

2016 Tri-State Post #6 Pre-Shift Contest Problem

Hello_____I'm Mitchell Brooks, the shift foreman. Sorry that I can't meet with you, but I had some problems to address at the long wall.

You are to conduct a pre-shift examination of the "M" Submains Right Section.

This part of the mine is running adjacent to the Waterfront Mine's old workings. We have been encountering some methane and lower oxygen levels. As a precautionary measure bore holes are being drilled into the barrier in the #3 entry's intersections to make sure we don't cut into old workings. I'm counting on you to check each bore hole by opening the valves and let me know if anything -is weeping out of them.

The #1 entry is the return

The #2 entry is the intake

The #3 entry is the belt

This area of advancement is the last panel we will be mining on this side of the mine. We are currently drawing up a plan to seal off this area within the next two (2) years or when mining is completed.

Oh! I almost forgot.... There were a couple of shop men on the section earlier this shift to do some burning and welding on the miner. Please do a thorough examination around the miner in the section.

Last but not least, before you leave the section call your pre-shift report out. The entire M Submains section crew and foreman are involved in evacuation class underground and will be going underground one hour early next shift.

Thanks,

Mitchell

2016 Post #6 Pre-Shift Contest

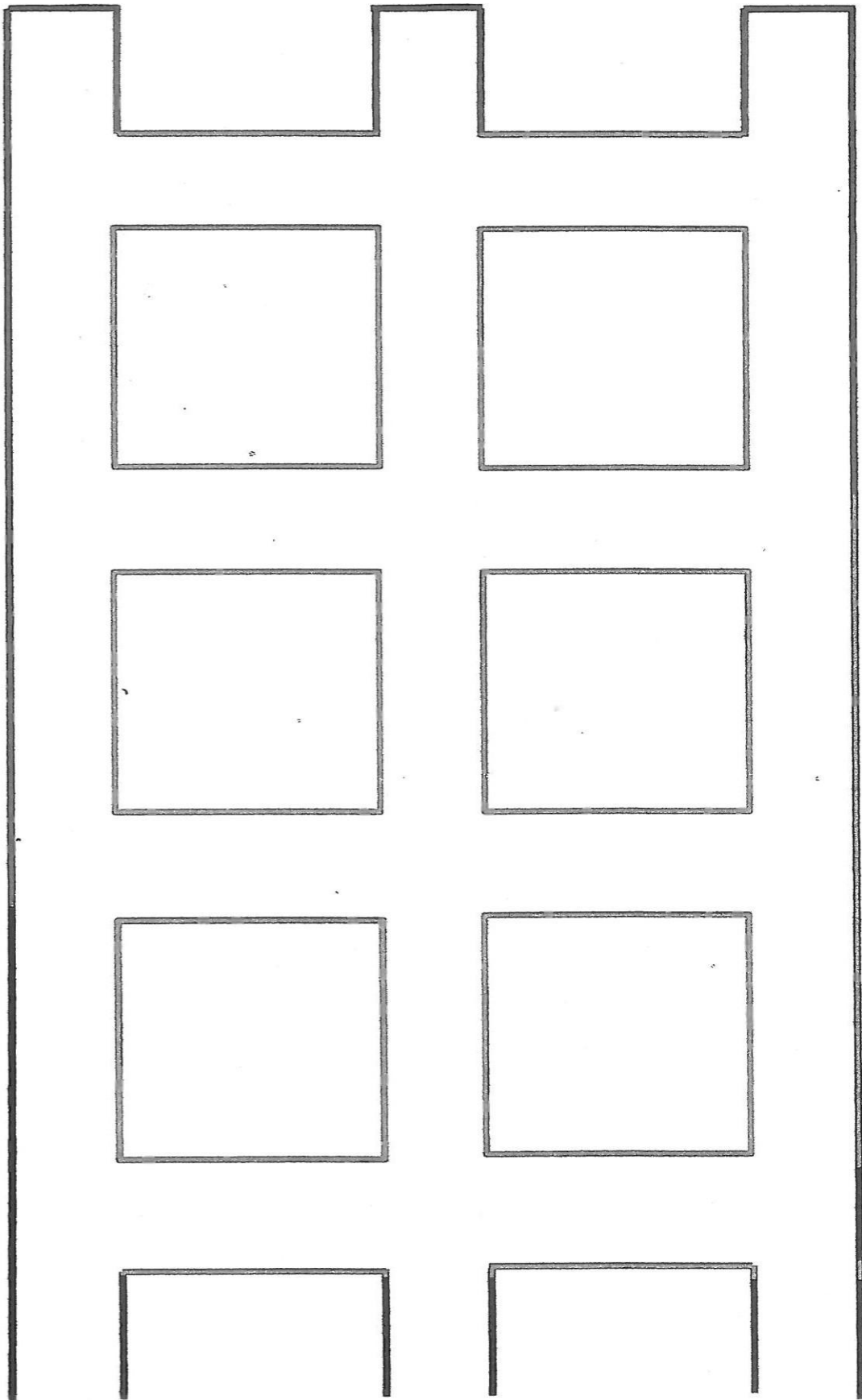
Roof Control Plan

- Minimum roof support length — 96 inches
- Roof support installation — 4 feet x 4 feet
- 9 — 16 foot cable bolts will be installed in every intersection on no more than 6 foot centers
- Maximum entry width — 18 feet
- 67 foot maximum diagonal intersection measurement
- Maximum cut depth — 20 feet
- Danger signs and/or physical barriers shall be placed to prevent entry into unsafe or unsupported areas
- Pillar size — 50 feet x 50 feet
- Mining height averages 8 feet
- All roof and rib areas must be protected only by the approved mesh material that is specified in the roof control plan
- 48 inch minimum rib bolt length

