



United States Department of Agriculture

Apache Leap Special Management Area Management Plan Errata to Final Environmental Assessment



Forest Service

Tonto National Forest

Globe Ranger District

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Apache Leap Special Management Area Management Plan Project Environmental Assessment

Errata Sheet

December 2017

The Apache Leap Special Management Area Management Plan Project Final Environmental Assessment (EA) was released in August 2017. This errata sheet documents corrections to the text of the published EA, and should be reviewed along with the final EA. These corrections reflect instruction provided by the Objection Reviewing Officer in letters in December 2017. These corrections are consistent with direction given in Forest Service Handbook 1909.15, Chapter 10, Section 18. There are no changes to the project or significant new circumstances identified in this errata sheet that affect the analysis and conclusions in the Apache Leap Special Management Area Management Plan Project Final Environmental Assessment.

Language with a strikethrough is deleted from the EA, and underlined language is added.

The revised sections are listed below in bold text.

- **Page 15, section titled “Proposed Action,” under the subtitle “New Plan Components,” under the heading “Natural Character and Scenery,” and under the subtitle “Guidelines”**

Management Approaches

~~If Resolution Copper’s proposed “General Plan of Operations” is approved, develop a seismic monitoring strategy in consultation with Resolution Copper mining engineers and geologists to provide a means to monitor, estimate, and anticipate the effects of future proposed mining adjacent to the special management area in order to preserve the natural character, cultural, and historic resources of the Apache Leap SMA as much as practicable. The monitoring strategy should include seismic monitoring equipment on the surface and subsurface, surface monuments (e.g., wooden or concrete post) that would be surveyed for movement, monitoring locations for collecting rock mechanics data, and a baseline survey using state-of-the-art methods, such as LiDAR, to establish pre-mine conditions against which future surveys could be compared. The strategy should identify and explore solutions to remediate and mitigate surface conditions that could threaten the integrity of the Apache Leap SMA as allowed by pertinent laws and regulations.~~

~~Implementation of the seismic monitoring strategy should occur as soon as practicable, and before the commencement of any mine-related activities that may be authorized under the proposed “General Plan of Operations” and related documents. The intent of the monitoring strategy is to:~~

- ~~1. Provide an adequate period before mine construction and development in which to collect baseline seismic and other monitoring information;~~
- ~~2. Ensure that the Forest Service is integrally involved in the design of the monitoring plan, and~~
- ~~3. Ensure that monitoring information is adequately reported and independently assessed by the Forest Service, including any monitoring information collected and made available to the Forest Service from areas outside the Apache Leap SMA. Further detail~~

~~should be provided in the Monitoring and Evaluation Plan for the Resolution Copper Project and Land Exchange Final Environmental Impact Statement.~~

