# 75.220 / 77.1000
# Roof Control
# Program & Plans

# Ground Control Plans

U.S. Department of Labor

Mine Safety and Health Administration
604 Cheat Road
Morgantown, West Virginia 26508

| UNDERGROUND MINE FILE | |
|---|---|
| DATE FWD. | 12-19-5 |
| INITIALS | aew |

SENT TO AND/OR DISCUSSED WITH FIELD OFFICE:

| SURNAME | DATE |
|---|---|
| Cole/Tenny | 12-7-05 |

REVIEWED BY:

| | |
|---|---|
| Cole | 12-7-05 |
| Blake | 12-8-05 |
| Sowell | 12-9-05 |
| Mosley | 12-15-05 |
| | |

DEC 19 2005

Mr. Jeffrey K. Toler
Superintendent
Anker West Virginia Mining Company, Inc.
Route 9, Box 507
Buckhannon, West Virginia 26201

Dear Mr. Toler:

A review has been conducted of your request dated December 5, 2005, concerning second mining of the lower bench of the Middle Kittanning coal seam of the A2-Panel area at the Sago Mine, I.D. No. 46-08791.

A tentative approval of your request is granted pending an on-site evaluation by MSHA personnel. The enclosed material has been added as a supplement to the mine roof control plan.

The roof support system(s) as shown on the plan drawings, and the descriptive procedures and safety precautions are the minimum roof-control measures for this mine. If the roof and/or ribs shows signs of weakness or failure, additional support shall be installed as required by 30 CFR 75.202(a).

If you have any questions, please feel free to contact this office.

Sincerely,

Kevin G. Stricklin

Kevin G. Stricklin
District Manager

Enclosure

GCole:si

bcc:
Bridgeport Field Office (2)
W. Ponceroff
Nelson Blake (2)
Main File

ANKER WEST VIRGINIA MINING COMPANY

RT. 9 BOX 507
BUCKHANNON, WV 26201

December 5, 2005

Mr. Kevin Stricklin
MSHA
604 Cheat Road
Morgantown, WV 26508

Dear Mr. Stricklin:

The following correspondence is concerning the second mining of our Sago Mine, (MSHA I. D. No. 46-08791 & State I. D. No. U-2016-98B). We wish to respectfully submit an amendment to our current approved roof control plan for the A2-Panel area of the Sago Mine for second mining of the lower bench of the Middle Kittanning Seam for both the entries and cross-cuts alike. Refer to attachment labeled (Projected Area). For your information I have attached a detailed cut sequence map that will eliminate exposure of persons to heightened areas. A list of the safety precautions has been included that will be in effect during this application.

All previously approved submittals concerning this mining application will still be in effect for this mining application.

In closing, your prompt review and approval of this request will be greatly appreciated by this department. If you have any questions concerning this correspondence please feel free to contact me at 1-304-471-3303.

John B. Stemple Jr.

Assistant Director of Safety
And Employee Development

Sago Mine
MSHA I.D. Number 46-08791; WVOMHS&T ID No. U-2016-98B

Safety Provisions:
Note: The safety provisions listed below will be reviewed with all persons working in the affected area prior to commencing work and record there of made.

1. Prior to and during mining an evaluation of the ribs will be made in the immediate mining area where equipment and/or persons will be working and any loose or adverse ribs will be supported or removed.
2. Second mining will not be conducted along blocks with both; crosscut centers at or less than 55 feet, and entry centers at or less than 50 feet.
3. No person will be allowed inby the position created in item 14 for the miner operator.
4. No person will be allowed inby the second mining area so as to eliminate exposure of persons to heightened coal ribs.
5. The shuttle car operator will be remain under the protective canopy at all times while inby the second mining area.
6. The Shuttle Car will be equipped with "Back Boards" so as to protect the operator from lateral material falls. (refer to the Attached Equipment Schematic).
7. All access points to raised areas created by second mining will be dangered off with yellow ribbon & or equivalent material. The ribbon will be affixed from rib to rib, and noted in the pre-shift/on-shift examination book.
8. Tests for methane gas will be conducted prior to cutting and loading of coal and every 20 minutes there after by remote means. This will be accomplished by utilizing a remote probe or by traveling inby on the upper level parallel and above the area to be mined.
9. In the event mining equipment becomes disabled the ribs will be supported prior to commencing repairs to said piece of equipment. All work will be conducted under the direct supervisions of a W.V. certified underground mine foreman.
10. Cable handling will be accomplished via remote means utilizing pull ropes and additional personnel if needed. At no time will persons go inby the start of the ramp to accomplish this task unless the coal ribs are supported.
11. The lower level mining entries will not be wider that the upper level.
12. Persons will be withdrawn from the immediate area during second advance mining in the event of loose and or overhanging ribs are encountered.
13. Outby the line depicted as "A" on the attached map, additional rib/roof support will be added so as to provide additional roof support for the miner operator. This will be accomplished utilizing one of the methods shown below:
    a). We will position one of our twin-head roof bolter in a crosscut to a point where the ATRS support is set at the junction of the crosscut and entry. Once the ATRS is set the roof bolters operator's canopy, nearest the corner in which the miner operator is going to position himself to operate, will be swung towards the inby corner and rib area. In doing such, this will create a protected area whereby the miner operator can operate the continuous miner from. This support will remain in place until the miner operator has completed the cut and has safely positioned himself in the main entry away, outby from the intersection.
    b). Either 2, (two), Prop-setter supports or 2, (two) Lock-N-Load Supports will be installed on 5, (five) foot centers, with screen meshing being attached on the inby side. These supports will be installed with wedges being driven from the outby

portion of the support towards the inby corner or rib line. By installing these supports in this fashion in conjunction with a removal rope, these supports can be remotely removed by using a scoop to safely remove these devices. Once removed, the rope, which had been previously attached to the scoop can be pulled taught in order to remove these supports to the middle of the intersection where they can be safely recovered.

c). Either the top will be screened to cover an area approximately 4' X 12', and installed utilizing 4, (four) roof bolts.

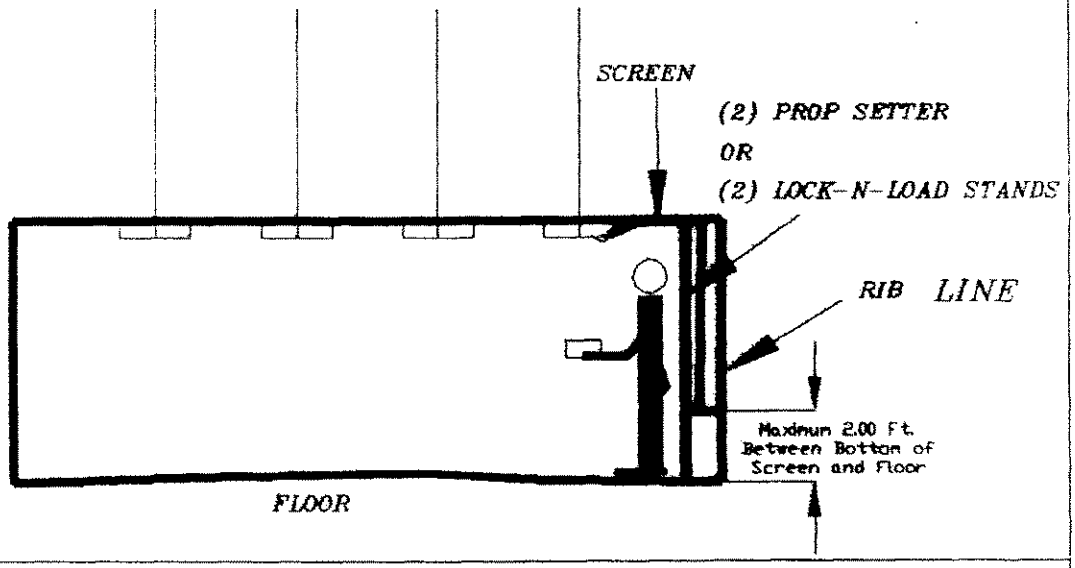
14. During the first cuts of Sequence #1, (See Diagram #1), the continuous miner operator can be positioned inby the corner of Sequence #1, provided the following measures have taken place:
    - Prior to starting the first cuts a screen must be attached to at least two roof bolts along the row of roof bolts located closest to the right hand rib. Attachment can be by means of running a cable hanger through the screen and connect it to the hanger loop in the roof bolt plate.
    - Once this is completed, either two Prop-Setter Supports or two Lock-N-Load supports will be installed as close as possible to the rib and underneath the screen. By installing these supports in this fashion the screen will be forced to the top, as well as towards the rib line.
    - After the above actions have been completed the continuous miner operator can be taking the first cuts from Sequence #1.

    - Removal of the screen and posts will occur as follows:
    - First the cable hooks will be unhooked from the roof bolt plates; then,
    - We will follow the removal action described in Item #10 above, with the exception that continuous miner may also be used to remotely remove the temporary supports.

## DIAGRAM #1

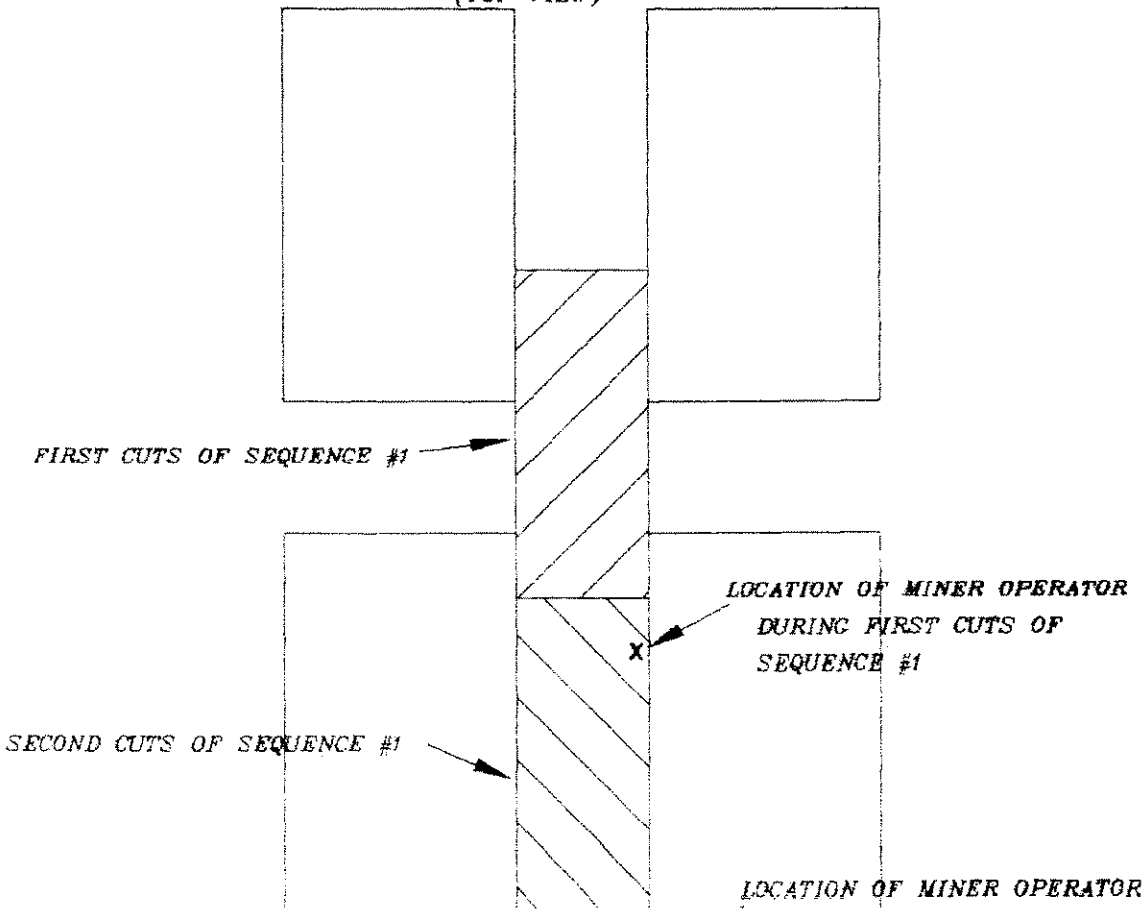
PROPOSED SCRREN AND POST LOCATION

(SIDE VIEW)




PROPOSED MINER OPERATOR LOCATION

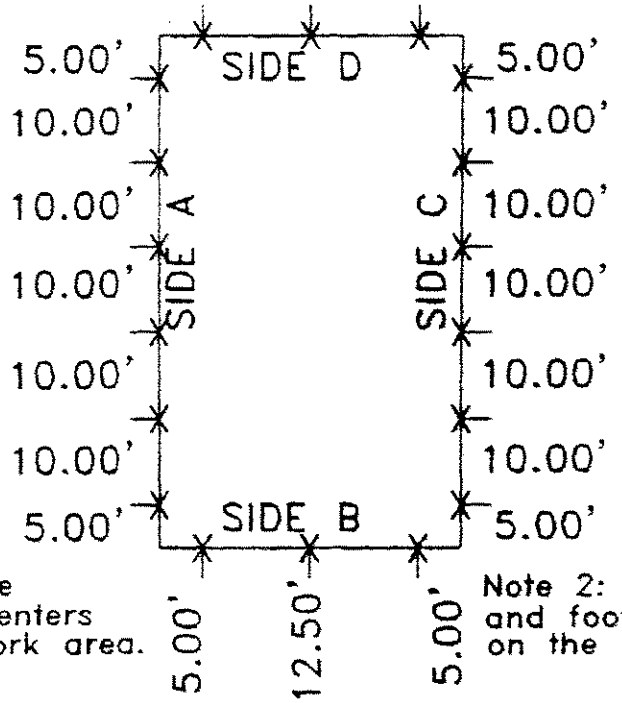
(TOP VIEW)



# DRAWING NO. 3
# TYPICAL CUT SEQUENCE
# FOR SECOND DEVELOPMENT WORK
# SAGO MINE

MSHA ID # 46-08791
WVOMHS&T # U-2016-98A

## RIB STABILIZATION PLAN
## STRATA PRODUCTS - LOCK-N-LOAD
## (TOP VIEW)



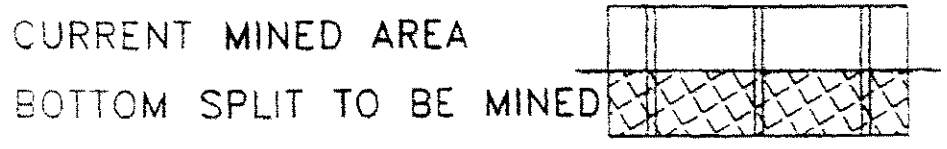

Note 1: Posts will be installed on 4 Ft. Centers in the immediate work area.

Note 2: Wooden Headers and footers willl be utilized on the Lock-N-Loads

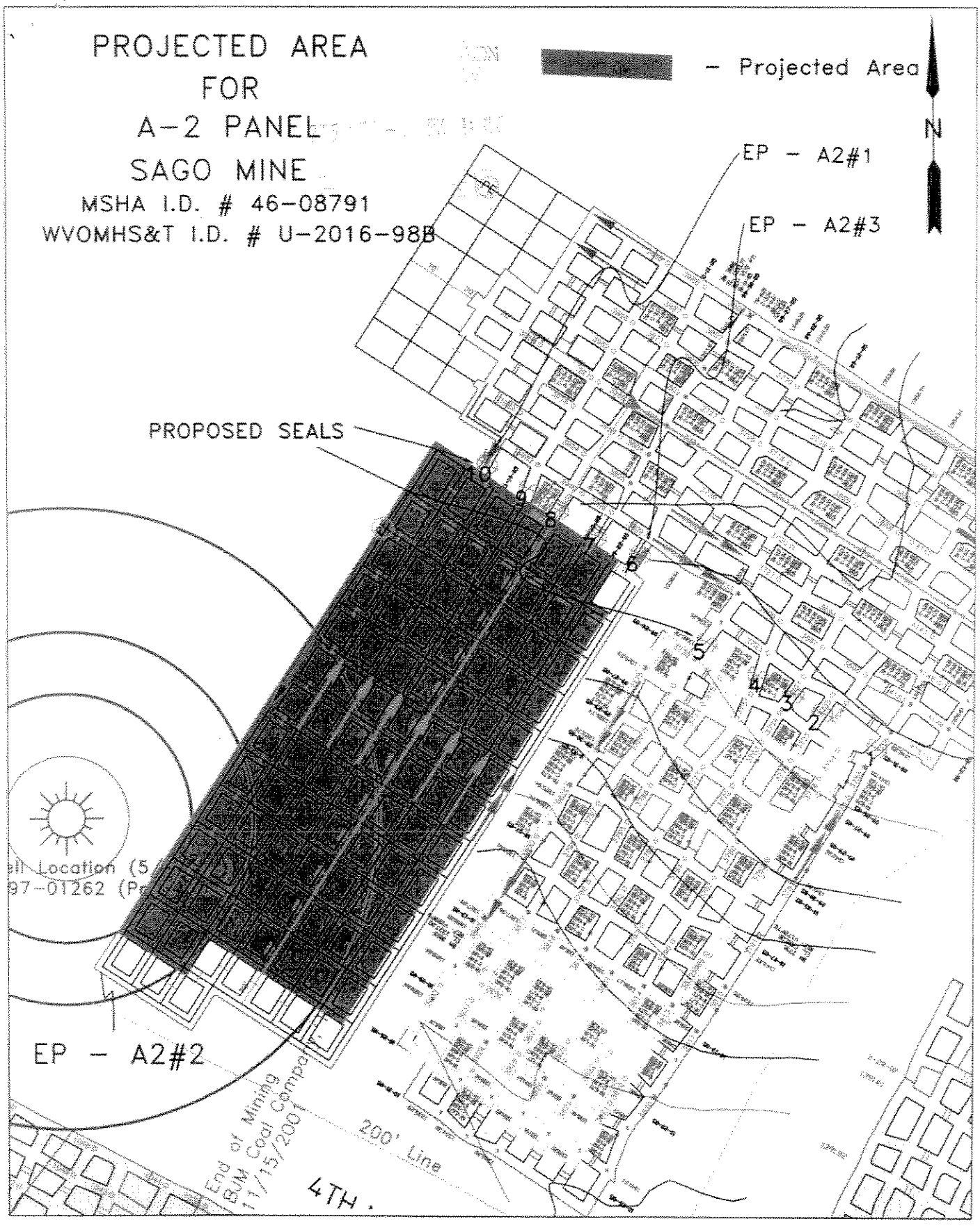
X - Location of Lock-N-Load Support

### SIDE VIEW OF SIDES A&C


### SIDE VIEW OF SIDES B&D




Note 3: Rib Supports will be left in place.


PROJECTED AREA
FOR
A-2 PANEL
SAGO MINE
MSHA I.D. # 46-08791
WVOMHS&T I.D. # U-2016-98B
- Projected Area
N
EP - A2#1
EP - A2#3
PROPOSED SEALS
10
9
8
7
6
5
4
3
2
1
EP - A2#2
End of Mining
B&M Coal Compa
11/15/2001
200' Line
4TH.

**U.S. Department of Labor**

Mine Safety and Health Administration
604 Cheat Road
Morgantown, West Virginia 26508

SENT TO AND/OR DISCUSSED WITH FIELD OFFICE:

| SURNAME | DATE |
|---|---|
| | |

REVIEWED BY:

| | |
|---|---|
| JLyall | 12/15/05 |
| [illegible] | 12/15/05 |
| Moss | 12-15-05 |
| [illegible] | 12-15-05 |
| | |

| UNDERGROUND MINE FILE | |
|---|---|
| DATE FWD. | 12-16-5 |
| INITIALS | aew |

DEC 1 6 2005

Mr. Jeffrey K. Toler
Superintendent
Anker WV Mining Company, Inc.
Route 9, Box 507
Buckhannon, West Virginia 26201

Dear Mr. Toler:

Your request dated December 15, 2005, to revise the roof-control plan for the Sago Mine, I.D. No. 46-08791, has been reviewed and is approved. Please add the enclosed pages to your copy of the approved roof-control plan for the mine.

The roof support system(s) as shown on the plan drawings, and the descriptive procedures and safety precautions are the minimum roof-control measures for this mine. If the roof shows signs of weakness or failure, additional support shall be installed as required by 30 CFR 75.202(a).

If you have any questions, please feel free to contact this office.

Sincerely,

Kevin G. Stricklin

Kevin G. Stricklin
District Manager

Enclosure

JLyall:aew

bcc:
Bridgeport F/O (2)
W. Ponceroff
Nelson Blake (2)
~~Main~~ File

ANKER WEST VIRGINIA MINING COMPANY, INC.
SAGO MINE
RT. 9 BOX 507
BUCKHANNON, WV 26201

DC
12-15-05

December 15, 2005



Mr. Kevin Stricklin
MSHA
604 Cheat Road
Morgantown, WV 26508

Dear Mr. Stricklin,

Anker West Virginia Mining Company, Inc. Sago Mine, MSHA I D. 46-08791 is submitting the following amendment to our current approved Roof Control Plan concerning 2 Left Mains; 1). "test bolts" being installed 2). 10 foot cable bolts installed in intersections.

Should you have questions concerning this matter please feel free to contact me at 471-3303.

Sincerely,

John B. Stemple Jr.
Assistant Director of Safety
and Employee Development

Roof Control Plan Amendment: page 2a2
Sago Mine
MSHA I.D. Number 46-08791; WVOMHS&T ID No. U-2016-98B

Safety Provisions for the 2 Left Mains: beginning one break inby Spad 4205 in entry No. 4 (belt).

Beginning one break inby Spad 4205 in entry No. 4 (belt) and continuing inby for the next 500 linier feet. The first bolt of each 40 foot of advance will be a "test bolt" installed without a bolt plate, in order to check for resin return (this is not a pattern bolt). Currently a 6 foot ¾ " diameter fully grouted resin roof bolt is being installed as the permanent means of roof control. On the "test bolt" should greater than 6 " of space be measured from the mine roof to the resin return, additional glue will be used with each permanent bolt installed to insure a fully grouted bolt installation.

Beginning one break inby Spad 4205 in entry No. 4 (belt) and continuing the length of this mains each intersection will have six-10 foot cable bolts installed. In the event solid sandstone is encountered during the mining cycle, as described on page 10 paragraph 3 of the approved Roof Control Plan, cable bolts will not be required as long as the certified section foreman is notified & gives authorization and such will be recorded in the pre-shift on-shift record book.

**U.S. Department of Labor**

Mine Safety and Health Administration
604 Cheat Road
Morgantown, West Virginia 26508

| UNDERGROUND MINE FILE | |
|---|---|
| DATE RVD. | 10-21-5 |
| INITIALS | aew |

SENT TO AND/OR DISCUSSED WITH FIELD OFFICE:

| SURNAME | DATE |
|---|---|
| | |

REVIEWED BY:

| | |
|---|---|
| Ronald T. Tulanowski | 10-20-05 |
| Blake | 10-20-05 |
| | 10-20-05 |
| | 10-20-05 |
| | |

OCT 2 1 2005

Mr. Jeffrey K. Toler
Superintendent
Anker WV Mining Company, Inc.
Route 9, Box 507
Buckhannon, West Virginia 26201

Dear Mr. Toler:

Your request dated October 16, 2005, to establish a test area for second mining of the lower bench of the Middle Kittanning coal seam for the A-Panel area at the Sago Mine, I. D. No. 46-08791, has been reviewed and is approved.

The roof support system(s) as shown on the plan drawings, and the descriptive procedures and safety precautions are the minimum roof-control measures for this mine. If the roof shows signs of weakness or failure, additional support shall be installed as required by 30 CFR 75. 202(a).

If you have any questions, please feel free to contact this office.

Sincerely,

Kevin G. Stricklin

Kevin G. Stricklin
District Manager

RTulanowski:aew

bcc:
Bridgeport F/O (2)
W. Ponceroff
Nelson Blake (2)
Main File

**Anker West Virginina Mining Company**

Rt.9 Box 507
Buckhannon, WV 26201



10-17-05

October 16, 2005

Kevin Stricklin, District Manager
C/O Department of Labor, Mine Health and Safety Administration
604 Cheat Road
Morgantown, WV 26508
Attn: Nelson Blake, Tom Hlavsa.
Submittal #1.

