

Case 8

Managing a Culturally Diverse Work Force in a Southern African Gold Mine

Jeffrey Ovia

Environment Introduction

Few 20th century industrial enterprises can compare with a southern African gold mine. These mines have 50 to 50000 employees on site. The mine properties often extend over 100km². Gold is extracted from underground depths below 4000m. Men are not only employed underground but also a significant number work on the surface processing the ore and in the various repair shops. By North American standards, a surprising amount of ancillary work is done on site.

Typically, mines have several shafts. Radiating out from these shafts are underground haulages often extending several kilometers before intersecting the ore body. Small trains shuttle back and forth along these haulages bringing the gold-bearing rock to the shaft for hoisting to the surface. The gold is found either in a gently dipping plane-type structure approximately one meter thick, or in a vein-type structure. Frequently, the ore body is broken and displaced by geologic faults. Once the haulages are in close proximity to the ore body, smaller travelling ways and ore passes are developed from the haulage to the ore body.

Primarily, all the development is in waste rock, so it is essential to minimize these excavations. Once in the ore body, excavations are best confined to the ore body itself. Excavating waste rock produces no revenue and is costly. Excavating is usually performed on a two-shift, six-day basis.

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During the day shift, holes for blasting are drilled by hand-held pneumatic drills. Excavation support is situated, and water and compressed-air pipes are advanced. After the shift has left the working areas, blasting begins. To allow the ventilation system to exhaust the blast fumes, there is a several-hours break between shifts. During the night shift, the broken rock is removed from either the ore body or the advancing haulages and brought to the shaft for hoisting.

Although considerable mechanization has occurred in the last 50 years, underground labor is strenuous and dangerous. Working quarters are hot, cramped, soaking wet, and noisy. The pneumatic drills are heavy. They require considerable muscle power to carry, let alone operate. The timber packs to support the surrounding rock are installed by hand. In hard-to-reach areas, hand shoveling is common. Most of the broken ore, however, is dragged by a scraper that is pulled by an electric winch. If the ore body is primarily horizontal, small winches will be arranged in a dendritic pattern to clean an area. The central winch will draw rock from several tributary winches to an ore pass where it will fall to a waiting train.

Most mine activity is focused on the day shift. During this time, miners are accompanied underground with electricians, samplers, surveyors, and mechanics. The night shift crews total less than 20% of the day shift. The difference underground is palpable and stark. Only the trains, winches, and hoists are operative at night.

Organizationally, the superintendent is responsible for the entire mine. Reporting to the superintendent is the resident engineer, mine manager, metallurgical manager responsible for ore processing and the administrative manager. On smaller mines these posts are combined. The resident engineer and the mine manager have various hierarchical levels beneath them based on geographic areas of the mine. For instance, there may be east and west sections for two different managers or engineers, which are divided into specific levels and sublevels. The engineering staff's job is to provide electricity, water, machinery, and compressed air to the miners in the haulages and ore body. Each area and subarea of the mine is given a monthly production and development target. The mine itself is assigned an annual target by the corporate office.

The mine management structure is vertical, and the larger mines include at least eight formal levels. Selective information percolates up, and only instructions pour down. Although there are significant differences, the mine management structure has many similarities with a regimental structure.

The key motivation for mine employees primarily is linking production targets to remuneration. The closer the employee is to direct production responsibility, the greater the proportion of bonus pay in the total remuneration. There is, however, an incongruity in that the mine is assigned a target of so many kilograms of gold by the corporate

office, while specific sections of the mine are assigned a target of so many tons of ore. In fact, many sections are assigned a target of cubic meters to extract each month.

Primarily, the superintendent is left to reconcile how this is to be achieved. A balance must be struck between easily accessible ore that has a low gold content, and difficult-to-obtain high gold content ore. If development is not done in conjunction with ore removal, access to the ore body soon diminishes. By the same token, because development is primarily done in waste rock, if only haulages were excavated, no gold would be produced and no revenue could be generated from gold sales.

A consequence of the autocratic management style that manifests itself in the assignment of targets and, subsequently, the earning of bonuses, is that one's superior determines one's target. Often, even reality will not alter a production target. The only performance restraint to achieving a production target is injury. An intense amount of pressure is applied at every level to achieve production targets.

