

NOVA SCOTIA WORKERS' COMPENSATION APPEALS TRIBUNAL

Appellant: **[X] (Worker)**

Participants entitled to
respond to this appeal: **[X] (Employer)** and
**The Workers' Compensation Board of Nova Scotia
(Board)**

APPEAL DECISION

Representatives: **[X]**

Form of Appeal: Oral hearing at Sydney, NS, on November 19 and 20, 2009

WCB Claim Nos: **[X]**

Date of Decision: September 30, 2010

Decision: The appeal of the February 8, 2006 Board Hearing Officer decision is denied, according to the reasons of Appeal Commissioner Sandy MacIntosh.

CLAIM HISTORY AND APPEAL PROCEEDINGS:

The Worker seeks a finding that he has an acceptable stress claim resulting from his former employment as a coal miner.

In addition to this stress claim, the Worker had several workplace soft-tissue injuries. He has been awarded a 5% permanent medical impairment rating on the basis that his underlying degenerative disc disease was aggravated by the soft-tissue injuries. The Board paid him a lump sum permanent impairment benefit effective November 28, 1999, the last day that he worked.

On September 3, 2003, the Employer filed a WCB Accident Report on behalf of the Worker. The Worker asserted that he had an over the course of time stress injury due to the combined impact of his back injuries, physical limitations and roof falls. The Worker indicated that his symptoms were first noticed in November of 1999. The Employer disputed the Worker's claim.

On November 14, 2003, the Board rejected the Worker's claim finding that he did not have an 'acute reaction to a traumatic event'.

The appeal history of the claim is convoluted. I will just describe the final three decisions which lead to this decision.

On February 8, 2006, a Board Hearing Officer found that the Worker's claim did not meet the criteria of Board policy 1.3.6. The Hearing Officer noted that the Worker had been diagnosed with a panic disorder with agoraphobia and post-traumatic stress syndrome. However, she found that the claim did not meet the criteria for traumatic onset stress as there was no evidence presented of a traumatic event. She found that the claim did not meet the criteria for gradual onset stress as there was insufficient evidence of unusual and excessive stressors compared to the experience of an average worker in the same or similar occupation.

On January 12, 2007, this Tribunal confirmed the Hearing Officer's decision. First, the Tribunal found that the Worker did not have traumatic onset stress as did not have a specific response to the potentially traumatic events he experienced. Also both the Worker's testimony, and the evidence from Dr. Sheard, supported a gradual onset mechanism for the Worker's stress claim. Second, the Tribunal found that the claim did not meet the criteria for gradual onset stress. It found that the stressors giving rise to the claim (back pain, altered mobility and work environment) were neither excessive nor unusual given the context of underground mining. In making this finding, the Tribunal had

noted that the mine in which the Worker had worked between 1991 and 1999 “may have been comparatively more dangerous than other mines”.

On April 15, 2008, the Nova Scotia Court of Appeal allowed an appeal by the Worker and remitted the matter to the Tribunal for a new hearing. The Court held that the Tribunal had misstated one part of the legal test for the recognition of gradual onset stress. It found that the Tribunal erred by assessing the workplace stressors in comparison to those experienced by others in the Worker’s workplace rather than those experienced by an average worker in the same or similar occupation. The Court noted that the Tribunal had an obligation to consider whether the conditions in the workplace were especially dangerous. The Court noted that the onus remained on the Worker to show that his workplace was somehow atypical of experiences of an average worker in the same or similar occupation. The Court indicated that common knowledge and common sense can assist in the determination.

This decision results from the new hearing ordered by the Court of Appeal.

At the November 2009 oral hearing, the Worker’s representative indicated that he would be seeking acceptance of the claim both on the basis of traumatic onset stress and gradual onset stress. However, his post-hearing submissions deal solely with gradual onset stress.

The Worker’s representative argues that the Worker’s claim meets the four criteria for gradual onset stress.

The first criteria is unusual and excessive workplace events or stressors. He argues that the test has objective and subjective components. Whether events are unusual and excessive requires an objective test, while the question of whether the events caused the stress requires a subjective analysis.

He argues that the workplace, Phalen Colliery, was excessively and unusually stressful compared to even the same type of work in the neighboring Lingan and Prince Mines and more so than in similar type work environments. In support of his argument he noted that several documents, many produced by the Employer, set out a series of roof falls, and rock gas outbursts, that eventually led to the early closure of the Phalen Colliery for safety reasons. He noted that the Worker’s witnesses all attested to the unusually dangerous working conditions at the Phalen Colliery compared to the other mines operated by the Employer.

The Worker’s representative argues that Dr. Peng’s expert testimony could not be given much weight due to his limited personal experience in the Phalen Colliery. He argues that some of Dr. Peng’s evidence supports the Worker - it is unusual to work in the ‘gob’ for any length of time as occurred in the Phalen Colliery. He argues some of the evidence of R.M., the former general manager of Phalen Colliery, supports the Worker’s case. R.M.’s evidence supports the Employer having many challenges with safety. The Representative

asks how a mine so unsafe that it was closed could not be considered unusually and excessively stressful.

The Worker's representative argues that the final three criteria for gradual onset stress are essentially a weighing of medical evidence. In this case, he argues that the evidence of Dr. Sheard, coupled with the Worker's evidence meet the final three criteria.

