



STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING



No. 196

To all who shall see these presents, Greeting:

THIS IS TO CERTIFY that Kevin Peterson S.S.N. 529-92-2462  
of C. W. Mining has been examined as required by Section 40-10-17(o) of the  
Statutes of Utah and Division Rule R614-105 and is hereby authorized to act as a  
Coal Mine Surface Blaster in the State of Utah, through January 31, 2005

Salt Lake City, Utah, January 31, 2002  
Victoria L. Bailey  
Secretary to the Board of Oil, Gas & Mining

DIVISION OF OIL, GAS & MINING  
Lawrence P. Brafton  
Director

# CO-OP MINING COMPANY



P.O. Box 1245  
Huntington, Utah 84528

Office (435) 687-2450  
FAX (435) 687-2084

October 17, 2003

Kenny Defa  
C. W. Mining Company  
P. O. Box 1245  
Huntington, UT 84528

**Re: Blasting at the Bear Canyon Mine Site**

Dear Mr. Defa,

C. W. Mining Company will be blasting with more than 5 pounds of explosives during the months of November and December on the Bear Canyon #4 Mine pad. Because of the close proximity of your dwelling to the blast area the blasting could potential damage your dwelling. A pre-blast survey has been conducted of your dwelling documenting the condition and includes a description and picture of all existing damage to your building. C. W. Mining Company will repair any additional damage that has occurred once the blasting is complete. A copy of the pre-blast survey is held at the mine site and can be obtained upon request.

Should you have any questions or require additional information, please feel free to call Mark Reynolds at (435)687-5777.

Sincerely,

Charles Reynolds (PE),  
Mining Engineer

mr

# CO-OP MINING COMPANY



P.O. Box 1245  
Huntington, Utah 84528

Office (435) 687-2450  
FAX (435) 687-2084

October 17, 2003

Wendell Owen  
C. W. Mining Company  
P. O. Box 1245  
Huntington, UT 84528

**Re: Blasting at the Bear Canyon Mine Site**

Dear Mr. Owen,

C. W. Mining Company will be blasting with more than 5 pounds of explosives during the months of November and December on the Bear Canyon #4 Mine pad. Because of the close proximity of your dwelling to the blast area the blasting could potential damage your dwelling. A pre-blast survey has been conducted of your dwelling documenting the condition and includes a description and picture of all existing damage to your building. C. W. Mining Company will repair any additional damage that has occurred once the blasting is complete. A copy of the pre-blast survey is held at the mine site and can be obtained upon request.

Should you have any questions or require additional information, please feel free to call Mark Reynolds at (435)687-5777.

Sincerely,

Charles Reynolds (PE),  
Mining Engineer

mr

# CO-OP MINING COMPANY



P.O. Box 1245  
Huntington, Utah 84528

Office (435) 687-2450  
FAX (435) 687-2084

October 17, 2003

Allen Jenkins  
Sportsmans  
7106 S Redwood Road  
West Jordan, UT 84084

**Re: Blasting at the Bear Canyon Mine Site**

Dear Mr. Jenkins,

C. W. Mining Company will be blasting with more than 5 pounds of explosives during the months of November and December on the Bear Canyon #4 Mine pad. Because of the close proximity of your dwelling to the blast area the blasting could potential damage your dwelling. A pre-blast survey has been conducted of your dwelling documenting the condition and includes a description and picture of all existing damage to your building. C. W. Mining Company will repair any additional damage that has occurred once the blasting is complete. A copy of the pre-blast survey is held at the mine site and can be obtained upon request.

Should you have any questions or require additional information, please feel free to call Mark Reynolds at (435)687-5777.

