2010. Book income before taxes is not positive until 1999.

Case B examines the project under the Base Case and utilizing the Western Leg transportation route under alternative California pricing. In this case it is assumed that a tariff is granted so that the SNG could be sold at the city gate at

TABLE 7.3-1

CONSTRUCTION PERIOD COSTS AND EQUITY REQUIREMENTS  
(\$ Millions)

	1982	1983	1984	1985	1986	1987	1988	1989	TOTAL
Inflated Construction Costs	\$1.84	\$20.41	\$45.98	\$101.63	\$654.49	\$1,202.62	\$ 987.60	\$130.92	\$3,145.48
Capitalized Interest	0.21	1.92	5.44	12.13	53.07	160.09	285.86	0.00	518.22
Total Financing Requirements	2.04	21.84	51.42	113.76	707.56	1,362.71	1,273.46	130.92	3,663.70
New Construction Debt Equity Requirement	1.53	16.38	38.57	85.32	530.67	1,022.03	955.09	98.19	2,747.78
	0.51	5.46	12.86	28.44	176.89	340.68	318.36	32.73	915.93
Cash Value of Interest Deduction	0.10	0.65	2.50	5.58	24.41	73.64	131.49	0.00	238.38
Total Tax Credits	0.17	1.84	4.14	9.15	58.90	108.24	88.88	11.78	283.09
Net Equity Requirements	\$0.25	\$ 2.97	\$ 6.21	\$ 13.71	\$ 93.57	\$ 158.80	\$ 97.99	\$ 20.95	\$ 394.45

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#### 7.4 (Continued)

the forecasted cost of distillate fuel. Under this case, the return to the investor is 17%. On an adjusted after tax basis the project returns the initial equity investment in 2001. Book Income Before Taxes in this case is not positive until 1996.

These projected operating results are not attractive to equity investors. The two forecasts, crude prices and distillate, can be viewed as a range of alternative pricing structures which could be available to the project. The crude price is a more likely case in that allowing the SNG to be sold at the distillate price or some discount of the distillate price would need a special tariff to provide incentives for this form of marginal gas supply.

#### 7.5 PRICE GUARANTEES

The above results clearly indicate that the project needs price guarantees together with the loan guarantees. The form of price guarantee necessary is dependent on the expectations of potential sponsors and the risks that they are willing to take.

The SFC has indicated that price guarantees should generally follow the format used in the Union Oil price guarantee. In this transaction, the formula had two components, general price inflation and a natural gas index. Following this model, the appropriate price guarantee for the Synfuels Project would depend, in part, on escalation clauses in the coal sales contract. Assuming that this contract provided for no real price growth, the proper formula for a price guarantee would utilize some base price as calculated in the lifecycle cost analysis plus general price escalation.

Case C in the Appendix shows the projected operating results where the project receives a plant tailgate price guarantee of \$6.75 per million Btu at the beginning of 1982 which escalates with general price inflation. The overall return on equity in this case is 27%. The project returns initial investment under this case by 1991, the third year of operation. Book income before taxes becomes positive in the following year (1992).

## 7.5 (Continued)

The \$6.75 price is intended to be representative of the level of price guarantee necessary. However, an assessment of the project risks could lead potential sponsors to require an even higher price guarantee.

Although price guarantees of this level or higher are necessary to provide sufficient incentive to attract investors, a problem arises in that the SFC authority is limited. The overall financial commitment to any project cannot exceed a total of \$3 billion. Under the 75% leverage case, \$2.7 billion is required for loan guarantees. This leaves only \$300 million available for price guarantees.

The overall price guarantee funding requirement for price guarantees is shown in Case C if SNG is priced in California at the forecasted crude price. By the tenth year in the crude price case the SFC under this formula would pay total outlays of \$3.4 billion against the SFC price guarantee. Even if the project were privately financed, or the loan guarantees were provided only during the construction period, in the crude pricing scenario the SFC could make price guarantees for only 9 years. Past the 9th year the available \$3 billion would be utilized.

Case D shows the price guarantee requirement if the gas is sold at the distillate price in California and the SFC is required to pay the difference between the sales price and the \$6.75 price adjusted for inflation.

When the SNG is priced at the distillate level in California, the maximum forecasted cumulative payment under this price guarantee is \$2.4 billion in 1986. After this point, the model assumes that price guarantees are repaid.

In this case also, the total loan guarantee and price guarantee authority exceeds the maximum \$3 billion. Some non-guaranteed financing after start-up would be necessary to allow the SFC to make required price guarantee projects under the \$3 billion ceiling.

## 7.5 (Continued)

If private lenders are willing to take the risk of some private debt to the project, and additional equity contributions are available, the Project could be feasible. It is not feasible if a 75% loan guarantee is required together with adequate price guarantees at today's price levels for natural gas.

## 7.6 SENSITIVITY ANALYSIS

Sensitivity analysis was performed on a number of variables in the financial model. The results of this sensitivity analysis are shown in the following three tables.

Table 7.6-1 shows the sensitivity of the project to capital cost escalation and to failure of the project to operate in the first year of startup. The startup delay assumes that the plant is in service for tax purposes but produces insignificant quantities of gas for sale.

The sensitivity of the project to escalation of coal prices is outlined in Table 7.6-2. Unless a coal purchase contract can limit escalation of future real coal prices, escalation of real coal prices will cause a moderate reduction in returns.

As shown in Table 7.6-3, similar modest reductions in return will occur if interest costs are 100 to 200 basis points higher than expected. Higher levels of interest rates would tend to be accompanied by different inflation assumptions. Alternative inflation assumptions were not examined. However, if rapid inflation occurs after startup, the returns to the sponsors will be greatly enhanced.

TABLE 7.6-1

**SENSITIVITY ANALYSIS**  
**EFFECT ON RATE OF RETURN OF COST AND OPERATING CHARGES**

<u>Gas Price</u>	<u>Base Case</u>	<u>50% Capital Cost Overrun</u>	<u>Failure to Operate 1st Year</u>
4.00	5.0%	-2.0%	3.7%
4.50	9.3	1.3	7.3
5.00	13.6	4.5	10.7
5.50	17.8	7.5	13.8
6.00	21.8	10.4	16.7
6.50	25.5	13.3	19.5
7.00	28.9	16.2	22.2
7.50	32.1	19.0	24.6
8.00	35.0	21.7	26.9

TABLE 7.6-2

**SENSITIVITY ANALYSIS**  
**EFFECT ON RATE OF RETURN OF VARIATIONS IN COAL PRICES**

<u>Gas Price</u>	<u>Real Coal Price Growth</u>				
	<u>-2%</u>	<u>-1%</u>	<u>Base Case</u>	<u>+1%</u>	<u>+2%</u>
4.00	8.8%	7.2%	5.0%	1.7%	-4.3%
4.50	12.8	11.3	9.3	6.6	2.1
5.00	16.8	15.4	13.6	11.2	7.7
5.50	20.6	19.3	17.8	15.7	12.8
6.00	24.3	23.1	21.8	20.0	17.6
6.50	27.7	26.7	25.5	24.0	22.0
7.00	30.9	30.0	28.9	27.6	26.0
7.50	33.9	33.0	32.1	30.9	29.5
8.00	36.7	35.9	35.0	34.0	32.8

TABLE 7.6-3

**SENSITIVITY ANALYSIS**  
**EFFECT ON RATE OF RETURN OF VARIATION IN INTEREST RATES**

<u>Gas Price</u>	<u>Base Case</u>	<u>+100 Basis Points</u>	<u>+200 Basis Points</u>
4.00	5.0%	3.9%	3.0%
4.50	9.3	8.1	6.9
5.00	13.6	12.1	10.7
5.50	17.8	16.1	14.5
6.00	21.8	20.0	18.3
6.50	25.5	23.7	22.0
7.00	28.9	27.2	25.5
7.50	32.1	30.5	28.9
8.00	35.0	33.6	32.0



## 7.7 COPRODUCTION OF METHANOL AND SUBSTITUTE NATURAL GAS

The financial analysis also examined the case where methanol would be coproduced with SNG. If the demand for methanol were to grow, such that methanol could be sold at a volume substantially above its comparable SNG Btu value, coproduction could be a viable alternative.

The rate of return of the plant under alternative methanol and SNG prices is shown in Table 7.7-1. A methanol price of \$10 per million Btu with SNG prices at \$6.00 per million Btu provides an acceptable rate of return.

If methanol prices were to increase from the \$10 per million Btu level, coproduction of natural gas could result in economic SNG prices.

TABLE 7.7-1  
RATE OF RETURN  
OF COPRODUCTION OF SNG AND METHANOL  
UNDER ALTERNATIVE PRODUCT PRICES (a)

<u>SNG Price(b)</u>	<u>\$5.00</u>	<u>\$6.00</u>	<u>\$7.00</u>
Methanol Price (b) (\$1982)			
2.00	-8.6%	-2.7%	2.1%
4.00	1.3	5.7	10.0
6.00	9.2	13.4	17.4
8.00	16.7	20.6	24.3
10.00	23.7	27.2	30.3

(a) Assumes 75% debt with inflated dollars to calculate rate of return.

(b) SNG and Methanol Prices in \$/MMBtu.

## 8.0 PROJECT RISKS

### 8.1 IDENTIFICATION OF PROJECT RISKS

The major risks for financial sponsors of the Project can be enumerated as follows:

1. Project abandonment prior to commencement of operations due to cost overruns, technical failure, environmental regulations or any other reason;
2. Delays in timing and cost overruns during construction;
3. Higher than anticipated operating costs, particularly feedstock costs and maintenance costs;
4. More onerous environmental requirements than originally anticipated and accompanying higher costs;
5. The failure of the plant to meet designed output capacity;
6. Technical obsolescence at some point in the future;
7. Technology failure;
8. Force majeure events including strikes, etc;
9. Higher than anticipated financing costs;
10. Availability of a market for the project output;
11. Lower than anticipated product prices; and,
12. Changes in tax laws.

### 8.2 RISK SHARING

These risks are present under any project financial structure. Alternative structures shift the risk among the Government and the private sector participants. An example of the differences in risk taking available from loan guarantees, as opposed to price guarantees only, can be viewed by realizing that a non-recourse loan guarantee to the project typically results in the Government taking the majority of the risks in all categories listed. Under a price guarantee the Government takes only a part of the last risk listed, that of the market price of the Project's products.

## 8.2 (Continued)

Project cost overruns can be divided into two parts, real cost overruns and price escalation. Real cost overrun risk and the risk of construction delays will be shared by the equity sponsors and the SFC through the loan guarantee. If the price guarantee adjusts with inflation, the risk of cost overruns due to escalation will be mitigated to the extent of available price guarantee authority.

The risk of higher than anticipated operating costs will be shared by the equity sponsors and the SFC through the loan guarantee. The manner in which a price guarantee will operate could provide additional funds to cover higher operating costs.

The risk of higher costs or shutdowns resulting from environmental regulations will be borne in part by the equity sponsors and also by the SFC through the loan guarantee.

Failure of the Project to meet capacity or delays due to technology adjustments are lessened by using commercially available technologies. Process performance guarantees and construction guarantees are expected to be available from major equipment vendors and construction companies. To the extent that these guarantees are inadequate this risk will be shared by the equity sponsors and the SFC.

If inadequate demand results from alternatively available fuels at substantially lower prices, the equity sponsors will be protected from this risk in part by the loan guarantee and to the extent of available authority by the price guarantee.

Project sponsors bear the risk that future changes in tax law will provide less tax benefits than currently available. For example, certain provisions of the tax bill recently passed by the Senate could lower the depreciable base by 50% of the tax credits taken. Another bill currently before Congress would require that interest be capitalized for tax purposes and amortized over the first 10 years of operations.