Cultural Diversity

Company towns, especially mining communities, have several special attributes. The mine becomes the landlord, town planner, and social chairman. Staff are allotted housing based on their position in the company. An accommodation problem is often brought to the attention of one's immediate superior if the housing department is slow or unwilling to act. It is hard to escape the extensive reach of this corporate paternalism.

Houses are described not by their size, quality, or location, but by the company position of the intended occupant. For instance, a certain size house is a manager's residence, a smaller house is for artisans. Within the same remuneration band, all houses are as identical as possible. Because occupants change every few years, the interiors and exteriors take on a bland appearance that is designed to offend no one. Typically, in the center of the community will be the company swimming pool, several tennis courts, sporting fields, and the social hall.

Although it is often said that in a small community there are no secrets, in a mine town the degree of familiarity among the inhabitants is exceptional. People see each other as co-workers, neighbors, and club members. If one is successful in the mine, one is successful in the community.

This relationship manifests itself in many ways. It is common for the superintendent's wife to be the chairperson of the ladies' or social club. If employees in a certain area of the mine are not meeting their production targets, an element of alienation or even ostracism, is created in the community. A newcomer to the community is judged by his

company credentials. The higher the position the greater the respect and trepidation that is warranted.

Community life in southern Africa is a product of the region's various ethnic groups. After the Boer War, an identifiable southern African culture slowly began to emerge. Today, especially in the major centers, it is difficult to find separate cultural components in their original form, let alone vestiges of the country's colonial past. The southern African economy has been the driving force, forging an integrated culture from the region's ethnic groups.

Mining has played a significant role in the economy. It has also brought south Africa's diverse ethnic groups in closer contact. A dichotomy arose despite the various groups' proximity on the mine. The region's colonial past would produce a strict class society in the mine community. Artisans would socialize with artisans and supervisors with supervisors.

Earlier in this century, as Afrikaners began displacing the immigrant English miners, the scene was set for cross-cultural tension. With growing economic empowerment, the differences among Xhosa, Tswana, Shona, Ndebele, Shangaan, Basotho, and Zulu workers, who would often find themselves on the same mine, became more apparent. This tension has continued to the present as former laborers have been promoted to supervisory positions leaping what was perceived to be a cultural and racial divide. Class and cultural differences are highly pronounced in the country. Southern Africa's racial problems have exacerbated both the tension between ethnic groups and the violence often associated with mine disputes.

Case Introduction

The Jordan shaft at the northern border of the Occidental mine was nearly 30 years old. To say that the shaft had seen its best days would be an understatement—the Jordan shaft was on borrowed time. In its prime 4000 people toiled in this subterranean recess. When Seth Wilson arrived, there were barely 300. Occidental was somewhat farther from the nearest city than his last posting, but it was closer to a tourist area. Seth was looking forward to an occasional trip to a game park.

The Jordan shaft was now expected to increase Occidental mine's life. Although the shaft had three working levels, high hopes were held for the extension of haulages on 18-level (an underground level where production was underway). Corporate staff were convinced the decade-long decline of Occidental mine could be arrested. They were hopeful that in less than a year these haulages could be extended to what was a large portion of overlooked ore between two faults. Previous geologic interpretations had not identified this ore. As for the existing

production on 18-level, some new ground was exposed by the only new development to take place on this shaft in twelve months.

Most of the existing production on Jordan came from 15-level. At the fringes of older worked-out areas, various remnants of ore were found, although little development had occurred. Enough ore was found to carry the shaft for the last several months. The problem here was the dispersion of the working areas; the areas were so spread out that it was difficult to equip these areas for efficient mining. No sooner was all the equipment in place when the ore was exhausted. Several days would be spent moving the winches and pipes to a new area.

A critical situation was apparent on 13-level, the last and uppermost working area of the Jordan shaft. This level of the shaft had not achieved its budgeted target for nearly one year. The few identified remaining ore remnants were soon to be exhausted, and all the production resources were to be shifted to 18-level.

The superintendent presented the Jordan shaft as a turnaround-in-the-making to Seth Wilson. Of course, it would not be easy. Of course, there were two or three presently viable shafts on the mine, but for a young man with several years' production experience Jordan was the place to begin.

