

C/007/016 Incoming

# 4156



225 N. 5th Street, Suite 900  
Grand Junction, CO 81501  
(970) 263-5141  
Fax (970) 263-5161

August 13, 2012

Mr. Daron R. Haddock, Coal Environmental Manager  
Division of Oil, Gas, and Mining  
P.O. Box 145801  
Salt Lake City, Utah 84114-5801

RE: Post Mining Land Use Change to Gordon Creek 2, 7, and 8 Disturbed Area,  
Permit # C/007/016

Dear Mr. Haddock:

Please find enclosed with this letter completed copies of the C1 and C2 forms, three redline/strikethrough copies, and four clean copies of modified text of the Gordon Creek 2, 7, and 8 Mines Mining and Reclamation Plan (MRP) that are part of Mountain Coal Company, LLC's (MCC) application to change the post mining land use of the disturbed area of the reclaimed 2, 7, and 8 Mines. This modification application is being made to more accurately represent the planned land use of the property after phase III bond release is given. MCC has discussed this issue at length with Mr. J. Mark Jacob, the sole owner of the property, and he has agreed the post mining land use for this property will principally be livestock grazing. It is also likely Mr. Jacob will be extending a road through the reclaimed area to access the upper reaches of his properties within the reclaimed disturbed area.

Because of the age of the permit and unfortunate lack of existing compatible electronic format for the original MRP, the modified pages have multiple variations of redline/strikethrough colors or shading. This is the result of the work of several authors using various word processing formats that, where at times, the various software and printer drivers refused to cooperate one with another. Also, there are sections of new text that could not be compared to the original text since the electronic version of the original text was unavailable. I apologize for any inconvenience these issues may cause.

I appreciate your consideration in this matter. If you have any questions regarding the information provided in this letter, please give me a call at (970) 261-1425.

Sincerely,

Chris D. Hansen  
Environmental Coordinator  
Arch Western Bituminous Group, LLC

RECEIVED

AUG 14 2012

DIV. OF OIL, GAS & MINING

# APPLICATION FOR COAL PERMIT PROCESSING

Permit Change  New Permit  Renewal  Exploration  Bond Release  Transfer

**Permittee:** Mountain Coal Company, LLC

**Mine:** Gordon Creek 2, 7 & 8 Mines

**Permit Number:** C/007/016

**Title:** Post Mining Land Use Change

**Description,** Include reason for application and timing required to implement:

Change the post mining land-use of the disturbed area to more clearly represent private owner's use.

**Instructions:** If you answer yes to any of the first eight (gray) questions, this application may require Public Notice publication.

- Yes  No 1. Change in the size of the Permit Area? Acres: \_\_\_\_\_ Disturbed Area: \_\_\_\_\_  increase  decrease.
- Yes  No 2. Is the application submitted as a result of a Division Order? DO# \_\_\_\_\_
- Yes  No 3. Does the application include operations outside a previously identified Cumulative Hydrologic Impact Area?
- Yes  No 4. Does the application include operations in hydrologic basins other than as currently approved?
- Yes  No 5. Does the application result from cancellation, reduction or increase of insurance or reclamation bond?
- Yes  No 6. Does the application require or include public notice publication?
- Yes  No 7. Does the application require or include ownership, control, right-of-entry, or compliance information?
- Yes  No 8. Is proposed activity within 100 feet of a public road or cemetery or 300 feet of an occupied dwelling?
- Yes  No 9. Is the application submitted as a result of a Violation? NOV # \_\_\_\_\_
- Yes  No 10. Is the application submitted as a result of other laws or regulations or policies?  
*Explain:* \_\_\_\_\_
- Yes  No 11. Does the application affect the surface landowner or change the post mining land use?
- Yes  No 12. Does the application require or include underground design or mine sequence and timing? (Modification of R2P2)
- Yes  No 13. Does the application require or include collection and reporting of any baseline information?
- Yes  No 14. Could the application have any effect on wildlife or vegetation outside the current disturbed area?
- Yes  No 15. Does the application require or include soil removal, storage or placement?
- Yes  No 16. Does the application require or include vegetation monitoring, removal or revegetation activities?
- Yes  No 17. Does the application require or include construction, modification, or removal of surface facilities?
- Yes  No 18. Does the application require or include water monitoring, sediment or drainage control measures?
- Yes  No 19. Does the application require or include certified designs, maps or calculation?
- Yes  No 20. Does the application require or include subsidence control or monitoring?
- Yes  No 21. Have reclamation costs for bonding been provided?
- Yes  No 22. Does the application involve a perennial stream, a stream buffer zone or discharges to a stream?
- Yes  No 23. Does the application affect permits issued by other agencies or permits issued to other entities?

