



U.S. Department of the Interior

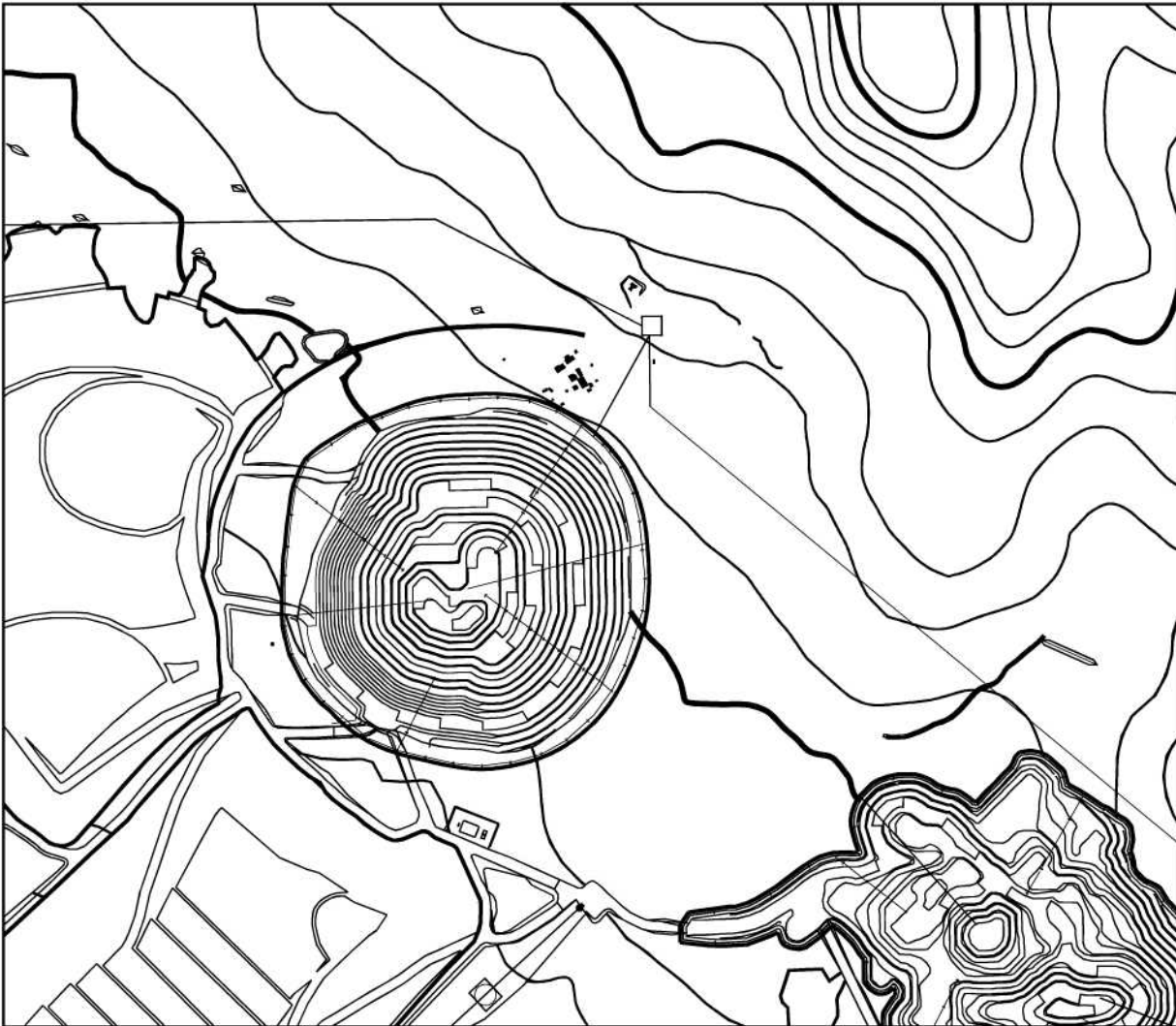
Bureau of Land Management
Arizona State Office

Safford Field Office

June 2004



Record of Decision Environmental Impact Statement Dos Pobres / San Juan Project



Bureau of Land Management Mission

The Bureau of Land Management is responsible for the balanced management of the public lands and resources and their various values so that they are considered in a combination that will best serve the needs of the American people. Management is based upon the principles of multiple use and sustained yield; a combination of uses that takes into account the long-term needs of future generations for renewable and nonrenewable resources. These resources include recreation, range, timber, minerals, watershed, fish and wildlife, wilderness, and natural, scenic, scientific, and cultural values.

Safford Field Office Mission

Balancing the needs of people and resources through excellent service, teamwork, and proactive resource management.

FES03-50



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Safford District Office

711 14th Avenue
Safford, AZ 85546
(520) 348-4400



In Reply Refer To:
1793 (AZ-040)
AZA-31133

June 29, 2004

Dear Reader:

The publication of this Record of Decision (ROD) for the Dos Pobres/San Juan Project culminates more than ten years of careful studies and analysis by the Bureau of Land Management (BLM) and numerous contractors. Extensive review of the potential environmental and socioeconomic impacts, both positive and negative, of the proposed project was incorporated into the Final Environmental Impact Statement (FEIS) upon which this ROD is based.

In addition to reviewing the proposal for a new copper mine north of Safford, a land exchange option was also evaluated. Based on the information presented in the FEIS, the BLM has selected the Preferred Alternative, thus approving the proposed land exchange between the BLM and Phelps Dodge.

The ROD identifies required mitigation measures or conditions, and provides information on the applicable administrative review procedures for the ROD. A Notice of Decision is being published in legal sections of *The Arizona Republic*, *Arizona Daily Star*, and *Eastern Arizona Courier*. Federal regulations contained in 43 CFR 2201.7-1 allow protests to be filed on this decision for a period of 45 days. These protests must be received at the following address by the close of business no later than 45 days from the date of publication of the Notice of Decision. Protests should be mailed to: William T. Civish, Field Manager; Safford Field Office, 711 14th Avenue, Safford, AZ 85546. Objections to the land exchange will be reviewed by the Arizona State Director who may sustain, vacate, or modify the Record of Decision.

A separate ROD will be issued by the U.S. Army Corps of Engineers, a cooperating agency with permitting authority for the Project under Section 404 of the Clean Water Act. The Environmental Protection Agency, another cooperating agency for the FEIS, delegated authority for National Pollutant Discharge Elimination System permit program (Section 402 of the Clean Water Act) compliance to the Arizona Department of Environmental Quality (ADEQ) in 2002. The ADEQ was thus authorized to issue the 402 permit for this project at the state level, and that permit was issued in May 2004.

Please refer informal questions on the BLM's Record of Decision to Scott Evans, Project Manager, at (928) 348-4414, Scott_Evans@blm.gov, or the address above.

Sincerely,

William T. Civish
Field Manager

RECORD OF DECISION
ENVIRONMENTAL IMPACT STATEMENT
DOS POBRES/SAN JUAN PROJECT
CASE NUMBER: AZA-31133

Prepared by:

U.S. Department of the Interior
Bureau of Land Management
Safford Field Office
Arizona

It is my decision to approve the Safford Land Exchange as described in this Record of Decision.

Approved by:



William T. Civish
Field Manager, Safford Field Office
June 29, 2004

TABLE OF CONTENTS

INTRODUCTION.....	1
DECISION.....	1
MITIGATION AND IMPLEMENTATION MEASURES	2
Mitigation Measures.....	2
Implementation Measures	3
RATIONALE FOR DECISION.....	3
Management Considerations/Public Interest Determinations.....	4
Better Federal Land Management.....	4
The Needs of State and Local People	5
Equal Appraised Value.....	6
Other Agency Decisions	6
ALTERNATIVES AND THEIR ENVIRONMENTAL CONSEQUENCES	7
Mine Plan Alternatives	7
Land Exchange Alternatives	7
PROTEST RESOLUTION PROCEDURES	8
REFERENCES.....	9
APPENDIX A - LEGAL DESCRIPTIONS OF THE FEDERAL AND NON-FEDERAL LANDS APPROVED FOR EXCHANGE	A-1

LIST OF TABLES

Table 1. Mitigation Measures for Impacts of Action Alternatives for the Dos Pobres/San Juan Project	11
Table 2. Comparative Summary Table of Impacts of Alternatives for the Dos Pobres/San Juan Project.....	17

INTRODUCTION

This Record of Decision (ROD) identifies the alternative selected by the Bureau of Land Management (BLM), the rationale for this decision, the mitigation and implementation measures, the alternatives that were considered in the Environmental Impact Statement (EIS) for the Dos Pobres/San Juan Project, and the administrative procedures for protesting this decision. This decision culminates an extensive review and analysis of the anticipated direct, indirect, and cumulative environmental impacts of a new copper mining project and its alternatives near Safford, Graham County, Arizona, as proposed by the Phelps Dodge Corporation (Phelps Dodge or PD).

In 1994, the BLM received a land exchange proposal from Phelps Dodge to acquire BLM-administered public lands adjacent to and surrounding its privately owned properties and ore deposits approximately eight miles north of the City of Safford. In exchange, the BLM would acquire PD-owned inholdings, or properties adjacent to BLM lands, that had high resource values and were of equal appraised value to those selected for acquisition by PD. By 1996, the Safford Land Exchange Project had evolved into the Dos Pobres/San Juan Project when Phelps Dodge Safford, Inc. (PDSI) submitted to the BLM a formal Mining Plan of Operations (MPO) to develop the Dos Pobres/San Juan copper mines on lands selected for disposal to PD. The land exchange became one of five project alternatives, all of which were analyzed in the Dos Pobres/San Juan Project Environmental Impact Statement (Draft published September 1998; Final published December 2003). Cooperating agencies on the Final EIS were the U.S. Army Corps of Engineers (COE), which will issue a separate decision regarding issuance of a Clean Water Act Section 404 Individual Permit in summer 2004, and the Environmental Protection Agency (EPA), Region IX.

DECISION

It is the decision of the Safford Field Manager to authorize the land exchange, which is the BLM's Preferred Alternative. The exchange consists of transferring to PD approximately 16,297 acres of BLM-managed public lands (federal lands) and accepting into federal ownership approximately 3,867 acres of private lands (non-federal land), as described in the Land Exchange alternative, Section 2.2.2 of the Final Dos Pobres/San Juan Project Environmental Impact Statement (BLM 2003). Immediately prior to the transfer of titles, Phelps Dodge will relinquish all of their unpatented mining claims on the federal lands. The public lands' mineral estate, including the portion of the San Juan copper deposit located on the federal lands, was appraised separately and this value was included in the total appraised value of the federal lands. In approving the exchange, the BLM realizes value for these minerals for the public through the acquisition of non-federal lands of equal appraised value, whereas approval of an MPO would have authorized mining on public lands without any compensation to the public for the mineral estate being developed.

Appendix A provides the legal descriptions of federal and non-federal lands. This decision approves a realty action (a land exchange) that is authorized under the Federal Land Policy and Management Act (FLPMA) of 1976 as amended by the Federal Land Exchange Facilitation Act (FLEFA) of 1988 and is in conformance with the BLM's Safford District Resource Management Plan (1992, 1994).

Separate from, but important to the BLM's decision, is the COE's decision to issue their federal Clean Water Act Section 404 Individual Permit to Phelps Dodge that will allow them to implement stormwater management, road and utility crossings, and other fill activities necessary to develop

the Dos Pobres/San Juan Project. This permit is independent of the BLM's land exchange decision and the COE will maintain its jurisdiction over Waters of the United States on the project area regardless of the land ownership status. As described in the FEIS, the COE's permit is conditional upon implementation of the Mitigation and Monitoring Plan (MMP; see Appendix F of the FEIS). Integral to the MMP is the "3M Program", which specifies the "Model, Monitor, and Mitigate" process that is required of Phelps Dodge to monitor and mitigate for the model-projected impacts of groundwater pumping on water resources during and at the end of mining. The 3M Program specifies active involvement by the U.S. Geological Survey, an agency of the Department of the Interior, in the inventory of wells and springs, quality control of groundwater level data, training or participation in water sampling data collection, database management and quality control, hosting of the publicly-accessible monitoring data on their website, technical review of the annual data report, and participation in the Stakeholder Committee. Mitigation measures for impacts to water resources are also clearly specified in the MMP through the Alternate Year Fallowing Program, in which consumptive use of water along the Gila River for agricultural irrigation is reduced by as much as three times the model-predicted impact.

MITIGATION AND IMPLEMENTATION MEASURES

Several mitigation and implementation measures will occur upon completion of the Safford Land Exchange. This section describes the measures required by the BLM to mitigate for adverse impacts of the Land Exchange as described in Chapter 4 of the Final EIS, as well as other voluntary measures being undertaken by Phelps Dodge to address mining issues that are expected to occur. Mitigation measures that are required are summarized in the Land Exchange alternative column in Table 1. Measures described under the Proposed Mining Activities column in Table 1 are associated with the proposed mining that will occur on what will become private lands for which the BLM will have no oversight or authority once the Safford Land Exchange is executed. As discussed above, implementation of the measures described in detail in the Mitigation and Monitoring Plan, included as Appendix F in the Final EIS (BLM 2003), is a requirement of the Corps of Engineers' (COE) Clean Water Act Section 404 Permit (COE 2004).

