

REGIONAL PLANNING ISSUES FOR THE
FOUR CORNERS REGION OF THE NAVAJO RESERVATION:

A Process of Self-Determination

by

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Bachelor of Architecture
University of New Mexico
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Submitted in partial fulfillment of the
requirements for the degree of

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ABSTRACT

This thesis derived from increasing concerns over the future development of Indian Reservations within the United States. For the past century the federal government has created a system of dependency for Indian people living on these reservations. This dependency has included education, health, economic development, transportation, housing, social services, etc., with the ultimate federal goal of assimilating the Indian into the mainstream of the dominant American life-style. In many situations the government has accomplished their goal. But for the most part Indian people have survived these attempts by the government to absorb them into an alien society. Consequently, reservations exist with growing populations, expanding geographically and possessing vast amounts of natural resources such as coal, natural gas, oil and uranium. It is the development of these natural resources that will be the most important challenge to the Indian life-style since the coming of the first white Europeans.

Today there is an increasing demand by Indian people for self-determination and more control over their affairs. The problem is how to accomplish this when Indian Tribes are confronted with (1) the conflicts of gaining self-reliance after 100 years of domination by a governing federal system that it still does not understand, (2) the desire to industrialize, yet compete in an economic system that has different standards, and (3) the challenge of future development without losing its social and cultural identity.

To better explain this problem, this thesis concentrates on the Navajo Reservation, located in the Southwest United States. The objective is to recommend to the Tribal governing body alternatives for increasing their control over

the future development of the reservation that would consequently develop a process for implementing self-determination.

The approach of this thesis is to investigate existing examples where the Tribe has instituted internal control over economic ventures and where external controlling factors have prevented complete tribal participation. These illustrations focus on the controlling factors of (1) management, (2) employment, and (3) marketing, required to implement a process of self-determination.

These illustrations are presented as examples to the Tribal Council to illustrate the Tribe's ability to create their own control over economic development ventures. The same principles of control are extended in the thesis to demonstrate on a larger scale possible controlling alternatives that the Tribal Council should consider in the future development of their natural resources. This is accomplished by presenting two illustrations concerning the development of coal in the Four Corners Region of the reservation and proposed coal gasification plants.

Each illustration is presented with its present characteristics and further explores alternative controlling recommendations for the Tribe. In addition, the socioeconomic, cultural and environmental impacts that coal development will have on the reservation are presented, emphasizing the amount of benefits, trade-offs and opportunities the Tribal Council should consider before development policy and decisions are made.

Finally the thesis concludes by emphasizing the fact that the Navajo Tribe still owns and basically controls their (1) land, (2) natural resources, and (3) water, three important factors that help maintain the Navajos as a tribal entity. But to maintain this identity, it will be necessary for the Tribal Council to develop a more balanced growth strategy throughout the reservation.

This strategy should integrate planning methods that will help the Tribe in minimizing their land and water resources, while maximizing the human resources and overall economic goals, resulting in a process of self-determination.

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Regional Studies

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Most of all I would like to thank my Navajo relatives, whose spirits and guidance have always helped me, for it is through their endurance that all things will end in the Beauty Way.

Ahéhee' t'áá'anóltso, t'áá'íiyisí ahéhee'!

(Thank you, all of you, powerfully I thank you)

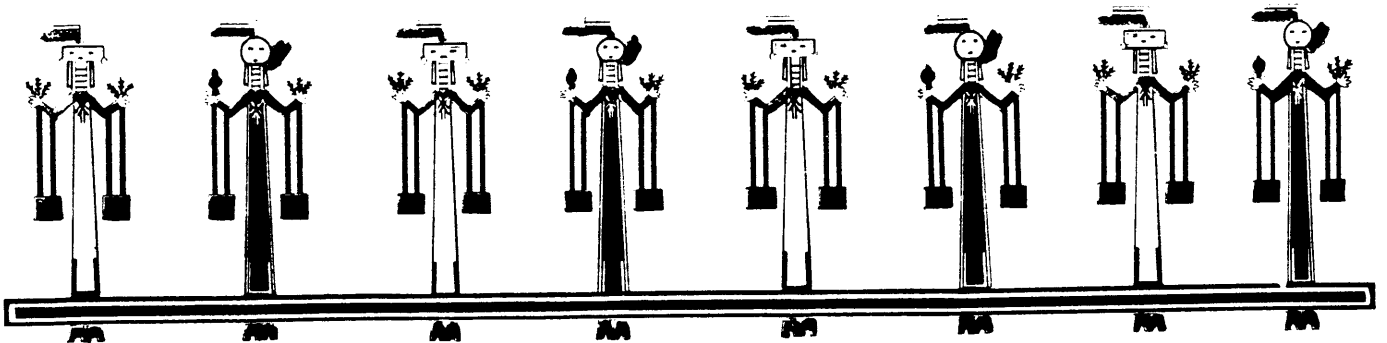


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INTRODUCTION

Each year the term "self-determination" becomes a stronger reality for the American Indians living on reservations located throughout the United States. After 100 years of strict domination by the federal government, the Indian people are becoming increasingly aware of the importance of regaining self-control. Before 1860 the American Indians were, for the most part, free to determine their own destiny. After this date many agreements were signed between various Indian tribes and the federal government, and these led the government to form the reservations to "protect" the Indian people. For approximately 100 years thereafter, these reservations existed under the control of the federal government through the Bureau of Indian Affairs (BIA) in the Department of the Interior. On these reservations Indians were born, lived, and died under dominance that was unknown to their ancestors. The individuals born into this new system became very dependent on the U.S. government, which had imposed upon them governmental, educational, and health and employment systems that were designed by the BIA. All were designed to assimilate the Indian into the mainstream of the white American life style. About 1960 the self-determination concept began to take root, and the problem of implementing this concept has become a main concern for many Indian tribes. Today, some reserva-

tions are better prepared than others politically or economically to cope with the demands of development. But, regardless of these prevailing conditions, there are three main elements of concern that confront all Indian tribes in the development process: (1) How does an Indian tribe gain self-reliance after 100 years of domination by a governing system that it still does not understand? (2) How does the Indian tribe industrialize when it has to compete in an economic system that has different standards? (3) Finally, how does the Indian tribe join the 20th century without losing its social and cultural identity?

Today more than half of the Indian population in the U.S. lives on Indian reservations. Most of these reservations have high unemployment, poor health facilities, and inadequate transportation systems. Although they have an adequate labor force, many reservations have ample natural resources that have not been developed. These natural resources (coal, uranium, oil, and lumber) are a primary concern to these developing areas.

The social and economic problems on the reservations are relatively easy to define. Also, goals and suggestions for improving the situations often seem intuitive. But tribal governments have not clearly developed the means for imple-

menting these goals or development strategies. Usually these strategies are generated by the federal government through the BIA or private sector concerns and do not represent the same goals or expectations of the Indian people. In other words, the strategies do not answer the demands or needs of the respective developing reservations.

For many of these Indian tribes, the lack of exposure to or misunderstanding of planning models that come off the reservation create issues in reservation development. For example, the Navajo Tribe exists in a dual economy. The traditional economy is based on subsistence farming, livestock raising, rug weaving, handicrafts. There is also a cash economy where an individual or the tribe as a whole are monetarily rewarded by their labor, sale of products, or development of natural resources. In most cases, the tribal decisionmakers and policymakers are individuals who understand clearly and agree with one of these two economies. But, also, there are individuals at this level who understand both and are in conflict because of their traditional Indian ideology, on the one hand, and their desire to see the reservation develop in the most equitable way for all members of the tribe. Consequently, Indian tribal governments have difficulties in developing consistent planning strategies and implementing development policies for their reservation.

As mentioned earlier, Indian tribes have for generations depended on the U.S. federal system for their livelihood. But in December 1975, the Nixon Administration signed into law a bill approved by the U.S. Congress, titled Public Law 93-638, The Indian Self-Determination and Education Assistance Act. This law essentially permitted Indian tribes to contract and administer directly federal programs that had previously been administered by the Bureau of Indian Affairs or the Indian Health Service. This law essentially enforced the belief of many tribal leaders that they in fact did have the right and ability to determine the destiny of their reservation and its people.

With this emphasis on Indian self-determination, many tribes are entering an era of reservation development that is increasing the complexities of attempts to maintain their cultural heritage and yet to alleviate some of the economic disparity that exists between reservations and other communities throughout the United States. One approach that tribes are taking to change the economic standard on the reservation is through development of their natural resources.

The objective of this thesis is to investigate the approach the Navajo Tribe is taking in developing their coal resources. Because this development will have far-reaching implications

on the Navajo culture, economy, and environment, it is imperative to have a process for tribal decisionmakers that allows them the opportunity to investigate development proposals and be aware of the comprehensive implications that might occur. The thesis will investigate the problems confronting the Navajo Tribe in the development of the coal resources and provide recommendations for the integration of this reservation development process into the Tribe's goals of self-determination.

Chapter I will present a brief profile of the Navajo reservation's characteristics, define the Tribe's development goals as established in their 10-year plan by the Office of Navajo Economic Development, and show the relationship between these goals and the process of self-determination.

Chapter II will present two case studies, one on the development of coal strip mining in the Four Corners region of the reservation and the second on the proposed coal gasification plants in the same region. The studies will provide a profile of each case and its effects on reservation development. In addition, recommendations will be provided for developing alternatives for tribal planners to gain more control over this form of economic development, and thus relate to the self-determination process.

Chapter III will discuss the implications that strip mining and coal gasification will have on the reservation and Tribe in the areas of water resources, land reclamation, and new town development.

Chapter IV will conclude the thesis by summarizing the previous chapters and recommending methods for improving reservation development through a process of self-determination.

CHAPTER I

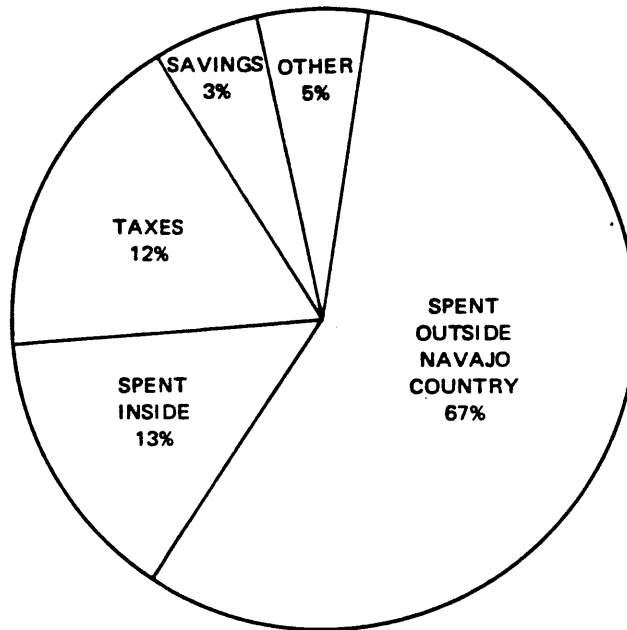
NAVAJO DEVELOPMENT GOALS

"For over 100 years it has been the policy of the U.S. government to assist the American Indian to become economically self-sufficient. In a large measure...this policy has been a failure... It has never occurred to the majority of those pronouncing this policy that many Indians may not want to swim in a mainstream they largely regard as polluted and that they should be free to refuse; or that there might exist an Indian culture, which not only rejects the materialistic value system of the White Man, but has positive values in terms of brotherhood, and preservation of one's environment, from which the White Man could learn, if he were willing to listen."¹

The Navajo reservation resembles many developing nations in that it shares many of their characteristics, such as a high rate of unemployment, lack of labor skills, and exploitation of natural resources. In addition, capital generated on the reservation is drained off because the Tribe does not have an economic base for trade and commerce. Figure 1 shows how the Navajo dollar is spent. One of the most critical problems facing the reservation is the lack of a base for economic development. The Navajo Tribal Council currently is concentrating on establishing this system through the guidelines of The Navajo Ten-Year Plan. One aspect of this plan is to establish more manufacturing and retail businesses on the reservation, which will help transform some of the

Figure 1
WHERE THE
NAVAJO
DOLLAR GOES

(Percentage
indicates
individual
income
expenditures.)



Source: Navajo Ten-Year Plan.

agrarian labor force into a skilled, professional labor force. The goal of the Plan is to create 46,000 jobs at an investment of \$4 billion. Since this program is primarily in the planning stages, it will be several years before the complete Plan becomes a reality. Not only is the economic development plan in its infancy, but also the physical aspects of the semi-urban sectors on the reservation currently are incapable of developing the necessary water supply, sewerage and waste disposal plants, roads, and other required infrastructure that are common in urban centers. Consequently, transforma-

tion from a rural to a semi-urban/urban concentration will be a very slow process. Today, approximately 10 percent of the total reservation population lives in semi-urban areas.

For centuries the Navajo people have lived with the land. Their primary economic base was established through agriculture, livestock, and handicrafts. The religion, which is a very important aspect in the culture, is closely identified with the land and various aspects of nature. This coalescence with the land has existed for generations and is extremely deep-rooted. Because of this feeling, it is no wonder that the Navajos are reluctant to transform their culture and give up their identity with the land.

As a result, numerous Navajos adhere to this life-style. This does not mean that these people will not be affected or influenced by the exposure to different social, economic, or environmental changes, but it is important for these influences to have a lasting impression through choice and not by force.

Those rural and semi-urban families who are undergoing economic and social transition have the highest incident of poverty, and a large proportion of their labor force is unskilled. Because of the difference in ideology, Navajos

neither completely understand the financial activities of investment nor the use of land as a monetary gain by buying or selling. For the traditional Navajo, using land for financial transactions would negate the belief that land is free as a spirit and should be enjoyed by all.

All of these concerns involved in this transition need to be considered in any approach to development of the reservation. To date, there has been no successful overall implementation of a planning process that will help Navajos make a successful transition. Consequently, this transition should be viewed as an important change for Navajos. Consideration should be given to the establishment of development alternatives that will provide a process where the end product will continue to express the Navajo's world view and life-style, as well as promote Tribal control through the process of self-determination.

RESERVATION PROFILE

The following is a brief profile of reservation characteristics. More detailed information and specific references for the sources can be found in the Appendix.

Geographical Area -- The reservation is located in the Four Corners region of the Southwest United States, encompassing approximately 25,000 square miles (16 million acres). Its land mass is larger than the combined areas of New Hampshire, Massachusetts, and Connecticut.

Demography -- With approximately 140,000 people, the Navajo Tribe is the largest Indian tribe in the United States. Average family size is 5.6 persons, with a growth rate of 2.5 percent per year. The median age of the Navajos is 16.2 years, with 30 percent of the population 20 years and under.

Income -- The per capita income of Navajos residing on the reservation as recorded in the 1970 Census was \$900, compared with the national average of \$3,900. This means that the average person living off the reservation had approximately \$3,000 more to spend on consumer goods, housing, food, and clothing than the average Navajo.

Labor -- It is estimated that the unemployment rate on the reservation is 31 percent. The potential labor force is approximately 50,000 men and women (16 years and older). Of this total, 35,000 are employed and 15,000 are unemployed.

Governmental System -- The main decision- and policymaking body of Tribal government is the Tribal Council, composed of 87 members who are elected every four years. The executive body consists of a chairman and vice-chairman of the Tribal Council who are also elected on a four-year cycle.

Tribal Income -- As mentioned above, many Navajos depend on the traditional economic system and annual subsidies from the federal government. In addition, the Tribe receives a substantial income mostly from mining, petroleum, and forestry production. Oil and gas royalties for Fiscal Year 1978 (October 1, 1977 to September 30, 1978) were slightly over \$15 million. Coal royalties for the same year were over \$3 million and for uranium were slightly over \$1 million. One of the Tribe's most successful enterprises is its lumber industry, Navajo Forest Products Industry, which averaged over \$800,000 profit per year from 1964 to 1976.

THE TEN-YEAR PLAN

"...What is rightfully ours, we must protect;
what is rightfully due us, we must claim.

What we depend on from others, we replace with
the labor of our own hands and the skills of
our own people.

What we do not have, we must bring into being.
We must create for ourselves."²

Peter MacDonald
Chairman, Navajo Tribe

For years the federal government has neglected the real needs and demands of the Navajo people. As stated in a 1975 report of the United States Commission on Civil Rights, "The federal government, faced with several alternatives, has consistently opted for the one of least benefit to the Navajo people and their land and the one most likely to perpetuate a welfare existence on the reservation."³ Furthermore, a witness to the Commission, Dr. David Aberle, summed it up as, "the difference between running a relief economy and running a development economy."⁴ Despite the ineptness of the federal system to plan adequately for reservation development, the Navajo Tribe has sustained its culture and life-style. But with increasing population and pressure to develop additional alternatives for capital income, the Tribe is confronting development issues, such as increased unemployment as well as inadequate transportation and communication networks, educational institutions, hospitals and clinics, police and fire protection, and housing, all of which are necessary to support an adequate social and economic infrastructure for the reservation.

Consequently, the Navajo Tribal Council developed their Ten-Year Plan. The principal goal of the Plan is to develop an economy within the boundaries of the reservation that will provide the Navajo people a choice of life-style and a plan-

ning process that assures Navajo control and self-sufficiency.

SUMMARY OF THE TEN-YEAR PLAN

The Plan initially proposes a combined total of capital investment from the public sector (federal and state governments) and existing Tribal funding of approximately \$3.8 billion, plus a \$2.3 billion capital investment from the private sector (manufacturing, mining, construction, etc.) totaling over a ten-year period to an investment of approximately \$4.0 billion. It is proposed that this investment would generate 46,000 jobs for Navajos -- 26,000 in the public sector and 20,000 in the private sector.

It should be noted that these funds from the public sector (federal and state) will be used to improve the social amenities (employment, health, transportation, and so forth) and business ventures. This allocation of funds was established because it was thought that once an adequate social and physical infrastructure was developed, it would generate an effective amount of private investment for the economy of the reservation.

Table 1, which is from the Plan, indicates the capital investment from both the public and private sectors over the next ten-year period, including the employment that will be generated.

The overall objective of the Ten-Year Plan is to promote Navajo self-sufficiency, both for the individual by providing a choice of life-style, and for the Tribe as a whole by becoming less dependent on public funds. The principal strategy of the Plan is to develop a reservation economic base that will eliminate the 67 percent capital drain from the reservation. To accomplish this, the Plan proposes an increase in social overhead investment, health, education, housing, labor development, etc. In addition, it proposes the further development of natural resource production, industrial and commercial development, improved transportation, and expansion of agricultural development.

The Plan also contains a summary of deficiencies faced by the Tribe, such as 61 percent of Navajo homes are without electricity, 80 percent without water and sewer services, high rate of infant mortality (42.3 per 1000 live births, compared to 20.7 nationally), 30 percent unemployment rate, average education level attained of only five years, compared to 12 years nationally, and so forth. These deficien-

Table 1
PUBLIC INVESTMENT (TEN YEAR TOTALS) AND RESULTING EMPLOYMENT (ANNUAL AVERAGES)

Social Overhead (Public) Sector* (Investment in Human Resources Development)			Production (Private) Sector (Investment in Directly Productive Activities)		
Program	Investment 10 Years	Employment (Per Year)	Industry	Public Share** of Investment	Employment (Per Year)
Education and Manpower Development	\$1,210,000,000	10,200	Small Business Manufacturing, transportation and construction	\$ 24,000,000	2,200
Health	422,000,000	3,300	Retail trade and services	30,000,000	4,700
Housing (public sector)	372,000,000	1,500	Large Scale Industry Footloose Industry	13,000,000	3,000
Roads and other transportation	740,000,000	1,400	Resource utilization NFPI	1,000,000	1,700
Public Utilities	164,000,000	1,100	Tourism & Recreation Motels, etc.	8,000,000	800
Public Services	173,000,000	1,900	Arts & Crafts	26,000,000	1,200
Parks and Recreation	137,000,000	5,500	Agriculture Navajo Indian Irrigation Project	10,000,000	(increased incomes)
Land and Water	520,000,000	1,000	Farms	30,000,000	1,000
Research & Development	40,000,000	100	Processing	30,000,000	1,000
			Crop production	10,000,000	-
			Transforming traditional agriculture: credit, marketing, etc.	50,000,000	5,000
TOTAL	\$3,778,000,000	26,000		\$232,000,000	20,600

*Includes present, on-going program expenditures as well as needed additional expenditures. About half of the expenditure totals are for present programs and about half are additional expenditures.

**Public funds will generate private investment in considerable larger amounts. The amount of private funds will be estimated in Part II of the Ten Year Plan's determination of specific business potentials.

Source: Navajo Ten-Year Plan.

cies, and the capital investment requirements necessary to correct them, represent only a few of the visible indicators the Tribe, as a traditional society, are confronting as a result of its effort to transform into a more technological/industrial society. Other factors present obstacles to development. These include the geographical location of the reservation, which has created isolation between Navajos and non-Navajos, and cultural factors which for generations have promoted a foreign heritage that does not co-exist with the dominant white society. Moreover, as the Ten-Year Plan indicates, there is little capital for funding an individual Navajo entrepreneur. In addition to these institutional issues, there is a more subtle obstacle in the development process that may not be so evident to the Tribal Council policymakers. That very important factor, which the Tribal Council should view as synonymous with self-determination, is control. At this time, the Tribe does not have adequate influence over controlling factors, such as investment capital, technology, and other economic forces exerted from outside the reservation. This is not an unusual situation for a developing region. But with the goal of the Ten-Year Plan stressing self-sufficiency, Tribal policy and decision-makers should be aware that, as their needs increase, their dependence on outside forces will not permit the control they need to attain the goal of self-sufficiency through the process of self-determination.

