

#### 17.24.304 INFORMATION ON ENVIRONMENTAL RESOURCES

This chapter of the Bull Mountains Mine No. 1 permit document presents the environmental resources of the area. Information is presented for the characterization of three specific areas: the Permit Area, the Permit Amendment Area, and the Anticipated Life-of-Mine Area. The timing and sequence of the Anticipated Life-of-Mine is shown on Map 308-1. The 5-year mine plan will include the existing Permit Area, as well as the Permit Amendment Area. The timing and sequence of the 5-year mine plan is shown on Map 308-1a. In addition, the study area contains lands within a designated buffer zone around all three mining areas. Some regional environmental disciplines, such as hydrology or wildlife, will have a study area while other site specific disciplines, such as vegetation or soils, do not. The study area for each environmental discipline has been identified and discussed within the description of that resource. This has been determined by the nature of the regulations set forth by the Montana Department of Environmental Quality (MDEQ).

From 1970 to 1991 PM Coal conducted surface mining on a small scale, about 15,000 tons annual production. During 1991, the PM Coal surface mining operation was converted to underground mining. The existing PM Coal highwall was blasted to provide a bench and RBM Mining was contracted by PM Coal to conduct underground operations. PM Coal processed and sold the coal to local markets. Underground mine development continued into 1992. Development included 4 portals and the 1 East Mains were advanced about 1200 feet to cross cut #11. Total underground production for PM/RBM operations was about 62,000 tons. During 1993 PM Coal closed and the mine was idle until 1995 when property owners PM Coal and Meridian Minerals leased the property to Mountain Inc. Underground mine operations were resumed and underground development advanced the 1 East Mains another 2000 feet to cross cut 36. In addition, 1 North was developed 1100 feet to cross cut 14 and 1 South was developed 450 feet to cross cut 5. Portal #5 was developed by Mountain Inc. During 1997 Mountain Inc. closed and the mine was idled and sealed. Total underground production by Mountain Inc. was about 176,000 tons. During 2002 the mine was sold to Bull Mountain Investments, Inc. (BMPII) and the portals were reopened. The condition of the underground mine had deteriorated. Mine restoration work was performed until August of 2003 when mine production resumed. BMPII production began with work to square up the 1 South area. There was no advancement of 1 South but access was gained by driving 2 new entries adjacent to the old works. After 1 South was rehabilitated, during December 2003 mine development moved to 1 East. Advancement of 1 East continued through September 2004 when soft floor mining conditions were encountered and 1 East was stopped. 1 East advancement totaled 1400 feet to cross cut 53. Two sumps, 2 North and 1 1/2 North, were established for storage of water and mine floor clean up. Mining of the sumps began during October 2004 and was completed in April 2005. Total advancement of the sumps was 700 feet each by 450 feet and 700 feet wide respectively. During May 2005 mining began in 1 South and continued for the rest of the year. At years end in 2005, 1 South advancement is 3,100 feet to cross cut 45. Total BMPII production by year is 35,616 tons in 2003, 204,717 tons in 2004, and 373,322 tons in 2005.

Since the Bull Mountains No. 1 is an underground mine, extraction of coal will be accomplished by longwall. Coal will be conveyed to the surface through production portals. Coal cleaning, temporary storage, and handling will be conducted at the surface facilities area. The surface disturbance area contains all lands to be directly disturbed by these operations. Lands which may be indirectly disturbed by the underground mining are contained within the effected area. These lands include areas directly above mining and areas within the angle of draw of the mining. Effected areas also include the areas disturbed by surface facilities.

The following sections of this chapter present the environmental resources within each of these designated areas which could be affected by the mining and reclamation operations proposed within this document.

(1)(a) Map 308-1 shows the size, sequence, and timing of the sub-areas of the Permit Area, Permit Amendment Area and Anticipated Life-of-Mine Area. The Permit Area and Permit Amendment Area encompass the areas the permittee intends to mine in the first five (5) years. Subsequent permits will be applied for according to the mine development rate. These mining years are shown on Map 308-1.

#### Environmental Baseline Data

During the period 1989 to 1991, before any mining commenced in conjunction with Mine Permit No. 93017, Meridian Minerals Company conducted baseline studies for various environmental disciplines. During the period 2006 to 2007, Bull Mountains Coal Mining expanded the 5-year permit area (South Amendment 0178) and the Life-of-Mine area and conducted additional environmental studies for both the South Amendment area and the expanded Life-of-Mine area.

In order to address Rule 17.24.304 environmental baseline data was collected and environmental reports were written to describe the environmental baseline condition of the mine permit area and the Life-of-Mine area prior to mining activities in the respective permit areas. The results of these environmental baseline studies are contained in the Updated Mine Permit Application binders as follows:

#### **LIST OF ADDENDUMS FOR THE BASELINE STUDIES (RULE 17.24.304) IN UP-DATED PERMIT**

Addendum 1: Cultural Resources, Special & Unique Features, Hydrologic and Geologic Data and Appendix 1. (Original Volume 1)

Addendum 2: Groundwater Data Appendices 2, 3, and 4. (Original Volume 1A)

Addendum 3: Aquifer Testing Data Appendices 5, 5A, 5B, & 5C (Original Volume 1B)

Addendum 4: Surface Water Data Appendices 6, 7, 8, 9, and maps (Original Volume 1C)

Addendum 5: Hydrologic & Geologic Description & Appendices 1 thru 4. (Original Vol. 2)

Addendum 6: Hydro & Geologic Description & App. 5 thru 10 & Maps. (Original Vol. 3)

Addendum 7: Hydrologic data, cross-sections and Maps. (Original Vol. 3A)

Addendum 8: Hydrologic & Geologic Data & Maps. (Original Vol. 4)

Addendum 9: Overburden and Climatological Data (Original Vol. 5)

Addendum 10: Vegetation Study (Original Vol. 6)

Addendum 11: Vegetation Data (Original Vol. 6A)

Addendum 12: Vegetation Data (Original Vol. 6B)

Addendum 13: Vegetation Studies (Original Vol. 7)

Addendum 14: Wildlife Data (Original Vol. 7A)

Addendum 15: Soils, Land use, Prime Farmlands (Original Vol. 8)

Addendum 16: BMP Well Data and Reports (Old Vol. 11B)

Addendum 17: BMP Well Data and Reports (Old Vol. 11C)

Addendum 18: Lithologic Logs (Old Vol. 12)

Addendum 19: Lithologic Logs cont. and Coal Analyses (Old Vol. 13)

Addendum 20: Geophysical Logs (Old Vol. 14)