The BLM's decision to authorize the exchange will result in the BLM losing regulatory jurisdiction over the proposed mining activities. The BLM considered the identified impacts of this result, as well as the mitigation measures proposed by Phelps Dodge, as part of its analysis of the loss of BLM oversight under the exchange alternative. The COE, a federal agency, Arizona Department of Environmental Quality, Arizona Department of Water Resources, and State Mine Inspector's Office will continue to assert regulatory control over the mining activities and associated mitigation measures that will ultimately be implemented on PD's private lands.

Mitigation Measures

Cultural Resources. A testing and data recovery plan approved by the State Historic Preservation Office will be implemented prior to completion of the exchange to ensure that cultural resources are adequately protected from harm during mining activities. This plan includes archaeological and ethnographic investigations of 82 historic and prehistoric sites. Furthermore, perpetual protective measures will be implemented through a Conservation Easement that Phelps Dodge will give to the Gila River Indian Community for three sacred sites on the federal lands. The Conservation Easement grants access and examination of these three sacred sites for cultural purposes and specifies a one-time contribution to fund conservation inspections of the sites.

Private Property Taxes. The net loss of property tax revenues from reduction of private land parcels in the counties in which the non-federal lands are located (Pima, Santa Cruz, and Yavapai Counties) will be offset by Payment in Lieu of Taxes (PILT) to the Counties paid by the federal government. These payments are calculated and paid annually by the federal government.

Grazing/Agriculture. Ownership of 24 range improvements made by grazing allottees on the federal lands will be transferred to PD as a result of the exchange. Allottees will be compensated by Phelps Dodge for the loss of these improvements.

Access and Recreation. Loss of public access via the San Juan Mine Road to the Gila Mountains backcountry will be offset by reimbursement by PD to the BLM for upgrading portions of the Solomon Pass Road to provide fair-weather travel for 2-wheel drive passenger vehicles. Additionally, the BLM will retain easements on portions of West Ranch Road, Salt Trap Tank Road, and to the Horseshoe Claims to provide for continued access.

Hazardous Materials. The federal public and non-federal private lands have been examined in accordance with Section 120(h) of Superfund Amendment and Reauthorization Act (SARA). No evidence was found to indicate that any hazardous substance was stored for one year or more or disposed of or released on the private (non-federal) or federal lands. Therefore, no further measures are required regarding SARA compliance prior to exchange of titles.

Implementation Measures

For the purposes of this document, implementation measures are actions or agreements that will occur with implementation of the exchange, but unlike mitigation measures, are not required or warranted as a result of the impact assessment completed in the FEIS (BLM 2003). In addition to the measures described in Table 1 under the Proposed Mining Activities column, two measures that Phelps Dodge has voluntarily committed to implement are discussed below.

Donation of Difference in Value of Federal and Non-federal Lands. The updated appraisals completed during the spring of 2004 have shown an increase in the values of both the federal and the non-federal lands over previous appraisals. However, as disclosed in the EIS, the value of the non-federal lands is still greater than the value of the federal lands. The values of the non-federal and federal lands are \$6,252,000 and \$5,232,000, respectively; Phelps Dodge has committed to donating the discrepancy in values between the non-federal and federal lands, approximately \$1,020,000, based on these recent market valuations completed by the BLM (BLM 2004).

Contingency Fund for Groundwater Impacts. Based on the analysis in the FEIS, the BLM determined that the predicted groundwater impacts under the San Carlos Apache Reservation (Reservation) were not significant and therefore, no mitigation was warranted or required. However, Phelps Dodge has offered to establish a contingency fund that would be used to compensate for groundwater impacts that are possible but unlikely to occur. The BLM has agreed to the establishment of a fund as proposed by Phelps Dodge.

RATIONALE FOR DECISION

The BLM's decision to select the Land Exchange alternative rests on many considerations and requirements, which are summarized and discussed below.

Management Considerations/Public Interest Determinations

The BLM may exchange land under authority of Section 206 of the Federal Land Policy and Management Act (FLPMA) of 1976, as amended in 1988 by the Federal Land Exchange Facilitation Act. Section 206 of FLPMA directs the Secretary of the Interior to consider whether the public interest would be well served by completing an exchange and when considering the public interest, to “give full consideration to better Federal land management and the needs of State and local people, including needs for lands for the economy, community expansion, recreation areas, food, fiber, minerals, and fish and wildlife...” (43 USC §1716; 90 Stat. 2756). The specific public interest factors that influenced the BLM’s decision to select the exchange alternative are described below. The equal-value exchange requirement in FLPMA is also discussed in detail below.

Better Federal Land Management

The exchange facilitates better federal land management in several ways. First, the exchange will help to consolidate public lands in several geographic areas, making it easier for the BLM to apply resource management prescriptions in a consistent manner to achieve desired conditions and to protect environmentally sensitive areas. The exchange will consolidate public lands by:

- acquiring 1,179 acres of private inholdings within public special management areas (e.g., 675 acres of Curtis and 180-acre Amado properties within the Gila Box Riparian National Conservation Area (RNCA); 324-acre Tavasci Marsh property within the Tuzigoot National Monument boundary);
- acquiring 400 of private lands (Schock and Clyne I) within the Sonoita Valley Acquisition Planning District for inclusion within the Las Cienegas National Conservation Area(NCA);
- acquiring 948 acres of private lands adjacent to BLM-administered special management areas (e.g., Musnicki and Butler-Borg are adjacent to Dos Cabezas Mountains Wilderness boundary);
- acquiring 1,340 acres of private land adjacent to BLM-administered or other public lands (e.g., Freeland properties, Norton properties, Feulner property, Clyne II property, 80 acres of Curtis);
- disposing of a block of about 16,297 acres of BLM-administered lands that are encumbered by 844 active mining claims, identified for disposal in the Safford District RMP, and that surround PD’s patented and privately-owned lands within the Safford Mining District.

Second, the exchange improves access to BLM-administered and NPS public lands by:

- acquiring private lands which provide primary or secondary legal access to existing public lands and resources (e.g., Musnicki, Freeland West and East tracts, and Butler-Borg provide secondary access to Dos Cabezas Mountains Wilderness; Feulner provides secondary access to Cienega Creek; Tavasci Marsh provides additional access within the National Park Service’s Tuzigoot National Monument; Clyne I provides secondary access to Las Cienegas NCA).

Third, the exchange reduces BLM management obligations by disposing of public lands that are:

- subject to mining plans of operations that must be overseen by the BLM Safford Field Office; and
- encumbered by facilities or buildings (through disposal of the 14-acre Sanchez parcel in the exchange).

The Needs of State and Local People

In considering the needs of State and local people, the BLM weighed the impacts of the alternatives on economics, recreational lands, mineral production, and fish and wildlife in their decision-making. Since it was clear that, unless the no mining alternative was selected, mining would occur on public lands under the MPO alternative or on private land under the exchange alternative, with identical impacts under either scenario. Thus it became clear that the BLM's decision should be based upon which alternative provided the most net benefits to various public interest factors such as economy, recreational lands, minerals, and fish and wildlife. The net benefits identified by the BLM are described below.

Economy. The foreseeable mining uses of the federal lands will provide the following economic benefits:

- creation of approximately 350 direct regular, full-time jobs at an average annual wage of \$36,000;
- creation of 275 indirect jobs;
- \$213 million payroll;
- \$151 million State and local taxes;
- \$283 million Federal taxes (direct and indirect);
- \$56 million in taxes returned to local communities.

While these beneficial effects would also occur under the MPO alternative, the exchange will additionally provide a net gain in private lands ownership in Graham County that will translate into increased private property tax payments by Phelps Dodge. In those counties where non-federal lands will go into public ownership, Payments in Lieu of Taxes (PILT) by the federal government will offset some loss to property tax revenues. Thus, the economic benefits of the exchange not only include the anticipated mining-related effects, but also the net positive increase in private property in Graham County.

Recreational Lands. The recreational potential of lands acquired by the BLM through the exchange substantially exceeds those being disposed of. As stated earlier, much of the land being acquired into federal ownership are inholdings containing wetland or riparian habitats in the Gila Box RNCA, Las Cienegas NCA, or the Tuzigoot National Monument. As such, these lands will provide for a variety of active and passive recreational activities available to the public, ranging from hiking and wildlife watching to camping, backcountry driving, and horse back riding. In comparison, the recreational value of the federal lands is limited and primarily consists of access to other recreational lands in the Gila Box RNCA (other access routes still exist) and backcountry driving.

Minerals. The exchange proponent, Phelps Dodge, "is one of the world's leading producers of copper and molybdenum and is the world's largest producer of continuous-case copper rod"

(<http://www.phelpsdodge.com/pdmc.right.html>). PD's intended uses of the lands it will acquire through the exchange are the development of the Dos Pobres and San Juan copper ore deposits (and potentially in the future, the Lone Star deposit), mine support facilities, and safety and security buffers. In selecting the exchange instead of the MPO, the BLM's decision causes the public to acquire public lands containing high resources values, while still enabling the planned mineral development of Dos Pobres and San Juan deposits.

Fish and Wildlife. Both the land exchange and the MPO are in compliance with the Endangered Species Act. The Biological Opinion issued by the U.S. Fish and Wildlife Service stated that the Dos Pobres/San Juan Project (i.e., the foreseeable mining uses) would not jeopardize the continued existence of either the endangered Southwestern Willow Flycatcher or the Arizona Hedgehog Cactus, nor was the Project likely to adversely affect the Gila Topminnow, Razorback Sucker, Spikedace, and Loach Minnow or designated critical habitat for the latter three fish species. In addition, selection of the exchange would result directly in the public acquisition of occupied habitat for three endangered species (Southwestern Willow Flycatcher, Yuma Clapper Rail, and Razorback Sucker), as well as potential habitat for the endangered Gila Chub, and the Yellow-billed Cuckoo, a candidate species. As such, the exchange alternative has a greater net benefit to fish and wildlife.

Equal Appraised Value

An exchange authorized by FLPMA and FLEFA requires that the dollar values of the exchanged lands be of approximately equal appraised value¹. This requirement ensures that the exchange is equitable regardless of the acreage being exchanged. Because the original appraisals on which the land exchange package had been developed became outdated during the administrative review of the exchange proposal, new appraisals of the federal and non-federal lands, including valuation of the mineral estate on the public lands, were completed in conformance with Federal appraisal standards. The updated appraisals resulted in disproportionately increased values of the non-federal lands in comparison with the values of the federal lands, resulting in a value discrepancy of \$1,020,000. According to FLPMA/FLEFA, a reduction in non-federal lands would be required to equalize the exchange, however, Phelps Dodge has elected under 43 U.S.C. 1737 (c) to donate this discrepancy in value instead of restructuring the exchange to accomplish the approximately equal value requirement, thus allowing the public to receive all non-federal lands as described and analyzed in the FEIS.

Other Agency Decisions

The U.S. Army Corps of Engineers (COE) was a cooperating agency on the EIS and will issue its Section 404 Individual Permit/Record of Decision in the summer of 2004, which authorizes mining as described in the Proposed Action alternative. The COE's decision allows issuance of a Section 404 Individual Permit to Phelps Dodge that will permit them to impact jurisdictional washes for stormwater management facilities and for construction of road crossings and mine support facilities in the manner described in the Proposed Action alternative. As stated in their Draft Permit, the COE's Section 404 Permit is conditional upon PD's full implementation of the Mitigation and Monitoring Plan that was included as Appendix F in the Final EIS (BLM 2003).

¹ "Approximately equal value" is defined as within 25 percent of the value of the federal lands. 43 U.S.C. §1716 (b).

ALTERNATIVES AND THEIR ENVIRONMENTAL CONSEQUENCES

Five alternatives were considered in the EIS. These alternatives were organized into two sets, Mine Plan Alternatives and Land Exchange Alternatives. Both sets included a No Action alternative. Alternatives are briefly described below; for detailed descriptions, please see Chapter 2 of the Final EIS. The environmental consequences of the five alternatives considered and evaluated in the EIS are summarized in Table 2.

Mine Plan Alternatives

Mining Plan of Operations (Proposed Action). The Dos Pobres/San Juan Project MPO uses conventional open pit mining (drilling and blasting) and solution extraction/electrowinning (SX/EW) technologies to mine and extract copper. The unmineralized development rock will be hauled from the pits and stored in two separate unlined rock stockpiles. Leach ore will be hauled from the pits to be further crushed, tumbled with sulfuric acid and water to agglomerate the fine materials and larger rock particles for more uniformly wetted material, then delivered to the lined leach pad by overland conveyor and placed onto the leach pad by a stacker system.

A weak sulfuric acid solution will be applied to the leach pad using drip emitters. As the leach solution percolates through the ore, soluble copper minerals are dissolved and the copper-laden water, called pregnant leach solution or PLS, is collected and routed to the PLS collection tank and eventually processed at the SX/EW plant.

Seven soil and growth medium stockpiles will be created for use as growth media and capping material in reclamation. Water supply will be groundwater with an average use requirement of 3,431 gallons per minute or 5,533 acre-feet per year. Electric power will be provided to the project from the existing 230 kilovolt Hackberry line operated by Sierra Southwest Transco; about seven miles of transmission line, a new substation, and three separate 69 kilovolt overhead transmission lines will be built on Phelps Dodge property to supply power to the mine areas and facilities.

