CHAPTER 2

ALTERNATIVES CONSIDERED

Four alternatives are analyzed in this EIS: the Proposed Action, Buckeye Alternative, Copper Butte Alternative, and No Action Alternative. The first three are land exchange alternatives that meet the purpose of and need for action. The last, the No Action alternative, is a NEPA requirement. This chapter describes each alternative, then identifies actions common to them all. Alternatives that were considered by the BLM ID Team but not studied in detail are also presented, along with the reason(s) for their elimination. A summary table of the potential environmental impacts associated with each alternative is presented at the end of this chapter.

2.1 ALTERNATIVES INCLUDING NO ACTION

2.1.1 Proposed Action (Agency Preferred Alternative)

The Proposed Action consists of two connected actions: a land exchange between BLM and Asarco and corresponding plan amendments to BLM's Phoenix and Safford District RMPs that would allow for the disposal by exchange of the selected lands. The BLM's preferred alternative is the Proposed Action alternative. This alternative would allow the BLM to achieve its objectives for public lands management and land tenure adjustments as stated in the Phoenix and Safford RMPs, as amended, while still meeting the purpose and need for the proposed land exchange. Under this alternative, Asarco has committed (letter dated July 8, 1996), that if Asarco were to purchase Section 24 (T3S, R12E)[11] from the State of Arizona, Asarco would donate approximately three-quarters (480 acres) to BLM, which would become part of the White Canyon ACEC. In addition, Asarco has also agreed to maintain existing access to the White Canyon Wilderness. Although the selected lands would become privately owned by Asarco under this alternative, potential future mining projects on these lands would still be subject to the COE and/or EPA's federal jurisdiction through their respective permitting authorities under the Clean Water Act. Furthermore, other federal laws such as the Clean Air Act would also likely trigger federal involvement in such future activities.

2.1.1.1 Ray Land Exchange

As proposed in the Agreement to Initiate (ATI) a land exchange between Asarco and BLM, Asarco seeks to acquire from BLM approximately 10,976 acres of public lands (the selected lands) in 31 parcels in Pinal and Gila Counties. In addition, because Asarco would use Battle Axe Road under the Proposed Action, and this road currently provides public access to the White Canyon Wilderness, artesian well, and Coke Ovens, the Proposed Action includes alternative access routes. BLM is analyzing two routes in this document (Route #1 and Route #2), which are discussed in more detail in Section 4.4.3. In March 1999, the BLM Interdisciplinary Team (ID Team) discussed these two routes (Figure 4-1) and decided to select the Route #2 (Battle Axe Road) alignment as the preferred access route from Highway 177 to the White Canyon Wilderness. Impacts associated with this route were considered much less than Route #1, which was too close to the White Canyon Wilderness and Silver Creek community. Access is also addressed under general response no. 1, in Chapter 7.

In exchange for the selected lands, Asarco is offering to BLM approximately 7,300 acres of private property consisting of two individual parcels and three parcel groups (18 parcels total) located within Mohave and Pinal Counties. These offered lands possess resource qualities considered to be of significant value to the public. These parcels or types of resources have been identified for acquisition by BLM. The offered lands

[11] As of June 1999, Asarco's application for purchase of Section 24 is still being processed by the State and it is unknown when a decision by the State will be made.

are private inholdings within the jurisdictional boundaries of the Tucson and Kingman Field Offices of BLM. Table 2-1 summarizes the acreage involved in the proposed Ray Land Exchange.

Table 2-1. Summary of Selected and Offered Lands Parcels

	Number of Parcels	Full Estate Acreage	Splite-estate Acreage	Location
Selected Lands	31	8,196 acres (parcels range from <1 acre to >2,001 acres)	Subsurface Estate Only: 2,780 acres (parcels range from 30 acres to 595 acres)	28 parcels in Pinal County; 3 parcels in Gila County
Offered Lands	5 (2 parcels and 3 parcel groups)	6,940 acres (Tomlin Parcels, McCracken Mtns Parcels, portions of Gila River Parcel at Cochran and Knisely Ranch Parcels	Surface Estate Only: 360 acres (160 acres of Gila River Parcel at Cochran; 80 acres of Knisely Ranch Parcels; 120 acres of Sacramento Valley)	1 parcel in Pinal County, 4 parcel groups in Mohave County

Selected Lands. Of the 31 parcels of selected lands, 28 are located near Asarco's Ray Mine operations in southwestern Gila County and northeastern Pinal County. Parcels of selected lands are grouped into three areas of existing or planned mine-related development: Ray Complex, Copper Butte/Buckeye, and Chilito/Hayden. The remaining three parcels of selected lands lie just west of Casa Grande in western Pinal County (Figure 1-1). The 31 parcels of selected lands are labeled as shown in Table 2-2.

Table 2-2. Selected Lands Parcels and Corresponding Parcel Numbers

Area	Parcel Numbers
Ray Complex	RM-1 through RM-18
Copper Butte/Buckeye	CB-1 through CB-5
Chilito/Hayden	CH-1 through CH-5
Casa Grande	CG-1 through CG-3

Seven of the 31 selected land parcels (RM-2 to RM-6, and RM-9) are isolated fragments of public lands remaining after mineral claims were patented. Six of the seven parcels are five acres or less in size; the remaining parcel is 30 acres. Each of these seven parcels is adjacent to or surrounded by Asarco's private land. The remaining 24 parcels range in size from approximately 8 to 2,001 acres.

The selected lands include 8,196 acres of full estate public lands (surface and subsurface mineral estates) and 2,780 acres of splite-estate land (subsurface mineral estates only). The surface estates of the splite-estate parcels are owned by either Asarco (approximately 1,638 acres) or the State of Arizona (approximately 1,142 acres). Asarco has filed applications to purchase the surface estates from the State.

Offered Lands. The approximately 7,300 acres of private lands offered by Asarco in exchange for the selected lands have been grouped into five geographic areas as described below. All the offered lands are full estate lands owned by Asarco, except as noted.

Section 206 of FLPMA and 43 CFR §2200.0-6 mandate that all lands acquired by exchange within the boundaries of a National Park, Wildlife Refuge, Wild and Scenic River, or any other system established by an Act of Congress, be managed by the laws, regulations, and rules applicable to that system. Additionally,

43 CFR §2200.0-6 extends this coverage to include public lands covered by BLM Resource Management Plans (RMPs) and the administrative designations. In part, these regulations state that:

> *"lands acquired by an exchange within a Bureau of Land Management District shall automatically become public lands as defined in 43 USC §1702 and shall become part of that district. The acquired lands shall be managed in accordance with existing regulations and provisions of applicable land use plans and plan amendments. Lands acquired by exchange that are located within boundaries of Areas of Critical Environmental Concern or any other area having an administrative designation established through the land use planning process shall automatically become part of the unit or area within which they are located."*

Two RMPs apply to managing the offered lands: the Phoenix RMP for the Gila River Parcel at Cochran, and the Kingman RMP for the remainder. Refer to Appendix H for additional information on management objectives and prescriptions for parcels. The general management guidelines for RMPs has not been reprinted herein but provides additional information.

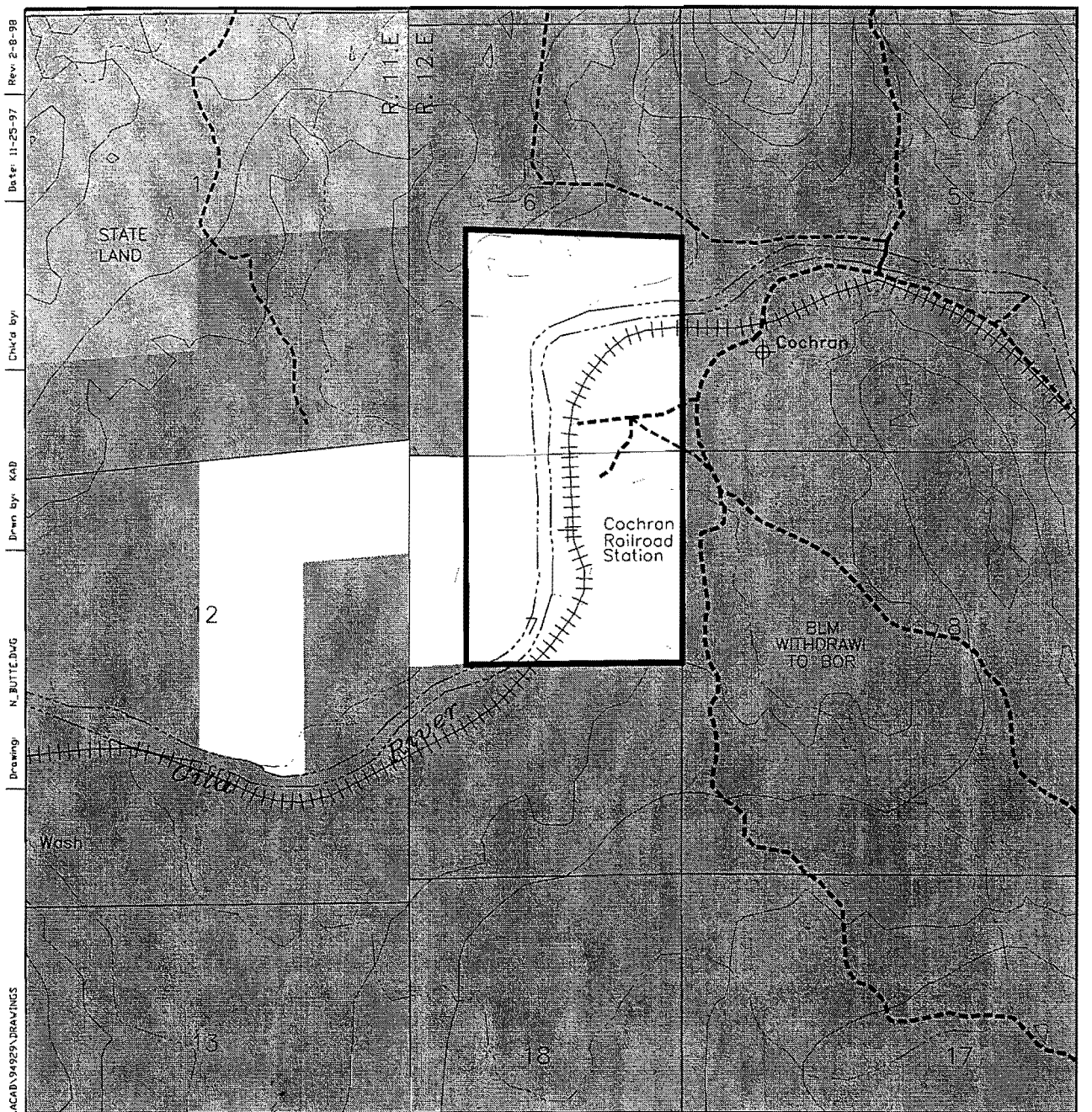
Gila River Parcel at Cochran. The 320-acre Gila River Parcel at Cochran is located in Pinal County, Arizona, and is within the White Canyon Resource Conservation Area (RCA) (Figure 2-1). This parcel contains a segment of the Gila River Riparian Management Area (GRRMA) and is within the Middle Gila Cultural Resource Management Area (MGCRMA) (Appendix H). Riparian habitat on this parcel appears suitable for two federally endangered species: the southwestern willow flycatcher and the cactus ferruginous pygmy-owl.

In this alternative the title to the split-estate portions of Sections 6 and 7 of T4S, R12E and the remaining full estate would be transferred and managed for multiple use resource values per the management objectives of the Phoenix RMP (Appendix H) as well as requirements under the Endangered Species Act (ESA). In addition, BLM would petition to withdraw this parcel from mineral entry even though the potential for metallic minerals is low.

Sacramento Valley Parcel. This 120-acre parcel is located in Mohave County, Arizona, adjacent to the Warm Springs Wilderness (Figure 2-2). Under the Proposed Action, BLM would acquire the surface estate of this parcel and manage its important desert tortoise and bighorn sheep habitat values according to the Kingman Resource Area RMP (Appendix H). This parcel will be open to mineral entry even though the potential for metallic minerals is low.

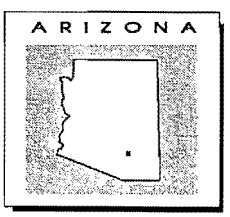
Tomlin Parcel Group. The three Tomlin Parcels, totaling approximately 320 acres, are located in the southern foothills of Groom Peak in the Hualapai Mountains, Mohave County, Arizona (Figure 2-3). These offered lands fall within the Big Sandy Herd (wild burros) Management Area, while the 120-acre Parcel #4 encompasses the Big Sandy River and its riparian corridor. In a recent Arizona Wild and Scenic River study, this segment of the Big Sandy River was determined as eligible for wild and scenic river status; however, BLM determined it to be "non-suitable" for wild and scenic river status and released it from further consideration. In this alternative, the Tomlin parcels would be managed according to the Kingman Resource Area RMP. Although none of the parcels exhibit a high potential for mineral occurrence, BLM would file a petition to withdraw Tomlin Parcel #4 from mineral entry especially for riparian objectives (Appendix H).

McCracken Mountains Parcel Group. The ten McCracken Mountains Parcels, totaling approximately 6,384 acres, are located in Mohave County, Arizona within the McCracken Desert Tortoise Habitat ACEC (Figure 2-4). These parcels would consolidate the checkerboard land ownership within the McCracken Mountains, which would facilitate management of wildlife and wildlife habitats in the area in accordance with the Kingman Resource Area RMP. The McCracken parcels exhibit low potential for mineral occurrence (moderate only in Section 25). No mineral closures are planned if parcels are acquired (Appendix H). Additional portions of the McCracken Mountains are also being considered for acquisition by the BLM in the proposed Hualapai Mountain Land Exchange, and when combined with the Ray Land Exchange, these projects would complement one another by allowing additional opportunities for wildlife habitat management across the landscape.



KEY

LOCATION MAP



USGS 7.5' QUADRANGLE: NORTH BUTTE, ARIZONA

- DIRT ROADS
- EPHEMERAL DRAINAGES
- PARCEL BOUNDARY
- STATE LAND
- BLM WITHDRAWL TO BUREAU OF RECLAMATION
- PRIVATE LAND

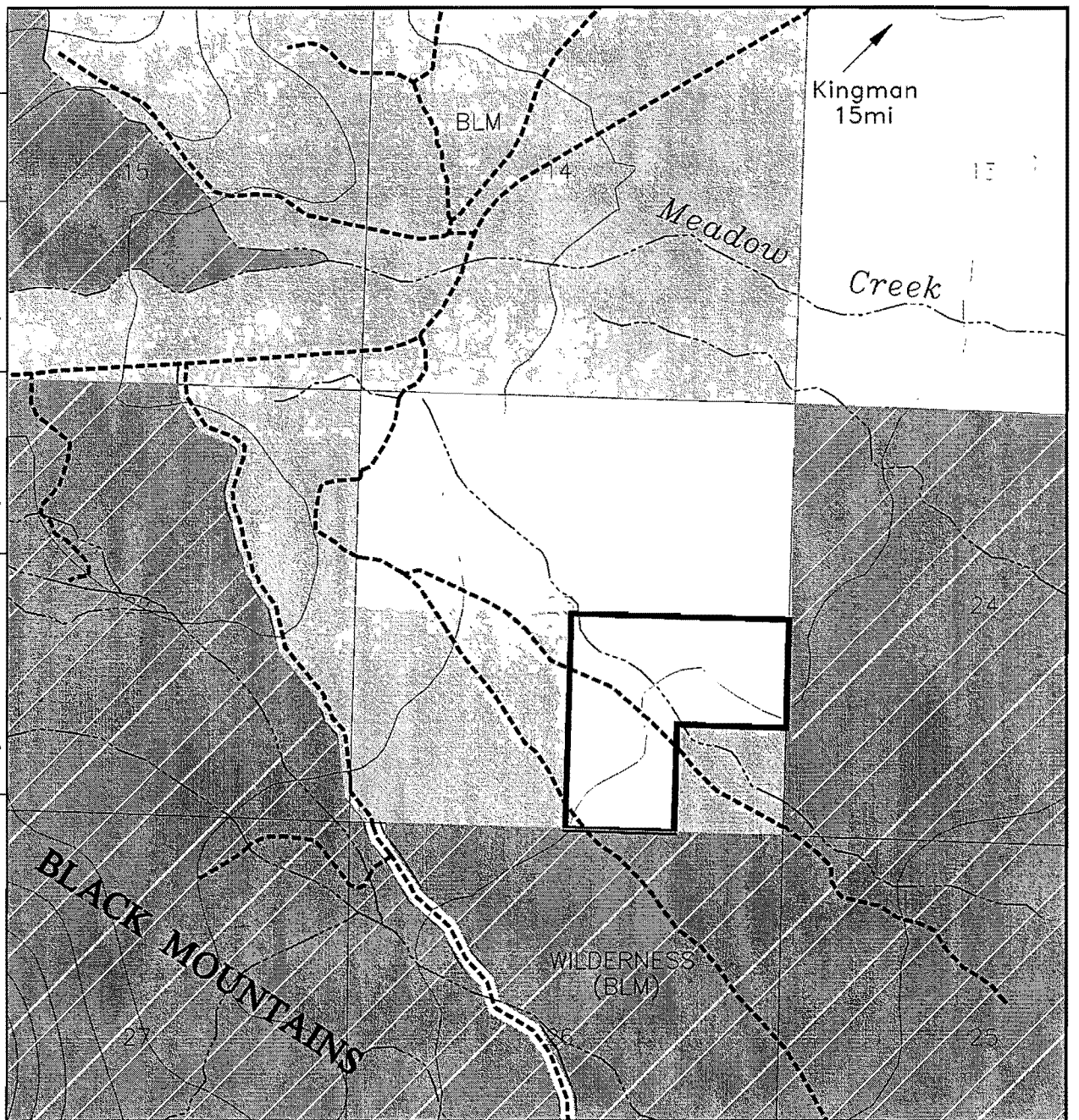
N

Scale
0 1000 2000
FEET

RAY LAND EXCHANGE/PLAN AMENDMENT EIS
Pinal County, Arizona Sec. 6 and 7 T.4S.,R12E.