Sincerely,

Charles Reynolds (PE),  
Mining Engineer

mr

# CO-OP MINING COMPANY

P.O. Box 1245  
Huntington, Utah 84528

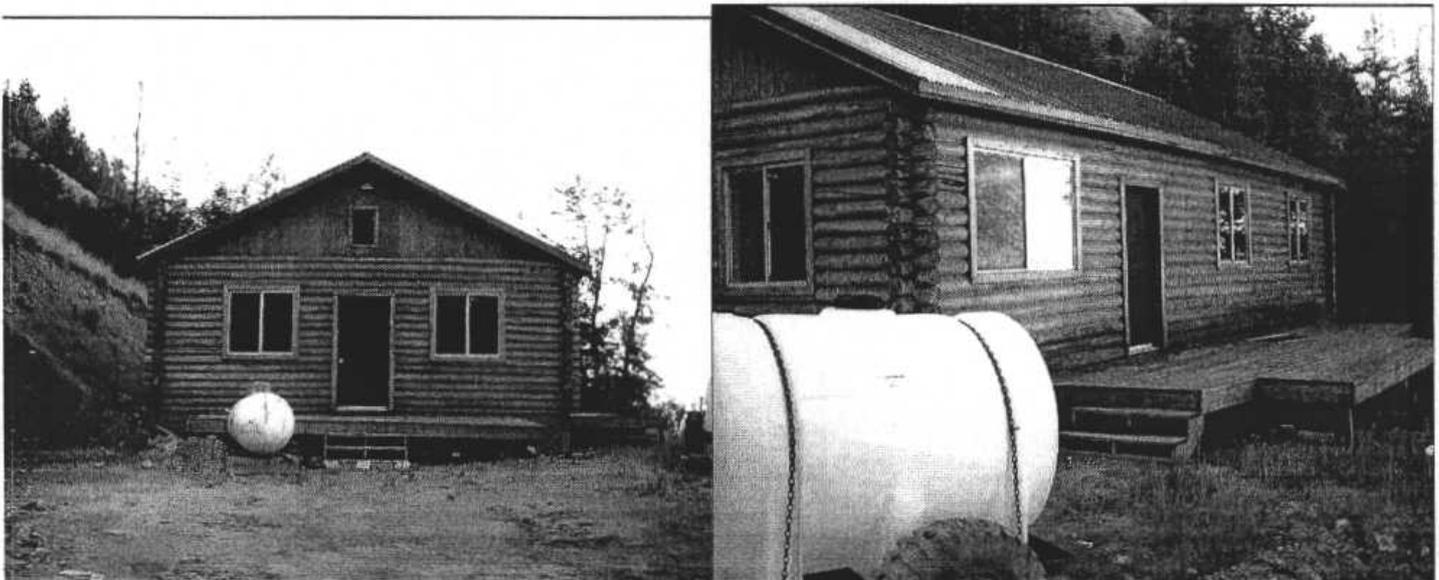


