

### Document Information Form

Mine Number: C/015/004

File Name: Incoming

To: DOGM

From:

Person N/A

Company N/A

Date Sent: June 25 1980

Explanation:

Post Mining Backfilling and Regrading Plan

cc:

File in: C/015, 004, Incoming

- Refer to:
- Confidential
  - Shelf
  - Expandable

Date \_\_\_\_\_ For additional information

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JUN 25 1980

DIVISION OF  
OIL, GAS & MINING

Post-Mining Backfilling & Regrading Plan

Special Stipulation #16  
OSM Approval (UT-0004)  
Huntington Canyon #4 Mine

File in:

- Confidential
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Refer to Record No 0013 Date 6-25-80

In C/ 015, 004, Incoming

For additional information

POST-MINING  
BACKFILLING AND REGRADING PLAN

784.13 - Reclamation Plan

General Requirements:

- A) The enclosed plan is for reclamation of affected lands within the permit area. This plan is submitted in response to Special Stipulation #16 of the OSM approval (UT-0004) for the Huntington Canyon #4 Mine, Mining and Reclamation Plan.
- B) 1) Within three (3) months after termination of the underground mining operation, the following reclamation procedures will take place in the order listed:
- a) Seal portals - 1 week
  - b) Remove all structures - 4 weeks
  - c) Reclaim: Upper pads; upper road; coal storage pad; lower pad; drainfield - 8 weeks
  - d) Topsoil replacement - 1 week
  - e) Reseeding - 1 week
  - f) Mulching (if required) - 1 week
  - g) Protective fencing (if required) - 1 week
  - h) Restore natural drainage - 1 week
  - i) Sedimentation pond removal and reclaim (after reclaimed areas are stabilized) - 1 week
  - j) Continued subsidence monitoring (if required) - 5 years

According to the above timetable, reclamation efforts are scheduled to be complete within 18 weeks of initiation. The time of removal of the sediment ponds is indeterminate, but such removal will take place upon stabilization of reclaimed areas.

- 2) The attached detailed cost estimate shows each phase of the operation, based on 1980 dollars. The existing reclamation bond on this property is for \$154,000 (based on an OSM estimate).
- 3) Backfilling and Regrading - It will be impossible to restore the mine yards to the approximate original contour because these yards were dozed out of very steep, rocky canyon walls. Nearly all fill material escaped over the edge of the canyon walls and cannot be retrieved. Terracing is impossible due to the steep, rocky nature of the terrain. Instead, the area will be smoothed and contoured to a pleasing appearance, consistent with post-mining land uses and available topsoil will be drifted over the area to assure the success of revegetation.

In general, the backfilling and regrading will proceed as follows:

- a) After sealing of the portals and removal of all structures, a backhoe (Cat 235 or larger) will be brought to the upper (portal) terrace.
  - b) The backhoe will begin by reaching down over the fill bank and retrieving as much material as can be reached. This material will be placed on the terrace.
  - c) A Cat (D-7 or larger) will work with the backhoe, taking the retrieved material and spreading and compacting it from the highwall outward to reach a configuration as shown on the attached reclaimed area contour map.
  - d) As the reclaimed pad is finally formed, distribution of topsoil will begin on the far end. Topsoil will be spread at a uniform thickness and compacted by wheel pressure to prevent blowing away. This is covered further in Section 4.
  - e) The upper pad will be sloped to drain to the center as shown. A rock-lined natural drainage will be restored in this area since all diversion will have been removed during the backfilling and regrading.
  - f) The procedure, as noted above, will continue down the upper road, with the backhoe and cat operating in conjunction to reclaim this area down to the property line.
  - g) Similar reclamation techniques will take place on the lower level, starting with the coal storage area, lower pad, and drainfield area. Removal of sedimentation ponds will take place after the reclaimed areas are stabilized by revegetation.
  - h) Upon final shaping of an area, topsoil placement will begin, followed by reseeding.
- 4) Topsoil Handling Plan - As noted above, no topsoil was saved during the initial disturbance of this property. Since the implementation of this mine plan, topsoil has been, and will continue to be saved on all areas of new disturbance. Topsoil thickness will be determined at sites of proposed disturbance, and such material will be removed and stored in the designated topsoil storage area. Any other excess soil will also be stored in a separate pile for future use in backfilling and regrading.

