3.14 Visual Resources

The study area for direct and indirect impacts to visual resources encompasses the viewshed from which the proposed project facilities would comprise a notable feature in the viewer's landscape. The CESA encompasses an area from which the proposed facilities would be visible. This area would include the valleys and slopes within the ridgelines of the mountain ranges to the north (Battle Mountain Range), east (Shoshone Range), south (Fish Creek Mountains), and west (Tobin Range) (**Figure 3.14-1**).

3.14.1 Affected Environment

The BLM is responsible for identifying and protecting scenic values on public lands under several provisions of the FLPMA and NEPA. The BLM VRM system was developed to facilitate the effective discharge of that responsibility in a systematic, interdisciplinary manner. The VRM system provides the methodology to inventory existing scenic quality; assign visual resource inventory classes based on a combination of scenic values, visual sensitivity, and viewing distances; and assign visual management objectives. The project area has been inventoried for visual resources and has a VRM designation of Class IV. The management objectives for VRM classifications are as follows:

Class I Objective. The objective of this class is to preserve the existing character of the landscape. This class provides for natural ecological changes; however, it does not preclude very limited management activity. The level of change to the characteristic landscape should be very low and must not attract attention. Class I is assigned to those areas where a management decision has been made to maintain a natural landscape. This includes congressionally and administratively designated areas where decisions have been made to preserve a natural landscape.

Class II Objective. The objective of this class is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.

Class III Objective. The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.

Class IV Objective. The objective of this class is to provide for management activities that require major modifications of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management activities may dominate the view and be the major focus of viewer attention; however, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic elements.

The VRM system also includes a contrast rating procedure for evaluating the potential visual consequences of a proposed project or management activity. The VRM system provides the basic approach for evaluating direct visual impacts as well as potential cumulative visual impacts of the proposed expansion project.

The study area is situated in the Great Basin section of the Basin and Range Province. This area is characterized by wide, flat to gently sloping basins bounded by mountain ranges rising more than 5,000 feet above the floor of the basins (Fenneman 1931).

The mountains typically are elongated ranges consisting of a spine of interconnected mountain peaks, and the existing Phoenix Mine is located in a relatively small, conical landform known as Battle Mountain. The mountain rests on the south side of the Humboldt River valley, just south of I-80, near the Town of Battle Mountain, Nevada.

A series of deeply incised drainages radiate out from Antler Peak in the central portion of the mountain, which creates a complex pattern of internal ridges and canyons. The existing Phoenix Mine is located primarily in the Copper Canyon drainage in the southern portion of the mountain range, but includes the ridges and canyons of other minor drainages to the southeast, including Philadelphia and Iron canyons. Portions of the existing operations are located on elevated, exposed ridge tops, while other portions are in lower, concealed canyons.

The existing Phoenix Mine is located in an area that has been mined historically, and large scale mining operations continue. Both historic and recent mining operations also are present in the northern and eastern portions of the mountain range.

Vegetation in the study area consists of low, sparse shrub communities. As a result, the color and texture primarily are determined by the geology of the landform. For this reason, past and current mining operations are visually evident due to the unnatural color and texture contrasts within the surrounding darker, undisturbed rock. Other visual modifications exist but are much less extensive and noticeable. These include some areas of recent mineral exploration, some historic small-scale mining operations, and secondary dirt roads.

Areas of disturbance from previous and existing operations currently are visible from public hunting and recreation areas in the surrounding valleys and mountain areas as well as from I-80 (approximately 15 miles viewing distance), SH 305, Buffalo Valley Road, and Willow Creek Road.

Three KOPs have been identified in the visual area of influence as shown in **Figure 3.14-1**. KOPs (sensitive receptors) are used for analyzing detailed landscape characteristics in the affected environment and for comparing those with the characteristics of the proposed project. Factors considered in selecting KOPs are as follows: sensitivity of users, angle of observation, number of viewers, length of time the project would be in view, relative project size, season of use, and light conditions (BLM 2007).