CALIFORNIA CRUDE PRICES: WESTERN LEG

CASE A

CASH FLOW

	1982	1983	1984	1985	1986	1987	1988	1989	1982-89
TOTAL REVENUE	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 270.22	\$ 278.22
TOTAL OPERATING COSTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	229.97	229.97
INTEREST EXPENSE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	352.75	352.75
NET INCOME TAXES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHANGE IN NET WORKING CAPITAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	57.42	57.42
DEBT AMORTIZATION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	137.39	137.39
EQUITY REQUIREMENT	0.51	5.46	12.86	28.44	176.89	240.68	318.36	32.73	915.93
CASH FLOW	0 ( 0.51)	0 ( 5.46)	0 ( 12.86)	0 ( 28.44)	0 ( 176.89)	0 ( 240.68)	0 ( 318.36)	0 ( 532.03)	0 ( 1415.23)
LOSSES PASSED THROUGH OR CARRIED FORWARD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	070.68	870.68
CASH VALUE OF INTEREST DEDUCTION	0.10	0.45	2.50	5.50	24.41	73.64	131.49	0.00	238.38
CASH VALUE OF FEDERAL TAX LOSS DEDUCTION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	400.51	400.51
INVESTMENT TAX CREDITS	0.17	1.84	4.14	9.15	58.90	108.74	28.88	11.78	283.09
ENERGY TAX CREDITS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ADJUSTED CASH FLOW	0 ( 0.25)	0 ( 2.97)	0 ( 6.21)	0 ( 13.71)	0 ( 93.57)	0 ( 158.00)	0 ( 97.99)	0 ( 119.74)	0 ( 493.24)
ACCUMULATED ADJUSTED CASHFLOW	0 ( 0.25)	0 ( 3.22)	0 ( 9.43)	0 ( 23.15)	0 ( 116.72)	0 ( 275.52)	0 ( 373.50)	0 ( 493.24)	
IRR	5.97%	5.97%	5.97%	5.97%	5.97%	5.97%	5.97%	5.97%	5.97%

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CALIFORNIA CRUDE PRICES: WESTERN LEG

CASE A

CRON INDIAN PROJECT

FINANCIAL INCOME STATEMENT  
YEAR END

	1982	1983	1984	1985	1986	1987	1988	1989	1982-89
TOTAL REVENUE	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 278.22	\$ 278.22
TOTAL OPERATING COSTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	229.97	229.97
DEPRECIATION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	73.27	73.27
INTEREST EXPENSE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	352.75	352.75
BOOK INCOME BEFORE TAXES	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ (277.77)	\$ (377.77)

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CALIFORNIA CRUDE PRICES: WESTERN LEG

CASE A

CASH FLOW

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1982-98
TOTAL REVENUE	\$ 278.22	\$ 465.27	\$ 502.85	\$ 543.07	\$ 506.13	\$ 632.24	\$ 601.62	\$ 734.50	\$ 791.16	\$ 851.86	\$6,066.93
COSTS	229.97	365.47	387.40	410.65	425.20	461.40	489.09	518.43	549.54	582.51	4,429.74
INTEREST EXPENSE	352.75	334.89	317.02	299.16	281.30	263.44	245.58	227.72	209.86	192.00	2,723.73
NET INCOME TAXES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.77	38.40	54.17
CHANGE IN NET WORKING CAPITAL	37.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	57.42
DEBT AMORTIZATION	137.39	137.39	137.39	137.39	127.39	127.39	137.39	127.39	137.39	137.39	1,373.89
EQUITY REQUIREMENT	32.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	915.93
CASH FLOW	\$ (532.03)	\$ (272.48)	\$ (338.97)	\$ (304.13)	\$ (267.84)	\$ (229.97)	\$ (190.44)	\$ (149.04)	\$ (121.40)	\$ (98.44)	\$ (3487.95)
LOSSES PASSED THROUGH OK											
CARRIED FORWARD	870.68	1,140.99	881.00	619.69	256.93	92.60	53.05	11.65	0.00	0.00	4,026.59
CASH VALUE OF INTEREST DEDUCTION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	238.38
CASH VALUE OF FEDERAL TAX LOSS DEDUCTION	400.51	524.86	405.26	285.06	164.19	42.60	24.40	5.36	0.00	0.00	1,852.23
INVESTMENT TAX CREDITS	11.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	283.09
ENERGY TAX CREDITS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ADJUSTED CASH FLOW	\$ (119.74)	\$ 152.37	\$ 66.29	\$ ( 19.07)	\$ (102.66)	\$ (187.29)	\$ (166.04)	\$ (143.68)	\$ (121.40)	\$ ( 98.44)	\$ (1114.24)
ACCUMULATED ADJUSTED CASHFLOW	( 493.24)	( 340.87)	( 274.57)	( 293.64)	( 397.30)	( 584.69)	( 750.73)	( 894.41)	( 1,015.80)	( 1,114.24)	
IRR	5.97%	5.97%	5.97%	5.97%	5.97%	5.97%	5.97%	5.97%	5.97%	5.97%	5.97%

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**CALIFORNIA CRUDE PRICES: WESTERN LEG**

CASE A

**CROW INDIAN PROJECT**

**TAX STATEMENT  
YEAR END**

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1982-98
<b>TOTAL REVENUE</b>	\$ 278.22	\$ 465.27	\$ 502.85	\$ 543.07	\$ 586.13	\$ 632.24	\$ 681.62	\$ 734.50	\$ 791.16	\$ 851.86	\$ 61,066.93
<b>TOTAL OPERATING COSTS</b>	229.97	365.47	387.40	410.65	425.28	461.40	489.09	518.43	549.54	582.51	4,429.74
<b>TAX DEPRECIATION</b>	566.19	905.90	679.42	452.95	226.47	0.00	0.00	0.00	0.00	0.00	2,830.94
<b>INTEREST EXPENSE</b>	352.75	334.89	317.02	299.16	201.30	263.44	245.58	227.72	209.86	192.00	2,723.73
<b>UNADJUSTED NET INCOME BEFORE TAXES</b>	\$ (870.60)	\$ (110.99)	\$ (881.00)	\$ (619.69)	\$ (356.93)	\$ (92.60)	\$ (53.05)	\$ (11.65)	\$ 31.76	\$ 77.35	\$ (3917.48)
<b>NET INCOME TAXES</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.77	38.40	54.17
<b>ADJUSTED NET INCOME AFTER TAXES</b>	\$ (870.60)	\$ (110.99)	\$ (881.00)	\$ (619.69)	\$ (356.93)	\$ (92.60)	\$ (53.05)	\$ (11.65)	\$ 15.99	\$ 38.95	\$ (3971.65)
<b>TOTAL TAX CREDITS</b>	11.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	283.09
<b>LOSSES PASSED THROUGH OR CARRIED FORWARD</b>	870.60	1,110.99	881.00	619.69	356.93	92.60	53.05	11.65	0.00	0.00	4,026.59

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**CALIFORNIA CRUDE PRICES: WESTERN LEG**

CASE A

**CRON INDIAN PROJECT**

**FINANCIAL INCOME STATEMENT  
YEAR END**

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1982-98
TOTAL REVENUE	\$ 278.22	\$ 465.27	\$ 502.85	\$ 543.07	\$ 506.13	\$ 632.24	\$ 681.62	\$ 734.50	\$ 791.16	\$ 851.86	\$4,066.93
TOTAL OPERATING COSTS	229.97	365.47	387.40	410.65	425.20	461.46	489.09	518.43	549.54	582.51	4,429.74
DEPRECIATION	73.27	146.55	146.55	146.55	146.55	146.55	146.55	146.55	146.55	146.55	1,392.21
INTEREST EXPENSE	352.75	334.89	317.02	299.16	281.30	263.44	245.58	227.72	209.86	192.00	2,723.73
BOOK INCOME BEFORE TAXES	\$ (377.77)	\$ (381.64)	\$ (348.13)	\$ (313.28)	\$ (277.00)	\$ (239.15)	\$ (199.60)	\$ (158.20)	\$ (114.79)	\$ ( 69.20)	\$ (2478.75)

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CALIFORNIA CRUDE PRICES: WESTERN LEG

CASE A

CASH FLOW

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	1982-08
TOTAL REVENUE	916.91	986.62	1,061.34	1,141.44	1,227.32	1,319.40	1,418.14	1,524.03	1,637.61	1,739.43	1,905.17
TOTAL OPERATING COSTS	617.46	654.51	693.78	735.40	779.83	826.30	875.88	928.43	984.14	1,043.18	1,256.35
INTEREST EXPENSE	174.14	156.28	138.42	120.56	102.70	84.84	66.98	49.12	31.26	13.40	3,661.41
NET INCOME TAXES	63.21	87.29	113.76	141.73	171.32	202.68	233.95	271.30	308.90	348.93	1,978.25
CHANGE IN NET WORKING CAPITAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	57.42
DEBT AMORTIZATION	137.39	137.39	137.39	137.39	137.39	137.39	137.39	137.39	137.39	137.39	2,747.78
EQUITY REQUIREMENT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	915.93
CASH FLOW	174.29	148.85	22.00	6.36	36.38	48.19	101.24	127.79	175.23	216.33	2,889.96
LOSSES PASSED THROUGH OR CARRIED FORWARD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4,026.59
CASH VALUE OF INTEREST DEDUCTION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	238.38
CASH VALUE OF FEDERAL TAX LOSS DEDUCTION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,852.23
INVESTMENT TAX CREDIT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	283.09
ENERGY TAX CREDIT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ADJUSTED CASH FLOW	174.29	148.85	22.00	6.36	36.38	48.19	101.24	127.79	175.23	216.33	2,889.96
ACCUMULATED ADJUSTED CASHFLOW	1,188.53	1,237.38	1,259.38	1,253.02	1,216.63	1,140.44	1,046.50	908.71	732.78	516.25	
IRR	5.97%	5.97%	5.97%	5.97%	5.97%	5.97%	5.97%	5.97%	5.97%	5.97%	5.97%

USE OR DISCLOSURE OF REPORT DATA IS SUBJECT TO THE RESTRICTION ON THE NOTICE PAGE AT THE FRONT OF THIS REPORT

**CALIFORNIA CRUDE PRICES: WESTERN LEO**  
 REFINERY IN THE STATE OF CALIFORNIA

CASE A

**CRUI INDIAN PROJECT**

**TAX STATEMENT  
YEAR END**

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	1992-08
<b>TOTAL REVENUE</b>	\$ 916.91	\$ 986.62	\$ 1,061.34	\$ 1,143.44	\$ 1,227.32	\$ 1,319.40	\$ 1,410.14	\$ 1,524.03	\$ 1,637.61	\$ 1,789.43	\$ 19059.17
<b>TOTAL OPERATING COSTS</b>	417.46	454.51	493.70	745.40	779.53	826.30	875.08	928.43	984.14	1,043.18	12,568.35
<b>TAX DEPRECIATION</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,030.24
<b>INTEREST EXPENSE</b>	174.14	156.28	138.42	120.56	102.70	84.84	66.98	49.12	31.26	13.40	3,661.41
<b>UNADJUSTED NET INCOME BEFORE TAXES</b>	\$ 125.31	\$ 175.83	\$ 229.15	\$ 285.40	\$ 345.09	\$ 408.26	\$ 475.28	\$ 546.48	\$ 622.21	\$ 702.85	\$ ( 1.52)
<b>NET INCOME TAXES</b>	62.21	87.39	113.76	141.73	171.32	202.68	238.95	271.30	308.90	348.83	1,998.25
<b>ADJUSTED NET INCOME AFTER TAXES</b>	\$ 63.10	\$ 88.44	\$ 115.39	\$ 143.75	\$ 173.77	\$ 205.58	\$ 236.33	\$ 275.18	\$ 313.32	\$ 353.92	\$ (1999.77)
<b>TOTAL TAX CREDITS</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	283.09
<b>LOSSES PASSED THROUGH OR CARRIED FORWARD</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4,026.59

USE OR DISCLOSURE OF REPORT DATA  
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CALIFORNIA CRUDE PRICES: WESTERN LEG

CASE A

CROW INDIAN PROJECT

FINANCIAL INCOME STATEMENT  
YEAR END

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	1982-08
TOTAL REVENUE	\$ 516.91	\$ 986.62	\$ 1,061.34	\$ 1,141.44	\$ 1,287.32	\$ 1,319.40	\$ 1,418.14	\$ 1,524.03	\$ 1,637.61	\$ 1,759.43	\$ 19059.17
TOTAL OPERATING COSTS	617.46	654.51	693.78	735.40	779.53	826.30	875.88	928.43	984.14	1,043.18	12,568.35
DEPRECIATION	146.55	146.55	146.55	146.55	146.55	146.55	146.55	146.55	146.55	146.55	2,887.89
INTEREST EXPENSE	174.14	156.28	138.42	120.56	102.70	84.84	66.98	49.12	31.26	13.40	3,661.41
BOOK INCOME BEFORE TAXES	\$ ( 21.24)	\$ 29.29	\$ 82.60	\$ 138.93	\$ 198.54	\$ 261.71	\$ 328.74	\$ 399.94	\$ 475.67	\$ 556.30	\$ ( 28.28)