6. To meet the desired conditions for natural character, a data collection strategy should occur to monitor, estimate, and anticipate the effects of future proposed mining activities adjacent to the special management area.
 - To provide an adequate period to collect baseline information, implementation of the strategy should occur as soon as practicable, and before the commencement of any mine-related activities that may be authorized under Resolution Copper's proposed "General Plan of Operations" and related documents.
 - The strategy, at a minimum, should include these design criteria: seismic monitoring equipment on the surface and subsurface, surface monuments (e.g., wooden or concrete post) that would be surveyed for movement, monitoring locations for collecting rock mechanics data, and a baseline survey using state-of-the-art methods, such as LiDAR, to establish pre-mine conditions against which future surveys could be compared.
 - The strategy should specify what, where and how data is to be collected and the frequency for evaluating and reporting results.
 - The strategy should identify and explore solutions to remediate and mitigate surface conditions that could threaten the integrity of the Apache Leap SMA as allowed by pertinent laws and regulations.
- **Pages 16–17, section titled “New Plan Components” and subtitled “Tribal” under the heading “Management Approaches”** – This section is updated as follows:
 - ~~Consider working Work~~ with tribes to develop a monitoring strategy and timeline to ensure that Traditional Cultural Property values are protected from vandalism, looting, and other forms of human disturbance.
 - Consider implementing actions to secure and stabilize sites, including permanent or seasonal closures pending assessment and determination of appropriate actions to protect the sites or traditional use areas.
 - ~~Consider developing Develop~~ a strategy to incorporate the private land in the Apache Leap SMA into the *Chi'chil Bildagoteel* Historic District to be included on the formal National Register listing.
 - ~~Consider working Work~~ with tribes to ensure that healthy sustainable plant populations are available for traditional uses.
- **Page 19, section titled “Recreation” and subtitled “Management Approaches”** – This section is updated as follows: Within the Climbing Management Plan, consider designating approaches to the escarpment from the west side, ~~designating identifying existing and future climbing routes, and prohibiting new bolting on select climbing routes~~ defining how climbing routes would be managed to minimize environmental natural and cultural resource impacts.
- **Page 31, section titled “Natural Character and Scenery” and subtitled “Environmental Consequences” under the heading “NDAA-Authorized Activities”** – This section is updated as follows: The management plan addresses cumulative effects resulting from the Resolution Copper Project and Land Exchange through inclusion of a ~~management approach guideline that encourages the Forest Service to develop a strategy in consultation with Resolution Copper mining engineers and geologists to provide a means to~~ that monitors, estimates, and anticipates, where possible, the effects of future mining activities adjacent to the special management area in order to preserve the natural character, cultural, and historic resources of the Apache Leap SMA as much as practicable. The management plan further details how the Forest Service would

develop and implement this ~~management approach~~ guideline. Implementation of this strategy and other aspects of the management plan would reduce overall cumulative effects on the Apache Leap SMA from the projects described above.

- **Page 53, section titled “Recreation” and subtitled “Environmental Consequences” under the heading “NDAA-Authorized Activity”** – This section is updated as follows: Within the Climbing Management Plan, consider designating approaches to the escarpment from the west side, ~~designating~~ identifying existing and future climbing routes, and ~~prohibiting new bolting on select climbing routes~~ defining how climbing routes would be managed to minimize ~~environmental~~ natural and cultural resource impacts.”
- **Page 62, section titled “Wildlife” and subtitled “Environmental Consequences” under the heading “Resolution Copper Pre-feasibility Hydrological Monitoring Wells”** – This section is updated as follows: The administrative use would continue to be subject to environmental protection measures, including those for biological resources, as described in the “~~Resolution Copper Mining Baseline Hydrological and Geotechnical Data Gathering Activities Pre-feasibility Activities Plan of Operations Final Environmental Assessment~~” (Forest Service, 2016d0).
- **Page 62, section titled “Wildlife” and subtitled “Environmental Consequences” under the heading “NDAA-Authorized Activities”** – This section is updated as follows: Potential impacts for NDAA-related activities would be addressed under the management approach for ~~natural character and scenery~~ wildlife that calls for the Forest Service to develop and implement a monitoring plan for wildlife in conjunction with Resolution Copper.
- **Page 66, section titled “Vegetation” and subtitled “Environmental Consequences” under the heading “Resolution Copper Pre-feasibility Hydrological Monitoring Wells”** - This section is updated as follows: The administrative use would continue to be subject to environmental protection measures, including those for biological resources, as described in the “~~Resolution Copper Mining Baseline Hydrological and Geotechnical Data Gathering Activities Pre-feasibility Activities Plan of Operations Final Environmental Assessment~~” (Forest Service, 2016d0).
- **Page C-60, response to comments 53** – This response is updated as follows: Additional language has been added to management plan Section 3.1.4 3.1.3, “~~Management Approaches Guidelines~~,” for Natural Character and Scenery to elaborate on the expectations and intent of the monitoring plan (including seismic monitoring) ~~to be prepared during the NEPA (EIS) process~~.
- **Page C-61, response to comments 68** – This response is updated as follows: Additional language has been added to management plan Section 3.1.4 3.1.3, “~~Management Approaches Guidelines~~,” for Natural Character and Scenery to elaborate on the expectations and intent of the monitoring plan (including seismic monitoring) ~~to be prepared during the NEPA (EIS) process~~.
- **Page C-61, response to comments 71** – This response is updated as follows: Additional language has been added to management plan Section 3.1.4 3.1.3, “~~Management Approaches Guidelines~~,” for Natural Character and Scenery to elaborate on the expectations and intent of the monitoring plan (including seismic monitoring) ~~to be prepared during the NEPA (EIS) process~~.
- **Page C-62, response to comments 68** – This response is updated as follows:
 - The purpose of the management plan is to provide management direction for the Apache Leap SMA, including the intent that the area should allow for both surface and subsurface seismic monitoring. ~~As~~, as stated in management plan Section 3.1.4 3.1.3, “~~Management Approaches Guidelines~~,” for Natural Character and Scenery; ~~Further detail should be provided in the Monitoring and Evaluation Plan for the Resolution Copper Project and Land Exchange Final Environmental Impact Statement.~~”