Dear Mr. Stricklin:

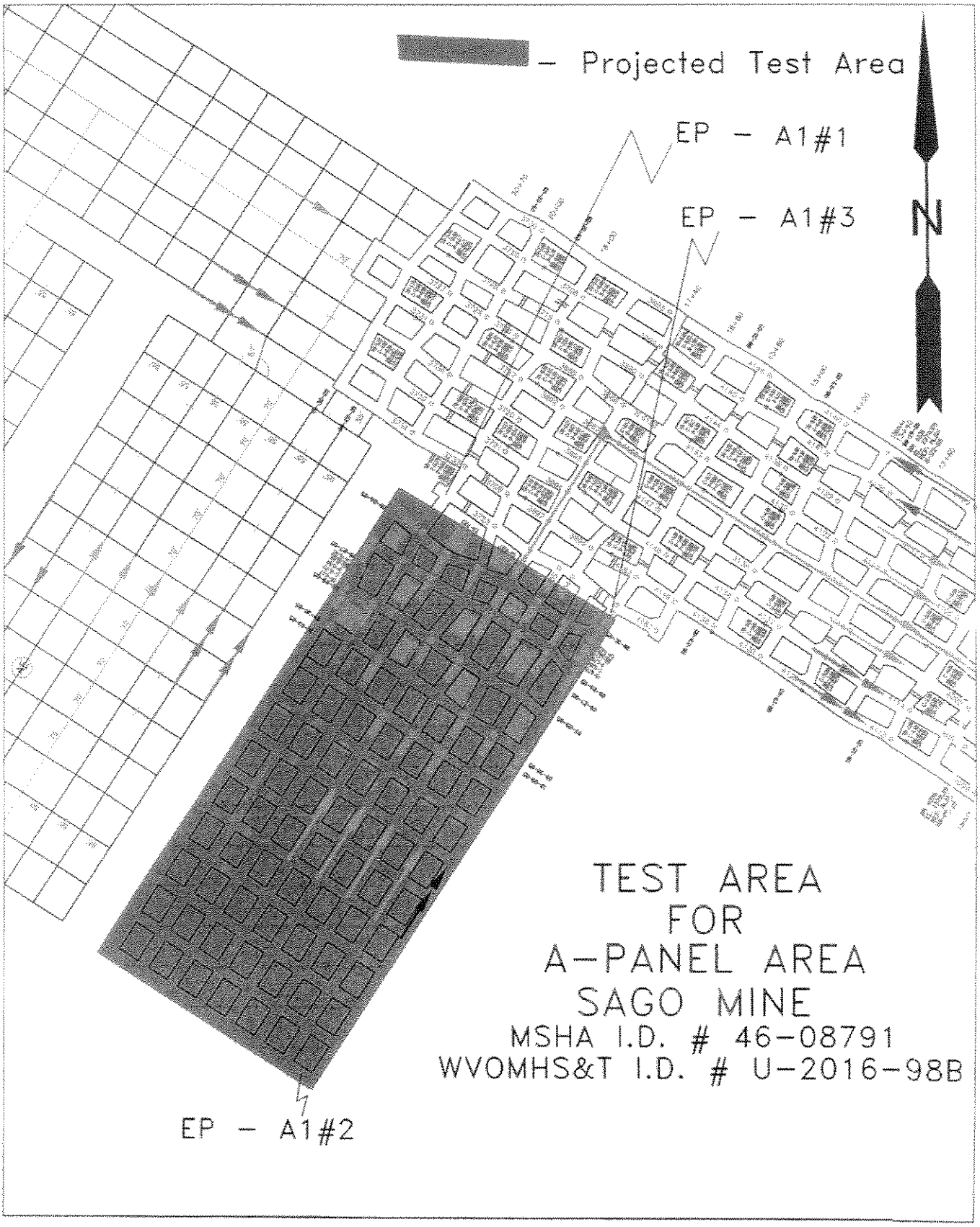
The following correspondence is concerning the second mining of our Sago Mine, {M.S.H.A. identification number 46-08791 & State I.D. # U-2016-98A}. We wish to respectfully request that a Test Area be approved for the A-Panel area of the Sago Mine for second mining of the lower bench of the Middle Kittanning Seam for both the entries and cross-cuts alike .Refer to attachment labeled {Projected Test Area} which shows proposed ventilation circuits and evaluation points. For your information I have attached a detailed cut sequence map that will eliminate exposure of persons to heightened areas. A list of the safety precautions that have been successfully utilized in previously mined areas has been included that will be in effect during this application.

All previously approved submittals concerning this mining application will still be in effect for this mining application.

In closing, your prompt review and approval of this request will be greatly appreciated by this department. If you have any questions concerning this correspondence please feel free to contact me at 1-304-471-3442.

Sincerely,

Al Schoonover
Safety Director




# TEST AREA
# FOR
# A–PANEL AREA
# SAGO MINE

MSHA I.D. # 46–08791

WVOMHS&T I.D. # U–2016–98B

Sago Mine
MSHA I.D. Number 46-08791; WVOMHS&T ID No. U-2016-98B

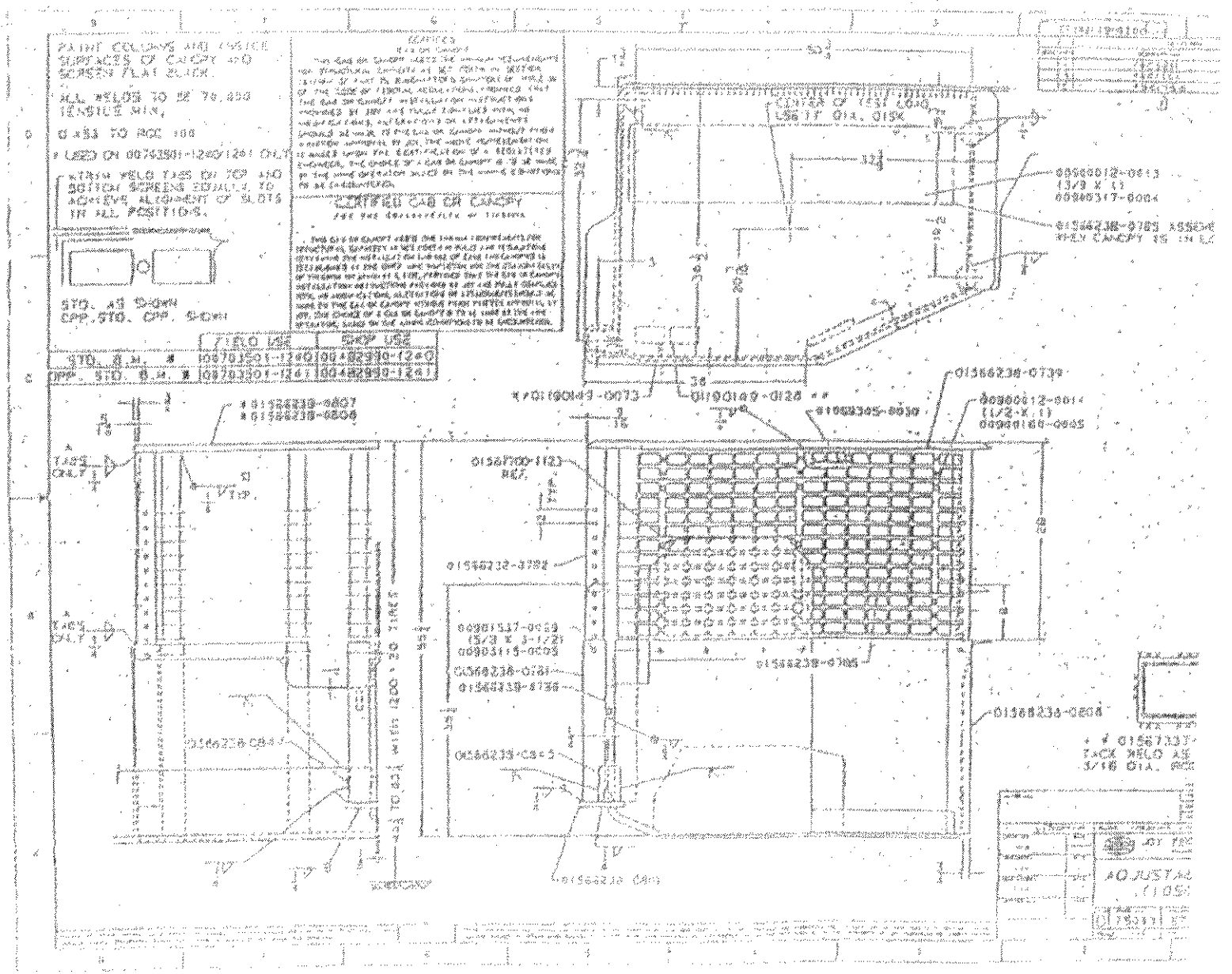
Safety Provisions:
Note: The safety provisions listed below will be reviewed with all persons working in the affected area prior to commencing work and record there of made.

1. No person will be allowed inby the second mining area so as to eliminate exposure of persons to heightened coal ribs.
2. The shuttle car operator will be remain under the protective canopy at all times while inby the second mining area.
3. The Shuttle Car will be equipped with "Back Boards" so as to protect the operator from lateral material falls. (refer to the Attached Equipment Schematic).
4. All access points to raised areas created by second mining will be dangered off with yellow ribbon & or equivalent material. The ribbon will be affixed from rib to rib, and noted in the pre-shift/on-shift examination book.
5. Tests for methane gas will be conducted prior to cutting and loading of coal and every 20 minutes there after by remote means. This will be accomplished by utilizing a remote probe or by traveling inby on the upper level parallel and above the area to be mined.
6. In the event mining equipment becomes disabled the ribs will be supported prior to commencing repairs to said piece of equipment. All work will be conducted under the direct supervisions of a W.V. certified underground mine foreman.
7. Cable handling will be accomplished via remote means utilizing pull ropes and additional personnel if needed. At no time will persons go inby to accomplish this task unless the coal ribs are supported.
8. The lower level mining entries will not be wider that the upper level.
9. Persons will be withdrawn from the immediate area during second advance mining in the event of loose and or overhanging ribs are encountered.
10. Outby the line depicted as "A" on the attached map, additional rib/roof support will be added so as to provide additional roof support for the miner operator. This will be accomplished utilizing one of the methods shown below:
    a). We will position one of our twin-head roof bolter in a crosscut to a point where the ATRS support is set at the junction of the crosscut and entry. Once the ATRS is set the roof bolters operator's canopy, nearest the corner in which the miner operator is going to position himself to operate, will be swung towards the inby corner and rib area. In doing such, this will create a protected area whereby the miner operator can operate the continuous miner from. This support will *remain in place until the miner operator has completed the cut and has safely* positioned himself in the main entry away, outby from the intersection.
    b). Either 2, (two), Prop-setter supports or 2, (two) Lock-N-Load Supports will be installed on no more than 5, (five) foot centers, with screen meshing being attached on the inby side. These supports will be installed with wedges being driven from the outby portion of the support towards the inby corner or rib line. By installing these supports in this fashion in conjunction with a removal rope, these supports can be remotely removed by using a scoop to safely remove these devices. Once removed, the rope, which had been previously attached to the scoop can be pulled taught in order to remove these supports to the middle of the intersection where they can be safely recovered.

c). Either the top will be screened to cover an area approximately 4' X 12', and installed utilizing a minimum of 4, (four ft.)roof bolts.

11. During the first cuts of Sequence #1, (See Diagram #1), the continuous miner operator can be positioned inby the corner of Sequence #1, provided the following measures have taken place:
    - Prior to starting the first cuts a screen must be attached to at least two roof bolts along the row of roof bolts located closest to the right hand rib. Attachment can be by means of running a cable hanger through the screen and connect it to the hanger loop in the roof bolt plate.
    - Once this is completed, either two Prop-Setter Supports or two Lock-N-Load supports will be installed as close as possible to the rib and underneath the screen. By installing these supports in this fashion the screen will be forced to the top, as well as towards the rib line.
    - After the above actions have been completed the continuous miner operator can be taking the first cuts from Sequence #1.

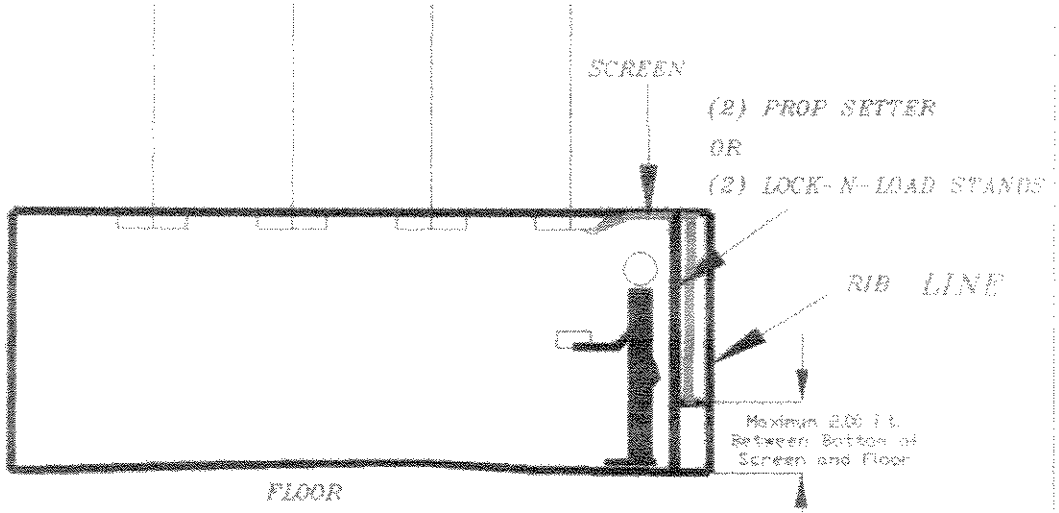
    - Removal of the screen and posts will occur as follows:
    - First the cable hooks will be unhooked from the roof bolt plates; then,
    - We will follow the removal action described in Item #10 above, with the exception that continuous miner may also be used to remotely remove the temporary supports.



# DIAGRAM #1

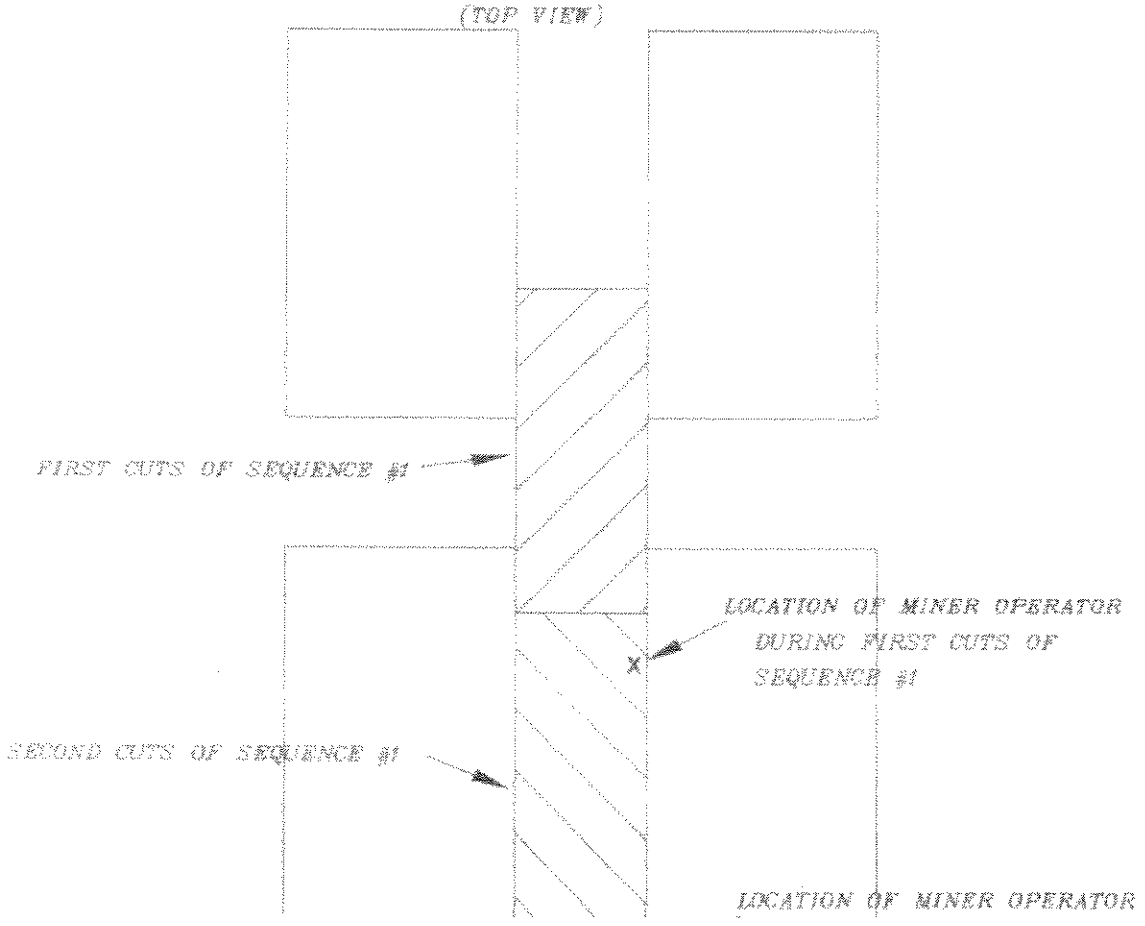
PROPOSED SCRREN AND POST LOCATION

(SIDE VIEW)




PROPOSED MINER OPERATOR LOCATION

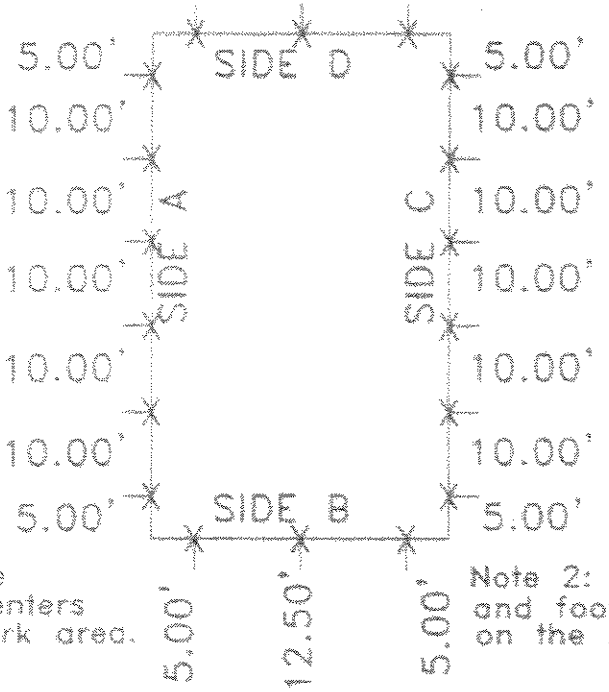
(TOP VIEW)



# DRAWING NO. 3
# TYPICAL CUT SEQUENCE
# FOR SECOND DEVELOPMENT WORK
# SAGO MINE

MSHA ID # 46-08791
WVOMHS&T # U-2016-98A

## RIB STABILIZATION PLAN
## STRATA PRODUCTS - LOCK-N-LOAD
## (TOP VIEW)



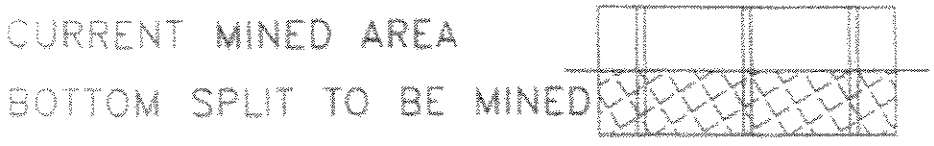

Note 1: Posts will be installed on 4 Ft. Centers in the immediate work area.

Note 2: Wooden Headers and footers willl be utilized on the Lock-N-Loads

X - Location of Lock-N-Load Support

### SIDE VIEW OF SIDES A&C


### SIDE VIEW OF SIDES B&D

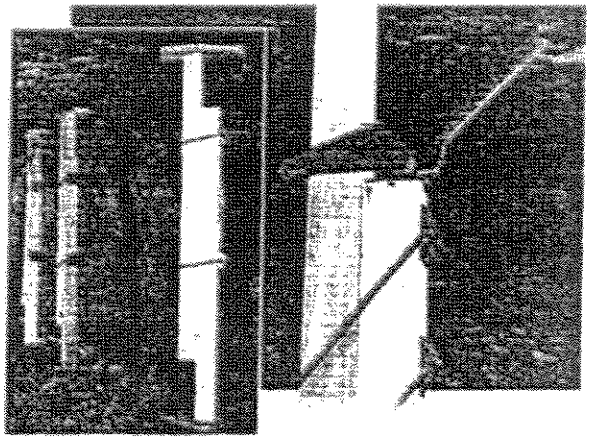



Note 3: Rib Supports will be left in place.

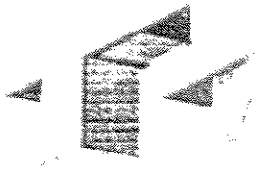
LIST OF PRODUCTS AND SERVICES AVAILABLE IN:

# LOCK-N-LOAD

## ADJUSTABLE SUPPORT



- Adjustable without any cutting of the timber and is available to fit mining heights from 3 feet to 16 feet (1m to 5m).
- Available in different lengths and capacities of either 5, 8 or 20 tons.
- Can be installed by one person and may be preloaded using the simple wrench that can be purchas unit. 2500 lbs(11kN) of preload can be applied.
- The Lock-N-Load™ can be removed and reused by releasing the clamps.



- The Lock-N-Load can be packaged with conventional cap blocks and header boards. In addition, various steel fittings are available to tie into steel or wooden beams.

THEAD CHANI

For use in tying into a steel beam or strap

- The Lock-N-Load can be applied in place of steel jacks, water props, or posts as either a temporary or permanent support. It can also be used as formwork for stoppings, seals, barricades and ventilation curtains.

*Note: The non-yielding Lock-N-Load is not classified as a roof support unde 30.*

**LOCK-N-LOAD SPECIFICATIONS**
**5 TON SUPPORT CAPACITY**

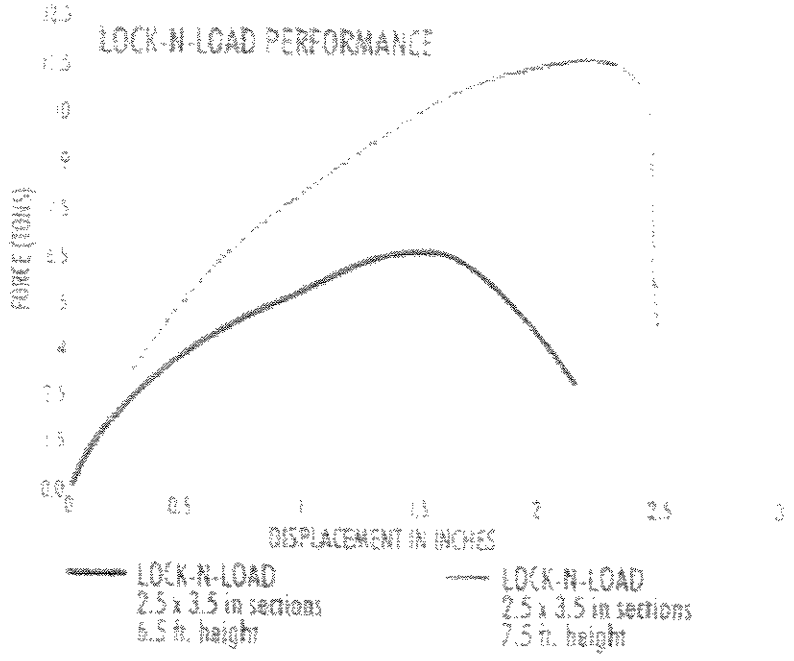
| Part # | Closed Height | Open Height | Weight |
|---|---|---|---|
| Lock 5/3-5 | 3 ft. | 5 ft. | 19 lbs. |
| Lock 5/4-6 | 4 ft. | 6 ft. | 24 lbs. |
| Lock 5/5-7 | 5 ft. | 7 ft. | 28 lbs. |
| Lock 5/6-8 | 6 ft. | 8 ft. | 33 lbs. |

## LOCK-N-LOAD SPECIFICATIONS
## 8 TON SUPPORT CAPACITY

| Part # | Closed Height | Open Height | Weight |
|---|---|---|---|
| Lock 8/3-5 | 3 ft. | 5 ft. | 26 lbs. |
| Lock 8/4-6 | 4 ft. | 6 ft. | 32 lbs. |
| Lock 8/5-7 | 5 ft. | 7 ft. | 39 lbs. |
| Lock 8/6-8 | 6 ft. | 8 ft. | 45 lbs. |
| Lock 8/7-9 | 7 ft. | 9 ft. | 52 lbs. |
| Lock 8/8-10 | 8 ft. | 10 ft. | 58 lbs. |
| Lock 8/10-12 | 10 ft. | 12 ft. | 71 lbs. |

## LOCK-N-LOAD SPECIFICATIONS
## 20 TON SUPPORT CAPACITY

| Part # | Closed Height | Open Height | Weight |
|---|---|---|---|
| Lock 20/3-5 | 3 ft. | 5 ft. | 54 lbs. |
| Lock 20/4-6 | 4 ft. | 6 ft. | 67 lbs. |
| Lock 20/5-7 | 5 ft. | 7 ft. | 80 lbs. |
| Lock 20/6-8 | 6 ft. | 8 ft. | 93 lbs. |
| Lock 20/7-9 | 7 ft. | 9 ft. | 106 lbs. |
| Lock 20/8-10 | 8 ft. | 10 ft. | 118 lbs. |
| Lock 20/9-11 | 9 ft. | 11 ft. | 131 lbs. |
| Lock 20/10-12 | 10 ft. | 12 ft. | 144 lbs. |




Download Adobe pdf file of Lock-N-Load product sheet.

