1917 0005

COAL FATAL

REPORT OF AN INUNDATION DECEMBER 17, 1917; WILKESON MINE;
WILKESON, WASHINGTON; 6 KILLED
(FROM BUREAU OF MINES REPORT BY G. W. EVANS)

This accident occurred at midnight Monday, December 17, 1917, and resulted in the death of six men. Four bodies have been recovered to date, but the other two bodies have not yet been reached, although efforts are still being made to reach them. The accident took place in a water level working in what is known as the No. 3 South Gangway.

Two men escaped with their lives from this accident. According to their statement, they were knocked down and rendered temporarily unconscious by the concussion of air at the time of the accident. Their lights were put out at the time, and they do not know how long they remained unconscious, but it was probably not more than five or ten minutes. They were revived no doubt by the air readjusting itself after the first concussion, and upon regaining consciousness, they started down the chute from the point at which they were working. They were working at the top of chute 22 at the seventh crosscut, and hurried down the pitch to the fifth crosscut, which is the intake airway and manway to the surface. When they reached the fifth crosscut, they encountered water and glacial clay and they had some difficulty in getting out to the surface for the reason that this airway is very long and has varying pitches, goes through several rock tunnels and rock chutes and finally comes to the surface at a point a mike or a mile and a half from the place at which the accident occurred. They the hastened to Wilkeson Mine.

He found, on entering the mine, that the glacial clay and water had come out into the fifth crosscut to No. 13 chute and on reaching the gangway found that the material had come out as far as the No. 7 1/2 chute. He immediately organized rescuing parties and began cleaning up the track so as to get cars and the materials in to effect a rescue. The air had to be reestablished in several instances and the work of cleaning up the track was very slow and laborious.

Four shifts of men, working six hours each, were placed on this work and every available space was covered that could be, in order to hasten the rescue work. This work was continued until 6 a.m., Dec. 21st, at which time the Deputy Mine Inspector for the State of Washington, reported the working faces, especially up the pitch, unsafe for the rescuers to do any further work in. He found that the glacial clay had been rendered more plastic by reason of the presence of the second inrush of water and that the clay had started to run again and he felt that it was better to delay the work until such time that the clay had settled. About this time a conference was held with the officials of the miners' union, the State Mine Inspection Department, the two men who escaped from the accident, and the rescuers, and it was decided that the men imprisoned could not possibly be alive at this time and to continue the work might result in losing other lives. It was thought best

to take due care for the safety of the men who were doing the rescue work.

After the material had settled in the chutes and crosscuts, the work has continued and on January 18th at 6 a.m. one body was found in 21 chute on January 19th at 5 a.m. another body was found at No. 20 chute, and on January 20th at 8 a.m., the third body was found in No. 20 chute also. At 4 a.m., January 23rd, the fourth body was found in chute No. 21 1/2. The rescue work is still in progress, but instead of working along the gangway and the first counter, as has been done formerly, it has been thought best to get into the chutes from the fifth crosscut. It was found on inspection made February 5th that the material was becoming rather plastic and oozing out from among the timber that had been placed to hold it back. Therefore, it was thought safer to approach these places from above rather than below.

The No. 3 South gangway is a water level drift driven on the No. 3 bed, which dips from 30 to 35 degrees. This bed contains in the neighborhood of 10 1/2 to 12 ft. of coal and other material that is mined. The bed in this part of the mine dips at angles varying from 35 to 42 degrees. The roof is composed of a sandy shale that is extremely short grained and any considerable difficulty is found in holding this roof over any great area, and for this reason, the roof caves immediately back of the area from which the pillars have been removed.

Three stages of work are indicated. The gangway and first counter are driven together and at intervals narrow chutes are driven from the gangway connecting the first counter, and above the first counter breasts 15 ft. in width are driven up the pitch with connecting crosscuts at every 40 ft. These breasts are carried up the pitch to the fifth counter or to a point four blocks above the first counter. The fifth counter constitutes the intake airway after the chutes have been driven and remains the permanent intake for this portion of the mine. Shortly after driving these breasts and crosscuts, a squeeze comes on which closes them and for that reason then only two openings remain open into this part of the mine, and are the main gangway and the fifth crosscut or second counter. The second working then consists of opening up these former breasts and cogs are placed along the rib to protect the sheet iron chute, which is carried up between the cogs. Above the fifth crosscut then, chutes 5 ft. in width are driven up into the solid coal, and when a pre-determined point is reached, such as the twelfth crosscut, the pillars are removed. The second working then consists of driving the narrow chutes, connecting crosscuts. The third working consists of removing the pillars by means of skips as indicated.