The Employer's representative argues that the only issue before the Tribunal is whether the Worker's claim meets the criteria for gradual onset stress. The Employer argues that the Worker's claim fails to meet two of the criteria.

First, the Employer argues that neither the Worker nor his witnesses have provided evidence that stressors experienced in the Phalen Colliery were excessive or unusual compared to those experienced by an average worker. The representative argues that the expert evidence of Dr. Peng places these stressors in their proper context. The employer argues that roof falls, gas-rock outbursts, and the presence of mine water are not unusual and excessive in the context of underground coal mining.

Second, the Employer argues that the Worker has not proven causation. He was not diagnosed with a gradual onset stress condition. He argues that I should draw a negative inference against the Worker due to Dr. Sheard's failure to identify workplace stressors as playing a role in the Worker's symptoms until at least two years after he began treating the Worker.

In a May 18, 2010 letter, the Board's representative wrote that the Employer's representative had fully addressed the issues.

On June 7, 2010, I wrote the participants seeking additional information. I asked how many longwall panels of coal were mined in Phalen between 1991 and 1998. I explained I wanted to have some context for Dr. Peng's opinion evidence regarding average yearly number of roof falls per panel in the American coal mining experience.

On June 30, 2010, the Employer's representative indicated that 14 panels were mined between 1988 and 2000. He argued that 8 roof falls during that time was not excessive or unusual given the number of panels mined.

The Worker's representative filed final submissions on August 3, 2010. He argues that the position of the Employer would lead to a Worker who has a dangerous job never being able to establish a claim for gradual onset stress. He argues that such an position is illogical and contrary to the *Workers' Compensation Act*.

ISSUES AND OUTCOME:**Does the Worker have an acceptable claim under policy 1.3.6 ?**

No. The Worker has failed to prove an 'accident', in that he has provided insufficient evidence of unusual and excessive stressors in the context of the dangerous profession of underground coal mining.

ANALYSIS:Background

The Worker performed a number of trades, primarily at the coal face of the mine. He worked for the Employer from 1979 until 1999. His claim for gradual onset stress is based on his time in the Phalen Colliery, where he worked from 1991 until January of 1999 (he worked for a short period of time in Prince Colliery after his lay-off in 1999). He has not worked since that time.

The Employer operated underground coal mines in the Sydney coal field. The Worker's witnesses testified concerning conditions in the No. 26 Colliery, Lingan Colliery, Prince Colliery and Phalen Colliery. These were all mines operated by the Employer in Sydney coal field.

The primary method of underground coal mining used by the Employer is called retreat longwall mining. In longwall mining, a panel of coal is extracted. A panel is a rectangular block of coal from a seam that is hundreds of feet wide and thousands of feet long. There are underground roads (headings) on each side of the panel which are dug before the panel is mined. The headings have several uses including access, pumping of water, and ventilation.

It is called retreat mining as the extraction begins on the far side of the panel. The coal is extracted using large shearers to cut a slice at a time off the face of the longwall of coal. A series of movable hydraulic jacks support steel shields over the area being mined. These protect the miners, shearers and the coal conveyer belt. The jacks are moved towards the face as the coal is extracted.

As the longwall retreats, the mine collapses behind it (a caving). This unshielded area where the mine collapses is referred to as the gob. If there is a caving ahead of the face, the caving is also referred to as the gob.

As mining proceeds, the width of the gob increases, and pressure increases on the longwall face. A significant increase in pressure is called a weighing or weighing event.

The harder the type of rock on top of the coal seam, the more it may overhang before caving, possibly resulting in weighing events or a roof fall.

When a caving is unexpected, it is referred to as a roof fall. Roof falls are often associated with weighing events.

The efforts to maintain the stability of a mine is referred to as ground control.

Geology is usually the most significant factor in determining how difficult it is to extract coal. Geological conditions can vary greatly from mine to mine and within mines. As stated in a 2003 Information Circular by the United States Department of Health and Human Services (page 30):

One of the most hazardous areas of mining remains the instability of exposed roof. During 1983-2000, 245 coal miners were killed by roof falls. In addition, an average of 980 injuries per year were attributed to roof falls during the same period. Unlike construction materials for which there are known strengths and other physical properties, roof geology, and thus rock stability, is highly variable.

The Worker's representative argues that three particular hazards made Phalen Colliery an unusually dangerous mine - cave-ins, gas-rock outbursts and water. There is no dispute as to these being features of the Phalen mine.

Law

As the Worker was employed by a federal crown agency, his entitlement to benefits is determined under the *Government Employees Compensation Act (GECA)*. Eligibility for compensation under the provisions of *GECA* is provided at subs. 4(1) and, under subs. 4(2), the rate of compensation and conditions for payment of compensation are determined under Nova Scotia's *Workers' Compensation Act*.

The definition of "accident" in *GECA* includes "a wilful and intentional act, not being the act of the employee, and a fortuitous event occasioned by a physical or natural cause". Section 4(1) of *GECA* provides that compensation will be paid to an employee who "is caused personal injury by accident arising out of and in the course of employment".