**U.S. Department of Labor**

Mine Safety and Health Administration
604 Cheat Road
Morgantown, West Virginia 26508

| UNDERGROUND MINE FILE | |
|---|---|
| DATE FWD. | 10-11-5 |
| INITIALS | alw |

OCT 7 2005

SENT TO AND/OR DISCUSSED WITH FIELD OFFICE:

| SURNAME | DATE |
|---|---|
| NB – KT | 10/7/05 |

REVIEWED BY:

| | |
|---|---|
| LyAll | 10/7/05 |
| | 10/7/05 |
| BLAKE | 10/7/05 |
| R. Mayer for J.C. Hosley | 07 OCT 05 |
| | |

Mr. Jeffrey K. Toler
Superintendent
Anker West Virginia Mining Company, Inc.
Route 9, Box 507
Buckhannon, West Virginia 26201

Dear Mr. Toler:

Your request dated October 7, 2005, to revise the safety precautions for the test area to mine the lower bench of the middle Kittanning coal seam at the Sago Mine, I.D. No. 46-08791, has been reviewed. Your request is tentatively approved pending an on-site evaluation by MSHA personnel.

If you have any questions, please feel free to contact this office.

Sincerely,

for William Ponceroff
Kevin G. Stricklin
District Manager

NBlake:jw

bcc:
Bridgeport F/O (2)
W. Ponceroff
Nelson Blake (2)
Main File

**Anker West Virginia Mining Company**

Rt.9 Box 507
Buckhannon, WV 26201

October 7, 2005

Kevin Stricklin, District Manager
C/O Department of Labor, Mine Health and Safety Administration
604 Cheat Road
Morgantown, WV 26508
Attn: Nelson Blake

Submittal # 4.

Dear Mr. Stricklin:

Anker West Virginia Mining Company wishes to amend our September 27 and October 3, 2005 submittals which allowed our Sago Mine, (MSHA ID # 46-08791), and more specifically our 2nd Left Mains unit, to mine the lower bench of the Middle Kittanning Seam. We wish to modify this plan to allow for a change in the location in which the continuous miner can operate. This proposed location for the operator to operate the miner is shown on the attached diagram.

It should be noted that we will comply with all details and information complied in both the September 27, 2005 and October 3, 2005 submittals. In fact we wish to add an additional precaution to our safety provisions. See precaution number 11.

If you have any questions concerning this correspondence please feel free to contact me at 1-304-471-3300.

Sincerely,

Al Schoonover
Safety Director

Sago Mine
MSHA I.D. Number 46-08791; WVOMHS&T ID No. U-2016-98B

Safety Provisions:
Note: The safety provisions listed below will be reviewed with all persons working in the affected area prior to commencing work and record there of made.

1. No person will be allowed inby the second mining area so as to eliminate exposure of persons to heightened coal ribs.
2. The shuttle car operator will be remain under the protective canopy at all times while inby the second mining area.
3. The Shuttle Car will be equipped with "Back Boards" so as to protect the operator from lateral material falls. (refer to the Attached Equipment Schematic).
4. All access points to raised areas created by second mining will be dangered off with yellow ribbon & or equivalent material. The ribbon will be affixed from rib to rib, and noted in the pre-shift/on-shift examination book.
5. Tests for methane gas will be conducted prior to cutting and loading of coal and every 20 minutes there after by remote means. This will be accomplished by utilizing a remote probe or by traveling inby on the upper level parallel and above the area to be mined.
6. In the event mining equipment becomes disabled the ribs will be supported prior to commencing repairs to said piece of equipment. All work will be conducted under the direct supervisions of a W.V. certified underground mine foreman.
7. Cable handling will be accomplished via remote means utilizing pull ropes and additional personnel if needed. At no time will persons go inby to accomplish this task unless the coal ribs are supported.
8. The lower level mining entries will not be wider that the upper level.
9. Persons will be withdrawn from the immediate area during second advance mining in the event of loose and or overhanging ribs are encountered.
10. Outby the line depicted as "A" on the attached map, additional rib/roof support will be added so as to provide additional roof support for the miner operator. This will be accomplished utilizing one of the methods shown below:
    a). We will position one of our twin-head roof bolter in a crosscut to a point where the ATRS support is set at the junction of the crosscut and entry. Once the ATRS is set the roof bolters operator's canopy, nearest the corner in which the miner operator is going to position himself to operate, will be swung towards the inby corner and rib area. In doing such, this will create a protected area whereby the miner operator can operate the continuous miner from. This support will remain in place until the miner operator has completed the cut and has safely positioned himself in the main entry away, outby from the intersection.
    b). Either 2, (two), Prop-setter supports or 2, (two) Lock-N-Load Supports will be installed on 5, (five) foot centers, with screen meshing being attached on the inby side. These supports will be installed with wedges being driven from the outby portion of the support towards the inby corner or rib line. By installing these supports in this fashion in conjunction with a removal rope, these supports can be remotely removed by using a scoop to safely remove these devices. Once removed, the rope, which had been previously attached to the scoop can be pulled taught in order to remove these supports to the middle of the intersection where they can be safely recovered.

c). Either the top will be screened to cover an area approximately 4' X 12', and installed utilizing 4, (four) roof bolts.

11. During the first cuts of Sequence #1, (See Diagram #1), the continuous miner operator can be positioned inby the corner of Sequence #1, provided the following measures have taken place:
    - Prior to starting the first cuts a screen must be attached to at least two roof bolts along the row of roof bolts located closest to the right hand rib. Attachment can be by means of running a cable hanger through the screen and connect it to the hanger loop in the roof bolt plate.
    - Once this is completed, either two Prop-Setter Supports or two Lock-N-Load supports will be installed as close as possible to the rib and underneath the screen. By installing these supports in this fashion the screen will be forced to the top, as well as towards the rib line.
    - After the above actions have been completed the continuous miner operator can be taking the first cuts from Sequence #1.

    - Removal of the screen and posts will occur as follows:
    - First the cable hooks will be unhooked from the roof bolt plates; then,
    - We will follow the removal action described in Item #10 above, with the exception that continuous miner may also be used to remotely remove the temporary supports.

**U.S. Department of Labor**

Mine Safety and Health Administration
604 Cheat Road
Morgantown, West Virginia 26508

| UNDERGROUND MINE FILE | |
|---|---|
| DATE FWD: | 10-4-05 |
| INITIALS | |

SENT TO AND/OR DISCUSSED WITH FIELD OFFICE:

| SURNAME | DATE |
|---|---|
| | |

REVIEWED BY:

| | |
|---|---|
| | |
| BLAKE | 10/3/05 |
| Mosley | 10/4/05 |
| Jones | 10-4-05 |
| | |

OCT 4 2005

Mr. Jeffrey K. Toler
Superintendent
Anker West Virginia Mining Company, Inc.
Route 9, Box 507
Buckhannon, West Virginia 26201

Dear Mr. Toler:

Your request dated October 3, 2005, for an additional test area to mine the lower bench of the Middle Kittanning coal seam at the Sago Mine, I.D. No. 46-08791, has been reviewed. Your request is tentatively approved pending an on-site evaluation by MSHA personnel.

If you have any questions, please feel free to contact this office.

Sincerely,

ORIGINAL SIGNED BY
WILLIAM E. PONCEROFF

Kevin G. Stricklin
District Manager

NBlake:si

bcc:
Bridgeport Field Office (2)
W. Ponceroff
Nelson Blake (2)
Main File

**Anker West Virginia Mining Company**

Rt.9 Box 507
Buckhannon, WV 26201

October 3, 2005

Kevin Stricklin, District Manager
C/O Department of Labor, Mine Health and Safety Administration
604 Cheat Road
Morgantown, WV 26508
Attn: Nelson Blake

Submittal # 3.

Dear Mr. Stricklin:

Anker West Virginia Mining Company wishes to amend our September 27, 2005 submittal which allowed our Sago Mine, (MSHA ID # 46-08791), and more specifically our 2nd Left Mains unit, to mine the lower bench of the Middle Kittanning Seam. We wish to modify this plan to allow for additional mining in this area. This additional area is shown on the attached map, and displayed and denoted with hatching.

It should be noted that we will comply with all details and information complied in the September 27, 2005 submittal. In fact we wish to add an additional precaution to our safety provisions. See precaution number 10.

If you have any questions concerning this correspondence please feel free to contact me at 1-304-471-3300.

Sincerely,

James Al Schoonover

Al Schoonover
Safety Director

Sago Mine
MSHA I.D. Number 46-08791; WVOMHS&T ID No. U-2016-98A

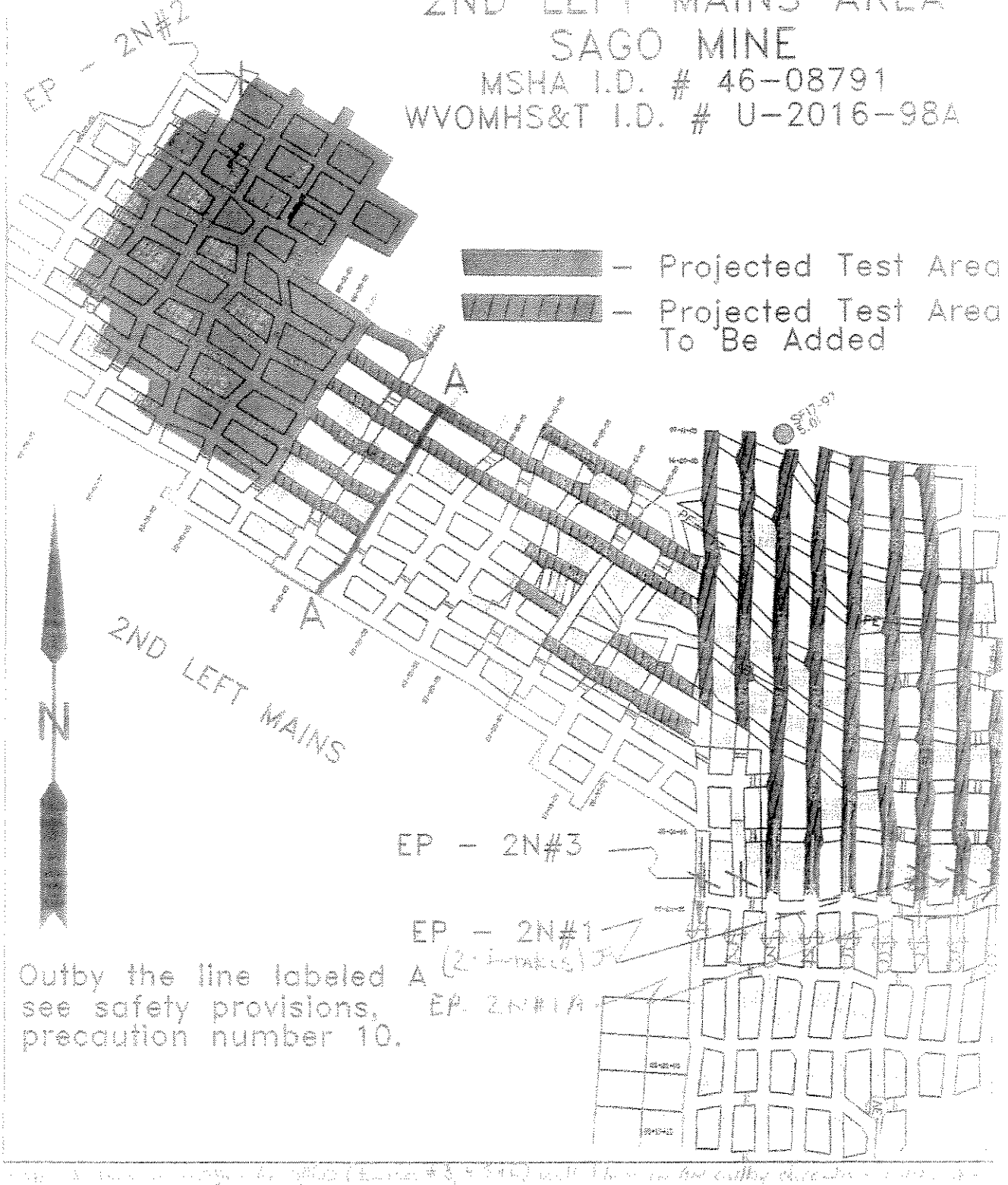
Safety Provisions:
Note: The safety provisions listed below will be reviewed with all persons working in the affected area prior to commencing work and record there of made.

1. No person will be allowed inby the second mining area so as to eliminate exposure of persons to heightened coal ribs.
2. The shuttle car operator will be remain under the protective canopy at all times while inby the second mining area.
3. The Shuttle Car will be equipped with "Back Boards" so as to protect the operator from lateral material falls. (refer to the Attached Equipment Schematic).
4. All access points to raised areas created by second mining will be dangered off with yellow ribbon & or equivalent material. The ribbon will be affixed from rib to rib, and noted in the pre-shift/on-shift examination book.
5. Tests for methane gas will be conducted prior to cutting and loading of coal and every 20 minutes there after by remote means. This will be accomplished by utilizing a remote probe or by traveling inby on the upper level parallel and above the area to be mined.
6. In the event mining equipment becomes disabled the ribs will be supported prior to commencing repairs to said piece of equipment. All work will be conducted under the direct supervisions of a W.V. certified underground mine foreman.
7. Cable handling will be accomplished via remote means utilizing pull ropes and additional personnel if needed. At no time will persons go inby to accomplish this task unless the coal ribs are supported.
8. The lower level mining entries will not be wider that the upper level.
9. Persons will be withdrawn from the immediate area during second advance mining in the event of loose and or overhanging ribs are encountered.
10. Outby the line depicted as "A" on the attached map, additional rib/roof support will be added so as to provide additional roof support for the miner operator. This will be accomplished utilizing one of the methods shown below:
    a). We will position one of our twin-head roof bolter in a crosscut to a point where the ATRS support is set at the junction of the crosscut and entry. Once the ATRS is set the roof bolters operator's canopy, nearest the corner in which the miner operator is going to position himself to operate, will be swung towards the inby corner and rib area. In doing such, this will create a protected area whereby the miner operator can operate the continuous miner from. This support will remain in place until the miner operator has completed the cut and has safely positioned himself in the main entry away, outby from the intersection.
    b). Either 2, (two), Prop-setter supports or 2, (two) Lock-N-Load Supports will be installed on 5, (five) foot centers, with screen meshing being attached on the inby side. These supports will be installed with wedges being driven from the outby portion of the support towards the inby corner or rib line. By installing these supports in this fashion in conjunction with a removal rope, these supports can be remotely removed by using a scoop to safely remove these devices. Once removed, the rope, which had been previously attached to the sccop can be pulled taught in order to remove these supports to the middle of the intersection where they can be safely recovered.

c). Either the top will be screened to cover an area approximately 4' X 12', and installed utilizing 4, (four) roof bolts.

# TEST AREA
# FOR
# 2ND LEFT MAINS AREA
# SAGO MINE

MSHA I.D. # 46-08791
WVOMHS&T I.D. # U-2016-98A




— Projected Test Area

— Projected Test Area To Be Added

Outby the line labeled A see safety provisions, precaution number 10.

U.S. Department of Labor

Mine Safety and Health Administration
604 Cheat Road
Morgantown, West Virginia 26508

SENT TO AND/OR DISCUSSED WITH FIELD OFFICE:

| SURNAME | DATE |
|---|---|
| WB - KT | 9/28/05 |

REVIEWED BY:

| | |
|---|---|
| SCHALL 9/28/05 | |
| 9/28/05 | |
| | |

RECEIVED
9-29-5
aaw

SEP 2 8 2005

Mr. Jeffrey K. Toler
Superintendent
Anker WV Mining Company, Inc.
Route 9, Box 507
Buckhannon, West Virginia 26201

Dear Mr. Toler:

Your request dated September 27, 2005, for a test area to mine the lower bench of the Middle Kittanning coal seam at the Sago Mine, I.D. No. 46-08791, has been reviewed. Your request is tentatively approved pending an on-site evaluation by MSHA personnel.

If you have any questions, please feel free to contact this office.

Sincerely,

Kevin G. Stricklin

Kevin G. Stricklin
District Manager

NBlake:aew

bcc:
Bridgeport F/O (2)
W. Ponceroff
Nelson Blake (2)
Main File

**Anker West Virginina Mining Company**

Rt.9 Box 507
Buckhannon, WV 26201

2005 SEP 28 PM 1:43

RECEIVED

September 27, 2005

Kevin Stricklin, District Manager
C/O Department of Labor, Mine Health and Safety Administration
604 Cheat Road
Morgantown, WV 26508
Attn: Nelson Blake, Tom Hlavsa.
Submittal # 2a-2.

Dear Mr. Stricklin:

The following correspondence is concerning amending our Sago Mines, {M.S.H.A. identification number 46-08791} approved roof control plan. Page two of the current approved roof control plan will be replaced with the attached copy describing the current seam lithology.

These proposed amendments will allow recovery of additional resources, in that the lower bench of the Middle Kittanning seam that is being proposed to be mined. This mining application will apply to the lower coal seam of the 2nd Left Mains at the Sago Mine, I.D.No.46-08791. Please refer the attached drawing number 1 depicting the detailed cut sequence. This design will eliminate rib exposure to the miner operator in that he will remain on the upper level during the mining process. The shuttle car operator will be protected by the equipment canopy during the limited mining process.(Refer to the attached equipment schematic) Please refer to the attached list of "Safety Provisions" that will address in detail safe work procedures for this mining process.

In closing, I have attached a copy of a detailed geologic assessment that was recently conducted by our senior staff geologist Mr. Joe Andrews which clearly states in his expert opinion that cavity heights will not affect the coal ribs in the short term .Your prompt review and approval of this proposed amendment will be greatly appreciated. If you have any questions concerning this correspondence please feel free to contact me at 1-304-471-3400.

September 27, 2005

Sincerely,

for Al Schoonover

Al Schoonover

Safety Director

| | | |
|---|---|---|
| Main Roof | | 20' Feet Sandstone |
| Immediate Seam | | 20' Gray Shale |
| Coal Seam – Top Bench | | 50"-70" Middle Kittanning |
| Binder/Bottom | | 1.5 – 10' Shale |
| Coal Seam – Bottom Bench | | 30"-50" Middle Kittanning |
| Bottom | | 0-10.0' Gray Shale |

## ASSOCIATED FACE AND HAULAGE EQUIPMENT

1. Joy 14.15 Continuous Miner
2. Joy 10SC Shuttle Cars
3. Fletcher RRII-15 Roof Bolter
4. S&S and Fairchild Scoops
5. Stamler Feeder/Breaker
6. Stamler Breaker/Feeder

## MAXIMUM WIDTH AND CENTERS

### MAINS

| | | | |
|---|---|---|---|
| Entry Width: | 20 Feet | Entry Centers: | 48-110 Feet |
| Crosscut Width: | 20 Feet | Crosscut Centers: | 54-140 Feet |

### SUB MAINS

| | | | |
|---|---|---|---|
| Entry Width: | 20 Feet | Entry Centers: | 48-110 Feet |
| Crosscut Width: | 20 Feet | Crosscut Centers: | 48-140 Feet |

### ROOMS and PANELS

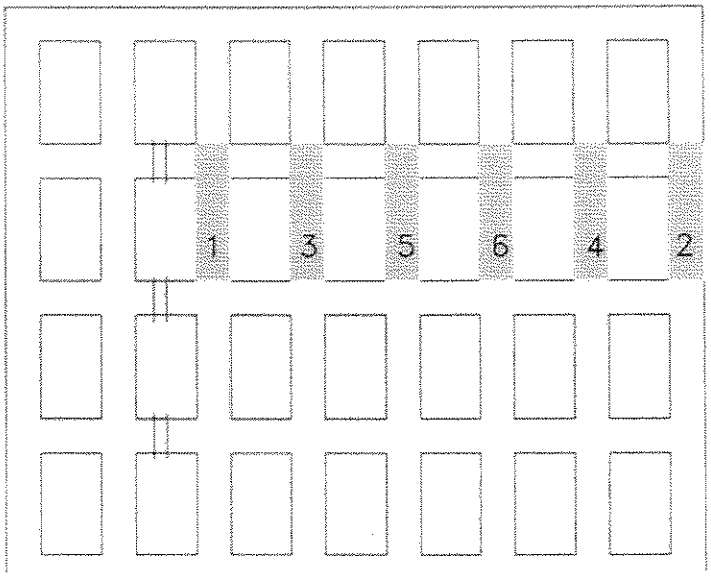
| | | | |
|---|---|---|---|
| Entry Width: | 20 Feet | Entry Centers: | 48-110 Feet |
| Crosscut Width: | 20 Feet | Crosscut Centers: | 40-140 Feet |

# DRAWING NO. 1

# TYPICAL CUT SEQUENCE FOR SECOND DEVELOPMENT WORK SAGO MINE

MSHA ID # 46-08791
WVOMHS&T # U-2016-98A

SEQUENCE NO. 1




Note: This cycle may be repeated, as well as altered due to mining conditions.

## Sago Mine I.D. Number 46-08791

**Safety Provisions:**

**Note: The safety provisions listed below will be reviewed with all persons working in the affected area prior to commencing work and record there of made.**

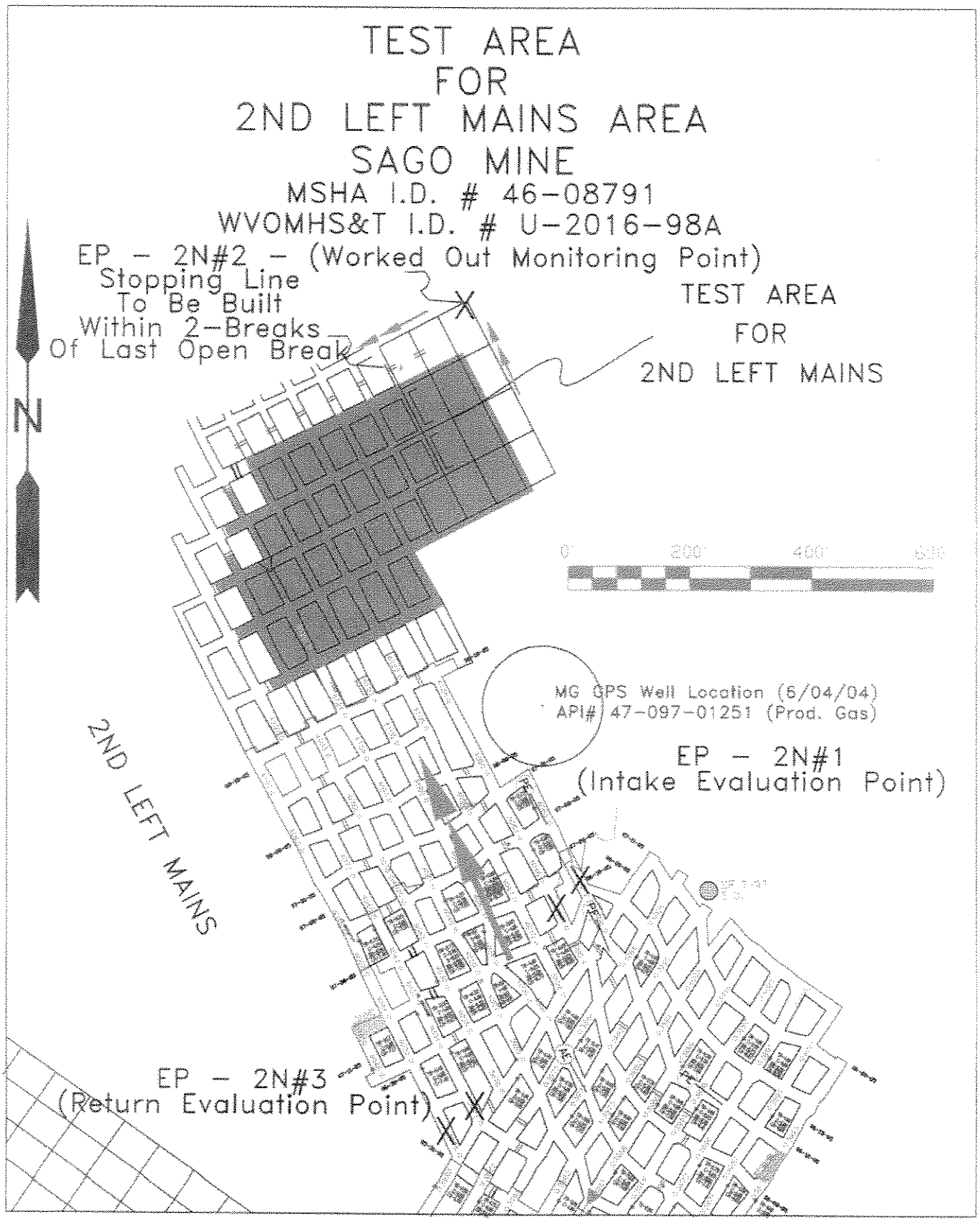
1. No person will be allowed inby the second mining area so as to eliminate exposure of persons to heightened coal ribs.
2. The Shuttle car operator will remain under the protective canopy at all times while inby the second mining area.
3. The Shuttle cars will be equipped with "Back Boards" so as to protect the operator from lateral material falls. (Refer to the Attached Equipment Schematic)
4. All access points to raised areas created by second mining will be dangered off with yellow ribbon & or equivalent marterial.The ribbon will be affixed from rib to rib. and noted in the pre-shift /on-shift examination book.
5. Tests for methane gas will be conducted prior to the cutting and loading of coal and every 20 minutes there after by remote means. This may be accomplished by utilizing a remote probe or by traveling inby on the upper level parallel and above the area to be mined.
6. In the event mining equipment becomes disabled the ribs will be supported prior to commencing repairs to said piece of equipment. All work will be conducted under the direct supervision of a W.V. certified underground mine foreman.
7. Cable handling will be accomplished via remote means utilizing pull ropes and additional personnel if needed. At no time will persons go inby to accomplish this task unless the coal ribs are supported.
8. The lower level mining entries will not be wider than the upper level.
9. Persons will be withdrawn from the immediate area during second advance mining in the event of loose and or overhanging ribs are encountered .