The development process of the Ten-Year Plan emphasizes a development priority with the assumption that the Tribe's most evident sources are those in the area of natural resources and their labor force. This is not to be disputed, but there appears a dichotomy in the strategy. First, the Tribe's natural resources, especially coal, are very attractive to off-reservation investors, and for the most part this product will enhance the Tribe's goal of increasing investments from the private sector. Second, the Tribe would like to create employment opportunities for its unemployed. Herein lies the conflict that is analogous to developing nations. As stated by E.F. Schumacher in Small Is Beautiful, "Large projects are invariably more economic than small ones, and it proves that capital-intensive projects are invariably to be preferred as against labour-intensive ones,"⁵ but "this means that those who have nothing to sell but their labour remain in the weakest possible bargaining position."⁶ Given the fact that the Tribe would like to achieve the goals of increasing capital investment and decreasing the unemployment rate through a controlled process of self-determination, their policy decisions and implementation of a planning process should consider a more comprehensive approach. Inducing increased capital investment into the reservation does not imply that the social needs and demands of the Navajos will evolve in a natural

order. This is especially true when considering the fact that the Navajo Tribe is an indigenous society striving to maintain its identity and increase control over its destiny.

The Navajo Tribe cannot evolve as a Tribe without controlling the economic development process and simultaneously satisfying the needs and demands that will be placed on the Navajo society. The Ten-Year Plan states the deficiencies and proposes solutions for correcting these deficiencies, but this does not absolutely guarantee control over the process because it will be the individual Navajo or Navajos that will have to implement and control the process of self-determination. How does this happen?

In considering the Tribal Council's ability to control and implement reservation development, existing and past ventures of economic development should be reviewed. The following illustrations are presented as examples to demonstrate the Tribal Council's ability for developing local Navajo capabilities in operating reservation economic ventures, if the controlling features such as (1) management, (2) employment (hiring process, training, etc.), and (3) marketing, are not to be dominated by off-reservation corporations. The examples will focus on two business ventures located on the reservation. One involves a large off-reservation corpora-

tion, Fairchild Camera and Instrument Corporation, that dominated the controlling features above. The second examines the Tribal-owned lumber enterprise, Navajo Forest Products Industries. This is a business venture in which the Tribe has invested both capital and human resources, but not without the problems of management, employment, etc., related to controlling the industry or the sociocultural changes. These examples are presented to show that, given time and the right decision of Navajo Tribal economic ventures, the Tribe can develop a process for controlling its business ventures.

In 1965, Fairchild Camera and Instrument Corporation contracted the operation and production of a semiconductor assembly plant located on the reservation in Shiprock, New Mexico. The physical structure of the plant was built by the Navajo Tribe (\$1.5 million), financed through the Economic Development Administration and then leased to Fairchild. At one period of the industry's history, it employed 1,200 Navajos with 30 non-Navajo managers and supervisors. In 1974, the industry employed about 900 Navajos with an annual payroll of \$5.6 million. During this period of operation, Fairchild exercised almost complete control of the industry. These controlling factors were:

1. Management. The non-Navajo employees represented the top management of the Shiprock Plant. They, in turn, were controlled by the national parent corporation located in Mountain View, California. There were some Navajo supervisors, but most of the highly technical jobs were filled with non-Navajo employees.

2. Employment. The industry had its own personnel office and hired Navajos from throughout the reservation. The on-the-job training program was subsidized by the Bureau of Indian Affairs. The BIA paid one-half of the employee's salary for the duration of the individual's training period. The criticism expressed by a BIA official was that the industry tended to terminate some employees shortly after they were trained or transfer them to another section that would require further training and, consequently, more BIA subsidization.

3. Marketing. The market for the industry's product was entirely off the reservation and primarily consisted of federal defense contracts. This influenced the viability of the industry. It had to respond to the market fluctuation, especially toward

the end of the Viet Nam War when many government contracts involving this product began to terminate.

In 1975, ten years after the industry had been established on the reservation, Fairchild terminated the contract with the Navajo Tribe. It finally closed the plant in June 1976. Several events culminated at that time which led to Fairchild's decision to close the plant. First, the federal demand for semiconductors was decreasing because of the decline of the Viet Nam War. By 1975, the plant's employment was down from 1,200 to 650 Navajo employees, and it appeared that more employees would be released. At the local level in Shiprock, the American Indian Movement (AIM), began to protest the release of Navajo employees and accused the corporation of seeking a cheaper labor market in a foreign country. Consequently, AIM took over the facilities and demanded that Fairchild rehire the released Navajo employees. After the takeover, Fairchild demanded assurance from the Tribal Chairman that AIM would not create any further conflicts. When the Chairman could not comply, Fairchild decided to terminate their contract with the Navajo Tribe, stating that without the assurance from the Tribe concerning AIM's activities, the industry would have to close the plant. Unofficially, tribal officials suspected that the AIM takeover was the red herring and due to the cut back in the

market demand of semiconductors and the future potential of securing a cheaper labor market, was the actual reason for Fairchild's decision. As a result, the 650 Navajo employees were laid off, and a plant of 72,000 square feet sits unoccupied.

Because of the nature of the industry, the employees' training and knowledge was limited to the one product of semiconductors. Because this was the only plant of its kind on the reservation, the Navajos trained to produce this product would have to seek employment opportunities off the reservation.

The second illustration involves a Tribal-owned lumber enterprise. Although lumber has been produced on the reservation since the 1880's, it was not until 1958 that the Tribe officially organized the Navajo Forest Products Industries. With an initial investment of \$12.5 million (\$7.5 million for the lumber mill and \$5 million for housing), the Tribe not only increased the production of their lumber resources, but also created a small town. The town is situated on the eastern side of the reservation where the population density of Navajos is the highest. Although the present population is about 1,800 people, the town of Navajo has a service area of nearly 30,000 individuals in a 25-mile radius.

The Tribal Council is anxious to further the development of the town, but must overcome basic social and economic problems. First, the town was created around the lumber mill, which exists primarily for the employment of Navajo men and women. The mill employs about 600 Navajos and 20 non-Navajos. These 20 employees, however, are the controlling force of the mill. The inability of the Navajos to participate even marginally in the management process of decision-making concerning the mill's operation is of serious concern to the Navajo employees. The problems of the separation of workers from management by race has serious implications for the distribution of individual incomes and collective goods. The economic and social disparity reflects either directly or indirectly on the human settlement pattern and ultimately will have a profound influence on the further development of the town.

The most difficult social differences are those that stem from the depths of disparate cultures. These deep-seated differences are hardest to change or control. The differences in the Navajo and Anglo cultures are expressed through day-to-day living situations and in attitudes toward work and social activity. Specifically, the feeling of cultural separateness and the attitudinal impediments to any meaningful participation in the Anglo-dominated sectors of produc-

tion have combined to eliminate the incentive for the Navajos to attempt to control their own destiny. The Navajo employee of the lumber mill has been conditioned by circumstance and culture to withdraw from the operations of the mill, thereby increasing existing differences between the Anglo manager and the Navajo workers.

The following is a suggested process by which the Navajos can help themselves gain skills, confidence, and management responsibility. The fact is that both the town of Navajo and the mill were created by the Navajo Tribal Council, which ultimately has responsibility and control over the welfare of the people in the town. To a large extent, it may be in the Council's power -- if they are willing -- to help the Navajos attain their potential as human beings, to increase their income, and to decrease the difference of class and status between the Navajos and their Anglo manager. This, in sum, is a design for attitudinal and institutional change in the direction of an eventual redistribution of resources, power, and prestige in the Navajo settlement.

The above review of socio-economic differences and the problems they have created leads to a discussion of the possible approach to implementation of the self-determination goal. At least four processes are in order:

- A. Initiation of contact with the dominant source of power, namely, the Navajo Tribal Council;
- B. Achievement of control over the Management Board of the mill;
- C. Modification of the hiring process, specifically in terms of the qualifications pertaining to the superintendents;
- D. Implementation of increased working/educational opportunities for the Navajos.

In creating the Management Board of the mill, which consists of four Navajos and four non-Navajos, the Tribal Council wanted to ensure its own responsibility for policies. However, the Tribal Council has over time relied heavily on the non-Navajo board members for direction in the operation of the mill. It has become evident that by doing so, the Council has de facto given up its power to govern. For this reason, the Council must be reminded of the original intentions underlying the mill's creation. It must be made aware of the extent to which these intentions have been displaced by relegating governing power to non-Navajo members of the Management Board. An important step in implementing institutional change in Navajo is contact -- in person or in writing -- with the Tribal Council to remind its members that they are elected officials of the Navajo Tribe with responsibilities to the people, their constituents.

The second aspect of the implementation strategy is for the Tribe to gain control over the Management Board gradually by increasing the number of Navajo board members to five and limiting the non-Navajo representation to four. It seems that the best approach is a direct one, namely, persuading the Tribal Council to use their influence in the appointment of Navajos to the Board.

The third component of the strategy relates to the appointment of Navajos as supervisors in the mill. Although initially non-Navajos were recruited to take supervisory positions so as to train Navajo successors, this process has achieved slow results. Most of the Anglo supervisors hired in the mill are within 10 to 12 years of retirement. Because they have comfortable homes and relatively superior incomes, it is unlikely that they would be willing to displace themselves by training younger individuals to qualify for their jobs. Satisfactory and equally profitable work would be difficult for them to find at their age. This particular problem could be resolved by changing hiring practices at the mill. First, by limiting the age of a prospective supervisor to one that is young, the person would not have the fear of finding employment after the training process of a Navajo is successfully completed. Or second, this hiring process could be eliminated completely. In its place, a private or govern-

mental grant could support a special program of training for Navajos with the instructors being hired for a specific time period and a specific training task. This would eliminate the incentive to slow down or effectively limit the training of Navajo supervisors that is inherent under the present system.

But perhaps the final and most important aspect of the implementation strategy is the creation of a feeling of self-assurance and pride on the part of the Navajo workers. Self-confidence and a sense of personal responsibility are closely interrelated. The Navajos must be given opportunities to develop confidence in their ability to carry out responsibility. Some of this could be obtained through additional on-the-job training, perhaps in combination with study grants, which would be of enormous utility in increasing the capability of Navajo individuals in the professions of forestry, management, or business.

In viewing this illustration as an opportunity to confront a real problem existing in the town of Navajo, it quickly becomes apparent that in the "solution" of the disparities in income and social class among Navajos and non-Navajos working in the mill, other difficulties remain unresolved. In other words, in complying with two of the design criteria

specified earlier, namely, the maximization of incomes and the minimization of social class differences, one must still confront the entrenched interests, habits, and attitudes of the Navajo government, i.e., the Navajo Tribal Council. The lack of government adaptability to change is perhaps the source of a great deal of conflict in the course of implementing the objectives as has been spelled out above. But recognizing this element does not require -- given the terms of reference of the exercise -- the design of another settlement pattern or city. This is because an interesting paradox emerges in the process. While on the one hand, the Tribal Council resists change, at the same time its constituents are demanding that policies do change and that greater attention is paid to their advancement. Thus, although conflict with the Tribal Council may be expected in the initial stages of the process, the process itself may help the Council become more sensitive, more sympathetic, and more attuned to its constituents. And finally, another paradox becomes evident. In the process of equalizing social status and reducing the disparity in incomes by promoting Navajo workers to managerial and supervisory jobs in the mill (jobs previously held by non-Navajos), disparities among Navajos will become more evident. The inherent conflict between manager and worker will not be erased by replacing an Anglo manager with a Navajo. Given that both are of the same cultural group, the discord will

not be as severe. The differences in social class and income will continue, and it is difficult to predict what other unforeseen consequences will become apparent as the initial design criteria laid out here are implemented. At least one thing is clear. The redistribution of resources, control, and prestige from non-Navajo to Navajo will enable the Navajos to recognize and deal with emerging difficulties and problems by themselves and for themselves instead of continuing their reliance on external assistance.

These illustrations do not imply that the Tribal Council's goals for self-sufficiency are inadequate, but with any new policy, there has to be a planning process and implementation. As Schumacher stated, "It is not enough merely to have a new policy; new methods of organization are required because the policy is in the implementation."⁷

In comparing the illustrations and assessing the controlling factors, as mentioned on page 21, the following conclusions are made:

1. Management. The Fairchild venture was completely controlled and influenced by off-reservation powers with no input or monitoring by the Tribal Council or Navajo employees. The Forest Products

Industry has Navajo members on its Board and is monitored by the Tribal Council, and it is through these two sources that Navajo employees of the lumber mill can have the option of presenting their concerns.

2. Employment. The on-the-job training program in the Fairchild plant was again controlled by the non-Navajo management with minimum monitoring by BIA and no monitoring from the Tribal Council. Consequently, the program was misused by moving trainees from section to section to be retrained and eventually working themselves out of a job once the training was over. On the other hand, the training program in the Forest Products Industries is monitored by both the Navajo Board members and Tribal Council. Navajo employees are learning a skill and retaining employment after their training program.
3. Marketing. The product of the Fairchild Industry was completely controlled by the off-reservation market. The product could not be used locally and, depending on the demand, the industry either prospered or declined. In this situation, the latter was the case and the industry closed down. Although the Forest Products Industry's market for lumber

extends off the reservation, the market is not controlled by one source and supplies a variety of businesses. Moreover, the product can be used locally on the reservation and being a renewable resource, its marketability will contribute to an economic base for the reservation for an indefinite future.

The external influences on reservation development will have an impact on the Navajo's goal of obtaining self-determination through control. Yet other examples, such as the Forest Products Industries, will become the more successful Navajo economic ventures. These successes will demonstrate the Navajo's ability to develop a process for controlling their own affairs and destiny.

FOOTNOTES

¹U.S. Joint Economic Committee, Economic Development of the American Indian and His Lands, Vol. 2, p. 411, quoted by Gerald J. Boyle, "Economic Status of the Navajo on the Reservation," University of New Mexico, 1973.

²Navajo Tribe, "The Ten Year Plan for Navajo Economic Development," December 1972.

³U.S. Commission on Civil Rights, The Navajo Nation: An American Colony, Washington, D.C.: Government Printing Office, 1975, p. 25.

⁴Ibid., p. 25.

⁵E.F. Schumacher, Small is Beautiful: Economics as if People Mattered, New York: Harper & Row Publishers, 1973, p. 69.

⁶Ibid., pp. 69-70.

⁷Ibid., p. 190.

CHAPTER II

COAL DEVELOPMENT ON THE NAVAJO RESERVATION

The Navajo Tribe is venturing into a socio-economic transitional phase that will develop implications which will determine the future status of the reservation. This transition is developing more rapidly because of the recent energy crisis and consequently, the influence of federal and private industrial proposals for extracting natural resources from the reservation to be converted into energy-producing resources. This type of exploitation is certainly not new for the Navajo Tribe or any other American Indians. The colonial attitude imposed upon Indian people by the federal government and private industry has historically created situations of forced assimilation and, in some cases, genocide. The Navajo Tribe has suffered economically, socially, and politically, and this abuse has occurred mostly from the lack of exposure (direct involvement or confrontation) of Tribal policymakers in the business/political world of white American society. With the abundant supply of natural resources on the reservation (coal and uranium), the Navajo Tribe is faced with its energy crisis: exploitation by off-reservation industrial developers. The challenge confronting the Tribe will be institutionalizing new policies that will benefit, not suppress, the economic development process of the reservation.

This process of self-determination can be accomplished by developing and implementing Tribal policies that will establish firm control over the economic development transition of the reservation by and for the Navajo people.

Because of the Navajo Tribe's traditional pastoral society, with its distinct social, economic, and political ideologies, the direction and implementation of new development policies becomes increasingly complex. There exists both internal and external problems in developing these new policies for the reservation. The major internal conflict is an attempt to reduce the unemployment (30 percent) rate by developing the natural resources while maintaining at least the most important traditional ideologies of the Navajo culture. Compounding the problems of this development strategy is the Tribe's exposure to limited industrialization models, imposed by external influences within the bureaucracy of the federal government and private industrial concerns.

"Power is not merely politics, and I think that underlying the problem of power is the problem of economic interests, that oil companies do not like to share profits with the Navajo Tribe, that whenever there is a charge between a settlement that could be made on the reservation and could be made in Farmington, Gallup, Flagstaff, or Winslow, the choice will be made in favor of the border communities, and that, in other words, whenever it is a question of Navajo interests or other interests, the choice goes in favor of other interests."1

For the most part, policies introduced from off-reservation sources have been very limited in providing viable socio-economic alternatives for the future development of the reservation. The lack of alternatives is especially evident in the area of economic development. The emphasis of this approach to developing the reservation has been designed totally on the economic scale (needs and demands of external reservation markets), with the attitude that once the economic of the Tribe is decided, then the social and political aspects will develop in a natural order. It is this influence that has contributed to the complexities of reservation development. Without improved methods of control and choice of development procedures, the Navajo people will continually be exploited and their future controlled by external needs and demands.

As stated in Chapter I, to stimulate the process of self-determination, the Navajo Tribe is venturing into various industrial development programs. To date, the most lucrative ventures in terms of economic returns is the selling and leasing of natural resources such as lumber, oil, uranium, and coal. Considering these resources, coal will have the most immediate impact on future development policies for the reservation. Because of the international energy crisis, coal has become a more competitive energy source, and the

reservation has projected coal resources of approximately 4 billion tons. Encouraged by the federal government and private coal corporations, the Tribal Government has signed coal leases that are not in the best interest for the development of the reservation. In addition to the poorly negotiated contracts, the short-term and long-term ramifications of this process of industrialization are not fully realized or comprehended by Tribal policy developers. This situation is a result of the Tribe's lack of exposure to this form of regional development and poor coordination of control over a comprehensive development plan.

The objective of this chapter is to present a general perspective of the planning situation of the Four Corners Region of the reservation. The development and growth of this area is becoming more complex because of proposed additions to existing strip mining ventures and proposals for the construction of coal gasification plants to be located on the reservation. The impact of this industrialization will increase the demands on the existing social, economic, political, and environmental qualities of the Navajo reservation and surrounding states. The following will concentrate specifically on these two industries and explore alternative methods that will establish control of the development process by the Navajo Tribe.

ILLUSTRATION 1 -- STRIP MINING

The development of coal on the Navajo reservation is part of a comprehensive plan by utility and coal companies and federal agencies to develop massive electrical power for the growing demands of urban areas throughout the West Coast and Southwest region of the United States.² This development is exemplified by two existing coal-fired power plants in New Mexico in the Four Corners Region, and proposals for the construction of three additional plants by 1985 in Arizona and Utah. With a substantial portion of coal reserves located on the reservation (estimated 4 billion tons of coal under 500 square miles in the Four Corners Region)³ and within relatively convenient distances to the power plants, the Tribe immediately becomes a prime producer of marketable coal. But to date, the Navajo Tribe has only remained the owner of these reserves and the real producers have been large mining corporations. Strip mining started in this area in 1953 when Utah International, Inc. (UII) secured an exploration permit from the Navajo Tribe. The lease agreement for the actual strip mining of 24,864 acres of land was signed in 1957, with a second lease for 6,547 acres. The second lease agreement signed was between the Navajo Tribe and El Paso Natural Gas-Consolidation Coal Company (El Paso-Consol) in 1968. The value of the coal in royalties to the Navajo Tribe is 15¢/ton

and 20¢/ton, respectively, in the two UII leases, and 55¢/ton or 12-1/2 percent (depending on which figure is the higher) of the price of coal upon delivery (fob).

Given the existing economic situation on the reservation as identified in Chapter I, the Tribe has decided to increase the development of their coal resources as one alternative to achieve their goals in the Ten-Year Plan. The issue now becomes one of developing viable development alternatives that will provide absolute self-control by the Tribe. The development of these options for control are not only a process for defending the Tribe from outside intervention, but involves the creation of alternatives that will include the basis for future Navajo self-determination.

The following illustration will present the current development situation in the Four Corners Region, with an emphasis on strip mining. Also, the impacts of this industry will be discussed and a presentation will be given of proposed alternatives that could provide rectification of past Tribal coal/land leases with a perspective of future issues the Tribe will have to confront and consider when future development proposals are established.

STRIP MINING -- PRESENT STATUS

Theoretically, before any form of lease sale, a coal evaluation is required of the respective lessor Indian Tribe, Bureau of Indian Affairs (BIA), Bureau of Land Management (BLM), and U.S. Geological Survey (USGS) to determine the potential reserves, quality, mining accessibility, and marketability. These technical examinations are supposed to establish guidelines for the amount of royalty rates that the Tribe should expect to receive for leasing its land and sale of coal. Usually, after this function is determined, the actual lease can be accomplished through competitive bidding among interested companies or by direct negotiations between the Tribe and coal company. Regardless of the choice of lease, the Department of Interior/Bureau of Indian Affairs have the final approval of leases accepted by the Tribal Council.

LAND AND COAL LEASING

There are guidelines that determine the minimum standards which are included in mining leases between Indian tribes and private companies. Before final signature, the following criteria are considered and determined by the respective federal bureaus and Indian Tribe:

- (1) Whether a permit should be issued or a lease entered into,
- (2) The acreage to be covered,
- (3) The royalty rate,
- (4) The annual rental rate,
- (5) The minimum acceptable bonus bid for competitive lease.⁴

The first consideration is determined by the respective Tribe, BIA, USGS, and BLM, depending on estimated coal reserves (quantity and quality). As stated in the Code of Federal Regulations (25 CFR, Part 171 -- Leasing of Tribal Lands for Mining), the minimum on floor figures⁵ for acreage per lease is 2,560, royalty rate of 10¢/ton, and an annual rental share of \$1/acre. The bonus bid acceptable is usually determined through the best bid/acre lease proposal by an interested company. Bonuses are usually paid to the respective Tribe before mining actually starts. Also, the term of leases as stated in 25 CFR, 171, is for a period "not to exceed ten years from the date of approval by the Secretary of the Interior."⁶

As mentioned, the Navajo Tribe has signed leases in the Four Corners Region with Utah International (UII) and El Paso Natural Gas-Consolidation Coal Company (El Paso-Consol). Table 2 indicates the terms of the leases.