**Please attach four (4) review copies of the application. If the mine is on or adjacent to Forest Service land please submit five (5) copies, thank you.** (These numbers include a copy for the Price Field Office)

I hereby certify that I am a responsible official of the applicant and that the information contained in this application is true and correct to the best of my information and belief in all respects with the laws of Utah in reference to commitments, undertakings, and obligations, herein.

Chris D Hansen  
Print Name

Chris D Hansen ENV Coordinator 8/13/12  
Sign Name, Position, Date

Subscribed and sworn to before me this 13<sup>th</sup> day of August, 2012

Kathleen Atwood  
Notary Public

My commission Expires: 12-02, 2015 }  
Attest: State of Utah } ss:  
County of Carbon



<b>For Office Use Only:</b>    	<b>Assigned Tracking Number:</b>   	<b>Received by Oil, Gas &amp; Mining</b>  <div style="font-size: 2em; color: red; font-weight: bold;">RECEIVED</div> <div style="font-size: 1.5em; font-weight: bold;">AUG 14 2012</div> <div style="font-size: 0.8em; color: red; font-weight: bold;">DIV. OF OIL, GAS &amp; MINING</div>
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### **3.3.4 Mine Permit Area**

*The total acreage contained within the Mine Permit Area is 2286 acres. The area is delineated on Figure 1-2, Permit Area Map, and Plate 1-1, Mine Land Boundaries.*

### **3.3.5 Mine Plan Area**

*The mine plan area is the same as the mine permit area.*

## **3.4 Environmental Protection**

### **3.4.1 Preservation of Land Use**

*Upon approval of this revised plan, final reclamation work will commence. Reclamation efforts will be directed to recreating the pre-mining land use which was stock grazing. This will be achieved by use of an acceptable seed mixture with shrubs and grasses.*

#### **3.4.1.1 Projected Impacts of Mining on Current and Future Land**

*Impacts to additional areas will be controlled by maintaining surface disturbances within the present boundaries. Mining and reclamation operations have not affected public facilities or roads and are not projected to in the future.*

#### **3.4.1.2 Control Measures to Mitigate Impacts**

*Based on the boundaries of the present surface disturbance, no public parks or historic places will be impacted by reclamation operations so mitigation measures are not discussed here. A further discussion of Cultural Resources may be found in Section 5.*

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*Disturbance of furtive species results from the levels of noise and activity associated with an operational mine. Thus, most larger species of birds and mammals (including, for example, deer, carnivores and raptors) tend to avoid the mine site, at least during working hours. Most of these species are likely to move freely around the mine site on weekends and to quickly re-inhabit the area after decommissioning. Since the mining is completed, little if any wildlife impacts should occur as a result of reclamation.*

#### **3.4.6.2 Mitigation and Management Plans**

*The Gordon Creek No. 2/7/8 Mines are existing/completed operations. Therefore, mitigation and wildlife management measures have been designed to prevent additional impacts related to reclamation activities and to facilitate rapid return of the site to it's pre-mining habitat after decommissioning.*

*The relatively small-scale habitat loss associated with the mining operation will be mitigated upon completion of the project by reclaiming the disturbed sites. The revegetation plant mix includes herbaceous and woody species that are adapted to onsite conditions are of known value to wildlife for cover, forage, or both. Details of the reclamation plan are provided in Section 3.5. It should be noted that the post-mining land use is stock grazing; however, reclamation will also replace wildlife habitat.*

*Habitat loss associated with disruption or pollution of North Fork Gordon Creek is controlled by a diversion system to keep unaffected upslope runoff away from the disturbed area, and a series of sediment ponds to prevent disturbed area runoff from increasing the sediment load of the stream.*

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The site configuration will provide a stable subsurface foundation for vegetative cover capable of stabilizing the surface from erosion

As discussed above, the backfilled areas of the No. 7 Mine site will be stable and will be revegetated in accordance with the revegetation plan described in Section 3.5.5.2. Doing so will minimize erosion and promote protection of the hydrologic balance.

