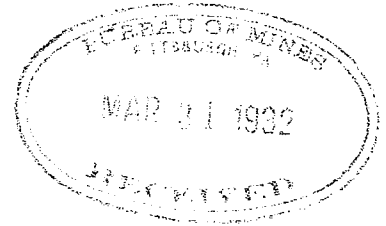


LETTER REPORT OF MINE EXPLOSION
AT

BOISSEVAIN MINE



On February 27, 1932 about 4:05 A. M., a mine explosion occurred in the Basin Main section of the Boissevain Mine at Boissevain, Va., killing 38 of the 42 men employed on the night shift in this section.

This mine is operated by the Pocahontas Fuel Company, with offices at Pocahontas, Va.

Officials are:

James E. Jones	General Manager & Vice-President
George Craft	" Superintendent
Dan E. Tabor	Mine Superintendent
John W. Groseclose	" Foreman
Harvey Hodge	Night "

At 10:20 A. M. on morning of February 27, 1932 the writer was informed by Mr. J. F. Davies, District Engineer at the Bureau of Mines, concerning the explosion. Upon inquiry it was learned that plenty of equipment was on hand at the Boissevain Mine. However, the gas masks and some other Norton Station equipment was loaded into the Ford truck and taken to Boissevain.

I accompanied Mr. Davies, we arrived at the site of the explosion at 3:00 P. M. and joined Messers. Marshall, Humphreys and Kazee, of the Bureau of Mines, who arrived earlier in the day. We reported to Mr. Thomas, Stockdale, (West Virginia State Mine Inspector) who had charge of the recovery work.

LOCATION:

This mine is located at Boissevain, Tazewell County, Virginia and is served by the Norfolk & Western Railroad. It is a shaft mine and is operat-

ing in what is known as the Pocahontas # 3 seam of coal which, in this mines averages about 10 feet in thickness.

About 377 men are employed, 74 surface men, 77 loaders and 226 company men. There is an average daily production of 2237 tons and the yearly output for 1931 was 420,460 tons.

The mine is a shaft mine having two shafts. One for hoisting coal and supplies and one used as an air way. There are two slope openings and two drift openings. One of the slope openings was used in the past for hauling, coal and supplies, the other for air. The two drift openings are used as drainage openings.

MINING:

Room and pillar method is used for mining the coal.

The coal is center cut about four feet and six inches from the floor with a non-permissible 17-A Jeffrey cutting machine mounted on a home constructed truck. Most of the coal is loaded with non-permissible "Coal Loader" loading machines.

VENTILATION:

The mine prior to the explosion was ventilated with a Jeffrey sixteen feet by six feet electric ^{and} belt driven ~~for~~ blowing. Following the explosion the fan was reversed and during the recovery work and at the present time the fan is exhausting.

The mine is rated as a ~~non~~-gassy mine by the Virginia State Dept., of Mines, altho two drainage headings from the Boissevain Mine cuts into the Jenkins-Jones Mine which is rated as a gassy mine.

HAULAGE:

Haulage is done by electric locomotives, none of which are of a permissible type. Four main haulage motors with trolleys and 17 gathering motors

equipped with bath, trolley and reels.

Forty-two inch track gauge is used, equipped with 60 pound rails on headings and 30 and 40 pound rails in the rooms.

Both wooden constructed and steel constructed types of cars are used. Cars are of tight construction and have a capacity of three tons.

Prior to the explosion haulage was done on the return air.

All equipment underground is electrically driven and of a non-permissible type 550 direct current is used. Equipment used under ground consists of 4 main haulage motors, 17 gathering motors, 3 pumps, 3 cutting machines, drills, and 4 "Coal Loaders" loading machines.

EXPLOSIVES:

Monobel # 9 L. F. and Pellett powder is used.

Miners use pellett powder fired by miners squibs where the working place is dry. In wet places Monobel # 9 L. F. and # 6 detonators, detonated with a four unit Hot Shot battery is used,

Holes where pellett powder is used are tamped with clay by use of a miner's iron, copper tip tamping bar, a steel miner's needle is used. Miners do their own shooting any time during the working shift.

Explosives are distributed to miners on the surface prior to the working shift, 12 sticks being the maximum allowed to a man. Detonators and squibs are purchased from the company store the night before and stored in their homes. Explosives, fuse and detonators are carried into the mine by the miners in canvas knap sacks.

In the mechanical loading section pellett powder and Monobel # 9 L. F. is conveyed into the mine in a closed non-insulated car. The car is used as a storage place for explosives underground. A motor crew moves

the car from place to place and distributes the explosives as needed. According to past records, several men have been burned and even one case of a mine fire being caused by the powder car, are on record.

Three men are hired to do the drilling and shooting in the Third and Fourth Lefts off Basin Main. A non-permissible 550 D. C. electric driven drill is used to drill the holes. Clay stemming tamped with a wooden stick is used. No. 6 Electric Detonators and a Hot Shot battery are used to set off the shots. In the remaining mechanical loading section the miners do their own shooting.

The amount and kind of explosives to be used is left to the man who does the shooting. Shooting is done any time during the working shift.

FIRST-AID AND MINE RESCUE:

No first-aid material is kept underground. A stretcher and a small amount of first-aid material is kept on the surface.

This mine was issued a 100% first-aid certificate in 1929.

No apparatus or equipment is kept at this mine.

On March 21-22-23 I assisted Mr. J. F. Davies and P. O. Yingst collect air samples, dust samples and section face samples.

The first day was devoted to collecting air samples and dust samples. We sectionalized the mine on the map and collected the samples at such points that if Methane gas is found in the samples the section generating the gas could easily be located.

Dust samples were collected in the explosion area.

The second day was devoted to cutting section face samples. One sample was a 3" X 3" channel cut from floor to roof was cut at the face of # 27 room off 3rd Left. This room is the next adjacent room to where the explosion

originated.

The second face sample was cut in a pillar section outside of the explosion area.

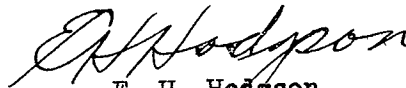
Both samples were placed in cloth sacks and taken to the outside. Samples weighed sixty and fifty-six pounds respectively.

Wednesday morning we ground the samples and by riffing reduced the samples that they could be placed in six pound coal sampling cans and sent to the fuel section for analysis.

At present time work is being done to recover the mine and machinery. Where blasting is necessary to break up the rock, rock-dusting is being applied by use of a high-pressure rock-dusting machine 300 feet inby and 300 feet outby the blasting point. Another crew of men is following the rock crew, washing the ribs and roof with a very high pressure stream of water. Rock dust is then being applied.

These observations were made during the recovery work and during the two days underground gathering air samples, dust samples and section face samples.

Very truly yours,



E. H. Hodgson
Foreman Miner

REPORT OF EXPLOSION
BOISSEVAIN MINE OF THE POCAHONTAS FUEL COMPANY
BOISSEVAIN, TAZEWELL COUNTY, VIRGINIA

By

J. F. Davies
Assistant Mining Engineer

DEPARTMENT OF COMMERCE
BUREAU OF MINES

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Gas Analysis Reports

Coal Analysis Reports

REPORT OF EXPLOSION
BOISSEVAIN MINE OF THE POCAHONTAS FUEL COMPANY
BOISSEVAIN, TAZEWELL COUNTY, VIRGINIA

By

J. F. Davies
Assistant Mining Engineer

INTRODUCTION

An explosion occurred in the basin main section of the Boissevain mine of the Pocahontas Fuel Company, at Boissevain, Tazewell County, Virginia, on the morning of February 27, 1932, resulting in the death of thirty-eight men, of whom two were killed outright by force and probably others whose bodies were found under heavy roof falls. All of the bodies showed evidence of severe burns. There were four men escaped from other portions of the mine not affected by the explosion. Apparently every man in the affected area died immediately following the explosion as there was no indication of any making any move to escape. There was evidence of great force and intense heat throughout the affected area.

Notice of the explosion was received at the Bureau of Mines office in Pittsburgh, Pennsylvania, from the Associated Press; and the information immediately wired to Joseph F. Davies, at Norton, Virginia, and to K. L. Marshall, at Coalwood, West Virginia. Mr. Marshall, Mr. H. B. Humphrey, and Mr. H. H. Kasee, who were at Coalwood, West Virginia, proceeded in privately owned automobiles to the mine, arriving shortly after noon. The

information was received at Norton, Virginia, at 10:40 a.m., and E. H. Hodgson and J. F. Davies left Norton by truck at about 11 a.m., arriving at the mine about 2:30 p.m. February 27.

Because of the heavy, extensive falls throughout the affected area, ventilation was not restored until about 6 o'clock Monday night, February 29. Because many of the bodies were under falls the last body was not recovered until early on the morning of March 4.

Since it was desirable to view the entire explosion area so as to fix details before heavy falls might close off sections, a preliminary investigation was made on Friday, March 4. The official investigation was made on Saturday, March 5, after the last body had been recovered. Face section samples, dust and air samples were collected on March 21 and 22 and other face section samples and a five ton sample will be collected as soon as it is possible to do so.

Five Bureau of Mines men assisted in the recovery operations or in the investigation. They were K. L. Marshall, H. B. Humphrey, H. H. Kazee, E. H. Hodgson, and J. F. Davies.

LOCATION

Boissevain mine of the Pocahontas Fuel Company is located at Boissevain, Tazewell County, Virginia.

The mine is served by the Norfolk and Western Railroad.

COMPANY OFFICIALS

Offices are maintained at Pocahontas, Virginia and at Boissevain, Virginia.

The officers are:

James Elwood Jones	President	Switchback, W.Va.
George Craft	General Superintendent	Pocahontas, Va.
W. A. Bishop	Chief Engineer	Boissevain, Va.
Dan C. Tabor	Superintendent	Boissevain, Va.
John W. Grosedose	Mine Foreman	Boissevain, Va.
S. F. Mitchell	Assistant Mine Foreman	Boissevain, Va.
Harvey Hodge	Night Boss	Boissevain, Va.

EMPLOYEES

There are 377 men employed, 303 underground of whom 226 are daymen and 77 loaders. There are 74 employed on the surface. There were 42 men underground at the time of the explosion, 4 of whom escaped.

DAILY PRODUCTION

The daily production averages 2237 tons.

The production in 1931 was 420,460 tons.

THE MINE

The Boissevain mine of the Pocahontas Fuel Company is a shaft mine but has two slope openings and is connected with a mine having drift openings through which the Boissevain mine is drained of water by natural drainage. It is operating in the No. 3 Pocahontas bed which in this mine dips westwardly. The mine is served by two shafts, two slopes, and two connections with drift openings. A three compartment main shaft, 180 feet deep, which was the full return for the ventilation, is equipped with cages operated in balance and used for hoisting coal and rock, raising and lowering men and supplies. The second shaft, located about 150 feet from the main shaft, is used as a fan shaft and is the main air intake. There are two slopeways, one of which is equipped with rope haulage for lowering of supplies. The two connections with an adjacent mine are used as drainageways for natural drainage. One of these

drainageways, known as the New Drainway was not completed, there being only a small opening which was made the day previous to the explosion.

The Coal Bed:

The Pocahontas No. 3 bed is a friable, low volatile, bituminous coal. The bed has a slate floor which is smooth and hard. Above the coal there is a sandstone formation which varies over portions of the mine, but generally is of a slippery nature with occasional kettle bottom and requires careful timbering.

Sections of the Pocahontas No. 3 Bed:

Sections of the Pocahontas No. 3 bed, corresponding to the locations where face section samples were taken, are given in detail in the Appendix.

The total thickness of the bed varies from 9 feet 5 inches to 12 feet but averages about 10 feet.

The Coal:

Two samples of face coal from the Pocahontas No. 3 bed were taken on March 21 and 22, 1932 in the Boiesevain mine, Boiesevain, Tazewell County, Virginia, by E. H. Hodgson, P. O. Yingst, and J. F. Davies, of the U. S. Bureau of Mines and G. Crain, of the Pocahontas Fuel Company.

The coal analysis reports of these samples from both the Pocahontas Fuel Company's coal testing laboratory and the U. S. Bureau of Mines' laboratory are included in the Appendix. The location where the samples were taken is shown on the accompanying map.

At least two more face section coal samples and one

LABORATORY REPORT OF CHANNEL SAMPLES

BOISSEVAIN MINE

<u>Merk</u>	<u>Moist</u>	<u>Vol.Mat.</u>	<u>Fix.Car.</u>	<u>Ash</u>	<u>B.T.U.'s</u>	<u>Fus.Pt.</u>
D-725	2.04	22.73	73.00	4.03	15,117	2375
X-30	2.26	23.64	72.90	3.20	15,201	2465

Tests made in the Pocahontas Fuel Company's laboratory at
Pocahontas, Virginia

5-ton sample will be taken as soon as it is possible to reach the desired locations in the mine.

The air-dry loss is .3 and .4 per cent. On the "as received" basis the average total incombustible (moisture plus ash) is 5.82 per cent. The average ratio of volatile matter to total combustible is .241.

