



# **P&M Coal McKinley Mine REUSE PLAN AND FEASIBILITY STUDY**

**Prepared for:**

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**In Association with:**

SWCA Environmental Consultants  
Phoenix, Arizona

Hilda Allred, Ed.D.  
Scottsdale, Arizona

**NOVEMBER 10, 2006**





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New Mexico Economic Development Department  
Navajo Nation Division of Natural Resources  
Navajo Nation Department of Water Resources  
P&M McKinley Coal Mine  
Navajo Tribal Utility Authority  
Fort Defiance Chapter  
Tsayatoh Chapter  
St. Michaels Chapter  
Rock Springs Chapter  
Twin Lakes Chapter  
Community Members  
Dine Coalmine Coalition  
Allottees, Grazing Permittees and other Interested Parties

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# 1. Introduction

## Background

Operating in McKinley County and the Navajo Nation for over 40 years, the Pittsburg & Midway Coal Mining Co. (P&M) is scheduled to cease coal removal at the McKinley Mine in December, 2008. The mine's closure will ultimately result in the loss of employment for 300 people. Further, income in the form of taxes and/or royalties generated for the Navajo Nation, McKinley County and the State of New Mexico will be lost. As per Federal and State reclamation guidelines reflected in P&M's lease agreements and mining permits with the Navajo Nation and the State of New Mexico, assets such as water wells, power lines, buildings, ponds and roads must be removed and the property returned to pre-mining conditions; which as the existing permit application(s) reads includes returning the land to a condition suitable for grazing and wildlife habitat.



The guidelines notwithstanding, the assets that are part of the mining operations are of great interest to the five chapters in the area including Fort Defiance, Tsayatoh, Twin Lakes, Rock Springs and St. Michaels (hereafter referred to as the five chapters), the Navajo Nation, McKinley County and the State of New Mexico. Demonstrating that interest in 2003, the 46<sup>th</sup> Legislature, 1<sup>st</sup> Session 2003, House Joint Memorial 110 passed a memorial requesting that the New Mexico Economic Development Department coordinate efforts with the Navajo Nation to develop a reuse plan and feasibility study that will benefit all of the interested parties. To bring such a reuse plan to reality, the mining permit application packages for both the New Mexico Mining and Minerals Division (MMD) and the Office of Surface Mining (OSM) would need to be amended once such a reuse plan is developed and approved.

It is important to note that P&M has agreements with certain allottees within the study area, and that some facilities may lie totally or in part on allotment lands. Nevertheless this project is focused on plans and agreements among the Navajo Nation, the State of New Mexico and the five chapters. Thus, P&M and the allottees will need to work with each other according to their respective lease agreements; however, if allottees chose to be apart of this study, they were included.

Because of the expressed interests and support of various parties (individuals, the five chapters, the Navajo Nation and the State of New Mexico), a reuse plan and feasibility study was developed. Thus, the plan described herein represents the combined effort of the five chapters, the Navajo Nation and the State of New Mexico. The plan provides an evaluation of existing facilities in the leasehold and determines which facilities should remain on the property after P&M finishes using the mine's facilities and closes the mine. It also provides a conceptual land use plan for the affected area after the closure.

## **Purpose**

As the McKinley Mine moves toward closure in 2008, the Navajo Nation and the State of New Mexico have come together to formalize a reuse plan to demonstrate what will become of the lease area upon the mine's closure. Since the chapters are an integral part of the Navajo Nation, they were included in this project. Within the Fort Defiance Chapter, the Coalmine Diné Coalition, a consortium of grazing permit holders and their families, have come together to voice their concerns throughout the planning process.

With the termination date growing near, the pending planning process for reclamation and reuse offers many new opportunities for all the impacted parties including opportunities for economic and community development as well as grazing, range management and open space. Before such opportunities can be realized, the concerns of all entities and individuals who have participated in the planning process must be recognized. Thus, the wants, needs, and desires of the permit holders and other impacted families who have voiced their visions for the future throughout the process have been directly incorporated into this plan.

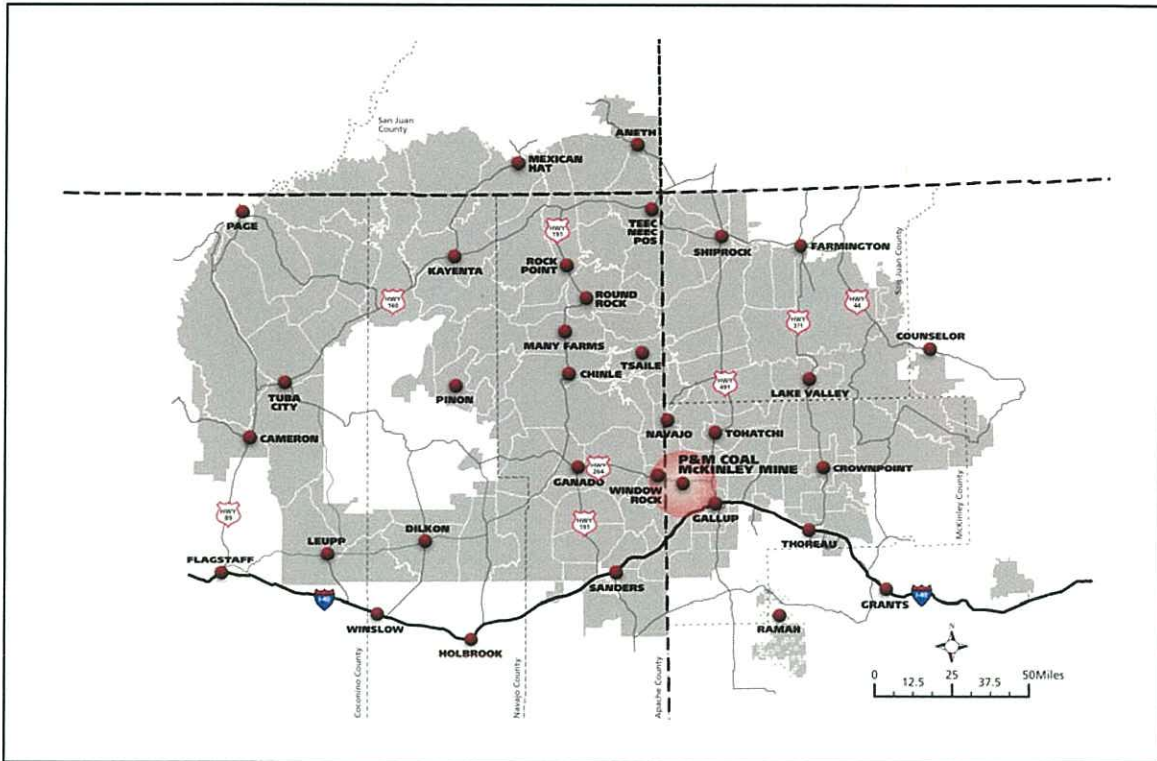


The purpose of the P&M McKinley Mine Reuse Plan and Feasibility Study is multi-fold. First, the study aims to inventory major mining related facilities within the mine's leasehold and assess the potential reuse of the facilities and land. Second, the plan will provide a conceptual post-mining reuse strategy that can be expanded upon in cooperation with and coordination by the five chapters, the Navajo Nation and the State of New Mexico.

More broadly, the study's intent is to provide a forum where effected parties could have a voice and express their viewpoints regarding the potential reuse of the facilities and areas under study. Further, the study documents the participants' opinions and recognizes their agreements with the mining companies so that those agreements can be honored and incorporated as the planning process develops.

Such a comprehensive plan will provide direction for future community and economic development with an eye towards generating employment opportunities within the Navajo Nation while also respecting the Navajo culture and traditional lifestyles, and previous agreements made with the mine.

Figure 1. Project Location



## 2. Project Setting

### Location

Located in northwest New Mexico, McKinley Mine is approximately 17 miles northwest of Gallup and 8 miles east of Window Rock, AZ, the Navajo Nation Capital along State Highway 264 (Figure 1). Within the State's boundaries, the mine is entirely situated within McKinley County where five Chapters are within or adjacent to the mine. The Tsayatoh Chapter covers a major portion of the leasehold, particularly in the checker board section to the south. Fort Defiance encompasses most of the northern half. Twin Lakes mainly lies within Township 17 North, Range 19 West where the mine juts out to the east. Both Rock Springs and St. Michaels also have interest in the reuse plan because they are in close proximity to the mine and many of the allottees reside within these chapters (Figure 2).

## Lease Boundaries

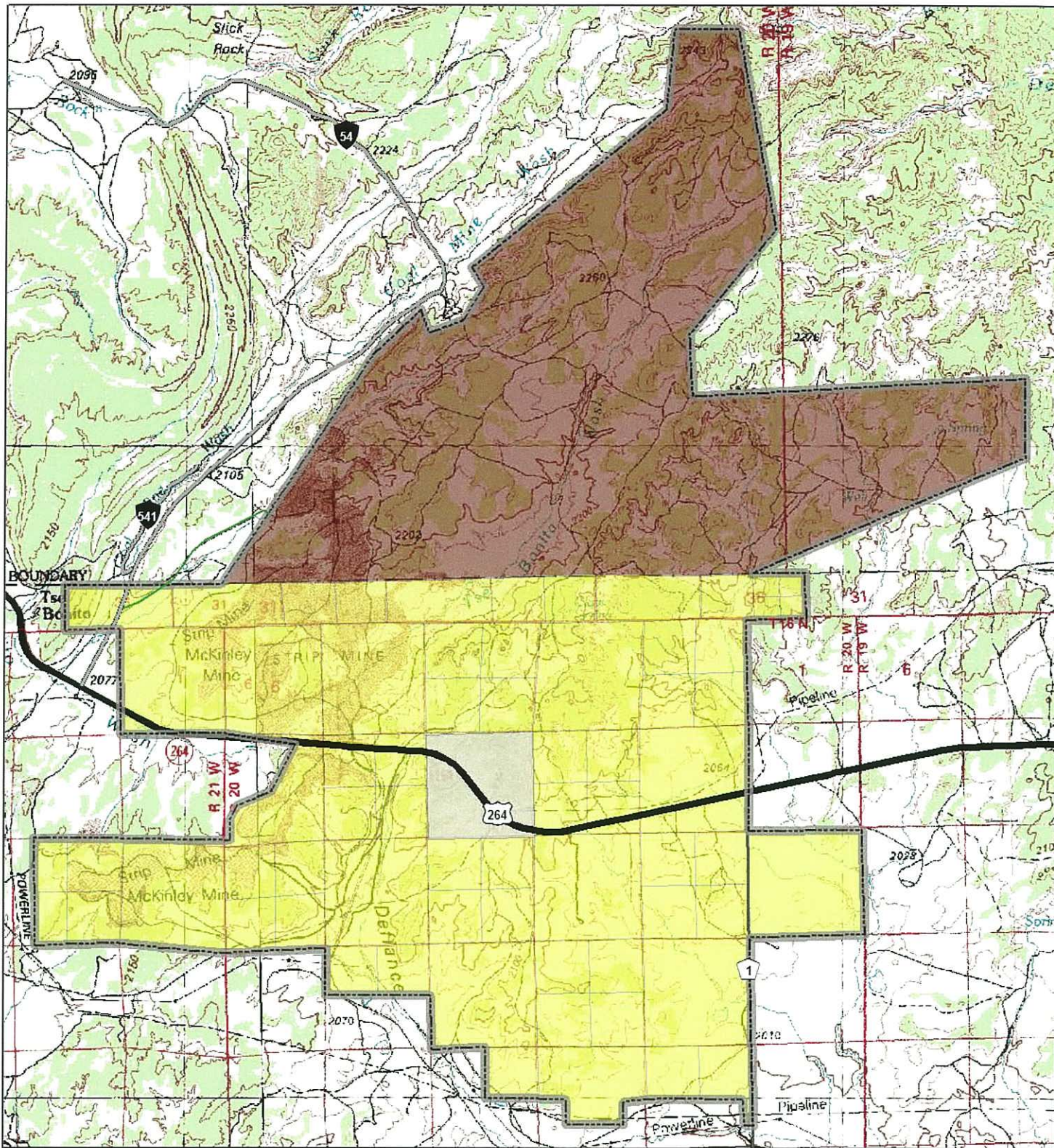
The initial Navajo Nation mining lease for McKinley Mine was signed in 1964 for 11,294 acres. McKinley Mine's boundaries are both on and off the Navajo Nation. The boundaries for the property are shown in Figure 3. The boundaries that lie within the Nation's border are referred to as the North Mine. The area south of the Nation's border, typically referred to as the checkerboard area because of the alternating pattern of land status between mainly private and Indian-owned allotments, is called the South Mine. The North Mine primarily lies in Township 17 North, Range 20 West. Only a small heel-like section extends into Township 17 North, Range 19 West. The South Mine primarily lies in Township 16 North, Range 20 West. Small portions extend east and west, into Ranges 19 and 21, respectively.

## Land Status and Ownership

The ownership of land within the McKinley Mine lease boundaries is listed in Table 1 and graphically depicted in Figure 4. A majority of the land within the boundaries is Navajo Trust Land (11,294 acres), with all of it found in the northern mine area. Another 1,848.5 acres just south of the Northern mine are Navajo Tribal Fee lands. A majority of the mine site is in a checkerboard pattern, with 7,428.06 acres as Indian allotments. Other landowners in the checkerboard area are Bureau of Land Management (758 acres), State of New Mexico (64.1 acres) and private fee surface ownership by Chevron USA (9,613.6 acres). The non-private land is leased to either P&M or Chevron USA for the sole purpose of coal mining.

Description	Township	Range	Sections	Acres
Navajo Tribal Trust	17 North	20 West	31–36	11,294
Navajo Tribal Fee	16 North	21 West	1	1,848.46
Indian Allotments	16 North	21 West	12	7,428.06
BLM	16 North	21 West	13–14, 23, 25	758
State of NM	16 North	21 West	15, 22, 27	64.09
Private	16 North	20 West	2–11, 13–19	9,613.56
<b>TOTAL ACRES:</b>				<b>31,006.17</b>





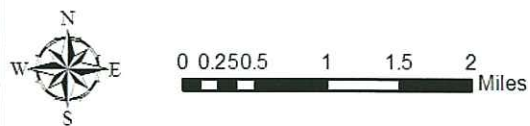
**Legend**

- Lease Boundary
- North Mine
- Not within Lease
- South Mine

**Roads**

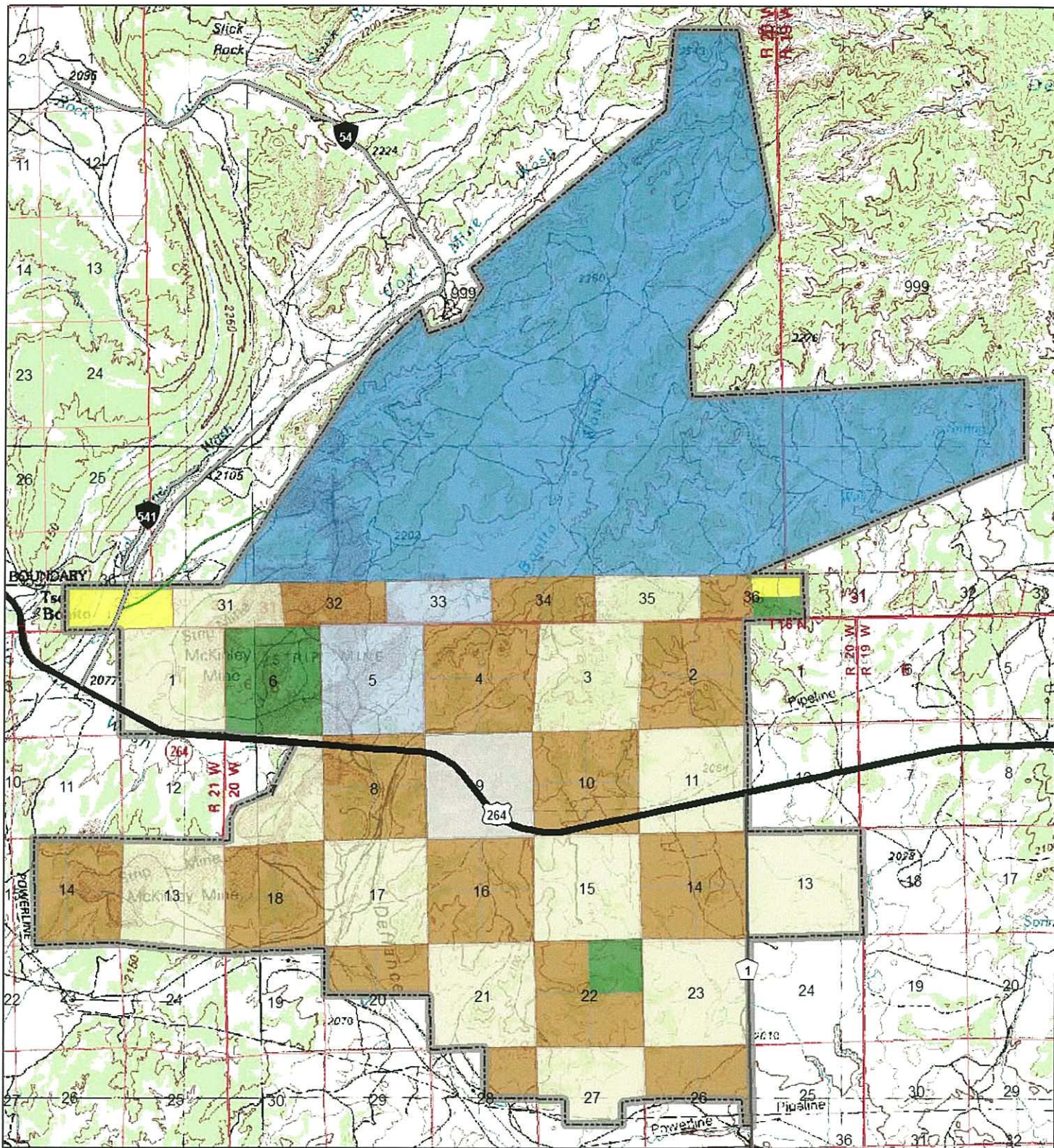
- State Highway
- County Road
- Indian Route
- North Mine Entrance

**Figure 3. Lease Boundaries**



Sources:  
 U.S. Geological Survey; P & M Coal Mining Company  
 Navajo Nation Land Department; Navajo Department of Transportation





**Legend**

- Lease Boundary
- Not within Lease

**Roads**

- State Highway
- County Road
- Indian Route
- North Mine Entrance

**Land Status**

- BLM
- Indian Allotment
- Navajo Indian Reservation
- Navajo Tribal Fee
- Private
- State

**Figure 4. Land Status**



0 0.25 0.5 1 1.5 2 Miles

Sources:  
 U.S. Geological Survey; P & M Coal Mining Company  
 Navajo Nation Land Department; Navajo Department of Transportation





## 3. McKinley Coal Mine

### Brief History

Most of the coal that is mined in New Mexico is in the San Juan Basin and in the Raton area in the north-central part of the State. New Mexico's coal varies from Pennsylvanian to Paleocene Age. Coal resources in the San Juan Basin are of the Late Cretaceous Age; those in Raton area are of the Paleocene Age. The demonstrated coal reserve base is 4.65 billion tons, or about one percent of the national reserves.

New Mexico coal, on and off Indian lands, has played an important economic role for several centuries. Early Spanish settlers used small amounts of coal. Then, commercial coal mining began in 1861 when the U.S. army opened a mine at the Carthage field for Fort Craig, New Mexico. By 1889, annual production exceeded one million tons when large amounts were used by the railroads and lead copper smelters. Later, coal production, stimulated by World War I, peaked in 1918 at more than



four million tons for use by smelters, factories, and railroads. Conversion of the railroads to diesel and the smelters and factories to natural gas caused a decline in the demand for coal. But by 1958, an increased interest in the use of coal came about when inexpensive stripping methods were instituted. With expensive coal, electric utilities in the Southwest began to increase their use of coal to produce electricity. Thus, there was a renewed increase in coal production.

This renewed need for coal in the U.S. prompted P&M, Chevron's wholly owned coal mining and marketing subsidiary, to develop mining operations in McKinley County. Spencer Chemical Company, a subsidiary of Gulf Oil, which owned P&M, began prospecting in 1961 and subsequently entered into a lease agreement with the Navajo Nation in 1964 to develop McKinley Mine. As a multiple seam strip mining operation, P&M achieved its 100 millionth ton of coal by 1995. In 2005, production value topped a record \$664 million, a five percent increase from 2004.

## Land Lease Agreements

Since the original exploration permits in 1961 were issued, lease agreements for the McKinley Mine were acquired by P&M. And P&M's parent company has changed because of various mergers (Table 2). Additionally, within the checker board area in the southern leasehold, P&M has leases with the Navajo Nation, the State of New Mexico, the BLM and the individual Indian allottees.

As per these lease agreements, royalty recipients differ depending on the land status and mining agreements. For example, P&M pays royalties to the Navajo Nation for coal that it mines within the Nation on Navajo Trust Lands in the northern mine area and on Navajo Fee Land in the leasehold's southern checker board area. In the northern mine area, P&M also pays grazing permittees for subleasing their grazing permits. In the checker board region, P&M has surface rights to certain areas but pays royalties to Peabody Western Coal Company for subsurface rights to the coal. Further, P&M has individual agreements with individual Indian allottees for allotment lands.



<b>Table 2. Current Lease Agreements</b>			
<b>Date</b>	<b>Title</b>	<b>Participants</b>	<b>Description</b>
April 1, 1961	Mining Lease	Santa Fe Pacific Railroad Company and Spencer Chemical Company (parent of P&M)	Lessee, Spencer Chemical Company acquires rights to remove all of the coal from the said land for a reasonable profit in compliance with the laws of NM
May 22, 1964	Mining lease for Coal and other mineral except oil and gas	Navajo Nation and P&M	Spencer Chemical Company assigns its mining interests to P&M April 20, 1964 and P&M acquires exclusive rights to prospect and develop coal reserves by strip, surface, open-face, quarry, shaft, slope or drift, store upon, transport across, prepare for sale and sell upon and from the northern leasehold.
April 18, 1969	Surface Lease	Tribal Indian Land Navajo Tribe, State of New Mexico and P&M	P&M acquires surface rights to Section 5, Township 16N, Range 20W, and a portion of Section 33, Township 17N, Range 20W
September 9, 1975	Assignment and Consent	Gulf Oil Corporation and P&M	P&M takes over all liabilities and responsibilities from Gulf Oil of the original mining lease dated April 1, 1961.
July 23, 1985	Amendment to Existing Mining Lease of Navajo Lands dated May 22, 1964	Navajo Nation and P&M	Royalties modified

## Regulatory Oversight

The coal-bearing regions of New Mexico underlie about 25,000 square miles or 20.6 percent of the total area of the state. The majority of the coal-bearing regions lie under Indian lands. The OSM regulates these areas. The MMD regulates the portion of the mine on the remaining coal-bearing regions.

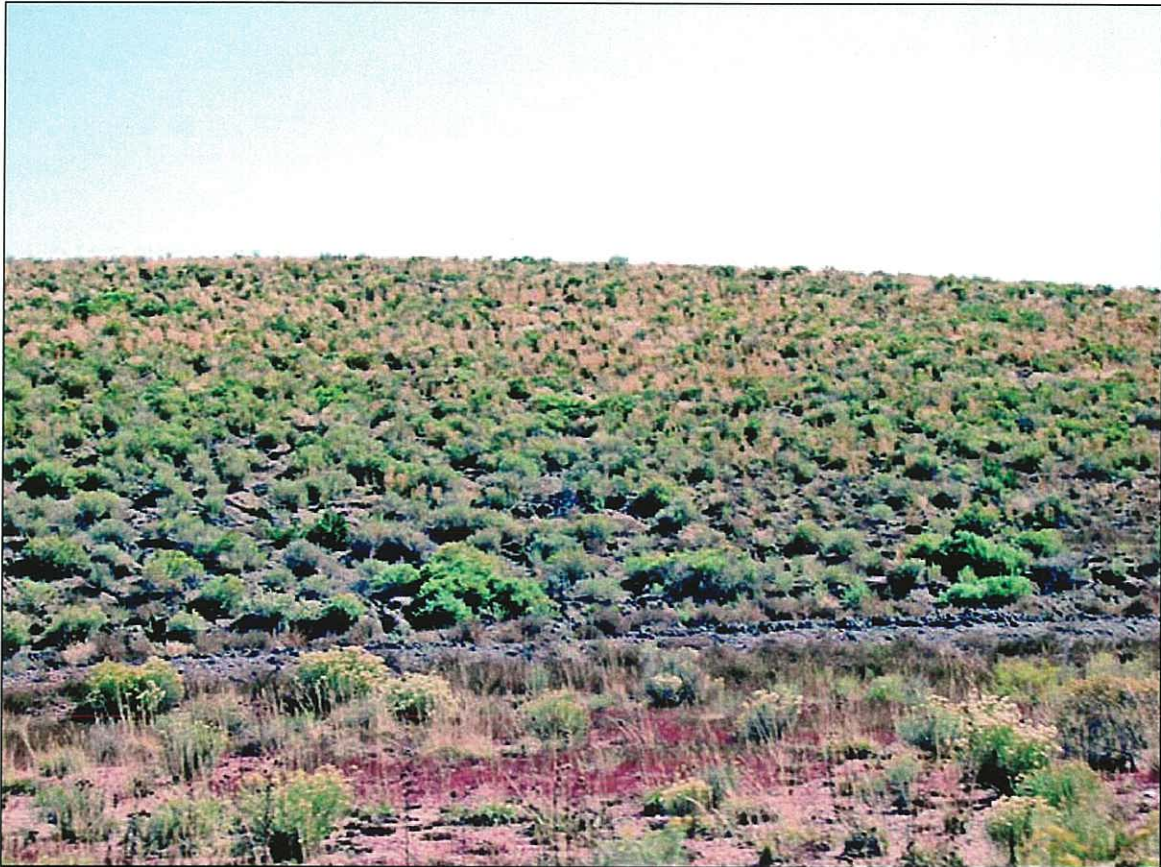
Because of the location across the Navajo Nation and the State of New Mexico for this particular mine, two separate mining permits are associated with the McKinley Mine. One permit is for the portion of the mine leasehold located on the Navajo Reservation, permitted through the OSM, and one permit is for the portion of the mine leasehold located off the Reservation, permitted through the MMD.

These agencies not only regulate safe and proper operation and reporting during the time of active mining operations, they also have jurisdiction even during and after any mine closure. Both OSM and MMD are tasked with the responsibility of holding P&M to their regulatory requirements as the mine heads towards closure. For instance, these agencies will continue to regulate the area after active coal mining ceases in 2008 and during the reclamation process. To this end, P&M will not receive a bond release from either agency until each agency is completely satisfied that all requirements are met or exceeded.

In 1977, the US Congress passed the *Surface Mining Control and Reclamation Act* of 1977 (SMCRA). Although the state already had a reclamation program, SMCRA reinforced the need for more thorough reclamation, and subsequently New Mexico was awarded primacy to enforce SMCRA within its boundaries.

SMCRA requires coal mining lands be reclaimed to meet a specific post mine land use. In this case, P&M chose to return the land to a post mine land use of grazing and wildlife habitat. To show proper reclamation, both the State and OSM require a minimum of 10 years after revegetation has occurred to demonstrate success.



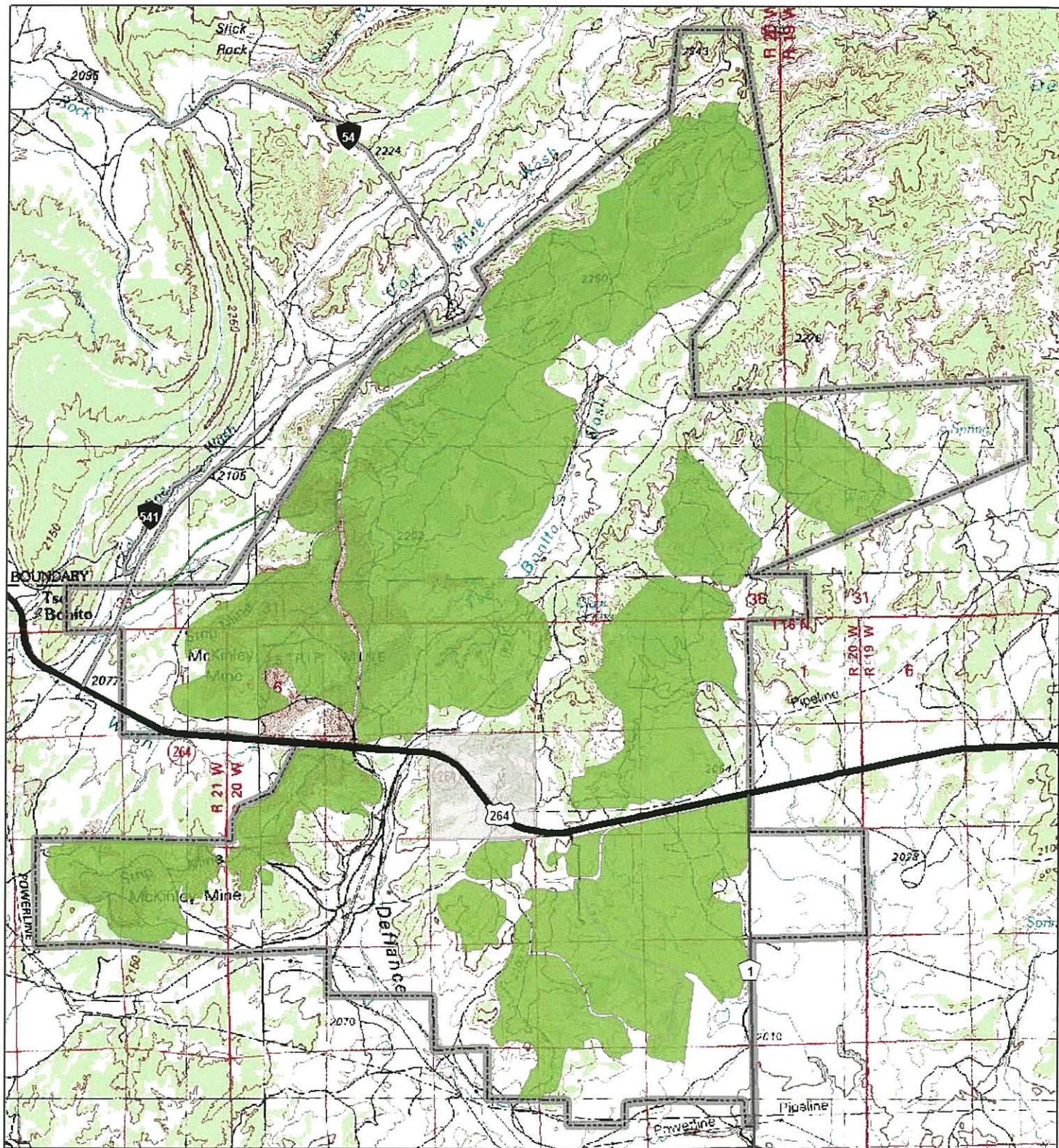


## 4. Site Assessment & Asset Inventory


### Areas of Reclamation

P&M is establishing plant communities on reclaimed lands that provide ground cover and productivity that is expected to be equal or superior to that occurring on undisturbed lands. The current post-mining land use plan identifies grazing as the primary land use. The grazing capacity of the mine area is planned for restoration by establishing a diverse and permanent vegetation community on the reclaimed areas as identified in Figure 5. The vegetation on reclaimed areas consists primarily of native grasslands and shrub-lands. This type of vegetation provides wildlife habitats that will permit joint use among native wildlife and grazing livestock.





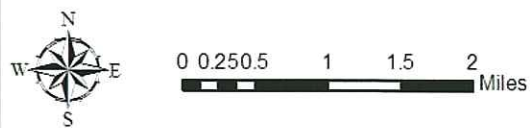
**Legend**

-  Lease Boundary
-  Reclaimed Areas
-  Not within Lease

**Roads**

-  State Highway
-  County Road
-  Indian Route
-  North Mine Entrance

**Figure 5. Reclaimed Areas**



Sources:  
 U.S. Geological Survey; P & M Coal Mining Company  
 Navajo Nation Land Department; Navajo Department of Transportation



## Transportation Facilities

Transportation facilities are summarized in Table 3. The roads within the leasehold area consist of primary and ancillary roads that are owned and maintained by P&M, in addition to non-mining and private roads.

