

1 **Landownership and Boundary Management**

2 **Introduction**

3 Landownership within and surrounding the project area consists of private lands owned by Rosemont
4 Copper and other private landowners, State lands managed by the ASLD and the University of
5 Arizona, and lands managed by the Forest Service and the BLM.

6 **Changes from the Draft Environmental Impact Statement**

7 No comments related to landownership or boundary management were received during the comment
8 period for the DEIS.

9 This section of the DEIS included individual analysis areas for each of the five action alternatives and
10 described the acres of NFS, BLM, and ASLD Trust land to be impacted by mining activities. A review
11 of the analysis indicated that the issues related to landownership boundaries and survey monuments
12 focus on the boundaries and monuments that would be damaged or destroyed by the action
13 alternatives, along with the impacts to the Forest Service's ability to manage mineral survey fractions
14 after the mine closes.

15 Overall acres of NFS, BLM, and ASLD State Trust land impacted by mining activities is not directly
16 relevant to the issues associated with damage to landownership boundaries and survey monuments;
17 therefore, that analysis, tables 102 and 103 of the DEIS, and the maps of associated spatial analysis
18 areas have not been included in the FEIS.

19 Several events have occurred since the release of the DEIS that address issues associated with
20 landownership and boundary management.

- 21 • A BLM administered dependent resurvey has been completed. The intent of a dependent
22 resurvey is to inventory all corner monuments, including lost corner monuments that would
23 be impacted by the project in order to allow future reestablishment of ownership boundaries
24 and survey monuments.
- 25 • The ACC determined the final location for the electric transmission line, and in accordance
26 with the DEIS, the water supply pipeline and secondary access road will be co-located in the
27 same corridor in order to reduce potential impacts. The final location does not involve land
28 administered by the BLM; therefore, the 3 acres of impact to this land shown in table 102 of
29 the DEIS is no longer valid.

30 This section of the FEIS has been reorganized to reflect the current situation as it relates to
31 landownership and boundary management, considering completion of the dependent resurvey and the
32 decision on the location of the electric transmission line, waterline, and access road.

33 **Issues, Cause and Effect Relationships of Concern**

34 During the scoping period, no public comments or significant issues concerning landownership or
35 boundary management were identified. However, the protection of survey monuments and
36 landownership boundaries is an important concern for the Forest Service, and all action alternatives
37 would damage, destroy, or obliterate corner monuments and landownership boundaries.

1 **Affected Environment**

2 **Relevant Laws, Regulations, Policies, and Plans**

3 Major legislation, mandates, and guidance directing the administration of land use on public lands
4 include the following:

- 5 • “Coronado National Forest Land and Resource Management Plan,” as amended
6 (U.S. Forest Service 1986);
- 7 • General Mining Law of 1872;
- 8 • Title 18 U.S.C. 1858 (62 Statute 789);
- 9 • FSM 5571 (U.S. Forest Service 2003);
- 10 • FSM 7152 (U.S. Forest Service 2000);
- 11 • Small Tracts Act of January 12, 1983 (Public Law 97-465);
- 12 • BLM Manual and Handbook 1790-1 and Departmental Guidance (516 DM 1-4) (Bureau of
13 Land Management 2008, 2009a); and
- 14 • ARS 33-103(d) and (e).

15 **Existing Conditions**

16 ***Landownership***

17 **Private Lands**

18 Private lands in the vicinity of the project area and utility corridor include private property, fee lands,
19 and patented mine claims. Rosemont Copper owns 132 patented lode mining and mill site claims
20 totaling approximately 1,969 acres. Rosemont Copper also owns approximately 742 acres in fee lands
21 (e.g., Rosemont Ranch) in the vicinity of the 132 patented claims within the Rosemont and Helvetia
22 mining districts.

23 **National Forest System, Public, and State Trust Lands**

24 ***National Forest System Lands***

25 The area surrounding the mine site includes NFS lands in the Nogales Ranger District’s Santa Rita
26 Ecosystem Management Area.

27 ***Lands Administered by the Bureau of Land Management***

28 The area surrounding the mine site includes public land managed by the BLM Tucson Field Office;
29 however, no ground-disturbing activities would occur on these lands.