GILA RIVER PARCEL AT COCHRAN

FIGURE 2-1



KEY

LOCATION MAP

USGS 7.5' QUADRANGLE:
MOUNT NUTT, ARIZONA

DIRT ROADS

EPHEMERAL DRAINAGES

PARCEL BOUNDARY

BLM LAND

WARM SPRINGS WILDERNESS BLM

PRIVATE LANDS

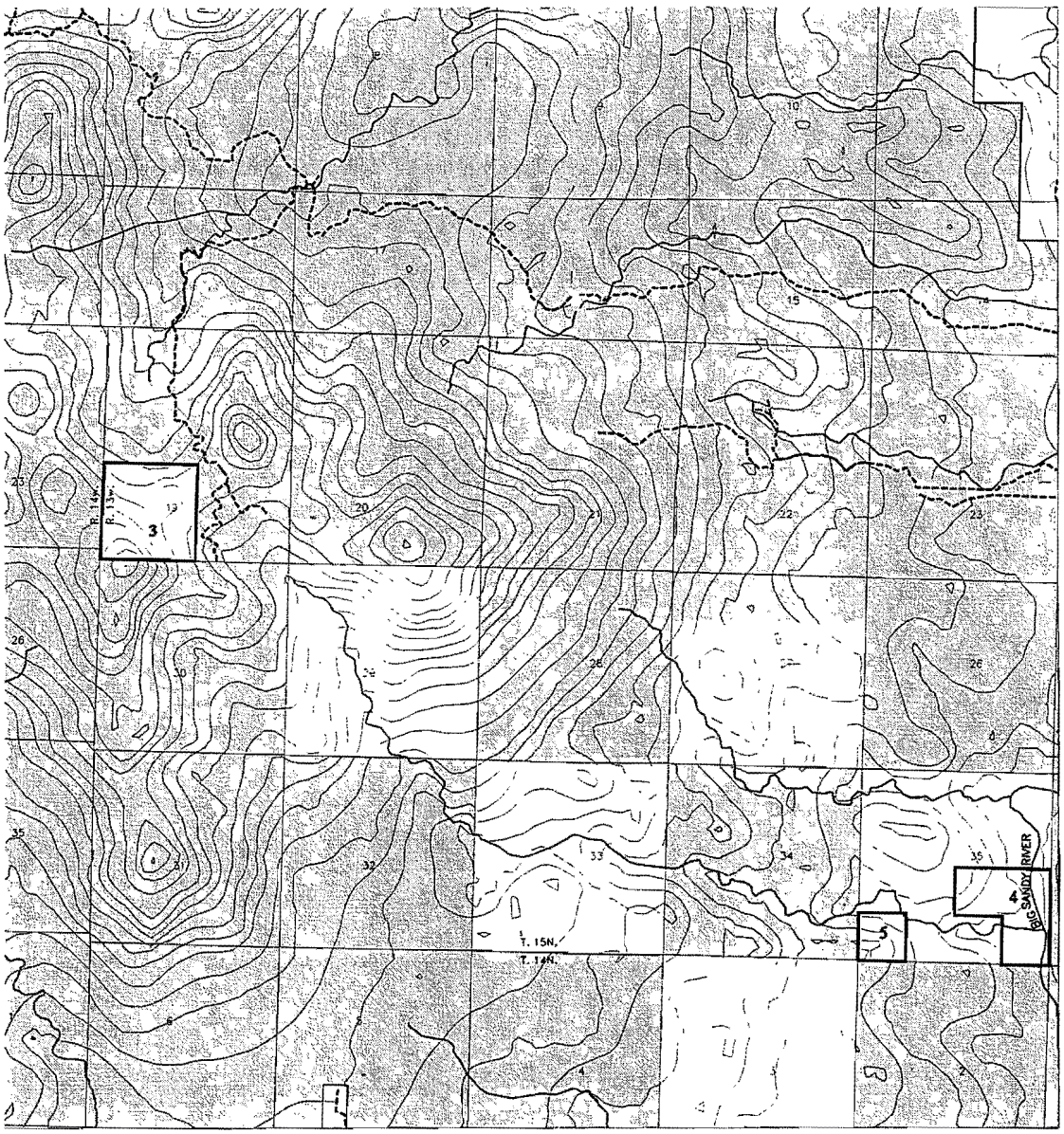
N

Scale
0 1000 2000
FEET

RAY LAND EXCHANGE/PLAN AMENDMENT EIS
Mohave County, Arizona Sec. 22 and 23 T.19S.,R19E.

SACRAMENTO VALLEY PARCEL

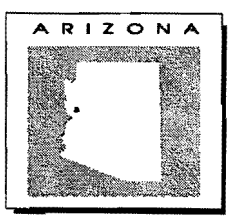
FIGURE 2-2



KEY

- DIRT ROADS
- EPHEMERAL DRAINAGES
- PARCEL BOUNDARY
- BLM LAND
- PRIVATE LAND

LOCATION MAP



USGS 7.5' QUADRANGLE:
GREENWOOD PEAK, ARIZONA

N

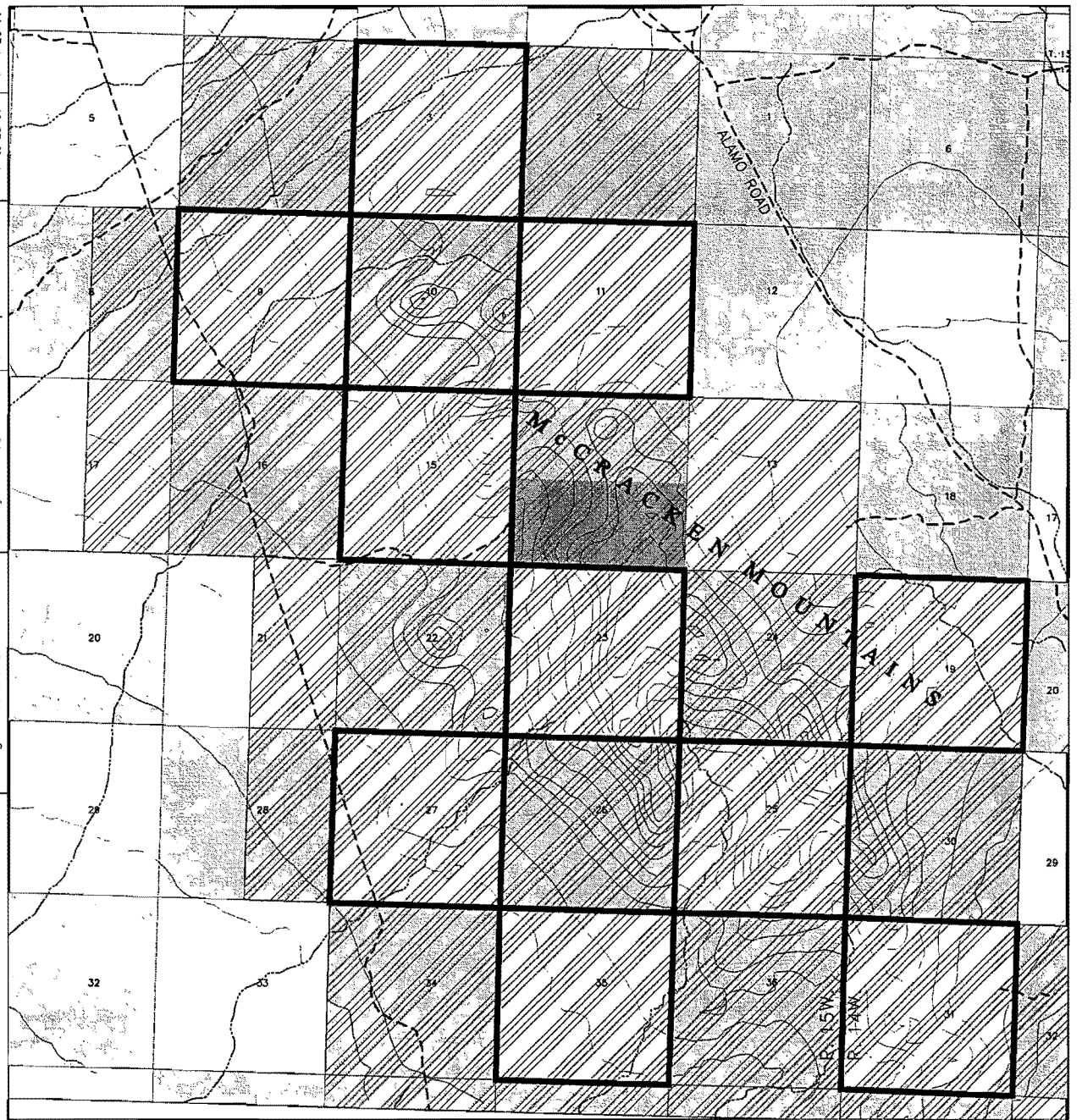
Scale
0 2500 5000
FEET

RAY LAND EXCHANGE/PLAN AMENDMENT EIS
Mohave County, Arizona Sec. 19, 29, 33, 27 and 35 T.15N,R13W.

TOMLIN PARCELS
#3, 4, AND 5

FIGURE 2-3

Proj #: 86-94929 | Filer: D:\ACAD\94929\DFFLAND | Drawing: GREENWOOD.DWG | Drawn by: KAD | Chk'd by: | Date: 11-25-97 | Rev: 7-6-98



KEY

DIRT ROADS

EPHEMERAL DRAINAGES

PARCEL BOUNDARY

BLM LAND

STATE LAND

AREA OF CRITICAL ENVIROMENTAL CONCERN

PRIVATE LAND

LOCATION MAP

USGS 7.5' QUADRANGLE: DUTCH FLAT, ARIZONA

N

Scale

0 2500 5000

FEET

RAY LAND EXCHANGE/PLAN AMENDMENT EIS

Mohave County, Arizona T.14N., R.15W., T.14N., R.14W.

McCRACKEN MOUNTAIN PARCELS

FIGURE 2-4

Proj. #: 86-94929 Filer: D:\ACAD\94929\QFFLAND Drawing: DUTCH.DWG Drwn by: KAD/ABL Chk'd by: Date: 11-25-97 Rev: 4-26-99

Knisely Ranch Parcel Group. The three Knisely Ranch parcels total 160 acres and are private inholdings located within the 30,208-acre Mount Tipton Wilderness in Mohave County, Arizona (Figure 2-5). In this alternative, the title to the split-estate of Section 17 of T25N, R18W would be transferred with the remaining full estate. No mining claims currently exist and under the 1990 Arizona Desert Wilderness Act, no new claims can be filed within the Mount Tipton Wilderness. Two of the Knisely Ranch parcels contain springs, which provides water to cattle. These parcels would be managed for their wilderness values per the management objectives in the Kingman Resource Area RMP.

While all the offered lands parcels possess resource qualities considered to be of significant value to the public, some resources are considered more valuable than others in the fulfillment of BLM multiple-use management objectives. Table 2-3 lists the parcels in order of priority for acquisition and reasons for priority.

Table 2-3. Offered Land Parcels for Acquisition by the BLM and Descriptions

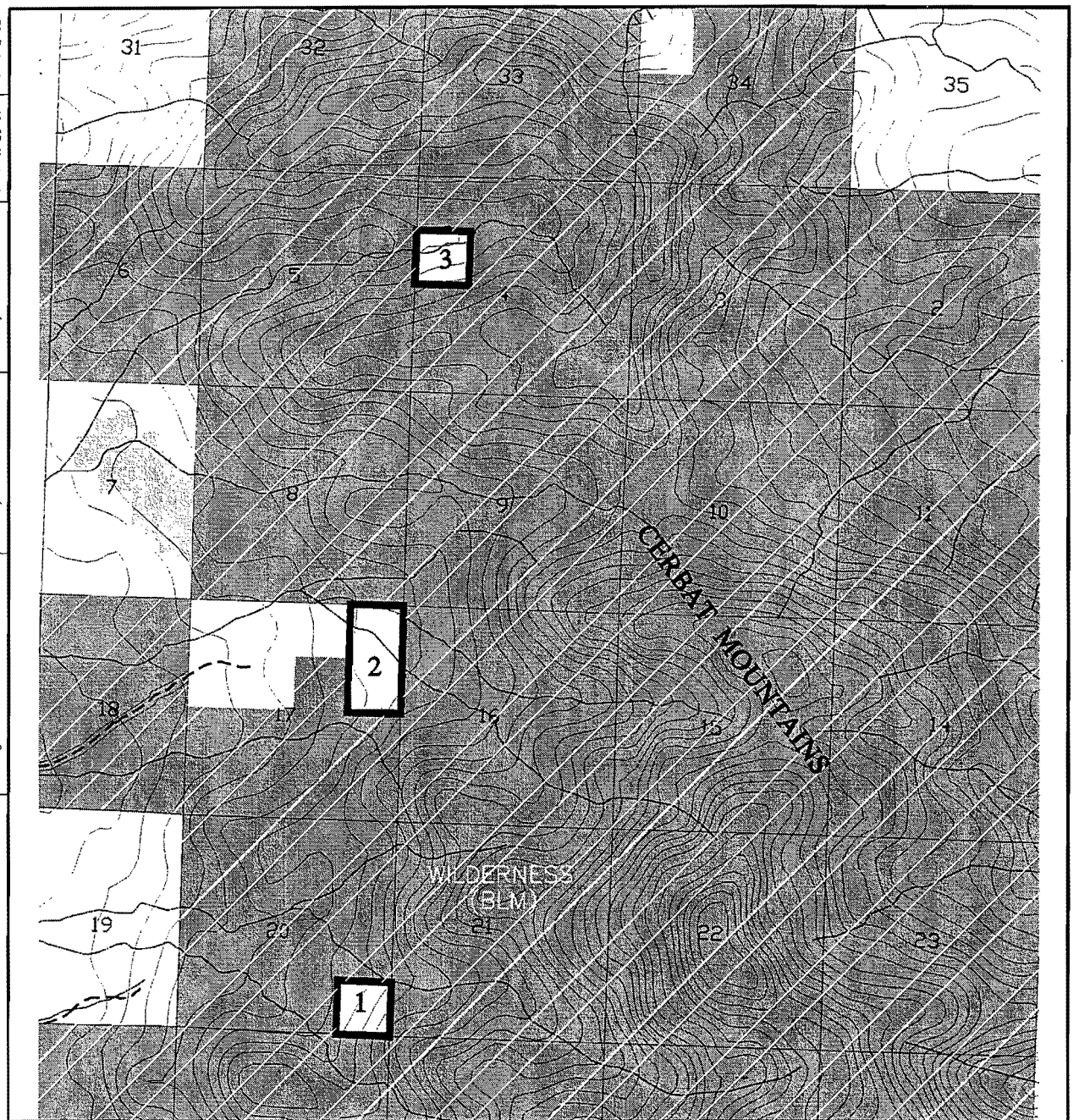
PARCELS	DESCRIPTION
Knisely Ranch Parcel Group	Knisely Ranch Parcel Group are inholdings within the Mount Tipton Wilderness
Gila River Parcel at Cochran	Gila River Parcel at Cochran provides high value wildlife habitat for special status species including the southwestern willow flycatcher and contains a segment of the Gila River Riparian Management Area (GRRMA)
Tomlin Parcels #3, #4, #5	Tomlin #4 lies within " Segment A" of the Big Sandy River and was subject to a wild and scenic rivers study and all parcels contain Category II Desert Tortoise Habitat
Sacramento Valley Parcel	Sacramento Valley Parcel is an inholding within the Black Mountains Herd Management Area and has high value Category I desert tortoise habitat
McCracken Mountains Parcel Group	McCracken Mountains Parcel Group are inholdings within the McCracken Desert Tortoise Habitat ACEC (Category I)

2.1.1.2 Plan Amendment

The plan amendment in the Proposed Action alternative would amend the current land tenure decisions in the approved Phoenix and Safford District RMPs. Specifically, the Phoenix RMP would be amended to allow disposal by exchange of approximately 7,841 acres of full estate public lands and 2,702 acres of mineral estate public lands presently classified for retention and management under BLM's multiple-use mandate (see Table 1-2, Figure 2-6). Similarly, the Safford District RMP would be amended to allow disposal of 355 acres of full estate public lands and 78 acres of mineral estate public lands. No change in land tenure classification is necessary for the 637 acres of public mineral estate land near Casa Grande as these lands have already been identified for disposal by exchange in the approved Phoenix RMP.