USE OF DISCLOSURE OF REPORT DATA  
IS SUBJECT TO THE RESTRICTION ON THE

CALIFORNIA CRUDE PRICE: WESTERN IEG  
REPERIOD: 1982-14

CASE A

CASH.FLOW

	2009	2010	2011	2012	2013	2014	1982-14
TOTAL REVENUE	\$1,890.12	\$2,030.32	\$2,186.74	\$2,342.14	\$2,515.33	\$1,350.38	\$213,68.22
TOTAL OPERATING COSTS	1,108.78	1,172.12	1,242.45	1,317.00	1,396.02	739.89	19,541.60
INTEREST EXPENSE	( 0.00)	( 0.00)	( 0.00)	( 0.00)	( 0.00)	( 0.00)	3,661.41
NET INCOME TAXES	389.39	426.03	465.82	508.93	555.69	302.08	4,647.20
CHANGE IN NET WORKING CAPITAL	0.00	0.00	0.00	0.00	0.00	0.00	57.42
DEBT AMORTIZATION	0.00	0.00	0.00	0.00	0.00	0.00	2,747.78
EQUITY REQUIREMENT	0.00	0.00	0.00	0.00	0.00	0.00	915.93
CASH FLOW	\$ 394.96	\$ 432.15	\$ 472.48	\$ 516.21	\$ 563.63	\$ 307.42	\$ (203.12)
LOSSES PASSED THROUGH OR CARRIED FORWARD	0.00	0.00	0.00	0.00	0.00	0.00	4,026.59
CASH VALUE OF INTEREST DEDUCTION	0.00	0.00	0.00	0.00	0.00	0.00	238.38
CASH VALUE OF FEDERAL TAX LOSS DEDUCTION	0.00	0.00	0.00	0.00	0.00	0.00	1,852.23
INVESTMENT TAX CREDITS	0.00	0.00	0.00	0.00	0.00	0.00	283.09
ENERGY TAX CREDITS	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ADJUSTED CASH FLOW	\$ 394.96	\$ 432.15	\$ 472.48	\$ 516.21	\$ 563.63	\$ 307.42	\$2,170.59
ACCUMULATED ADJUSTED CASHFLOW	(1,131.29)	310.85	763.63	1,299.84	1,863.17	2,170.59	
IRK	5.97%	5.97%	5.97%	5.97%	5.97%	5.97%	5.97%

USE OR DISCLOSURE OF REPORT DATA  
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CALIFORNIA CRUDE PRICES: WESTERN LEG CASE A

CROW INDIAN PROJECT

TAX STATEMENT  
YEAR END

	2009	2010	2011	2012	2013	2014	1982-14
TOTAL REVENUE	\$1,890.12	\$2,030.32	\$2,180.74	\$2,342.14	\$2,515.33	\$1,350.30	\$31368.22
TOTAL OPERATING COSTS	1,105.76	1,172.12	1,242.45	1,317.00	1,386.02	739.89	19,541.60
TAX DEPRECIATION	0.00	0.00	0.00	0.00	0.00	0.00	2,830.94
INTEREST EXPENSE	( 0.00)	( 0.00)	( 0.00)	( 0.00)	( 0.00)	( 0.00)	3,661.41
UNADJUSTED NET INCOME BEFORE TAXES	\$ 784.34	\$ 858.20	\$ 938.29	\$1,025.15	\$1,119.32	\$ 610.50	\$5,334.27
NET INCOME TAXES	389.39	424.05	445.82	500.92	555.69	303.08	4,647.20
ADJUSTED NET INCOME AFTER TAXES	\$ 394.96	\$ 432.15	\$ 472.48	\$ 514.21	\$ 563.62	\$ 307.42	\$ 687.07
TOTAL TAX CREDITS	0.00	0.00	0.00	0.00	0.00	0.00	283.09
LOSSES PASSED THROUGH OR CARRIED FORWARD	0.00	0.00	0.00	0.00	0.00	0.00	4,026.59

CALIFORNIA CRUDE PRICES: WESTERN LEO

CASE A

CRUIR INDIAN PROJECT

FINANCIAL INCOME STATEMENT  
YEAR END

	2009	2010	2011	2012	2013	2014	1982-14
TOTAL REVENUE	\$1,890.12	\$2,030.32	\$2,180.74	\$2,342.14	\$2,515.33	\$1,350.38	\$31369.22
TOTAL OPERATING COSTS	1,105.78	1,172.12	1,242.45	1,317.00	1,396.02	738.89	19,541.60
DEPRECIATION	146.55	146.55	146.55	146.55	146.55	73.27	3,663.70
INTEREST EXPENSE	( 0.00)	( 0.00)	( 0.00)	( 0.00)	( 0.00)	( 0.00)	3,661.41
BOOK INCOME BEFORE TAXES	\$ 637.79	\$ 711.65	\$ 791.75	\$ 878.60	\$ 972.77	\$ 537.22	\$4,501.50

CALIFORNIA DISTILLATE PRICES: WESTERN LEG

CASE B

CASH FLOW

	1982	1983	1984	1985	1986	1987	1988	1989	1982-89
TOTAL REVENUE	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 362.43	\$ 362.43
TOTAL OPERATING COSTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	229.97	229.97
INTEREST EXPENSE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	352.75	352.75
NET INCOME TAXES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHANGE IN NET WORKING CAPITAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	57.42	57.42
DEBT AMORTIZATION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	127.39	127.39
EQUITY REQUIREMENT	0.51	5.46	12.86	28.44	176.89	340.68	318.36	32.73	915.93
CASH FLOW	\$( 0.51)	\$( 5.46)	\$( 12.86)	\$( 28.44)	\$( 176.89)	\$( 340.68)	\$( 318.36)	\$( 447.83)	\$( 1331.03)
LOSSES PASSED THROUGH OR CARRIED FORWARD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	786.48	786.48
CASH VALUE OF INTEREST DEDUCTION	0.10	0.65	2.50	5.58	24.41	73.64	121.49	0.00	238.38
CASH VALUE OF FEDERAL TAX LOSS DEDUCTION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	261.78	261.78
INVESTMENT TAX CREDITS	0.17	1.84	4.14	9.15	58.90	108.24	88.88	11.78	283.09
ENERGY TAX CREDITS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ADJUSTED CASH FLOW	\$( 0.25)	\$( 2.97)	\$( 6.21)	\$( 13.71)	\$( 93.57)	\$( 158.80)	\$( 97.99)	\$( 74.27)	\$( 447.77)
ACCUMULATED ADJUSTED CASHFLOW	( 0.25)	( 3.22)	( 9.43)	( 23.15)	( 116.72)	( 275.52)	( 373.50)	( 447.77)	
IRR	17.01%	17.01%	17.01%	17.01%	17.01%	17.01%	17.01%	17.01%	17.01%

CALIFORNIA DISTILLATE PRICES: WESTERN LEO

CASE B

CROW INDIAN PROJECT

FINANCIAL INCOME STATEMENT  
YEAR END

	1982	1983	1984	1985	1986	1987	1988	1989	1982-89
TOTAL REVENUE	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 242.43	\$ 362.43
TOTAL OPERATING COSTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	229.97	229.97
DEPRECIATION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	73.27	73.27
INTEREST EXPENSE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	352.75	352.75
BOOK INCOME BEFORE TAXES	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ (293.56)	\$ (293.56)

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## CASE B

## CALIFORNIA DISTILLATE PRICES: WESTERN LEO

## CASH FLOW

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1998-99
TOTAL REVENUE	\$ 362.43	\$ 599.95	\$ 647.78	\$ 698.98	\$ 753.87	\$ 812.73	\$ 875.00	\$ 943.40	\$ 1,015.96	\$ 1,073.72	\$ 7,804.62
TOTAL OPERATING COSTS	229.97	365.47	387.40	410.65	435.28	461.40	489.09	518.43	549.54	582.51	4,439.74
INTEREST EXPENSE	352.73	334.89	317.02	299.16	281.30	263.44	245.58	227.72	209.86	192.00	2,723.73
NET INCOME TAXES	0.00	0.00	0.00	0.00	0.00	43.63	70.07	97.92	127.37	156.47	497.46
CHANGE IN NET WORKING CAPITAL	57.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	57.42
DEBT AMORTIZATION	137.39	137.39	137.39	137.39	137.39	137.39	137.39	137.39	137.39	137.39	1,373.89
EQUITY REQUIREMENT	32.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	915.93
CASH FLOW	\$ (447.83)	\$ (237.80)	\$ (194.04)	\$ (148.21)	\$ (100.11)	\$ (93.14)	\$ (66.22)	\$ (38.07)	\$ (8.20)	\$ 23.35	\$ (2193.55)
LOSSES PASSED THROUGH OR CARRIED FORWARD	786.48	1,004.31	736.67	463.77	189.20	0.00	0.00	0.00	0.00	0.00	3,181.83
CASH VALUE OF INTEREST DEDUCTION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	238.38
CASH VALUE OF FEDERAL TAX LOSS DEDUCTION	361.78	462.90	336.59	213.34	87.03	0.00	0.00	0.00	0.00	0.00	1,463.64
INVESTMENT TAX CREDITS	11.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	283.00
ENERGY TAX CREDITS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ADJUSTED CASH FLOW	\$ (74.27)	\$ 225.10	\$ 144.56	\$ 65.12	\$ (13.08)	\$ (93.14)	\$ (66.32)	\$ (38.07)	\$ (8.20)	\$ 23.35	\$ (208.44)
ACCUMULATED ADJUSTED CASHFLOW	( 447.77)	( 223.67)	( 78.11)	( 12.99)	( 36.07)	( 119.20)	( 185.52)	( 223.59)	( 231.79)	( 208.44)	
IRR	17.01%	17.01%	17.01%	17.01%	17.01%	17.01%	17.01%	17.01%	17.01%	17.01%	17.01%

CALIFORNIA DISTILLATE PRICES: WESTERN LEG

CASE B

CROW INDIAN PROJECT

TAX STATEMENT  
YEAR END

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1998-98
TOTAL REVENUE	\$ 362.43	\$ 599.95	\$ 647.78	\$ 698.98	\$ 753.87	\$ 812.73	\$ 875.80	\$ 943.40	\$ 1,015.96	\$ 1,073.72	\$ 7,804.62
TOTAL OPERATING COSTS	229.97	365.47	387.40	410.65	435.28	461.40	489.09	518.43	549.54	582.51	4,429.74
TAX DEPRECIATION	566.19	905.90	679.42	453.95	226.47	0.00	0.00	0.00	0.00	0.00	2,830.94
INTEREST EXPENSE	352.75	334.89	317.02	299.16	301.30	263.44	245.50	227.73	209.86	192.00	2,723.73
UNADJUSTED NET INCOME BEFORE TAXES	\$ (786.48)	\$ (1,006.31)	\$ (736.07)	\$ (463.77)	\$ (189.20)	\$ 87.88	\$ 141.14	\$ 197.24	\$ 256.36	\$ 319.21	\$ (2,179.80)
NET INCOME TAXES	0.00	0.00	0.00	0.00	0.00	43.63	70.07	97.92	127.37	155.47	497.46
ADJUSTED NET INCOME AFTER TAXES	\$ (786.48)	\$ (1,006.31)	\$ (736.07)	\$ (463.77)	\$ (189.20)	\$ 44.25	\$ 71.07	\$ 99.32	\$ 129.19	\$ 163.74	\$ (2,677.25)
TOTAL TAX CREDITS LOSSES PASSED THROUGH OR CARRIED FORWARD	11.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	383.09
	786.48	1,006.31	736.07	463.77	189.20	0.00	0.00	0.00	0.00	0.00	3,161.83

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CALIFORNIA DISTILLATE PRICES: WESTERN LEG

CASE B

CROW INDIAN PROJECT

FINANCIAL INCOME STATEMENT  
YEAR END

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999-98
TOTAL REVENUE	\$ 362.43	\$ 599.95	\$ 447.28	\$ 498.98	\$ 753.87	\$ 812.73	\$ 825.80	\$ 943.40	\$ 1,015.96	\$ 1,093.72	\$ 7,804.62
TOTAL OPERATING	229.97	365.47	387.40	410.65	425.28	461.40	489.09	518.43	549.54	582.51	4,429.74
DEPRECIATION	73.27	146.55	146.55	146.55	146.55	146.55	146.55	146.55	146.55	146.55	1,392.21
INTEREST EXPENSE	352.75	334.89	317.02	299.18	281.30	263.44	245.58	227.72	209.86	192.00	2,723.73
BOOK INCOME											
BEFORE TAXES	\$ (283.56)	\$ (246.96)	\$ (203.20)	\$ (187.37)	\$ (109.27)	\$ (50.66)	\$ ( 5.41)	\$ 50.70	\$ 110.01	\$ 172.66	\$ (741.07)