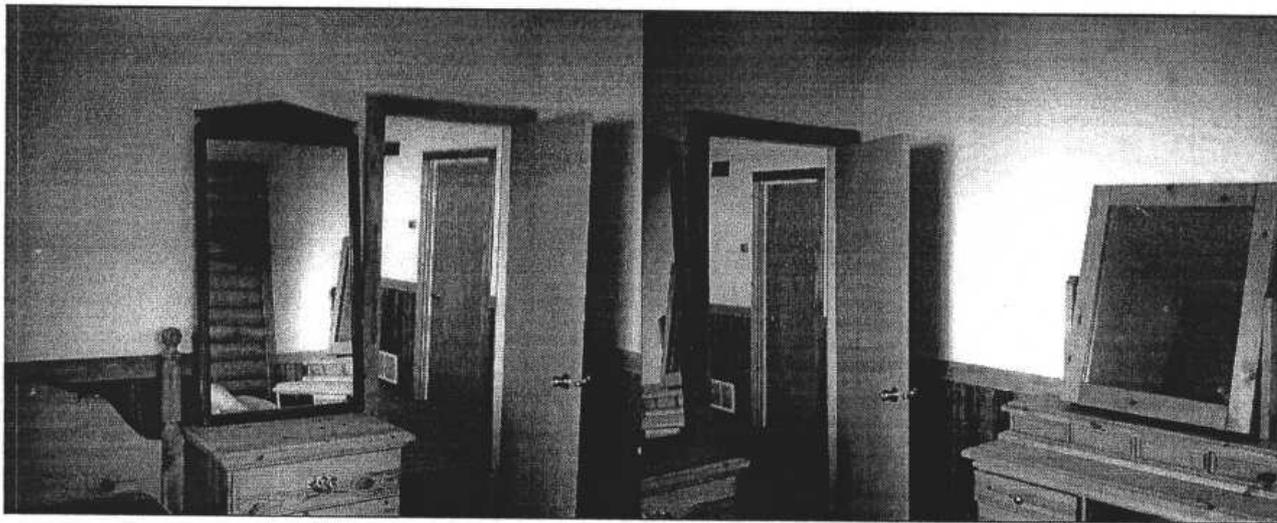
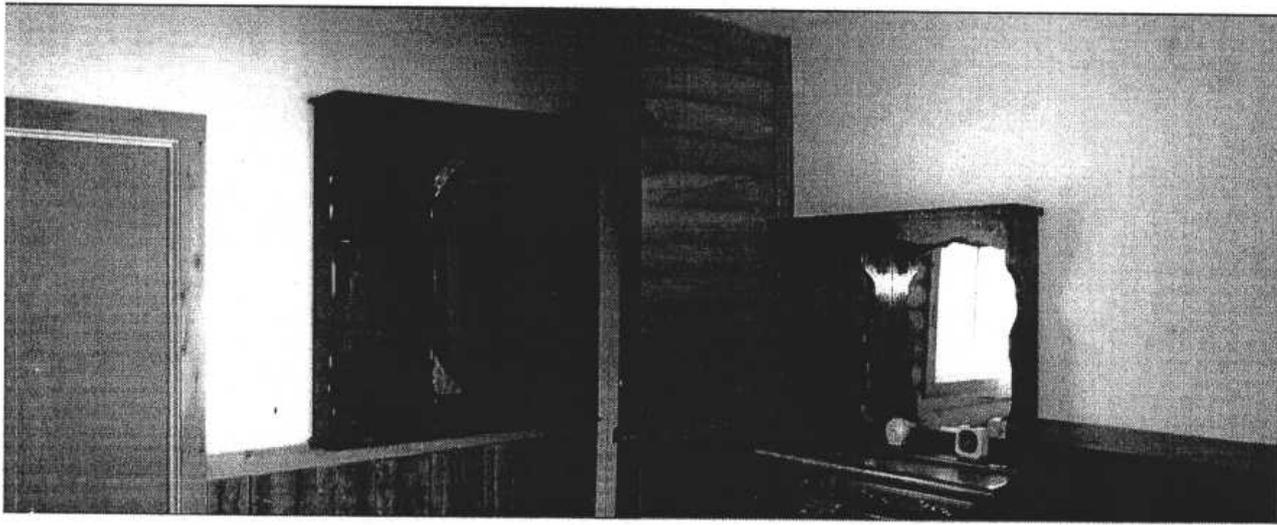
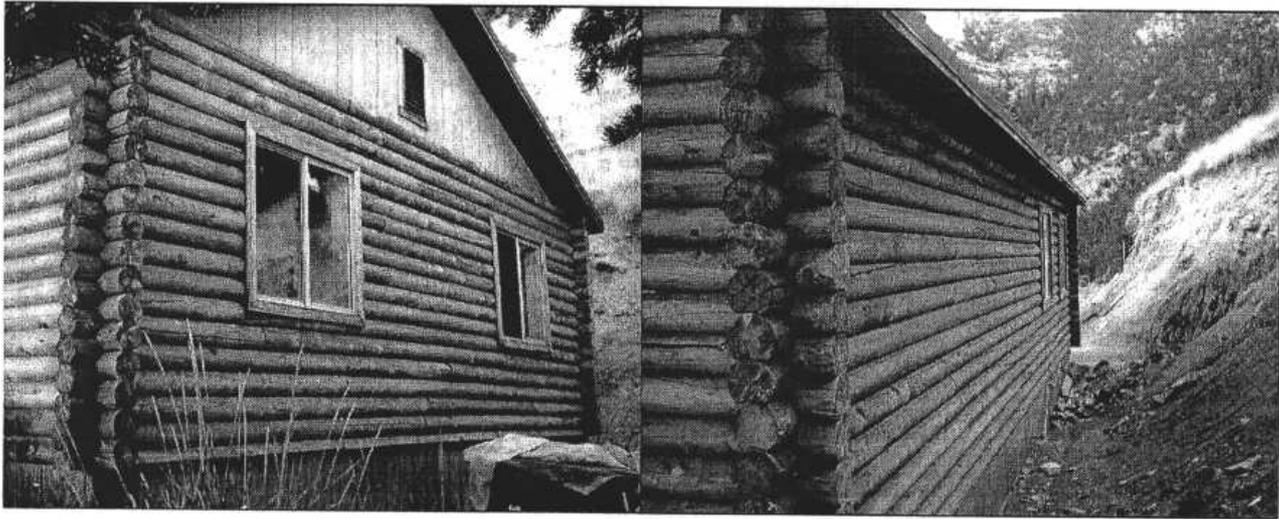
Office (435) 687-2450  
FAX (435) 687-2084