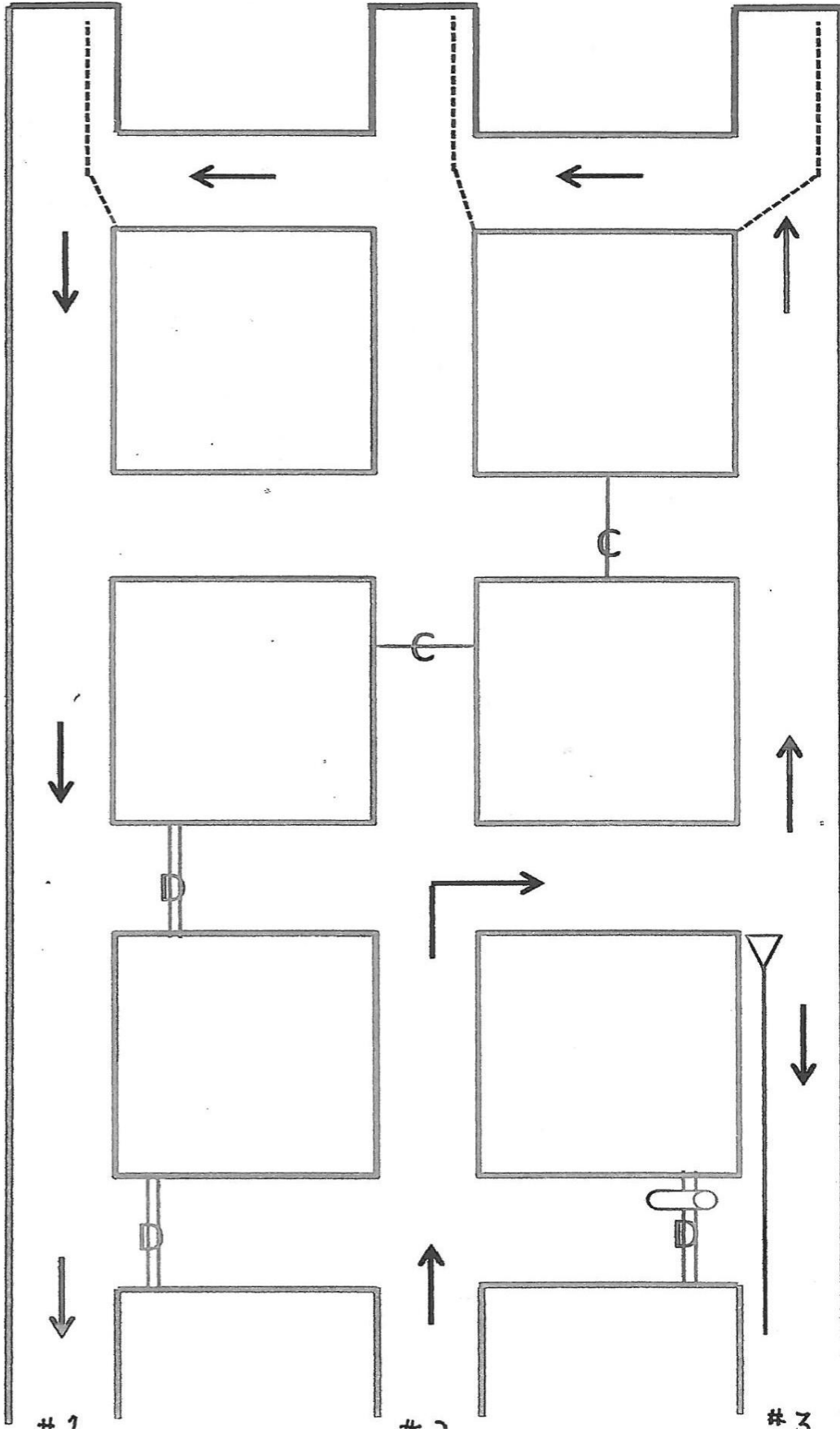
Ventilation Plan

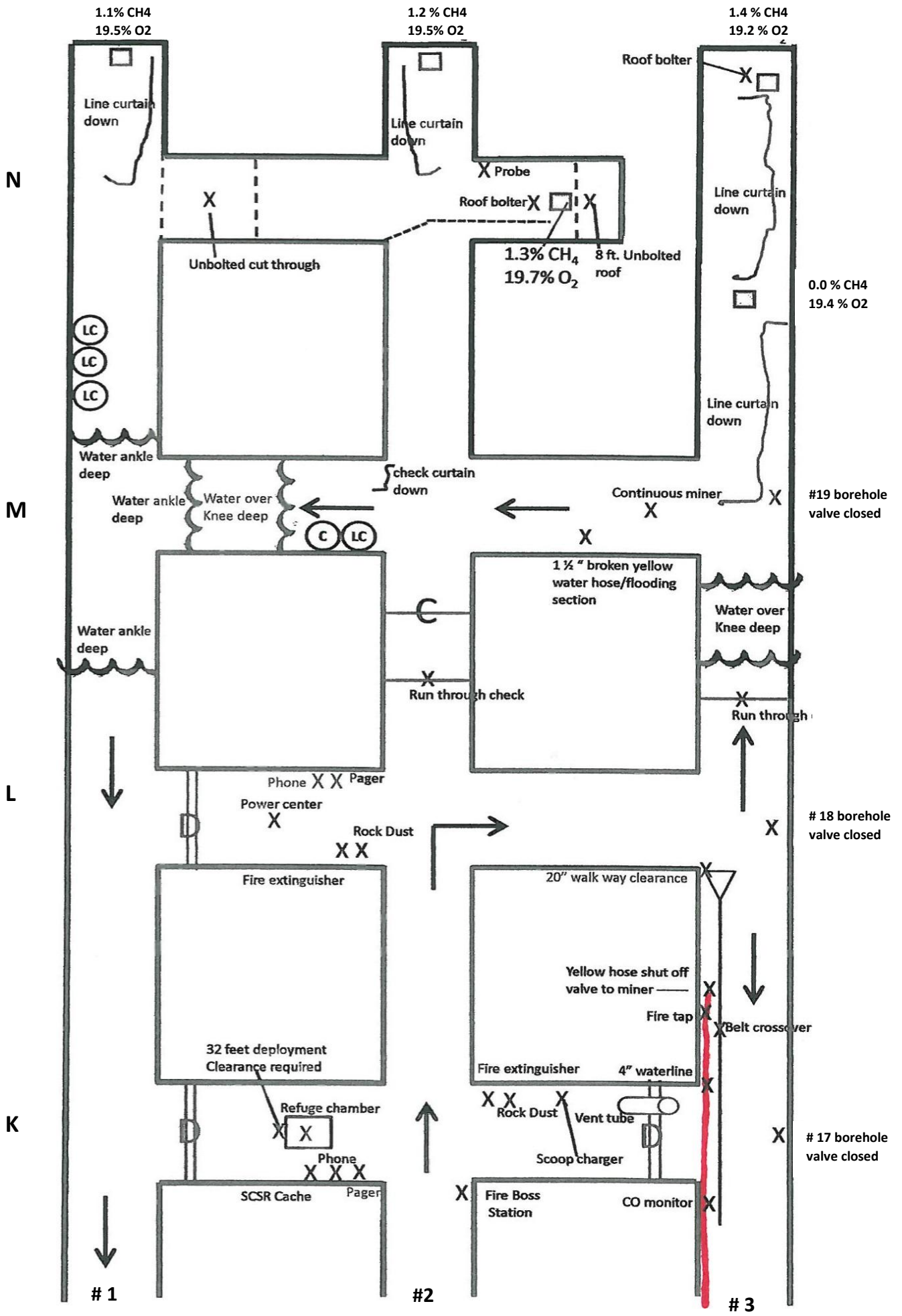
- Not to scale
- Blowing ventilation
- Belt air is ventilated outby into section belt regulator
- Permanent stoppings, belt lines, overcast and machinery cannot be walked through unless doors or accessible means are provided at these locations
- Permanent stoppings shall be maintained up to and including the third connecting crosscut
- A total of 24 SCRS must remain in the section cache
- CO sensors must be within 100 feet down wind of electrical installations
- The section's refuge chamber must be clear of all obstructions. A 32 foot deployment clearance must be present at this location. The chamber should always be within 1000 feet of the working face.
- Face line curtains must be properly installed to dilute and render harmless any gas accumulation which may occur. They must be adequately hung tight to rib and roof and within 5 feet of face or unsupported area
- No ventilation changes can be made until all accessible areas of the section have been examined
- 2 air readings are required:
 1. Velocity of airflow on belt (minimum 80 velocity)
 2. Last open crosscut (minimum 12,000 cfm)