The site configuration will support the post-mining land use

The post-mining land use for this area will be stock grazing. The regrading to AOC will be entirely consistent the these uses. Indeed, the emphasis on stability and protection of the hydrologic regime will be the most protective of these uses.

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### 3.5.5.6 Establishment of Wildlife Habitat

Although the post-mining land use is stock grazing, reclamation is also particularly important as a means of controlling erosion and restoring disturbed areas to productive wildlife habitat. Mountain Coal will use one or more of the following procedures in achieving the reclamation goal: (1) Planting a diverse mixture of native grasses, forbs, and (where appropriate) woody species, (2) using seedling stock rather than relying solely on seeds for trees or shrubs, (3) planting vegetation to create an edge effect by clumping selected shrub or tree species, (4) leaving islands of natural vegetation within the new disturbed sites, which were saved during the initial construction of the mine site (No. 8 Mine). Section 10.5 provides a detailed discussion of the reclamation, mitigation and management plans of terrestrial habitats and wildlife.

### 3.5.5.7 REVEGETATION STANDARDS FOR SUCCESS

Standards for revegetation success will follow DOGM guidelines and be consistent with those described in R645-301-356. The standards will include criteria representative of unmined lands. Reference areas have been sampled to provide adequate standards for success. ~~Ground~~Total living cover, and ~~woody species density will~~biomass production will be considered when they are at least 90% of the standards described below.

#### Gordon Creek No. 2 Mine Area

As described in Chapter 9, one area (shown on Plate 9-1) was sampled to be used for the standard of success at the time of final reclamation. The community type is mountain grasslands.

The mountain grassland community was estimated at 20.4% cover, whereas, most of it consisted of herbaceous species. The species mix includes species that are consistent with this community.

In an effort to provide one standard of success for cover, the Mountain Grassland (also referred to as "Mountain Brush/Grassland Community" Reference Area will be used as the vegetative standards for success for all reclaimed sites. —As indicated earlier, this reference area was re-sampled in 1993. (Data is included in Appendix 9-2.). Revegetation of the reclaimed sites will be deemed successful when the ~~cover, density and diversity match that of the resampled reference area as described below~~total living cover and biomass productivity meet or exceed that of the reference area.

Cover on reclaimed and reference areas will be measured using the ~~same~~similar methods as were employed during the base line studies. Cover will be estimated ~~in~~by randomly ~~located~~placing 1.0 square meter quadrats in the sample areas. Production will ~~not be measured, since the post-mining land-use is wildlife habitat. Shrub density will be evaluated based on the belt transect method outlined in UDOGM "Vegetation Informatin Guidelines" Revised, 1989.~~

~~One of the greatest challenges of revegetation is to create reclaimed areas which have a large number of desirable species. Species diversity on the reclaimed areas will be encouraged by including a variety of grasses, forbs, and shrubs in seeding and planing mixes. Species diversity will be judged adequate when the relative cover and percent distribution of biomass for the major life form groups approximates that which occurs in the reference area. That is, if the relative cover of perennial grasses is 50 percent in the reference area, then the relative cover of perennial grasses on the reclaimed areas should also be approximately 50 percent.~~

~~If most of the cover were being provided by annual forbs on the reclaimed areas and by perennial grasses on the reference area, then the reclamation would be judged successful.~~ be measured by clipping and weighing the current annual biomass within 1.0 meter quadrats.

The purpose of the above procedures is to demonstrate that based on total living cover, and productivity biomass production, the disturbed areas have been returned to stable plant communities capable of withstanding the intended post-mining land use, which is stock grazing.