30 ***Arizona State Trust Land***

31 The area surrounding the mine site includes State land managed by the ASLD and the University of
32 Arizona.

33 **Mineral Survey Fractions**

34 Mineral survey fractions are small parcels of NFS lands interspersed within or adjacent to lands
35 transferred out of Federal ownership under the mining laws (36 CFR 254.31, “Definitions”). Mineral
36 survey fractions are difficult to efficiently manage as public lands because of their size and location.
37 The Coronado’s specialist report titled “Rosemont Mine Boundary Management Mitigation” (McKay
38 2010) states, “The current fragmented and irregularly-shaped landownership configuration in the

1 proposed Rosemont Copper project area is based on numerous patented lode mining and mill-site
 2 claims as well as lands patented under the Homestead Act of 1862 (rectangular system).” Seven
 3 known mineral survey fractions with a total of approximately 5.5 acres are completely surrounded by
 4 the patented mining claims owned by Rosemont Copper. Figure 77 shows the location of the seven
 5 mineral survey fractions known to exist within the patented mining claims.

6 ***Boundary Management***

7 Approximately 202 mineral survey corner monuments (150 wood posts, 13 stones, and 33 iron pipes)
 8 control approximately 19.5 miles of property boundary between NFS lands and private land owned by
 9 Rosemont Copper within or very near the footprint of the proposed action (pit, roads, plant site, truck
 10 shop, waste rock facility, dry-stack tailings, pollution management area, and security fencing) on the
 11 Coronado National Forest. The mineral survey corner monuments were originally set between 1881
 12 and 1978.

13 In addition, there are approximately 81 section and quarter-section corner monuments (Rectangular
 14 System of Surveys) within or very near the footprint of the proposed action that either control
 15 approximately 7.5 miles of property boundaries between NFS and private land patented under the
 16 Homestead Act or that may be needed for future administrative or management purposes. The section
 17 and quarter-section corner monuments were originally set between 1874 and 1926. There are also
 18 29 intersection points where patented mineral surveys overlap areas controlled by mineral survey
 19 corner monuments and nine intermediate corner monuments controlled by section and quarter-section
 20 corner monuments. Many of these corners are currently in some stage of deterioration or have been
 21 completely lost and are difficult to identify and recover (especially wood post and stone monuments).

22 Preservation of these corner monuments in their original location is important for both the protection
 23 of private property rights and the sound management of NFS lands in the area, both now and in the
 24 future. In addition, it is a Federal penalty to engage in the unauthorized alteration or removal of any
 25 government survey monument or marked tree (18 U.S.C. 1858 (62 Statute 789)).