Contestant's note sheet



Ventilation Map





**2016 Post #6 Pre-Shift Contest
Judge's Discount Sheet**

Contestant _____ No. _____

Contestant has 2 minutes to start problem once entering fire boss station.

Fire Boss Station	Yes	No
Start Clock (rule 1)	_____	_____
Check in (rule 1)	_____	_____
SCSR Check (rule 3)	_____	_____
Gas Detector(s) (rule 19)	_____	_____
Required Equipment (rule 2)	_____	_____
Required Equipment Maintained Operable (rule 14)	_____	_____

#2 Entry (start)

Gas test/DTI #2 entry 0.0% CH4 20.8%O2 (rule 5) _____

Verbally state visual exam. roof/rib #2 entry (rule 10) _____

#2 to #1K Crosscut

Check pager and phone at cache (rule 19) _____

Inspect cache (Judge's state 24 SCSR's inside (rule 14) _____

Inspects refuse chamber and finds a placard stating 32 feet deployment clearance required. It's requested at this time that examiner measures for proper clearance space. He only finds 26 feet. The examiner states that this is a violation and places a danger sign/DTI at this location. (rule 11)

#1 Entry

Gas Test/DTI #1 Entry 0.0% CH4 20.8%O2 (rule 5) _____

Verbally state visual examination roof & rib #1 entry _____

(rule 10)

#1 Entry clear to crosscut M

#1 to #2 M Crosscut

Water over knee deep found. Verbally states that this is a dangerous condition. Places a danger sign/DTI at #1 side of water of knee deep. (rule 11)

#1 to #2 N Crosscut

Unbolted cut through found without danger signs. Verbally states that this is a dangerous condition. Places a danger sign/DTI at the #1 side of the unsupported cut through. (rule 11)

#1 Face

Line curtain leading into #1 face is down in "N" intersection. Verbally states that this is a violation. State that this line curtain will be rebuilt during proper section ventilation. (rule 11)

CH4 found in #1 Face over 1.0%. (1.1% CH4) Verbally states that this is a dangerous condition. Places danger sign/DTI at the #1 Face location. States that gases should be reduced or removed through proper section ventilation. (rule 5 & 12) (A second gas test required after ventilation)

#2 Entry - #2 to #3 K Crosscut

Fire extinguisher and rock dust ok (rule 19)

No violations found at scoop charger location. Gas test/DTI 0.0% CH4 20.8%O2 (rule 5)

#2 to #1 L Crosscut

Fire extinguisher, rock dust, pager and telephone ok. (rule 19)

Power center location gas test/DTI 0.0% CH4 20.8%O2 (rule 5)

#2 to #3 M Crosscut

1 h inch yellow miner water hose leaking and flooding section Examiner follows water hose back to shut off valve located outby feeder on belt line and shuts off water. IMPORTANT the examiner must use the proper access back to the water shut off valve. Cannot step into water over knee deep, cross through 20-inch clearance at feeder and must use belt crossover if necessary. (rule 16)

