

**FEDERAL MINE SAFETY AND HEALTH REVIEW COMMISSION**

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April 28, 2015

SECRETARY OF LABOR  
MINE SAFETY AND HEALTH  
ADMINISTRATION (MSHA),  
Petitioner

v.

HECLA LIMITED,  
Respondent

SECRETARY OF LABOR  
MINE SAFETY AND HEALTH  
ADMINISTRATION (MSHA),  
Petitioner

v.

DOUG BAYER, employed by  
HECLA LIMITED  
Respondent

CIVIL PENALTY PROCEEDINGS

Docket No. WEST 2012-760-M-A  
A.C. No. 10-00088-283636-02

Docket No. WEST 2012-986-M  
A.C. No. 10-00088-289913

Lucky Friday Mine

CIVIL PENALTY PROCEEDING

Docket No. WEST 2014-591-M  
A.C. No. 10-00088-347067 A

Lucky Friday Mine

**DECISION AND ORDER**

Appearances: Patricia Drummond, Esq., Office of the Solicitor, U.S. Department of Labor, Seattle, Washington and Cheryl L. Adams, Esq., Office of the Solicitor, U.S. Department of Labor, San Francisco, California, for Petitioner;<sup>1</sup>  
Laura E. Beverage, Esq., and Karen L. Johnston, Esq., Jackson Kelly PLLC, Denver, Colorado, for Respondents.

Before: Judge Manning

These cases are before me upon petitions for assessment of civil penalty filed by the Secretary of Labor, acting through the Mine Safety and Health Administration (“MSHA”), against Hecla Limited and Doug Bayer pursuant to sections 105 and 110 of the Federal Mine Safety and Health Act of 1977, 30 U.S.C. §§ 815 and 820 (the “Act” or “Mine Act”). The parties introduced testimony and documentary evidence at a hearing held in Coeur D’Alene, Idaho, filed post-hearing briefs, and filed reply briefs.

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<sup>1</sup> Matthew Vadnal of the Office of the Solicitor in Seattle, Washington, also represented the Secretary in these cases until his retirement in October 2014.

Hecla Limited operates the Lucky Friday Mine in Mullan, Idaho. One section 104(d)(1) citation and three section 104(d)(1) orders brought against Hecla and a civil penalty proceeding brought against Hecla's mine superintendent Doug Bayer under section 110(c) of the Act were adjudicated at the hearing.

## **I. BACKGROUND**

The Lucky Friday Mine is a silver, lead, and zinc mine in the Coeur D'Alene Mining District of northern Idaho. The mine is divided into two sections: the Gold Hunter section and the Lucky Friday section. On April 15, 2011, a large fall of ground occurred in cut 3 of stope 15 west at the 6150 level of the Gold Hunter section ("15 west"). Larry Marek was fatally injured in the accident.

### **A. Mining Method<sup>2</sup>**

The Lucky Friday Mine is subject to intense horizontal pressure that significantly exceeds the vertical pressure in the Mine. This intense horizontal pressure is a characteristic of the Coeur D'Alene Mining District. The pressure prompted Hecla Limited to refine a mining technique known as underhand cut and fill mining, as described below.

The mining process consists of five stages: drilling, ramping, slotting, stoping, and backfilling. Drifts are developed horizontally from the mine shaft. Ramps are then developed that spiral up or down from a drift. Slots are developed from the ramp, perpendicular to the ore vein. The slot is used to access the vein. The mining of ore takes place in the stope, which extends to the right and to the left of a slot. The stope is mined to follow the vein or veins of silver, lead and zinc. Each slot is used to access 50 vertical feet of ore in five separate cuts in the stope. These five cuts make up a sublevel. Each cut is ten feet high.

The crew follows the same sequence of events in each cut in the two sides of the stope. They muck out rock from the previous shift, bolt the area, drill the next round, and blast the next round at the end of the shift. This process is repeated many times, extending the ten feet high and twenty foot wide stope up to several hundred feet horizontally to the limits of the ore vein. After completing the extraction of ore from a cut in the stope, the miners prepare to backfill the entire length of the stope before moving down to the next level. The engineered backfill is a combination of cement, water, and classified mill tailings. The backfill is mixed on the surface and pumped underground through a series of pipes. This backfill is often referred to as "sandfill" or "pastefill." In preparation for backfilling the stope, miners place a one to two foot layer of prep muck over the stope floor. Miners install what are called "Dywidag" bolts in a designated pattern in the prep muck on the stope floor. This pattern is specified in the "Lucky Friday Ground Support Standards." The bolts, which stand upright, act as rebar giving strength to the backfill.

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<sup>2</sup> The description of the mining method is taken from the "Parties' Joint Stipulations" and is supplemented by undisputed testimony.

Miners build a sandwall to contain the cement backfill during the pouring process. The sandwall and backfill extend from the floor of the stope to approximately two feet below the back.<sup>3</sup> Once the backfill has hardened, the next cut is taken about 10 feet below the backfill with the result that the hardened backfill from the previous cut becomes the back (roof) of the next cut. Although the pastefill is firm and solid, it has enough elasticity to withstand the horizontal pressure exerted upon it. (Tr. 419, 531-32). The horizontal pressure holds the backfill in place.

Hecla used extensive engineering and geological expertise to refine this underhand cut and fill method. This method made mining safer by reducing rock bursts and roof falls. Hecla's work to improve this mining method is well known in the mining industry. The Secretary does not take issue with this mining method in ordinary circumstances.

In stope designation, the first number refers to the sublevel; the second number is the stope; and the third number is the specific cut within a sublevel. The sublevel designation is determined by the depth of the sublevel measured in feet from the collar of the shaft. Sublevel 615 is 6150 below the top of the shaft. The fatal accident occurred in 615-15-3.

Cuts in the 15 stope were typically 18 to 20 feet wide. Under the mine's ground support standards, cuts were permitted to be wider, but extra ground support was necessary if the cut exceeded 20 feet for a distance of 25 feet. (Ex. R-19 p. 3). Cuts that exceeded 20 feet slowed the mining process because muck could not be removed quickly enough and the ratio of ore containing rock and waste rock usually decreased. Both Hecla and its miners sought to speed the mining process by keeping the width of cuts under 20 feet.

At the Lucky Friday Mine, miners bid to work in specified areas of the mine and the most senior miners get first priority and are able to pick the area that they will mine as well as the miners who will be on their mining team. After winning a bid, miners work in the same area for a long period of time, allowing the miners to become familiar with that area. A bid covers two sublevels (10 cuts) which typically takes two years to complete. (Tr. 456). The pay for miners working in the stope is based on the number of feet that they advance the stope. (Tr. 517).