<b>Table 3. Transportation Facilities</b>			
<b>Roadways</b>	<b>Description</b>	<b>Responsible Party</b>	<b>Comments</b>
Primary	Main haul roads are approximately 150 feet in width with a gravel surface.	P&M	Roads built by P&M are considered temporary and will be reclaimed unless approved by OSM as part of the post-mining land use plan. If the new owner decides the roads should remain they are usually narrowed to a standard width.
Ancillary	Any mine road not classified as a primary road. These are considered temporary and are in use only as required for active mining purposes.	P&M	Roads built by P&M are considered temporary and will be reclaimed unless approved by OSM as part of the post-mining land use plan. If the new owner decides the roads should remain they are usually narrowed to a standard width.
Non-mining related	Public Roads US Highway 264 County Road 1: graveled collector road Navajo Route 54 Navajo Route 541	NMDOT McKinley County BIA BIA	All public roads will remain upon mine closure, under the jurisdiction of the current authority.
Pit Ramps	Temporary roads located within active pit and spoil areas	P&M	Ramps are continuously removed upon completion of mining in pits. All ramps will be removed prior to time of mine closure.
Railroad	Mine is served by Burlington Northern & Santa Fe Railroad (BNSF).	BNSF to the reservation. Maintained through contract on the reservation through P&M.	Rail on reservation may need to be removed upon mine closure, unless requested by owner to retain the rail.

## Utilities

Utilities on the leasehold area include electric, water and sewer (Figure 6). Approximately 7,602 feet of power lines owned and operated by P&M exist within the leasehold area. P&M has responsibility for distribution of power over the entire mining property while the Navajo Tribal Utility Authority (NTUA) had short extensions into the mine. The main power lines extending to the mine are 115 KV, which are operated by Public Service Company of New Mexico from the Yah Ta Hey substation. Other lines shown on the utility map that are located on the leasehold area are owned by P&M. Electric lines will be removed upon closure of the McKinley Mine, unless otherwise requested by Navajo Nation as the new owner.

There is a high pressure gas transmission line crossing the southern mine area which owned and operated by El Paso Natural Gas (EPNG). This gas pipeline has its own right-of-way and will not be affected by the mine closure.

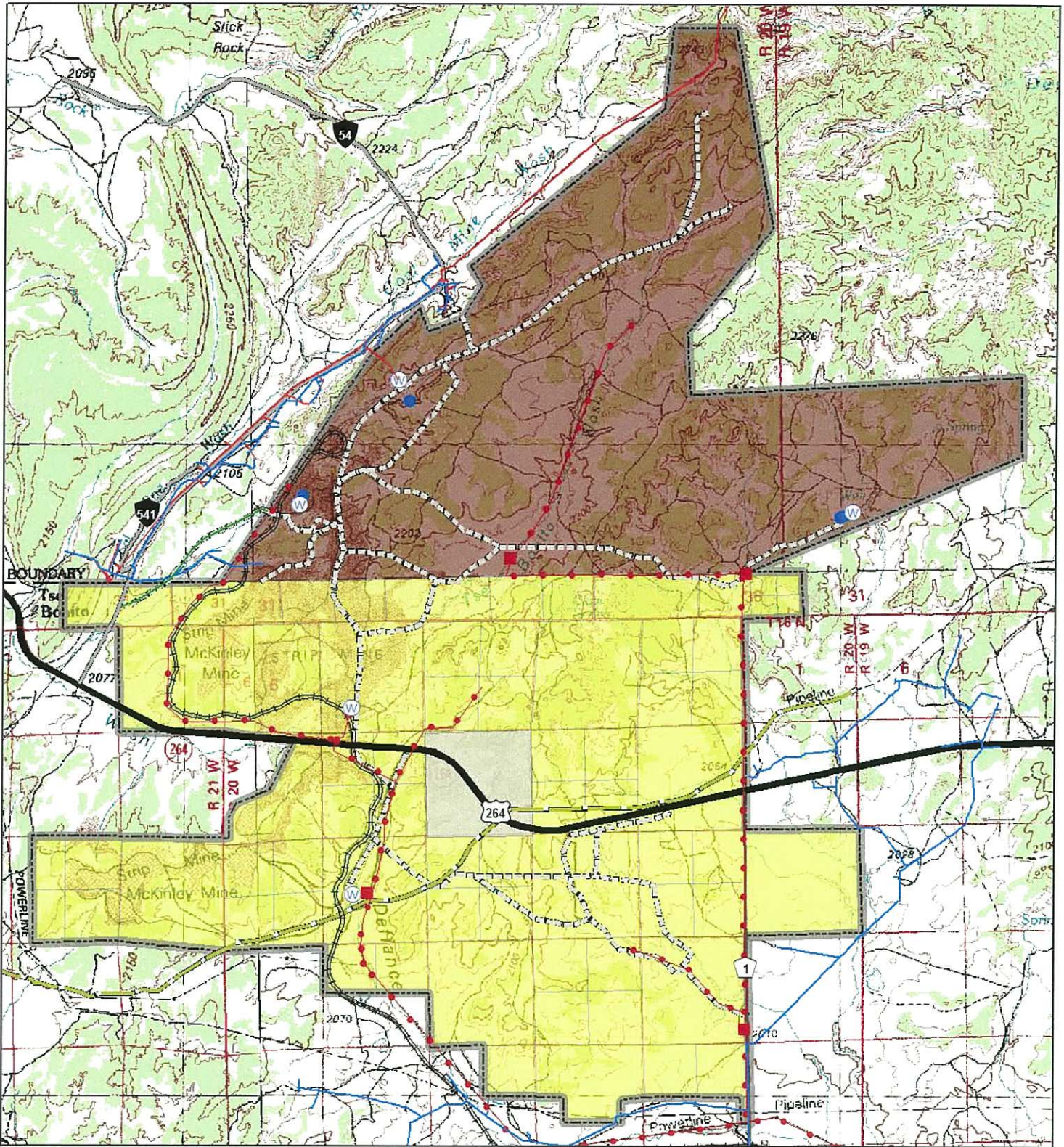
Communications include telephone, radio, television, internet and newspaper. Telephone service through Frontier Communications is available to the northern and southern mine areas. No cell towers exist within the leasehold area; although, there are towers located nearby off the mine property. The mine operations have a radio communication system consisting of a tower near the main office and a tower in Section 3, T17N, R20W. Internet service is available via modem and satellite connections.

## Water and Sewer Facilities

Information regarding water facilities is summarized in Table 4. Water facilities include water wells, tanks, and impoundment ponds. Three water wells in the northern mine area and two wells in the southern mine area provide the needed water supply to the mining operation. Some of the ponds are only temporary.

<b>Table 4. Water Facilities</b>			
	<b>Description</b>	<b>Responsible Party</b>	<b>Comments</b>
Water Wells and Tanks	<ul style="list-style-type: none"> <li>• Three existing wells on the Northern mine               <ul style="list-style-type: none"> <li>• #1: potable well with 50,000 gallon storage tank serving office and shop</li> <li>• #2: 500,000 gallon storage tank</li> <li>• #3: two storage tanks approximately 40,000 gallons each</li> </ul> </li> <li>• Two existing wells on the South Mine area:               <ul style="list-style-type: none"> <li>• Section 5 and Section 17 at South Mine area office</li> </ul> </li> </ul>	P&M	<ul style="list-style-type: none"> <li>• Wells were drilled by P&amp;M and permitted through either Navajo Nation or State of New Mexico.</li> <li>• Water wells may be left in place as the reclamation is completed at the Mine. Those to be left in place will be dependent on the well size and quality of water in the well, as determined by the Navajo Nation Department of Water Resources or State of NM. Any of these facilities will have to be maintained, likely by the appropriate regulatory agencies.</li> </ul>
Impoundment Ponds	Ponds are mostly temporary for sediment control	P&M	<ul style="list-style-type: none"> <li>• Ponds designated as "temporary" may be changed to permanent for livestock and wildlife watering on an individual basis, if requested by owner. Change in status would require appropriate agency approval, which includes certification by a registered professional engineer, etc. that the embankment will meet a specific storm event.</li> </ul>
Sewer Facilities	<ul style="list-style-type: none"> <li>• Office/shop sewer facility               <ul style="list-style-type: none"> <li>• Septic Tank located south of the office building. Leach field is northwest of office building</li> </ul> </li> <li>• Five onsite septic systems including leach fields are located at:               <ul style="list-style-type: none"> <li>• Security Building</li> <li>• Safety Building</li> <li>• Sample Prep Building</li> <li>• Tipple Office</li> <li>• Tipple Bathhouse</li> </ul> </li> </ul>	P&M	<ul style="list-style-type: none"> <li>• Sewer facilities will be removed upon mine closure along with buildings they serve, unless otherwise requested by new owner.</li> </ul>

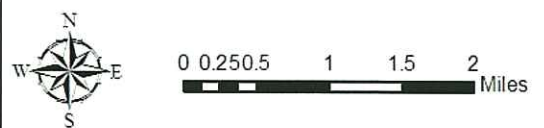




**Legend**

- |                     |                    |                        |
|---------------------|--------------------|------------------------|
| Lease Boundary      | 115 kV Power Line  | North Mine             |
| Not within Lease    | Substation         | South Mine             |
| <b>Roads</b>        | Water Well         | <b>Buildings</b>       |
| State Highway       | Water Storage Tank | Location of Buildings  |
| County Road         | NTUA Power Line    | 1 North Mine Buildings |
| Indian Route        | NTUA Water Line    | 2 North Mine Buildings |
| Mine Road           | EPNG Pipeline      |                        |
| North Mine Entrance | Railroad           |                        |

**Figure 6. Roads & Utilities**



Sources:  
 U.S. Geological Survey; P & M Coal Mining Company  
 Navajo Nation Land Department; Navajo Department of Transportation

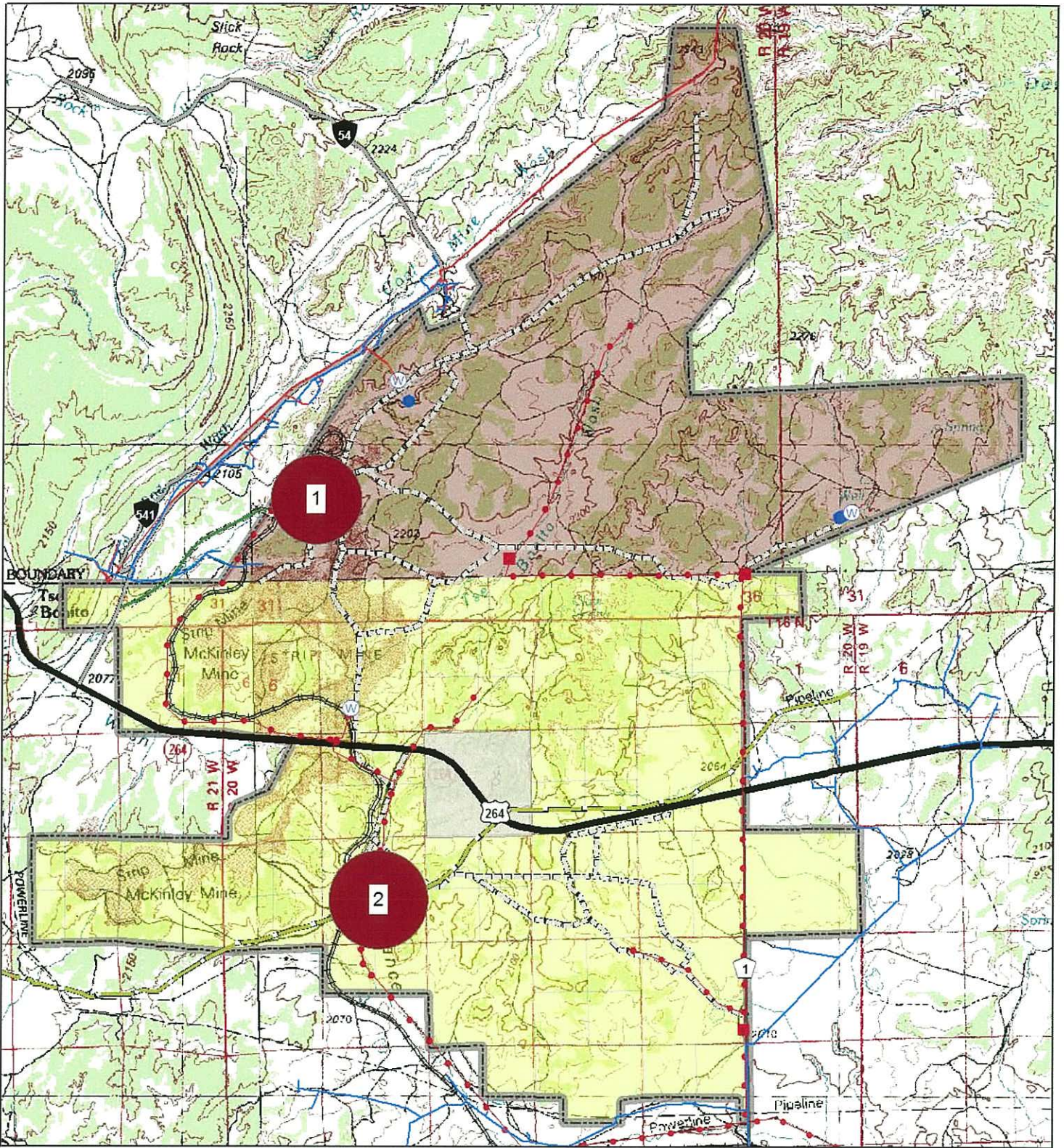


## Buildings

There are numerous structures of varying sizes and uses located in the leasehold. Those that have been determined to be of greatest potential for future use are identified in the following summary table (Table 5). General locations of the buildings in the North Mine and South Mine are shown in Figure 7.

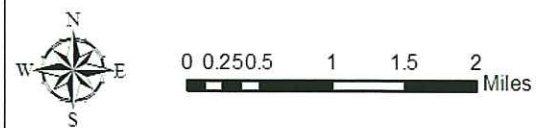
<b>Table 5. Buildings and Facilities</b>			
<b>Type</b>	<b>Description</b>	<b>Responsible Party</b>	<b>Comments</b>
Buildings	<ul style="list-style-type: none"> <li>• The main office and shop were initially built in 1974 and are of steel construction with concrete foundation and floor. The office was added onto in 1991. The office also contains a soils and coal lab.</li> <li>• The shop contains warehouse space, mechanical, welding, machine and electrical shops, with four overhead cranes: two 5 ton and two 15 ton. Three-phase electrical service is available.</li> <li>• The safety building is a one-story structure that was constructed in 1980. It is used for training and the mine ambulance/first aid.</li> <li>• Other buildings include the coal load-out, primary and secondary coal crusher, tippie shop and office, wash rack, two oil docks, bucket welding shop, 2C training trailer, known as the "chapter house", and security building at the mine entrance. Except for the "chapter house", all buildings are steel construction. Most of this infrastructure was built in 1974.</li> </ul>	<ul style="list-style-type: none"> <li>• P&amp;M</li> </ul>	<ul style="list-style-type: none"> <li>• Office is two stories consisting of 12,800 sq. ft. (6,400 sq. ft. per story)</li> <li>• Shop is 40,425 sq. ft.</li> <li>• Warehouse is 10,075 sq. ft.</li> <li>• Building is 2,600 sq. ft., of steel framework and metal siding.</li> </ul>





- Legend**
- Lease Boundary
  - Not within Lease
  - Roads**
    - State Highway
    - County Road
    - Indian Route
    - Mine Road
    - North Mine Entrance
  - 115 kV Power Line
  - Substation
  - Water Well
  - Water Storage Tank
  - NTUA Power Line
  - NTUA Water Line
  - EPNG Pipeline
  - Railroad
- Buildings**
- Location of Buildings
  - North Mine Buildings
  - North Mine Buildings
- Mine Areas**
- North Mine
  - South Mine

**Figure 7. Location of Buildings and Other Facilities**



Sources:  
 U.S. Geological Survey; P & M Coal Mining Company  
 Navajo Nation Land Department; Navajo Department of Transportation



## Coal Handling Facilities and Equipment

Information regarding coal handling facilities is summarized in Table 6. There are a number of structures of varying sizes that are currently used for the existing coal operations in the leasehold. Those that are determined to be of greatest potential for future use will depend upon the potential opportunities identified for economic development as part of this study. At this time, all coal handling facilities are scheduled to be removed when the mine is closed unless otherwise requested by the Navajo Nation as the new owner.

<b>Table 6. Coal Handling and Related Facilities</b>			
<b>Type</b>	<b>Description</b>	<b>Responsible Party</b>	<b>Comments</b>
Crusher and Hopper	<ul style="list-style-type: none"> <li>Approximately 60 X 70 feet and 65 feet deep concrete silo. Primary crusher is located under the steel hopper within the silo.</li> </ul>	<ul style="list-style-type: none"> <li>P&amp;M</li> </ul>	<ul style="list-style-type: none"> <li>All coal handling facilities are designed for operation to meet a specific use. All will be removed upon mine closure, unless a relevant use can be identified.</li> </ul>
Coal Stockpile and Prepared Coal Stockpile	<ul style="list-style-type: none"> <li>Coal stockpile is 400 X 800 feet, as storage area prior to being dumped into the hopper.</li> <li>Prepared Coal Stockpile is 300 X 900 feet, holding prepared coal for shipment to customers.</li> </ul>		
Bucket Shop, Sample Preparation, Load-Out, Tipple Shop, Sampling Building, Secondary Crusher and Screen	<ul style="list-style-type: none"> <li>All structures are concrete slab floors, varying in size depending on use, with metal frame and sheeting. Conveyor structures connect coal processing buildings to Load-Out.</li> </ul>		
	<ul style="list-style-type: none"> <li>Transformer installations and Motor Control Centers are in or adjacent to some of the buildings.</li> </ul>		



## 5. Market Trade Area & Socioeconomic Conditions

### Introduction

A market trade area has been identified that will serve as the area of analysis related to the impact of the mine closure and potential impact of future uses on the mining property. Criteria used in identifying a trade area include:

- Employees place of residence;
- Location of ancillary businesses that support existing mine operations;
- Area in which employees primarily and secondarily obtain services and goods;



- Economic and fiscal factors, such as government revenues and receipts from mining and potential development, as well as requirements for providing services and infrastructure related to potential future economic development activity; and
- Travel corridors associated with economic activities.

## Market Trade Areas

For purposes of analysis, the primary trade area is the area where direct and secondary impacts for the McKinley Mine are likely to be felt and will have the greatest effect. The socioeconomic information presented for this analysis includes population data, employment and labor force information, public service and facility conditions, and fiscal impacts on governmental entities resulting from the closure of the mine.

The primary trade area surrounding the mine include the mine and jurisdictional boundaries. The jurisdictions that are analyzed in detail as the primary trade area and characterized for this study are:

- Navajo Nation;
- St. Michaels, AZ;
- Tsayatoh, NM;
- Rock Springs, NM;
- Fort Defiance, NM;
- Twin Lakes, NM;
- Gallup, NM; and
- Tse Bonito, NM.

Based upon discussions with mine officials, it is estimated that the majority of mine employees reside within a 30–40 mile radius of the mine. It is estimated that about 90 percent of all employees are Navajo, with the great majority living on the Navajo Nation. The remaining 10 percent of employees are reported to reside primarily in Ganado, Window Rock, Gallup, Twin Lakes and Standing Rock.

In this study, the trade area varies depending upon the social or economic issue that is being addressed. For example, the social and cultural impacts for those living within the immediate area surrounding the mine are different than the impact on residents living elsewhere on or off of the Navajo Reservation. The economic impact is also different in scope when analyzing the Navajo Nation, McKinley and Apache Counties, and the State of New Mexico in terms of revenues received and services provided in relation to the operation of the mine and potential new development.

In addition to the economic and social impact of the mine on the primary trade area, the social and economic influence of the mine extends in varying degrees on a geographic basis, depending upon the social or economic factors that are considered. In this case, the impacts encompass, to a varying degree, the following jurisdictions that comprise a secondary trade area:

- Navajo Nation;
- McKinley County, NM;
- Apache County, AZ; and
- State of New Mexico.

For these reasons, this study also analyzes these jurisdictions in detail, as well as the state of Arizona for comparative purposes.

There are also some indirect impacts on other communities, such as Farmington, NM. These impacts result primarily from support services and trade activities provided by these communities for employees and their families, resulting in limited economic benefits to those cities.

## Location of Services and Goods

An estimated 90 percent of the mine's employees live on the reservation, the majority of which, commute to Gallup, NM and/or Window Rock, AZ to obtain services and goods. Gallup, NM is the largest city in the area and offers a broader range of goods and services when compared to Window Rock. The bulk of ancillary businesses that support current mine operations are located in Gallup, NM. Such businesses include machinery companies that specialize in mining equipment, auto parts shops, glass shops and plumbers. The major corridor for employees traveling to Gallup is Highway 264 east-west, then Highway 491 south to Gallup.

## Socioeconomic Conditions and Analysis

The purpose of this section is to identify and analyze the historical and current conditions and trends related to social and economic characteristics of the communities within the primary and secondary trade areas.

### *DEMOGRAPHICS AND HOUSEHOLDS*

Within the Navajo Nation, there are 110 chapters; five chapters are located within the primary trade area of the McKinley Mine. The total population of these five Navajo chapters was 15,325 in 2000, which represents about 10 percent of the Nation's total population.

With the five chapters and Gallup, NM (Tse Bonito 1990 Census data is not available), the population of the primary trade area increased by approximately 1.4 percent from 1990 to 2000. Areas that increased in population over the ten-year span were: St. Michaels, Twin Lakes and Gallup, NM. The Navajo Chapters of Fort Defiance, Rock Springs, and Tsayatoh decreased in population during the same time period; however, Rodgers (2004) estimates indicate the primary trade area population will increase, growing approximately 3.5 percent between 2000 and 2004. Table 7 identifies population and household trends and characteristics for the primary trade area, as well as comparisons to other relevant jurisdictions



<b>Table 7. Population and Household Characteristics</b>				
	<b>Population (1990)</b>	<b>Population (2000)</b>	<b>Population (est. 2004)</b>	<b>Households (2000)</b>
Arizona	3,665,228	5,130,632	5,832,150**	1,901,327
New Mexico	1,515,069	1,819,046	1,903,006***	677,971
Navajo Nation	128,356	155,214	187,152****	31,295
Fort Defiance Chapter	5,881*	5,501*	6,185****	1,576
Rock Springs Chapter	1,295*	986*	1,066****	243
St. Michaels Chapter	5,255*	5,867*	6,607****	1,611
Twin Lakes Chapter	1,952*	2,240*	2,419****	607
Tsayatoh Chapter	1,288*	731*	803****	213
Gallup, NM	19,340 ***	20,209	19,715****	7,349
Tse Bonito, NM	Not Available	261	Not Available	78
Apache County, AZ	61,591	69,423	72,045****	19,971
McKinley County, NM	60,686	74,798	72,531	21,476
Sources: US Census 2000				
* Navajo Nation: Chapter Images (2004)				
**AZ Department of Economic Security (2005)				
*** University of NM, Bureau of Business and Economic Research				
****Navajo Nation Division of Economic Development (2005)				
(1) A household includes all the people who occupy a housing unit as their usual place of residence.				

## AGE

The Navajo Nation has a relatively young population when compared to other jurisdictions, as summarized in Table 8. The percent of residents that are of school age is consistently higher when compared to the states of New Mexico and Arizona. The percent of Gallup, Tse Bonito, Apache County and McKinley County school aged residents are lower than on the Navajo Nation but higher than both states. The percent of the population over 65 years of age is typically lower on the Navajo Nation than other jurisdictions. These two characteristics of the population result in a comparatively low median age for Navajo Nation when compared to the State of New Mexico and Arizona. The median age of residents within the primary trade area (26.5) is about two years older when compared to the Navajo Nation (24.1).

	<b>Total Population</b>	<b>School Aged 5-19 (%)</b>	<b>Age 65 or older (%)</b>	<b>Median Age (Years)</b>
Arizona	5,130,632	22.1	13.0	34.2
New Mexico	1,819,046	22.8	11.7	34.6
Navajo Nation	155,214	34.9	7.0	24.1
Fort Defiance Chapter	5,501	35.7	5.0	25.4
Rock Springs Chapter	986	36.3	4.6	22.4
St. Michaels Chapter	5,867	31.6	5.6	26.0
Twin Lakes Chapter	2,240	32.5	5.9	24.6
Tsayatoh Chapter	731	32.5	9.2	28.2
Gallup, NM	20,209	27.5	9.0	31.1
Tse Bonito, NM	261	28.3	5.4	27.8
Apache County, AZ	69,423	32.9	8.3	27.0
McKinley County, NM	74,798	32.2	6.9	26.9

Source: US Census 2000

## HOUSING

Housing characteristics for the primary trade area are summarized in Table 9. The median home value for the communities in the primary trade area, with the exception of Gallup, NM, and the Navajo Nation is well below the median home value for the State of New Mexico and for Apache County, AZ and McKinley County, NM. On the other hand, the median home value for all communities in the primary trade area is typically higher than the values for the Navajo Nation.

Single-family attached and detached homes represent the majority of the housing types. In the primary trade area, mobile homes comprise about 18.7 percent of all housing units; the Navajo



Nation and the State of New Mexico have similar numbers of mobile homes as the primary trade area. However, Apache County, AZ and McKinley County, NM and the State of Arizona all have a lower percentage of mobile homes when compared to the primary trade area.

	Total Housing Units		Type of Housing Unit (2000) (1)		Median Home Value (2000)
	1990	2000	Single	Mobile Home	
Arizona	1,659,430	2,189,189	1,375,489	302,575 (13.8%)	\$ 121,300
New Mexico	632,058	780,579	511,283	145,087 (18.6%)	\$ 108,100
Navajo Nation	48,385	59,498	45,576	11,118 (18.7%)	\$ 23,800
Fort Defiance Chapter		794	647	82 (10.3%)	\$ 34,000 *
Rock Springs Chapter		366	280	86 (23.5%)	\$10,000 *
St. Michaels Chapter		1,894	1,210	458 (24.2%)	\$ 60,100 *
Twin Lakes Chapter		836	632	204 (24.4%)	\$14,300 *
Tsayatoh Chapter		307	262	35 (11.4%)	\$ 27,100 *
Gallup, NM	6,204	7,349	4,263	1,374 (18.4%)	\$ 97,000
Tse Bonito, NM	Not Available	180	46	108 (60.0%)	\$ 22,500
Apache County, AZ	26,731	31,621	22,993	6,317 (20.0%)	\$ 41,700
McKinley County, NM	20,933	26,718	18,001	6,341 (23.7%)	\$ 57,000
Source: US Census 2000 Navajo Nation Division of Economic Development (2005) *					
(1) A housing unit is house, an apartment, a mobile home, or trailer, a group of rooms, or a single room occupied as separate living quarters, or if vacant, intended for occupancy as separate living quarters.					

### HOUSING CONDITION

The condition of housing is generally characterized by the age of the homes and the availability of basic facilities such as plumbing and heating. Complete plumbing facilities are defined as hot and cold piped water, a bathtub or shower, and a flush toilet. As shown in Table 10, the percentage of homes lacking complete plumbing facilities is lower for communities within the primary trade area (with the exception of Rock Springs and Tsayatoh Chapters) than the majority of homes throughout the Navajo Nation. The figures, however, are still considerably higher when compared to the State and Apache and McKinley Counties. Many of the residents in the area, as is typical throughout the Reservation, depend upon cistern systems for water, often hauling water substantial distances on a weekly basis.

Most households on the Navajo Nation and those within the primary trade area rely on either gas or wood for fuel.

While the Navajo Tribal Utility Authority (NTUA) does provide electric service to the general area, a number of residences are not connected to the electrical system due to the infeasibility of providing service to the scattered site, single unit housing that is often on relatively isolated home sites.

	Year Built		Type of Heating Fuel				Plumbing Facilities
	Prior to 1990	1990 - 2000	Electric	Wood	Coal	Gas <sup>(1)</sup>	Lacking Complete Plumbing
Arizona	1,547,891	641,298	1,033,095 (47%)	39,842 (2.1%)	933 (0.1)	811,404 (42.7%)	39,632 (1.8%)
New Mexico	601,764	178,815	78,671 (11.6%)	34,666 (5.1%)	628 (0.2%)	557,101 (82.2%)	11,905 (1.8%)
Navajo Nation	42,353	17,145	3,255	20,896	888		26,930 (45.3%)
Fort Defiance Chapter	1,431	575	135 (8.6%)	497 (31.8%)	27 (1.7%)	866 (55.4%)	170 (31.7%)
Rock Springs Chapter	263	103	0	109 (48.2%)	0	117 (51.8%)	103 (45.6%)
St. Michaels Chapter	1,534	360	129 (7.9%)	594 (36.2%)	41 (2.5%)	879 (53.5%)	166 (10.1%)
Twin Lakes Chapter	601	235	25 (3.9%)	344 (53.4%)	15 (2.3%)	244 (37.9%)	242 (37.6%)
Tsayatoh Chapter	224	83	0	135 (69.9%)	0	45 23.3	199 (47.5%)
Gallup, NM	6,104	1,214	500 (7.3%)	72 (1.1%)	0	7,227 (91.3%)	59 (0.9%)
Tse Bonito, NM	89	91	0	0	11 (9.7%)	102 (90.3%)	0
Apache County, AZ	23,797	11,189	1,553 (7.8%)	10,085 (50.5%)	297 (1.5%)	7,494 (37.5%)	5,155 (25.8%)
McKinley County, NM	19,836	6,882	1,284 (6.0%)	6,854 (31.9%)	129 (0.6%)	12,965 (60.4%)	3,917 (18.2%)

Source: US Census 2000  
1) Gas includes both utility gas and gas that is housed in a tank or LP Gas.



**RACE AND ETHNICITY**

According to the U.S. Census 2000, the majority of the population in the area is American Indian, and most of the mine's employees (90 percent) are Native Americans (Table 11).

<b>Table 11. Ethnicity Characteristics</b>							
	<b>Navajo Nation</b>	<b>Tse Bonito, NM</b>	<b>Gallup, NM</b>	<b>Apache County, AZ</b>	<b>Arizona</b>	<b>McKinley County, NM</b>	<b>New Mexico</b>
American Indian/ Alaska Native	149,423	186	7,404	53,375	255,879	55,892	173,483
White	3,861	59	8,106	13,536	3,873,611	12,257	1,214,253
Black/African American	128	0	219	173	158,873	296	34,343
Asian, Hawaiian, Pacific Islander	135	1	308	132	98,969	376	20,758
Hispanic/Latino <sup>+</sup>	1,914	11	6,699	3,119	1,295,617	9,276	765,386
Source: US Census 2000							
+ Note-Hispanic/Latino may be of another race.							

**MOBILITY**

The percentage of residents living on the Navajo Nation in 2000 that were also born there is a significantly higher in comparison to the State of New Mexico (Table 12); however, Apache and McKinley Counties have a similar percentage as that of the Navajo Nation. This is also the case for residents living in the same house since 1995. This is consistent with the tradition that tribal members tend to settle in one location, particularly remaining in an area to maintain close family connections; on the other hand, Arizona has one of the highest in-migration rates in the country.

	Navajo Nation	Gallup, NM	Tse Bonito, NM	Apache County, AZ	Arizona	McKinley County, NM	New Mexico
Place of Birth	Number (percent) of residents						
Arizona or New Mexico	123,317 (79%)	11,943 (58.9%)	84 (30.2%)	49,129 (70.8%)	1,779,492 (34.7%)	55,533 (74.2%)	937,212 (51.5%)
Other US State	31,552 (20.5%)	7,254 (35.8%)	194 (69.8%)	19,579 (28.2)	2,639,275 (51.4%)	17,654 (23.6%)	713,596 (39.2%)
Outside US	585 (0.5%)	164 (0.8%)	0	(0.2%)	711,865 (13.9%)	272 (0.4%)	18,632 (1.0%)
New Residents Since 1995	Number (percent) of residents						
Same House in 1995	105,335 (75%)	9,346 (50.3%)	146 (54.5%)	44,593 (70.6%)	2,103,907 (41%)	47,405 (69.8%)	919,717 (54.4%)
Different House in 1995	35,210 (25%)	8,944 (48.2%)	76 (28.4%)	18,140 (28.7%)	2,648,817 (51.6%)	19,985 (29.4%)	731,488 (43.3%)
Source: U.S. Census Bureau (2000)							

### EMPLOYMENT AND INCOME

The total labor force, employment and unemployment figures for the Navajo Nation are summarized in Table 13. The Arizona Department of Economic Security and the New Mexico Department of Labor provide monthly data on unemployment and labor force for jurisdictions in each respective state. This data, however, does not consider the unemployed that are no longer eligible for unemployment benefits. The numbers do not accurately reflect the true number of unemployed on the Navajo Reservation. For example, the Arizona figures showed an unemployment rate of 23.5 percent in 2000 for the Navajo Nation. The Navajo Division of Economic Development (DED) also collects figures based upon more complete surveys of Navajo Nation residents that showed an unemployment rate of about 47.6 percent for the same period. The Department also provides an Indian Labor Force Report to the U.S. Department of Interior every two years, which excludes all non-Indians from the calculations. The unemployment rate from this report in 1999 was 53.88 percent, and 52.2 percent in 2001. Using 1986 figures from Robinson (1988), which are based upon information from the Navajo Nation at the time, the unemployment rate for the Navajo Nation has increased from 40.6 percent in 1986 to 47.57% in 2003, which is the latest data from the DED.