Partial Backfill Alternative. This alternative is identical in almost every aspect as the MPO except that approximately 60–80 million tons of development rock from the Dos Pobres pit would be backfilled into a mined-out portion of the San Juan pit. This would serve to reduce the height of each of the two development rock stockpiles by about one lift (about 50 feet), but would also preclude any further development of the San Juan copper resources remaining in the San Juan pit that are not economic to mine at this time.

No Action. This alternative involves no federal actions; the BLM would reject the MPO. The result would be no mining on public lands.

Land Exchange Alternatives

Safford Land Exchange (Preferred Alternative). This alternative involves the exchange, on an equal value basis, of 16,297 acres of public lands in the Safford Mining District to Phelps Dodge in exchange for 3,867 acres of PD-controlled lands located in five counties in southern and central Arizona. The public lands are encumbered by PD-owned mining and mill-site claims and surround lands patented to PD. The non-federal lands include privately owned inholdings in the Gila Box Riparian National Conservation Area and Tuzigoot National Monument, as well as lands

near or adjacent to BLM lands in the Dos Cabezas Mountains Wilderness, the Las Cienegas National Conservation Area, and other BLM holdings.

No Land Exchange. This alternative involves retaining the federal lands under the BLM administration; the public would not acquire the non-federal lands, which would remain as private lands. If the BLM had selected the No Land Exchange alternative, it would then be required to approve or reject the MPO as per the General Mining Law of 1872. Selection of the MPO would result in mining as described in the Proposed Action, assuming PD secured all the necessary permits, with the BLM retaining management oversight of the federal lands on which mining would occur.

PROTEST RESOLUTION PROCEDURES

This section outlines administrative procedures for formally protesting this decision, the BLM's selection of the Land Exchange alternative. Protest procedures are set forth in 43 Code of Federal Regulations (CFR) Part 2201.7. Land exchange decisions are not directly appealable to the Interior Board of Land Appeals, however, this decision can be protested by anyone with standing to do so within forty-five (45) days of notification of the decision. Legal notices for this decision will be published in the following publications: *Arizona Republic*, *The Arizona Daily Star*, and *Eastern Arizona Courier*. Any protests must be filed with the BLM Safford Field Office within forty-five (45) days of the date of Notice of Decision.

After a written protest is received at the BLM Safford Field Office, the Arizona State Director (the authorizing officer of the BLM Arizona State Office) will consider its merits and will issue a final administrative decision on the protest. This protest decision is appealable under 43 CFR Part 4 unless the Assistant Secretary takes jurisdiction of the protest decision, in which case, the protest decision becomes the final determination of the Department of the Interior.

REFERENCES

Army Corps of Engineers

- 2004 Department of the Army Permit for the Dos Pobres/San Juan Project. Los Angeles, California. Draft. Final expected in summer.

Bureau of Land Management

- 2004 Compilation of Eight New Appraisal Reports for the Eleven Non-Federal Parcels and the Federal Lands for the Safford Land Exchange. Various dates.
- 2003 Dos Pobres/San Juan Project Final Environmental Impact Statement, Volumes I and II (Figures and Appendices). December. Safford, Arizona.
- 1994 Decision Record on EA Number AZ-040-EA-04-12, Land Tenure Amendment to the Safford District Resource Management Plan (Safford LTA): Final Environmental Assessment. Safford, Arizona. 1 p.
- 1992 Partial Record of Decision for the Approval of the Safford District Resource Management Plan. Safford, Arizona. 16 p.

Table 1. Mitigation Measures for Impacts of Action Alternatives for the Dos Pobres/San Juan Project (N/A = not applicable since the BLM would no longer have regulatory authority over this mitigation under this alternative)

IMPACTS		MITIGATION MEASURES	
Subcategory	Issue/Impact	Proposed Mining Activities	Land Exchange Alternative*
LAND USE			
Public Lands Management	Loss of BLM jurisdiction over federal lands, including for mine reclamation.	N/A	No mitigation required. Other federal agency jurisdiction still applicable (i.e., COE). PDSI's Reclamation Plan designed to meet both federal and state requirements and APP monitoring and closure requirements would still apply, so no adverse impact from loss of BLM oversight.
Access and Recreation	Loss of public access on San Juan Mine Road to Gila Mountains.	Alternate access to the Gila Mountains is still available and portions of the existing Solomon Pass Road have already been upgraded to accommodate fair-weather travel of 2-wheel-drive passenger vehicles. Other mitigation measures for this impact include BLM retaining easements on portions of West Ranch and Salt Trap Tank roads to provide continued access to the Gila Mountains and Gila Box RNCA.	Same as for Proposed Action.
	Loss of dispersed recreational opportunities on public lands.	PDSI would provide 'scenic overview' opportunities as part of educational/tourism post-mining land uses. No other specific mitigation is proposed.	Recreational opportunities gained on non-federal lands compensate for this impact.
	Impact to part of route for Johnny Creek Ride through public lands	No mitigation proposed; BLM may continue to issue a Special Use Permit to event organizers if an alternate route on public lands is proposed.	Same as for Proposed Action.
Grazing	Reduced stocking capacity and loss of use of range improvements, including those for stock/wildlife watering, within proposed security fence.	Mitigation (i.e., payment) would be made by Phelps Dodge to the appropriate party(s) for the eight registered range improvements directly impacted by the proposed mining operations (i.e., those improvements located within the proposed security/grazing fence). No mitigation for reduced allotment stocking capacity. Mitigation for loss of range improvements for stock/wildlife would be provisions for replacement water features if possible.	Same as for Proposed Action.
Visual Resources	Major modifications to the landscape in the Safford Valley; increased nighttime lighting effects.	Mitigation for visual impacts include revegetation of portions of development rock stockpiles as described in Reclamation Plan (PDSI 2003), as well as the following measures: 1) use earth-toned paint colors for buildings to reduce their visibility; 2) recontour the land disturbed for road cuts and fills, stormwater diversions, impoundment dams, borrow areas, stockpiles, and other facilities; and 3) recontour the sharp angles of the corners and edges of the front, sides, and tops of the pad and stockpiles as described in Reclamation Plan to reflect the natural, adjacent landforms. Nighttime lighting effects will be minimized through compliance with Graham County's Nighttime Lighting Ordinance (shielding, use of sodium lighting, etc.) and enforced by the County; use of conveyors will minimize haul truck usage thereby reducing need for portable light plants at the leach pad and effects from truck headlights.	N/A
Hazardous Materials	Risk of contamination by hazardous materials through spills.	To minimize risks associated with use and transport of hazardous materials, all such materials would be transported, handled, stored, and disposed of per requirements of MSHA, RCRA, and CERCLA (see Sections 2.1.2.3.5 to 2.1.2.3.8). Under this alternative, oversight for RCRA, a federal law, is provided by ADEQ, which conducts inspections and provides enforcement on behalf of EPA. The shipping company selected by PDSI to transport hazardous materials would be required to comply with applicable federal (USDOT) and state (ADOT) regulations governing such transport. PDSI would develop a Spill Prevention Control and Countermeasures (SPCC) Plan to address requirements for preventing accidental spills and developing procedures to be followed in the event of a spill. The SPCC Plan is required to be kept on site for inspection by ADEQ or EPA. Upon closure of the mines, PDSI will be required to properly remove and dispose of hazardous materials from the mine sites by ADEQ per their APP permit and by the State Mine Inspector's Office per reclamation requirements in the Arizona Mined Lands Reclamation Act.	N/A

Table 1, CONTINUED. Mitigation Measures for Impacts of Action Alternatives for the Dos Pobres/San Juan Project (N/A = not applicable since the BLM would not have regulatory authority over this mitigation under this alternative)

IMPACTS		MITIGATION MEASURES	
Subcategory	Issue/Impact	Proposed Mining Activities	Land Exchange Alternative*
PHYSICAL RESOURCES			
Air Quality	Some decrease in ambient air quality but within federal and state standards due to implementation of environmental protection measures.	Environmental protection measures incorporated into the MPO include dust control at crushing and screening facilities and at ore surge piles consisting of fog nozzles and water-wetting systems to suppress dust, and air pulse dust collection systems to filter dust-laden air. Water trucks would systematically suppress dust on roads. Methods being evaluated by PDSI to control sulfuric acid mist in the tankhouse include heat retention beads and balls, surfactants, water foggers, and cell wipers. Emissions of VOCs during the solution extraction process would be minimized through engineering design and diluent selection for low vapor pressure. Boiler combustion gasses would be minimized through use of clean-burning fuels, such as propane and/or natural gas. Oversight for Air Quality compliance will be provided by ADEQ through PD's Class II Air Quality Control Permit.	N/A
Soils	Direct, long-term impacts to soil productivity.	Mitigation includes stormwater control measures to limit erosion potential (overseen through CWA Section 404 by COE and Sections 402 AZPDES and 401 Water Quality Certification by ADEQ), watering during construction and operations to control soil loss by wind erosion, stockpiling soils for reclamation, revegetation programs, and contouring sides and tops of stockpiles to reduce wind and water erosion effects (as overseen by the State Mine Inspector's Office).	N/A
Groundwater Quantity	Pumping causes lowered groundwater surface elevation in project area vicinity (cone of depression); 1' drawdown contour does not reach Reservation, Bonita Creek, or Gila River; predicted wellhead pressure reduced by 0.72 ft at Watson Wash; Dos Pobres and San Juan pit lake evaporation estimated at 21 a-f/yr in perpetuity	No direct mitigation for predicted cone of depression is proposed, however, reduced tributary groundwater is predicted to affect surface water flows and associated legally protected resources such as jurisdictional waters of the U.S., habitat for listed species, designated critical habitat, and/or Indian trust assets (surface water rights and reservation groundwater). To mitigate for subsequent predicted physical effects on surface flows (total predicted maximum of 149 a-f/yr, including reduced stormwater runoff and pit lake evaporation), 3M Program will be implemented (see also Mitigation under Surface Water Quantity) as a Special Condition of PDSI's CWA Section 404 Permit, under COE jurisdiction and oversight. 3M Program involves monitoring groundwater levels and using actual well data to recalibrate the predictive groundwater model; if necessary, adjust acres of fallowed lands in Alternate Year Fallowing Program to reduce consumptive use of river flow to offset predicted effects from pumping. Flows at the Watson Wash artesian well would also be monitored and height of discharge pipe lowered if necessary to offset reduced groundwater flow. (See appropriate sections of this table and Appendix F for specifics.) Construction of wells is subject to ADWR oversight and pumping must be for beneficial use.	N/A
Groundwater Quality	No impacts expected due to implementation of environmental protection measures required by ADEQ's APP Program. Risk of discharge to groundwater would be reduced by these measures but cannot be eliminated.	Environmental protection measures incorporated into the MPO include BADCT applications such as composite liner system for the leach pad; double-liner system for the PLS excess solution pond; a lined stormwater impoundment conservatively sized for a 100-year/24-hour storm event combined with 24-hour power outage; and secondary containment systems for the SX/EW facility. Groundwater quality would be monitored regularly for APP compliance. APP closure requirements include permanent strategies to control run-on, runoff, and infiltration. Compliance with this mitigation is under the jurisdiction of ADEQ, which has oversight of the Aquifer Protection Program (APP) for which PDSI will be issued a permit.	N/A

Table 1, CONTINUED. Mitigation Measures for Impacts of Action Alternatives for the Dos Pobres/San Juan Project (N/A = not applicable since BLM would not have regulatory authority over this mitigation under this alternative)