To render this coal immune from propagation of an explosion, in case no gas is present, will require at least 60 per cent of incombustible dust. Some of this incombustible content is provided by the ash of the coal and the moisture, but what the net effect of this and other variable will have on the quantity of added rock dust required to prevent propagation of an explosion will be given after tests of the 5-ton sample of coal from the Boissevain mine has been made at the Bureau's experimental mine.

DUST

Much dry coal dust was observed throughout the area affected by the explosion and in areas adjacent to the affected area.

Table 1 shows the locations at which samples were taken and the results of the analyses. The locations where the dust samples were taken are also shown on the accompanying map. That more samples were not taken in the explosion area was due to the extent of heavy falls and imminent danger of others occurring; however, it is believed the samples taken are representative of conditions throughout the affected area.

The area affected by the explosion was all development work and the portion of the area in which the explosion originated

was a machine loading section. Apparently it was a practice to use excessive charges of explosives so as to assure uninterrupted operation of the loading machine, as in each place that had been shot the coal was all broken down in very small sizes.

There was much dry coal dust on the roof, ribs, and floor in the vicinity of the point of origin, and on roof and ribs in all of the places in the section. Every place in this section was an active working place inby the 2nd left entries.

There was a very wet area on the 3rd left entry and air-course which extended outby from near room 21 for some distance and because of this water the haulway into the working places in the 3 left entries had been through rooms 21 and 22 between the 3 left and 4 left entries. In these two rooms there was much dry coal dust on roof, ribs, and floor. The wet area in the 3 left entries just outby of room 21 probably exerted a limiting effect on the propagation of the explosion in that direction while the plentiful amount of very dry coal dust in rooms 21 and 22 between the 3 left and 4 left entries afforded ideal conditions for the propagation through to the 4 left. Evidently the flame moved very rapidly through these rooms and into the 4 left where the flame ignited the pellet powder in the explosives car at the intersection of the 4 left and basin mains, which added impetus to the explosion.

Apparently the explosion moving outby through the 3 left entries was retarded by the wet area and lowering of pressure through expansion into the 2 left area as the two forces apparently

met at the intersection of the 3 left and basin mains.

On the basin mains from the 1 left intersection outby there is a condition ranging from a moist to decidedly wet. At the intersection of the sidetrack and basin main haulageway, outby of the 1 left intersection there is an area in which water is falling in small streamlets from the roof and from this point outby there was no visible indication of flame and there was a marked lowering of pressure.

Dust samples 6A and 6B were collected at a point on No. 5 basin main outby of 1 left intersection and indicates an average condition of this area. The air dry moisture loss of these samples was 11 per cent of roof and rib sample and 13.2 per cent of floor sample.

From the point where samples 6A and 6B were collected there was a decidedly wet area; in many places the floor was in a muddy condition and small pools of water were formed. This condition existed to a short distance beyond the drainway and from there for quite a distance the conditions were moist.

Samples 7A and 7B were collected at the intersection of the 5 west and the "I" headings and the air dry moisture loss of these samples were 12.0 and 14.3 per cent.

Samples 8A and 8B were collected about 200 feet outby the intersection of 5 west haulageway and the "I" headings and the air dry moisture loss was 8.9 per cent and 11.4 per cent.

Dust samples laboratory numbers A-80253 to A-80282 were collected at places within the flame area at selected places

between roof falls where it was possible to get roof, rib, and floor samples, and it is believed these samples are representative of conditions throughout that area following the explosion.

The total ash plus moisture in none of these samples exceeds 34.1 and the average is 14.6 per cent.

More dust samples would have been collected outside of the affected area but before this was done considerable rock dust had been carried by the ventilating current long distances with resultant deposits and it was deemed not advisable.

TABLE NO. 1

ANALYSES OF DUST SAMPLES--BOISSEVAIN MINE

Sack No.	Location in Mine	Kind of Dust	Mois- ture	Ash	Comb.	Ash Plus Mois- ture	Screen Test		
							48	100	200
1-A	In new drainway to Jenkins-Jones Mine	R & R	.6	7.1	92.3	7.7	No size		
1-B	In new drainway to Jenkins-Jones Mine	Floor	.5	10.4	89.1	10.9	85.9	69.7	50.9
2-A	On 3 basin main between 4 left entries	R & R	.8	17.0	82.2	17.8	No size		
2-B	On 3 basin main between 4 left entries	Floor	.6	19.4	80.0	20.0	No size		
3-A	In room 22 off 4 left	R & R	.8	10.0	89.2	10.8	No size		
3-B	In room 22 off 4 left	Floor	.7	10.6	88.7	11.3	85.3	66.5	48.0
4-A	In crosscut between rooms 26 - 27 off 3 left	R & R	.7	7.6	91.7	8.3	No size		
4-B	In crosscut between rooms 26 - 27 off 3 left	Floor	.8	9.5	89.7	10.3	65.5	34.3	17.3
5-A	In 16 K at Station 04905	R & R	.5	24.3	75.2	24.8	No size		
5-B	In 16 K at Station 04905	Floor	.4	20.5	79.1	20.9	44.1	19.9	8.2
			Mois- ture						
			Air Dry				Thru 50	Thru 200	
6-A	On 5 west haulage 200 ft. outby "I" headings	R & R	8.9	20.3		30.1	42.3	21.6	
6-B	On 5 west haulage 200 ft. outby "I" headings	Floor	11.4	22.7		34.1	32.5	4.1	
7-A	At intersection of 5 west haulage and "I" heading	R & R	12.0	20.1		32.1	35.6	17.2	
7-B	At intersection of 5 west haulage and "I" heading	Floor	14.3	21.5		35.8	31.3	16.7	
8-A	On 5 basin main 300 ft. outby 1 left	R & R	11.0	15.2		26.2	47.1	34.3	
8-B	On 5 basin main 300 ft. outby 1 left	Floor	13.2	19.8		33.0	43.4	27.0	

Note -- The samples 6A-B, 7A-B, and 8A-B were air dried, screen tested, and volumeter test run at Norton Station

METHOD OF MINING

A room and pillar method of mining is used. The main entries are driven six abreast and room entries two abreast. Pillars have been extracted from a large portion of the older part of the mine. Room entries are driven at intervals of about 225 feet and two parallel rooms are driven off room entries at intervals of about 200 feet. These rooms are driven through and intersect adjacent entries. When the room entries have been driven up, rooms are turned and driven about 15 feet wide with room pillars about 25 feet thick. These room pillars are later extracted.

All of the coal is center cut with 17-A Jeffrey machines mounted on trucks. The coal is shot with either Pellet powder fired by squibs or Monobel 9A, L.F. permissible explosive detonated by No. 6 electric detonators. Both machine and hand loading is done. Four mechanical loaders load approximately 1000 tons a day; the rest being hand loaded.

Much timbering is required. The timbering consists of either posts and caps or 3-member timber sets.

Ventilation and Gases:

The mine is rated as non-gassy by the Virginia Department of Mines. It is said that inflammable gas has never been detected in any portion of this mine. No pre-shift inspection was made.

The mine is ventilated by means of a 16-foot by 6-foot centrifugal fan which previous to the explosion was operated blowing. By means of doors the direction of the ventilating current can be reversed. It is fitted with explosion doors. The fan is belt driven by means of an electric motor. A recording water gauge is provided. Following is record of fan performance on the day previous

to the explosion:

73 r.p.m., 75 h.p., 27.27 k.w.h., 1.1 inch water gauge
36 r.p.m., 37.5 h.p., 5.16 k.w.h., .3 inch water gauge

The foregoing is a record of the fan performance at the two different speeds at which it is operated. At 3 a.m. the fan speed is reduced to 36 r.p.m. and at 7:30 a.m. speeded up to 73 r.p.m., and again at 3 p.m. the speed is reduced to 36 r.p.m., and at 9 p.m. speeded up to 73 r.p.m. An air measurement made after temporary ventilation had been completed indicated the full return to be 73,080 cubic feet per minute. It is said that air measurements previous to the explosion indicated 110,000 cubic feet per minute.

After temporary ventilation had been completed, air samples and air velocities were taken at places indicated on the accompanying map on which is also shown the probable course of the air before the explosion and the course of the air after the direction of air flow was changed following the explosion and at the time the air samples included herein were collected.

Table 2 shows the quantity of air circulating at designated points and the analytic results of air samples collected during the recovery work and after ventilation had been restored in the affected area.

During the recovery work no methane was detected by the use of a flame safety lamp, not even in places in advance traveling air.

Samples laboratory Nos. 55543 and 55544 were collected during the recovery work. Sample No. 55543 was collected at the

TABLE NO. 2

GAS ANALYSIS REPORT
OF MINE AIR SAMPLES COLLECTED IN THE
BOISSEVAIN MINE, POCAHONTAS FUEL COMPANY, BOISSEVAIN, VIRGINIA
FEBRUARY 29 AND MARCH 21, 1932

Sample Number	Laboratory Number	Location in Mine	Per Cent				Cu. Ft. Air Per Minute
			Carbon Dioxide	Oxygen	Nitrogen	Methane	
AS-443	55543	At face of 6th left	0.52	20.42	78.86	0.20	
AS-444	55544	Outby of 6th left	0.15	20.76	79.06	0.03	
AS-451	55593	Outby 1st crosscut, 1 north, new drainage heading	0.22	20.80	78.98	0.00	5,265
AS-462	55594	100 ft. on 4th left aircourse	0.32	20.64	79.02	0.02	26,195
AS-452	55595	Face room 26 off 3rd left	0.38	20.43	79.16	0.03	
AS-461	55596	Outby intersection of 5th west with basin main	0.19	20.75	79.06	0.00	14,833
AS-440	55597	Inby intersection of 5th west with basin main	0.25	20.64	79.11	0.00	12,870
AS-455	55598	Face of 4th left	0.56	19.80	79.56	0.08	
AS-456	55599	Inby 1st crosscut in new drainage heading	0.12	20.89	78.99	0.00	5,265
AS-441	55600	Full return at slopeway	0.32	20.50	79.18	0.00	73,080
AS-446	55602	Face 4th left aircourse	0.40	20.18	79.36	0.06	
AS-445	55603	Face 4th left aircourse	0.44	20.07	79.44	0.05	

face of the 6 left entry and shows 0.20 per cent methane. Sample No. 55544 was collected at the intersection of 6 left and no. 1 basin main entry which was a point on the full return from the 6 left and the area inby; this sample shows 0.03 per cent methane.

After ventilation had been restored air samples bearing laboratory Nos. 55593 to 55603, inclusive, were collected.

Samples laboratory Nos. 55596 and 55597 were collected near the intersections of the 5 west entries with the basin mains, which points were the points of intake into the basin main section of air from the other portion of the mine and from main intake; neither sample shows methane.

Samples laboratory Nos. 55593 and 55592 were collected in what is known as the New Drainway. These samples were collected for the purpose of determining whether methane was being carried from Jenkins-Jones mine into Boissevain mine through the drainway which intersects Jenkins-Jones workings. Neither sample shows methane.

Sample laboratory No. 55594 was collected on the 4 left aircourse about 100 feet inby the intersection with no. 1 basin main entry. This point is on the full return from the 5th, 6th, 7th left entries and the faces of the basin mains and it shows a methane content of 0.02 per cent which calculated for 24 hours indicates there is 754.4 cubic feet of methane carried past this point in 24 hours.

Sample laboratory No. 55602 was collected at the face of 4 left aircourse which was approximately 180 feet inby last

open crosscut and it shows but 0.06 per cent methane.

Sample laboratory No. 55598 was collected at the face of the 4 left entry which was 180 feet in by last open crosscut and it shows 0.08 per cent methane. On the following day another sample (laboratory No. 55603) was collected at the same point and it shows 0.05 per cent methane.

Sample laboratory No. 55595 was collected at the face of room 26 off 3 left entry, which point was the point of origin of the explosion and it shows 0.03 per cent methane. The point where this sample was taken was approximately 130 feet in by the last open crosscut.

Samples laboratory Nos. 55600 and 55601 were collected at the overcast over slopeway near the fan and in the full return from the mine. Neither sample shows methane.

The analytic results of the air samples collected while not conclusive proof that methane was not a factor in the initiating and propagating of the explosion do indicate that in all probability it was not.

Haulage:

The track gauge is 30 inches. The rails used are 85, 60, 40 pounds.

Two types of cars are used: one an all metal lift end-gate type of about 3-ton capacity; the other a wooden end-gate type of about $2\frac{1}{2}$ -ton capacity.

Main haulage is with trolley locomotives. Gathering is with reel and trolley locomotives.

All haulage was on return air.

All electric power underground is 550 volts direct current.

The trolley lines were not guarded but they are approximately 6 feet above the rail. A large part of the main haulage is on a heavy up grade toward the shaft bottom.

Lighting:

Portable carbide lights were used for illumination by men and officials. The main bottom and junction points on haulageways were lighted by electric lights the current for which was taken from the trolley wires.