The topsoil and soil piles will be placed in lifts not to exceed twelve (12) inches and compacted by wheel or track pressure. Upon completion of the storage procedure, the piles will be planted with the temporary seed mixture specified in the plan.

Protection of the topsoil pile will be accomplished by compaction, seeding, and drainage protection around the piles. Any runoff from the piles will be directed to the sedimentation ponds.

Upon completion of backfilling and regrading during reclamation, the surface will be scarified to prevent slippage on the surface and promote root penetration. The topsoil will then be redistributed over the reclaimed areas. Topsoil will be spread at a uniform thickness and compacted by wheel pressure to prevent blowing or washing away. The thickness at which topsoil is redistributed will be determined by its availability on site (which is to be determined by further soil studies).

#### 5) Revegetation Plan

- a) Schedule of Revegetation - Revegetation is scheduled to begin within 14 weeks of initiation of final reclamation activities, following placement and preparation of topsoil or other growing medium. Revegetation will begin on the reclaimed upper pad (portal area), and will proceed down the reclaimed upper access road. The lower pads and access roads will be done next, with the final revegetation to take place on the reclaimed sedimentation pond area. The sediment ponds will be removed last, after the other reclaimed areas are stabilized, or as allowed by regulatory authorities.
- b) Species and amounts-per-acre of seeds and seedlings to be used are to be determined by forthcoming vegetative studies on the area. Special Stipulation #21 of the mine plan approval specifies that "No later than December 31, 1980, the operator will submit to, and obtain the approval of the regulatory authority for a proposed seed mix of native grasses, forbs, shrubs, and where appropriate, trees for use on lands permanently contoured and prepared for vegetation".
- c) Planting methods, mulching techniques, irrigation (if any), methods of determining success, and soil testing plan for revegetation have been previously discussed, and any additional information needed shall be submitted with the information for Special Stipulation #21 due by December 31, 1980.

Any procedures submitted at this point would be subject to change pending the results of the vegetative studies mentioned earlier.

- 6) Measures to maximize the use and conservation of the coal resource have been covered in previous submittals. It should be noted, however, that as a final protection of the resource, the exposed coal seam will be covered with incombustible material during the final reclamation (see attached map).
- 7) Disposal of all waste materials is covered in Exhibit #44 of the previous mine plan submittal.
- 8) The final sealing mine openings will be accomplished by placing a concrete block seal 20 to 50 feet in by the portal. The area out by the seal will then be backfilled during reclamation to minimize any roof breaking in this area. The portal structures will be removed and the exposed coal seam, including portal areas, will be covered during the reclamation of the upper pad and high-wall areas. See attached map for cross section of this procedure.
- 9) Measures to be taken to comply with the Clean Air Act, Clean Water Act, and other applicable air and water quality laws and regulations and health and safety standards have been discussed in the plan and will be further covered (as required) in subsequent submittals.