Based on discussions with the Division of ~~Wildlife Resources and the Division of~~ Oil, Gas and Mining, it has been determined that a successful revegetation will be achieved once these parameters meet or exceed that of the reference area – the area chosen to represent future revegetation success ~~standard of 2000 shrubs or trees per acre will also be required for bond release~~ standards.

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Cover on reclaimed and reference areas will be measured using the same methods employed during the base line studies. Cover will be estimated in randomly located 1.0 square meter quadrats. Production will not be measured, since the post-mining land-use is wildlife habitat. Shrub density will be evaluated based on the belt transect method outlined in UDOGM "Vegetation Information Guidelines" Revised, 1989.

One of the greatest challenges of revegetation is to create reclaimed areas which have a large number of desirable species. Species diversity on the reclaimed areas will be encouraged by including a variety of grasses, forbs, and shrubs in seeding and planning mixes. Species diversity will be judged adequate when the relative cover and percent distribution of biomass for the major life form groups approximates that which occurs in the reference area. That is, if the relative cover of perennial grasses is 50 percent in the reference area, then the relative cover of perennial grasses on the reclaimed areas should also be approximately 50 percent.

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The purpose of the above procedures is to demonstrate that based on cover, and productivity, the disturbed areas have been returned to stable plant communities capable of withstanding the intended post-mining land use, which is stock grazing.

Based on discussions with the Division of Wildlife Resources and the Division of Oil, Gas and Mining, it has been determined that a success standard of 2000 shrubs or trees per acre will also be required for bond release.

#### 4.3.4 Legal Right to Enter

Figure 4-3 shows the boundaries of land within the proposed permit area upon which the applicant initially had the legal right to enter and conduct coal mining/reclamation activities.

However, All coal leases, with Federal, State and Private concerns, have been relinquished, and the property has been reclaimed. The present right to enter is based solely on surface use agreements with ~~3~~1 private ~~parties~~party: Calvin K. Jacob and Sons., ~~Robert F. and Linda M. Jewkes and E.E. Peirce.~~J. Mark Jacob, a son of Calvin K, Jacob, is the sole proprietor of the lands after the death of Calvin and settlement of the estate. The right to enter agreement remains in effect with J. Mark Jacob.

The permit area has been revised to contain only the disturbed (reclaimed) area, ~~right fork culvert and Sweet's Pond~~. The right of entry is for surface use only, and will terminate upon final bond release for reclamation. The following is a description of the revised permit area:

Section 17, T. 13 S., R. 8 E., SLBM

SE 1/4 SW 1/4 SW 1/4

Section 18, T. 13 S., R. 8 E., SLBM

N 1/2 SE 1/4, N 1/2 SW 1/4 SE 1/4, S 1/2 NE 1/4 SW 1/4, SE 1/4 SW 1/4,  
SE 1/4 SW 1/4 SW 1/4

The previous permit area was approximately 2286.05 acres.

The current permit area is 180 acres in total.

#### **4.3.5 Associated Surface Mining**

*The surface operations associated with underground coal mining activities do not involve the surface mining of coal. The private mineral estate to be mined (coal) has not been severed from the private surface estate.*

#### **4.4 Existing Land Use**

##### **4.4.1 Regional Land Use**

###### **Agricultural**

*Irrigated lands are common throughout the region. More recently, part of the irrigation water is being consumed by growing communities. This has not affected tillage rotation operations appreciably.*

*Historically, the livestock industry has played an important part of the region's economy. Early settlers depended on range land for grazing sheep, cattle and horses. Presently, the trend is towards more cattle grazing and fewer sheep. Typically, ranchers conduct their operations adjacent to the grazing area. The BLM and USFS lands are used extensively for grazing.*

###### **Forestry**

*Timber operations were once closely tied to ranch operations. Early settlers needed the timber for fences, corrals, mine timber, railroad ties, etc. In more recent years, the majority of the sawmills have closed due to less demand for wood products.*

*Current uses of forest products have changed somewhat since earlier times. The demand is now for fence-posts, poles, Christmas trees and sawtimber. Present levels of forest products use is in up-swing with population growth.*