October 19, 2003

## Pre-Blast Survey Hunting Cabin

This is the residence of most concern since it is approximately 500 ft. from the blast site. The main concerns are the breaking of mirrors and windows from blast vibrations, and possible fly rock hitting the east side of the cabin. The cabin is generally in good condition; no windows or mirrors are broken or cracked. All light fixtures and utilities are in good condition. Since the cabin is not currently in use all loose items have been removed from the walls. The east facing side of the cabin has no visible defects. Pictures have been included documenting the condition of the structure.





*Mark Reynolds*  
Mark Reynolds  
Civil Engineer

# CO-OP MINING COMPANY

P.O. Box 1245  
Huntington, Utah 84528

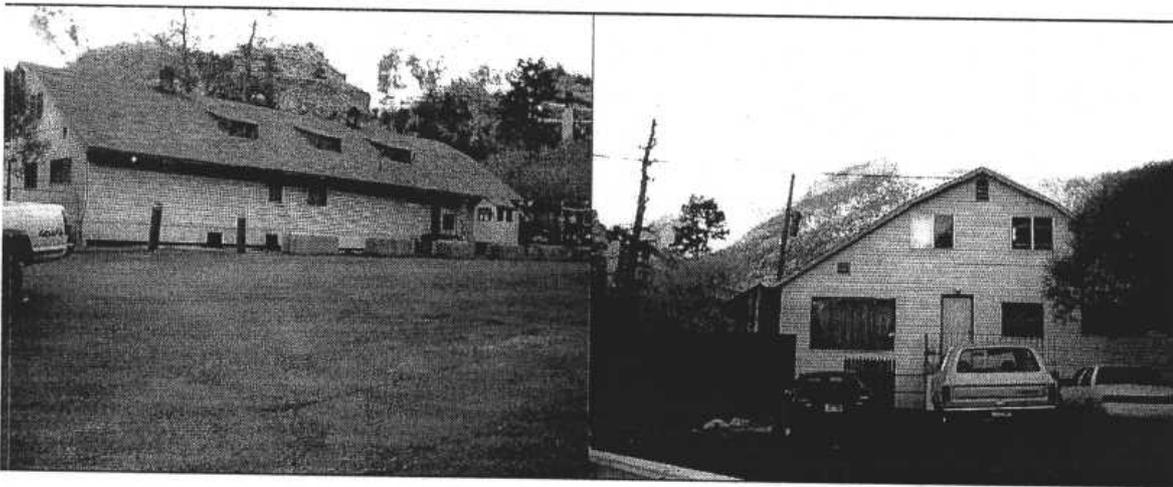


Office (435) 687-2450  
FAX (435) 687-2084

October 19, 2003

## Pre-Blast Survey Owen House

The south end of this building is the residence of Wendell Owen. This structure is located approximately 1 ¼ miles from the blast area. There is little concern as to the damage of this building. The only possible damage would be broken windows. All windows are in good shape. Pictures have been included documenting the condition of this building.



A handwritten signature in cursive script that reads "Mark Reynolds".

