

# Fire Review Report for the Island Mountain Property and Surroundings, Elko County, Nevada

Field Visit Performed on November 7-9, 2018

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## Fire Review Report for the Island Mountain Property and Surroundings, Elko County, Nevada

#### Introduction

This report covers a field visit by the author to the Island Mountain property (Figure 1) in northern Elko County, Nevada on November 7-9, 2018. The purpose of the visit was to determine the extent of impacts to the property from the South Sugarloaf Fire (see <a href="https://inciweb.nwcg.gov/incident/6166">https://inciweb.nwcg.gov/incident/6166</a> for a synopsis of the fire) which occurred during August and early September of 2018. The fire covered more than 230,000 acres from the Bull Run Mountains on the west to the Gold Creek Road area on the east.

The overall extent of the burn for the Island Mountain property is approximately 80%, with the west side of the property generally at 100% and the coverage on the east side being patchier. Gold Creek Road to the south and east of the property appeared to have acted as a firebreak or containment line, and only a northeastern finger of the fire extended beyond that and made it as far as the high ridge to the east of Martin Creek.

The body of this report covers the burn status of each of ARNEVUT Resources Nevada LLC's ("ARN") drill sites and access paths that were prepared and reclaimed during the 2012-



Figure 1. Map of claims comprising the Island Mountain property.



Figure 2. Status of planned versus completed drilling at Island Mountain as of the end of 2013.

2013 drilling program. Revegetation of those sites was started upon completion of drilling at each of the sites. At the time of the fire, all sites had been under revegetation for 4.75 to 5.75 years. Some additional observations on areas surrounding the property will be given as well.

The drill sites and their associated access paths will be covered moving from the northern edge of the property to the southern edge and west to east as logically as possible given their staggered locations. Figure 2 shows the location of each of the completed sites in blue (2012 sites) and green (2013 sites). Drill sites shown as red dots were not completed during that program and will be submitted for re-approval for a future drilling program. Sites shown in yellow were put on indefinite hold at the request of the U.S. Forest Service ("USFS") as a result of their biological and cultural reviews for the previous Plan of Operations ("PoO"). The yellow line shows a section of exploration road that was reclaimed in 2009 and re-opened in 2012 to allow safe access to the southern part of the property by drill rigs and other vehicles.

Note that the claim boundaries shown on Figure 2 pre-date ARN's activities at the property, and the claim block now is much bigger on the south and east sides. Also, a re-survey of the patented claims in 2012-2013 shifted them to various degrees compared to the locations

shown on this map. However, that shift was not sufficient to affect whether past drill sites are on USFS versus private lands.

#### Drill Site GG-NW2

Drill site GG-NW2 (Figure 3) is burned in excess of 95%. Of interest is that grass sprouts were common to abundant in this area (visible as green in the foreground and in the background in Figure 3), so there should be significant ground cover in 2019 if the winter is sufficiently wet. There was little sage in this area originally, but any present before has been mostly (low blackened bushes in background) to fully burned. This site is on USFS land.

The accessway from site GG-NW1 to GG-NW2 is partially seen in the foreground. This path also was burned in excess of 95%, but also shows new grass growth. The accessway closer to site GG-NW1 is shown in Figure 4. It likewise shows considerable grass growth since the fire.

#### Drill Site GG-NW1

Drill site GG-NW1 (Figure 5) is burned in excess of 95%. Of interest is that grass sprouts were common to abundant in this area (visible as green in the foreground and in the



Figure 3. Drill site GG-NW2 looking southwest (drilled in 2012).



Figure 4. Accessway between GG-NW1 and GG-NW2 looking west from edge of GG-NW1.

background in Figure 5), so there should be significant ground cover in 2019 if the winter is sufficiently wet. There was little sage in this area originally, but any present before has been mostly (low blackened bushes in background) to fully burned. Some of the patchy nature of the burn area north of the ridge where this site is located can be seen in the background on the right side. This site is on USFS land.

Site GG-NW1 was accessed from the end of an existing road and an area of old drilling disturbance on this hilltop. Therefore, only the part of the old disturbance adjacent to the drill site was reclaimed in 2012 by ARN.