- Management plan Section ~~3.1.4~~ 3.1.3, “~~Management Approaches Guidelines~~,” for Natural Character and Scenery has been modified to clarify that the intent of the seismic monitoring is to establish a baseline prior to initiation of block caving operations, and after that to provide a feedback mechanism with which to inform block caving operations.
- **Page C-63, response to comments 68** – This response is updated as follows: Additional language has been added to management plan Section ~~3.1.4~~ 3.1.3, “~~Management Approaches Guidelines~~,” for Natural Character and Scenery to elaborate on the expectations and intent of the monitoring plan (including seismic monitoring) ~~to be prepared during the NEPA (EIS) process.~~
- **Page C-63, response to comments 69** – This response is updated as follows: Additional language has been added to management plan Section ~~3.1.4~~ 3.1.3, “~~Management Approaches Guidelines~~,” for Natural Character and Scenery to elaborate on the expectations and intent of the monitoring plan (including seismic monitoring) ~~to be prepared during the NEPA (EIS) process.~~
- **Page C-64, response to comments 69** – This response is updated as follows:
 - Management plan Section ~~3.1.4~~ 3.1.3, “~~Management Approaches Guidelines~~,” for Natural Character and Scenery has been modified to clarify that the intent of the seismic monitoring is to establish a baseline prior to initiation of block caving operations, and after that to provide a feedback mechanism with which to inform block caving operations.
 - ~~Management plan Section 3.1.4, “Management Approaches,” for Natural Character and Scenery has been modified to clarify that the Forest Service will receive and independently assess the seismic monitoring data~~
- **Page C-65, response to comments 69** – This response is updated as follows:
 - The purpose of the management plan is to provide management direction for the Apache Leap SMA, including the intent that the area should allow for both surface and subsurface seismic monitoring. ~~As, as stated in management plan Section 3.1.4 3.1.3, “Management Approaches Guidelines,” for Natural Character and Scenery, “Further detail should be provided in the Monitoring and Evaluation Plan for the Resolution Copper Project and Land Exchange Final Environmental Impact Statement.”~~
 - ~~Further explanation has been added to management plan Section 3.1.4, “Management Approaches,” for Natural Character and Scenery to reflect the intent of the Forest Service with respect to independent review and use of the seismic monitoring, as well as design of the monitoring protocols.~~
- **Page C-66, response to comments 53** – This response is updated as follows:
 - The purpose of the management plan is to provide management direction for the Apache Leap SMA, including the intent that the area should allow for both surface and subsurface seismic monitoring. ~~As, as stated in management plan Section 3.1.4 3.1.3, “Management Approaches Guidelines,” for Natural Character and Scenery, “Further detail should be provided in the Monitoring and Evaluation Plan for the Resolution Copper Project and Land Exchange Final Environmental Impact Statement.”~~
 - Management plan Section ~~3.1.4~~ 3.1.3, “~~Management Approaches Guidelines~~,” for Natural Character and Scenery has been modified to clarify that the intent of the seismic monitoring is to establish a baseline prior to initiation of block caving operations, and after that to provide a feedback mechanism with which to inform block caving operations.
- **Page C-67, response to comments 53** – This response is updated as follows: Management plan

Section 3.1.43.1.3, “~~Management Approaches~~ Guidelines,” for Natural Character and Scenery has been modified to clarify that the Forest Service should specify what, where and how data is to be collected and the frequency for evaluating and reporting results. will receive and independently assess the seismic monitoring data and that this review will include any other pertinent monitoring information from outside the Apache Leap SMA.

