

SECTION 2

OPERATION AND PERMIT DESCRIPTION

TABLE OF CONTENTS

| SECTION | SECTION TITLE | PAGE NUMBER |
|----------------|---|------------------------|
| SECTION 2 | OPERATION AND PERMIT DESCRIPTION..... | 1 |
| 2.1 | Operation Identification..... | 1 |
| 2.2 | Location..... | 1 |
| 2.3 | Permit Area Description | 2 |
| 2.4 | Permitting During the Life of the Operation | 2 |
| 2.4.1 | Extended Initial Permit Term Information | 2 |
| 2.5 | Socioeconomic Description..... | 2 |
| 2.5.1 | Estimates on Revenues and Services..... | 3 |
| 2.5.2 | Employment of Native Americans | 4 |
| | Personnel | 4 |
| | References | 4 |

SECTION 2

OPERATION AND PERMIT DESCRIPTION

LIST OF EXHIBITS

EXHIBIT

NUMBER

EXHIBIT TITLE

| | |
|-----------------------|---|
| 2.1-1 | Pinabete Permit Area (Sheet 1 of 2) |
| 2-1-1 | Pinabete Permit Area (Sheet 2 of 2) |
| 2.2-1 | USGS 7.5 Minute Quadrangle Location Map |

SECTION 2

OPERATION AND PERMIT DESCRIPTION

LIST OF APPENDICES

APPENDIX

NUMBER APPENDIX TITLE

[2.A](#) Permit Area Description

SECTION 2

OPERATION AND PERMIT DESCRIPTION

LIST OF REVISIONS DURING PERMIT TERM

| REV. | | DATE |
|---------------|-----------------------------|-----------------|
| NUMBER | REVISION DESCRIPTION | APPROVED |

SECTION 2 OPERATION AND PERMIT DESCRIPTION

2.1 Operation Identification

BHP Navajo Coal Company (BNCC) is submitting an application to the Office of Surface Mining Reclamation and Enforcement (OSM) to develop a new permit area for surface coal mining and reclamation operations for post July 6, 2016 Navajo Mine operations. The new permit area will be used to supply coal to Four Corners Power Plant (FCPP) and fulfill BNCC's coal sale obligations through 2041. The new permit area, referred to herein as the Pinabete Mine Plan permit area (permit area), is composed of portions of the current Navajo Mine permit area (OSM Permit No. NM-0003F) and unpermitted areas of BNCC's mining lease, located immediately south of the Navajo Mine permit area ([Exhibit 2.1-1](#) and [Appendix 2.A](#)). Further discussion on the Pinabete Mine Plan mining and reclamation operations can be found in Part 3 (Operations Plan) and Part 5 (Reclamation Plan) of this permit application package.

BNCC's contact information is as follows:

BHP Navajo Coal Company
Pinabete Mine Plan
P.O. Box 1717
Fruitland, NM 87416
Telephone: (505) 598-4200

BNCC's federal identification numbers are as follows:

Employer Identification No.: Federal I.D. No. 85-0436672
Mine Safety and Health Administration (MSHA) No.: MSHA I.D. No. 29-00097

2.2 Location

The permit area is located in western San Juan County in the northwest corner of the State of New Mexico. The Pinabete Mine Plan mining and reclamation operations will be solely located on the Navajo Nation Indian Reservation. The BNCC mine offices are approximately 15 miles north of Navajo Nation Tiis Tsoh Sikaad (Burnham) Chapter House and 13 miles south of Fruitland, New Mexico. The City of Farmington, New Mexico is approximately 19 miles northeast of the mine offices.

As described in Section 2.1, the permit area encompasses portions of the Area 4 North and Area 4 South resource areas of the BNCC mining lease. The permit area is located to the south of the existing Navajo Mine mining permit area (OSM Permit No. NM-0003F) ([Exhibit 2.1-1](#)). The Area 4 North resource area can be found in the following U.S. Geologic Survey (USGS) 1:24,000 series quadrangles: The Hogback South, Kirtland Southwest, Newcomb Northeast, and The Pillar Northwest. The Area 4 South resource area can be found on the following USGS 1:24,000 series quadrangles: Newcomb Northeast and The Pillar

Northwest. A map identifying the Pinabete permit area and USGS quadrangles is included as [Exhibit 2.2-1](#).

2.3 Permit Area Description

The permit area is fully contained within BNCC's mining lease with the Navajo Nation as described in Section 6 (Land Ownership and Control). The permit area includes approximately 5,569 acres as shown in [Exhibit 2.1-1](#). The permit area coincides on the east and west sides with the BNCC mining lease boundary description, included as Appendix 6.A and shown in Exhibit 6.5-1. On the north, the permit area incorporates the southern extent of pre July 6, 2016 mining within the Navajo Mine permit area. The meets and bounds description of the Pinabete permit boundary is presented in [Appendix 2.A](#). For operational purposes, the mining lease area and permit area are divided into resource areas. The resource areas affected by the proposed Pinabete mining and reclamation operations include Area 4 North and Area 4 South. The division of the mining lease into multiple areas is advantageous for mining and reclamation operations, and is used in other sections of the permit to identify resource areas. A description of mining operations is included in Section 20 (Mining Operations).