Board Policy 1.3.6, entitled "Compensability of Stress as an Injury Arising out of and in the Course of Employment - *Government Employees Compensation Act (GECA)*", establishes criteria for the adjudication of stress claims under *GECA*.

Policy 1.3.6, amongst other things, defines the types of stressors that can be an 'accident' under s. 4(1) of *GECA*. It provides that an accident must either be a 'traumatic event' or

work-related events that are 'unusual and excessive' in comparison to the work-related events or stressors experienced by a worker in the same or similar occupation.

While the Worker's representative indicated at the oral hearing that the Worker was seeking acceptance of his claim as both traumatic onset stress and gradual onset stress, the written submissions state the issue to be gradual onset stress. Given that the Court of Appeal only overturned the first Tribunal decision with respect to its analysis concerning gradual onset stress it is questionable whether I now have authority to re-adjudicate the question of traumatic onset stress. In any event, I would adopt the reasoning of the previous tribunal decision regarding traumatic onset stress. Therefore, the remainder of my analysis will focus on whether the Worker's claim meets the criteria for gradual onset stress.

Not every workplace stress exposure can be considered to be an accident for compensation purposes. It is not an 'accident' for someone to be exposed to the usual stresses associated with their position, even if such stresses cause a psychological reaction. Justice Robertson, in *Stewart v. Workplace, Health, Safety and Compensation Commission*, 2010 NBCA 67, recently explained the criteria for gradual onset stress, and the rationale behind such an approach, in the following terms:

In effect, Policy No. 1.3.6 places a significant restriction on the ability of federal workers to claim compensation benefits tied to claims arising from work-related gradual onset stress. The work-related stressors must be "unusual and excessive" when compared to what the average worker in the same occupation would experience. For greater certainty, the Policy goes on to exclude the right for compensation for gradual onset stress arising from activities that are expected and integral part of the work environment.

...

It is understandable that the law would carefully craft restrictions on the right to compensation benefits for gradual onset stress. Just as the law adopts an expansive interpretation of statutory provisions, so too are courts expected to apply their judicial air brakes thereby avoiding run-away interpretations, which may inflict fiscal injury on those responsible for the administration of the statutory scheme and on those who must pay for it (the employers). In brief, there is no legal impediment to courts adopting an expansive interpretation of the word "accident", as defined in the Act, while at the same time placing restrictions on what types of gradual onset stress claims will be eligible for compensation benefits. I seriously doubt whether any court would have been prepared to interpret the definition of accident to include psychological injury for gradual onset stress, had it known that there would be no reasonable safeguards or restrictions in place to ensure consistency

with the notion that an “accident” is either an intentional or a fortuitous event, that is to say, one which is unexpected. Stress is a virtual given in all but a few employment contexts.

Justice Robertson expressed the view that the intentional infliction of psychological injury by co-workers (harassment) is the “quintessential example” of an acceptable compensable claim for gradual onset stress.

In this case, the Worker is claiming that he was exposed to unusual dangers that gave rise to his claim. This raises the question of what constitutes an unusual danger. This phrase has been interpreted by the Supreme Court of Canada in the context of occupiers’ liability law. In *Campbell v. The Royal Bank of Canada*, [1964] S.C.R. 85, Justice Spence adopted a test from the House of Lords: Unusual is used in an objective sense and means such danger as is not usually found in carrying out the task or fulfilling the function.

I must now analyse the evidence to determine whether the Worker was excessively exposed to dangers whose nature is atypical, in terms of extent or degree, compared to what the average underground coal miner who works at the face of a mine might experience.

In determining whether the external stressors to which the Worker was exposed could amount to an ‘accident’, I must give him the benefit of the doubt. This means that if disputed possibilities are even then the issue must be resolved in his favour.

Key documentary evidence

In evidence before me are the materials from the Worker’s claims files, the transcript from the previous tribunal hearing, a large volume of documentary evidence submitted to the tribunal for this appeal and the evidence presented at the November 2009 oral hearing.

Amongst other things, the Worker’s representative filed portions of the Employer’s Annual reports for the years ending between 1993 and 2000:

1994 - There was a major set back in production at Phalen in the Fall of 1994 due a rock-gas outburst. The report indicated that such events were a “very rare occurrence” in coal mining. Development was halted until company representatives visited Poland and Germany to learn more about outbursts. By years end, new operating criteria were in place. That report also called operating under a flooded mine “unique”.

1996 - A severe weighting resulted in a major roof fall. As a result, 1200 employees were laid off for 10 weeks.

1997 - A number of roof falls, together with a mechanical break down, resulted in several

weeks of lost production.

1997-98 - A roof fall at Phalen Colliery caused three months of lost production. A rock-gas outburst halted development of one section of Phalen. The Employer wrote that a survey would determine whether that area had too much gas to be developed further. The report went on to provide that these problems, together with water inflows, made the Employer question whether it made economic sense to mine all of the coal reserves.

1999 - Phalen experienced two significant roof falls. Due to revenue shortfalls, geological conditions and safety considerations, it was decided that Phalen will be closed after section 8 East is mined. This is expected to be in the year 2000. However, Phalen might close before that depending on circumstances.