## **B. Events Leading up to the Accident**

The primary source of silver and the economic lifeblood of the Gold Hunter Section is the 30 vein. There are other ore veins in that section, some of which are economical to mine while others are not. Hecla deemed that mining the 41 vein was also economically beneficial and simultaneously mined the 30 and 41 veins in the Gold Hunter section. Mine geologists regularly visited the stope and prepared a cut projection map, which provided miners the information they need to advance the stope. In the 15 west stope, miners advanced cut 1 as a single 20 foot wide cut but after advancing approximately 50 feet, they were instructed to create two roughly parallel entries that split like the tines on a barbecue fork, following each vein

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<sup>3</sup> The roof is generally referred to as the "back" at the Lucky Friday Mine. I use the terms "roof" and "back" interchangeably in this decision.

separately.<sup>4</sup> The 15 east stope was mined in the same manner. Thus, there were four advancing faces at the opposite ends of the stope, two on the west side and two on the east. The width of the cut for each vein was significantly narrower than 20 feet. Mining advanced more than 200 feet on each side of the stope in this fashion. This method of mining was common in the Gold Hunter section of the mine. The space between the veins was not mined, creating a pillar of unmined rock.<sup>5</sup> The miners followed the procedure described above when backfilling the cuts so that in the area where the veins diverged, there were two backfilled areas on each side of the slot separated by the waste rock pillar that was not mined. A similar procedure was followed in cut 2 of the 15 stope. The solid waste rock left between the two advancing faces on the west side of stope 15 cut 2 varied in width between six and nine feet. Mine geologists determined that 30 vein merged with the 41 vein in the area of cut number 3, however. At Hecla's direction, the miners removed all of the rock in the west stope, including the rock directly under the waste rock pillar that was left in cuts 1 and 2, for a distance of about 75 feet. The plan was that miners would proceed in this fashion into the stope until the veins diverged again 75 feet or more into the cut. At that point miners would again leave a waste pillar down the middle of the stope.

The mining of 615-15-2 started on January 27, 2011 and was completed on March 16, 2011. The mining of 615-15-3 started on March 30. In cut three, miners in both the east and west stopes were extracting the ore-bearing rock under the pillar that was present in cuts 1 and 2. On April 13, 2011, Hecla Management toured all the active stopes, including 15 west. Management evaluated the geology, ground conditions, and general characteristics of the active areas and found no problem with the back or ribs in the area or with the fact that miners were not leaving a pillar down the middle of the cut.

On April 15, 2011, the back and the waste rock pillar above cut 3 in stope 15 west fell into cut 3, fatally crushing miner Larry Marek in the west stope. By all accounts, the rock fall was massive. Following the rock fall, both Hecla and MSHA initiated rescue efforts, but were unable to save Larry Marek. Michael Marek, Larry's brother, was working in the east stope at the time of the accident.

MSHA investigated the rock fall and issued the citation and orders at issue. Numerous MSHA personnel were involved in the investigation, but Rodric B. Breland was the lead inspector. The Secretary of Labor alleges that Hecla failed to control ground in the east and west 15 stope as well as the 12 stope. He also alleges that Hecla failed to properly examine the ground in the 15 west stope. The Secretary charged Doug Bayer with a violation of section 110(c) of the Mine Act. That charge relates to the failure to properly examine ground conditions.

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<sup>4</sup> The horizontal distances referenced in this decision are not exact but are approximations based upon the testimony and the projection maps presented at the hearing. (*See e.g.* Tr. 80, 143, 214-15; Exs. P-9, R-1, R-6, R-8).

<sup>5</sup> This unmined rock between the veins was referred to as "waste rock" at the hearing because it did not contain valuable ore. It was also referred to as the "pillar" or "waste rock pillar." Pillars are not part of the ground control system at the mine. (Tr. 209, 408). Pillars are not designed to support the weight of the roof as pillars are in a "room and pillar" mine.

At hearing, both the Secretary of Labor and Hecla Limited presented numerous witnesses and exhibits focusing upon the geology, engineering, and events leading up to the rock fall at the mine. The Secretary called Inspector Kevin Hirsh, an Assistant District Manager, Inspector Rodric Breland, a Field Office Supervisor and the Lead investigator of the rock fall, Paul Tyrna, a Geologist for MSHA Technical Compliance, and Ron Krusemark, Lucky Friday's Chief Engineer at the time of the rockfall. The Secretary also presented three miner witnesses: Mike Marek, Tom Ruff, and Doug McGillis. Hecla called as witnesses Doug Bayer, the current general manager of the Mine who was mine superintendent at the time of the rockfall, Terry DeVoe, the Mine's chief geologist, Nick Furlin, a senior geologist, Scott Hogamier, the safety supervisor, John Jordan, Hecla's Vice President of technical services who was the general manager at the time of the rockfall, John Lund, a Mine foreman, Cliff Shiner, an assistant mine foreman, and Bruce Cox, lead production geologist. John Jordan, Terry DeVoe and John Lund were principal witnesses for the Secretary as well as Hecla.

## **II. Citation No. 8559607 and Order No. 8559608; WEST 2012-986-M**

On August 8, 2011, MSHA Inspector Rodric B. Breland issued Citation No. 8559607 and Order No. 8559608 under section 104(d)(1) of the Mine Act. Citation No. 8559607 states:

A fatal accident occurred at this mine on April 15, 2011, when a miner was struck by falling material while working in the 6150-15-3 West stope. A substantial quantity of material (measuring approximately 25 feet in width, 74 feet in length, and 25 feet in height) fell 10 feet from the stope back after portions of a supporting pillar were removed to extract ore. Ground support was necessary in the stope to mine safely, but the ground support utilized was not adequate. The ground control was not designed, installed, and/or maintained in a manner that was capable of supporting the ground in such a wide stope when the support pillar was removed. Mine management has engaged in aggravated conduct constituting more than ordinary negligence by directing the pillar to be mined as the stope advanced and allowing miners to work under inadequately supported ground. This is an unwarrantable failure to comply with a mandatory standard.

(Ex. G-1 at 1). Citation No. 8559607 alleges a violation of section 57.3360 of the Secretary's safety standards, which requires in pertinent part:

[g]round support shall be used where ground conditions, or mining experience in similar ground conditions in the mine, indicate that it is necessary. When ground support is necessary, the support system shall be designed, installed, and maintained to control the ground in places where persons work or travel in performing their assigned tasks.

30 C.F.R. § 57.3360. Order No. 8559608 states, in pertinent part:

Management failed to adequately examine and test the ground conditions to determine if additional measures needed to be taken. This was necessary due to constantly changing ground conditions, they were mining a wide stope and

removing the support pillar. The operator has engaged in aggravated conduct constituting more than ordinary negligence, as they needed to make examinations and conduct tests to ensure that all feasible precautions were taken. This is an unwarrantable failure to comply with a mandatory standard.

