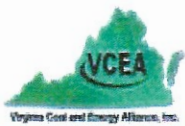


# 2019 Energy Expo Pre-Shift Contest

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**Ridgeview School**  
**Clintwood, Virginia 24228**  
**October 3, 2019**



# Energy Expo Preshift Contest

## Thursday October 3, 2019

Chief Judge

Appeals

Score Card Examiners

Score Card Review

Written Exam/Guards

Transportation Coords

Field Setup

Judges

X	X
X	X
X	X
X	X
X	
X	

**2019  
Energy Expo  
Preshift Contest**

**Contestant Statement**

The Run Lotsa Coal # 1 Mine produces coal with a continuous miner, shuttle cars, a dual head roof-bolting machine, and battery powered scoops. The mine operates two shifts per day, five days per week on the MMU 001-0. This mine has a history of poor roof and rib conditions along with accumulations of water, methane and low oxygen. Travel time from the surface to the section is approximately 45 minutes.

You are to conduct a preshift examination of the 001-0 section for the upcoming shift.

The MMU 001-0 section consists of three entries.

The No. 1 Entry is the left return.

The No. 2 Entry is the intake/belt.

The No. 3 Entry is the right return.

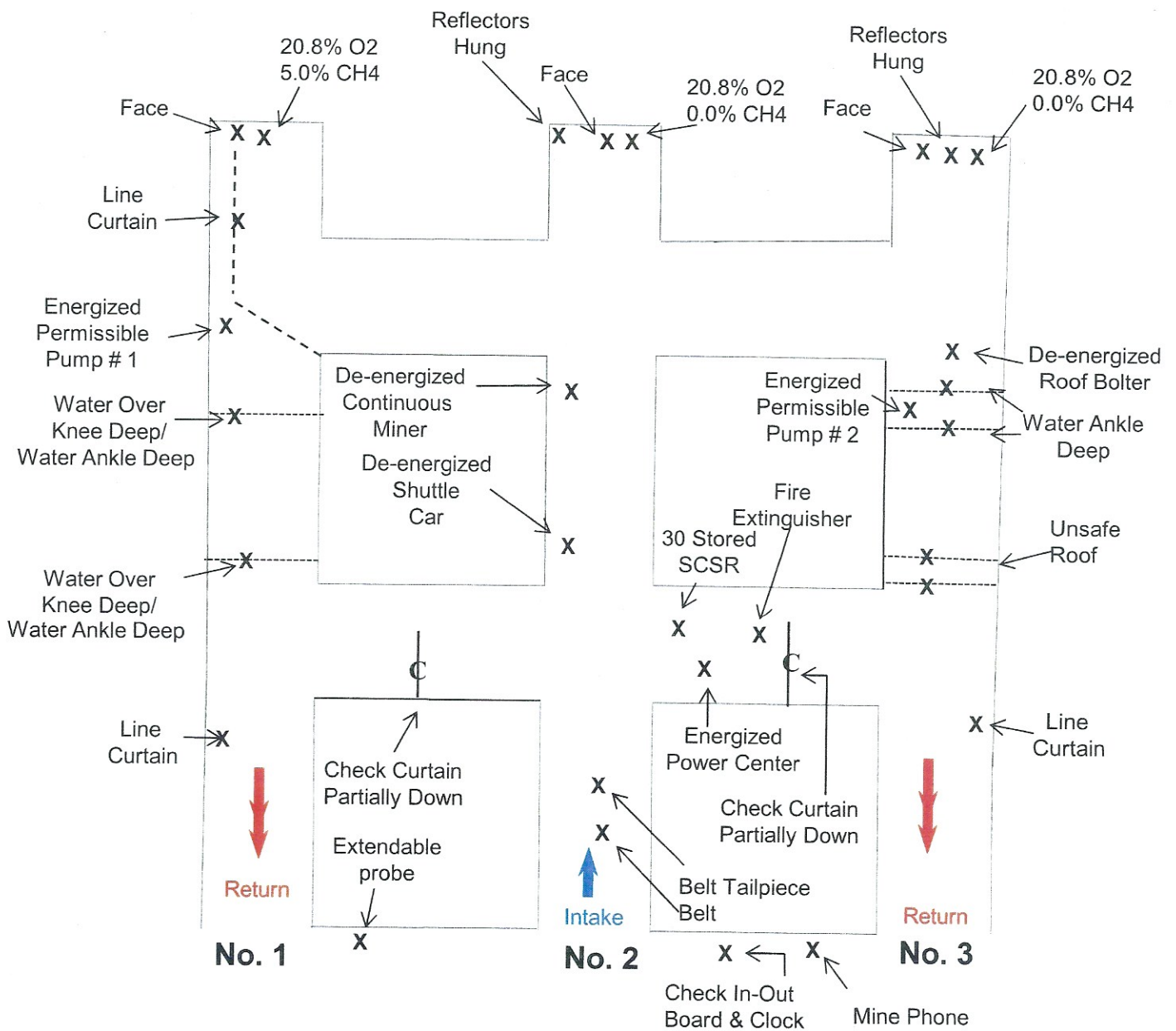
The mining height averages 7 feet. The main fan is blowing and operational. Underground power is energized, and once turned off, the power cannot be turned back on.

