

2.02 GENERAL REQUIREMENTS FOR COAL EXPLORATION

2.02.1 Scope

Basin Resources conducted coal exploration during 1992 under Notices of Intent Numbers X-92-213-00 and X-92-213-01. New Elk Coal Company conducted coal exploration in 2010 through 2012 under Notice of Intent Numbers X-2010-232-00 and X-2011-232-01. None of the exploration activity was within the permitted area of the New Elk Mine.

Should future coal exploration activity be required within the permit area, the appropriate permit revisions will be obtained. Likewise, for activities outside the permit boundaries, the appropriate Notice of Intent shall be filed.

2.02.2 Exploration Involving Removal of 250 Tons or Less of Coal

New Elk Coal conducted eight exploratory drill holes within the New Elk Permit Area.

In the area proposed for exploration the surface is owned by State of Colorado through the Department of Natural Resources for the use and benefit of the Division of Wildlife (DOW). Ownership is indicated on **Map 1**. The DOW lease shown on **Map 2** was filed in Las Animas County Book 1075 pages 1935-1969. Right of entry for the lease is explained in Section 2.03.6 of this Permit Application Package. The location and approximate depths of the drill holes are found in **Table 1.1** and the location can be found on **Map 11-Sheet 4**.

Table 1.1: Approximate Drill Hole Location and Depth			
Hole no.	Location*		Approximate Depth (feet)
	Northing	Easting	
NE-01-20	3,162,814	1,178,758	500
NE-02-20	3,156,836	1,178,331	230
NE-03-20	3,162,285	1,177,863	840
NE-04-20	3,154,128	1,176,905	560
NE-07-20	3,156,291	1,174,015	470
NE-09-20	3,160,918	1,171,470	60
NE-10-20	3,156,116	1,168,478	140
NE-12-20	3,159,903	1,167,681	800

Exploration activities will primarily consist of drilling and associated drill site construction. Limited road construction will take place due to the extensive existing road network used in gas exploration and production. The equipment to be used includes two truck mounted rotary drills, one truck to haul pipe, two water trucks, one backhoe, one bull dozer, a road maintainer, and a logging truck. 4 wheel drive pickups will be used on a daily basis to access the sites.

Construction activities will be minimized. Existing roads will be used wherever possible. Any road spurs required will be constructed in such a manner as to minimize erosion and disturbance to the land surface using a dozer and/or track mounted excavator. The removal of trees will be avoided where possible. Brush will be disposed in accordance to the agreement with the landowners. The amount of surface disturbance necessary will depend on the drill site. The amount of disturbance at each drill site will be kept to a minimum. A pit for the collection of drill cuttings and fluids will be excavated with a backhoe at each location. The pit will be approximately 8 ft by 40 ft by 6 ft deep. The pit will be pumped on a regular basis and all fluids transported to a disposal site at the New Elk Mine. The pit will be backfilled upon completion of the drilling activity. Present plans call for one pit per drill site.

Drill hole depth and estimated acreage of disturbance for road and site construction is included in **Table 1.2**.

Table 1.2: Drill Hole Estimated Disturbance Area					
Hole no.	Estimated Site Area (sf)	Estimated New Road (ft)	Estimated Site (Acres)	Estimated New Road (Acres)	Estimated total Disturbance (Acres)
NE-01-20	3,600	0	0.083	0.000	0.083
NE-02-20	3,600	20	0.083	0.006	0.089
NE-03-20	3,600	300	0.083	0.096	0.179
NE-04-20	3,600	3,950	0.083	1.270	1.352
NE-07-20	3,600	5,220	0.083	1.678	1.760
NE-09-20	3,600	70	0.083	0.022	0.105
NE-10-20	3,600	0	0.083	0.000	0.083
NE-12-20	3,600	500	0.083	0.161	0.243
Total	28,800	10,060	0.661	3.233	3.894

The irregular terrain precludes making an accurate estimate of the amount of material to be disturbed. Each pad is estimated to disturb 3,600 square feet.

Approximately 10,060 foot of road will be necessary. All new proposed roads follow previous roads. The road details are explained in detail in Section 2.05.3 (c).

Drilling activities will include rotary and core drilling. Hole diameter will be 3 inches while rotary drilling and a 3.5 inch diameter core when coring. Drilling fluids include air and water with a mist foaming agent and drilling mud if necessary. All chemicals used will be biodegradable so as not to adversely impact the surrounding area or any groundwater which may be encountered.

Topsoil will be salvaged from the drill sites prior to their construction. Salvaging will include removing the top 12 inches of soil or the amount available and stockpiling this material in the general vicinity of its removal in an area where it will not be removed from the drill site area. Stockpiles of topsoil will be compacted to prevent erosion by wind and other elements until used for reclamation. Topsoil at each drill pad if the area has not been previously disturbed will be stored on the upslope side of the drill pad when safe and practicable to do so to minimize risk of erosion.

The premine land use is shown on **Map 4** covering the entire Permit Area. The soil for the Permit Area is shown on **Map 9**. The vegetation survey for the Permit Area is shown on **Map 10**. Revegetation for the drill sites will be consistent with practices at the New Elk mine site described in Section 2.05.4 (f) in this Permit Application Package.

No holes will be developed as monitoring wells.