#2 to #1 M Crosscut

Check curtain down. Verbally state this is a violation and air is being short circuited. States that check curtain will be rebuilt during proper section ventilation. (rule 11)

Approaches the #2 side of water over knee deep. Verbally states this is a dangerous condition. Places a danger sign/DTI at the #2 side of the water over knee deep. (rule 11)

#2 to #1 N Crosscut

Approaches the #2 side of the unsupported cut through. No dangers signs found. Verbally states that this is a dangerous condition. Places a danger sign/DTI at the #2 side of the unsupported cut through (rule 11)

#2 to #3 Face N Crosscut

Finds an 8-foot unsupported area without danger signs. Verbally states that this is a dangerous condition. Also finds over 1.0% CH4 (1.3% CH4) This gas test should have been made with probe found at location, at the face. Places danger sign/DTI in front of unsupported area. (rule 11)

(A second gas test required after ventilation)

#2 Face

Line curtain leading into #2 face is down in "N" intersection and is built in exhausting ventilation. Verbally states that these are both violations. State that this line curtain will be rebuilt on the right side of entry during proper section ventilation. (rule 11)

CH4 found in #2 Face over 1.0%. (1.2% CH4) Verbally states that this is a dangerous condition. Places DTI at the #2 Face location.

States that gases should be reduced or removed during proper section ventilation. (rule 5 & 12)

(A second gas test required after ventilation)

#3 Entry

Gas Test/DTI #3 Entry 0.0% CH4 20.8%O2 (rule 5)

Verbally state visual examination roof & rib #3 entry (rule 10)

CO monitor found ok (rule 19)

Examiner MUST use belt crossover to cross belt (rule16)

Opens #17 borehole valve and finds no weeping. Closes valve.
(rule17)

Examiner takes air reading on belt line for velocity. Proper air reading procedures must be made. Verbally states direction of air flow. (rule 8 & 9) VELOCITY IS 84

#3 K to L

Feeder location. Gas test/DTI 0.0% Ch4 20.8%O2

(this gas test can also include the gas test made for #3 entry) (rule 5)

Finds a tight walkway clearance of 20 inches along feeder. Verbally states that this is a dangerous condition. Places a danger sign/DTI at both approaches to this tight clearance location. (rule 11)

#3 L Intersection

Opens #18 borehole valve and finds no weeping. Closes valve.
(rule 17)

#3 L to M

Finds water over knee deep. Verbally states that this is a dangerous condition. Places a danger sign/DTI at both approaches to the water over knee deep. (rule 11)
(examiner must go around block to place danger sign on other approach to water over knee deep)

#3 M Intersection

Opens #19 borehole valve and finds no weeping. Closes valve. (rule 17)

Finds line curtain down. States that this is a violation.
Continues inby and finds line curtain down again. Just inby this
the examiner finds 19.4%O₂. (rule 11)
(this is as far as he can go safely)

The examiner must start section ventilation now.

First Step. Should rebuild check curtain #2 to #1 M. This will allow air flow to go up #3 entry.

Second Step. Return to #3 M intersection. Rebuild line curtain going into #3 face.

Third Step. The examiner can advance into #3 entry where low O₂ (19.4%) was found.

Fourth Step. Now he can connect the two line curtains together to the face keeping himself on the fresh air side of the line curtain. (rule 16)

Fifth Step. Examiner moves into #3 face. Again finds line curtain down and low O₂ (19.2%). Also CH₄ over 1.0% (1.4%). Verbally states that three different dangerous conditions were found. At this time he should raise the line curtain and build it up to the face keeping himself on the fresh air side of the line curtain. Once line curtain is built, a second gas test can be made at the face. (Judges should turn placard over). Gases are reduced. (rule 11 & 16)

PROPER SECTION VENTILATION SHOULD BE CONTINUED ACROSS SECTION.

Remove and rebuild line curtain in #2 face in blowing mode.

Must return to #1 face and rebuild line curtain.

A second gas test is required at all three remaining face locations.