2.1.2 Buckeye Alternative

This land exchange alternative was developed in response to issues raised in public scoping comments over the proposed disposal of Sections 25 and 26, T3S, R12E near Walnut Creek. These sections are in selected lands Parcel CB-1 in the Copper Butte/Buckeye Area (Figure 2-6).



LOCATION MAP

USGS 7.5' QUADRANGLE:
Mt. TIPTON, ARIZONA

KEY

- DIRT ROADS
- EPHEMERAL DRAINAGES
- PARCEL BOUNDARY
- BLM LAND
- MOUNT TIPTON WILDERNESS BLM
- PRIVATE LAND

N

Scale
0 2000 4000
FEET

RAY LAND EXCHANGE/PLAN AMENDMENT EIS
Mohave County, Arizona Sec. 4, 17 and 20 T.25N.,R18W.
KNISELY RANCH PARCELS

FIGURE 2-5

2.1.2.1 Buckeye Land Exchange

Selected Lands. The Buckeye Land Exchange involves reducing the total acreage of the selected lands from approximately 10,976 acres to approximately 10,176 acres by excluding about 800 surface and subsurface acres of Parcel CB-1 in Sections 25 and 26. About 320 acres of Parcel CB-1 in the eastern quarter would remain in the land exchange proposal (Figure 2-6).

Offered Lands. Under this alternative, all offered lands would be included with the exception of Section 9 of the McCracken Mountains Parcels (640 acres, T14N, R15W, Appendix A), resulting in a total offered lands package of approximately 6,659 acres.

2.1.2.2 Plan Amendment

The plan amendment in this alternative would correspond to the reduced acreage of selected lands in the Buckeye Land Exchange. The Phoenix and Safford District RMPs would be amended to change the land tenure decision for 9,539 acres of public lands from retention to disposal by exchange. The land tenure decision in the Phoenix RMP for the 800 acres of Parcel CB-1 in Sections 25 and 26 excluded from the Buckeye Land Exchange would not be changed; it would remain in retention.

2.1.3 Copper Butte Alternative

This land exchange alternative was developed in response to scoping issues regarding access and recreation to the White Canyon Wilderness through the Copper Butte Area. The Copper Butte Area selected lands Parcels CB-1 to CB-5 lie adjacent to the White Canyon Wilderness, east of Highway 177 (Figure 2-6).

2.1.3.1 Copper Butte Land Exchange

Selected Lands. The Copper Butte Land Exchange involves reducing the total acreage of the selected lands from approximately 10,976 acres to approximately 9,161 acres by excluding surface and subsurface acres of Parcels CB-1 (1,120 acres), CB-2 (615 acres), and portions of Parcel CB-3 (80 acres) for a total of 1,815 acres. About 652 acres of Parcel CB-3 and all of Parcel CB-4 would remain in the land exchange proposal (Figure 2-6).

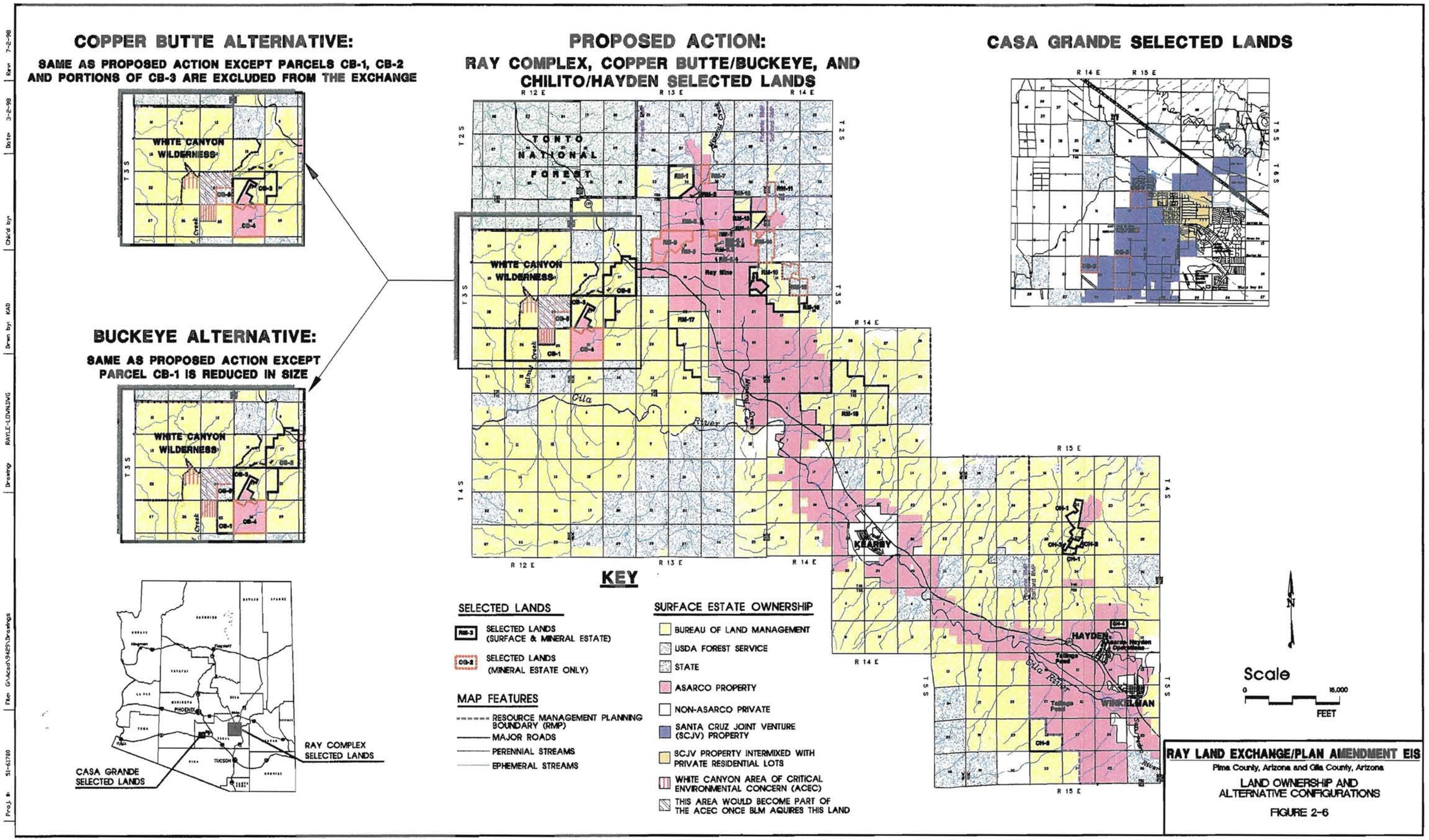
Offered Lands. Under this alternative, all offered lands would be included with the exception of Section 9 (640 acres, T14N, R15W), Section 3 (638 acres, T14N, R15W), and a portion of Section 19 (420 acres, T14N,) of the McCracken Mountains Parcels, resulting in a total offered lands package of approximately 5,601 acres.

2.1.3.2 Plan Amendment

The plan amendment in this alternative would correspond to the reduced acreage of selected lands in the Copper Butte Land Exchange. The Phoenix and Safford District RMPs would be amended to change the land tenure decision for 9,161 acres of public lands from retention to disposal by exchange. The land tenure decision in the Phoenix RMP for the 1,815 acres of Parcels CB-1, CB-2, and portions of CB-3 that are excluded from the Copper Butte Land Exchange would not be changed; these lands would remain in retention.

2.1.4 No Action Alternative

Selected Lands. Under this alternative, no lands would be exchanged, and no plan amendment would be required. The selected lands would remain in public ownership and would continue to be managed by BLM according to the multiple-use management directives in FLPMA and the current Phoenix and Safford District RMPs. Under the No Action alternative, future management actions by BLM are expected to include processing multiple mining MPO or NOI proposals (under 43 CFR §3809) for individual actions as submitted, and/or processing applications from Asarco to patent their existing claims on the selected lands.


COPPER BUTTE ALTERNATIVE:
SAME AS PROPOSED ACTION EXCEPT PARCELS CB-1, CB-2 AND PORTIONS OF CB-3 ARE EXCLUDED FROM THE EXCHANGE
WHITE CANYON WILDERNESS
BUCKEYE ALTERNATIVE:
SAME AS PROPOSED ACTION EXCEPT PARCEL CB-1 IS REDUCED IN SIZE
PROPOSED ACTION:
RAY COMPLEX, COPPER BUTTE/BUCKEYE, AND CHILITO/HAYDEN SELECTED LANDS
TONTO NATIONAL FOREST
Gila River
KEARNY
HAYDEN
WINKELMAN
CASA GRANDE SELECTED LANDS
RAY COMPLEX SELECTED LANDS
CASA GRANDE SELECTED LANDS
KEY
SELECTED LANDS
SELECTED LANDS (SURFACE & MINERAL ESTATE)
SELECTED LANDS (MINERAL ESTATE ONLY)
MAP FEATURES
RESOURCE MANAGEMENT PLANNING BOUNDARY (RMP)
MAJOR ROADS
PERENNIAL STREAMS
EPHEMERAL STREAMS
SURFACE ESTATE OWNERSHIP
BUREAU OF LAND MANAGEMENT
USDA FOREST SERVICE
STATE
ASARCO PROPERTY
NON-ASARCO PRIVATE
SANTA CRUZ JOINT VENTURE (SCJV) PROPERTY
SCJV PROPERTY INTERMIXED WITH PRIVATE RESIDENTIAL LOTS
WHITE CANYON AREA OF CRITICAL ENVIRONMENTAL CONCERN (ACEC)
THIS AREA WOULD BECOME PART OF THE ACEC ONCE BLM AQUIRES THIS LAND
Scale
0
15,000
FEET
RAY LAND EXCHANGE/PLAN AMENDMENT EIS
Pima County, Arizona and Gila County, Arizona
LAND OWNERSHIP AND ALTERNATIVE CONFIGURATIONS
FIGURE 2-6

Offered Lands. Under the No Action alternative, the offered lands would remain in Asarco ownership and would most likely be marketed, with the assumption that they would be sold and divided into smaller parcels (Genesis 1997). The foreseeable uses of the offered lands should the No Action alternative be selected are presented in Table 2-4.

Table 2-4. Potential Disposition of the Offered Lands by Asarco Should the No Action Alternative be Selected

Private Parcel	Reserve Parcel for Mitigation?	Sell for Development Purposes?
Gila River Parcel at Cochran	likely	unlikely
Sacramento Valley Parcel[12]	possible	likely
Knisely Ranch Parcels	possible	possible
Tomlin Parcels	unlikely	likely
McCracken Mountains Parcels	unlikely	likely

Source: Genesis 1997

2.2 ACTIONS COMMON TO ALL ALTERNATIVES

This section describes actions that are common to all alternatives; that is, activities that would occur regardless of which alternative is selected. In developing alternatives, BLM concluded that foreseeable mining-related uses of the selected lands are actions common to all alternatives; that is, mining/mine-support uses would likely occur whether any one of the land exchange alternatives were selected or the No Action alternative was selected. This is because a land exchange is not required for mining-related activities to take place on the selected lands. Asarco currently holds the vast majority of the mining claims on the public lands selected for exchange, and through these mining claims, Asarco has the right to pursue development on the selected lands for mining or mining-related uses. The regulatory basis for this determination is found in the General Mining Law of 1872, the Mining and Minerals Policy Act of 1970, FLPMA, and the National Materials and Minerals Policy Research and Development Act of 1980. As a component of its multiple resource management objectives, BLM is charged with implementing these laws, which were enacted to encourage the development of mineral resources on public lands by the private sector.

To develop its claims on public lands, Asarco (the project proponent in this case) must first file an Mine Plan of Operations (MPO) with BLM if five acres or more of public lands would be disturbed or if any acres within an ACEC would be disturbed. Filing of such documents invokes plan approval procedures under 43 CFR 3809 regulations. Under these procedures, BLM is required to conduct a separate environmental analysis of the planned mining activities, to ensure that no unnecessary or undue degradation[13] would result from the proposed mining operations, and that the proponent complies with other applicable environmental regulations. If BLM finds no evidence of undue and unnecessary degradation, and the project proponent has obtained all required permits, BLM must authorize the planned mining operations. Asarco has already indicated that in the future it would submit an MPO for the selected lands if the No Action alternative were approved.

[12] This parcel would likely be marketed either as a single large parcel with possible future exchange possibilities or in smaller parcels (Genesis 1997).

[13] Unnecessary or undue degradation means surface disturbance greater than what would normally result when an activity is being accomplished by a prudent operator in usual, customary, and proficient operations of similar character and taking into consideration the effects of operations on other resources and land uses, including those resources and uses outside the area of operations [43 CFR 3809.0-6(k)].

2.2.1 Access to Public Lands

As agreed to by Asarco, BLM is considering alternative access routes that would ensure continued physical and legal access to the White Canyon Wilderness and other public lands, the artesian well, Gila River, and Coke Ovens. Currently, physical access exists along a dirt track, but legal access is not available. BLM is considering these routes because, under any EIS alternative and including the foreseeable use, the existing Battle Axe Road would be used for hauling to Copper Butte by Asarco, creating public access problems to the Wilderness. To solve this problem, BLM and Asarco are considering two alternative routes to maintain physical and legal access to these public lands. These are labeled Route #1 and Route #2 on Figure 4-1 and are discussed in more detail in Section 4.4.3. Physical public access would be maintained on Parcels CB-2, CB-3, CB-1 and adjacent BLM lands equivalent to the type of access that exists today. To ensure public access, the following would apply under all alternatives:

- If Parcel CB-1 is exchanged, an easement will be issued to BLM, and a new road segment will be engineered and constructed by Asarco to ensure public access within Section 26 (see Segment #3 on Figure 3-15). This will connect the existing White Canyon public access through the northwest corner of Section 26 into Section 27 connecting with the existing track. This access will be equal to or slightly improved over the existing road conditions but suitable for back country driving or routine administrative needs by the BLM.

- If Parcels CB-2 and CB-3 are exchanged, Asarco will be required to engineer and construct alternative Route #2 and implement the following: 1) obtain permits from other agencies including ADOT, COE (as suitable); 2)undertake appropriate NEPA analysis should the road extend outside of Parcels CB-2 and 3; and 3) design Route #2 according to BLM specifications prior to construction.

  Alternative Route #2 is BLM's preferred access route to replace the existing Battle Axe Road and would require the above mitigation. Route #1 would require the above mitigation as well as the following: 1) ADOT approved ingress/egress design from Highway 177; 2) protection of the existing Walnut Creek watercourse; 3) protection of the existing waterline and well for Silver Creek community; 4) road construction with berming; 5) possible paving or other design to reduce dust and erosion for local Silver Creek residents; and 6) appropriate signing and safety barricades to the White Canyon Wilderness.