#### Drill Site WW1 and Staging Area 2

Drill site WW1, the exploration water supply well drilled in 2013, coincides with Staging Area 2 for the Island Mountain project (Figure 6). The two water tanks installed in 2013 remain to allow future use of the well and water storage for planned further drilling. The staging area also will be used in further exploration work. Therefore, no reclamation work was performed at this site in 2013 and will not be done until the staging area is no longer needed for exploration activities. This site is on private land.

Nonetheless, the site remains largely unburned (80%) except for the western edge (just visible in Figure 6). The disturbed and partially denuded nature of the site and the adjacent



Figure 5. Dill site GG-NW1 looking west (drilled in 2012).



Figure 6. Drill site WW1 (water well; drilled in 2013) and Staging Area 2 looking northeast.

USFS road appear to have acted as a small firebreak. A significant area of the sage and grass immediately to the northeast of the site remained unburned. Likewise, the water tanks and wellhead appear to have been unaffected by the fire.

#### Drill Site NE2

Drill site NE2 (Figure 7) is burned approximately 70%. The fire must have moved through this area fairly quickly given that many clumps of vulnerable dry grass remained untouched. Very scattered new grass sprouts were apparent, but presumably the unburned grasses will regrow normally in 2019. There did not appear to have been significant growth of shrubs at this site following revegetation work in late 2013. The natural small shrubs in the background in Figure 7 appeared to have largely scattered fire impacts. This is in keeping with the patchy nature of the burned area as the fire progressed to the east within the project area. This site is on USFS land.

This drill site was adjacent to an existing USFS road, and that was used for all drilling access. Therefore, no reclamation was done to the roadway other than any smoothing needed to maintain the road quality.



Figure 7. Drill site NE2 looking northwest (drilled in 2013).

#### **Drill Site DT1**

Drill site DT1 (Figure 8) is about 50% burned. The drilling took place on the USFS road with some of the disturbance spread to both sides of the road to allow for the pad to be big enough to handle the equipment and sump. The vegetation on west side of the road was burned almost 100%. The road clearly acted as a firebreak, with the vegetation on the east side of the road and on the road midline showing little to no burn impacts. This site is on USFS land.

The drill site was on an existing USFS road, and that was used for all drilling access. Therefore, no reclamation was done to the roadway other than any smoothing needed to maintain the road quality. The only evidence of the drill site on the road itself is a color difference (yellow versus tan) in the surface material, which can be seen in Figure 8.



Figure 8. Drill site DT1 looking north (drilled in 2013).

## Drill Site NW1

Drill site NW1 (Figure 9) is burned 100%. Significant regrowth of grasses has occurred since the fire, with many sprouts visible in Figure 9. This site is on USFS land.

Likewise, the accessway between drill site NW6 and NW1 is burned 100% (Figure 10). Again, grass regrowth is significant and should provide useful cover in 2019 if there is sufficient winter moisture. Note that the slightly furrowed appearance of drill site NW1 and the accessway is due to the raking and reseeding process for the site reclamation.



Figure 9. Drill site NW1 looking north (drilled in 2012).



Figure 10. Accessway between NW1 and NW6 looking north from edge of NW6.

#### **Drill Site NW6**

Drill site NW6 (Figure 11) is burned almost 100%. A few small shrubs appear to have only partially burned and a few grass clumps remain as well. Significant but patchy regrowth of grasses has occurred since the fire, with many sprouts visible in Figure 11. This site is on USFS land.

The accessway between drill site NW3 and NW6 is burned 100% (Figure 12). Again, grass regrowth is significant and should provide useful cover in 2019 if there is sufficient winter moisture. Note that the slightly furrowed appearance of the accessway is due to the raking and reseeding process for the site reclamation.



Figure 11. Drill site NW6 looking northwest (drilled in 2012).

#### **Drill Site NW3**

Drill site NW3 (Figure 13) is burned 100%. Significant but patchy regrowth of grasses and a few forbs has occurred since the fire, with many sprouts visible in Figure 13. Also, an unburned stem and seed head for a Rocky Mountain Bee Plant was found at the site, indicating that this species (first seen here in 2013 after 1 full year of revegetation) likely will continue growing here in the future. This site is on USFS land.

This site is located adjacent to the main USFS road through the project area. Therefore, there was no accessway to be reclaimed in 2012 other than between the sites for NW3 and NW6



Figure 12. Part of accessway between NW6 and NW3 looking northwest.