2000 - Production at Phalen ceased in September 1999 due to adverse geological conditions and related safety concerns. Phalen had stopped producing in late February 1999 through July due to a major roof fall. Another roof fall took place on September 7, 1999. Due to geology, safety, and financial considerations, the Employer decided to close the mine a year earlier than planned.

The Worker's representative filed several newspaper clippings relating to the closure of the Phalen Colliery. I will mention the two most significant which were both from the Cape Breton Post:

September 14, 1999 - Quoted the chair of the Employer's Board of Directors as saying that his number one concern was safety of miners. He felt that each roof fall increased the risk of an accident. The article goes on to state that an inspection of the site of the last rock fall revealed a thicker sandstone roof closer to the coal which increased the likelihood of further falls, water and gas.

September 14, 1999 - Purports to set out the chronological history of the Phalen Colliery. According to the article:

- Phalen began production 1988/89.
- A rock-gas outburst halted production of a portion of the mine in 1994.
- A roof fall in 1995 closed the mine for several months. It was as large as two football fields and buried equipment.
- Four roof falls in 1996 result in six weeks lost production. There is also flooding in a section of Phalen.
- The article documents three specific roof falls in 1997.

- The article states that on November 4, 1997, the Employer had indicated that up to 30 roof falls had occurred since Phalen began operation nearly four years ago.
- Roof fall in February 1998 resulted in five months of no production. Second roof fall in October 1998 puts mine out of production until November.
- Roof falls in February 1999 and September 1999 lead to decision to close Phalen.

The Employer filed several documents with the Tribunal.

One of the documents is the May 2000 thesis written by R.M., whose testimony is set out later in this decision. In the thesis, he wrote that longwall mining at Phalen Colliery began in May of 1987. By 1992, eight longwall panels had been mined without any serious ground control problems.

R.M. described how the Lingan Colliery flooded in 1992 after there was a pillar breach between the flooded No. 26 Colliery and the Lingan Colliery. He wrote that the Employer had to follow a strict protocol to avoid the accidental flooding of the Phalen Colliery. He wrote that fracturing associated with longwall mining in Phalen had "tapped" water in the flooded Lingan Colliery. He wrote that water was a major risk factor in the development of roof falls as it slows down operations during weighings. The presence of water also slows down recovery operations.

He wrote that the weighing events were believed to be caused by ground stresses induced by the coal pillars in the Lingan Colliery, together with the impact of the thick sandstone bed immediately above the coal seam.

R.M. also wrote that during the past six years, Phalen Colliery had recorded 133 weighting events on its longwalls. Of these, eight escalated to roof falls. He wrote these events occurred on five of its longwall panels.

Post-hearing, I wrote the Employer's representative asking how many longwall panels were mined yearly between 1991 and 1998 in Phalen. The representative wrote as follows:

I am advised that between 1988 and 2000, Phalen Colliery operated fourteen (14) long wall panels. However, it must be understood that (a) more than one panel was mined at a time, and (b) some panels took more than a year to mine out.

Testimony

The Worker had 4 witnesses as well as testifying on his own behalf. By all accounts (including evidence from the Employer), the Worker was a good employee who took pride

in his work, and took on difficult and challenging tasks, including volunteering for recovery work in the mines. I now set out the key testimony regarding conditions in the mines.

W.D.

W.D. testified that he worked in the mines between 1975 and 1999. Most of his career was in the Lingan Colliery. He began working in the Phalen in 1992/3 as a mine supervisor. At first he found Phalen alright to work in. Then roof falls became more frequent. He testified that the final two roof falls occurred in the same month.

While every mine has roof falls, he testified that Phalen's were different in that they were larger. They were greater in height and length. He testified that they could result in production stopping while the miners worked to recover the mining equipment and prepare the mine to resume production ("recovery"). A recovery operation at Phalen could last months. This did not happen in the other mines.

He testified that Phalen was also unusual in the amount of time miners had to spend on top of jacks. Phalen had gaps up to 30 feet between the jacks and the roof of the mine after a roof fall. They put boards on top of the jacks then pumped in the foam. It was nerve wracking to be on top of the jacks. Only occasionally did the miners have to go on top of the jacks in Lingan. He heard that this was also done at an isolated location in the Prince Colliery.

He testified that water came in during roof falls. It was like rain. This was not good as it made it hard to hear. He explained that it is important to hear "roof crackles" which give miners warning that a further roof fall might occur (this sound is referred to as "bumping").

He testified that taking part in recovery was voluntary, at least closer in time to when production ended at Phalen.

He testified that it was necessary in Phalen to keep the face wall moving to prevent weighing events that can lead to roof falls. This was not always possible as there were mechanical breakdowns.

He testified that he believes Phalen closed primarily due to safety concerns, but that economics was also a factor.

P.P.

P.P. testified that he worked for the Employer from 1974 until 2000. He had been an underground manager at both Lingan Colliery and Phalen. He had extensive training, including mine examiner's papers. He felt that the Employer had trained him well concerning safety concerns in the mines. He testified that underground mining is

dangerous work.