2.2.2 Foreseeable Uses of the Selected Lands

As explained above, foreseeable uses of the selected lands are assumed to be the same for all alternatives. These foreseeable uses can be classified into five major categories:

- **Existing Mining (EXIST)**: If surface disturbance has already occurred due to mining activity in or adjacent to the Ray Mine, the affected lands are classified as existing mining. Areas of existing mining total approximately 272 acres (2%) of the selected lands. The parcels in this category are all located in the Ray Mine portion of the Ray Complex Area.

- **Production Operations and Support Areas (POS)**: Areas classified as Production Operations and Support would be subject to substantial disturbance (25 to 100 percent) of the land surface. These areas comprise an estimated 3,614 acres (33%) of the selected lands. Potential foreseeable mining uses include, but are not limited to, expansion of open pits, haul roads, solution-extraction rock deposition areas, and overburden deposition areas. Most of the selected lands parcels in this category are located in the Ray Mine and Copper Butte/Buckeye portions of the Ray Complex Area.

- **Transition (TRANS)**: Transition areas would be subject to less intensive mining-related activities, resulting in 5 to 25 percent surface disturbance. An estimated 875 acres (8%) of the selected lands fall into this category. Potential foreseeable mining uses include, but are not limited to, raveling areas around overburden and leach rock deposition areas, access roads, storm water diversion ditches, rights-of-way, and administrative facilities.

- **Intermittent Use (INTER)**: These areas would not be subject to direct mining activity, resulting in less than five percent surface disturbance. Potential intermittent uses, which would affect an estimated 4,481 acres (41%) of selected lands, include, but are not limited to, consolidation of Asarco ownership and buffering neighboring land owners from mining operations.

- **Long-Range Prospect (LRP)**: Selected lands in this category could potentially be used for mine development and associated support facilities at some point in the future, but no conceptual mine planning has begun. Because future mining uses of these lands are unknown, the degree of surface disturbance resulting from such mining activity cannot be projected. Approximately 1,733 acres (16%) of the selected lands belong to this category.

These categories reflect differences in the timing of mining activity; the degree of certainty about the activity (i.e., the current stage of planning); and the nature and extent of anticipated surface disturbance resulting from the activity. None of these categories include assumptions about land ownership or administrative responsibilities. Tables 2-5 and 2-6 summarize the foreseeable mining uses by parcel, and vice versa. Figures 2-7, 2-8, and 2-9 present this information graphically.

2.3 ALTERNATIVES CONSIDERED BUT NOT STUDIED IN DETAIL

This section describes project alternatives that were initially considered for analysis in the EIS but were subsequently eliminated for the reason(s) stated below. If any of these alternatives were to be considered again in the future, implementation would require environmental analysis in compliance with NEPA.

2.3.1 Expanded Plan Amendment Alternative

No public lands in the Ray Complex Area are currently identified for disposal by exchange in the Phoenix and Safford District RMPs. These public lands are located within the White Canyon RCA, or within an LTMA where public lands are to be retained. Asarco has identified all the parcels they would like to acquire. Other BLM parcels in the Ray Complex Area; however, may meet the criteria for disposal. The purpose of this alternative was to identify and designate additional BLM parcels for disposal in order to improve management efficiency of public lands in the Ray Complex Area.

The BLM rejected further consideration of this alternative because the process to identify and elect to dispose of additional parcels (other than those desired by Asarco) is not a management priority for the Tucson BLM Field Office at this time. The BLM did not want to invest its limited resources into studying additional scattered parcels for the following reasons: many of the scattered, smaller parcels are encumbered by mining claims; there is no likely proponent (for exchange) since Asarco has fully identified future needs; and additional archaeological and biological evaluations or other inventories would need to be conducted. In summary, identifying parcels for future disposal and associated actions when the likelihood of disposal is low would not alleviate long-term management problems for BLM.

2.3.2 Long-Range Prospect Alternative

In this land exchange alternative, Asarco would reconfigure the selected lands to exclude property classified in the Long-Range Prospect foreseeable mining use category (1,733 acres, orange colored parcels on Figure 2-7). The total acreage of selected lands would drop from 10,976 acres to 9,243 acres. The BLM has rejected further consideration of this alternative because not all of the Long-Range Prospect selected lands are of public concern or have resource values which may warrant consideration for retention. The only long-range prospect which has resource considerations and which received public comment during scoping was the Buckeye long-range prospect. Therefore an alternative was developed and considered in detail that excludes a large portion of Parcel CB-1.

Table 2-5. Summary of Existing Mining and Foreseeable Uses of Selected Lands

Parcel	Name	EXIST (acres)	POS (acres)	TRANS (acres)	INTER (acres)	LRP (acres)	SURF & MIN (acres)	MIN ONLY (acres)
RM-1	Ray Area 1	-	73	26	324	-	423	-
RM-2	Red Bluff[14]	-	2.3	2.7	~~5~~	-	5	-
RM-3	Red Hills Fraction	5	-	-	-	-	5	
RM-4	Copper Zone 8/Combination	2	-	-	-	-	2	-
RM-5	Section 10 Fragment	< 1	-	-	-	-	<1	-
RM-6.1-3	Copper Era 1 - Tracts A,B,C	< 1	-	-	-	-	< 1	-
RM-6.4	Wedge Lode	< 1	-	-	-	-	< 1	-
RM-7	Section 35 Fragment	-	-	-	80	-	-	80
RM-8	Section 9/10 Mineral	211	205	54	12	-	-	483
RM-9	Section 11 Fragment	30	-	-	-	-	-	30
RM-10	Limestone Quarry	21	116	31	-	694	862	-
RM-11	Rustlers Gulch	-	16	21	122	-	-	159
RM-12	Rustlers Gulch	-	160	-	-	-	160	-
RM-13	Rustlers Gulch	-	118	-	-	-	118	-
RM-14	East Side	-	166	31	153	-	-	350
RM-15	Limestone Quarry	2	-	-	-	284	-	286
RM-16	Limestone Quarry	-	-	-	-	40	40	-
RM-17	Tortilla Foothills	-	649	60	611	-	1320	-
RM-18	Hackberry Gulch	-	1286	186	529	-	2001	-
	RAY MINE SUB-TOTAL	**272**	**~~2,789~~ 2791**	**~~409~~ 412**	**~~1,836~~ 1,831**	**1,018**	**4,937**	**1,388**
CB-1	Copper Butte 1	-	-	-	757	363	1,120	-
CB-2	Copper Butte 2	-	-	110	505	-	615	-
CB-3	Copper Butte 3	-	279	119	294	-	692	-
CB-4	Copper Butte 4	-	64	66	465	-	-	595
CB-5	Copper Butte 5	-	2	11	147	-	-	160
	COPPER BUTTE/BUCKEYE SUB-TOTAL	**-**	**345**	**306**	**2,168**	**363**	**2,427**	**755**
CH-1	Chilito 1	-	-	-	-	262	262	-
CH-2	Chilito 2	-	-	-	-	8	8	-
CH-3	Chilito 3	-	-	-	-	2	2	-
CH-4	Administration	-	-	-	-	80	80	-
CH-5	Hayden D	-	480	-	-	-	480	-
	CHILITO/HAYDEN SUB-TOTAL	**-**	**480**	**-**	**-**	**352**	**832**	**-**

[14] The change in acreage for this parcel (POS and Trans) is under five acres and therefore, acreage calculations in Chapter 4 were not re-calculated.

Table 2-5, continued. Summary of Existing Mining and Foreseeable Uses of Selected Lands

Parcel	Name	EXIST (acres)	POS (acres)	TRANS (acres)	INTER (acres)	LRP (acres)	SURF & MIN (acres)	MIN ONLY (acres)
CG-1	Casa Grande 1	-	-	-	157	-	-	157
CG-2	Casa Grande 2	-	-	-	160	-	-	160
CG-3	Casa Grande 3	-	-	160	160	-	-	320
	CASA GRANDE SUB-TOTAL	**-**	**-**	**160**	**477**	**-**	**-**	**637**
	TOTAL	272	~~3,614~~ 3,616	~~875~~ 878	~~4,481~~ 4,476	1,733	8,196	2,780

Abbreviation Key: EXIST=Existing Mining; POS=Production Operations and Support; TRANS=Transition; INTER=Intermittent; LRP=Long-Range Prospects; SURF & MIN=surface and subsurface mineral estate; MIN=subsurface mineral estate

Table 2-6. Mining Activities Expected to Occur Within Each Foreseeable Mining Use Category

FORESEEABLE MINING USE	PARCELS
Production Operation and Support	
Ray pit, Ray Mine waste rock deposition areas, Ray Mine overburden and leach rock deposition areas, Ray Mine tailings deposition areas, Copper Butte pit,	▸ RM-1, RM-2, RM-10, RM-11, RM-12, RM-13, RM-14, RM-17, RM-18
Copper Butte waste rock deposition areas, stormwater	▸ CB-3, CB-4, CB-5 ▸ CH-5
Transition	
rights-of-way, haul/access routes, pipeline, Copper Butte catchment pond, raveling areas around overburden and leach rock deposition areas	▸ RM-2, RM-17 ▸ CB-2, CB-3, CB-4, CB-5 ▸ CH-2, CH-3
Intermittent	
consolidate holdings, buffer zone, existing road	▸ All selected lands
Long-Range Prospect	
Buckeye copper mine, copper/silica flux development, refuse dump, quarry limestone	▸ RM-10, RM-15, RM-16 ▸ CB-1 ▸ CH-1, CH-4

Source: SWCA 1997a

2.3.3 Split-Estate Alternative

In this land exchange alternative, Asarco would modify the configuration of the selected lands to exclude approximately 2,142 acres of split-estate parcels for which the Arizona State Land Department (ASLD) manages the surface. Under current policy, BLM is unable to complete the exchange of a mineral estate unless the person who acquires the land controls the surface estate. Asarco has initiated the process for

acquiring the surface from the ASLD. Should an exchange of the mineral estate be allowed in a Record of Decision (ROD), and Asarco does not control the surface at that time, then BLM will have to hold the mineral estate parcels in escrow until such time when Asarco has completed acquisition of the surface. Since this would be accomplished in the ROD, there is no need for a separate alternative.

2.3.4 Mining Plan of Operations Alternative

Under this alternative, Asarco would submit an MPO, as described in federal regulations governing mining operations on federal public lands (43 CFR § 3809.1-5). The BLM rejected this alternative from further consideration because Asarco has not submitted a MPO to BLM suitable for approval, and BLM cannot require a MPO from Asarco for the selected lands in question to process a land exchange proposal. In addition, several MPOs would be required since Asarco has only conceptual plans for parcels, which include short term as well as long term plans. Overall, BLM would likely be required to process several MPOs.

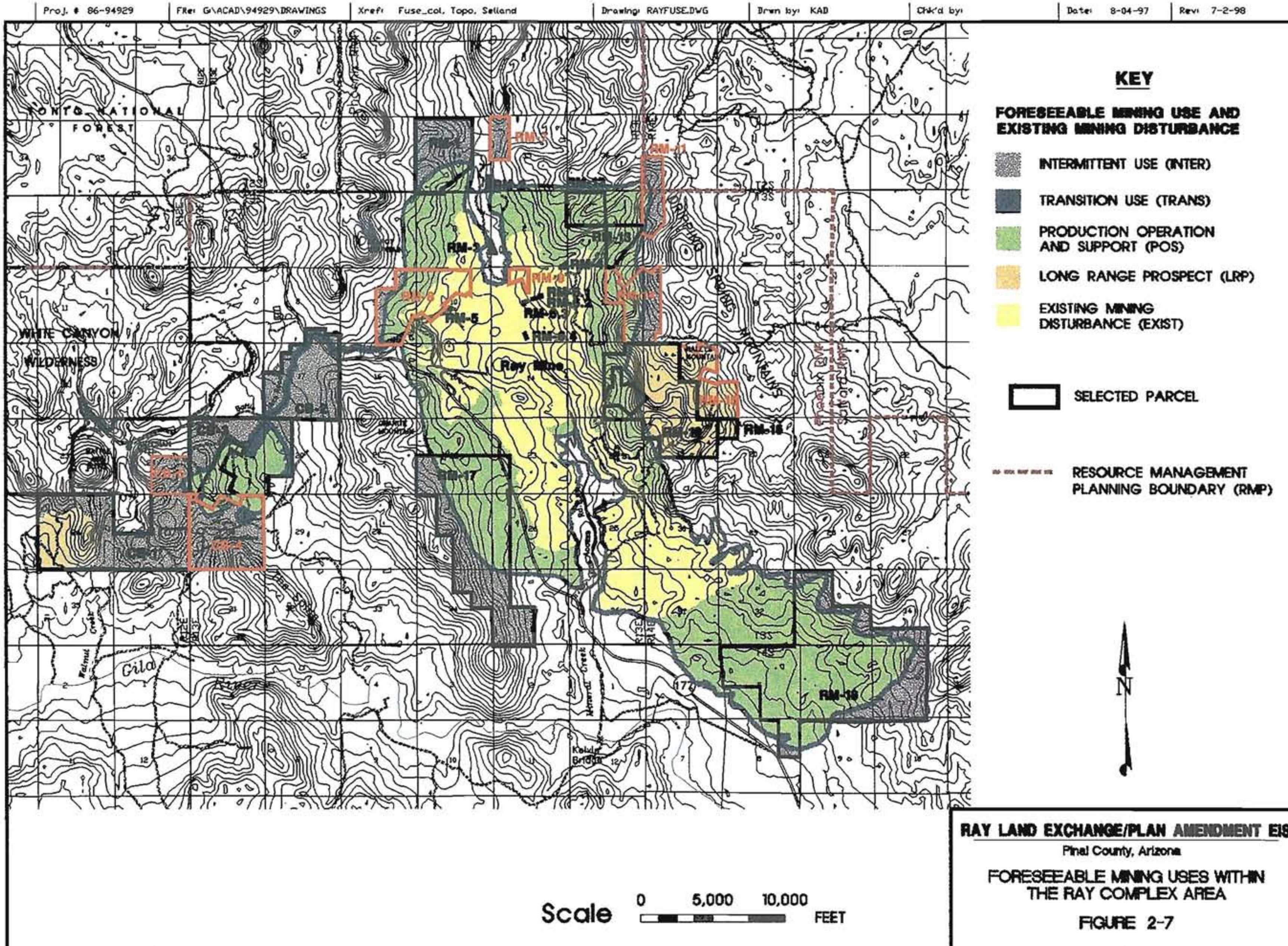
2.3.5 Hackberry Alternative

Under this land exchange alternative, approximately 1,530 acres of Parcel RM-18 (Hackberry) would be retained in federal ownership. The quantity of offered lands would have to be reduced, and a plan amendment would still be required for the remainder of the selected lands. The purpose of this alternative was to retain in federal ownership a substantial number of archaeological sites, several intermittent springs, and Category II desert tortoise habitat. BLM and Asarco studied this alternative in detail and determined that Asarco would have to immediately file an MPO for the remainder of the parcel to match its foreseeable use plan. Thus, the resources that the alternative sought to protect would likely be impacted through implementation of an MPO and require similar mitigation regardless of ownership. Although Intermittent and Transition Use areas are not subjected to direct mining activity, these lands are proposed to have many necessary facilities which support mining. Therefore Asarco would have to seek BLM permission (through an MPO, NOI, ROW, or other conveyance mechanism) and BLM would still have a regulatory role in mining at the Ray Complex. This alternative would also require BLM to administer 43 CFR 3809 since the parcel would still be encumbered by mining claims. Therefore, this alternative has been eliminated from further consideration.

2.3.6 Production Lands Alternative

This alternative was an attempt to configure the land exchange around lands that would be subjected to active mining and receive direct impacts. Under this land exchange alternative, approximately 7,090 acres of selected lands would be retained in federal ownership. These lands are located in Long-Range Prospect, Intermittent, and Transition Use Areas. The quantity of offered lands would have to be reduced and a plan amendment would still be required for the remainder of selected lands located in Production, Operation and Support and Existing Disturbed areas.

The BLM has eliminated this alternative from further consideration because the alternative does not meet the purpose and need of the project. Under this alternative, BLM would retain lands which are encumbered by mining claims and impacted and impaired by mining activity and Asarco would not acquire all of the lands it needs to conduct mining activity. Although Intermittent and Transition Use areas are not subjected to direct mining activity, these lands are proposed to have many necessary facilities which support mining. Therefore Asarco would have to seek BLM permission (through an MPO, NOI, ROW, or other conveyance mechanism) and BLM would still have a regulatory role in mining at the Ray Complex.