A copy of the approved roof control plan, the approved ventilation plan, and a blank mine map are all attached to this statement. If means are available, the section is to be left in compliance with the approved plans and all hazardous conditions corrected.

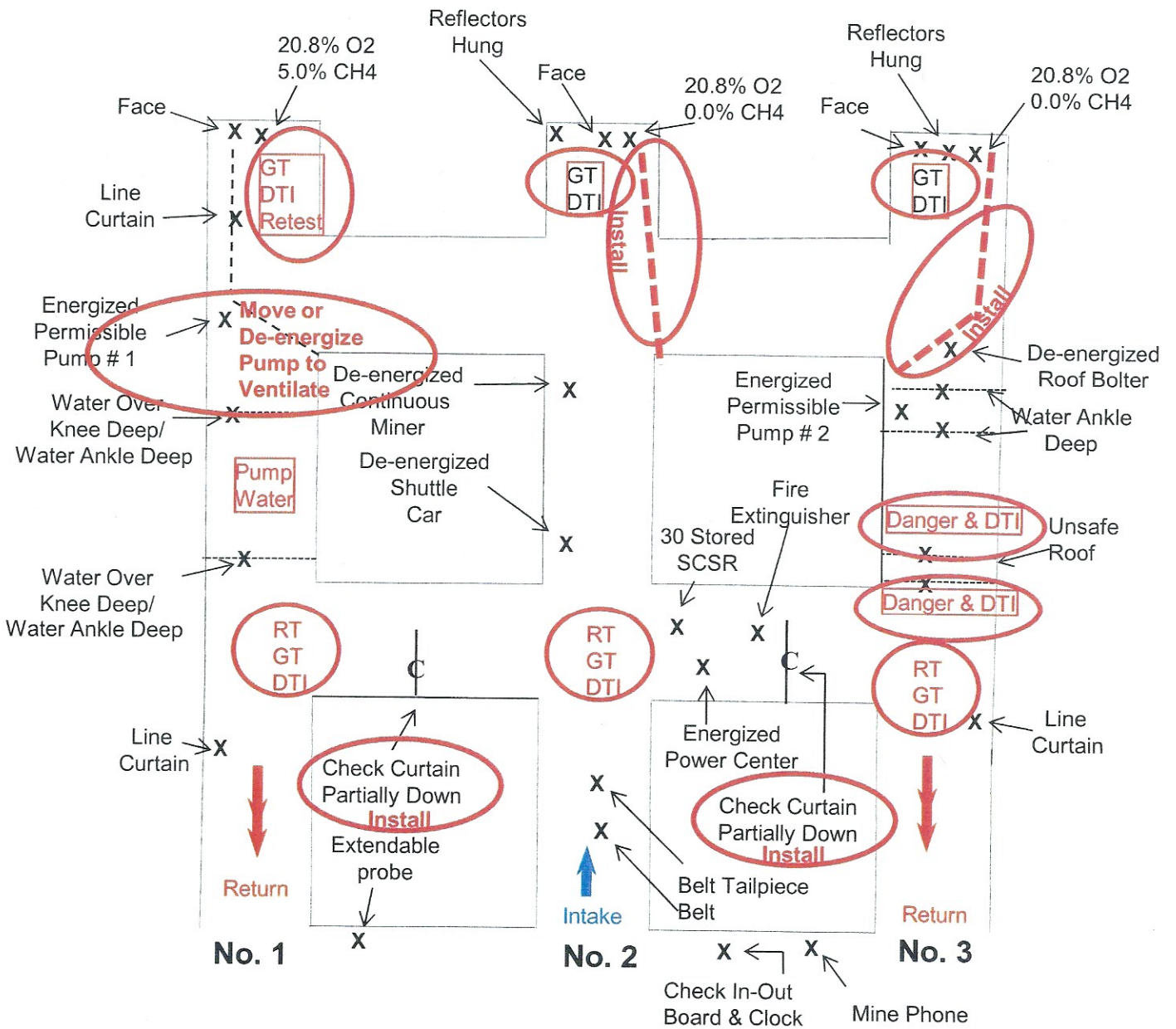
For the contest purposes, all violations of the Title 30 CFR will be considered hazards.