(Ex. G-1 at 8). Order No. 8559608 alleges a violation of section 57.3401 of the Secretary's safety standards, which requires:

[p]ersons experienced in examining and testing for loose ground shall be designated by the mine operator. Appropriate supervisors or other designated persons shall examine and, where applicable, test ground conditions in areas where work is to be performed, prior to work commencing, after blasting, and as ground conditions warrant during the work shift. Underground haulageways and travelways and surface area highwalls and banks adjoining travelways shall be examined weekly or more often if changing ground conditions warrant.

30 C.F.R. § 57.3401. The Secretary proposed a penalty of \$159,100.00 for each alleged violation. For both Citation No. 8559607 and Order No. 8559608 Inspector Breland determined that a fatal injury occurred. Further, he determined that the violations were Significant and Substantial ("S&S"), the operator acted with reckless disregard, and that one person was affected. The penalties were proposed under section 110(b)(2) of the Mine Act for flagrant violations.

MSHA also proposed a penalty against Doug Bayer under section 110(c) for the conditions set forth in Order No. 8559608, alleging that he knowingly authorized, ordered, or carried out the violation of Section 57.3401. The Secretary proposed a \$4,500.00 penalty for this alleged violation.

## **A. Discussion and Analysis**

### **1. Section 57.3360, Ground Support - Citation No. 8559607**

Both parties agree that whether section 75.3360 was violated turns on what action a reasonably prudent person familiar with the facts and the protective purpose of the safety standard would have taken to provide the protection intended by the standard. *Canon Coal*, 9 FMSHRC 667, 668 (April 1987).<sup>6</sup> Hecla argues that the safety standard must be interpreted in the context of the conditions and experience specific to the mine and notes that the Commission has held that "experience" includes "practical wisdom resulting from what one has encountered,

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<sup>6</sup> After the parties filed their briefs, the Commission issued its decision in *Jim Walter Resources, Inc.*, 36 FMSHRC \_\_\_\_, No. SE 2007-203-R etc. (March 31, 2015). In that decision, the Commission discussed issues surrounding the use of the reasonably prudent person test set forth in *Canon Coal* when there has been a fall of ground. Commissioner Robert F. Cohen stated in a concurring opinion that the Commission decision in *Jim Walter* "effectively overrules the Commission's decision in *Canon Coal*[" Slip op. at 6. I have applied the reasonably prudent person test in the present cases. Because of my holdings in this decision, I need not reach the issues raised by the Commission in *Jim Walter*.

undergone, or lived through” and that a “mine’s ‘operating experience’ broadly encompasses all relevant facts tending to show the condition of the mine roof in question and whether, in light of the roof condition, roof support is necessary.” *Copper Range Co., White Pine Copper Div.*, 5 FMSHRC 825, 836 (May 1983) (interpreting § 57.3-20, the predecessor for the cited standard). The Commission further stated that “this determination takes into account the operating history of the mine (*i.e.*, its past mining practice), geological conditions, scientific test or monitoring data and any other relevant facts tending to show the condition of the mine roof in question and whether in light of those factors roof support is required in order to protect the miners from potential roof fall.” *Copper Range Co.*, 5 FMSHRC at 838.

Hecla contends that whether a reasonably prudent person would have installed ground support requires the review of a number of factors including the drumminess of the ground, the presence of visible fractures, the presence of sloughed material, whether popping or snapping sounds emanated from the roof, whether the operator was complying with its ground control plan, and the operating experience at the mine. It argues that, in this instance, the evidence demonstrates that a reasonably prudent person would have concluded that Hecla’s ground control plan was sufficient to protect miners from roof falls. First, there were no audible or visual indications that additional roof support was necessary. Second, the ground support met or exceeded the standards set forth in Hecla’s ground support standards. Miner Eric Tester installed additional bolts and wire mesh in the back on April 13 but this fact does not support the finding of a violation. Rather, it shows that Hecla took appropriate actions when the need for additional support was appropriate. There was no indication of a pending back failure in the 15 stope.

Hecla also contends that it was reasonable for it to believe that mining rock between a split stope did not present an unusual or higher level of risk. The evidence demonstrates that stopes often split and then re-converge at the mine given the geometry of the ore veins. “This was simply another instance of two veins merging together and the mining plan calling for the pillar nose to be mined on multiple successive cuts.” (Hecla Br. 30, citing Tr. 533-34). The mine’s “operating experience” supported management’s conclusion that the existing support was adequate to maintain the stability of the back. Hecla contends that mining an area below a waste rock pillar on successive cuts was not an unusual practice. Thus, “the overall experience of the mine in mining in this configuration in various stopes without back instability supports the mine’s conclusion that the existing support of reinforced backfill and bolting was sufficient.” (Hecla Br. 31).

## **Findings of Fact and Analysis**

### **Fact of Violation**

I find that the Secretary established that the circumstances leading up to the fall of ground would have put reasonably prudent person on notice that additional measures were required. The back of cut 3 was not the typical 20 foot wide expanse of backfill from the previous cut. The back of the west and east stope in cut 3 consisted of three parts once the miners advanced beyond the point where the pillar existed in cut 2. There was backfill on either side abutting the north and south ribs. The remnant of the waste rock pillar, called the “nose of the pillar” at the hearing, ran down the center of the cut parallel to the ribs. There was nothing below the nose of

the pillar in cut 3 to directly support it. Hecla had installed extra support in the backfill itself as directed in its ground support standards. The crew placed timbers across the backfill as it was being formed on the floor of cut 2. But these timbers were not in the area where the rock fall occurred but were placed closer to the slot where the stope was wider than 20 feet.<sup>7</sup> At least one of these timbers is visible in a post-accident photograph. (Ex. R-16 p. 1). These timbers did not help support the nose of the pillar.

I find that the conditions cited in Citation No. 8559607 violated section 57.3360 of the Mine Act. The pertinent part of section 57.3360 requires that in locations (1) where ground support is necessary (2) the support system shall be designed and installed to control the ground (3) in places where persons work or travel. 30 C.F.R. § 57.3360. The cited area of the mine clearly required ground support; the Mine's Ground Support Standards mandate numerous requirements for underhand stopes. (Ex. 7 at 2-4). There is no doubt that 15 west was a place where persons work or travel. Although the conditions cited in Citation No. 8559607 complied with the Hecla's Ground Support Standards, the standards were not designed to control the ground in situations where a pillar will be undercut for more than a few feet. Supplemental ground support was necessary in the cited work area and Hecla did not design or install additional ground support, violating section 57.3360.