IMPACTS		MITIGATION MEASURES	
Subcategory	Issue/Impact	Proposed Mining Activities	Land Exchange Alternative*
PHYSICAL RESOURCES			
Surface Water Quantity	Model-predicted reduction (unmeasurable) in surface water flows in the Gila River; total maximum peak impact is 149 a-f/yr at Year 450 after mining starts. Bonita Creek flow reduction also unmeasurable.	Alternate Year Fallowing of decreed farmland that PDSI owns in the Safford Valley would offset predicted impacts to surface water flows in the Gila River by reducing consumptive use for agriculture. The program calls for fallowing 200 acres each year in an alternating pattern. Based on recent per-acre consumptive use in the Safford Valley, fallowing 200 acres would reduce consumptive use along the Gila River by 480 a-f/yr of water. Because 480 a-f/yr is more than three times the total maximum predicted impact (149 a-f/yr) on Gila River flows, the program as currently configured will be more than adequate even if the monitoring program and future model recalibration predicts a higher impact. Should revised impact estimates exceed 480 a-f/yr, additional decreed farmland is available to be fallowed to make up the difference. The Alternate Year Fallowing Program would be implemented in perpetuity and protected by placing deed restrictions on the decreed lands incorporated into the program. Compliance with the Alternate Year Fallowing program is enforceable by the COE through its oversight of PDSI's CWA Section 404 Permit and the special condition that requires full implementation of the Mitigation and Monitoring Plan.	N/A
	Model-predicted reduction in surface water flow at the Watson Wash artesian well.	Predicted 0.72 ft reduction in wellhead pressure would be mitigated by lowering the height of the well discharge pipe by the appropriate amount to maintain surface flows at the current volume. This measure would occur through compliance with the MMP, as required by PDSI's CWA Section 404 Permit overseen by the COE.	N/A
	Placement of fill into waters of the U.S. from mining activities.	To reduce temporal impacts associated with loss of riparian functions of 68 acres of WUS on the project site, proposed mitigation measures (creation, enhancement, and preservation of riparian and wetland habitats) have already been implemented at the Pima and Thatcher mitigation sites as described in Appendix F. Habitat mitigation objectives include creation of 30 acres of riparian habitat, enhancement of 18 acres of riparian and wetland habitat, and preservation of 160 acres of riparian habitats along the Gila River in the Safford Valley. These measures are conditions of PDSI's CWA Section 404 permit, and continuing oversight is provided by the COE.	N/A
Surface Water Quality	No impacts expected due to implementation of environmental protection measures required by CWA Sections 404, 402 (AZPDES permit), and 401 (state water quality certification).	Environmental protection measures incorporated into the MPO include designing and operating the Project as a non-discharge facility (per Section 402 of the CWA and overseen by ADEQ and EPA), i.e., using BADCT criteria for the design, construction, and operation of all potentially discharging facilities such as the leach pad and stormwater management system. The stormwater management system has been conservatively sized for a 100-year, 24-hour storm event combined with a 24-hour power outage (a very unlikely and extreme scenario). As a requirement of their AZPDES stormwater permit, PD will prepare, maintain on-site, and comply with a Stormwater Pollution Prevention Plan (SWP3) that stipulates Best Management Practices to be implemented to minimize surface water quality impacts during mine construction and operation. Site inspection for compliance and enforcement of the SWP3 is provided by ADEQ.	N/A
BIOLOGICAL RESOURCES			
Vegetation	Loss of upland habitat (grubbing) and xeroriparian habitat (scouring, dewatering).	Reclamation measures to restore vegetation on some facilities (including on soil stockpiles for dust control) would help to mitigate for these impacts and will be overseen by the State Mine Inspector's Office. As described above, COE requires mitigation for indirect impacts to habitat associated with waters of the U.S. (ephemeral drainages) resulting from permitted impacts to such waters.	N/A
Wildlife	Loss of wildlife habitat and small wildlife (rodents, reptiles, insects, etc.) during mine and road construction. Potential adverse impacts to wildlife through exposure to PLS pond.	PDSI will monitor potential wildlife use of the excess process solution impoundment and facility ponds will include special fencing to keep out terrestrial wildlife. In addition, PD is currently evaluating potential options to further minimize the potential for wildlife exposure to ponds. Should monitoring results indicate that significant adverse impacts are occurring to wildlife, appropriate mitigation measures would be implemented. PD must comply with the Migratory Bird Treaty Act and other legal requirements intended to protect wildlife. All wildlife is the property of the State of Arizona subject to management and protection by AGFD.	N/A

Table 1, CONTINUED. Mitigation Measures for Impacts of Action Alternatives for the Dos Pobres/San Juan Project (N/A = not applicable since BLM would not have regulatory authority over this mitigation under this alternative)

IMPACTS		MITIGATION MEASURES	
Subcategory	Issue/Impact	Proposed Mining Activities	Land Exchange Alternative*
CULTURAL RESOURCES			
Archaeological Sites and TCPs	Destruction of 13 archaeological sites on public lands and 24 sites on private lands. Loss of 26 sites identified as TCPs by Indian tribes: 10 on public lands and 16 on private lands.	A SHPO-approved treatment plan has been developed to address impacts on cultural resources (SWCA 2003b). Some archaeological sites may be avoided by judicious placement of certain mine facilities, such as access roads, transmission line poles, etc. Mitigation for sites that cannot be avoided consists of implementing a BLM- and SHPO-approved testing and data recovery plan that was developed with input from Indian tribes that have consulted with BLM for this project. The purpose of testing and data recovery (which itself destroys a site) is to gather as much scientific information as possible from the sites before they are physically impacted by the Project. Twenty-six of the thirty-four affected archaeological sites have been identified as traditional cultural properties by one or more Indian tribes. In the case of sacred sites, provisions have been made for avoidance/protection of three sacred traditional cultural places. PDSI has provided a conservation easement for these three sites to the Gila River Indian Community (GRIC). As holder of the easement, GRIC will conduct periodic inspections to verify that the physical conditions of the sites are being maintained. The easement also provides for reasonable access to the sites for the Four Southern Tribes and any other tribes consulted by BLM that claimed cultural affiliation to these sites. Relocation of eight boulders bearing petroglyphs that would otherwise be impacted by mining has been recommended and is included in the treatment plan that would be implemented prior to the mining activity or to the exchange of titles under the land exchange alternative. BLM recognizes that certain tribes feel that some kinds of direct and indirect impacts on cultural resources cannot be mitigated.	N/A
	Loss of BLM (federal) jurisdiction over 61 archaeological sites on the federal lands, including 43 sites identified as TCPs by Indian tribes. Three of the 43 sites were also identified as sacred places.	N/A	To mitigate for the loss of federal oversight and protection, the testing and data recovery plan approved by BLM and reviewed by SHPO for sites on the federal and private lands to be impacted by the foreseeable mining uses would be implemented prior to the exchange of title for the federal lands. BLM recognizes that certain tribes feel that some kinds of direct and indirect impacts to cultural resources cannot be mitigated.
SOCIOECONOMIC RESOURCES			
Taxes	Net loss of private property tax income to Pima, Santa Cruz, and Yavapai Counties (Net gain for Graham and Cochise Counties).	N/A	This impact would be offset partly through Payments in Lieu of Taxes (PILT) from the federal government to counties for federal land holdings; no other mitigation is proposed or required.
Transportation	Degraded pavement and increased vehicle and truck traffic on parts of Safford-Bryce Road.	The Proposed Project would result in substantial payments by PDSI in state and local taxes that fund road repair and other improvements. PD will be discussing roadway improvements, particularly at the turn-off to the mine, with appropriate County and ADOT officials. No other mitigation is proposed or necessary.	N/A

Table 1, CONTINUED. Mitigation Measures for Impacts of Action Alternatives for the Dos Pobres/San Juan Project (N/A = not applicable since BLM would not have regulatory authority over this mitigation under this alternative)

IMPACTS		MITIGATION MEASURES	
Subcategory	Issue/Impact	Proposed Mining Activities	Land Exchange Alternative*
INDIAN TRUST RESOURCES			
Indian Trust Assets	Reduced tributary surface and groundwater flow to the Gila River resulting from pumping may have potential adverse impacts to Indian holders of priority water rights on the Gila River.	Implementation of the following program for model-predicted reductions in surface water flows in the Gila River from groundwater pumping and surface water diversion would eliminate the potential for adverse impacts to holders of priority water rights on the Gila River, such as the Gila River Indian Community and the San Carlos Apache Tribe. Compliance with the MMP includes implementation of the Alternate Year Following program and is a special condition of PDSI's Section 404 permit, for which the COE has jurisdiction and enforcement authority.	N/A
	Model-predicted decline in groundwater elevation under San Carlos Apache Reservation is nearly zero and unmeasurable; very slight predicted temporary increase in flow of groundwater off Reservation	N/A	N/A

* This column applies only to the proposed land exchange *per se*; foreseeable uses of the federal lands are not included. Mitigation for impacts attributable to foreseeable uses associated with the Dos Pobres/San Juan Project is described under "Proposed Action." Any mitigation for impacts attributable to foreseeable uses associated with development of the Dos Pobres sulfide and Lone Star deposits would be determined at the time of federal permitting for those potential future projects.

Table 2. Comparative Summary Table of Impacts of Alternatives for the Dos Pobres/San Juan Project

Resource/ Issue	Mine Plan Alternatives Set			Land Exchange Alternatives Set		
	No Action	Proposed Action	Partial Backfill of San Juan	No Land Exchange	Land Exchange Alternative	
					Federal Lands	Non-Federal Lands
LAND USE						
Access/ Recreation	No direct, indirect, or cumulative impacts to access to and recreation on public lands. The status quo would be maintained.	Public access on San Juan Mine Road would be discontinued; Johnny Creek Ride permit could not include public lands used for mining for public safety and site security concerns; five existing BLM special use permits would be modified to exclude use of proposed mining areas; public lands available for hunting in AGFD Hunt Unit 28 reduced by about 5,169 acres (acreage that will be fenced off around Project). Access to Gila Mountains and Johnny Creek would still be available through Solomon Pass Road, a portion of which would be upgraded to mitigate for the loss of public use of the San Juan Mine Road to access the Gila Mountains.	Direct and indirect impacts are expected to be identical to those of the Proposed Action.	This alternative would not, in itself, cause changes to existing public access or recreational uses of the non-federal or federal lands. However, given that mining would likely occur on portions of the federal lands, impacts identical to those described under the Proposed Action are anticipated.	In disposing of federal lands, physical and public access to and dispersed recreation on the federal lands would no longer be controlled by BLM, but by PDSI. BLM would retain access on portions of Salt Tank Trap Rd, Solomon Pass Rd, and West Ranch Rd for continued public and physical access through PD lands to Gila Mountains and Gila Box RNCA. Owners of Horseshoe Claims would have access to their lands through BLM easement on spur road from Solomon Pass Rd. Foreseeable uses at DP/SJ Project would result in same impacts to public access and recreation as the Proposed Action. Foreseeable mining uses at DP sulfide and Lone Star projects would not be expected to further affect dispersed recreation opportunities or public access than those effects described above.	Through acquisition of non-federal lands, public access to the Dos Cabezas Mountains Wilderness, in the Gila Box RNCA, and in the Empire-Cienega RCA would be improved. Developed recreational facilities at Tavasci Marsh come into public ownership and management; dispersed recreational opportunities would be increased in BLM Safford and Tucson Field Offices.
Encumbrances	No direct, indirect, or cumulative impacts on existing rights-of-way or easements on public lands.	Seven ROWs are directly impacted by proposed mining and would be relocated to provide utilities to the Project. This is not expected to be an adverse impact as existing ROWs are for utilities to current or past mining operators.	Direct and indirect impacts expected to be identical to those of the Proposed Action.	This alternative would not, in itself, cause changes to existing encumbrances on non-federal or federal lands; however, given that mining would likely occur on portions of the federal lands, impacts identical to those described under the Proposed Action are anticipated.	No direct, indirect, or cumulative impacts to encumbrances on the federal lands as disposal of 16,297 acres of federal lands would be subject to conditions of existing ROWs. Physical impacts from foreseeable uses would be identical to those described under the Proposed Action, but these are not expected to be adverse.	No direct, indirect, or cumulative impacts to existing encumbrances on non-federal lands as exchange is "subject to" conditions of existing legal agreements appurtenant to the lands.
Agriculture/ Grazing	No direct, indirect, or cumulative impacts to prime farmlands or to grazing are expected.	No direct impacts to agricultural lands, but minor indirect, long-term impacts to agricultural production through implementation of Alternate Year Fallowing Program for water resources mitigation (see Appendix F). Eight range improvements within four allotments, comprising a total of 5,169 acres of public lands would be directly impacted by proposed mining as these resources would be fenced off for security and safety purposes. BLM's grazing receipts reduced by about \$144/yr resulting from 107 AUM reduction in BLM stocking capacity within the allotments affected by this alternative.	Direct and indirect impacts of this alternative are expected to be identical to those of the Proposed Action.	This alternative would not, in itself, cause changes to existing agricultural or grazing practices on non-federal or federal lands; however, given that mining would likely occur on portions of the federal lands, impacts identical to those described under the Proposed Action are anticipated.	No direct, indirect, or cumulative impacts to agricultural lands. Disposal of the federal lands would adversely and directly impact 16,297 acres of public lands in 6 BLM allotments, totaling 653 AUMs. This would reduce BLM grazing receipts by nearly \$882/yr and impact 24 range improvements. In the short-term, some grazing use of the federal lands outside the proposed security fence would occur, as PD would lease back a portion of the federal lands until such time as other foreseeable uses at the DP sulfide and Lone Star projects were implemented. At that time, PD would likely terminate grazing use on additional, but unknown areas within the federal lands in order to develop these projects. The maximum total physical impacts by foreseeable uses would be about 10,431 acres. The majority of intermittent use areas could still be grazed, but PD would own the land and receive the annual grazing income that currently is paid to BLM.	Acquisition of non-federal lands and the availability of those lands for grazing (except Tavasci Marsh and riparian areas of Amado and Curtis) would offset slightly the loss of public grazing use of federal lands. Foreseeable uses of the non-federal land under public management would not affect agricultural uses or productivity.