### **Recreation**

*A large variety of wildlife zones are present ranging from desert to high mountain forest. Large amounts of data are present for game species due to their economic value. Mule deer are the most abundant big game in the region. Deer populations are low and rangelands are improving.*

*Winter range for deer is the most limiting factor for expansion at the present time. Hunting is expected to rise in popularity as population in Carbon and Emery Counties increase. Mule deer and elk are popular big game species that are hunted.*

*Lakes, streams and rivers of this region provide habitat for 40 varieties of fishes. Rainbow, cut-throat, brown and brook trout are some of the better known game fish pursued by fishermen.*

*In addition to hunting and fishing, USFS and BLM provide lands for a variety of recreational activities in this region. They include camping, hiking, pioneering, snowmobiling, snow skiing, etc.*

#### **4.4.2 Mine Plan Area Land Use**

##### **Past and Present Land Use**

*The land on which No. 2/7/8 Mines are located has long been used for coal mining. Prior to coal mining operations, the mine site land was primarily used for stock grazing. The surface area of the mine site is all private-owned land. As a result, public access for other uses has been non-existent, or at least very limited. There are no developed campgrounds or public roads within the area and none planned for the future.*

Private landowners still presently administer the lands in this area for livestock forage. Wildlife habitat, watershed, dispersed recreation and coal mining are also limited land uses; however, they are minor uses and subject to control of the landowners. There are no range improvements on the area. Access to the lease tract is limited to jeep trails into the higher elevations leading to Beaver Creek which is above the No. 2/7/8 Mine leases. There are no plans to alter this access situation.

The above described uses of this land are primarily the same for stream valleys, steep slopes or flats, hilltop areas, with the exception of coal mining, which was located on the slope and beneath the hilltop areas.

#### **4.4.3 Affect of Operation on Land Use and Mitigation measures**

The surface disturbance created by the mining operations at No. 2/7/8 Mines is limited to what was previously disturbed, and has since been reclaimed. Therefore, the potential to affect the land use is discussed below.

The surface disturbance at the No. 2/7/8 Mines consisted for the most part of access and haul roads that service the mining operation. There was little impact on rangeland as the mine plan area is below areas used for summer grazing by private landowners.

The cultural resources survey showed that there are four dilapidated cabins within the permit area. These cabins are considered sites used by various early inhabitants. There are no public roads or public parks in or near mining operations that would suffer adverse impacts from mining operations.

Mining has been completed at this operation, and the site has been reclaimed. All roads were eliminated, and a temporary, 3-celled sediment pond which was constructed to catch runoff and any sediment from the reclaimed area above, has also been removed and reclaimed.

#### **4.4.4 Post-Mining Land Use**

The post-mining land use is proposed to be the same as the pre-mining land use, namely: stock grazing. Stock grazing has been limited at the site since the 1960's due to the steep terrain and fencing for the mine operation. The reclaimed area was also fenced to prevent stock grazing during the reclamation liability period; however, all fences have now been removed, and stock grazing can occur at the landowner's discretion.

The post-mining land use will be achieved by the return of the area to a state compatible with stock grazing and through the use of the seed mixes and reclamation techniques as described in Section 3.5 of this application.

#### **4.5 Post Mining Land Uses**

The post-mining uses of the land will be the same as the pre-mining and present uses described above. The disturbed areas have been reclaimed to a degree acceptable to the Division of Oil, Gas & Mining and the land will once again support its principle pre-mining use: stock grazing.

The restoration of the area was achieved by regrading the yards, reclaiming the roads and portal areas to a practical degree, planting all disturbed areas and monitoring the revegetation effort to the satisfaction of the Division of Oil, Gas & Mining.

##### **4.5.1 Evaluation for Meeting Post-Mining Land Use**

The disturbed/reclaimed area of the mine has a designated post-mining land use of "stock grazing." This area is still within the bond liability period for reclamation; however, stock has been observed on the reclaimed site in numerous instances.

The area in question for the reduction of the permit area is that surrounding the minesite and areas above the mining. Post-mining land use for these areas is also primarily stock grazing. Wildlife habitat, hunting, sightseeing, watershed, hiking and most recently - logging, are other, limited uses of the area; however, access and such uses are under control of the landowners, and as such, are not considered valid post-mining land uses.