Machinery Underground:

None of the machinery underground was of permissible type.

The power for all motor-driven machinery was 550 volts direct current.

There were 4 mining machines of the 17-A type Jeffrey mounted on home-made trucks for center cutting.

There was one motor-driven electric pump of a portable type and two motor-driven stationary pumps.

There were 4 trolley type locomotives and 14 trolley and cable reel type locomotives.

There were 4 loading machines of the Coloder type.

Each shot firing crew was supplied a motor-driven power drill.

Power:

Electric power is purchased; it is transformed from 13000 volts alternating current to 220 volts alternating current and 550 volts direct current in the transformer station which is located

about 500 feet from the shaft. The 220 volt alternating current is used for operating the fan, hoisting engine and other machinery about the surface, and the 550 volt direct current is used for operating all of the electrically-operated equipment underground.

Explosives and Shooting:

All coal is center cut before being shot. Either pellet powder or permissible explosives are used for shooting coal. Occasionally 60 per cent dynamite is used for shooting rock but usually permissible explosives are used for this purpose. The permissible explosive used is Monobel 9A, L.F. in sticks 1-1/2 inches in diameter. A maximum of 12 sticks per shift is allowed. These are issued at the explosives magazine on the surface and are carried into the mine in canvas bag by the miner. No. 6 electric detonators are used to detonate the detonating explosives and, it was said, occasionally to fire charges of pellet powder. The detonators are also issued from the explosives magazine and are either carried loose or wrapped in paper. Leg wires of shots prepared for shooting in a room adjacent to the room in which the explosion originated were not shorted. Either Monobel or pellet powder is used for shooting coal presumably Monobel is used in all wet holes.

Quantities of explosives and pellet powder are hauled into the mine by electric locomotives in a specially constructed car. This explosives car is used to transport the explosives, pellet powder and detonators to the several portions of the mine where shooting crews are employed to drill, tamp, and fire the

shots in machine loading sections. This car is presumably of an insulated construction and is attached to locomotives or trip by an insulating coupling of wood and iron construction and of a stiff type.

Whether or not the explosives car is of insulated construction is problematic as it is in substance of the ordinary mine car construction with the exception of the drawbar which is two large bolts extending under the floor to two coupler plates at each end and is lined with Rubberoid roofing material, over which is nailed 1-inch boards. These nails extend through the roofing material into outer boards. It has two hinged covers of the lift type which extend the full length of the car.

Clay is supposed to be used for stemming all shots. However, during the recovery work dummies filled with fine coal were found. When pellet powder is used the usual practice is to use a blasting needle and fire with squibs. It is said, however, that occasionally electric detonators are used to fire pellet powder.

In holes prepared for shooting it was observed that the stemming was not tightly tamped and that the holes were not tamped too near the collar of the hole; in these holes observed there was from 19 inches to 27 inches of untamped hole.

Scrappings from the end of one of the drill holes of one of the shots presumed to have caused the explosion were collected and sent to the explosives laboratory of the U. S. Bureau of Mines and the curalytic results indicate that either

straight dynamite or a permissible explosive was fired in this hole. From the condition of the coal at the back of each of the 4 holes, it is evident that a detonating explosive was fired in each of them.

Explosives Magazine:

The explosives storage magazine is located about 800 feet from the main shaft and tibble. It is constructed of concrete blocks and has a wooden roof. On the day it was visited there was a very small supply of explosives in it, consisting of several cases of Monobel 9A, L.F. and a broken case of 60 per cent dynamite. There were a number of electric fuses lying loose in a paper but the attendant was asked to remove these and destroy them. There were no lights in the building.

There were two large ventilators in the walls high up near the apex of the roof. These are constructed of wood and the openings between the panels are large enough to permit of small objects being thrown through.

Drainage:

This mine is kept free of accumulation of water by natural drainage. Water is conducted by ditches from the various sections to a large main drainageway. Two parallel entries were driven from the Boissevain mine and intersected entries of the Jenkins-Jones mine which is adjacent to the Boissevain. These two entries form natural drainways through to what is known as 6 - 4 drifts, as shown on the accompanying map. Two parallel entries are being driven from near the face of the basin main

entries to intersect entries leading to the 6 - 4 drifts, which when completed will afford natural drainage from that portion of the mine. On the day previous to the explosion a small opening had been made through at the face of one of these parallel entries. After the explosion a party came through from the Jenkins-Jones mine to the mouth of these entries on the basin main, but were unable to go farther because of afterdamp.

Rock Dusting and Watering:

No rock dusting had been done in this mine.

No watering had been done to allay dust in any part of the mine.

CONDITIONS IMMEDIATELY PRIOR TO THE EXPLOSION

The night shift had entered the mine as usual on the night of February 26 and nothing unusual had occurred in so far as anyone knows. The positions of the bodies would indicate that the men were performing their duties in the normal, usual manner.

PREVIOUS EXPLOSIONS

It was said that there has never been gas found or lighted in the Boissevain mine. However, in mines adjacent appreciable gas has been found. It was reported that on two different occasions explosives in powder cars have exploded in the Boissevain mine, but that in neither instance had the explosion been propagated.

PROPERTY DAMAGE

No accurate estimate of the damage can be made, but it will be great, as approximately eighty-five per cent of the af-

affected area in by the 1 left entry off the basin main was affected by heavy falls and no doubt more falls will occur before timbering can be replaced that had been dislodged by the forces of the explosion. Every stopping and door in the affected area was completely destroyed. Trolley wires were either torn down by the forces or buried under heavy, extensive falls. All the machinery in the affected area suffered more or less damage from forces, flame, or heavy falls. Probably sixty days will be required to clean up the haulageways sufficiently to resume operations.

RESCUE AND RECOVERY OPERATIONS

The water gauge chart indicated a disturbance at some moment between 4:05 and 4:10 a.m., the pen having been moved off the chart and apparently the fan was again operating normally at 4:15 a.m.

The fan was not damaged. The fan speed had been reduced at about 3:00 a.m. as usual.

What occurred for several minutes following the explosion is not definitely known, but that an explosion had occurred somewhere in the mine was known and various officials were notified. Shortly after the explosion, one of the men who escaped was hoisted to the surface and a little while later the other three.

After making a short exploration, a decision was made to reverse the direction of the ventilating current so as to permit the use of the main haulageway and hoisting shaft for men and supplies.

A damaged concrete stopping at the mouth of the 4 west

was repaired, which permitted rapid progress of the rescue parties into the 5 west as far as the intersection of the 5 west entries with the "I" headings. Here it was found that afterdamp was moving out of the section to the right of the 5 west and because of the several entries and large area the ventilating current was very sluggish. It was at this point that Marshall and Davies joined the party. After carefully viewing the conditions it was decided to retreat and close the aircourse over the overcast at the "I" 13 heading, which very materially increased the velocity and quantity of air on the 5 west, which was the intake. It was then decided to seal off the two entries leading to the "I" 12 headings and the two drainways were then sealed and good brattices placed at the places where the concrete seals had been on the "I" headings. After these had been built and this area cleared the recovery work progressed much more rapidly but was hindered by heavy extensive falls and by falls occurring frequently and particularly as the fresh air was advanced. The first two bodies were found at the mouth of the 1 left entry. The order in which the bodies were recovered is shown by numbers together with their names and occupations on the accompanying map.

The recovery work progressed uninterrupted until about 8 p.m. of March 1, 1932, when ventilation had been restored in the explosion area and all of the bodies that had been located had been recovered. At this time all persons were ordered out of the mine and every person whose name appeared on the check-in list were accounted for. While the list was being checked, a conference was held in which all who had taken leading parts in the recovery work

participated and in which the decision to relieve all who wished to return to their homes or work and to organize searching parties to move falls to recover bodies was made. Every possible clue or evidence that might lead to the location of missing bodies was noted, after which it was decided all should rest until early morning of March 2, when the work of uncovering the remaining missing bodies was resumed and proceeded uninterrupted until the early morning of March 5, 1932 when the last body was recovered from under a very heavy fall in the 6 left entry.

MINE CONDITIONS AFTER THE EXPLOSION

The official underground investigation was made by chief mine inspector A. G. Lucas of the Virginia Department of Mines and representative persons on March 5, 1932. On the previous day, March 4, a party consisting of W. J. German, Cassell, Schwinberg, K. L. Marshall, and J. F. Davies made very careful observations in every accessible part of the affected area.

The inspections disclosed that not a place in the affected area had escaped damage, timbers were dislodged and falls had occurred or the roof was working. Probably in eighty-five per cent of the affected area in by 1 left entry off basin main falls had occurred and others were imminent.

The flame and forces had apparently been initiated in room 20 off 3 left off basin main and moved outby and through rooms 21 and 22 into the 4 left and outby, and at the intersection of the 4 left with the basin main entries where the flame ignited a quantity of pellet powder in an explosives car, which no doubt added impetus

to the flame and forces already developed. Whether or not the explosion would have been as widespread had this powder not been ignited is problematic, but evidently this burning powder added impetus to the explosion. No doubt several electrical arcs occurred during the progress of the explosion which may have also been factors in the propagation of flame. The direction of forces, location of explosives car, point of origin, together with pertinent data, are indicated on the accompanying map.

STATE INSPECTOR'S CONCLUSION

It was the conclusion of chief mine inspector A. G. Lucas of the Virginia Department of Mines that the explosion had been initiated at the face of room 26 off 3 left off basin main by one or more overcharged or so-called windy shot or shots, and that the explosion had been propagated by coal dust and that gas was probably not a factor in the initiation of the explosion.

SUMMARY OF EVIDENCE

AS TO THE CAUSE, ORIGIN, AND PROPAGATION OF THE EXPLOSION

During the recovery operation, not a trace of gas was detected on a flame safety lamp, although very careful efforts were made to find traces in advanced places. Two air samples were collected at what was believed to be strategic points; the analytic results of these and other air samples show very little or no methane.

Direction of movement of heavy debris, dust, and coke deposits on standing timbers and coke deposits on ribs all led to unquestionably placing the point of origin in room 26 off 3 left off basin mains. These indications lead uninterruptedly past the point where the powder in the explosives car burned, indicating

that the burning of the powder was but a factor in propagation.

In room 26 off 3 left off basin main eight shots had been fired and it is believed in two series in rapid succession; that is, the four shots in the bottom bench of coal were fired and as soon as it was possible to do so the four shots in the upper bench were fired. It is believed the four top shots initiated the explosion as it is believed they were all four fired simultaneously. This belief is strengthened by the way the shots in the adjacent room were connected for firing.

The four top shots were evidently overcharged. There was a portion of each of the drill holes left. The depth of these varied from 17 inches to 29 inches. The condition of these all indicated that the same type of explosive had been used in each and scrapings from the one second from the right rib were collected and sent to the explosives laboratory of the U. S. Bureau of Mines for testing to determine the nature of the explosive used. The results of this test indicate that either a permissible explosive or straight dynamite was used in this hole.

The positions of the three bodies found in this room indicate that one man was sitting in the deck of the locomotive, probably waiting for the other two, the other two were about 11 and 16 feet outby the "hot-shot" dry cell battery used for firing shots, the one outby body lying full length, the inby body apparently had been on hands and knees and had settled down from that position. The end of the firing cable was about 3 feet inby the battery. All of these led to the belief that simultaneous

with the firing of the shots the explosion occurred.

Coke deposits or heavy soot streamers indicated that flame had reached the face of every place in the affected area and apparently diminished rapidly outby 1 left.

This rapidly diminishing flame evidently failed of propagation when it reached the wet area at the intersection of the basin mains, the "I" heading, the drainways, and the 5 west entries and evidently there was a rather sudden release of pressures in this area immediately following the collapse of the six concrete seals across the six "I" headings and the concrete seals between the 4 west off main and the "I" headings as the collapse of these seals opened unrestricted passageways in several directions and into large areas for expansion. The wet area in the 3 left entries outby room 21 off 3 left probably had a limiting effect in the early stage of the explosion which probably accounts for the comparatively slight effects of the explosion in the inby portions of the 1 and 2 left entries.

PROBABLE CAUSE OF THE EXPLOSION

Evidently the explosion was initiated at the face of room 26 off 3 left entry off the basin mains, the face of which room was approximately 130 feet inby the last open crosscut. It is believed that four shots had been fired in the bottom bench, and that before the smoke and dust of these shots had cleared four top shots were fired. It is also believed that the four top shots had been overcharged, had been fired simultaneously, and had projected sufficient flame of long enough duration to permit of

propagation by the coal dust in suspension; furthermore, that there had been developed a pressure wave of sufficient intensity to raise into suspension sufficient coal dust to carry on propagation outside of this room and to have developed the widespread explosion which resulted.

WHAT HAS BEEN DONE TO PREVENT RECURRENCE OF THE DISASTER

Realizing that this explosion was occasioned by improper shooting and that the explosion was propagated by coal dust it is now the policy of this company to, in so far as is feasible to do so, eliminate or minimize the hazards that contributed, and the following are some of the important things that are being or will be done.