Table 2. CONTINUED. Comparative Summary Table of Impacts of Alternatives for the Dos Pobres/San Juan Project

Resource/ Issue	Mine Plan Alternatives Set			Land Exchange Alternatives Set		
	No Action	Proposed Action	Partial Backfill of San Juan	No Land Exchange	Land Exchange Alternative	
					Federal Lands	Non-Federal Lands
LAND USE						
Mineral Rights	No direct, indirect, or cumulative impacts to mineral rights on public lands are expected. This alternative would not affect PD's ability to mine its claims under a permissible MPO.	No direct, indirect, or cumulative impacts to PD's or third-parties' mineral rights on public lands are expected.	Impacts of this alternative are expected to be identical to those of the Proposed Action.	No direct, indirect, or cumulative impacts are expected as a result of this alternative.	PD's acquisition of the federal lands would extinguish their mining claims filed with BLM, as they would now own the federal lands on which their claims had been filed. No direct, indirect, or cumulative impacts to Melody or Horseshoe claims from this alternative.	PD would relinquish right to extract minerals on non-federal lands. Public acquires right to extract mineral resources on Norton, Musnicki, Freeland, and Butler-Borg properties per applicable management plans. All other non-federal properties would be withdrawn from mineral entry if acquired through the exchange.
Blasting Noise/ Vibrations	No direct, indirect, or cumulative impacts to existing levels of noise and vibrations in the region from this alternative because no blasting would occur.	In Safford, daily short-duration noise and vibration impacts from mine blasts would not reach levels commonly considered to be annoying; these impacts would last the life of the Project (16 years). The effects will be almost imperceptible at Mt. Graham and are not likely to affect astronomical observation activities.	Direct and indirect impacts are expected to be identical to those of the Proposed Action.	This alternative would not, in itself, cause changes to existing noise levels on non-federal or federal lands; however, given that mining would likely occur on portions of the federal lands, impacts identical to those described under the Proposed Action are anticipated.	No impacts on existing noise and vibration levels in Safford as a result of the land exchange itself. The foreseeable mining at the DP/SJ Project would have impacts identical to those described under the Proposed Action. Noise and vibrations generated by the foreseeable uses at the DP sulfide and Lone Star projects would continue those impacts and be similar in magnitude to those of the Proposed Action alternative, but the number of blasts per day may vary.	No direct, indirect, or cumulative impacts to existing noise and vibration levels on the non-federal lands are expected as a result of the exchange.
Hazardous Materials	No direct, indirect, or cumulative impacts expected from hazardous materials as a result of this alternative. The zipACIDS site would remain and no additional hazardous material would be brought on site.	There would be a beneficial effect from elimination of the San Juan zipACIDS site as a result of the Project. Through environmental compliance with MSHA, OSHA, RCRA, EPCRA, and other regulations for hazardous materials, all regulated materials are expected to be transported, handled, stored, and disposed of properly; however, a risk of environmental damage is incurred by the transport of such materials and their presence on site (due to human error, etc). The USFWS has concurred with BLM in their Biological Opinion that risk of impacts from acid spills on Gila River and listed species is minima and unlikely to have adverse effects. As part of mine closure and reclamation, many facilities would be razed and materials disposed of at an authorized waste disposal site.	Direct and indirect impacts are expected to be identical to those of the Proposed Action.	This alternative would not, in itself, cause changes to the state of hazardous materials on non-federal or federal lands; however, given that mining would likely occur on portions of the federal lands, impacts identical to those described under the Proposed Action are anticipated.	Disposal of the federal lands would reduce federal liabilities for any hazardous materials associated with mined lands. In implementing the foreseeable uses on private lands, PD, as the new landowner, would assume responsibility for reclamation (with oversight from the State Mine Inspector) and proper treatment of hazardous materials associated with mining operations as required by MSHA, OSHA, RCRA, EPCRA, and other regulations for hazardous materials. Implementing the foreseeable uses would entail risks of environmental contamination associated with transporting, handling, and storing hazardous materials needed for mining. The USFWS has concurred with BLM that impacts to Gila River and listed species from increased risk of acid spills is unlikely to have adverse effects.	No direct, indirect, or cumulative impacts expected. Acquisition of the non-federal lands would not increase federal liabilities for hazardous materials as no known such sites have been identified on the non-federal lands.

Table 2. CONTINUED. Comparative Summary Table of Impacts of Alternatives for the Dos Pobres/San Juan Project

Resource/ Issue	Mine Plan Alternatives Set			Land Exchange Alternatives Set		
	No Action	Proposed Action	Partial Backfill of San Juan	No Land Exchange	Land Exchange Alternative	
					Federal Lands	Non-Federal Lands
LAND USE						
Visual Resources	No direct, indirect, or cumulative impacts to public lands visual resources. The visual character of the area would be retained.	Visual character of the landscape will be permanently modified in a major way, primarily through changes in topography and creation of contrasting land forms, lines, and contrasting colors of disturbed areas with undisturbed areas. Visual impacts to in-town views probably will be less noticeable as compared to views from above or near the higher elevations of the Gila Mts. Slightly increased nighttime lighting in the project area will be a long-term effect but is not expected to impact observations at Mt. Graham as PDSI will comply with Graham County Nighttime Lighting Ordinance and use of conveyor will reduce need for haul truck lighting and headlights. The Proposed Action alternative and mine-related Reasonably Foreseeable Future Actions (RFFAs) will contribute cumulatively to visual impacts to the northern-facing viewsheds of the Safford Valley.	For in-town views of the project area, this alternative will result in similar but slightly reduced direct visual resource impacts as a result of slightly lower stockpile heights. Nighttime lighting impacts may also be slightly reduced due to portable light plants located below surface elevation in the San Juan pit for the latter part of the Project. Otherwise all impacts would be identical to those described for the Proposed Action.	This alternative would not, in itself, cause changes to existing visual resources on non-federal or federal lands; however, given that mining would likely occur on portions of the federal lands, impacts identical to those described under the Proposed Action are anticipated.	In disposing of the federal lands, BLM VRM objectives for those lands would no longer apply. The foreseeable mining uses could be implemented without BLM input on visual mitigation measures. Foreseeable uses at the DP/SJ Project would result in impacts identical to those described for the Proposed Action alternative. Foreseeable uses at DP sulfide and Lone Star projects would extend those impacts, adding to cumulative visual impacts in the Safford Valley. Together, the foreseeable mining uses would alter the landscape of the Gila Mountains and its southern flank, affecting the silhouette of Lone Star Mountain. The massing effect of the three mines across the base of the Gila Mountains would create a zone below the horizon of large-scale, mesa-like or terrace-like forms, with various structures, roads, and contrasting colors visible from the Safford Valley.	Non-federal lands would become subject to public management of visual resources per VRM objectives for adjacent public lands as stated in the applicable management plan for each property.
Climate	No direct, indirect, or cumulative impacts on climate would result from this alternative.	Direct impacts to localized wind patterns at a microclimatic scale due to permanent changes in local topography on the project area as a result of mining activities would be imperceptible outside of the project area.	Impacts of this alternative are expected to be identical to those of the Proposed Action.	This alternative would not, in itself, cause changes to existing climatic conditions; however, given that mining would likely occur on portions of the federal lands, impacts identical to those described under the Proposed Action are anticipated.	No direct, indirect, or cumulative impacts on climate on a local or regional scale. Foreseeable uses would have identical impacts as the Proposed Action; DP sulfide and Lone Star projects would have similar impacts in that localized changes in topography may have microclimatic impacts on wind patterns; these are expected to be imperceptible outside the project area.	No direct, indirect, or cumulative impacts on climate on local or regional scale are expected as a result of public acquisition or management.

Table 2. CONTINUED. Comparative Summary Table of Impacts of Alternatives for the Dos Pobres/San Juan Project

Resource/ Issue	Mine Plan Alternatives Set			Land Exchange Alternatives Set		
	No Action	Proposed Action	Partial Backfill of San Juan	No Land Exchange	Land Exchange Alternative	
					Federal Lands	Non-Federal Lands
PHYSICAL RESOURCES						
Air Quality	No direct, indirect, or cumulative impacts on air quality would result from this alternative. Ambient air quality is retained.	The ambient air quality is expected to decrease but stay within federal and state standards. Model-predicted emissions of criteria pollutants at a localized level during the life of the Project would not exceed standards at the process boundary or at four special receptor sites (the southern tip of the San Carlos Apache Reservation, in the town of Safford, or at the Galiuro or Gila wilderness areas). No visual plume impacts expected in Gila and Galiuro wilderness areas (Class I airsheds) as a result of the project. Cumulatively, the concentration of some criteria air pollutants is likely to increase in Safford Valley as a result of growth, the Project, and RFFAs. However, ADEQ, through their permitting authority, must ensure that concentrations do not exceed applicable standards.	Impacts of this alternative are expected to be identical to those of the Proposed Action.	This alternative would not, in itself, cause changes to existing air quality on non-federal or federal lands; however, given that mining would likely occur on portions of the federal lands, impacts identical to those described under the Proposed Action are anticipated. .	No direct, indirect, or cumulative impacts to air quality from the disposal of federal lands; impacts of foreseeable uses at the DP/SJ Project on criteria air pollutants in the region including two Class I airsheds would be identical to Proposed Action alternative. All foreseeable uses would likely result in increased ambient concentrations of criteria pollutants but within standards. DP sulfide project would likely require a Class I air quality permit; Lone Star project would likely require a Class II air quality permit.	No direct, indirect, or cumulative impacts to air quality from criteria air pollutants as a result of public acquisition or management of the non-federal lands.
Geology	No direct, indirect, or cumulative impacts on geological resources would result from this alternative.	Direct, permanent impact to locatable mineral resources as allowed by the General Mining Law of 1872 and other surface management regulations. Economic mineral potential (metals and common variety minerals) of public lands will be realized under this alternative.	Impacts of this alternative are expected to be identical to those of the Proposed Action.	This alternative would not, in itself, cause changes to existing mineral resources on non-federal or federal lands; however, given that mining would likely occur on portions of the federal lands, impacts identical to those described under the Proposed Action are anticipated.	Mineral resources of the federal lands would become the property of PD, which currently owns 100% of 844 mining claims that encumber the federal lands. Mineral resources would be developed under the foreseeable uses through implementation of the Dos Pobres/San Juan mine, DP sulfide, and Lone Star projects. No adverse impacts to salable minerals as a result of the exchange.	Acquisition of non-federal lands would increase public lands available for mineral entry in the Dos Cabezas and Northwest Gila Valley LTMA; mineral entry would not be allowed on properties acquired in the Gila Box RNCA, Empire-Cienega RCA, and Tuzigoot NM.
Soils	No direct, indirect, or cumulative impacts on soils would result from this alternative.	Direct, long-term impacts to soil complexes (generally poor, low-productivity soils). Some productivity regained through reclamation. Mitigation includes stormwater control measures to limit erosion potential, watering during construction and operations to control soil loss by wind erosion, stockpiling soils for reclamation, revegetation programs, and contouring sides and tops of stockpiles to reduce wind and water erosion effects. Long-term losses of soil productivity would occur in areas not subject to active reclamation programs and would continue until natural successional processes resulted in the re-establishment of vegetation and productive soil profiles.	Impacts of this alternative are expected to be identical to those of the Proposed Action.	This alternative would not, in itself, cause changes to existing soils on non-federal or federal lands; however, given that mining would likely occur on portions of the federal lands, impacts identical to those described under the Proposed Action are anticipated.	No direct physical impacts to soils as a result of exchange; foreseeable mining uses would result in long-term reduction in soil productivity although not for soils that will be stockpiled and used as growth media at reclamation. Erosion potential of soils would increase as a result of clearing of vegetation, but resultant increased sedimentation effects are not expected outside the project area, and bedloads recover well before reaching the Gila River.	Public acquires soil resources and BLM manages productivity of soils of the non-federal lands.

Table 2. CONTINUED. Comparative Summary Table of Impacts of Alternatives for the Dos Pobres/San Juan Project