The primary effects of the mining on the surrounding area for permit size reduction would be in the form of subsidence or affecting the watershed. The property is completely private-owned on the surface, and landowners control access for hunting, hiking, and logging. Watershed protection and wildlife habitat are also controlled to a certain degree by the landowners, since excessive logging and over-grazing have an adverse effect on watersheds and wildlife.

The following measures have been taken and analyzed to ensure the post-mining land use of the area has been met. It should be noted, however, that since Mountain Coal does not own or control the surface (except for the reclaimed area) there is a limit as to its ability to maintain any environmental protection of these areas beyond that associated directly with the mining/reclamation operations.

Subsidence monitoring and mitigation has been performed on the entire mined area. As analysis of the subsidence effects on the area indicates no damage to structures or renewable resources. Also, there are no known areas which present any danger to stock as a result of the mining operations. The subsidence analysis is discussed in detail in Appendix 3-11.

The hydrology of the area has been examined and monitored extensively over the life of the project. Based on field examinations and monitoring results, no adverse effects to the hydrology or watershed as a result of this operation have been noted. A complete summary of hydrologic monitoring results is shown in Appendix 7-8.

*Mountain Coal Company has an on-going program to control noxious plants on its minesite. This effort actually enhances the surrounding area by lessening the chance for spreading of these plants.*

*All drill holes located on the surrounding property have been plugged and sealed. In addition, any disturbance associated with past drilling has been reclaimed according to the plan. All subsidence markers have also been removed.*

*The majority of the surface surrounding the mine is owned by Jacob & Sons. They have signed a letter indicating their agreement with the post-mining land use. All landowners, including Jacob, have been notified of the mine reclamation and application for bond release on 3 separate occasions, and given opportunity each time to make comments relative to the effects on their property. To date, not one official adverse comment has been received. Copies of the Jacob letter and the latest landowner notification are included in Appendix 4-1.*

#### **4.6 Socio-Economic Considerations**

*The coal mining industry within Emery County has shown several erratic periods of renewed growth and sudden decline. During the 1950-1960 census period, the population of Emery County declined 8.79 percent. From 1960-1970, Emery County's population declined .74 percent per year. From 1970 to 1975, the population increased from 5,137 to an estimated 6,700 persons, a 23 percent increase.*

*Carbon and Emery Counties are economically dependent upon conditions in the coal market. This is evident by the slump in population of these counties that occurred between 1950-1970. The recent increase in coal mining has centered on Emery county where mining employment has increased over 210 percent from 1969 to 1980. The increase has been more modest in Carbon (40-50 percent).*

*Mining and Reclamation Plan  
Gordon Creek No. 2/7/8 Mines*

*As of this date, the mines have been closed and the minesite has been reclaimed.*

#### **4.3.4 Legal Right to Enter**

*Figure 4-3 shows the boundaries of land within the proposed permit area upon which the applicant initially had the legal right to enter and conduct coal mining/reclamation activities.*

*However, all coal leases, with Federal, State and Private concerns, have been relinquished, and the property has been reclaimed. The present right to enter is based solely on surface use agreements with 1 private party: Calvin K. Jacob and Sons., J. Mark Jacob, a son of Calvin K, Jacob, is the sole proprietor of the lands after the death of Calvin and settlement of the estate. The right to enter agreement remains in effect with J. Mark Jacob.*

*The permit area has been revised to contain only the disturbed (reclaimed) area. The right of entry is for surface use only, and will terminate upon final bond release for reclamation. The following is a description of the revised permit area:*

Section 17, T. 13 S., R. 8 E., SLBM

SE 1/4 SW 1/4 SW 1/4

Section 18, T. 13 S., R. 8 E., SLBM

N ½ SE 1/4, N ½ SW 1/4 SE 1/4, S ½ NE 1/4 SW 1/4, SE 1/4 SW 1/4,  
SE 1/4 SW 1/4 SW 1/4

*The previous permit area was approximately 2286.05 acres.*

*The current permit area is 180 acres in total.*

#### **4.3.5 Associated Surface Mining**

*The surface operations associated with underground coal mining activities do not involve the surface mining of coal. The private mineral estate to be mined (coal) has not been severed from the private surface estate.*