According to the DED, major employers on the Navajo Nation in 2002 were the Navajo Nation (8,000), the State of Arizona, including school districts (4,200); State of New Mexico



including school districts (2,000), Navajo Area Indian Health Services (3,000), BIA Office of Indian Education (2,300), State of New Mexico (1,300) Peabody Energy (690) and McKinley Mine (300).

<b>Table 13. Labor Force, Employment and Unemployment Characteristics</b>					
<b>Arizona</b>					
Year		Labor Force	Employment	Unemployment	Unemployment Rate
2005		2,844,000	2,710,1000	133,900	4.7%
2004		2,762,612	2,630,988	131,614	4.8%
2003		2,690,294	2,593,359	150,935	5.6%
2002		2,667,477	2,502,720	164,757	6.2%
2001		2,577,933	2,456,515	121,418	4.7%
2000		2,489,348	2,390,899	98,449	4.0%
1990		1,806,323	1,707,287	99,036	5.5%
Source: Arizona Department of Economic Security (2005)					
<b>New Mexico</b>					
2005		935,888	866,724	49,164	5.3%
2004		914,538	862,422	52,116	5.7%
2003		896,118	840,422	52,696	5.9%
2002		875,631	827,303	48,328	5.5%
2001		863,682	821,003	42,679	4.9%
2000		852,293	810,024	42,269	5.0%
1990		711,981	663,698	48,193	6.8%
Source: New Mexico Department of Labor					
<b>Navajo Nation</b>					
2003		58,101	30,464	26,286	47.57%
2002		57,062	30,776	26,286	46.07%
2001		56,054	32,420	23,634	42.16%
2000		55,041	30,818	24,223	44.01%
1986*			40,742		40.6%
Source: Navajo Nation Department of Economic Development (2005)					

According to the “Comprehensive Economic Development Strategy of the Navajo Nation”, prepared by the DED, there are several key characteristics of the Navajo Nation labor force. For example, the number of employees has changed very little since the DED began to collect data in 1991. The figure is generally in the area of 30,000 employees. On the other hand, more people are becoming eligible for the work force, resulting in a need to create up to 3,544 new jobs each year. It is estimated that about 200 jobs per year are created on the Navajo Nation.

Most of the jobs are in the support services sector, which is demonstrated in Table 14. Contrarily, the “basic industries” that bring jobs and income from outside the Reservation (such as manufacturing, agriculture, mining, tourism) are few in comparison.

There are a number of arts and crafts vendors, as well as food vendors who sell their products at roadside stands and flea markets on and off the reservation. These individuals are not counted as officially employed, nor are their income counted in the personal income for the Navajo Nation.

As indicated in Table 14, the Government and Services sectors represent the greatest proportion of employment for the Navajo. The Government employment is considerably higher than Apache County, McKinley County, and the States of Arizona and New Mexico, most likely reflecting a lack of private sector jobs.

Within the Navajo Nation, mining represents a much higher percent of industry employment, which is to be expected given the number of mining operations on the reservation. It should be noted that the “Total Employment” figures in Table 14 vary from those identified in Table 13, as the figures in Table 13 are from the State of New Mexico and tribal sources, while the figures in Table 14 are from the U.S. Census 2000.

Industry Sector	Navajo Nation		Apache County, AZ	Arizona	McKinley County, NM	New Mexico
	1986*	2000**	2000***	2000***	2000***	2000***
Farm, Agriculture Services, Forestry, Mining and Other	8.3	5.6	3.1	1.0	2.3	4.0
Construction	2.9	2.8	10.9	8.7	7.4	7.9
Manufacturing	5.0	1.2	2.6	10.2	6.2	6.5
Transportation and Public Utilities	11.4	7.1	8.7	7.8	5.4	7.1
Retail and Wholesale Trade	9.1	9.9	9.1	15.5	16.9	14.9
Fire	2.3	1.4	2.8	7.9	3.5	5.5
Services/Other	36.6	47.2	50.2	43.0	48.9	46.0
Government	24.4	24.8	12.6	5.0	9.5	8.0
<b>Total Employment</b>	<b>40,742</b>	<b>30,818</b>	<b>16,469</b>	<b>2,233,004</b>	<b>21,940</b>	<b>763,116</b>
Sources: * Robinson, 1988 and Denver Research Institute ** Navajo Nation Division of Economic Development (2005) *** U.S. Census Bureau (2000) a: FIRE: Finance, Insurance and Real Estate						

Data for employment characteristics at the chapter level is generally not available from the U.S. Census, but there is information available for areas identified as “Census Designated Places



(CDPs)". The Census Bureau defines CDPs as "communities" that do not have separate municipal government, but in many ways resemble cities or villages. CDPs are delineated to provide data for settled concentrations of population that are identifiable by name but are not legally incorporated. The boundaries are defined in cooperation with local or tribal officials, but are not fixed. CDP boundaries may change from one census to the next to reflect changes in settlement patterns.

Within the primary trade area, there are six CDPs for which detailed employment information is available: Rock Springs; Twin Lakes; St. Michaels; Window Rock and Fort Defiance. Data for these areas is shown in Table 15 and provides an indication of the types of employment by industry in the primary trade area, Gallup, NM. A census tract is also included in Table 15. Census tracts are similar to CDPs in size; however, they often follow governmental unit boundaries.

The primary industry for employment in these communities is the service sector, which is consistent with the findings for the Navajo Nation. These services include health care and educational services, which are both significant sources of employment for the Navajo. Information from Rogers (2004) prepared for the Navajo Nation Division of Community Development shows major employers in the vicinity of the primary trade area are Navajo Nation, Gallup-McKinley County Schools, Indian Health Services, Bureau of Indian Affairs, Gallup Indian Medical Center, Navajo Tribal Utility Authority, P&M and the City of Gallup.

Table 15. Percent Employment by Industry Sector: Census Designated Places								
Industry Sector	Fort Defiance, AZ	Rock Springs, NM	St. Michaels, AZ	Twin Lakes, NM	Yah-ta-hey, NM	Window Rock, AZ	Gallup, NM1	Tse Bonito, NM
Farm, Agriculture Services, Forestry, Mining and Other	1.1	0.0	6.7	3.8	13.0	1.1	1.7	0.0
Construction	7.0	0	2.3	10.4	0	8.2	4.9	6.5
Manufacturing	2.0	7.0	7.3	3.8	10.9	1.4	3.8	0
Transportation and Public Utilities	5.0	7.6	1.3	0	5.0	6.4	4.1	0
Retail and Wholesale Trade	6.8	7.0	7.5	28.1	20.5	6.7	19.9	18.5
FIREa	3.6	7.0	5.7	2.8	4.6	2.7	5.0	4.6
Services/Other	55.8	59.2	50.8	34.7	30.5	44.6	51.2	39.3
Government	16.0	12.2	14.0	16.6	15.5	25.8	7.8	21.3
Total Employment	1,078	172	386	289	239	971	8,243	216
<p>Gallup, NM is a Census Tract. Census defines a census tract as a small, relatively permanent statistical subdivision of a county delineated by a local committee of census data users for the purpose of presenting data. Census tract boundaries normally follow visible features, but may follow governmental unit boundaries and other non-visible features in some instances; they always nest within counties.</p> <p>Source: U.S. Census Bureau (2000) a: FIRE: Finance, Insurance and Real Estate</p>								

**INCOME**

The per capita income and median family income for residents within the primary trade area is shown in Table 16. The median family income for residents within the primary trade area is \$24,530, which is comparable to that for the Navajo Nation, but still well below the median family income for Apache and McKinley Counties and the States of Arizona and New Mexico.

The percent of persons below poverty level, as defined by the U.S. Census Bureau, is very high for communities in the primary trade area, as well as for the Navajo Nation. This is consistent with the high unemployment rate found in the area. It is likely that the percent below poverty level is underestimated for the Navajo, as is the case with unemployment. Figures for median income of P&M employees were not available. The closing of the mine will have an impact on the unemployment rate for the area, with the loss of about 300 jobs. Although some employees will be retiring or relocating, most are expected to remain in the area.

	<b>Per Capita Income</b>	<b>Median Family Income</b>	<b>Persons Below Poverty Level</b>	<b>% Below Poverty Level</b>
Arizona	\$20,275	\$46,723	698,669	13.6 %
New Mexico	\$17,261	\$39,425	328,933	18.4%
Navajo Nation	\$7,486	\$23,209	65,001	41.9 %
Fort Defiance Chapter	\$9,603	\$32,137	387	31.6%
Rock Springs Chapter	\$15,260	\$14,375	375	50.6%
St. Michaels Chapter	\$6,683	\$29,671	234	24.7%
Twin Lakes Chapter	\$8,171	31,667	601	27.0%
Tsayatoh Chapter	\$5,318	\$14,803	441	67.7%
Gallup, NM	\$15,789	\$34,868	4,079	20.8%
Tse Bonito, NM	\$20,187	\$38,365	45	16.2%
Apache County, AZ	\$8,986	\$26,315	25,789	37.8%
McKinley County, NM	\$9,872	\$26,806	26,664	36.1%
Source: U.S. Census Bureau (2005) Navajo Nation: Chapter Images (2004)				





## 6. Regional Personnel Assessment

### Data Collection

Data were collected from available sources, particularly those that are part of public record from the State of New Mexico and the Navajo Nation. Various interviews were conducted at the P&M McKinley Mine operations as well. The study's purpose was to obtain more extensive primary data regarding the current employee population, its demographics including training and preparedness for the plant closure. Data that were made available, however, only included representative wages and pay rates, total hours worked, job titles, payroll totals. These data were used to compare to State and Navajo data from public sources.



P&M provided 2005 data indicating that an average of 238 hourly, non-exempt employees, and an average of 61 exempt employees worked at the mines during that period. Employees in hourly jobs were reported as being represented by the United Mine Workers of America.

## Comparison to Employment Conditions

To help with classification and matching of appropriate comparisons from industry to industry, county to county, for example, the Standard Industrial Classification (SIC) codes were used until 1997. In that year, the North American Industry Classification System (NAICS) replaced the old system in order to provide common industry definitions for Canada, Mexico and the United States. These codes continue to help facilitate analyses of the economies across established criteria. The taxonomy system is used by the US Census Bureau, states within the US, and other agencies to classify various sectors of the economy, including within New Mexico's counties. Under NAICS, an establishment is classified to one industry based on its primary activity. In the case of P&M, the general classification would be 212-Mining (except oil and gas).

New Mexico Department of Labor has also established on-line Labor Analysis Statistics and Economic Research (LASER) for use by various individuals (job seekers, for example) and by numerous governmental and private organizations, including workforce redeployment groups. Navajo Nation also provides information on the demographics of the population.

In terms of general information gathered, the population estimate for the year 2000 in McKinley County was 74,798, a 23.3 percent increase from 1990. This compares to a 20.1 percent growth rate for New Mexico as a whole. Recent postings by the New Mexico Department of Labor indicated that the May, 2006 monthly unemployment rate was 4.2 percent; however, the official unemployment rate was believed to be on the low side of what is likely in the future for the state considering the national unemployment rate was 4.6 percent.

As told by P&M representatives, the majority of the workers at the McKinley Mine are Native American. Based on the socioeconomic data, the percent of residents living on the Navajo Nation in 2000 who were also born there is significantly higher than nearby states, thus tribal members tend to settle in one location to remain close to family connections. Further, the Navajo Nation has a relatively young population indicating that there will be more young people competing for what appears to be some limited employment opportunities in the near future.

Recent statistics indicate that the McKinley County unemployment rate was 5.7 percent in May, 2006, which is down from 7.2 percent in May, 2005. Compared to other counties in the New Mexico, McKinley County ranks fifth in unemployment, with Luna County having the highest unemployment and Los Alamos County with the lowest according to New Mexico Department of Labor statistics.

The DED reports (as shown in the socioeconomic section of this study) that the unemployment rate within the Nation is nearly 48 percent. The Department also provides an Indian Labor Force Report to the U.S. Department of Interior every two years, which excludes all non-



Indians from the calculations. The unemployment rate from this report in 1999 was close to 54 percent and just over 52 percent in 2001. P&M Mining has been an important employer within the Navajo Nation and its closure will likely add to these unemployment numbers. .

As shown in Table 17, participating mining organizations (212 NAICS code) reported employment numbers, average employment, and average weekly wages according to LASER research. Records indicate that McKinley County had four establishments in the 212 NAICS code which accounted for the highest average weekly wage at \$1,290 among those reporting, and San Miguel had the lowest at \$402.

Area / County	Average Establishments	Employment Month 1	Employment Month 2	Employment Month 3	Average Employment	Average Weekly Wage
McKinley	4	547	547	546	547	\$1,290
Eddy	4	925	928	922	925	\$991
Grant	3	944	949	954	949	\$1,008
Rio Arriba	4	12	9	8	10	\$717
Sandoval	4	19	19	20	19	\$941
San Miguel	3	25	25	25	25	\$402
Santa Fe	3	39	36	34	36	\$645

\*Source: LASER: Labor Analysis Statistic and Economic Research--NM, online 6/2006.  
Displaying here only those Counties reporting mining operations

From labor data provided by P&M Mining, the typical mining jobs included dragline operators, shovel operators, heavy equipment operators, maintenance mechanics, maintenance welders, maintenance electricians, and tippie specialists. Representative wage rates were reported for these jobs at the lowest grade to start at \$21.29 with an average \$23.82, which would equate on a forty-hour week without overtime to be \$952.80. However, using the total represented wages for labor reported by P&M, divided by the average number of employees reported in 2005, the average weekly wage was \$1111.85 which approaches the fourth quarter 2005 Census of Employment and Wages data for the McKinley County area of \$1,290.

When attempting to gather data on New Mexico's general occupational category related to mining, the closest Metropolitan Statistical Area (MSA) was Albuquerque. Others on which MSA data are collected are Santa Fe and Las Cruces, which are significantly further from the McKinley region and thus not considered.

A review of the projections for related or somewhat related jobs—continuous mining machine operators, derrick operators (oil/gas), derrick, rotary drill, and service unit operators (oil/gas), earth

drillers (except oil/gas)—as noted in Table 18, only 18 new jobs will be created in the 10-year period being reported. More jobs in terms of raw numbers are predicted for creation in the occupational areas of construction and extraction and related occupations.

<b>Occupational Titles</b>	<b>2000 Estimated</b>	<b>2010 Projected</b>	<b>Total 2000-2010</b>	<b>Annual Avg.</b>	<b>Total</b>
	<b>Employment</b>	<b>Employment</b>	<b>Employment Change</b>	<b>Percent Change</b>	<b>Percent Change</b>
Boilermakers	18	20	2	1.1	11.1
Construction and Building Inspectors	240	328	88	3.2	36.7
Construction & Extraction Occupations	25,628	32,981	7,353	2.6	28.7
Construction Equipment Operators	1,718	2,165	447	2.3	26
Construction Laborers	4,372	5,782	1,410	2.8	32.3
Construction Trades and Related Workers, All Other	534	669	135	2.3	25.3
Construction Trades Workers	19,431	24,992	5,561	2.5	28.6
Continuous Mining Machine Operators	***	***	***	***	***
Derrick Operators, Oil and Gas	5	6	1	1.8	20
Derrick, Rotary Drill, and Service Unit Operators, Oil, Gas,	33	39	6	1.7	18.2
Earth Drillers, Except Oil and Gas	39	50	11	2.5	28.2
Electricians	1,686	2,269	583	3	34.6

Selected occupational titles in mining industry or occupations where similar skills may apply.

The area job demand statistics were reviewed regarding opportunities beyond mining. Based on an April 2005 report posted by New Mexico Department of Labor (The Gallup One-Stop Career Center), high demand jobs in the McKinley County area included cashiers, construction estimators, certified diesel mechanics, hotel maintenance staff, nurses, security guards, licensed social workers and certified teachers.



## Assessment and Recommendations

It is unclear how well employees of the McKinley Mine are prepared for the upcoming changes about to happen because it appears that little has been done to help employees in preparation for a career/job change. Indications from mine's staff are that because many of the employees have worked at the mine since its inception, some of those staff may consider retirement as an option. Little was discussed as to what younger employees would do to transition to new opportunities. What is clear from even a cursory assessment of the relevant data related to the types of jobs likely to be available within the study area, is that the predominant jobs are in fields that either require extensive specialized training or education, such as nursing or teaching, and/or jobs that pay at substantially lower rates, such as security guards or cashiers.

It would be wise for displaced workers to work at transitioning their skills, competencies, and experience into occupations related to areas where more opportunities may become available. Data indicated more potential openings in areas such as construction and extraction, construction equipment operators than in many of the other areas reported. Some occupations may present some openings in the future for which workers may need an apprenticeship or other technical training. While land reuse plans may be such that other industries with good paying jobs may be attracted into the affected area, those plans will likely take some extended period of time to bring to fruition.

Nevertheless, if P&M provides assistance to employees who are transitioning into other jobs or occupations, they may consider several activities including assessing where the workforce is in terms of understanding career exploration concepts. Workers' options include looking into other entrepreneurial ventures, exploring other skill training, new/different job or career, or moving within the industry to a new company and/or location. Further, it would be appropriate to encourage the workforce to be actively networking with others in the field and within new fields so that the employees may begin exploring other potential opportunities before the plant actually closes.

Involvement with outside agencies, government or otherwise, can be very helpful to companies that are in the process of a plant closure. P&M could work more closely with the New Mexico Department of Labor regarding employment security and with other state agencies, U.S. agencies or programs, One-Stop Career Centers that may help when there is a need for people to transition and/or retrain when there is a significant shift in an industry.

While not a new publication, the Bureau of Economic Research and Analysis published, "New Mexico Job Seeker's Guide," provides good information on the process of landing a new job. It shares information about on-line computer resources, one-stop career centers, publications and videos that are available. It can also direct employees to the Department of Labor's LASER website where job change tools are also available. Those offices are at 2020 East Aztec Avenue, GALLUP, NM 87301, next to the Social Security Building; their number is posted to be (505) 863-3884. There is likelihood that staff members could be sent from these offices directly to the mining operations for information sharing and coaching sessions on site.

P&M can also consider getting some assistance with change management to help the organization work with outside agencies, the union and the employees as it moves through this major change initiative. The company could provide seminars, often available from outside agencies at little or no costs, on how to prepare for retirement, considering the indication that a large percentage of the population is considered to be older workers. There are also agencies that encourage development of entrepreneurial establishments. Using its own staff or outside organizations, even the State Department of Labor for employment security, the company could offer to employees and their families, a series of career development/career change workshops that would provide skills training on career tools such as networking, searching the internet, resume preparation, and interviewing skills preparation.

Further, P&M could work with the State of New Mexico to host a Career Fair where regional companies, mining (regional, US, global) or other types of companies, to the Compound to provide information on jobs that they may have opening up within the next six to twelve months. These companies could share the skills and competencies required for their industries, many of which may be transferable skills from the current mining work accomplished at P&M McKinley Mine Company. For instance, maintenance electricians and maintenance welders have skills that may easily transfer to other types of companies. Families should be encouraged to attend as these members can provide significant support to employees in transition. Local colleges and trade schools could also be invited to visit P&M McKinley Mine Company to provide information regarding potential for “re-tooling” for other careers. Caution should be used, however, in which schools should be invited to participate. Many for-profit schools may be more interested in selling seats in classrooms than providing meaningful education or training that may be needed. Some institutions to be considered may be Crownpoint Institute of Technology, Din4 College Crownpoint Center, University of New Mexico- Gallup.

In Albuquerque and the surrounding area, a variety of education and training programs are available, including, but not limited to, Albuquerque Technical Vocational Institute, ITT Technical Institute, Southwest Indian Polytechnic Institute, University of New Mexico’s main campus and continuing education. Various trade unions in the area indicate offerings for apprentice and other training. P&M McKinley Mine may also wish to look into what programs and support may be available through the union that is present at the mining operations and capitalize on those offerings.

Ultimately, each individual is responsible for his or her own life, for his/her own career, for his/her own happiness. However, it is also appropriate for companies in the throes of a major transition, in this case a shut down, to also try to provide tools or otherwise direct its employees to resources that can be helpful in dealing with the upcoming change. It is recommended that P&M consider the recommendations made here with reference to helping its people make the transition as smooth as possible as the mining operation closes.





## 7. Economic Impact Analysis

### Highlights

There are, obviously, economic benefits to both the Navajo Nation and the State of New Mexico related to operation of McKinley Mine, in addition to the employment opportunities that are created. Generally speaking, information related to revenues, royalties and other economic benefits in the form of additional payments was not readily available from P&M; therefore, estimates have been made based upon more general information available from both the Navajo Nation and the State of New Mexico. These economic benefits are discussed in this section of the report. Highlights of economic benefits of the mine operation include:

- McKinley Mine has been a significant economic presence in the region for some 40 years;
- McKinley Mine is one of three mines on the Navajo Nation contributing to the total tax revenues, royalties and other payments;



- A total of about 300 jobs will be lost when the Mine closes, which represents about 238 union employees and 61 salaried employees. Payroll disbursements for 2005 were approximately \$13.7 million in non-salaried wages and \$4.9 million in salaried position wages, excluding benefits and retirement. Wages for union employees average \$23.82 per hour; and
- Coal is the leading commodity for production value, revenue generation and payroll in the state of New Mexico.

## Property Valuation and Taxation

In New Mexico, property taxation is based upon the “ad valorem” value of property (ad valorem, meaning “according to value”). The tax is calculated from two different bases: full cash value (or market value) and limited value, i.e., statutorily controlled value. The full cash value is used to calculate tax rates to pay for voter-initiated bonds, overrides, and special district levies.

The Division of Property Tax (DPT) under the State of New Mexico’s Taxation and Revenue Department is responsible for valuing property for tax purposes. DPT assesses the value of utilities, airlines, railroads, mines, and other geographically dispersed properties, which are referred to as “Centrally Valued Properties”. Values determined by DPT for those properties are transmitted to the County Assessors for entry upon the county tax rolls for levy and collection of property taxes. County Assessors, utilizing appraisal standards and manuals prescribed by DPT, are responsible for assessment of other classes of property, including residential, commercial, industrial, and agricultural properties (Locally Assessed Properties). The property taxes for the mines are paid to the State and redistributed through the County.

The state sales tax is paid on coal sales, outside services, and materials and supplies. The revenue from the state sales tax is retained by the state and distributed through a number of funds based upon the approved State budget. Various state services are provided to residents within the study area, most noticeably the local school districts.

The Navajo Nation receives several types of payments resulting from negotiated lease agreements with P&M for the extraction of coal at the Mine, as well as other taxes applicable for the Navajo Nation.

The Office of Navajo Tax Commission administers several types of taxes on the Navajo Nation. Four taxes that are applicable to the McKinley Mine are the Possessory Interest Tax (PIT), the Business Activity Tax (BAT), Navajo Sales Tax and Fuel Excise Tax. The PIT is a tax on the taxable value of a possessory interest granted by the Navajo Nation, which provides a right to be on Navajo land performing a particular activity. The most common types of uses are oil and gas leases, coal leases, rights-of-way and business site leases. The BAT is a tax on the net source gains (gross receipts minus deductions) from the sale of Navajo goods and services. The tax applies to goods that are produced, processed or extracted within the Navajo Nation, and on services that are all performed within the Navajo Nation. The Fuel Excise Tax went into effect in 1999, generating 18 cents per



gallon. The Sales Tax became effective on April 1, 2002 with a rate of three percent of gross receipts. The tax is imposed on all goods or services purchased within the Navajo Nation.

Detailed information on P&M's state sales tax payments was not readily available from P&M, so estimates have been made that are based upon figures for the amount of coal production from the Mine and average tax rates for New Mexico and the Navajo Nation for all coal production in New Mexico. A total of 5,503,290 short tons of coal were produced in McKinley Mine in 2005, resulting in estimated tax revenues of \$6,019,829 for the Navajo Nation and \$783,699 for the State of New Mexico.

## Federal Payments

The Office of Surface Mining Reclamation and Enforcement (OSMRE) is responsible for collecting fees related to the Surface Mining Law, which provides for the restoration of lands mined and abandoned or left inadequately restored before August 3, 1977. Under this program, production fees of 35 cents per ton of surface mined coal, 15 cents per ton of coal mined underground and 10 cents per ton of lignite are collected from coal producers at all active coal mining operations. The fees are deposited in the Abandoned Mine Reclamation Fund (AML), which is used to pay the reclamation costs of abandoned mine land projects. The original legislation expired on September 30, 2004 and was extended to June 30, 2006. The Navajo, as well as other western tribes, are supporting legislation that will continue the program for the next 12 to 15 years. It is not certain at this time whether the legislation will be renewed under the Department of the Interior, or renewed with more limited funds for tribes and communities to carry out their renovations of community facilities.

The Navajo Tribe and New Mexico receive funds in the form of grants on an annual basis from the federal government to fund reclamation of eligible abandoned mines. Most of the reclamation activity to date has been for uranium mines. When reclamation is completed, funds may be used for projects that protect, repair, replace or enhance public facilities, such as water distribution and treatment plants that replace water supplies affected by coal mining operations. Under this program, the Navajo Nation received funds from the Navajo (BHP Billiton Navajo Coal Company) and P&M as well as the Black Mesa and Kayenta mines (Peabody Western Coal Company). Funds are also collected by the federal government under the Black Lung Excise Tax in the amount of 55 cents per ton of surface mined coal, which is provided as a payment to the United Mine Workers of America Combined Benefit Fund. AML fees and payments to the Black Lung Excise Tax made by P & M in 2005 amounted to \$4,952,961.

## Other Payments

In addition to taxes, P&M makes royalty payments for coal that is produced at McKinley Mine. The payment in 2005 was approximately \$7,432,000 to the Navajo Nation. In addition, the Navajo Nation received about \$85,000 in scholarship funds to be distributed for higher education to Navajo students.

## Navajo Nation Budget

The impact of the funds received by the Navajo Nation as a result of the mine operations is distributed broadly to a number of tribal agencies and Navajo Chapters. This section presents a summary of Tribal budgets, including revenues and expenditures.

Table 19 identifies the revenues associated with the Navajo Nation annual government budget for the past five years for which information is available. Mines located on the Reservation, which include the McKinley Mine and the Navajo Mine in addition to Black Mesa and Kayenta, historically have represented about 40 percent of the Navajo non-grant revenues, not including other taxes (sales tax, fuel excise tax PIT, BAT) paid by the mines.

**Table 19. Navajo Nation Revenues: Annual Budgets**

	1986	2000	2001	2002	2003	2004
Oil and Gas	\$20,882,000	\$23,348,873	\$25,618,093	\$17,026,187	\$16,000,000	\$20,362,284
Mining	\$31,738,000	\$49,131,932	\$51,750,363	\$53,558,071	\$54,500,000	\$67,611,027
Taxes	\$148,600	\$50,398,885	\$44,176,344	\$46,099,215	\$49,000,000	\$56,872,026
Land, Building, Business Site, ROW	\$3,400,000	\$10,108,808	\$22,318,313	\$11,609,978	\$8,800,000	\$12,846,470
Investment Income	\$10,900,000	\$128,853,529	(\$41,578,373)	(\$43,809,376)	\$4,700,000	\$1,003,087
Grants		\$225,779,714	\$260,414,036	\$300,106,068		\$310,538,682
Other Income	\$3,300,000	\$41,014,422	\$51,212,342	\$101,704,535	\$1,300,000	\$4,356,636
<b>Total Revenue</b>	<b>\$218,760,000</b>	<b>\$528,636,163</b>	<b>\$413,911,118</b>	<b>\$497,946,959</b>	<b>\$137,300,000</b>	<b>\$138,022,098</b>

Source: Navajo Nation Office of the Controller, Division of Finance (2006)

The expenditure summary by Navajo Nation programs for selected years is summarized in Tables 20 and 21. The Navajo Nation's 2004 expenditures listed in Table 20 reflect the changes in standards of governmental accounting and financial reporting. As indicated by the total expenditures for 2001 and relatively low revenues in 2004, the amount can vary significantly from year to year, depending upon receipt of grants or other revenues from outside sources. The Navajo Nation distributes the revenues received from the mines through the annual budgeting process to a number of agencies. As a result, the revenues received from the mines serve to fund a number of different agencies, including the Division of Natural Resources' Abandoned Mines Land Reclamation program.



**Table 20. Navajo Nation Expenditures: Annual Budgets 1986, 2000-2003**

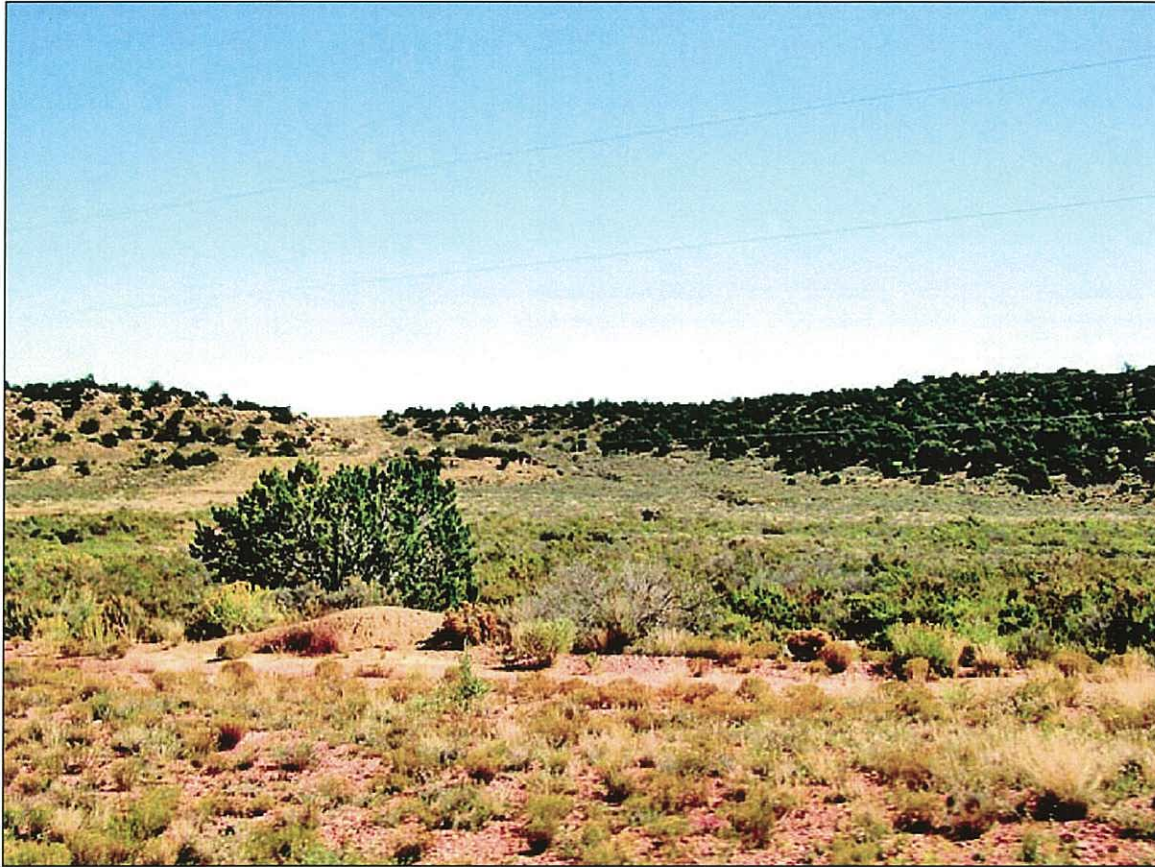
	1986*	2000	2001	2002	2003
Executive Offices	\$5,380,000	\$3,386,606	\$11,407,202	NA	4,256,062
Legislative Branch	\$6,062,000	\$9,380,097	\$11,320,969		\$12,626,138
Judicial Branch	\$4,100,000	\$6,060,687	\$7,829,716		\$7,647,175
Administration & Finance	\$8,203,000				
Division of General Services		\$28,959,432	\$34,577,302		\$42,207,998
Office of the Controller		\$8,471,307	\$18,746,084		\$9,034,182
Department of Justice		\$4,526,231	\$4,802,804		\$5,069,141
Office of Mgmt. and Budget		\$1,308,732	\$2,008,261		\$1,482,112
Office of Navajo Tax Commission		\$1,191,860	\$1,299,170		\$1,399,193
Division of Econ. Development	\$1,579,000	\$6,120,545	\$9,665,040		\$6,692,675
Division of Community Development	\$9,254,000	\$30,111,170	\$91,622,910		\$40,634,188
Division of Human Resources		\$18,380,609	\$70,038,129		\$48,325,755
Division of Natural Resources		\$26,931,949	\$42,056,147		\$26,164,004
Environmental Protection Agency		\$4,853,648	\$9,441,257		\$7,174,236
Water Resources	\$5,284,000				
Resources	\$5,128,000				
Division of Public Safety	\$3,160,000	\$32,036,630	\$65,271,336		\$30,088,351
Division of Health	\$3,242,000	\$51,612,494	\$158,600,966		\$18,336,996
Division of Social Services	\$4,100,000	\$16,605,973	\$162,558,793		\$88,717,027
Child Development	\$1,200,000				
Youth Development	\$1,233,000				
Labor	\$900,000				
Division of Dine Education	\$702,000	\$52,419,308	\$127,839,303		\$56,553,493
Fixed Costs	\$11,666,000	\$12,035,145	\$11,873,692		\$13,063,198
Fixed Cost Credit		\$-3,563,744			
Tribal Grants	\$3,577,000	\$2,813,008	\$2,790,561		\$5,950,742
Capital Expenditure	\$20,591,000				
<b>GRAND TOTAL</b>	<b>\$95,361,000</b>	<b>\$313,641,687</b>	<b>\$843,749,642</b>		<b>\$425,422,666</b>

Source: \* Robinson, 1988

Navajo Nation Office of the Controller, Division of Finance (2005)

General Government	\$60,907,686
Economic Development and Planning	\$4,408,341
Community and Rural Development	\$50,874,370
Education and Training	\$74,698,665
Grants and Contributions to Components	\$11,545,658
Natural Resources	\$38,554,046
Public Safety	\$39,843,717
Health and Welfare	\$155,147,686
Culture and Recreation	\$5,443,827
Transportation	\$4,253,361
Capital Outlay	\$24,703,084
<b>TOTAL EXPENDITURES</b>	<b>\$470,380,241</b>
Source: Navajo Nation Office of the Controller, Division of Finance (2006)	





## 8. Grazing & Wildlife Habitat

### Introduction

This section addresses the current conditions associated with vegetation and wildlife habitats in and around the mine's leasehold area. It also presents the status and techniques associated with grazing and range management that may be appropriate to consider in the leasehold.