Mark Reynolds  
Civil Engineer

# CO-OP MINING COMPANY

P.O. Box 1245  
Huntington, Utah 84528

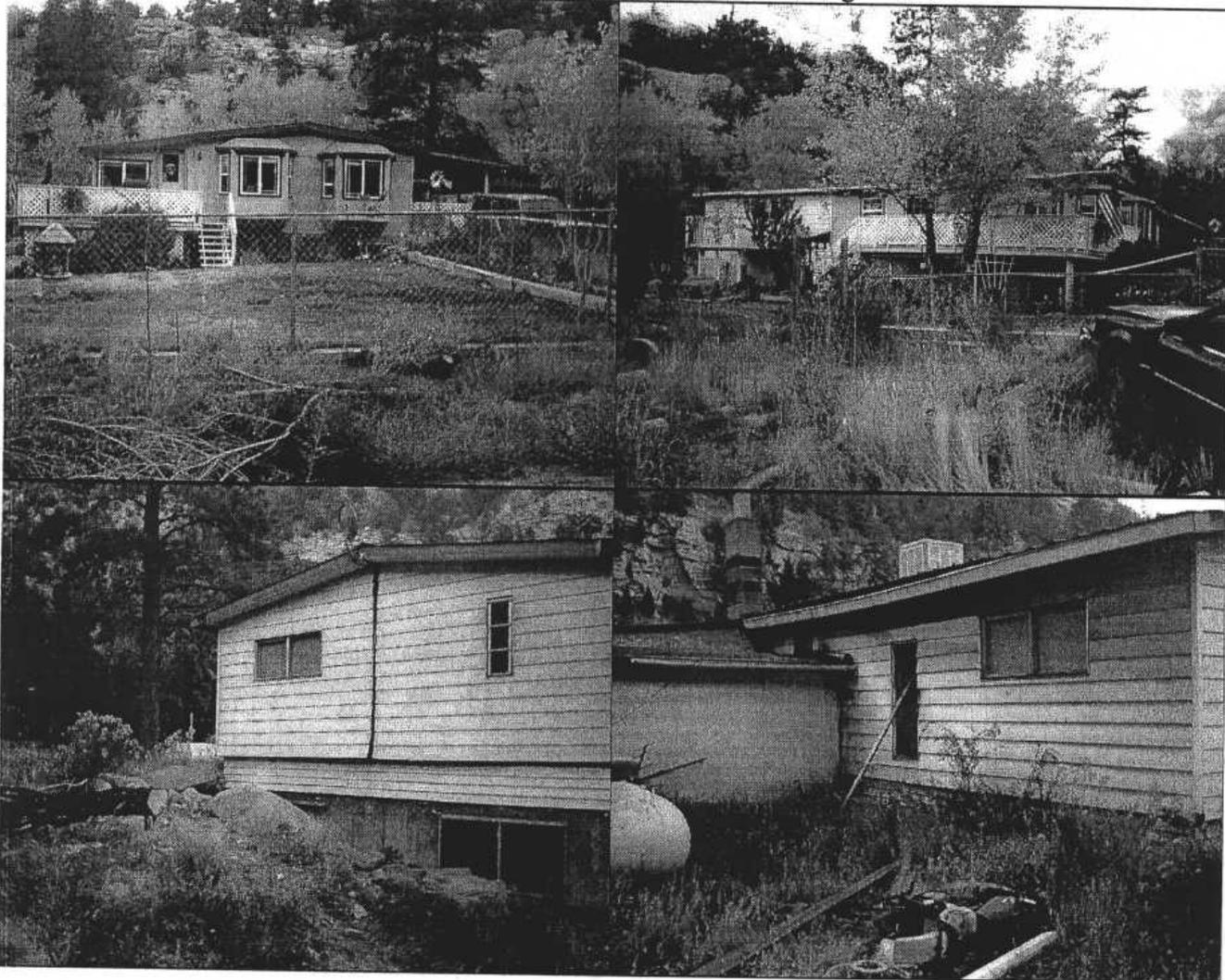


Office (435) 687-2450  
FAX (435) 687-2084

October 19, 2003

## Pre-Blast Survey Defa House

This structure is located approximately 1 ¼ miles from the blast area. There is little concern as to the damage of this building. The only possible damage would be broken windows. All windows are in good shape. Pictures have been included documenting the condition of this building.



  
Mark Reynolds  
Civil Engineer

# C. W. MINING COMPANY

P.O. Box 124  
Huntington, Utah 84528

Office (435) 687-2450  
FAX (435) 687-208

October 19, 2003

City Hall  
20 Mains St  
Huntington, Utah 84528

Re: **Blasting at the Bear Canyon Mine**

To Whom It May Concern,

Co-Op Mining Company will begin blasting at the Bear Canyon #4 Mine portal pad on October 23. If you would like to be notified of the exact days and times or would like any additional information call me at 687-2450.