Figure 13. Drill site NW3 looking northwest (drilled in 2012) with part of accessway to NW6 in the background.

as can be seen in Figure 12 and in the background of Figure 13.

### **Drill Site NW2**

Drill site NW2 (Figure 14) is burned in excess of 95%. A cluster of clump grasses from the revegetation process remains at the east end of the site. There has been very patchy regrowth of grasses since the fire, with sprouts visible in the background of Figure 13 along a small ephemeral stream. There is a considerable amount of rodent burrow activity at this site, evidenced by the numerous mounds of loose soil. This site is on USFS land.

This site is located adjacent to the main USFS road through the project area. Therefore, there was no accessway to be reclaimed in 2012.



Figure 14. Drill site NW2 looking northeast (drilled in 2012).

## **Drill Site DT8 and Staging Area 1**

Drill site DT8 (Figures 15 and 16) is burned close to 100%. The drill site is included in the general area of Staging Area 1 that ARN used and is using for equipment and other logistical support for drilling and other exploration activities on the property. The overall staging area is burned in excess of 80%. The berm seen in Figures 15 and 16 was retained after recontouring of the drill site so that supplies, vehicles, and trailers would have a backstop for the hillside when parked in this flat area. Staging Area 1 (additionally shown in Figure 17) was set up based on an



Figure 15. Former drill pad site for DT8 (drilled in 2012).



Figure 16. Former sump site for drill site DT8.



Figure 17. Panorama of Staging Area 1 looking south to southwest.

already heavily disturbed area probably left over from previous operators and perhaps also from ranching activities. This site is on USFS land.

The sump portion of site DT8 (Figure 16) was revegetated and is now 100% burned. Given that the rest of the drill site is part of Staging Area 1, which will continue to be used for further exploration work in the area, final reclamation and revegetation on this site and area will be done in the future. The existing road through the staging area will not be reclaimed in order to maintain access that was available at the time ARN began operations on this project.

#### **Drill Site DT2**

Drill site DT2 (Figure 18) is burned at least 80%. The drilling was done on the road surface whereas the sump was located in the hillside to reduce potential impacts to the roadway after drilling. Regrowth of some grass, sage, and other shrubs appeared to have happened since the revegetation of this site in late 2013. The sage probably re-grew quickly given that the soil and near-surface broken rock was laid up onto the hillside during sump excavation rather than being mixed into the overall drill site material. That would have preserved at least some roots that could re-establish growth quickly. This site is on private land.

Because the drill site was on the road, no reclamation was done to the road beyond smoothing and compaction necessary to maintain road quality.



Figure 18. Drill site DT2 looking east (drilled in 2013).

#### **Drill Site NW7**

Drill site NW7 (Figure 19 in middleground) is burned in excess of 90%. The drilling was done mostly on a remnant accessway (visible from exploration work by a previous operator). That was done to reduce new exploration impacts as well as aid further reclamation of the old accessway after drilling. Growth of clump grass and shrubby plants appeared to have happened since the revegetation of this site in late 2012, some of which remain after the fire. There also is apparent abundant growth of grass (green area in middleground of Figure 19) across the drill site which should provide significant cover in 2019. This site is on USFS land.

The accessway from Staging Area 1 to NW7 is very short, given that the drill site was close to the staging area boundary, and is shown in Figure 19 in the foreground. Revegetation appeared to have done well before the fire. Regrowth of some sage and other shrubs appeared to have happened since the revegetation of this site in late 2013. Because the remnant accessway was available, traffic was able to minimize impacts to at least some of the vegetation that had grown along and adjacent to that previous track. The accessway is now close to 100% burned.



Figure 19. Drill site NW7 looking southwest (drilled in 2012).

#### **Drill Site NW8**

Drill site NW8 (Figure 20) is burned close to 100%. The drill site was fairly flat originally, so minimal excavation besides the sump was needed to prepare the site. This helped maintain at least some roots for sage and other shrubs that then were able to regrow quickly after reclamation. Note that the slightly furrowed appearance of the drill site is due to the raking and reseeding process for the site reclamation. This site is on USFS land.

The accessway from NW7 to NW8 is shown in Figure 21. As with the drill site, the slightly furrowed appearance of the accessway is due to the raking and reseeding process for the site reclamation.