BNCC will survey the permit area once OSM has issued their permit.

2.4 Permitting During the Life of the Operation

The permit area described in [Appendix 2.A](#) and Appendix 6.A and shown in [Exhibit 2.1-1](#) includes all areas of surface coal mining in Area 4 North and Area 4 South required to fulfill coal sale obligations to the FCPP through 2041. Mining sequence information is included in Section 20 (Mining Operations).

2.4.1 Extended Initial Permit Term Information

BNCC does not request an extended initial permit term beyond five years. Therefore, this section is not applicable to the current proposed mining and reclamation operations.

2.5 Socioeconomic Description

Socioeconomics describes the interaction between the community (social) and the economics (population, employment, income, government revenue, and related benefits) of a proposed action. Using information available at the time of submittal, BNCC has prepared the following discussion provides a summary of the socioeconomic conditions and impacts of the proposed mining and reclamation activities.

It is anticipated that the majority of the workforce for the proposed mining and reclamation activities will come from the local area; this includes the communities of Farmington, Flora Vista, Kirtland, and Shiprock in San Juan County, New Mexico and the Navajo Nation Chapters of Beclabito, Burnham, Crystal, Fruitland, Hogback, Huerfano, Naschitti, Nenahnezad, Red Valley, Sanostee, Sheep Springs, Teec Nos Pos,

Two Grey Hills, and White Rock. The remainder of the workforce will come from outside of the local area including the remaining portions of Apache County in Arizona, McKinley and San Juan Counties in New Mexico, and La Plata and Montezuma Counties in Colorado.

BNCC anticipates the mining and reclamation operations will require a workforce of approximately 380, most of whom would be miners. The workforce would be divided between the following classes:

- Management,
- Professional,
- Technical,
- Clerical,
- Warehouse,
- Skilled,
- Semi-skilled, and
- Unskilled

The mining wages would be similar to those at the existing BNCC Navajo Mine. The U.S. Department of Labor, Bureau of Labor Statistics estimated an average annual wage \$70,323 for the mining sector workforce in 2009 (University of New Mexico 2011a). The estimated average annual wage for BNCC employees in 2009 was approximately \$76,000 which is slightly higher than national averages.

2.5.1 Estimates on Revenues and Services

Per capita income (in 2009 dollars) of San Juan County residents in 2009 was \$20,029 for a population of 130,044 (U.S. Census Bureau 2011). Median household income in San Juan County during the same time was \$46,007 (U.S. Census Bureau 2011). In 2010, the total employed civilian labor force in San Juan County was 56,513 with an unemployment rate of 9.6% (Univ. of New Mexico 2011b). Using 2007 employment values, the Navajo Nation Division of Economic Development estimated the unemployment within the Navajo Nation to be nearly 50% (Navajo Nation Division of Economic Development 2009). The payroll associated with mining in the Pinabete mine plan will be approximately \$26,700,000 based upon 2009 U.S. Department of Labor, Bureau of Labor Statistics wages (University of New Mexico 2011a) and an anticipated employment of approximately 380 employees.

The incomes of BNCC's employees would have a direct, positive affect on the area's economy. Indirect and induced effects include purchasing of goods and services from local businesses and suppliers and employees spending their wages in the local economy to purchase additional goods and services.

San Juan County, New Mexico is a rapidly-growing area; it is anticipated that the housing market and the availability of services, such as school enrollment, will keep up with demand. A portion of the tax revenue

paid by BNCC to the State of New Mexico would be distributed to the local school districts. Health care is adequate; however, rural areas are termed medically “underserved”. Factors which contribute to a medically underserved determination include: nutritional status, access to health care, ambulance and emergency treatment, multiple historical exposures, and stress. These factors may affect a population’s susceptibility to adverse health effects. Preventative health care, such as better nutrition and wellness checkups, are closely correlated to income, so households with incomes associated with Navajo Mine operations would have more opportunity for preventative health care.

2.5.2 Employment of Native Americans

Article 11 of the mining lease between BNCC (formerly Utah Mining and Construction Company and Utah International Inc. (UII)) and the Navajo Nation, dated July 26, 1957, states:

"Lessee [BNCC] agrees to employ Navajo Indians when available in all positions, for which they are qualified in the judgment of the lessee, and to pay prevailing wages to such Navajo employees, and to utilize services of Navajo contractors whenever feasible in the judgment of the lessee. Lessee agrees to make special efforts to work Indians, giving priority to qualified members of the Navajo Tribe, into skilled, technical and other higher jobs in connection with lessee's operations under this lease".