9-28-06

# TEST AREA
# FOR
# 2ND LEFT MAINS AREA
# SAGO MINE

MSHA I.D. # 46-08791

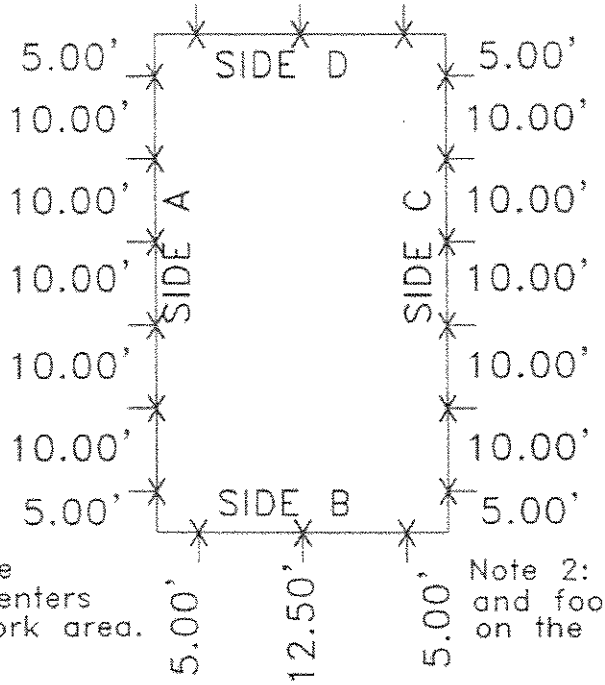
WVOMHS&T I.D. # U-2016-98A



# DRAWING NO. 3
# TYPICAL CUT SEQUENCE
# FOR SECOND DEVELOPMENT WORK
# SAGO MINE

MSHA ID # 46-08791
WVOMHS&T # U-2016-98A

## RIB STABILIZATION PLAN
## STRATA PRODUCTS - LOCK-N-LOAD
## (TOP VIEW)




Note 1: Posts will be installed on 4 Ft. Centers in the immediate work area.

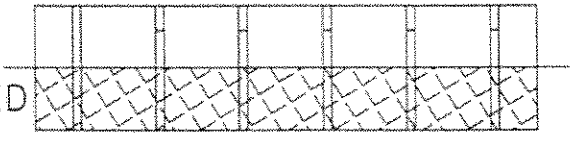
Note 2: Wooden Headers and footers willl be utilized on the Lock-N-Loads

X - Location of Lock-N-Load Support

### SIDE VIEW OF SIDES A&C

CURRENT MINED AREA

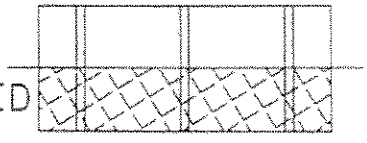
BOTTOM SPLIT TO BE MINED



### SIDE VIEW OF SIDES B&D

CURRENT MINED AREA

BOTTOM SPLIT TO BE MINED

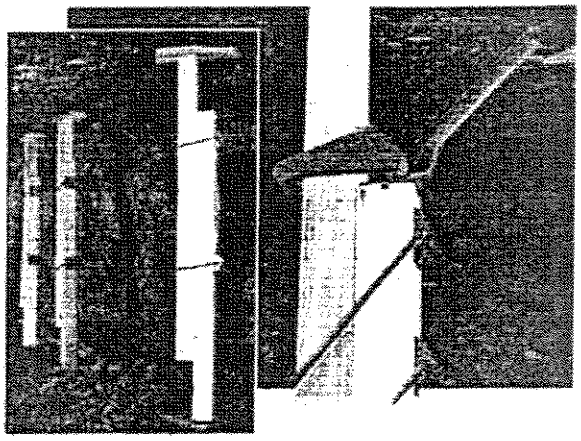


Note 3: Rib Supports will be left in place.

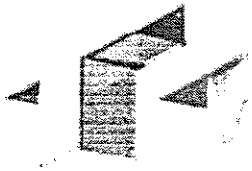
LIST OF PRODUCTS AND SERVICES AVAILABLE IN:

# LOCK-N-LOAD

## ADJUSTABLE SUPPORT



- Adjustable without any cutting of the timber and is available to fit mining heights from 3 feet to 16 feet (1m to 5m).
- Available in different lengths and capacities of either 5, 8 or 20 tons.
- Can be installed by one person and may be preloaded using the simple wrench that can be purchas unit. 2500 lbs(11kN) of preload can be applied.
- The Lock-N-Load™ can be removed and reused by releasing the clamps.
- The Lock-N-Load can be packaged with conventional cap blocks and header boards. In addition, various steel fittings are available to tie into steel or wooden beams.
- The Lock-N-Load can be applied in place of steel jacks, water props, or posts as either a temporary or permanent support. It can also be used as formwork for stoppings, seals, barricades and ventilation curtains.



T HEAD CHANI

For use in tying into a stee beam or string

*Note: The non-yielding Lock-N-Load is not classified as a roof support unde 30.*

**LOCK-N-LOAD SPECIFICATIONS**
**5 TON SUPPORT CAPACITY**

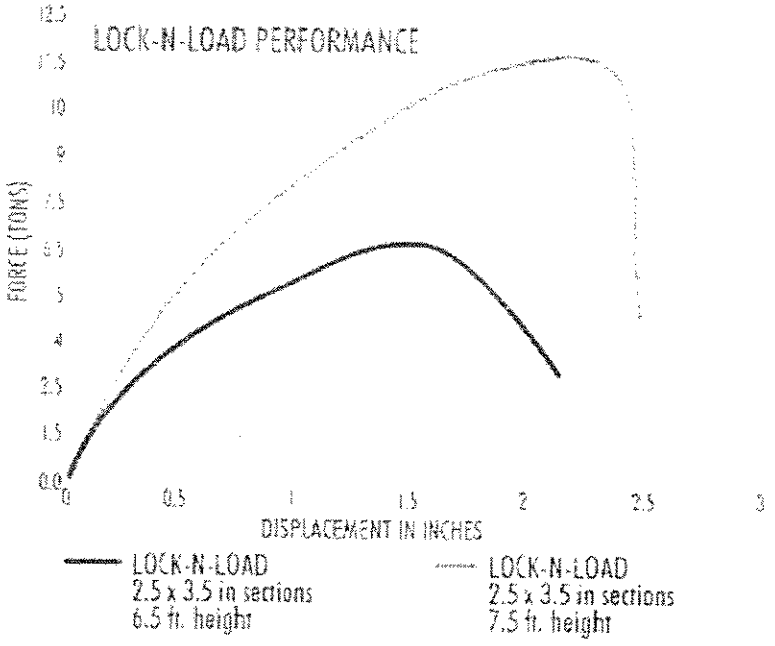
| Part # | Closed Height | Open Height | Weight |
|---|---|---|---|
| Lock 5/3-5 | 3 ft. | 5 ft. | 19 lbs. |
| Lock 5/4-6 | 4 ft. | 6 ft. | 24 lbs. |
| Lock 5/5-7 | 5 ft. | 7 ft. | 28 lbs. |
| Lock 5/6-8 | 6 ft. | 8 ft. | 33 lbs. |

## LOCK-N-LOAD SPECIFICATIONS
## 8 TON SUPPORT CAPACITY

| Part # | Closed Height | Open Height | Weight |
|---|---|---|---|
| Lock 8/3-5 | 3 ft. | 5 ft. | 26 lbs. |
| Lock 8/4-6 | 4 ft. | 6 ft. | 32 lbs. |
| Lock 8/5-7 | 5 ft. | 7 ft. | 39 lbs. |
| Lock 8/6-8 | 6 ft. | 8 ft. | 45 lbs. |
| Lock 8/7-9 | 7 ft. | 9 ft. | 52 lbs. |
| Lock 8/8-10 | 8 ft. | 10 ft. | 58 lbs. |
| Lock 8/10-12 | 10 ft. | 12 ft. | 71 lbs. |

## LOCK-N-LOAD SPECIFICATIONS
## 20 TON SUPPORT CAPACITY

| Part # | Closed Height | Open Height | Weight |
|---|---|---|---|
| Lock 20/3-5 | 3 ft. | 5 ft. | 54 lbs. |
| Lock 20/4-6 | 4 ft. | 6 ft. | 67 lbs. |
| Lock 20/5-7 | 5 ft. | 7 ft. | 80 lbs. |
| Lock 20/6-8 | 6 ft. | 8 ft. | 93 lbs. |
| Lock 20/7-9 | 7 ft. | 9 ft. | 106 lbs. |
| Lock 20/8-10 | 8 ft. | 10 ft. | 118 lbs. |
| Lock 20/9-11 | 9 ft. | 11 ft. | 131 lbs. |
| Lock 20/10-12 | 10 ft. | 12 ft. | 144 lbs. |




Download Adobe pdf file of Lock-N-Load product sheet.

To: T. Coleman
From: J. Andrews
CC: J. Myers; C. Dunbar
Re: Rib Stability for Full Seam, Sago Mine
Date: 9/26/05

On 9/23/05, Carl Crumrine and I went to "large cavity sumps" in 2 Left and 1 Left to inspect the condition of the ribs. The purpose of the trip was to form an opinion as to whether there would be significant rib problems with a full seam cavity height on the order of 15 feet. The full seam cavity height includes what is mined initially- the roof, the top coal bench and a portion of the underlying parting- plus the proposed, subsequent mining of the rest of the parting and the bottom coal bench.

We inspected conditions and took pictures of sumps in No. 8 entry of 2 Left (near spad 4154), in old No. 1 entry of 2 Left (near spad 3701), in No. 1 entry of 1 Left (inby spad 4120) and in the first break off of 2 North Mains at the start of 1 Left (near spad 3831).

The sump in No. 8 entry of 2 Left was cut about 2 weeks ago. The sequence is as follows:

Top of mine
- Apprx. 4-ft of shale roof; screened; cable bolted; roof tenders; roof drippers; no prominent joints
- 4.6' coal- top coal bench
- 2.2' fire clay- upper portion brownish, firm; lower portion dark gray, soft to medium hardness
- 3.4 coal- bottom coal bench
- coal base

Total cavity height in the sump in No. 8 entry is 14.2 feet. In this sump and in the other sumps, no significant rib sloughing was seen and the pillars appear to have good stability, as indicated in the photos taken 9/23/05. The observations of 9/23/05 include the big sump in No. 1 entry of 1 Left, which has a cavity height of 15.0 feet, as measured on 9/2/05 shortly after it was constructed.

In my opinion, there will not be significant rib problems during mining of the rest of the parting and the bottom coal bench in 2 Left, per the proposed mining plans. This opinion is based on:

- In-mine observations of 9/23/05
- Stability factor of 1.99 (as calculated by ICG, Buckhannon office)
- A parting that is stronger than the coal, based on laboratory test data. Sago area cores show compressive strengths ranging from 1,743 psi to 15,933 psi for the floor of the top bench (the parting between top and bottom coal bench)
- Conditions in the full seam test area of the Spruce 2 Mine. The full seam was taken in the 4th Northwest Submains in late 2001 for a distance of about 300 feet. No significant rib problems were reported for the test area, as confirmed recently by personnel involved at the time.

Joe Andrews
Senior Geologist
Anker Energy Corporation

**U.S. Department of Labor**

Mine Safety and Health Administration
604 Cheat Road
Morgantown, West Virginia 26508

| | |
|---|---|
| | 9-21-5 |
| | aew |

SEP 2 1 2005

| SENT TO AND/OR DISCUSSED WITH FIELD OFFICE: | |
|---|---|
| SURNAME | DATE |
| | |
| **REVIEWED BY:** | |
| Cole | 9-20-05 |
| Blake | 9-20-05 |
| Sam | 9-20-05 |
| Hall for CM | 9/20/2005 |
| | |

Mr. Jeffrey K. Toler
Superintendent
Anker West Virginia Mining Company, Inc.
Route 9, Box 507
Buckhannon, West Virginia 26201

Dear Mr. Toler:

A review has been conducted of your request dated September 19, 2005, to mine the floor/pavement and the lower coal seam of the 2nd Left Mains and "A" panel off the 1st Left Mains, at the Sago Mine, I.D. No. 46-08791, and approval cannot be granted.

As you are aware, increasing the opening height of the entries and crosscuts to the extent in your request, decreases the stability of the coal and rock ribs and increases the hazards related to falls in areas where persons are required to work and/or travel. Therefore, before a request can be considered for approval, the plan must include provisions for supporting the coal and rock ribs.

If you have any questions or wish to participate in a meeting, please feel free to contact this office.

Sincerely,

ORIGINAL SIGNED BY
WILLIAM E. PONCEROFF

Kevin G. Stricklin
District Manager

GCole:si

bcc:
Bridgeport Field Office (2)
W. Ponceroff
Nelson Blake (2)
~~Main~~ File

**Anker West Virginina Mining Company**

Rt.9 Box 507
Buckhannon, WV 26201

September 19, 2005

Kevin Strickland, District Manger
C/O Department of Labor, Mine Health and Safety Administration
604 Cheat Road
Morgantown, WV 26508
Attention: Nelson Blake, Tom Halassa

Dear Mr. Strickland:

The following correspondence is concerning amending our Sago Mines,{ M.S.H.A. identification number 46-08791 & State I.D. # U-2016-98A} approved roof control plan & mine ventilation plan. Page two of the current approved roof control plan will be replaced with the attached copy describing the current seam lithology.The attached face ventilation drawings will be included in the current approved ventilation plan.

These proposed amendments will allow recovery of additional resources, in that the lower bench of the Middle Kittanning seam that is being proposed to be mined mined. This mining application will apply to two specific test areas, one being the development area of the 2nd. Left mains area and the other being the A panel off of 1st. Left Mains. (Refer to the enclosed mine map). Exposure of personnel will be limited during this mining process in that if roof and rib hazards are encountered the Test area will be abandoned and sealed.

In closing, your prompt review and approval of this proposed amendment will be greatly appreciated. If you have any questions concerning this correspondence please feel free to contact me at 1-304-471-3400.

Sincerely,

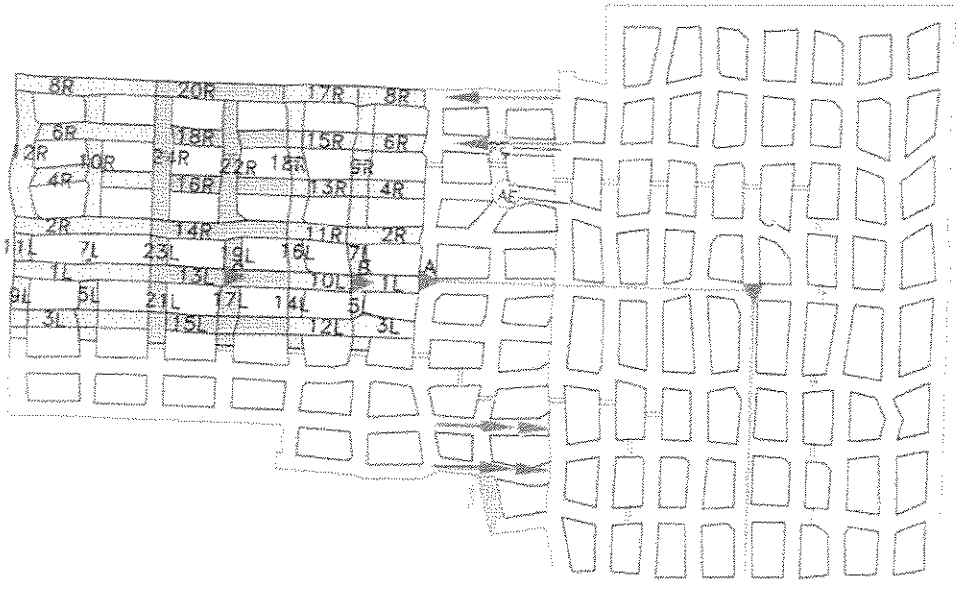
Al Schoonover
Safety Director

RECEIVED
2005 SEP 19 PM 4:37
MINE HEALTH AND SAFETY ADMINISTRATION
MORGANTOWN, WV

9-20-05

# TYPICAL CUT SEQUENCE
# FOR SECOND DEVELOPMENT WORK
# SAGO MINE

## MSHA ID # 46-08791
## WVOMHS&T # U-2016-98A




Note: This cycle may be repeated, as well as altered due to mining conditions.

Note 1: Cycles depicted in green and magenta depict once the ramp has been cut on cycle.

Note 2: Cycle depicted in yellow depicts cycle inclusive of the ramp down.

| | | |
|---|---|---|
| Main Roof | | 20' Feet Sandstone |
| Immediate Seam | | 20' Gray Shale |
| Coal Seam – Top Bench | | 50"-70" Middle Kittanning |
| Binder/Bottom | | 1.5 – 10' Shale |
| Coal Seam – Bottom Bench | | 30"-50" Middle Kittanning |
| Bottom | | 0-10.0' Gray Shale |

## ASSOCIATED FACE AND HAULAGE EQUIPMENT

1. Joy 14/15 Continuous Miner
   Joy 10SC Shuttle Cars
3. Fletcher RRII-15 Roof Bolter
4. S&S and Fairchild Scoops
5. Stamler Feeder/Breaker
6. Stamler Breaker/Feeder

## MAXIMUM WIDTH AND CENTERS

### MAINS

| | | | |
|---|---|---|---|
| Entry Width: | 20 Feet | Entry Centers: | 48-110 Feet |
| Crosscut Width: | 20 Feet | Crosscut Centers: | 54-140 Feet |

### SUB MAINS

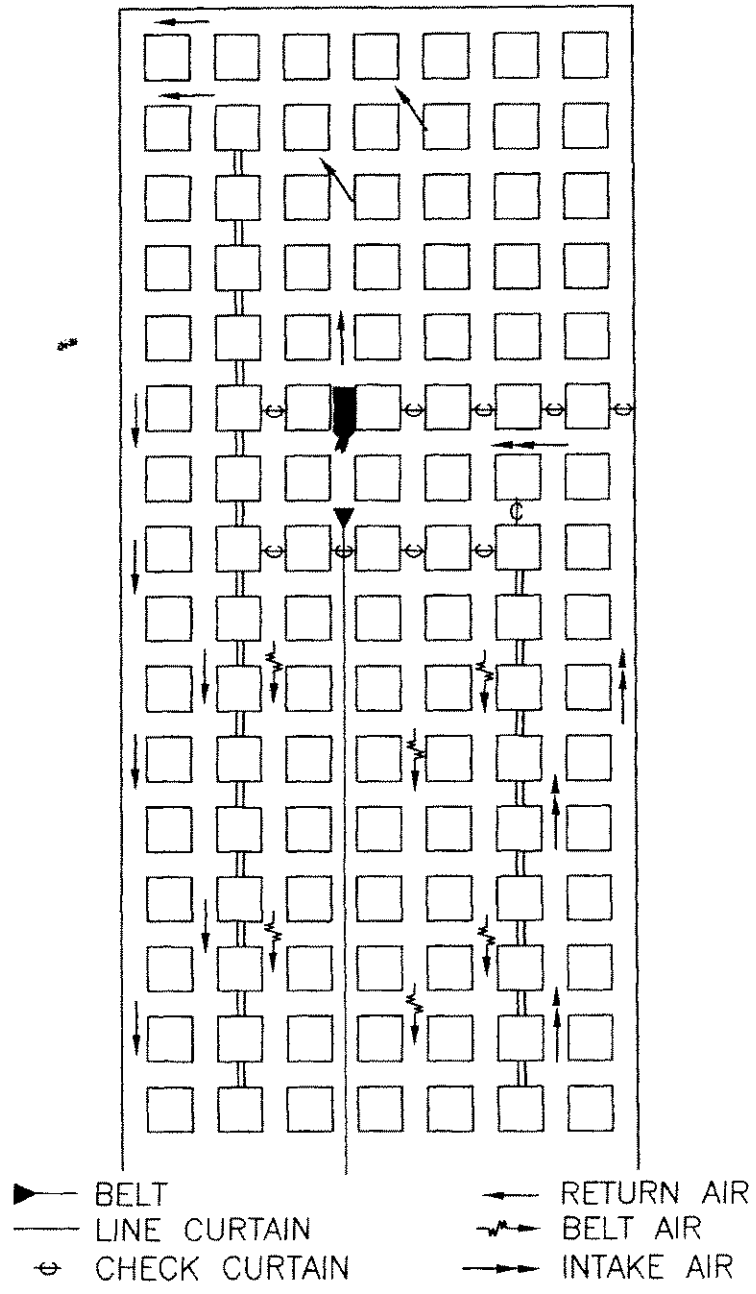
| | | | |
|---|---|---|---|
| Entry Width: | 20 Feet | Entry Centers: | 48-110 Feet |
| Crosscut Width: | 20 Feet | Crosscut Centers: | 48-140 Feet |

### ROOMS and PANELS

| | | | |
|---|---|---|---|
| Entry Width: | 20 Feet | Entry Centers: | 48-110 Feet |
| Crosscut Width: | 20 Feet | Crosscut Centers: | 40-140 Feet |

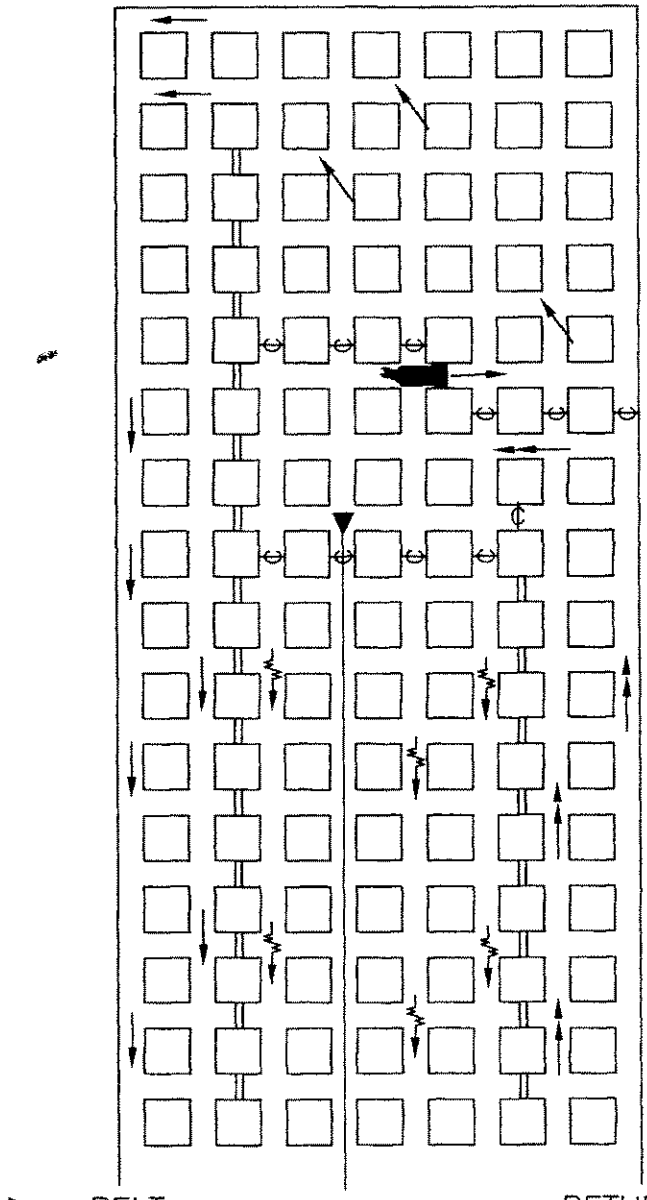
# ANKER WEST VIRGINIA MINING COMPANY, INC.
# SAGO MINE

TYPICAL MINING SEQUENCE AND SECTION VENTILATION
FOR BOTTOM SEAM DEVELOPMENT
(ENTRY DEVELOPMENT)



# ANKER WEST VIRGINIA MINING COMPANY, INC.
# SAGO MINE

TYPICAL MINING SEQUENCE AND SECTION VENTILATION
FOR BOTTOM SEAM DEVELOPMENT
(CROSS-CUT DEVELOPMENT)



BELT
LINE CURTAIN
CHECK CURTAIN
RETURN AIR
BELT AIR
INTAKE AIR

**U.S. Department of Labor**

Mine Safety and Health Administration
604 Cheat Road
Morgantown, West Virginia 26508

| UNDERGROUND MINE FILE | |
|---|---|
| DATE PUT | 8-29-5 |
| INITIALS | aew |

SENT TO AND/OR DISCUSSED WITH FIELD OFFICE:

| SURNAME | DATE |
|---|---|
| | |

REVIEWED BY:

| | |
|---|---|
| GC/E | 8-29-05 |
| Blake | 8-25-05 |
| NB for CM | 8-26-05 |
| Stoner | 8-25-05 |
| | |

AUG 2 9 2005

Mr. Jeffrey K. Toler
Superintendent
Anker WV Mining Company, Inc.
Route 9, Box 507
Buckhannon, West Virginia 26201

Dear Mr. Toler:

A review has been conducted of your request dated August 16, 2005, revising item numbers 1 and 2 on Page 10 of the approved roof-control plan for the Sago Mine, I.D. No. 46-08791, and approval is granted. Please replace the appropriate page of the approved roof-control plan with the enclosed Page 10.