Figure 20. Drill site NW8 looking northwest (drilled in 2012).

#### **Drill Site NW5**

Drill site NW5 (Figure 22) is burned close to 100%. There has been very patchy regrowth of grasses since the fire, with sprouts visible throughout Figure 22 and in the middleground and background. This site is on USFS land.

The accessway from NW8 to NW5 is shown in Figures 23 and 24. The burn in this area was essentially 100%. Our cross-country accessways were intended to have as little impact on the area as possible. The upper part of the accessway appears probably to have been dominated



Figure 21. Part of accessway between site NW7 and NW8 looking south toward NW8.



Figure 22. Drill site NW5 looking southwest (drilled in 2012).



Figure 23. Upper part of accessway between site NW8 and NW5 looking southeast.



Figure 24. Lower part of accessway between site NW8 and NW5 looking north.

by grasses. The lower part of the accessway (Figure 24) shows that sage and/or other shrubs grew back significantly before the fire.

## Drill Site C1

Drill site C1 (Figure 25) is burned in excess of 95%. There has not been any obvious regrowth of grasses since the fire. Nonetheless, some clump grasses from the site revegetation remained unburned. This site is on private land.

This site is located adjacent to a USFS road through the project area. Therefore, there was no distinct accessway to be reclaimed in 2012.



Figure 25. Drill site C1 looking north-northwest (drilled in 2012).

## **Drill Site C8**

Drill site C8 (Figure 26) is burned 100%. Because the soil was quite thin in the drill site area, much rock was excavated during the pad and sump development, as apparent on the reclaimed site (Figure 26). There has been very patchy regrowth of grasses since the fire, with sprouts visible in parts of Figure 26. This site is on private land.

The accessway (Figure 27) to C8 from a fenceline along the ridge was chosen to minimize impacts to the land. The upper contour of the valley and then the ridge line were



Figure 26. Drill site C8 looking southeast (drilled in 2013).



Figure 27. Accessway from the near the fenceline to site C8 looking southwest.

followed both for safety purposes and to prevent the need for any excavation along the accessway. The accessway is burned 100%, but areas of new grass growth can be seen along it.

## Drill Site C7/C12

Drill site C7/C12 (Figure 28) is burned about 95%. Two drill holes were merged into one site at the time the prior PoO was submitted for approval to USFS. Keeping them separate would have required significant excavation of a steep access path between the two original sites. C7 was an angled hole to reach approximately the same area and vertical column as the original planned separate drill site. C12 was a vertical drill hole. Very scattered regrowth of grass and some other plants is visible. This site is on USFS land.

The accessway from the USFS road to C7/C12 (Figure 29) is burned close to 100%. Scattered regrowth of grass and some other plants is visible.



Figure 28. Drill site C7/C12 looking northwest (drilled in 2012).

## **Drill Site DT3**

Drill site DT3 (Figure 30) is burned 100%. Very scattered regrowth of grass is visible. This site is on USFS land.



Figure 29. Accessway from the USFS road to drill site C7/C12 looking northwest.



Figure 30. Drill site DT3 looking northeast (drilled in 2013).

This site is located adjacent to a USFS road through the project area. Therefore, there was no distinct accessway to be reclaimed in 2013.

### Drill Site SW2

Drill site SW2 (Figure 31) is burned in excess of 95%. A number of small shrubs at the site were incompletely burned. Scattered to patchy regrowth of grass is visible in Figure 21. This site is on USFS land.

The accessway from the end of the USFS road to SW2 (Figure 32) is burned 100%. Abundant regrowth of grass is visible. There is a considerable amount of rodent burrow activity along and adjacent to the accessway, evidenced by the numerous mounds of loose soil in Figure 32.



Figure 31. Drill site SW2 looking northwest (drilled in 2012).

## Drill Site SW5

Drill site SW5 (Figure 33) is burned about 60%. A number of clump grasses and small shrubs at the site were incompletely burned to untouched. Where the burn was more complete, very scattered regrowth of grass is visible in Figure 33. Nonetheless, the significant amount of unburned grasses and shrubs indicates that overall regrowth on the site should proceed quickly if winter moisture is sufficient. This site is on USFS land.