26 **Environmental Consequences**

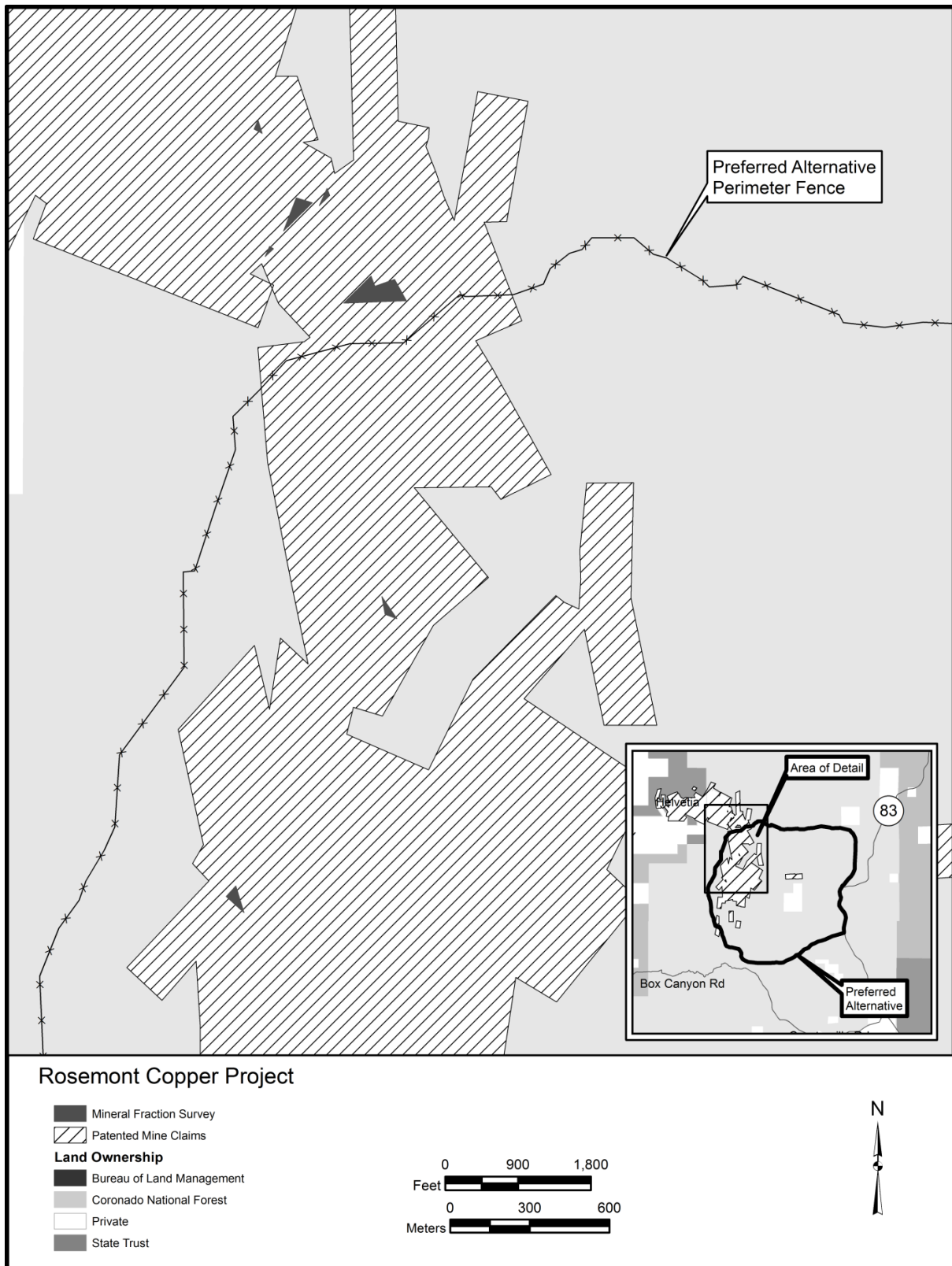
27 **Direct and Indirect Effects of Each Alternative**

28 ***No Action Alternative***

29 Landownership and boundary management would not incur direct or indirect effects under the no
 30 action alternative. Private land in the form of patented mining claims and fee lands would remain, and
 31 management responsibilities of the Coronado, BLM, and ASLD would continue for NFS lands, public
 32 lands, and State lands, respectively. As population growth continues in southern Arizona, the trend of
 33 community growth and subdivision is expected to continue.

34 ***Impacts Common to All Action Alternatives***

35 The direct effects of the action alternatives on landownership and boundary management are the
 36 destruction of the corner monuments used to delineate property boundaries. The action alternatives
 37 incorporate the mineral survey fractions into the operations facilities and render the Coronado’s
 38 postclosure ability to manage these parcels according to its responsibilities difficult, if not impossible.



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2 **Figure 77. Mineral survey fractions**

1 **Landownership**

2 ***Mineral Survey Fractions***

3 Seven known mineral survey fractions of approximately 5.5 acres of Coronado National Forest lands
4 would be impacted by the action alternatives. These mineral survey fractions would be incorporated
5 into the operations facilities, such as the tailings and waste rock facilities and the pit, during the
6 construction and operation phases.

7 ***Boundary Management***

8 Approximately 202 mineral survey corner monuments (includes 150 wood posts, 13 stones, and
9 33 iron pipes) that control approximately 19.5 miles of property boundary between NFS lands and
10 private land owned by Rosemont Copper are within or very near the footprints of the action
11 alternatives.

12 Approximately 81 section and quarter-section corner monuments are within or very near the footprint
13 of the action alternatives. These corner monuments control approximately 7.5 miles of property
14 boundaries between NFS lands and private land patented under the Homestead Act of 1862 and are
15 needed for future administrative or management purposes.

16 With completion of the dependent resurvey, all issues associated with damage or destruction to
17 ownership boundaries and survey monuments have been resolved. Ownership boundaries and survey
18 monuments can be relocated postclosure using the results of the dependent resurvey.

19 **Cumulative Effects**

20 The list of reasonably foreseeable actions was reviewed to determine whether any foreseeable
21 projects or actions could result in impacts that could combine with those of the proposed action or
22 action alternatives and result in cumulative impacts. No reasonably foreseeable future actions were
23 identified that are expected to have a cumulative effect on landownership and boundary management.