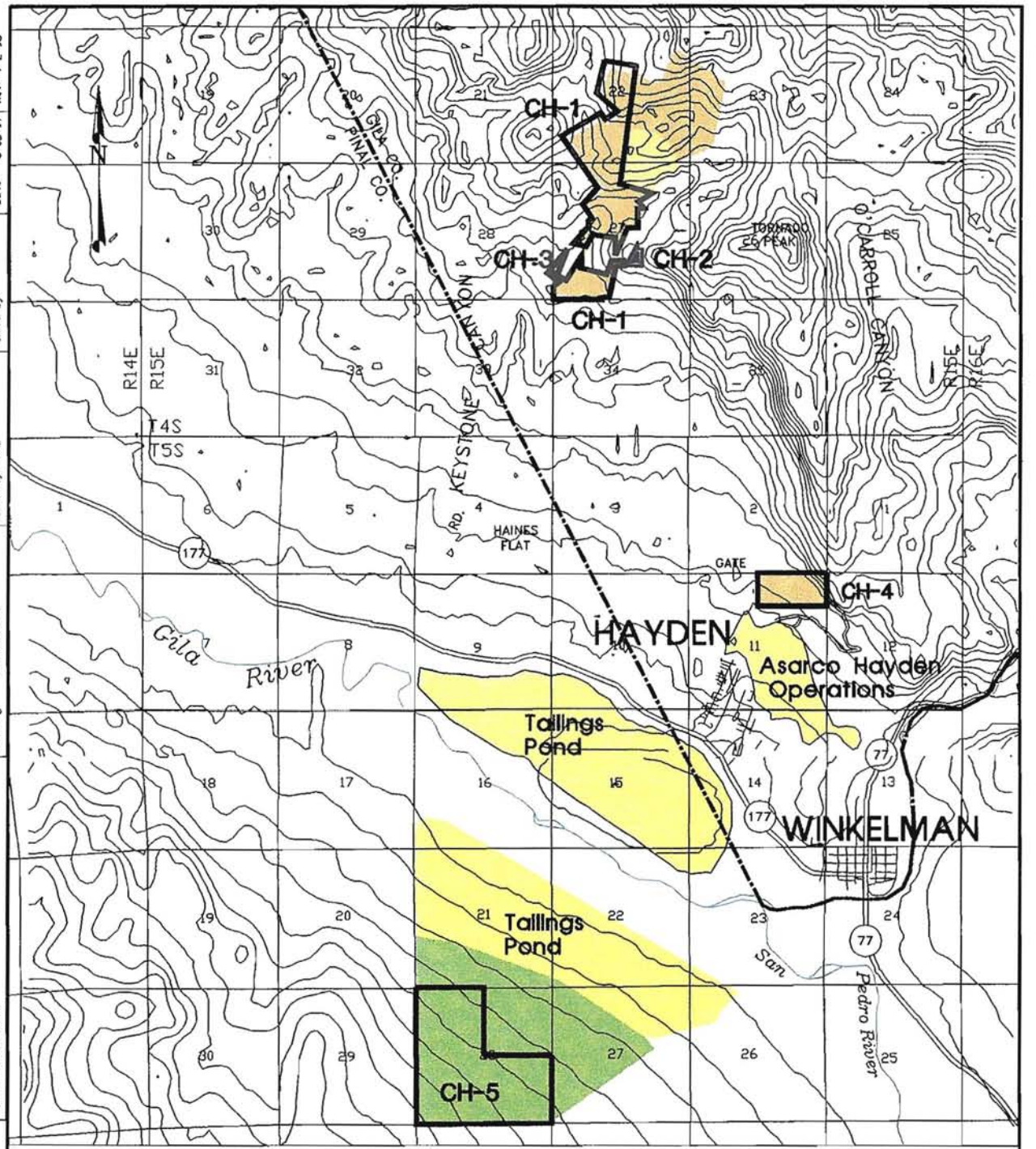


RAY LAND EXCHANGE/PLAN AMENDMENT EIS

Pinal County, Arizona

FORESEEABLE MINING USES WITHIN THE RAY COMPLEX AREA

FIGURE 2-7



FORESEEABLE MINING USE AND EXISTING MINING DISTURBANCE

- PRODUCTION OPERATION AND SUPPORT
- LONG RANGE PROSPECT
- EXISTING MINING DISTURBANCE
- SELECTED PARCELS (SURFACE & MINERAL ESTATE)

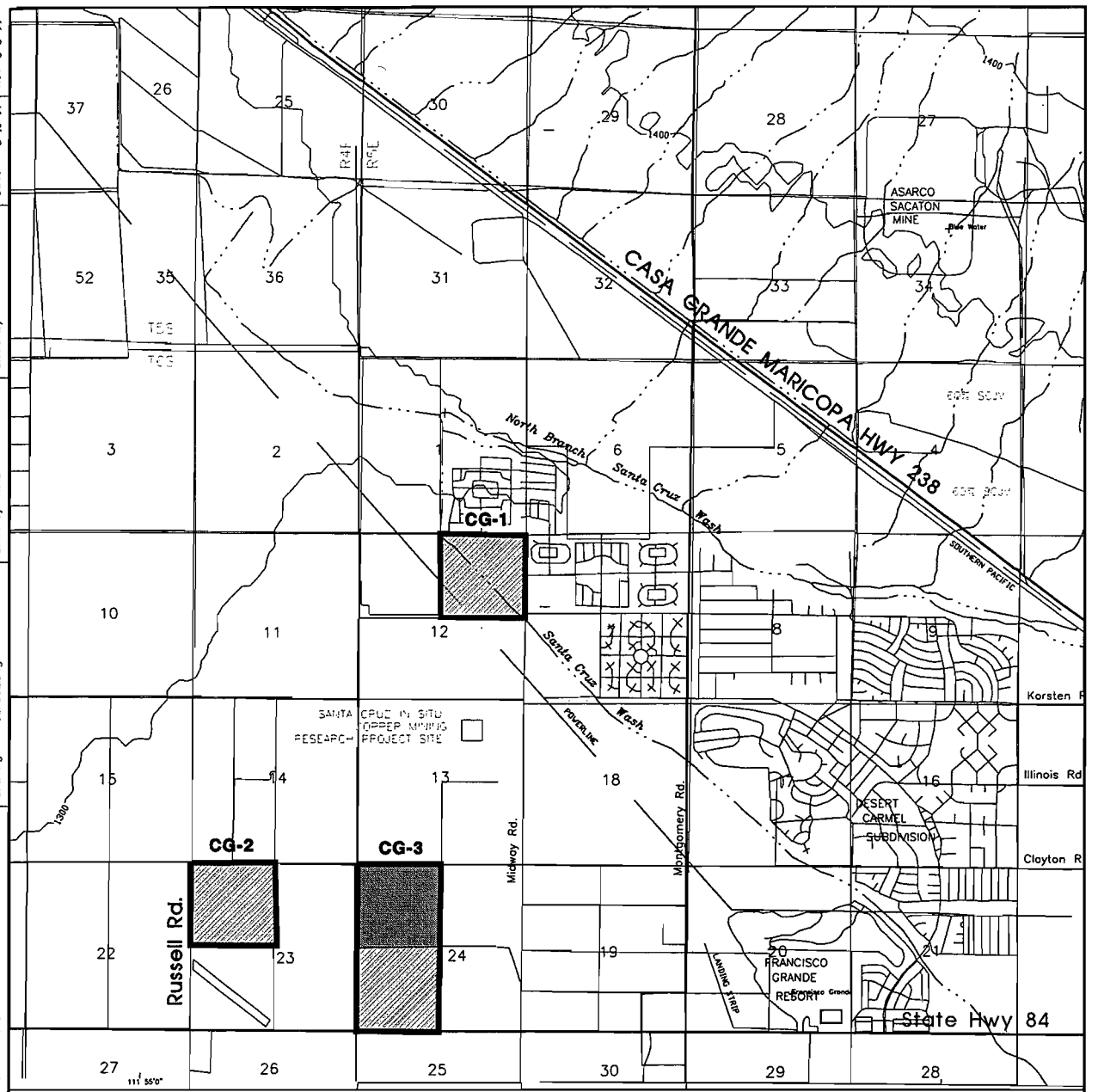
Scale 0 3000 6000 FEET

RAY LAND EXCHANGE/PLAN AMENDMENT EIS

Pinal and Gila County, Arizona T.4S.R.15E., T.5S.,R.15E.

FORESEEABLE MINING USES OF CHILITO/HAYDEN PARCELS

FIGURE 2-8



KEY

SELECTED PARCELS (MINERAL ESTATE ONLY)

FORESEEABLE MINING USE

INTERMITTENT

TRANSITION USE

Scale

0 1/2 1

MILE

CONTOUR INTERVAL 100 FEET

RAY LAND EXCHANGE/PLAN AMENDMENT EIS

Pinal County, Arizona T.6S.R.4E., T.6S.,R.5E.

FORESEEABLE MINING USES WITHIN THE CASA GRANDE AREA

FIGURE 2-9

2.3.7 No Mining Election Alternative (Errata 2.1.5 in DEIS)

Should the land exchange not take place, a "no mining" election could occur, if: (1) the mining claimant[15] of record elects not to mine any portion of the selected public lands presently encumbered by mining claims; or (2) the mining claimant is barred from mining because its plan of operations is not approved or the claims are determined to be invalid. Even with the exchange, the same election could occur should the proponent elect not to mine or if the proponent was unable to secure the state and federal permits needed for mine operation.

Under the "no mining election," the minerals found within the claims would not be developed, and none of the actions contemplated under the Proposed Action, Copper Butte, Buckeye, or No Action alternatives would occur. The site would remain in its present state, and expansion of existing mining operations from adjoining lands would not take place. Surface disturbances created by mineral exploration and historic mining activities would remain to the extent not otherwise reclaimed.

The selected public lands would continue to be subject to the pressures of mineral development, given favorable economic circumstances, and would be available for future mine development attempts or other uses within the limits of applicable state and federal laws and regulations. Should there be no mining, certain employment and economic benefits would not accrue to the local and regional communities.

Given the prevailing circumstances, the likelihood of a no mining election is essentially nil and cannot be considered a reasonably foreseeable possibility under any of the alternatives, including the No Action Alternative.

2.4 COMPARATIVE SUMMARY OF ENVIRONMENTAL IMPACTS

Table 2-7 summarizes and compares the environmental impacts between the Proposed Action, Buckeye, Copper Butte and No Action Alternatives. Impacts resulting from the foreseeable uses, which are common to all alternatives and are likely to occur with or without a land exchange, are also identified in this table. Detailed analysis of impacts is provided in Chapter 4.

[15] As noted at Section 3.2.2.2, the selected lands are encumbered by a total of 751 mining claims. Each of the 31 parcels constituting the selected lands are encumbered by mining claims, except one (Parcel CH-5). Of these 751 claims, 747 (99.5 percent) are held by Asarco, and 4 (0.5%) are held by a third party (Parcel CH-1). Thus, references to "mining claimant" as a practical matter, refer to Asarco.

Table 2-7. Comparative Summary of Anticipated Environmental Consequences of the Proposed Action, Buckeye, Copper Butte and the No Action Alternatives, and Impacts Common to All Alternatives (the foreseeable mining uses) *Foreseeable Mining Use categories include: Production Operation and Support (POS) with 25%-100% surface disturbance, Transition (TRANS) with 5%-25% surface disturbance, Intermittent (INTER) with <5% surface disturbance, Long-Range Prospect (LRP) with surface disturbance similar to POS or TRANS and Existing (EXIST) where the surface is already disturbed.*

Resource/Issue	Impacts Common to All Alternatives (Implementation of Foreseeable Mining Uses on Selected Lands)	*PROPOSED ACTION (Preferred Alternative)
BIOLOGICAL RESOURCES **Upland Plant Communities** ***Section 4.1.1***	Approximately 10,891 acres impacted. 891 acres within EXIST (already disturbed), 4,037 within INTER, 3,416 within POS, 704 within TRANS, and 1,731 within LRP.	Asarco to acquire approximately 10,891 acres of upland plant communities; 10,000 acres of Sonoran desertscrub and 891 acres of disturbed plant communities. BLM to acquire approximately 7,148 acres of upland plant communities
Riparian Plant Communities ***Section 4.1.2***	Approximately ~~17~~ 9.3 acres of Sonoran Riparian Deciduous Forest[1] ~~and 17 acres of artificial ponds/reservoirs~~ impacted.	Asarco to acquire approximately ~~90~~ 34 acres of riparian communities; 17 acres Xeroriparian mixed grass, and ~~22~~ 17 acres Sonoran Riparian Deciduous Forest ~~and 51 acres of artificial ponds.~~ BLM would acquire approximately 152 acres of riparian plant communities ~~62~~ 118 acre net gain to BLM administered riparian habitat
Wildlife/Wildlife Habitats ***Section 4.1.3***	Approximately 10,090 acres of wildlife habitat impacted. Approximately 26-42 big game animals impacted. Specifically, 9-12 within INTER, 9-17 within POS, 3 within TRANS, and 6-10 within LRP.	Asarco to acquire approximately 10,976 acres of wildlife habitat (891 already disturbed) BLM would acquire approximately 7,300 acres of wildlife/wildlife habitat on the offered lands
Special Status Species ***Section 4.1.4***	Plants; Impacts to San Carlos buckwheat on RM-8, Gila rock daisy on CB-1 and CB-4, and Pima Indian Mallow on CH-1 Fish and Wildlife: Impacts to eight roosts providing potential habitat for Townsend's big-eared bat , California leaf-nosed bat and cave myotis on Parcels RM-1, RM-8, RM-10 and RM-18; elimination of an artificial pond containing lowland leopard frog; approximately ~~3,276~~ 4,108 acres of Category II and 3,982 acres of Category III desert tortoise habitat directly/indirectly impacted, approximately 1,150 acres of potential habitat for chuchwalla; longfin dace in Walnut Creek; and 40 acres of potential habitat for Western burrowing owl on CG-3.	Federal protection of special status plants, fish and wildlife located on selected lands would be discontinued due to exchange. Asarco to acquire approximately 6,860 acres of Category II and III desert tortoise habitat. BLM to acquire habitat for ten special status wildlife species including ~~6,040~~ 7,144 acres of Category I and II desert tortoise habitat[2] ~~and 640 acres of Category II desert tortoise habitat.~~

[1] Riparian vegetation acreage associated with artificial ponds was moved to Section 3.2.2 and 4.2, Physical Resources and therefore, riparian vegetation acreage decreased on the selected lands.

[2] Tortoise acreage on the selected lands was re-calculated to exclude private and State-owned surface parcels (split-estate), therefore, changing the acreage of Category II and III tortoise to be impacted under any of the alternatives (See Table 4-5).

**The impacts discussed under the Proposed Action, Buckeye, Copper Butte and No Action Alternatives must be added to the impacts presented under Impacts Common to All Alternatives*

Table 2-7. Comparative Summary of Anticipated Environmental Consequences of the Proposed Action, Buckeye, Copper Butte and the No Action Alternatives, and Impacts Common to All Alternatives (the foreseeable mining uses) *Foreseeable Mining Use categories include: Production Operation and Support (POS) with 25%-100% surface disturbance, Transition (TRANS) with 5%-25% surface disturbance, Intermittent (INTER) with <5% surface disturbance, Long-Range Prospect (LRP) with surface disturbance similar to POS or TRANS and Existing (EXIST) where the surface is already disturbed.*

*BUCKEYE ALTERNATIVE	*COPPER BUTTE ALTERNATIVE	*NO ACTION ALTERNATIVE
Asarco to acquire approximately 9,200 acres of upland plant communities, of which, 891 acres already disturbed BLM to acquire approximately 6,508 acres of upland plant communities	Asarco to acquire approximately 8,586 acres of upland plant communities and approximately 891 acres already disturbed BLM to acquire approximately 5,450 acres of upland plant communities	Approximately 10,891 acres of upland plant communities would remain under BLM administration Approximately 7,300 acres of upland plant communities would remain under private ownership and subject to development or other private uses.
Asarco to acquire approximately ~~87~~ 34 acres of riparian plant communities ~~and artificial pond/reservoirs.~~ BLM would acquire approximately 152 acres of riparian plant communities on the offered lands. 118 acre net gain to BLM administered riparian habitat.	Asarco to acquire approximately ~~79~~ 34 acres of riparian plant communities BLM would acquire approximately 152 acres of riparian plant communities on the offered lands. 118 acre net gain to BLM administered riparian habitat.	~~90~~ 34 acres of riparian plant communities would remain under BLM administration. 152 acres of riparian plant communities, located on the offered lands, would remain in private ownership and subject to development or other private uses. BLM would forego an opportunity to increase BLM administered riparian habitat.
Asarco to acquire approximately 10,176 acres of wildlife habitat (891 acres already disturbed) BLM would acquire approximately 6,659 acres of wildlife habitat	Asarco to acquire approximately ~~9,176~~ 9,161 acres of wildlife habitat (891 already disturbed) BLM would acquire approximately 5,601 acres of wildlife habitat.	Approximately 10,976 acres of wildlife habitat would remain under BLM administration Approximately 7,300 acres of wildlife habitat on the offered lands, would remain under private ownership and subject to disturbance through private development or other private uses.
Federal protection of special status plants, fish and wildlife located on selected lands would be discontinued due to exchange. Approximately ~~800~~ 320 acres of Category II desert tortoise habitat on CB-1 would remain under BLM administration. BLM to acquire habitat for seven special status species including 6,504 acres of Category I and II desert tortoise habitat.	Federal protection of special status plants, fish and wildlife located on selected lands would be discontinued. Approximately ~~800~~ 652 acres of Category II and Category III desert tortoise habitat would remain under BLM administration as will populations of Gila rock daisy on CB-1 and CB-4. BLM to acquire habitat for seven special status species including 5,446 acres of Category I and II desert tortoise habitat.	Habitat for special status plants, fish and wildlife located on selected lands would remain under BLM administration including ~~1,251~~ 3,997 acres of Category II and ~~2,064~~ 3,063 acres of Category III desert tortoise habitat. An opportunity to acquired habitat for ten special status species, including 7,144 acres of Category I and II desert tortoise habitat, would be foregone and remain in private ownership and subject to development or other private uses.