1. That in order to prevent the propagation of an explosion a high pressure rock-dust distributor has been purchased, together with supplies of rock dust and rock dusting is being done as the cleaning up process proceeds. It is the intention to thoroughly and systematically rock dust the mine and to so maintain the percentage of incombustible content of the dust on roof, rib, timbers and floor of all places as to prevent the propagation of flame.

2. That only charges of permissible explosives fired in permissible manner will be used for the shooting of all coal shots.

3. That all persons underground will be provided portable electric cap lamps and that the use of open flame lights shall not be permitted underground.

4. That a "no smoking" rule has been put into effect and is and will be strictly enforced.

5. That an "In" and "Out" checking system has been provided and is being used.

RECOMMENDATIONS

In a spirit of helpful cooperation and with a desire to assist if possible in preventing a recurrence of a similar disaster in this mine, the following recommendations are offered. Although some of these recommendations have already been put into effect they are included.

1. That to prevent the propagation of an explosion every open and accessible part of the mine be thoroughly and effectively rock dusted to within at least 40 feet of every active face.

2. That regular and systematic sampling of all rock-dusted areas be done at frequent intervals and records of such sampling be kept.

3. That the practice of advancing working faces long distances beyond the last open crosscut "as the face of room 26 or the face of the long room between 4 left aircourse and the 3 left entry or the face of both 4 left entry and aircourse" be prohibited.

4. That a careful study be made with the view of establishing regular and systematic methods of shooting all coal and especially the elimination of heavily charged shots of a dependent nature.

5. That preferably all shooting be done after the shift and when all persons are out of the mine excepting the regularly employed shot-firers.

6. That if shooting is done during the shift that only

such shot or shots that are not of a dependent nature and that are charged with permissible explosives, such charges being within the permissible limit, properly stemmed to the collar of the bore hole with incombustible material preferably clay secured outside the mine, be fired.

7. That the placing, charging, and firing of any or all shots be under the immediate supervision of experienced, qualified, and dependable official.

8. That all shots be fired electrically.

9. That the car used for the transportation of explosives be so constructed as to afford positive protection against electrical current, whether it be through draw bar rail or contact with trolley wire on any part or piece of such car.

10. That the explosives car shall not be considered as suitable for storage of explosives underground, and its capacity should not be greater than one day's supply.

11. That the keeping of supplies of either detonators, cap, or explosives in any tool house, shanty, or supply box underground, even in small quantities should be prohibited.

12. That suitable water locks be constructed in the drainways between the Boissevain mine and the Jenkins-Jones mine to insure that air does not pass from one mine to the other, thus avoiding air loss from either mine or the passing of methane laden air from one mine to the other unintentionally.

13. That the fan speed should not be reduced while any person is in the mine.

14. That where it is practicable to do so, robbed or

abandoned area should be effectively sealed with strong effective seals constructed of incombustible materials and provided with means whereby samples of air may be collected from within the sealed area for analysis.

15. That where it is not practicable to seal robbed areas the return air from these areas should be, in so far as it is practical to do so, so coursed as not to pass through any active part of the mine nor over or by any electrically operated equipment.

16. That each person charged with the safety or supervision of men underground should qualify as to his ability to detect methane or unsafe conditions and that he be required to make regular systematic inspection of every place within his jurisdiction and to make written reports of his findings. Such inspection should be at least twice during each shift.

17. That an "In" and "Out" checking system be provided and carefully and systematically followed.

18. That every person in or around the mine be trained in methods of rendering first-aid to the injured.

19. That at least ten men be instructed in mine-rescue methods and procedure.

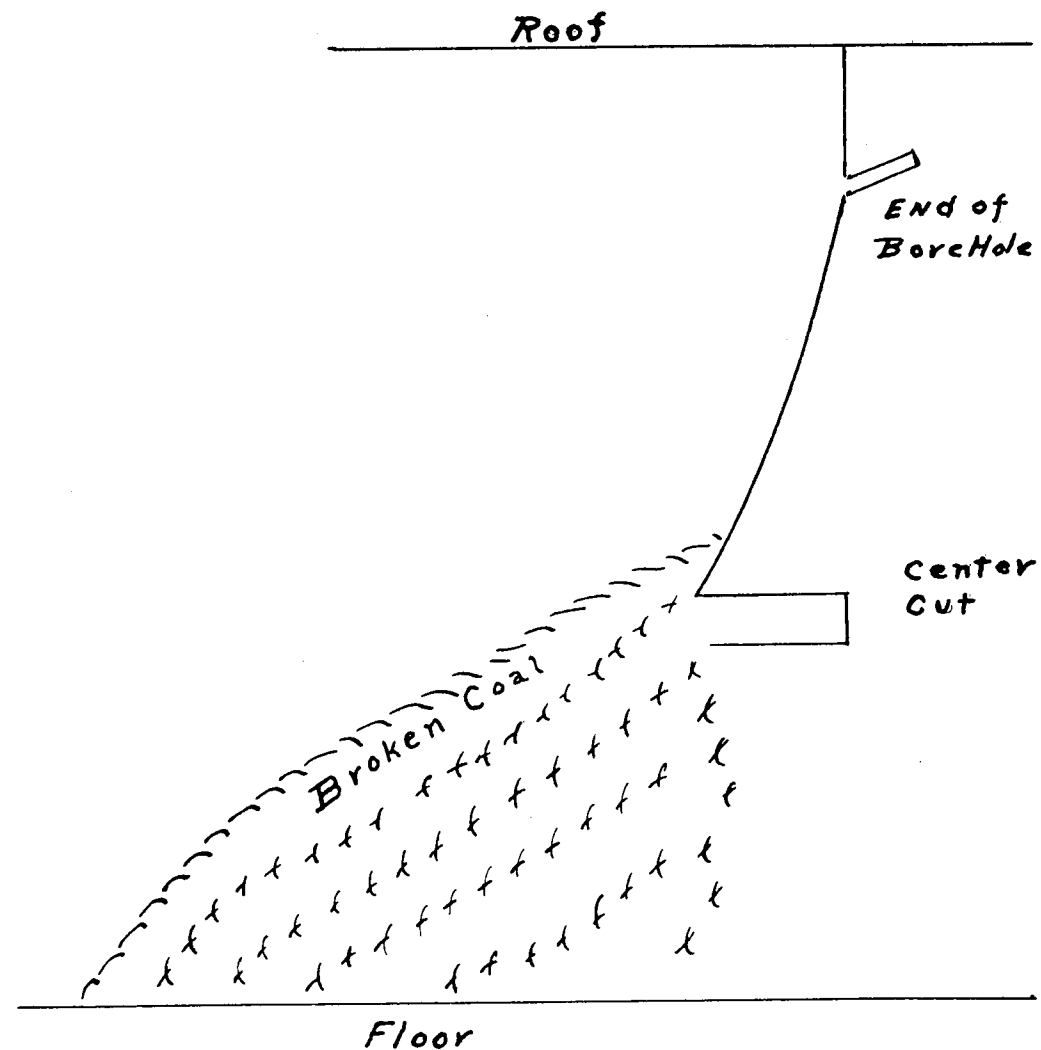
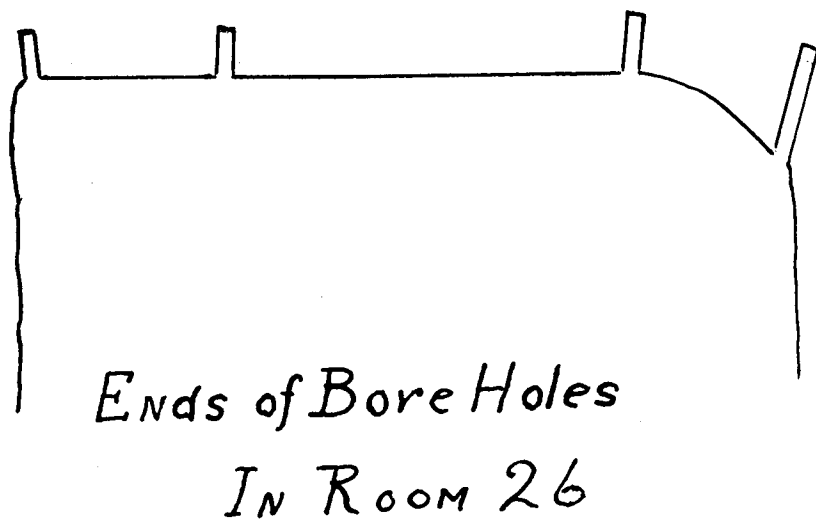
20. That regular supervised safety meetings be held at least once each month in which every employee is required to participate.

Respectfully submitted,


J. F. DAVIES
Assistant Mining Engineer

Approved:

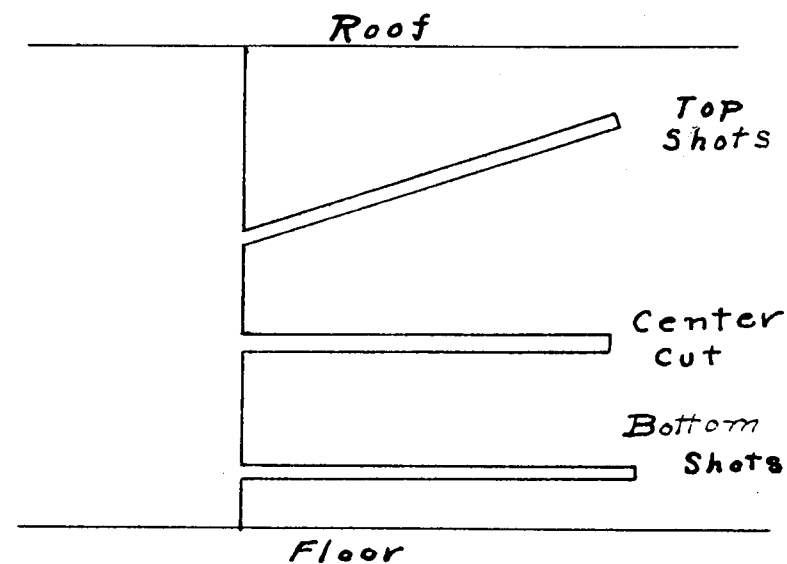
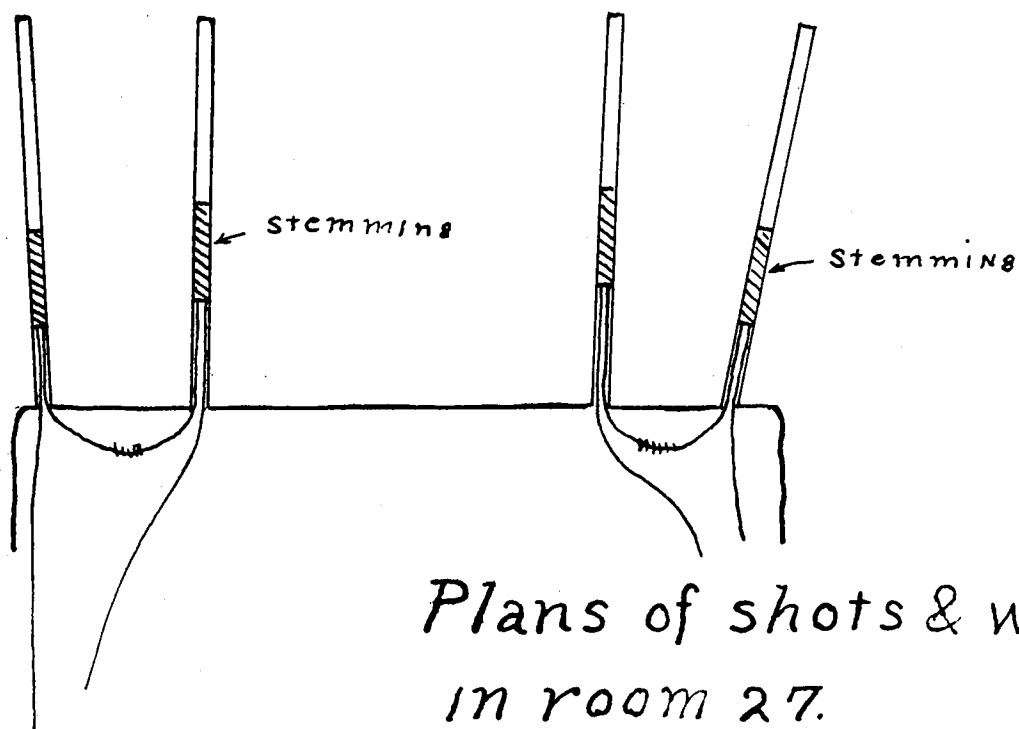
APPENDIX



Side view of face of room 26

1" = 2'

Boissevain Mine - Pocahontas Fuel Co. Boissevain, Va.



Plans of shots & wire connections
in room 27.