### Vegetation and Wildlife

McKinley Mine is in the Great Basin conifer woodland (Brown 1994), which has an elevation ranging from 6,850-7,200 feet. This habitat is a cold-adapted evergreen woodland dominated by two conifers: juniper (*Juniperus* spp.) and piñon (*Pinus edulis*). These trees rarely exceed 40 feet in height and are typically open-spaced, thus the term woodland is best used to

describe the area. The term “woodland” refers to the widely separated trees; “forest” is a more appropriate term when the trees are closely spaced and their canopies interlock (Brown 1994). Other plant species that may be present include oak (*Quercus* spp.), cliffrose (*Purshia subintegra*), rabbitbrush (*Chrysothamnus* spp.) mountain mahogany (*Cercocarpus montanus*), current (*Ribes* spp.), and sagebrush (*Artemisia* spp.). Grasses and forbs include snakeweed (*Gutierrezia sarothrae*), threadleaf groundsel (*Senecio longilobus*), black grama grass (*Bouteloua gracilis*), galleta grass (*Pleuraphis jamesii*), muhly grass (*Muhlenbergia* spp.), dropseed (*Sporobolus* spp.), and junegrass (*Koeleria macrantha*).

Many wildlife species rely on piñon-juniper woodlands for all or part of the year including large mammals such as the Rocky Mountain Elk and the Mule Deer. Many small mammals, songbirds, and a few reptile species can also be found in these habitats. The piñon mouse and the piñon jay are closely tied to these woodlands; other species are more adaptable and therefore, more widespread (Brown 1994).

The average annual precipitation in the Four Corners area is less than 10 inches. Most of the precipitation comes as thundershowers in the months from July to September. The low amount of rainfall can make attempts at revegetation difficult.

Because mining operations have cleared vegetation from the area, reclamation efforts will concentrate on creating and improving grazing habitat, rather than restoring woodlands. Reclamation will also include maintenance of fences, watering stations, and roads. No vehicles will be allowed to travel off of existing roadways.

The plant and wildlife species identified in Table 22 are those listed as being present in McKinley County by the USFWS (2006). There are no lakes, streams, reservoirs, wetlands, seeps, springs, or other aquatic or riparian habitats within the project area; therefore, no suitable habitat exists for the yellow-billed cuckoo, Zuni bluehead sucker, Southwestern willow flycatcher. All such wildlife relies upon wet areas, either in or near rivers, streams, or other bodies of water. The black-footed ferret requires medium to large prairie dog colonies with greater than 20 burrows per hectare.



Table 22. Wildlife and Plant Species in McKinley County, NM		
Common Name	Scientific Name	USFWS Status
Yellow-billed cuckoo	<i>Coccyzus americanus</i>	C
Zuni bluehead sucker	<i>Catostomus discobolus yarrowi</i>	C
Southwestern willow flycatcher	<i>Empidonax traillii extimus</i>	E
Black-footed ferret	<i>Mustela nigripes</i>	E
Bald eagle	<i>Haliaeetus leucocephalus</i>	T
Mexican spotted owl	<i>Strix occidentalis lucida</i>	T
Zuni fleabane	<i>Erigeron rhizomatus</i>	T
The following are species of concern and are included for planning purposes		
New Mexico silverspot butterfly	<i>Speyeria nokomis nitocris</i>	SC
San Juan checkerspot butterfly	<i>Euphydryas anicia chuskae</i>	SC
American peregrine falcon	<i>Falco peregrinus anatum</i>	SC
Arctic peregrine falcon	<i>Falco peregrinus tundrius</i>	SC
Baird's sparrow	<i>Ammodramus bairdii</i>	SC
Black tern	<i>Chilonias niger</i>	SC
Mountain plover	<i>Charadrius montanus</i>	SC
Northern goshawk	<i>Accipiter gentilis</i>	SC
Western burrowing owl	<i>Athene cunicularia hypugea</i>	SC
Acoma fleabane	<i>Erigeron acomanus</i>	SC
Parish's alkali grass	<i>Puccinellia parishii</i>	SC
Sivinski's fleabane	<i>Erigeron sivinkii</i>	SC
Status- "C": Candidate; "E": Endangered; "T": Threatened; "SC":: Species of Concern. (Source: US Fish and Wildlife Service: 2006)		

Bald eagle breeding habitat is characterized by large trees capable of supporting a nest and by a nearby water source that provides an adequate supply of medium-sized to large fish (Johnsgard 1990). Bald eagles build huge stick nests in large trees, in snags, and on top of tall cliff ledges. Nests are typically up to 6 feet across and are lined with soft materials such as grasses, leaves, and mosses (Ehrlich et al. 1988). Bald eagles often reuse nests year after year (USFWS 1995). Roost sites for bald eagles are usually in fairly open stands with trees that are taller than surrounding canopy. Bald eagles primarily eat fish but are also known to eat other small vertebrates and carrion (Busch 1986).

In this area, there are no cliffs, large trees, nor open water sources that would contain adequate numbers of prey species for bald eagles. No suitable habitat for bald eagles exists within the mine area.

Mexican spotted owls typically breed and roost in deep canyons or old growth mixed- conifer forests on steep slopes at elevations from 4,500–10,000 feet. Nest and roost stands typically have a

high degree of stand structure, a large tree component, a broadleaf component, tree decadence in the form of broken tops, snags, and downed logs and high basal area and canopy closure (Ganey and Dick 1995). Nest and roost areas are often in canyon bottoms or on lower slopes that offer cool microclimates (Ganey and Dick 1995).

The diet of the Mexican spotted owl varies depending on location and habitat. Generally, these owls feed on small and medium-sized mammals such as mice, voles, pocket gophers, ground squirrels, and woodrats. Spotted owls typically forage at night, although diurnal foraging has also been observed.

There are no deep canyons or steep forested slopes within the mine leasehold area; therefore, no suitable habitat exists for the Mexican spotted owl.

Zuni fleabane is a low-growing plant with stems that trail along the ground (NMRPTC 1999). It grows on nearly barren detrital clay hillsides with soils derived from shales of the Chinle or Baca formations (often seleniferous); most often on north or east-facing slopes in open piñon-juniper woodlands at 2,200–2,400 m (7,300–8,000 ft). It is known to exist in Catron, McKinley, and San Juan Counties in New Mexico and Apache County, Arizona. This plant more specifically is from three locations in the Zuni Mountains near Fort Wingate, at least 28 locations in the Sawtooth and northwest Datil mountains, and one location in the Red Valley/Cove area on the Navajo Indian Reservation in Arizona. The distribution of Zuni fleabane is associated with the distribution of uranium deposits in west-central New Mexico (NMRPTC 1999). The fleabane's spread was likely due to the movement of people and equipment associated with earlier uranium mining. While the Zuni fleabane flowers in May and June, livestock usually do not graze this species.

It is unlikely that Zuni fleabane is present on the mine lands under study because the area is primarily sandstone of the Mesa Verde group, which is good for coal, but not a soil that easily supports this species. Zuni fleabane grows on the Chinle and Baca formations. If there are areas within mine lands that have either of these rock types exposed at the surface level, there is the possibility that Zuni fleabane may be present.

None of the Species of Concern listed in Table 1 are known to occur or currently have habitat within the mine leasehold area. Reclamation of mine lands may result in the creation of habitat for some species, specifically the Mountain Plover and Baird's sparrow, both of which are grassland species. Mine reclamation may also benefit the burrowing owl, whose habitat preferences include open grassland areas with few large trees or other over story vegetation, as well as near agricultural areas and dirt canal banks.

## **Grazing and Range Management Techniques**

P&M Mining Company has subleased grazing permits from grazing permittees in the Navajo Reservation portion of the Mine. Upon completion of reclamation and the release of reclamation bonds, grazing permits will be returned to the permittees; therefore, future land uses for the area include both grazing and wildlife habitat. Grasses, forbs and trees have been planted for this purpose



in reclaimed areas. Currently, to enhance the growth of vegetation, the McKinley Mine uses local livestock as part of an approved grazing plan.

Range management techniques discussed in this section will focus on grazing management systems for arid rangeland types.

### *RANGE MANAGEMENT AND RANGELAND TYPES*

Rangeland management is the treatment of rangeland components to obtain the optimum combination of goods and services on a sustained basis. Historically, range management has focused on controlling livestock grazing; however, in recent years the field has broadened to include management of other rangeland ecosystem components such as fire, wildlife and human activities (Holechek, Pieper and Herbel 1998).

Fifteen rangeland types can be found within the contiguous United States. Rangelands vary considerably in precipitation, soils and terrain. As such, management practices should be tailored to specific rangeland types to be most effective. The McKinley Mine leasehold area consists of a piñon-juniper woodland rangeland. The piñon-juniper woodland rangeland is characterized as low precipitation, hot summers, high winds and low relative humidity. Soils are poorly developed and recovery from overgrazing is considered to be slow.

### *RANGE MANAGEMENT TECHNIQUES*

The basic components of a grazing management program include an appropriate stocking rate and a suitable grazing system. The most important component of a grazing management program is choosing an appropriate stocking rate (Holechek, Pieper and Herbel 1998). The Society for Range Management defines stocking rate as the quantity of land allocated to each animal unit for the grazable period of the year (Society for Range Management 1989). Grazing capacity is commonly referred to when discussing stocking rates. In general, grazing capacity is the average number of animals that a particular range will sustain over time. For arid rangeland types such as Piñon-Juniper Woodland, range management specialists recommend a low-intensity grazing capacity (Holechek, Pieper and Herbel 1998).

Grazing systems are often discussed using terms such as *deferment*, *rest* and *rotation*. The term *deferment* involves delaying grazing until a pasture's key forage plant has reached its seed maturity (Holechek, Pieper and Herbel 1998). Deferring grazing until seed maturity time will allow plants to gain vigor and reproduce. The term *rest* refers to the non-use of rangeland for a full year rather than just during the growing season. And *rotation* is the movement of livestock from one pasture to another (Society for Range Management 1989).

The two grazing systems generally recommended by range specialists for arid rangeland types are continuous grazing and short-term grazing. Continuous grazing is most effective in arid rangeland types when a moderate stocking rate is utilized and where the watering points are not more than 2 miles apart (Holechek, Pieper and Herbel 1998). Under this method, livestock often develop preferred grazing areas that can result in damage to vegetation. Because rotation of grazing pastures

is not used in the continuous grazing system, deferment of preferred areas can be implemented through rotating of water points. Studies have shown livestock rarely travel more than 2 miles from the water points; therefore, water points can be relocated to allow new vegetation growth to occur in areas that are overgrazed.

Short-term grazing in arid rangeland types has also proven to be an effective grazing system. This method involves a series of fenced pastures in a wagon wheel figuration with water and livestock handling facilities located in the center of the grazing area. Pastures are grazed for a short period (usually a period of five days) followed by a longer time period of non-use (approximately four weeks) (Holechek, Pieper and Herbel 1998). Studies have shown ranchers using the short-term grazing method can have a higher stocking rate than if using the continuous grazing system (White, Pieper, Donart and Trifaro 1991).

### *RECOMMENDATIONS*

Historically, the Navajo people have grazed sheep and cattle on the Navajo Nation using free-range conditions in grazing areas. Because fenced pastures are a necessary component for the short-term grazing method, the continuous grazing may be the more appropriate method for the McKinley Mine leasehold area. While studies have indicated stocking rates can be increased moderately (10–20percent) using short-term grazing, livestock responses to short-duration grazing were not superior to those under continuous grazing (White, Pieper, Donart and Trifaro 1991). In addition, studies have shown short-term grazing methods can result in increased sedimentation (Holechek, Pieper and Herbel 1998). Additional fencing would not be required for the continuous grazing method if uses in the reuse plan for the McKinley Mine and overgrazed areas could be managed by rotating the locations of water points.

All areas that are most appropriate for grazing under a reuse plan are those that have been reclaimed from mining use through vegetation management and plant species that are consistent with successful grazing methods. These areas are identified as “reclaimed areas.” The proposed land use plan for the mining area identifies grazing areas from the areas and is consistent with the other land uses suggested in the Plan.





## 9. Environmental Site Review

### Introduction

The following section presents findings from a preliminary investigation through research and discussions with staff at McKinley Mine related to potential environmental hazards, either past or current, that may have occurred on the mine leasehold property.

### Background and Findings

On May 5, 2006, a staff member of SWCA Environmental Consultants interviewed Mr. John Engels, Senior Land Agent for P&M in Gallup, NM. Mr. Engels indicated, to his knowledge, no

chemical or petroleum product spills of significance have occurred at the McKinley Mine site and that there are no outstanding environmental clean up activities related to the site. Mr. Engels also pointed out that any spill incident at the mine would be reported immediately to the appropriate regulators and cleanup would follow proper protocol. According to Navajo Nation Environmental Protection Agency and New Mexico agency records, there are no incidences of spills.

The McKinley Mine operates under environmental and safety regulations of the State of New Mexico, Navajo Nation and federal government. A review of applicable regulatory agency websites (New Mexico Energy, Minerals and Natural Resources Department (EMNRD); US Department of the Interior, Office of Surface Mining (OSM); US Department of Labor, Mine Safety and Health Administration (MSHA) and US Environmental Protection Agency, Office of Water (EPAOW), IMI2006) did not identify any references to spill violations at the McKinley Mine.

There are no known underground storage tanks on the site. All on-site tanks utilized for mining operations are located aboveground and are positioned inside secondary containment (Engels, 2006). Fuel and oil storage tanks that have been documented from P&M records and a site visit that are known to be located on the site consist of:

- 250,000 gallon diesel fuel tank; clay bottom liner and concrete wall constructed to restrain contents in event of leakage; and
- Oil/gasoline/antifreeze tank farm: one 20,000 gallon gasoline tank and four 10,000 gallon tanks containing oil and antifreeze. Located inside concrete containment structure conforming to aboveground storage requirements.

There are two water wells located in the southern portion of the mining leasehold and three water wells located in the northern mine area. The three water wells located on the Reservation are permitted through the Navajo Nation. One of these wells is a small domestic well used for the office and the remaining two are larger production wells with water used for industrial purposes, such as spraying for dust control. All wells on the site are currently operational and have associated electrical hookups, pumps and water tanks, some of which are large capacity tanks. All electricity, electrical hookups, water tanks and associated water lines will be removed from the site upon closure of the mine, per the current mining permit and reuse plan. The wells will not be closed because they are permitted through the Navajo Nation; the well casings and pumps will also remain.

According to the United States Environmental Protection Agency, a brownfield is “a property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant”. Since there are no documented cases of the presence of hazardous substances, pollutants or contaminants on the mining property, the area does not fall into the category of a “brown field site”.





# 10. Reuse Alternatives

## Introduction

Because of the significance of the planned closure of the P&M mine, the Navajo Nation and State of New Mexico came together to support this important study. Obviously, many people and organizations will be affected by this closure--displaced employees, allottees and lease holders who need to consider options, businesses that support the mining operations, tax and fee departments and other government agencies.

Numerous meetings were held to give to and gather information from interested parties. The attached copies of sign-in documents and meeting agendas show the individuals and representatives from tribal and government departments who took advantage of the opportunity to share and receive information since the inception of this project. Documentation regarding meetings conducting to obtain these alternatives as wells as presentations to special committees are included in Appendix A.

Four alternatives were developed for analysis based upon information gathered from these meetings with surrounding chapters, the grazing permittees and their families, discussions with the Navajo Nation and State agencies.



The purpose of identifying a variety of options is to insure that a range of ideas and interests will be carefully considered before recommending a particular strategy that will be more aggressively acted upon. Likely, the final recommendations will incorporate components of more than one of the alternatives discussed below. As appropriate, the chosen alternative[s] will be incorporated into the final reuse plan for the leasehold.

## **Alternative 1 – Return Area to Pre-Mining Land Use (Wildlife and Grazing)**

### *BACKGROUND DISCUSSION*

SMCRA requires that coal mining lands be reclaimed to meet specific post mine land use criteria. P&M and the Navajo Nation agreed to abide by this standard in the original lease agreement. Alternative 1, as discussed here, examines the economic impact and reuse plan based on the removal of all mining facilities and the return of the land to premining condition for livestock and wildlife. To show proper reclamation, both MMD and OSM require monitoring reclamation for a minimum of 10 years after revegetation to ensure success. During this reclamation process the land is to remain otherwise undeveloped.

As of this writing, P&M is concluding mining in certain areas within the leasehold area and is active in the reclamation process. P&M is returning lands to grazing and/or wildlife habitat according to the agreed upon plan and will continue to do so if no other actions are taken in an expeditious way.

### *REUSE PLAN*

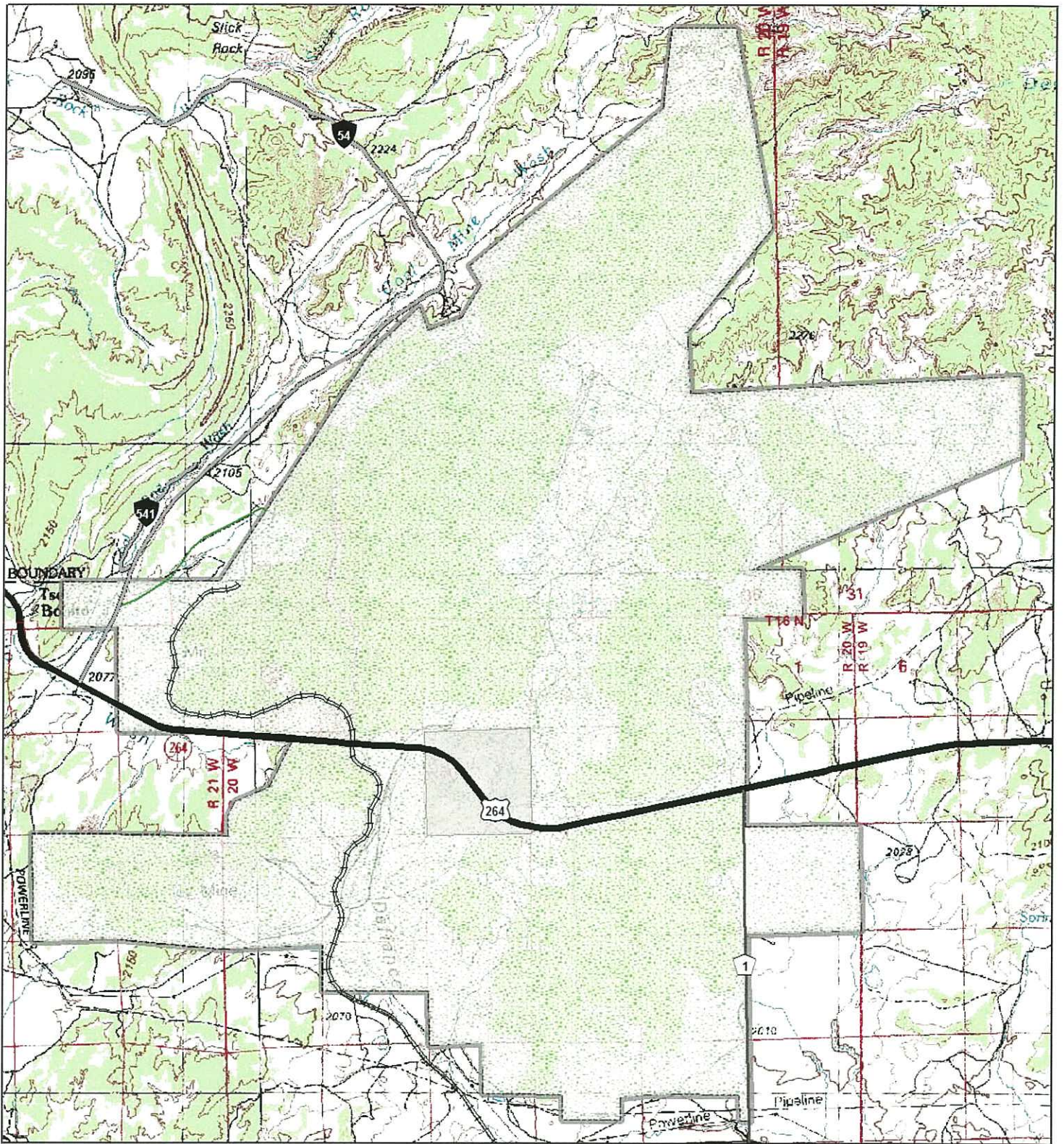
Under this option, all of the mine area would be used for grazing and/or wildlife management. All related mining facilities and structures would be destroyed, decommissioned or otherwise removed, and the land would be restored to grazing and/or wildlife habitat. Figure 8 is a conceptual Land Use Plan that demonstrates how these proposed changes will appear on the landscape. The P&M reclamation that is currently underway according to the lease agreements is scheduled to be completed prior to the closure of the mine. It is anticipated that P&M will continue its reclamation work in reverting back to grazing and wildlife habitat unless it receives direction from the parties involved.

### *ECONOMIC IMPACT*

Although this approach may to some extent compensate the grazing permittees and their families for their previous losses, the approach presents limits to long-term economic prosperity to the entire Navajo Nation and the communities involved. Under this alternative, economic opportunities would be few, and would be limited solely to revenue from the sale of livestock and similar products. This approach would not allow for other economic development that could bring in additional revenue. The loss of all revenue to the Navajo Nation and State of New Mexico would include royalties, tax dollars and charitable contributions.

Within the north mine area, grazing permittees will lose the current subleases and will no longer receive payments for subleasing their grazing permits. Similarly, payments to allottees will cease when their individual lease agreements with P&M expire. Thereafter, under this approach, the grazing permittees would be responsible for the substantial up-front costs including the purchase of livestock and all similar start up costs to begin grazing herds again on the north mine. In addition to the sizeable up-front costs, it would likely take the grazing enterprises extended periods of time to get to a profitable level. Perhaps more important, only grazing permittees and their families would have any income potential when the land is strictly used for grazing livestock. Of further concern is the manner in which allottee agreements have been established. Because of the nature of the individual allottee agreements with P&M, each allottee may potentially make other agreements on their own without regard for the overall good to their families, the communities, and to the Navajo Nation.





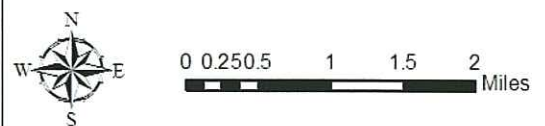
**Legend**

-  Lease Boundary
-  Grazing & Wildlife Habitat
-  Not within Lease
-  Reclaimed Areas

**Roads**

-  State Highway
-  County Road
-  Indian Route
-  North Mine Entrance

**Figure 8. Alternative 1 Reuse Plan**



Sources:  
 U.S. Geological Survey; P & M Coal Mining Company  
 Navajo Nation Land Department; Navajo Department of Transportation



## Alternative 2 – Reuse and Development Opportunities Based on Chapters' Visions

### *BACKGROUND DISCUSSION*

The chapters that will be most directly impacted by the mine closure and subsequent reuse plan have put great energy, work and time into a reuse plan. These chapters have been meeting and discussing the mining area for the past two years. This information was collected from each of the five chapters. Additional meetings were held as part of this study and the information was reviewed and compiled. Based upon their discussions throughout these meetings, the chapters have developed a second alternative which addresses their collective concerns and goals for future development in the area. This alternative and the Chapters' vision are described and discussed below.

### *VISION*

The Chapters involved in this project envision a time when the study area has many new uses that provide more comprehensive and long term benefits to the state, the tribe, the county, and the impacted chapters and families. The community sees this area becoming a great place to visit and a great place to live, work, and recreate. To that end, it foresees a time when appropriate economic development will occur, in particular commercial development along Highway 264, while reserving certain areas for grazing and wildlife habitat. The chapters also have a plan to reuse the existing offices that may be relocated or expanded for other community-designed purposes.

### *GOALS AND OBJECTIVES*

#### 1. Water

Goal A Maintain water resources in the lease area.

##### Objectives

- a. Keep existing wells, tanks and ponds.
- b. Expand the water system for development, farming and livestock usage.
- c. Explore innovative developments for water.

Goal B Provide ponds suitable for livestock use.

##### Objectives

- a. Retain existing ponds suitable for livestock.
- b. Ensure that existing ponds are free of toxics or other contaminants.

#### 2. Infrastructure

Goal A Provide a road system that connects and provides safe and convenient access throughout the lease.

##### Objectives

- a. Develop and improve roads to meet the needs of various planned land uses and reclaim unnecessary roads.

- b. Keep the width of the road in some places and make innovative use of it.

Goal B Provide utilities to accommodate existing developments as well as future growth.

Objectives

- a. Provide and maintain electric, water and wastewater services to meet the needs of reuse plans.

3. Mining Facility & Land Reuse and Acquisition

Goal A Acquire, use and/or develop the land and facilities within the lease area that make efficient use of the land and respects the traditional aspects and value of land.

Objectives

- a. Plan for and develop an acquisition strategy that contributes to the realization of reutilizing existing structures and purchasing land as it becomes available.
- b. Encourage land uses that integrates the future vision of the lease area with planning and development.
- c. Collaborate
- d. Examine current uses, size and condition of existing buildings/equipment/facilities and determine how they can be utilized to meet the needs and desires (office building, warehouses, roads, etc.).
- e. Identify and explore options of mining property for potential reuse, renovation or removal (buildings, keep certain fencing, etc.).
- f. Ensure reuse of structures meet health, safety and building standards and regulations.
- g. Identify facilities to be removed and ensure that those areas are reclaimed.

4. Recreational Services & Facilities

Goal A Provide recreational services responsive to the needs of the community.

Objectives

- a. Identify areas for recreation to accommodate all ages (i.e. youth, elders, handicapped, etc.).
- b. Set apart areas for sports fields (soccer, baseball, equestrian, etc.)
- c. Design a circulation system that optimizes pedestrian, bicycle and horseback riding movement.
- d. Utilize open space facilities to unify parts of the recreational area.
- c. Identity areas for hiking, camping, walking & jogging trails, etc.

5. Community Services & Facilities

Goal A Provide adequate community development and services responsive to the needs of the community.

Objectives

- a. Identify and plan the public safety needs of the lease community (police, fire, emergency, etc.).
- b. Advance community development and programs to meet the needs of the communities bordering the lease area (multi-use facility, police/judicial complex, etc.).



- c. Establish a program to manage and maintain the community development.
  - d. Explore possible uses for mining facilities (office space, maintenance yard, etc.).
6. Housing
- Goal A Provide safe and adequate housing to meet the needs and expectations of all incomes, lifestyles and age groups.
- Objectives
- a. Promote rural scattered housing versus subdivisions.
7. Agriculture & Livestock
- Goal A Continue grazing activities as essential to the traditional and economic base for the area.
- Objectives
- a. Recognize the importance and continuance of grazing permits.
  - b. Continue and expand range management activities.
  - c. Include Department of Agriculture and the BIA in discussions of a grazing management plan for the affected areas.
  - d. Ensure water is provided for livestock use.
- Goal B Continue farming activities as essential to the traditional culture and economic base for the area.
- Objectives
- a. Re-establish former farming areas and provide areas for future farm plots.
  - b. Ensure water is made available for farming.
8. Economic Development
- Goal A Advance economic development along the Highway 264 corridor that supports and enhances the quality of life of the local community and economy.
- Objectives
- a. Pursue and capitalize on recreational and tourism-related development activities (golf course, rodeo arena, cultural center/museum, campground, etc.).
  - b. Attract and develop suitable commercial development activities (resort, office building, etc.).
  - c. Pursue industrial development activities (manufacturing, etc.).
  - d. Ensure the area is well served by attractive commercial districts in appropriate locations that meet the day-to-day needs of the community, as well as the visitor/tourist (resort, office park, etc.).
  - e. Promote local historical, cultural and natural features (mine tours, Hweeldi 1st night site, etc.).

## *REUSE PLAN*

The result of the Chapters, the Navajo Nation, and the State of New Mexico joining together has been extremely positive and immensely productive for all parties. Once the mine shuts down in the future, the various parties want to see salvageable components of the mines' infrastructure appropriately incorporated into their community and land use plans. This alternative presents the types of proposed developments recommended for the reuse plan, and considers compatibility with the reuse goals and objectives identified at the Chapters' meetings. Figure 9 shows the general reuse plan as envisioned by the impacted chapters.

## *NORTH MINE AREA*

The northern mine has the most facilities. A reuse and development plan, that includes a regional recreational center, is presented in more detail below for this area (Figure 10).

### Housing

Housing proposed includes scattered site housing on 22 acres, clustered housing on four acres, and 10 acres of housing adjacent to the area designated for farming. Utilities and other improvements needed to develop the housing areas are generally available, including electricity, water and roads. Housing could be developed by either the Navajo Housing Authority or with a private developer. Infrastructure costs to support the housing development would be minimal, while the benefit to the area would be enhanced by the new development.