**The impacts discussed under the Proposed Action, Buckeye, Copper Butte and No Action Alternatives must be added to the impacts presented under Impacts Common to All Alternatives*

Table 2-7. Comparative Summary of Anticipated Environmental Consequences of the Proposed Action, Buckeye, Copper Butte and the No Action Alternatives, and Impacts Common to All Alternatives (the foreseeable mining uses) *Foreseeable Mining Use categories include: Production Operation and Support (POS) with 25%-100% surface disturbance, Transition (TRANS) with 5%-25% surface disturbance, Intermittent (INTER) with <5% surface disturbance, Long-Range Prospect (LRP) with surface disturbance similar to POS or TRANS and Existing (EXIST) where the surface is already disturbed.*

Resource/Issue	Impacts Common to All Alternatives (Implementation of Foreseeable Mining Uses on Selected Lands)	*PROPOSED ACTION (Preferred Alternative)
Threatened and Endangered (T&E) Species Plants, Fish and Wildlife ***Section 4.1.5***	~~No impacts because~~ No T & E plants, fish or wildlife are known to occur on the selected lands. Impacts to approximately five acres of southwestern willow flycatcher habitat; approximately 6,646 acres of potential habitat for cactus ferruginous pygmy-owl and potential habitat for lesser long-nosed bat (if range extension occurred).	Asarco to acquire approximately five acres of potential southwestern willow flycatcher and approximately 6,646 acres of potential CFPO cactus ferruginous pygmy-owl habitat and potential habitat for lesser long-nosed bats (if range extension occurred). BLM would acquire offered lands which provide habitat for the bald eagle, American peregrine falcon, cactus ferruginous pygmy-owl and southwestern willow flycatcher.
Critical Habitat ***Section 4.1.6***	No proposed or critical habitat occurs on any of the selected lands. Proposed critical habitat occurs on the Gila River Parcel at Cochran for the cactus ferruginous pygmy-owl.	~~None~~ BLM would acquire the Gila River Parcel at Cochran, which is proposed critical habitat for the cactus ferruginous pygmy-owl.
PHYSICAL RESOURCES **Surface Water** ***Section 4.2.1***	Under the foreseeable mining uses, potential impacts to surface waters would be regulated by Clean Water Act (CWA) sections 401, 402, and 404.[3] Cumulative impacts to surface water quality and quantity may occur in Middle Gila River watershed.	Asarco would acquire 13 springs and 3 stockponds on the selected lands. BLM would acquire surface water features on the offered lands, which include 0.50 miles of the Big Sandy River, 2 springs, 2 stockponds, 1.1 miles of the Gila River, and one wildlife catchment.
Groundwater ***Section 4.2.2***	Discharges to groundwater from foreseeable mining uses would be regulated by Arizona's APP program. This requires that groundwater quality at designated points of compliance meet aquifer water quality standards.[4]	Asarco would acquire one abandoned stock watering well. BLM would acquire one well.
Surface Water Rights/Well Permits ***Section 4.2.3***	Nine surface water sources and wells on the selected lands in the Ray Complex area may become unusable from foreseeable mining uses of the selected lands. Three other surface water sources would most likely continue to be utilized for their designated uses.	Five federal reserved rights (Public Water Reserve No. 107) would be withdrawn by BLM from ADWR's records. Seven other surface water rights claims would transfer to Asarco, including three associated with stockponds on the Copper Butte Parcels and four associated with springs on RM-18. Five surface water rights and one well permit on the offered lands would transfer to BLM.

[3] Residual impacts may occur after compliance with CWA permits, and are described in Section 4.2.1.1.

[4] Residual impacts may occur after compliance with APP, and are described in Section 4.2.2.1.

**The impacts discussed under the Proposed Action, Buckeye, Copper Butte and No Action Alternatives must be added to the impacts presented under Impacts Common to All Alternatives*

Table 2-7. Comparative Summary of Anticipated Environmental Consequences of the Proposed Action, Buckeye, Copper Butte and the No Action Alternatives, and Impacts Common to All Alternatives (the foreseeable mining uses) *Foreseeable Mining Use categories include: Production Operation and Support (POS) with 25%-100% surface disturbance, Transition (TRANS) with 5%-25% surface disturbance, Intermittent (INTER) with <5% surface disturbance, Long-Range Prospect (LRP) with surface disturbance similar to POS or TRANS and Existing (EXIST) where the surface is already disturbed.*

*BUCKEYE ALTERNATIVE	*COPPER BUTTE ALTERNATIVE	*NO ACTION ALTERNATIVE
Asarco to acquire approximately five acres of potential southwestern willow flycatcher habitat, 5,846 acres of potential cactus ferruginous pygmy-owl habitat and potential habitat for lesser long-nosed bats. BLM would acquire offered lands which provide habitat for the bald eagle, American peregrine falcon, cactus ferruginous pygmy-owl and southwestern willow flycatcher.	Asarco to acquire approximately five acres of southwestern willow flycatcher, 4,831 acres of potential cactus ferruginous pygmy-owl habitat and potential habitat for lesser long-nosed bats. BLM would acquire offered lands which provide habitat for the bald eagle, American peregrine falcon, cactus ferruginous pygmy-owl and southwestern willow flycatcher.	Approximately five acres of potential southwestern flycatcher habitat, 6,646 acres of potential cactus ferruginous pygmy owl habitat and potential habitat for lesser long-nosed bats would remain under BLM administration. BLM would forego an opportunity to acquire ~~occupied~~ habitat for ~~these T & E wildlife species.~~ the southwestern willow flycatcher, cactus ferruginous pygmy-owl, peregrine falcon, and bald eagle.
~~None~~ BLM would acquire the Gila River Parcel at Cochran, which is proposed critical habitat for the cactus ferruginous pygmy-owl.	~~None~~ BLM would acquire the Gila River Parcel at Cochran, which is proposed critical habitat for the cactus ferruginous pygmy-owl.	~~None~~ BLM would not acquire the Gila River Parcel at Cochran, which is proposed critical habitat for the cactus ferruginous pygmy-owl.
Same as Proposed Action except that BLM would retain one spring and one stockpond on Parcel CB-1. BLM would not acquire one stockpond on the offered lands.	Same as Proposed Action except that BLM would retain three stockponds, and one abandoned well on Parcels CB-1, CB-2, and CB-3. BLM would not acquire one stockpond on the offered lands.	Same as Impacts Common to All Alternatives except that BLM would not acquire surface water features on the offered lands.
Same as Proposed Action	Same as Proposed Action	Same as Impacts Common to All Alternatives. BLM would forego an opportunity to acquire the one well on the offered lands.
Same as Proposed Action, except that one BLM water right associated with Parcel CB-1 for Rincon Reservoir would remain in federal ownership. Two water rights associated with Section 9 of the McCracken Mountains Parcels would not be acquired by BLM.	Same as Proposed Action, except that three BLM water rights associated with Parcels CB-1, CB-2, and CB-3 (for Rincon Reservoir, Dunn Tank No. 1, and Dunn Tank No. 2, respectively) would remain in federal ownership. Two water rights associated with Section 9 of the McCracken Mountains Parcels would not be acquired by BLM.	No water rights in the project area would transfer ownership. Five surface water rights and one well permit would remain in private ownership.

**The impacts discussed under the Proposed Action, Buckeye, Copper Butte and No Action Alternatives must be added to the impacts presented under Impacts Common to All Alternatives*

Table 2-7. Comparative Summary of Anticipated Environmental Consequences of the Proposed Action, Buckeye, Copper Butte and the No Action Alternatives, and Impacts Common to All Alternatives (the foreseeable mining uses) *Foreseeable Mining Use categories include: Production Operation and Support (POS) with 25%-100% surface disturbance, Transition (TRANS) with 5%-25% surface disturbance, Intermittent (INTER) with <5% surface disturbance, Long-Range Prospect (LRP) with surface disturbance similar to POS or TRANS and Existing (EXIST) where the surface is already disturbed.*

Resource/Issue	Impacts Common to All Alternatives (Implementation of Foreseeable Mining Uses on Selected Lands)	*PROPOSED ACTION (Preferred Alternative)
Air Quality ***Section 4.2.4***	All parcels within the Ray Complex and Copper Butte/Buckeye areas are within a non-attainment area for PM_{10} and all parcels within the Chilito/Hayden area are within a non-attainment area for both PM_{10} and SO_2. Any impacts to air quality resulting in accedences in PM_{10} or SO_2 would require a modification to Asarco's Title V Permit from ADEQ.	The exchange of selected lands in and of itself would not affect air quality. Acquisition of the offered lands is not expected to impact air quality.
Soils ***Section 4.2.5***	Approximately 10,339 acres of soils in the Ray Complex, Copper Butte/Buckeye and Chilito/Hayden areas and approximately 637 acres of soils in the Casa Grande area impacted.	Approximately 10,976 acres of soils on the selected lands would be acquired by Asarco. BLM would acquire 7,300 acres of soils on the offered lands.
MINERAL RESOURCES **Mineral Potential** ***Section 4.3.1***	The selected lands would be mined for copper under all the alternatives	None
Mineral Rights ***Section 4.3.2***	Asarco would exercise mineral rights on all mining claims. Third-party claims located on Parcel CH-1 would need to be resolved before mining can occur.	BLM would acquire the offered lands and petition to withdraw two parcels to mineral entry (Tomlin #4 and Gila River Parcel at Cochran).
LAND USE **Land Ownership** ***Section 4.4.1***	Foreseeable mining uses on the selected lands could occur under private or public ownership.	Two percent increase in privately-held lands in Pinal County and 0.3 percent increase in Gila County. In addition, a 0.1 percent decrease in publicly-held lands in Pinal County. BLM administered split-estate lands in the Ray Complex, Copper Butte/Buckeye and Chilito/Hayden areas would decrease from 48 to 43 percent. Increase in publicly-held lands in Mohave County.

**The impacts discussed under the Proposed Action, Buckeye, Copper Butte and No Action Alternatives must be added to the impacts presented under Impacts Common to All Alternatives*

Table 2-7. Comparative Summary of Anticipated Environmental Consequences of the Proposed Action, Buckeye, Copper Butte and the No Action Alternatives, and Impacts Common to All Alternatives (the foreseeable mining uses) *Foreseeable Mining Use categories include: Production Operation and Support (POS) with 25%-100% surface disturbance, Transition (TRANS) with 5%-25% surface disturbance, Intermittent (INTER) with <5% surface disturbance, Long-Range Prospect (LRP) with surface disturbance similar to POS or TRANS and Existing (EXIST) where the surface is already disturbed.*

*BUCKEYE ALTERNATIVE	*COPPER BUTTE ALTERNATIVE	*NO ACTION ALTERNATIVE
Same as Proposed Action.	Same as Proposed Action.	The selected lands would remain under BLM administration. BLM would not acquire the offered lands as they would remain under private ownership and subject to development or other private uses.
Approximately 10,176 acres of soils on the selected lands would be acquired by Asarco.	Approximately 9,161 acres of soils on the selected lands would be acquired by Asarco.	Asarco would not acquire any of the selected lands and BLM would not acquire any of the offered lands.
None	None	None
Same as Proposed Action.	Same as Proposed Action.	Existing mineral rights would continue to be held by Asarco. BLM would not acquire the mineral rights of the offered lands and would be unable to petition to withdraw Tomlin #4 and Gila River Parcel at Cochran to mineral entry.
Approximate two percent increase in privately-held lands in Pinal County and 0.3 percent increase in Gila County. In addition, a 0.1 percent decrease in publicly-held lands in Pinal County. BLM administered split-estate lands in the Ray Complex, Copper Butte/Buckeye and Chilito/Hayden areas would decrease from 48 to 43 percent. Increase in publicly-held lands in Mohave County.	Approximate two percent increase in privately-held lands in Pinal County and 0.3 percent increase in Gila County. In addition, a 0.1 percent decrease in publicly-held lands in Pinal County. BLM administered split-estate lands in the Ray Complex, Copper Butte/Buckeye and Chilito/Hayden areas would decrease from 48 to 43 percent. Increase in publicly-held lands in Mohave County.	No change from existing land ownership, the selected lands would continue to be administered under the BLM Phoenix and Safford RMPs. The offered lands would remain under private ownership and the BLM would forego an opportunity to acquire these lands.

**The impacts discussed under the Proposed Action, Buckeye, Copper Butte and No Action Alternatives must be added to the impacts presented under Impacts Common to All Alternatives*

Table 2-7. Comparative Summary of Anticipated Environmental Consequences of the Proposed Action, Buckeye, Copper Butte and the No Action Alternatives, and Impacts Common to All Alternatives (the foreseeable mining uses) *Foreseeable Mining Use categories include: Production Operation and Support (POS) with 25%-100% surface disturbance, Transition (TRANS) with 5%-25% surface disturbance, Intermittent (INTER) with <5% surface disturbance, Long-Range Prospect (LRP) with surface disturbance similar to POS or TRANS and Existing (EXIST) where the surface is already disturbed.*

Resource/Issue	Impacts Common to All Alternatives (Implementation of Foreseeable Mining Uses on Selected Lands)	*PROPOSED ACTION (Preferred Alternative)
Management of Public Lands ***Section 4.4.2***	Impacts to management of public lands are expected when Asarco proceeds with foreseeable mining uses regardless of land ownership.	BLM would have substantially less management responsibilities under 3809 if Asarco acquires the selected lands. BLM will have fewer management conflicts in various wilderness and ACEC areas within Arizona by acquiring the offered lands.
Access and Recreation ***Section 4.4.3***	Battle Axe Road would be used by Asarco for mining operations at Copper Butte. Two alternative routes for access/recreation to Walnut Canyon and White Canyon Wilderness are being considered. In addition, alternative trail segments are being considered for the Arizona Trail. BLM has selected proposed Route #2 to replace the existing Battle Axe Road to the White Canyon Wilderness. Back country vehicle recreation in the Copper Butte/Buckeye area would be impacted by implementation of foreseeable mining uses. Proposed mitigation would allow access to popular sites (e.g. Coke Ovens and artesian well).	Some alignments proposed for the AZ Trail would be impacted as these would require Asarco permission to develop or require realignment. BLM would acquire offered lands in five special management areas, consolidating public land ownership and alleviating potential public access problems through those lands.
Rights-of-Way ***Section 4.4.4***	Three rights-of-way occur within the POS Use category and will likely need to be relocated: a portion of county road (Battle Axe Road AZA 21389), an electric power line (AZA 2146), and Highway 177 (AZAR 024241). Rights-of-way occurring in other foreseeable use categories could potentially be impacted, but not necessarily relocated.	BLM would transfer title of selected lands to Asarco and all rights-of-way would remain intact. Asarco would no longer need an easement for Parcel CH-4 (AZA 1000). Acquisition of the offered lands is not expected to impact any rights-of-way.
Grazing ***Section 4.4.5***	Approximately 4,814 acres and 379 AUMs of BLM administered grazing land in seven allotments would be impacted.	BLM would relinquish management of and grazing income of $1,239.30/year from approximately 8,196 acres (918 AUMs) and seven improvements within seven grazing allotments. BLM would acquire 7,300 acres within five allotments, totaling 288AUMs and $587.25 per year.