As noted heretofore, the roof is extremely short grained and brittle, for that reason they have great difficulty in holding up any considerable area of it under which the coal had been removed. For this reason, then, it is very unlikely that any considerable area of this roof had remained standing unsupported in the district that has been mine out, inside of chute No. 25. It is more than likely that the roof has caved close to breast 25 and the chute

which continues up the pitch above the fifth crosscut which might be considered a continuation of breast 25.

We have just stated that everything indicated that no considerable area of roof remains standing. For this reason then the blast of air that occurred probably could not have been originated by an extensive fall of roof. It would be clear this point absolutely if it were possible to get into the area in which the accident has occurred, but, judging from the appearance of the working, it is very doubtful it this area will ever again be reached, and, for that reason then were are giving the information we have at hand at this time, and our theory is based upon the information we have so far gathered.

The greater portion of the Puget Sound area, of which this mining district is a part, has been glaciated and in many places thick deposits of glacial material overlie the coal beds and coal areas. Prior to the glacial period, pre-glacial streams had cut channels which drained the coal area topography of that time. In addition to well defined stream channels, pot holes were also developed.

Immediately above the coal occurs a stratum of this fine grained glacial clay, approximately 70 ft. in thickness. Above this glacial clay occurs a very coarse glacial gravel, in which boulders 2 ft. in diameter are common. We observed further that the surface water, which filters into the surface gravel, appears in the air chute in the form of a spring at the contact between the glacial clay and the coarser gravel. We observed further that beneath the glacial clay and next to the coal outcrop there was no sign of water coming from this source, but that the water occurring in the air chute, came from above at the contact as indicated.

What might have happened in the case. A pot hole reaching below the general surface of the ground, might have occurred at some point, such as near the top of the chute 24 or 25 and extended down to within a short distance of the coal bed. A narrow channel cutting across the measures at right angles to the line of strike might have had similar effect on this particular part of the mine. At the time of the deposition of the glacial material, this pot hole or narrow channel would naturally be filled with the glacial clay up to the top of the opening and then we would have above this the accumulation of 70 ft. or more of the material or until the area affected had reached the level formed by the deposition of this clay. On top of this clay, then, was deposited the coarse glacial material we now find in the air chutes connecting with the surface.

Any water occurring within this channel or pot hole at the time of deposition of the glacial clay might be trapped beneath the clay, and the further deposition of clay and accumulation of gravel above the clay would cause this water to be under considerable pressure. If this condition did not exist, and the cave should have occurred and which rendered unconscious the two men who escaped. The fact that there was only one inrush of water at the time of this accident and the slight inrush several days later would indicate hat no surface stream of any magnitude had been

encountered, and that the surface, as far as we can determine, had not been disturbed, and the further fact that no coarse gravel has thus far been found within the mine would indicate that only the glacial clay had come into the mine workings and that the cave had not yet, at least, brought through the glacial clay allowing the coarser material to come in.

The absence of any quantity of roof material in the mine workings would indicate that no large portion of the roof had come in at the time of the accident.

We have searched very carefully for a distance of one-fourth of a mile above the probable seat of this accident, looking for any sign of a break in the surface, but have been unable to find any indication that the surface has been in any way disturbed.

This condition might have been caused by accumulation of glacial clay and the pre-glacial channel or pot hole and the material running out of the channel or pot hole but not extending up into the 70 ft. of material which might bridge the top of the opening. In this manner then the clay was not weakened sufficiently to allow the weight of gravel above to break through the roof of clay and into the mine. Water trapped at the foot of this channel or pot hole will be under great pressure. The first opening could have been dammed temporarily after the first inrush of material, and water perhaps accumulate back of this temporary dam, and the releasing of this dam could probably account for the second slight inrush which alarmed the mine inspector at the time he called off the rescue work temporarily.