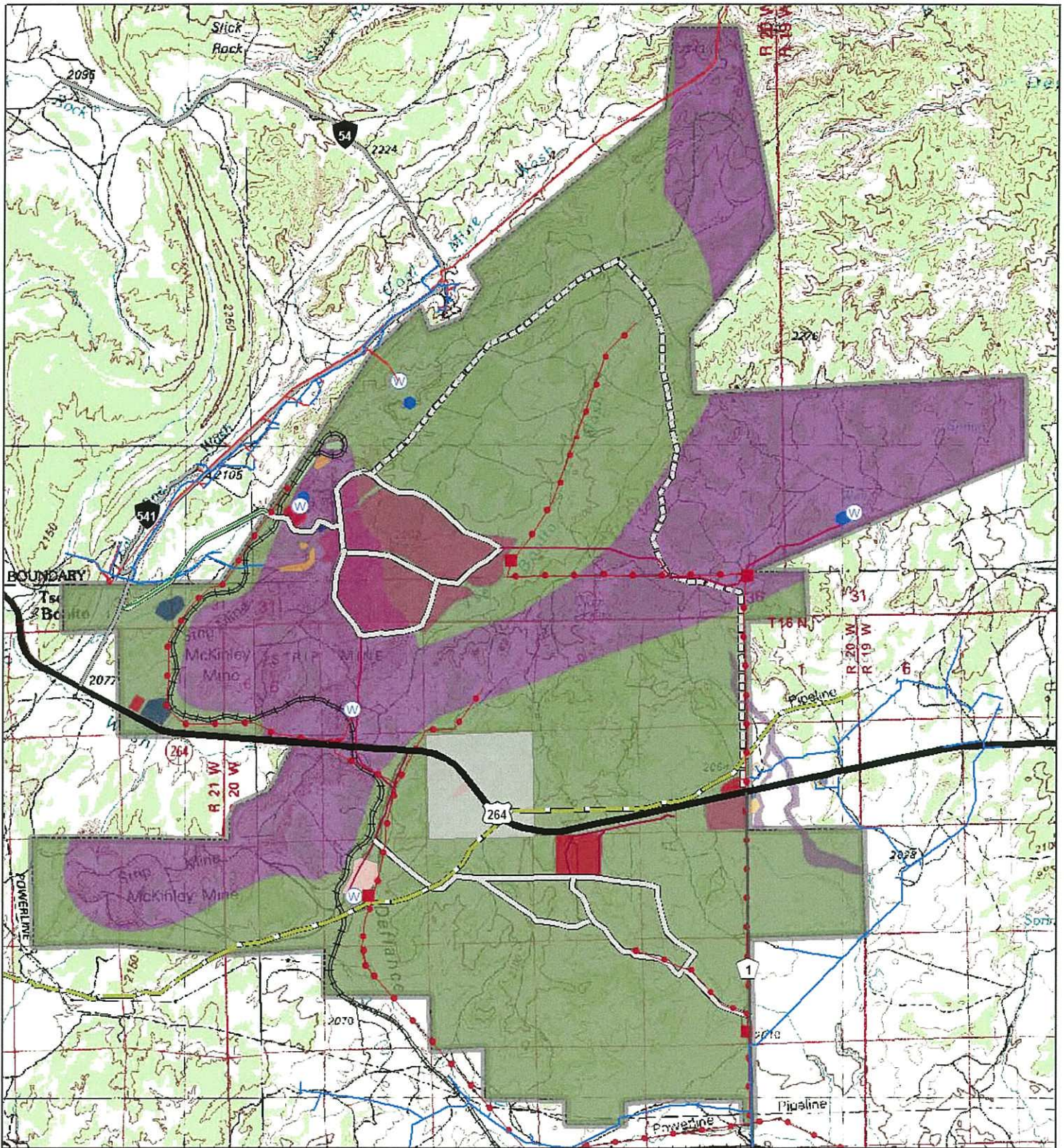
### Office Park

The office park basically consists of about 18 acres that include the existing administrative area for the mine. Since the buildings and supporting utilities all exist, additional costs would basically be limited to any renovation of the buildings to accommodate the new tenants. It has been suggested that the buildings in the complex would be well suited for departments of the Navajo Nation government. Use of these buildings for this purpose would provide a cost benefit in the form of savings over any new construction to accommodate Navajo Nation government offices.

### Community Center

The community center consists of 5.6 acres that include existing support buildings for the mine. Since the buildings and supporting utilities all exist, additional costs would include any renovation of the buildings to accommodate the needs for a community center. A specific plan of uses and activities associated with a community center has not been developed, so specific costs cannot be sufficiently identified. Such use for a community center would provide a cost benefit in the form of savings to the Navajo Nation over any new construction of a community center.





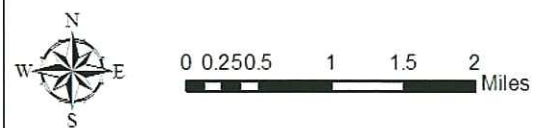
**Legend**

- |                     |                    |
|---------------------|--------------------|
| Lease Boundary      | 115 kV Power Line  |
| Not within Lease    | Substation         |
| <b>Roads</b>        | Water Well         |
| State Highway       | Water Storage Tank |
| County Road         | NTUA Power Line    |
| Indian Route        | NTUA Water Line    |
| Mine Road           | EPNG Pipeline      |
| North Mine Entrance | Railroad           |

**Land Use**

- |                      |
|----------------------|
| Commercial           |
| Community Facilities |
| Farming              |
| Industrial           |
| Open Space           |
| Grazing              |
| Recreation           |
| Residential          |

**Figure 9. Alternative 2 Reuse Plan**



Sources:  
 U.S. Geological Survey; P & M Coal Mining Company  
 Navajo Nation Land Department; Navajo Department of Transportation



### Equestrian Center/Fairgrounds

The area designated as the fairgrounds is about 51 acres in size. Improvements would be required in order to accommodate the specific needs associated with fairgrounds activities, once a design for the facilities is determined. This type of facility would provide an improvement over the existing fairgrounds, allowing for the potential of increased attendance and more events that would enhance economic development for the area.

### Recreation

Sports fields are proposed on 18 acres of land that would provide needed community recreational opportunities within the area. While there would not be immediate advantages directly from an economic development standpoint, availability of recreational facilities is a consideration in the relocation decisions of businesses and industries to a community. There would be costs associated with the development of facilities for the sports fields.

Camping areas are proposed for about 540 acres in the reuse plan. This new recreational use would have a positive potential impact on economic development by providing an enhancement to recreational facilities for the area, and possibly providing a source of income from tourism. Costs for development would depend on the type of facilities proposed in a site design and could range from “primitive” camping to an RV park with more conveniences.

### Farming

The area designated for farming use is about 18 acres. This use would potentially generate income for residents of the area in the form of products that could be sold at markets. There would be no investment to develop the farming area, other than implementing practices by those using the land through typical farming approaches.

### Loop Road and Connector to Highway 264

A loop road that would provide access throughout the activity areas in the Northern mine Area would consist of a parkway on existing mine roads of about 5.2 miles in length, with another new road that would complete the “loop” of about 1.4 miles. There would also need to be improvements to a connector road towards the south to Highway 264 that is about one mile long. Estimated improvements to the existing roads would be about \$500,000 per mile, while construction of the 1.4 mile length to complete the loop would be about \$750,000 per mile. The cost for improvements would be borne by the Navajo Nation.

## **SOUTH MINE AREA**

The south mine area area has a number of facilities that would support expanded growth for economic development opportunities. Uses in this area would primarily be associated with commercial and industrial development, supported by existing and new infrastructure to make the area more attractive and competitive for development.

### Industrial Park

The industrial park area includes several existing buildings, wells and other facilities that are in use by either P&M or mine contractors that provide supplies and services for the mine operations. An existing business, an explosives manufacturer, may possibly remain in their

current location. There is also the potential for locating other industries, such as a bio-diesel manufacturing facility in the area.

There is an existing road that provides access from Highway 264 to the industrial park area; however, the allottees for land south of Highway 264 that includes the access road want the area reclaimed. In order to provide access from Highway 264, a new road will need to be identified and/or constructed from the industrial park area in a northwest direction to connect to Highway 264 or County Road 1.

#### County Road 1 and Highway 264 Junction

Commercial, community facilities, housing and recreational areas are proposed for this location along the North side of Highway 264 (Figure 11). Community facilities and housing are identified at the southeast corner of the junction. The southwest corner is proposed for recreational activities including a playground, park and trails.

### *ECONOMIC IMPACT*

Greater economic opportunities would be available under this approach. Additional infrastructure would be needed, but the investment could have a great potential to attract new businesses to the area. These new businesses would bring jobs, tax revenue, and income for spending in the communities near the mine area.



# NORTH MINE REDEVELOPMENT/ REGIONAL RECREATION AND COMMUNITY FACILITIES

JJCLACS & CO.  
JUNE 2006

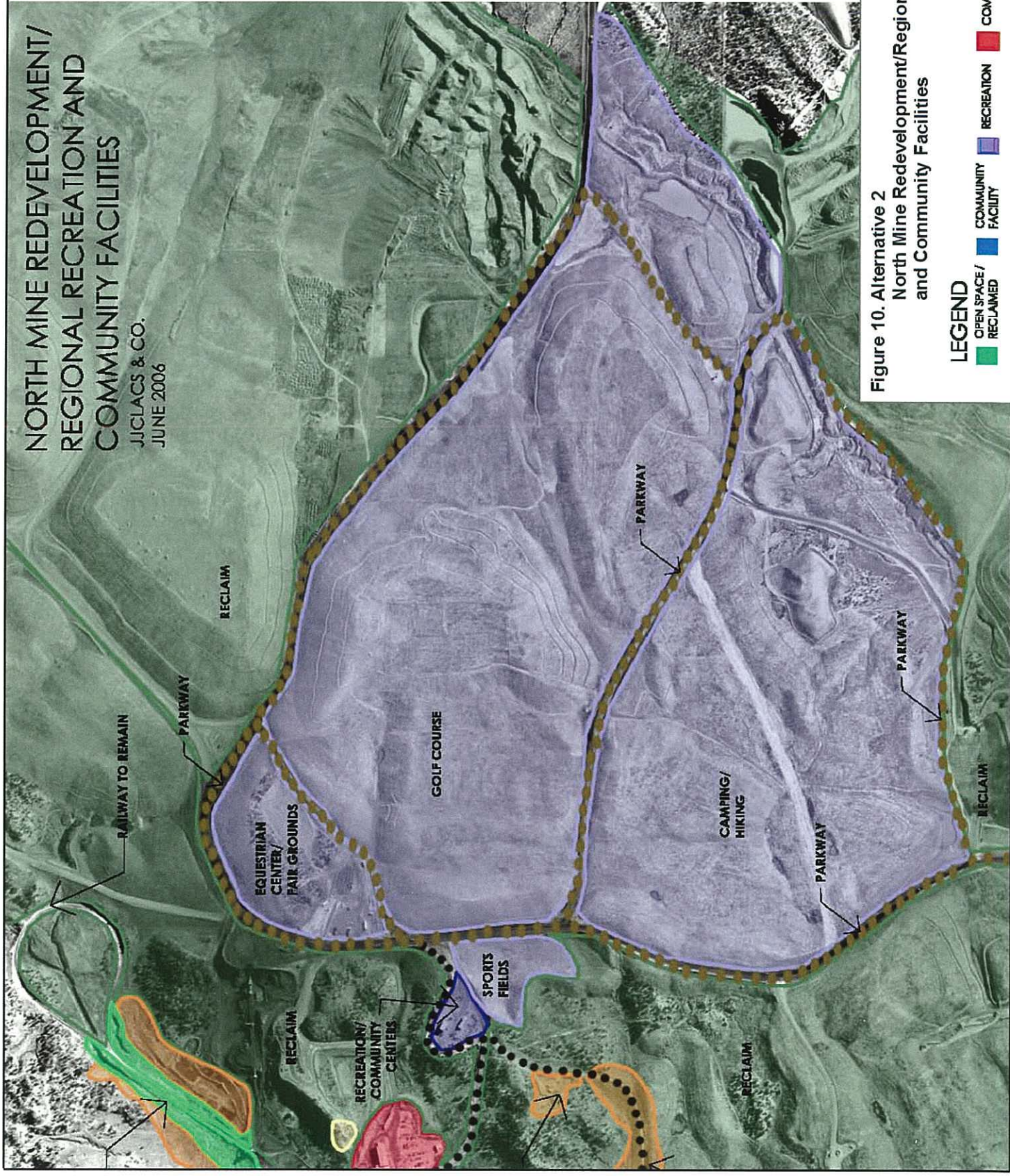


Figure 10. Alternative 2  
North Mine Redevelopment/Regional Recreation  
and Community Facilities

- LEGEND**
- OPEN SPACE/  
RECLAIMED
  - COMMUNITY  
FACILITY
  - RECREATION
  - COMMERCIAL
  - HOUSING



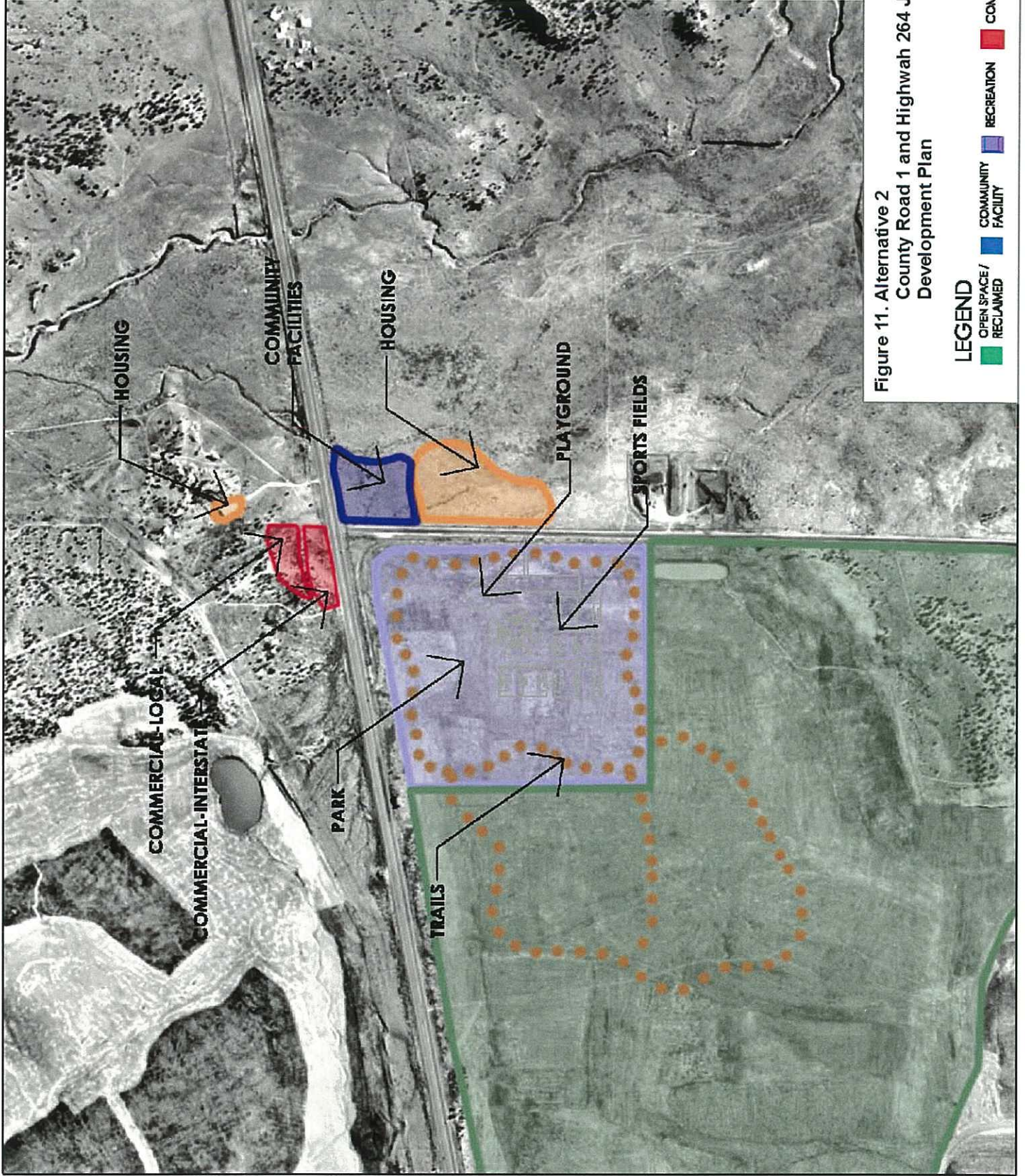


Figure 11. Alternative 2  
 County Road 1 and Highway 264 Junction  
 Development Plan

**LEGEND**  
 OPEN SPACE/  
 RECLAIMED  
 COMMUNITY  
 FACILITY  
 RECREATION  
 COMMERCIAL  
 HOUSING



## **Alternative 3 – Reuse Based on Grazing Permit Holders and Select Allottees**

### *BACKGROUND DISCUSSION*

Based on the original lease agreement between P&M, the Navajo Nation and individual grazing permittees and their families, P&M leased ten permit areas within Navajo Tribal Trust Lands for the set period of the lease. According to the lease agreement, once the lease expired, P&M would return the grazing areas to the permit holders. With the lease terminating in 2008, the permit holders and their families have formed the Coalmine Dine' Coalition to more successfully negotiate the terms of the reclamation process once the mine closes in 2008, and to participate in the planning process to help decide upon what future development, if any, will occur. The following grazing land reuse proposals as submitted by most of the grazing permittees represent the ideas, hopes, personal visions, and concerns of the impacted grazing permittee families.

Since the South Mine includes allottees, these community members were also invited to participate in this project. During meetings and work sessions, only members from Section 8 were in attendance. These several allottees from Section 8 represented their ideas, hopes, personal visions, and concerns during these sessions and those desires and concepts were included in this report.

Although several allottees from Section 8 participated in this study, it is very important and significant to note that these allottees have direct and individual agreements with P&M. Though they participated and gave their ideas, these individuals can make any agreement they chose regardless of what is presented here.

Going forward, it will be important to continue to communicate with these allottees so that everyone understands and can support a broad-based vision that is good not only for these allottees, but also for the entire Navajo Nation and surrounding area. Further, it is the belief of this study group that when these allottees are part of the process, they are in a better position to negotiate with P&M.

### *REUSE PLAN*

Each of the grazing units are described below and shown in Figure 12.

#### Grazing Unit 1

The grazing lease for Unit 1 is located around the main office area. Existing facilities include the office buildings, structures, roads, water and power lines, coal handling facilities, and the railroad. The permit holder of Unit 1, Charlie Reeder, has a long family history associated with this area and proposes, through a family representative, that the land be returned to pre-mining conditions with the following considerations:

- Establish lands suitable for herding sheep for food, wool for rug weaving market, and ceremonies; retain impoundments ponds for livestock, wildlife and irrigation; remove and store boundary fencing (posts and wire) for future use.

- Remove railroad and the circle tracks so that food crops such as corn, squash, and other vegetables can be planted in that area.
- Remove conveyor structure coal load-out facilities, coal crushers and wash rack, but retain the main office, adjacent shop and warehouse, safety building, bucket welding shop, covered structures, concrete foundations, guard house, and the trailer called “Chapter House”; retain equipment such as front end loaders, skid loaders, dump trucks and graders for use by permit holder for maintenance and operation of the facilities.
- Retain utilities—communication lines, transmission towers and satellite receivers—and also retain properly functioning septic tanks and/or lagoons with drainage and leach fields.
- Narrow roads within Unit 1; provide access to historical sites in the adjacent grazing unit where such area is to remain securely fenced to preserve the family’s historic hogan and wagon; the family cemetery should remain fenced with access made available to person who have claim to the remains.

However, the permittee, through his representative, has indicated an interest in continuing discussions with the Navajo Nation that could potentially lead to negotiated agreements whereby the areas in question may be put to additional and/or alternative uses to those mentioned above or in other discussions. Following are some conceptual ideas of what the permittee may be interested in discussing and/or negotiating:

- Provide lease compensation to the permittee for the terms of an agreement, from which the permittee is provided two family homes with appropriate utilities, one for himself and one for his sister.
- Establish an agreement where compatible reuse of the facilities is maintained; reuse concepts include those for the good of the Navajo Nation including a state of the art veterinary hospital, animal health lab, related educational programs regarding livestock production, range management, conservation and erosion control, equestrian center (potential for local and nationally sponsored equestrian events), a facility for youth education regarding horses, livestock and farming events to include clinics for 4-H and Future Farmers of America (FFA) members.
- Develop/convert into an indoor arena for horse shows, indoor rodeo events, livestock shows, cutting horse events and livestock auctions the original shop portion of the main building, and consider naming the facility “The Frank Reeder (Hosteen Tsechee) Memorial Arena” in honor of this family patriarch who loved the land and devoted his life to agriculture and farming.
- Retain parking areas to accommodate events for concepts such as special event convention center and/or tribal event center with a large ceremonial Hogan and maintained teepee grounds; set up area for outdoor barbeque facilities; include some overnight accommodations and/or camping hookups; also consider a coffee shop and/or café.
- Provide a center to the hardworking Navajo farmers and ranchers who make a living off the land and consider establishing a Frank Reeder (Hosteen Tsechee) Memorial Scholarship Trust Fund to promote Navajo youth who desire higher education and training in the field of agriculture.



### Grazing Unit 2

Unit 2 is directly below Unit 1 in the southwest corner of the Navajo Tribal Trust Lands. This unit is dissected by several haul roads that the impacted families would like to see narrowed. Power lines extend slightly into the unit from the west and one mining building resides along the unit's northwest edge near the mine's main office. The railroad also runs along the western edge of the grazing unit.

### Grazing Unit 3

Unit 3 is directly above Unit 1 and is also dissected by the haul road. A 500,000 gallon water tank sits in the middle just east of a well and southeasterly trending power line extension.

Historically, in 1974 the Blackgoat and the Plummer families signed the sublease agreement with Gulf/Chevron Company, which later became P&M Coal Company. Once P&M releases the land and returns it to the families, the families will build upon a five- year plan

During the first year, families will tour their former grazing area and identify problems where lands need to be assessed. Families will be educated about land status, vegetation, water, roads, and fences. Open space and range management plans will be developed.

During the second year a plan of operation from the Coalmine Din4 Coalition will be finalized. Plans for roads, culverts, wells, ponds, fences, power lines will be outlined in the plan. Areas where land was not disturbed will be plotted out for home sites or other development. Plans for range management will be decided upon by the grazing permit holders, and will follow the grazing act that's in the plan for the Navajo Nation. Plans for the railroad and office complexes will be up to the Ft. Defiance Chapter and Navajo Tribal Government.

During the third year, the plan will be submitted with the following goals:

- The main haul road from Black Mesa "Coal Stock Pile" to the north end of the mine will be reclaimed but leaving a one lane road for future usages;
- The haul road from north of the railroad track "Spur" should be reclaimed but also leaving a one lane road;
- Roads to ponds should be left for future usages;
- Road to the 25,000-gallon water storage tank should be kept in place;
- All culverts should be kept in place;
- All water ponds certified berms, sediments ponds, and triangle well pond should be kept in place and will be use for livestock water;
- Fence along the north haul road should be kept with a twenty-five foot right-of-way;
- The boundary fence will be removed from the spur "railroad track" to the old coalmine area;
- The 25,000-gallon water tank and water lines will be kept for the community's use;
- The Blackgoat and Plummer families would like to have the natural vegetation replanted; and
- Fence materials such as barb wire, T-posts, livestock panels, and gates should be donated to the family.
-

Additionally, the family would like one or two buildings from the P&M Mine office complex to be transferred to old Coal Mine area for future community use as well as a vehicle and several pieces of heavy equipment such as a backhoe, grader, and a small tractor.

Implementation of the reuse plan will begin in the fourth year. P&M will conduct an environmental assessment. The Nation and the Fort Defiance Chapter will support the Coalmine Dine' Coalition in their efforts to get the plan completed. All reclamation activities will be done according to specifications.

In the fifth and final year of the project, P&M representatives will work closely with the Nation, Fort Defiance, and the Coalmine Din4 Coalition to fulfill the project.

#### Grazing Unit 4

Unit 4 is one of the largest units held by the permittees. A power line bisects the unit along the unit's southern edge. Grazing permits for unit 4 are held by Helen Billie, John Billie, Janet Dawes, Annie Johnson, the late Jim & Rose Billie, and the late Morris & Frances Denetdeel. These permit holders request the following modifications to their grazing area:

- The above grazing permit areas of Helen Billie, John Billie, Janet Dawes, Annie Johnson, the late Jim & Rose Billie, and the late Morris & Frances Denetdeel would be fenced off.
- The undisturbed areas would be fenced off so the reclaimed areas are not disturbed when home sites are assigned;
- Place an operative windmill where the present water pump is located, which is approximately 1/4 mile south of the cornfield in the undisturbed area;
- Retain ponds that are currently located in the areas of the above grazing permit holders;
- Re-fence and clear the cornfield area to its natural habitat;
- The families request P&M oversee reclamation within the above grazing areas and replant sagebrush, rabbit brush, juniper trees, pinyon trees, aspen trees, and other native plants. More topsoil should also be added. The family will use this area for their own use, when it is turned over;
- The families wish to have P&M re-construct the road from the Old Coalmine area that was a former road into the above area and other passable roads that would withstand inclement weather; and
- They request waterline extensions for human and livestock consumption as well as power line extensions.
- Survey area of unmined land for home site lease.
- Lastly and foremost, the families wish to have an extensive environmental study conducted in the mined, undisturbed, and surrounding areas for air quality and hazardous substances that could jeopardize the lives of family members, such as radon, uranium radiation, coal silicosis or other substances that could be carcinogenic.

#### Grazing Unit 5

Unit 5 is situated along the central western edge of the trust lands in the leasehold just above Units 3 and 5. The haul road parallels the units southern boundary and slightly extends



north in the units southern portion. An electric fence runs along the road, and the unit contains two ponds.

The permit holder of unit 5, George Gordy, requests that the water ponds be kept, that two additional ponds be constructed, and the area should be leveled for a home site. Mr. Gordy also wishes for the old road from residents to the haul road be improved, that the electric fence along the haul road be removed, and the haul road narrowed.

#### Grazing Unit 6

Located directly above Unit 4, Unit 6 is also bisected by the north-south trending power line. No other facilities are present. The permit holders (#18-938), Mary Ann Dean and Hoskie Blackgoat were raised by their mother, Benjesbah Chee whom is deceased, at Hiding Horse and Washington Lake. Mary Ann Dean has four children of her own and eleven grandchildren. She also has four great-grandchildren. Mary Ann Dean and Hoskie Blackgoat would like to move back to their homestead and reclaim the land that is theirs. When P&M negotiated the lease with Mary Ann Dean's family, P&M promised that they (P&M) would reconstruct the families' homes along with the horse and sheep corrals, water dams, roads, and fences. The family wants P&M to maintain their agreement in the following ways:

- Mary Ann Dean, would like to have her home built on her mother's home site, because she is without a place of her own.
- Hoskie Blackgoat needs to have his house rebuilt where it once stood. He would also like the dam released, the cornfield re-plowed, and fencing re-done, with an open place for a gate. Homes should be furnished with running water, electricity, and phone lines. Mr. Blackgoat would also like to re-establish a Sweat Lodge.
- Fencing that was used to round up horses needs to be re-established.
- We would like to have log poles replaced if this is done. It was on the late Benjesbah Chee's home site.
- The families would like to have roads re-graded and graveled with bridges and culverts where needed. Additionally, a road needs to be re-established from the original coalmine road.
- Washington Lake and the dam need to be renovated.
- Grade and level out where the homes are to be rebuilt and also where Benjesbah Chee's home site used to be. These two areas need to be graded along with where the sheep corral is to be.

#### Grazing Unit 7

This unit is at the northern most extent of the permit areas directly above Unit 8. A power line traverses the unit. Several ponds and small roads are also present. Joe Natonabah is the current grazing permit holder. He is one of ten children of Leonard and Mary Natonabah. First and foremost, Mr. Natonabah's family did not receive any financial compensation from P&M even though the family has lived in the customary use and grazing area since the early 1950's.

Currently, three homes are on the land and occupied by Joe, Kathy and Larry Natonabah and their families. Dennis and Peter Natonabah and their families have plans to return to the area and build permanent homes.

The families feel P&M have done enough damage and would like P&M to clean, pack up, and leave when they cease operation in 2008. They want P&M to leave the land as clean as it once was. The family strongly opposes any new "cluster" homes to move into the area because of illegal trash dumping and littering.

#### Grazing Unit 8

Unit 8 is nestled between Units 6 and 7. The haul road extends northeast-southwest through the permit area. A small portion of the power line that bisects Units 4 and 6 protrudes in to unit from the south. Several roads are also present.

Grazing Unit 8 is held by the Watson Family, namely the sons and daughters of Joe Lee and Rebecca Watson. Joe is now deceased. The majority of the Watson Family are voting members of the Fort Defiance Community Chapter. As of the 2003–2004, only one member of the family has a home site lease in the old coal mine area. The rest of the family members are unable to get home site leases anywhere near the area of where their parents were re-located in the old coal mine community.

It is important that the grazing areas be returned to the family that has the grazing rights to the area. The Watson family met and discussed the area on November 8, 2003. All but one family member was present. Based on this discussion the following requests have been made.

- The family would like the power line to remain in place for use by the family.
- The family wishes to re-establish their home sites and home site leases under the Fort Defiance Community Chapter. They are asking for financial support from P&M and its entities in re-establishing their homes.
- The Watson family wants all roads within the unit returned to the way they were before re-location.
- The water source should be re-established. The family wants the ponds in their original areas and any recent ponds established to remain. There were two ponds and two springs that the Watson family and others used prior to re-location in Unit 8. Presently, there is a pond near where the family named the area, Lone Pine Tree. They want this pond to remain unchanged. The family also would like to have a windmill within the Unit 8.
- The Watson family intends to re-establish grazing horses, cattle, and sheep. They plan to start with horses within enclosures and gradually add cattle and finally sheep.
- The family had six fields before relocation. They would like to re-establish these fields. The utilization of fields will consist of re-introducing of corn, pumpkin, melons, beans, and other plants that are suitable for this area and climate.
- In places, the topsoil is not deep enough. The topsoil should be deep enough so the plants and animals can be part of this re-establishment. The family is asking the mining company and its entities to re-introduce all the plants and trees that were native to Area 8 before re-location. The reclamation of all area/sites is very essential.
- The family wants P&M and its entities to identify all past trash dumping sites and present dumping sites within all area mentioned above. The family wants



the Navajo Nation, Federal, and State EPA Department to be involved in testing these past and present dumping sites. The sites should be tested for hazardous waste and any other material that will affect water table and soils. They want these sites and other areas made useable for people, livestock, wildlife, and plants.

- The family wants the present fences in place and Unit 8 enclosed with a fence. Gates should be put in places where applicable.
- The family wants to move their relative(s) that are presently placed at P&M Mining Cemetery (this site is located within or near the grazing rights of the Lee/Reeder Family), to their own site to be identified later on in Unit 8. They request financial and logistical support from P&M in exhuming all relative(s), (especially the remains of the father, Joe Lee Watson); of the family to the later to be identified plot(s) in Unit 8. The Watson family is aware that the Lee/Reeder family is concerned about this plot of land that is identified as P&M Cemetery.

Further, the Watson family supports the Denetdeel family in re-establishing the road from the old coalmine community to their traditional grazing areas. The Watson family also supports the Lee/Reeder family in the removal of all railroad tracks and buildings within the Lee/Reeder grazing rights areas.

In general, there is a sweeping consensus among the permit holders and their families that the land should be returned, as closely as possible, back to its natural state and that mining facilities that will not enhance future grazing and range management activities should be removed. Infrastructure that will benefit the families, such as power lines and water sources, should remain for the use of the permit holders once they are able to re-establish their homes on their traditional lands. Figure 10 shows how these changes will look once they are implemented.

Additionally, the families want to see that scientific research is conducted to determine the long-term health impacts of living in the reclamation zone. Finally, the impacted families have strived to organize themselves so that their concerns and visions for their families' futures will be clearly heard and understood. They strongly hope that P&M will maintain the original lease agreements and return the land to them as it once was before the mining began.

#### T 16 N, Section 8 Allottees

The allottees in this area are very interested in the post mining plan and have expressed concerns regarding their allotments. Section 8 is divided into 4 allotments. Allottees in the northern two allotments within this section expressed their desires for the following:

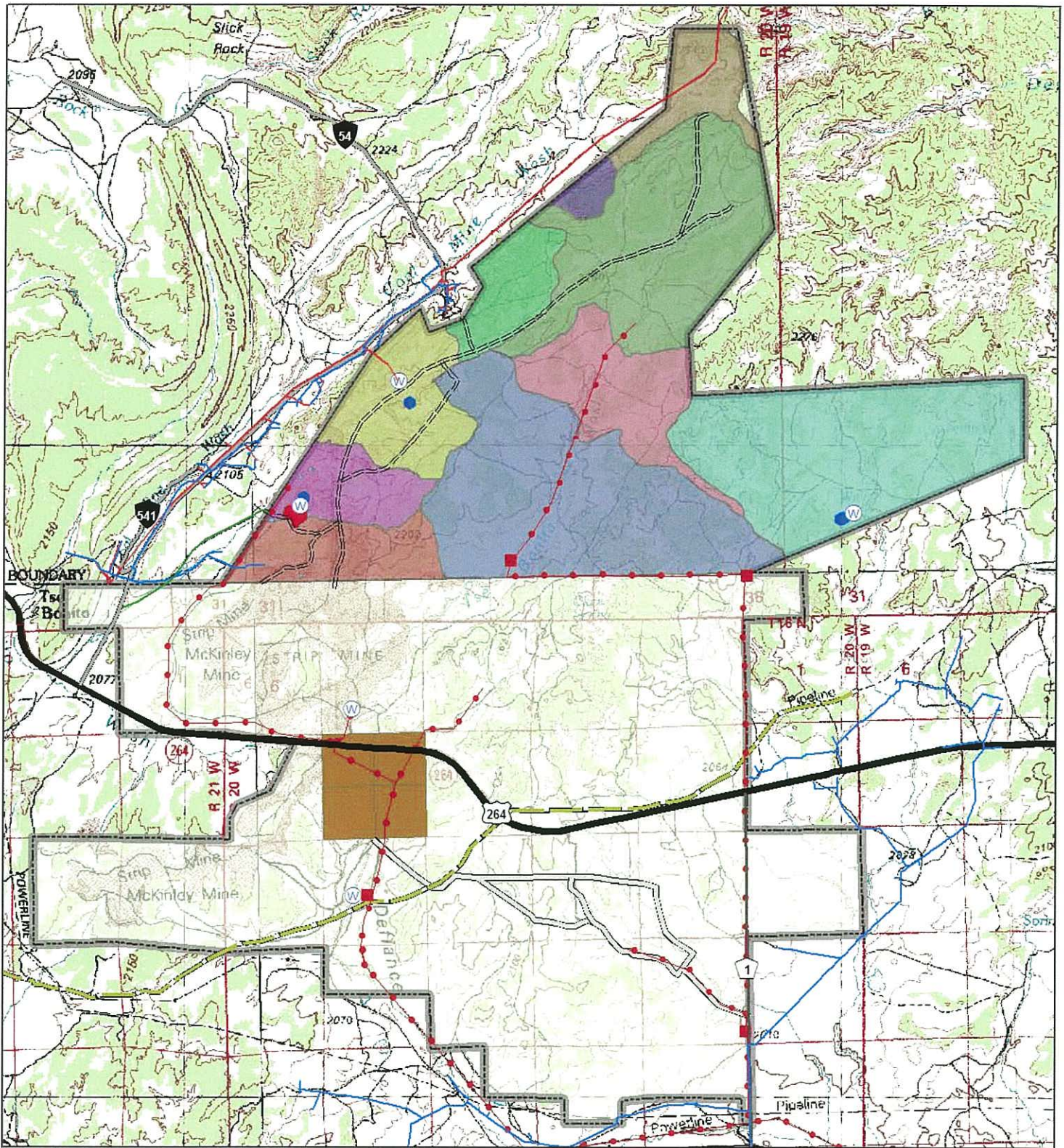
- Remove railroad tracks;
- Remove the haul road ( this is the primary access road to the South Mine facilities in Section 17 from Highway 264);
- Keep ponds; and
- Keep power lines.