24 ***Climate Change***

25 Anticipated changes in the climate of southern Arizona are not expected to have any effects on
26 landownership or boundary management.

27 **Mitigation Effectiveness**

28 ***Mitigation and Monitoring – Forest Service***

29 **Boundary Management**

- 30 • **Resurvey of existing survey monuments and land lines to allow reestablishment**
31 **postmining.** A BLM administered dependent resurvey that extends beyond the project area
32 has been completed. A dependent resurvey is a retracement and reestablishment of the lines of
33 the original survey in their true original positions according to the best available evidence of
34 the positions of the original corners. The dependent resurvey includes the restoration of lost
35 corners in accordance with procedures described in the “Manual of Instructions for the
36 Survey of the Public Lands of the United States” (Bureau of Land Management 2009b).
37 The intent of the BLM administered dependent resurvey is to inventory all corner monuments
38 that would be impacted by the project, including lost corner monuments.

1 A control network of monuments referenced to the property corner monuments has been set
2 outside the disturbance area. The purpose of the control network is to perpetuate the corner
3 monuments and property lines that would be impacted by providing position data for locating
4 the destroyed corner monuments in the reclamation phase. By setting the control network
5 outside the disturbance area prior to ground-disturbing activities, the “control network
6 ensures the easy recovery of any corner position or property line of the dependent resurvey at
7 any time in the future and mitigate the difficulty and future expense to reestablish lost corner
8 positions and property lines during reclamation” (McKay 2010).

- 9 • **Reestablish survey monuments and surveyed land line upon completion of final**
10 **reclamation.** Upon completing reclamation, Rosemont Copper would be required to restore
11 and properly mark survey monuments and landownership boundaries. Rosemont Copper
12 would use the BLM’s “Field Notes of the Dependent Resurvey” to restore survey
13 monuments, referring to Global Positioning System (GPS) Control Network.

14 ***Mitigation and Monitoring – Rosemont Copper***

15 **Landownership**

- 16 • **Transferring ownership of small slivers of land within the mining footprint from the**
17 **Coronado to Rosemont Copper.** The sale of the seven currently known mineral survey
18 fractions (approximately 5.5 acres total), plus any additional survey fractions identified by a
19 dependent resurvey, by the Coronado to Rosemont Copper could mitigate the impacts to
20 landownership. Rosemont Copper has agreed to purchase seven currently known mineral
21 survey fractions (approximately 5.5 acres total), plus any additional survey fractions
22 identified by the dependent resurvey, to mitigate the impacts to landownership. By selling
23 these mineral survey fractions to Rosemont Copper, the Coronado could avoid the impact of
24 increased difficulty in managing these parcels after they become integrated in the mining
25 facilities. However, it is important to note that the Forest Service lacks the authority to
26 require Rosemont Copper to purchase these mineral survey fractions. Should Rosemont
27 Copper choose not to purchase the mineral survey fractions, the Forest Service’s ability to
28 manage these small, isolated parcels would be severely limited.
- 29 • **Eliminate future development of private lands located on top of waste rock and tailings**
30 **facilities.** The Forest Service has requested that Rosemont Copper record a restrictive
31 covenant on any privately held land that is within the footprint of the tailings and waste rock
32 facilities to restrict potential future development. The intent of this mitigation is to avoid
33 potential future actions that could compromise reclamation, including the stability of the
34 facilities and success of revegetation activities. While there is no legal mechanism for the
35 Forest Service to require Rosemont Copper to record a restrictive covenant on their private
36 lands, Rosemont Copper has expressed an interest in working with the Forest Service on this
37 issue.

38 ***Conclusion of Mitigation Effectiveness***

39 Since the dependent survey has been completed and landownership boundaries and survey
40 monuments would be able to be relocated postclosure as needed, there are no remaining impacts to
41 boundary management.

1 Should Rosemont Copper carry out their intention to purchase mineral fractions, then impacts to the
2 Forest Service's ability to manage these slivers of land as NFS lands would be eliminated. However,
3 if the sale does not occur, it would be difficult for the Forest Service to manage these small parcels.

4 If Rosemont Copper were to record a restrictive covenant on its private lands within the footprint of
5 the tailings and waste rock facilities, potential impacts to reclamation success from future
6 development would be avoided.

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