Personnel

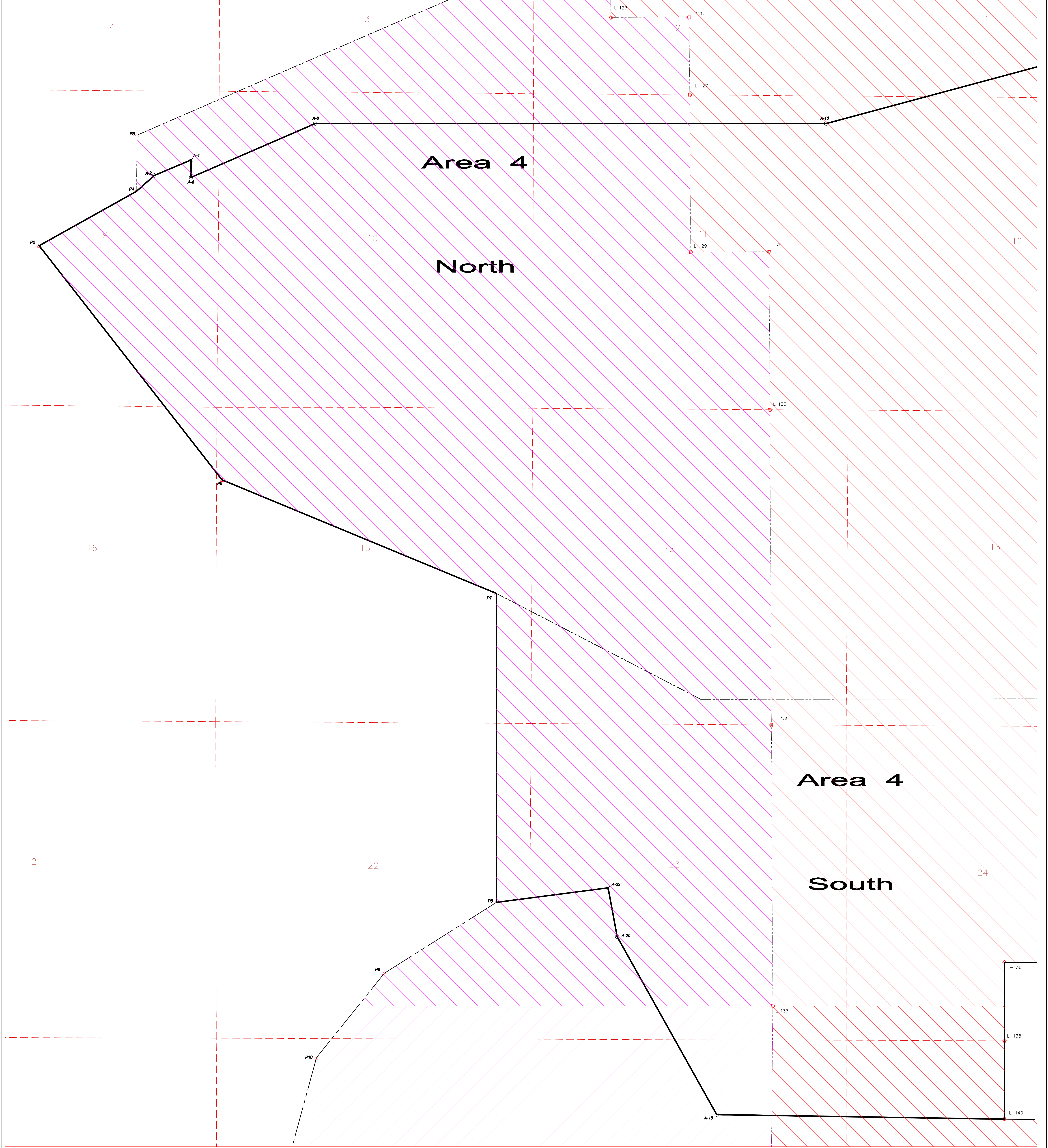
Persons or organizations responsible for data collection, analysis, and preparation of this permit application package section:

| | |
|-------------------------|--------------------|
| Kent Applegate | Tetra Tech, Inc. |
| Ron Van Valkenburg | Salt Lake City, UT |
| Matt Owens | |
| BHP Navajo Coal Company | |

References

- Navajo Nation Division of Economic Development. 2009. 2009-2010 Comprehensive Economic Development Strategy. http://www.navajobusiness.com/pdf/CEDS/CED_NN_Final_09_10.pdf (verified March 29, 2012).
- U.S. Census Bureau. 2011. State and County Quick Facts, San Juan County, New Mexico. <http://quickfacts.census.gov/qfd/states/35/35045.html> (Verified on March 29, 2012).
- University of New Mexico, Bureau of Business & Economic Research. 2011a. New Mexico Counties 2010 Average Annual Wages for Covered workers, by Major Industrial Sector San Juan County data tables. <http://bber.unm.edu/econ/agwgsanjnaics.htm> (verified on March 29, 2016)