You will have 30 minutes to complete the problem.

# 2019 Energy Expo Preshift Contest Problem Map



# 2019 Energy Expo Preshift Contest SCORING Map



**2019  
Energy Expo  
Preshift contest  
10/03/19**

**Judge's instructions Page 1**

1. Show the contestant the time clock, mine phone, and the check in/out board.
2. A blank map, written statement (contestant statement), roof control and ventilation plans will be provided, **and these have already been reviewed by the contestant in lock-up**. Upon receipt of these materials the contestant must start the clock within 2 minutes.
3. Contestant should take the air measurement in the last open crosscut right side between the # 2 and # 3 entries, and the last open crosscut left side between the # 1 and # 2 entries.

**Provide information in box to the contestant after taking the air reading in the last open crosscuts (LOCC) between the # 1 and # 2 (Left), and the #2 and #3 entries (Right).**

**Left Side LOCC**

Height: 72 INCHES

Width: 234 INCHES

Feet per minute: 99 correction factor: + 17

**Do not give out total= 13572**

**Right Side LOCC**

Height: 72 INCHES

Width: 234 INCHES

Feet per minute: 104 correction factor +17

**Do not give out total = 14157**

Note: If the contestant takes an air measurement in the wrong location, and the check curtains have been installed, the information above should be provided to them but discounts assessed for wrong location. (Rule9)

**If the contestant takes air measurement with the ventilation controls partially installed (not according to the vent plan schematic) then the air reading will be 8,470 CFM for either or both side LOCC.**

Height: 72 INCHES

Width: 234 INCHES

Feet per minute: 52 correction factor: + 25

**Do not give out total CFM 9,009**

**Digital anemometers can be held in either direction.**

**2018  
Energy Expo  
Preshift contest  
10/3/19  
Judge's instructions PAGE 2 (Idle air readings)**

**IDLE AIR IN FACES:**

**LINE CURTAIN HUNG**

**LINE or CHECK CURTAINS NOT HUNG**

**# 1 Face**

Height: 6 FEET

Width: 3 FEET

Feet per minute: 120 Correction factor: + 3

**Do not give out total= 2214**

Height: 6 FEET

Width: 3 FEET

Feet per minute: 40 Correction factor +5

**Do not give out total = 810**

**# 2 Face**

Height: 5.5 FEET

Width: 3 FEET

Feet per minute: 135 Correction factor: + 1

**Do not give out total= 2244**

Height: 5.5 FEET

Width: 3 FEET

Feet per minute: 50 Correction factor +5

**Do not give out total = 907**

**# 3 Face**

Height: 6 FEET

Width: 3 FEET

Feet per minute: 108 Correction factor: + 2

**Do not give out total= 1980**

Height: 6 FEET

Width: 3 FEET

Feet per minute: 60 Correction factor +5

**Do not give out total = 1170**

**2019  
Energy Expo  
Preshift contest**

**Judges Instructions Page 3**

1. Gas detector must be left on during working of the problem.
2. If the contestant only hangs the check curtain in x-cut between # 1 and # 2, there will be enough air for the Left side LOCC reading.
3. If the contestant only hangs the check curtain in x-cut between # 2 and # 3, there will be enough air for the Right side LOCC reading.
4. If the contestant only hangs the check curtain in x-cut between # 1 and # 2, there will be enough air to clear the 5.0 % CH<sub>4</sub> in # 1 face area.
5. The power to the Energized Permissible Pump # 1 must be knocked and disconnected at the Power Center prior to clearing CH<sub>4</sub> from face of # 1.
6. After the CH<sub>4</sub> is cleared from face of # 1, Permissible Pump # 1 can be used to pump water out by the left side LOCC in # 1 entry.
7. If contestant hangs check curtain between # 1 and # 2 before de-energizing Energized Permissible Pump #, 1 then use Rule # 15 ( Any act by the examiner, which may result in an explosion of an explosive air/gas mixture).
8. **Q&A From 2015**  
If a contestant failed to identify, danger off, or correct a hazardous condition as stated in Rule 11 and received the discount; will they also be discounted for failing to correct the hazardous condition as stated in Rule 12? **Yes**, if hazardous condition is not found the contestant will receive discounts under Rules 11 and 12. :

**Filling out the Preshift Record (Same as above)**

Rule 3 Failure to record hazardous condition.