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CALIFORNIA DISTILLATE PRICES: WESTERN LEG  
 REPORT PREPARED BY THE DISTILLATE PRICES COMMITTEE

CASE D

## CASH FLOW

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	1982-08
TOTAL REVENUE	\$1,177.14	\$1,266.60	\$1,362.54	\$1,465.50	\$1,576.01	\$1,694.52	\$1,821.71	\$1,958.25	\$2,104.82	\$2,262.09	\$2,4493.80
TOTAL OPERATING COSTS	617.46	654.51	693.78	735.40	779.53	826.30	875.08	928.43	984.14	1,043.18	12,569.35
INTEREST EXPENSE	174.14	156.28	138.42	120.56	102.70	84.84	66.98	49.12	31.26	13.40	3,661.41
NET INCOME TAXES	191.40	226.29	263.29	302.61	344.43	388.91	436.31	486.87	540.84	598.48	4,7276.88
CHANGE IN NET WORKING CAPITAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	57.42
DEBT AMORTIZATION	137.39	137.39	137.39	137.39	127.39	137.39	137.39	127.39	137.39	137.39	2,747.78
EQUITY REQUIREMENT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	915.93
NET CASH FLOW	\$ 56.75	\$ 92.13	\$ 129.67	\$ 169.55	\$ 211.97	\$ 257.08	\$ 305.16	\$ 356.44	\$ 411.19	\$ 469.65	\$ 266.03
LOSSES PASSED THROUGH OR CARRIED FORWARD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3,181.83
CASH VALUE OF INTEREST DEDUCTION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	238.38
CASH VALUE OF FEDERAL TAX LOSS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,453.64
INVESTMENT TAX CREDITS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	283.07
ENERGY TAX CREDITS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ADJUSTED CASH FLOW	\$ 56.75	\$ 92.13	\$ 129.67	\$ 169.55	\$ 211.97	\$ 257.08	\$ 305.16	\$ 356.44	\$ 411.19	\$ 469.65	\$2,291.15
ACCUMULATED ADJUSTED CASHFLOW	( 151.69)	( 59.56)	70.11	239.66	451.62	708.71	1,013.87	1,370.31	1,781.50	2,251.15	
IRR	17.01%	17.01%	17.01%	17.01%	17.01%	17.01%	17.01%	17.01%	17.01%	17.01%	17.01%

USE OR DISCLOSURE OF REPORT DATA  
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CASE B

CALIFORNIA DISTILLATE PRICES: WESTERN LEG  
 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 1982-08

## CROW INDIAN PROJECT

TAX STATEMENT  
 YEAR END

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	1982-08
TOTAL REVENUE	\$1,177.14	\$1,266.60	\$1,362.54	\$1,465.50	\$1,576.01	\$1,694.52	\$1,821.71	\$1,958.25	\$2,104.82	\$2,262.00	\$2,4493.80
TOTAL OPERATING COSTS	617.46	654.51	693.78	735.40	779.53	826.20	875.88	928.43	984.14	1,043.18	12,568.35
TAX DEPRECIATION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,830.94
INTEREST EXPENSE	174.14	156.28	138.42	120.56	102.70	84.84	66.98	49.12	31.26	13.40	3,661.41
UNADJUSTED NET INCOME BEFORE TAXES	\$ 385.54	\$ 455.81	\$ 530.35	\$ 609.54	\$ 693.78	\$ 783.38	\$ 870.85	\$ 980.70	\$1,089.42	\$1,205.51	\$5,433.10
NET INCOME TAXES	191.40	226.29	263.29	302.61	344.43	388.91	436.31	486.87	540.84	598.98	4,276.88
ADJUSTED NET INCOME AFTER TAXES	\$ 194.14	\$ 229.52	\$ 267.06	\$ 306.93	\$ 349.35	\$ 394.47	\$ 442.55	\$ 493.83	\$ 548.58	\$ 607.04	\$1,156.22
TOTAL TAX CREDITS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	283.09
LOSSES PASSED THROUGH OR CARRIED FORWARD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3,181.83

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**CALIFORNIA DISTILLATE PRICES: WESTERN LEG**  
UNIT: DOLLARS PER GALLON, EXCLUDING TAXES, FREIGHT, AND OTHER CHARGES

CASE B

**CROW INDIAN PROJECT**

**FINANCIAL INCOME STATEMENT  
YEAR END**

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	1982-08
<b>TOTAL REVENUE</b>	\$1,177.14	\$1,266.60	\$1,362.54	\$1,465.50	\$1,576.01	\$1,694.52	\$1,821.71	\$1,958.25	\$2,104.62	\$2,262.09	\$24493.80
<b>TOTAL OPERATING COSTS</b>	617.46	654.51	693.78	735.40	779.53	826.30	875.88	928.43	984.14	1,043.18	12,568.35
<b>DEPRECIATION</b>	146.55	146.55	146.55	146.55	146.55	146.55	146.55	146.55	146.55	146.55	2,857.69
<b>INTEREST EXPENSE</b>	174.14	156.28	138.42	120.56	102.70	84.84	66.98	49.12	31.26	13.40	3,661.41
<b>BOOK INCOME BEFORE TAXES</b>	\$ 238.99	\$ 309.26	\$ 383.80	\$ 462.99	\$ 547.24	\$ 636.84	\$ 732.31	\$ 834.15	\$ 942.87	\$1,038.96	\$5,406.35

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CASE B

CALIFORNIA DISTILLATE PRICES: WESTERN LEB

CROW INDIAN PROJECT

TAX STATEMENT  
YEAR END

	2009	2010	2011	2012	2013	2014	1982-14
TOTAL REVENUE	\$2,430.90	\$2,612.14	\$2,806.78	\$3,015.65	\$3,240.00	\$1,740.22	\$40339.48
TOTAL OPERATING COSTS	1,105.78	1,172.12	1,242.45	1,317.00	1,396.02	739.89	19,541.60
TAX DEPRECIATION	0.00	0.00	0.00	0.00	0.00	0.00	2,830.94
INTEREST EXPENSE	( 0.00)	( 0.00)	( 0.00)	( 0.00)	( 0.00)	( 0.00)	3,261.41
UNADJUSTED NET INCOME BEFORE TAXES	\$1,325.13	\$1,440.02	\$1,564.33	\$1,698.65	\$1,843.98	\$1,000.33	\$14,305.54
NET INCOME TAXES	657.86	714.90	776.61	843.29	915.45	496.61	8,681.60
ADJUSTED NET INCOME AFTER TAXES	\$ 667.27	\$ 725.12	\$ 787.72	\$ 855.35	\$ 928.54	\$ 503.72	\$5,623.93
TOTAL TAX CREDITS	0.00	0.00	0.00	0.00	0.00	0.00	283.09
LOSSES PASSED THROUGH OR CARRIED FORWARD	0.00	0.00	0.00	0.00	0.00	0.00	3,181.83

CALIFORNIA DISTILLANCE PRICES! WESTERN LEG

CASE B

CASH FLOW

	2009	2010	2011	2012	2013	2014	1902-14
TOTAL REVENUE	\$2,430.90	\$2,612.14	\$2,806.70	\$3,015.65	\$3,240.00	\$1,740.22	\$40339.48
TOTAL OPERATING COSTS	1,105.78	1,172.12	1,242.45	1,317.00	1,392.02	739.89	19,541.60
INTEREST EXPENSE	( 0.00)	( 0.00)	( 0.00)	( 0.00)	( 0.00)	( 0.00)	3,661.41
NET INCOME TAXES	607.86	714.90	776.61	843.29	915.45	496.61	8,681.60
CHANGE IN NET WORKING CAPITAL	0.00	0.00	0.00	0.00	0.00	0.00	57.42
DEBT AMORTIZATION	0.00	0.00	0.00	0.00	0.00	0.00	2,747.78
EQUITY REQUIREMENT	0.00	0.00	0.00	0.00	0.00	0.00	915.93
CASH FLOW	\$ 667.27	\$ 725.12	\$ 787.72	\$ 855.35	\$ 928.54	\$ 503.72	\$4,733.75
LOSSES PASSED THROUGH OR CARRIED FORWARD	0.00	0.00	0.00	0.00	0.00	0.00	3,181.83
CASH VALUE OF INTEREST DEDUCTION	0.00	0.00	0.00	0.00	0.00	0.00	230.38
CASH VALUE OF FEDERAL TAX LOSSES	0.00	0.00	0.00	0.00	0.00	0.00	1,463.64
DEFERRED TAX	0.00	0.00	0.00	0.00	0.00	0.00	283.09
ENERGY TAX CREDITS	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ADJUSTED CASH FLOW	\$ 667.27	\$ 725.12	\$ 787.72	\$ 855.35	\$ 928.54	\$ 503.72	\$6,718.86
ACCUMULATED ADJUSTED CASHFLOW	2,918.41	3,643.53	4,421.25	5,286.61	6,215.14	6,718.86	
IRR	17.01%	27.01%	17.01%	17.01%	17.01%	17.01%	17.01%

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CASE B

CALIFORNIA DISTILLATE PRICES: WESTERN LEO  
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 CROWN INDIAN PROJECT

CROWN INDIAN PROJECT

FINANCIAL INCOME STATEMENT  
 YEAR END

	2009	2010	2011	2012	2013	2014	1982-14
TOTAL REVENUE	\$2,430.90	\$2,412.14	\$2,006.28	\$3,015.65	\$3,240.00	\$1,740.22	\$40339.48
TOTAL OPERATING COSTS	1,105.78	1,172.12	1,242.45	1,317.00	1,396.02	729.89	19,541.60
DEPRECIATION	146.55	146.55	146.55	146.55	146.55	73.27	3,663.70
INTEREST EXPENSE	( 0.00)	( 0.00)	( 0.00)	( 0.00)	( 0.00)	( 0.00)	3,663.43
BOOK INCOME BEFORE TAXES	\$1,178.58	\$1,293.47	\$1,417.78	\$1,552.10	\$1,697.44	\$ 927.06	\$13472.77

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# CALIFORNIA CRUDE PRICES: WESTERN LEG

CASE C

## CASH FLOW

	1982	1983	1984	1985	1986	1987	1988	1989	1982-89
TOTAL REVENUE	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 495.18	\$ 495.18
TOTAL OPERATING COSTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	229.97	229.97
INTEREST EXPENSE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	352.75	352.75
NET INCOME TAXES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHANGE IN NET WORKING CAPITAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	57.42	57.42
DEBT AMORTIZATION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	137.39	137.39
EQUITY REQUIREMENT	0.51	5.46	12.86	28.44	176.89	340.68	318.36	32.72	915.93
CASH FLOW	\$ ( 0.51)	\$ ( 5.46)	\$ ( 12.86)	\$ ( 28.44)	\$ (176.89)	\$ (340.68)	\$ (318.36)	\$ (215.00)	\$ (1498.28)
LOSSES PAID THROUGH ON CARRIED FORWARD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	653.73	653.73
CASH VALUE OF INTEREST DEDUCTION	0.10	0.45	2.50	5.58	24.41	73.64	121.49	0.00	238.38
CASH VALUE OF FEDERAL TAX LOSS DEDUCTION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	300.71	300.71
INVESTMENT TAX CREDITS	0.17	1.84	4.14	9.15	58.90	108.24	88.88	11.78	283.09
ENERGY TAX CREDITS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ADJUSTED CASH FLOW	\$ ( 0.25)	\$ ( 2.97)	\$ ( 6.21)	\$ ( 13.71)	\$ ( 93.57)	\$ (158.80)	\$ ( 97.99)	\$ ( 2.88)	\$ (376.09)
ACCUMULATED ADJUSTED CASHFLOW	( 0.25)	( 3.22)	( 9.43)	( 23.15)	( 116.72)	( 275.52)	( 373.50)	( 376.09)	
GUARANTEED PRICE	7.29	7.87	8.50	9.10	9.74	10.42	11.15	11.93	
SNR PLANT PRICE	4.91	5.10	5.31	5.95	6.43	6.95	7.51	4.71	
PRICE GUARANTEE PAYMENT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	216.95	
CUMULATIVE PRICE GUARANTEES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	216.95	
IRR	27.24%	27.24%	27.24%	27.24%	27.24%	27.24%	27.24%	27.24%	27.24%