Resource/ Issue	Mine Plan Alternatives Set			Land Exchange Alternatives Set		
	No Action	Proposed Action	Partial Backfill of San Juan	No Land Exchange	Land Exchange Alternative	
					Federal Lands	Non-Federal Lands
PHYSICAL RESOURCES						
Groundwater	No direct, indirect, or cumulative impacts on groundwater quality or quantity would result from this alternative.	Model-predicted maximum drawdown of water table is 800 feet after Year 16 centered in the San Juan pit, with the drawdown cone as defined by the one-foot contour line not reaching the Gila River, Bonita Creek, or the boundary of the San Carlos Apache Reservation. Increase in groundwater flow southward from the Reservation, peaking at 0.2 a-f/yr, or about 0.07 percent of estimated current flow, in Year 50; decline of water table beneath the Reservation predicted to be nearly zero. DP Seep would be destroyed. Wellhead pressure at Watson Wash artesian well is predicted to be reduced by a maximum of 0.72 ft at Year 1200. Cumulative impacts are likely but are not expected to adversely impact known production wells of other municipal or industrial water users. Magnitude of cumulative effects will be more accurately predicted in the future, as monitoring programs for the DP/SJ Project help to refine the groundwater model's predictive capabilities and as each RFFA is subjected to required environmental permitting and review. No direct, indirect, or cumulative impacts expected to existing groundwater quality through compliance during or after mining with BADCT design standards for potentially discharging mine facilities through APP permit. Risk of discharge to groundwater would be reduced by these measures but cannot be eliminated completely. (See also Indian Trust Resources discussion in this Table)	Impacts of this alternative are expected to be identical to those of the Proposed Action.	This alternative would not, in itself, cause changes to existing groundwater conditions on non-federal or federal lands; however, given that mining would likely occur on portions of the federal lands, impacts identical to those described under the Proposed Action are anticipated.	No direct, indirect, or cumulative impacts to groundwater quantity or quality as a result of the exchange. Foreseeable mining uses at DP/SJ Project would result in the same impacts as described for the Proposed Action alternative. Foreseeable mining uses at DP sulfide and Lone Star projects would likely draw on the same aquifer as the DP/SJ Project, adding to its impacts and extending them over time and area. The magnitude and significance of the physical impacts of the DP sulfide and Lone Star projects on water resources (e.g., surface flows of Gila River and Indian trust assets such as water rights and groundwater of the San Carlos Apache Tribe) would have to be estimated at the time of future federal permitting for these projects. Foreseeable mining uses are not expected to adversely impact groundwater quality because they would be subject to APP requirements.	Public acquisition of the non-federal lands would not directly, indirectly, or cumulatively impact groundwater quality or quantity.
Surface Water	No direct, indirect, or cumulative impacts on surface water quantity or quality, waters of the U.S., or surface flows of the Gila River would result from this alternative.	The maximum model-predicted reduction in flows in the Gila River as a result of the Project is 149 a-f/yr at Year 450. Of this volume, 34 a-f/yr is from groundwater pumping impacts, 21 a-f/yr is from the pit lake effect, and 94 a-f/yr is attributable to stormwater runoff impacts. The proposed Alternate Year Following Program to mitigate for Gila River surface flow impacts is described in Appendix F. Predicted impacts to Bonita Creek flows are nearly zero. No adverse cumulative impacts to surface water are expected upon implementation of this mitigation for physical effects to surface water. Direct and indirect impacts to drainages from sedimentation and scour resulting from stormwater retention and detention in major tributaries such as Cottonwood and Peterson Washes are not expected to reach the Gila River. Direct impacts to about 21.4 acres of waters of the U.S. and 93.2 acres of indirect impacts to waters. Direct and indirect impacts to waters of the U.S. mitigated through implementation of the COE's Mitigation and Monitoring Plan (Appendix F); therefore no significant adverse cumulative impacts to waters of the U.S. A pit lake would be created at Dos Pobres and the existing pit lake at San Juan would be pumped, mined out, and would refill after the proposed mining there is complete. The pH of the water in both pits is expected to be neutral and heavy metal concentrations within federal and state standards.	Impacts of this alternative are expected to be identical to those of the Proposed Action.	This alternative would not, in itself, cause changes to existing surface water resources on non-federal or federal lands; however, given that mining would likely occur on portions of the federal lands, impacts identical to those described under the Proposed Action are anticipated.	Disposal of federal lands would not result in direct, indirect, or cumulative impacts on surface water quantity or quality. Foreseeable mining uses at DP/SJ Project would directly impact surface water quantity as described under Proposed Action alternative. Mitigation in perpetuity for this reduction in surface flows would preclude indirect and cumulative adverse impacts to surface water quantity in the project area region. Monitoring program will show if model predictions warrant changes in mitigation requirements. Foreseeable mining use at DP sulfide and Lone Star would contribute cumulatively to surface water quantity reductions to an unknown degree; however, mitigation requirements associated with future COE permitting, requirements of the Endangered Species Act, and the anticipated physical effects to surface flows (including protecting the existing water rights of downstream users and Indian tribes) would be expected to negate such impacts.	Surface water quantity and quality would not be directly, indirectly, or cumulatively affected by public acquisition of the non-federal lands.

Table 2. CONTINUED. Comparative Summary Table of Impacts of Alternatives for the Dos Pobres/San Juan Project

Resource/ Issue	Mine Plan Alternatives Set			Land Exchange Alternatives Set		
	No Action	Proposed Action	Partial Backfill of San Juan	No Land Exchange	Land Exchange Alternative	
					Federal Lands	Non-Federal Lands
BIOLOGICAL RESOURCES						
Vegetation	No direct, indirect, or cumulative impacts to vegetation from this alternative.	A total of about 3,360 acres of land to be impacted, including about 1,931 acres of BLM land (527 acres of Sonoran Desertscrub, 1,220 acres of Sonoran Desertscrub-Semidesert Grassland Ecotone, and 184 acres of existing disturbed lands) and 1,429 acres of PD private lands (290 acres Sonoran Desertscrub, 1,026 acres Sonoran Desertscrub-Semidesert Grassland Ecotone, and 113 acres disturbed land). This alternative is unlikely to cause or promote the introduction or spread of invasive species. Cumulative impacts to vegetation in the Safford Valley are expected; however, on a regional or statewide scale these impacts are not considered cumulatively significant.	Impacts would be identical those of the Proposed Action.	This alternative would not, in itself, cause changes to the status or condition of vegetation (including invasive species) on non-federal or federal lands; however, given that mining would likely occur on portions of the federal lands, impacts identical to those described under the Proposed Action are anticipated.	No physical direct, indirect, or cumulative impacts on vegetation, including invasive species, from the exchange; vegetation resources, including Walnut Spring, would be under PD management; foreseeable use impacts would be identical to those of Proposed Action, with an additional 5,059 acres of similar types of impacts in the future possible from development of DP sulfide and Lone Star projects. Foreseeable uses would contribute to minor cumulative adverse impacts to these habitats. Revegetation at reclamation is expected to offset some of the impacts to vegetation expected as a result of foreseeable uses.	Public acquisition of riparian habitats at Gila Box RNCA, wetland habitat at Tuzigoot NM, and various xeroriparian habitats in LTMA's in Safford and Tucson Field Offices would exceed acreage of such habitats disposed of with federal lands. Net loss of widespread and common upland habitats within the Safford Field Office. Vegetation resources, including any potential invasive species, on non-federal lands become subject to federal management practices.
Wildlife	No direct, indirect, or cumulative impacts to wildlife would occur from this alternative.	Direct impacts to game and non-game wildlife inhabiting the project area; estimated direct impacts to up to 35 mule deer and 15 javelina as a result of habitat destruction on both BLM and PD lands. No adverse impacts expected to wildlife from pit lake water quality at the Dos Pobres and San Juan Mines. A very small potential for adverse impacts to wildlife (birds, bats) exists from exposure to excess process solution impoundment; PDSI will monitor pond for wildlife use for at least 1 year to see if wildlife is adversely affected. Cumulative impacts to wildlife in the Safford Valley are expected; however, on a regional or statewide scale these impacts are not considered cumulatively significant.	Impacts would be identical those of the Proposed Action.	This alternative would not, in itself, cause changes to wildlife; however, given that mining would likely occur on portions of the federal lands, impacts identical to those described under the Proposed Action are anticipated.	No direct, indirect, or cumulative impacts to wildlife on federal lands due to exchange as all wildlife remains under AGFD jurisdiction regardless of land ownership; direct, indirect, and cumulative impacts to wildlife from foreseeable uses on federal lands would be identical to those of Proposed Action, plus additional similar impacts (32 - 55 mule deer lost and 12 - 24 javelina lost) would be expected as a result of potential future development of DP sulfide and Lone Star projects.	No direct impacts of exchange on wildlife on non-federal lands; AGFD retains jurisdiction of wildlife regardless of land ownership. Additional 3,543 acres of non-federal properties (except Tavaschi Marsh property) would become available for game hunting in applicable AGFD hunt units. Wildlife habitats on the non-federal lands would be subject to federal management and protection.

Table 2. CONTINUED. Comparative Summary Table of Impacts of Alternatives for the Dos Pobres/San Juan Project

Resource/ Issue	Mine Plan Alternatives Set			Land Exchange Alternatives Set		
	No Action	Proposed Action	Partial Backfill of San Juan	No Land Exchange	Land Exchange Alternative	
					Federal Lands	Non-Federal Lands
BIOLOGICAL RESOURCES						
Special Interest Species	No direct, indirect, or cumulative impacts to special interest species from this alternative.	No impacts to federally listed species expected. Implementation of mitigation measures as described in Appendix F for predicted physical effects on water resources is expected to preclude any potential for direct, indirect, or cumulative impacts to listed, proposed, or candidate species, or designated or proposed critical habitat. In their Biological Opinion, the USFWS concurred that habitat mitigation and monitoring activities for Section 404 permit were unlikely to adversely affect listed species or critical habitat.	Impacts would be identical those of the Proposed Action.	This alternative would not, in itself, cause changes to the status or condition of special interest species; however, given that mining would likely occur on portions of the federal lands, impacts identical to those described under the Proposed Action are anticipated.	Special status plant species would receive consideration under ESA if a federal nexus (e.g., permit or authorization) is triggered; otherwise Arizona Native Plant Law regulations would apply. Habitat for Pima Indian mallow (BLM sensitive species) goes into private ownership and management and one location is expected to be affected by foreseeable uses. Protection of federally listed animal species continues but under COE (not BLM) as lead agency in Section 7 consultation with USFWS. Nine mine features adversely impacted by foreseeable mining uses, but none are considered important bat roosts. No adverse cumulative impact is expected.	Public would acquire potentially suitable habitat for 13 federally listed species, 1 proposed endangered species, and 2 candidate species that are known to occur or may occur on the non-federal lands. Public jurisdiction would be extended to Tavasci Marsh, which is known to support southwestern willow flycatcher, Yuma clapper rail, and yellow-billed cuckoo, and to portions of Bonita Creek that support Gila chub and yellow-billed cuckoo. Additional areas designated as critical habitat for spikedace, loach minnow, razorback sucker, southwestern willow flycatcher, and Gila topminnow would come into public lands management through acquisition of some of the non-federal properties (e.g., Tavasci, Curtis, Amado).
Biodiversity	No direct, indirect, or cumulative impacts on the region's biodiversity as a result of this alternative.	No direct, indirect, or cumulative impacts on the region's biodiversity of the region are expected from this alternative.	Impacts would be identical to those of the Proposed Action.	No direct, indirect, or cumulative impacts on the region's biodiversity as a result of this alternative.	No direct, indirect, or cumulative impacts on the region's biodiversity are expected from this alternative.	No direct, indirect, or cumulative impacts on the region's biodiversity are expected from this alternative.

Table 2. CONTINUED. Comparative Summary Table of Impacts of Alternatives for the Dos Pobres/San Juan Project

Resource/ Issue	Mine Plan Alternatives Set			Land Exchange Alternatives Set		
	No Action	Proposed Action	Partial Backfill of San Juan	No Land Exchange	Land Exchange Alternative	
					Federal Lands	Non-Federal Lands
CULTURAL RESOURCES						
Archaeological Sites	No direct, indirect, or cumulative impacts expected as a result of this alternative.	This alternative would directly destroy or damage 37 of the 115 archaeological sites recorded on the project area (this includes 13 sites on BLM land and 24 on PD land). Thirty-six of the sites are considered eligible for nomination to the National Register of Historic Places. It is probable that at least 16 of these sites will be avoided by judicial placement of transmission line components, road alignments, and stockpiled soils. Additional sites would be lost as a result of RFFAs; however, adverse cumulative impact to the information potential of archaeological sites is not expected to be significant because of mitigation requirements under NHPA.	Impacts of this alternative are expected to be identical to those of the Proposed Action.	This alternative would not, in itself, cause changes to existing cultural resources on non-federal or federal lands; however, given that mining would likely occur on portions of the federal lands, impacts identical to those described under the Proposed Action are anticipated.	Disposal of the federal lands would affect all 61 archaeological sites on federal lands through loss of federal management. DP/SJ Project would physically impact 13 sites; DP sulfide and Lone Star could physically impact 9 sites. Mitigation for loss of federal protection and impacts of foreseeable mining uses of the federal lands would involve implementing a testing and data recovery plan for all or a representative sample of the impacted sites at the time of exchange approval. No significant adverse cumulative impact to the sites' information potential is expected because of testing and data recovery requirements.	Archaeological resources occurring on the non-federal lands would come under federal protection and management. This includes historic and prehistoric sites adjacent to the ruins at the Tuzigoot National Monument on the Tavasci Marsh property; sites along Bonita Creek in the Gila Box on the Curtis and Amado properties; and various sites on the non-federal properties in the Dos Cabezas LTMA.
Traditional Cultural Properties	No direct, indirect, or cumulative impacts expected as a result of this alternative.	Eleven Indian tribes were consulted about TCPs and sacred sites in the project area. Tribes identified 76 of the 115 archaeological sites as potential TCPs, 43 of which are located on BLM lands. Of the 76 potential TCPs, 26 would be damaged or destroyed by the Proposed Action (10 on public lands, 16 on PD lands). Four potential TCPs (AZ CC:2:200, 211, 225, and 234) have also been identified by Indian tribes as sacred sites. Three of these sites (AZ CC:2:200, 211, and 234) would be avoided under this alternative and access by tribes would be permitted with reasonable notice. No determination of eligibility as TCPs has yet been made for impacted sites.	Impacts of this alternative are expected to be identical to those of the Proposed Action.	This alternative would not, in itself, cause changes to TCPs on non-federal or federal lands; however, given that mining would likely occur on portions of the federal lands, impacts identical to those described under the Proposed Action are anticipated.	Disposal of federal lands would not physically impact the 43 potential TCPs, including 3 sacred sites, on the federal lands but would have regulatory implications. Sites on private lands are considered private property; as such, sites would not be subject to consideration under the American Indian Religious Freedom Act or under Exec. Order 13007 regarding sacred sites. Access to TCPs and sacred sites on the federal lands under this alternative would be controlled by PD, which has told BLM and the Four Southern Tribes that it would, with reasonable notice, allow Indian groups access to the sacred sites (see Table 1 regarding Conservation Easement). Foreseeable uses of federal lands would result in impacts to TCPs identical to those described under the Proposed Action. Loss of federal protection is considered an impact and BLM will require mitigation for TCPs as described for Proposed Action. Three sacred sites would be avoided and protected in perpetuity.	Although no tribes identified any potential TCPs on the non-federal lands, federal protection and access would be provided to any such sites under this alternative.