He expressed the view that Phalen was the most dangerous of the mines. He testified that sandstone on top of the coal seam made it necessary to keep the wall face moving quickly to avoid a roof fall. He expressed the view that water was the “biggest” concern as it prevented miners from hearing a potential roof fall. He testified that miners had to volunteer to take part in recovery operations. He testified that no fatalities resulted from roof falls in Phalen. He suffered a broken leg. This did not happen during a roof fall. It occurred during a recovery when a single rock fell.

He testified that the nature of roof falls at Lingan were different in that recoveries were easy. At Phalen it could take 6 to 8 months to clear a roof fall. By the last roof fall, he was concerned that someone would be killed. It almost crushed the shearer. He knew that they would not be able to recover the shearer. He testified that there was a general feeling amongst the miners that a fatality would take place if they kept mining after the last fall.

He testified that during a wave (a weighting) the miners could see bleeding (oil pushed from the jacks by pressure). Sometimes bolts flew off the jacks. They then had to keep the face wall moving to avoid a roof fall. During vacations, they were able to keep a skeleton crew in Lingan. They could not do that in Phalen, as they had to keep the face moving. He testified that there were over a hundred weighing events in Phalen.

He testified that was unusual to work below a flooded mine (Lingan was flooded when it closed, and Phalen was located below it). He testified that the water was salty, and it impacted the machinery. Only in Phalen did the miners have to wear rain gear. He testified that drowning was never a fear.

He testified that methane gas was a problem at Phalen and some other mines. It could cause a rock-gas outburst (an explosion).

He testified that one of the most dangerous things in mining was recovery work on top of the jacks. There could be a huge hole. You had to put up lumber before the foam.

He testified that the conditions in Phalen impacted the morale of the workforce. He believes that safety is the reason that Phalen was closed in 1999.

A.K.

A.K. testified that he worked for the Employer from 1971 until 1999. He worked in the #26 Colliery, Lingan, Phalen and Prince. He worked in Phalen from 1985 until 1999, mostly as a shearer operator.

He testified that different mines had different hazards. At #26 Colliery rock-gas outbursts

were a particular concern, particularly near the end of that operation of that mine.

He testified that mining conditions were either really good or terrible in Phalen. He testified that he had to keep the shearer moving when jacks started to bleed.

He testified that ideally the jacks would touch the roof. However, this did not happen in Phalen. Due to this there was no safe place to work while in Phalen. He testified that they had to put up plywood and foam on top of the jacks. In the lower levels of Phalen they used a form of glue instead of the foam. He testified that the jacks used in Phalen were 3 times larger than those used in the other mines. If you saw them bleed, then you knew you had to get the coal face moving. He testified that this relieved pressure.

He testified that foam was not used at any of the other mines (except once at Prince).

He testified that work on top of the jacks was nerve wracking. He was only up there a few times. He testified that only about 100 men were willing to volunteer to take part in recoveries (he called them "falls"). He testified that falls would take place in Phalen without warning.

He testified that he had been scared when he worked in Phalen, but not in the other mines. He testified that he took a job at the surface of the mines in 1999 as he could not take it anymore. He was glad when Phalen was closed with no fatalities.

He testified that they had to wear rain gear in Phalen including taping their gloves. The water could come down in sheets at times. He described the sound as worse than a rain storm. Working below a flooded mine also worried him.

He testified that there were over a 100 weighing events and about 8 roof falls at Phalen over the years. He testified that rock falls happened all the time, and could occur at anytime following a roof fall. He felt that Phalen was unique for the size of the hole following a roof fall. He testified that he had never experienced a weighing event at any mine other than Phalen.

W.B.

W.B. is the Worker's brother. He began in the Lingan Colliery in 1979, then worked in Phalen starting around 1993 until 1998. He primarily worked at the face of the mine.

He testified that Lingan was a good mine to work in. There was only about a foot or two space above the jacks at most. There were no water problems.

He contrasted this to Phalen. He testified that sandstone was the reason why Phalen was prone to roof falls. In Phalen, they had to stand on top of the jacks and place plywood

before using foam. When they had roof falls, recovery operations could take months. This required working in the gob. They used extra 'tell tales' to warn of possible roof falls.

He testified that it was difficult to work in Phalen as you had to wear rain gear. He expressed the view that the salty water was coming from the flooded Lingan mine. He testified that you could get methane gas without warning in Phalen. He did not believe that the flooding of Lingan had been planned. He did not believe that Phalen would have been mined had the Employer known of the dangers before hand.

He testified that they used different jacks at Phalen. He thought that the use of foam was unusual. He testified that the Employer brought in experts to look at Phalen, something that did not happen at Lingan. He felt that the Employer had been caught off-guard by the conditions at Phalen. He was glad when Phalen was closed.

Worker

The Worker was employed in the mines since 1979. He began in the Lingan Colliery, then in 1991 moved to Phalen (according to his 2006 testimony, he was laid off in January of 1999). In April of 1999, he went to work at Prince. He volunteered to work at the face of the mine including recovery.

The Worker described a roof fall where he saw the jacks going down on the shearer. Everything was coming down. A jack just missed him. He pulled himself over a cable carrier.

He testified that he had several close calls. He remembers a large rock falling just next to him. He remembers a rock hitting his head on one occasion.

The Worker testified that Phalen was a lot different than Lingan. At Phalen, things were more tense and management was edgy.