Boissevain Mine - Pocahontas Fuel Co. - Boissevain, Va. $1'' = 4'$

U. S. BUREAU OF MINES

E-DESCRIPTION OF MINE

(1) State **Virginia** (2) County **Taxewell** (3) Town **Boissevain** (Post office.)

(4) Mine sample of **roof, & rif, floor dust** (5) Coal field **Pocahontas** (6) District

(7) Mine **Boissevain** (a. Name.) (b. Kind of opening—if shaft give depth.) **shaft** (c. Height of opening above sea level.) **about 2300**

(d. Distance and direction from town.) (e. Sec., T., and R., if necessary.) (f. Railroad connections.) **N E R Ry**

(g. Shipping point.) (h. State if wagon mine or prospect and give distance from shipping point.)

(8) Coal bed **Pocahontas #3** (a. Name.) (b. Geologic system.)

(c. Formation.) (d. Dip, degrees.) (e. Strike, direction.)

(9) Mining system **room & pillar** (Long wall, room and pillar, panels, etc.) (10) Undercutting **center cut/** (Hand or machine.) **machine**

(11) Explosives **Monobel - Pellet** (a. Used for coal.) (b. Used for roof or floor.)

(12) Operator **Pocahontas Fuel Co.** (Name and address.)

(13) Sales agent (Name and address.)

(14) Output per day **2237 tons** (Average—gross or net tons.) (15) Maximum day's output (During past year.) (16) Last year's output **420,400 tons** (Gross or net tons.)

(17) Output from advance workings, per cent **35** (At present.) (18) Lifetime of mine **25 years** (Years—estimated.)

(19) Run-of-mine, per cent (Of output shipped.) (20) Is coal screened? **yes** (21) Type of screens **shaker**

(22) Type of washer (23) Per cent of coal washed **all but fine**

(24) Maximum size washed **all except slack** (25) Sizes produced **4** (Washed coal.)

(26) Sizes produced **1-slack** (Of coal not washed.) (27) Is coal picked? (State whether on car or belt.)

(28) Per cent of coal coked (At mine.) (29) Sizes coked (Screenings, crushed, washed, etc.)

(30) Type and number of ovens (31) Remarks (For any additional information indicate after subject, mark X if additional information is given here.)

(32) Can Nos. **1-A-B, 2-A-B, 3-A-B, 4-A-B, 5-A-B** (Give Nos. of all samples forwarded.)

(33) Laboratory Nos. **A 50253 to A 50262 incl.** (Laboratory to fill in immediately below corresponding can number.)

(34) Mine sampled at **5** points, by **J.F. Davies, E.H. Hodgson & P.O. Vincent** on **3/22/32**, 19 **Norton, Va.** (Date.)

Above information copied from Card A by **McDermott** on **April 19, 1932** 19

DEPARTMENT OF COMMERCE BUREAU OF MINES

DUST-ANALYSIS REPORT

Test No. roof & rib Lab. No. A 80258
 Sample of Pocahontas Fuel Co. dust (through 20-mesh screen). Can No. sack V-1
 Operator Virginia Mine Buissevain
 State Boissevain County Tazewell Bed Pocahontas #3
 Town _____
 Location in mine in new driveway to Jenkins Jones mine
 Method of sampling Std Gross weight, lbs. _____ Net weight, gms. 20.
 Date of sampling 3/22/32 Date of Lab. sampling _____ Date of analysis _____
 For B. of M. section Mine Acc Collector Davies

AIR-DRY LOSS		COAL (Air dried)	COAL (As received)	COAL (Moisture free)	COAL (Moisture and ash free)
Proximate Analysis	Moisture _____		<u>.6</u>		
	XXXXXXXX <u>Comb</u>		<u>92.5</u>	<u>92.8</u>	(^a)
	Volatile matter _____				
	Fixed carbon _____				
	Ash _____		<u>7.1</u>	<u>7.2</u>	
			<u>100.0</u>	<u>100.0</u>	
Ultimate Analysis	<u>on 20 mesh</u>		<u>Grams</u>	<u>Per cent</u>	
	<u>thru 20 mesh</u>		<u>5.0</u>	<u>13.0</u>	
	<u>total wt. of sample</u>		<u>20.0</u>	<u>87.0</u>	
	Oxygen _____		<u>23.0</u>		
	Sulphur _____				
	Ash _____				
Calorific value determined	Calories _____				
	British thermal units _____				

Screen test, through 20 mesh No size. Cumulative per cent. 100
 through 48 mesh _____
 through 100 mesh _____
 through 200 mesh _____
 Area from which sample was taken (sq. ft.) _____
April 25, 1932
 Date, _____ (Signed) H. M. Cooper, Chemist.

DEPARTMENT OF COMMERCE
BUREAU OF MINES

DUST-ANALYSIS REPORT

Test No. _____

Lab. No. **A 80254**Sample of **floor** _____ dust (through 20-mesh screen).Can No. **sack 1-B**Operator **Pocahontas Fuel Co.** _____ Mine **Boissevain** _____State **Virginia** _____ County **Tazewell** _____ Bed **Pocahontas #3** _____Town **Boissevain** _____Location in mine **in new drainway to Jenkins Jones mine** _____Method of sampling _____ **Std** _____ Gross weight, lbs. _____ Net weight, gms. **98.** _____Date of sampling **5/22/32** _____ Date of Lab. sampling _____ Date of analysis _____For B. of M. section _____ **Mine Acc** _____ Collector **J.F. Davies** _____

	AIR-DRY LOSS	COAL (Air dried)	COAL (As received)	COAL (Moisture free)	COAL (Moisture and ash free)
Proximate Analysis	Moisture _____		.5		
	Moisture Comb _____		89.1	89.6	(^a)
	Fixed carbon _____		10.4	10.4	
	Ash _____		100.0	100.0	
Ultimate Analysis	Hydrogen _____		Grams	Per cent	
	Carbon on 20 mesh _____		10.0	9.3	
	thru 20 mesh _____		98.0	90.7	
	Nitrogen _____				
	total wt. of sample _____		108.0		
	Oxygen _____				
Calorific value determined	Sulphur _____				
	Ash _____				
	Calories _____				
	British thermal units _____				

Screen test, through 20 mesh _____ Cumulative per cent. 100

through 48 mesh _____ **85.9**

through 100 mesh _____ **69.7**

through 200 mesh _____ **50.9**

Area from which sample was taken (sq. ft.) _____

Date, **April 25, 1932** _____ (Signed) **H. M. Cooper** _____, Chemist.^a This figure is the ratio of volatile combustible to total combustible.

DEPARTMENT OF COMMERCE
BUREAU OF MINES

DUST-ANALYSIS REPORT

Test No. _____ Lab. No. **A 80255**
 Sample of **roof & rib** dust (through 20-mesh screen). Can No. **sack 2-A**
 Operator **Pocahontas Fuel Co.** Mine **Boissevain**
 State **Virginia** County **Tazewell** Bed **Pocahontas #3**
 Town **Boissevain**
 Location in mine **on 3 basin main parallel between 4 left entries**
 Method of sampling **std** Gross weight, lbs. _____ Net weight, gms. **56.**
 Date of sampling **3/22/32** Date of Lab. sampling _____ Date of analysis _____
 For B. of M. section **Mine Acc** Collector **Davies**

AIR-DRY LOSS		COAL (Air dried)	COAL (As received)	COAL (Moisture free)	COAL (Moisture and ash free)
Proximate Analysis	Moisture		.8		
	Volatile matter Comb		82.2	82.9	(^a)
	Fixed carbon				
	Ash		17.0	17.1	
			100.0	100.0	
Ultimate Analysis	Hydrogen		Grams	Per cent	
	Carbon on 20 mesh		2.0	3.4	
	Nitrogen thru 20 mesh		56.0	96.6	
	Oxygen total wt. of sample		56.0		
	Sulphur				
	Ash				
Calorific value determined	Calories				
	British thermal units				

Screen test, through 20 mesh **no size.** Cumulative per cent. 100
 through 48 mesh _____
 through 100 mesh _____
 through 200 mesh _____

Area from which sample was taken (sq. ft.) _____

Date, **April 25, 1932** (Signed) **H. M. Cooper**, Chemist.

^a This figure is the ratio of volatile combustible to total combustible.

DEPARTMENT OF COMMERCE
 BUREAU OF MINES

DUST-ANALYSIS REPORT

Test No. _____

Lab. No. **A 80256**Sample of **floor** dust (through 20-mesh screen).Can No. **bag 2-B**Operator **Pocahontas Fuel Co.**Mine **Boissevain**State **Virginia**County **Tazewell**Bed **Pocahontas #3**Town **Boissevain**Location in mine **on 3 basin main parallel between 4 left entries**Method of sampling **std**

Gross weight, lbs. _____

Net weight, gms. **61.**Date of sampling **3/22/52**

Date of Lab. sampling _____

Date of analysis _____

For B. of M. section _____

Mine **Ace**

Collector _____

J.F. Davies

AIR-DRY LOSS		COAL (Air dried)	COAL (As received)	COAL (Moisture free)	COAL (Moisture and ash free)
Proximate Analysis	Moisture		.6		
	Volatil Comb		80.0	80.5	(^a)
	Fixed carbon				
	Ash		19.4	19.5	
			100.0	100.0	
Ultimate Analysis	Hydrogen		<u>Grams</u>	<u>Per cent</u>	
	on 20 mesh Carbon		8.0	11.6	
	thru 20 mesh Nitrogen		<u>21.0</u>	33.4	
	total wt. of sample Oxygen		69.0		
	Sulphur				
Calorific value determined	Calories				
	British thermal units				

Screen test, through 20 mesh _____

No size.Cumulative
per cent.
100

through 48 mesh _____

through 100 mesh _____

through 200 mesh _____

Area from which sample was taken (sq. ft.) _____

Date, **April 27, 1932**

(Signed) _____

H. M. Cooper

, Chemist.

^a This figure is the ratio of volatile combustible to total combustible.

DEPARTMENT OF COMMERCE
 BUREAU OF MINES

DUST-ANALYSIS REPORT

Test No. _____ Lab. No. A 80257
 Sample of roof & rib dust (through 20-mesh screen). Can No. sack 3-1
 Operator Pocahontas Fuel Co. Mine Boissevain
 State Virginia County Tazewell Bed Pocahontas #5
 Town Boissevain
 Location in mine in room 22 off 4 left
 Method of sampling Std Gross weight, lbs. _____ Net weight, gms. 50.
 Date of sampling 3/22/32 Date of Lab. sampling _____ Date of analysis _____
 For B. of M. section Mine Acc Collector J.F. Davies

AIR-DRY LOSS		COAL (Air dried)	COAL (As received)	COAL (Moisture free)	COAL (Moisture and ash free)
Proximate Analysis	Moisture		<u>.8</u>		
	Volatile Matter Comb		<u>89.2</u>	<u>90.0</u>	(a)
	Fixed carbon				
	Ash		<u>10.0</u>	<u>10.0</u>	
Ultimate Analysis			<u>100.0</u>	<u>100.0</u>	
	Hydrogen		<u>Grams</u>	<u>Per cent</u>	
	Carbon <u>on 20 mesh</u>		<u>7.0</u>	<u>10.8</u>	
	Nitrogen <u>thru 20 mesh</u>		<u>68.0</u>	<u>89.2</u>	
	<u>total wt. of sample</u>		<u>85.0</u>		
	Sulphur				
Calorific value determined	Calories				
	British thermal units				

Screen test, through 20 mesh No size Cumulative per cent. 100
 through 48 mesh _____
 through 100 mesh _____
 through 200 mesh _____

Area from which sample was taken (sq. ft.) _____

Date, April 25, 1932 (Signed) H. M. Cooper, Chemist.

^a This figure is the ratio of volatile combustible to total combustible.

DEPARTMENT OF COMMERCE
 BUREAU OF MINES

DUST-ANALYSIS REPORT

Test No. _____ Lab. No. **A 80258**
 Sample of **floor** dust (through 20-mesh screen). Can No. **sack 3-B**
 Operator **Pocahontas Fuel Co.** Mine **Boissevain**
 State **Virginia** County **Tazewell** Bed **Pocahontas #3**
 Town **Boissevain**
 Location in mine **in room 22 off 4 left**
 Method of sampling **Std** Gross weight, lbs. _____ Net weight, gms. **146.**
 Date of sampling **3/22/32** Date of Lab. sampling _____ Date of analysis _____
 For B. of M. section **Mine Acc** Collector **Davies**

AIR-DRY LOSS		COAL (Air dried)	COAL (As received)	COAL (Moisture free)	COAL (Moisture and ash free)
Proximate Analysis	Moisture		.7		
	Volatiles Comb		88.7	82.5	(^a)
	Fixed carbon				
	Ash		10.6	10.7	
			100.0	100.0	
Ultimate Analysis	Hydrogen		<u>Grams</u>	<u>Per cent</u>	
	on 20 mesh		18.0	11.0	
	Carbon		146.0	89.0	
	thru 20 mesh				
	Nitrogen				
	total wt. of sample		164.0		
Calorific value determined	Calories				
	British thermal units				

Screen test, through 20 mesh _____ Cumulative per cent. 100
 through 48 mesh _____ **85.3**
 through 100 mesh _____ **86.5**
 through 200 mesh _____ **48.0**

Area from which sample was taken (sq. ft.) _____

Date, **April 25, 1932** (Signed) **H. M. Cooper**, Chemist.