If you have any questions, please feel free to contact this office.

Sincerely,

**Kevin G. Stricklin**

Kevin G. Stricklin
District Manager

Enclosure

GCole:aew

bcc:
Bridgeport F/O (2)
W. Ponceroff
Nelson Blake (2)
Main File

8-18-05

MINE SAFETY & HEALTH
AUG 17 2005
ADMINISTRATION

CM


# Anker WV Mining Co. Inc.
## Sago Mine
## RT. 9 Box 507
## Buckhannon, WV 26201

Phone 304-473-1676
Fax 304-473-1677


Mr. Kevin G. Stricklin
Mine Safety Health Administration
604 Cheat Road
Morgantown, WV 26508

August 16, 2005

Dear Mr. Stricklin,

Anker West Virginia Mining Company, Inc., Sago Mine, MSHA I.D. 46-08791 is submitting for your review and approval a change to page 10, items #1 and #2 of our approved roof control plan. This change shall commence at Spad Station #4090 on the 2nd Left Mains and 160 feet inby Spad Station #4110 on the 1st Left Mains.

If you have any questions concerning this matter, please contact me at 304-473-1676

Thanks,

James A. Schoonover

James A. Schoonover
Safety Dept.

## MAINS AND SUBMAINS DEVELOPMENT

The following procedure shall be adhered to when developing mains and sub-mains in addition to tbe normal bolting pattern.

1. The primary escapeway, track and belt conveyor entry shall have wire screen bolted to the mine roof with a screen opening of not greater than 4"x 4".

2. One return aircourse entry shall contain one of the following roof support measures and maintained even with the section tailpiece.

    a. A roof sealant will be applied to seal the mine roof.
    b. A 17"x 17" plate (roof cap) or greater shall be installed with each roof bolt.
    c. Wire screen will be bolted to the mine roof with screen opening of not greater than 4" x 4".
    d. Two (2) rows of post or their equivalent will be installed to create a 6' wide walkway on not more than 5'advancing centers.

    Note: The wire screen to be installed shall measure at least 5' x 13' and will be at least 8 gauge.

3. The primary roof support installed shall consist of 5' fully grouted tension roof bolts or 6' fully grouted resin roof bolts or 4' and 6' fully grouted resin roof bolts installed in a staggered pattern shown on page 7a or 4' fully grouted resin roof bolts when in sandstone as described below *. These four roof support systems shall not be intermixed unless they are used as supplementary support. *Resin grouted roof bolts shorter than the approved minimum length but not less than 48 inches may be used in solid sandstone. The solid sandstone must be at the top of the hole being drilled for a distance of at least 12 inches. The certified section foreman shall be notified and give authorization prior to installing shorter than the approved minimum length roof bolt. The authorization shall be recorded in the Pre-shift/On-shift record book.

4. The immediate roof shall be removed to help prevent sloughing in the seven (7) center entries, unless sandstone is present in the immediate roof.

Rt. 9 Box 507, Buckhannon, W.V. 26201

**ANKER WV MINING CO. SAGO MINE**

# Fax

**To:** Kevin Stricklin **From:** Al Schoonover

**Fax:** 304-473-1677 **PAGES** 3

**Phone:** 304-473-1676 **Date:** 8-17-05

**Re:** **CC:**

☐ **Urgent** X **For Review** ☐ **Please Comment** ☐ **Please Reply** ☐ **Please Recycle**

**U.S. Department of Labor**

Mine Safety and Health Administration
604 Cheat Road
Morgantown, West Virginia 26508

| SENT TO AND/OR DISCUSSED WITH FIELD OFFICE: | |
|---|---|
| *SURNAME* | *DATE* |
| | |

| REVIEWED BY: | |
|---|---|
| JLyall | 8/23/05 |
| Blake | 8/23/05 |
| NB for CM | 8/23/05 |
| Toner | 8-25-05 |
| | |

| | |
|---|---|
| DATE PMD | 8-29-5 |
| INITIALS | aew |

AUG 2 9 2005

Mr. Jeffrey K. Toler
Superintendent
Anker WV Mining Company, Inc.
Route 9, Box 507
Buckhannon, West Virginia 26201

Dear Mr. Toler:

A review has been conducted of your submittal dated August 22, 2005, concerning the roof-control plan for the 2 Left section of the Sago Mine, I.D. No. 46-08791, and approval is granted. Please add the enclosed page to your copy of the approved roof-control plan.

The roof support system(s) as shown on the plan drawings, and the descriptive procedures and safety precautions are the minimum roof-control measures for this mine. If the roof shows signs of weakness or failure, additional support shall be installed as required by 30 CFR 75.202(a).

If you have any questions, please feel free to contact this office.

Sincerely,

**Kevin G. Stricklin**

Kevin G. Stricklin
District Manager

Enclosure

JLyall:aew

bcc:
Bridgeport F/O (2)
W. Ponceroff
Nelson Blake (2)
Main File

**Anker West Virginina Mining Company**

Rt.9 Box 507
Buckhannon, WV 26201



8-23-05

August 22, 2005

Kevin Strickland, District Manager
C/O Department of Labor, Mine Health and Safety Administration
604 Cheat Road
Morgantown, WV 26508
Attn: Nelson Blake,

Dear Mr. Strickland:

The following correspondence is concerning amending the Sago Mines {M.S.H.A. identification number 46-08791} approved roof control plan .The attached amendment is designed to enhance health and safety by reducing occurrences of falling roof material .

In closing, your prompt review and approval of this proposed amendment will be greatly appreciated by this department. If you have any questions concerning this correspondence please feel free to contact me at 1-304-473-1676.

Sincerely,

James Al Schoonover

Al Schoonover , Safety Director

**U.S. Department of Labor**

Mine Safety and Health Administration
604 Cheat Road
Morgantown, West Virginia 26508

| SENT TO AND/OR DISCUSSED WITH FIELD OFFICE: | |
|---|---|
| *SURNAME* | *DATE* |
| | |

| REVIEWED BY: | |
|---|---|
| Ronald Tulanowski | 8-12-05 |
| BLAKE | 8-12-05 |
| NB/to CM | 8-12-05 |
| | |
| | |

UNDERGROUND MINE FILE
DATE RCD. 8-12-5
INITIALS aew

AUG 1 2 2005

Mr. Jeffrey K. Toler
Superintendent
Anker WV Mining Company, Inc.
Route 9, Box 507
Buckhannon, West Virginia 26201

Dear Mr. Toler:

Your request dated August 11, 2005, to amend the approved roof-control plan for the Sago Mine, I.D. No. 46-08791, has been reviewed and is approved. Please add the enclosed pages to your copy of the approved roof-control plan.

The roof support system(s) as shown on the plan drawings, and the descriptive procedures and safety precautions are the minimum roof-control measures for this mine. If the roof shows signs of weakness or failure, additional support shall be installed as required by 30 CFR 75.202(a).

If you have any questions, please feel free to contact this office.

Sincerely,

**Kevin G. Stricklin**

Kevin G. Stricklin
District Manager

Enclosure

RTulanowski:aew

bcc:
Bridgeport F/O (2)
W. Ponceroff
Nelson Blake (2)
Main File

Roof Control Plan Amendment: page 2a.

MSHA ID#46-08791

1. The Second Left section MMU # 003 immediate mine roof will be screened using wire mesh so as to reduce exposure of falling material to personnel.

2. The entry width will be reduced to 18 feet.

3. Screening will commence inby spad 4101.

4. Screen installation will be conducted during the mining cycle.

5. The above stated amendments will be in effect until roof conditions warrant a subsequent & prompt site specific review conducted by M.S.H.A. representatives as requested by the operator.

6. Additional bearing supports will be affixed to the rib bolt in each row. These supports will consist of wood boards, and or metal "Brow Tender" type supports or equalivant.

**U.S. Department of Labor**

Mine Safety and Health Administration
604 Cheat Road
Morgantown, West Virginia 26508

UNDERGROUND MINE FILE
DATE FWD. 7-6-5
INITIALS: aew

SENT TO AND/OR DISCUSSED WITH FIELD OFFICE:

| SURNAME | DATE |
|---|---|
| Cole/Terry | 6-30-05 |

REVIEWED BY:

| | |
|---|---|
| Cole | 6-30-05 |
| Blake | 6-30-05 |
| Wolfe | 7-5-5 |
| Mosley | 7-5-05 |
| | |

JUL 6 2005

Mr. John B. Stemple, Jr.
Superintendent
Anker WV Mining Company, Inc.
Route 9, Box 507
Buckhannon, West Virginia 26201

Dear Mr. Stemple:

An on-site roof-control plan evaluation was conducted at the Sago Mine, I.D. No. 46-08791, on June 28, 2005. As a result of that evaluation, the request concerning the installation of six-foot fully-grouted bolts as primary roof support that was tentatively approved on April 7, 2005, is now fully approved. Please replace the appropriate page of your approved roof-control plan with the enclosed Page 10.

The roof support system(s) as shown on the plan drawings, and the descriptive procedures and safety precautions are the minimum roof-control measures for this mine. If the roof shows signs of weakness or failure, additional support shall be installed as required by 30 CFR 75.202(a).

If you have any questions, please feel free to contact this office.

Sincerely,

**Kevin G. Stricklin**

Kevin G. Stricklin
District Manager

Enclosure

GCole:aew

bcc:
Bridgeport F/O (2)
W. Ponceroff
Nelson Blake (2)
~~Main~~ File

COAL MINE SAFETY AND HEALTH DISTRICT 3

JUL 6 2005

MEMORANDUM FOR KEVIN G. STRICKLIN, District Manager

THROUGH: CARLOS T. MOSLEY, Assistant District Manager for Technical Programs

NELSON T. BLAKE, Chief, Roof-Control Section

UNDERGROUND MINE FILE
DATE FWD 7-6-5
INITIALS aew

FROM: GARY D. COLE, Coal Mine Inspector, Roof Control

SUBJECT: Roof-Control Six-Month Review, Anker West Virginia Mining Co., Inc., Sago Mine, I.D. No. 46-08791

Date Review Started: 06/15/2005 Date Review Completed: 06/29/2005

The following items were checked for compliance and meeting criteria as part of the review and/or plan evaluation inspection procedures. These items may be judged to be:
**A = Adequate I = Inadequate N = Not Applicable X = Idle**

| | | | |
|---|---|---|---|
| 1. Conventional Supports | A | 8. Sequence Advance Mining | A |
| 2. Roof Bolt Assemblies | A | 9. Sequence Retreat Mining | N |
| 3. Installation Sequence | A | 10. LW/SW Support System | N |
| 4. Installation Torque | A | 11. Supplemental Materials | A |
| 5. Resin Installations | A | 12. Pull-Torque/Tension | N |
| 6. Torque Check Procedures | A | 13. Roof Fall Report System | A |
| 7. Roof Bolting Pattern | A | 14. Deep Cut Mining Systems | A |

Section(s) Inspected: 004-0
Discussed plan with field office representative on: 06/23/2005
Discussed plan with representative of mines on: 06/28/2005

Opening Height: 7 feet Opening Width: 20 feet
Cut Depth: 40 feet Remote Control: Yes

Number of reported unintentional roof falls in past six months: Eleven

Adverse Items/Comments: Three of the 11 falls were inby. Mining was stopped in the two panels having the three falls and the equipment removed. Also, two revisions to the plan have been approved. One increases the length of bolts installed as primary support and the other addresses the installation of cable bolts in areas having 160 feet or less of cover.

Date of Base Plan: October 4, 2004

Revisions or supplements to base plan (date and brief description):

1) Request for a test area to install 4-foot and 5-foot fully-grouted bolts, approved 10/19/2004.
2) Request for an extension of time to complete the installation of tunnel liners in the Trubie Run crossing, approved 12/15/2004.
3) Revision of item 8 on Page 8, first cut in a turned crosscut, approved 02/09/2005.
4) Request to install six-foot fully-grouted bolts as primary support, tentatively approved 04/07/2005.
5) Request concerning the installation of cable bolts in 160 feet or less of cover, approved 05/24/2005.
6) Request to remove a corner of the coal rib for the realignment of the mine track approved 06/29/2005.

Variance from criteria of 75.222: None

Approval Recommended: Yes

**U.S. Department of Labor**

Mine Safety and Health Administration
604 Cheat Road
Morgantown, West Virginia 26508

UNDERGROUND MINE FILE
DATE ENTD 6-29-5
INITIALS aew

SENT TO AND/OR DISCUSSED WITH FIELD OFFICE:

| SURNAME | DATE |
|---|---|
| | |

REVIEWED BY:

| | |
|---|---|
| GCole | 6-29-05 |
| Blake | 6-29-05 |
| Jones | 6-29-05 |
| Mosley | 6-29-05 |
| | |

JUN 2 9 2005

Mr. John B. Stemple, Jr.
Superintendent
Anker WV Mining Company, Inc.
Route 9, Box 507
Buckhannon, West Virginia 26201

Dear Mr. Stemple:

A review has been conducted of your request dated June 23, 2005, to remove a corner of the coal rib at the No. 21 block intersection for the realignment of the mine track at the Sago Mine, I.D. No. 46-08791, and approval is granted. Please add the enclosed material to your copy of the approved roof-control plan for the mine.

If you have any questions, please feel free to contact this office.

Sincerely,

ORIGINAL SIGNED BY
WILLIAM E. PONCEROFF

Kevin G. Stricklin
District Manager

Enclosure

GCole:aew

bcc:
Bridgeport F/O (2)
W. Ponceroff
Nelson Blake (2)
Main File

6-23-05



ANKER WEST VIRGINIA MINING COMPANY INC.
Sago Mine
Rt. 9 Box 507
Buckhannon, WV 26201
Phone 304-473-1676
Fax 304-473-1677

June 23, 2005

Mr. Kevin Stricklin
Mine Safety Health Administration
604 Cheat Road
Morgantown, WV 26508

Dear Mr. Stricklin:

Anker West Virginia Mining Company, Inc. Sago Mine, MSHA I.D. 46-08791 is submitting a request for your review and approval, permission to exceed the 60ft. approved diagonal distance of one intersection at #21 Block, #6 Entry (track). This is necessary to provide proper realignment of track and clearance for equipment transportation on our Mainline Track at the Sago Mine. Supplemental support shall be installed such as cribs, ACS jacks, and cable bolts prior to "slabbing" the coal rib to keep roadway under 20ft. in width. Attached is a map illustrating the supplemental support to be installed in this area.

Should you have any questions concerning this matter please call me at 304-473-1676.

Sincerely,

James A. Schoonover

James A. Schoonover
Safety Dept.

Please disregard the submittle dated June 22, 2005.

**U.S. Department of Labor**

Mine Safety and Health Administration
604 Cheat Road
Morgantown, West Virginia 26508

| UNDERGROUND MINE FILE | |
|---|---|
| DATE FWD: | 5-24-05 |
| INITIALS | ai |

SENT TO AND/OR DISCUSSED WITH FIELD OFFICE:

| SURNAME | DATE |
|---|---|
| Cole/Tenny | 5-19-05 |

REVIEWED BY:

| | |
|---|---|
| Cole | 5-19-05 |
| Blake | 5-19-05 |
| Jones | 5-19-05 |
| Mosley | 5-19-05 |
| | |

MAY 2 4 2005

Mr. John M. Garrett
Superintendent
Anker WV Mining Company, Inc.
Route 9, Box 507
Buckhannon, West Virginia 26201

Dear Mr. Garrett:

A review has been conducted of your request dated May 17, 2005, concerning the installation of cable bolts in areas having 160 feet of cover or less at the Sago Mine, I.D. No. 46-08791, and approval is granted. Please add the enclosed Page 10b to your copy of the approved mine roof-control plan.

If you have any questions, please feel free to contact this office.

Sincerely,

**Kevin G. Stricklin**

Kevin G. Stricklin
District Manager

Enclosure

GCole:aew

bcc:
Bridgeport F/O (2)
W. Ponceroff
Nelson Blake (2)
✓Main File

ANKER WEST VIRGINIA MINING COMPANY INC.
Sago Mine
Rt. 9 Box 507
Buckhannon, WV 26201
Phone 304-473-1676

Entered from faxed copy dated 5-17

CM

May 17, 2005

Mr. Kevin Stricklin
Mine Safety Health Administration
604 Cheat Road
Morgantown, WV 26508

Dear Mr. Stricklin:

Anker West Virginia Mining Company, Inc. Sago Mine, MSHA I.D. 46-08791 is submitting an addendum to our current approved Roof control plan. The addendum is the addition of Page 10b, referring to the use of cable bolts at the Sago Mine.

Should you have any questions concerning this matter please call me at 304-473-1676.

Sincerely,

James A. Schoonover

James A. schoonover
Safety Dept.

Please disregard submittal letter dated May 16, 2005

## MAINS, SUBMAINS and PANEL DEVELOPMENT

A double row of cable bolts 14 feet in length shall be installed with the installation of the pattern bolts during bolting cycle on a minimum of 8 foot centers in stream valleys in areas with 160 feet of cover or less. The 160 foot cover area will be determined by a Certified Overburden Map.
Cable bolts shall anchor in competent roof where anchor zone is above mud seams, separations or any adverse roof.

U.S. Department of Labor

Mine Safety and Health Administration
604 Cheat Road
Morgantown, West Virginia 26508

| UNDERGROUND MINE FILE | |
|---|---|
| DATE FWD. | 4-8-5 |
| INITIALS | ALW |

APR 7 2005

SENT TO AND/OR DISCUSSED WITH FIELD OFFICE:

| SURNAME | DATE |
|---|---|
| Cole/Satterfield | 4-4-05 |

REVIEWED BY:

| | |
|---|---|
| Cole | 4-5-05 |
| Blake | 4-5-05 |
| Jones | 4-6-05 |
| Pmt Section | 4/6/2005 |
| | |

Mr. John M. Garrett
Superintendent
Anker West Virginia Mining Company, Inc.
Route 9, Box 507
Buckhannon, West Virginia 26201

Dear Mr. Garrett:

A review has been conducted of your request dated March 28, 2005, to install 6 foot fully grouted resin roof bolts as primary roof support at the Sago Mine, I. D. No. 46-08791. A tentative approval of your request is granted pending an on-site evaluation of the roof conditions by MSHA personnel.

The enclosed material, letter dated March 28, 2005, and revised Page 10, has been added to the roof control plan for the mine.

If you have any questions, feel free to contact this office.

Sincerely,

ORIGINAL SIGNED BY
CARLOS MOSLEY
Kevin G. Stricklin
District Manager

Enclosures

GCole:si

bcc:
Bridgeport Field Office (2)
W. Ponceroff
Nelson Blake (2)
Main File

# Anker WV Mining Co. Inc.
## Sago Mine
## RT. 9 Box 507
## Buckhannon, WV 26201
304-473-1676


3-30-05

March 28, 2005

Mr. Kevin G. Stricklin
Mine Safety Health Administration
604 Cheat Road
Morgantown, WV 26508

Dear Mr. Stricklin,

Anker West Virginia Mining Company, Inc., Sago Mine, MSHA I.D. 46-08791 is submitting a change to page 10 of our current approved Roof Control Plan. The only change to page 10 is adding 6' fully grouted resin roof bolts to the list of primary roof support to be used at the Sago Mine.

Should you have any questions concerning this matter, please contact me at 304-473-1676.

Please disregard the previous submittal dated March 15, 2005

Thanks,

James A. Schoonover

James A. Schoonover
Safety Dept.

## MAINS AND SUBMAINS DEVELOPMENT

The following procedure shall be adhered to when developing mains and sub-mains in addition to the normal bolting pattern.

1. The track and belt conveyor entry shall have wire screen bolted to the mine roof with a screen opening of not greater than 4"x 4".

2. The primary escapeway and one return aircourse entry shall contain one of the following roof support measures and maintained even with the section tailpiece.

    a. A roof sealant will be applied to seal the mine roof.
    b. A 17"x 17" plate (roof cap) or greater shall be installed with each roof bolt.
    c. Wire screen will be bolted to the mine roof with screen opening of not greater than 4" x 4".
    d. Two (2) rows of post or their equivalent will be installed to create a 6' wide walkway on not more than 5'advancing centers.

    Note: The wire screen to be installed shall measure at least 5' x 13' and will be at least 8 gauge.

3. The primary roof support installed shall consist of 5' fully grouted tension roof bolts or 6' fully grouted resin roof bolts or 4' and 6' fully grouted resin roof bolts installed in a staggered pattern shown on page 7a or 4' fully grouted resin roof bolts when in sandstone as described below *. These four roof support systems shall not be intermixed unless they are used as supplementary support. *Resin grouted roof bolts shorter than the approved minimum length but not less than 48 inches may be used in solid sandstone. The solid sandstone must be at the top of the hole being drilled for a distance of at least 12 inches. The certified section foreman shall be notified and give authorization prior to installing shorter than the approved minimum length roof bolt. The authorization shall be recorded in the Pre-shift/On-shift record book.

4. The immediate roof shall be removed to help prevent sloughing in the seven (7) center entries, unless sandstone is present in the immediate roof.

**U.S. Department of Labor**

Mine Safety and Health Administration
604 Cheat Road
Morgantown, West Virginia 26508

UNDERGROUND MINE FILE
DATE FWD 2-10-5
INITIALS alw

SENT TO AND/OR DISCUSSED WITH FIELD OFFICE:

| SURNAME | DATE |
|---|---|
| | |

REVIEWED BY:

| | |
|---|---|
| Cole | 2-4-05 |
| BLAKE | 2-4-05 |
| Jones | 2-7-05 |
| Mosley | 2-8-05 |
| | |

FEB 9 2005

Mr. James L. Swartz
Superintendent
Anker West Virginia Mining Co., Inc.
Route 9, Box 507
Buckhannon, West Virginia 26201

Dear Mr. Swartz:

A review has been conducted of your request dated February 3, 2005, to revise Item No. 8 on page 8 of the roof control plan for the Sago Mine, I.D. No. 46-08791, and approval is granted. Please replace the appropriate page of the mine roof control plan with the enclosed page 8.

If you have any questions, please feel free to contact this office.

Sincerely,

Kevin G. Stricklin

Kevin G. Stricklin
District Manager

Enclosure

GCole:si

bcc:
Bridgeport Field Office (2)
W. Ponceroff
Nelson Blake (2)
Main File

ANKER WEST VIRGINIA MINING COMPANY, INC.
Sago Mine
Rt. 9 Box 507
Buckhannon, WV 26201
Phone 304-473-1676

February 3, 2005

Mr. Kevin G. Stricklin, District Manager
Mine Safety Health Administration
604 Cheat Road
Morgantown, WV 26508

Dear Mr. Stricklin:

Anker West Virginia Mining Company, Inc. Sago Mine, MSHA I.D. 46-08791 is submitting a change to page 8 of our current approved Roof control plan. The only part on this page that has been changed is 8. " The first cut extracted from a turned right-hand crosscut shall not exceed 20 feet in depth when using a miner with the cable on the right side. The first cut extracted from a turned left-hand crosscut shall not exceed 20 feet in depth when using a miner with a cable on the left side."