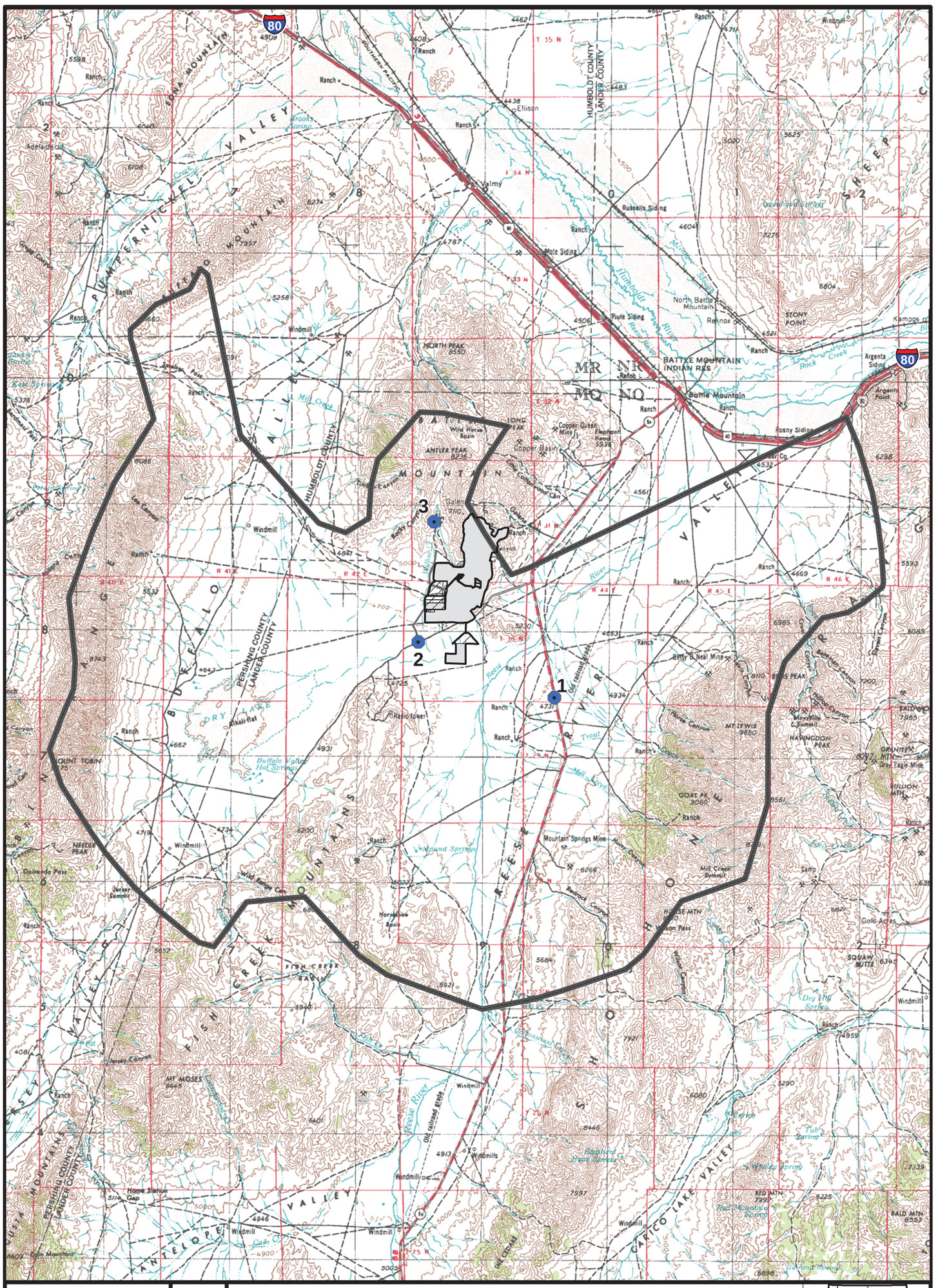
3.14.2 Environmental Consequences

The proposed project would be visible from portions of I-80 and SH 305. SH 305 runs southwest from the Town of Battle Mountain east and south of the study area. It also would be visible from several homes and ranches. In addition, Buffalo Valley Road and Willow Creek Road, which carry primarily recreation-oriented traffic, pass near the project.

Visual impacts are assessed using the BLM Contrast Rating System, as outlined in BLM Technical Manual 8432, “Visual Contrast Rating.” It involves assessing the degree of visual contrast between the existing and proposed landscape characters and conditions. The level of visual contrast is compared with the designated visual resource management objectives for that area to determine compatibility with the landscape.

Significance of visual impacts would be judged as follows:

- Significant – Predicted visual contrast that exceeds the VRM class guidelines.
- Moderate – Predicted visual contrast levels that are fully at the level of change allowed, but that do not exceed the VRM guidelines.
- Low – Predicted visual contrast levels that are clearly below the VRM class allowable thresholds for visual change.