Table 2. Terms of Coal Mining Leases by the Navajo Tribe

Lessee	Date	Royalty/Ton	Acreage	Annual Rental/Acre	Bonus Bid
Utah Inter- national	1957	15¢ first lease	24,869	\$1/acre	0
		20¢ second lease	6,547		
El Paso - Consol	1968	20¢/ton	40,287	\$1.25/acre	0
	rene- goti- ated 1976	55¢/ton or 12.5% of the f.o.b. mine price	40,287	\$1.25/acre	\$5.6 million

NOTE: Prior to bonus bids, the Navajo Tribe was receiving advanced royalty payments that would eventually be deducted from their future royalty payments. The amount of the bonus bid is not deducted from future royalty payments.

Source: Bureau of Indian Affairs.

LEASING -- DISADVANTAGES AND ADVANTAGES

Leasing guidelines as established and monitored by the federal government has had a questionable history of truly representing the interest of Indian Tribes. As examples, a 1972 report by the Government Accounting Office (GAO) entitled "Administration of Regulations for Surface Exploration, Mining and Reclamation of Public and Indian Coal Lands," stated, "No guidelines or instructions to assist them [BIA field personnel] in conducting technical examinations or in developing the permit or lease requirements...;" furthermore, "The BIA did not conduct technical examinations for six permits and six leases we reviewed, which were subject to the regulations."⁷ Perhaps a more noted allegation of federal negligence came from the Northern Cheyenne Tribe in Montana.⁸ Their legal counsel comprised a list of 36 violations toward coal contracts that had been approved by the federal government. Among these violations were:

- a) Failure to perform technical pre-leasing examinations of surface exploration and mining operations;
- b) Failure to incorporate legally required environmental protection clauses in the contract;

- c) Failure to prepare environmental impact statements;
- d) Failure to make required on-site inspections;
- e) Failure to demand adequate performance and exploration bonds.

It was on the basis of these violations that the Tribe petitioned the Department of the Interior to withdraw the Department's approval of the leases in the best interest of the Tribe. Subsequently, Secretary Rogers C.B. Morton did rule in favor of the Northern Cheyennes and the issues involving the coal leases on the reservation were held in abeyance until the Tribe could come to an agreement with the coal companies involved. To date, the Northern Cheyenne Tribe has decided not to develop any of its coal resources.

The Department of Interior is responsible for administering coal reserves throughout the United States. These controls are administered through the Mineral Leasing Act of 1920 and the Omnibus Tribal Leasing Act of 1938, which authorizes the leasing of both public and Indian mineral rights. Herein exists a conflict, because leasing regulations of public and Indian coal reserves are often treated by the federal government as one and the same. In other words, what is good for the public is good for the Indians. When, in fact, because

of the peace treaties between the U.S. Government and Indian Tribes, the status of Indians and their land holding have a different status. Although the reservation land is held in trust by the government, the minerals and land are owned by the respective Tribe and due to their sovereign rights, they should have control over their holdings.

An excellent example of misuse of Indian lands by the federal government involves the granting of prospective permits. Regardless of land holding (public or Indian), the first priority in leasing is to determine the land value and mineral content. Public land prospecting permits are awarded to interested companies through a preference-right leasing system established in the Leasing Act of 1920. This system gives the lessee company the exclusive right to lease all of portions of land that the prospecting company has found to contain workable quantities of coal. Obviously, this eliminates competition and encourages companies to hold land for speculative purposes. By granting this form of permits for Indian land, the Tribe is immediately placed at a disadvantage because their option of opening the sale of coal reserves to competitive bidding is eliminate.

Consequently, the assistance the Tribe receives from the federal government in preparation for negotiating coal leases

becomes a conflict of interest. On the one hand, the government has the obligation of trust responsibility and in this specific case the responsibility is to help the Tribe obtain coal contracts that will be in the best interest of the Tribe. Yet they conduct proceedings related to Indian land holdings as though it were public land. Through the preference-right leasing system and elimination of competition, the question arises as to whom the government is representing in the best interest, the coal companies or the Indian Tribe? As an example, both the Utah International and El Paso coal leases were negotiated after the companies obtained mineral prospecting permits (exclusive with option) and found substantial coal deposits. El Paso obtained its original permit in 1959 for 85,760 acres of land by submitting the required \$10.00 filing fee and 25¢/acre rental for each year. But it was not until proven coal deposits were found that a final lease was negotiated with the Tribe in 1968 for 40,281 acres of land. Under this leasing system coal companies can retain large tracts of land for a period of two years. After two years, the permit does not terminate, because the company retains an option of the permit by proving they have performed reasonable diligence during the first two years of prospecting. This is usually done by claiming the company has invested more than \$1/acre. Thus, the lessee company can perpetuate the permit until a favorable market value for coal is established.

The influence that the Department of Interior has exercised over the leasing of Indian land for mining purposes is evident when comparing public and reservation leasing. Currently there are 17 Indian leases in seven Western states (four on the Navajo reservation) compared with 465 public leases, as shown in Table 3. The startling fact is the average Indian lease is for 15,221 acres/lease and the average public lease is 1,471 acres/lease. The large number of acres/lease is granted despite 25 CFR, 171, which states that ordinary Indian coal leases shall be limited to 2,560 acres/lease, unless the lessee can justify larger acreage/lease is in the interest of the Tribe.⁹ Although there are more public leases than Indian, the percentage of coal production is higher on Indian reservations. Federal leases producing coal is 11.6 percent compared to 29.9 percent production on Indian coal leases.

After coal leases are signed, the Tribe receives two forms of revenue. One is a minimum base rental rate of \$1/acre/year and second, a minimum royalty rate of 10¢/ton of coal. Both of these regulations were originally established by the Department of Interior without a sliding royalty system. Consequently, any coal price increase would not provide the Tribe a readjusted royalty rate on their coal lease. Indian coal leases can be adjusted every ten years (twenty years for

Table 3. Coal Acreage Under Lease As Of March 1976

	FEDERAL		INDIAN		TOTAL	
	leases	acreage	leases	acreage	leases	acreage
ARIZ.	0	0	2	64,858	2	64,858
COLO.	113	112,247	1	19,452	114	141,699
MONT.	17	36,232	10	91,396	27	127,628
N. MEX.	28	40,958	3	82,860	31	123,818
N. DAK.	19	16,276	0	0	19	16,276
UTAH	197	268,555	1	200	198	268,755
WYOM.	<u>91</u>	<u>199,944</u>	<u>0</u>	<u>0</u>	<u>91</u>	<u>199,944</u>
	465	684,212	17	258,766	482	942,978

NOTES: Average Federal Lease per acre = 1,471 acres/lease.
Average Indian Lease per acre = 15,221 acres/lease.
Federal Leases producing coal = 11.6%.
Indian Leases producing coal = 29.9%.

Sources: Bureau of Land Management
U.S. Geological Survey

public leases), but this is not closely monitored and usually adjustments are made at the end of the twenty year period.

This identification between public and Indian lands by the Department of Interior has greater repercussions for the Navajo reservation. Because of the relative size (geographical and population) and wealth, the United States Government is better prepared to absorb any losses that might occur through minimum coal-leasing regulations. Of course, the federal government is not in the coal business and therefore can accept lower leasing terms when negotiating with coal corporations. If the Tribe is encouraged to accept leasing contracts based upon federal guidelines, then the reservation will suffer more. This becomes evident when the percentage of leased land on the reservation to leased public land in the United States. Given the geographical and economic situation, the Navajo Tribe cannot absorb economic losses or great damage to their environment without creating severe ramifications on the reservation.

The Navajo Tribe's dependence on federal agencies for establishing the criteria that determine the outcome of land/coal leasing has placed the Tribe in a vulnerable position with coal corporations. Because of the lenient prospecting and leasing laws of public land and natural resources, private

industry has been able to select land holdings at their own will for minimal cost to the industry. Unfortunately, the leasing of Tribal land is under the guidelines that identify their land with public land and this expense to the reservation has only profited the coal industry. There are changes in the present procedure of land leasing that the Navajo Tribe can make to benefit the reservation immediately and in the future. Of course, this will require the Tribe to re-evaluate their present objectives and priorities for economic growth, the time element for developing their coal reserves, and to what extent they actually want to become involved in the coal industry. In the long-term, the objectives should include the establishment of new legislation that would make a clear distinction between Indian and public land.

PROPOSED RECOMMENDATIONS

Although the Secretary of the Interior does have final approval or disapproval of Indian leases, it must be remembered that in many cases Tribes do and often take the initiative of first negotiating with energy companies for the rights to leasing reservation land and minerals. Consequently, with the goal of self-determination, the Navajo Tribe should investigate their own procedures and policy with regard to negotiating and leasing their land and natural resources.

In light of the Tribe's objective to accomplish self-determination and the ever-growing demand for natural energy production, the pressure to produce Navajo coal resources will increase. Therefore, in evaluating their present land and coal leasing status, several alternatives could be considered in the establishment of a coal development strategy. Three considerations should be assessed:

- 1) Formation of a Tribal minerals contract office,
- 2) Cancellation or renegotiation of existing leases,
- 3) Re-evaluation of alternative coal development ventures:
 - a) Joint ventures
 - b) Tribal enterprise

Tribal Minerals Office: In all past natural resource leases, the Tribal Council has been responsible for approving the contracts. But the principal negotiator has been the Council's Office of General Counsel. This office is under contract and directly responsible to the Tribal Executive Body and the Tribal Council. It is with this office that direct or referred contact is made by corporations interested in exploring for possible mineral reserves or bargaining for proven reserves. Of the ten divisions of the Tribal Government organization, the Minerals Department is the only other Tribal

office that has direct involvement in negotiation proceedings. As mentioned before, the Department of the Interior through the Bureau of Indian Affairs, Bureau of Land Management, and U.S. Geological Survey, is responsible for assisting the Tribe by supplying additional data pertaining to the land and mineral resources that are considered in the negotiations.

It is very important to stress the function of negotiations, because the initial commitment of the Tribe to lease their coal will have long-term impacts throughout all aspects of the reservation. As stated by Charles Lipton, International Minerals Negotiator:

"It has become fashionable lately to apply games theory to negotiations. In an era of computer technology, there is a tendency to try to reduce almost every human process to numbers which can be programmed for the computer. There are still, however, some areas of the human experience which defy the computer, including among others the art of negotiations."¹⁰

Because negotiation will affect more than one division within the Tribal government structure and since the consequences will have a direct impact throughout the entire reservation, it is recommended that an office, for negotiating and monitoring Tribal mineral and oil leases, be established. It is essential that one office have this responsibility because the Tribe has to be reassured of knowing (1) who is directly responsible for negotiating mineral contracts and that they

have the best interest for the Tribe; (2) how familiar they are with Tribal overall objectives; (3) that they have or can acquire expertise in understanding and dealing with the outside corporate structures; (4) have a full understanding of the trade-offs confronting the Tribe; (5) knowledge of direct short- and long-term alternatives that would be advantageous for the reservation; and (6) ability to coordinate Tribal and federal participation in the negotiating process. With coal becoming a more competitive energy resource, the competition for mining the resource and methods for gaining the highest returns for an industry's investment will become an increasingly critical factor of coal negotiations. Therefore, if the Tribe has at its disposal the best qualified experts in negotiating coal leases, they could assure more control and better coordinate any comprehensive development process. It should be noted that in some cases the Tribe and the proposed office may have to go beyond the existing Tribal government structure and contract with professional negotiators who not only have the interest of the Tribe, but the knowledge of the prevailing coal market, its potential, and, of course, of the corporations with which they are negotiating.

Cancellation or Renegotiation: There are specified responsibilities the federal government is obligated to maintain in

their transaction with Indian tribes. These obligations vary according to the circumstance, but in general are referred to as federal trust responsibility towards Indian tribes. Presumably, this trust status is defined as actions taken by the federal government to represent, advise, assist, etc. Indians in ways that are in the best interest of the respective tribe. If this trust is taken too literally by Indian tribes, without the realization of who is defining best interest, then the tribe is placing itself at the mercy of federal agencies that will continue to dominate every move toward future development that the tribe wishes to make.

In this case, the trust responsibility is in terms of federal advice to the Navajo Tribe over their method of negotiating their natural resources for the establishment of a stronger economic base for the reservation. Certainly, the minimum standards set forth by the federal government for securing prospecting permits and coal leases is a basis for negotiating contracts, but the Tribal Council should realize that these are economic standards originally applicable to the requirements of leasing public lands, and when applied to reservation land, they do not necessarily represent the present needs and demands of the Tribe. The most important consideration is the enforcement of laws and requirements for mining, regardless of who establishes the guidelines.

Only the Secretary of the Interior has the authority of cancelling mineral leases for Indian tribes, as stated in 25 CFR, 171.27: "When, in the opinion of the Secretary of the Interior, the lessee has violated any of the terms and conditions of a lease or of the applicable regulations,"¹¹ and "to declare such lease null and void, and the Lessor shall then be entitled and authorized to take immediate possession of the land."¹² It is interesting to note that, included in the original coal lease in 1957 between the Navajo Tribe and Utah International, Section G, the stipulation under Surrender and Termination was "The lessee shall have the right at any time during the term thereof to surrender and terminate this lease or any part thereof." Unfortunately, Indian tribes cannot nationalize resource operations on their reservations. Also, the federal government is very sensitive when it comes to "charges of nonfeasance in exercise of their trust responsibilities."¹³ Given the strong oppositions by the federal establishment in cancelling leases and, as David Aberle stated:

"Bureau officials are constrained in many ways: they wish to be primarily concerned for Navajos, but they must be concerned lest they violate their role as trustees for Indian property, and lest they upset local interests, who in turn will put pressure on Congress, which will put pressure on them. Furthermore, neither Congress nor federal officials have to live with mistakes in dealing with Navajo resources as closely as Navajos do."¹⁴

This does not imply that the Tribe should not petition the government for cancellation, or renegotiate leases because the Tribe does have examples of federal non-feasance. For example, the leases with Utah International and El Paso-Consol are for 31,416 acres and 40,287 acres, respectively, compared to the average federal lease per acre which equals 1,465 acres/lease. Also the regulations establish an acreage limitation of 2,560 acres per lease or "of such larger acreage is in the interest of the lessor."¹⁵ But the standard argument that is used to justify additional acreage is made by the coal industry. It usually states that for a coal project to be profitable, it must in this case be more than the prescribed 2,560 acres. The basis of this argument is that large land holdings makes the coal lease more profitable for the coal industry (their capital returns on investment) and therefore, makes it more profitable for the Navajo Tribe. The question is on what grounds did the BIA approve the larger lease holdings. If the justification was based on behalf of the coal industries argument, then perhaps the Tribe should use the regulation of the minimum 2,560 acres as bargaining power and receive higher royalty and rental rates. After all, the Tribe has the possession of the land and resources.

With regards to renegotiating leases it should be noted that the Tribe accomplished this in 1977, when Secretary of the Interior Cecil Andrus approved a renegotiated lease between the Navajo Tribe and El Paso-Consol. The new terms of the lease included a 55¢/ton or 12-1/2 percent royalty rate (depending on which figure is the highest), and a \$5.6 million advance bonus. A couple of points should be made regarding the above arrangements. First, the minimum 12-1/2 percent royalty rate had been standard with public leases and is just now being considered as a standard regulation change in 25 CFR, 171. The important factor here is that the rate is a minimum 12-1/2 percent and so why did the Tribe accept the 12-1/2 percent and not renegotiate for 18 percent or even 25 percent? Second, the original lease was signed in 1968 for a term of ten years and according to the federal regulations. The renegotiation took place eighteen years after the original lease and eight years past the stated regulations. There are good legal justifications for the Tribe to evaluate present coal contracts and decide the grounds for cancellation or renegotiation. But the challenge for the Tribal Council will be to develop their guidelines or evaluating reservation resources in terms that will be in the best interest for the Tribe. The Tribe maintains the ownership of reservation natural resources. But ownership is half the battle of controlling one's resources. The other half is developing posi-

tive methods for extracting the resource, if this is the kind of development the Tribe wants. The realization of ownership and the bargaining power it develops has not been fully utilized by the Tribal Council or negotiators that represent the Tribe, and there are several factors the Tribe should recognize before negotiating coal leases that could provide a different perspective of ownership and what the development possibilities of its coal resources really are for the reservation.

ALTERNATIVE DEVELOPMENT VENTURES

As stated, estimated Navajo potential coal reserves are 8 billion tons. At this time approximately 4 billion tons are economically recoverable and of that amount 2.6 billion tons have been leased with some 1.4 billion tons still at the disposal of the Tribe. Total coal production on the reservation in 1978 was 15,542,028 tons, with about 40 percent of this production coming from the Four Corners Region of the reservation. Total income for the same year was \$3.6 million. It is estimated by the U.S. Geological Survey that Navajo coal production in this area will be 15.5 million tons per year. Given these estimates of coal quantity and production and present lease arrangements, it becomes more apparent that time is not on the side of the Tribe. In the renegotiated

lease with El Paso-Consol, the company estimates it will mine for the next 38 years. If this is an indication of the future market and with the Tribe only receiving a 12.5 percent royalty rate, then alternative sources for increasing their revenue should be considered if they expect to implement the goals of the Ten-Year Plan.

There are several alternatives that could be considered. As an example, (1) negotiate better contracts, (2) joint ventures, and (3) service contracts. Negotiating contracts requires the tribal participants to have, if possible, as much information on their coal reserves, such as quantity, quality, and marketability. Not to mention the necessary knowledge of the operations of corporate structures, the cost of mining and profit margins. To date, all of these requirements have not been available to the Tribe. Obviously, before going to a bargaining table, the tribal negotiation should, at a minimum, know the quantity, quality, and market value for coal. But as discussed before, the interested coal company can lease tribal land for exploration, then with preferential treatment through exclusive permits, they can enter into direct negotiations after having determined the extent of the coal reserves. To help alleviate this problem, the BIA in 1975 developed a Minerals Inventory Program for the Bureau of Mines and U.S. Geological Survey. The program

is proposed in three phases to:

- I. Provide a literature search and summaries of mineral potential by reservation,
- II. Implement field investigations on selected reservations, those that show mineral potential determined in Phase I,
- III. Determine qualification of occurrence, quality, grade, metallurgical recovery, and marketing potential of resources on the selected reservations.

The drawback to this program is that BIA lacks both qualified personnel and budget to adequately implement the three phases. Given the complex budget cycle that the federal government goes through and the cumbersome bureaucratic system, it is conceivable that it would take years to complete the program. Unfortunately, time is not on the side of the Navajos or any other tribe confronting this situation. Two solutions, though, would be to contract federal funds to the Navajo Tribe under Public Law 93-638, the Self-Determination and Education Assistance Act, and supplemented with some revenue from existing incoming royalty rates, conduct their own minerals inventory. The other possibility is to establish a federal loan program to energy-potential tribes. Has not this been done in the past with some railroads and airplane manufacturers in the United States?

The potential for joint ventures has been discussed among Tribal Council members in the past, but they have been discouraged by the BIA and the lack of their own knowledge about the coal industry. Once a coal company has determined the potential of proven reserves on the reservation, they secure a lease and develop a working interest to produce the coal, based on existing equity or they secure a loan from a financial institution. This is based on the fact that the company has proven coal resources. Given the fact that the Navajo Tribe is the owner of these proven resources, what would prevent them from securing a loan on the resources and then the loan would become their capital contribution in a joint venture. If the Tribe entered into a joint venture agreement, they should be aware that in addition to their capital investment, they would have to establish the capability of monitoring their partner's operations in order to protect Tribal interests.

The other approach would be to establish a Tribal-owned enterprise that could produce coal through service contracts. Like the joint venture possibility, the Tribal Council has not been encouraged because they lack (1) capital investment, (2) management capabilities, and (3) a track record of successful business ventures. Service contracts are basically agreements between an owner, in this case the Navajo Tribe,

and experienced companies. The Tribe as possessor of the coal could contract to a mining company to extract the coal and then a Tribal mineral developing company could market the product. Comparing this to alternatives that developing countries are taking, Charles Lipton stated:

"that mineral agreements have taken a 180 degree turn since World War II. No longer will any developing country accept a fixed royalty of a few cents per ton as its share of the revenues from a mineral project. Royalties are usually a percentage of the value of the mineral mined. Increasingly, through joint venture agreements, developing countries are keeping a major share of the profits as shareholders in the mining operating company as well as taxing profits. Some developing countries have now decided to go into minint projects themselves and hire mining companies under service contracts to mine and market the minerals on a fixed fee basis, thus retaining complete ownership, complete control and 100% of the profits. . Others hire mining companies to be managers, paying them a percentage of the profits."16

As indicated before, the capital investment capability exists in the form of the Tribe's proven coal reserves. It is estimated that there are 4 billion tons of coal under 500 square miles in the Four Corners Region and with this amount of coal resources available as potential capital investment, the Tribe could develop its own financial package and present it to any investment bank to develop the necessary capital required to start a Navajo coal enterprise or joint

venture with an existing coal corporation. The Tribe presently may not have qualified management skills available, but if it decided to develop its coal enterprise there is no reason why it could not contract this specialty to an off-reservation firm. These contracts could be for short periods of seven to ten years and would be advantageous for a Tribal enterprise because, in addition to the management obligations of the industry, the contracted company would have to implement an educational and training program for Navajos with management capabilities. If it became necessary to renew a management contract, then one aspect in reviewing the success of the existing management company could be measured on the number of successful Navajo candidates who were trained. This approach of direct Navajo involvement has proven successful on the reservation before in one Tribal enterprise, as indicated in Chapter II: with Navajo Forest Products Industries, which has an extensive training program and has developed an excellent track record as a successful Tribal business venture.