Seth raised his concern that Jordan had only met its production target one month out of the last 12. These concerns fell on unsympathetic ears. The superintendent was convinced the ore was there and that fresh perspective and youthful ambition were all that were needed to coax the gold from the earth. The ore production target shortfalls for the past year averaged only about 10–20% each month; certainly Seth had it in him to create this marginal improvement. Had Seth more experience, the lack of development over the past year on Jordan shaft would have figured much more prominently in the discussion. Even so, a much more pressing problem was soon apparent.

Jordan shaft had been a problem to Occidental mine long before Seth Wilson's arrival. It was not only a matter of often failing to produce 150 kg of gold a month, but also Jordan shaft was Mr. Kile's private fiefdom. Jan Kile was an Occidental institution. He had spent years placing his relatives throughout the section and was now able to offer senior management a multitude of incontestable reasons why objectives could not be met. And if this were not enough, he had on occasion influenced the surveyors to measure his section's production favourably. Jan Kile was comfortable. He used the system to his benefit. If outside suppliers were willing to court him, he would order their products. With Occidental's own resources Mr. Kile could be quite generous. Frequently, several of the 300 laborers in the section could be found working off the mine property during the shift. This lapse was discreetly tolerated by Mr. Kile. The few mine supplies that could be used elsewhere were always over-ordered.

Jan's comfortable situation persisted for some time, but as it became more difficult to meet production targets, and as costs throughout the southern African mining industry rose considerably, Jan's methods became untenable. He had on occasion attempted to influence the surveyors to measure his section's production favorably. Shortly before Seth's arrival, Jan resigned and Seth replaced him.

During Seth's first month on the mine, before he became responsible for Jordan shaft, there were glimpses and whispers of its chequered past. Most people were sympathetic but not forthcoming with vital information. Seth often suspected that anyone contemptuous was Jan's relative or ally. His suspicions were nearly always correct. Seth would soon become aware that although the chief was gone, his lieutenants remained.

As if the section's physical and staff problems were not enough, the superintendent was due to retire within two years. The mine manager had been passed over for promotion many times.

He expected to retire later, too, but this was his last opportunity to create a sense of trepidation in his subordinates by asserting the superintendent's authority. The underground manager, Mr. Bauer, was competent, energetic, and knowledgeable, presenting the image of a modern rational manager, and it was surprising that he had not advanced further. However, his life's most impressionable experience was fighting as a soldier in one of the continent's older conflicts.

How had Seth found himself in this position? The divisional manager in the corporate office met briefly twice a year with all the young, high-potential staff in his region. Over the last eighteen months the relationship that developed between Seth and the divisional manager was businesslike but detached. Occidental was the weakest performer of the many mines in his division. It was also the one most under the spotlight of corporate attention. When a position became available for reasons that Seth may never entirely know, a transfer was initiated. The divisional manager in all likelihood had some knowledge of the shortage of available ore and of the difficult personnel problems on the Jordan shaft.

As Seth took over the Jordan shaft in May, the superintendent's words from the previous week were ringing in his ears, "You have to play with the cards you are dealt." When asked if he agreed with this statement, Seth wholeheartedly replied, "That is absolutely right." Seth spent dozens of evenings in the antiquated planning department's files reviewing Jordan's ore body extraction and development over the years. He had enjoyed deciphering the very old plans, and was pleased, when after several hours' effort, he found an out-of-sequence or misplaced plan. If the mining was anything like the planning, hard work in terms of effort and perseverance would pay off. These cards were bad, but they could be played. What Seth did not know that first day in May was that these bad cards were the best he had.

Seth calculated that development would have to increase nearly 400% to sustain the production of 150 kg of gold a month. This was possible. However, the real problem was determining where to develop. If the wrong area was accessed, the gold content of the rock might not support the required level of gold production. There was little room for error because they were exhausting the ore body daily. This was the primary focus of his first meeting with his shift supervisors who appeared to be typical of mine staff. One of the four could have actually worked elsewhere in the mine, while the other three had been selected by Mr. Kile for other reasons.

Mr. de Bruyn, in charge of 13-level, had Mr. Kile's brother working for him as his most senior foreman. On 15-level Mr. Van Bil, who often achieved his production targets, was the anchor for section's production. Mr. Whyte on 18-level had overstepped his abilities. The rigors of a section and the responsibility for 60 people left him overextended. The night shift supervisor was Mr. Riley, married to Mr. Kile's sister. Other relationships with Mr. Kile became apparent with the passage of time.