#### **4.4 Existing Land Use**

##### **4.4.1 Regional Land Use**

###### **Agricultural**

*Irrigated lands are common throughout the region. More recently, part of the irrigation water is being consumed by growing communities. This has not affected tillage rotation operations appreciably.*

*Historically, the livestock industry has played an important part of the region's economy. Early settlers depended on range land for grazing sheep, cattle and horses. Presently, the trend is towards more cattle grazing and fewer sheep. Typically, ranchers conduct their operations adjacent to the grazing area. The BLM and USFS lands are used extensively for grazing.*

###### **Forestry**

*Timber operations were once closely tied to ranch operations. Early settlers needed the timber for fences, corrals, mine timber, railroad ties, etc. In more recent years, the majority of the sawmills have closed due to less demand for wood products.*

*Current uses of forest products have changed somewhat since earlier times. The demand is now for fence-posts, poles, Christmas trees and sawtimber. Present levels of forest products use is in up-swing with population growth.*

### **Recreation**

*A large variety of wildlife zones are present ranging from desert to high mountain forest. Large amounts of data are present for game species due to their economic value. Mule deer are the most abundant big game in the region. Deer populations are low and rangelands are improving.*

*Winter range for deer is the most limiting factor for expansion at the present time. Hunting is expected to rise in popularity as population in Carbon and Emery Counties increase. Mule deer and elk are popular big game species that are hunted.*

*Lakes, streams and rivers of this region provide habitat for 40 varieties of fishes. Rainbow, cut-throat, brown and brook trout are some of the better known game fish pursued by fishermen.*

*In addition to hunting and fishing, USFS and BLM provide lands for a variety of recreational activities in this region. They include camping, hiking, pioneering, snowmobiling, snow skiing, etc.*

#### **4.4.2 Mine Plan Area Land Use**

##### **Past and Present Land Use**

*The land on which No. 2/7/8 Mines are located has long been used for coal mining. Prior to coal mining operations, the mine site land was primarily used for stock grazing. The surface area of the mine site is all private-owned land. As a result, public access for other uses has been non-existent, or at least very limited. There are no developed campgrounds or public roads within the area and none planned for the future.*

Private landowners still presently administer the lands in this area for livestock forage. Wildlife habitat, watershed, dispersed recreation and coal mining are also limited land uses; however, they are minor uses and subject to control of the landowners. There are no range improvements on the area. Access to the lease tract is limited to jeep trails into the higher elevations leading to Beaver Creek which is above the No. 2/7/8 Mine leases. There are no plans to alter this access situation.

The above described uses of this land are primarily the same for stream valleys, steep slopes or flats, hilltop areas, with the exception of coal mining, which was located on the slope and beneath the hilltop areas.

#### **4.4.3 Affect of Operation on Land Use and Mitigation measures**

The surface disturbance created by the mining operations at No. 2/7/8 Mines is limited to what was previously disturbed, and has since been reclaimed. Therefore, the potential to affect the land use is discussed below.

The surface disturbance at the No. 2/7/8 Mines consisted for the most part of access and haul roads that service the mining operation. There was little impact on rangeland as the mine plan area is below areas used for summer grazing by private landowners.

The cultural resources survey showed that there are four dilapidated cabins within the permit area. These cabins are considered sites used by various early inhabitants. There are no public roads or public parks in or near mining operations that would suffer adverse impacts from mining operations.

Mining has been completed at this operation, and the site has been reclaimed. All roads were eliminated, and a temporary, 3-celled sediment pond which was constructed to catch runoff and any sediment from the reclaimed area above, has also been removed and reclaimed.