PROPOSED COAL GASIFICATION INDUSTRY -- PRESENT STATUS

In the following illustration, the main focus will be on Tribal control over the proposed coal gasification plants. The issues confronting the Tribe are similar to the strip mining illustration in that:

- the Tribe is dealing with off-reservation corporations;
- capital investments are required;
- increase in employment opportunities;
- impacts on the socio-economic, cultural and environment of the reservation.

The differences are:

- the gasification industry is more labor intensive than strip mining, resulting in more management control and increased population;
- higher capital investment to start the industry, approximately \$600 million/plant;
- increased demand for surface water to operate each plant;
- the process of granting business site leases and land tenureship.

Because of these differences the Tribal Council should alter their negotiating approach to this development and consider

alternatives to increasing their control over this development. It is the objective of this illustration to explore and provide alternatives in the areas of: (1) Tribal involvement through joint ventures, (2) leasing of reservation land for business site leases, and (3) securing better employment agreements.

In addition to the existing electrical power plants and coal stripmining in the Four Corners Region, there are proposals to construct as many as six coal gasification plants. All are planned within a 56-mile radius of the Four Corners area and situated on the Navajo Reservation. Two of the plants are proposed by El Paso Natural Gas Company (EPNG) and four more by a consortium of corporations called Western Gasification Company (WESCO).

The location of the proposed plant sites are situated in a very arid (less than 8 inches of rain annually) region and the population is very low (average Reservation density is one Navajo for every 132 acres) compared with the rest of the Reservation. The soil conditions are extremely poor, because of the lack of water and the over-grazing by the sheep herds. (It takes about 25 acres to feed one sheep.) Near the coal site, within a radius of 35 miles are two growth centers, Shiprock, New Mexico, which is on the Reservation

and Farmington, New Mexico, which is located just off the Reservation. The companies proposing the plants plan to build the six gasification plants during a ten-year period, and each plant would employ approximately 900 individuals, resulting in a total of 5,400 jobs. Adjacent to the coal fields, there is in process a multi-million dollar irrigation program that will divert water from the San Juan River to eventually irrigate 110,000 acres of arid land on the Reservation. The irrigation project will employ another 3,000 individuals, making over 9,000 jobs available in the near future. Estimating 4.5 people per family, this area in the next ten years will have an increased population of 40,500. In addition the gasification plants will each require approximately 10,000 acre feet/year of water, creating an increased demand on surface water in the area.

Presently there are no coal gasification plants located in the United States. Consequently, the long-range socioeconomic and sociocultural impacts that this industry will have on the Reservation is in a state of speculation.

As mentioned in this Chapter, coal leases between Utah International, El Paso-Consol and the Navajo Tribe have been approved. To date, no coal gasification plant proposals have been accepted by the Tribal Council. But in light of the

recent national energy crisis and President Carter's energy proposal, the Tribal Council can be assured that interested corporations will be presenting renewed proposals in the near future for coal gasification plants.

Gasification plant requirements. All six proposed plants are approximately the same size and each will require the following:

1. Cost @ \$400-600 million/plant
2. 1,000 acres of land/plant site
3. 9 million tons of coal/year/plant
4. 10,000 acre feet of water/year/plant
5. Employment -- construction phase, approximately 4,500 employees/plant @ peak of activity, leveling off to 900 permanent employees/plant
6. 25-year lease/plant

At this time the Western Gasification Company (WESCO) will be supplied with coal and water from Utah International's existing stripmining project and secured water rights of 44,000 acre feet for industrial purposes. El Paso has renegotiated a coal lease with the Navajo Tribe for 40,000 acres, but has not been granted its request of 28,250 acre feet of water annually, from the Bureau of Reclamation. Neither

of the two proposals have received a business site lease, which is required by the Tribal Council.

Because the process of coal gasification is a new industrial venture in the United States, most of the requirements for establishing the industry's production and marketing are still proposed projections. Realistically, the demands, cost/benefits and output of this industry will not be fully proven until a gasification plant is constructed. This places the Navajo Tribe at a disadvantage, because in the negotiations the Tribe will be dealing with an industry that has not fully established the gasification process and whose facts and statistics the Tribal Council will have to rely on to provide adequate information about the requirements and projections of this industrial process. Given this situation, Tribal negotiators should only accept information provided by the proposed industry, as minimum data and keep in mind that the projected input and output of this industry could be distorted through the lack of an established, proven process. Therefore, it could have greater impact on the human and natural resources of the Reservation.

PROPOSED RECOMMENDATIONS -- COAL GASIFICATION INDUSTRY

Parallel to the stripmining leases, Tribal negotiators should be aware of advantages and trade-offs that the Navajo Tribe will have to consider and confront, if they are to fully participate in the development of the coal gasification industry on the Reservation. As mentioned above, there are similar negotiating issues confronting the Tribal Council's review of land and coal leasing for strip mining and the proposed gasification industry.

First, both industries depend on the common resource of coal. Realizing that the Navajo Tribe owns the resource, the Tribal Council should recognize the bargaining power and develop this resource as collateral which could be presented as a financial package. In turn, this package becomes the Tribe's capital investment power and opens the possibilities for ownership through joint venture into the gasification industry. This does not preclude the formation of a Tribal enterprise that would retain sole ownership, but again emphasizing the newness of the industry and lack of Tribal management expertise, it is recommended that the Tribal Council view this venture on a long-term basis. Given adequate time, the Tribe could increase its percentage of joint venture ownership through increased profits, which would be reinvested

into the industry. The important factor to remember is that the Navajo Tribe is owner of the coal resource that the two industries are dependent upon for their existence. The strip mining and gasification industries may be highly qualified to invest capital and provide the necessary technology, but the Navajo Tribe maintains the ownership of the coal resource, which is the key to this industrial process. Through the joint venture approach, the Tribe would eliminate the royalty payment system. Presently, the only income that the Tribe would derive from the gasification proposal is the sale of the coal and rental payment on the lease-hold agreement for land required to build the gasification plant. If the Tribe becomes involved in the complete industrial process, their profit sharing of the end product (natural gas) would by far exceed any income based on a royalty fee.

Second, it should be recognized that the proposed sites for construction of the plants are located within the boundary of the Reservation. This situation also has potential for developing additional revenue for the Tribe. Traditionally, Navajo land tenure has been of common ownership by all members of the Tribe, and reservation land cannot be sold because it is held in trust by the federal government. To date, this has generally worked well for the individual Navajo, because the Reservation has not been sub-divided into

tracts of land for individual or family ownership. The appraisal of reservation land does not have any identification with the conventional approach of attaching a monetary value on real estate. Although the traditional aspects are well respected, it creates problems in land development, especially concerning rental payments on appraisal of reservation land for coal leasing and industrial site lease-hold agreements.

It has been customary for the federal government to establish the value of Indian land and thus determine the going rental rate that Indian tribes should receive for the use of their land by private industries. Because of the federal government's close identification of Indian land to public land, they have established their tradition of appraising both public and Indian lands at the lowest possible minimum rental rate of 25¢ and \$1.00 per acre, respectively. This applies to land that is used for coal strip mining purposes and the Tribe received an initial bid per acre of \$6.25 from EPNG for their lease of 40,000 acres to be strip mined. Given the method of the federal government evaluation of Indian land, it would not be surprising if they recommended to the Navajo Tribe that they accept a rental of \$6.25 per acre, annually, for a gasification plant site lease. This would mean that under the present situation, the Navajo Tribe

would have an annual income based on the royalty rate of mined coal and annual rental fee of \$6,250.00 per plant site lease (considering each plant site requires 1,000 acres). Also, past rental contracts have been written with a fixed fee and if this prevailed, the Tribe would receive the same annual amount of rental income for the life of the project. Of course this is based on past experience of federal land evaluation. It is highly recommended that the Navajo Tribe establish their criteria for land appraisal, especially with regard to reservation land that is used for industrial purposes. The notion of creating a monetary value on reservation industrial land will provide extra leverage for the Tribe's bargaining power in negotiating lease-hold agreements for the construction of gasification plants.

There are several approaches the Tribe could take in establishing their land evaluation criteria:

- 1) Given that each gasification plant will require approximately 1,000 acres, Tribal appraisers should investigate what the current cost of industrial land is in the neighboring cities and states.
- 2) Compare a cost analysis of construction, employment, real estate value and evaluate the advantages/disadvantages and trade-offs that a

gasification plant would have to consider in locating on or adjacent to the reservation.

- 3) Establish a land value on:
 - a) Percentage of the final construction cost of one coal gasification plant and re-evaluated every year because of escalation cost and appreciation of land value, or
 - b) Comparable current industrial land value off the reservation with an inflationary clause.

After the criterion is developed and value of reservation land is established, the negotiation options for the Tribe will become increasingly evident. As an example, if the Tribe applied a 10 percent land value based upon an industrial investment of 600 million dollars for a gasification plant, then the site of 1,000 acres appraisal will be worth a minimum of 6 million dollars. Multiplying this times 6 plant sites will equal a 36-million-dollar evaluation, and if the Tribe imposes an escalation clause for re-evaluation every year, then the appreciation of the land will increase the value of the sites. Usually after a land value has been established, assessment for tax purposes follows.

The tax situation is going to become an increasing conflict between the states of Utah, Arizona, New Mexico and the reservation. Because the reservation extends into these three states, they support the argument that would ensure them the capability of levying a land tax on those industries located within the boundaries of the reservation. This would virtually add millions of dollars annually to these states. These states feel they have the right to this revenue regardless of the fact that they will not be paying the cost of support services required to establish the coal and gasification industries. Among these support services would be an infrastructure of utilities, water, sewer and transportation, and last but not least, the use of Navajo coal, water and expense of land reclamation. It is ironic and the height of exploitation for these states to assume that they have the right to collect tax revenue from reservation industries without economically or socially contributing to the establishment and support of these industries. The Tribal argument could be stated very clearly. Noting that the reservation is land held in trust by the federal government and that states cannot legally tax the federal government, then on what legal grounds can they impose a land tax on the reservation? To counteract this movement, the Tribal Council should be able to develop a reservation industrial business tax.

Third, the employment impact of this proposed industry will have a greater effect on the reservation than any existing industry. This impact will have noted differences in (1) the types of jobs offered, (2) job skills required, (3) migration of Navajo and non-Navajo employees, and (4) multiplier effects through additional employment created by the gasification industry. But in accordance with the variety of skilled and unskilled requirements that the gasification industry brings into the region, the serious issue confronting the Navajo Tribe is who will obtain the employment.

There is no doubt that this form of industry will create an immediate job market for the construction phase of the gasification plants and sustain its pace for the life of operating the plants. The basic employment assumptions presented by El Paso Natural Gas Company indicate that for the construction of one plant, a peak work force of 4,535 will be required.¹⁷ This peak will have a time span of only two years. The assumption is that the construction phase of the first plant will be near completion at this time and preparation of the second plant initiated. This time cycle will continue for ten years after which all six gasification plants are scheduled to be in full production. New Mexico State Employment Service has indicated that there is a shortage of eligible construction skilled and unskilled

workers in the area. Therefore, it is estimated that only 200 skilled and 500 unskilled construction workers from the local region will be hired for construction of the plants. This would result in an immigration of workers to fulfill the construction requirements. Hence, 95 percent of the maximum skilled and 45 percent of the maximum unskilled number of workers required would come from outside the region. This problem is defined on the basis of constructing one plant and if WESCO's construction phase coincides with EPNG's plans, then the overall problem of worker shortage and immigration of workers will be compounded.

After construction, the gasification plants will maintain an average of 900 permanent workers per plant. The total number could reach 1,500, as indicated by El Paso Natural Gas figures. El Paso Natural Gas Company has proposed a training program, but still suggests that an estimate of only 1,000, or one-third of the operating workers, will be employed from within the region and 2,000, or about two-thirds of the personnel, will be imported.¹⁸ This actual employment created through the construction of the plants and operations of the gasification process are referred to as direct employment. In addition to this form of employment, the establishment of indirect jobs created through a multiplier effect will contribute to an increment of

employment potential in the region, and if these support jobs cannot be filled from within the region, the influx of individuals seeking employment will take place. This indirect employment will mostly consist of support services for the basic industries and will involve commercial, retail and wholesale businesses.

Regardless of the numbers presented for potential direct and indirect jobs that will be created due to the establishment of gasification plants, the fact remains that Navajos will have to compete for both skilled and unskilled positions without having adequate labor trained for the requirements of the coal and coal gasification industries. Although the Navajo tribe is negotiating for better guarantees concerning the hiring of Navajo workers, it is important to note two elements: (1) existing qualifications of skilled and unskilled Navajo labor force and (2) the time scale concerning the construction and production of the proposed gasification industry. If the plants are constructed according to the proposed time scale, many Navajos will not be able to take advantage of the job market. The construction proposal is based on plant completion of approximately every three years with overlapping construction schedules as one plant is near completion and new construction begins on the next plant.

The complete construction cycle of this process will take almost ten years. Realistic or not, this represents a construction venture that could overwhelm the Navajo labor force once this rapid succession of construction came to an end. Construction work is noted for its irregularities in that it is seasonal employment, has a high turnover rate and unless the local economic situation can sustain the market, the construction worker has to move on to the next opportunity for employment.

The situation created by the construction of the gasification plants will definitely have an atmosphere of rapid economic expansion. But after the construction phase, what happens to the Navajo labor force? Although the Navajo labor force will be able to take advantage of the gasification plant construction phase, the ultimate alternative objective should include employment opportunities for Navajos that precede the construction phase. Both the Navajo tribe and gasification industries are considering training programs to assist Navajos in obtaining various skills that would enable them to compete in the given job market. This appears to be a positive proposal, but it could have long-term negative effects for the Navajo involved. For several years the BIA has promoted vocational training programs that emphasized skills such as welders, pipe fitters, electricians, carpenters,

etc., but once the participant returned to the reservation, his skill often did not coincide with jobs available. So if the tribe and gas industries pursue the training proposals, it should not only include the actual training of a skill, but the program should develop a placement system that would enable the Navajo worker a transitional phase of adapting his skill to the requirements of the operational activities of the gasification plants. Because of the social/cultural identification to the reservation, many Navajos are reluctant to leave in search of employment. Therefore, if this training program was instituted, it would satisfy the individual Navajo's desire to remain on the reservation, and assist the tribal need of sustaining its employment demands on both short- and long-term bases.

SUMMARY

There exist serious problems of coal exploitation on the reservation that challenge the inherent right of the Navajo Tribe, as owner of this resource, to become directly involved in the extraction and marketing of this product. If the Tribe's development objectives are to increase the income of the Navajos by attracting industry to the reservation, then they should become fully aware of the potential of such industry in supplying the needed employment. If the industry

does prove to be capital intensive as opposed to labor intensive, the Tribal Council should develop alternatives of sharing in the return of profits from the marketability of the product. In terms of responsibility, this would require higher risks for the Tribe because they would be sole owner or partner in any business venture involving coal production. By using their proven coal reserves as investment capital, the Tribe could develop a coal enterprise or joint venture. Either way, their investment would return as profits and not through rental of land and royalty rates. This approach could also permit the Tribe to employ a management firm with a training program, for Navajos, until the Tribe could assume full responsibility for their enterprise. Before any of this process can take place, the Tribal Council will have to re-evaluate their present status in relationship to their needs and demands.

Because of the loose requirements and lack of enforcing mining regulations, the federal government has placed the Tribe at a disadvantage when negotiating contracts, and because of federal discrepancies in promoting Tribal coal leases, the Tribal Council has sufficient legal recourse to negotiate the contracts. Therefore, the Council should establish an Office of Contract Negotiations that would coordinate the development objectives of the Navajo Nation.

The office would be responsible for mineral, oil and natural gas contracts and the contracting of professional negotiating teams with an expertise in dealing with corporate structures on related natural resources. In addition, the office would participate as a team member to make sure reservation objectives are complied with during the negotiation of contracts.

The possibility of ownership of a coal company or gasification plant appears to be a way for obtaining more income. But because of the large costs the tribe would have to incur and their limited investment power (equity), they should consider this possibility as a long-term process of gaining economic control of their resources. One key is in the negotiations for the business site lease. The contracts for coal are signed but open for negotiations. Additional potential for income exists in the leasehold agreement of the proposed gasification business sites. In addition to profiting from the sale of the gas, the tribe should raise the cost of the lease-hold to a level that would justifiably increase their income by a larger margin. For years the tribe has recognized the profits that could be made from the sale of natural resources, but they have not realized the reserves of income that could be generated by using the land as real estate. By establishing a high cost of land for industrial leasing, the tribe could invest this revenue and

use the profits to build their own coal companies, gasification plants, power plants, etc. In this particular case the land is their greatest bargaining asset.

As mentioned earlier, six gasification plants are proposed to be constructed and the tribe should think about owning at least several of the plants. This could possibly be done by the following way: (1) Raise the leasehold cost to provide a better income; (2) after the first lease is signed, use the second lease as bargaining power, by lowering the cost of the leasehold in exchange for profits derived from the sale of the natural gas; (3) with the third lease negotiate an exchange of lower leasehold costs for part-ownership in the gasification plant, backed up with equity (investment power) that was made through investments from profits of the two previous lease agreements; (4) each time a leasehold agreement is signed, the tribe should gain a higher percentage of ownership until finally they have enough experience and equity to completely own several gasification plants. Since employment is a major goal of the Tribal Council, they should recognize the fact that many of the jobs created by the establishment of a gasification plant are jobs requiring highly skilled technicians. Consequently, many of these jobs will go to non-Navajos and would delay the employment goal established by the Council. Again, realizing the

product of coal and acquisition of land as a bargaining power, the Council could ensure Navajo employment by stipulating a training program to educate Navajos as skilled technicians and managers. These programs could be jointly sponsored by the tribe and gas companies as part of the agreement when the lease-hold contracts are negotiated. This training would not only guarantee a higher percentage of Navajo participation in the gasification plants, but would prepare Navajos for total control over future ownership of gas plants, coal mining operations, etc.

FOOTNOTES

¹U.S. Commission on Civil Rights, The Navajo Nation: An American Colony, Washington, D.C.: Government Printing Office, 1975, p. 22.

²U.S. Department of the Interior, Southwest Energy Study, An Evaluation of Coal-Fired Electrical Power Generation in the Southwest, Washington, D.C.: Government Printing Office, November 1972.

³Philip Reno, "Navajo Resources and Economic Development," Compendium of Studies on Southwest Region Under Stress Project, Washington, D.C.: Resources for the Future, December 1978, p. 153.

⁴Bonus bid -- a cash consideration, in addition to rental and royalty payments, paid by the successful bidder for a mineral lease.

⁵Floor figure -- minimum payment accepted by the lessor.

⁶Code of Federal Regulations, (25 CFR), Indians, Part 171 -- "Leasing of Tribal Lands for Mining," 171.27(a), p. 296.

⁷U.S. Government Accounting Office, "Administration of Regulations for Surface Explorations, Mining and Reclamation of Public and Indian Coal Lands," Washington, D.C.: Government Printing Office, 1972, quoted in Federal Trade Commission, Bureau of Competition, Report on "Mineral Leasing on Indian Lands," Washington, D.C.: Government Printing Office, October 1975, p. 67.

⁸Northern Cheyenne Tribe, "Petition of the Northern Cheyenne Indian Tribe to Rogers C.B. Morton, Secretary of the Interior, Concerning Coal Leases and Permits on Their Reservation," Vol. I, Petition and Legal Analysis, January 1974, pp. V-42 to V-90. Submitted by the Firm of Ziontz, Pirtle, Morisset, and Ernstoff, Attorneys for the Tribe.

⁹Code of Federal Regulations, (25 CFR), Indians, Part 171.27(a), "Leasing of Tribal Lands for Mining," p. 296.

¹⁰ Charles Lipton, "Government Negotiating Techniques and Strategies," Paper presented at the International Workshop on Negotiation and Drafting of Mining Development Agreements, Buenos Aires, November 1973.

¹¹ Code of Federal Regulations, (25 CFR), Indians, Part 171.27, "Cancellation," p. 296.

¹² Ibid., p. 296.

¹³ Philip Reno, op. cit., p. 166.

¹⁴ David F. Aberle, "A Plan for Navajo Economic Development," Compendium of Papers Submitted to the Subcommittee on Economy in Government, 91st Congress, U.S. Government Printing Office, 1969, p. 250.

¹⁵ Code of Federal Regulations, (25 CFR), Indians, Part 171.9, "Acreage Limitation," p. 291.

¹⁶ Charles Lipton, "Real Choices in Indian Resource Development, Alternatives to Leasing," Report to Americans for Indian Opportunity, Billings, Montana, Conference, 1975.

¹⁷ U.S. Department of the Interior, Bureau of Reclamation, "El Paso Coal Gasification Project, New Mexico, Environmental Statement," 1974, p. 3-52.

¹⁸ Ibid., p. 3-57.

CHAPTER III
IMPACTS OF COAL DEVELOPMENT

"An attitude to life which seeks fulfillment in the single-minded pursuit of wealth -- in short, materialism -- does not fit into this world, because it contains within itself no limiting principle, while the environment in which it is placed is strictly limited. Already, the environment is trying to tell us that certain stresses are becoming excessive. As one problem is being 'solved,' ten new problems arise as a result of the first 'solution.'"1

As the Navajo Tribal Council strives to improve the economic conditions on the reservation for their people, the planning process should carefully consider the trade-offs and pitfalls that will challenge the growth and control of the Tribe's self-determination goal.

