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DEPARTMENT OF NATURAL RESOURCES

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March 4, 2013

TO: Minerals Regulatory Program

THROUGH: Dana Dean, Associate Director – Mining _____initial

THROUGH: Paul B. Baker – Minerals Program Manager _____initial

FROM: Wayne H. Western – Environmental Scientist III _____initial

SUBJECT: 2013 Reclamation Surety Costs for Small Mining Operations and Exploration Including Small Mine Three and Five Year Escalation

Rules R647-2-111.3.11 and R647-111.3-3.13 allow the Minerals Regulatory Program to calculate reclamation cost estimates for small mines and exploration projects based on the average dollars per acre costs for reclamation of similar operations. The amounts are determined by the Division, based upon approved surety amounts for current large mining operations. These average costs must be approved by the Board of Oil, Gas and Mining. This memorandum details the amounts recommended to the Board for the average costs to be used for small mines and exploration projects.

The amounts shown are average costs to reclaim sites with similar attributes (i.e. no structures, underground openings, etc.). Additional surety would be required if these facilities were present. These amounts include costs for regrading and revegetation of a simulated mine site based on standard heavy equipment cost data. Hole plugging costs, primarily for exploration, were calculated using information from drilling contractors. The typical reclamation job would require backfilling and grading that could be done with a bulldozer that could be transported to the site with no or limited permits required. For small mines over five acres the amount of disturbance usually requires an excavator to deal with highwall and other types of excavation.

These costs are escalated three or five years into the future for small mines using a five-year average of the Average Means Historical Cost Index for Site Construction, National Average. Costs for exploration projects are escalated a year into the future then re-evaluated if an operator requests an extension for the project.

Through 2011, the Minerals Program used actual costs for reclaiming several large mines, but this procedure resulted many in difficulties. Most large mines have facilities, such as processing plants and leach pads, that are not present at most small mines and exploration projects. It is very difficult to remove these costs and standardize escalation years to make a meaningful calculation. In addition, the Division found it was nearly impossible to not introduce bias into the process of selecting the mines that would be used to calculate the per-acre costs.

Through experience reclaiming remote mines using forfeited sureties, the Division has found the mobilization/demobilization amounts used in the past to be inadequate. Thus, a higher figure has been used than in the past, but the Division has the option of reducing this amount if mobilization and demobilization would be lower due to proximity to an area where equipment could be obtained.



The Division assumes two pieces of equipment need to be used for mines between five and ten acres.

Exploration Notices

<u>Year</u>	<u>First Acre</u>	<u>Each additional acre</u>
2013	\$8,900	\$4,900

Project Size (Acres)	Surety (\$ Amount-2013)	Comments
1 or fewer acres	\$8,900 (includes \$4,000 mob/demob charge) *	Minimum surety required
Each additional acre	\$4,900 per acre (No restriction on acreage)	Partial acreages are rounded up to next highest # (no maximum \$ amount)
Drilling (dry)	\$1,000 mob/demob plus \$210.00/hole	In addition to above costs
Drilling (wet) up to 7" diameter	\$7,000 mobilization charge for holes 800 feet or less plus \$4.25/foot plus \$210 for cap. \$10,000 mobilization charge for hole between 801 and 1,600 feet plus \$4.81/foot plus \$210 for cap. \$16,000 mobilization for holes greater than 1,600 feet and \$5.44/foot plus \$210 for cap.	In addition to above costs
Wells Great than 7" diameter	The Division can request a third party estimate	
Wells deeper than 1,600 feet	The Division can request a third party estimate	
Portal	\$2,000 each opening	
Shafts	\$3,000 each opening	
Revegetation after regrading	\$1,000 mob/demob plus \$1,000 per acre seeding costs.	

Small Mining Operation 5 Acres or Smaller

Project Size (Acres)	Surety 3 & 5 year escalation 2013	Comments
1 or fewer acres	\$9,400 (3-year escalation) * \$9,700 (5-year escalation)	Minimum amount required
Additional acres up to 5 total acres	\$5,200/ acre (3-year escalation) \$5,300/acre (5-year escalation)	Partial acreages rounded up (e.g., 1.2 acres = 2 acres)
Cumulative Amount for 5 acres	\$30,200 (3-year escalation) \$30,900 (5-year escalation)	\$700 difference between 3 and 5 year escalation amount for 5-acres of disturbance.
Portal	\$2,000 each opening	
Shafts	\$3,000 each opening	
Revegetation after regrading	\$1,000 mob/demob plus \$1,000 per acre seeding costs.	

Small Mining Operation Over 5 Acres to 10 Acres

Project Size (Acres)	Surety 3 & 5 year escalation 2013	Comments
6th acre	\$40,600 (3-year escalation) * \$42,000 (5-year escalation)	Minimum amount required
Additional acres up to 10 total acres	\$5,400/ acre (3-year escalation) \$5,600/acre (5-year escalation)	Partial acreages rounded up (e.g., 5.2 acres = 6 acres)
Cumulative Amount for 10 acres	\$62,200 (3-year escalation) \$64,400 (5-year escalation)	\$2,200 difference between 3 and 5 year escalation amount for 10-acres of disturbance.
Portal	\$2,000 each opening	
Shafts	\$3,000 each opening	
Revegetation after regrading	\$1,000 mob/demob plus \$1,000 per acre seeding costs.	