Sincerely,



Mark Reynolds,  
Civil Engineer

# C. W. MINING COMPANY

P.O. Box 124  
Huntington, Utah 84528

Office (435) 687-2450  
FAX (435) 687-208

October 19, 2003

Fire Department  
20 Mains St  
Huntington, Utah 84528

Re: **Blasting at the Bear Canyon Mine**

To Whom It May Concern,

Co-Op Mining Company will begin blasting at the Bear Canyon #4 Mine portal pad on October 23. If you would like to be notified of the exact days and times or would like any additional information call me at 687-2450.

Sincerely,



Mark Reynolds,  
Civil Engineer

# C. W. MINING COMPANY

P.O. Box 124  
Huntington, Utah 84528

Office (435) 687-24505  
FAX (435) 687-208

October 19, 2003

Emery County Office  
75 Main St.  
Castle Dale, Utah 84513

Re: **Blasting at the Bear Canyon Mine**

To Whom It May Concern,

Co-Op Mining Company will begin blasting at the Bear Canyon #4 Mine portal pad on October 23. If you would like to be notified of the exact days and times or would like any additional information call me at 687-2450.

Sincerely,

A handwritten signature in cursive script that reads "Mark Reynolds". The signature is written in black ink and is positioned above the printed name and title.

Mark Reynolds,  
Civil Engineer

## **Blast Design**

The following blast design pertains to blasting within 1,000 feet of any building used as a dwelling, public building, school, church, or community or institutional building outside the permit area, or within 500 feet of an active or abandoned underground mine. Approval will be obtained from MSHA prior to conducting blasting within 500 feet of an active underground mine. There are no underground mines within 500 feet of the Wild horse Ridge potential blasting areas. This design describes the use of blasting to break large rocks encountered during construction. This design will be used in the construction of the Wild Horse Ridge conveyor access roads in the event rocks are encountered which are too large for the equipment to move, or cutting into bedrock is required. A hunting cabin exists within the permit area approximately 750 feet from the nearest potential blasting zone for the Wild Horse Ridge areas. This building is not used as a dwelling, public building, school, church, or community or institutional building. No other buildings exist outside the permit area within 1,000 feet of the proposed Wild Horse Ridge roads and facilities.

Two types of blasting are anticipated during normal operation and construction, special one time blasting designs will be included as attachments. The first is a situation where large rocks will require breaking up to move. The second type is bench blasting in areas where bedrock is encountered which must be cut into. In both cases, holes to be used will be 1½" diameter, 4' deep and will be spaced 4' apart. Figure 3M-1 shows the typical pattern and the layout for the bench holes. To break up rocks, holes will be drilled into the rock at an adequate depth to fracture the rock, not to exceed 4'. Holes will be spaced approximately 4' apart. The explosive to be used is Irecoal D 378 permissible explosive, an explosive which uses a non-nitroglycerin base gel dynamite. This explosive is specifically designed for use in drillhole patterns, especially when shooting off solid. Ireco electric 25 ms delay detonators will be used to delay the holes in a pattern which will contain the shot within the cut area created by the previous shot. 1.3 pounds of explosive per each hole will be used, providing a powder factor of 1.2. The following standards will be maintained for all blasts.

Airblast Limits and Ground Vibration (R645-301-524.600). Airblast and ground vibration limits at the location of any building structure outside the permit area will not exceed those outlined in R645-301-524.621 and R645-301-524.642. In an effort to minimize airblast and fly rock, a satchel-type explosive and mud-packing will not be used.

### **Pre-Blast Survey**

Since each blast will not exceed 5 pounds of explosive weight, the requirements of a pre-blast survey are not applicable to the blasting plan. During the construction of the #4 Mine portals blasting will exceed 5 pounds, this is described in attachment A.

### **Blasting Schedule**

Since each blast will not exceed 5 pounds of explosive weight, a blasting schedule and public notification will not be required. During the construction of the #4 Mine portals blasting will exceed 5 pounds, this is described in attachment A.

### **Warning Signs, Signals and Access Control**

During periods of construction involving blasting, warning signs will be posted as described in Section 3.4.5.1.

Warning and all-clear signals of different patterns, audible within a range of one-half mile from the point of the blast, will be given to inform anyone in the area of the status of blasting activities. The signals and their patterns and meanings will be described in the "Warning" sign at the entrance to the property. Each person within the permit area, or anyone who resides or regularly works within one-half mile of the permit area will be notified of the meaning of the signals.