- **Page C-67, response to comments 53** – This response is updated as follows: Management plan Section 3.1.43.1.3, “~~Management Approaches~~ Guidelines,” for Natural Character and Scenery has been modified to clarify that the Forest Service should specify what, where and how data is to be collected and the frequency for evaluating and reporting results. will receive and independently assess the seismic monitoring data and that this review will include any other pertinent monitoring information from outside the Apache Leap SMA.
- **Page C-68, response to comments 53** – This response is updated as follows:
 - Additional language has been added to management plan Section 3.1.4 3.1.3, “~~Management Approaches~~ Guidelines,” for Natural Character and Scenery to elaborate on the expectations and intent of the monitoring plan (including seismic monitoring) ~~to be prepared during the NEPA (EIS) process.~~
 - ~~With respect to preparation of the monitoring plan, as stated in management plan Section 3.1.4, “Management Approaches,” for Natural Character and Scenery, “Further detail should be provided in the Monitoring and Evaluation Plan for the Resolution Copper Project and Land Exchange Final Environmental Impact Statement.”~~
- **Page C-69, response to comments 69** – This response is updated as follows:
 - Additional language has been added to management plan Section 3.1.4 3.1.3, “~~Management Approaches~~ Guidelines,” for Natural Character and Scenery to elaborate on the expectations and intent of the monitoring plan (including seismic monitoring) ~~to be prepared during the NEPA (EIS) process.~~
 - Management plan Section 3.1.43.1.3, “~~Management Approaches~~ Guidelines,” for Natural Character and Scenery has been modified to clarify that the Forest Service should specify what, where and how data is to be collected and the frequency for evaluating and reporting results. will receive and independently assess the seismic monitoring data and that this review will include any other pertinent monitoring information from outside the Apache Leap SMA.
- **Page C-70, response to comments 70** – This response is updated as follows: The purpose of the management plan is to provide management direction for the Apache Leap SMA, including the intent that the area should allow for both surface and subsurface seismic monitoring. ~~As, as stated in management plan Section 3.1.4 3.1.3, “Management Approaches Guidelines,” for Natural Character and Scenery, “Further detail should be provided in the Monitoring and Evaluation Plan for the Resolution Copper Project and Land Exchange Final Environmental Impact Statement.”~~
- **Page C-72, response to comments 68** – This response is updated as follows: Further explanation has been added to management plan Section 3.1.4 3.1.3, “~~Management Approaches~~ Guidelines,” for Natural Character and Scenery to reflect the intent of the Forest Service with respect to independent review and use of the seismic monitoring, as well as design of the monitoring protocols.
- **Page C-73, response to comments 66** – This response is updated as follows:
 - The purpose of the management plan is to provide management direction for the Apache Leap SMA, including the intent that the area should allow for both surface and

subsurface seismic monitoring. ~~As, as stated in management plan Section 3.1.4 3.1.3, “Management Approaches Guidelines,” for Natural Character and Scenery, “Further detail should be provided in the Monitoring and Evaluation Plan for the Resolution Copper Project and Land Exchange Final Environmental Impact Statement.”~~