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CALIFORNIA CRUDE PRICES: WESTERN LEG

CASE C

CROW INDIAN PROJECT

FINANCIAL INCOME STATEMENT  
YEAR END

	1982	1983	1984	1985	1986	1987	1988	1989	1982-89
TOTAL REVENUE	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 495.18	\$ 495.18
TOTAL OPERATING COSTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	229.97	229.97
DEPRECIATION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	73.27	73.27
INTEREST EXPENSE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	252.75	252.75
BOOK INCOME BEFORE TAXES	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ (160.81)	\$ (160.81)

CALIFORNIA CRUDE PRICES: WESTERN LEG

CASE C

CASH FLOW

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1982-98
TOTAL REVENUE	\$ 495.18	\$ 760.93	\$ 827.78	\$ 877.45	\$ 936.10	\$ 985.90	\$ 1,045.06	\$ 1,107.76	\$ 1,174.23	\$ 1,244.68	\$ 9,469.04
TOTAL OPERATING											
COSTS	229.97	345.47	387.40	410.65	435.28	461.40	489.09	518.43	549.54	582.51	4,439.74
INTEREST EXPENSE	352.75	334.89	317.02	299.16	281.30	263.44	243.58	227.72	209.86	192.00	2,723.73
NET INCOME TAXES	0.00	0.00	0.00	0.00	0.00	129.60	154.99	179.52	205.94	233.42	902.57
CHANGE IN NET											
WORKING CAPITAL	57.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	57.42
DEBT AMORTIZATION	137.39	137.39	137.39	137.39	137.39	137.39	137.39	127.39	137.39	137.39	1,373.89
EQUITY REQUIREMENT											
NT	32.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	915.93
CASH FLOW	\$ (315.08)	\$ (56.82)	\$ (14.03)	\$ 30.25	\$ 76.12	\$ ( 5.93)	\$ 18.91	\$ 44.70	\$ 71.50	\$ 99.36	\$ (930.22)
LOSSES PASSED THROUGH OR CARRIED FORWARD	453.73	825.33	556.07	285.31	12.97	0.00	0.00	0.00	0.00	0.00	2,333.40
CASH VALUE OF INTEREST DEDUCTION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	238.38
CASH VALUE OF FEDERAL TAX LOSS DEDUCTION	300.71	379.65	255.79	121.24	5.96	0.00	0.00	0.00	0.00	0.00	1,073.37
INVESTMENT TAX CREDITS	11.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	283.09
ENERGY TAX CREDITS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ADJUSTED CASH FLOW	\$ ( 2.58)	\$ 322.83	\$ 241.76	\$ 161.49	\$ 82.08	\$ ( 5.93)	\$ 18.91	\$ 44.70	\$ 71.50	\$ 99.36	\$ 600.62
ACCUMULATED ADJUSTED CASHFLOW	( 376.09)	( 53.26)	108.50	260.00	422.08	426.15	445.06	489.75	561.25	660.62	
GUARANTEED PRICE AND PLANT PRICE	11.93	12.64	13.40	14.20	15.06	15.96	16.92	17.93	19.01	20.15	
PRICE GUARANTEE PAYMENT	4.71	5.58	6.13	6.73	7.36	8.05	8.79	9.58	10.44	11.36	
CUMULATIVE PRICE GUARANTEES	216.95	315.66	324.93	334.38	342.96	353.66	363.44	373.26	383.07	392.82	
	216.95	533.62	857.55	1,191.93	1,525.89	1,889.85	2,252.99	2,626.24	3,009.31	3,402.13	
IRR	27.24%	27.24%	27.24%	27.24%	27.24%	27.24%	27.24%	27.24%	27.24%	27.24%	

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CALIFORNIA CRUDE PRICES: WESTERN LEG

CASE C

CRUM INDIAN PROJECT

TAX STATEMENT  
YEAR END

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1989-98
TOTAL REVENUE	\$ 495.18	\$ 780.93	\$ 827.78	\$ 877.45	\$ 930.10	\$ 985.90	\$ 1,045.06	\$ 1,107.76	\$ 1,174.23	\$ 1,244.68	\$9,469.06
TOTAL OPERATING COSTS	229.97	345.47	387.40	410.65	435.28	461.40	489.09	518.43	549.54	582.51	4,429.74
TAX DEPRECIATION	566.19	905.90	679.42	452.85	226.47	0.00	0.00	0.00	0.00	0.00	2,830.94
INTEREST EXPENSE	352.75	334.89	317.02	299.16	281.30	263.44	245.58	227.72	209.86	192.80	2,723.73
UNADJUSTED NET INCOME BEFORE TAXES	\$ (653.73)	\$ (625.33)	\$ (556.07)	\$ (289.31)	\$ (12.97)	\$ 261.06	\$ 310.39	\$ 361.61	\$ 414.83	\$ 470.17	\$ (515.35)
NET INCOME TAXES	0.00	0.00	0.00	0.00	0.00	129.60	154.09	179.52	205.94	233.42	902.57
ADJUSTED NET INCOME AFTER TAXES	\$ (653.73)	\$ (625.33)	\$ (556.07)	\$ (289.31)	\$ (12.97)	\$ 131.46	\$ 156.30	\$ 182.09	\$ 208.89	\$ 236.75	\$ (1417.92)
TOTAL TAX CREDITS	11.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	283.09
LOSSES PASSED THROUGH OR CARRIED FORWARD	653.73	625.33	556.07	289.31	12.97	0.00	0.00	0.00	0.00	0.00	2,733.40

**CALIFORNIA CRUDE PRICES: WESTERN LEO**

**CASE C**

**CROW INDIAN PROJECT**

**FINANCIAL INCOME STATEMENT  
YEAR END**

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1982-98
TOTAL REVENUE	\$ 495.18	\$ 780.93	\$ 827.78	\$ 877.45	\$ 930.10	\$ 985.90	\$ 1,045.06	\$ 1,107.76	\$ 1,174.23	\$ 1,244.68	\$ 9,469.06
TOTAL OPERATING COSTS	229.97	365.47	387.40	410.65	435.20	461.40	489.09	518.43	549.54	582.51	4,429.74
DEPRECIATION	73.27	146.55	146.55	146.55	146.55	146.55	146.55	146.55	146.55	146.55	1,392.21
INTEREST EXPENSE	352.75	334.89	317.02	299.14	281.30	263.44	245.58	227.72	209.86	192.00	2,723.73
BOOK INCOME BEFORE TAXES	\$ (160.81)	\$ (65.98)	\$ (23.19)	\$ 21.09	\$ 66.96	\$ 114.51	\$ 163.84	\$ 215.06	\$ 268.28	\$ 323.62	\$ 923.38



CALIFORNIA CRUDE PRICES: WESTERN LEG

CASE C

CASH FLOW

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	1982-08
TOTAL REVENUE	\$1,319.36	\$1,398.52	\$1,482.43	\$1,571.30	\$1,665.66	\$1,765.60	\$1,871.54	\$1,983.83	\$2,102.86	\$2,229.03	\$2,6859.27
TOTAL OPERATING	617.46	634.51	693.78	735.40	779.53	826.30	875.80	928.43	984.14	1,043.10	12,568.35
INTEREST EXPENSE	174.14	186.28	138.42	120.56	102.70	84.84	66.98	49.12	31.26	13.40	3,661.41
NET INCOME TAXES	282.01	291.78	322.81	355.17	388.94	424.20	461.04	499.57	539.87	582.06	5,030.02
CHANGE IN NET	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WORKING CAPITAL	137.39	137.39	137.39	137.39	137.39	137.39	137.39	137.39	137.39	137.39	137.39
DEBT AMORTIZATION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EQUITY REQUIREME-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CASH FLOW	\$ 128.36	\$ 158.56	\$ 190.04	\$ 222.86	\$ 257.11	\$ 292.88	\$ 330.25	\$ 369.32	\$ 410.21	\$ 453.00	\$1,878.37
LOSSES PASSED	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
THROUGH OR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CARRIED FORWARD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CASH VALUE OF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INTEREST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DEDUCTION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CASH VALUE OF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FEDERAL TAX LOSS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DEDUCTION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INVESTMENT TAX	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CREDITS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ENERGY TAX	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CREDITS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ADJUSTED CASH	\$ 128.36	\$ 158.56	\$ 190.04	\$ 222.86	\$ 257.11	\$ 292.88	\$ 330.25	\$ 369.32	\$ 410.21	\$ 453.00	\$3,473.21
FLOW	788.98	947.55	1,137.58	1,340.44	1,617.85	1,910.43	2,240.68	2,610.00	2,920.21	3,473.21	
ACCUMULATED	21.36	22.64	24.00	25.44	26.96	28.58	30.30	32.11	34.04	36.08	
ADJUSTED	12.36	13.43	14.58	15.82	17.16	18.60	20.16	21.83	23.64	25.58	
CASHFLOW	402.45	411.90	421.09	429.94	438.34	446.20	453.40	459.80	465.25	469.60	
GUARANTEED PRICE	3,804.58	4,216.48	4,637.57	5,067.51	5,505.85	5,952.05	6,403.45	6,865.25	7,330.50	7,800.10	
SHG PLANT PRICE	27.342	27.342	27.342	27.342	27.342	27.342	27.342	27.342	27.342	27.342	
PRICE GUARANTEE	27.342	27.342	27.342	27.342	27.342	27.342	27.342	27.342	27.342	27.342	
PAYMENT	27.342	27.342	27.342	27.342	27.342	27.342	27.342	27.342	27.342	27.342	
CUMULATIVE PRICE	27.342	27.342	27.342	27.342	27.342	27.342	27.342	27.342	27.342	27.342	
GUARANTEES	27.342	27.342	27.342	27.342	27.342	27.342	27.342	27.342	27.342	27.342	
IRR	27.342	27.342	27.342	27.342	27.342	27.342	27.342	27.342	27.342	27.342	

USE OR DISCLOSURE OF REPORT DATA  
IS SUBJECT TO THE RESTRICTION ON THE  
NOTICE PAGE AT THE FRONT OF THIS REPORT

**CALIFORNIA CRUDE PRICES! WESTERN LEG**  
=====

CASE C

**CRUM INDIAN PROJECT**  
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**TAX STATEMENT  
YEAR END**

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	1962-08
TOTAL REVENUE	\$1,319.36	\$1,398.52	\$1,483.43	\$1,571.38	\$1,665.66	\$1,765.60	\$1,871.54	\$1,983.83	\$2,102.86	\$2,229.03	\$2,6859.27
TOTAL OPERATING COSTS	617.46	654.51	693.78	735.40	779.53	824.30	875.88	928.43	984.14	1,043.18	12,548.35
TAX DEPRECIATION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	27830.94
INTEREST EXPENSE	174.14	156.28	138.42	120.56	102.76	84.84	66.98	49.12	31.26	13.40	34661.41
UNADJUSTED NET INCOME BEFORE TAXES	\$ 527.76	\$ 587.73	\$ 650.24	\$ 715.42	\$ 783.44	\$ 854.46	\$ 928.68	\$1,004.28	\$1,087.47	\$1,172.45	\$7,798.58
NET INCOME TAXES	262.01	291.78	322.81	355.17	388.94	424.20	461.04	499.57	539.87	582.04	5,030.02
ADJUSTED NET INCOME AFTER TAXES	\$ 265.75	\$ 295.95	\$ 327.43	\$ 360.25	\$ 394.50	\$ 430.27	\$ 467.64	\$ 506.71	\$ 547.59	\$ 590.39	\$2,768.56
TOTAL TAX CREDITS LOSSES PASSED THROUGH OR CARRIED FORWARD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	283.09
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	\$1,333.40



CALIFORNIA BRIDE PRICES: WESTERN LEG

CASE C

CROW INDIAN PROJECT

FINANCIAL INCOME STATEMENT  
YEAR END

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	1982-08
TOTAL REVENUE	01,319.36	01,398.52	01,482.43	01,571.38	01,665.66	01,765.60	01,871.54	01,983.83	02,102.86	02,229.03	028859.27
TOTAL OPERATING COSTS	617.46	654.51	693.78	735.40	779.53	826.30	875.88	928.43	984.14	1,042.18	12,568.35
DEPRECIATION	146.58	146.55	146.55	146.55	146.55	146.55	146.55	146.55	146.55	146.55	2,857.69
INTEREST EXPENSE	174.14	156.28	138.42	120.56	102.70	84.84	66.98	49.12	31.26	13.40	3,661.41
BOOK INCOME BEFORE TAXES	0 381.21	0 441.19	0 503.69	0 568.87	0 636.88	0 707.92	0 782.13	0 859.73	0 940.92	0 1,025.90	0 7,771.82