Based on the evidence presented at the hearing, I find that a reasonably prudent person familiar with the facts and the protective purpose of the safety standard would have recognized that additional measures were required to protect miners working in the stope. I have relied on the record as a whole, but the evidence summarized below is particularly pertinent to my finding of a violation and my findings with respect to S&S and unwarrantable failure.

Dan McGillis testified for the Secretary. He was employed as a miner at the Lucky Friday Mine for 38 years. He testified that he and other miners asked their shift bosses what was holding up the pillar in cut 3. He stated that he was never given a direct answer but was told that the pillar would not come down. (Tr. 324-25). McGillis further testified that Eric Tester, another miner, told him that when he was bolting the back on the west side "the whole back just started dribbling." (Tr. 325, 340). This reported condition worried McGillis enough that he talked to Bayer about it. He told Bayer that he was concerned about a cave in. *Id.* He offered several suggestions. (Tr. 325-26, 331-32). Bayer replied that he would "look into it" and "[m]aybe next cut we can do something different." (Tr. 326, 343). McGillis testified that the miner's felt uncomfortable working on both sides of the stope in cut 3. (Tr. 327). McGillis could only recall one other time when he was involved in undercutting a pillar and, in that instance, the crew only set off one or two rounds under the pillar. (Tr. 338). As a

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<sup>7</sup> There is no dispute that the stope was four to five feet wider in cut 3 than called for in the projection map on April 13, 2011. (Tr. 585, 658). The mine's ground support standard provides for extra support when stope width exceeds 20 feet for a distance of more than 25 feet. (Ex. R-10 p. 3). The parties' briefs discuss this issue at length and they disagree as to the significance of the testimony presented. Although it is possible that the width of the stope may have contributed to the fall of ground, I have not relied on issues surrounding the width of the stope in reaching my findings and conclusions in this decision.



consequence, only a small part of the pillar was undermined. He was the most senior miner working in the 15 stope at that time and I credit his testimony.

Mike Marek, the Larry's brother, testified that he was worried about the stability of the pillar above cut 3 and asked his shift boss, Cliff Shiner, if the crew could install 10 by 10 timbers in the stope wedged up tight against the back. (Tr. 296). He was told that timbers were not going to be installed.

Tim Ruff, a mine geologist, testified that miners voiced concerns to him about mining under the pillar. (Tr. 356-57). Tim Ruff testified that he told another mine geologist that the "cement waste backfill on either side of the pillar" could not hold the pillar up "because the [backfill] was designed to crush." (Tr. 354). Ruff raised these concerns with Bayer when they were both in the 15 stope. The face of cut 3 had advanced about 40 feet under the pillar on the west side at the time of their conversation. (Tr. 357). Ruff suggested that a pillar be started with the next round so that there would be two 10 foot wide stopes on either side of a pillar. He testified that Bayer seemed to understand his concerns and told him that the miners would only take one more round under the pillar. *Id.* When Ruff came to the mine a day or two later, he could see that more than one round had been taken. He confronted Bayer in his office and was told "[w]ell, let me think about it." (Tr. 358).

Ron Krusemark was Hecla's chief mining engineer at the Lucky Friday Mine at the time of the roof fall. He testified that mining under a pillar in the manner that was performed in cut 3 was "way out of the norm." (Tr. 143-44, 153). He was not directly included in the planning for undercutting the pillar and did not know it was occurring until after the accident. (Tr. 150). After the accident, he investigated the mining of pillars at the mine going back a few years. Other than instances where pillars were undercut for short distances, he found only three situations where large pillar undercuts of 50 to 70 feet were taken. (Tr. 159). These undercuts occurred in the 15 stope west cut 3, 15 stope east cut 3 and in the 12 stope. Finally, Krusemark testified that if he had been consulted about undercutting the pillar, he would not have approved it without an engineered ground support plan. (Tr. 153).<sup>8</sup>

Paul Tyrna, a geologist from MSHA's technical support group, visited the accident site. He concluded that because the fallen material consisted of large blocks of rock, the ground had separated along faults, joints and other geologic features. (Tr. 234). He was not familiar with the practice of undercutting a pillar so he decided to investigate whether the practice had been validated. He testified that a practice can be validated by engineering analysis and by a history of successful operation. (Tr. 216). As part of his investigation, Tyrna gathered technical information and talked to miners, managers, mine engineers and geologists. He also reviewed documents including cut and projection maps. He concluded that the fall occurred because the

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<sup>8</sup> I recognize that after a fatal accident witnesses will always testify that the mine operator should have provided additional protection. That is self-evident; everyone would agree with such a conclusion in this case. Nevertheless, I credit Krusemark's testimony in this regard and I credit his conclusion that undercutting pillars in the Gold Hunter section of the mine was not the normal method of mining. Krusemark had only been the chief engineer for a short period of time and might not have been aware of some of the earlier discussions about undercutting pillars.

stope was too wide, no additional ground support had been installed under the pillar, and there was a significant fault cutting across the pillar. (Tr. 214, 221-22, 225, 233-34). Although six- to eight-foot Dywidag bolts had been installed, they were not long enough to intersect the fault. (Tr. 227).

Hecla believed that this pillar nose would act like a keystone and that the horizontal pressure would keep it in place. (Tr. 507, 645, 657). A keystone only works when placed at the top of an arch.<sup>9</sup> Here the back was entirely horizontal with this nose protruding down a little from the backfill that was on either side of the nose. The host rock is subject to slips, strikes, dips, faults, and fractures. A reasonably prudent person familiar with the mine would comprehend that, with nothing to support the weight of the nose of the pillar, rock would tend to fall if any fractures or faults were present. The weight of the rock would tend to put stress on any fractures or faults above the nose. Separation of rock at a fault or fracture was likely given the lack of support. Placing rock bolts in the nose would not provide sufficient protection from roof fall. Inspector Breland estimated that the rock fell from as high as 25 feet above the back of cut 3. Krusemark estimated that pillar had separated about 50 above. (Tr. 150). Thus, a substantial portion of the waste rock pillar fell into cut 3. The fall was a catastrophic failure of the entire system of roof support. It was foolhardy to believe that horizontal pressure applied to the backfill on either side of the nose of the pillar would be strong enough to hold up the fractured rock in the pillar above cut 3 with the addition of some 6 or 8 foot roof bolts. I recognize that the mine is subject to tremendous horizontal pressure, but that pressure was obviously not enough to overcome the weight of the rock in the pillar above cut 3.<sup>10</sup>

If Hecla wanted to remove the pillar in Cut 3, it should have analyzed its ground support standards to determine whether they were sufficient to control the ground in the cited area including the pillar. As Krusemark testified, Hecla should not have undercut the pillar “without a tested, designed, engineered ground support plan” because undercutting the pillar was “way outside of the norm.” (Tr. 151). At hearing, Hecla used only conclusory statements to defend its decision to undercut the pillar in 15 west without providing additional ground support, as its witnesses testified that they were not worried about a ground fall and that the horizontal pressures of the mine made a fall unlikely. (Tr. 440). Hecla did not present any data, evidence, or test results to demonstrate that the horizontal pressures were sufficient to support the ground

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<sup>9</sup> A keystone is defined as a “symmetrically tapered piece at the center or crown of an arch.” Am. Geological Institute, *Dictionary of Mining, Mineral, and Related Terms* 297 (2d ed. 1977).