Table 2. CONTINUED. Comparative Summary Table of Impacts of Alternatives for the Dos Pobres/San Juan Project

Resource/ Issue	Mine Plan Alternatives Set			Land Exchange Alternatives Set		
	No Action	Proposed Action	Partial Backfill of San Juan	No Land Exchange	Land Exchange Alternative	
					Federal Lands	Non-Federal Lands
SOCIOECONOMIC RESOURCES						
Population and Demographics	No direct, indirect, or cumulative impacts.	Direct, indirect, and cumulative but minor impacts in the Safford area by increasing population by 3.1% (from 1995) with the addition of an estimated 145 households, or 448 individuals. Anticipated growth and the subsequent increased demand upon public services and schools resulting from the Proposed Action are relatively small percentages of the growth projected for Graham County area from 1995 to 2005 without the Project. New demands on infrastructure should be adequately met through increased tax revenue generated directly and indirectly by the Project. Direct and indirect benefits to local population, including minority and low-income groups, by increased general employment opportunities. Because the largest populations of Native Americans are geographically distant from the Safford area, this group as a whole would be less affected than nearby Hispanic populations in the Safford Valley.	Direct and indirect impacts expected to be identical to those of the Proposed Action.	No direct, indirect, or cumulative impacts.	No direct, indirect, or cumulative impacts to population resulting from exchange. Implementing the foreseeable uses at Dos Pobres/San Juan would result in the impacts described under the Proposed Action. Foreseeable uses at DP sulfide and Lone Star ore bodies would also likely affect population size and demographics in the Safford area, but as no information is yet available about the scale of the potential future mining operations, there is insufficient information available to predict the magnitude or significance of those effects.	No impacts on population size or demographics in or near the non-federal lands.
Local and Regional Economy	No direct, indirect, or cumulative impacts.	Direct, indirect, and cumulative beneficial impacts stemming from increased employment and tax revenues in the Safford area: construction phase employment would average 470 full-time jobs over 15 mos.; long-term direct and indirect employment would total 644 jobs by the end of the Project; for life of Project, PDSI's cumulative payroll would total \$214 million; cumulative local tax revenue would total \$57.6 million; PDSI would pay a cumulative total of over \$420 million in federal, state, and local taxes (all figures are estimates in 1997 dollars). No adverse cumulative impacts to the local and regional economy are expected.	Direct and indirect impacts expected to be identical to those of the Proposed Action.	No direct, indirect, or cumulative impacts.	No direct, indirect, or cumulative impacts on employment and income expected from the exchange. Graham County would lose \$19,634 (1997 \$) in PILT payments and gain an undetermined, but likely higher amount in private property tax revenue. Impacts of foreseeable uses at the DP/SJ Project are expected to be identical to those of the Proposed Action. Potential future development of the DP sulfide and Lone Star ore bodies would likely affect the local and regional economy, but insufficient information is available at this time to predict the magnitude or significance of those effects, but they are not expected to be adverse.	No impacts on local or regional employment or income in or near the non-federal lands. Pima, Graham, Santa Cruz, Cochise, and Yavapai counties would lose tax revenue from the federalization of the non-federal lands but these would be offset by PILT. Net change in tax revenues 1997 \$) for the counties after PILT are not expected to be significant on a county-wide basis.

Table 2. CONTINUED. Comparative Summary Table of Impacts of Alternatives for the Dos Pobres/San Juan Project

Resource/ Issue	Mine Plan Alternatives Set			Land Exchange Alternatives Set		
	No Action	Proposed Action	Partial Backfill of San Juan	No Land Exchange	Land Exchange Alternative	
					Federal Lands	Non-Federal Lands
SOCIOECONOMIC RESOURCES						
Infrastructure	No direct, indirect, or cumulative impacts.	Direct, indirect, and cumulative but minor impacts to housing, schools, utilities, and emergency response services in the Safford area. The Project is predicted to generate an increase of 3.1% in the local population; increases in local tax revenues resulting from the Project would be disproportionately higher than this population growth resulting from the Project. This increase in revenues is expected to offset any potentially adverse impacts to existing infrastructure generated by the relatively small increase in population attributable to the Project. No adverse cumulative impacts are expected.	Direct and indirect impacts expected to be identical to those of the Proposed Action.	No direct, indirect, or cumulative impacts.	No effects on local infrastructure from disposal of the federal lands. Foreseeable uses at DP/SJ Project would have identical effects on local infrastructure as those described under the Proposed Action. Potential future development of the DP sulfide and Lone Star ore bodies may also affect the local infrastructure in a similar manner, but no information is yet available about the scale of these possible future mining operations, so predictions cannot be made regarding the magnitude or significance of those effects.	No impacts on infrastructure in or near the non-federal lands.
Transportation	No direct, indirect, or cumulative impacts.	No direct impacts. Indirect and cumulative impacts would be limited to a small overall increase in vehicle and truck traffic in the Safford area, most noticeably on the Safford-Bryce and Airport roads, but this increase is not expected to reduce the Level of Service (LOS) ratings of the roads. All roads and intersections would continue to operate at acceptable levels of service. Increases in local tax revenues resulting from the Project are expected to offset any adverse impact to pavement conditions caused by increased truck traffic.	Direct and indirect impacts expected to be identical to those of the Proposed Action.	No direct, indirect, or cumulative impacts.	No impacts expected from exchange on traffic and transportation. Indirect and cumulative impacts of the foreseeable uses at DP/SJ Project would be identical to those of the Proposed Action. Potential future development of the DP sulfide and Lone Star ore bodies would likely affect transportation in the Safford area, but no information is yet available about the scale of the mining operations, so predictions cannot be made regarding the magnitude or significance of those effects.	No impacts on transportation in or near the non-federal lands.
INDIAN TRUST RESOURCES						
Indian Trust Assets	No direct, indirect, or cumulative impacts to Indian trust assets.	No direct, indirect, or cumulative impacts to water rights to the Gila River held by the San Carlos Apache Tribe and the Gila River Indian Community are expected. Predicted long-term physical effects on Gila River surface flows are avoided through implementation of the Alternate Year Fallowing Program. The Program will reduce consumptive use along the river by 480 a-f/yr in perpetuity to offset the predicted total maximum effect to the Gila River of 149 a-f/yr resulting from the Project's groundwater pumping and stormwater diversions; this is more than 3 times the peak predicted impact. The excess benefit in reduced water consumption for agriculture (331 a-f/yr) will result in a net annual increase in surface water available in the Gila River and in the San Carlos Reservoir. The Project's predicted groundwater drawdown on the San Carlos Apache Reservation is short-term and unmeasurable, therefore, no significant, adverse impacts to this trust asset are expected.	Impacts expected to be identical to those of the Proposed Action.	No direct, indirect, or cumulative impacts to Indian trust assets.	No direct, indirect, or cumulative impacts to Indian trust assets as a result of the land exchange itself. Foreseeable use impacts from Dos Pobres/San Juan Project and mitigation for physical effects to Gila River surface flows are identical to those of the Proposed Action and preclude adverse impacts to trust assets. Foreseeable uses at DP sulfide and Lone Star projects would be expected to result in continued or increased reductions of Gila River flows if groundwater continues to be the water supply source and may affect groundwater under the San Carlos Apache Reservation; however, insufficient information exists at this time to predict whether or to what degree such an impact would occur. Future environmental analyses of these possible projects will occur under future federal and state permitting processes and specific analyses of groundwater and development of mitigation, if warranted, would be required at that time.	No Indian trust resources are known to be associated with non-federal lands. No direct, indirect, or cumulative impacts expected to trust resources through public acquisition of the non-federal lands.

APPENDIX A

**LEGAL DESCRIPTIONS OF THE FEDERAL AND NON-FEDERAL LANDS
APPROVED FOR EXCHANGE**

FEDERAL LANDS

Gila and Salt River Meridian, Arizona

- T. 5 S., R. 26 E.,
 sec. 19, SE $\frac{1}{4}$;
 sec. 20, Lot 1, SW $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$, SW $\frac{1}{4}$ SE $\frac{1}{4}$;
 sec. 22, Lot 6;
 sec. 26, Lots 8-12 inclusive, NE $\frac{1}{4}$, NE $\frac{1}{4}$ NW $\frac{1}{4}$, S $\frac{1}{2}$ NW $\frac{1}{4}$, NW $\frac{1}{4}$ SW $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$;
 sec. 27, Lots 1 and 2;
 sec. 28, Lots 1-5 inclusive;
 sec. 29, Lots 1 and 2, W $\frac{1}{2}$ NE $\frac{1}{4}$, NW $\frac{1}{4}$, S $\frac{1}{2}$;
 sec. 30, Lots 3 and 4, E $\frac{1}{2}$, E $\frac{1}{2}$ SW $\frac{1}{4}$;
 sec. 33, Lots 1-5 inclusive, S $\frac{1}{2}$ SW $\frac{1}{4}$;
 sec. 34, Lots 1-7 inclusive, NE $\frac{1}{4}$ SE $\frac{1}{4}$;
 sec. 35, Lots 4-9 inclusive, SE $\frac{1}{4}$ NE $\frac{1}{4}$, E $\frac{1}{2}$ SE $\frac{1}{4}$;
 sec. 36, All.
- T. 5 S., R. 27 E.,
 sec. 31, Lots 1 and 2, NE $\frac{1}{4}$, E $\frac{1}{2}$ NW $\frac{1}{4}$;
 sec. 32, Lots 1 and 2, N $\frac{1}{2}$, N $\frac{1}{2}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$;
 sec. 33, All.
- T. 6 S., R. 25 E.,
 sec. 13, N $\frac{1}{2}$;
 sec. 14, NE $\frac{1}{4}$.
- T. 6 S., R. 26 E.,
 sec. 1, Lots 3 and 4, Lots 16-20 inclusive, S $\frac{1}{2}$ N $\frac{1}{2}$, SW $\frac{1}{4}$, W $\frac{1}{2}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$;
 sec. 2, Lots 5-10 inclusive, SW $\frac{1}{4}$ NW $\frac{1}{4}$, S $\frac{1}{2}$;
 sec. 3, Lots 1, 2, 3, and 6, S $\frac{1}{2}$ N $\frac{1}{2}$, S $\frac{1}{2}$;
 sec. 4, Lots 1-4 inclusive, S $\frac{1}{2}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ NW $\frac{1}{4}$, S $\frac{1}{2}$;
 sec. 5, Lot 1, E $\frac{1}{2}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$;
 sec. 8, E $\frac{1}{2}$, E $\frac{1}{2}$ NW $\frac{1}{4}$, E $\frac{1}{2}$ W $\frac{1}{2}$ NW $\frac{1}{4}$, NE $\frac{1}{4}$ SW $\frac{1}{4}$, E $\frac{1}{2}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$, E $\frac{1}{2}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$;
 sec. 9, All;
 sec. 10, All;
 sec. 11, Lots 1, 2, 5, 6, 9, 11, 12, and 15, NW $\frac{1}{4}$ NW $\frac{1}{4}$;
 sec. 12, Lots 5-10 inclusive, Lots 13, 14, 15, and 17, N $\frac{1}{2}$ NW $\frac{1}{4}$, SE $\frac{1}{4}$ NW $\frac{1}{4}$;
 sec. 14, Lots 1, 5, 6, 8, 11, and 12, SW $\frac{1}{4}$ NW $\frac{1}{4}$, SW $\frac{1}{4}$, S $\frac{1}{2}$ SE $\frac{1}{4}$;
 sec. 15, All;
 sec. 16, All;
 sec. 17, All;
 sec. 18, Lots 1 and 2, NE $\frac{1}{4}$, E $\frac{1}{2}$ NW $\frac{1}{4}$;
 sec. 23, NE $\frac{1}{4}$, W $\frac{1}{2}$;
 Tract 37, All;
 Tract 38, All.
- T. 6 S., R. 27 E.,
 sec. 3, Lots 3 and 4, S $\frac{1}{2}$ NW $\frac{1}{4}$, SW $\frac{1}{4}$;
 sec. 6, Lots 5, 18, 19, and 20;
 sec. 7, Lots 9 and 12;
 sec. 9, Lots 1, 2, 3, 5, 6, and 7, S $\frac{1}{2}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ NW $\frac{1}{4}$, E $\frac{1}{2}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$;
 sec. 10, NW $\frac{1}{4}$;

sec. 17, Lots 1, 3, 4, and 5, E $\frac{1}{2}$ NE $\frac{1}{4}$, S $\frac{1}{2}$;
sec. 18, Lots 5-9 inclusive;
sec. 20, N $\frac{1}{2}$;
sec. 35, NW $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$, N $\frac{1}{2}$ N $\frac{1}{2}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$, N $\frac{1}{2}$ S $\frac{1}{2}$ N $\frac{1}{2}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$,
SE $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$, S $\frac{1}{2}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$,
SW $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$;
Tract 37, All.

The areas described for the Federal Lands aggregate 16,296.885 acres, more or less.