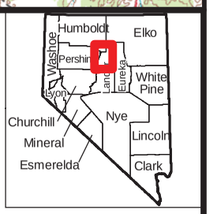


Legend

- Visual Resources CESA
- Proposed POO Boundary
- Proposed Action
- Proposed Action Linear Feature
- Permitted Disturbance

Key Observation Points:

1) SH 305
2) Buffalo Valley Road
3) Willow Creek Road



N

0 2.5 5 Miles

Source: BLM 2008e.

Figure 3.14-1
Visual Resources CESA

Phoenix Copper Leach Project

06/29/2011

3.14.2.1 Proposed Action

Viewpoints affected by the proposed project would include portions of I-80, SH 305, Buffalo Valley Road, and Willow Creek Road. Of these, SH 305 (northbound), Buffalo Valley Road, and Willow Creek Road were identified as KOPs, due to their close proximity, use volume, and sensitivity of viewers (**Figure 3.14-1**). The photographs of existing conditions, currently permitted conditions, post-mining, post-reclamation, and visual contrast rating forms for these KOPs are presented in **Appendix C**. The assessment of visual contrasts is informed by photographic simulations of the proposed project following reclamation.

The proposed project would include components intermingled with existing operations (e.g., SX-EW facilities and Reona Copper Heap Leach Pad) plus others located at the southern and western periphery of existing operations (e.g., Phoenix Copper Heap Leach Pad and Sections 15/16 Borrow Area).

SH 305 Northbound (KOP-1)

Figures C-1 through **C-4** show the currently permitted operation (existing view and currently permitted condition simulations) and the mine site with implementation of the Proposed Action (post-mining and post-reclamation simulations) as seen from KOP-1 (SH 305 northbound). As shown in the existing condition photos (**Figures C-1** and **C-2**), visible portions of the mine are largely limited to waste rock facility slopes and pit highwalls. Further to the east (off the photo), there is extensive mining activity, with waste rock landforms and highwalls dominating the view.

A moderate increase in the extent of visible mine features would occur following development of the Proposed Action (**Figures C-3** [post-mining] and **C-4** [post-reclamation]). The change would be most noticeable in the area of the proposed Phoenix Copper HLF on the west side of the existing Phoenix Mine. This feature would be added to what is currently an open valley, resulting in a moderate degree of visual contrast from this direction and distance. During operations, moving night lights (from mine vehicles and equipment) and stationary lights periodically would be visible. It is probable that the stationary lighting would be focused on working sites and not oriented toward the highway; however, if unshielded or directed to the southeast, glare and spill from project operations would affect the nighttime sky. Form, line, and color contrasts would contribute more substantially to the visual contrast than would texture.

In this VRM Class IV area, the significance of the visual impacts as seen from KOP-1 under the Proposed Action would be moderate and would conform to the management guidelines for the area.

Buffalo Valley Road (KOP-2)

Figures C-5 through **C-8** show the currently permitted operation (existing view and currently permitted condition simulations) and the mine site with implementation of the Proposed Action (post-mining and post-reclamation simulations) as seen from KOP-2 (Buffalo Valley Road). As shown in the existing condition photos (**Figures C-5** and **C-6**), extensive existing activities of the currently permitted Phoenix Project are visible from this location. They include pit walls, waste rock facilities, HLFs, tailings disposal areas, and other mining features, resulting in highly contrasting colors, textures, forms, and lines of landforms and vegetation.

It is estimated that the degree of the visual impact as observed from KOP-2 under the Proposed Action would be moderate due to the extent of the currently permitted disturbance and the allowable change within the VRM Class IV designation.

Willow Creek Road (KOP-3)

Figures C-9 through **C-12** show the currently permitted operation (existing view and currently permitted condition simulations) and the mine site with implementation of the Proposed Action (post-mining and post-reclamation simulations) as seen from KOP-3 (Willow Creek Road). Due to the elevated position of

this KOP, there is a clear view of the currently permitted waste rock facility, HLF, and tailings disposal area, as shown in the existing condition and currently permitted condition photos (**Figures C-9** and **C-10**). There also would be a clear view of the proposed Phoenix Copper HLF. Contrasting colors, textures, forms, and lines of landforms and vegetation appear together.