#### **4.4.4 Post-Mining Land Use**

*The post-mining land use is proposed to be the same as the pre-mining land use, namely: stock grazing. Stock grazing has been limited at the site since the 1960's due to the steep terrain and fencing for the mine operation. The reclaimed area was also fenced to prevent stock grazing during the reclamation liability period; however, all fences have now been removed, and stock grazing can occur at the landowner's discretion.*

*The post-mining land use will be achieved by the return of the area to a state compatible with stock grazing and through the use of the seed mixes and reclamation techniques as described in Section 3.5 of this application.*

#### **4.5 Post Mining Land Uses**

*The post-mining uses of the land will be the same as the pre-mining and present uses described above. The disturbed areas have been reclaimed to a degree acceptable to the Division of Oil, Gas & Mining and the land will once again support its principle pre-mining use: stock grazing.*

*The restoration of the area was achieved by regrading the yards, reclaiming the roads and portal areas to a practical degree, planting all disturbed areas and monitoring the revegetation effort to the satisfaction of the Division of Oil, Gas & Mining.*

##### **4.5.1 Evaluation for Meeting Post-Mining Land Use**

*The disturbed/reclaimed area of the mine has a designated post-mining land use of "stock grazing." This area is still within the bond liability period for reclamation; however, stock has been observed on the reclaimed site in numerous instances.*

*The area in question for the reduction of the permit area is that surrounding the minesite and areas above the mining. Post-mining land use for these areas is also primarily stock grazing. Wildlife habitat, hunting, sightseeing, watershed, hiking and most recently - logging, are other, limited uses of the area; however, access and such uses are under control of the landowners, and as such, are not considered valid post-mining land uses.*

*The primary effects of the mining on the surrounding area for permit size reduction would be in the form of subsidence or affecting the watershed. The property is completely private-owned on the surface, and landowners control access for hunting, hiking, and logging. Watershed protection and wildlife habitat are also controlled to a certain degree by the landowners, since excessive logging and over-grazing have an adverse effect on watersheds and wildlife.*

*The following measures have been taken and analyzed to ensure the post-mining land use of the area has been met. It should be noted, however, that since Mountain Coal does not own or control the surface (except for the reclaimed area) there is a limit as to its ability to maintain any environmental protection of these areas beyond that associated directly with the mining/reclamation operations.*

- 1- Subsidence monitoring and mitigation has been performed on the entire mined area. As analysis of the subsidence effects on the area indicates no damage to structures or renewable resources. Also, there are no known areas which present any danger to stock as a result of the mining operations. The subsidence analysis is discussed in detail in Appendix 3-11.*
- 2- The hydrology of the area has been examined and monitored extensively over the life of the project. Based on field examinations and monitoring results, no adverse effects to the hydrology or watershed as a result of this operation have been noted. A complete summary of hydrologic monitoring results is shown in Appendix 7-8.*

- 3- *Mountain Coal Company has an on-going program to control noxious plants on its minesite. This effort actually enhances the surrounding area by lessening the chance for spreading of these plants.*
- 4- *All drill holes located on the surrounding property have been plugged and sealed. In addition, any disturbance associated with past drilling has been reclaimed according to the plan. All subsidence markers have also been removed.*
- 5- *The majority of the surface surrounding the mine is owned by Jacob & Sons. They have signed a letter indicating their agreement with the post-mining land use. All landowners, including Jacob, have been notified of the mine reclamation and application for bond release on 3 separate occasions, and given opportunity each time to make comments relative to the effects on their property. To date, not one official adverse comment has been received. Copies of the Jacob letter and the latest landowner notification are included in Appendix 4-1.*

#### **4.6 Socio-Economic Considerations**

*The coal mining industry within Emery County has shown several erratic periods of renewed growth and sudden decline. During the 1950-1960 census period, the population of Emery County declined 8.79 percent. From 1960-1970, Emery County's population declined .74 percent per year. From 1970 to 1975, the population increased from 5,137 to an estimated 6,700 persons, a 23 percent increase.*

*Carbon and Emery Counties are economically dependent upon conditions in the coal market. This is evident by the slump in population of these counties that occurred between 1950-1970. The recent increase in coal mining has centered on Emery county where mining employment has increased over 210 percent from 1969 to 1980. The increase has been more modest in Carbon (40-50 percent).*

*As of this date, the mines have been closed and the minesite has been reclaimed.*