University of New Mexico, Bureau of Business & Economic Research. 2011b. New Mexico Counties 2010 Civilian Labor Force data tables. <http://bber.unm.edu/econ/co-uer10.htm> (verified on March 29, 2012)



LEGEND

- BRASS CAPS (BLM)
- Tentative Point
- △ NAVAJO MINE MONUMENTS
- PERMIT LEASE CORNERS
- PERMIT LEASE BOUNDARY

MINERALS LEASE AREAS :

| | |
|----------------------------|------------------|
| Original Lease | 24,219.99 |
| AMENDMENT 2 | 612.29 |
| AMENDMENT 3 | 6,854.05 |
| AMENDMENT 4A | 1,348.97 |
| TOTAL LEASE ACREAGE | 33,035.30 |

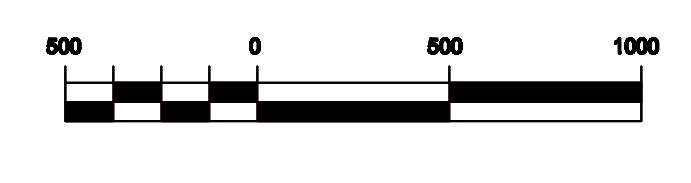
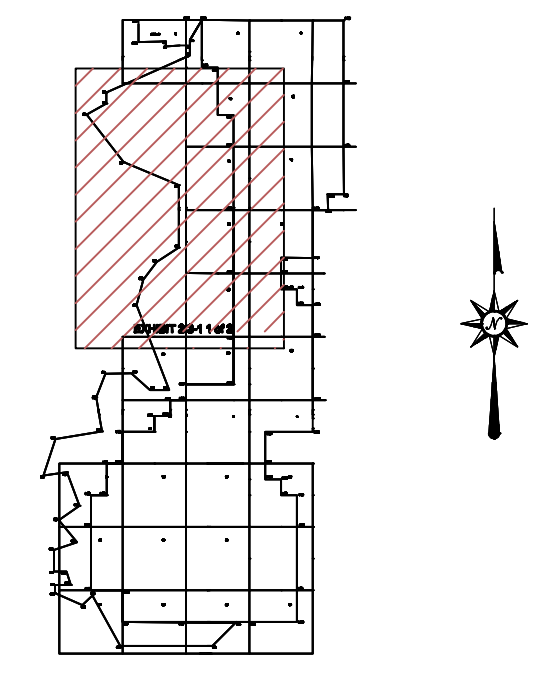
SURFACE LEASE AREAS :

| | |
|---------------------------------|---------------|
| AMENDMENT 4-EQ | 545.32 |
| AREA-III ADDITION | 3.11 |
| MINE PLANT LEASE (NOT SURVEYED) | 223.21 |
| TOTAL LEASE ACREAGE | 771.64 |

500 ft Wide Surface Layback Address (Surface Lease Permit)

| | |
|----------------------------|------------------|
| 106.15 | |
| TOTAL LEASE ACREAGE | 33,496.02 |

INDEX



BASIS OF BEARINGS, SOLAR OBSERVATION AND NOT NAVAJO MINE COORDINATE SYSTEM

"THIS IS NOT A SURVEY FOR USE BY A PROPERTY OWNER FOR ANY PURPOSE."

| | | | | | | |
|-----|---------|-----|--|------|------|---------|
| NO. | DATE | BY | REVISION DESCRIPTION | CHK. | APP. | DATE |
| 1 | 1-14-12 | WB | AREA 4 PERMIT SUBMITTAL | WB | WB | 1-14-12 |
| 2 | 1-24-12 | PJP | REVISED SUBMITTAL TO OSM FOR REVIEW AND APPROVAL | PJP | WB | 1-24-12 |
| 3 | 2-08-12 | PJP | SUBMITTED TO OSM FOR APPROVAL, REVISED ORDER FILED | PJP | WB | 2-08-12 |