The development of coal in the Four Corners Region of the reservation in the past 20 years has changed dramatically. Once an ample supply of coal was proven and contracted for mining the product, this portion of the reservation became, to outside investors and industrialists, an economic blossom in the desert. To date, in addition to coal mining, there are two electrical generating power plants -- the Four Corners Plant, located on the reservation, and the San Juan Plant, located just off the reservation in New Mexico.

Proposals for as many as six coal gasification plants have been presented to the Navajo Tribal Council for approval. Although these proposals were rejected by the Tribal Council in January 1978, revised proposals are being prepared for the Council's reconsideration.

The impacts this industrialization will have upon the reservation occur in the following areas: (1) water resources, (2) environmental, and (3) new community development. In the Southwest portion of the United States, water is the keystone for future development. Indian water rights, which are critically important to energy resource development both on and off Indian land, are of great concern to Indian leaders. This concern has evolved over the allocation of this precious resource, and the Indian people fear that the allocation of Indian water rights has taken place without the Indian owners' permission. Obviously, this becomes a real problem when tribes are trying to develop their reservations. Environmental impacts already exist concerning sulfur emissions created by the electrical power plants. But, in addition, the Navajos are confronted with land reclamation of coal-mined areas. Although there are reclamation laws to persuade mining companies to reclaim strip-mined areas, in this portion of the reservation there is a delicate balance of the ecological system, and the question of possible reclamation

has not proven feasible. With the establishment of an industrial base, the spin-offs will increase in several areas. One will be in the area of employment opportunities, and this has an impact on new community development within the boundaries of the reservation. This will require the Tribal Council to give serious consideration to various issues such as jurisdiction over non-Navajos on the reservation, land tenureship, development and cost of social amenities such as health, education, transportation, etc. Foremost, the Tribe must evaluate the impact on the Navajo culture and society that any kind of development will create.

This chapter discusses these three direct impacts and their possible repercussions as a result of industrial development on the reservation. When development goals and strategies for implementation are established, Tribal decisionmakers should review a comprehensive development plan carefully, bearing in mind the consequences of the "trade-offs" in the Plan and compromises that they must make before they establish a policy.

Water Resources: As mentioned earlier, water is the keystone to development in the Four Corners Region. The issue is more than having an adequate supply of water to meet the demands, and becomes increasingly complicated because of

the question of ownership of water rights. In 1908, the Supreme Court essentially declared in the landmark Winters vs. United States water case that when Indian reservations were organized, there was reserved or affirmed in addition to land the right to enough water to irrigate the irrigable portions of the reservation lands and otherwise fulfill the purposes of future reservation development.² The main source of water in this region is the San Juan River, which is part of the Colorado River Basin. The U.S. Congress possesses the rights over water in interstate commerce. In turn, an interstate commerce commission within respective states regulates control over water in a particular water basin. The dispute that exists is whether allocation of water should be separate from the competing state. Obviously, the Indian tribes think that, based on the Winters Doctrine, their allocations should be considered separately. But to date, both state and federal agencies, for the most part, have continued to allocate all water, ignoring Indian interests.

The present and proposed water allocation for projects located on the Navajo reservation is as follows:

	<u>Acre feet/year (Af/yr)</u>
1. Utah International	44,000
2. Navajo Indian Irrigation Project	508,000

	<u>Acre feet/year</u>
3. Four Corners Power Plant	51,600
Proposed (requested):	
1. Western Gasification Company (WESCO)	40,000
a) Four coal gasification plants @ 10,000 Af/yr	
2. El Paso Natural Gas*	20,000
	<hr/>
TOTAL	713,600
	<hr/> <hr/>

*El Paso has requested
28,250 Af/yr

It should be noted that these figures are forecasting ultimate use and will eventually represent a depletion of the annual flow of surface water from the San Juan River.

In a BIA 1975 report, the annual depletion rate of the San Juan River was as follows:³

	<u>Acre feet/year</u>
1. Average Natural Streamflow	1,549,000
2. Depletions (1973)	
a) Indian	99,630 Af/yr
b) Non-Indian	344,350 Af/yr
	<hr/>
TOTAL	443,980
(including agriculture, municipal, stock and domestic, exports, industrial and evaporation)	

	<u>Acre feet/year</u>
3. Depletions from Authorized Projects (such as Navajo Indian Irrigation Project)	
TOTAL	554,070
4. Remaining streamflow	<u>550,950</u>
5. Potential Indian water projects (including Navajo, Jicarilla-Apache, Southern Ute, Ute Mountain)	
TOTAL	<u>2,890,260</u>

The main purpose of the above examples of water requests and depletion rates is to emphasize the expanding demand for water in the growth and development of the region. In addition, the Navajo Tribe is increasingly concerned about its water rights and its control over existing allocated water. The Tribe's Navajo Indian Irrigation Project (NIIP) illustrates this concern. In 1962, President Kennedy signed the Navajo Tribal Council Public Law 87-483, authorizing the Navajo Indian Irrigation Project. This irrigation project was proposed to cultivate 110,630 acres of Navajo land at a cost of \$135 million, with an annual water allocation of 508,000 acre feet per year. Since the law was signed, the Bureau of Reclamation and state agencies have taken several actions that have reduced the initial 508,000 acre feet per

year allocation to 330,000 acre feet per year because the irrigation system was changed to support sprinklers instead of a flood (open ditch) system. The created surplus of 178,000 acre feet/year would revert back to the state of New Mexico to be sold to other proposed projects. This issue has not been resolved and the Tribe's concern is that Congress allocated 508,000 acre feet/year and the Tribe's contention is that they have the right to handle the surplus of 178,000 acre feet/year as it sees fit. This is definitely a challenge to the concept of Navajo sovereignty; until Indian tribes successfully challenge the federal and state agencies, they will be confronted with this issue.

Consequently, in considering the proposed development of the Four Corners Region, the Tribe will have to evaluate the over-allocation of their water resources and the constant challenge to their inherent sovereignty.

Environmental: In addition to the sulfur dioxide emission from the two power plants in the area, the after-effects of strip mining will increase the damage to the environment. Strip mining is a process that requires the removal of over-burdened topsoil before the coal seams are exposed and mined. Because the mining process requires the following of coal seams, the results after the coal has been removed are

open trenches with huge heaps of overburdened soil that stretch for miles. In the Four Corners Region the trenches are usually about 150 feet deep.

Currently, before the actual mining starts, a reclamation plan must be approved by the Area Mining Supervisor of the U.S. Geological Survey with approval from the Navajo Tribe and the BIA. As stated in the renegotiated lease between the Navajo Tribe and El Paso-Consol,

"An integral part of the plans for the leasehold include the specific reclamation of strip-mined or disturbed lands. The lessee is required to return the reclaimed land to grazing uses with a productivity equal to or greater than that of comparable undisturbed land in the immediate area. To this end the mined lands will be back-filled and graded to the approximate original contour, earth materials will be compacted over each coal bed, and the lands resurfaced with soil, conditioned, seeded, and supplementally irrigated at appropriate times. Provision is made in lease terms for alternative land use."⁴

Given the fact that there are two mining leases, as described in Chapter II, for a combined acreage of 71,703, the effects on the area's environment will be astonishing. To date, the possibility of rehabilitation has not been proven. In addition to the adequate soil conditions required for reclamation, adequate water is the main factor in any proposed rehabilitation plan. There are two factors confronting

any proposed plan to reclaim the land in this portion of the reservation: (1) water supply (both rainfall and surface water) and (2) cost to rehabilitate. First, the average annual rainfall in the Four Corners Region is less than 10 inches and according to the National Academy of Sciences report,

"The drier areas, those receiving less than ten inches of annual rainfall or with high evaporation rates, pose a more difficult problem. Re-vegetation of these areas can probably be accomplished only with major, sustained inputs of water, fertilizer, and management," and, "Rehabilitation of the drier sites may occur naturally on a time scale that is unacceptable to society, because it may take decades, or even centuries for natural succession to reach stable conditions."⁵

Second, the cost to rehabilitate one acre of land ranges from \$925 to \$2,750.⁶ Using the low figure and existing acreage under lease, it would cost approximately \$66.3 million to rehabilitate this land. Third, it is estimated that rehabilitation of land in this area would require .5 to .75 acre feet/acre.⁷ At this rate, and considering only the existing leases, it would require a conservative allocation of water for supplemental irrigation of between 35,850 to 53,777 acre feet to reclaim the stripped area. Considering the existing and proposed water allocations from the San Juan River, any additional proposal for rehabilitation would have to compete with these demands.

With the demand for water increasing on a national level, President Carter's water policy is proposing quantification of water resources.⁸ If this policy is implemented, the Navajo Tribe will have to justify its use of water, including agriculture, livestock grazing, consumption, industrial, etc. The Tribal Council is proposing that strip-mined areas be rehabilitated so that Navajo livestock can graze once again in this area. If the Tribe has to quantify its water needs for the future, then they should include the strip-mined area as land that would be rehabilitated for the purpose of agriculture as well as livestock. With the Navajo Irrigation Project located in the same area, it could be expanded to include the reclaimed area and could justify the "surplus" of 178,000 acre feet mentioned in the above section on water impacts, and any additional water required to place and sustain rehabilitated land for agricultural purposes.

New Community Development: Typically, large-scale energy development projects proceed rapidly with little preparation for the needs of the construction and operation workers immigrating for the projects. There is a strong possibility that quick housing, such as mobile home parks, would be created -- only to become a slum area later. Educational facilities become overcrowded or established, roads, sewer and water lines are often inadequate, retail and recreational facilities

cannot be constructed fast enough to meet the rapidly expanding needs. Considering the existing and proposed projects in the Four Corners Region and realizing that the area is basically rural, the proposed coal projects will have severe fiscal and social impacts on the region.

Although the Tribal Council is not proposing any new communities as a result of additional strip mining, electrical power plants or proposed coal gasification plants, the potential does exist. To date, the impacts of current development have been absorbed both on and off the reservation by the existing communities of Shiprock (on the reservation), Farmington, Fruitland, Kirtland and others in the area. But the proposed coal gasification projects will have the greatest impact by far on this region, if the projects are approved by the Tribal Council.

As discussed in Chapter II, the gasification projects are proposed by El Paso Natural Gas Company (two projects) and Western Gasification Company (four projects). It has been projected that once the gasification projects are in operation (10-year construction cycle), a new town in this area with a population of 32,000 would exist.⁹ Considering a multiplier effect, the population could expand to 60,000 by the year 2000.¹⁰

The construction of each plant will take about three years and require 3,500 construction employees for each plant at its respective construction peak.¹¹ It is estimated that with overlapping construction phases, the six plants will be in full operation in 10 years.¹² Thus, whether or not the Tribal Council approves any plans for a new town proposal, the impact of the construction phase will affect the reservation.

The development of these projects will have a broad impact on the socio-economic, cultural, and political aspects of reservation life-style. The average personal income of gasification employees will be about \$10,000, compared with the present personal Navajo income of \$900.¹³ The demand for community infrastructures will increase, such as housing, education and health facilities, and transportation. It should be noted that some of these impacts already are being experienced by some Navajos. But the accelerated development process, as indicated by the gasification projects, will create a relatively short transition for reservation development, and it is this transition that will have the greatest adverse effect on Navajo culture. For generations the Navajos have had the ability to adjust gradually to outside influences. Geographic location and maintenance of their language contributed to a steady transition into the present

day. With these proposals for development, challenges to Navajo sovereignty will occur. These challenges will confront issues of jurisdiction of Navajo Tribal policies over non-Navajos living on the reservation, for instance, law-and-order cases involving non-Navajos and the fact that in the existing Tribal government, only Navajos have representation. These issues have not been resolved, but will be impacts that Tribal decisionmakers will have to investigate.

The Tribal Council has alternatives. First, they could refuse to accept any proposals for new community development and simply allow the off-reservation border towns to absorb the development impacts. Second, they still own the coal resources, and it is these resources that will supply the gasification plants for the conversion to synthetic fuels. Consequently, it would be feasible to control the construction of these plants and ease the impacts over a longer period. This would alleviate the overall impacts on the entire region both on and off the reservation.

These three major impacts -- water, environmental and new communities -- cannot be viewed as separate entities within the overall development process. Without the necessary water, no additional development will occur. Tribal water rights are being constantly challenged, and the Tribal water

needs may have to be quantified. By combining development efforts, future additional water allocation could be justified by expanding the existing Navajo Irrigation Project to include the irrigation and rehabilitation of strip-mined areas. A direct impact of this development will be an immigration of Navajo and non-Navajo workers. Whether or not a new town evolves on a permanent basis, construction of the coal gasification plants will have an impact on the existing reservation life-style. But included in the development process, the Tribal Council should not lose control, because the Navajo Tribe owns the most important development factors, the coal and water.

FOOTNOTES

¹E.F. Schumacher, Small is Beautiful: Economics as if People Mattered, New York: Harper & Row Publishers, 1973, p. 27.

²U.S. Supreme Court, Winters v. United States, 207 U.S. 564, the case that originated the Winters Doctrine, 1908. The United States brought suit against non-Indian water users along the Milk River in Montana to restrain them from constructing or maintaining dams or reservoirs which would prevent water from reaching the Fort Belknap Indian Reservation. The non-Indians claimed the right to the water under prior appropriation through the laws of the State of Montana.

³U.S. Department of the Interior, Bureau of Indian Affairs, "Water Supply Availability in the San Juan River Basin as of 1975: A Summary Report," June 1975, pp. 6-15.

⁴Navajo and El Paso Natural Gas Company Coal Lease, August 26, 1976.

⁵National Academy of Science, Study Committee on the Potential for Rehabilitating Lands Surface-Mined for Coal in the Western United States, Rehabilitation Potential of Western Coal Lands, Cambridge, Mass.: Ballinger Publishing Company, 1974, p. 2.

⁶Ibid., p. 88.

⁷Ibid., p. 43.

⁸President Carter's Water Policy Message, June 6, 1978. "All Federal water development agencies are being directed to develop procedures to be used in evaluating projects for the development of Indian water resources and to increase Indian water development in conjunction with quantification of rights. These procedures will be consistent with existing laws, principles, standards and procedures governing water resource development." Quantification -- determining an amount of water that Indian tribes will require to adequately supply water to all future development projects.

⁹Gruen Associates, "Housing and Community Services for Coal Gasification Complexes Proposed on the Navajo Reservation," Study prepared for El Paso Natural Gas Company and Western Gasification Company, April 1974, p. V-3.

¹⁰Ibid., p. V-3.

¹¹Ibid., p. V-4.

¹²Ibid., p. V-3.

¹³U.S. Department of the Interior, Bureau of Reclamation, Assessment of Cumulative Sociocultural Impacts of Proposed Plans for Development of Coal and Water Resources in Northern New Mexico, James R. Leonard Associates, Inc., September 1975.

CHAPTER IV

SUMMARY AND CONCLUSION

"If the Great Spirit had desired me to be a whiteman, He would have made me so in the first place. Each man is good in His sight. It is not necessary for eagles to be crows."

Chief Sitting Bull
(1834 - 1890)

The Navajo Reservation is in the preliminary stages of an incredible transition of cultural and socio-economic development. This development is heavily influenced through the dominant intervention of the federal government and private industry, and the impacts will be felt at all levels of Navajo society on the reservation. The impacts of this transitional period, which threaten the core of Navajo society, can be defended against if the Navajo people demand their unquestionable rights to maintain a role of self-determination through acts of self-control. But without developing comprehensive objectives and methods for implementing future development, the terms expressing self-control are mere rhetoric.

Although there are a variety of development aspects to consider when confronting the future of the Navajo Reservation,

basic fundamental internal reservation structures can be developed or improved to express methods of implementing future planning as planning for Navajos, by Navajos.

SUMMARY

The Navajo Tribal Council has developed a ten-year plan to create an economy within the boundaries of the reservation that will provide the Navajo people with a choice of lifestyle and a planning process that ensures Navajo control through a process of self-determination. The goal of the Plan is to increase employment on the reservation by creating 46,000 new jobs. To achieve this, the Plan identifies areas within reservation development where capital investment from both the public and private sectors will contribute approximately \$4 billion.

The concept of the Plan is first to increase and strengthen the social overhead investment, such as housing, health, education, labor, transportation, etc. Second, by developing their natural resources, they would like to create incentives for further industrial and commercial development. With apparently abundant natural resources, the Tribal Council has decided that the increased development of coal will serve as a key incentive for off-reservation investors

to commit their capital and assist in achieving the ten-year plan objectives. This approach is logical, given the amount of coal resources (approximately 4 billion tons, which is economically and technologically strippable), and the available Navajo labor force. But are these factors sufficient to accomplish the objective of self-determination? Unfortunately, the Tribe is in a vulnerable position because, like developing countries, they do not control the market, and consequently can be exploited to the benefit of the investor.

Considering the Tribe's ability to control and implement reservation development, the Tribal Council should review existing and past economic ventures with these controlling factors in mind: (1) management, (2) employment (hiring process, training, etc.), and (3) marketing. As mentioned in Chapter I, the tribe in 1965 invested capital and labor to support an electronics firm (Fairchild Camera and Instrument Corporation) located on the reservation. But only ten years later, the firm which had employed 1,200 Navajos, shut down its operations and terminated its contract with the Navajo Tribe. The contract with Fairchild provided no Navajos in top management positions. In fact, all management was controlled from the parent corporation, which was located off the reservation. Employment was also controlled

through the non-Navajo plant managers. Their training program was subsidized by the BIA, but was not monitored appropriately, and training period for employees became very lax. The only product being provided was semiconductors, under contract to the federal government. When this market began to diminish in 1974, the impact on the Fairchild plant caused them to release Navajo employees. Consequently in 1975 the plant closed its operations.

On the other hand, in 1959 the Tribal Council established a lumber enterprise, Navajo Forest Products Industries (NFPI), and over a 20-year period has demonstrated that the Navajos are capable of controlling their own affairs. The enterprise's management board, located on the reservation, is comprised of both Navajo and non-Navajo members; the Tribal Council monitors its activities. The existing employment training program has provided adequate training for Navajo workers, although, as discussed on pages 19-32, both of these functions could be improved. The lumber produced by the industry can be used for local demands as well as for alternative markets off the reservation, such as construction, furniture manufacturing, and lumber stores. Thus, despite external influences on the reservation and their consequences, examples such as the Forest Products Industries illustrate the Navajo's ability to develop a process of

controlling their own affairs.

Because of the demand for alternative energy resources, the Tribal Council realizes that one of the more lucrative ventures is in coal production. The pressure from the federal establishment and private industry is growing not only to increase coal production, but also to accept proposals for the establishment of a synthetic fuel industry, such as coal gasification.

Chapter II discussed two examples that increased the Tribe's control over the expanding coal industry on the reservation. These controlling factors are:

1. Management. Alternative coal development enterprises, joint ventures on service contracts.
2. Employment. Develop better training for Navajo employees through affirmative action programs.
3. Market Analysis. Reconsider the tribe's ownership of a product in demand and renegotiate coal leases to their advantage.

Because of the BIA's laxness, the Navajo Tribe has negotiated mineral leases that were not to their advantage. Although

there are established regulations stipulating minimum requirements for leasing Indian minerals and land, federal agencies have constantly ignored these regulations. To date, the most successful challenge has been between the Northern Cheyenne and the Department of the Interior. Eventually, that tribe was able to get Secretary Morton to rule in favor of the Tribe and they have decided not to develop their coal resources. Perhaps the focus of this issue is that the federal government tends to view Indian land and mineral resources as public domain -- a resource subject to the same policies as pertain to public lands -- rather than as private assets held in federal trust for Indian individuals or tribal owners. To improve the Navajo Tribe's control, it is recommended that they:

1. Establish a Tribal minerals contract office, that would provide the expertise of negotiating contracts to the best interest of the Tribe, and coordinate both Tribal and federal participation in the negotiative process.
2. Cancel or renegotiate existing leases.
3. Reevaluate alternative coal development ventures:
 - a. Joint ventures, using the coal resources that the Tribe owns as capital contribution.
 - b. Establish a Tribal enterprise through service contracts.

To date, coal gasification proposals have been rejected by the Tribal Council, but in light of the present energy demand and emphasis on synthetic fuels, these proposals most likely will again be presented to the Council. It has been proposed that at least six coal gasification plants be constructed in the Four Corners Region of the reservation, at an approximate cost of \$400 to 600 million and requiring 1,000 acres. With the Tribe's limited capital it would not be possible to finance a venture of this magnitude. But again, they should recognize their bargaining power, the ownership of the coal resources and land that each plant requires for construction.

Given the magnitude of the existing and proposed development in the Four Corners Region, the resulting impacts will have a long-lasting effect on the Navajo people. These impacts fall under these categories: (1) water resources, (2) environmental, and (3) new community development. The keystone to all development will be determined by the amount of water available. Already the San Juan River's (the main source of surface water in the Four Corners Region) capacity is nearly all allocated and most likely, as some suspect, overallocated. The Navajo's sovereign rights to water are constantly being challenged or ignored by both federal and state agencies. If this persists, any future Navajo projects

requiring water will be left high and dry. It has been reported that in areas of less than 10 inches of annual rainfall, the land cannot be rehabilitated without supplemental irrigation. If the Tribe wants the strip-mined areas reclaimed for future agriculture and livestock purposes, then they need the water to correct the physical damage this mining process has done to Navajo land. With the potential for increased growth and development, there will be an influx of immigration of people seeking employment. This so-called boom development will create instant impacts on both the socio-economic and socio-cultural life of the reservation.