<sup>10</sup> Doug Bayer drew an analogy with an example involving a stack of books. (Tr. 507). If you pick up three books hold them horizontally and apply pressure to the two outside books with your hands, the book in the middle will not fall. There is a significant problem with this analogy. It assumes that the three books weigh about the same amount. If you put a heavier book, such as an unabridged dictionary, in the middle surrounded by two paperback books, you will have a difficult time keeping the dictionary from falling no matter how hard you squeeze. At the mine, you had a heavy rock pillar in the middle and backfill on either side. Although the backfill had considerable strength, the mass of the pillar was too great even accounting for the horizontal pressure.

under these conditions.<sup>11</sup> Hecla violated section 57.3360 because it did not design or install a support system adequate to control the ground in the cited area.

### **Significant and Substantial**

I find that the Secretary established that the violation was S&S. A lengthy analysis is not required for this finding. A violation occurred that contributed to a discrete safety hazard, a measure of danger to safety. The Secretary established that there was a reasonable likelihood that the hazard contributed to by the violation would result in an event in which there is an injury. The discrete hazard was a fall of ground and such a fall was reasonably likely because the pillar was inadequately supported. The roof did fall and a miner was killed. Thus, all four elements of the Commission's S&S test were met.<sup>12</sup>

### **Unwarrantable Failure**

The term "unwarrantable failure" is defined as aggravated conduct constituting more than ordinary negligence. *Emery Mining Corp.*, 9 FMSHRC 1997, 2004 (Dec. 1987). Unwarrantable failure is characterized by such conduct as "reckless disregard," "intentional misconduct," "indifference," or the "serious lack of reasonable care." *Id.* at 2003-04; *Rochester & Pittsburgh Coal Co.*, 13 FMSHRC 189, 194 (Feb. 1991).<sup>13</sup>

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<sup>11</sup> The parties agree that the standard ground support used by Hecla was tested and safe under usual mining conditions. Undercutting a pillar for a distance of 75 feet, however, was an unusual situation. Hecla's argument that it was planning on creating a new pillar in cut 3 after mining about 75 feet into the stope does not support its position.

<sup>12</sup> An S&S violation is a violation "of such nature as could significantly and substantially contribute to the cause and effect of a . . . mine safety or health hazard." 30 U.S.C. § 814(d) (2006). In order to establish the S&S nature of a violation, the Secretary must prove: "(1) the underlying violation of a mandatory safety standard; (2) a discrete safety hazard – that is, a measure of danger to safety – contributed to by the violation; (3) a reasonable likelihood that the hazard contributed to will result in an injury; and (4) a reasonable likelihood that the injury will be of a reasonably serious nature." *Mathies Coal Co.*, 6 FMSHRC 1, 3-4 (Jan. 1984); *accord Buck Creek Coal Co., Inc.*, 52 F.3d 133, 135 (7th Cir. 1995); *Austin Power Co., Inc.*, 861 F.2d 99, 103 (5th Cir. 1988) (approving *Mathies* criteria). The Commission has held that "[t]he test under the third element is whether there is a reasonable likelihood that the hazard contributed to by the violation...will cause injury." *Musser Eng'g, Inc. and PBS Coals, Inc.*, 32 FMSHRC 1257, 1281 (Oct. 2010).

<sup>13</sup> Aggravating factors include: (1) the length of time that the violation has existed, (2) the extent of the violative condition, (3) whether the operator has been placed on notice that greater efforts are necessary for compliance, (4) the operator's efforts in abating the violative condition, (5) whether the violation was obvious or posed a high degree of danger, and (6) the operator's knowledge of the existence of the violation. *See Consolidation Coal Co.*, 22 FMSHRC 340, 353 (Mar. 2000); *Mullins & Sons Coal Co.*, 16 FMSHRC 192, 195 (Feb. 1994); *Windsor Coal Co.*, 21 FMSHRC 997, 1000 (Sept. 1999); *Consolidation Coal Co.*, 23 FMSHRC 588, 593 (June 2001). All of the relevant facts and circumstances of each case must be examined to determine if

I find that the violation was the result of Hecla's reckless disregard and unwarrantable failure to comply with the safety standard. The Secretary argues that Hecla was fully aware that undercutting the pillar in 15 West could cause a ground fall, but that Hecla risked miner safety due to its desire to "chase ore." Hecla, conversely, argues that it had undercut pillars many times without incident and had no reason to believe that the roof support would be inadequate in this instance. Although I do not believe that Hecla intentionally risked the lives of miners, I find that Hecla should have known that the roof support in 15 west beneath the waste pillar would endanger miners and violate section 57.3360. Previously, Hecla only undercut waste pillars for a horizontal distance of 10 to 20 feet. The pillar in 15 west was undercut for about 75 feet. Hecla provided no data to substantiate its claim that the provisions in its ground control standards would control the back when a pillar is undermined for a significant distance. Hecla only significantly undercut pillars in two other locations, which was not enough history to prove that those actions were safe. It was reckless for Hecla to mine ore in a more invasive manner than it had in the past without considering whether additional ground support was required. It should have been obvious that a large, unsupported rock mass could endanger miners, yet Hecla did not ascertain whether the waste pillar in 15 stope was adequately supported.

Several other factors contribute to my finding that Citation No. 8559607 was the result of Hecla's reckless disregard and unwarrantable failure. As stated above, the rock at the Lucky Friday Mine was subject to faults and fractures.<sup>14</sup> The cited condition was extensive; the rock fall measured about 25 feet wide, 25 feet deep, and 75 long. Everyone agreed that it was a massive ground fall, with many witnesses saying it was the largest fall they had ever seen. This violation posed a high degree of danger, evidenced by the death it caused. The standard requires that ground support be designed in a manner to control the ground. The failure to analyze the risks posed by removing a pillar for a distance of 75 feet demonstrates aggravated conduct because it shows that Hecla made no effort to properly design its ground support in this situation. Hecla's aggravated conduct and unwarrantable failure led to a violation of the Mine Act for its failure to design and install adequate ground control in cut 3.<sup>15</sup>

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an actor's conduct is aggravated, or whether mitigating circumstances exist. *Consolidation Coal Co.*, 22 FMSHRC at 353.