EXHIBIT 2.1-1

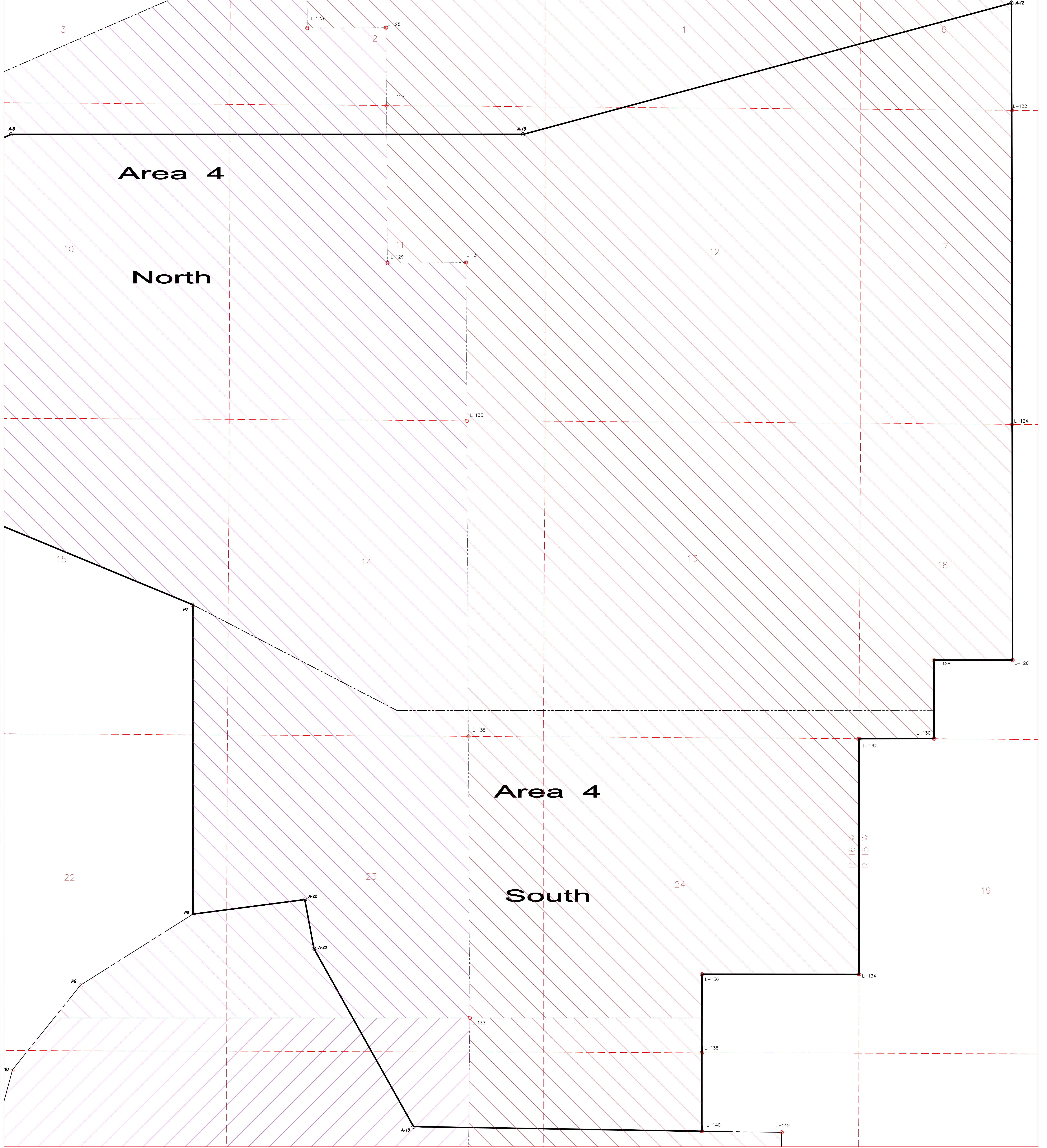
BHP NAVAJO COAL COMPANY

bhpbilliton

P.O. BOX 1717 FRUITLAND, NEW MEXICO 87418

NAVAJO MINE LEASE SURVEY BASE MAP

| | | | | | |
|-------------|----|----------|-------------|-------|-----------|
| PREPARED BY | WB | DRAWN BY | WB | SCALE | 1" = 800' |
| APPROVED BY | | DATE | 13 JAN 2012 | SHEET | 1 of 2 |



Area 4

North

Area 4

South

LEGEND
 ○ BRASS CAPS (BLM)
 △ Tentative Point
 ○ NAVAJO MINE MONUMENTS
 ● PERMIT LEASE CORNERS
 — PERMIT LEASE BOUNDARY

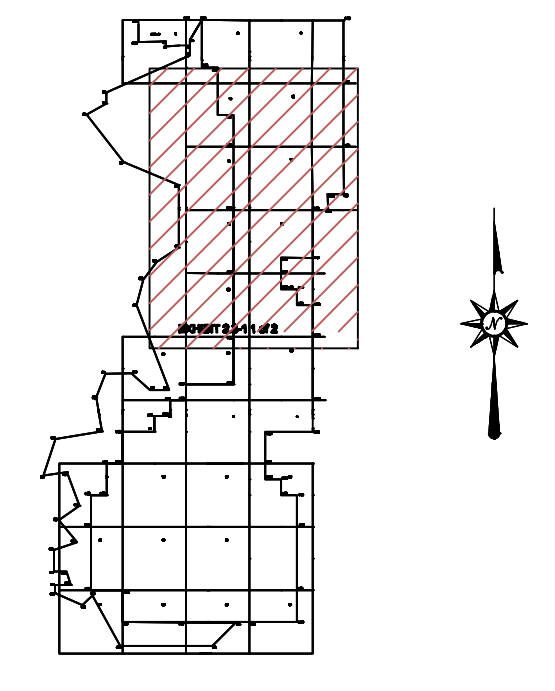
MINERALS LEASE AREAS :

| | | |
|--|----------------|------------------|
| | ORIGINAL LEASE | 24,219.99 |
| | AMENDMENT 2 | 612.29 |
| | AMENDMENT 3 | 6,854.05 |
| | AMENDMENT 4A | 1,348.87 |
| | | 32,817.28 |