Huntington Canyon #4 Mine  
 Cost Estimate  
 for  
 Final Reclamation

<u>Procedure</u>	<u>Cost</u>	<u>Total Cost</u>
1) Seal Portals 2 men (4 days) + material	\$ 1,500	\$ 1,500
2) Remove Structures:		
a) Fan 2 men (2 days) + hauling	500	
b) Conveyor (see "d")		
c) Block Building & Tank 2 men (3 days) + hauling	750	
d) Chute & Conveyor 3 men (4 days) + hauling	1,500	
e) Bathhouse 2 men (1 day) + hauling	300	
f) Lower Water Tank & House 2 men (2 days) + hauling	500	
g) Creek Water System 2 men (1 day) + hauling	300	
h) Clean Up 2 men (4 days) + hauling	<u>1,000</u>	4,650
3) Reclaim		
a) Upper Pad & Diversions (5.35 ac) Backhoe + Operator (10 days) @ \$700/day	7,000	
Cat + Operator (10 days) @ \$700/day	7,000	
b) Upper Road (2.58 ac) Backhoe + Operator (20 days) @ \$700/day	14,000	
c) Coal Storage Pad (2.47 ac) Backhoe + Operator (3 days) @ \$700/day	2,100	
Cat + Operator (3 days) @ \$700/day	2,100	
d) Lower Pad (1.37 ac) Backhoe + Operator (2 days) @ \$700/day	1,400	
Cat + Operator (2 days) @ \$700/day	1,400	
e) Drainfield Pad (.052 ac) Backhoe + Operator (2 days) @ \$700/day	1,400	
Cat + Operator (2 days) @ \$700/day	1,400	37,800
4) Topsoil Replacement (12.5 ac) Estimate \$100/acre with labor	1,250	1,250
5) Reseeding (12.5 ac) Estimate \$100/acre with labor	1,250	1,250
6) Mulching (if required) (12.5 ac) Estimate \$200/acre	2,500	2,500

Cost Estimate for Final Reclamation  
Page Two

7) Protective Fencing (if required)		
Estimate \$1000 lump sum	1,000	1,000
8) Restoration of Natural Drainage		
Backhoe + Operator (5 days) @ \$700/day	3,500	
2 men (5 days)	<u>1,000</u>	4,500
9) Reclaim Sedimentation Pond Site (.22 ac)		
Backhoe + Operator (2 days) @ \$700/day	1,400	
Cat + Operator (2 days) @ \$700/day	<u>1,400</u>	2,800
10) Continued Subsidence Monitoring (if required)		
5 years @ \$2500/yr	10,500	<u>10,500</u>
SUBTOTAL		\$ 67,750
10% Contingency		<u>6,775</u>
TOTAL		<u>\$ 74,725</u>
	USE	\$ 75,000

Hunt #4  
ACT/015/004

Exhibit #47: Hydrologic Impact Of Roads

## EXHIBIT #47

### HYDROLOGIC IMPACT OF ROADS

1. A general drainage plan for the roads is shown on the attached map.
2. All culverts in the area are sized according to recommendations by the U.S. Forest Service. Any additional culverts to be installed (see map) will be of adequate size to safely pass flows from a 25 year - 6 hour precipitation event. All drainage ditches shall also be maintained to safely pass this flow. The drainage ditches along the road shall be a minimum of 24" wide by 12" deep (as per Diversion Typical Exhibit #19); however, it should be noted that the road is bermed to the outside, and sloped to the inside on the cut areas, making it impossible for water to break out except at the designated culverts.
3. Roads, ditches, and culverts will be maintained on a regular basis. It is to the advantage of the company to keep the roads and drainage in good repair to provide safe, efficient access to the mine. When dry, roads are sprinkled as needed to prevent air-borne dust as much as possible. When wet, the roads are graded as required, and ditches and culverts are cleaned as cleaning is indicated. When snow or ice creates a hazardous driving condition, sand may be placed on the road to provide traction. Coal or slack will not be placed on the road for this or any other intentional purpose. In the event of an unintentional spill of coal along the road, the spill shall be cleaned up as soon as possible after the occurrence, and the material removed to the coal stockpile or loaded in a coal carrier and taken from the area for processing. Every effort will be made to prevent any spilled material from reaching the drainages in the area.

In general, roads will be maintained in such a manner as to allow for safe, easy access to the area, with a minimum of environmental degradation from dust, runoff, or coal.

4. Drainage control devices shall have a discharge constructed in such a manner as to prevent scouring. Whenever practical, the discharge shall be onto a protective device such as a piece of conveyor belting, and then into rocks or other energy dissipators.