June

Once again the Jordan shaft had underperformed by 15% in May. Seth had emphasized the importance of development and began daily to traipse through various parts of the shaft, with special emphasis on 18-level where his superiors felt the future was. He began to have doubts. One newly opened portion was found to have sub-economic ore; the cost of mining would exceed the revenue. Another of the working areas was very difficult to keep open. In effect, the roof kept coming down.

Mr. Bauer was adversarial every morning, offering no solutions, only management rhetoric, during his morning meetings. During their joint underground visits, the focus was constantly on details. As soon as Seth mentioned the lack of payable or accessible ore, Mr. Bauer would focus on track alignment or inadequately supported ventilation piping. They were not communicating. Seth felt that Mr. Bauer's bombastic tone was insincere, and Mr. Bauer felt that if details were adhered to the gold would appear.

When Seth was not the subject of Mr. Bauer's verbal abuse, he was coaxing and cajoling his shift supervisors to perform. Already, he had decided that somehow or some way Mr. Whyte had to be replaced and Mr. Riley had to leave the section.

Seth also was appalled at the daily attendance figures among the laborers and even some of the junior foremen. To combat absenteeism Seth began using the harshest response permissible by the company; three unexcused absences within a year warranted a dismissal. Once a week, Seth, together with the personnel staff, would complete the

dismissal paperwork, and as a result, often three or four men were fired.

To advance the 18-level haulages to the portion of ore that was nearly one year away, a small obstacle had to be overcome. Over the past 20 years, a loading gate connecting 18-level to another disused shaft system had rusted through, allowing the broken rock to pour onto the rails of the haulage, blocking passage to its end, 100 meters ahead. As no one had worked in this part of the mine for at least 10 years the obstacle had never been a concern. Now that 18-level was in the spotlight, this had to change. Extending the haulage would not be possible until the broken rock was removed. Every day as a train load of rock would be loaded and hauled away, more rock would pour through the gate. No one seemed to know how much rock remained above.

Mr. Van Bil was close to meeting his targets for 15-level, and had a reasonable projection for the next two months. Many of the working places on 13-level were sub-economic or near the margin. Mr. de Bruyn and Kile's brother were not concerned about the payability nor the lack of ore in six weeks' time. Their joint approach to Seth was to agree with everything and do nothing.

Seth's monthly review with the mine's top management appeared to go well. He tried to be upbeat and Mr. Bauer was noticeably quiet. They went through the plans level by level. Every time he tried to raise the issue of payability or where, based on their many years' of experience on Occidental, to investigate, either the subject changed or an insubstantial palliative was offered. The superintendent, in pronouncing the review over, said he was hearing good things about Seth through his various sources, however, the results of the Jordan shaft were expected to improve over the next few months. The mine manager remained distant from the entire review.

July

Two pressing concerns confronted Seth at the beginning of July; the superintendent's underground inspection and who would replace Mr. Whyte on 18-level. Seth convinced his superior of the need for a replacement, however, he was not permitted to influence the selection of the new supervisor and, even if he could, he did not know individuals on other shafts. Mr. Bauer would draw the replacement from another shaft.

As for the Superintendent's inspection, tradition dictated that this be a highly orchestrated affair. Usually, one or two of the other shafts would lend a crew for two or three days to help tidy the workings. Although this temporary allocation occurred, it was never acknowledged, although it was highly probable that the superintendent was aware of his staff's behavior, he never broached the subject. Sometimes

the inspections were announced months in advance, while at other times less than a week's notice was given. As this was to be Seth's first inspection on Occidental, he was anxious to inspire confidence and make a favorable impression.

Regarding the ore-pass problem on 18-level, either Mr. Bauer and the mine manager were uninformed on the situation or were withholding information from him. This ore pass led to an old shaft system that was abandoned while both of them worked on the mine. As for his staff, Seth was frustrated that they could not solve this problem; yet he did not expect them to do something dangerous. No sooner would they report that all the ore was removed than the following day the timber crew would telephone to say more rock had fallen onto the tracks. After spending several late hours at the planning office reviewing diagrams of the area, Seth concluded that between shifts he and one of the laborers would clear the ore pass from its top in the abandoned shaft system.