Rule 4 Failure to record action taken to correct hazardous condition.

e.g. If contestant fails to record the Dislodged Timber in # 3, also dock for not recording a correction.

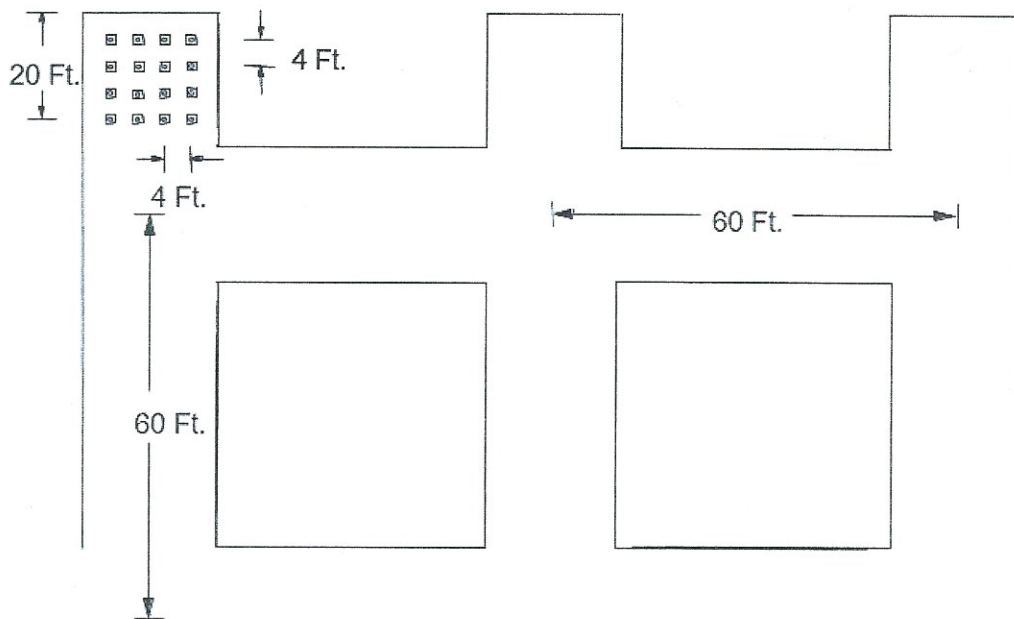
**Times**

Written exam	_____	15 minutes
Review plans in Staging area	_____	10 minutes
On field start clock after giving materials	_____	2 minutes
Work problem on field	_____	30 minutes (warn when 5 minutes left)
Fill out record	_____	20 minutes
After posting name time to appear	_____	60 minutes
Review and prepare protests	_____	20 minutes