<sup>14</sup> Testimony was presented at the hearing relating to whether Hecla knew or should have known about a particular fault in the rock above the third cut. I do not resolve the disputed testimony because I find that a reasonably prudent person would have recognized that faults and fractures were a common occurrence in the Gold Hunter section of the mine and that the ground support system had to be designed to account for fractures, faults, and other geologic structures, known and unknown, when undermining a pillar. Hecla should have designed a support system that would assure that the pillar would stay in place even if a fracture was present and a large section of rock began to separate from the remainder of the pillar above it.

<sup>15</sup> Hecla started mining cut 3 on March 30, 2011. Miners started undercutting the pillar on the west side of the stope on April 4 or 5. Thus, the condition was created 10 days before the roof fall. The violation was extensive and obvious. It posed a high degree of danger. The operator had not been placed on notice that greater efforts were necessary for compliance. I reject the Secretary's argument that previous rock bursts gave the requisite notice that greater efforts were necessary. These rock bursts were not related to undercutting pillars. Nevertheless, as stated

For the reasons set forth above, Citation No. 8559607 is **AFFIRMED** as written by Inspector Breland.

## **2. Section 57.3401, Examinations of Ground Conditions - Order No. 8559607**

Section 57.3401 contains two important requirements. “First, areas where work is to be performed must be examined for loose ground before work is started, after blasting, and as conditions warrant. *Asarco, Inc.*, 14 FMSHRC 941, 945 ((June 1992). “Second, where applicable, ground conditions in work areas must also be tested.” *Id.* The Commission held that “[n]either the presence of loose materials, nor the fact that the roof fell, by themselves, indicate that the area was not properly examined.” *Id.* at 946. I find that the back and ribs in cut 3 of Stope 15 were examined numerous times by management and hourly employees.

The Secretary did not establish a violation. Section 57.3401 “does not specify how testing for loose ground is to be performed, nor has the Secretary described the procedure or set forth guidelines in her Program Policy Manual or other interpretative material.” *Asarco, Inc.*, 14 FMSHRC at 947 (June 1992). The standard is intentionally broad to cover a variety of situations. The back of the stope was 10 feet above the floor, putting it only a few feet above miners’ heads. Management employees and miners examined the back and ribs and found no problems. Miners were trained to examine ground conditions by looking at the angle of the bolts, assessing whether the bolts are taking any weight, looking at the plates around the bolts to see if they are being sucked up into the backfill, and evaluating the condition of the backfill. (Tr. 474-75). The miners can also use a scaling bar to scale and sound the back. There is no evidence that Hecla did not perform such examinations on a regular basis as cut 3 was being advanced.

There was no “loose ground,” as that term is generally used, in cut 3 in the days leading up to the fatal accident.<sup>16</sup> Larry Marek was not stuck and killed by loose ground that could be detected by a visual examination or by sounding the back. Rather, there was a sudden and catastrophic failure of the entire ground support system in the west side of stope 15. The Secretary suggests that examinations were not adequate because miners did not know how to examine the area and that engineering analysis was required. “The evidence shows that Hecla management failed to design any sort of ground examination system in 15 stope west that could pinpoint problems with ground support before they became a hazard.” (Sec’y Br. 19) The standard requires observation and careful examination of ground conditions not an engineering

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above, Hecla had not performed an analysis of the risks posed by undermining the pillar. Hecla did not attempt to abate the condition before the citation was issued because it did not consider the condition to be a violation of the safety standard.

<sup>16</sup> As stated above, McGillis testified that Tester told him that the back “started dribbling” when he was bolting the back on the west side. (Tr. 325, 340). Although this dribbling concerned McGillis and Tester, it does not help establish that thorough examinations were not being conducted. Extra bolts and mesh were installed as a result of this examination.

analysis.<sup>17</sup> There is no test or examination technique that could allow Hecla's employees to determine that rock was starting to fracture and separate 25 feet above the back. The failure to perform engineering analysis before undermining the pillar relates directly to the requirement to design suitable ground control under section 57.3360. Citation No. 8559607 for that violation has been affirmed in all respects. Although Hecla failed to design adequate ground support, it carefully examined the back and ribs in the cited area with sufficient thoroughness to comply with section 57.3401.

For the reasons set forth above, Order No. 8559607 is **VACATED**.

### **III. WEST 2014-591-M; § 110(c) Penalty Proposed Against Doug Bayer**

In WEST 2014-591-M, the Secretary filed a civil penalty case against Doug Bayer, who was the mine superintendent, under section 110(c) of the Mine Act. 30 U.S.C. § 810(c). This penalty case alleges that Bayer was an agent of Hecla "who knowingly authorized, ordered, or carried out" the violation of section 57.3401 as alleged in Order No. 8559608. The Secretary contends that Hecla failed to adequately examine and test the ground conditions in the west stope. In his brief, the Secretary states that Bayer approved the plan to undermine the pillar on the third cut without conferring with Hecla's engineering department and without conducting any studies to see if additional ground support would be necessary. (Sec'y Br. 21). The Secretary relies on evidence that Bayer failed to advise upper management that undercutting a pillar for such a long distance had never been tried before. With a degree mining engineering, Bayer should have known that undermining the pillar was risky and that Hecla's normal methods of examining and testing the back were inadequate during cut 3 in 15 Stope west. *Id.* at 23. He concludes that "Doug Bayer is guilty of aggravated conduct beyond ordinary negligence and he should pay a personal penalty . . . of \$4,500[.]" *Id.*

The Secretary does not allege that Bayer "knowingly authorized, ordered, or carried out" a violation of section 57.3360 for inadequate ground support in the west stope. Rather, he alleges that Bayer violated section 57.3401 for inadequate examinations of the stope. A necessary prerequisite to section 110(c) liability is a finding that the corporate operator violated the safety standard. I vacated Order No. 8559608 so the penalty proceeding brought against Bayer cannot stand. The proposed penalty brought against Bayer is **VACATED** and WEST 2014-591-M is **DISMISSED**.

### **IV. Order Nos. 8559609 & 8559610; WEST 2012-760-M-A**

Also on August 8, 2011, Inspector Breland issued Order No. 8559609 under section 104(d)(1) of the Mine Act, alleging a violation of section 57.3360. The order states, in part:

Portions of a supporting pillar were removed to extract ore in the 6150-15-3 East stope. The section of removed pillar measured approximately five to nine feet wide by 85 feet long. This stope is approximately 18 to 20 feet wide and was

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<sup>17</sup> Inspector Breland testified that the examination should have been conducted by "an individual with a geomechanic background" who would have advised management "[n]ot to mine it that way." (Tr. 118). Such an examination is not required by the safety standard.

mined similar to the 6150-15-3 west stope that resulted in a fatal accident when the pillar fell.