The Worker testified that after 1992, they had to wear rain gear while working in Phalen. He felt that the barrier between the mines had been compromised and that the flooding of Lingan had not been planned. However, the problem with water was the noise.

The Worker testified that he had several workplace injuries. The worst was in 1997 when he slipped while lifting a heavy object. He injured his back and was off for nine weeks. He testified that he had ongoing problems after his return to work. He felt that the injury slowed his reflexes, making it more difficult for him to avoid dangers. It also slowed him at work, which bothered him as he was proud of his work. The Worker felt things had changed for him after the 1997 accident, they started to fall apart. He did not know why.

The Worker feels that Phalen was closed due to roof falls. He feels that it is different than

other mines due to the continuous nature of the threat. He testified that it took seven months to clear one of the falls. He noted that there was no cover when putting up jacks after a fall. He compares his situation to the miner who was struck by a stone and died after walking out to an unshielded location against company policy.

The Employer had two witnesses.

R.M.

R.M. has been employed by the Employer since 1981. He was the General Manager of the Phalen Colliery from 1997 to 2001. Before that he had various engineering responsibilities in the Lingan Colliery.

He acquired his masters degree in underground coal mining while working for the Employer. He testified that he acquired his degree from West Virginia as most mining in Canada is hard rocking mining - there were no post-secondary programs in engineering for soft rock mining such as coal. His master's paper, published in the year 2000, concerned weighing events in the Phalen Colliery.

He testified that other jurisdictions were ahead of Canada in coal mining technology. He visited several underground coal mines in the United States and United Kingdom. He testified that he had wanted the right technology to support the roof of the mine. Further, the Employer had to defend its methods to a Federal regulator.

He testified that the two other underground coal mines in Canada did not compare to the Employer's operations. They were very small and not longwall operations.

He testified that mining coal in sandstone was a challenge. Sandstone is harder to hold up than the rocks in the other mines of the Employer. In Phalen larger support jacks were necessary. He testified that there were 113 weighing events in Phalen. He testified that 8 major roof falls occurred due to weighing events. He testified that the largest roof fall was 9 metres in height. In length, it was about 500 feet (almost two football fields). He testified that shut downs following a roof fall were longer at Phalen than the other mines.

He testified that working below a flooded mine did not create a hazard. The distance between the mines was safe (according to British standards). He testified that the density of water is less than that of coal, and much less dense than sandstone. He testified that when a working mine is abandoned, the water pumps are turned off and it floods.

He testified that salty water occurred naturally underground. It is not water from the ocean. Instead, it is water that was trapped from ancient geological times. He testified that Phalen was a bit different due to the concentration of salty water. It was eight times more salty than seawater.

He testified that each mine presented different challenges in terms of ground control. There were localized areas in Lingan that were prone to roof falls. Prince had an area with a water problem, including a lot of hydrocarbons. He testified that Phalen did not have more roof falls than Lingan, but that they were bigger. He testified that there were gas problems in #26 Colliery, Lingan and Phalen. Methane gas was a greater problem in #26 Colliery than Phalen. He travelled to other jurisdictions to learn how to deal with rock-gas outbursts.

He testified that each mine had to be designed to address its challenges. He testified that he “overdesigned” for safety in Phalen using what he learned in other jurisdictions.

He testified that three gas-rock outbursts occurred in Phalen, compared to six in Lingan. He testified that rock-gas outbursts were rare in Canada, so they travelled to Europe to learn how to deal with them. He testified they learned to drill ahead of the face, and if gas were detected, they would use a controlled explosion to eliminate the hazard.

He testified that they used “tell tales” to see what was happening to the roof while they mined (this was only done in Phalen). These are poles, which are inserted into the roof, that are either 8 or 16 feet long. Also, they used sonic probes to detect movement in the roof. They had valves in the longwall which expelled fluids when pressure increased. They had monitors on site which changed colour based on the amount of pressure. He testified that the use of bolts was unique to Phalen.

He testified that it was very rare for the miners to be above the shield. They had to build cribs before foam could be pumped up. He felt this to be a high risk part of recovery. He testified that it took 1 to 2 hours to build a crib. He did not observe this.

He testified that no miners were killed by a roof fall while he worked for the Employer. After the closure of the mines in 2001, he is aware of one former employee who was killed in a roof fall in a coal mine in Alberta.

He testified that he disagreed with the September 14, 1999 report in the Cape Breton Post which reported the Employer said that there had been 30 roof falls in Phalen. He testified that he never reported this.

He testified that the decision to close Phalen was made at a meeting of the Board of Directors. It followed a September 1999 roof fall. He testified that the usual life of a mine is 25 years. Phalen closed after 8. He agrees that Phalen was more challenging than the other mines where he worked. He agrees that several of the documents which discuss the closure of Phalen refer to safety as the reason.

Dr. Peng

Dr. Peng, an engineer (Ph.D), provided expert evidence. He is an university professor of coal mining in West Virginia. He wrote three texts which are used at other teaching institutes in the United States: *Coal Mine Ground Control* (3rd ed), *Longwall Mining* (2nd ed), and *Ground Control Failures* (more of a reference book than a text). He has visited over 300 coal mines around the world. He has been a consultant for many mines. I found that he was qualified to provide opinion evidence concerning underground coal mining including longwall mining and ground control.