- Further explanation has been added to Section 3.1.4, “Management Approaches,” for Natural Character and Scenery to reflect the intent of the Forest Service with respect to independent review and use of the seismic monitoring, as well as design of the monitoring protocols.
- **Page C-74, response to comments 67** – This response is updated as follows:
 - The purpose of the management plan is to provide management direction for the Apache Leap SMA, including the intent that the area should allow for both surface and subsurface seismic monitoring. ~~As, as stated in management plan Section 3.1.4 3.1.3, “Management Approaches Guidelines,” for Natural Character and Scenery, “Further detail should be provided in the Monitoring and Evaluation Plan for the Resolution Copper Project and Land Exchange Final Environmental Impact Statement.”~~
 - Management plan Section 3.1.4 3.1.3, “Management Approaches Guidelines,” for Natural Character and Scenery has been modified to clarify that the intent of the seismic monitoring is to establish a baseline prior to initiation of block caving operations, and after that to provide a feedback mechanism with which to inform block caving operations.
- **Page C-88, response to comments 47** – This response is updated as follows: Management plan Section 3.1.4 3.1.3, “Management Approaches Guidelines,” for Natural Character and Scenery was updated to state “Implementation of the monitoring strategy should occur as soon as practicable, and before the commencement of any mine-related activities authorized under the ‘General Plan of Operations’ and related documents.”
- **Page C-94, response to comments 69** – This response is updated as follows: Management plan Section 3.1.4 3.1.3, “Management Approaches Guidelines,” for Natural Character and Scenery has been modified to clarify that the purpose and intent of the seismic monitoring is to establish a baseline prior to initiation of block caving operations, including operation of an underground tunnel and associated workings.
- **Page C-97, response to comments 69** – This response is updated as follows: The language in Section 3.1.4 3.1.3, “Management Approaches Guidelines,” for Natural Character and Scenery was edited for clarity. The modified version of the ~~management approach guideline~~ now includes this statement: “The strategy should identify and explore solutions to remediate and mitigate surface conditions that could threaten the integrity of the Apache Leap SMA as allowed by pertinent laws and regulations.”
- **Page D-4, response to comments 10** – This response is updated as follows: Management plan Section 3.1.3, “Guidelines,” and Section 3.1.4, “Management Approaches,” for Natural Character and Scenery were edited to clarify that the guideline and ~~management approach~~ referenced in the comment are related to seismic monitoring activities.
- **Page D-6, response to comments 21** – This response is updated as follows: The Forest Service is currently monitoring and managing permitted mining activities on federal lands, including hydrological monitoring wells in the Apache Leap SMA, which are permitted under the ~~“Final Environmental Assessment: Resolution Copper Mining Baseline Hydrological and Geotechnical Data Gathering Pre-feasibility Activities Plan of Operations.”~~
- **Page D-7, response to comments 23** – This response is updated as follows: The Forest Service considers the reference to “pertinent laws and regulations” in Section 3.1.4 3.1.3, “Management

Approaches Guidelines,” for Natural Character and Scenery to incorporate NDAA Section 3003g(6).

- **Page D-9, response to comments 23** – This response is updated as follows: The deleted portion of text referenced in the comment appears in the modified management plan in Section ~~3-1.4 3.1.3~~, “Management Approaches Guidelines,” for Natural Character and Scenery.
- **Page D-12, response to comments 8** – This response is updated as follows: The seismic monitoring ~~management approach guideline~~, as stated in Section ~~3-1.4 3.1.3~~, “Management Approaches Guidelines,” for Natural Character and Scenery adequately outlines the intent to develop a seismic monitoring strategy to evaluate the effects of future proposed mining activities adjacent to the Apache Leap SMA.
- **Page D-13, response to comments 8** – This response is updated as follows: Section ~~3-1.4 3.1.3~~, “Management Approaches Guidelines,” for Natural Character and Scenery was edited in accordance with NDAA Section 3003(g)(6).
- **Page D-14, response to comments 8** – This response is updated as follows: The request to edit the seismic monitoring strategy in Section ~~3-1.4 3.1.3~~, “Management Approaches Guidelines,” for Natural Character and Scenery as an objective was not made, as it is not consistent with the requirements of Forest Service plan components.
- **Page D-16, response to comments 8** – This response is updated as follows: The intent of the guidelines, including the seismic monitoring ~~management approach~~ in Section ~~3-1.4 3.1.3~~, “Management Approaches Guidelines,” for Natural Character and Scenery was to capture the seismic monitoring approach in one location in the management plan. The plan components in the management plan are designed to be used together to achieve integrated resource management throughout the plan area.
- **Page D-32, response to comments 6** – This response is updated as follows: Management plan Section 3.5.4, “Management Approaches,” for Recreation was clarified to state that a future Apache Leap Special Management Area Climbing Management Plan would consider “~~prohibiting new bolting on select climbing routes~~ defining how climbing routes would be managed to minimize environmental natural and cultural resource impacts.”
- **Page D-34, response to comments 11** – This response is updated as follows: Management plan Section 3.5.4, “Management Approaches,” for Recreation was clarified to state that a future Apache Leap Special Management Area Climbing Management Plan would consider “~~prohibiting new bolting on select climbing routes~~ defining how climbing routes would be managed to minimize environmental natural and cultural resource impacts.”
- **Page D-35, response to comments 12** – This response is updated as follows: Management plan Section 3.5.4, “Management Approaches,” for Recreation was clarified to state that a future Apache Leap Special Management Area Climbing Management Plan would consider “~~prohibiting new bolting on select climbing routes~~ defining how climbing routes would be managed to minimize environmental natural and cultural resource impacts.”
- **Page D-35, response to comments 13** – This response is updated as follows: Management plan Section 3.5.4, “Management Approaches,” for Recreation was clarified to state that a future Apache Leap Special Management Area Climbing Management Plan would consider “~~prohibiting new bolting on select climbing routes~~ defining how climbing routes would be managed to minimize environmental natural and cultural resource impacts.”
- **Page D-36, response to comments 14** – This response is updated as follows: Within the Climbing Management Plan, consider designating approaches to the escarpment from the west side, ~~designating~~ identifying existing and future climbing routes, and ~~prohibiting new bolting on select climbing routes~~ defining how climbing routes would be managed to minimize