(Ex. G-1 at 11). Inspector Breland determined that an injury was highly likely to occur and that such an injury could reasonably be expected to be fatal. Further, he determined that the violation was S&S, the operator's negligence was high, that one person would be affected, and that the alleged violation was an unwarrantable failure. The Secretary of Labor proposed a penalty of \$20,900 for this alleged violation.

Also on August 8, 2011, Inspector Breland issued Order No. 8559610 under section 104(d)(1) of the Mine Act, alleging a violation of section 57.3360. The order stated, in part:

The pillar separating the 30 and 41 veins was undercut in the 6100-12 stope. A 56 foot long portion of the pillar longitudinally spans the 3-way slot intersection in 6100-12-1 that is seven to 10 foot wide. The intersection is approximately 22 feet wide and was mined similar to the 6150-15-3 west stope that resulted in a fatal accident when the pillar fell.

(Ex. G-1 at 12). Inspector Breland determined that an injury was highly likely to occur and that such an injury could reasonably be expected to be fatal. Further, he determined that the violation was S&S, the operator's negligence was high, that one person would be affected, and that the alleged violation was an unwarrantable failure. The Secretary of Labor proposed a penalty of \$20,900 for this alleged violation.

Both orders contain the following additional language to support the alleged violations:

Ground support was necessary in the stope to mine safely, but the ground support utilized was not adequate. The ground control was not designed, installed and/or maintained in a manner that was capable of supporting the ground in such a wide stope when the support pillar was removed. Mine management has engaged in aggravated conduct constituting more than ordinary negligence by directing the pillar to be mined as the stope advanced and allowing miners to work under inadequately supported ground. This is an unwarrantable failure to comply with a mandatory standard.

For the reasons set forth below, I affirm both Order Nos. 8559609 and 8559610.

### **Discussion and Analysis**

Although Order Nos. 8559609 and 8559610 concern different areas of the mine, for the purposes of section 57.3360, I consider the two orders together. The area where the violations are located is immaterial here; the focus is upon the action of significantly undercutting a pillar without providing additional ground support. Hecla undercut waste rock pillars for long distances in both of the cited areas, using the same ground support in each without analyzing whether that support was adequate. Although the undercut area was of a different size in each

order, both were significant: the pillar was undercut for a distance of 85 in the east side of stope 15 and for a distance of 56 foot in the 6100-12 stope

I find that the condition cited in Order Nos. 8559609 and 8559610 violated section 57.3360 for the same reasons I found a violation of the standard with regard to Citation No. 8559607, discussed above. The ground control used in all three cited area was inadequate for the same reason; a large portion of a waste rock pillar was undercut and miners worked beneath that pillar. Although Order Nos. 8559609 and 8559610 did not contribute to fatal injuries, these two orders address the same practices and the same safety standard. In each of these stopes, Hecla undercut pillars for a significant distance without analyzing the possible outcomes of doing so. Although neither of the cited undercut pillars cited in Order Nos. 8559609 and 8559610 collapsed, the ground support used in those areas was the same as the support used in the area cited by Citation No. 8559607, which was not properly designed to support the ground under a waste pillar and was therefore inadequate under the standard. Hecla relied on the horizontal pressure to support the nose of the pillar in each location. I credit the testimony of Inspector Breland, Krusemark, and several other witnesses that this ground support was inadequate. I find that both Order Nos. 8559609 and 8559610 violated section 57.3360 because the ground support used in those areas was proven to fail under similar conditions.

I find that Order Nos. 8559609 and 8559610 were S&S and highly likely to cause a fatal injury. Both orders violated section 57.3360. Inadequate ground support contributes to the hazard of a rockfall, which can clearly cause a fatality. Miners worked in both of these stopes. Hecla's own experience shows that significantly undercutting pillars while using its normal ground control standard can lead to ground falls. I credit the testimony of Inspector Breland that the conditions were highly likely to contribute to a rockfall and a serious or fatal injury.

As discussed above, I affirmed MSHA's determination that the violation in the 14 west stope was the result of Hecla's reckless disregard as alleged in Citation No. 8559607. MSHA determined that Order Nos. 8559609 and 8559610 were the result of Hecla's high negligence. At the hearing, Inspectors Hirsch and Breland testified that they could have designated the level of negligence for these two violations as reckless disregard for the same reasons as the violation in Citation No. 8559607. (Tr. 43, 98-99). I affirm MSHA's negligence determination as set forth in the two orders and find that Hecla's high negligence contributed to the violations.

I also affirm MSHA's unwarrantable failure designation for each order for the reasons set forth above with respect to Citation No. 8559607. Failing to adequately support a large section of roof in areas where miners work constituted aggravated conduct greater than ordinary negligence. This practice posed a significant hazard as the fall in 15 West demonstrated. The inadequately supported roof in each cited area was extensive. It was obvious that these large rock masses posed a danger if inadequately supported, but Hecla made no effort to ascertain whether the ground support was effective, which demonstrated aggravated conduct.

## **V. APPROPRIATE CIVIL PENALTIES**

Section 110(i) of the Mine Act sets forth the criteria to be considered in determining an appropriate civil penalty. I have considered the Assessed Violation History Report, which was



submitted by the Secretary. (Ex. G-5). Respondent was issued 55 section 104(a) citations and 1 section 104(g)(1) order in the 24 months prior to April 15, 2011, and 12 of these violations were designated as S&S. The Secretary determines the size of a metal mine operator by calculating the employee-hours worked during the previous year. 30 C.F.R. § 100.3(b). MSHA records show that the Lucky Friday Mine worked 407,847 hours which makes it a medium to large mine operator. MSHA's records show that the hours worked for Hecla Limited was 1,189,458, which makes it relatively large. The violations were abated in good faith. The parties stipulated that if the "assessed penalty, if affirmed, will not impair Hecla's ability to remain in business." (Joint Stips. ¶ 18).

I find that the penalties for Order Nos. 8559609 and 8559610 should be increased from \$20,900 for each violation to \$50,000 each. I reached this conclusion because of the serious safety hazard created by these violations and Hecla's high negligence. Management knew that (1) fractures and faults were often present in the host rock; (2) miners were going to undercut the pillars for a considerable distances; (3) undercutting pillars for significant distances was not a typical practice in the Gold Hunter section of the mine, and (4) no engineering study or any other study had been undertaken to determine whether its ground support plan would adequately support the roof under such conditions. Hecla also relied on a misplaced theory that the nose of the pillar would act as a keystone to hold up the pillar and the back.