CALIFORNIA CRUDE OIL PRICES: MEMBERSHED

CASE C

CASH FLOW

	2009	2010	2011	2012	2013	2014	1982-14
TOTAL REVENUE	92,362.77	\$2,504.54	\$2,654.81	\$2,814.10	\$2,982.95	\$1,581.10	\$41,759.55
TOTAL OPERATING							
COSTS	1,105.78	1,172.12	1,242.45	1,317.00	1,396.02	739.89	19,541.60
INTEREST EXPENSE	( 0.00)	( 0.00)	( 0.00)	( 0.00)	( 0.00)	( 0.00)	3,651.41
NET INCOME TAXES	624.04	661.48	701.17	743.24	787.83	417.62	8,965.39
CHANGE IN NET							
WORKING CAPITAL	0.00	0.00	0.00	0.00	0.00	0.00	27.42
DEBT AMORTIZATION	0.00	0.00	0.00	0.00	0.00	0.00	2,747.78
EQUITY REQUIREMENT							
NET	0.00	0.00	0.00	0.00	0.00	0.00	915.93
CASH FLOW	\$ 632.96	\$ 670.94	\$ 711.19	\$ 753.87	\$ 799.10	\$ 423.59	\$5,870.02
LOSSES PASSED THROUGH OR CARRIED FORWARD	0.00	0.00	0.00	0.00	0.00	0.00	2,333.40
CASH VALUE OF INTEREST DEDUCTION	0.00	0.00	0.00	0.00	0.00	0.00	238.38
CASH VALUE OF FEDERAL TAX LOSS DEDUCTION	0.00	0.00	0.00	0.00	0.00	0.00	1,073.37
INVESTMENT TAX CREDITS	0.00	0.00	0.00	0.00	0.00	0.00	283.09
ENERGY TAX CREDITS	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ADJUSTED CASH FLOW	\$ 632.96	\$ 670.94	\$ 711.19	\$ 753.87	\$ 799.10	\$ 423.59	\$7,464.86
ACCUMULATED ADJUSTED CASHFLOW	4,106.17	4,777.11	5,488.30	6,242.17	7,041.27	7,464.86	
GUARANTEED PRICE	38.45	40.54	42.98	45.55	48.29	51.18	
NO PLANT PRICE	27.68	29.94	32.37	35.00	37.83	40.87	
PAYMENT	472.65	474.22	474.07	471.96	467.61	230.72	
CUMULATIVE PRICE	8,272.75	8,746.97	9,221.04	9,693.00	10,160.61	10,391.33	
IRK	27.24%	27.24%	27.24%	27.24%	27.24%	27.24%	

CALIFORNIA CRUDE PRICES: WESTERN LEG CASE C

CRUM INDIAN PROJECT

TAX STATEMENT  
YEAR END

	2009	2010	2011	2012	2013	2014	1982-14
TOTAL REVENUE	\$2,362.77	\$2,504.54	\$2,654.81	\$2,814.10	\$2,982.95	\$1,581.10	\$4,759.55
TOTAL OPERATING COSTS	1,105.78	1,172.12	1,242.45	1,317.00	1,396.02	739.89	19,541.60
TAX DEPRECIATION	0.00	0.00	0.00	0.00	0.00	0.00	2,830.94
INTEREST EXPENSE	( 0.00)	( 0.00)	( 0.00)	( 0.00)	( 0.00)	( 0.00)	3,661.41
UNADJUSTED NET INCOME BEFORE TAXES	\$1,257.00	\$1,332.42	\$1,412.36	\$1,497.10	\$1,586.93	\$841.21	\$15,725.60
NET INCOME TAXES	624.04	661.48	701.17	743.24	787.83	417.62	11,965.39
ADJUSTED NET INCOME AFTER TAXES	\$ 632.96	\$ 670.94	\$ 711.19	\$ 753.87	\$ 799.10	\$ 423.59	\$6,760.21
TOTAL TAX CREDITS	0.00	0.00	0.00	0.00	0.00	0.00	283.09
LOSSES PASSED THROUGH OR CARRIED FORWARD	0.00	0.00	0.00	0.00	0.00	0.00	2,333.40

CALIFORNIA CRUDE PRICES: WESTERN LEG CASE C

CROW INDIAN PROJECT

FINANCIAL INCOME STATEMENT  
YEAR END

	2009	2010	2011	2012	2013	2014	1982-14
TOTAL REVENUE	\$2,362.77	\$2,504.54	\$2,654.81	\$2,814.10	\$2,982.95	\$1,881.10	\$4,1759.55
TOTAL OPERATING COSTS	1,105.78	1,172.12	1,243.45	1,317.00	1,392.02	739.89	19,541.60
DEPRECIATION	146.55	146.55	146.55	146.55	146.55	73.27	3,663.70
INTEREST EXPENSE	( 0.00)	( 0.00)	( 0.00)	( 0.00)	( 0.00)	( 0.00)	3,661.41
BOOK INCOME BEFORE TAXES	\$1,110.45	\$1,185.87	\$1,265.81	\$1,350.56	\$1,444.38	\$ 767.94	\$14892.83

CALIFORNIA DISTILLATE PRICES: WESTERN LEG  
 SUMMARY OF THE DATA FOR THE PERIOD 1982-1989

CASE D

## CASH FLOW

	1982	1983	1984	1985	1986	1987	1988	1989	1982-89
TOTAL REVENUE	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 495.18	\$ 495.18
TOTAL OPERATING COSTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	229.97	229.97
INTEREST EXPENSE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	352.75	352.75
NET INCOME TAXES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHANGE IN NET WORKING CAPITAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	57.42	57.42
DEBT AMORTIZATION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	137.39	137.39
EQUITY REQUIREMENT	0.51	5.46	12.86	28.44	176.89	340.68	218.36	32.73	915.93
CASH FLOW	\$ ( 0.51)	\$ ( 5.46)	\$ ( 12.86)	\$ ( 28.44)	\$ (176.89)	\$ (240.68)	\$ (318.36)	\$ (315.00)	\$ (198.28)
LOSSES PASSED THROUGH OR CARRIED FORWARD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	653.73	653.73
CASH VALUE OF INTEREST DEDUCTION	0.10	0.65	2.50	5.58	24.41	73.64	121.49	0.00	239.58
CASH VALUE OF FEDERAL TAX LOSS DEDUCTION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	300.71	300.71
INVESTMENT TAX CREDITS	0.17	1.84	4.14	9.15	58.90	108.24	88.68	11.78	283.09
ENERGY TAX CREDITS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ADJUSTED CASH FLOW	\$ ( 0.25)	\$ ( 2.97)	\$ ( 6.21)	\$ ( 13.71)	\$ ( 93.57)	\$ (158.80)	\$ ( 97.99)	\$ ( 2.58)	\$ (274.09)
ACCUMULATED ADJUSTED CASHFLOW	( 0.25)	( 3.22)	( 9.43)	( 23.15)	( 116.72)	( 275.52)	( 373.50)	( 376.09)	
GUARANTEED PRICE AND PLANT PRICE	7.29	7.87	8.50	9.10	9.74	10.42	11.15	11.93	
	6.35	6.86	7.41	8.01	8.65	9.35	10.10	7.51	
GUARANTEED PRICE PAYMENT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	132.75	
CUMULATIVE PRICE PAYMENT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	132.75	
IRR	27.24%	27.24%	27.24%	27.24%	27.24%	27.24%	27.24%	27.24%	27.24%

CASE D

CALIFORNIA DISTILLATE PRICES: WESTERN LEG  
 =====

CROW INDIAN PROJECT  
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FINANCIAL INCOME STATEMENT  
 YEAR END

	1982	1983	1984	1985	1986	1987	1988	1989	1982-89
TOTAL REVENUE	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 495.18	\$ 495.18
TOTAL OPERATING COSTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	229.97	229.97
DEPRECIATION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	73.27	73.27
INTEREST EXPENSE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	352.75	352.75
BOOK INCOME BEFORE TAXES	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ (140.81)	\$ (140.81)



# CALIFORNIA DIETRIC PRICES: WESTERN LEG

## CASH FLOW

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
TOTAL REVENUE	\$ 495.18	\$ 780.93	\$ 827.78	\$ 877.45	\$ 930.10	\$ 985.90	\$ 1,045.06	\$ 1,107.76	\$ 1,174.23	\$ 1,244.68	\$ 1,319.06
TOTAL OPERATING											
COSTS	229.97	365.47	387.40	410.65	435.28	461.40	489.09	518.43	549.54	582.51	619.74
INTEREST EXPENSE	352.75	234.89	317.02	299.16	281.30	263.44	245.58	227.72	209.84	192.00	173.73
NET INCOME TAXES	0.00	0.00	0.00	0.00	0.00	129.60	154.09	179.52	205.94	233.42	262.57
CHANGE IN NET											
WORKING CAPITAL	57.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	57.42
DEBT AMORTIZATION	137.39	137.39	137.39	137.39	137.39	137.39	137.39	137.39	137.39	137.39	137.39
EQUITY REQUIREMENT											
NET	32.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	915.93
CASH FLOW	\$ (315.08)	\$ (56.82)	\$ (14.03)	\$ 30.25	\$ 76.12	\$ 5.93	\$ 18.91	\$ 44.70	\$ 71.50	\$ 99.36	\$ (934.22)
LOSSES PASSED THROUGH OR CARRIED FORWARD	653.73	825.33	556.07	285.31	12.97	0.00	0.00	0.00	0.00	0.00	2,333.40
CASH VALUE OF INTEREST DEDUCTION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	238.38
CASH VALUE OF FEDERAL TAX LOSSES	300.71	379.65	255.79	131.24	5.96	0.00	0.00	0.00	0.00	0.00	1,073.37
INVESTMENT TAX CREDITS	11.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	283.09
ENERGY TAX CREDITS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ADJUSTED CASH FLOW	\$ ( 2.58)	\$ 322.63	\$ 241.76	\$ 163.49	\$ 82.08	\$ ( 5.93)	\$ 18.91	\$ 44.70	\$ 71.50	\$ 99.36	\$ 660.62
ACCUMULATED ADJUSTED CASHFLOW	( 374.09)	( 53.26)	168.50	350.00	432.08	426.15	445.06	489.75	561.25	660.62	
GUARANTEED PRICE AND PLANT PRICE	11.93	12.64	13.40	14.20	15.06	15.94	16.82	17.73	18.61	19.51	20.43
	7.51	8.59	9.37	10.21	11.11	12.09	13.13	14.26	15.47	16.77	
GUARANTEED PRICE PAYMENT CUMULATIVE PRICE	132.75	180.98	180.00	178.46	176.23	173.17	169.25	164.36	158.27	150.96	
PAYMENT	132.75	313.73	493.73	672.20	848.43	1,021.60	1,190.85	1,355.22	1,513.48	1,664.44	
JAR	27.24	27.24	27.24	27.24	27.24	27.24	27.24	27.24	27.24	27.24	27.24

CALIFORNIA DISTILLATE PRICES: WESTERN LEG  
 1989-1998

CASE D

## CROM INDIAN PROJECT

TAX STATEMENT  
YEAR END

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1982-98
TOTAL REVENUE	\$ 495.18	\$ 780.93	\$ 827.78	\$ 877.45	\$ 930.10	\$ 985.90	\$ 1,045.06	\$ 1,107.76	\$ 1,174.23	\$ 1,244.68	\$ 9,469.06
TOTAL OPERATING COSTS	229.97	365.47	387.40	410.65	435.28	461.40	489.09	518.42	549.54	582.51	4,429.74
TAX DEPRECIATION	566.19	905.90	679.42	452.95	226.47	0.00	0.00	0.00	0.00	0.00	2,830.94
INTEREST EXPENSE	352.75	334.89	317.02	299.16	281.30	263.44	245.58	227.72	209.86	192.00	2,723.73
UNADJUSTED NET INCOME BEFORE TAXES	\$ (653.73)	\$ (825.33)	\$ (556.07)	\$ (285.31)	\$ (12.97)	\$ 261.06	\$ 310.39	\$ 361.61	\$ 414.83	\$ 470.17	\$ (315.35)
NET INCOME TAXES	0.00	0.00	0.00	0.00	0.00	129.60	134.09	179.52	205.94	233.42	902.57
ADJUSTED NET INCOME AFTER TAXES	\$ (653.73)	\$ (825.33)	\$ (556.07)	\$ (285.31)	\$ (12.97)	\$ 131.46	\$ 156.30	\$ 182.09	\$ 208.89	\$ 236.75	\$ (117.92)
TOTAL TAX CREDITS	11.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	283.09
LOSSES PASSED THROUGH OR CARRIED FORWARD	653.73	825.33	556.07	285.31	12.97	0.00	0.00	0.00	0.00	0.00	2,333.40