These impacts cannot be treated as separate entities within the development process, because they are all interrelated and have to be considered before any formal comprehensive development policy is established by the Tribal decision-makers.

To assist these decisionmakers, the following steps are recommended:

1. Immediately expand the existing planning capabilities within the tribal government organization. This central planning office should have the

skills to view more comprehensively the short- and long-term planning objectives of the Tribal Council; assist and advise these decisionmakers on policy formulation, planning and evaluation; examine opportunities for further definition, strengthening and expansion of the principle of self-determination; coordinate the planning and implementation of other functions, such as housing, transportation, hospitals, economic development, recreation, etc.

2. Establish a Tribal Minerals Contract Office that would provide the expertise in negotiating mineral, oil, natural gas and uranium contracts, and operate as the lead coordinator with other federal agencies (BIA, Bureau of Mines, U.S. Geological Survey) and their participation in the overall natural resource development process.
3. Establish coordination between the central planning office and minerals contract office to improve overall communications, monitoring and comprehensive planning within the tribal government organization.

CONCLUSION

The goal is to develop Navajo self-control through a process of self-determination. Given the political and economic pressures that persist from federal and state agencies and private industry, can the Tribal Council as the principal decisionmaking body establish a planning process that will promote the overall welfare of the Navajo people without centralizing this decisionmaking process and becoming an elite body, separate from the Navajo people?

Historically in this country the "Indian problem" has been treated as a social problem. The gap between the Navajo population and the rest of the country has been constantly enforced over the years by maintaining the reservation, through federal programs, as a place for fostering massive doses of social investment in remedial services intended to promote acculturation and assimilation. This process was encouraged by the BIA through its education and job placement programs. Navajo children were sent to off-reservation boarding schools and adults were sent to urban centers, under the pretense that the job skills they train for would enable them to join the mainstream of American society. To date, most of these programs have failed, and the Navajo

reservation has increased in size as well as in population.

In a 1970 unpublished BIA report, "Navajo Manpower Survey," it indicated that 72 percent of the Navajo labor force wanted employment on the reservation. Why have these programs failed? There are several reasons, including a gross underestimation of the strength of Navajo cultural differences, vast distance between the federal institutions and the Navajo people, and just poor implementation. In addition, the federal government has disregarded the actual realities of outmoded economic activities and Navajos have been trained for a job market that did not exist on the reservation. Moreover, the BIA focused on the social problem of the individual without examining the possible economic causes or the dynamics of the economic system as a whole.

Today, the emphasis has changed and the economic conditions of Navajo life have received unprecedented attention, especially with the potential natural resource development. This has shifted the focus from exporting Navajo labor to urban areas to importing jobs to the reservation. This has reinforced the Tribal Council's desire to promote self-determination and the virtually unanimous desire of the Navajo people to be able to provide for their economic

needs rather than being obliged to move to distant, often hostile, urban environments. With the past history of federal domination over the development of the Navajo reservation and society, the Navajos have proven that their culture cannot be as easily assimilated as presumed. On the contrary, the challenge to the Tribal Council, with the full cooperation of the federal government, is to construct economics which can support Navajo life and preferences rather than requiring their submission as a precondition for prosperity.

The main question underlying the conduct of economic change for the Navajo reservation is how to implement self-determination. In other words, the question is how to build a reservation economy which supports both individuals and ways of life that are compatible with the reservation location and whose indirect effects are not hostile to the physical and social environment. This will require a development process that can be controlled and managed by Navajo people.

The Navajo Tribal Council has established reservation development goals as indicated in their ten-year plan. As a developing region, they should be exposed to alternative strategies for implementing these goals. If they continue

to rely on present conventional assumptions about human resource development, employment structure, and numbers of jobs, they will be forced into a substantial commitment to external controls of the reservation economy. This, in turn, introduces additional pressure for assimilation. This process tends to promote a project-by-project orientation which obscures the Tribe's ability to coordinate a more comprehensive development plan. Ultimately, the Tribal Council may only inflict the social ills affecting the rest of the country on the reservation in a more virulent form than they have experienced in the past.

All is not lost. The Navajo Tribe still owns three prime factors that maintain them as a tribal entity: (1) land, (2) natural resources, and (3) water. To date, these elements have provided the Navajo Tribe, as well as other Native American tribes, with a unique situation. Unlike any other group of people, or corporate structure, the Navajos have vast land holdings, 16 million acres, ample natural resources, and their inherent right to water. The existence of these factors have enabled the Navajos to retain their society, culture, and identification as an Indian tribe.

But what about the future? The Navajo's coal wealth may only be viable for the next 40 years, water resources may

diminish, and portions of their land base may be eroded by the process of strip mining. What will happen to the Navajo's capital, human, and environmental investment? The necessity to develop a more balanced growth strategy throughout the reservation is imperative if the Tribal Council's goal is to maintain control and pursue self-determination. The strategy will only be implemented after the planning capabilities of the tribe are redefined, expanded and organized, and then integrated planning methods will have to be developed that help the tribe in minimizing their land and water resources while maximizing the human resources, capital investment, and overall economic goals. For example, in the Four Corners Region of the reservation millions of acres of land are being strip mined. This land will have to be reclaimed to its original condition. But as stated in Chapter III, this will require supplemental irrigation. At the same time, the Tribe has started a massive irrigation project adjacent to the strip-mined area. Also, the Tribe is being confronted with the prospect of quantifying its future water needs in the area. It is the desire to have the mined lands reclaimed for the future use to Navajo livestock owners. Thus, the Tribe could expand their agriculture venture into the stripped area. This would meet three goals; the Tribe could (1) increase and justify their future water needs by increasing the size of

the irrigation project, (2) reclaim the strip-mined land, and (3) use proper land management and reclamation techniques to establish agriculture as a new economic base for the area, replacing strip mining, over the next 40 years. Consequently, (1) the land resource would be minimized as waste land and maximized for agriculture purposes, (2) water rights would be maximized by expanding the irrigation project, (3) economic growth would be maximized by superimposing an agriculture economic base over coal development, and (4) Navajo employment opportunities would be maximized by sustaining job opportunities, minimizing the necessity to leave the reservation. This approach of integrated planning can be accomplished once the Tribal Council realizes the potential of the tribe's control over all resources.

If the Tribal Council goal is to achieve sustained self-determination and self-sufficiency for their tribal members within the context of Navajo culture, then the Tribal Council will have to develop new planning strategies and policies. These strategies should subordinate economic goals to sociocultural goals and develop a transitional period that will enable the Navajo people the opportunity to develop more control and autonomy over their future and in harmony with Navajo time.

APPENDIX

CHARACTERISTICS OF THE NAVAJO RESERVATION

Geographical Area

The Navajo Reservation is located in the Four Corners Region of the Southwest United States and extends into the states of Utah, Arizona, and New Mexico (see attached map). The reservation encompasses approximately 25,000 square miles (16 million acres) and is larger than the combined areas of New Hampshire, Massachusetts and Connecticut -- thus making the reservation the largest of all Indian reservations (comprising one-fifth of all Indian land holdings).

Climate

Climate and soil productivity are largely dictated by elevation and rainfall. Vegetative cover varies sharply from sparse shrubs at the lower elevations (4,500 feet) to forests in the mountainous regions (10,000 feet). The reservation is comprised of high plateaus, deep canyons, and low-lying plains and is transversed by a range of mountains along the Arizona-New Mexico state line. Although annual rainfall may be as high as 27 inches, in high altitudes, the climate is considered to be arid or semi-arid.

Demographic and Economic

The most current data shows the Navajo population of the reservation as approximately 142,000, with 6.2 persons per square mile. The population growth rate is 3.4 percent/year, and if this rate continues there will be nearly 300,000 Navajos on the reservation by the year 2000. There are almost the same number of Navajo females as males living on the reservation, with the median age of 16.3 for males and 17.3 for females (see Table 1). Approximately 30 percent of the population is under 20 years of age, which is 10 years younger than the median age of the U.S. population. The average family size of the Navajo is 5.6 as compared with the national average of 3.4

Income (Individual and Tribal)

The reservation has the lowest per capita income in the United States. The Census of Population, 1970 showed a per capita income of Navajos residing on the reservation of only \$900, compared with the national average of \$3,900. This means that the average person in the U.S. had almost \$3,000 more to spend on food, clothing and shelter than the average Navajo. Correspondingly, 64.7 percent of the population falls into the poverty class. It should be noted that the relative amount of poverty on the reservation

TABLE 1

AGE DISTRIBUTION OF THE NAVAJO RESIDENT POPULATION

AGE GROUP	MALE POP.	MALE Percentage of Total Pop.	FEMALE Percentage of Total Pop.	FEMALE POP.	TOTAL POP.
60+	4,448	3.1	3.1	4,466	8,914
50-59	3,424	2.4	2.6	3,703	7,127
40-49	4,764	3.3	4.0	5,671	10,435
30-39	6,440	4.5	5.4	7,798	14,238
20-29	9,113	6.4	7.5	10,638	19,751
10-19	18,975	16.3	13.3	20,121	39,096
0-9	21,462	↑	15.1	21,638	43,100
Sub-Total	68,626	Male Median Age	48.1%	Female Median Age	74,035
TOTAL			100%		142,661

Source: Provisional Estimates, July 1, 1978; USORS, Base: 1970
 Provided by: Information Services Department, The NAVAJO NATION

varies with family size, composition and location. Usually it is the rural families that have a larger family size, lower annual income and because of their remote location the highest incidence of poverty. Similarly, geographical location and employment create a per capita income that varies widely from the median of \$900 (\$398 at Rock Point to \$1,301 at Fort Defiance). The Navajo who resides in or near an urban center has an average per capita income of about \$1,500. This is because the individual can be employed with the government and retail or manufacturing businesses and the individual is usually employed full time. In comparison, the Navajo who resides in the rural areas of the reservation has a per capita income as low as \$400. This income is mostly derived from a pastoral economic base, which is both part time and seasonal employment.

In addition to the individual incomes, the Navajo tribe receives additional revenue from federal subsidies and from coal, oil, natural gas and uranium reserves. This income diverts back into the general fund of the tribal government and pays for the operation of the tribal government, welfare, education, health, and social amenities (police and fire departments, etc.). Also this income from natural resources is invested in business ventures, both on and off the reservation. Two enterprises that are tribally owned and on the

reservation are a lumber mill and a utilities authority. Both employ a substantial number of the Navajos and supply a good financial return to the tribe.

Labor

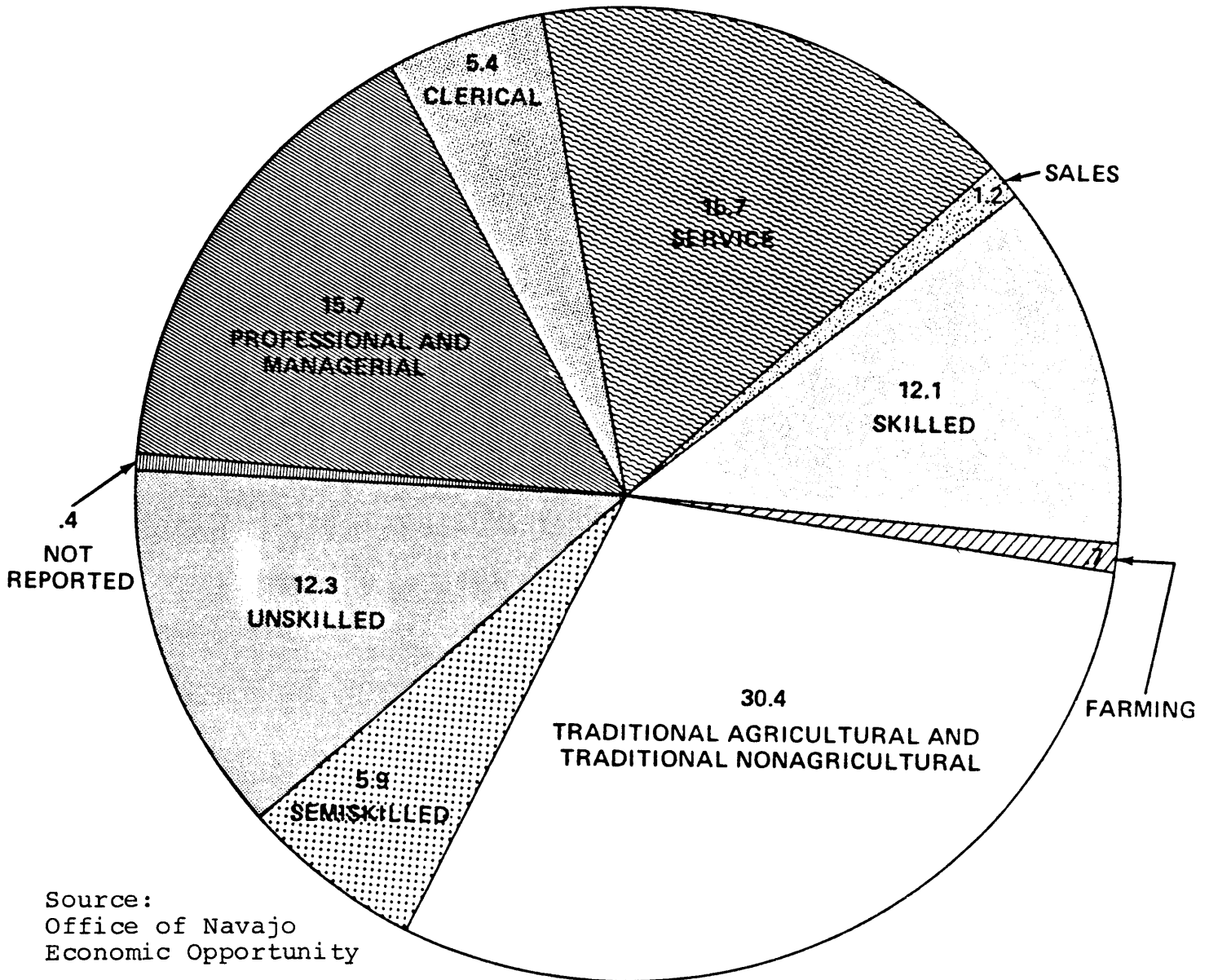
Presently there is a potential labor force of slightly over 50,000 individuals on the reservation and of this figure approximately 35,000 are employed full-time. As shown in Table 2, the dominant employed laborers are those in the traditional agricultural and traditional non-agricultural sectors. The term traditional employment refers to raising livestock and crops and weaving rugs or making jewelry. The non-employed labor force on the reservation (Table 3) is dominated by the unskilled labor market. Taking into consideration the present labor force, it is interesting to note that a high percentage of the unskilled and traditional employed individuals reside in the remote areas of the reservation. Consequently, they have a lower per capita income and what income they do obtain is usually spent on food and clothing with a small portion of the income being spent for adequate housing.

NAVAJO LABOR FORCE

OCCUPATION OF EMPLOYED LABOR FORCE

PERCENTAGE DISTRIBUTION

TABLE 2

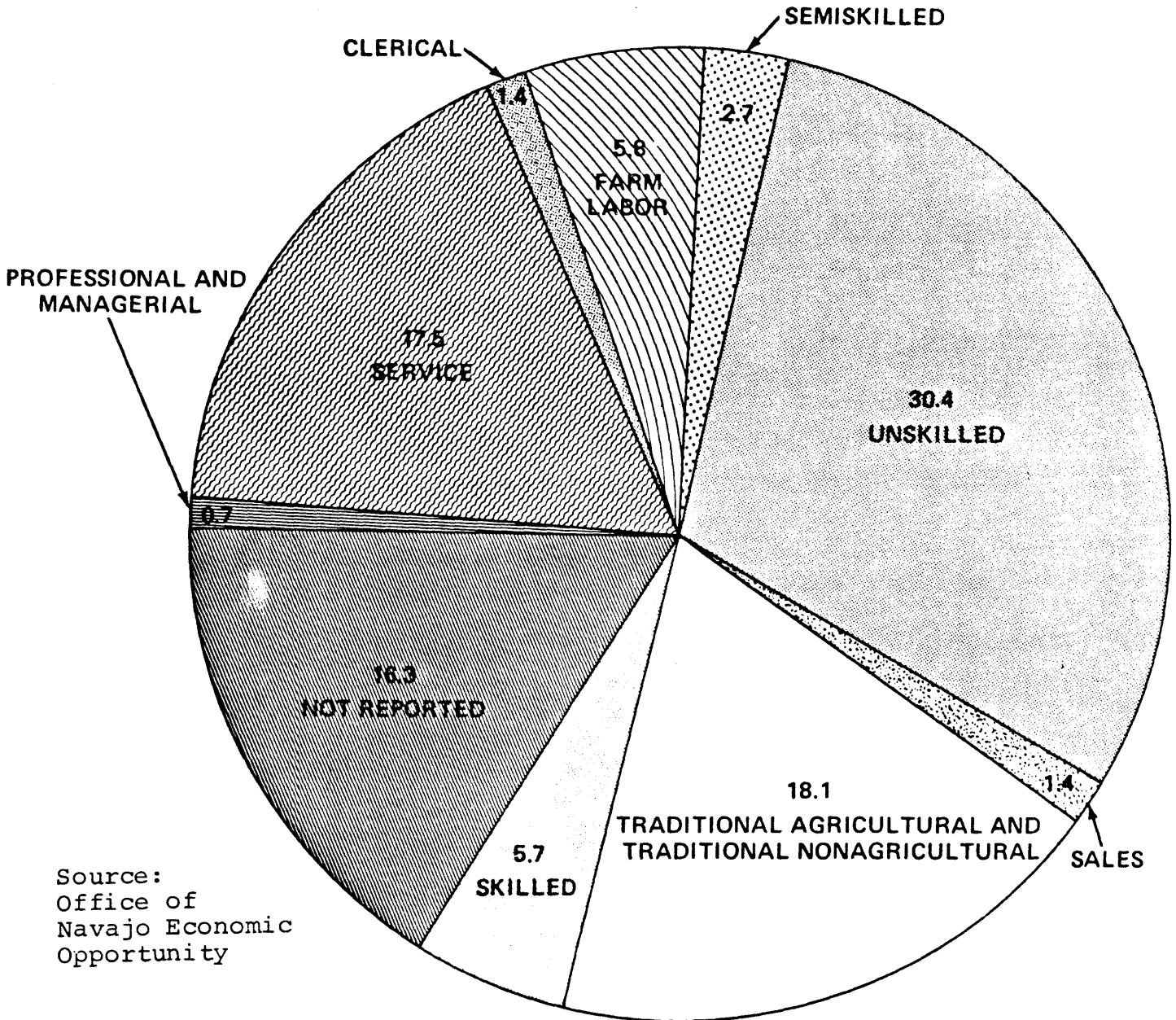


NAVAJO LABOR FORCE

OCCUPATION OF NONEMPLOYED LABOR FORCE

PERCENTAGE DISTRIBUTION

TABLE 3



Source:
Office of
Navajo Economic
Opportunity

Labor Statistics

	<u>Total</u>	<u>Male</u>	<u>Female</u>
Total under 16 years of age	68,295	33,788	34,557
Total 16 years and older	74,366	34,888	39,478
Not in Labor Force (16 and older)	23,200	9,699	13,501
Potential Labor Force (16 and older)	51,166	25,189	25,977
Employed	35,297	18,464	16,833
Not employed	15,869	6,725	9,144
Of the unemployed, those seeking work	5,679	3,100	2,579
Unemployment Rate	31%	27%	35%

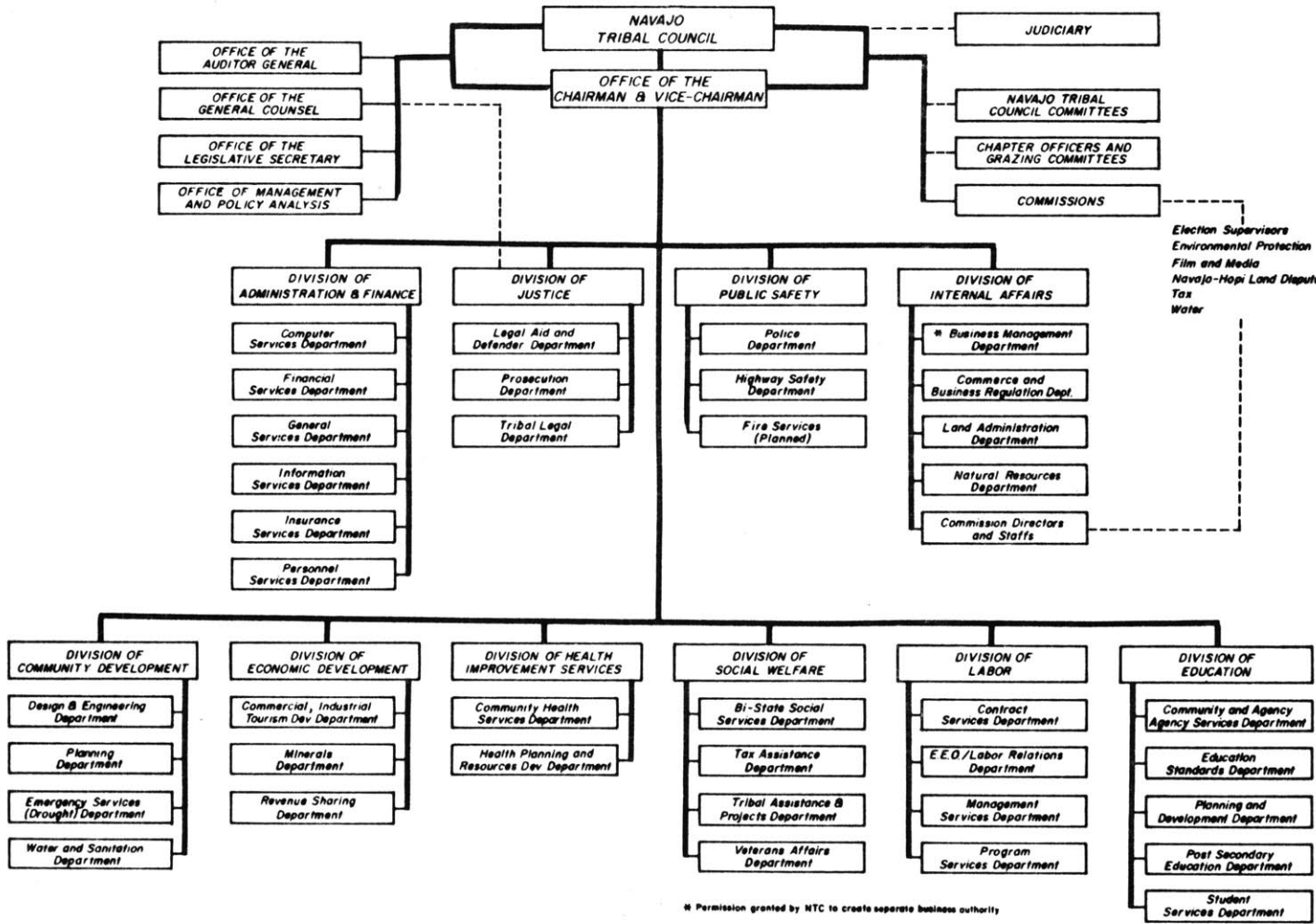
Governmental System

The Navajo reservation, as with other Indian reservations, is composed of social and governmental subregions. In 1927, the Chapter system (Navajo grass roots political subdivision), illustrated on the attached map, was initiated as a means of organizing the people to cope with local problems and issues. This system was used primarily by the Bureau of Indian Affairs to administer its programs. Since 1950, Tribal funds have been used to construct Chapter houses and local Chapter officers are elected by the local community. The function of the Chapter officers is primarily to represent the Chapters and serve as links between the community service departments of the Tribal Council and the people they represent. Today there are 102 Chapters on the Navajo reservation.