^a This figure is the ratio of volatile combustible to total combustible.

DEPARTMENT OF COMMERCE
BUREAU OF MINES

DUST-ANALYSIS REPORT

Test No. _____ Lab. No. **A 80259**
 Sample of **roof & rib** dust (through 20-mesh screen). Can No. **bag 4-A**
 Operator **Pocahontas Fuel Co.** Mine **Boissemvain**
 State **Virginia** County **Tazewell** Bed **Pocahontas #3**
 Town **Boissemvain**
 Location in mine **cut in first X-cut between rooms 26 - 27 off 3 left**
 Method of sampling **Std** Gross weight, lbs. _____ Net weight, gms. **50.**
 Date of sampling **5/22/32** Date of Lab. sampling _____ Date of analysis _____
 For B. of M. section **Mine Acc** Collector **J.F. Davies**

AIR-DRY LOSS		COAL (Air dried)	COAL (As received)	COAL (Moisture free)	COAL (Moisture and ash free)
Proximate Analysis	Moisture		.7		
	Moisture Comb		91.7	92.6	(^a)
	Fixed carbon				
	Ash		7.6	7.6	
			100.0	100.0	
Ultimate Analysis	Hydrogen		<u>Grams</u>	<u>Per cent</u>	
	on 20 mesh				
	Carbon		14.0	21.2	
	thru 20 mesh		50.0	78.1	
	Nitrogen				
	total wt. of sample		64.0		
Calorific value determined	Oxygen				
	Sulphur				
	Ash				
Calorific value determined	Calories				
	British thermal units				

Screen test, through 20 mesh **No size.** Cumulative per cent. 100
 through 48 mesh _____
 through 100 mesh _____
 through 200 mesh _____

Area from which sample was taken (sq. ft.) _____

Date, **April 25, 1932** (Signed) **H. M. Cooper**, Chemist.

^a This figure is the ratio of volatile combustible to total combustible.

DEPARTMENT OF COMMERCE
 BUREAU OF MINES

DUST-ANALYSIS REPORT

Test No. _____ Lab. No. **A 80260**
 Sample of **floor** dust (through 20-mesh screen). Can No. **make 4-B**
 Operator **Pocahontas Fuel Co.** Mine **Boissevain**
 State **Virginia** County **Tazewell** Bed **Pocahontas #3**
 Town **Boissevain**
 Location in mine **in first X out between rooms 26 - 27 off 3 left**
 Method of sampling **Std** Gross weight, lbs. _____ Net weight, gms. **151.**
 Date of sampling **5/22/32** Date of Lab. sampling _____ Date of analysis _____
 For B. of M. section **Mine Acc** Collector **J.F. Davison**

AIR-DRY LOSS		COAL (Air dried)	COAL (As received)	COAL (Moisture free)	COAL (Moisture and ash free)
Proximate Analysis	Moisture		.8		
	volatile matter Comb		89.7	90.5	(a)
	Fixed carbon		9.5	9.5	
	Ash		100.0	100.0	
Ultimate Analysis	Hydrogen		<u>Grams</u>	<u>Per cent</u>	
	Carbon on 20 mesh		28.0	18.6	
	thru 20 mesh		151.0	83.4	
	Nitrogen				
	total wt. of sample		157.0		
	Oxygen				
Calorific value determined	Sulphur				
	Ash				
Calorific value determined	Calories				
	British thermal units				

Screen test, through 20 mesh _____
 through 48 mesh _____
 through 100 mesh _____
 through 200 mesh _____

Cumulative per cent.

100
65.5
34.3
17.3

Area from which sample was taken (sq. ft.) _____

Date, **April 27, 1932** (Signed) **H. M. Cooper**, Chemist.

^a This figure is the ratio of volatile combustible to total combustible.

DEPARTMENT OF COMMERCE
 BUREAU OF MINES

DUST-ANALYSIS REPORT

Test No. _____ Lab. No. **A 80261**
 Sample of **Roof & rib** dust (through 20-mesh screen). Can No. **snack 5-1**
 Operator **Pocahontas Fuel Co.** Mine **Beissovain**
 State **Virginia** County **Tazewell** Bed **Pocahontas #3**
 Town **Beissovain**
 Location in mine **in 16 K at station 04905**
 Method of sampling **Std** Gross weight, lbs. _____ Net weight, gms. **39.**
 Date of sampling **5/22/32** Date of Lab. sampling _____ Date of analysis _____
 For B. of M. section **Mine Acc** Collector **J. F. Davies**

AIR-DRY LOSS		COAL (Air dried)	COAL (As received)	COAL (Moisture free)	COAL (Moisture and ash free)
Proximate Analysis	Moisture		.5		
	Moisture Comb		75.2	75.3	(^a)
	Fixed carbon				
	Ash		24.3	24.4	
			100.0	100.0	
Ultimate Analysis	Hydrogen		<u>Grams</u>	<u>Per cent</u>	
	Carbon on 20 mesh		21.0	55.0	
	thru 20 mesh		32.0	65.0	
	Nitrogen				
	total wt. of sample		60.0		
	Oxygen				
Calorific value determined	Calories				
	British thermal units.				

Screen test, through 20 mesh **No size.** Cumulative per cent. 100
 through 48 mesh _____
 through 100 mesh _____
 through 200 mesh _____

Area from which sample was taken (sq. ft.) _____

Date, **April 26, 1932** (Signed) **H. M. Cooper**, Chemist.

^a This figure is the ratio of volatile combustible to total combustible.

DEPARTMENT OF COMMERCE
BUREAU OF MINES

DUST-ANALYSIS REPORT

Test No. _____ Lab. No. A 80262
 Sample of floor dust (through 20-mesh screen). Can No. sack 5-B
 Operator Pocahontas Fuel Co. Mine Boissevain
 State Virginia County Tazewell Bed Pocahontas #3
 Town Boissevain
 Location in mine in 16 K at station 04905
 Method of sampling Std Gross weight, lbs. _____ Net weight, gms. 90.
 Date of sampling 3/22/32 Date of Lab. sampling _____ Date of analysis _____
 For B. of M. section Nine Ace Collector Davies

	AIR-DRY LOSS	COAL (Air dried)	COAL (As received)	COAL (Moisture free)	COAL (Moisture and ash free)
Proximate Analysis	Moisture _____		<u>.4</u>		(a)
	Volatiles Comb _____		<u>79.1</u>	<u>79.4</u>	
	Fixed carbon _____				
	Ash _____		<u>20.5</u>	<u>20.6</u>	
Ultimate Analysis			<u>100.0</u>	<u>100.0</u>	
	Hydrogen _____		<u>Grams</u>	<u>Per cent</u>	
	on 80 mesh _____		<u>50.0</u>	<u>35.7</u>	
	Carbon _____		<u>20.0</u>	<u>64.3</u>	
	thru 20 mesh _____				
	Nitrogen _____		<u>140.0</u>		
	total wt. of sample _____				
Calorific value determined	Oxygen _____				
	Sulphur _____				
	Ash _____				
Calorific value determined	Calories _____				
	British thermal units _____				

Screen test, through 20 mesh _____
 through 48 mesh _____ 44.1
 through 100 mesh _____ 19.9
 through 200 mesh _____ 8.2

Area from which sample was taken (sq. ft.) _____
 Date, April 27, 1932 (Signed) H. M. Cooper, Chemist.

^a This figure is the ratio of volatile combustible to total combustible.

U. S. BUREAU OF MINES

E-DESCRIPTION OF MINE

(1) State **Virginia** (2) County **Tazewell** (3) Town **Boissevain**
(Post office.)

(4) Mine sample of **bituminous - low volatile coal Pocahontas** (5) Coal field **Pocahontas** (6) District _____
(Material—for coal give classification.)

(7) Mine **Boissevain** **shaft** **about 2300**
(a. Name.) (b. Kind of opening—if shaft give depth.) (c. Height of opening above sea level.)

(d. Distance and direction from town.) (e. Sec., T., and R., if necessary.) (f. Railroad connections.) **H & W Ry.**

(g. Shipping point.) (h. State if wagon mine or prospect and give distance from shipping point.)

(8) Coal bed **Pocahontas #3**
(a. Name.) (b. Geologic system.)

(c. Formation.) (d. Dip, degrees.) (e. Strike, direction.)

(9) Mining system **room and pillar** (10) Undercutting **center cut-machine**
(Long wall, room and pillar, panels, etc.) (Hand or machine.)

(11) Explosives **Pellet, powder & monobel**
(a. Used for coal.) (b. Used for roof or floor.)

(12) Operator **Pocahontas Fuel Co.**
(Name and address.)

(13) Sales agent _____
(Name and address.)

(14) Output per day **2237 tons** (15) Maximum day's output _____ (16) Last year's output **420,400**
(Average—gross or net tons.) (During past year.) (Gross or net tons.)

(17) Output from advance workings, per cent **35** (18) Lifetime of mine **25 yrs.**
(At present.) (Years—estimated.)

(19) Run-of-mine, per cent _____ (20) Is coal screened? **yes** (21) Type of screens **shaker**
(Of output shipped.)

(22) Type of washer _____ (23) Per cent of coal washed **all but fine**

(24) Maximum size washed **all except slack** (25) Sizes produced **4**
(Washed coal.)

(26) Sizes produced **1-slack** (27) Is coal picked? _____
(Of coal not washed.) (State whether on car or belt.)

(28) Per cent of coal coked _____ (29) Sizes coked _____
(At mine.) (Screenings, crushed, washed, etc.)

(30) Type and number of ovens _____ (31) Remarks _____
(For any additional information indicate after subject by mark X if additional information is given here.)

(32) Can Nos. **X-30 D-725**
(Give Nos. of all samples forwarded.)

(33) Laboratory Nos. **A-79574 and A-79575**
(Laboratory to fill in immediately below corresponding can number.)

(34) Mine sampled at **2** points, by **J.F. Davies, E.H. Hodgson, P.O. Yingst** **3/22/32**
(Number.) (Collector.) (Office.) (Date.)

Above information copied from Card A by **McDermott** on **3/29/32**, 19
6-6322

U. S. BUREAU OF MINES

- SAMPLING REPORT

Can No. **X 30**Lab. No. **A 79574**

(1) State **Virginia** (2) County **Tazewell** (3) Town **Boissevain** (4) Mine **Boissevain**
(Post office.)

(5) Sample of **coal face section** (6) Analysis desired **proximate**

(7) Method of sampling **standard**
(Describe if other than standard.)

(8) Location in mine **at face of room 27 off 3 left**
(Distance and direction from opening. Locate with respect to rib, room, pillar, aircourse, entry, etc.)

(9) Date **3/22/32**, 19____
(Of sampling.)

(10) Coal, dry or moist **Dry** (11) Gross wt., lbs. **60** (12) Net wt., lbs. _____
(Sample cut.) (Sample mailed.)

(13) Sample from fresh or weathered coal **fresh**

(14) Roof **sandstone**
(Kind and quality.)

(15) Draw slate or roof coal **slatey rash 2in.**
(Description and thickness.)

(16) Floor **slate-hard**
(Kind, soft or hard, smooth or rough.)

(17) Vertical depth from surface to point of sampling, feet **320**

No.	SECTION OF BED	Ft.	Ins.	No.	SECTION OF BED	Ft.	Ins.
1	Coal	4	3/4	10			
2	Bony coal		3	11			
3	Coal	6		12			
4				13			
5				14			
6				15			
7				16			
8				Total thickness of bed		10	3/4
9				Thickness in sample		10	3/4

(18) Excluded from sample, marked X, section Nos. **2**

(19) Send analysis to **Davies** (20) Collector **Davies, Hodgson** (21) Office **Norton, Va.**

Yingat

Above information copied from B card by **McDermott** on **3/29/32** 19____
6-6098

D 725

U. S. BUREAU OF MINES
F-SAMPLING REPORTLab. No. **A 79575**

- (1) State **Virginia** (2) County **Tazewell** (3) Town **Boiesevain** (4) Mine **Boiesevain**
(Post office.)
- (5) Sample of **coal face section** (6) Analysis desired **proximate**
standard
- (7) Method of sampling **standard** (Describe if other than standard.)
- (8) Location in mine **25 ft. outby station 4905 on 16 E Haulageway**
(Distance and direction from opening. Locate with respect to rib, room, pillar, aircourse, entry, etc.)
- (9) Date **3/22/32**, 19____
(Of sampling.)
- (10) Coal, dry or moist **dry** (11) Gross wt., lbs. **59** (12) Net wt., lbs. _____
(Sample cut.) (Sample mailed.)
- (13) Sample from fresh or weathered coal **fresh**
- (14) Roof **sandstone** (Kind and quality.)
- (15) Draw slate or roof coal **sandy shale** (Description and thickness.)
- (16) Floor **slate** (Kind, soft or hard, smooth or rough.)
- (17) Vertical depth from surface to point of sampling, feet _____

No.	SECTION OF BED	Ft.	Ins.	No.	SECTION OF BED	Ft.	Ins.
1	Coal	5	7	10			
x 2	Bony coal		2½	11			
3	Coal	8	10½	12			
4				13			
5				14			
6				15			
7				16			
8				Total thickness of bed		9	8
9				Thickness in sample		9	8½

- (18) Excluded from sample, marked X, section Nos. **2**
- (19) Send analysis to **Davies** (20) Collector _____ (21) Office **Norton, Va.**

Above information copied from B card by **McDermott** on **3/29/32** 19____
6-4098

File

PATRONS ARE REQUESTED TO FAVOR THE COMPANY BY CRITICISM AND SUGGESTION CONCERNING ITS SERVICE

12018

CLASS OF SERVICE

This is a full-rate Telegram or Cablegram unless its deferred character is indicated by a suitable sign above or preceding the address.