Figure 32. Accessway from the USFS road to drill site SW2 looking southeast.



Figure 33. Drill site SW5 looking east (drilled in 2013).

This site is located along a USFS road through the project area. Therefore, there was no distinct accessway to be reclaimed in 2013. Because the drill site was on the road, no reclamation was done to the road beyond smoothing and compaction necessary to maintain road quality.

#### **Drill Site SW11**

Drill site SW11 (Figure 34) is burned in excess of 95%. A number of small shrubs and clump grasses at the site were untouched to incompletely burned. Very scattered regrowth of grass and some other plants is visible in Figure 34. This site is on USFS land.

The accessway between site SW6 and SW11 (Figure 35) is burned 100%. Very scattered regrowth of grass is visible.



Figure 34. Drill site SW11 looking north-northeast (drilled in 2013).

#### **Drill Site SW6**

Drill site SW6 (Figure 36) is burned close to 100%. Very scattered regrowth of grass and some other plants is visible in Figure 36. This site is on USFS land.

The short accessway between the USFS road and drill site SW6 also is shown in Figure 36. It is burned in excess of 90%, with some clusters of clump grasses from the site revegetation remaining unburned.



Figure 35. Accessway between drill site SW6 (middleground) and drill site SW11 looking north.



Figure 36. Drill site SW6 (drilled in 2013) and short accessway looking north.

#### **Drill Site C9**

Drill site C9 (Figure 37) is burned close to 100%. Very scattered regrowth of grass was seen. This site is on USFS land.

The accessway between the USFS road and site C9 (Figure 38) is burned 100%. Very scattered regrowth of grass was seen.



Figure 37. Drill site C9 looking west (drilled in 2012).

## **Drill Site C10**

Drill site C10 (Figure 39) is burned close to 100%. Very scattered and patchy regrowth of grass is visible in Figure 36 (left middleground). This site is on USFS land.

The accessway between the USFS road and site C10 (Figure 40) is burned in excess of 95%. Very little regrowth of grass was seen. Nonetheless, many small shrubs and sage were incompletely burned, so it is possible this area will see some significant regrowth if winter moisture is sufficient to trigger that.



Figure 38. Accessway between USFS road (near fenceline in background) and drill site C9 looking east.



Figure 39. Drill site C10 looking northeast (drilled in 2012).



Figure 40. Accessway between USFS road and drill site C10 looking east.

#### **Drill Site DT4**

Drill site DT4 (Figure 41) is burned 100%. Very scattered and patchy regrowth of grass is visible in Figure 41 (left middleground). This site is on USFS land.

This site is located adjacent to a USFS road through the project area. Therefore, there was no distinct accessway to be reclaimed in 2013. The road was not impacted by the excavation for the drill site.

#### **Drill Site C11**

Drill site C11 (Figure 42) is burned close to 100%. Very scattered regrowth of grass is visible in Figure 41 (left middleground). Some incompletely burned small shrubs remain as well which could help with revegetation of the area. The undergrowth in the aspen grove southwest of the site was heavily impacted by the fire, but the trees appear to mostly remain unburned (other than variable scorching around their bases). This site is on USFS land.

The accessway between site C10 and C11 (Figure 43) is burned 100%. Scattered regrowth of grass is visible.



Figure 41. Drill site DT4 looking northeast (drilled in 2013).



Figure 42. Drill site C11 looking southwest (drilled in 2012).



Figure 43. Accessway between drill site C10 and drill site C11 looking south.

#### **Drill Site DT5**

Drill site DT5 (Figure 44) is burned in excess of 90%. Scattered regrowth of grass is visible in Figure 44. Many unburned to incompletely burned small shrubs can be seen within and around the drill site. This should improve the regrowth of the area with winter and spring moisture. This site is on USFS land.

This site is located adjacent to a USFS road through the project area. Therefore, there was no distinct accessway to be reclaimed in 2013. The road was not impacted by the excavation for the drill site.

Of interest for future plant growth in this part of the project area and surroundings is that there is abundant new growth of grass to the south of drill site DT5 as visible in Figure 45. This area was dominantly grass before the fire.

#### **Drill Site SW8**

Drill site SW8 (Figure 46) is burned in excess of 90%. Scattered regrowth of grass is visible in Figure 46. Many incompletely burned small shrubs can be seen in within and around the drill site. This should improve the regrowth of the area with winter and spring moisture. This site is on USFS land.