CALIFORNIA DISTILLATE PRICING: WESTERN LEG  
 SUMMARY OF FINANCIAL INFORMATION

CASE D

## CROW INDIAN PROJECT

FINANCIAL INCOME STATEMENT  
YEAR END

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1998-99
TOTAL REVENUE	\$ 495.18	\$ 780.93	\$ 827.78	\$ 877.45	\$ 930.10	\$ 985.90	\$ 1,043.06	\$ 1,107.76	\$ 1,174.23	\$ 1,244.48	\$ 1,319.06
COSTS	229.97	365.47	387.40	410.65	425.28	461.40	489.09	518.43	549.54	582.51	613.74
DEPRECIATION	73.27	146.55	146.55	146.55	146.55	146.55	146.55	146.55	146.55	146.55	146.55
INTEREST EXPENSE	352.75	234.89	317.02	299.16	281.30	263.44	245.58	227.72	209.86	192.00	173.73
BOOK INCOME	\$ (140.81)	\$ (65.98)	\$ (23.19)	\$ 21.09	\$ 66.96	\$ 114.51	\$ 163.84	\$ 215.06	\$ 268.28	\$ 323.62	\$ 392.39
BEFORE TAXES											

CALIFORNIA DISTILLATE PRICES: WESTERN LEO

CASE D

CASH FLOW

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	1992-08
TOTAL REVENUE	\$1,319.36	\$1,398.52	\$1,482.43	\$1,571.38	\$1,665.66	\$1,745.60	\$1,871.54	\$1,983.63	\$2,102.86	\$2,229.03	\$2,6859.27
TOTAL OPERATING COSTS	457.46	654.51	493.78	735.40	779.53	826.30	875.88	928.42	984.14	1,043.18	12,568.35
INTEREST EXPENSE	174.14	156.28	136.42	120.56	102.70	84.84	66.92	49.12	31.26	13.40	3,661.41
NET INCOME TAXES	262.01	291.78	322.81	355.17	388.94	424.20	461.04	499.57	539.87	582.06	5,030.02
CHANGE IN NET WORKING CAPITAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	57.42
DEBT AMORTIZATION	137.39	137.39	137.39	137.39	137.39	137.39	137.39	137.39	137.39	137.39	2,747.78
EQUITY REQUIREMENT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	915.93
CASH FLOW	\$ 128.36	\$ 158.56	\$ 190.04	\$ 222.86	\$ 257.11	\$ 292.88	\$ 330.25	\$ 369.32	\$ 410.21	\$ 453.00	\$1,878.37
LOSSES PASSED THROUGH OR CARRIED FORWARD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,333.40
CASH VALUE OF INTEREST DEDUCTION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	738.38
CASH VALUE OF FEDERAL TAX LOSS DEDUCTION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,073.37
INVESTMENT TAX CREDITS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	283.09
ENERGY TAX CREDITS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ADJUSTED CASH FLOW	\$ 128.36	\$ 158.56	\$ 190.04	\$ 222.86	\$ 257.11	\$ 292.88	\$ 330.25	\$ 369.32	\$ 410.21	\$ 453.00	\$3,473.21
ACCUMULATED ADJUSTED CASHFLOW	788.98	947.55	1,147.58	1,360.44	1,617.55	1,910.43	2,240.68	2,610.00	3,020.21	3,473.21	
GUARANTEED PRICE AND PLANT PRICE	21.36	22.64	24.00	25.44	26.96	28.50	30.30	32.11	34.04	36.08	36.82
GUARANTEED PRICE PAYMENT	142.22	131.93	119.89	105.87	89.65	71.08	49.83	25.58	( 1.52)	( 33.06)	
CUMULATIVE PRICE PAYMENT	1,806.66	1,978.59	2,068.48	2,164.35	2,254.00	2,325.08	2,374.91	2,400.49	2,398.54	2,365.48	
IRR	27.24%	27.24%	27.24%	27.24%	27.24%	27.24%	27.24%	27.24%	27.24%	27.24%	27.24%

USE ON DISCLOSURE OF REPORT DATA  
IS SUBJECT TO THE RESTRICTION ON THE  
NOTICE PAGE AT THE FRONT OF THIS REPORT

CASE D

CALIFORNIA DISTILLATE PRICES: WESTERN LEG

CROW INDIAN PROJECT

TAX STATEMENT  
YEAR END

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	1983-08
TOTAL REVENUE	\$1,319.36	\$1,398.52	\$1,482.43	\$1,571.38	\$1,665.66	\$1,765.60	\$1,871.54	\$1,983.83	\$2,102.86	\$2,229.03	\$2,485.27
TOTAL OPERATING COSTS	617.46	654.51	693.78	735.40	779.53	826.30	875.88	928.43	984.14	1,043.18	12,568.35
TAX DEPRECIATION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,830.94
INTEREST EXPENSE	174.14	156.28	138.42	120.56	102.70	84.84	66.98	49.12	31.26	13.46	3,661.41
UNADJUSTED NET INCOME BEFORE TAXES	\$527.76	\$587.73	\$650.24	\$715.42	\$783.44	\$854.46	\$928.68	\$1,006.28	\$1,087.47	\$1,172.45	\$7,798.58
NET INCOME TAXES	262.01	291.78	322.81	353.17	388.94	424.20	461.04	499.57	539.87	582.06	5,030.02
ADJUSTED NET INCOME AFTER TAXES	\$265.75	\$295.95	\$327.43	\$360.25	\$394.50	\$430.27	\$467.64	\$506.71	\$547.59	\$590.39	\$2,768.56
TOTAL TAX CREDITS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	283.09
LOSSES PASSED THROUGH OR CARRIED FORWARD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,733.40

CALIFORNIA DISTILLATE PRICES: WESTERN LEO

CASE D

CROW INDIAN PROJECT

FINANCIAL INCOME STATEMENT  
YEAR END

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	1992-08
TOTAL REVENUE	\$1,319.36	\$1,398.52	\$1,482.43	\$1,571.38	\$1,665.66	\$1,769.60	\$1,871.54	\$1,983.83	\$2,102.86	\$2,229.63	\$2,859.27
TOTAL OPERATING COSTS	617.46	684.51	693.78	735.40	779.53	826.30	875.88	928.42	984.14	1,043.18	12,048.35
DEPRECIATION	146.55	146.55	146.55	146.55	146.55	146.55	146.55	146.55	146.55	146.55	2,857.69
INTEREST EXPENSE	174.14	156.28	138.42	120.86	102.70	84.84	66.98	49.12	31.26	13.40	3,661.41
BOOK INCOME BEFORE TAXES	\$ 381.21	\$ 441.19	\$ 503.69	\$ 568.87	\$ 634.89	\$ 707.92	\$ 782.12	\$ 859.73	\$ 940.92	\$ 1,025.90	\$ 7,771.82

CALIFORNIA DISILLUATE PRICES: WESTERN LEG  
 2011-2014

CASE D

## CASH FLOW

	2009	2010	2011	2012	2013	2014	1982-14
TOTAL REVENUE	\$2,362.77	\$2,504.54	\$2,654.91	\$2,814.10	\$2,982.95	\$1,581.10	\$41759.55
TOTAL OPERATING COSTS	1,105.78	1,172.12	1,242.45	1,317.00	1,396.02	729.89	19,541.60
INTEREST EXPENSE	( 0.00)	( 0.00)	( 0.00)	( 0.00)	( 0.00)	( 0.00)	3,661.41
NET INCOME TAXES	624.04	661.48	701.17	743.24	787.83	417.62	8,965.39
CHANGE IN NET WORKING CAPITAL	0.00	0.00	0.00	0.00	0.00	0.00	57.42
DEBT AMORTIZATION	0.00	0.00	0.00	0.00	0.00	0.00	2,747.78
EQUITY REQUIREMENT	0.00	0.00	0.00	0.00	0.00	0.00	915.93
CASH FLOW	\$ 632.96	\$ 670.94	\$ 711.19	\$ 753.87	\$ 799.10	\$ 423.59	\$5,870.02
LOSSES PASSED THROUGH OR CARRIED FORWARD	0.00	0.00	0.00	0.00	0.00	0.00	2,233.40
CASH VALUE OF INTEREST DEDUCTION	0.00	0.00	0.00	0.00	0.00	0.00	238.38
CASH VALUE OF FEDERAL TAX LOSS DEDUCTION	0.00	0.00	0.00	0.00	0.00	0.00	1,073.37
INVESTMENT TAX CREDITS	0.00	0.00	0.00	0.00	0.00	0.00	283.09
ENERGY TAX CREDITS	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ADJUSTED CASH FLOW	\$ 632.96	\$ 670.94	\$ 711.19	\$ 753.87	\$ 799.10	\$ 423.59	\$7,464.86
ACCUMULATED ADJUSTED CASHFLOW	4,106.17	4,777.11	5,488.30	6,242.17	7,041.27	7,464.86	
GUARANTEED PRICE AND PLANT PRICE	38.25	40.54	42.98	45.55	48.29	51.12	
	39.77	42.95	46.37	50.04	54.04	58.20	
GUARANTEED PRICE PAYMENT	( 68.13)	( 107.60)	( 181.97)	( 201.88)	( 257.05)	( 159.12)	
CUMULATIVE PRICE PAYMENT	2,297.35	2,189.74	2,037.70	1,836.23	1,579.18	1,420.06	
IRR	27.24%	27.24%	27.24%	27.24%	27.24%	27.24%	

**CALIFORNIA DISTILLATE PRICES: WESTERN LEG**

CASE D

**CROW INDIAN PROJECT**

**TAX STATEMENT  
YEAR END**

	2009	2010	2011	2012	2013	2014	1982-14
<b>TOTAL REVENUE</b>	92,362.77	92,504.54	92,654.81	92,814.10	92,982.95	91,581.10	941,759.55
<b>TOTAL OPERATING COSTS</b>	1,403.70	1,172.12	1,242.45	1,317.00	1,396.02	739.89	19,541.60
<b>TAX DEPRECIATION</b>	0.00	0.00	0.00	0.00	0.00	0.00	2,830.94
<b>INTEREST EXPENSE</b>	( 0.00)	( 0.00)	( 0.00)	( 0.00)	( 0.00)	( 0.00)	3,661.41
<b>UNADJUSTED NET INCOME BEFORE TAXES</b>	91,257.00	91,332.42	91,412.36	91,497.10	91,586.93	91,841.21	915,725.60
<b>NET INCOME TAXES</b>	624.04	661.48	701.17	743.24	787.83	417.62	8,965.39
<b>ADJUSTED NET INCOME AFTER TAXES</b>	9,632.96	9,670.94	9,711.19	9,753.87	9,799.10	9,423.59	96,760.21
<b>TOTAL TAX CREDITS LOSSES PASSED THROUGH OR CARRIED FORWARD</b>	0.00	0.00	0.00	0.00	0.00	0.00	283.09
	0.00	0.00	0.00	0.00	0.00	0.00	2,333.40

CALIFORNIA DISTILLATE PRICES: WESTERN LEG  
 2009 2010 2011 2012 2013 2014 1982-14

CASE D

CROW INDIAN PROJECT

FINANCIAL INCOME STATEMENT  
 YEAR END

	2009	2010	2011	2012	2013	2014	1982-14
TOTAL REVENUE	\$2,362.77	\$2,504.54	\$2,654.81	\$2,814.10	\$2,982.95	\$1,581.10	\$41759.55
TOTAL OPERATING COSTS	1,105.76	1,172.12	1,242.45	1,317.00	1,396.02	739.89	19,541.60
DEPRECIATION	146.55	146.55	146.55	146.55	146.55	73.27	3,663.70
INTEREST EXPENSE	( 0.00)	( 0.00)	( 0.00)	( 0.00)	( 0.00)	( 0.00)	3,663.70
BOOK INCOME	\$1,110.46	\$1,185.87	\$1,265.81	\$1,350.55	\$1,440.38	\$ 767.94	\$14892.83
BEFORE TAXES							

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## VOLUME III

LEGAL ASSESSMENT1.0 INTRODUCTION

In addition to the legal tasks and potential legal problems facing any new, major energy facility in the United States, there are certain tasks and potential problems which are specific to and inherent in the proposed Crow Synfuels Project. The following section identifies and assesses these areas of the law and their probable impact on the project.