As shown in the Proposed Action post-mining and post-reclamation simulations (**Figures C-11** and **C-12**, respectively), the extent and scale of development substantially would increase as observed from this KOP. Dominating this view would be Phases 2 and 3 of the Phoenix Copper HLF. This expansion would be apparent to the casual viewer in comparison to the natural peaks and mine features south and east of these facilities. From this KOP, the existing high voltage transmission line in the foreground contributes relatively strong line contrasts. The scale and extent of the Proposed Action would dominate the scene and result in a moderate degree of visual contrast as seen from KOP-3.

It is estimated that the degree of the visual impact as observed from KOP-3 under the Proposed Action would be moderate due to the extent of existing disturbance and the allowable change within the VRM Class IV designation.

3.14.2.2 Reona Copper Heap Leach Facility Elimination Alternative

The Reona Copper Heap Leach Facility Elimination Alternative would be the same as the Proposed Action, except that the proposed Reona Copper HLF and associated infrastructure (i.e., solution pipelines) would not be developed. Under this alternative, the estimated visual impacts from the affected viewpoints would be the same as the Proposed Action.

3.14.2.3 No Action Alternative

Under the No Action Alternative, the proposed project would not be developed and the associated effects to visual resources would not occur. The existing Phoenix Project would continue to operate under existing authorizations. Potential impacts to visual resources previously were discussed and analyzed in the Phoenix Project Final EIS (BLM 2002a).

SH 305 Northbound (KOP-1)

Under the No Action Alternative, little additional disturbance (beyond existing and currently permitted facilities) would be visible from this KOP. The existing and permitted disturbance shown in **Figures C-1** and **C-2** would be reclaimed. The forms and lines that would remain generally would appear natural and similar in scale to the surrounding terrain. Color and texture contrasts would be reduced with time as the re-established vegetation matures.

During operation, there would continue to be nighttime lighting visible from this KOP. These light sources would include a number of vehicles and stationary lighting. The overall effect on the night sky would be noticeable to the casual observer.

Following reclamation, visual contrasts and visual impacts would be low and within allowable thresholds of the VRM Class IV area.

Buffalo Valley Road (KOP-2)

Under the No Action Alternative, little additional disturbance (beyond existing and currently permitted facilities) would be visible from this KOP. The existing and permitted disturbance shown in **Figures C-5** and **C-6** would be reclaimed. Following reclamation, the degree of visual contrast would be reduced from that currently seen, resulting in no additional visual impacts.

During operation, there would continue to be nighttime lighting visible from this KOP. These light sources would include a number of vehicles and stationary lighting. The overall effect on the night sky would be noticeable to the casual observer.

Following reclamation, visual contrasts and visual impacts would be low and within allowable thresholds of the VRM Class IV area.

Willow Creek Road (KOP-3)

Under the No Action Alternative, little additional disturbance (beyond existing and currently permitted facilities) would be visible from this KOP. The existing and permitted disturbance shown in **Figure C-9** and **C-10** would be reclaimed. Following reclamation, the degree of visual contrast would be reduced from that seen in the permitted condition, and, as a result, there would be no additional visual impacts.

During operation, there would continue to be nighttime lighting visible from this KOP. These light sources would include a number of vehicles and stationary lighting. The overall effect on the night sky would be noticeable to the casual observer.

Following reclamation, visual contrasts and visual impacts would be low and within allowable thresholds of the VRM Class IV area.

3.14.3 Cumulative Impacts

The CESA for visual resources is shown in **Figure 3.14-1**. Past and present actions and RFFAs are identified in **Table 2.8-1**; their locations are shown in **Figure 2.8-1**.

The proposed project would be an expansion of an existing mine. While it represents a substantial expansion as seen from some viewpoints, it would not be a new visual impact. Thus, the cumulative visual impact is estimated to be low.

3.14.4 Monitoring and Mitigation Measures

Based on Newmont's applicant-committed environmental protection measures (Section 2.5.7) and this environmental analysis, the visual effects of the proposed project would be minimized to the extent possible as required by VRM Class IV objectives. As a result, no additional monitoring and mitigation measures are recommended.

3.14.5 Residual Adverse Effects

Although successful reclamation would minimize visual impacts to the extent possible, the large-scale forms and lines of the proposed facilities would remain visible from the SH 305 northbound, Buffalo Creek Road, and Willow Creek Road. These changes would result in residual adverse effects to visual resources.