WESTERN UNION

NEWCOMB CARLTON, PRESIDENT

J. C. WILLEVER, FIRST VICE-PRESIDENT

SIGNS

DL = Day Letter
NM = Night Message
NL = Night Letter
DCO = Deferred Cable
NLT = Cable Night Letter
WLT = Week-End Letter

The filing time as shown in the date line on full-rate telegrams and day letters, and the time of receipt at destination as shown on all messages is STANDARD TIME.

Received at Chamber of Commerce Bldg. Cor. 7th Ave. & Smithfield St. Pittsburg, Pa. 1932 MAR 1 PM 3 51

HNA155 25 GOVT COLLECT=WELCH WVIR 1 345B

DUPLICATE OF TELEPHONE TELEGRAM
FULL-RATE DAY LETTER

J J FORBES=U S BUREAU MINES

4800 FORBES ST PITTSBURGH PENN=

MARSHALL HUMPHREY AND KAZEE RETURNED TO COALWOOD STOP WORK
HERE DELAYED BUT HUMPHREY CAN LEAVE FOR WASHINGTON THIS
WEEKEND IF DESIRED STOP PLEASE ADVISE=

K L MARSHALL..

NA 4500
BY IF 3558
TO C.D.K.
M.L.B.

RECEIVED
BUREAU OF MINES
PITTSBURGH, PA.
MAR - 2 1932

Recd 3:55 PM
3/1

THE QUICKEST, SUREST AND SAFEST WAY TO SEND MONEY IS BY TELEGRAPH OR CABLE

File

PATRONS ARE REQUESTED TO FAVOR THE COMPANY BY CRITICISM AND SUGGESTION CONCERNING ITS SERVICE

12013

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WESTERN UNION

NEWCOMB CARLTON, PRESIDENT

J. DUNN, VICE-PRESIDENT

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NLT - Cable Night Letter
WLT - Week-End Letter

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Received at Chamber of Commerce Bldg., Cor. 7th Ave. & Smithfield St., Pittsburgh, Pa.

HNA64 20 GOVT COLLECT-TAZEWELL VIR 1 1010A

MINUTES	TRANSIT
FULL-RATE	DAY LETTER

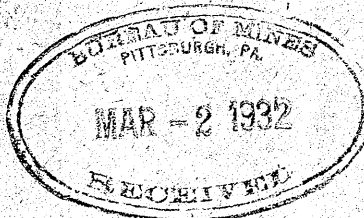
J J FORBES, US BUREAU OF MINES=

4800 FORBES ST PITTSBURGH PENN=

ALL VISIBLE BODIES RECOVERED SEARCHING NOW UNDER FALLS FOR
NINE MISSING VENTILATION GOOD IN AREA BEING SEARCHED

WASHINGTON ADVISED=

DAVIES.



Recd 10.30 AM
3/1

MA 4500	To	G.M.T. (R)
Sy. 1030A		Ind

WESTERN UNION GIFT ORDERS SOLVE THE PERPLEXING QUESTION OF WHAT TO GIVE.

PATRONS ARE REQUESTED TO FAVOR THE COMPANY BY CRITICISM AND SUGGESTION CONCERNING ITS SERVICE

12015

CLASS OF SERVICE

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WESTERN UNION

NEWCOMB CARLTON, PRESIDENT

J. C. WILLEVER, FIRST VICE-PRESIDENT

SIGNS

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LCO = Deferred Cable
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Received at Chamber of Commerce Bldg., Cor. 7th Ave. & Smithfield St., Pittsburgh, Pa.

HNA86 12 COLLECT GOVT=POCAHONTAS VIR 29 1129A

J J FORBES, US BUREAU OF MINES=

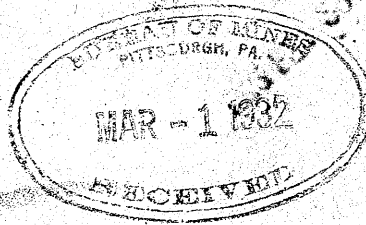
4800 FORBES ST PITTSBURGH PENN=

MINUTES IN TRANSIT

FULL-RATE DAY LETTER

TWENTY TWO BODIES RECOVERED PROGRESS SLOW HEAVY EXTENSIVE
FALLS WASHINGTON ADVISE=

DAVIES.



Recd 1:00 PM
2/29

NA 4570 E.C. (R)
E 57 10210
adv call 1230 PM -
12 PM - R

WESTERN UNION GIFT ORDERS ARE APPROPRIATE GIFTS FOR ALL OCCASIONS.

PATRONS ARE REQUESTED TO FAVOR THE COMPANY BY CRITICISM AND SUGGESTION CONCERNING ITS SERVICE

12015

CLASS OF SERVICE

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WESTERN UNION

(05)

NEWCOMB CARLTON, PRESIDENT

J. C. WILLEVER, FIRST VICE-PRESIDENT

SIGNS

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LCO = Deferred Cable
NLT = Cable Night Letter
WLT = Week-End Letter

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Received at Chamber of Commerce Bldg., Cor. 7th Ave. & Smithfield St., Pittsburgh, Pa.

1932 FEB 28 PM 6 06

RXJB151 18 COLLECT GOVT=TDUF POCAHONTAS VIR 28-557P

J. J. FORBES=

DUPLICATE OF TELEPHONED TELEGRAM

FEB 29 1932

4800 FORBES ST PGH=

NOTES IN TRANSIT

FULL-RATE DAY LETTER

THIRTY EIGHT VICTIMS FOURTEEN LOCATED VENTILATION PROGRESSING
CAUSE UNKNOWN OPERATED NONGASEOUS BASIS EXTENSIVE AREA
INVOLVED WASHINGTON ADVISED=

DAVIES.

ma 4500

No. <i>7276</i>	TH <i>20</i>
By <i>UG</i>	At <i>6/10P</i>

mail

WESTERN UNION GIFT ORDERS SOLVE THE PERPLEXING QUESTION OF WHAT TO GIVE.

PATRONS ARE REQUESTED TO FAVOR THE COMPANY BY CRITICISM AND SUGGESTION CONCERNING ITS SERVICE

12019

CLASS OF SERVICE

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WESTERN UNION (08).

NEWCOMB CARLTON, PRESIDENT

J. C. WILLEVER, FIRST VICE-PRESIDENT

SIGNS

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NLT = Cable Night Letter
WLT = Week-End Letter

The filing time as shown in the date line on full-rate telegrams and day letters, and the time of receipt at destination as shown on all messages, is STANDARD TIME.

Received at Chamber of Commerce Bldg., Cor. 7th Ave. & Smithfield St., Pittsburgh, Pa.

1932 FEB 27 PM 4 09

RXPB618 12 COLLECT GOVT=TDUF BOISSEVAIN VIR 27 401P

TES IN TRANSIT
FULL-RATE DAY LETTER

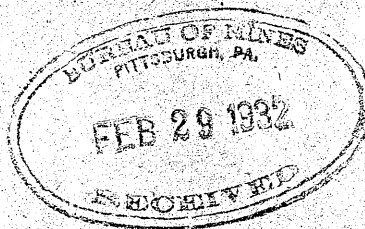
J J FORBES, BUREAU OF MINES=

DUPLICATE OF TELEPHONED TELEGRAM

4800 FORBES ST PHONE MAYFLOWER 4500 PGH=

THIRTY SIX MEN UNACCOUNTED FOR PROSPECT GAINING ENTRANCE
TO SECTION TONIGHT=

H B HUMPHREY.



Rec'd 4:11 PM
2/27

No Ma 4500	To R. K. H. RB
By 30	11-P
Chp. at.	

THE QUICKEST, SUREST AND SAFEST WAY TO SEND MONEY IS BY TELEGRAPH OR CABLE

PATRONS ARE REQUESTED TO FAVOR THE COMPANY BY CRITICISM AND SUGGESTION CONCERNING ITS SERVICE

CLASS OF SERVICE

This is a full-rate Telegram or Cablegram unless its deferred character is indicated by a suitable sign above or preceding the address.

WESTERN UNION

(57).

NEWCOMB CARLTON, PRESIDENT

J. C. WILLEVER, FIRST VICE-PRESIDENT

SIGNS

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NL = Night Letter
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NLT = Cable Night Letter
WLT = Week-End Letter

12018

The filing time as shown in the date line on full-rate telegrams and day letters, and the time of receipt at destination as shown on all messages, is STANDARD TIME.

Received at Chamber of Commerce Bldg., Cor. 7th Ave. & Smithfield St., Pittsburgh, Pa.

RXHNA153 16 GOVT COLLECT=TDUF BOISSEvain VIR 27 352P 1932 FEB 27 PM 3 58

J J FORBES, BUREAU OF MINES=

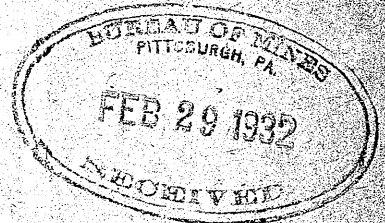
DUPLICATE OF TELETYPE TELEGRAM

TRANSIT
DAY LETTER

4800 FORBES ST TELEPHONE MAYFLOWER 4500 PGH=

ALL BUREAU MEN ON THE GROUND VENTILATION BEING RESTORED WILL REPORT FURTHER PROGRESS AS ACCOMPLISHED=

H B HUMPHREY.



No. *4701A R.H.R.B.*
By *JD* *401-P*
Ship OK.

WA

*Recd 4:03 PM
2/27*

WESTERN UNION MESSENGERS ARE AVAILABLE FOR THE DELIVERY OF NOTES AND PACKAGES.

STANDARD FORM NO. 14A
APPROVED BY THE PRESIDENT
MARCH 10, 1926

TELEGRAM

OFFICIAL BUSINESS—GOVERNMENT RATES

GOVERNMENT PRINTING OFFICE 11-9107

CHECK SERVICE DESIRED		Day Letter
IF MESSAGE IS TO WASHINGTON, D. C., SEND COLLECT		Night Message
		Night Letter
		<input checked="" type="checkbox"/> Fast Day Message
OTHERWISE CHARGE U. S. BUREAU OF MINES		Pittsburgh (Station)
Sent by		J. J. Forbes
Title		Supr. Engr., Sfty. Div.,
Place		Pittsburgh, Pa.
Date		Feb. 27, 1932 GWO:FF

Mr. D. Harrington,
U. S. Bureau of Mines,
Washington, D. C.

Associated Press reports explosion Bossevain mine, Pocahontas Fuel Co.,
Bossevain, near Pocahontas, Va. Report states thirty men missing. Davies
instructed proceed to mine, make investigation, and report.

Forbes.

Phoned W. U., 9:25 a.m., 2/27/32 by F.F.

Confirmation
CC-Files

PATRONS ARE REQUESTED TO FAVOR THE COMPANY BY CRITICISM AND SUGGESTION CONCERNING ITS SERVICE

1201 S

CLASS OF SERVICE

This is a full-rate Telegram or Cablegram unless its deferred character is indicated by a suitable sign above or preceding the address.

WESTERN UNION

NEWCOMB CARLTON, PRESIDENT

J. C. WILLEVER, FIRST VICE-PRESIDENT

SIGNS

DL = Day Letter
NM = Night Message
NL = Night Letter
LCO = Deferred Cable
NLT = Cable Night Letter
WLT = Week-End Letter

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Received at Chamber of Commerce Bldg., Cor. 7th Ave. & Smithfield St., Pittsburgh, Pa. MAR 2 AM 10 23

HNA52 36 GOVT COLLECT=WELCH WVIR 2 1017A

J J FORBES, U S BUREAU OF MINES=

4800 FORBES STREET PITTSBURGH PENN=

HUMPHREY LEAVES FOR WASHINGTON FRIDAY MARSHALL TO BOISSEVAIN
MINES FRIDAY MORNING AS ORDERED STOP NOTIFY A R MATHEWS
FAIRMONT CANCELLING MY ENGAGEMENT FOR MARCH EIGHTH STOP
SUGGEST J W PAUL BE ASKED TO FILL IN=

K L MARSHALL.