He testified the largest producers of coal are: China, United States, India, Russia, Poland then Australia. Canada is a very small producer of coal. Surface mining is more common in the United States as it is less labour intensive and less complicated. In terms of underground coal mining the largest producers are: China, United States then Australia. Both Canada and the United Kingdom are very small producers of underground coal. He testified that the most common method of underground coal mining is longwall mining as it is safer and more productive than other methods.

He testified that there were only three underground coal mines in Canada at the relevant times. One in British Columbia, one in Alberta and that of the Employer. He testified that the other two Canadian mines were very small compared to the Employer's operation.

Dr. Peng visited the Phalen and Lingan Collieries after the Lingan Colliery had flooded. He was consulted to determine whether the flooding posed a hazard to the Phalen Colliery. It was his opinion that it did not, given the distance between the coal seams. He visited the Phalen Colliery on 3 or 4 other occasions for consultations with respect to weighing issues.

He testified that normal pressure underground is about 1600 psi. During a weighing event, it increases to between 1800 and 2000 psi.

He testified that weighings are common events in a coal mine. Most have them. He testified that sandstone or limestone makes a mine prone to weighings, and the thicker the sandstone, the larger the weighing. He expressed the view that the sandstone at Phalen was about medium thickness. By contrast, he described a weighing event with sandstone in a mine in Utah which resulted a 4.3 Richter earthquake.

He testified that roof falls are very common. There are about 900 underground mines in the United States. He testified that it is very unusual for a mine not to have a roof fall. In the United States there are, on average, 2 to 3 roof falls per panel mined per year. He testified that it is not uncommon for a mine to have over a 100 weighing events. He testified that more weighing events would not be uncommon. He testified that some mines have hundreds of weighing events. He testified that a 70 foot roof fall would not be considered a big one. He testified that participating in recovery operations is not usually

voluntary in the United States.

He testified that the Employer was ahead of its time to have an onsite geologist. It is now common practice.

He testified that the Employer had excellent safety practices. They had more employees than most mines whose jobs were dedicated to safety. The Employer had safety protocols for everything.

He testified that fatalities are not common, but happen. It varies by country. China is the worst with thousands per year. In the United States there were 34 in the previous year. In 2009, to the date of the hearing, there had been 5 underground fatalities in the United States. He testified that roof falls are one of the most common causes of death. He testified that rock fall fatalities are very rare.

He testified that Phalen was not an unusually deep mine. He testified that it is not uncommon to mine under old mines. In Virginia, for example, multiple seam mining is common, with some having 13 to 16 seams.

He testified that an average longwall in the United States is 900 feet wide, so Phalen was not unusual.

He testified that water in a mine is very common. Having to wear rain gear is something that happens, but not in all mines. He testified that for each acre mined, you get 1 gallon per minute of water on average. For this reason, it is common for a mine to have a pumping station. Abandoned mines are usually flooded by turning off the pumps.

He testified that miners typically only spend about a half hour on top of a jack in a mine. He testified that the use of foam is very common in longwall mining. He testified that recovery work is more dangerous than ordinary mining. He testified that standing on top of a jack does expose a miner to risk.

He testified that a mine is typically abandoned after a roof fall if the recovery operation is more expensive than replacing the mine.

Dr. Peng had reviewed the testimony from the 2006 WCAT hearing as well as listening to the testimony in 2009. He expressed the view that there was nothing unusual about the Worker's experiences in the Phalen Colliery. He felt that such experiences were common in the industry. However, within the Sydney field, Phalen Colliery was unusual.

Proper comparator

The Worker worked several trades at the face of the mine. In his case, the same or similar

occupation would include the various trades that one might work at the face of a coal mine.

As previously noted, the 2007 Tribunal decision erred when it compared the stressors experienced by the Worker to those experienced by other underground coal miners who also worked at Phalen. Clearly, the Tribunal choose the wrong comparator group.

The Worker's representative submits that the correct comparator group would be underground coal miners who worked in the Sydney coal field in mines other than Phalen. In my view, that is too narrow a comparator group. Such a narrow comparator group would not reasonably represent the occupation.

The Canadian underground coal mining industry is very small. The other two mines in Canada are too small to be proper comparators. In these circumstances it is appropriate to consider the experiences the average American underground coal miner in considering what is an unusual and excessive stressor. Some consideration of worldwide experiences is also appropriate given that similar geographical conditions may be found in other countries. However, I do not believe that comparisons to developing countries is appropriate given that far different occupational health and safety standards may exist in such countries.

Not unusual and excessive

The Worker has established that the conditions under which he worked in Phalen were comparatively more dangerous than conditions in the No. 26 Colliery, Lingan Colliery, or Prince Colliery. In terms of amount of time the miners had to spend in the gob, and time above the shields, the Worker experienced stressors which were unusual and excessive compared to the stressors experienced in the other recently active mines in the Sydney Coal field.

However, that it not the proper comparator group. I now examine in greater detail the dangers to which the Worker was exposed to determine whether they were unusual and excessive compared to an average coal miner who works at the face of the mine.