#### **Penalty for Flagrant Violation**

The Secretary proposed a higher penalty for Citation No. 8559607 because he deemed the violation to be flagrant. The flagrant violation provision was added to the Mine Act in section 110(b)(2) by the Mine Improvement and New Emergency Response Act of 2006. The provision defines a flagrant violation to mean "a reckless or repeated failure to make reasonable efforts to eliminate a known violation of a mandatory health or safety standard that substantially and proximately caused, or reasonably could have been expected to cause, death or serious bodily injury." 30 U.S.C. § 820(b)(2).

The Commission has not yet had the opportunity to issue a decision concerning this provision as relevant to the present case. The lead administrative law judge decision is *Stillhouse Mining LLC*, 33 FMSHRC 778 (Mar. 2011) (Judge Paez). There is no dispute that the Mine Act's enforcement scheme is designed to provide "increasingly severe sanctions for increasingly serious violations or operator behavior." *Emery Mining*, 9 FMSHRC 1997, 2000 (Dec. 1987). Assessing a flagrant penalty is one of the more severe sanctions in the Mine Act.

The issue in this case is whether Hecla's conduct amounted to a reckless failure to make reasonable efforts to eliminate a known violation of a mandatory safety standard. As applied to this case, the four point test set forth by Commission Judge Paez is whether there was:

- (1) A reckless failure to make reasonable efforts to eliminate
- (2) A known violation of a mandatory safety standard
- (3) That substantially and proximately caused
- (4) Death or serious bodily injury.

*Stillhouse*, 33 FMSHRC at 802. In his decision, Judge Paez analyzed the flagrant violation provision at length. His analysis was detailed and well-reasoned. *Stillhouse* 33 FMSHRC 798-808. I agree with his analysis and incorporate it herein by reference.

I find that the Secretary establish that the civil penalty for Citation No. 8559607 should be assessed under the Mine Act's flagrant violation provision. I find that Hecla's decision to undercut the pillar in cut 3 was reckless. As stated by Judge Paez, "an operator is 'reckless' for the purposes of a flagrant violation when it consciously or deliberately disregards an unjustifiable risk of harm arising from its failure to make reasonable efforts to eliminate a known violation of a mandatory health or safety standard." *Id.* at 803. In determining whether a risk of harm is "unjustifiable," a judge should compare the "burdens of ameliorating the risk" to the severity of the risk of harm created by the violation. *Id.* at 803-04. In this instance, Hecla could have either mined cut 3 without removing a substantial portion of the pillar or conducted an engineering study to develop a method to support the pillar as mining progressed. I find that Hecla created an unreasonable risk of harm and that it could have taken reasonable efforts to eliminate this risk. Hecla did not "take the steps that a reasonably prudent person 'familiar with the mining industry and the protective purposes of' the safety standard would have taken to support the back. *Id.* at 805.

A flagrant penalty cannot be assessed unless the Secretary establishes that there existed a "known violation of a mandatory health or safety standard." 30 U.S.C. § 820(b)(2) (emphasis added). In the present case, Hecla management had knowledge of the cited conditions. Management authorized miners during cut 3 to undercut the pillar that had been left in cuts 1 and 2. Hecla, contends, however, that this condition did not violate section 57.3360. I hold that the use of the term "known" in the context of a flagrant violation contemplates an objective test. As Judge Paez held:

In the legal context, "knowledge" may be understood as "actual" or "constructive." *Black's Law Dictionary* at 888 [8<sup>th</sup> ed. 2004]. Actual knowledge may be "express," which is "[d]irect and clear knowledge," or it may be "implied," which is "[k]nowledge of such information as would lead a reasonable person to inquire further." *Id.*

33 FMSHRC at 806.

Hecla's management knew that miners were going to undercut the pillar for a distance of about 75 feet during cut 3, knew that it was unusual for miners to undercut a pillar for such a significant distance in the Gold Hunter section of the mine, and knew that no engineering study or any other study had been undertaken to determine whether its existing ground support standards would adequately support the roof or the pillar under such conditions. Hecla also knew that the rock structure in the host rock was subject to faults and fractures in the rock. It is universally recognized that a keystone will support weight only if it is placed at the top of an arch, so Hecla's theory that the nose of the pillar would act as a keystone lacks credibility. Management did not ask its own engineering group at the mine to analyze the matter. Hecla

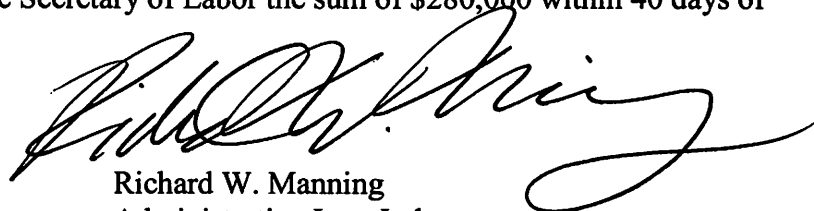
simply assumed that the horizontal pressure would keep the nose of the pillar and the rock above it securely in place. I find that Hecla had at least implied knowledge of the violation.<sup>18</sup>

I also conclude that the violation substantially and proximately caused the death of Larry Marek. If the pillar had not been undermined the roof would have been adequately supported so long as the mine followed its ground support standards. In the alternative, Hecla may have been able to engineer a ground support system that would have allowed it to mine the pillar in cut 3 without the risk of a fall of ground.

In conclusion, I assess a penalty for Citation No. 8559607 in accordance with section 110(b)(2) of the Mine Act. I find that a civil penalty of \$180,000 is appropriate for this violation. I increased the penalty above that proposed by the Secretary for same reasons discussed with respect to Order Nos. 8559609 and 8559610.

## VI. ORDER

For the reasons set forth above, Citation No. 8559607 is **AFFIRMED** and a penalty of \$180,000 is assessed for the violation, Order No. 8559608 is **VACATED**, Order Nos. 8559609 and 8559610 are **AFFIRMED** and a penalty of \$50,000 is assessed for each violation. WEST 2014-591-M, the proceeding brought against Doug Bayer, is hereby **DISMISSED**. Hecla Limited is **ORDERED TO PAY** the Secretary of Labor the sum of \$280,000 within 40 days of the date of this decision.<sup>19</sup>



Richard W. Manning  
Administrative Law Judge

Distribution:

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<sup>18</sup> The “known violation at issue in a flagrant case need not have been previously cited by MSHA at the time the operator recklessly failed to eliminate it.” *Stillhouse*, 33 FMSHRC at 807.

<sup>19</sup> Payment should be sent to the Mine Safety and Health Administration, U.S. Department of Labor, Payment Office, P.O. Box 790390, St. Louis, MO 63179-0390.