The allottees within this area are essentially interested in returning the area to grazing, as they indicate the land is very dear to them. Again, these allottees understood that they can directly make any changes or arrangements with P&M on their own without consultation with others or the Navajo Nation..

### *ECONOMIC IMPACT*

The economic impact associated with this alternative would mostly benefit the grazing permit holders that would return to their land and use it according to the ways they have identified in this alternative. There would be costs associated with many of the requests made by the permit holders, which would need to be funded by the permit holders, Navajo Nation, or P&M as part of the mine closure and reuse plan. The specific costs for any improvements, relocation, or other actions requested by the permit holders have not been determined, as there are no specific plans as far as the scope of improvements and other actions requested. It appears, however, that there would be more limited benefits to the community in terms of overall economic impact for this alternative as compared to the other alternatives.

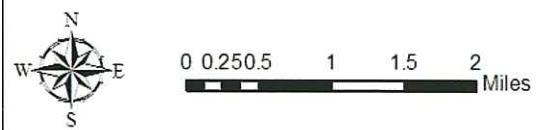




**Legend**

- |                     |                       |                  |    |
|---------------------|-----------------------|------------------|----|
| Lease Boundary      | 115 kV Power Line     | 0                | 5  |
| Not within Lease    | Substation            | 1                | 6  |
| <b>Roads</b>        | Water Well            | 2                | 7  |
| State Highway       | Water Storage Tank    | 3                | 8  |
| County Road         | NTUA Power Line       | 4                | 11 |
| Indian Route        | NTUA Water Line       | 5                |    |
| Dirt Road           | EPNG Pipeline         | 6                |    |
| North Mine Entrance | North Mine Facilities | 7                |    |
|                     |                       | Indian Allotment |    |

**Figure 12. Alternative 3 Reuse Plan**



Sources:  
 U.S. Geological Survey; P & M Coal Mining Company  
 Navajo Nation Land Department; Navajo Department of Transportation



## Alternative 4 – Commercial/Industrial Development Potential Options

### *BACKGROUND DISCUSSION*

After reviewing the site assessment and asset inventory, market trade areas and socioeconomic conditions, human capital and environmental/cultural concerns among others, the study group focused decision making on potential options for commercial/industrial development. In the analysis for this option, emphasis was placed on identifying sites for development for commercial and industrial areas. This alternative would allow for more extensive development of sites for industrial uses than the previously developed alternatives.

Such factors included access to utilities, infrastructure, proximity to residential areas, and several other factors. Below are highlights of the criteria used for assessment of the initial ten sites:

#### Highway Access

An industrial site, in particular, should be located in close proximity to a state highway, preferably within ten miles of a four-lane highway. When an industrial firm locates near a state highway, it is assured access to a road constructed for semi-trailer use.

#### Railroad Access

Many industries are dependent upon railroad lines and spurs for shipping products that are manufactured or fabricated at the facility, as well as delivery of materials to be used in the manufacturing or fabrication of products. Close proximity for convenient railroad access provides for effective and timely shipping and delivery of materials and products.

#### Interstate Highway Access

As is the case with rail access, close proximity for convenient interstate highway access, in this case Interstate 40, provides for effective and timely shipping and delivery of materials and products.

#### Site Access

Access to the site from a major road, as well as availability of roads to the site that are suitably designed and constructed to accommodate traffic associated with industrial uses is important. If a community chooses to develop an industrial park, rather than a single industrial site, then it is important that the road going through the park has two access points to the state highway. Two access points guarantee that a firm locating in the industrial park will always have usable access and egress in case of an emergency. For example, if a vehicle accident should block one of the access points, the industrial firm can still meet its shipping schedule through the other access point.

#### Topography and Soil Conditions

Topography of the site is an important factor. Companies usually seek fairly level sites with adequate drainage to avoid standing water. Depending on a firm's desire for aesthetic considerations, a gently sloping site may also be attractive. Once again, in considering topography a firm is trying to decrease the cost of site work.

Stability of the soils on a site is also an important consideration, as manufacturing equipment in particular often requires a greater soil bearing capacity than the actual building structure. Areas that have been reclaimed with new fill and soils, as is the case in some locations on the Mine area, may be less desirable from a construction standpoint than areas with undisturbed soils.

#### Ownership

Clear title, a minimal number of owners, and some legal form of site control assuring that the property is readily available and, if required, can be purchased for the asking price is an important consideration for firms seeking a new site for development. In addition to price, in certain site development projects, other details must be clearly stated, including available date of transfer, who pays any applicable transfer fees, closing costs if in force on the reservation, and any legal fees. Sites that may require negotiations with a number of allottees, for example, will be less desirable than sites that are available as Navajo Trust lands under the Navajo Nation.

#### Utilities

Utility standards are determined by the size of the site and its proximity to utility suppliers. Availability of utilities, or the ability to provide utility extensions in a cost effective manner, are advantages in the selection of sites for industrial or commercial use. Following are some minimum standards that were applied in the assessing sites for further consideration:

- Appropriate electric service should be available at the site. At a minimum, there should be three-phase service, with 12 KVh and a high probability of uninterrupted service. Single-phase electric service should also be available. The line should also be served through a sub-station that has a reasonable level of excess capacity available;
- Availability of sewer facilities (onsite treatment systems) with sufficient excess treatment capacity to meet a manufacturing firms needs;
- Water supply that meets requirements for industrial uses. There are a number of water wells located throughout the Mine area that would, in most cases, be able to meet the required needs;
- Natural gas service should also be available at the site with a minimum of intermediate pressure rating; and
- The site should also be capable of handling storm drainage. This can range from the use of a natural drainage process to the construction or use of existing storm drainage ponds.

#### Compatibility with Chapter Visions and Plans

An initial step in this planning process was to conduct meetings and gathering input from Chapters that will be impacted by the closing of the mine and the future reuse of the area. Those desires captured during meetings with the Chapters are reflected in this study under Alternative No. 2. The initial ten sites were also evaluated based upon compatibility with the vision and plans developed by the Chapters.

#### Compatibility with Adjacent Land Uses

Commercial or industrial uses are, because of their nature, often not compatible with other types of development, including housing areas, parks, and recreation centers. Consideration



was given to identifying these existing areas in the initial screening in order to avoid potentially negative impacts.

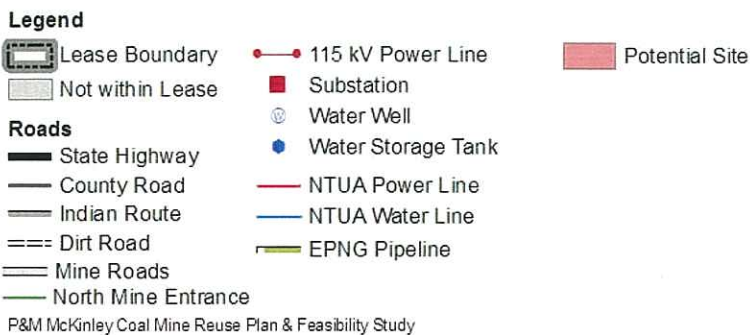
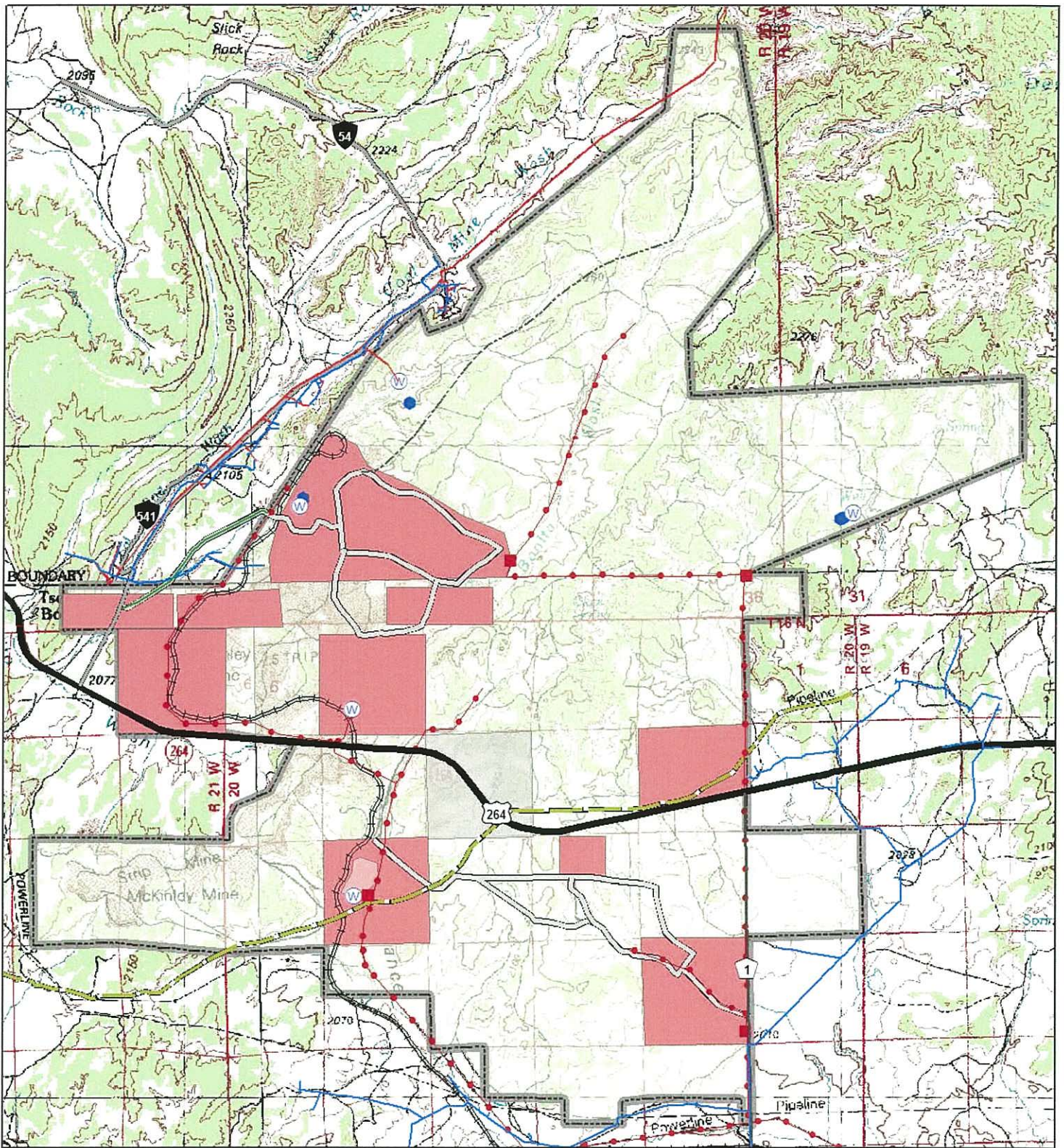
### *REUSE PLAN*

Figure 13 provides a graphical representation of all of the areas within the study that were considered for potential commercial and/or industrial development. Relying on inputs from all interested parties and on assessment of secondary research, the initial analysis to identify potential sites for commercial and/or industrial resulted in a total of ten sites throughout the mining area.

### *ECONOMIC IMPACT*

This alternative has the greatest potential economic benefit to the communities, the grazing permittees, Navajo Nation, and the State when compared to the other alternatives. Further, a substantial amount of time, effort, and funding can be saved by building upon the existing infrastructure where it is consistent with the plan's goals and objectives and appropriate for the Navajo way of life. Such a systematic planning approach is necessary to draw new businesses and jobs to the area and to begin to create the economic momentum necessary for long term growth and vitality in the lease area.





**Figure 13. Alternative 4 Reuse Plan**



Sources:  
 U.S. Geological Survey; P & M Coal Mining Company  
 Navajo Nation Land Department; Navajo Department of Transportation





# 11. Recommended Plan

## Introduction

The recommended plan is consistent with the desires of the local Chapters as well as with economic goals of the Navajo Nation and State of New Mexico. A strategy that can be implemented to attract businesses is needed as a first step toward sustainable economic development and employment retention. By undertaking the strategy, the Navajo Nation and State have the opportunity to define how regional economic development should move forward when McKinley Mine closes in 2008. Although the mine's pending closure is the impetus for this reuse plan, it is important to look beyond the immediate needs of the individual parties involved and plan for long-term economic development that will provide lasting opportunities for everyone.

Multiple strategies to implement the plan involve diversification, improving competition, and increasing investment in the area. Efforts should be concentrated in creating jobs in retail and wholesale trade, government, services, construction and manufacturing.

Opportunities associated with this plan include increased employment resulting from development of infrastructure that will attract industry and jobs, and result in an increased revenue stream to McKinley County, the Navajo Nation, and New Mexico. Implementation of a solid strategy that takes advantage of the opportunities is a major component of sustainable economic growth.

## Conceptual Plan

The recommended plan offers a balance and diversification of uses that will address the economic development goals of the Navajo Nation and State of New Mexico. The recommended plan is compatible with the desires of the impacted Chapters and permit holders in terms of land use compatibility and maintaining traditions.

Under this recommended plan, the north mine area would become primarily grazing, as shown in the concept plan presented in Figure 14. This approach addresses the desires of the permit holders and the Chapters to maintain traditional uses, including community facilities, residential, grazing, traditionally sensitive and economy. Economic development for the mine area is a critical component of the Conceptual Plan. To accomplish the assurance of designating economic development areas, a process was conducted to identify the best potential sites for development of industry to attract jobs to the area. This process was explained in a previous section of this Plan.

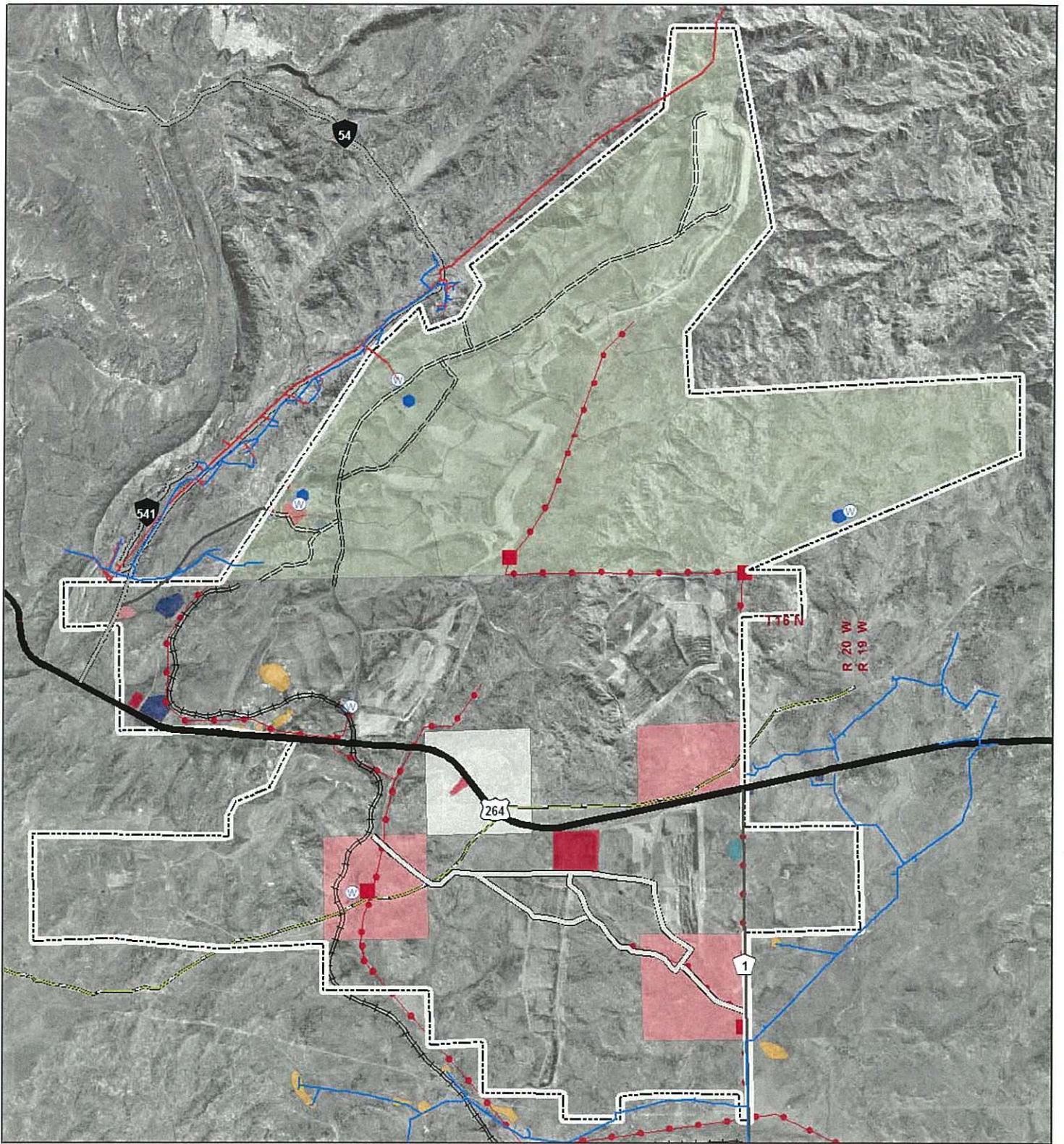
The application of ratings of the important factors used in the site selection process helped to narrow the selection to three potential industrial/commercial sites that were felt to be the most feasible on a preliminary basis for further consideration and analysis. These top three sites are summarized below and shown in Figure 15:

- Site A located in Section 17 approximately one mile south of Highway 264 is approximately 640 acres;
- Site B is located in Section 11 adjacent to and north of Highway 264; and
- Site C is located in Section 23 west of County Road 1 approximately one mile south of Highway 264.

### Analysis of Recommended Potential Industrial/Commercial Sites

Following is a more detailed analysis of the three sites identified for further consideration. Each site has strengths and weaknesses, the latter of which will be more completely discussed in the Opportunities Section of this document.





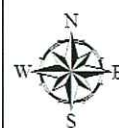
**Legend**

- |                    |                    |
|--------------------|--------------------|
| Lease Boundary     | 115 kV Power Line  |
| Not within Lease   | Substation         |
| <b>Roads</b>       | Water Well         |
| State Highway      | Water Storage Tank |
| County Road        | NTUA Power Line    |
| Indian Route       | NTUA Water Line    |
| Dirt Road          | EPNG Pipeline      |
| Mine Roads         |                    |
| Mine Entrance Road |                    |

**Land Use**

- |                         |
|-------------------------|
| Commercial              |
| Community Facilities    |
| Existing Residential    |
| Industrial/Commercial   |
| Traditionally Sensitive |
| Grazing                 |

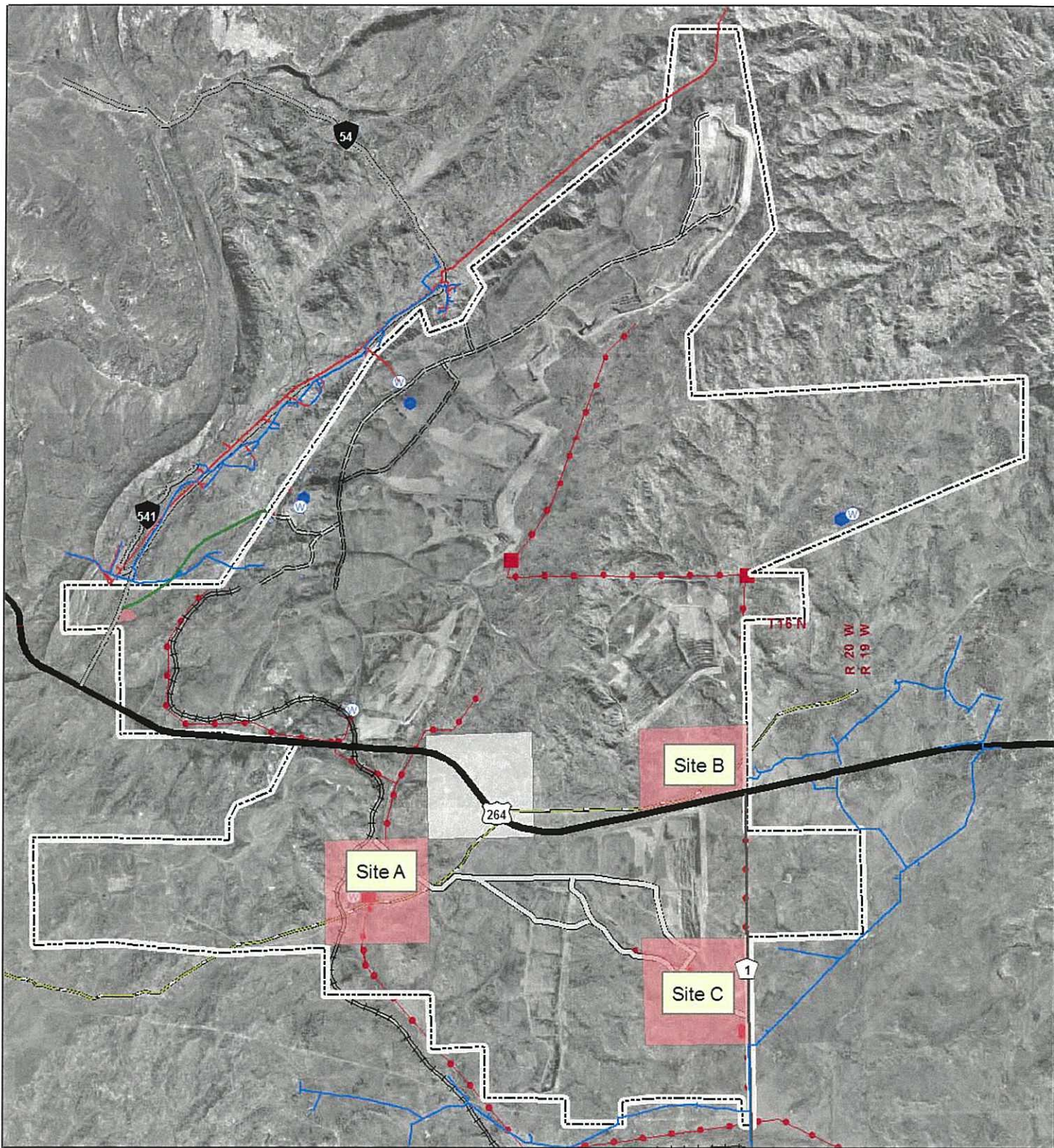
**Figure 14. Recommended Reuse Plan**



0 0.250.5 1 1.5 2 Miles

Sources:  
 U.S. Geological Survey; P & M Coal Mining Company  
 Navajo Nation Land Department; Navajo Department of Transportation





**Legend**

- |                    |                    |
|--------------------|--------------------|
| Lease Boundary     | 115 kV Power Line  |
| Not within Lease   | Substation         |
| <b>Roads</b>       | Water Well         |
| State Highway      | Water Storage Tank |
| County Road        | NTUA Power Line    |
| Indian Route       | NTUA Water Line    |
| Dirt Road          | EPNG Pipeline      |
| Mine Roads         |                    |
| Mine Entrance Road |                    |

**Land Use**

- |  |                       |
|--|-----------------------|
|  | Industrial/Commercial |
|--|-----------------------|

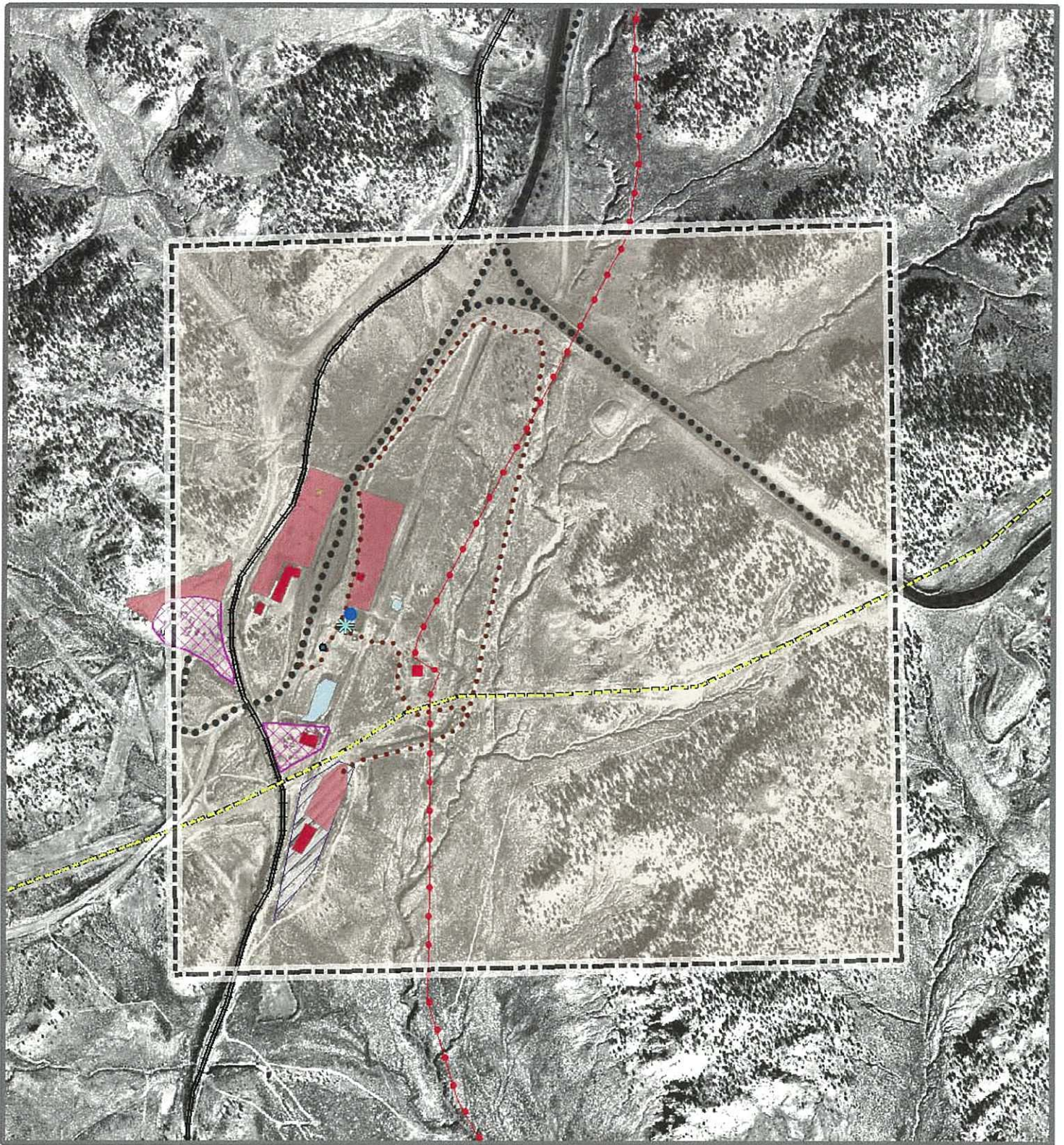
**Figure 15. Location of Industrial/Commercial Sites A, B & C**



0 0.250.5 1 1.5 2 Miles

Sources:  
U.S. Geological Survey; P & M Coal Mining Company





**Legend**

- |                           |                  |
|---------------------------|------------------|
| Section Line              | Substation       |
| Building                  | Water Well       |
| Structure                 | Small Water Tank |
| Pond                      | Access Road      |
| Open Area                 | Dirt Road        |
| Not in Permit Boundary    | Pipeline         |
| Leased to Private Company | Powerline        |
|                           | Railroad         |

**Figure 16. Industrial/Commercial Site A**




0 187.5 750 1,125 1,500 Feet

Sources:  
P & M Coal Mining Company

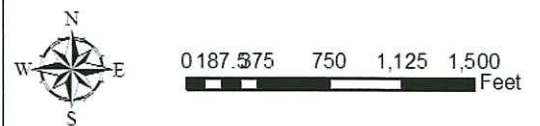




**Legend**

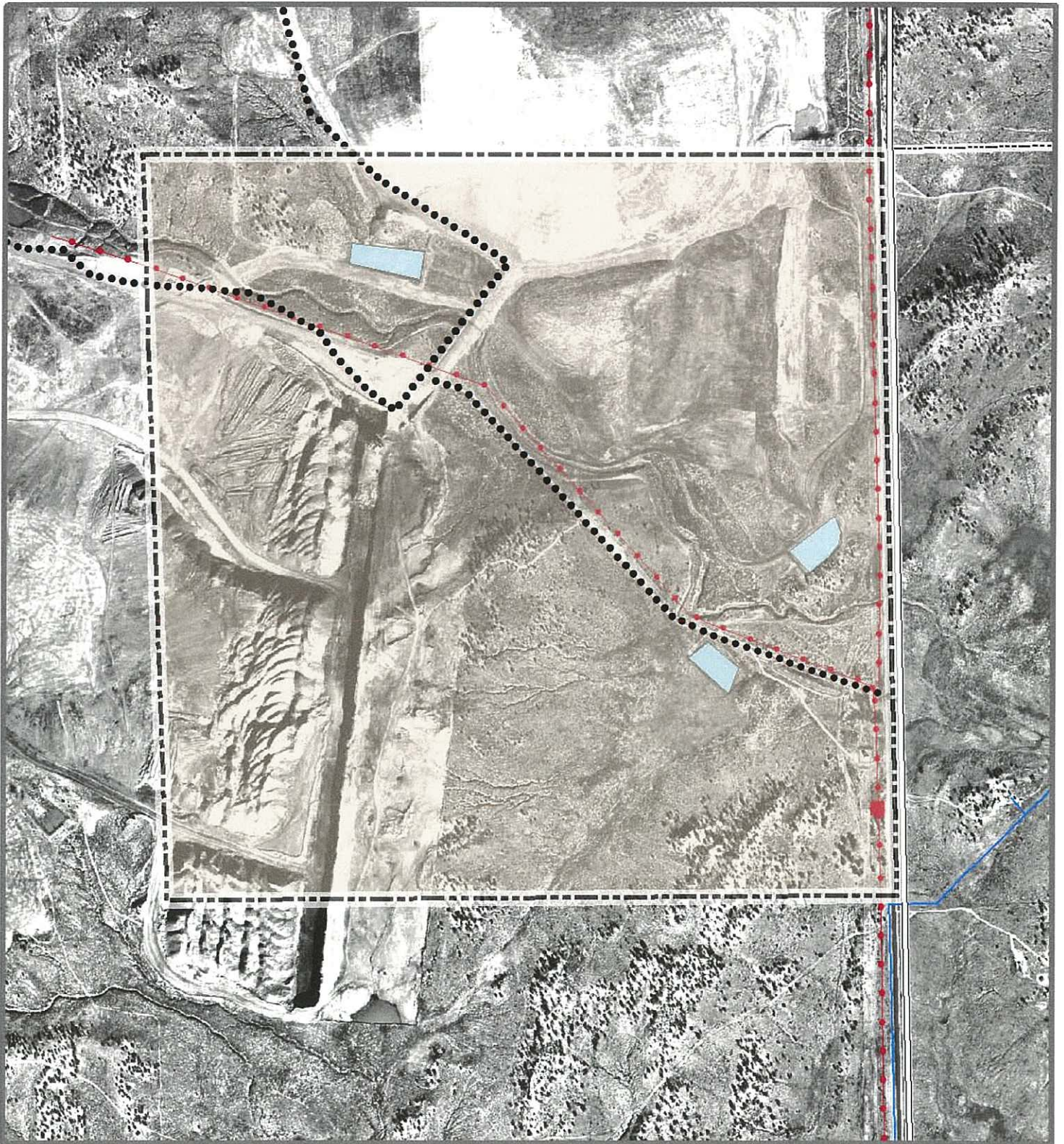
-  Section Line
-  Pond
-  NTUA Water Line
-  County Road
-  Powerline
-  Pipeline

**Figure 17. Industrial/Commercial Site B**



Sources:  
 U.S. Geological Survey; P & M Coal Mining Company  
 Navajo Nation Land Department; Navajo Department of Transportation

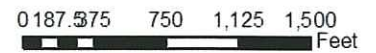




**Legend**

-  Section Line
-  Pond
-  NTUA Water Line
-  County Road
-  Substation
-  Powerline
-  Access Road

**Figure 18. Industrial/Commercial Site C**



Sources:  
P & M Coal Mining Company



### *Site A*

Located approximately one mile south of Highway 264 in Section 17 in the South Mine area, Site A encompasses about 640 acres (Figure 16). Of the total acreage within this site, approximately 25% seems best suited for development, particularly because there are existing buildings, structures, and infrastructure in place.