## 2.0 SUMMARY

### 2.1 ENVIRONMENTAL LAW

#### 2.1.1 Jurisdiction

There is little question that if a synfuels project is built on the Crow Reservation by an entity composed of tribal and non-tribal interests, both the federal government and the tribe would have jurisdiction to regulate environmental elements of the project. Much less clear, however, is the question whether the State of Montana would assert jurisdiction over such a project and if so, whether its claim would be valid.

This is an area of the law in which the opinions of the United States Supreme court, rendered during the past ten to twenty years, indicate that many factors are weighed in reaching a final decision. These factors include:

- 1) Is the subject area which the state seeks to regulate already comprehensively regulated by the federal government or by the tribal government;
- 2) Does the state statute interfere with the purposes of federal statutes pertaining to Indian tribes;
- 3) Does the state statute interfere with the Indian Tribe's right to self-government;
- 4) What is the history of treaties between the United States and the Indian tribe (Crow) and the statutory history pertaining to the Crow Indians;
- 5) To what State-Indian tribe relationship have the Crows previously accommodated themselves;

### 2.1.1 (Continued)

- 6) Is the project on an Indian reservation; and
- 7) What legitimate state interests are involved.

Obviously these factors require an analysis of the specific state law in question. Such an analysis can be prepared only after a more detailed project proposal is in hand and the state's perspective is understood. Careful planning may well avoid protracted disputes regarding legal jurisdiction.

### 2.1.2 Federal Permits

The proposed synfuels project will be subject to numerous federal environmental regulations. Many of these regulations require the project to obtain a permit prior to commencement of construction or operation. The regulatory process for obtaining each permit will vary according to the type of permit required and the agency with jurisdiction. Typically the permit process takes several months at a minimum and in some instances can be as long as a year. Foremost among the environmental permits which will be necessary will be right-of-way permits from the Bureau of Indian Affairs, a hazardous waste permit, air quality permit, and water quality permit from the Environmental Protection Agency.

In addition to the specific permits required by statute, the proposed synthetic fuels project must comply with the National Environmental Policy Act (NEPA). This will necessitate the preparation of an Environmental Impact Statement (EIS) considering the effects of the project on the environment. The lead agency for purposes of preparing the EIS and considering project impacts will most likely be the Bureau of Indian Affairs.

### 2.1.2 (Continued)

In addition to NEPA and the specified permits, there are several other laws which could apply to the project. These include laws governing mining, cultural resource protection, fish and wildlife protection, archaeological resource protection, and the preservation of floodplains and wetlands.

### 2.1.3 State and Local Permits

The most likely local government to assert jurisdiction over any aspect of the project is Big Horn County. Most of the Crow Reservation is within its boundaries as are the anticipated off-reservation lay-down areas. Big Horn County's jurisdiction, however, is subject to two important limitations: 1) the power of any county government to regulate activities on Indian reservations is wholly derived from the state's regulatory power; and 2) as a matter of policy, Big Horn County does not enforce its ordinances on Indian lands. The county might issue a permit for that portion of a facility built off-reservation, but its power is obviously limited.

While it is unclear whether the State of Montana would assert jurisdiction over the project, the state has enacted a large number of laws requiring that environmental permits are obtained. As with Big Horn County, the state conceivably could issue permits for any portion of the project located off-reservation. Additionally, there is the potential for the state to issue permits for purely Indian activities located wholly within reservation boundaries pursuant to a delegation to the state of a federal permitting function.

2.1.3 (Continued)

Aside from federally-delegated authority, state permitting laws include the Montana Environmental Policy Act and the Montana Major Facility Siting Act, as well as several water and floodway management acts, water and air pollution laws, hazardous and solid waste management requirements, and laws protecting historical and archaeological resources. Permits pursuant to the Montana Strip and Underground Mine Siting Act and the Montana Strip and Underground Mine Reclamation Act might be needed in addition to prospecting and geological permits.

Some federal programs have been delegated in whole or in part to the State of Montana for administration. Under none of these programs, however, does the state presently issue permits on reservation land. While for several years National Pollutant Discharge Elimination System (NPDES) permitting has been turned over to the state, the EPA continues to issue these point source water discharge permits on reservation land. It is anticipated that by the end of 1982, the state will have assumed federal permitting authority for issuing PSD (air quality) and hazardous waste management permits.

2.2 REGULATORY LAW

The manufacture, transportation and sale of coal gas is not regulated by the Federal Energy Regulatory Commission (FERC) under the Natural Gas Act. The courts have also clearly established that the manufacture, transportation and sale of coal gas, not commingled with natural gas, is beyond the jurisdiction of the FERC. Therefore, the synfuels plant would not be within FERC jurisdiction, in addition, the pipeline transporting the SNG would not be within FERC jurisdiction.

## 2.2 (Continued)

FERC jurisdiction under the Natural Gas Act would apply to the coal gas once it is commingled with natural gas. This commingling of SNG with natural gas would occur at the point of interconnection with a FERC regulated interstate pipeline. Once commingled, FERC authority would have to be obtained for any subsequent transportation or sale.

The State of Montana does not have any specific statute to regulate natural gas pipelines. There does, however, appear to be a state statute which is written broadly and could be utilized as a basis to regulate an intrastate SNG pipeline. Under this statute, the Montana Public Service Commission (PSC) has the power to establish and enforce rates and regulations for gathering, transporting, loading, and delivering crude petroleum, coal, or the products thereof by pipeline carriers within the state. This language would seem to apply to an SNG pipeline since the gas being transported will be the product of coal.

## 2.3 WATER LAW

The proposed project when it is operating at its full capacity (250 MMSCF/CD) will require approximately 20,000 acre feet of water, all of which is consumed. The Crow Tribe under the reserved water rights doctrine has more than sufficient water to meet the demands of the project.

The reserved water rights concept was first announced by the Supreme Court in 1908 in *Winters v. United States*. Therein, the Court held that when a reservation is established, sufficient water to meet the needs of the reservation is deemed to exist. These needs encompass past, present as well as future uses and is not limited by the amount of water that is actually used at any given time.



2.3 (Continued)

The Crow Tribe has water available to it for use by the project in the Big Horn River, Yellowtail Reservoir as well as the Little Bighorn River and its tributaries. Since the Tribe's right to these waters is based on federal law, it does not have to apply to the State of Montana for a use permit. Moreover, the Tribe's priority date of 1851 is senior to all other users within the respective watersheds; therefore, in times of shortage the Tribe has the right to displace other users to meet its water needs.

Although the quantity of water the Crow Tribe is entitled to under the reserved water rights doctrine is not yet determined, there exists more than a sufficient supply of uncommitted water in the Big Horn River and Yellowtail Reservoir. The Bureau of Reclamation has acknowledged that of the stored water in Yellowtail Reservoir approximately 98,000 acre feet per year was reserved for the irrigation of agricultural lands in the Hardin Bench unit. That irrigation system has never been constructed. Nonetheless, in 1971, 30,000 acre feet were transferred tentatively for industrial uses for the development of Crow coal reserves. The 30,000 acre feet is no longer committed to the option-purchase contract for industrial use and it is therefore fair to state that it at a minimum is available if needed for the project.

2.4 INDIAN LAW

2.4.1 Jurisdiction and Regulatory Authority

The proposed siting of this project on an Indian reservation along with the attendant environmental issues raise the question of which governmental entity has primary regulatory control over the development as well as operational phases of the project. The three principal governmental entities of concern here are the Crow Tribal Council, the United States, and the State of Montana.

#### 2.4.1 (Continued)

The Crow Tribal Council will have primary regulatory responsibility inasmuch as the lands and environment to be affected by the project lie within the boundaries of the reservation. However, the United States because it must approve the project in its trustee capacity for the Crow Tribe and because of certain federal statutes which apply on the reservation will have a significant role. The United States, through the Department of the Interior, in determining whether it should approve the project for the Crow Tribe will have to comply with the National Environmental Policy Act of 1969. In addition, certain permits will have to be obtained from the Environmental Protection Agency. These will be permits required by the Clean Air Act, the Clean Water Act and the Resources Conservation and Recovery Act.

It will be extremely important to involve personnel from these respective federal agencies at the beginning and throughout the developmental phase of the project so as to minimize any permit delays. Although the State of Montana does not have direct regulatory control over the proposed project, it is advisable to include representatives of the state on an advisory basis. Having state input may preclude the filing of court actions which would only serve to delay the project.

Once the project is approved and all required federal permits are obtained, other than whatever federal oversight of the permits is required, the Crow Tribal Council will have primacy.

#### 2.4.2 Pledging Trust Assets as Collateral

The Crow Tribe has substantial real property assets which could be used or committed in some form to help finance its share of the project. These assets consist of timber, water, surface lands, and deposits of coal,

#### 2.4.2 (Continued)

bentonite, oil and gas. The coal deposits alone consist of approximately 17 billion tons, of which, it is estimated 6 to 7 billion tons under today's economic conditions is strippable.

However, these assets cannot be alienated, mortgaged or pledged without the approval of the United States. As trustee for the Crow Tribe the United States must approve such actions affecting tribal property. The executive branch is charged with this responsibility but it can only act in accordance with federal statutes. That is, unless Congress has vested by statute in the executive the authority to approve the disposition of tribal property such a disposition is invalid. See, 25 U.S.C. § 177.

Because of this limitation, for the purpose of pledging or alienating tribal properties to help finance this project only certain specific statutes are available. One is 25 U.S.C. § 415 which authorizes the executive branch through the Department of the Interior to approve the leasing of tribal lands for business purposes and the use of natural resources in connection with the operation of such a lease. Under such a lease the Crow Tribe could commit coal and water to the project. Alternatively, the Tribe could lease coal reserves under the 1938 Mineral Leasing Act and by the lease terms have the coal dedicated to the project. Also available is the Act of May 19, 1958 which authorizes the Secretary of the Interior to approve the sale or exchange of restored tribal lands in the so-called "ceded area." This Act appears to permit the direct sale or mortgaging of lands acquired pursuant to it.

#### 2.4.3 Business and Tax Status

Because of certain tax immunities enjoyed by the Crow Tribe as a government the method of ownership of the project between the Tribe and the other participants needs to be closely examined. The Crow Tribe as a

### 2.4.3 (Continued)

government continues to retain the inherent powers to impose taxes on activities within its jurisdictional boundaries. And as a government it also is immune from federal and state taxation statutes.

Thus, income derived from tribal lands and minerals held in trust and accruing to the Tribe is non-taxable. However, Montana like other states has vigorously sought to tax minerals severed by non-Indian lessees from tribal lands. The Crow Tribe through litigation is opposing the imposition of such a tax by Montana. The Tribe in opposing the tax is relying on two broad principles of law laid down by the federal courts to test whether a state statute has application on an Indian reservation. One is the infringement test, that is whether the state law interferes with the right of a tribe to make its own laws and be governed by them. And the other principle is whether the federal government so regulates the area so as to preempt the state statute.

In the area of Indian mineral development the United States in 1938 enacted comprehensive legislation for the purposes of regulating mineral development and encouraging tribal economic development. This Congressional enactment along with certain others serve to negate the imposition by the state of taxes on the development of the Tribe's coal reserves. However, should the project be handled through a lease arrangement the state may seek to impose a Possessory Interest Tax on the leasehold. Such state taxes have been upheld by the courts on the basis that the incidence of the tax does not fall directly on the Tribe but instead is imposed on the non-Indian lessees. Current case law suggests that it may even be possible to overcome this tax should Montana seek to impose one on the project.

#### 2.4.3 (Continued)

Despite some of the problems of attempts by the state to tax tribal interests by various methods the fact that the Tribe is generally immune from taxation should not be overlooked when structuring the business organization of the project.

### 3.0 SCOPE OF WORK

The scope of work for the legal assessment included:

Identifying the legal tasks and potential legal problems unique to the proposed synfuels project.

Assigning each area of the law identified above to an appropriate attorney for research and drafting.

Reviewing and commenting on the above work by others involved in producing the legal assessment.