DG/ag

SPECIAL STIPULATION NO. 19

HUNTINGTON CANYON NO. 4 MINE

MINING AND RECLAMATION PLAN

O.S.M. REFERENCE NO. UT-0004

SPECIAL STIPULATION NO. 19  
HAULAGE ROAD DATA

General

The haul route from #4 Mine to the C.V. Spur is approximately 32.0 miles. The first 700' is on a gravel surfaced road on the permit area. The next 1.3 miles is on a gravel surfaced road on U.S. Forest land - use of this road is covered by the attached Special Road Use Permit. The remainder of the haul route is on paved highway: 10.0 miles on State Highway 31 to Huntington, 17.5 miles on State Highway 10 to Ridge Road (4 miles south of Price, Utah), and 3.0 miles along Ridge Road to C.V. Spur. The attached map shows the entire haul route described above.

Speed

The speed limit will be posted at 25 miles per hour in Mill Fork Canyon. The remainder of the haul route is on public highway, and as such, has designated speed controls posted in accordance with state and local laws.

Haulage

All trucks will be loaded in such a manner as to provide sufficient freeboard to prevent wind spillage. To help assure legal loading on site, Beaver Creek Coal has installed a weightometer on the loader bucket. This gives a known quantity of coal in the truck before it leaves the site. The reduced speed limit in Mill Fork Canyon will also have a positive effect in preventing spillage. Speed limits and legal loading requirements are also enforced on the public highways by State Law Enforcement Officials.

Effect of Haulage

The attached Special Use Permit (U.S. Forest Service) and letter of general acceptance (Utah Department of Transportation) indicate a general acceptance of the proposed truck haul activity. All roads on the proposed route are designed to handle the expected loading and frequency of these coal trucks.

The coal trucks are a combination of standard end dumps (approximately 28 tons) and belly-dump doubles (approximately 40 tons). Using projected production figures, the number of haulage trips per day will range from about 35 (1 section-2 shifts), to 70 (2 sections-2 shifts) in the future. All drivers are properly licensed and trained in both highway safety and rules, as well as safe procedures on mine properties. Wind spillage will be minimized through proper (legal) loading and observation of speed limits and road conditions. Drivers will also be re-instructed to use extra caution in the Huntington Canyon area to minimize wildlife road kills, and a record of any such kills shall be maintained.

Summary

The haul route will be the same as that previously used from this property. Past history of the use of this route shows no known detrimental effects, and with the implementation of the above procedures, future effects from the hauling should be even less. This opinion is further strengthened by the enclosed letters of general acceptance from the highway authorities.

DWG/js

ARCO Coal Company  
555 Seventeenth Street  
Denver, Colorado 80202  
Telephone 303 575 7502  
Environmental Services

COAL

~~Route file~~  
ACT/015/004

*Handwritten initials and scribbles*



*D.*

*MKS  
8/14*

*JCS  
Laa  
8/6  
7007  
8/26*

Ms. Mary Ann Wright  
Reclamation Biologist  
Division of Oil, Gas & Mining  
1588 West North Temple  
Salt Lake City, Utah 84116

Dear Mary Ann:

I am taking this opportunity to inform you we have implemented a program for reporting deer road-kills on each of the Beaver Creek mine sites. Enclosed please find a copy of the data sheets prepared by David Chenoweth and the memo Dan Guy sent to various personnel explaining their purpose.

Your agency will be sent annual reports to analyze our involvement in deer road-kills. We will continue to stress the importance of alert driving habits in an attempt to prevent restrictions on coal haulage.

Please note that we are still waiting for guidelines to conduct wildlife studies. OSM required submittal of a wildlife survey plan by May 6, 1980. We informed OSM that we will draft a wildlife survey plan upon receipt of your guidelines.

If you have any questions or comments concerning any of these matters, do not hesitate to call me at (303)575-7504 or David Chenoweth at (303)575-7506.

Sincerely,

*James A. Ives*

James A. Ives  
Principal Environmental  
Coordinator

JAI/jah

Encl.

cc: D. K. McSparran/DAT 1969  
J. A. Holligan/DAT 2247  
Dan Guy - Beaver Creek