NON-FEDERAL (PRIVATE) LANDS

Gila and Salt River Meridian, Arizona

AMADO PROPERTY

T. 5 S., R. 27 E.

PARCEL No. 1:

section 3, S $\frac{1}{2}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$, NW $\frac{1}{4}$ SE $\frac{1}{4}$;

PARCEL No. 2:

section 10, All that part of the S $\frac{1}{2}$ NE $\frac{1}{4}$ lying NW of a line beginning at the NE corner of the S $\frac{1}{2}$ NE $\frac{1}{4}$ running thence southwesterly to the SW corner of the NE $\frac{1}{4}$.

The areas described comprising 180.00 acres, more or less.

CURTIS PROPERTY

T. 5 S., R. 27 E.

PARCEL No. 1:

section 10, NE $\frac{1}{4}$ SE $\frac{1}{4}$, that part of the NE $\frac{1}{4}$ of Section 10, more particularly described as follows:

BEGINNING at the East Quarter corner of said Section 10;
Thence westerly to the center quarter corner of said Section 10;
Thence northeasterly to the North Sixteenth corner of said Section 10;
Thence southerly to the POINT OF BEGINNING.

EXCEPTING therefrom, that part of the E $\frac{1}{2}$ of Section 10, a five (5) acre parcel, more particularly described as follows:

BEGINNING at the East Quarter corner of said Section 10, the basis for bearing is the record GLO bearing on the East boundary of Section 10, which is North 00° 01' West;
Thence South 89° 59' West, a distance of 540.00 feet to the POINT OF BEGINNING;
Thence South 89° 59' West, a distance of 660.00 feet;
Thence North 00° 01' West, a distance of 330.00 feet;
Thence North 89° 59' East, a distance of 660.00 feet;
Thence South 00° 01' East, a distance of 330.00 feet to the POINT OF BEGINNING.

section 11, NW $\frac{1}{4}$ SW $\frac{1}{4}$;

PARCEL No. 2:

section 14, W $\frac{1}{2}$;
section 23, W $\frac{1}{2}$.

The areas described comprising 755.00 acres, more or less.

MUSNICKI PROPERTY

T. 14 S., R. 28 E.

section 9, E $\frac{1}{2}$ SE $\frac{1}{4}$;
section 10, NE $\frac{1}{4}$, E $\frac{1}{2}$ NW $\frac{1}{4}$, S $\frac{1}{2}$.

The areas described comprising 640.00 acres, more or less.

FEULNER PROPERTY

T. 18 S., R. 18 E.

PARCEL No. 1:

section 5, Lot 1;

PARCEL No. 2:

section 5, Lot 2, S $\frac{1}{2}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$.

The areas described comprising 320.18 acres, more or less.

SCHOCK PROPERTY

T. 20 S., R. 18 E.

PARCEL No. 1:

section 9, SE $\frac{1}{4}$;

PARCEL No. 2:

section 10, S $\frac{1}{2}$ SW $\frac{1}{4}$.

The area described comprising 240.00 acres, more or less.

TAVASCI MARSH PROPERTY

T. 16 N., R. 3 E.

That part of the Southwest quarter of Section 15, and that part of the Northwest quarter and the North half of the Southwest quarter Section 22, Township 16 North, Range 3 East of the Gila and Salt River Base and Meridian, Yavapai County, Arizona, more particularly described as follows:

COMMENCING at the Southwest corner of said Section 15, monumented with a 2 $\frac{1}{2}$ " aluminum pipe; thence North 01 degrees, 38 minutes, 17 seconds, West (measured), North 00 degrees, 36 minutes, 26 seconds, East (record), along the West line of the Southwest quarter of said Section 15, as shown on the Boundary Survey of the Proposed Tuzigoot National Monument, recorded in Book 2 of Land Surveys, page 192, Yavapai County Records, a distance of 1,475.00 feet to the TRUE POINT OF BEGINNING.

Thence continuing North 01 degrees, 38 minutes, 17 seconds, West, along said West line of the Southwest quarter of said Section 15, a distance of 1,196.12 feet to the West quarter corner of said Section 15, monumented with a United States Forest Service Aluminum Cap; thence North 88 degrees, 01 minutes, 21 seconds, East, along the East-West mid section line of said Section 15, a distance of 2,609.43 feet to the center quarter corner of said Section 15, monumented with a United States Forest Service Aluminum Cap; thence South 02 degrees, 20 minutes, 25 seconds, East, along the North-South mid section line of said Section 15, a distance of 2,659.29 feet to the South quarter corner of said Section 15, also being the North quarter corner of said

Section 22, monumented with a GLO Brass Cap; thence South 03 degrees, 55 minutes, 01 seconds, East, along the North-South mid section line of said Section 22, a distance of 2,657.46 feet to the center quarter corner of said Section 22, monumented with an Aluminum Cap; thence South 03 degrees, 55 minutes, 08 seconds, East, continuing along the North-South mid section line of said Section 22, a distance of 1,323.01 feet to the Southeast corner of the North half of the Southwest quarter of said Section 22, monumented with a National Park Service Aluminum Cap; thence South 87 degrees, 09 minutes, 57 seconds, West, along the South line of said North half of the Southwest quarter of said Section 22, a distance of 2,667.13 feet to the Southwest corner of said North half of the Southwest quarter of said Section 22, monumented with a National Park Service Aluminum Cap in concrete; thence North 03 degrees, 33 minutes, 07 seconds, West, along the West line of the Southwest quarter of said Section 22, a distance of 795.91 feet to the Southwesterly boundary of the existing "Tuzigoot National Monument Boundary", monument with a ½" rebar;

Thence along said existing "Tuzigoot National Monument Boundary", the following courses;

Thence South 16 degrees, 15 minutes, 43 seconds, East, a distance of 169.85 feet to a GLO Brass Cap; thence North 87 degrees, 28 minutes, 58 seconds, East, a distance of 70.00 feet to a GLO Brass Cap; thence North 17 degrees, 32 minutes, 19 seconds, East, a distance of 2,977.54 feet to a GLO Brass Cap; thence North 65 degrees, 28 minutes, 39 seconds, West, a distance of 594.31 feet to a GLO Brass Cap; thence North 24 degrees, 32 minutes, 11 seconds, East, departing said existing "Tuzigoot National Monument Boundary" and along the Northeasterly prolongation of the Northwesterly boundary line of said existing "Tuzigoot National Monument Boundary", a distance of 1,133.00 feet to the beginning of a 2,850.00 foot radius non-tangent curve, whose center bears South 45 degrees, 29 minutes, 58 seconds, West; thence Northwesterly, along said curve, through a central angle of 28 degrees, 12 minutes, 28 seconds, a distance of 1,403.10 feet to the TRUE POINT OF BEGINNING.

The area described comprising 323.749 acres, more or less.

FREELAND PROPERTY

T. 14 S., R. 28 E.

PARCEL No. 1:

section 7, E½SW¼NE¼;

PARCEL No. 2:

section 4, S½NW¼;

PARCEL No. 3:

section 9, NW¼NE¼.

The areas described comprising 140.00 acres, more or less.

BUTLER-BORG PROPERTY

T. 14 S., R. 28 E.

section 7, Lots 1 - 4, inclusive, E½W½.

The areas described comprising 307.64 acres, more or less.

NORTON PROPERTY

T. 5 S., R. 22 E.

PARCEL No. 1:

section 25, S½SE¼SW¼, W½SW¼SE¼, N½NE¼SW¼SE¼, W½SW¼NE¼SW¼SE¼;

PARCEL No. 2:
section 25, S $\frac{1}{2}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$, S $\frac{1}{2}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$, S $\frac{1}{2}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$,
NE $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$;

PARCEL No. 3:
section 25, N $\frac{1}{2}$ SW $\frac{1}{4}$, NW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$, NW $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$,
NW $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$;

PARCEL No. 4:
section 25, E $\frac{1}{2}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$, SE $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$, SE $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$.

T. 5 S., R. 23 E.
PARCEL No. 5:
section 30, S $\frac{1}{2}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$, E $\frac{1}{2}$ NW $\frac{1}{4}$;

PARCEL No. 6:
section 30, N $\frac{1}{2}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$, S $\frac{1}{2}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$, NW $\frac{1}{4}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$;

PARCEL No. 7:
section 30, NE $\frac{1}{4}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$, NE $\frac{1}{4}$ NE $\frac{1}{4}$.

The areas described comprising 400.00 acres, more or less.

CLYNE I PROPERTY

T. 19 S., R. 18 E.
section 10, SW $\frac{1}{4}$.
The area described comprising 160.00 acres, more or less.

CLYNE II PROPERTY

T. 19 S., R. 18 E.
section 15, SW $\frac{1}{4}$ SW $\frac{1}{4}$;
section 21, E $\frac{1}{2}$ NE $\frac{1}{4}$, NE $\frac{1}{4}$ SE $\frac{1}{4}$;
section 22, NW $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$.
The areas described comprising 400.00 acres, more or less.

The areas described for the Non-Federal Lands aggregate 3,866.31 acres, more or less.

ACRONYMS AND ABBREVIATIONS

3M	Model, Monitor, and Mitigate	LWCF	Land and Water Conservation Fund
AAC	Arizona Administrative Code	: g/m³	micrograms per cubic meter
ACEC	Area of Critical Environmental Concern	MPO	Mining Plan of Operations
ADEQ	Arizona Department of Environmental Quality	MSHA	Mine Safety and Health Administration
ADOT	Arizona Department of Transportation	NAAQS	National Ambient Air Quality Standards
ADWR	Arizona Department of Water Resources	NAGPRA	Native American Graves Protection & Repatriation Act
af	acre-feet	NCA	National Conservation Area, including RNCAs
af/yr	acre-feet per year	NEPA	National Environmental Policy Act
AGFD	Arizona Game and Fish Department	NHPA	National Historic Preservation Act
ANFO	Ammonium nitrate and fuel oil	NM	National Monument
APP	Aquifer Protection Program	NO₂	nitrogen dioxide
AQCR	Air Quality Control Region	NO_x	unspecified form of nitrogen oxide
ARS	Arizona Revised Statutes	NOA	Notice of Availability
ASM	Arizona State Museum	NOD	Notice of Decision
ATI	Agreement to Initiate a Land Exchange	NOI	Notice of Intent to Prepare an EIS
AUM	Animal Unit Month	NPDES	National Pollutant Discharge Elimination System
AWQS	Arizona Water Quality Standards	NPS	National Park Service
AZPDES	Arizona Pollutant Discharge Elimination System	NRCS	Natural Resource Conservation Service
BADCT	Best Available Demonstrated Control Technology	NSR	New Source Review
BIA	Bureau of Indian Affairs	OSHA	Occupational Safety and Health Administration
BLM	Bureau of Land Management	PD	Phelps Dodge (parent corporation)
CEQ	Council on Environmental Quality	PDSI	Phelps Dodge Safford, Inc.
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980	PILT	Payment in Lieu of Taxes
CFR	Code of Federal Regulations	PLS	Pregnant Leach Solution
cfs	cubic feet per second	PM	Particulate Matter
CO	carbon monoxide	PM₁₀	Particulate Matter of 10 microns or less in aerodynamic diameter
COE	Corps of Engineers	PM_{2.5}	Particulate Matter of 2.5 microns or less in aerodynamic diameter
CAA	Clean Air Act	PMLU	Post-mining land use
CWA	Clean Water Act	PSD	Prevention of Significant Deterioration
DEIS	Draft Environmental Impact Statement	RCA	Resource Conservation Area
DOI	Department of Interior	RCRA	Resource Conservation and Recovery Act
EA	Environmental Assessment	RMP	Resource Management Plan
EIS	Environmental Impact Statement	RNCA	Riparian National Conservation Area (subset of NCA)
EPA	Environmental Protection Agency	ROD	Record of Decision
ESA	Endangered Species Act	ROM	Run-of-Mine
FAA	Federal Aviation Administration	ROW	Right-of-way
FEIS	Final Environmental Impact Statement	SCS	Soil Conservation Service (now NRCS)
FEMA	Federal Emergency Management Agency	SO₂	sulphur dioxide
FIRE	Finance, Insurance, and Real Estate	SPCC	Spill Prevention Control and Countermeasure Plan
FLEFA	Federal Land Exchange Facilitation Act	SX/EW	Solution Extraction/Electrowinning
FLPMA	Federal Land Policy and Management Act	TCP	Traditional Cultural Property
gal	gallon(s)	tpd	tons per day
gpd	gallons per day	USC	United States Code
gpm	gallons per minute	USFS	U.S. Forest Service
HDPE	High-density polyethylene	USFWS	U.S. Fish and Wildlife Service
H₂SO₄	sulfuric acid	UST	Underground Storage Tanks
IBLA	Interior Board of Land Appeals	W&SR	Wild and Scenic Rivers
ID Team	Interdisciplinary Team	WQARF	Arizona Water Quality Assurance Revolving Fund (WQARF) site
kV	kiloVolt	WSCA	Wildlife Species of Concern in Arizona
LOS	Level of Service	VOC	Volatile Organic Compound
LTMA	Long-Term Management Area	VRM	Visual Resource Management
LUST	Leaking Underground Storage Tanks	zipACIDS	Arizona CERCLA Information and Data System sorted by postal zip code

**UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT**

Safford Field Office
711 14th Avenue
Safford, Arizona 85546-3321

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, \$300