The uncontradicted testimony of R.M. is that three rock-gas outbursts took place in Phalen. The Worker's testimony did not discuss any personal exposure to rock-gas outbursts. Irrespective of whether or not such a condition might be an unusual danger, the Worker cannot be said to have had excessive exposure to this type of danger. The remainder of my analysis will concentrate on roof falls and water.

Broadly speaking, water and roof falls (and rock falls) were related stressors in Phalen. Water problems and the coal seam being surrounded by sandstone combined to make Phalen more challenging in terms of ground control than No. 26 Colliery, Lingan Colliery, or Prince Colliery.

Sandstone created a strong roof, which is not a good geological feature for longwall mining. It was prone to weighing events and larger roof falls than occur with a weaker roof. It also tends to result in a larger cavity above the shield and the need for cribs to be built exposing miners to the risk of rock falls.

Phalen had water from aquifers disturbed by the mining operation (as do most mines). It was also under a flooded mine from which water percolated into Phalen, particularly during weighing events and roof falls. The water added to the risks of mining in Phalen in three ways: it slowed down mining operations which increased the risk of a weighing resulting in a roof fall (including increasing the incidence of mechanical breakdown); it increased the amount of time needed for recovery operations (the miners had to spend more time in the gob exposed to potential rock falls or additional roof falls); and it made it difficult for miners to hear a bump (one of several ways they can learn a weighing is occurring).

The Worker was in the Phalen Colliery from 1991 until he was laid off in January of 1999. This means that he was not working in Phalen when the final two roof falls occurred in 1999 (a fall which stopped production for five months and the final fall after which Phalen was closed).

P.P., a witness for the Worker, testified that over 100 weighing events occurred at Phalen over the years. He testified that there were about 8 roof falls over the years. His evidence is very similar to that by R.M. on behalf of the Employer. He testified that there had been 113 weighing events at Phalen. He testified that there had been 8 roof falls.

The Employer's Annual Reports document 6 specific roof falls, plus the 1997 report states that a "number" of roof falls occurred during its reporting period.

The chronological history (from unknown sources) from the Cape Breton Post documents 13 roof falls, plus it cites unknown source from the Employer as stating that up to 30 roof falls had occurred at Phalen by 1997.

I cannot give any weight to the suggestion that 30 roof falls occurred. The information (of unknown source) is too unreliable and does not accord with the rest of the evidence.

Given that both P.P and R.M. testified to 8 (or about 8), this appears to be in the right ballpark. However, R.M.'s thesis states that weighings resulted in 8 roof falls. I infer that R.M. used his thesis in recalling the number of roof falls. Given that not all roof falls result from weighings, it is reasonable to infer that the total number was slightly higher than 8. In all these circumstances, I accept that about 13 roof falls occurred as suggested by the Cape Breton Post article. The Worker would have been employed at Phalen for about 11 of those.

The Employer's evidence is that 14 longwall panels were mined between 1988 and 2000.

In his thesis, R.M. wrote that the weighing events and roof falls occurring on five panels which were mined in the last six years of Phalen.

Taking into account the number of longwall panels mined while the Worker was at Phalen, and Dr. Peng's evidence that on average there are 2 to 3 roof falls per year per panel mined, it appears that, by industry standards, Phalen's number of roof falls fell within the average range. The number of roof falls was not unusual.

Roof falls lead to recovery operations. The Employer did not require its employees to take part in recovery operations. However, I accept the evidence of Dr. Peng that, by industry standards, it is a usual part of a underground miner's job to take part in recovery operations. This is not an unusual danger given the occupation.

Phalen was closed many years before its reserves of coal were extracted. I accept that the Employer was concerned that the risk of fatalities was too great to continue mining Phalen. There is uncontradicted evidence before me that the Employer had a greater focus on safety than many in the industry. There is also evidence before me that mine operators perform cost analysis after roof falls to determine whether to continue with a mine. There is a strong correlation between safety and profitability. I do not find it unusual that a mine operator would close a mine due to cost and safety concerns. That in itself does not make the Worker's stress exposures unusual and excessive.

Witnesses on behalf of the Worker suggested that it is unusual to work under a flooded mine or to mine under sandstone. I accept that these features made Phalen more dangerous than the other mines in the Sydney coal field.

However, the Worker has not led evidence that working under a flooded mine or mining coal under sandstone is unusual in the industry outside of the Sydney coal field. Dr. Peng testified that it is common to have multiple seam mining with the abandoned mines having been flooded. He testified in the industry the need for cribs and foam above the shields is common. He testified that the thickness of the sandstone at Phalen was about average for a coal mine. Dr. Peng was also of the view that there was nothing unusual about the Worker's experiences in the context of underground coal mining. I accept the foundation for Dr. Peng's opinion and come to the same conclusion on the evidence as a whole.

Overall, I find that the Worker has failed to prove, on an as likely as not basis, that the stressors to which he was exposed were unusual and excessive compared to the average underground coal miner who works at the face of a mine. There is no need for me to consider the other criteria under policy 1.3.6.

CONCLUSION:

The appeal is denied.

The Worker does not have an acceptable stress claim under policy 1.3.6.

DATED AT HALIFAX, NOVA SCOTIA, THIS 30th DAY OF SEPTEMBER, 2010.

Sandy MacIntosh
Appeal Commissioner