**The impacts discussed under the Proposed Action, Buckeye, Copper Butte and No Action Alternatives must be added to the impacts presented under Impacts Common to All Alternatives*

Table 2-7. Comparative Summary of Anticipated Environmental Consequences of the Proposed Action, Buckeye, Copper Butte and the No Action Alternatives, and Impacts Common to All Alternatives (the foreseeable mining uses) *Foreseeable Mining Use categories include: Production Operation and Support (POS) with 25%-100% surface disturbance, Transition (TRANS) with 5%-25% surface disturbance, Intermittent (INTER) with <5% surface disturbance, Long-Range Prospect (LRP) with surface disturbance similar to POS or TRANS and Existing (EXIST) where the surface is already disturbed.*

*BUCKEYE ALTERNATIVE	*COPPER BUTTE ALTERNATIVE	*NO ACTION ALTERNATIVE
Same as Proposed Action, however, should Asarco ultimately seek to develop the Buckeye Deposit, it would have to be done under BLM's 3809 regulations, which would result in long-term BLM management of the Buckeye operation.	Same as Buckeye Alternative except Parcels CB-1, CB-2, and portions of CB-3 would remain under BLM administration, requiring management under 3809.	Implementation of the foreseeable mining uses via MPO, would require long-term BLM resources and oversight. Implementation of foreseeable mining uses might require BLM to process future patent applications, but currently new patent applications are not being accepted. BLM would forego an opportunity to acquire the offered lands. In addition, the McCracken Mountains ACEC would remain checker-boarded with fragmented management conflicts.
Same as Proposed Action, except that BLM would not acquire Section 9 of the McCracken Mountains Parcels. Public access through these private properties and recreation opportunities on these parcels would not be available. Legal public access through Section 24 would not be resolved	Same as the Buckeye alternative, except that BLM would not acquire Sections 9, 3 and 19 of the McCracken Mountains Parcels. Legal public access through Section 24 would not be resolved.	The selected lands would remain under BLM administration, and impacts to access/recreation would be expected to be similar to those described under impacts common to all alternatives. The offered lands would remain in private ownership. Public access and recreation on these lands would not be available, and an opportunity to acquire them would be gone. Legal public access through Section 24 would remain unsolved
Same as Proposed Action.	Rights-of-way crossing the Copper Butte parcels will remain under BLM administration.	Selected lands would remain under BLM administration. BLM would not acquire the offered lands.
Approximately 7,396 acres (825 AUMs) relinquished from BLM administration and a loss of grazing income of $1,113.75/year. BLM would acquire 6,659 acres within five allotments, and increase grazing revenues by $326.34 per year.	Approximately 6,221 acres (698 AUMs) relinquished from BLM administration and a loss of grazing income of $834.30/year. BLM would acquire 5,601 acres within five allotments, increase grazing revenues by $274.53 per year.	Under the No Action, the selected lands would remain under BLM administration. BLM would not acquire the offered lands, which would remain in private ownership and subject to development or other private uses.

**The impacts discussed under the Proposed Action, Buckeye, Copper Butte and No Action Alternatives must be added to the impacts presented under Impacts Common to All Alternatives*

2.3.7 No Mining Election Alternative (Errata 2.1.5 in DEIS)

Should the land exchange not take place, a "no mining" election could occur, if: (1) the mining claimant[15] of record elects not to mine any portion of the selected public lands presently encumbered by mining claims; or (2) the mining claimant is barred from mining because its plan of operations is not approved or the claims are determined to be invalid. Even with the exchange, the same election could occur should the proponent elect not to mine or if the proponent was unable to secure the state and federal permits needed for mine operation.

Under the "no mining election," the minerals found within the claims would not be developed, and none of the actions contemplated under the Proposed Action, Copper Butte, Buckeye, or No Action alternatives would occur. The site would remain in its present state, and expansion of existing mining operations from adjoining lands would not take place. Surface disturbances created by mineral exploration and historic mining activities would remain to the extent not otherwise reclaimed.

The selected public lands would continue to be subject to the pressures of mineral development, given favorable economic circumstances, and would be available for future mine development attempts or other uses within the limits of applicable state and federal laws and regulations. Should there be no mining, certain employment and economic benefits would not accrue to the local and regional communities.

Given the prevailing circumstances, the likelihood of a no mining election is essentially nil and cannot be considered a reasonably foreseeable possibility under any of the alternatives, including the No Action Alternative.

2.4 COMPARATIVE SUMMARY OF ENVIRONMENTAL IMPACTS

Table 2-7 summarizes and compares the environmental impacts between the Proposed Action, Buckeye, Copper Butte and No Action Alternatives. Impacts resulting from the foreseeable uses, which are common to all alternatives and are likely to occur with or without a land exchange, are also identified in this table. Detailed analysis of impacts is provided in Chapter 4.

[15] As noted at Section 3.2.2.2, the selected lands are encumbered by a total of 751 mining claims. Each of the 31 parcels constituting the selected lands are encumbered by mining claims, except one (Parcel CH-5). Of these 751 claims, 747 (99.5 percent) are held by Asarco, and 4 (0.5%) are held by a third party (Parcel CH-1). Thus, references to "mining claimant" as a practical matter, refer to Asarco.

Table 2-7. Comparative Summary of Anticipated Environmental Consequences of the Proposed Action, Buckeye, Copper Butte and the No Action Alternatives, and Impacts Common to All Alternatives (the foreseeable mining uses) *Foreseeable Mining Use categories include: Production Operation and Support (POS) with 25%-100% surface disturbance, Transition (TRANS) with 5%-25% surface disturbance, Intermittent (INTER) with <5% surface disturbance, Long-Range Prospect (LRP) with surface disturbance similar to POS or TRANS and Existing (EXIST) where the surface is already disturbed.*

Resource/Issue	Impacts Common to All Alternatives (Implementation of Foreseeable Mining Uses on Selected Lands)	*PROPOSED ACTION (Preferred Alternative)
BIOLOGICAL RESOURCES **Upland Plant Communities** ***Section 4.1.1***	Approximately 10,891 acres impacted. 891 acres within EXIST (already disturbed), 4,037 within INTER, 3,416 within POS, 704 within TRANS, and 1,731 within LRP.	Asarco to acquire approximately 10,891 acres of upland plant communities; 10,000 acres of Sonoran desertscrub and 891 acres of disturbed plant communities. BLM to acquire approximately 7,148 acres of upland plant communities
Riparian Plant Communities ***Section 4.1.2***	Approximately ~~17-9~~ 3 acres of Sonoran Riparian Deciduous Forest[1] ~~and 17 acres of artificial ponds/reservoirs~~ impacted.	Asarco to acquire approximately ~~90~~ 34 acres of riparian communities; 17 acres Xeroriparian mixed grass, and ~~22~~ 17 acres Sonoran Riparian Deciduous Forest ~~and 54 acres of artificial ponds.~~ BLM would acquire approximately 152 acres of riparian plant communities ~~62~~ 118 acre net gain to BLM administered riparian habitat
Wildlife/Wildlife Habitats ***Section 4.1.3***	Approximately 10,090 acres of wildlife habitat impacted. Approximately 26-42 big game animals impacted. Specifically, 9-12 within INTER, 9-17 within POS, 3 within TRANS, and 6-10 within LRP.	Asarco to acquire approximately 10,976 acres of wildlife habitat (891 already disturbed) BLM would acquire approximately 7,300 acres of wildlife/wildlife habitat on the offered lands
Special Status Species ***Section 4.1.4***	Plants: Impacts to San Carlos buckwheat on RM-8, Gila rock daisy on CB-1 and CB-4, and Pima Indian Mallow on CH-1 Fish and Wildlife: Impacts to eight roosts providing potential habitat for Townsend's big-eared bat , California leaf-nosed bat and cave myotis on Parcels RM-1, RM-8, RM-10 and RM-18; elimination of an artificial pond containing lowland leopard frog; approximately ~~3,276~~ 4,108 acres of Category II and 3,982 acres of Category III desert tortoise habitat directly/indirectly impacted, approximately 1,150 acres of potential habitat for chuchwalla; longfin dace in Walnut Creek; and 40 acres of potential habitat for Western burrowing owl on CG-3.	Federal protection of special status plants, fish and wildlife located on selected lands would be discontinued due to exchange. Asarco to acquire approximately 6,860 acres of Category II and III desert tortoise habitat. BLM to acquire habitat for ten special status wildlife species including ~~6,040~~ 7,144 acres of Category I and II desert tortoise habitat[2] ~~and 640 acres of Category II desert tortoise habitat.~~

[1] Riparian vegetation acreage associated with artificial ponds was moved to Section 3.2.2 and 4.2, Physical Resources and therefore, riparian vegetation acreage decreased on the selected lands.

[2] Tortoise acreage on the selected lands was re-calculated to exclude private and State-owned surface parcels (split-estate), therefore, changing the acreage of Category II and III tortoise to be impacted under any of the alternatives (See Table 4-5).

**The impacts discussed under the Proposed Action, Buckeye, Copper Butte and No Action Alternatives must be added to the impacts presented under Impacts Common to All Alternatives*

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*BUCKEYE ALTERNATIVE	*COPPER BUTTE ALTERNATIVE	*NO ACTION ALTERNATIVE
Asarco to acquire approximately 9,200 acres of upland plant communities, of which, 891 acres already disturbed BLM to acquire approximately 6,508 acres of upland plant communities	Asarco to acquire approximately 8,586 acres of upland plant communities and approximately 891 acres already disturbed BLM to acquire approximately 5,450 acres of upland plant communities	Approximately 10,891 acres of upland plant communities would remain under BLM administration Approximately 7,300 acres of upland plant communities would remain under private ownership and subject to development or other private uses.
Asarco to acquire approximately ~~87~~ 34 acres of riparian plant communities ~~and artificial pond/reservoirs.~~ BLM would acquire approximately 152 acres of riparian plant communities on the offered lands. 118 acre net gain to BLM administered riparian habitat.	Asarco to acquire approximately ~~79~~ 34 acres of riparian plant communities BLM would acquire approximately 152 acres of riparian plant communities on the offered lands. 118 acre net gain to BLM administered riparian habitat.	~~90~~ 34 acres of riparian plant communities would remain under BLM administration. 152 acres of riparian plant communities, located on the offered lands, would remain in private ownership and subject to development or other private uses. BLM would forego an opportunity to increase BLM administered riparian habitat.
Asarco to acquire approximately 10,176 acres of wildlife habitat (891 acres already disturbed) BLM would acquire approximately 6,659 acres of wildlife habitat	Asarco to acquire approximately ~~9,176~~ 9,161 acres of wildlife habitat (891 already disturbed) BLM would acquire approximately 5,601 acres of wildlife habitat.	Approximately 10,976 acres of wildlife habitat would remain under BLM administration Approximately 7,300 acres of wildlife habitat on the offered lands, would remain under private ownership and subject to disturbance through private development or other private uses.
Federal protection of special status plants, fish and wildlife located on selected lands would be discontinued due to exchange. Approximately ~~800~~ 320 acres of Category II desert tortoise habitat on CB-1 would remain under BLM administration. BLM to acquire habitat for seven special status species including 6,504 acres of Category I and II desert tortoise habitat.	Federal protection of special status plants, fish and wildlife located on selected lands would be discontinued. Approximately ~~800~~ 652 acres of Category II and Category III desert tortoise habitat would remain under BLM administration as will populations of Gila rock daisy on CB-1 and CB-4. BLM to acquire habitat for seven special status species including 5,446 acres of Category I and II desert tortoise habitat.	Habitat for special status plants, fish and wildlife located on selected lands would remain under BLM administration including ~~1,251~~ 3,997 acres of Category II and ~~2,064~~ 3,063 acres of Category III desert tortoise habitat. An opportunity to acquired habitat for ten special status species, including 7,144 acres of Category I and II desert tortoise habitat, would be foregone and remain in private ownership and subject to development or other private uses.

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Table 2-7. Comparative Summary of Anticipated Environmental Consequences of the Proposed Action, Buckeye, Copper Butte and the No Action Alternatives, and Impacts Common to All Alternatives (the foreseeable mining uses) *Foreseeable Mining Use categories include: Production Operation and Support (POS) with 25%-100% surface disturbance, Transition (TRANS) with 5%-25% surface disturbance, Intermittent (INTER) with <5% surface disturbance, Long-Range Prospect (LRP) with surface disturbance similar to POS or TRANS and Existing (EXIST) where the surface is already disturbed.*

Resource/Issue	Impacts Common to All Alternatives (Implementation of Foreseeable Mining Uses on Selected Lands)	*PROPOSED ACTION (Preferred Alternative)
Threatened and Endangered (T&E) Species Plants, Fish and Wildlife ***Section 4.1.5***	~~No impacts because~~ No T & E plants, fish or wildlife are known to occur on the selected lands. Impacts to approximately five acres of southwestern willow flycatcher habitat; approximately 6,646 acres of potential habitat for cactus ferruginous pygmy-owl and potential habitat for lesser long-nosed bat (if range extension occurred).	Asarco to acquire approximately five acres of potential southwestern willow flycatcher and approximately 6,646 acres of potential CFPO cactus ferruginous pygmy-owl habitat and potential habitat for lesser long-nosed bats (if range extension occurred. BLM would acquire offered lands which provide habitat for the bald eagle, American peregrine falcon, cactus ferruginous pygmy-owl and southwestern willow flycatcher.
Critical Habitat ***Section 4.1.6***	No proposed or critical habitat occurs on any of the selected lands. Proposed critical habitat occurs on the Gila River Parcel at Cochran for the cactus ferruginous pygmy-owl.	~~None~~ BLM would acquire the Gila River Parcel at Cochran, which is proposed critical habitat for the cactus ferruginous pygmy-owl.
PHYSICAL RESOURCES **Surface Water** ***Section 4.2.1***	Under the foreseeable mining uses, potential impacts to surface waters would be regulated by Clean Water Act (CWA) sections 401, 402, and 404.[3] Cumulative impacts to surface water quality and quantity may occur in Middle Gila River watershed.	Asarco would acquire 13 springs and 3 stockponds on the selected lands. BLM would acquire surface water features on the offered lands, which include 0.50 miles of the Big Sandy River, 2 springs, 2 stockponds, 1.1 miles of the Gila River, and one wildlife catchment.
Groundwater ***Section 4.2.2***	Discharges to groundwater from foreseeable mining uses would be regulated by Arizona's APP program. This requires that groundwater quality at designated points of compliance meet aquifer water quality standards.[4]	Asarco would acquire one abandoned stock watering well. BLM would acquire one well.
Surface Water Rights/Well Permits ***Section 4.2.3***	Nine surface water sources and wells on the selected lands in the Ray Complex area may become unusable from foreseeable mining uses of the selected lands. Three other surface water sources would most likely continue to be utilized for their designated uses.	Five federal reserved rights (Public Water Reserve No. 107) would be withdrawn by BLM from ADWR's records. Seven other surface water rights claims would transfer to Asarco, including three associated with stockponds on the Copper Butte Parcels and four associated with springs on RM-18. Five surface water rights and one well permit on the offered lands would transfer to BLM.

[3] Residual impacts may occur after compliance with CWA permits, and are described in Section 4.2.1.1.

[4] Residual impacts may occur after compliance with APP, and are described in Section 4.2.2.1.