Figure 44. Drill site DT5 looking east-northeast (drilled in 2013).



Figure 45. View to the south from near drill site DT5.



Figure 46. Drill site SW8 looking southwest (drilled in 2012).



Figure 47. Accessway to drill site SW8 looking southwest.

The accessway between the USFS road and SW8 (Figure 47) is burned close to 100%. Scattered regrowth of grass is visible.

## Drill Site SW9

Drill site SW9 (Figure 48) is burned in excess of 90%. Unburned to incompletely burned small shrubs can be seen within and around the drill site. This should improve the regrowth of the area with winter and spring moisture. This site is on USFS land.

The accessway between the USFS road and SW9 (Figure 49) is burned 100%. Scattered to abundant regrowth of grass is visible.



Figure 48. Drill site SW9 looking east (drilled in 2013).

## **Coleman Canyon**

Coleman Canyon on the east side of the property was variably burned due to the patchy nature of the fire on that side of the high central ridge at Island Mountain. The majority of the canyon bottom downstream of the old underground mining area was not burned significantly if at all. Upstream from the mining area (Figure 50), most of the canyon was burned, with remnant patches of vegetation remaining.

The seasonally boggy area just downstream of Staging Area 2 (large light brown patch in


Figure 49. Accessway from USFS road to drill site SW9 looking north.



Figure 50. View of Coleman Canyon upstream of the old mining area.

center of Figure 50 and Figure 51) was untouched probably because of the low growth of vegetation that did not support the fast-moving fire. This vegetation also probably was relatively green and high in moisture content (due to the perched water table) at the time of the fire and harder to ignite. The boggy area served as a small firebreak such that the grass and sage area to the east of it and the USFS road was not burned either.

The stands of aspen and vigorous undergrowth on the south slopes of Coleman Canyon appear also to have served as firebreaks. Figure 52 shows that the fire did not extend east of the aspen stands in most places. Fingers of the fire burned into the stands, but mostly not through the stands except through some of the larger breaks in the stands in the middle of the canyon and just upstream of the old mining area where the fire followed the valley bottom into and through scattered trees.

The riparian vegetation in middle to lower Coleman Canyon was largely untouched by the fire. The dense willows in this area can be seen in Figure 53 and in the closer panorama (attached with this report as a separate LowerColeman-pan.pdf file) of the area above the confluence with Hammond Canyon. As with the boggy area in upper Coleman Canyon, the willows, grasses, and sedges on the valley floor in this stretch of the stream likely were wetter at the time of the fire and did not support fire ignition and movement.



Figure 51. Closeup looking northwest of the seasonally boggy area in upper Coleman Canyon.



Figure 52. View of South slopes of Coleman Canyon showing aspen stands and remaining sage and grass areas east of those stands.



Figure 53. View of lower Coleman Canyon and region to east of Gold and Martin Creeks looking east-northeast from planned drill site SE7.

Except for a large northern finger of the fire (burn is visible in upper left of Figure 53), which extended all the way to the high hills east of Martin Creek, the fire stopped at Gold Creek and at the Gold Creek road on the east side of the hill just east of Gold Creek. Presumably, the creek and road acted as a firebreak and/or a containment line for the fire crews.

## **Old Mining Areas in Coleman Canyon**

#### Upper Coleman Canyon:

The old underground mining area in upper Coleman Canyon (the area covered by the cluster of patented claims) was largely unaffected by the fire. Figure 54 shows the central part of the workings where there is a collapsed shaft (upper center of picture) and collapsed adits (one visible at upper right in the picture). The fire burned the upstream portion of the surface workings (Figure 55) and down the streambed to the underground workings area (Figures 54 and 55). The stand of aspen and related undergrowth on the northwest side of the old workings appeared to have served as a firebreak and stopped the fire from advancing into the mining area beyond the western fringe of the trees. Only spot fires occurred within the stand of trees. The mine waste piles, being dominantly bare rock, also appear to have kept the fire from wrapping back into the mining area from the streambed. Most of the riparian streambed area to the east of the old workings also was not burned.



Figure 54. View of mine dumps and burn extent in old mining area in upper Coleman Canyon looking southwest from USFS road.



