



United States Department of the Interior



OFFICE OF SURFACE MINING

Reclamation and Enforcement

Brooks Towers

1020 15th Street

Denver, Colorado 80202

June 4, 1992

MEMORANDUM

TO: Director, Albuquerque Field Office

FROM: Chief, Technical Assistance Division

SUBJECT: Blazon No. 1 Mine, Highwall Removal and Stabilization

As a follow up to the May 14, 1992 meeting of Karen Jass and Charles Harrison with you, and Steve Rathbun and Bernie Freeman, of your staff, the requested changes have been made to the proposal presented.

The attached maps represent the proposed surface topography with the requested 1.3 plus safety factor. The cost estimate now includes mulching and contingency costs totalling approximately \$26,141.00.

Should you have any questions regarding this matter, you may contact Karen Jass, Mining Engineer, Engineering Support Section at (303) 844-3232.



Russell F. Price

Attachment

For the reclamation of the remaining highwall two things were strongly considered 1) removal of the highwall and 2) stability of the affected area following reclamation of the highwall area.

The following assumptions were made in gathering the data:

Company cross-sections modified by field measurements using tape and inclinometer and photographs are used. No certified land survey was performed, thus derivation of maps are based on the best information available. All volumes, distances and costs are based on these assumptions.

Disturbance was assumed for blasting and dozer work above the highwall, the road surface and adjacent cuts, and redisturbance of stable and vegetated reclaimed land adjacent to original slopes.

Highwall Backfill

Projected from the top of the highwall down 30°. This would require backfilling to the top of the current highwall and over reclaimed areas.

The disturbed highwall area would total 39,000 Ft² (.9 acres) and require 5600 BCY of material, of which 440 BCY would be available from the highwall area. The additional material would come from the road surface profile. To attain the necessary 5200 BCY material, the disturbed road area will be approximately 1170 feet long, 24 feet wide and 5 feet deep.

Ripping of the road surface would cost \$800 as calculated by using the Caterpillar handbook.

A D10N would push the material from the borrow area. The dozer would push the material an average distance of 550 feet from the road to the base of the hill. Then all the material would be pushed directly up the face of the hill to the flat area at the base of the highwall. Finally, the material would be pushed along the flat area at the base of the highwall. The cost involved in this stage of the highwall elimination is \$16,250.

This proposal would require blasting and elimination of the highwall (440 BCY) in the area of V-V' and replacement of fill material to the areas of T-T' and U-U'. This cost would require \$1320 for drilling and blasting, then transport of the material with a dozer at a cost of \$200.

Fertilizing and reseeding in this area averages \$350/acre (taken from PAP's for Skyline mine and Sunnyside mine). For the estimated disturbance area of .98 acres (backfill and above highwall), the cost for vegetation would total \$343.

Mulching averaged approximately \$300/acre (.98 acres) including straw, equipment and labor. These were taken from PAPs currently approved for Skyline mine and Soldier Canyon mine. The total cost for mulching would be \$294.00.

Itemized expenses would be approximately:

Rip road surface	\$ 800.00
Earthwork (borrow areas)	16,250.00
Earthwork (blast and move highwall)	1,520.00
Revegetation	343.00
Mulching	<u>\$ 294.00</u>
Direct Costs	\$19,207.00
Indirect Costs (based on OSM Handbook)	
Contingency (10%)	\$ 1,921.00
Engineering Redesign Fee (8.1%)	1,556.00
Profit and Overhead (12.2%)	2,343.00
Reclamation Management (5.8)	<u>1,114.00</u>
	\$ 6,934.00
Approximate Total Cost	\$26,141.00