Seth felt that by doing a challenging job that had defeated others, he would lead by example, and also that clever methods would inspire confidence in his staff. Explosives would be lowered into the ore pass and then detonated from a considerable distance. Seth explained to his shift supervisors the details, and made arrangements to pick up the explosives underground. It was important, Seth felt, that his staff knew what he was doing and that the origin of this idea was his. With the exception of unanticipated time spent walking underground to the old shaft system, the plan to clear the ore pass worked flawlessly. But his success had little effect on the attitude of his staff. The following morning he concealed his anger when Mr. Bauer did not even offer grudging acknowledgment.

Seth's nightly efforts in the planning office began to pay off. On 13-level he found seven or eight weeks of ore in two separate blocks. This ground was confirmed on one of his weekly inspections, and was found to be high grade. At the time he wondered why De Bruyn and Kile's brother showed so little interest.

Sometime, also, he had mentioned to Mr. Bauer that, overall the Jordan shaft was under manned. Mr. Bauer admitted that several shafts on Occidental were short of labor. Seth pointed out that his production targets were based on having enough men to do the job. Finally, Mr. Bauer said a mine-wide reallocation would occur and that the four shafts under him would be able to increase their crews from about 50 men that had been transferred. On Wednesday morning, one supervisor would go from each shaft to select men.

Seth had some experience with reallocations. Typically, management shed their worse people, and with 50 men this would be more of a circus than normal. Seth decided to send his most competent supervisor, Mr. Van Bil, and his night shift supervisor. He expected them there one hour before time. Because they had arrived so early, the

Jordan shaft got its allocation, and some of the men had good records. Seth arrived on the shaft that morning to find his colleagues on the other shafts howling mad. Their men had arrived only 30 minutes early! When his colleagues complained to Mr. Bauer, Seth was mildly surprised that no changes were made.

The superintendent's visit near the end of the month was unsatisfactory. Seth and Mr. Bauer both anticipated that 18-level would be the focus of attention. Several days before, extra effort was made to clean the expected route and making sure that all equipment was in order. Seth had reasonable answers to all the superintendent's questions, although he felt that some questions should have been directed to Mr. Bauer or the mine manager, who were also part of the entourage.

When they entered the 18-level haulage extension, the superintendent was upset that no one knew why an escapeway to the disused shaft system above was made so large. This excavation had been planned several months before Seth's arrival and everyone of his superiors had approved of it weeks before he was responsible for its excavation. By then, no one was interested in seeing the success they had in plugging the old ore pass problem and the superintendent stormed out.

In retrospect, Seth felt that although he did not design or approve the excavation, if he had not been so busy with other matters he could have got the paperwork rolling to change the dimensions. He knew that both Mr. Bauer and the mine manager were the first and the second line of defense in preventing specifying larger-than-necessary dimensions, yet he did not attempt to shift the blame.

July's review somehow overcame the visit failure. The Jordan shaft had managed to hold its shortfall at previous levels and development actually increased. His superiors seemed to be in a hurry to meet other appointments. Seth did note that the mine manager had a lot more to say, however, it was just a milder version of the daily cacophony that Mr. Bauer provided every morning. He was disappointed that none of these three men provided any advice that could be translated into direct action. Seth realized how alone he was.

August

Seth believed the solution was to work harder. He had a new man on 18-level and he was intent on other changes. Seth's plan was for Mr. De Bruyn and Kile's brother to spend the afternoon redirecting the railway tracks to a more convenient haulage to access the two new blocks on 13-level. With their supervision it would take eight men about five hours. Working in the haulages after the shift's blast is usually difficult because it takes several hours for the fumes to clear. This area of the 13-level haulage was a fresh air intake and would not

be affected by blasting fumes. Weekend haulage work would be a good opportunity to show everyone in the section that extra effort was required. It was also very efficient planning.

Earlier in the week, he had gotten approval from Mr. Bauer for his plan, and had instructed Mr. De Bruyn to select eight men for the overtime work. Normally, one shift supervisor stayed on until the shift was cleared from underground. Seth anticipated that Kile's brother or Mr. De Bruyn would, in some way, thwart his plans so it was his intention to spend time in his office reading and catching up on paperwork.

Early that morning, Kile's brother called in sick. Within three hours, Mr. De Bruyn was complaining from 13-level via the mine telephone that he was having difficulties finalizing the arrangements for the between-shift period. Seth was livid but undeterred. He shouted that at the shift's end he would personally review Mr. De Bruyn's progress, and if only he and Seth were left to complete the work, so be it. They would work through the night to Monday morning to finish.