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*BUCKEYE ALTERNATIVE	*COPPER BUTTE ALTERNATIVE	*NO ACTION ALTERNATIVE
Asarco to acquire approximately five acres of potential southwestern willow flycatcher habitat, 5,846 acres of potential cactus ferruginous pygmy-owl habitat and potential habitat for lesser long-nosed bats. BLM would acquire offered lands which provide habitat for the bald eagle, American peregrine falcon, cactus ferruginous pygmy-owl and southwestern willow flycatcher.	Asarco to acquire approximately five acres of southwestern willow flycatcher, 4,831 acres of potential cactus ferruginous pygmy-owl habitat and potential habitat for lesser long-nosed bats. BLM would acquire offered lands which provide habitat for the bald eagle, American peregrine falcon, cactus ferruginous pygmy-owl and southwestern willow flycatcher.	Approximately five acres of potential southwestern flycatcher habitat, 6,646 acres of potential cactus ferruginous pygmy owl habitat and potential habitat for lesser long-nosed bats would remain under BLM administration. BLM would forego an opportunity to acquire ~~occupied~~ habitat for ~~these T & E wildlife species.~~ the southwestern willow flycatcher, cactus ferruginous pygmy-owl, peregrine falcon, and bald eagle.
~~None~~ BLM would acquire the Gila River Parcel at Cochran, which is proposed critical habitat for the cactus ferruginous pygmy-owl.	~~None~~ BLM would acquire the Gila River Parcel at Cochran, which is proposed critical habitat for the cactus ferruginous pygmy-owl.	~~None~~ BLM would not acquire the Gila River Parcel at Cochran, which is proposed critical habitat for the cactus ferruginous pygmy-owl.
Same as Proposed Action except that BLM would retain one spring and one stockpond on Parcel CB-1. BLM would not acquire one stockpond on the offered lands.	Same as Proposed Action except that BLM would retain three stockponds, and one abandoned well on Parcels CB-1, CB-2, and CB-3. BLM would not acquire one stockpond on the offered lands.	Same as Impacts Common to All Alternatives except that BLM would not acquire surface water features on the offered lands.
Same as Proposed Action	Same as Proposed Action	Same as Impacts Common to All Alternatives. BLM would forego an opportunity to acquire the one well on the offered lands.
Same as Proposed Action, except that one BLM water right associated with Parcel CB-1 for Rincon Reservoir would remain in federal ownership. Two water rights associated with Section 9 of the McCracken Mountains Parcels would not be acquired by BLM.	Same as Proposed Action, except that three BLM water rights associated with Parcels CB-1, CB-2, and CB-3 (for Rincon Reservoir, Dunn Tank No. 1, and Dunn Tank No. 2, respectively) would remain in federal ownership. Two water rights associated with Section 9 of the McCracken Mountains Parcels would not be acquired by BLM.	No water rights in the project area would transfer ownership. Five surface water rights and one well permit would remain in private ownership.

**The impacts discussed under the Proposed Action, Buckeye, Copper Butte and No Action Alternatives must be added to the impacts presented under Impacts Common to All Alternatives*

Table 2-7. Comparative Summary of Anticipated Environmental Consequences of the Proposed Action, Buckeye, Copper Butte and the No Action Alternatives, and Impacts Common to All Alternatives (the foreseeable mining uses) *Foreseeable Mining Use categories include: Production Operation and Support (POS) with 25%-100% surface disturbance, Transition (TRANS) with 5%-25% surface disturbance, Intermittent (INTER) with <5% surface disturbance, Long-Range Prospect (LRP) with surface disturbance similar to POS or TRANS and Existing (EXIST) where the surface is already disturbed.*

Resource/Issue	Impacts Common to All Alternatives (Implementation of Foreseeable Mining Uses on Selected Lands)	*PROPOSED ACTION (Preferred Alternative)
Air Quality ***Section 4.2.4***	All parcels within the Ray Complex and Copper Butte/Buckeye areas are within a non-attainment area for PM_{10} and all parcels within the Chilito/Hayden area are within a non-attainment area for both PM_{10} and SO_2. Any impacts to air quality resulting in accedences in PM_{10} or SO_2 would require a modification to Asarco's Title V Permit from ADEQ.	The exchange of selected lands in and of itself would not affect air quality. Acquisition of the offered lands is not expected to impact air quality.
Soils ***Section 4.2.5***	Approximately 10,339 acres of soils in the Ray Complex, Copper Butte/Buckeye and Chilito/Hayden areas and approximately 637 acres of soils in the Casa Grande area impacted.	Approximately 10,976 acres of soils on the selected lands would be acquired by Asarco. BLM would acquire 7,300 acres of soils on the offered lands.
MINERAL RESOURCES **Mineral Potential** ***Section 4.3.1***	The selected lands would be mined for copper under all the alternatives	None
Mineral Rights ***Section 4.3.2***	Asarco would exercise mineral rights on all mining claims. Third-party claims located on Parcel CH-1 would need to be resolved before mining can occur.	BLM would acquire the offered lands and petition to withdraw two parcels to mineral entry (Tomlin #4 and Gila River Parcel at Cochran).
LAND USE **Land Ownership** ***Section 4.4.1***	Foreseeable mining uses on the selected lands could occur under private or public ownership.	Two percent increase in privately-held lands in Pinal County and 0.3 percent increase in Gila County. In addition, a 0.1 percent decrease in publicly-held lands in Pinal County. BLM administered split-estate lands in the Ray Complex, Copper Butte/Buckeye and Chilito/Hayden areas would decrease from 48 to 43 percent. Increase in publicly-held lands in Mohave County.

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*BUCKEYE ALTERNATIVE	*COPPER BUTTE ALTERNATIVE	*NO ACTION ALTERNATIVE
Same as Proposed Action.	Same as Proposed Action.	The selected lands would remain under BLM administration. BLM would not acquire the offered lands as they would remain under private ownership and subject to development or other private uses.
Approximately 10,176 acres of soils on the selected lands would be acquired by Asarco.	Approximately 9,161 acres of soils on the selected lands would be acquired by Asarco.	Asarco would not acquire any of the selected lands and BLM would not acquire any of the offered lands.
None	None	None
Same as Proposed Action.	Same as Proposed Action.	Existing mineral rights would continue to be held by Asarco. BLM would not acquire the mineral rights of the offered lands and would be unable to petition to withdraw Tomlin #4 and Gila River Parcel at Cochran to mineral entry.
Approximate two percent increase in privately-held lands in Pinal County and 0.3 percent increase in Gila County. In addition, a 0.1 percent decrease in publicly-held lands in Pinal County. BLM administered split-estate lands in the Ray Complex, Copper Butte/Buckeye and Chilito/Hayden areas would decrease from 48 to 43 percent. Increase in publicly-held lands in Mohave County.	Approximate two percent increase in privately-held lands in Pinal County and 0.3 percent increase in Gila County. In addition, a 0.1 percent decrease in publicly-held lands in Pinal County. BLM administered split-estate lands in the Ray Complex, Copper Butte/Buckeye and Chilito/Hayden areas would decrease from 48 to 43 percent. Increase in publicly-held lands in Mohave County.	No change from existing land ownership, the selected lands would continue to be administered under the BLM Phoenix and Safford RMPs. The offered lands would remain under private ownership and the BLM would forego an opportunity to acquire these lands.

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Resource/Issue	Impacts Common to All Alternatives (Implementation of Foreseeable Mining Uses on Selected Lands)	*PROPOSED ACTION (Preferred Alternative)
Management of Public Lands ***Section 4.4.2***	Impacts to management of public lands are expected when Asarco proceeds with foreseeable mining uses regardless of land ownership.	BLM would have substantially less management responsibilities under 3809 if Asarco acquires the selected lands. BLM will have fewer management conflicts in various wilderness and ACEC areas within Arizona by acquiring the offered lands.
Access and Recreation ***Section 4.4.3***	Battle Axe Road would be used by Asarco for mining operations at Copper Butte. Two alternative routes for access/recreation to Walnut Canyon and White Canyon Wilderness are being considered. In addition, alternative trail segments are being considered for the Arizona Trail. BLM has selected proposed Route #2 to replace the existing Battle Axe Road to the White Canyon Wilderness. Back country vehicle recreation in the Copper Butte/Buckeye area would be impacted by implementation of foreseeable mining uses. Proposed mitigation would allow access to popular sites (e.g. Coke Ovens and artesian well).	Some alignments proposed for the AZ Trail would be impacted as these would require Asarco permission to develop or require realignment. BLM would acquire offered lands in five special management areas, consolidating public land ownership and alleviating potential public access problems through those lands.
Rights-of-Way ***Section 4.4.4***	Three rights-of-way occur within the POS Use category and will likely need to be relocated: a portion of county road (Battle Axe Road AZA 21389), an electric power line (AZA 2146), and Highway 177 (AZAR 024241). Rights-of-way occurring in other foreseeable use categories could potentially be impacted, but not necessarily relocated.	BLM would transfer title of selected lands to Asarco and all rights-of-way would remain intact. Asarco would no longer need an easement for Parcel CH-4 (AZA 1000). Acquisition of the offered lands is not expected to impact any rights-of-way.
Grazing ***Section 4.4.5***	Approximately 4,814 acres and 379 AUMs of BLM administered grazing land in seven allotments would be impacted.	BLM would relinquish management of and grazing income of $1,239.30/year from approximately 8,196 acres (918 AUMs) and seven improvements within seven grazing allotments. BLM would acquire 7,300 acres within five allotments, totaling 288AUMs and $587.25 per year.

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*BUCKEYE ALTERNATIVE	*COPPER BUTTE ALTERNATIVE	*NO ACTION ALTERNATIVE
Same as Proposed Action, however, should Asarco ultimately seek to develop the Buckeye Deposit, it would have to be done under BLM's 3809 regulations, which would result in long-term BLM management of the Buckeye operation.	Same as Buckeye Alternative except Parcels CB-1, CB-2, and portions of CB-3 would remain under BLM administration, requiring management under 3809.	Implementation of the foreseeable mining uses via MPO, would require long-term BLM resources and oversight. Implementation of foreseeable mining uses might require BLM to process future patent applications, but currently new patent applications are not being accepted. BLM would forego an opportunity to acquire the offered lands. In addition, the McCracken Mountains ACEC would remain checker-boarded with fragmented management conflicts.
Same as Proposed Action, except that BLM would not acquire Section 9 of the McCracken Mountains Parcels. Public access through these private properties and recreation opportunities on these parcels would not be available. Legal public access through Section 24 would not be resolved.	Same as the Buckeye alternative, except that BLM would not acquire Sections 9, 3 and 19 of the McCracken Mountains Parcels. Legal public access through Section 24 would not be resolved.	The selected lands would remain under BLM administration, and impacts to access/recreation would be expected to be similar to those described under impacts common to all alternatives. The offered lands would remain in private ownership. Public access and recreation on these lands would not be available, and an opportunity to acquire them would be gone. Legal public access through Section 24 would remain unsolved
Same as Proposed Action.	Rights-of-way crossing the Copper Butte parcels will remain under BLM administration.	Selected lands would remain under BLM administration. BLM would not acquire the offered lands.
Approximately 7,396 acres (825 AUMs) relinquished from BLM administration and a loss of grazing income of $1,113.75/year. BLM would acquire 6,659 acres within five allotments, and increase grazing revenues by $326.34 per year.	Approximately 6,221 acres (698 AUMs) relinquished from BLM administration and a loss of grazing income of $834.30/year. BLM would acquire 5,601 acres within five allotments, increase grazing revenues by $274.53 per year.	Under the No Action, the selected lands would remain under BLM administration. BLM would not acquire the offered lands, which would remain in private ownership and subject to development or other private uses.

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Resource/Issue	Impacts Common to All Alternatives (Implementation of Foreseeable Mining Uses on Selected Lands)	*PROPOSED ACTION (Preferred Alternative)
Visual Quality ***Section 4.4.6***	Foreseeable mining uses at the proposed Copper Butte pit and Buckeye Long-Range Prospect would be visible from 35% of the Copper Butte/ Buckeye visual quality study area, which includes the White Canyon Wilderness. An estimated 8% of the residents of the Silver Creek Community would view mining activity at Copper Butte.	Visual impacts from mining would occur on private lands rather than public lands BLM would acquire all of the offered lands, and visual quality would be protected from development in special management areas.
Wilderness/ Special Management Areas ***Section 4.4.7***	Noise, air, and visual quality impacts resulting from the foreseeable mining uses would impact naturalness and solitude values in White Canyon Wilderness. Mining would be visible from higher areas within the wilderness, however visitors would be able to avoid these impacts by using the relatively protected canyon portions of the wilderness as they do today. Potential impacts expected for proposed public access Route #1 to White Canyon Wilderness and the Silver Creek community, therefore Route #2 is BLM's preferred alternative access route.	Asarco to acquire selected lands with private lands adjacent to wilderness and ACEC. BLM acquires offered lands in, or adjacent to, the Mount Tipton and Warm Springs Wilderness Areas as well as lands within three special management areas. Acquisition improves management proficiencies within each RMP and reduces management conflicts regarding access for recreation use.
CULTURAL RESOURCES **Archaeological Resources** ***Section 4.5.1***	Potential impacts to ~~80~~ 78 archaeological sites would be mitigated through the implementation of a treatment plan. Specifically, 43 sites within the Ray Complex and 35 sites within the Copper Butte/Buckeye area.	~~80~~ 56 sites transferred into private ownership after mitigation. Potential impacts to 78 sites would be mitigated through the implementation of a treatment plan. The exchange would place at least 11 sites into public ownership, where they would be afforded federal management and protection under ARPA and NHPA .
Places of Traditional Importance ***Section 4.5.2***	BLM is consulting with tribes to help identify places of traditional importance on the selected lands. None identified to date.	Same as Impacts Common to all Alternatives
SOCIOECONOMIC RESOURCES **Population and Demographics** ***Section 4.6.1***	None Expected	None Expected

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*BUCKEYE ALTERNATIVE	*COPPER BUTTE ALTERNATIVE	*NO ACTION ALTERNATIVE
Same as Proposed Action, but BLM would not acquire Section 9 of the McCracken Mountains Parcels, and potential future visual impacts from mining activities on Parcel CB-1 would occur on public lands rather than private lands.	Same as Buckeye Alternative, except BLM would not acquire Sections 9, 3, 19 of the McCracken Mountains Parcels. Additional visual impacts in the Copper Butte/Buckeye area as Parcels CB-1, CB-2 and a portion of CB -3 would remain in public ownership	The selected lands would remain under BLM, and visual impacts would be expected to be similar to impacts common to all alternatives. BLM would not acquire the offered lands, and the potential for visual impacts from private development within Special Management Areas would remain.
Same as Proposed Action BLM acquisition of offered lands except Section 9 of the McCracken Mountains Parcels improves management within the Phoenix and Kingman RMP and reduces management conflicts regarding access for recreation use.	Same as Proposed Action BLM acquisition of offered lands except Sections 9, 3 and 19 of the McCracken Mountains Parcels improves management within each RMP and reduces management conflicts regarding access for recreation use.	Selected lands would remain under BLM administration. BLM would not acquire any of the offered lands, which would remain under private ownership and subject to development and other private uses. Landowners could potentially apply for access roads to properties located within wilderness.
The exchange would transfer ~~76~~ 52 sites into private ownership after mitigation. Potential impacts to ~~74~~ sites would be mitigated through the implementation of a treatment plan. The exchange would place at least 11 sites into public ownership, where they would be afforded federal management and protection.	The exchange would transfer ~~64~~ 40 sites into private ownership after mitigation. Potential impacts to 62 sites would be mitigated through the implementation of a treatment plan. The exchange would place at least 11 sites into public ownership, where they would be afforded federal management and protection.	Sites on the offered lands would be subject to the rights of private ownership to the degree that private actions are regulated by local, state, and federal law. Sites on BLM surface on the selected lands would remain subject to BLM management and control.
Same as Impacts Common to all Alternatives	Same as Impacts Common to all Alternatives	Same as Impacts Common to All Alternatives.
None Expected	None Expected	None Expected

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Resource/Issue	Impacts Common to All Alternatives (Implementation of Foreseeable Mining Uses on Selected Lands)	*PROPOSED ACTION (Preferred Alternative)
Local and Regional Economy ***Section 4.6.2***	Asarco would retain 48 employees for the Copper Butte/Buckeye project. Average total income in salaries/wages to employees at Ray Complex and Copper Butte operations is approximately $1,882,000/year. Asarco is estimated to pay approximately $1,080,600/yr in taxes for Ray Complex and Copper Butte operations.	The exchange would affect the local economy through increased property tax revenues in Pinal and Gila Counties. Reductions in the property tax rolls of counties containing the offered lands are small and are potentially offset by PILT payments. For Mohave County, the result is a net loss of $15,700, $ 3,900 in Pinal County of the county's total property tax receipts.
Environmental Justice ***Section 4.6.3***	None-- Several meetings were held for the residents of the Silver Creek Community to give more detailed information of the Proposed Action and alternatives and to discuss the possible impacts.	None

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*BUCKEYE ALTERNATIVE	*COPPER BUTTE ALTERNATIVE	*NO ACTION ALTERNATIVE
Same as Proposed Action, except Section 9 of the McCracken Mountains Parcels not acquired, therefore resulting in less property tax in Mohave County as compared to the Proposed Action.	Same as Buckeye Alternative except Sections 9, 3 and 19 of the McCracken Mountains Parcels would not be acquired by BLM.	Asarco would retain its 1600 employees at the Ray Complex operations and there would be no change in taxes or income as existing operations would continue. Offered lands would remain under private ownership and subject to development and other private uses.
None	None	None

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