SURFACE LEASE AREAS :

| | | |
|--|--|------------------|
| | AMENDMENT 4-EQ | 545.32 |
| | AREA-III ADDITION | 3.11 |
| | MINE PLANT LEASE (NOT SURVEYED) | 223.21 |
| | | 771.64 |
| | 500 ft Wide Surface Leases Addition (Surface Use Permit) | 105.15 |
| | | 33,388.92 |
| | TOTAL LEASE ACREAGE | 33,495.02 |

INDEX



BASIS OF BEARINGS, SOLAR OBSERVATION AND NOT NAVAJO MINE COORDINATE SYSTEM.

"THIS IS NOT A SURVEY FOR USE BY A PROPERTY OWNER FOR ANY PURPOSE."

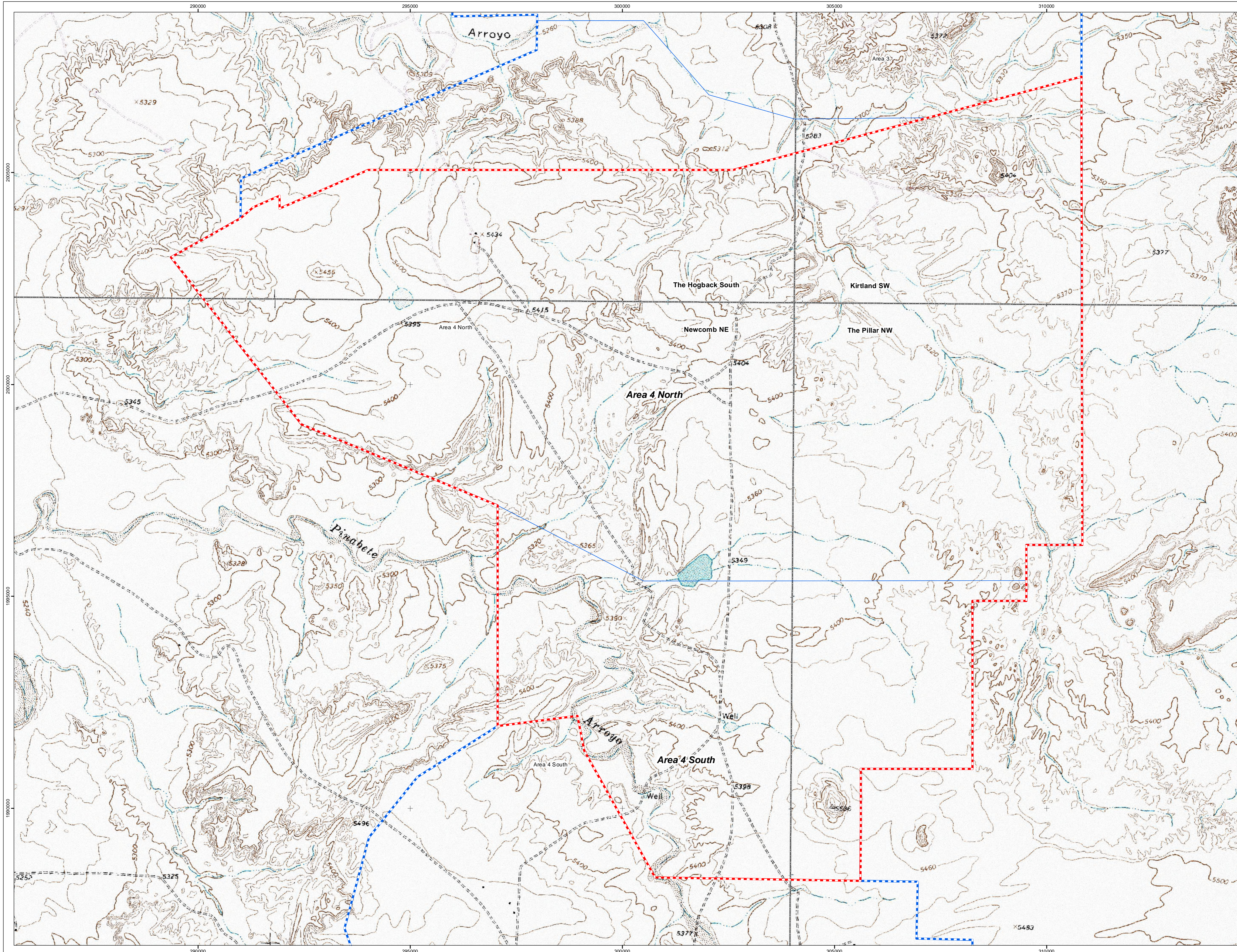
| REV | DATE | BY | DESCRIPTION | CHKD | APPD |
|-----|---------|-----|---|------|------|
| 1 | 1-14-15 | WB | AREA 4 PERMIT SUBMITTAL | WB | WB |
| 2 | 8-28-15 | PJP | REVISED SUBMITTAL TO OSM FOR REVIEW AND APPROVAL | PJP | WB |
| 3 | 7-28-17 | PJP | SUBMITTED TO OSM FOR APPROVAL, REVISION ORDER FILED | PJP | WB |
| 4 | 1-13-17 | WB | REVISION DESCRIPTION | WB | WB |