LAST OPEN CROSSCUT AIR READING

Area 16.5 feet wide x 8 foot high =132

Velocity 111

14,562

Examiner takes air reading in L.O.C. Proper air reading procedures must be made. Verbally state direction of air flow. (rule 8 & 9)

If ventilation is done improperly,

Area 16.5 feet wide x 8 foot high = 132

Velocity 64

8,448

Area 16.5'

wide x 8' high

Velocity 67

PRESHIFT-CERTIFICATION EXAMINER'S REPORT

Date of Examination	Time From: AM PM	To: AM PM
Section/Area: M Submains Right	Reported Outside? YES X NO	TIME: AM PM
Reported By:	Received By : Mitchell Brooks	

Pre-Shift required within 3 hours prior to any 8 hour interval

Location	Hazardous Condition	Action Taken	CH4	O2
# 1 Face	Line curtain down	Corrected-reinstalled line curtain 1st	1.1%	20.0%
# 1 Face	CH4 found in 1.1 %	Corrected-removed by ventilation 2 nd	0.0%	20.8%
#1 to #2K X-cut	Inadequate deployment clearance	Dangered off- reported		
#1 to #2M X-cut	Check curtain down	Correct-built check curtain		
#1 to #2M X-cut	Water over knee deep	Dangered off- reported		
#1 to #2N X-cut	Cut thru/no danger signs	Dangered off approaches-reported		
#2 Face	Line curtain improperly installed	Corrected-properly installed line curtain in blowing mode 1st	1.2%	19.9%
#2 Face	CH4 found 1.2%	Corrected-removed by ventilation 2 nd	0.1%	20.8%
#2 to #3N Face	No danger signs	Dangered off-reported	0.0%	20.8%
#2 to #3N Face	CH4 found 1.3%	Corrected-removed by ventilation 2nd	0.1%	20.8%
#3 Entry Feeder	Only 20" walkway clearance	Dangered off-reported	0.0%	20.8%
#3 Entry L to M	Water over knee deep	Dangered off-reported		
#3entryM to Face	Line curtain down	Corrected-reinstalled line curtain		
#3entryM to face	Low O2 found 19.4%	Corrected-removed by ventilation		
#3 Face	Ch4 1.4% Low O2 19.2%	Corrected-removed by ventilation 1 st	0.2%	20.8%
# 3 Face	Line curtain down	Corrected-reinstalled line curtain 2 nd	0.2%	20.8%