COAL FATALITY
WILKESON, WASHINGTON
WILKESON COAL & COKE COMPANY
DECEMBER 17, 1917

Name	Nationality	Age	Occupation	
Joe Rusnak	Hungarian	39	Miner	Married
Mike Semak	Austrian	45	Miner	Married
William Skorupsky	Polish	33	Miner	Married
John Tomco	Austrian	37	Miner	Married
William Heino	Finn	35	Miner	Married
Peter Marchetti	Italian	38	Miner	Married

The above named persons were killed on December 17 by a rush of water, clay and gravel which filled the workings in No. 3 south, east dip, where they were working. This accident occurred on the night of December 17 about 11:45 p.m. The No. 3 seam was worked in this part of the mine from a rock tunnel driven from No. 2 seam inside of the last fault encountered, or near the extreme southeast end of the property. The chutes were numbered north and south from the rock tunnel No. 33 1/2, being the last place on the south side. The pitch is about 45 degrees in this part of the mine and chutes had been driven and pillars from 31 out to No. 25 at the time of the accident. On the night of the accident eight men were working on the pitch in the following places: W. J. Heino and Mike Semak in No. 24 pillar above the 8th crosscut; P. Marchetti and Joe Rusnak in No. 23 chute near the 5th crosscut taking down the top coal placing cogs, this work being done before they started to take out the pillar. G. W. Thurston and Jacob Flies were driving No. 22 chute, which had reached the 7th crosscut. Wm. Skorupsky and John Tomco were reopening No. 20 chute from the gangway to counter and were working just below the counter at the time of the accident. An account as told by Thurston and Flies who worked in No. 22 chute and who were the only men out of the eight men who escaped was as follows:

"At about 11:45 p.m. we were in our working place, No. 22 chute, when we felt a concussion of the air which came with such force it lifted us off our feet. When we recovered we started down the chute to the 5th crosscut or counter which was the intake for this section of the mine. When we reached the 6th crosscut we encountered water rushing through from No. 23. Here we were overcome by the force of water and air. When we regained consciousness we started again and reached the 5th crosscut from where we followed the intake airway to the air chute and reached the outside and gave the alarm."

Rescue parties immediately entered the mine and found the gangway partly filled with water and mud from the rock tunnel into No. 12 chute, where it was impossible to go further. The chutes were filled inside of No. 20 on the 5th counter. The work of

clearing the gangway and reaching the places where the men were working was started at once. At No. 16 chute the gangway was filled to the roof and from this point the work proceeded very slowly. On the morning of January 15th, nearly a month after the accident, the body of P. Marchetti was found at No. 21 chute on the gangway. On the morning of January 19th the body of John Tomco was found in No. 20 chute near the counter. The body of Wm. Skorupsky was found on the morning of January 20th in No. 20 chute near where John Tomco was found. On January 23rd the body of Mike Semak was found in the counter at No. 21 1/2 chute. The gangway was cleaned to No. 25 chute and the counter to No. 24 without finding the other two bodies. The gangway had filled both ways from No. 21 1/2 chute and it is thought that both Joe Rusnak and Wm. Heino were carried to the inside. The gangway was in bad condition at No. 25 chute and it was not considered safe to go beyond that point on account of the pillars being pulled. Work was stopped on February 20th and the hope of reaching the bodies of the two men abandoned.

The cause of the accident will never be definitely known. It is thought to have been caused by either of the two following causes: First, that a heavy cave had occurred which released a body of water from the overhanging strata. Second, No. 26 chute had been driven into the gravel for some distance in an attempt to reach the surface. It made considerable water until the dry period of last summer and fall when it had almost stopped running. In the meantime the pillars were pulled below this chute and the ground caved. There is a possibility that when the wet season came on the water started to run again, the caved ground forming a dam which held the water until the angle was driven nearly through at the top end of No. 24 pillar when the water broke through and carried the clay and mud into the workings below.

The second theory seems the most reasonable on account of the amount of clay, mud and gravel that filled the chutes and gangways. Following is the verdict of the coroner's jury:

Jan. 22, 1918

STATE OF WASHINGTON, COUNTY OF PIERCE--SS.

BEFORE THE CORONER OF PIERCE COUNTY

In the matter of the Inquest on the body of Pete Marchetti.

We, the jury, in the above entitled matter, having been duly empaneled and sworn to determine the cause of death of Pete Marchetti, and having viewed the body of the said Pete Marchetti, and having heard the testimony of witnesses, find that the deceased came to his death at Wilkeson, Pierce county, Wash., on the 17th day of December, 1917; and we find the cause of death to be as follows:

Caught in a cave-in in the mine of Wilkeson Coal & Coke Co. Cause of cave-in not known to the jury.

T. J. ANDERSON,	*MIKE BRUCHOK, JR.,*
GUS A. CARLSON,	*ELLIS ROBERTS,*
F. E. DICE	E. A. WESTFALL.