When Seth arrived, the situation was a shambles, only three laborers remained and Mr. De Bruyn was full of excuses. All Seth could think of was that after 20 years De Bruyn should know how to organize overtime weekend work despite his senior foreman's absence. This failure was deliberate. Yet no matter how well he presented it to Mr. Bauer, Seth knew that Mr. Bauer would not support De Bruyn's dismissal. Seth felt that under the circumstance if the five of them spent 10 hours completing the work, not only would his weekend be ruined but De Bruyn's as well. Because De Bruyn was in no shape for arduous labor and would be exhausted and angry, perhaps some of his anger would percolate down to Kile's brother, the man who initiated this problem. The hours wore on but they finally cleared the shaft at 8:30 p.m. The trains would be taking a new route on Monday, and have full access to develop the new blocks on 13-level.

Two positive developments occurred in August that heartened Seth. The first was that the new blocks on 13-level were marginally larger, and the grade of the ore was significantly better than expected. The second positive development was his efforts at improving attendance. When he started, at its worst, sometimes 30 laborers were absent. Presently, only five to eight workers were absent daily. This was tangible. Unfortunately, he was surrounded on all fronts by other difficulties, severely restraining any feelings of optimism. At best, all he could conclude was that he could, after an inordinate amount of time identify some areas of promise. His policy of discharging laborers for work-practice violations did have some effect. However, he was responsible for several hundred people and several square kilometers of the mine. The obstacle was motivating his shift supervisors and their senior foremen to act.

Shortly before the month's end Mr. Bauer declared that he had been reviewing the amount of ore hoisted from the shaft and that it was noticeably below the amount calculated from blasting.

Seth was aware of this discrepancy and although he felt there were more pressing problems like finding gold rather than moving unpayable rock, he had no choice but to join the mine manager and Mr. Bauer on a midnight tour to review cleaning procedures on 18-level. Seth was somewhat surprised that the mine manager's first visit would be at night. Where had he been for the last three months?

Most items underground were in order, and the topic of conversation was general mine matters. For some reason Seth did not raise his litany of problems, nor were they especially inquisitive. When they arrived in the working area, they stopped near one of the intermediary scrapers that dragged the ore out to the trains. The three men watched a wire rope drag a partially full scraper out and bring the same one back empty every 40 seconds. Little was said. Seth mentioned that the support problems remained unsolved in this area and that by next month additional winches from elsewhere would be in place.

The mine manager motioned that it was time to leave, and they scrambled out to the haulage. The mine manager told Seth and Mr. Bauer that he had observed worn scrapers, and from his own budget he would allocate four new scrapers to Seth's section. Typically, scrapers, depending on use, only lasted a few months. Although Seth was grateful for new scrapers, the ones observed were only a few weeks old, and the overall effect of new ones would be negligible. Seth had trouble accepting that he was getting the best from the mine manager's 30 years of experience.

During the monthly planning meeting, Seth stared in disbelief as Mr. Bauer increased his budget figures by nearly 10%. There was not enough ore to meet his previous target, let alone this new one. And then Mr. Bauer had the audacity to say he would try to get him some of the winches he had been requesting for months.

Surely this was convincing proof that his superior had a fundamental lack of understanding about the underground situation? Those words about playing with the cards you are dealt with came back to haunt him. Could it be that he failed to convey the severity of the problem to Mr. Bauer? Mr. Bauer had nearly 20 years' experience in the mines. Mr. Bauer could compare the ratio of winches, drills, men, etc., to the amount of monthly production with the other shafts under his responsibility. Seth long wondered if Mr. Bauer was not allocating his resources equitably. The fact that Mr. Bauer would refuse to answer questions on the subject added to his suspicion.

August's review passed without serious incident. The superintendent noted the development on 13-level but quickly focused on the poor results on 18. Seth went through his litany of reasons, the new shift

supervisor had only been there for a month, and Mr. Riley, the night shift Supervisor, had been replaced the day before. The mine manager shed his quiet stance and cited some head office or management text theories about applying men and material to the task at hand. Seth now thought that the mine manager really did not understand the underground situation. He knew that whatever initial goodwill bestowed upon him by the superintendent was now gone. Seth just felt it and saw it on the superintendent's face. He knew either that Occidental's production targets would be met or his days were numbered.