Should you have any questions concerning this matter please call me at 304-472-8602.

Sincerely,

James A. Schoonover

James A. Schoonover
Safety Dept.

**Anker West Virginia Mining Company, Inc.**
**Sago Mine**

## SAFETY PRECAUTIONS - REMOTE CONTROL MINING

1. For maximum visibility and safety, while tramming the continuous miner, i.e. (repositioning in a cut, moving from place to place, or a new location, etc.), the miner operator and other persons shall not stand or walk beside the machine. These persons shall position themselves a sufficient distance away from the cutter drum and boom of the continuous miner, so they will not be endangered by sudden movement of the machine.

2. If the continuous miner is equipped with a remote control unit and being operated in the remote mode, the unit shall not be set on the machine. Reflective material shall be worn by the continuous miner operator and helper as an outer garment that will be visible from the front, back and sides.

3. The miner operator or other persons shall not advance beyond the second outby row of roof bolts while the continuous miner is being operated during extended cut mining practices, provided however, that the inby edge of the canopy of manned face haulage equipment may be advanced to the last row of permanent supports.

4. Two readily visible warning indicators shall be posted (one on each side) at the last row of roof bolts where mining is in progress, completed or discontinued and the distance from the last row of roof bolts to the face exceeds 5 feet. This included both sides of crosscuts when crosscut connections are completed.

5. In addition to the two reflective indicators, an additional reflective indicator shall be posted on the next to last row of roof bolts to aid the continuous miner operator, haulage equipment operator and other persons in determining their position for maximum safety.

6. The maximum depth of the extended cut shall not exceed 40 ft.

7. The maximum depth of the extended cut shall be measured from the last full row of undisturbed roof bolts to the deepest point of penetration at the working face.

8. The first cut extracted from a turned right-hand crosscut shall not exceed 20 feet in depth when using a miner with the cable on the right side. The first cut extracted from a turned left-hand crosscut shall not exceed 20 feet in depth when using a miner with the cable on the left side.

9. To protect the miner operator and other persons against roof falls riding back through the roof bolts when extended cut mining is being performed during advance mining, additional support shall be installed by one of the following methods:

    a. Six roof bolts shall be installed in the last row of roof bolts.
    b. An additional roof bolt shall be installed on each side in between the last two rows of bolts.
    c. Metal straps 13' x 5" shall be installed on the last two rows of roof bolts.
    d. Install 8 gage wire screen mats measuring at least 5' x 13' with screen openings not greater than 4" x 4" within the last two rows of roof bolts.

The roof bolts installed as the required additional support shall be permanently marked for identification. The identification is to distinguish the additional roof bolts from the other roof bolts installed in pattern.

Rt. 9 Box 507, Buckhannon, W.V. 26201

**ANKER WV MINING CO. SAGO MINE**

# Fax

**To:** G. Cole **From:** AI - SAGO

**Fax:** 304-473-1677 **PAGES** 3

**Phone:** 304-473-1676 **Date:** 2-3-04

**Re:** **CC:**

☐ Urgent X For Review ☐ Please Comment ☐ Please Reply ☐ Please Recycle

**U.S. Department of Labor**

Mine Safety and Health Administration
604 Cheat Road
Morgantown, West Virginia 26508

| UNDERGROUND MINE FILE | |
|---|---|
| DATE FWD. | 12-17-4 |
| INITIALS | aew |

SENT TO AND/OR DISCUSSED WITH FIELD OFFICE:

| SURNAME | DATE |
|---|---|
| Cole/Terry | 12-15-04 |

REVIEWED BY:

| | |
|---|---|
| Cole | 12-15-04 |
| CYA | 12-15-04 |
| Owen | 12-15-04 |
| Mabe | 12-15-04 |
| | |

DEC 1 5 2004

Mr. James L. Swartz
Superintendent
Anker WV Mining Co., Inc.
Route 9, Box 507
Buckhannon, West Virginia 26201

Dear Mr. Swartz:

A review has been conducted of your request dated December 14, 2004, to extend the time for the completion of the installation of the tunnel arches in the Trubie Run crossing at the Sago Mine, I.D. No. 46-08791, and approval is granted. The enclosed material, letter and map, has been added as a supplement to the mine's approved roof-control plan.

If you have any questions, please feel free to contact this office.

Sincerely,

**Kevin G. Stricklin**

Kevin G. Stricklin
District Manager

Enclosure

GCole:aew

bcc:
Bridgeport F/O (2)
W. Ponceroff
Nelson Blake (2)
Main File

ai 12-15-04



ANKER WEST VIRGINIA MINING COMPANY INC.
Sago Mine
Rt. 9 Box 507
Buckhannon, WV 26201
Phone 304-473-1676

December 14, 2004

Mr. Kevin G. Stricklin, District Manager
Mine Safety Health Administration
604 Cheat Rd.
Morgantown, WV 26508

Dear Mr. Stricklin:

Anker West Virginia Mining Company, Inc. Sago Mine, MSHA I.D. 46-08791 is submitting an addendum to its current approved Roof control Plan, Trubie Run Crossing for your approval. This area extends from Spad Station #3377, to one block inby, which will complete the Trubie Run Crossing. Sago Mine is requesting additional time for the installation of Tunnel Arches. The additional time is needed due to the mine floor conditions. The mine floor in this area is wet, muddy, uneven, and deteriorated to the point that the delivery and installation of the Tunnel Arches are taking a longer period of time than anticipated. The entire Trubie Run Crossing area is supported with 50 ton Truss Bolts, 5ft. Torque Tension Bolts, 8"x8" Bearing Plates, Wire Screen, and Spider Plates. This area includes five entries, one hundred forty five feet each, inby Spad Station #3377 including intersections. This is a combined total of seven hundred twenty five feet.

In addition, the advancement of the Tunnel Arches in the Belt Entry cannot be installed during a production shift due to the operation of the belt conveyor. Additional time will be needed in this area to extend the dumping point, #3 Belt Conveyor, inby the Trubie Run Crossing. We are requesting to extend the time for installation of the Tunnel Arches in the area described above to January 20, 2005.

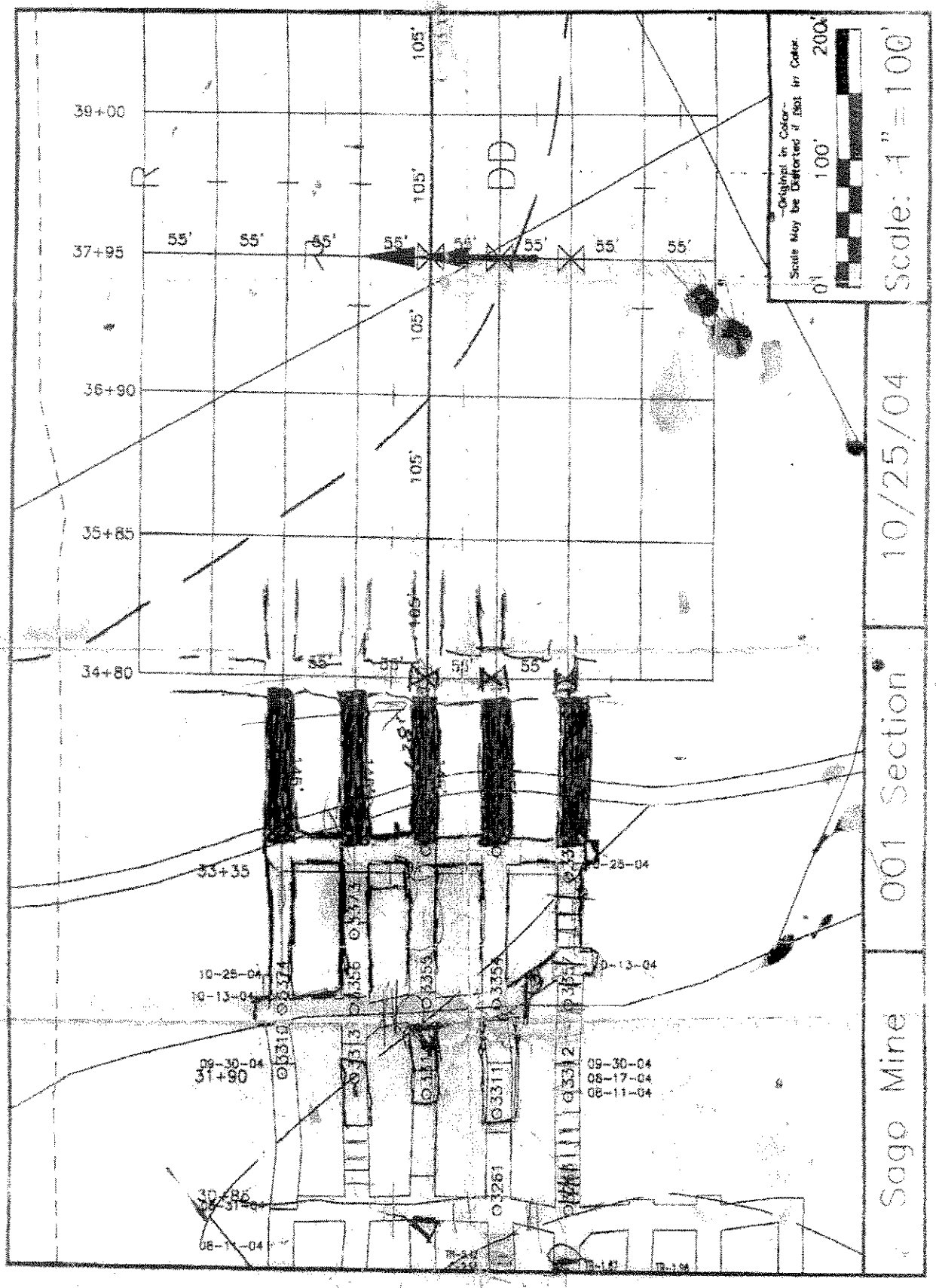
Should you have any questions concerning this matter please call me at 304-473-1676.

Sincerely,

James A. Schoonover

James A. Schoonover
Safety Dept.

Please disregard the addendum submittal dated December 6, 2004.


Sago Mine
001 Section
10/25/04
Scale: 1" = 100'
-Original in Color-
Scale May be Distorted if Not in Color
0'
100'
200'
39+00
37+95
36+90
35+85
34+80
33+35
31+90
105'
55'
10-25-04
10-13-04
09-30-04
08-17-04
08-11-04

COAL MINE SAFETY AND HEALTH DISTRICT 3

OCT 2 8 2004

MEMORANDUM FOR KEVIN G. STRICKLIN, District Manager

UNDERGROUND MINE FILE
DATE FWD 11-1-4
INITIALS aew

THROUGH: CARLOS T. MOSLEY, Assistant District Manager for Technical Programs

NELSON T. BLAKE, Chief, Roof-Control Section

FROM: GARY D. COLE, Coal Mine Inspector, Roof Control

SUBJECT: Roof-Control Six-Month Review, Anker West Virginia Mining Co., Inc., Sago Mine, I.D. No. 46-08791

Date Review Started: 10/06/2004 Date Review Completed: 10/25/2004

The following items were checked for compliance and meeting criteria as part of the review and/or plan evaluation inspection procedures. These items may be judged to be:
**A = Adequate I = Inadequate N = Not Applicable X = Idle**

| | | | |
|---|---|---|---|
| 1. Conventional Supports | A | 8. Sequence Advance Mining | A |
| 2. Roof Bolt Assemblies | A | 9. Sequence Retreat Mining | N |
| 3. Installation Sequence | A | 10. LW/SW Support System | N |
| 4. Installation Torque | A | 11. Supplemental Materials | A |
| 5. Resin Installations | A | 12. Pull-Torque/Tension | N |
| 6. Torque Check Procedures | A | 13. Roof Fall Report System | A |
| 7. Roof Bolting Pattern | A | 14. Deep Cut Mining Systems | A |

Section(s) Inspected: 001-0, 002-0
Discussed plan with field office representative on: 10/06/2004
Discussed plan with representative of mines on: 10/07/2004

Opening Height: 7′ Opening Width: 20′
Cut Depth: 40′ Remote Control: Yes

Number of reported unintentional roof falls in past six months: Three

Adverse Items/Comments: The three roof falls were in outby areas.

Date of Base Plan: October 4, 2004

Revisions or supplements to base plan (date and brief description):
Request for a test area to install 4′ and 5′ fully-grouted bolts, approved 10/19/2004.

Variance from criteria of 75.222: None

Approval Recommended: Yes

U.S. Department of Labor

Mine Safety and Health Administration
604 Cheat Road
Morgantown, West Virginia 26508

| UNDERGROUND MINE FILE | |
|---|---|
| DATE FND. | 10-20-4 |
| INITIALS | alw |

SENT TO AND/OR DISCUSSED WITH FIELD OFFICE:

| SURNAME | DATE |
|---|---|
| Cole/Satterfield | 10-19-04 |

REVIEWED BY:

| | |
|---|---|
| Cole | 10-19-04 |
| BLAKE | 10.19.04 |
| Jones | 10-19-04 |
| | |
| | |

**OCT 19 2004**

Mr. James L. Swartz
Superintendent
Anker West Virginia Mining Co., Inc.
Route 9, Box 507
Buckhannon, West Virginia 26201

Dear Mr. Swartz:

A review has been conducted of your request dated October 8, 2004, to install 4' and 5' fully grouted resin rods in a test area of the 1st Right Northeast Panel, at the Sago Mine, I.D. No. 46-08791, and approval is granted. These underground test areas are to be appropriately marked for identification and observation purposes.

The enclosed material has been added as a supplement to the mine roof control plan.

If you have any questions concerning this matter, feel free to contact this office.

Sincerely,

ORIGINAL SIGNED BY
CARLOS MOSLEY

Kevin G. Stricklin
District Manager

Enclosure

GC:si

bcc:
Bridgeport Field Office (2)
W. Ponceroff
Nelson Blake (2)
~~Main~~ File

ANKER WEST VIRGINIA MINING CO., INC.
SAGO MINE
RT 9 BOX 507
BUCKHANNON, WV 26201



October 8, 2004

Mr. Kevin G. Stricklin, District Manager
Mine Safety Health Administration
604 Cheat Road
Morgantown, WV 26508

Dear Mr. Stricklin:

Anker West Virginia Mining Company, Inc., Sago Mine, MSHA I.D. 46-08791 would like to submit for your review and approval a test area on the 1st Right Northeast Panel. The test area will include the No. 1 and No. 2 Entries and Breakthroughs. The test area would extend 270', installing 4' fully grouted resin rods, and 270' of 5' fully grouted resin rods with 180' or more of 5' torque tensions rods between the test areas.

A test rod will be installed at 40' intervals with approximately 3" of the fully grouted resin rod exposed for grout test purposes. Hole depth will be drilled accordingly for the rods to be tested.

Please disregard the previous letter submitted October 1, 2004.

If you have any questions or concerns, please feel free to contact me at 304-473-1676.

Sincerely,

James A. Schoonover

James A. Schoonover
Safety Department

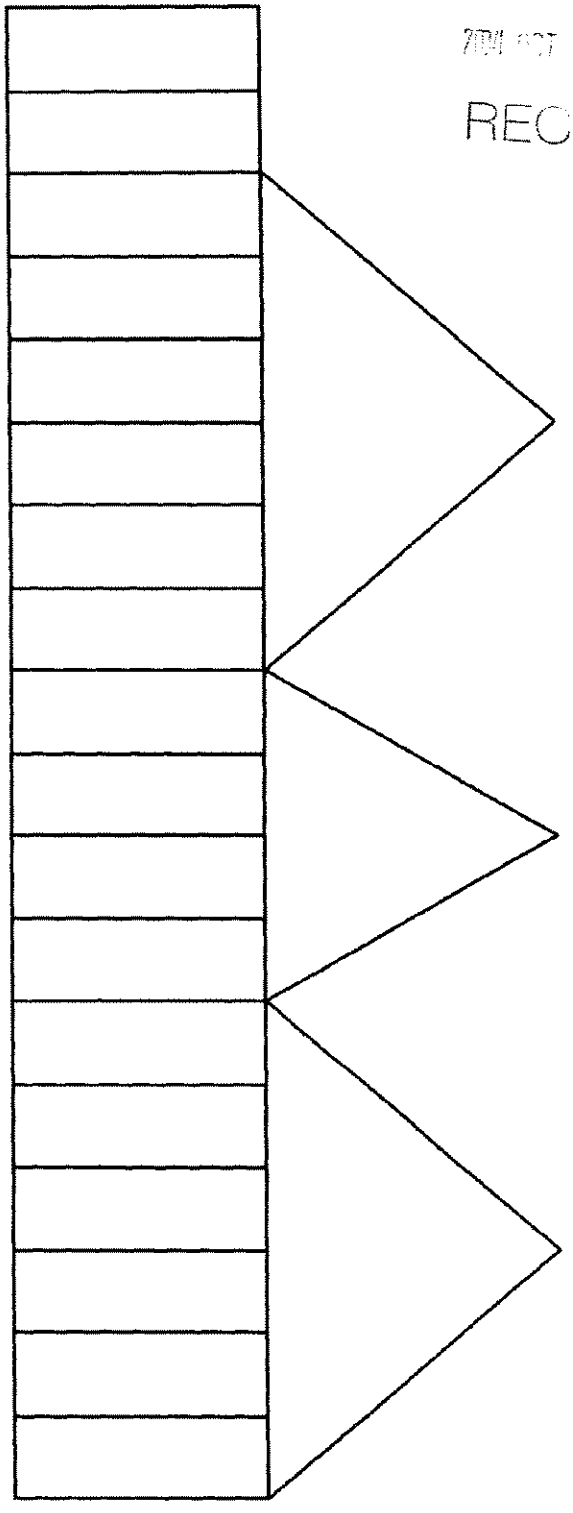
Enclosure (1)

#1 Entry #2 Entry

October 8, 2004



A1



270 ft
4 ft Fully Grouted Resin Rods
Including Breakthroughs

180 ft or more
5 ft Torque Tension Rods
Including Breakthroughs

270 ft
5 ft Fully Grouted Resin Rods
Including Breakthroughs

Not to scale

**U.S. Department of Labor**

Mine Safety and Health Administration
604 Cheat Road
Morgantown, West Virginia 26508

| | |
|---|---|
| | 10-4-4 |
| | aew |

SENT TO AND/OR DISCUSSED WITH FIELD OFFICE:

| SURNAME | DATE |
|---|---|
| | |

REVIEWED BY:

| | |
|---|---|
| Cole | 9.29.04 |
| BLAKE | 9.30.04 |
| Jones | 10-1-04 |
| | |
| | |

**OCT - 4 2004**

Mr. James L. Swartz
Superintendent
Anker West Virginia Mining Company, Inc.
22 Hampton Road
Buckhannon, West Virginia 26201

Dear Mr. Swartz:

A review has been conducted of the fully revised and consolidated roof-control plan submittal dated September 16, 2004, for the Sago Mine, I.D. No. 46-08791. The enclosed plan, as submitted, is approved, and supercedes any previous plans or revisions.

The roof support system(s) as shown on the plan drawings, and the descriptive procedures and safety precautions are the minimum roof-control measures for this mine. If the roof shows signs of weakness or failure, additional support shall be installed as required by 30 CFR 75.202(a).

If you have any questions, please feel free to contact this office.

Sincerely,

**ORIGINAL SIGNED BY CARLOS MOSLEY**

Kevin G. Stricklin
District Manager

Enclosure

GCole:aew

bcc:
Bridgeport F/O (2)
Nelson Blake (2)
Main File

ANKER WEST VIRGINIA MINING COMPANY INC.
Sago Mine
Rt. 9 Box 507
Buckhannon, WV 26201
Phone 304-473-1676



September 16, 2004

Mr. Kevin G. Stricklin, District Manager
Mine Safety Health Administration
604 Cheat Road
Morgantown, WV 26508

Dear Mr. Stricklin:

Anker West Virginia Mining Company, Inc. Sago Mine, MSHA I.D. 46-08791 is submitting for your review and approval a revised Roof Control Plan.

Should you have any questions concerning this matter please call me at 304-472-8602.

Sincerely,

James A. Schoonover
Safety Dept.

# ROOF CONTROL PLAN

**Anker West Virginia Mining Company, Inc.**
**Sago Mine**

Table of Contents



Directions: Take Rt. 33 to Buckhannon (Rt. 20 s), then take rt. 20 s approximately 5 miles to Sago Rd. (on left just past the State Police Station). Take Sago Rd. 2.7 miles to rt. 9 turn to bridge on left. After crossing the bridge the mine is on the right.

# ROOF CONTROL PLAN

TO BE POSTED ON MINE BULLETIN BOARD

**General Information**

| | |
|---|---|
| Company Name: | Anker West Virginia Mining Company, Inc. |
| Mine Name: | Sago Mine |
| Mine Address: | Rt. 9 Box 507 |
| Town, County, State | Buckhannon, Upshur, WV 29201 |
| Mine Telephone: | (304) 473-1676 |
| Maximum Cover: | 550 Ft. (Average 400 Ft.) |
| Mine ID No.: | State U-2016-98B MSHA 46-08791 |

Plan approved and submitted by:

Name: James Smith Date: 9-17-04
Superintendent

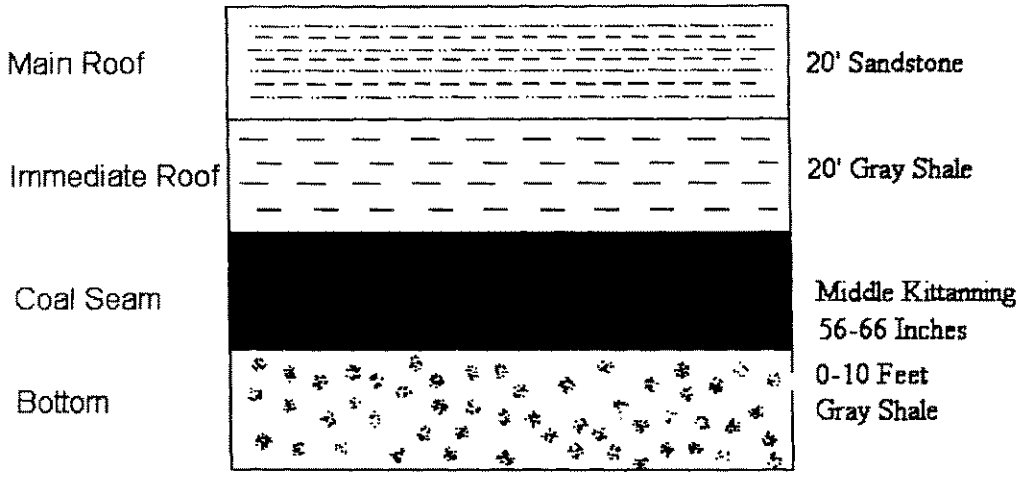
Approved By: [ 6 ] Date: 9-29-04
Roof Control Investigator

Approved By: [ 6 ] Date: 9-30-04
Roof Control Investigator

Approved By Carlos Mosley for K. Stricklin Date: 10/4/04

Title: District Manager

**General Lithology**




**Associated Face and Haulage Equipment**

1. Joy 14/15 E Continuous Miner
2. Joy 10SC Shuttle Cars
3. Fletcher RRII-15 Roof Bolter
4. S&S and Fairchild Scoops
5. Stamler Feeder/Breaker

**MAXIMUM WIDTH AND CENTERS**

**MAINS**

Entry Width: 20 Feet — Entry Centers: 48 – 110 Feet
Crosscut Width: 20 Feet — Crosscut Centers: 54 – 140 Feet

**SUB MAINS**

Entry Width: 20 Feet — Entry Centers: 48-110 Feet
Crosscut Width: 20 Feet — Crosscut Centers: 48-140 Feet

**ROOMS AND PANELS**

Entry Width: 20 Feet — Entry Centers: 48 – 110 Feet
Crosscut Width: 20 Feet — Crosscut Centers: 40 – 140 Feet

**Roof Support Materials**

**Fully Grouted Resin Tension Bolt - can be used as primary roof support throughout the entire mine, unless otherwise approved.**
Minimum Length: 60" Hole Size: 1" +/- .030
Diameter: *5/8" or 3/4" Torque Range: 175-250 ft. lbs.
Grade: *60-40
Type of anchorage Unit: 2' Fast Resin, 3' Slow Resin
Bearing Plate Size(rooms and panels): 6"x6"
Bearing Plate Size(mains and sub mains): 8"x8"

---

**Resin Grouted Bolt**
Minimum Length: 48" Hole Size: 1"+/- .030
Diameter: *5/8" or 3/4" Torque Range: Minimum 150 ft. lbs.
Type of anchorage Unit: Fully grouted resin Grade: *60-40
Bearing Plate Size(rooms and panels): 6"x6"
Bearing Plate Size(mains and sub mains): 8"x8"

---

***The following bolts are used as Supplemental support only:***

**Resin Cable Bolt**

| | | | |
|---|---|---|---|
| Minimum Length: | 10 Ft. | Hole Size: | 1" |
| Diameter: | 0.600" | Torque Range: | Not Tensioned |
| Grade: | 270K | | |

Type of anchorage Unit: 4' resin, Meets ASTM F432-83
Type of bolt: 3BX-C636 73.168 with 3 inch ST 3 bird cage compactor and spherical washer.