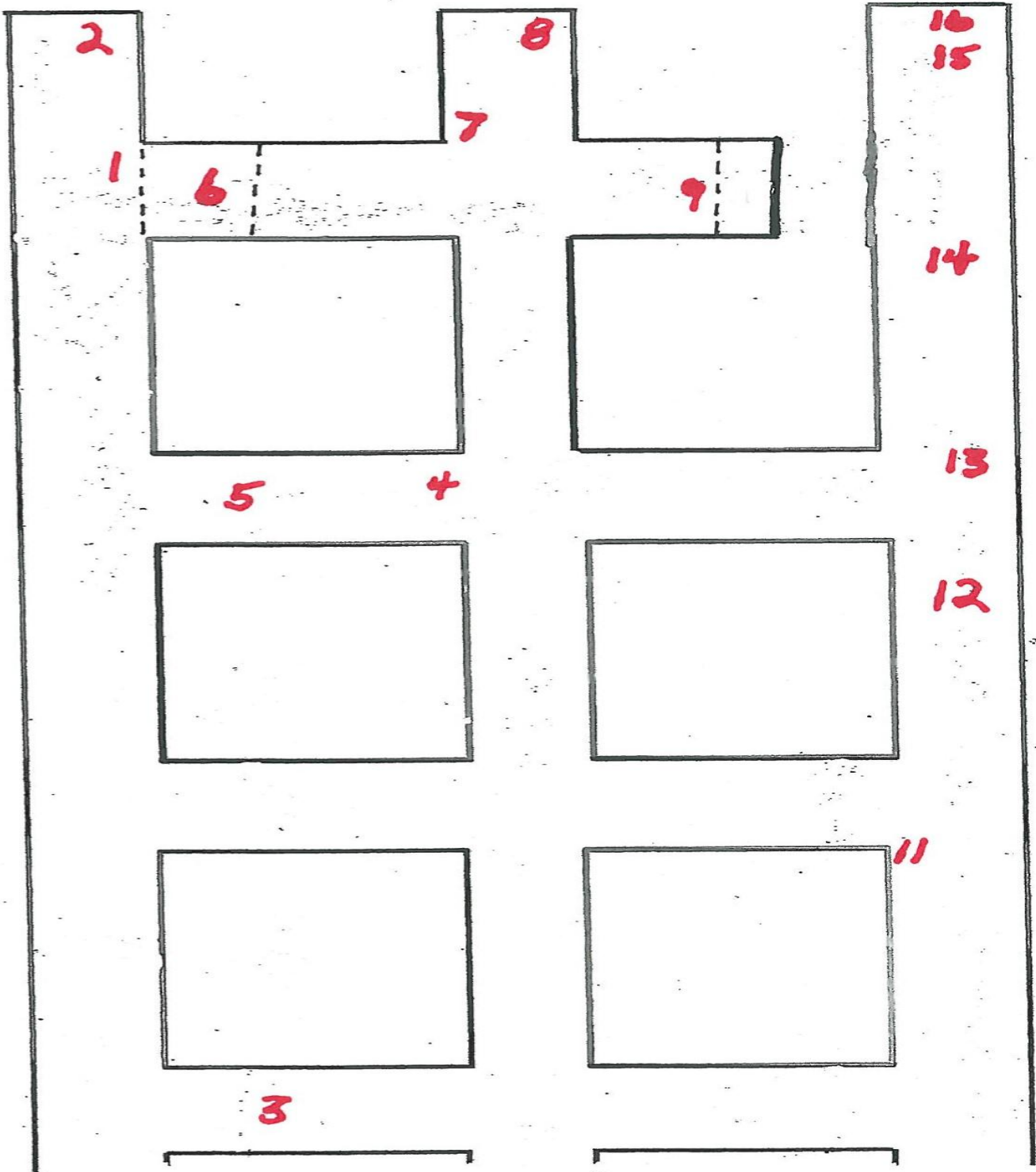
Air Measurements

Location	CFM	CH4	O2	Location	CFM	CH4	O2
#2 to #1, LOC	14,652	0.0%	20.8%	Power center, scoop charger, feeder		0.0%	20.8%
#3 KTOL Beltline Velocity 84		0.0%	20.8%	#1, #2, #3 Entries		0.0%	20.8%
				Boreholes #17, #18, #19 – O.K.			

REMARKS: All areas of this section: Travelways, Faces, Beltlines, Machinery, and Electrical installations were found Free of any unsafe or dangerous conditions other than those noted above. The air is traveling in it's proper course And normal volume. Water hose needs replaced. A pump needs to be brought to section to pump water over knee Deep.

Signed by Pre Certified Examiner	Date	Certification #
Countersigned by Mine Foreman	Date	Certification #

2016 Post 6 Pre-Shift Violation Locations



2016 POST 6 PRE-SHIFT

- 3 ↓
- 3 ↓
- 1/5 WATER ANKLE DEEP
- 6 1.1% CH 19.5% O₂ F | 0.0% CH 20.8% O₂ B
- 7 PAGER
- 8 PHONE
- 9 SCSR CACHE
- 10 REFUGE CHAMBER
- 11 3/2 FT FOR DEPLOYMENT
- 12 STP. WITH DOOR
- 13 ROCK DUST
- 14 FIRE EXT. SBAGS ROCK DUST 1P
- 15 POWER CENTER
- 16 STP. WITH DOOR
- 17 PHONE
- 18 PAGER
- 19 ←
- 20/21 WATER OVER KNEE DEEP
- 22/23 UNBOLTED CUT THRU
- 24 2
- 25 FIRE BOSS STATION
- 26 ↑
- 27 →
- 28 RUN THROUGH CHECK
- 29 1.2% CH 19.5% O₂ F | 0.1% CH 20.8% O₂ B
- 30 FIRE EXT SBAGS ROCK DUST
- 31 ROCK DUST 1P
- 32 SCOP CHARGER
- 33 STP WITH DOOR AND VENTILAE
- 34 ←
- 35 BROKEN HOSE
- 36 CONTINUOUS MINER
- 37 PROBE
- 38 ROOF BOLTER
- 39 8 FT UDSUPPORTED ROOF
- 40 1.3% CH 19.7% O₂ F | 0.1% CH 20.8% O₂ B
- 41 3
- 42 #17 BOREHOLE
- 43 4" WATERLINE
- 44 BELT CROSSOVER
- 45 YELLOW HOSE SHUT OFF VALVE
- 46 FIRE TAP
- 47 ↓
- 48 FEEDER
- 49 20 INCH CLEARANCE
- 50 #18 BOREHOLE
- 1 ↑
- 2 RUN THROUGH CHECK
- 3/54 WATER OVER KNEE DEEP
- 5 #19 BOREHOLE
- 6 19.4% O₂
- 7 1.4% CH 19.2% O₂ F | 0.2% CH 20.8% O₂ B
- ROOF BOLTER