The buildings include offices and a shop. An existing warehouse has a railroad spur extending into it. The warehouse, owned by the Navajo Nation, is on a small portion of land not within the permit boundary.

Also within Section 17 are two sites that are currently occupied by a private company, Emulsion Plant and Explosive Storage and Blending Area. This company provides explosives to P&M as well as other companies, and they use the railroad.

There is a 115 kV power line serving this area with a substation where the voltage is decreased to service the office complex.

The open areas can be used for parking, storage or for future development.

#### Strengths

- Excellent existing railroad access and availability of utilities;
- Partially developed for industrial uses; some existing infrastructure;
- Highly compatible with adjacent land uses and Chapter vision and plans.

#### Constraints

- Road access to Highway 264 requires approval of allottees north of the site, and/or a new road access is required to the east, crossing another allotment to connect with Highway 264 (approximately two miles).

### *Site B*

In reviewing the various sites, it was noted that Site B provides 440 acres located adjacent to and north of Highway 264 in Section 11 (Figure 17). Of the total acreage within this site, the total acreage paralleling the highway seems best suited for development of facilities.

Highway access can be a major consideration for commercial and industrial development and this Site B offers good access. Further, access to power, either electric or gas, can be equally important, and this site offers both.

Below are highlights of Site B's strengths and constraints:

#### Strengths

- Excellent access adjacent to Highway 264;
- Highly compatible with adjacent land uses and Chapter vision and plans;
- Adjacent to 115KV power line; and
- High Pressure gas line crosses southern edge of the site.

#### Constraints

- No railroad access (approximately three miles to the south); and
- New ingress and egress.



### *Site C*

This site provides 640 acres located west of County Road 1 approximately 1.5 miles south of Highway 264 in Section 23 (Figure 18). Active mining is currently in process in this area, with no definitive plans as to what comes next. Once mining is concluded, this site offers many positives particularly because of its location, road availability, and power on site.

The site's strengths and constraints are highlighted here.

#### Strengths

- Existing access to Highway 264 via County Road 1;
- Adjacent to 115KV power line; and
- Highly compatible with adjacent land uses and Chapter Vision and Plans.

#### Constraints

- County Road 1 will require upgrading to accommodate truck traffic (approximately two miles);
- No railroad access (approximately 1.5 miles away to the south);
- Utilities, including sewer, water and three-phase power would need to be provided or developed.

## **Economic Development Strategy**

It is important that the strategy for future economic development address the area's key challenges. One of the major challenges in the market area is that the economic sectors with jobs are mining and manufacturing with limited diversification of "basic" industries that actually create employment. Another challenge is access to major markets.

A marketing concept referred to as "cluster marketing" should be considered as a strategy to attract businesses to the area. By meeting with major industry representatives within each sector, growth opportunities that may exist with product or service suppliers can be better defined and may help lead to long term growth and sustainability of the dominant company or business sector.

Cluster marketing is based upon identifying the types of industry groups that are dominant in terms of employment, skills of the labor force and supporting or allied industries that are available in the area to support and enhance the growth of an industry. For example, the Silicon Valley is known for its high technology computer-related industry, and is therefore an attractive area for similar types of industries to locate. The area around Detroit is able to attract industries that provide metal fabricating and other components important to the automobile industry.

## **Development Opportunities**

Following is a summary of the opportunities that have the most potential and that should be capitalized upon in the immediate future. Further development of opportunities and implementation of the Conceptual Plan can serve the Navajo Nation and the State of New Mexico well.

Below are highlights of development opportunities by category:

Housing:

Additional housing that would be developed on the mine site would not only provide much needed housing to Navajo families, but also it would create a base for a potential labor force considering the close proximity to the area.

Community Facilities

Areas for community facilities have been identified for such things a Veteran's Center, cemetery and community center.

Office Park:

The existing buildings that would constitute the core of the office park can be leased to new businesses or possibly occupied by the Navajo Nation to meet its office space needs.

Equestrian & Related Commercial Facilities

North Mine area grazing permittees have recommended a state of the art veterinary hospital, animal health lab, equestrian center (potential for local and nationally sponsored equestrian events), an event facility for youth education regarding horses, livestock and farming events to include clinics for 4-H and Future Farmers of America (FFA); such facilities have potential for economic growth.

Commercial/Industrial Sites:

Criteria were developed and sites were matched to those criteria so as to help focus on the best potential locations for economic development. Sites most acceptable for various business and industrial development have been highlighted.

The next most important step is for community officials and leaders with a sense of urgency, further evaluate and discuss their preferences for potential sites that are identified in this Plan. While the criteria used were based on objective and factual considerations, there are likely to be local conditions and policies that lead to preferences for one particular site over the others. Those sites meeting the Criteria previously presented are intended to assist the Navajo Nation and State of New Mexico make express preparation for successfully attracting business and industry into the area.

Not being prepared with attractive sites and amenities for new industries will be a major impediment to competitively attracting any industrial firms or new businesses. Industrial firms are very often trying to meet ambitious construction and/or relocation schedules. As soon as a specific location is selected, ninety to one-hundred-and-twenty day construction schedules are not unusual.

Industrial firms and businesses will want quick responses to specific informational requests, sometimes within twenty-four hours. Without accurate and prompt answers to the firm's questions regarding a particular site, a community may be removed from consideration as a potential location.

The sites that have been identified offer a number of benefits to potential industries looking to locate their businesses within this area. With consideration to planning to be given to site development requirements that will enhance the sites for industrial development, the Navajo



Nation and New Mexico will be well positioned to attract and work cooperatively with businesses seeking to locate in the area.

As discussed, each of the three identified potential industrial development sites has different strengths and constraints. Following are recommended actions that will need to be considered and acted upon to enhance the marketability of the sites.

Site A:

- Resolve issues associated with access to the site from allottees north of the site or; as an alternative, pursue the feasibility of constructing a new access road in a northeast direction from the site to connect to Highway 264.

Site B:

- Provide turn lanes and merging lanes on Highway 264;
- Pursue extension of three-phase electrical service, natural gas and water to the site; and
- Pursue feasibility of construction of a rail spur to the site.

Site C:

- Upgrade County Road 1 to accommodate large vehicles that will be needed to access and serve industry;
- Provide turn lanes and merging lanes on Highway 264;
- Pursue extension of three-phase electrical service, natural gas and water to the site; and
- Pursue feasibility of construction of a rail spur to the site.

## Employment Opportunities

Industry sectors that should be targeted for business attraction efforts are those that will make the best use of Navajo Nation, McKinley County and New Mexico natural, human, and financial resources. There have traditionally been more dominant industry types in the area that represent a labor force that will support other similar types of industries. Existing dominant industry classes in the area, based upon information collected for the “Economic Conditions and Analysis” section, include:

- Retail and Wholesale Trade;
- Services;
- Manufacturing;
- Government; and
- Construction.

Mining and associated industries, although a significant consideration in this plan, has a relatively low overall number of employees in the region when compared to the industries identified above. The mining industry and employment associated with it is represented primarily by McKinley

Mine. It is very important, however, to identify and attract basic industries like McKinley Mine that create jobs and bring revenue into the area so that other businesses can also grow.

Businesses that meet these criteria and have shown some interest in locating on the McKinley Mine area include a biodiesel manufacturer and a metal recycling plant.

### Facilities to Remain

In order to insure that there is sufficient infrastructure to attract industry to the area, advance planning is needed to begin providing for that infrastructure. Fortunately, a number of facilities exist on the mine site that could be useful in attracting potential businesses and industries, and thus, creating economic development opportunities.

Facilities that likely will be useful in attracting new business and industry to the area are listed below by specific area and photos for included in Appendix B:

#### NORTH MINE AREA

The northern mine has the largest number of facilities and thus the most potential square footage that may be available for other uses. Facilities to remain are listed in the following tables. Figure 19 shows the facilities to remain within the north mine office complex area.

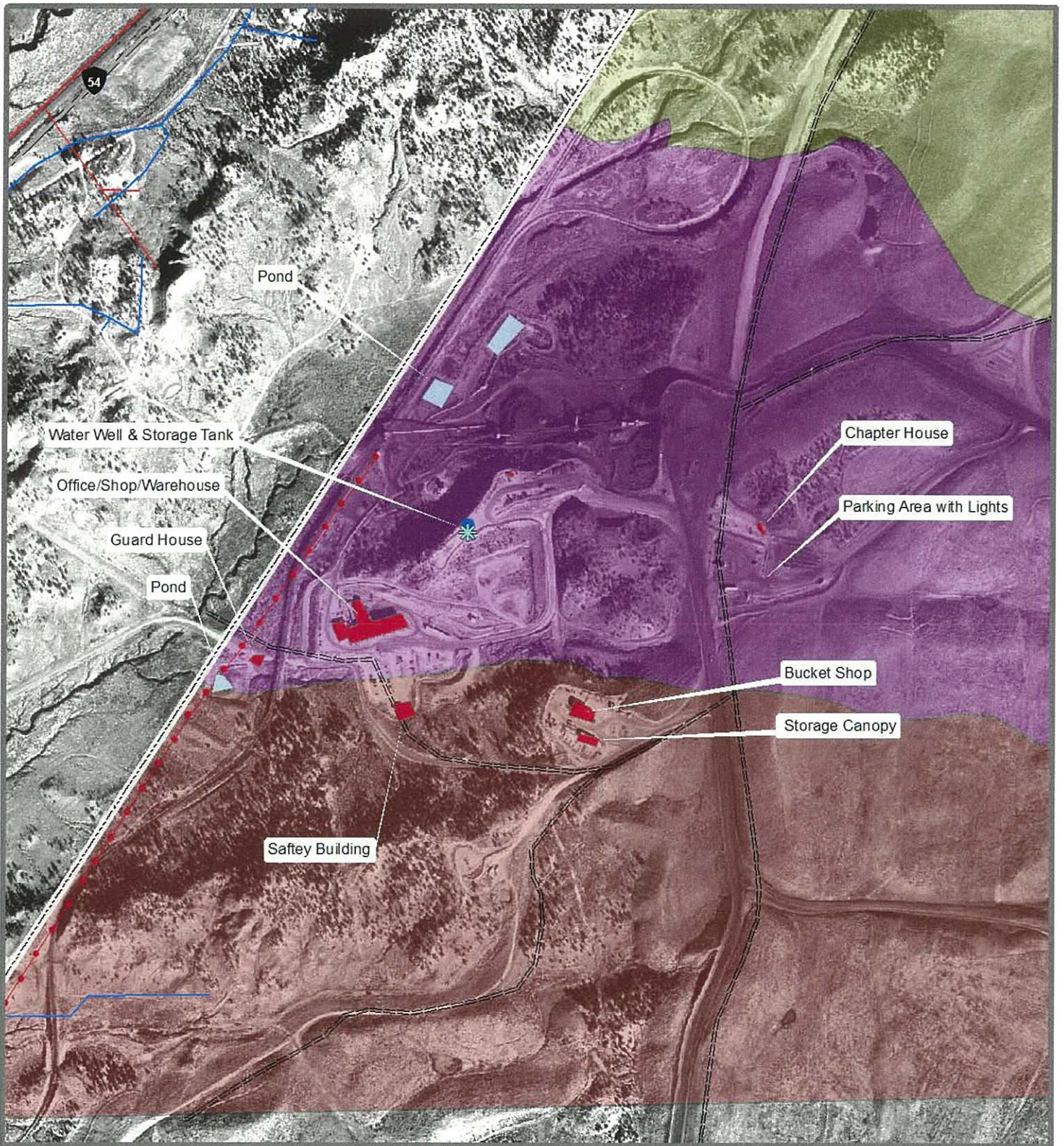
Table 23. North Mine - Electric Lines to Remain						
Description	Length (mi.)	Location	Land Status	Grazing Unit	Year Built	Comments
West 115 kV Line	1	T17N R20W	Navajo Tribal Trust	1 & 2	1974	Used to operate drag lines and coal load out facility
East 115 kV Line	5	T17N R20W	Navajo Tribal Trust	4, 6 & 8	1974	North end is not live.
Single & Three Phase lines	3	T17N R20W	Navajo Tribal Trust	1 & 2	1974	Serves office shop complex & 'Chapter House'

Table 24. North Mine - Water Wells to Remain						
Description	Depth (ft.)	Location	Land Status	Grazing Unit	Year Drilled	Comments
#1: Potable Well	~1,000	T17N R20W	Navajo Tribal Trust	1	1974	Connects to 50,000 gallon tank; serves office complex area.
#2: Triangle Well	~1,000	T17N R20W	Navajo Tribal Trust	3	1974	Connects to 500,000 gallon tank.
#3: Twin Tower Well	~1,000	T17N R219W	Navajo Tribal Trust	Twin Lakes	1974	Connects to two 40,000 gallon tanks.



Table 29. North Mine - Buildings to Remain						
Description	Size (sq. ft.)	Location	Land Status	Grazing Unit	Year Built	Comments
2-story Main Office Building with adjacent new office wing	12,800 (6,400 per story)	T17N R20W	Navajo Tribal Trust	1	main office 1974 new office 1991	Main office built of steel construction with concrete foundation and floor. New office added for office space and contains a soils and coal lab.
Shop	40,425	T17N R20W	Navajo Tribal Trust	1	1974	Contains warehouse space, mechanical, welding, machine and electrical shops, with four overhead cranes: two 5 ton and two 15 ton. Three-phase electrical service is available.
Warehouse	10,075	T17N R20W	Navajo Tribal Trust	1	1991	Warehouse is covered open walls.
Safety Building	3,200	T17N R20W	Navajo Tribal Trust	2	1980	The safety building is a one-story structure that was constructed in 1980. It is used for training and the mine ambulance/first aid.
Bucket Welding Shop	4,000	T17N R20W	Navajo Tribal Trust	2	1974	Building is of steel framework and metal siding.
2C Training Trailer, known as the "chapter house"	1,100	T17N R20W	Navajo Tribal Trust	1	1986	Building is single-wide trailer
Security Building	150	T17N R20W	Navajo Tribal Trust	1	1974	The security building is located at the north mine entrance.

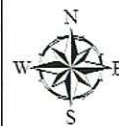




**Legend**

- |  |   |
|--|---|
| <span style="display:inline-block; width:15px; height:15px; background-color:orange; border:1px solid black;"></span> Building           | <span style="display:inline-block; width:15px; height:15px; background-color:red; border:1px solid black;"></span> Substation               |
| <span style="display:inline-block; width:15px; height:15px; background-color:yellow; border:1px solid black;"></span> Structure          | <span style="display:inline-block; width:15px; height:15px; background-color:lightblue; border:1px solid black;"></span> Water Well         |
| <span style="display:inline-block; width:15px; height:15px; background-color:lightblue; border:1px solid black;"></span> Pond            | <span style="display:inline-block; width:15px; height:15px; background-color:blue; border:1px solid black;"></span> Water Tank (50,000 gal) |
| <span style="display:inline-block; width:15px; height:15px; background-color:purple; border:1px solid black;"></span> Grazing Unit 1     | <span style="display:inline-block; width:15px; height:15px; border-top:1px solid red; border-bottom:1px solid red;"></span> Powerline       |
| <span style="display:inline-block; width:15px; height:15px; background-color:darkred; border:1px solid black;"></span> Grazing Unit 2    |   |
| <span style="display:inline-block; width:15px; height:15px; background-color:lightgreen; border:1px solid black;"></span> Grazing Unit 3 |   |

**Figure 19. North Mine Office Complex - Facilities to Remain**



0 187.5 375 750 1,125 1,500 Feet

Sources:  
P & M Coal Mining Company



**SOUTH MINE AREA**

While the South Mine area has fewer facilities than the North Mine facilities, this area has facilities that should remain. Those facilities to remain with the South Mine area are listed in the following tables. Figure 20 shows the facilities to remain within the south mine office complex area, which is located in Section 17.

Description	Length (mi.)	Location	Land Status	Year Built	Comments
West 115 kV Line	1	T17N R20W	Private, Allotments, BLM	1974	Used to operate drag lines and coal load out facility
East 115 kV Line	5	T17N R20W	Private and Allotments	1974	Parallels County Road 1 and crosses several types of land
Single & Three Phase lines		T17N R20W	Private	1974	Serves office shop complex

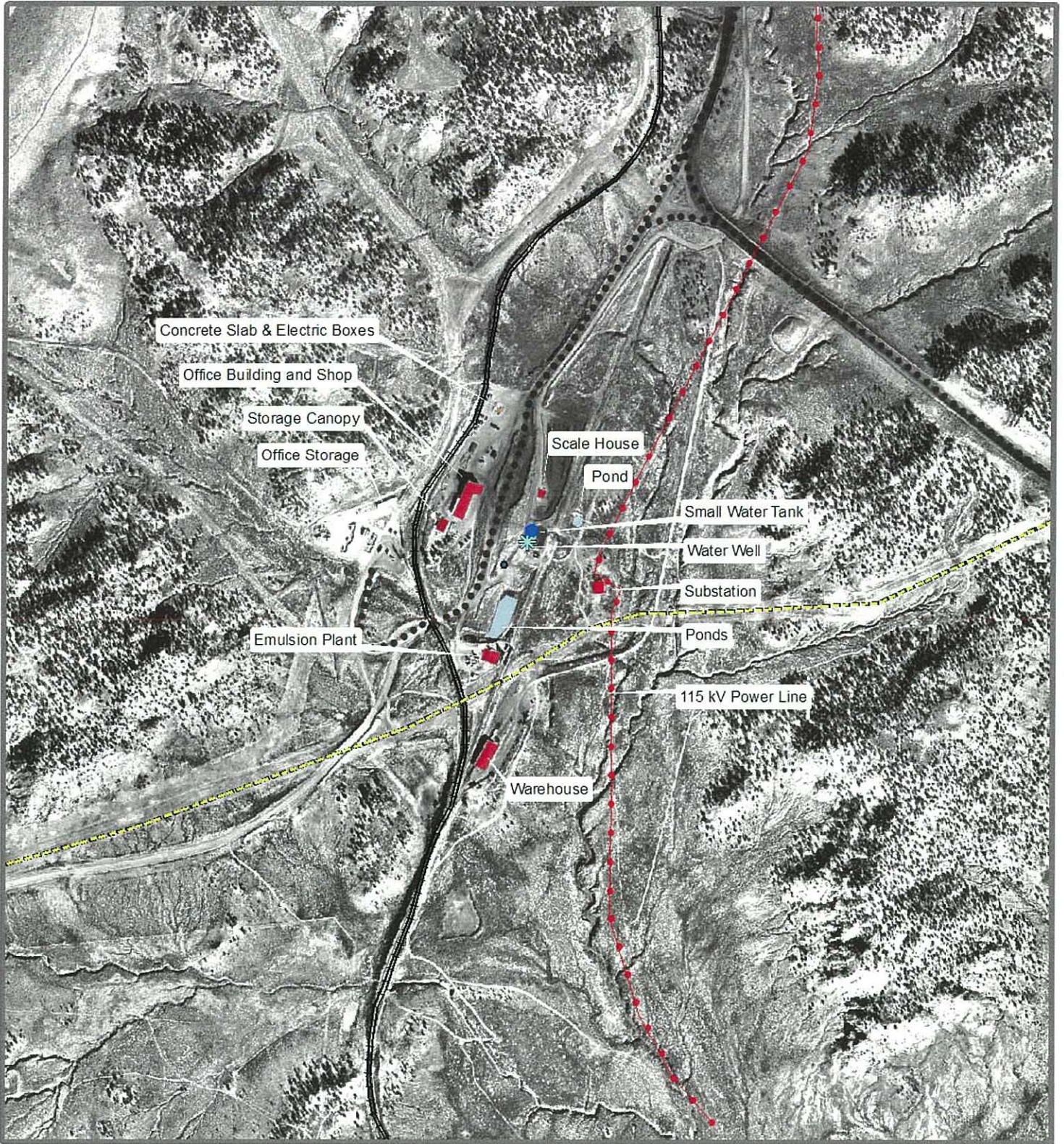
Description	Depth (approx.ft.)	Location	Land Status	Year Drilled	Comments
Water Well	~1,000	T16N R20W Section 5	Navajo Fee Land	1974	Connects to 50,000 gallon tank; serves office complex area.
Water Well	~1,000	T16N R20W Section 17	Private	1974	Connects to 500,000 gallon tank.

Description	Size	Location	Land Status	Year Installed	Comments
Impoundment Ponds	Up to 10 ac-ft	South Mine	Varies	varies	Keep ponds which are safe and useable by livestock Provide fencing

Description	Quantity	Location	Land Status	Year Built	Comments
Sewer Lines with Septic Systems	1	T16N R20W Section 17	Private	1974	Serves the office building

<b>Table 34. South Mine – Buildings to Remain</b>					
<b>Description</b>	<b>Size (sq. ft.)</b>	<b>Location</b>	<b>Land Status</b>	<b>Year Built</b>	<b>Comments</b>
Office Building with Shop	10,800	T16N R20W Section 17	Private	1974	Main office built of steel construction with concrete foundation and floor.
Storage Canopy	800	T16N R20W Section 17	Private	1974	Concrete Floor
Scale House	100	T16N R20W Section 17	Private	1974	Scale house used for public coal sales
Guard House	150	T16N R20W Section 8	Allotment	1974	Perhaps relocate building to Section 17





**Legend**

- Building
- Structure
- Pond
- Access Road
- Pipeline
- Powerline
- Railroad
- Substation
- Water Well
- Small Water Tank

**Figure 20. South Mine Office Complex - Facilities to Remain**



0 187.5 375 750 1,125 1,500 Feet

Sources:  
P & M Coal Mining Company



## Action Plan

A long-term strategy is important as part of an economic development effort, but it is more critical that a Plan be established with specific action steps to get the process underway.

Equally or perhaps more important is the need for urgency. As the P&M mining operations continue to be reduced and certain segments of the mine are closed, those areas are being reverted to the original grazing status. It is possible, indeed likely, that some of the areas that are being reverted to grazing may be more suitable for other uses as described in this document.

Wise and rapid decision making now will not only make appropriate lands available for economic development, but also it will help to reduce the costs that would be associated with reworking the areas needed if those are turned back to grazing now. Wise and rapid decision making will also impress potential business and industries that may be interested in these areas.

Below are some of the first steps that need to be taken:

### *STRATEGY 1 – COMMUNICATE AND OBTAIN APPROVALS*

Obtain necessary support and approvals that will lead to the Navajo Nation providing a letter to P&M informing them of the facilities, if any, should remain.

#### Action Items

- Obtain resolutions from the five chapters: Fort Defiance, Tsayatoh, Twin Lakes, St. Michaels and Rock Springs;
- Obtain resolutions from the Natural Resource Committee, Economic Development Committee and the Transportation and Community Development Committee;
- Obtain approval from the Navajo Nation Council;
- Navajo Nation to write letter to P&M informing them of the Nation's plan, including certain facilities to be retained; and
- Continue to communicate to the community and involve all interested parties.

### *STRATEGY 2 – SEEK POTENTIAL COMPANIES*

Utilize the reuse plan and study to seek potential companies to locate within the designated areas.

#### Action Items

- Seek and secure compatible, profitable businesses; and
- Coordinate between the Navajo Nation Division of Economic Development and the NM Department of Economic Development.

### *STRATEGY 3 – FOCUS ON REEMPLOYMENT*

- Explore and assist with re-employment opportunities for employees who will lose their jobs.



Action Items

- Explore other employment opportunities in non-related fields where current skills may be transferable;
- Encourage displaced employees to look into additional training and education at regional educational facilities;
- Contact and coordinate with the Desert Rock Power Plant project team regarding possible job opportunities; and
- Identify and/or secure appropriate staff from employment security departments of New Mexico and the Navajo Nation to assist displaced workers with job search strategies and skills development

*STRATEGY 4 – DIVERSITY AND EXPAND*

- Understand and reemphasize the importance of not putting all hopes into a single industry or initiative.

Action Items

- Diversify and expand the economy of the area;
- Focus on developing new regional industrial revenues through forming industry cluster teams;
- Improve competitiveness; and
- Expand awareness of regional opportunities and improve transportation/logistic costs and time to market.

*STRATEGY 5 – INCREASE INVESTMENT*

- Understand that it takes money to make money; timely and appropriate investment in the right projects can bring greater prosperity to the area.

Action Items

- Expand innovation and entrepreneurship;
- Improve economic knowledge and awareness of citizens, government and business; and
- Develop and implement investment capital to enhance economic growth.

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# APPENDIX A - MEETING INFORMATION



**NAVAJO NATION–DINÉ POWER AUTHORITY–SITHE GLOBAL POWER, LLC**

**“Desert Rock Energy Project Lease and Sublease Signing Ceremony”**

**Navajo Nation Office of the President and Vice-President, Navajo Nation Officials,  
Navajo Nation Council Delegates, Diné Power Authority, Desert Rock Energy  
Company, LLC and Sithe Global Power LLC**

**May 25, 2006**

**Karigan Professional Building  
Division of Economic Development Conference Room  
St. Michaels, Arizona**

**AGENDA**

- 11:00 a.m. Pre-meeting reception of business and tribal officials
- 11:30 a.m. Lease/Sublease signing ceremony. NN President, DPA, and Sithe Global  
Statements by the President, DPA and Sithe
- 12:00 noon Signing Ceremony Conclusion  
Statements by Parties, Officials, and Delegates  
Media News Release
- 12:30 pm Adjournment & Informal Discussion with attendees
- 1:00 pm NN/DPA/Sithe Luncheon sponsored by AterWynne LLP  
Outside Barbeque (behind Karigan building in Karigan Estates)

**P & M MCKINLEY MINE  
LAND REUSE AND DEVELOPMENT PLAN**

# **Meeting Agenda**

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**Thursday - June 08 2006**

- I. Introduction
- II. Project Overview
- III. Chapter Input
- IV. Adjournment

**Thank you for your participation!**

---

**JJ Clacs & Company**  
Post Office Box 479  
Fort Wingate, NM 87316  
(505) 488-6131  
wynette@jjclacs.com



**P & M MCKINLEY MINE  
LAND REUSE AND DEVELOPMENT PLAN**

# **Meeting Agenda**

---

**Thursday - June 15, 2006**

- I. Introduction
- II. Project Overview
- III. Chapter Input
- IV. Adjournment

**Thank you for your participation!**

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**JJ Clacs & Company**  
Post Office Box 479  
Fort Wingate, NM 87316  
(505) 488-6131  
wynette@jjclacs.com

Rock Springs  
8:00 AM

P&M McKinley Mine Land Reuse & Development Plan  
Thursday • June 15, 2006

## Meeting Sign-In Sheet

	NAME	OFFICE/COMPANY/COMMUNITY MEMBER
1.	Wynette Orviso	JJ Claes's Company
2.	Robert T. Began	Rock Springs C&E
3.	James Wood	" " Pres.
4.	Alan Began	DEI
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P&M McKinley Mine Land Reuse & Development Plan  
Thursday • June 15, 2006

### Meeting Sign-In Sheet

	NAME	OFFICE/COMPANY/COMMUNITY MEMBER
1.	Sylvia Morgan	TLC - OSC Sylvia_yoto@yahoo
2.	Allan Beggs	DED
3.	Wynette Arviso	J.T. Claws & Company
4.	Ronda D. Leonard	TLC - Office Specialist
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Seiyabeh  
2pm

P&M McKinley Mine Land Reuse & Development Plan  
Thursday • June 15, 2006

### Meeting Sign-In Sheet

NAME	OFFICE/COMPANY/COMMUNITY MEMBER
1. <u>Hevvy Hudson</u>	<u>EWA LA Bd Member Tzuy-fah / Rock Springs Clumpers</u>
2. <u>Harriett K. Bedenti</u>	<u>NNE - Rock Spring / Tzuy-fah Manuelito</u>
3. <u>Allan Berg</u>	<u>DW of Ec Development</u>
4. <u>DAVID Lee</u>	<u>SAVATON CHPT - PRESIDENT.</u>
5. <u>James - Isaac Sr.</u>	
6. <u>William J. Isaac</u>	
7. <u>Dorcas James</u>	
8. <u>Judge Gizzie</u>	
9. <u>Virgie Tom</u>	
10. <u>Ellen Tom</u>	
11. <u>Ralph T. Berg</u>	<u>RSC = CSC</u>
12. <u>Wynette Arviso</u>	<u>JJ Class Company</u>
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**P & M MCKINLEY MINE  
LAND REUSE AND DEVELOPMENT PLAN**

# **Land Re-Use Plan Work Session Agenda**

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**Tuesday - June 20, 2006**

- I. Introduction**
  
- II. Project Overview/Update**
  
- III. Hands-On Work Session - Map Building**
  - Identify Existing Facilities
  - Incorporate Goals & Objectives
  - Group Presentation
  
- IV. Adjournment**

**Thank you for your participation!**

---

**JJ Clacs & Company**  
Post Office Box 479  
Fort Wingate, NM 87316  
(505) 488-6131  
wynetta@jjclacs.com

P&M McKinley Mine Land Reuse & Development Plan  
Tuesday • June 20, 2006

**Land Re-Use Plan Work Session  
Sign-In Sheet**

NAME	OFFICE/COMPANY/COMMUNITY MEMBER
1. <u>Lorraine W. Nelson</u>	<u>President Ft. Defiance Chapter</u>
2. <u>John Plummer</u>	<u>Coalmine Done!</u>
3. <u>Brenda Notah</u>	<u>County Member / Ft. Def. Chpt.</u>
4. <u>Neil Smoljan</u>	<u>St. Michaels Ac</u>
5. <u>Charles Morrison</u>	<u>Tsuwatoh Chapter</u>
6. <u>Ray Clearland</u>	<u>Economic Development</u>
7. <u>Allan Begny</u>	<u>Ec. Dev.</u>
8. <u>Louise W. Bohrer</u>	<u>Fort Def</u>
9. <u>Archie S. Thaurak</u>	<u>2nd Division Chapter</u>
10. <u>Don Bennett</u>	<u>Fort Defiance Ac</u>
11. <u>Kirk Aviso</u>	<u>Fort Defiance Chapter</u>
12. <u>Harriet X Becent</u>	<u>Manuelita, Tsuwatoh NNE Rock Springs</u>
13. <u>Wynette Aviso</u>	<u>TICloes &amp; Company</u>
14. <u>Wanda Owens</u>	<u>" "</u>
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Ft. Defiance  
Chapter

P&M McKinley Mine Land Reuse & Development Plan  
Tuesday • June 20, 2006

### Land Re-Use Plan Work Session Sign-In Sheet

NAME	OFFICE/COMPANY/COMMUNITY MEMBER
1. <u>Lorraine W. Nelson</u>	<u>President Ft. Defiance Chapter</u>
2. <u>John Plummer</u>	<u>Coalmine Diner</u>
3. <u>Brenda Notah</u>	<u>Conty Member / Ft. Def. Chpt.</u>
4. <u>N. L. Smolger</u>	<u>Ft. Defiance Ac</u>
5. <u>Charles Morrison</u>	<u>Tsayatoh Chapter</u>
6. <u>Ray Clearland</u>	<u>Economic Development</u>
7. <u>Allan Befay</u>	<u>Ec. Dev.</u>
8. <u>Louise Cochran</u>	<u>Fort Def.</u>
9. <u>Arish S. Thaurah</u>	<u>Fort Defiance Chapter</u>
10. <u>Don Bennett</u>	<u>Fort Defiance Ac</u>
11. <u>Kirk Arviso</u>	<u>Fort Defiance Chapter</u>
12. <u>Harriet X. Besant</u>	<u>MANUALIST, Tsayatoh NVC Rock Springs</u>
13. <u>Wynette Arviso</u>	<u>ITC Loe's Company</u>
14. <u>Wanda Arviso</u>	<u>" "</u>
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# Land Re-Use Plan Work Session Agenda

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Thursday • June <sup>22</sup>21, 2006

- I. Introduction
- II. Project Overview/Update
- III. Hands-On Work Session - Map Building
  - Identify Existing Facilities
  - Incorporate Goals & Objectives
  - Group Presentation
- IV. Adjournment

**Thank you for your participation!**

---

JJ Clacs & Company  
Post Office Box 479  
Fort Wingate, NM 87316  
(505) 488-6131

wynette@jjclacs.com



## Land Re-Use Plan Work Session Sign-In Sheet

	NAME	OFFICE/COMPANY/COMMUNITY MEMBER
1.	Emily Bennett	Community members
2.	Cynthia Bigthumb	Community members
3.	Erwin Bigthumb	" "
4.	Donald P. Jones	
5.	Morocco M. Dale	
6.	Mildred M. Begay	Community member
7.	Teresa Begay	Community member
8.	MARLENE PERRY	COMMUNITY MEMBER
9.	Tahna Belone	Community Member
10.	Esther Belone	" "
11.	LVA M. TOM	Community member
12.	Margarite Chee	Community member
13.	Beca Rose Perry	" "
14.	Margaret M. Kee	
15.	Tony Perry	Div. of Economic Development
16.	Allan Begay	Div. of Economic Development
17.	Roy Cleveland	Div. of Economic Dev.
18.	Wanda Amis	OTC Class: Company
19.		
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**P & M MCKINLEY MINE  
LAND REUSE AND DEVELOPMENT PLAN**

# **Land Re-Use Plan Work Session 2 Agenda**

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**Tuesday • June 27, 2006**

- I. Introduction
- II. Project Overview/Update
- III. Hands-On Work Session - Map Building
  - Identify Existing Facilities
  - Incorporate Goals & Objectives
  - Group Presentation
- IV. Adjournment

**Thank you for your participation!**

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**JJ Ciacs & Company**  
Post Office Box 479  
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(505) 488-6131  
wynette@jjciacs.com



P&M McKinley Mine Land Reuse & Development Plan  
Tuesday • June 27, 2006

*Tsytah  
chapter*

**Land Re-Use Plan Work Session 2  
Sign-In Sheet**

NAME	OFFICE/COMPANY/COMMUNITY MEMBER
1. ELRENA MITCHELL	NNDIT
2. Charles Morrison	Tsytah Chapter / Community Service Coordinator
3. David Lee	Tsytah Chapter, Chapter President
4. Harriett K. Beenti	Tsytah, Manvel, Rock Springs - NNC
5. W.nette Arvici	IT Class & Company
6. Wanda Owens	IT Class & Company
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P&M McKinley Mine Land Reuse & Development Plan  
Tuesday • June 27, 2006

**Land Re-Use Plan Work Session 2  
Sign-In Sheet**

	NAME	OFFICE/COMPANY/COMMUNITY MEMBER
1.	Emily Bennett	Community Member
2.	Ellen Rose Perry	
3.	Esther Belone	
4.	Tahna Belone	
5.	Shoreusem. Hale	
6.	VIRGIL WYACO, II	SON OF ALLOTEE
7.	MARLENE R PERRY	
8.	JALIN O PERRY	
9.	Mildred M Bigay	
10.	Teresa Bigay	
11.	Cynthia Bigthumb	
12.	Erwin Bigthumb	
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US Army Corps of Eng  
NN. Econ Dev.