MATERIALS USED IN CONJUCTION WITH ROOF BOLTS AND BEARING PLATES: CAP BLOCK, PLANKS, CROSSBARS, STEEL MATS, STRAPS, WIRE SCREEN, 17" X 17" SQUARE OR 19" ROUND SPIDER PLATES.
Note: 6" x 6" bearing plates may be used in conjunction with these materials.

ARCHED I-BEAM AND TUNNEL LINER:

MIN. LENGTH: 48 INCHES
MAX WIDTH: 16 FEET
LAGGING: 4" X 6" X 47 ½" TREATED

MIN. HEIGHT: 48 INCHES
I-BEAM: W-6 X 20 LB.

When used as primary roof support, tunnel liner will be installed as follows:
1. Tunnel Liner will be built under permanent roof support and slid into place.
2. The top of the tunnel liner will be covered with a layer of cushioning material upon completion.
3. Repeat steps 1 and 2.

# GENERAL SAFETY PRECAUTIONS

1. All personnel required to install roof supports shall be trained by a qualified person designated by mine management before being made solely responsible for such work. This training shall insure that such persons are familiar with the functions of the roof supports being used, proper installation procedures, and the approved roof control plan.

2. All unstable materials shall be removed from the highwall above intended mine openings and areas between openings where miners travel or are required to perform work. A substantially constructed canopy shall be provided at all intended drift or slope openings prior to penetrating the coal seam from the surface and when mining from a place underground to a surface location, the canopy shall be provided prior to working or traveling through such openings. The canopy shall extend from the highwall for a distance which will provide adequate protection from falling highwall material. The top of the canopy, if constructed of wood shall be covered with sufficient material to cushion and/or prevent sudden collapse or dislodgment of the canopy in the event of highwall sloughing.

3. Initial development into a coalbed through a highwall, slope or outcrop shall be supported by crossbars on not more than four (4) foot centers, set on legs (posts), or pin rails installed in the rib and supported by 1 7/8" inch pin rails driven 3 feet into the coal pillars. These pins are on 4 foot centers and may be used in place of posts under the crossbars until an examination of the conditions is made by the WV Office of Miners' Health, Safety and Training and MSHA. In addition, roof bolts shall be installed through and near the end of each crossbar. This provision shall also apply when mining from a place underground to a surface location. Initial development from the highwall shall be limited to a entry and a crosscut width of 16 feet.

4. The WV Office on Miners' Health, Safety and Training and the MSHA District Office shall be notified in writing when mining approaches within one hundred fifty (150) feet of the outcrop or highwall. The notice shall include the precautions management intends to use to protect people and control the mine roof.

5. All unplanned roof falls at or above the anchorage zone in active workings shall be reported immediately to the WV Office of Miners' Safety and Training and the MSHA District Office.

6. A supply of supplementary roof support materials and the tools and equipment necessary to install the materials shall be available at a readily accessible location within four crosscuts of each working section. The supplementary roof support materials shall consist of at least twenty (20) roof bolts, at least one (1) foot longer than the roof bolts normally used and at least twenty (20) post of proper length with sufficient cap pieces and wedges to install the posts.

7. Two reflective indicators, or a readily visible warning device or a physical barrier shall be installed at the last row of permanent roof support where mining is in progress, completed or discontinued and the distance from the last row of permanent roof supports to the face exceeds five (5) feet. This includes both sides of crosscuts when crosscut connections are completed and not supported.

8. The roof in the face of entry, room, or crosscut shall be supported to the plan before a side cut is started. Where a place is driven beyond proposed intersection corners it shall be permanently supported to the plan for at least two rows of supports inby the intersection corner before a side cut is started or an approaching place cuts through. A side cut shall be permanently supported (roof bolted) to the plan before an opposite side cut is started. Openings that create an intersection shall be permanently supported (roof bolts) before any work or travel in the intersection except for necessary safety examinations.

9. All overhead protection supported by legs on a track, supply or mantrip haulage roads shall be installed in a manner that will prevent such installation from falling in the event the legs are accidentally dislodged.

10. Drill steel shall be equivalent in length to the rods used or adequately marked to assure the proper hole depth, and each drill hole shall be filled with the quantity of resin recommended by the manufacturer.

11. All resin grouted rods shall be used with bearing plates approved for use at the mine. Bearing plates shall be installed tight against the roof or material used in conjunction with roof bolts. A wedge may be used at intermittent locations to assure the bearing plate is tight against the roof.

12. Resin grouted rods and conventional roof bolts shall not be intermixed unless they are either used as supplementary supports or a plan has been approved for combining the two roof support systems.

13. Resin packages shall be protected from excessive heat and cold during storage and shall not be used in areas where the ambient temperature falls outside the range recommended by the manufacturer. The resin shall not be used if the manufacturer's recommended shelf life is exceeded. Resin grouted rods shall be installed in accordance with the manufacturer's recommendations. Resin grout from different manufacturers shall not be intermixed during installation.

14. To assure that bolts are anchored a minimum of twelve (12) inches from partings of coal, mud seams, or other irregularities, a test hole one (1) foot longer than the roof bolts being installed on pattern is to be drilled at least every twenty (20) feet. Test holes may be left open or closed with the appropriate length bolt. Test holes shall be identified by suitable markings.

15. An approved A.T.R.S. system shall be maintained and used during bolting operations. When the A.T.R.S. is inoperative repairs shall be made before bolting operations resume. When the A.T.R.S. will not provide adequate support due to excessive height, a minimum of four (4) temporary supports shall be installed across the place and advanced as each row of bolts are installed. Where these conditions are prevalent the A.T.R.S. system shall be modified to accommodate such conditions.

16. Temporary supports shall be used in conjunction with the A.T.R.S. system where the distance from the coal rib or other permanent support is greater that five (5) feet from the A.T.R.S. support devices.

17. The maximum distance from the last row of permanent roof support to the A.T.R.S. system shall not exceed 5.5 feet.

18. Where falls occur and roof is to be supported by roof bolting, wire screen will be bolted to the entire cavity in the mobile haulage entry, track, belt, supply, and active shuttle car entries. The use of wire screen is not necessary if the cavity is canopied or coated with a layer of fiber-reinforced sealant. The following standards apply:

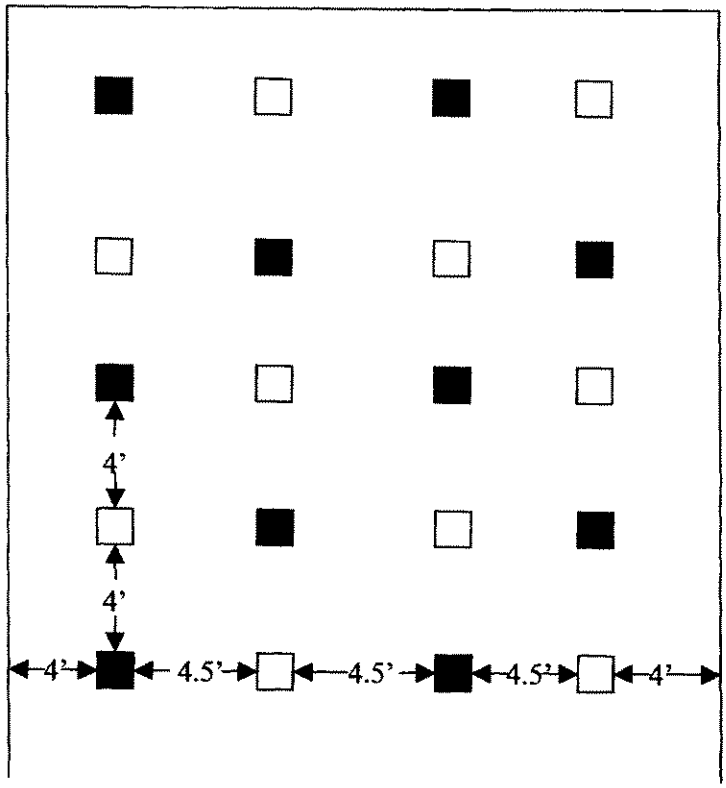
    - Depth of cavity must be at least 6 feet above the coal seam in the area before screen or other suitable device must be used.
    - Screen opening should not be greater than 6 inches by 6 inches.
    - Where possible, screens should be installed with the initial roof support of the cavity.
    - These areas may be supported with 4 foot fully grouted resin bolts.

20. Two rows of bolts shall be installed at the brow created when cutting an overcast. The bolts shall be one foot longer than the cavity created for the overcast.

21. When steel arch/tunnel liners are used in lieu of roof support they will be designed for each individual area. They will be assembled under supported roof and pushed into the cavity while exposing no persons to unsupported roof during the insertion process.

22. When surface cracks (two or more) are encountered running parallel with the working place, the roof bolts shall be supplemented with crossbars installed on 4' spacing with a leg under each end maintaining a 16' wide roadway throughout the affected area. When surface cracks are within 3' of one another or when the cracks run across the place metal straps on 4' spacing may be used with roof bolts in place of crossbars and legs.

## STAGGERED PATTERN INSTALLATION SEQUENCE



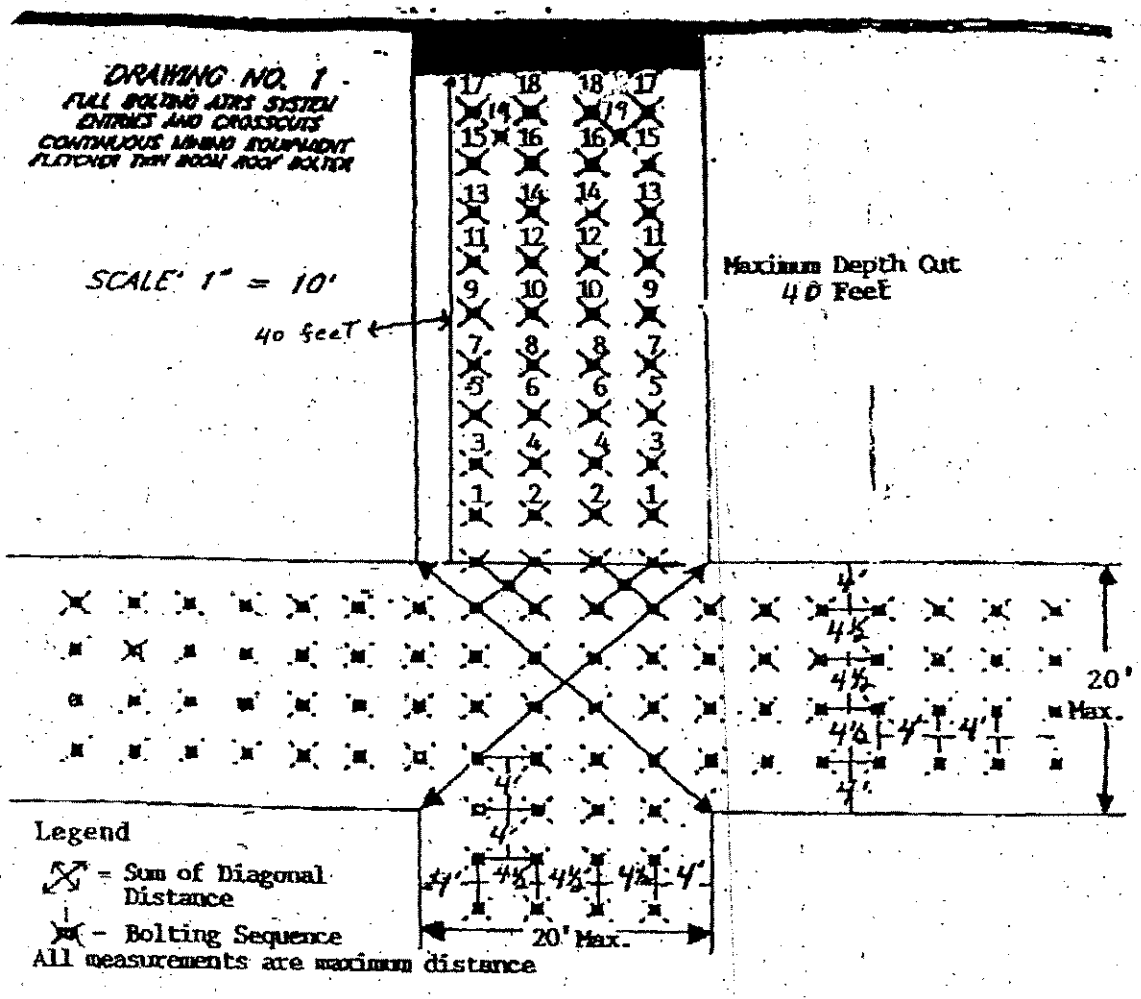

6 foot resin

4 foot resin

Sketch: Not to scale

SPRUCE NO.2

ROOF BOLT INSTALLATION SEQUENCE




GRNERAL NOTES

1. Permanent supports shall be installed as shown. However, the sequence may be altered if conditions warrant for the safety of the workmen. Bolt installations shall be started from the rib side, except when installing metal straps, wire screen or crossbars.
2. Workmen shall not advance beyond permanent supports except to install temporary supports.
3. Where corners are removed to facilitate haulage, bolts shall be installed on the required spacing as shown.
4. Where the sum of the diagonal distance in a 90-degree 4-way intersection exceeds 60 feet, posts or cribs shall be installed to reduce the span. This does not apply where intersection openings are offset.
5. Where clay veins or adverse roof are present, additional supports shall be installed by one or more of the following methods: Reduce lengthwise roof bolt spacing to 3-1/2 feet maximum, install oversize bearing plates, posts, or crossbars.
6. Roof bolts shall not exceed 4 feet from the coal rib.
7. Where wire screen is installed the distance between rows of roof bolts shall not exceed 54 inches.

## SAFETY PRECAUTIONS - REMOTE CONTROL MINING

1. For maximum visibility and safety, while tramming the continuous miner, i.e. (repositioning in a cut, moving from place to place, or a new location, etc.), the miner operator and other persons shall not stand or walk beside the machine. These persons shall position themselves a sufficient distance away from the cutter drum and boom of the continuous miner, so they will not be endangered by sudden movement of the machine.

2. If the continuous miner is equipped with a remote control unit and being operated in the remote mode, the unit shall not be set on the machine. Reflective material shall be worn by the continuous miner operator and helper as an outer garment that will be visible from the front, back and sides.

3. The miner operator or other persons shall not advance beyond the second outby row of roof bolts while the continuous miner is being operated during extended cut mining practices, provided however, that the inby edge of the canopy of manned face haulage equipment may be advanced to the last row of permanent supports.

4. Two readily visible warning indicators shall be posted (one on each side) at the last row of roof bolts where mining is in progress, completed or discontinued and the distance from the last row of roof bolts to the face exceeds 5 feet. This included both sides of crosscuts when crosscut connections are completed.

5. In addition to the two reflective indicators, an additional reflective indicator shall be posted on the next to last row of roof bolts to aid the continuous miner operator, haulage equipment operator and other persons in determining their position for maximum safety.

6. The maximum depth of the extended cut shall not exceed 40 ft.

7. The maximum depth of the extended cut shall be measured from the last full row of undisturbed roof bolts to the deepest point of penetration at the working face.

8. The first cut extracted from a turned right-hand crosscut shall not exceed 20 feet in depth.

9. To protect the miner operator and other persons against roof falls riding back through the roof bolts when extended cut mining is being performed during advance mining, additional support shall be installed by one of the following methods:

    a. Six roof bolts shall be installed in the last row of roof bolts.
    b. An additional roof bolt shall be installed on each side in between the last two rows of bolts.
    c. Metal straps 13' x 5" shall be installed on the last two rows of roof bolts.
    d. Install 8 gage wire screen mats measuring at least 5' x 13' with screen openings not greater than 4" x 4" within the last two rows of roof bolts.

The roof bolts installed as the required additional support shall be permanently marked for identification. The identification is to distinguish the additional roof bolts from the other roof bolts installed in pattern.

10. Where loose, broken or drummy roof is encountered in places being mined, the depth of the cuts shall be reduced to a depth sufficient to effectively control the mine roof.

11. Before an entry or crosscut is holed through, examinations shall be made to assure that the adjacent entry or crosscut is clear of persons or equipment.

12. Only one remote control system using the same frequency shall be used on the same section at one time.

13. When remote control units are being transported or stored in the mine, they shall be secured or locked out to prevent accidental activation.

14. No more than two open unsupported adjacent crosscuts in direct line with one another shall be permitted. No more than three (3) extended cuts are to be unbolted at any time. Additionally, extended cuts are not to be left unbolted when the mine is idle for more than 24 hours.

15. The face of an entry shall not be advanced more than 50 feet inby the proposed inby corner of the crosscut rib line before the crosscut is completed.

16. Upon completing crosscuts, the continuous miner may be used to push coal into the adjacent entry.

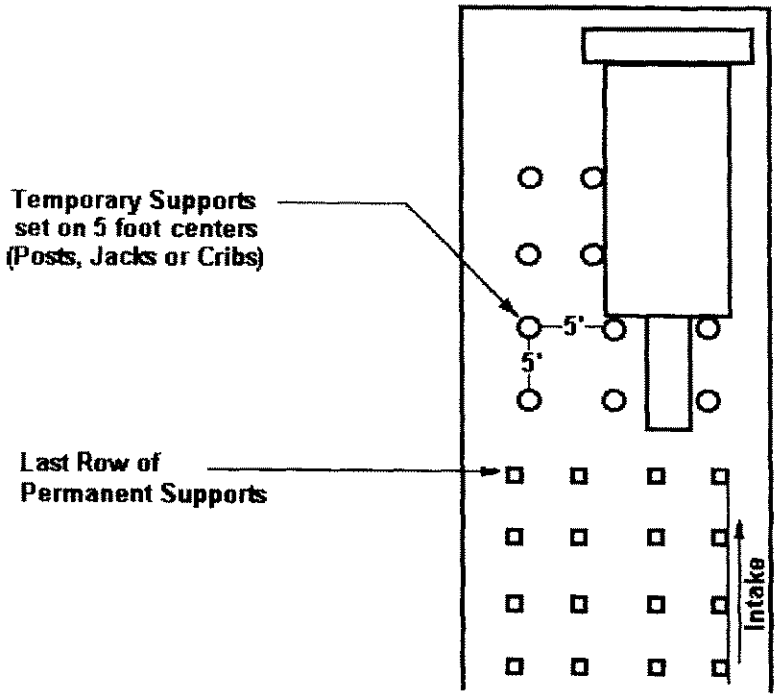
17. In the event of a continuous miner malfunction or breakdown that requires persons to go inby existing roof support to correct the malfunction, the unsupported area, where practical, shall be supported to plan. Temporary roof supports shall be installed on 5-foot centers to support the remainder of the area. Temporary supports shall be installed a minimum of one row inby the area where the work will be performed. Supports installed on mining equipment shall not be set metal on metal. The installation of temporary supports shall be under the direct supervision of a certified foreman. After the temporary supports have been set, only those persons necessary to make the repairs will be permitted inby permanent supports. (See attached Sketch No. 1, Page 9A)

18. The remote control unit shall be equipped with a devise that can de-energize the miner in the event of an emergency.

19. The manual tram controls provided on the fully remote control miner shall be used only in the event of an emergency or testing. Extreme caution shall be used during the testing of the manual tram controls or repositioning the miner using the manual tram controls.

Sketch No. 1

## PLAN FOR TEMPORARY SUPPORT
## DUE TO MECHANICAL BREAKDOWN




Scale: N.T.S.

## MAINS AND SUBMAINS DEVELOPMENT

The following procedure shall be adhered to when developing mains and sub-mains in addition to the normal bolting pattern.

1. The track and belt conveyor entry shall have wire screen bolted to the mine roof with a screen opening of not greater than 4"x 4".

2. The primary escapeway and one return aircourse entry shall contain one of the following roof support measures and maintained even with the section tailpiece.

    a. A roof sealant will be applied to seal the mine roof.
    b. A 17"x 17" plate (roof cap) or greater shall be installed with each roof bolt.
    c. Wire screen will be bolted to the mine roof with screen opening of not greater than 4" x 4".
    d. Two (2) rows of post or their equivalent will be installed to create a 6' wide walkway on not more than 5'advancing centers.

    Note: The wire screen to be installed shall measure at least 5' x 13' and will be at least 8 gauge.

3. The primary roof support installed shall consist of 5' fully grouted tension roof bolts or 4' and 6' fully grouted resin roof bolts installed in a staggered pattern shown on page 7a or 4' fully grouted resin roof bolts when in sandstone as described below *. These three roof support systems shall not be intermixed unless they are used as supplementary support.
   *Resin grouted roof bolts shorter than the approved minimum length but not less than 48 inches may be used in solid sandstone. The solid sandstone must be at the top of the hole being drilled for a distance of at least 12 inches. The certified section foreman shall be notified and give authorization prior to installing shorter than the approved minimum length roof bolt. The authorization shall be recorded in the Pre-shift/On-shift record book.

4. The immediate roof shall be removed to help prevent sloughing in the seven (7) center entries, unless sandstone is present in the immediate roof.

**Anker West Virginia Mining Company, Inc.**
**Sago Mine** **Page 11**

**Trubie Run Roof Support**

As mining proceeds to the area of the 160' overburden or less in the area of Trubie Run Crossing, the following shall apply : Maximum Entry Width 18' Maximum Crosscut Width 18'

All Entries and Crosscuts shall have the following installed as a minimum roof support:

5' Torque Tension Bolts with wire screen installed on cycle.
50 Ton truss Bolts on 4' Center's
Trusses will be installed after primary support and prior to next cut in that Crosscut or Entry.
Drill Holes for Truss Bolts shall not exceed 2 ' from rib or Carrier Trusses.
2 Carrier Trusses, spaced 18" to 24" apart, shall be installed parallel to the Entry in each Intersection.

Specifications for Truss Bolts are as follows:

**DSI 100 kip x #8truss – no shoes DSI bar truss**
2 x B08U28810 #8 cast anchor nuts
1 x B08K1 cut ( 100 kip bar ) x 12 ft x #8 DSI threadbar tierod
2 x B08K1 cut ( 100 kip bar ) x 8 ft angle bolts
1 x B08K31110 cast threadbar coupler
1 x B08K32010 - #8 Truss coupler

**DSI 100 kip truss with shoes**
4 x B08U28810 #8 cast anchor nuts
2 x B08K1 cut( 100 kip bar )x 8 ft angle bolts
2 x B08K1 cut ( 100 kip bar ) x 9 ft horizontal tie rods
2 x B08K32510 cast truss shoes
1 x B09K32010 - #9 Truss coupler

For both systems : Angle bolt – Depth of hole shall be 7'. Bolt shall be inserted into the back of the hole. Diameter – 1" bolt - # 8 threaded bar – Grade 75 – Torque Range 150 – 300 pounds. Anchorage unit – 4' Resin.

In the event that the minimum support does not adequately control the Roof, the Roof shall be glued prior to mining. Following are the safety precautions and procedures for this process. The materials for this process shall be readily available on the Mine Property.

**Safety Precautions - Polyurethane Binder Systems (Roof Glue)**

1. When installing glue in an open entry or crosscut, a single row of temporary supports will be set on not more than five foot centers for a minimum of twenty feet on each side of the hole being glued, to within five feet of the rib.

2. When an entry with a belt in it is being glued, temporary supports will be set on not more that five foot centers in two rows on both sides of the belt and for a minimum of twenty feet on each side of the hole being glued or to within five feet of the rib.

3. Once the glue has been allowed to cure for two hours, (minimum) the temporary supports may be removed remotely.

4. When installing glue in an open entry or crosscut, two convergence gauges will be installed approximately five feet inby and outby the hole being glued. Maximum allowable convergence of 0.3 or 0.5 inches is acceptable while pumping.

5. Those persons handling roof resin components will follow all manufacturer's precautions and will comply with the following:
   (a). Skin surfaces will be covered as much as practical to prevent contact with the glue.
   (b). All persons within 25 feet of the pressurized injection must wear eye protection.
   (c). A first aid kit containing at least eye wash, clean dry rags, and potable water will be kept in the immediate vicinity of the glue installation operations.
   (d). All persons required to install glue shall be trained by a qualified person designated by mine management on the handling and installing of the glue.

6. (a) All miners who will be affected will be notified of the storage, use, or transport of polyurethane materials into the mine prior to the components or application equipment being moved into the mine.
   (b.) All persons engaged in, assisting in, or supervising the application of the polyurethane material will wear personal protective clothing consisting of chemical goggles or face shields, protective gloves and body coverings. Protective gloves will be of a material providing protection from the polyurethane components. Body coverings will include long-sleeve shirts and full length pants. Contaminated protective clothing will be laundered before reuse or replaced. Protective clothing will be replaced if damaged or torn.
   (c) All persons working on the gluing will have direct communications with others working on the gluing. Communications may be accomplished by cap lamps, if in a close area, or by mine phone if communication by light is not possible.