The Tribal Council is the central governing body and principal policy and decision-maker of the reservation. It is composed of 87 councilmen elected every four years from communities within the reservation. In addition to the councilmen, there is an elected chairman and vice-chairman who preside over the Tribal Council. The reservation is divided into five regions or agencies. These agencies are Tuba City, Chinle, Fort Defiance, Shiprock, and Crownpoint. Within each agency are located local offices for Navajo tribal and federal administrative services, commercial activities, and industrial and community services. (See the attached Tribal Organization Chart and Area Agency Map.)

THE NAVAJO TRIBE ORGANIZATION CHART

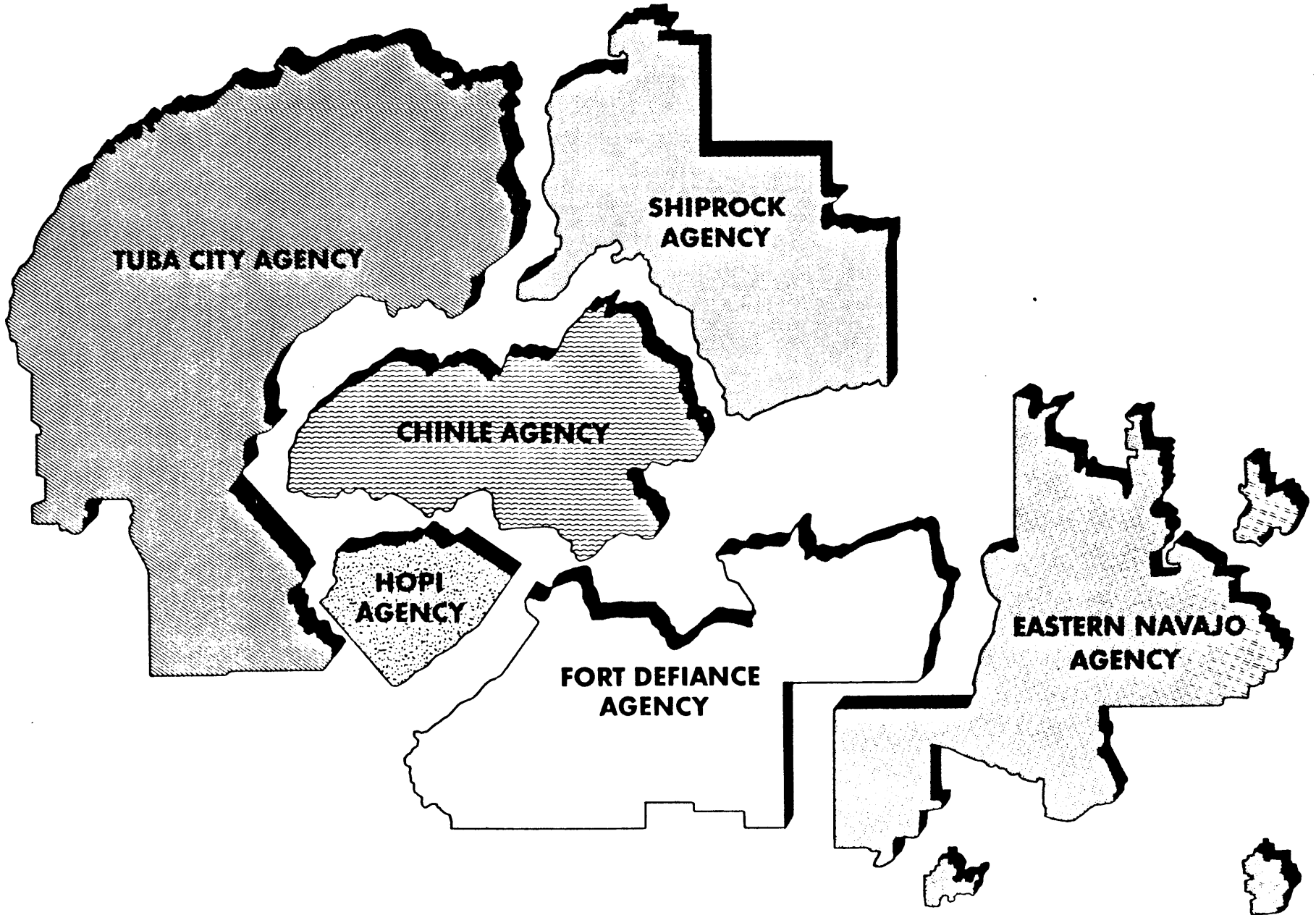
FY 1978



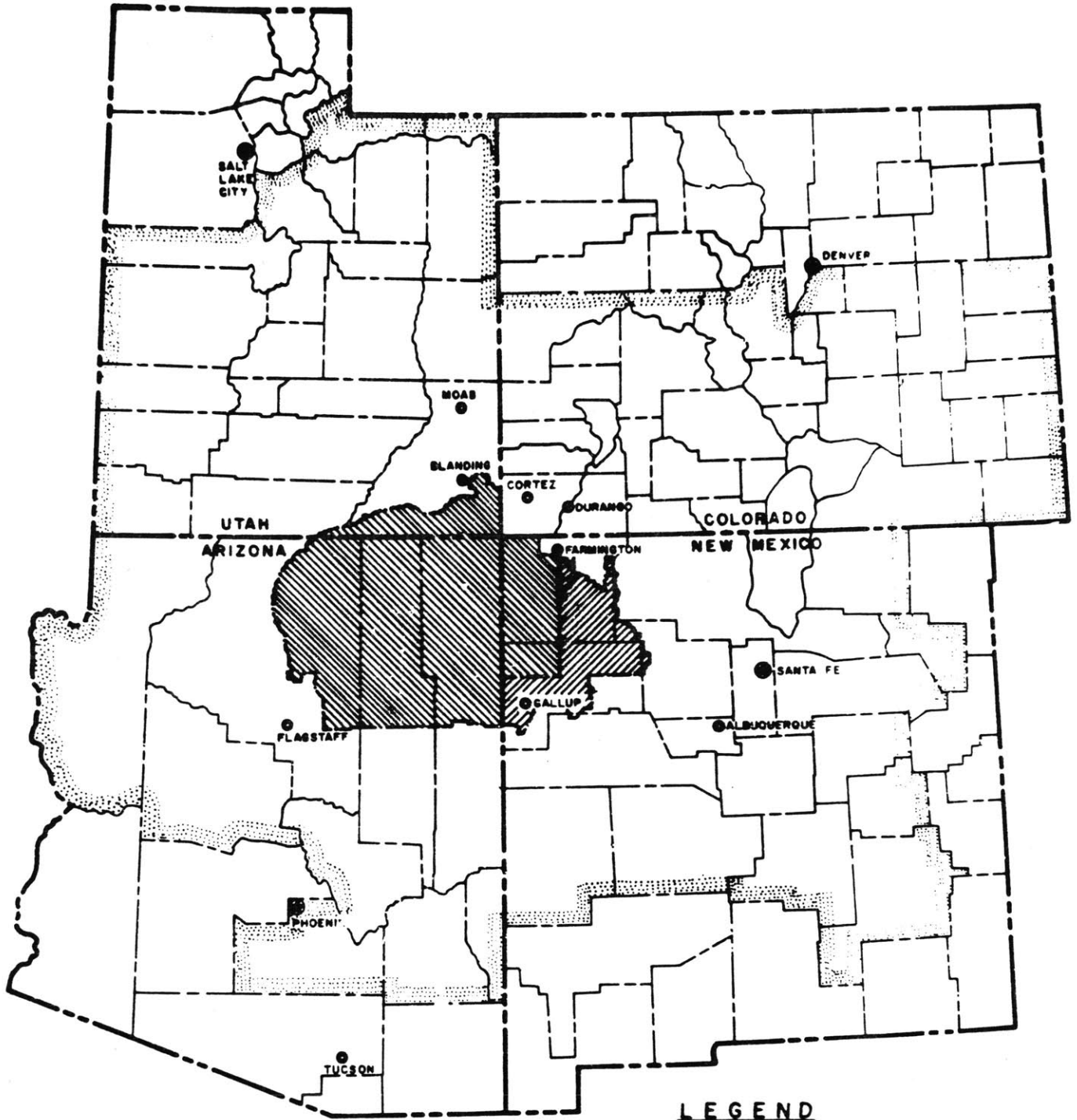
* Permission granted by NTC to create separate business authority

NAVAJO AREA AGENCIES





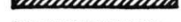


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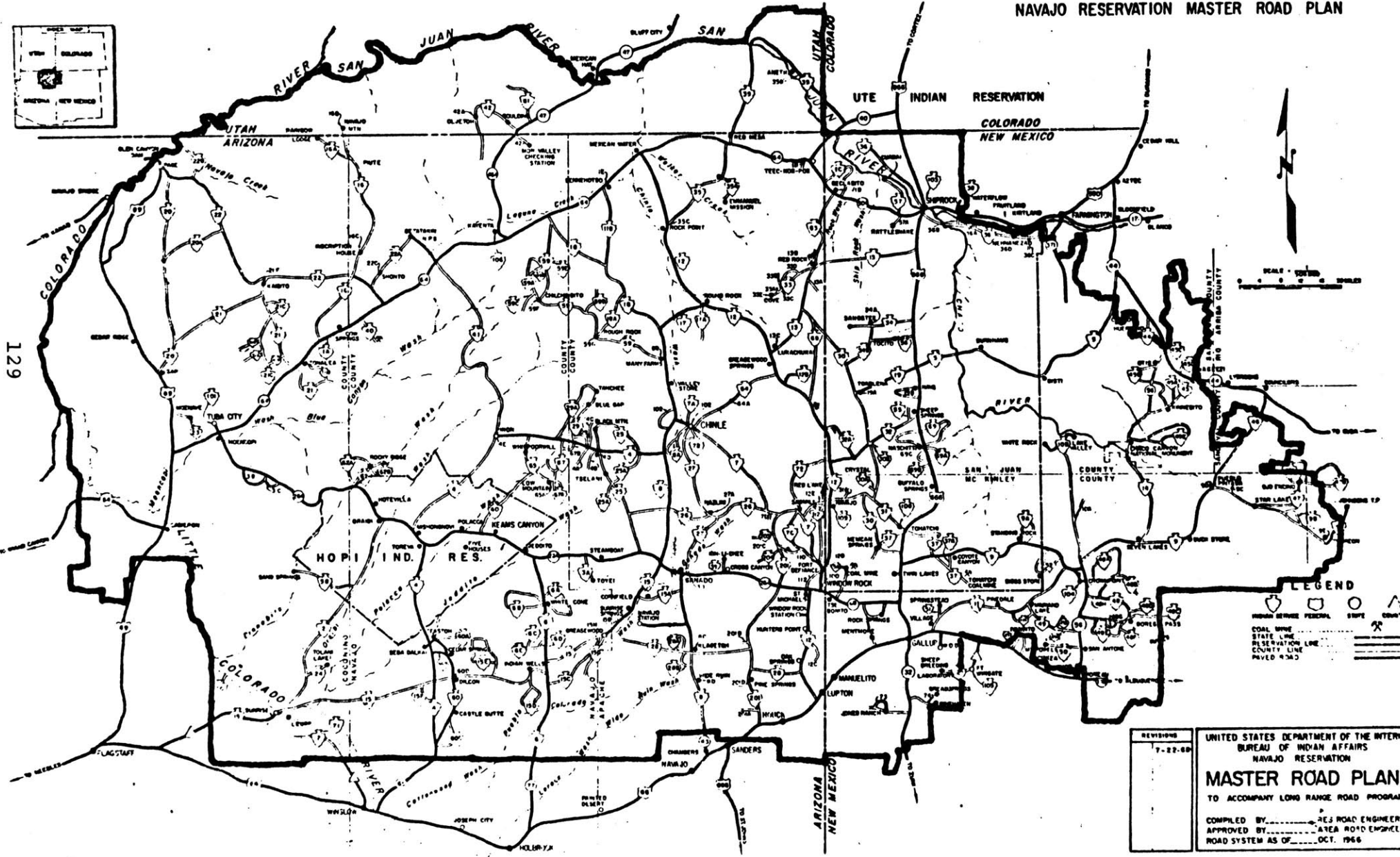
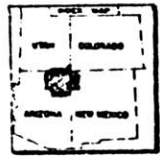
FOUR CORNERS REGION



LEGEND

-  State Line
-  County Line
-  Navajo Reservation
-  Eastern Navajo Agency
-  Four Corners Economic Development Region
-  State Capital
-  Cities and Towns

NAVAJO RESERVATION MASTER ROAD PLAN



129



LEGEND

- Indian Service Road
- Federal Road
- State Road
- County Road
- Coal Mine
- State Line
- Reservation Line
- County Line
- Paved Road

REVISIONS
7-22-69

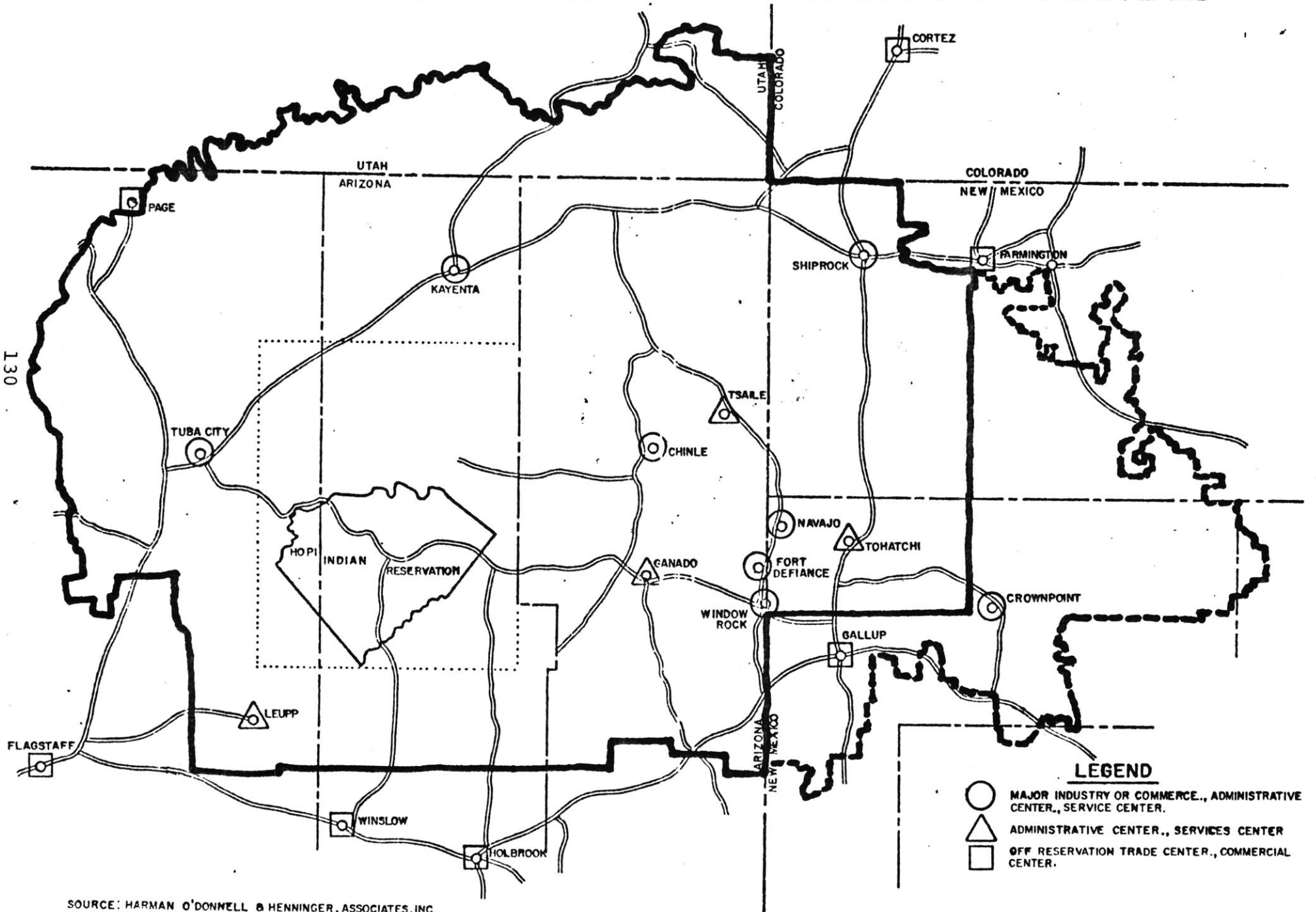
UNITED STATES DEPARTMENT OF THE INTERIOR
 BUREAU OF INDIAN AFFAIRS
 NAVAJO RESERVATION

MASTER ROAD PLAN

TO ACCOMPANY LONG RANGE ROAD PROGRAM

COMPILED BY _____ RES. ROAD ENGINEER
 APPROVED BY _____ AREA ROAD ENGINEER
 ROAD SYSTEM AS OF _____ OCT. 1966

MAJOR AND SECONDARY TOWNS AND SETTLEMENTS ON NAVAJOLAND



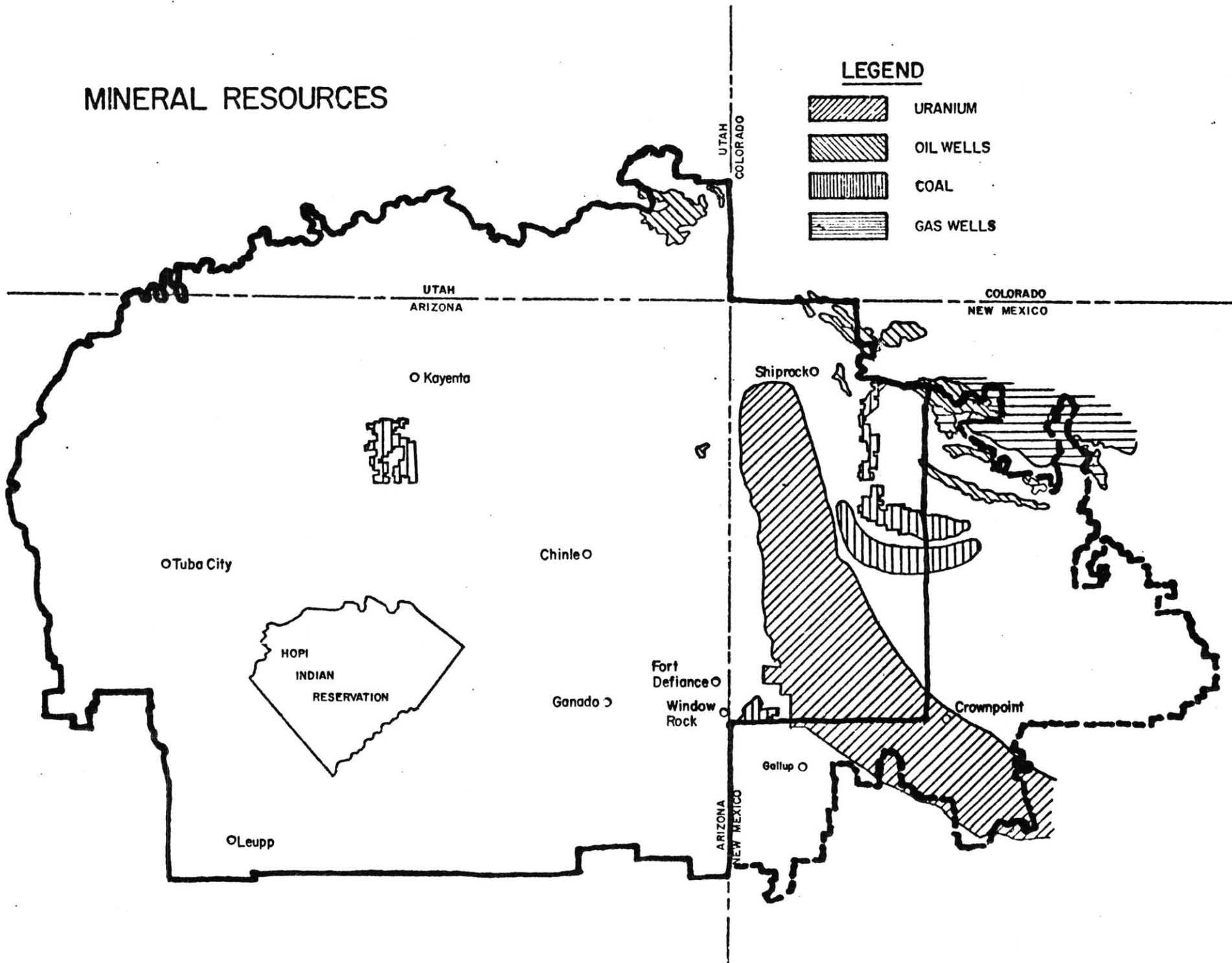
SOURCE: HARMAN O'DONNELL & HENNINGER, ASSOCIATES, INC.