10/27/06

Name	Contact information	
ROY J. CLEVELAND	Navajo Nation, Economic Development	928-871-7377
Wanda Omas	TJ Claus & Company	505-488-6131
Nunette Arviso	TJ Claus & Company	505-433-6131
Alfon Bepko	Division of Ec. Development	928-871-6299
Patrick Samuel	OPVP	928-871-7002
Tommy Perry	Div. Economic Develop	871-6504
Roy B Dempsey	Bx 3390 Window Rock AZ roybdempsey@hotmail.com	928-871-6350 505-871-1568 cell
OMURHU ONOKPISE	DIV OF ECONOMIC DEVELOPMENT	928.871.6966
Spencer O'Neal	U.S Army Corp Eng	256 895-1880
BERTHA Aguirre	SMALL BUSINESS Div. Economic Dev	(928) 871-6791



J J Clacs  
company

P.O. Box 479 Fort Wingate, NM 87316  
505.488.6131 (ph) • 505.488.6141 (fax)

**Project Report To the  
Eastern Navajo Land Commission  
P & M McKinley Mine Reuse Plan and Feasibility Study  
June 28, 2006**

***Project Description***

The *P&M McKinley Mine Reuse Plan and Feasibility Study* is contracted under the State of New Mexico Economic Development Division and the Navajo Nation Division of Economic Development for the purpose of developing a reuse plan for the P&M McKinley coal mine after its closure in 2008.

The goals of the project are:

- Evaluate the existing facilities
- Obtain community input from impacted chapters
- Determine the facilities that should stay after the mine closes
- Provide a conceptual land use plan for the area after the mine closes

***Land Status and Ownership***

The land status and ownership of land within the lease boundaries is shown in the attached map. A majority of the land is Navajo Tribal Trust (11,294 acres), with all of it found in the North Mine area. Another 1,848.46 acres in the is Navajo Tribal Fee land. A majority of the mine site is "checkerboard" pattern, with 7,428.06 acres as Indian allotments. Other landowners in the "checkerboard" area are Bureau of Land Management (758 acres), State of New Mexico (64.09 acres) and private fee surface ownership by Chevron USA (9,613.56 acres). The non-private land is leased to either P&M Coal Company or Chevron USA for the sole purpose of coal mining, with leases scheduled to expire as the Mine shuts down and reclamation is complete.

Land Owner	Acres
Navajo Tribal Trust	11,294
Navajo Tribal Fee	1,848.45
Indian Allotment	7,428.06
BLM	758
State of NM	64.09
Chevron USA	9,513.56

**P & M MCKINLEY MINE  
LAND REUSE AND DEVELOPMENT PLAN**

# **DRAFT Land Re-Use Plan Agenda**

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**10am - Friday - June 30, 2006  
Karigan Building - St. Michaels, Arizona**

- I. Introduction
- II. Project Update
- III. DRAFT Land Re-Use Plan Presentation
- IV. Comments
- V. Adjournment

**Thank you for your participation!**

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**JJ Clacs & Company**  
Post Office Box 479  
Fort Wingate, NM 87316  
(505) 488-6131  
wynette@jjclacs.com

P&M McKinley Mine Land Reuse & Development Plan  
Friday • June 30, 2006

**DRAFT Land Re-Use Plan Presentation  
Sign-In Sheet**

NAME	OFFICE/COMPANY/COMMUNITY MEMBER
1. <u>Darryl Bylowe</u>	
2. <u>John Cochran Pine</u>	
3. <u>Lorraine Nelson</u>	<u>Ft. Defiance Chapter</u>
4. <u>Hannah Waineka</u>	<u>" " " NNC/B&amp;K (hwaneka@navajo.org)</u>
5. <u>Harold Skow</u>	<u>NNDIT <del>h</del> hskow2002@yahoo.com</u>
6. <u>Elvira Mitchell</u>	<u>NNDIT elviramitchell@navajo.org</u>
7. <u>Charles Morrison</u>	<u>Tsayatoh Chapter tsayatoh@hotmail.com</u>
8. <u>Ray Berchman Pine</u>	<u>Oak Spring / St. Michaels NNC</u>
9. <u>J. Ingle (Luis)</u>	<u>JJ Claas &amp; Company</u>
10. <u>Wanda Olivas</u>	<u>JJ Claas &amp; Company</u>
11. <u>Larry Anderson, SR.</u>	<u>NNC/HSC Ft. Def. Chapter</u>
12. <u>Kirk Arviso</u>	<u>Fort Defiance Chapter kkarviso@yahoo.com</u>
13. <u>Tony Perry</u>	<u>Div. of Economic Develop.</u>
14. <u>Allan Boney</u>	<u>Div. of Economic Development</u>
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**P & M MCKINLEY MINE  
LAND REUSE AND DEVELOPMENT PLAN**

# **DRAFT Land Re-Use Plan Agenda**

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**9am • Monday • July 10, 2006  
Navajoland Days Inn • St. Michaels, Arizona**

- I. Introductions
- II. Project Update
- III. Review: DRAFT Land Re-Use Plan
  - A. Assessments
  - B. Vision, Goals & Objectives
  - C. Maps.
- IV. Discussion: Questions & Comments
- V. Next Steps
- VI. Adjournment

**Thank you for your participation!**

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**JJ Clacs & Company**  
Post Office Box 479  
Fort Wingate, NM 87316  
(505) 488-6131  
wynette@jjclacs.com

P&M McKinley Mine Land Reuse & Development Plan  
9am • Monday • July 10, 2006 • St. Michaels, AZ

**DRAFT Land Re-Use Plan Meeting  
Sign-In Sheet**

	NAME	OFFICE/COMPANY/COMMUNITY MEMBER
1.	Steve Bezy	Twin Lakes Chapter
2.	Notah Barney	Twin Lakes Chapter Vice President
3.	Charles Morrison	Troyton Chapter
4.	Larry Anderson, JR.	NMC/HSC Fort Defiance
5.	Lorraine M. Nelson	Ft. Defiance Chapter
6.	Ray J. CLEVELAND	Economic Development
7.	Joseph Watson	Old Cool Mine Din. Cadetion
8.	John Phummet	Cochise Mine
9.	Norman Johnson	Navigo National Council / Resources Com.
10.	Harold Wannerka	NMC / BNF / Ft. Defiance Chapter
11.	Allan Bezy	Div of Ec. Dev. & RN
12.	Jack Lewis	Ft. Defiance Chapter
13.	David Lee	Troyton Chapter
14.	Wanda Owens	JJ Class: Company
15.	Wendy Owens	JJ Class: Company
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**P & M MCKINLEY MINE  
LAND REUSE AND DEVELOPMENT PLAN**

# **Tribal Business Community Informational Meeting Agenda**

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**4pm • Monday • July 10, 2006  
Navajoland Days Inn • St. Michaels, Arizona**

- I. Introductions
- II. Project Overview
- III. DRAFT Land Re-Use Plan
  - A. Existing Facilities
  - B. North Mine ReUse & Development Plan
  - C. South Mine ReUse & Development Plan
- IV. Discussion: Questions & Comments
- V. Adjournment

**Thank you for your participation!**

---

**JJ Clacs & Company**  
Post Office Box 479  
Fort Wingate, NM 87316  
(505) 488-6131  
wynette@jjclacs.com



**P& M MCKINLEY MINE  
LAND REUSE AND DEVELOPMENT PLAN**

# **Tribal Programs Informational Meeting Agenda**

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**1pm • Monday • July 10, 2006  
Navajoland Days Inn • St. Michaels, Arizona**

- I. Introductions
- II. Project Overview
- III. DRAFT Land Re-Use Plan
  - A. Existing Facilities
  - B. North Mine ReUse & Development Plan
  - C. South Mine ReUse & Development Plan
- IV. Discussion: Questions & Comments
- V. Adjournment

**Thank you for your participation!**

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**JJ Clacs & Company**  
Post Office Box 479  
Fort Wingate, NM 87316  
(505) 488-6131

wynette@jjclacs.com

P&M McKinley Mine Land Reuse & Development Plan  
1pm • Monday • July 10, 2006 • St. Michaels, AZ

**Tribal Programs Informational Meeting  
Sign-In Sheet**

23.	NAME	OFFICE/COMPANY/COMMUNITY MEMBER
1.	Karen Ashby	St. Michaels Community Ft. Defiance R500
2.	John Plummer	Carlmine Mine
3.	STEEVE BAGAY	Pin Lakes
4.	Notah Barney	Twi hals Chapter
5.	Serraine Nelson	Ft. Defiance Chapter
6.	KEN CRAIG	NTUA
7.	ELRENA MITCHELL	NN Dept. of INFORMATION Technology
8.	Jerry Sanderson	NN Economic Dev Dept
9.	Allan Bagay	NN Div of Ec. Development
10.	Robert Lee	ERBDO
11.	Joseph Walker	Carlmine Mine
12.	Ken Behe	OSM - Minerals Dept
13.	Larry Anderson, Sr.	MVC/HSC Fort Defiance Chapter
14.	John R. Stuckel	MINERALS Dept. - SURFACE MINING PROGRAM
15.	Allan Bagay	NN Div of Ec Dev
16.	DeClavel	NN Div. of Economic Dev.
17.	Harold Williams	MVC/BMF/Ft Def Chapter
18.	DAVID LEE	TSAYATON CHAPTER
19.	Terril Lamone	Navigo Dept Water Resour. Water Code Admin.
20.	Niki Halverson	Navigo Land Department
21.	Norman John, II	Navigo NATIA Council
22.	William Anderson	TSAYATON CHAPTER

**P & M MCKINLEY MINE  
LAND REUSE AND DEVELOPMENT PLAN**

**DRAFT  
Land Re-Use Plan  
Agenda**

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**9am • Wednesday • July 19, 2006  
Karrigan Building • St. Michaels, Arizona**

- I. Introductions
- II. Project Update
- III. Review: DRAFT Land Re-Use Plan
  - A. changes to land use plan map
  - B. revised vision, goals & objectives
  - C. answer to questions of 7/10 mtg.
- IV. Discussion: Questions & Comments
- V. Next Steps
- VI. Adjournment

**Thank you for your participation!**

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**JJ Clacs & Company**  
Post Office Box 479  
Fort Wingate, NM 87316  
(505) 488-6131  
wynette@jjclacs.com



P&M McKinley Mine Land Reuse & Development Plan  
9am • Wednesday • July 19, 2006 • Karrigan Building

**DRAFT Land Re-Use Plan Meeting  
Sign-In Sheet**

	NAME	OFFICE/COMPANY/COMMUNITY MEMBER
1.	Wanda O'Connell	JJ Class & Company
2.	Alla Berg	DED WN
3.	of O'Connell	DED-SEDS
4.	Wilson Filmore <small>leashky strm@yahoo.com</small>	FD-12300
5.	Effie Ashley	St. Michael's Chapter
6.	Cassandra Bloedel	Narajo EPA
7.	<del>John G.</del>	<del>Imperial Chapter</del>
8.	Roy B. Dempsey	NAC - St. Michael's <small>roy b dempsey @ hotmail.com</small>
9.	Lorraine W. Nelson	H. Defiance Chapter
10.	Wynette Arviso	JJ Class & Company
11.	Elrena Mitchell	NNDIT <small>elrenamitchell@narajo.org</small>
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Revised: July 20, 2006

**TENTATIVE AGENDA  
for the  
SECOND MEETING  
of the  
ECONOMIC AND RURAL DEVELOPMENT  
AND TELECOMMUNICATIONS COMMITTEE**

**July 24-25, 2006  
Gallup, New Mexico  
Grants, New Mexico**

**Monday, July 24 — Gallup High School, Gallup**

- 10:00 a.m.     **Call to Order**
- 10:05 a.m.     **Pittsburgh & McKinley Coal Mining Reclamation Project —  
McKinley North Mine**  
—Frank Rivera, Senior Mine Engineer/Environmental, Pittsburgh & Midway  
Coal Mining Company  
—Jerry Sandoval, Native American Liaison, Economic Development  
Department  
—Allan Begay, Director, Division of Economic Development, Navajo Nation  
—Wynette Arviso, J.J. Clacks & Associates
- 11:30 a.m.     **Inter-Tribal Ceremonial — Status Update**  
—Louie Bonaguidi, President, Gallup Inter-Tribal Ceremonial  
—Joshua Rosen, Deputy Secretary, Tourism Department
- 12:00 noon     **Lunch**
- 1:00 p.m.     **Red Rock State Park — Status Update**  
—Glen Benefield, Executive Director, Economic Development Office, City  
of Gallup  
—Herb Mosher, Executive Director, Gallup Chamber of Commerce
- 2:00 p.m.     **Small Business Development Centers — Status Update**  
—J. Roy Miller, State Director, New Mexico Small Business Development  
Centers  
—Elsie Sanchez, Director, Gallup Small Business Development Center

**P & M MCKINLEY MINE  
LAND REUSE AND DEVELOPMENT PLAN**

**DRAFT  
Land Re-Use Plan  
Agenda**

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**9am - Tuesday - August 22, 2006  
Karrigan Building - St. Michaels, Arizona**

- I. Introductions
- II. Project Update
- III. Review: DRAFT Land Re-Use Plan
  - A. alternative 3
  - B. strategy & opportunities
- IV. Discussion: Questions & Comments
- V. Next Steps - costs: feasibility
- VI. Adjournment

**Thank you for your participation!**

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**JJ Clacs & Company**  
Post Office Box 479  
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(505) 488-6131  
wynette@jjclacs.com



P&M McKinley Mine Land Reuse & Development Plan  
9am • Tuesday • August 22, 2006 • Karrigan Building • St. Michaels, AZ

**DRAFT Land Re-Use Plan Meeting  
Sign-In Sheet**

	NAME	OFFICE/COMPANY/COMMUNITY MEMBER
1.	Allen Begay	DEQ
2.	Wilson Gilmore	FD RBDO
3.	Lorraine W. Nelson	FD Chapter Chapter
4.	Harriett K. Becenti	NNE <sup>Manualist, Asayatch</sup> Rock Springs
5.	Jeff Connell	SWCA
6.	Wynette Arvise	JJ Claes + Company
7.	Wanda Owens	" "
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**THE  
NAVAJO  
NATION**

**JOE SHIRLEY, Jr.**  
PRESIDENT  
**FRANK J. DAYISH, Jr.**  
VICE PRESIDENT

**P & M Land Reuse Plan  
Agenda  
August 28, 2006**

**Division of Economic Development Conference Room  
Karigan Professional Building  
St. Michaels, Arizona**

- I. Introduction
- II. Purpose of Meeting  
Reuse Plan Development Timeline  
Purpose of P&M Land offered for sale  
Assests Distribution  
    i.e. railroad  
    ponds  
    Powerline  
    Roads  
    Buildings, etc
- III. Set next meeting
- IV. Adjournment

SEARCHED BY	
INDEXED BY	

Sign In Sheet

Pst, m Nurse meeting  
Aug 28, 2006 @ 4:00pm

- |     |   |   |
|-----|---|---|
| 1.  | Allan Begay, Begay<br>Larry Anderson, Sr. | DEUS Admin<br>NMC-HSC                     |
| 2.  | Lorraine W. Nelson<br>John Kim            | Ft. Defiance Chapter<br>Coalmine District |
| 3.  | Sue Longhurst<br>STAN DENETDEE            | Ft Defiance AZ<br>Chavale / FF Def        |
| 4.  | Bertha Denetdeel<br>HARRA WARRICK         | PT Def, AZ<br>NMC / BNF Ft                |
| 5.  | Curran Hannon<br>Roy B. Dempsey           | NMC - St. Michael's<br>Chap.              |
| 6.  | Wanda Ann<br>Wynette Arviso               | IT Class: Company<br>IT Class: Company    |
| 7.  | Annou Jh. &                               | Jwicksdu / Kijntolan                      |
| 8.  |   |   |
| 9.  |   |   |
| 10. |   |   |



**P& M MCKINLEY MINE  
LAND REUSE PLAN AND FEASIBILITY STUDY**

# **Summary Report**

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**10am • Friday • September 01, 2006**

**Tsayatoh Chapter Planning Meeting • Tsayatoh, New Mexico**

- I. Introduction
  - a. P&M Mine operating for over 40 years – mining lease signed in 1961
  - b. Lease boundaries – over 30,000 acres
  - c. Closing mining operation beginning December 2008
  - d. Approximately 350 jobs will be lost
  - e. Lease Terms
  - f. Regulatory Stipulations
    - i. 10-year reclamation period – maybe less or more depending on type of development
  
- II. Purpose of Plan
  - a. Provide direction for a post-mining landscape
    - i. Assessment & Inventory
    - ii. Determine which facilities to keep and reuse
    - iii. Generate employment opportunities
  
- III. 5 Chapter Communities Affected
  - a. Tsayatoh
  - b. Fort Defiance
  - c. Twin Lakes
  - d. Rock Springs
  - e. St. Michaels
  
- IV. Land Status (see attached map)
  - a. Navajo Trust Land
  - b. Indian Allotment Land
  - c. New Mexico State Land
  - d. Navajo Fee Simple Land
  - e. Private Land
  - f. BLM Land

- V. Alternatives for Reuse of Land & Facilities
  - a. Grazing/Wildlife Habitat
  - b. Chapter Land Use Plan
  - c. Commercial/Industrial Development
  
- VI. Recommendations
  - a. Combination of the three alternatives (see attached map)
  - b. Acquire land
  - c. Work together, inform & communicate
  
- VII. Inform P&M Mine of Re-Use Plan
  - a. Chapter Resolution
  - b. Legislation
  - c. Letter to P&M
  
- VIII. Land Acquisition
  - a. Purchase land parcels upon availability
  - b. Work with Navajo Nation Sub-Committees, Eastern Navajo Land Commission, Navajo Land Department, and other related agencies.
  - c. Seek & obtain funding

---

**JJ Clacs & Company**  
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wynette@jjclacs.com

PROPOSED AGENDA OF THE  
TRANSPORTATION AND COMMUNITY DEVELOPMENT COMMITTEE  
OF THE NAVAJO NATION COUNCIL

September 05, 2006  
Regular Meeting

PRESIDING: Mark Maryboy, Chairperson, TCDC  
Willie Begay, Vice-Chairperson, TCDC

PLACE: North Conference Room  
Window Rock, Arizona

I. Calling the Meeting to Order, Roll Call, the Invocation, and Announcement.

Mark Maryboy	_____	Edward Jim, Sr.,	_____
Willie Begay	_____	Johnny Naize	_____
Sampson Begay	_____	David B. Rico	_____
Leslie Dele	_____	Willie Tracey, Jr.,	_____

II. Recognizing Guests and Visiting Officials.

III. Accepting and Approving the Agenda for September 05, 2006.  
M/S: \_\_\_\_\_ / \_\_\_\_\_ V: \_\_\_\_\_

IV. Receiving Reports:

- A. NHA Report – Jonathan Robertson, Division Director  
M/S: \_\_\_\_\_ / \_\_\_\_\_ V: \_\_\_\_\_
- B. Follow Up Review of Hardrock Chapter Corrective Action Plan Implementation.  
M/S: \_\_\_\_\_ / \_\_\_\_\_ V: \_\_\_\_\_
- C. Report on Dennehotso Capital Improvement Project – Katherine Benally  
M/S: \_\_\_\_\_ / \_\_\_\_\_ V: \_\_\_\_\_
- D. ADOT Update on Burton Burr Overpass Relocation from SR 264 to N15 – Kee Yazzie and David Sikes, ADOT  
M/S: \_\_\_\_\_ / \_\_\_\_\_ V: \_\_\_\_\_
- E. Report on PNM Coal Mine – Allen Begay and Wynette Arviso  
M/S: \_\_\_\_\_ / \_\_\_\_\_ V: \_\_\_\_\_
- F. Report from the five (5) Governance-Certified Chapters - Shonto Chapter, Newcomb Chapter, Tuba City Chapter, Nahata Dzil Chapter, and Steamboat Chapter.
- G. Teleconference call with Tomhaves – Chairman Maryboy  
M/S: \_\_\_\_\_ / \_\_\_\_\_ V: \_\_\_\_\_



PROPOSED AGENDA OF THE  
ECONOMIC DEVELOPMENT COMMITTEE  
OF THE NAVAJO NATION COUNCIL

(Regular Meeting)  
September 6, 2006

PRESIDING: Lawrence R. Platero, Chairperson, Economic Development Committee  
Kenneth Maryboy, Vice-Chairperson, Economic Development Committee  
P L A C E : Karigan Professional Bldg. - St. Michaels, Navajo Nation, (Arizona)

\_\_\_\_\_  
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\_\_\_\_\_  
\_\_\_\_\_  
Lawrence R. Platero  
Alice M. White  
Roy Dempsey  
Ralph Bennett

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\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
Kenneth Maryboy  
Tommy Tsosie  
Hoskie Kee  
Tom LaPahe

1. Calling the Regular Meeting to Order; the Roll Call; the Invocation; the Announcements.
2. Recognizing Guests and Visiting Officials to the Regular Meeting.
3. Reviewing and Accepting the Agenda for September 6, 2006 Regular Meeting.
4. Reviewing and Accepting the Journals: None
5. **RECEIVING REPORT(S):**
  - (a) P&M Land Reuse Plan Work Group – Wynette Arviso, Consultant, JJClac Firm.
  - (b) Update Relating to the Navajo Nation Business Site Leasing Act – Karis Begay, Attorney-DOJ
  - (c) Discussion Relating to the Memorandum of August 28, 2006 Relating to the Guest House at Former NFPI – Karis Begay, Attorney-DOJ.
  - (d) Update Report Relating to Antelope Point Project – Antelope Point Holdings, LLC.
6. **OLD BUSINESS:** None
7. **NEW BUSINESS:**
  - (a) **Legislation No. 0631-06** – Pete Ken Atcitty  
Relating to Economic Development; Approving a Mutual Termination of Business Site Lease SR-98-149 Between the Navajo Nation and Leonard H. Lopez and Annabelle Lopez, DBA: L & A Enterprise

- V. Alternatives for Reuse of Land & Facilities
  - a. Grazing/Wildlife Habitat
  - b. Chapter Land Use Plan
  - c. Commercial/Industrial Development
  
- VI. Recommendations
  - a. Combination of the three alternatives (see attached map)
  - b. Acquire land
  - c. Work together, inform & communicate
  
- VII. Inform P&M Mine of Re-Use Plan
  - a. Chapter Resolution
  - b. Legislation
  - c. Letter to P&M
  
- VIII. Land Acquisition
  - a. Purchase land parcels upon availability
  - b. Work with Navajo Nation Sub-Committees, Eastern Navajo Land Commission, Navajo Land Department, and other related agencies.
  - c. Seek & obtain funding

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**Fort Defiance Chapter  
P&M Re-use Plan Presentation By JJ Clacs and Company**

Date 09/06/2006

<u>Name</u>	<u>Business</u>	<u>Phone #</u>
1 Anita Natonabah	<del>XXXX</del>	928.871.5664
2 Cinda Natonabah		505 371-5383
3 Linda Watson		505-782-1214
4 Wila Watson		(928)729-2255
5 <del>Joseph Deane</del>		
6 Annie Reeder		
7 Charley Reeder		
8 <del>Maryella Lee</del>		
9 Peelay Oakley		928-871-6342
10 Maackly Dear		505-863-1291
11 Mary A. Dear		505-371-5130
12 Helen J. Bille		
13 <del>Yosky Blankenship</del>		
14 <del>John King</del>		
15 Joseph Watson		
16 <del>Tom Bennett</del>		928-729-4012
17 Wanda Aniso JJ Clacs & Company		409 6131
18 Wynette Aniso JJ Clacs & Company		505: <del>572-5117</del>
19 HANNA WANNICK NMC/BNK		871 6380
20 Dams n Wauwaka Ft. Defiance Aniso		
21 Betty J. Wauwaka		
22 EDWIN GATEWOOD White Face Mt. (Reading)		
23 George Gandy (Coal Mine)		
24 Bernthal Benetdell; PD P000 2014 WR AZ		
25 Stanley Benetdell Chino		





# St. Michaels Chapter

## REGULAR MEETING

September 24, 2006

@ 10:00 AM

### SIGN IN SHEET

"A Legal Quorum is 25 Registered Voters"

1. Ray Castillo, President

2. Vice President

3. Effie Ashley, Sec/Treas.

4. Curran Hammon, Council Delegate

5. Roy Dempsey, Council Delegate

6. Ray Berchman, Council Delegate

7. Marge Tsosie, Community Services Coord.

8. Teresa Tabaha, Office Specialist

9. Ernie Spindley

10. Charles D. y

11. Lera Dami Day

12. GARRETT A. WATSON

13. ROBERT HYDE

14. Genevieve Bittloy

15. Jim Shipel FAX

16. Jenny Procutti

17. MARYDNEZ

18. Wanda Amaro

19. Tracy Smith

20. Charles Ashley

21. B. H. B. B. B.

22. Rafael R. P. P.

23. SETH PARKER

24. Clara Ramirez

25. Benny Martinez

26. Eileen C. C.

27. Ida Tom

28. Eugene Tom

29. Josephine Wallace

30. Juanita Bann

31. Bernie Quintana

32. Lillian O'Keefe

33. Clara West

34. Mary E. Yaggi

35. Shirley Simpson

36. Lillian Whitford

37. Madeline Walker

38. Doreene Wise

# St. Michaels Chapter

Regular Meeting

September 24, 2006

@ 10:00 AM

## SIGN IN SHEET

"A Legal Quorum is 25 Registered Voters"

39. Ruth Upshaw	58.
40. Ella M. Yozzie	59.
41. Irene Yozzie	60.
42. Sadie Walker	61.
43. Eugene Tom	62.
44. Clara B. J. J.	63.
45. Benjamin J. J.	64.
46. Marie Clarke	65.
47. Mary Lee	66.
48. Ruthanne Beyer	67.
49. Belle Beyer	68.
50. Magda Wickham	69.
51. Gene Williams	70.
52. Rose & John Yozzie	71.
53. WILFRED WATSON, Sr.	72.
54. Clara Brown	73.
55. Alex J. Yozzie	74.
56. Marlene Lee	75.
57.	76.



**P & M MCKINLEY MINE  
LAND REUSE AND DEVELOPMENT PLAN**

**FINAL  
Land Re-Use Plan  
Meeting Agenda**

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**2pm • Thursday • September 28, 2006  
Karrigan Building • St. Michaels, Arizona**

1. Introductions
2. Presentation:  
FINAL DRAFT  
P&M McKinley Mine Land Re-Use Plan
3. Discussion
4. Final Document
5. Adjournment

**Thank you for your participation!**

---

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( @ 2:00 pm )

Community : PNM  
Re Use Plan Meeting  
Karigan Building Conference Rm.  
St. Michael's, AZ  
September 28, 2006

- 1. John Stucker Minerals Dept. NAVATO NATTON
- 2. Lorraine Nelson Ft. Defiance Chapter
- 3. Harold Wainwright Ft Defiance Chapt/NNC/BNF Comm.
- 4. Jodell Dawes-Jodae Ft. Def
- 5. Ann Longhorn St Defiance, AZ
- 6. Martha Lee St. Defiance, AZ
- 7. Jennie Lee St Defiance AZ
- \*\* 8. Dorothy Benally Ft Defiance
- \* 9. Margaret Kilichewski St Defiance, AZ
- 10. Frank Egan St Def Hq
- 11. David Swadgrass " " "
- 12. Stan Dewolter Charles Ariz (Ft Def Ariz) Chapter Member
- 13. Elmore Watchman St Def Chapter HSE.
- 14. Allan Bigay DED Admin
- 15. Wilson Ft. Defiance FD-RBDO
- 16. Wanda Awis JJ Class: Company
- 17. Wynette Awis " "

# **APPENDIX B - PHOTOGRAPHS**



# Appendix B – Facilities to Remain

## NORTH MINE AREA

**Water Tank (higher one) (50,000 gal)**



**Electric Lines & Roads**



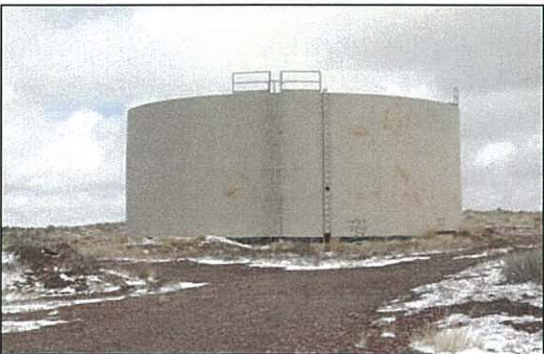
**Water Tanks-Twin Towers (40,000 gal ea)**



**Water Well**



**Water Storage Tank (500,000 gal)**



**Substation**



**2-Story New Office Building**



**Shop**



**Main Office Septic Tank**



**2-Story Main Office Building**



**Warehouse**



**Safety Building**





## SOUTH MINE AREA

**Electric Lines**



**Substation**



**Ponds**



**Ponds**



**Office Building with Shop**



**Inside of Shop**