**ATTACHMENT A  
#4 MINE ROCK TUNNELS**

This attachment has been included to address the blasting that will occur during the development of the WHR #4 mine portals. All blasting procedures outlined in Appendix 3M will be followed except for the changes that have been outlined below.

### **Blast Design**

Holes will be drilled 10 feet deep . Figures 1,2, and 3 show the typical patterns and the layout for the holes. Eight 0.78lb 1 1/4" diameter by 12" long sticks will be placed in each hole. The explosive to be used is Irecogel B permissible explosive, an explosive which uses a non-nitroglycerin base gel dynamite. Coaldet, Millidet or equivalent electric millisecond delay detonators will be used to delay the holes in the patterns shown. A scorpion HCCR (MSHA LCBU-1) shot firing unit will be used to initiate the detonators.

### **Pre-Blast Survey**

Only two dwellings are located within one-half mile of the blast area. One is the Hunting Cabin owned by Sportsmans and a residential home owned by Kenny Defa the mine superintendent. Both owners have been notified in writing of the blast. A pre-blast survey of both buildings has been conducted and his held on file at the mine site.

### **Blasting Schedule**

Blasting will be conducted between sunrise and sunset. Blasting will generally take place Monday thru Friday, but may include Saturday and Sunday if needed. A detailed time table will be given to local governments, and residents within one-half mile, and will also be published in the local newspaper at least 24 hours before blasting begins. If the schedule changes, local governments, residents, and the local paper will be notified. The blasting schedule will contain all information required under R645-301-524.460.

I hereby certify that this blasting plan as been prepared under my supervision in accordance with R645-301-524.