7. Storage:

1. a. Polyurethane chemical components will be stored in tightly closed containers, as supplied by the manufacturer, and handled in accordance with the manufacturer's specifications.

**Safety Precautions - Polyurethane Binder Systems (Roof Glue) Continued**

b. The maximum quantity at an application site will be limited to an amount sufficient for use in a 24 hour period. Unused polyurethane material will be promptly returned to a surface storage area, normally within 24 hours of the end of the application.
c. A minimum of 2 portable fire extinguishers and 240 pounds of rock dust will be provided at the work site.

2. Open flames and high heat sources will be kept at least 50 feet from the area where

polyurethane materials are being applied.

**Page 13**

8. Spills:

a. If a spill occurs on the surface, it will be cleaned up immediately, The spilled material will be covered with rock dust, coal fines, sawdust, vermiculite or other absorbent material. The absorbed material will then be shoveled into an open container and a neutralizing solution, such as water with 2-5 percent ammonia added to equal or greater volume that the spilled material. The container will be left standing open for 24 hours to 48 hours and then disposed of in accordance with applicable laws.

b. If a spill occurs underground and is inaccessible to miners within 24 hours after the time of the spill, the material does not have to be removed, provided that the spilled material is covered with rockdust.

9. Disposal:

a. Empty polyurethane materials containers will be removed from the underground portion of the mine and will be disposed of in accordance with the manufacture's recommendations and local requirements. As a minimum, empty containers will be filled with water and allowed to stand open for 24 to 48 hours prior to their disposal.

10. Training:

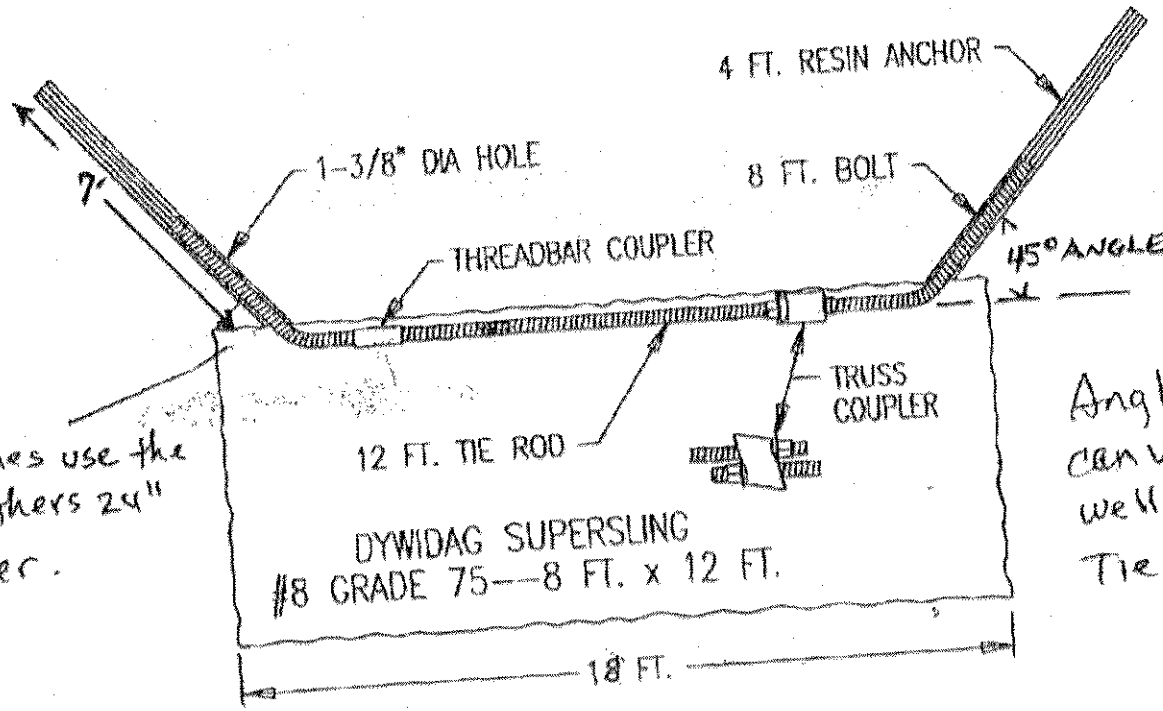
a. All persons working directly in the application of polyurethane materials, transporting or handling Polyurethane containers, application equipment or performing other work in the area where the materials will be used, will be trained in the approved plan requirements, hazards, safety precautions and manufacturer's data which will include all data included in the MSDS for all the components being used.

11. Ventilation:

a. All work with components (transfer and injection application sites) will be conducted in areas with adequate ventilation.

Conditions and support requirements will be re-evaluated as necessary. Tunnel Liner's will be installed and maintained up to the belt tail piece as the area advances under Trubie Run Crossing.

Once the Section has advanced beyond Trubie Run Crossing , but not to the next 160' overburden area, and Roof conditions have improved, the area will be re – evaluated by MSHA and WV – OMHST to determine if these precautions are still necessary.




Some mines use the corner; others 24" off corner.

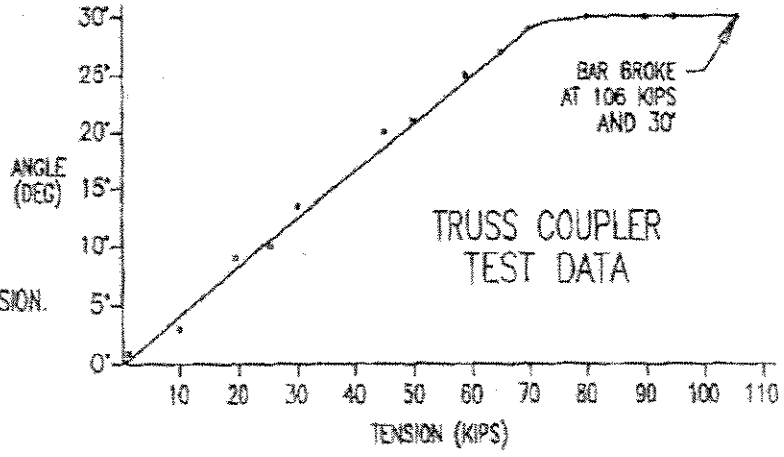
Angle rods can vary as well as the Tie Rod

01/17/95 CH-1138

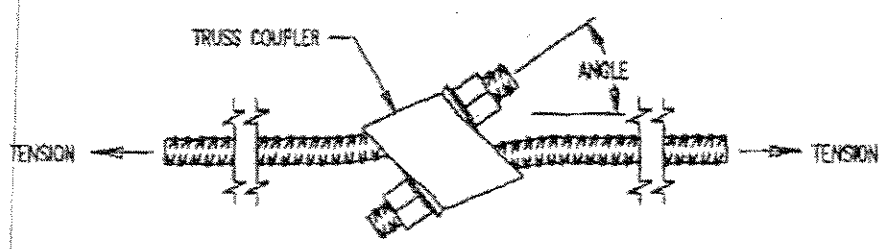
# DYWIDAG
# #8/GR 75 TENSIONABLE SLING

INSTALLATION STEPS

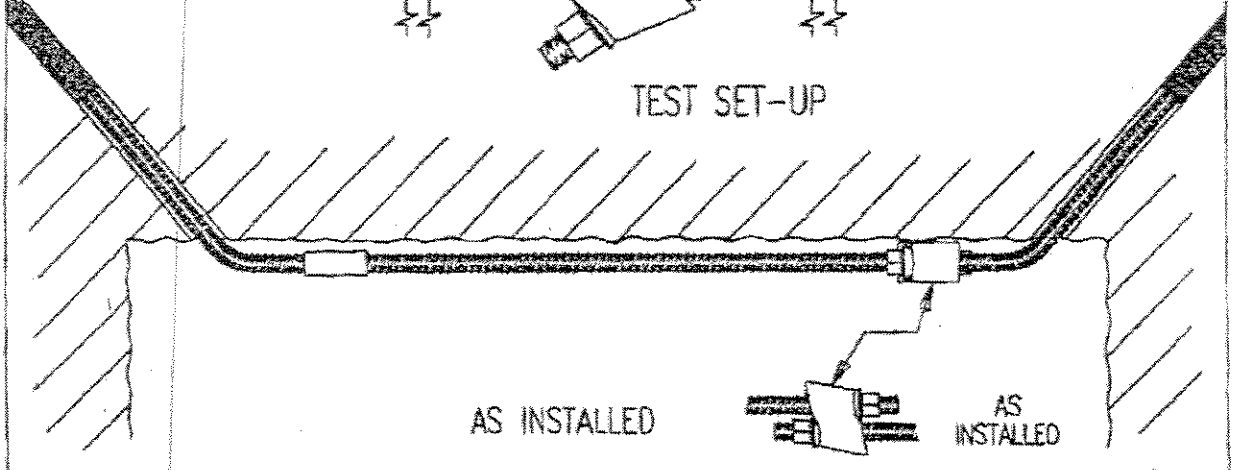
1. DRILL HOLES.
2. INSTALL RESIN CARTRIDGES.
3. SPIN BARS INTO RESIN.
4. BEND BARS.
5. INSTALL COUPLER & BAR EXTENSION.
6. INSTALL TRUSS COUPLER AND TIGHTEN NUTS.

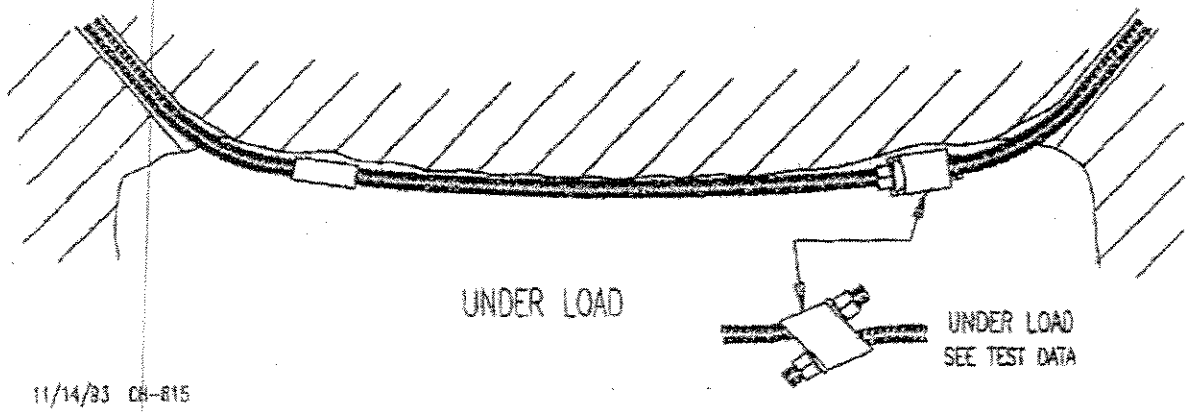



TRUSS COUPLER TEST DATA



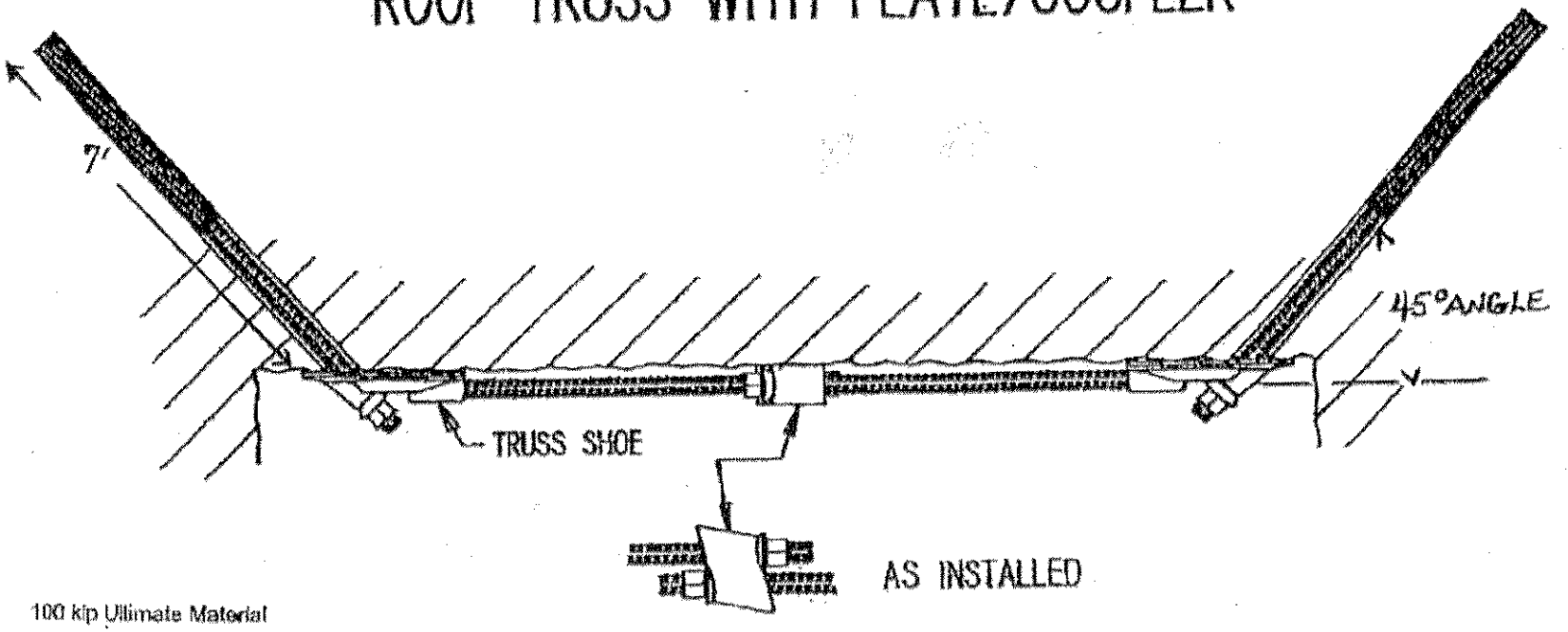

TEST SET-UP




11/14/83 CB-815

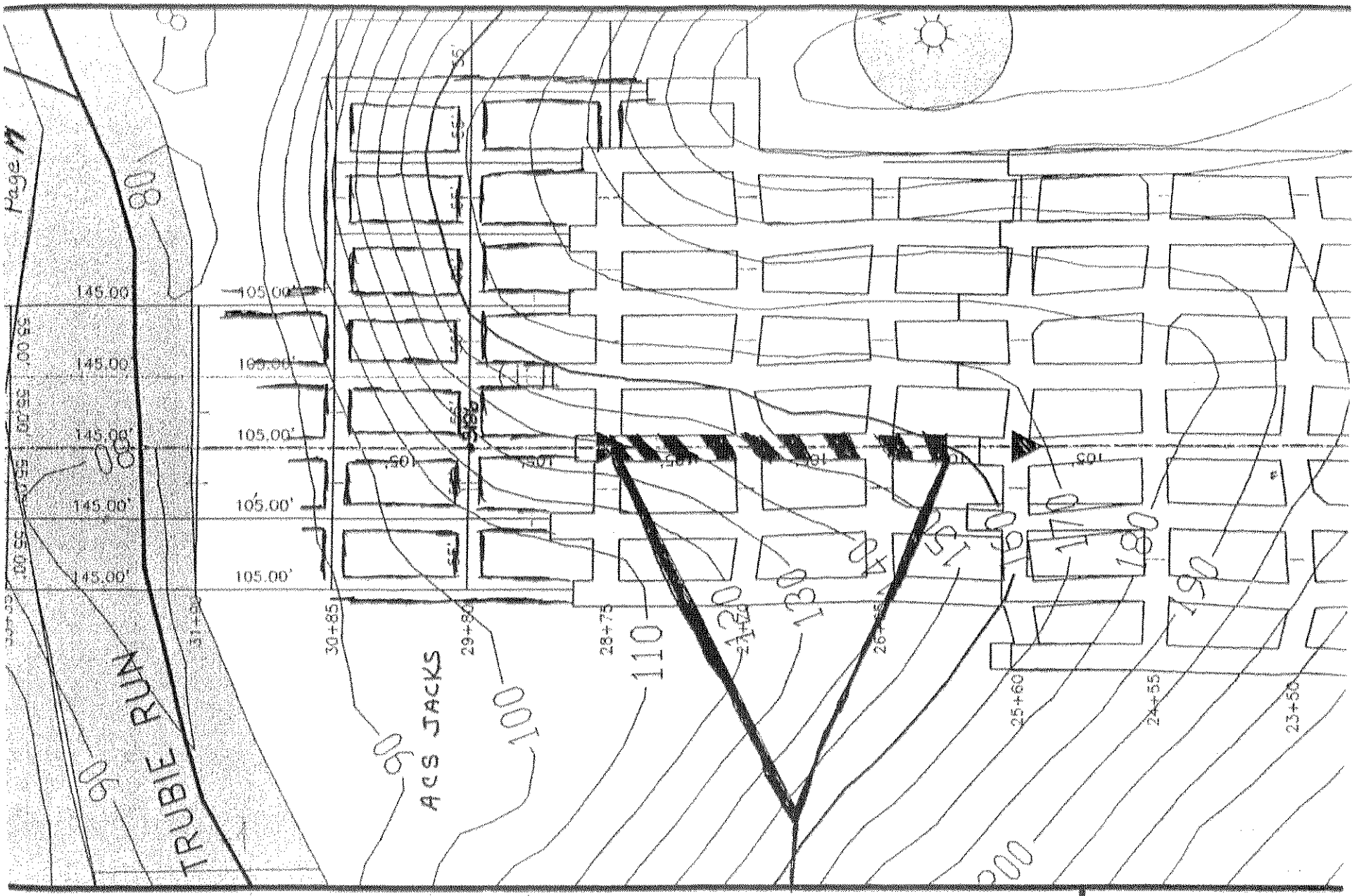
# DYWIDAG
# ROOF TRUSS WITH PLATE/COUPLER




100 kip Ultimate Material

| Quantity | P / N | Item description |
|---|---|---|
| 1 | B08K31110 | Cast coupler |
| 2 | B08U28810 | Cast anchor nut |
| 2 | B08K Cut | #8 x 8 ft tie rods |
| 2 | B08K32510 | Cast truss shoe |

11/15/94 CH-774A




50-ton Heinzman roof jack location: both sides of belt - 5-foot centers starting at 160-foot coverline to block outby spad #3186

1":100'

| SAGO MINE | Cover in Vicinity of Trubie Run | 8-16-04 |
|---|---|---|

Roof Control Plan Amendment: page 2a.

MSHA ID#46-08791

1. The Second Left section MMU # 003 immediate mine roof will be screened using wire mesh so as to reduce exposure of falling material to personnel.

2. The entry width will be reduced to 18 feet.

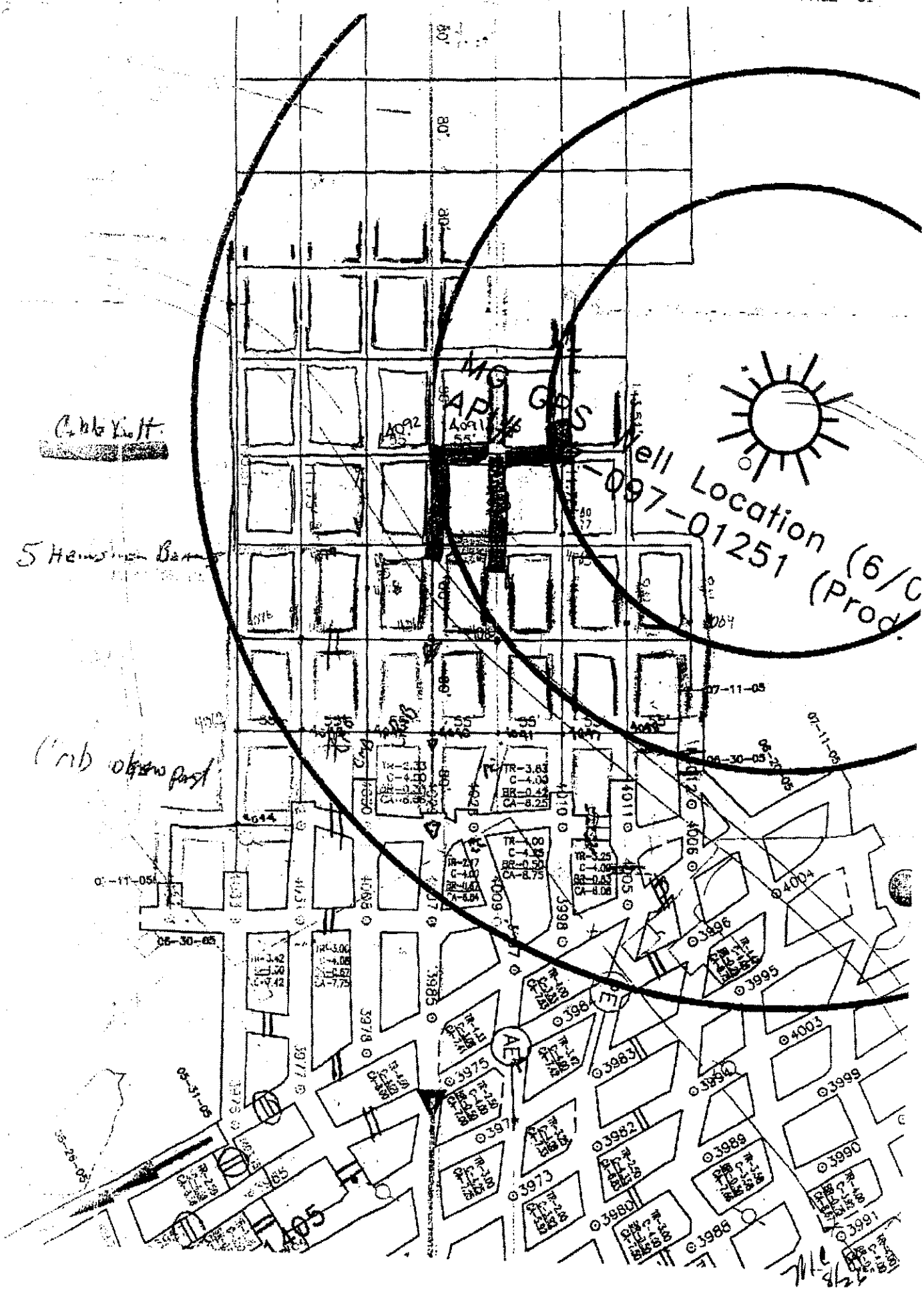
3. Screening will commence inby spad 4101.

4. Screen installation will be conducted during the mining cycle.

5. The above stated amendments will be in effect until roof conditions warrant a subsequent & prompt site specific review conducted by M.S.H.A. representatives as requested by the operator.

6. Additional bearing supports will be affixed to the rib bolt in each row. These supports will consist of wood boards, and or metal "Brow Tender" type supports or equalivant.

ml 8/24


API GAS Well Location (6/C
-097-01251 (Prod.
07-11-05
06-30-05
08-31-05
08-29-05
405
4092
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4010
4011
4009
4008
4007
4006
4005
4004
4003
3998
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3994
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3985
3978
3977
3975
3983
3982
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3990
3973
3980
3986
3991
TR-3.63
C-4.03
BR-0.45
CA-8.25
TR-3.42
C-4.08
BR-0.67
CA-7.75
TR-3.00
C-4.05
BR-0.55
CA-8.75

Roof Control Plan Amendment: page 2a1.

MSHA ID#46-08791

1. The Second Left section MMU # 003 immediate mine roof will be screened using wire mesh so as to reduce exposure of falling material to personnel.

2. The entry width will be reduced to 18 feet.

3. Screening will commence inby spad 4101.

4. These stated amendments will be in effect until roof conditions warrant a subsequent & prompt site specific review conducted by M.S.H.A. & W.V. O.M.H.S. & T. representatives as requested by the operator.

5. The mine intersections inby spad # 4124 will have 8 -10 ft' cable bolts installed in each four way intersections to augment the current bolt pattern .This is a supplemental support while in transition zone.

5a. three way intersections will have 6 - 10 ft. cable bolts installed to augment the current bolting program.

5b. 10 ft. cable bolts will be installed in the headings on 8ft. centers with two per row.

5c. In the event solid sandstone is encountered during the mining cycle as described on page 10 paragraph three of the approved roof control plan, cable bolts will not be required as long as the certified section foreman is notified & gives authorization and such will be recorded in the pre-shift on-shift record book.

6. The above stated stipulations will be in effect while the current roof conditions exist.

7. Additional bearing supports will be affixed to the rib bolt in each row. These supports will consist of wood boards, and or metal "Brow Tender" type supports or equalivent.

mle 9/09

AUG 2 9 2005