Figure 55. View looking northwest of the upper part of the old mining area in Coleman Canyon



Figure 56. View of old mining area from the collapsed shaft looking northwest.

There were no standing complete or remnant wooden or other vulnerable structures in the upper Coleman Canyon mining area prior to the fire. However, it is possible that artifacts were destroyed or damaged within the areas that did burn.

### Adit Area of Lower Coleman Canyon:

There is a collapsed adit in lower Coleman Canyon on the north side of the road about 300 m upstream of the Chinese Placer workings. Prior to the fire, the ore loading bin (Figures 57-59) to the southeast of the adit was the only standing mine structure in Coleman Canyon. That bin almost completely burned during the fire (right of center in Figure 60). Only the metal hopper, the wear plate that was above the hopper, and a couple unburned pieces of wood remain.

The overall area of the adit and related workings farther up the hill is shown in Figure 61. No other standing full structures were known in this area. However, there is an intact pile of lumber on the waste pile to the left of the adit (behind the large bush at upper left in Figure 60) which could have been a small hut or other building at one time. There also was a remnant structure (floor boards and lowest wall boards) of a small cabin about 50 feet to the east of the collapsed adit. This remnant structure also completely burned during the fire. Only part of a stovepipe, nails, the "foundation excavation" (a building outline a few inches deep at most), a stove "mound" (raised dirt square where a stove likely was located), and miscellaneous trash (such as metal cans) remain from that structure.



Figure 57. Ore loading bin (front view) in lower Coleman Canyon (taken June 9, 2010).



Figure 58. Ore loading bin (top view) in lower Coleman Canyon (taken June 9, 2010).



Figure 59. Ore loading bin (east side view) in lower Coleman Canyon (taken June 9, 2010).



Figure 60. View of collapsed adit area and former ore loading bin looking north from USFS road.



Figure 61. View of collapsed adit area in lower Coleman Canyon looking north from south side of the canyon.

Chinese Placer Workings in Lower Coleman Canyon:

The main part of the Chinese Placer workings in lower Coleman Canyon was not burned to any significant extent. These cover the area of large green bushes and unburned sage (to the left of the bushes) in the center of Figure 62.

There are smaller workings (defined by various piles of stream cobbles and gravel) along the southwestern unnamed tributary to Coleman Creek, which joins Coleman Creek just south of the collapsed adit, that are burned in excess of 90%. Figure 63 is a panorama of the lower half of this tributary. This tributary also is significant because the upper part of the tributary was the southern terminus of the Chinese Ditch, which was used to supply extra stream water to the Chinese Placer workings. Presumably, the more limited alluvial gravels and cobbles along the tributary contained enough gold to make it worthwhile to move those materials up the slopes of the tributary where the workers could sort and pan through them for metal content. The visible piles likely were neatly stacked to keep the worked material out of the way of further excavations.

It is unknown if any non-building artifacts existed in this tributary area before the fire. Given the extent of the burn in this area, it is unlikely any burnable artifacts would have survived.



Figure 62. View of part of lower Coleman Canyon near the confluence with Hammond Canyon.



Figure 63. View of the lower part of the southwest tributary to Coleman Creek with small Chinese placer workings visible as piles of gravel and cobbles on slopes above the streambed.

Mined Area of Hammond Canyon:

The middle portion of Hammond Canyon is burned nearly 100%. The lower third of the canyon is variably burned, with the confluence with Coleman Canyon being nearly untouched. The upper portion of Hammond Canyon likewise is variably burned.

Although no full review had been done in the middle portion of Hammond Canyon area prior to the fire, there is no recollection of any standing mine structures having been present since the Island Mountain project was begun. There are a number of collapsed mine workings in that portion of Hammond Canyon. Not enough of the area was reviewed on foot in the past to know if any remnant vulnerable structures could have been present. However, a review of past aerial photography (such as Google Earth) is recommended to see if any such features could have been present or not.

## Damage to Chinese Ditch

During this Fire Review, it was discovered that a portion (about 100 feet) of the Chinese Ditch in upper Hammond Canyon was damaged by the firefighting efforts. A bulldozer firebreak was cut from near drill site NE2 (on the ridge between upper Coleman and Hammond Canyons) down a small tributary into Hammond Canyon (Figures 64-69). The berm of the ditch has been variably cut or removed along this damaged section. The bowl of the ditch was mostly leveled as part of the firebreak construction.