  
Signature of Certified Blaster

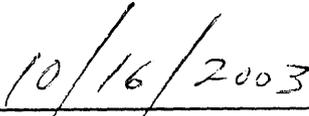
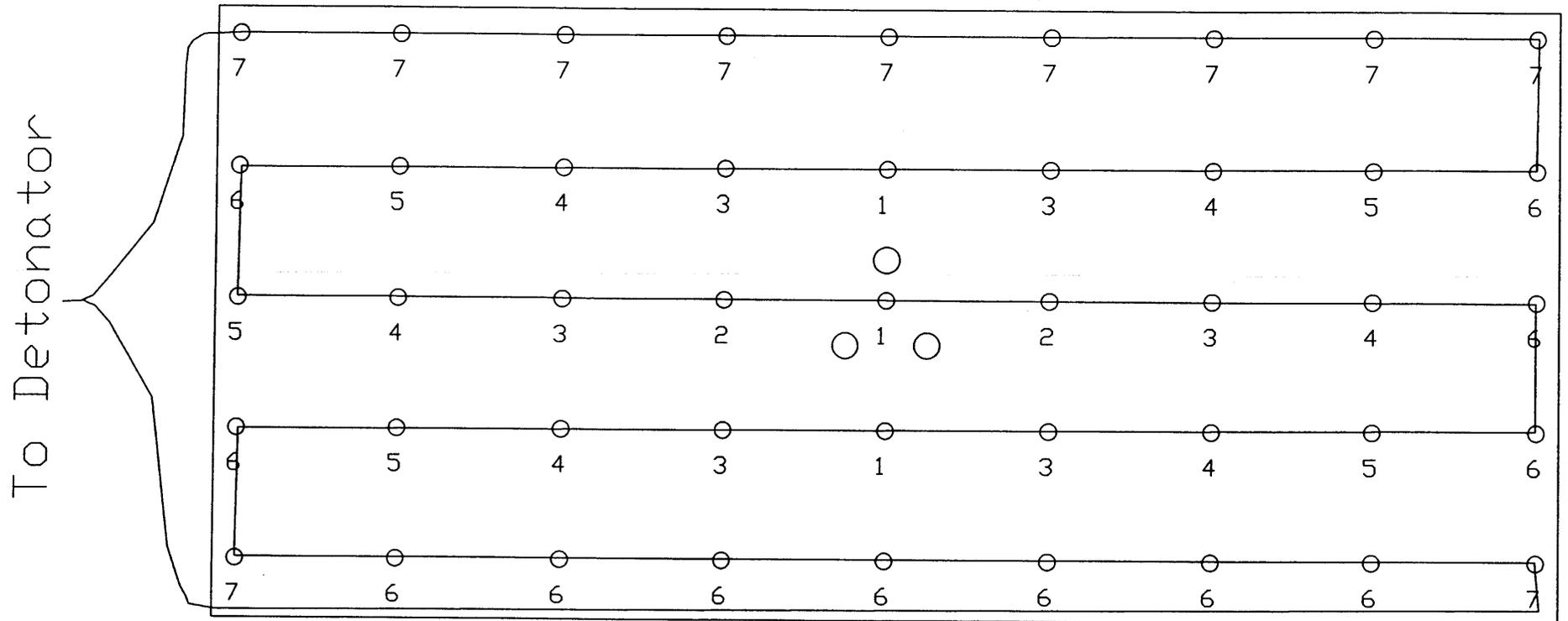
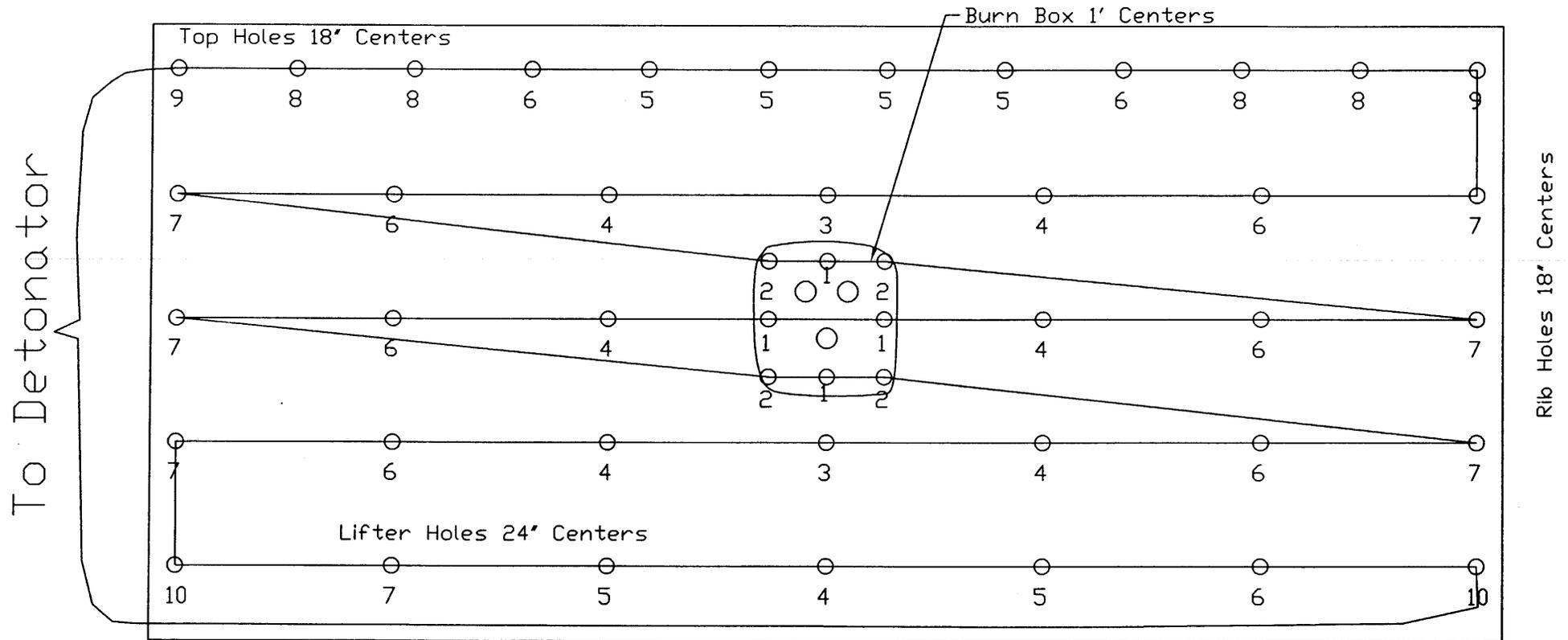
  
Date

Figure 1



Delay pattern may vary based on conditions  
Minimum spacing in coal 2.4"  
Minimum spacing in rock 18"

Figure 2



Delay pattern may vary based on conditions  
Minimum spacing in coal 2.4"  
Minimum spacing in rock 18"