September

With grim resolve, Seth confronted another month. He was spending in excess of 12 hours a day, Monday through Friday, on the mine and somewhat less on the weekend. Few, if anyone on the mine could offer consolation, let alone advice, with a semblance of impartiality. The few times he met people in the community considerable tension was evident. He had spent such long hours on the mine that he had been unable to weave himself into the social fabric of the community.

During the first week of the month, Kile's brother did not come to work and was not contactable. Seth began to draw up the discharge paperwork. After three days passed without hearing from him, Seth felt that at a bare minimum he could have Kile's brother transferred if not fired. Even Mr. Bauer would have to support a transfer. Kile's brother had many allies and was well-placed with the union. His wife brought a letter from a doctor to one of the shift supervisor's home explaining that her husband could not come to work for seven more days. Seth had completed all the disciplinary paperwork, and had found a younger, more energetic, replacement. Although he had recommended dismissal, Seth knew despite Mr. Bauer's military demeanor, he would not have the stomach to dismiss someone who had ten years' service with the company. An unsatisfactory production record for over a year, calling in sick the day the haulages were rerouted, and now, not informing a shift supervisor of his absence for three days should more than warrant a dismissal. Seth had no choice but to accept Mr. Bauer's recommendation to transfer Kile's brother to a lower paying position and not dismiss him.

The promise of the newly opened areas on 18-level never materialized. The area had been fully assayed and the values were not close to being economic. During one of the planning meetings, Seth finally thought he had framed the problem in such a way that Mr. Bauer had to provide a well-considered rationale for such unrealistic targets with no ore to mine. In response Mr. Bauer simply pointed to the subeconomic areas on 18 and said, "Mine here. What else are you going to do?"

In their minds Seth and Mr. Bauer knew that delivering below grade ore to the concentrator was expensive, and it robbed, through dilution, some of the gold in the ore coming from other shafts. The net result would be to increase costs and decrease revenue. Seth now realized that the management pressure for tons of rock far out-weighted commercial sanity. Mr. Bauer was prepared to sacrifice profit in order to quench his superiors' thirst for tons. Seth was not. To him, what was suggested was wrong, and Seth would be responsible, not Mr. Bauer. Seth was capable of compromise, but not under these conditions. Seth did not plan to mine the subeconomic areas. As he left the plans with Mr. Bauer, he wondered what would be the greater problem, lack of payable ore next month or the lack of production this month.

September ended decisively. The Jordan shaft's ore production was nearly 30% below the planned target. Seth had anticipated 13-level's weak performance. Little had changed on 18-level; however, 15-level's results were truly unanticipated. Rather than coming in somewhat high, 15-level had slightly under-achieved. With all Jordan's other problems, the additional shortfall had not been apparent. Seth wondered if he would last the month. Mr. Bauer and he had a loud argument shortly after the results were known. Mr. Bauer did not consider the Jordan's true situation. During this acrimonious outburst, Seth emphasized that development had improved by more than 200%, and that absenteeism had been reduced to nearly zero.

On the third morning of the month, Mr. Bauer informed Seth that within the next few weeks Seth would leave Occidental. In the meantime, he would fill in on another shaft. One of the last points that Mr. Bauer made was that the motivation for the transfer had come from the superintendent and mine manager. Mr. Bauer said that he had tried to give Seth another month. Several days later when the superintendent was discussing future plans with Seth, Seth could not help but remember Mr. Bauer's comment when the superintendent said "he had no choice but to accept the mine manager's and Mr. Bauer's recommendation for Seth's transfer." Seth wondered if the mine manager would also deny responsibility for the transfer.

Post September

Initially, after Seth's departure from the Jordan, ore production improved somewhat. However, within four months, after extraordinary shortfalls exceeding previous figures, the Jordan's target was reduced by 60%. During this time, Seth was promoted to a new position on another mine.

Seth's replacement on the Jordan had to contend with grave problems in addition to production, and ultimately was transferred to a technical position far away from Occidental. By the end of the year,

the Jordan shaft's production had been merged with another shaft. Somewhat later a major shake-up occurred at the corporate offices that coincided approximately with the superintendent's retirement. Fundamental reductions were initiated mine-wide to optimize results.

A few years passed before traditional underground activity ceased.