#1 ENTRY

#1 TO #2 K
CROSSCUT

#1 TO #2 L
CROSSCUT

#1 TO #2 M
CROSSCUT

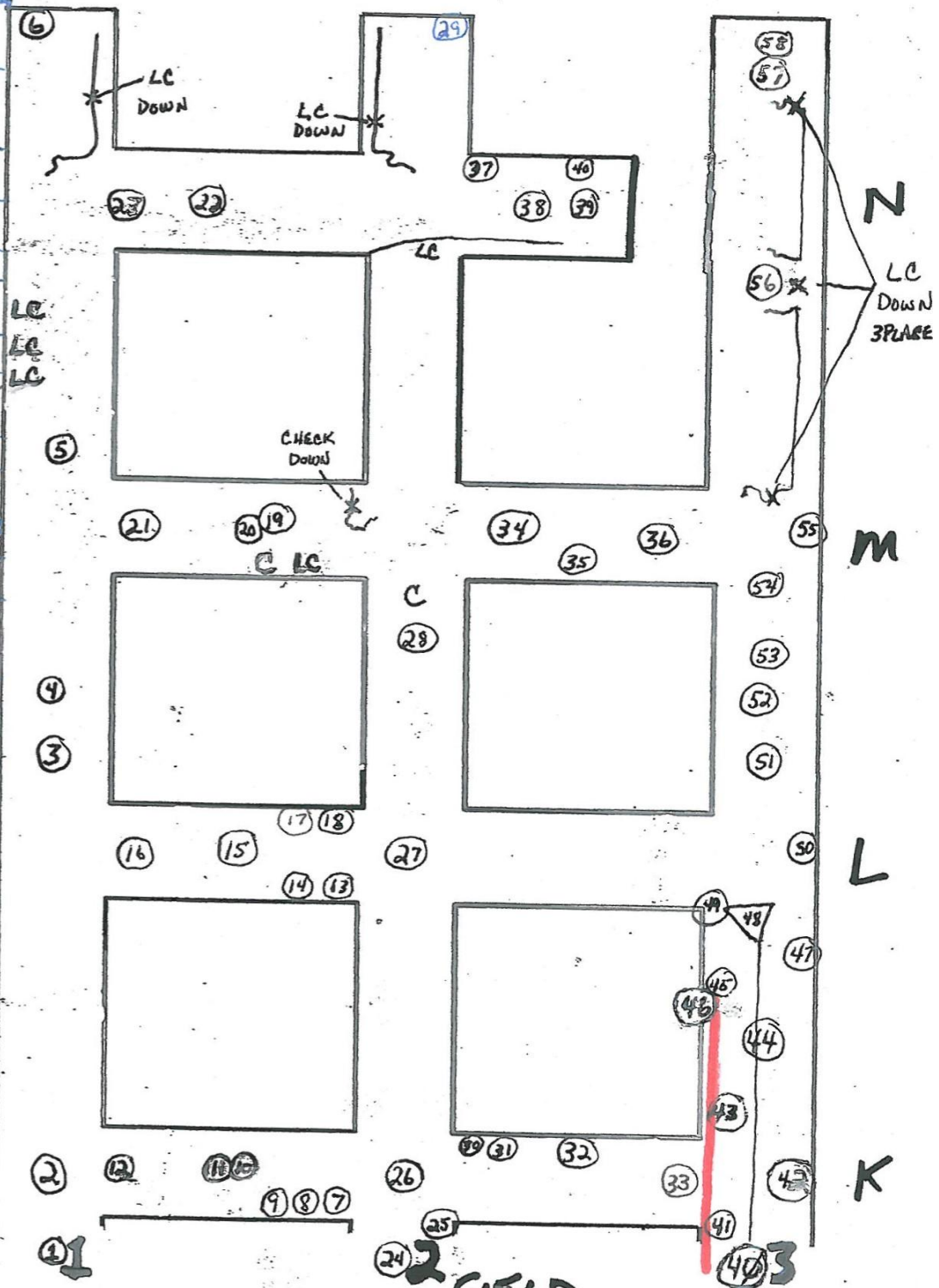
#1 TO #3 N
CROSSCUT

#2 ENTRY

#2 TO #3 K
CROSSCUT

#2 TO #3 M
CROSSCUT

#3 ENTRY



2 FIELD
PROBLEM SET-UP
PRE-SHIFT (PLACARDS)