~~environmental~~ natural and cultural resource impacts.”

- **Page D-36, response to comments 14** – This response is updated as follows: Management plan Section 3.5.4, “Management Approaches,” for Recreation was clarified to state that a future Apache Leap Special Management Area Climbing Management Plan would consider “~~prohibiting new bolting on select climbing routes~~ defining how climbing routes would be managed to minimize ~~environmental~~ natural and cultural resource impacts.”
- **Page D-37, response to comments 15** – This response is updated as follows: Within the Climbing Management Plan, consider designating approaches to the escarpment from the west side, ~~designating~~ identifying existing and future climbing routes, and ~~prohibiting new bolting on select climbing routes~~ defining how climbing routes would be managed to minimize ~~environmental~~ natural and cultural resource impacts.”
- **Page D-38, response to comments 20** – This response is updated as follows: Management plan Section 3.5.4, “Management Approaches,” for Recreation was clarified to state that a future Apache Leap Special Management Area Climbing Management Plan would consider “~~prohibiting new bolting on select climbing routes~~ defining how climbing routes would be managed to minimize ~~environmental~~ natural and cultural resource impacts.”
- **Page D-39, response to comments 22** – This response is updated as follows: Management plan Section 3.5.4, “Management Approaches,” for Recreation was clarified to state that a future Apache Leap Special Management Area Climbing Management Plan would consider “~~prohibiting new bolting on select climbing routes~~ defining how climbing routes would be managed to minimize ~~environmental~~ natural and cultural resource impacts.”
- **Page D-50, response to comments 23** – This response is updated as follows: Management plan Section 3.1.4 3.1.3, “~~Management Approaches Guidelines~~,” for Natural Character and Scenery was edited to clarify that the seismic monitoring strategy would apply to any future mining activities, if approved, adjacent to the Apache Leap SMA.
- **Page D-53, response to comments 23** – This response is updated as follows: Management plan Section 3.1.4 3.1.3, “~~Management Approaches Guidelines~~,” for Natural Character and Scenery was edited to clarify that the seismic monitoring strategy would apply to any future mining activities adjacent to the Apache Leap SMA.
- **Page D-54, response to comments 2** – This response is updated as follows: Section ~~3.1.4~~ 3.1.3, “~~Management Approaches Guidelines~~,” for Natural Character and Scenery.
- **Page D-54, response to comments 8** – This response is updated as follows: Section ~~3.1.4~~ 3.1.3, “~~Management Approaches Guidelines~~,” for Natural Character and Scenery.