EXHIBIT 2.1-1
 BHP NAVAJO COAL COMPANY

 P.O. BOX 1717 FRUITLAND, NEW MEXICO 87418

NAVAJO MINE LEASE
 SURVEY BASE MAP

PREPARED BY: WB DRAWN BY: WB SCALE: 1" = 800'
 APPROVED BY: DATE: 13 JAN 2012 SHEET: 2 of 2

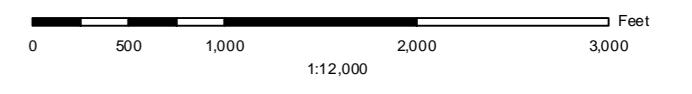
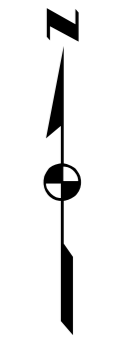
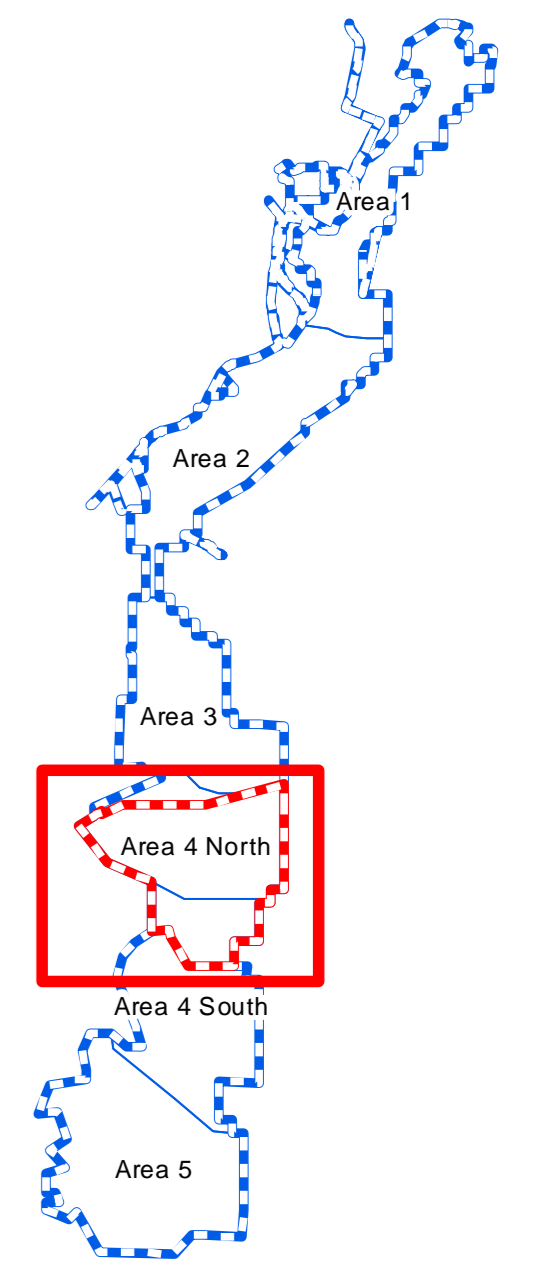


Legend

- Area 4 Permit Area
- Mining Lease Area
- Resource Areas
- USGS 7.5 minute Quads

Newcomb NE USGS 7.5 minute Quad Name

Note:
 - The information contained on this Exhibit is intended for illustrative purposes only. This map is not a certified survey map.