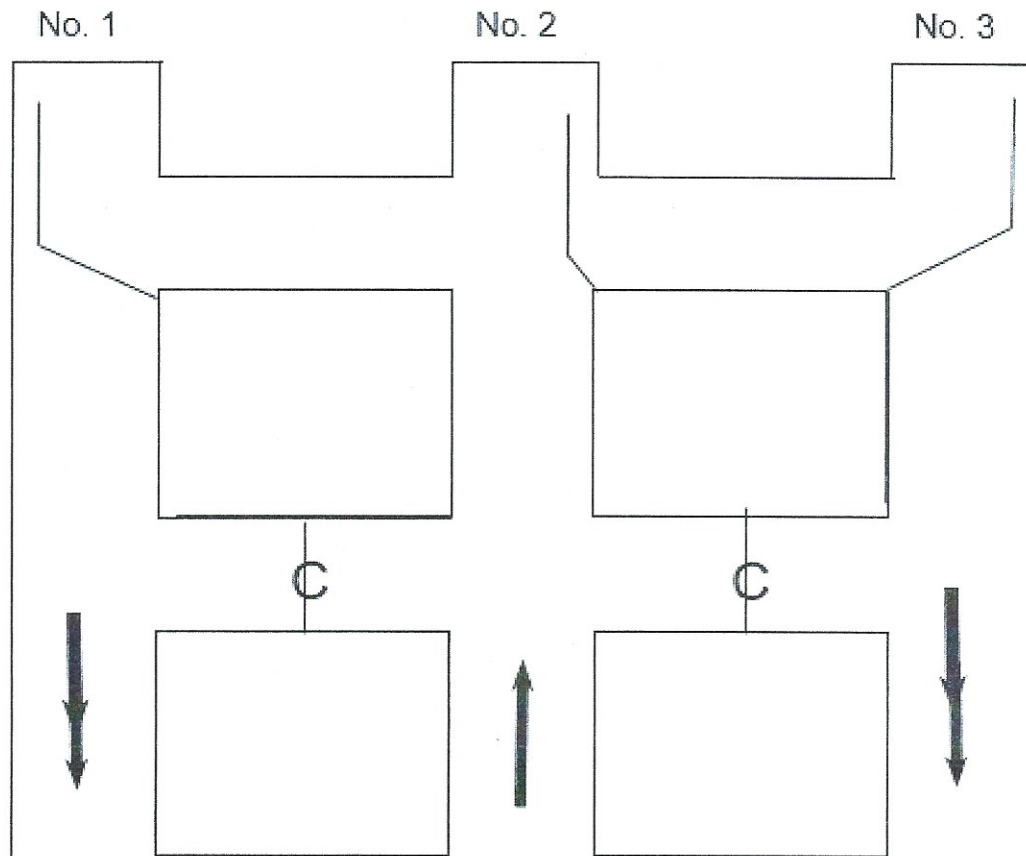


# 2019 Energy Expo PRESHIFT CONTEST ROOF CONTROL Plan



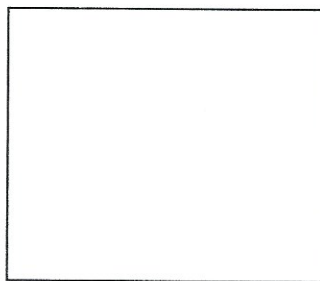
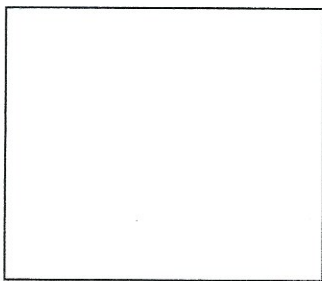
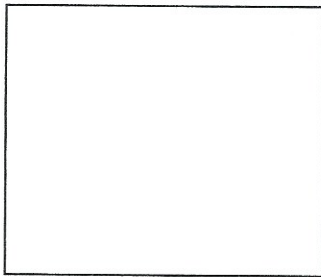
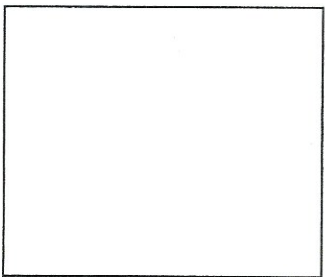
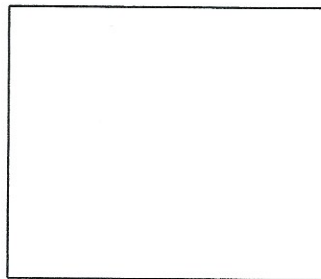
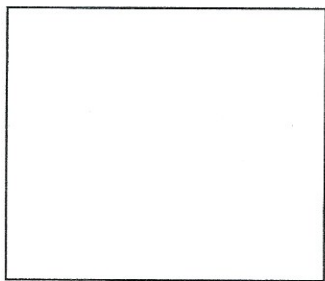
Permanent roof supports to be installed on not more than 4 ft. centers.  
 Maximum cut depth is 20 ft. and bolt length is 48 inches.  
 Maximum width of rooms, entries, and crosscuts is 20 ft.  
 Developed on 60 ft. centers with minimum size pillars 40 ft. x 40 ft.  
 Crosscuts shall be started only in areas that are supported with permanent roof supports. When headings and crosscuts are to be simultaneously developed, a minimum of three (3) rows of permanent roof supports shall be installed in by the proposed crosscut prior to starting the crosscut.  
 No place will be left unbolted for more than 24 hours.  
 Supplemental support will be installed on 4 ft. centers.  
 The end of permanent roof support shall be posted with a readily visible warning, danger sign or a physical barrier shall be installed to impede travel beyond permanent support.

# 2019 ENERGY EXPO PRESHIFT CONTEST VENTILATION PLAN



- Line curtain required where the continuous miner is cutting or loading coal.
- Line curtain required in face area where the roof bolting machine is located.
- Line curtain required to be maintained 10 ft. from the deepest point of penetration.
- A minimum of 12,000 CFM required in the last open crosscut.
- Maximum cut depth not to exceed 20 ft.
- Minimum quantity of 1,500 CFM required in each idle place.
- CH<sub>4</sub> checks will be conducted according to State/Federal regulations.
- Belt/Intake air is allowed at this mine.
- All face ventilation is exhausting.