WESTERN UNION MESSENGERS ARE AVAILABLE FOR THE DELIVERY OF NOTES AND PACKAGES.

Bluefield Daily Telegraph

Bluefield, W. Va., Tuesday Morning, March 1, 1932.—Ten Pages

Twenty-nine Victims Of Mine Explosion At Boissevain Are Brought To Surface By Crews

NINE MEN REMAIN IN TORN WORKINGS

Bodies Of Two Miners, In
Morgue, Unidentified

SEARCHERS CONTINUE

Work Narrows Down To Mov-
ing Slate, Tearing Away
Splintered Timbers

BULLETIN!

Having completely abandoned any hope of finding alive any of the nine missing miners, the rescue work at the Boissevain mine, from which 29 bodies have been recovered, was suspended temporarily late last night. The last crew came out of the mine shortly before midnight and it was announced that no more crews would enter the mine until this morning. A fresh crew will be sent into the mine and a careful search of all of the working places will again be made in an effort to locate the missing men. At 1 o'clock this morning two of the 29 bodies were still unidentified.

Company officials at 11 o'clock last night had definitely established the identification of 27 of the 29 bodies which had been recovered from the Boissevain mine of the Pocahontas Fuel company, wrecked by an explosion last Saturday morning.

Those identified were, Larry O. Brown, Mike Shupe, Garland McCormick, Orbie Hardy, John Baker, Walker Thomas, Clayton Hodge, Lester Phipps, Sam White, Dave Wire, Burton Brooks, Charles Yates, James Hardy, Sam Abrams, Mason Shupe, Robert Hardy, and Tom Yates, all white and residents of Pocahontas and Boissevain; Howard Petty, W. S. White, Sam Robinson, Dallas Fitzgerald, Willie Saunders, Ed Pegram, Ed Saunders, Ben Saunders, Brady Adams and Will Johnson, colored. Ben Saunders, Ed Saunders and Brady Adams are residents of Bluefield, Va., the others being residents of Boissevain and Pocahontas.

The wrecked mine still holds the fate of nine other miners who are yet unaccounted for. These are: Sid Thomas, Warren Harless, O. R. Jones, John Heck, C. R. Brown, Claude Baldwin, Homer Baldwin, Garnet Shupe, Mont Miller, all white; Lewis Moton and Lee Baker, colored, and Victor Auguleo, Mexican. The bodies of two of the unaccounted for list were resting in an improvised morgue above ground last night, but had not been identified.

Move Slate

Searchers held little hope that they could be able to complete their task before dawn or hours later, as the search had narrowed down to moving piles of slate, tearing away splintered timbers that strewed the mine floor. Working rooms and entries of the basin main section in which the blast occurred were thoroughly covered, and the crews started back over the ground once searched. Hope that any of the missing miners might possibly be found alive has been abandoned.

All of the bodies are held in custody of undertakers until funeral plans are completed. Most of the bodies were badly burned and mutilated, indicating that the explosion brought death instantly. As soon as a body was identified, relatives were notified. Widows and children bore this last news stoically as they had borne the long period of waiting, saying little and knowing there could be only one outcome.

Officials of the Pocahontas Fuel company and Coroner George W. Gillespie continued their investigation of the blast which wiped out most of the mine's night shift, but no decision was reached. As it was a non-gaseous mine, the possibility of a powder explosion was still uppermost.

The first of the bodies of the mine blast was brought to the surface at 8:45 Sunday night. Rescue workers have toiled in relays since the hour of the blast at 4:30 Saturday morning. George W. Craft, general superintendent of the Fuel company said the search for bodies would continue unabated until each missing man has been accounted for.

(Turn to Page Two.)

Company officials were doubtful as to when the nine other bodies still confined in the unexplored recesses of the mine would be located. Some said they probably would be reached today, although A. G. Lucas, chief of the Virginia bureau of mines, said it was likely all of the bodies would not be recovered for two or three days.

Fully an hour before the first two bodies were brought forth, the miners' wash room, which Saturday was converted into an improvised morgue, was cleared of all persons except embalmers, their assistants, the coroner and other persons directly interested in preparation of the bodies.

Immediately rope barriers were thrown up forming a cleared lane between the shaft entrance and the door of the morgue. After the long hours, those who had waited patiently about the mine entrance sensed, rather than verbally understood, that the frantic work which had been going on far underneath the ground was nearing fruition.

Nevertheless the cage went up and down, bringing out empty food containers, taking in fresh supplies or relief workers, for fully an hour after the morgue was cleared.

Finally three bells were sounded, the signal from the bottom of the shaft to the hoisting engineer. The bells were sounded much slower than usual, and the hoisting engineer un-

NINE MEN REMAIN IN TORN WORKINGS

(Continued From Page One)

derstood. The cage came up at half speed.

Two stretchers, covered by blankets, lay on the cage. They were borne to the morgue by grim-faced miners wearing lamps.

Six embalmers were ready to receive the first victims. The work was started immediately. Company and county officials waited with pencil and pads, hoping to get descriptions which would lead immediately to positive identification.

Through the checks which all miners wear inside the mine, through the position of the bodies and their apparent occupation at the time of death, the work of identification proceeded rapidly.

The caskets were assembled near the scene Sunday morning, the final gesture that all hope for the missing men had been abandoned.

Five United States bureau of mine rescue workers spent most of Sunday night inside the mine. They were K. L. Marshall, J. E. Davies, stationed at Norton; E. H. Hodgson, H. H. Keesee and H. B. Humphreys.

In addition to Mr. Lucas and two of his assistants, four West Virginia department of mines officials have been on duty in the blast-shattered workings. They are: W. D. Prentiss, War; Thomas Stockdale, Bramwell, and Frank Kerr, Welch, district mine inspector, and Robert Estill, Welch, safety director for the state of West Virginia.

Approximately thirty officers were on duty Sunday, and all automobiles carrying curiosity seekers were turned back at Pocahontas. Only persons directly interested in the mine or rescue work were permitted to proceed beyond a roped-off barrier established in center of Pocahontas.

Scenes about the mine were unusually quiet Sunday. Those persons who succeeded in passing the barriers at Pocahontas, found new obstructions at the mine scene, and only a small number of persons, other than rescue workers, were able to reach the center of activity about the shaft.

Four Blast Victims Still Underground

Bluefield Telegram March 2nd
**Boissevain Workers Toil Throughout Night In
Effort To Reach Bodies; One Victim In
Morgue Is Unidentified**

With four victims of the Boissevain mine explosion still missing, rescue workers last night toiled away untiring in their efforts to find the remainder of the thirty-eight men who died in the blast last Saturday.

Five more bodies were recovered yesterday making a total of thirty-four. The five men brought to the surface yesterday afternoon and last night were identified as O. R. Jones, C. R. Brown, Warren Harless, white, Victor Auguieleo, Mexican, and Lee Baker, colored.

One of the two bodies recovered Monday, which were so badly burned and mutilated and held in the improvised morgue pending identification, was positively identified last night as Homer Baldwin, white, it was announced by officials of the Pocahontas Fuel company. The identification was established by a brother of the mine blast victim by reason of the fact that Homer Baldwin had two fingers missing from one hand, and certain other identification marks on one foot.

Having definitely established the identification of Homer Baldwin, there remains only one body above ground yet to be identified. The last of the bodies brought to the surface last night was that of Warren Harless. He was found near a mining machine, which was buried under many tons of slate. Company officials late last night said that rescue workers expected to find at least two more of the four missing miners in the vicinity of this machine, but it would probably be several hours before rescuers could reach them.

The work of the rescue crews consisted of going back and forth over the basin main section, where the explosion wiped out most of the mine's night shift, seeking bodies buried under slate piles or timbers. The area has been searched thoroughly several times, but moving the piles of slate constituted an enormous task.

Rescue workers planned to continue their work throughout the night.

Rescue workers re-entered the blast shattered workings at 10 o'clock yesterday morning. All rescue work was suspended Monday midnight, to give a rest period to the weary workers. A fresh crew of thirty men re-entered the mine Tuesday morning, with the announced intention of again inspecting the area covered yesterday, hoping that a recheck might disclose some of the missing men.

No estimate could be made yesterday as to when the damaged mine can be repaired and restored to operation. Company officials said any such estimate could be nothing more than a "wild guess."

Individuals' funerals for the victims have been planned. Identified bodies were embalmed and prepared for burial as rapidly as possible.

The coffins were taken to the respective homes of the miners, to await disposition by the families. All but seven of the victims were married.

Those identified were: Larry O. Brown, Mike Shupe, Garland McCormick, Orbie Hardy, John Baker, Walker Thomas, Clayton Hodge, Lester Phipps, Sam White, Dave Wire, Burton Brooks, Charles Yates, James Hardy, Sam Abrams, Mason Shupe, Robert Hardy and Tom Yates, Homer Baldwin, A. R. Jones, C. R. Brown, Warren Harless and Victor Auguieleo, all white and residents of Pocahontas and Boissevain; Howard Petty, W. S. White, Sam Robinson, Dallas Fitzgerald, Willie Saunders, Ed Pegram, Ed Saunders, Ben Saunders, Lee Baker, Brady Adams and Will Johnson, colored. Ben Saunders, Ed Saunders and Brady Adams are residents of Bluefield, Va., the others being residents of Boissevain and Pocahontas.

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Explosion in Boissevain Mine. Pocahontas Fuel Co.
Feb. 27, 1932

30 MINERS ENTOMBED AT BLUEFIELD

Dynamite Explosion in Non-
Gaseous Mine in West
Virginia

FEAR MORE MAY BE DEAD

Rescue Forces, Driven Back by
Poisonous Air, Don Gas
Masks

CAUSE NOT DETERMINED

BLUEFIELD, W. Va. Feb. 27, (AP)
Thirty miners were trapped today by
an explosion in the Boissevain Mine
of the Pocahontas Fuel Company near
Pocahontas, Va., 25 miles from Blue-
field.

Fear for the safety of the en-
tombbed men was expressed when
they failed to reach the surface sev-
eral hours after the ending of the
night shift.

The explosion occurred about 4:30
a. m. The night shift ends at 7:00
o'clock in the morning.

One miner coming to the surface
said he heard "some kind of an ex-
plosion" in another section of the
mine, and started out immediately.
Rescue crews from Jenkin Jones, W.
Va., and Pocahontas, Va., equipped
with gas masks, were rushed to the
spot.

The cause of the blast or its ex-
tent was undetermined. Company
officials said the mine was non-
gaseous.

Rescue workers were driven back
by heavy air when they first at-
tempted to enter without gas masks.
Thomas Stockdale, a West Virginia
mine inspector reported that air con-
ditions were "bad," and that it would
be necessary to reverse the fans to
force fresh air into the workings.

The Baltimore (Pa.)

Republican

Feb. 27, 1932 SAK

- | | | |
|----|--------------------|------------|
| 1 | Don Voss | Coal Miner |
| 2 | LeRoy Brown | " |
| 3 | George Lewis | Blacksmith |
| 4 | Garland McCann | " |
| 5 | Oliver Hogg | Blacksmith |
| 6 | Ben Shivers-Cul | Miner |
| 7 | Ed. Saunders-Cul | " |
| 8 | Thomas Perry-Cul | " |
| 9 | Beard Smith-Cul | " |
| 10 | Ed. Plaster-Cul | " |
| 11 | John Bantz | Blacksmith |
| 12 | Walter Thomas | Blacksmith |
| 13 | Clayton Hogg | Blacksmith |
| 14 | Leiford Phelps | Blacksmith |
| 15 | Sam Hogg | Miner |
| 16 | Harold Baldwin | " |
| 17 | Conrad Jones | " |
| 18 | Clarence Baldwin | " |
| 19 | James Hogg | Blacksmith |
| 20 | John Hogg | " |
| 21 | Wes. Johnson-Cul | Miner |
| 22 | Sam Hogg | " |
| 23 | Walter Shivers-Cul | " |
| 24 | W.C. Hogg-Cul | " |
| 25 | Sam Hogg-Cul | " |
| 26 | Edwin Hogg-Cul | " |
| 27 | Tom Yates | Coal Miner |
| 28 | Harold Smith | Coal Miner |
| 29 | Robert Hogg | Coal Miner |
| 30 | G.R. Jones | Miner |
| 31 | Wes. Johnson-Cul | " |
| 32 | Lee Brown-Cul | " |
| 33 | C.A. Brown | " |
| 34 | Walter Shivers | Blacksmith |
| 35 | Benton Brown | Blacksmith |
| 36 | Sam Thomas | Blacksmith |
| 37 | Leiford Phelps-Cul | Miner |
| 38 | Tom Hogg | Blacksmith |