Coordinate System: NAD 1927 StatePlane New Mexico West FIPS 3003
 Projection: Transverse Mercator
 Datum: North American 1927
 False Easting: 500,000.0000
 False Northing: 0.0000
 Central Meridian: -107.8333
 Scale Factor: 0.9999
 Latitude Of Origin: 31.0000
 Units: Foot US

| REV. NO. | DATE | BY | REVISION DESCRIPTION | CHKD. | APP'D. |
|----------|----------|-----|--------------------------------|-------|--------|
| 2-A | 11/30/11 | MPO | Prepared for Submission to GEM | CKA | |

Exhibit 2.2-1



BHP NAVAJO COAL COMPANY

USGS 7.5 Minute Quadrangle
 Location Map

PREPARED BY: MPO DRAWN BY: MPO PAPER SIZE: ARCH D
 APPROVED BY: CKA DATE: 2/29/2012

Appendix 2.A

Permit Area Description

*The Pinabete permit area is fully contained in
BHP Navajo Coal Company's (BNCC) mining lease (lease description provided in Section 6).
Upon approval of the Pinabete Permit Application Package, BNCC will survey the
Pinabete boundary and replace this appendix.*

Certified copies of Appendices are available in Certified Exhibit binders.

Appendix 2.A

Navajo Mine Area 4 Permit Boundary Description

Beginning at a point in Section 9, T26N, R16W, NMPM, San Juan County, New Mexico. Said corner is also known as P-4 in Appendix 6.A of the Navajo Mine Lease Boundary, which has Navajo Mine Coordinates of Northing 2003912.77, Easting 291003.83 and New Mexico State Plane Coordinates, West Zone, NAD 83 of Northing 2003977.72, 2513912.49;

Thence N 48°29'19" E a distance of 403.02 feet to a tentative point called A-2;

Thence N 67°03'44" E a distance of 673.83 feet to a tentative point called A-4;

Thence S 00°00'11" E a distance of 294.28 feet to a tentative point called A-6;

Thence N 66°33'04" E a distance of 2275.61 feet to a tentative point called A-8;

Thence N 90°00'00" E a distance of 8601.57 feet to a tentative point called A-10;

Thence N 74°57'18" E a distance of 8495.58 feet to a tentative point called A-12 on the Navajo Mine Lease Boundary line in Section 6, T26N, R15W, NMPM;

Thence S 00°09'59" E along Navajo Mine Lease Boundary line as described by Scott Andrae dated August 1991, a distance of 1803.69 feet to the south 1/4 corner of said Section 6, also called L-122 in Appendix 6.A;

Thence S 00°04'50" E a distance of 5279.64 feet to the north 1/4 corner of Section 18, T26N, R15W, NMPM, also called L-124 in Appendix 6.A;

Thence S 00°05'09" E a distance of 3960.21 feet to the south 1/16 corner of said Section 18, also called L-126 in Appendix 6.A;

Thence S 89°58'43" W a distance of 1320.42 feet to the southwest 1/16 corner of said Section 18, also called L-128 in Appendix 6.A;

Thence S 00°03'58" E a distance of 1320.16 feet to the west 1/16 corner of said section 18 and Section 19, T26N, R15W, NMPM, also called L-130 in Appendix 6.A;

Thence S 89°57'56" W a distance of 1262.07 feet to the northwest corner of said Section 19, also called L-132 in Appendix 6.A;

Thence S 00°00'05" W a distance of 2641.54 feet to the west 1/4 corner of said Section 19;

Thence S 00°00'17" E a distance of 1319.29 feet to the south 1/16 corner of said Section 19 and Section 24, T26N, R16W, NMPM, also called L-134 in Appendix 6.A;

Thence N 89°58'58" W a distance of 2639.17 feet to the south 1/16 corner of said Section 24, also called L-136 in Appendix 6.A;

Thence S 00°00'27" W a distance of 1319.80 feet to the south 1/4 corner of said Section 24, also called L-138 in Appendix 6.A;

Thence S 00°00'58" W a distance of 1319.99 feet to the north 1/16 corner of Section 25, T26N, R16W, also called L-140 in Appendix 6.A;

Thence N 89°04'34" W a distance of 4845.76 feet to a tentative point called A-18;

Thence N 29°12'52" W a distance of 3430.69 feet to a tentative point called A-20;

Thence N 10°31'01" W a distance of 836.09 feet to a tentative point called A-22;

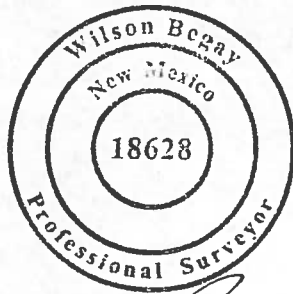
Thence S 82°35'08" W a distance of 1896.50 feet to a point called P-8 in Appendix 6.A;

Thence N 00°00'00" E a distance of 5200.00 feet to a point called P-7 in Appendix 6.A;

Thence N 67°30'00" W a distance of 5000.00 feet to a point called P-6 in Appendix 6.A;

Thence N 38°00'00" W a distance of 5000.00 feet to a point called P-5 in Appendix 6.A;

Thence N 60°47'01" E a distance of 1875.16 feet to a point called P-4 in Appendix 6.A, which is the point of beginning.



Wilson Begay
2/8/2012