2019  
Energy Expo  
Preshift Contest  
JUDGE'S MAP



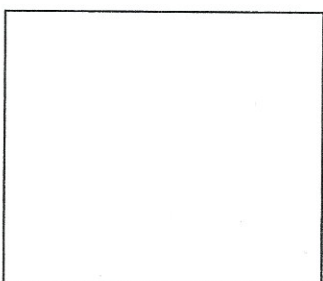
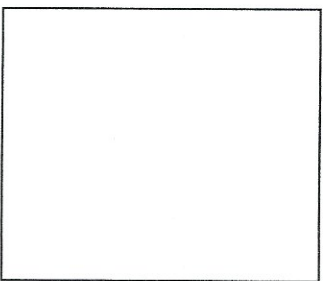
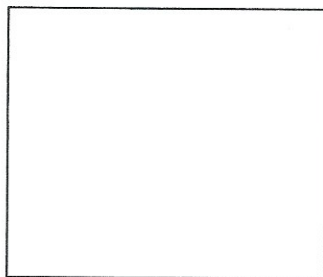
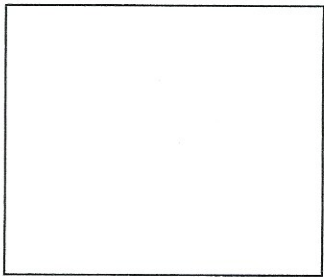
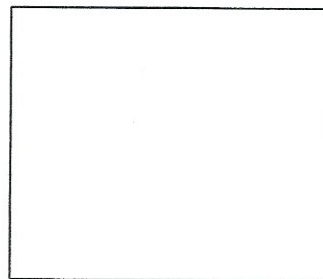
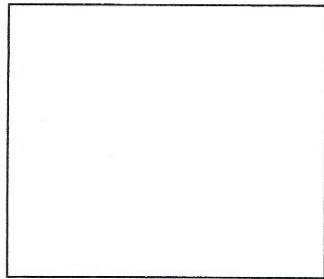
No. 1

No. 2

No. 3

X – Check In/Out Board  
& Clock

2019  
Energy Expo  
Preshift Contest  
JUDGE'S MAP



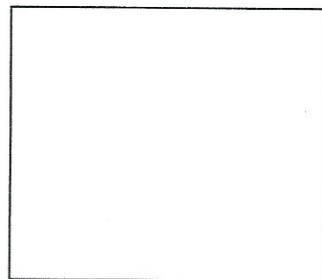
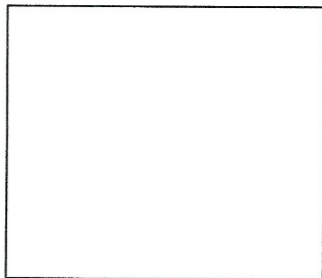
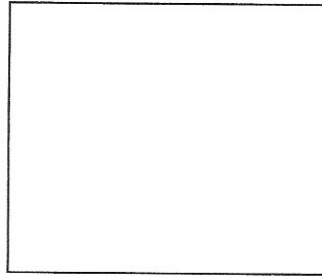
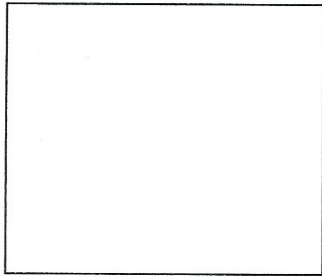
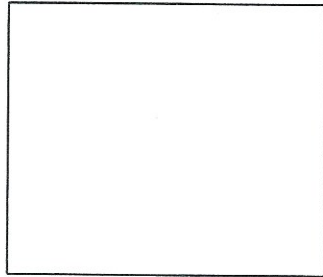
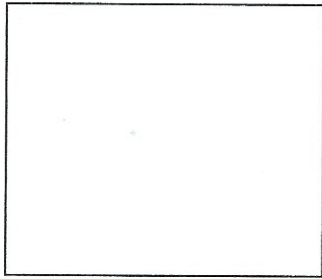
No. 1

No. 2

No. 3

X - Check In/Out Board  
& Clock

2019  
Energy Expo  
Preshift Contest  
JUDGE'S MAP



No. 1

No. 2

No. 3

X – Check In/Out Board  
& Clock