Figure 64. Bulldozer firebreak in small tributary to Hammond Canyon looking west.



Figure 65. Panorama of the intersection of the Chinese Ditch and the bulldozer firebreak.



Figure 66. Short section of intersecting firebreak cut up the hillside above the Chinese Ditch.



Figure 67. Portion of damaged Chinese Ditch southeast of the intersection with the firebreak.



Figure 68. Middle portion of the damaged part of the Chinese Ditch.



Figure 69. Southeast end of the damaged section of the Chinese Ditch. The firebreak continued to the left into the valley bottom.

The unaffected parts of the Chinese Ditch can be seen on the far left side of Figure 65 and in the background of Figure 69. The bulldozer firebreak intersected the ditch at the cattle path up the center of the tributary.

The firebreak appeared to have had an impact on the fire, but did not stop it completely in this area. The overall burn in upper Hammond Canyon was patchy, as can be seen in Figures 64-69.

#### **Gold Creek Placer**

The Gold Creek Placer patented claims could not be directly assessed because they are behind locked gates at both the northwest and south fence entrances. Nonetheless, from a distance (Figure 70), it appears that the Gold Creek placer area was mostly unaffected by the fire. The northern and middle parts of the placer area appear to not be burned based on the light brown colors of the vegetation in those areas and on the hill to the east of Gold Creek. The southern third of the placer claims area may have been at least partially burned based on the fact that the hill immediately to the east between the creek and Gold Creek Road was burned (upper right part of Figure 70).



Figure 70. View of the southeastern part of the Island Mountain property, Gold Creek Placer area, and extent of burned area to the southeast. The southern terminus of the Chinese Ditch is partially visible at middle right.

#### **Additional Panoramas of Project Area**

Some additional panoramas of the project area and surroundings are attached to this report as PDF files. The areas covered by these panoramas already have been discussed at least in part based on drill sites or other specific features of interest. Nonetheless, the panoramas do provide additional perspective on the extent of the burn in the project area and surroundings. Files are named based on the closest project and/or topographic feature(s) to the photo source location.

Filename	Description
ColemanCanyonFromSE7-pan.pdf	View of all of Coleman Canyon looking north- northwest (left) to east (right) from planned drill site SE7 (see southern part of Figure 2).
ColemanCreekWarmCreekDivide-pan.pdf	View of the Warm Creek-Coleman Creek divide area looking east-northeast (left) to southeast from hill near drill site GG-NW1. Drainage at left side flows north to Warm Creek.

LowerColeman-pan.pdf	View of Lower Coleman Canyon from the old mining area in the upper canyon down to the confluence with Hammond Creek. Taken looking northwest (left) to east-northeast (right) from hill on south side of canyon across from the mine adit in the lower part of the canyon.
MiddleColemanCanyon-pan.pdf	View of middle and far eastern part of Coleman Canyon looking southeast (left) to south-southwest (right) from "Prospect Hill" which is just south of drill site DT1. The Chinese Ditch is visible to the left below the viewpoint and on the south side of the canyon
ProspectsHills-pan.pdf	View of the area between drill site DT1 (far left; looking north) and middle part of Coleman Canyon (far right; looking southeast) from "Prospect Hill" which is shown on the U.S. Geological Survey 7.5- min topographic quadrangle as having a number of old mining prospects.
UpperColemanFromSiteC1-pan.pdf	Upper part of Coleman Canyon looking north (left) to east (right) from drill site C1. The old underground mining area in the upper canyon is among and northeast of the stand of aspens in center of the panorama.
UppermostColemanCanyon-pan.pdf	Uppermost Coleman Canyon looking southwest (left) to north (right) from "Prospect Hill".
WestRoadPanorama-pan.pdf	Panorama of the western half of the Island Mountain property looking north-northeast (left) to south-southwest (right) from the main access road on the west side of the claim block.

## ColemanCanyonFromSE7-pan.pdf



## ColemanCreekWarmCreekDivide-pan.pdf





## MiddleColemanCanyon-pan.pdf





## UpperColemanFromSiteC1-pan.pdf

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# WestRoadPanorama-pan.pdf