MINERAL RESOURCES

LEGEND

- URANIUM
- OIL WELLS
- COAL
- GAS WELLS

131

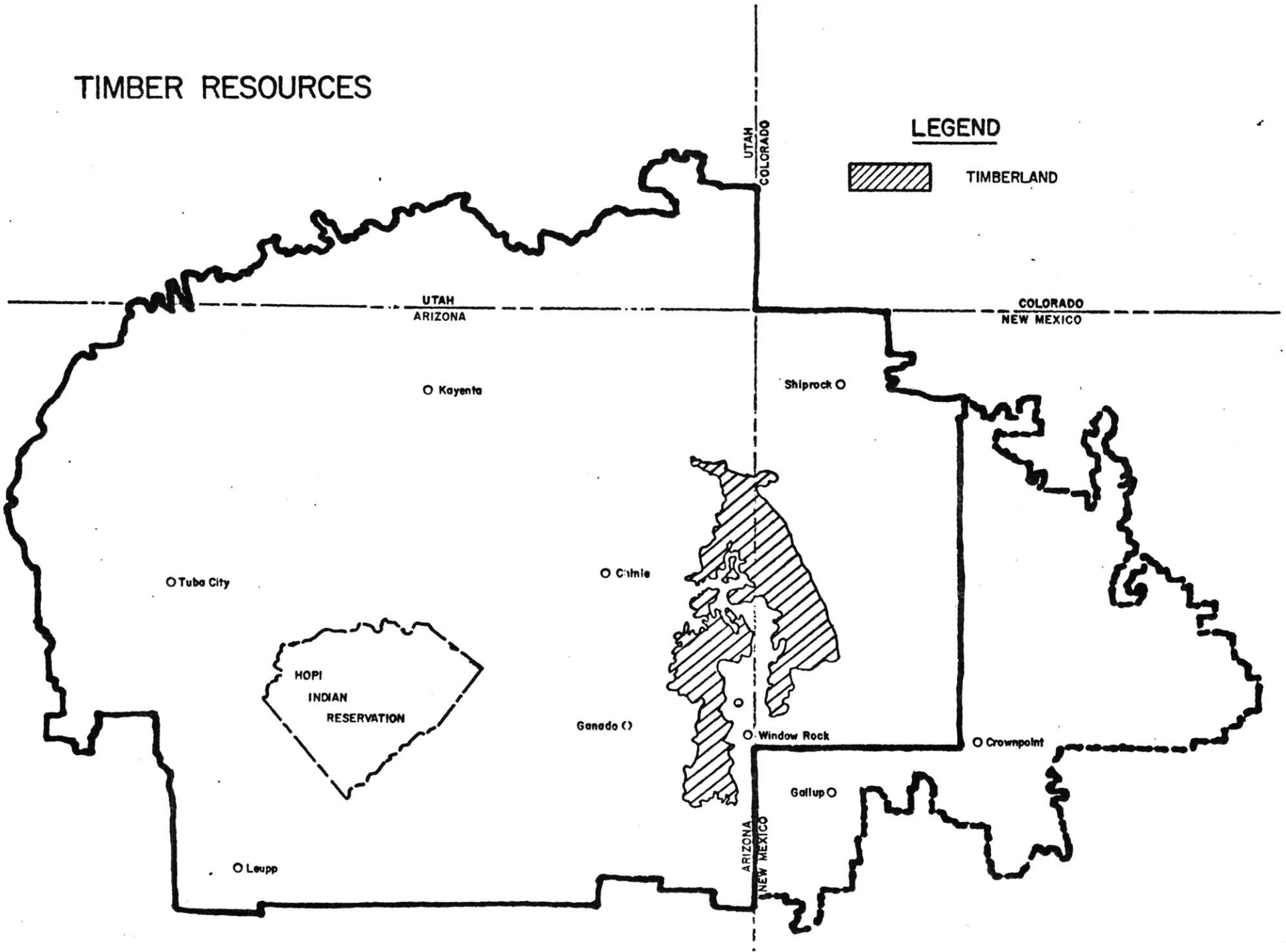


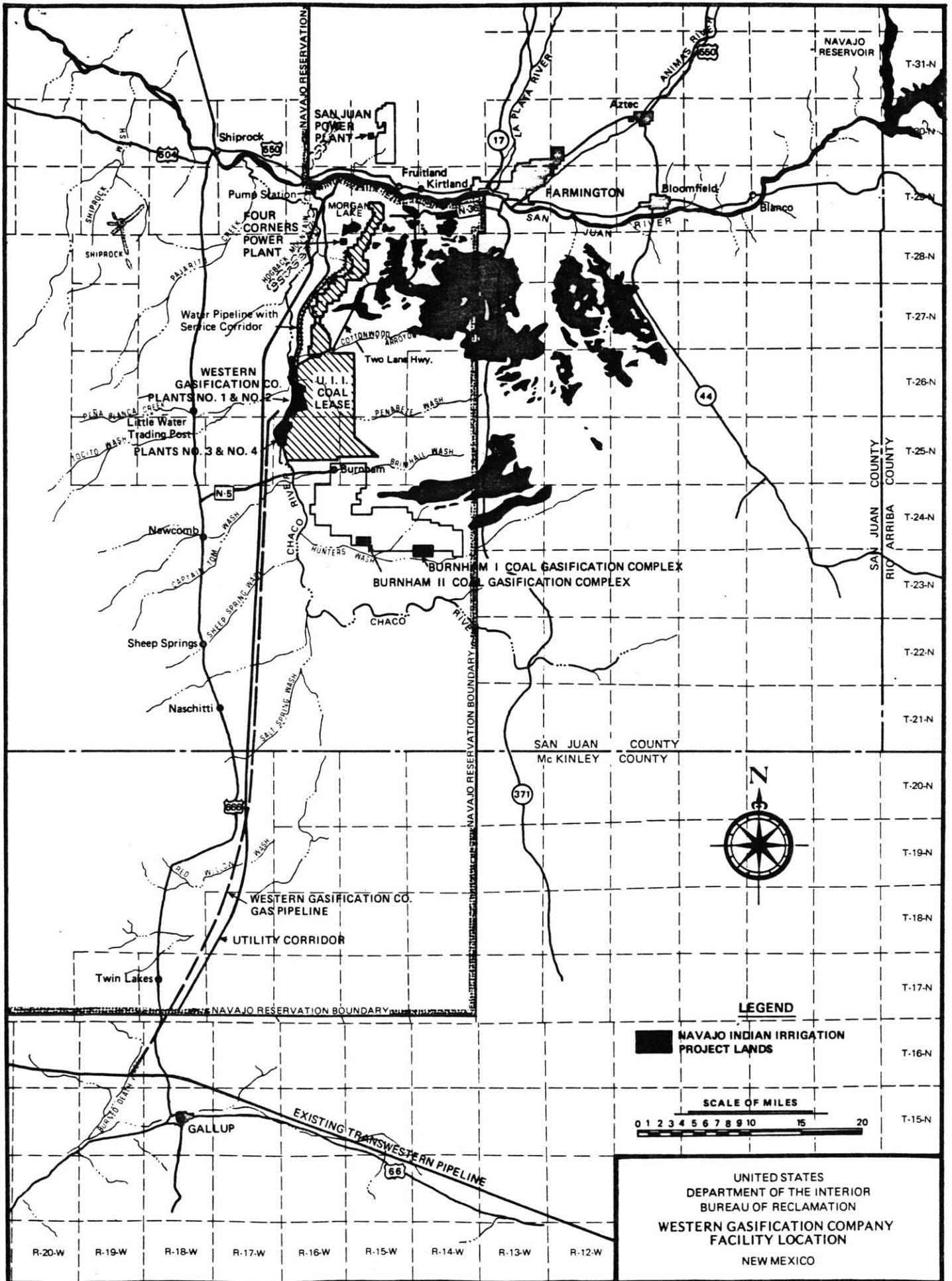
TIMBER RESOURCES

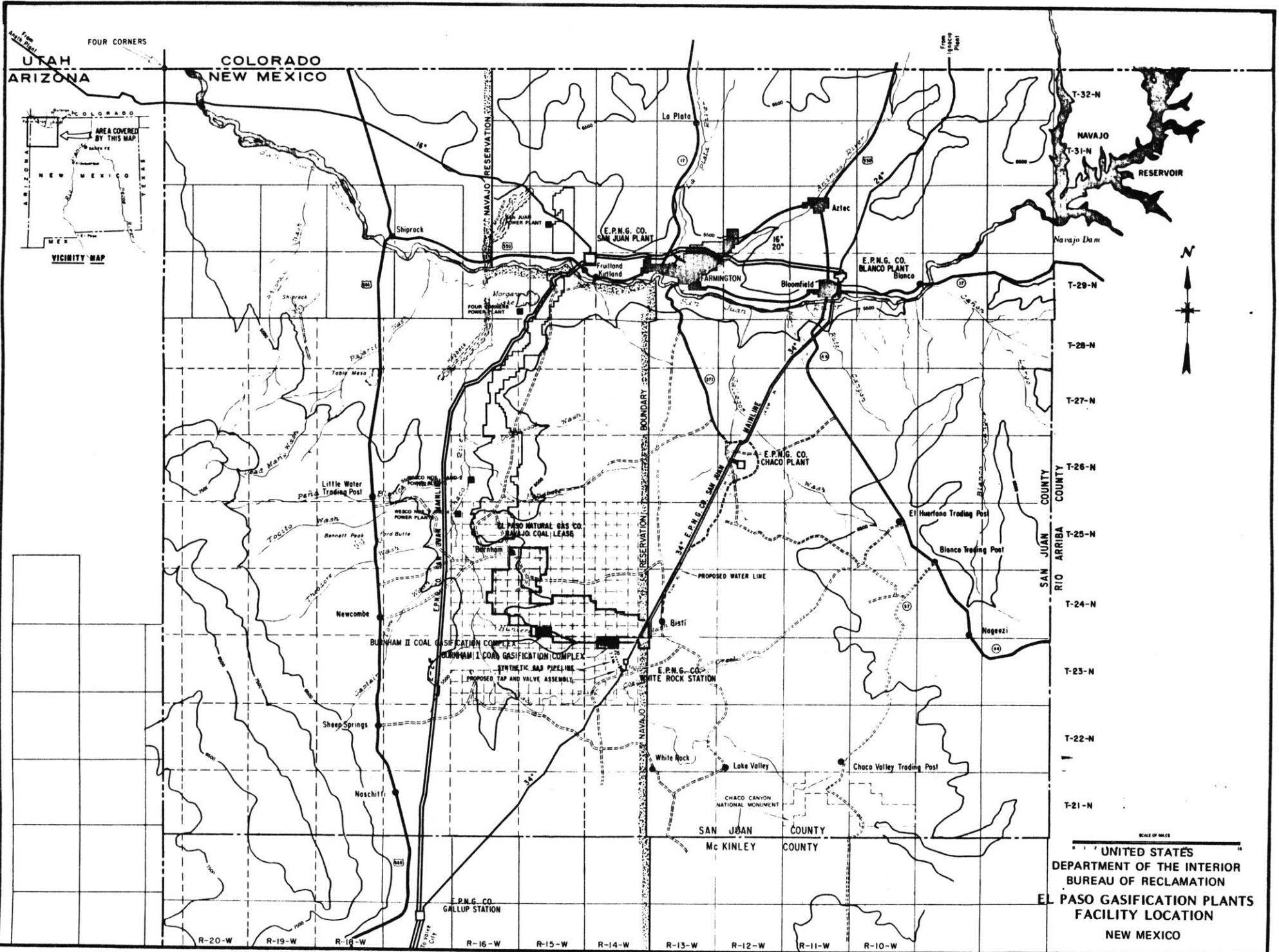
132

LEGEND

 TIMBERLAND







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UNITED STATES
 DEPARTMENT OF THE INTERIOR
 BUREAU OF RECLAMATION
 EL PASO GASIFICATION PLANTS
 FACILITY LOCATION
 NEW MEXICO

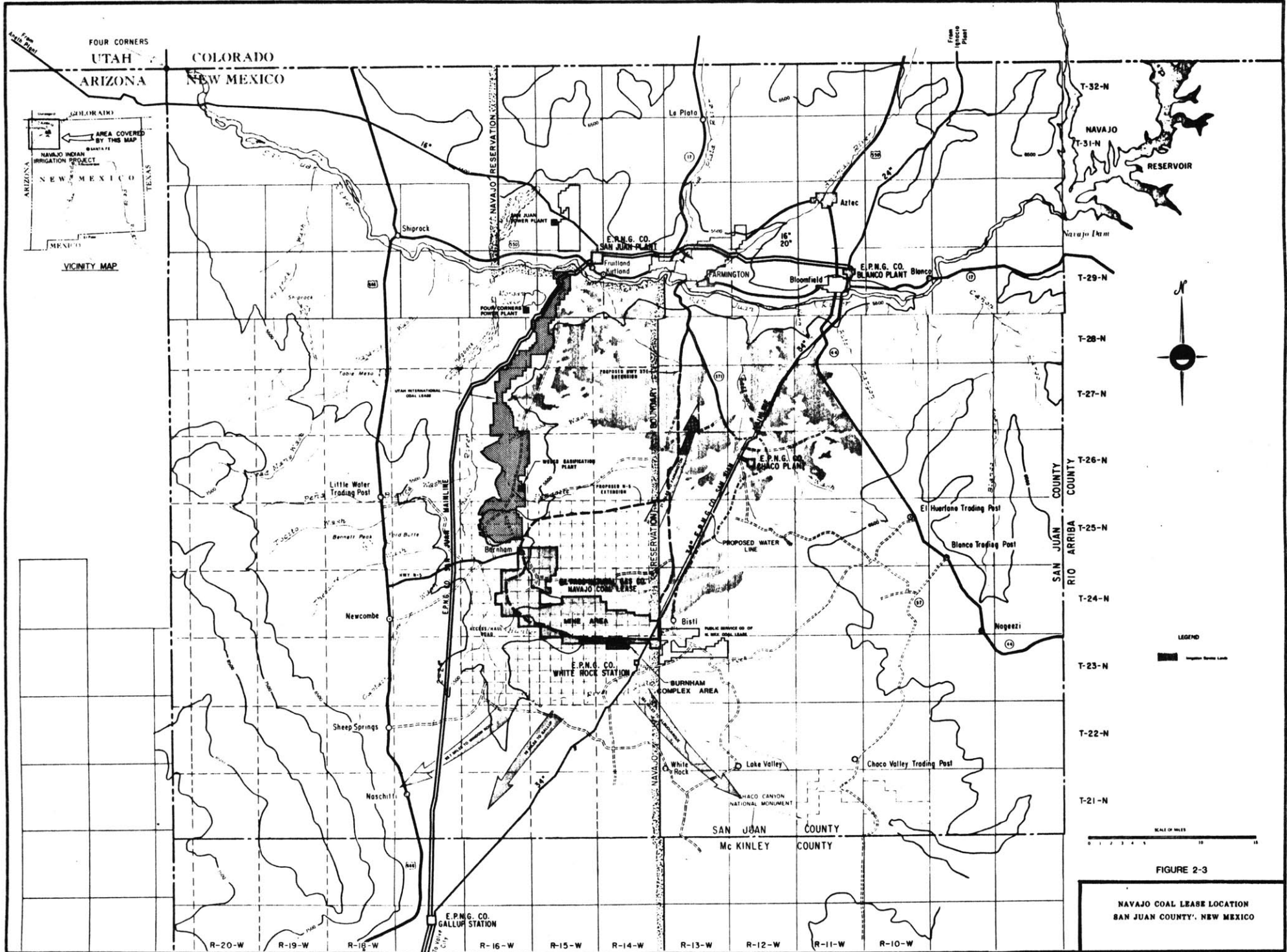
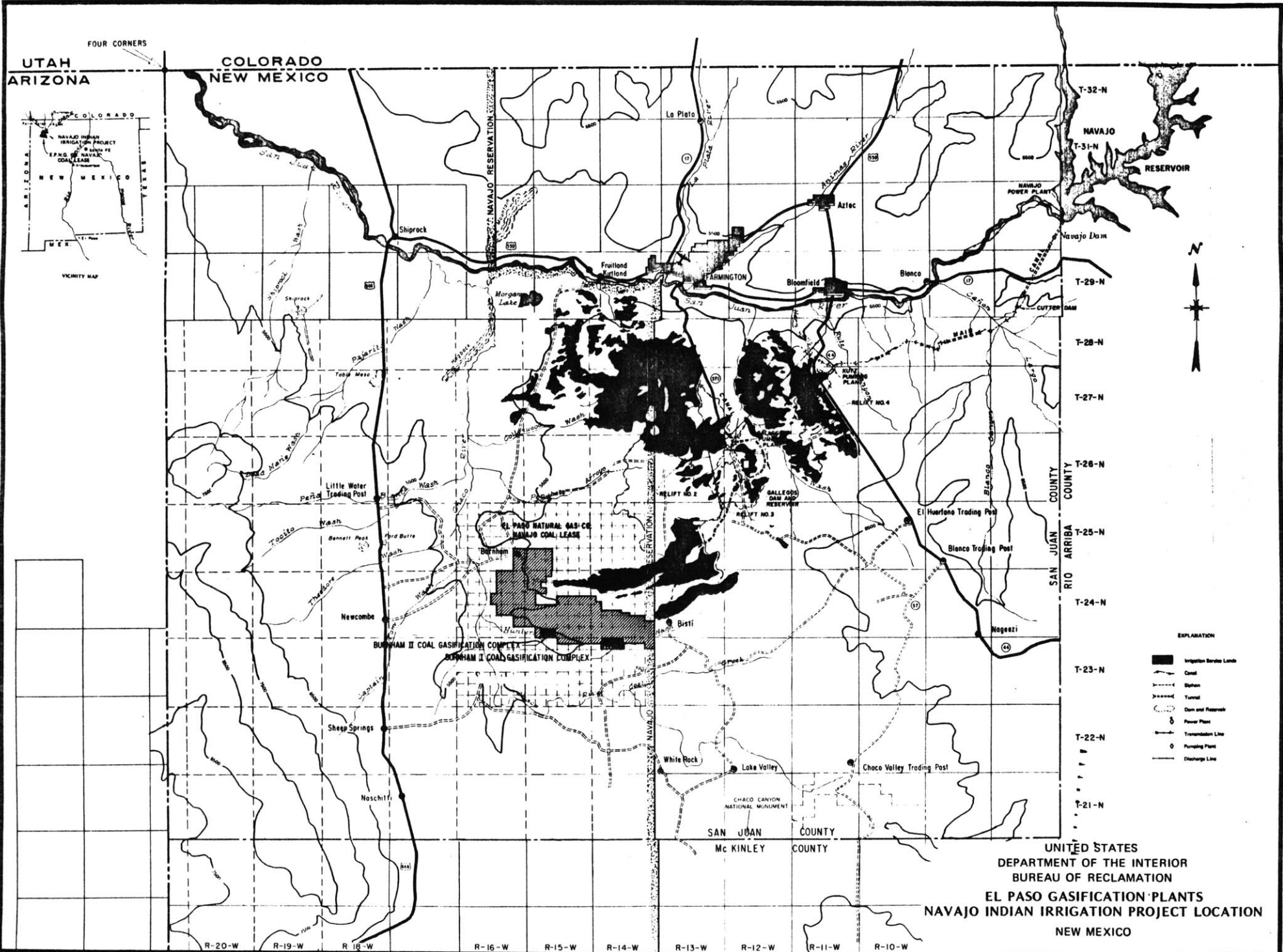


FIGURE 2-3
 NAVAJO COAL LEASE LOCATION
 SAN JUAN COUNTY, NEW MEXICO



- EXPLANATION**
- Irrigation Service Lands
 - Canal
 - Siphon
 - Tunnel
 - Dam and Reservoir
 - Power Plant
 - Transmission Line
 - Pumping Plant
 - Discharge Line

UNITED STATES
 DEPARTMENT OF THE INTERIOR
 BUREAU OF RECLAMATION
 EL PASO GASIFICATION PLANTS
 NAVAJO INDIAN IRRIGATION PROJECT LOCATION
 NEW MEXICO

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