

PAH NEWS PIX

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CALENDAR

- **Diggers & Dealers 2004**
July 26–29, 2004
Goldfields Arts Centre
Kalgoorlie, WA, Australia
email:
admin@diggersnddealers.com.au
- **Argentina Mining 2004**
August 18–20, 2004
Emilio Civit Congress Center
Mendoza, Argentina
email:
rojasniv@argentinamining.com
- **MiningWorld Central Asia 2004 Exhibition**
September 16–18, 2004
Atakent Exhibition Centre
Almaty, Kazakhstan
email:
indira.makhmetova@iteca.kz
- **MINExpo 2004**
September 27–30, 2004
Las Vegas Convention Center
Las Vegas, Nevada
email: jnaccarato@helexpo.com

Between a Rock and a Hard Place!

Mark Twain is often erroneously quoted as writing "A mine is a hole in the ground you pour money into." What he actually wrote was "A Western mine is a hole in the ground owned by a liar..." Whether mistakenly or correctly quoted, the idea is clear: mines often run into problems. And alas, when they do, the mine manager is obviously the one to blame!

As part of our work at Pincock, Allen & Holt (PAH) we often see frequent changes in mine operations managers, especially when storm clouds come blowing in on a newly-launched project. On such projects, the tenure of the manager is usually two years or less and it is not unusual to see as many as three or four change-outs of the master-and-commander before stability is achieved. Whether this is due to the helmsman, the ship, the sea, the crew, or something else is often obscure.

The strategy of changing managers when things are going awry, for all the uncertainty of its efficacy, is probably not a bad one. Its use is not confined to mining projects; it is certainly very visible in its application to coaches of professional sports teams, to generals in times of war, and to political leaders, though the latter is often much more difficult to accomplish than the others.

Clear evidence of troubled waters on a new mining project usually only becomes apparent

after at least three months from launching, though schedule delays and cost over-runs on the project engineering/procurement/construction (EPC) work prior to that time can sometimes be harbingers of future storms.

An operations manager is usually hired a year or so prior to the start of mine production, but often it can be two or three years prior to that time, especially on smaller projects.

The talents and aptitude of managers to manage different phases of a project are often questionable; certainly there are some who can do it all, but this is unusual. Managing a project from inception to operation start-up requires different skills from those of production; those good at project implementation are often not good at production management and vice versa. Essentially, there is a difference between project management and production management.

Principal tasks required of project managers are as follows:

- ◆ Preparing the Feasibility Study
- ◆ Managing and guiding the EPC contract
- ◆ Planning production, the operations organization, and operations contracts
- ◆ Hiring personnel and awarding operations contracts
- ◆ Managing the start-up period

■ FALLOUT FROM PERU'S ROYALTY DECISION

Peru is starting to feel the effects of Congress' approval to charge a royalty on mining operations. The controversial plan will charge mining companies in Peru with annual sales of up to \$60 million a royalty of 1 percent; companies with sales of \$60 million to \$120 million a royalty of 2 percent; and companies with sales of more than \$120 million a royalty of 3 percent. Royalty revenues will be divided among local, provincial and regional authorities in order to give more back to Peru's often dirt-poor mining regions. As a result of the decision, the Lima-based Southern Peru Copper Corporation (SPCC) has pulled out of the auction for the Las Bambas copper project. Two months earlier SPCC sent a letter to a state investment promotion agency outlining its withdraw from the Las Bambas project if royalties were applied. In the letter, SPCC stated that the copper project was already subject to a 2 percent minimum royalty and if another 3 percent were added the project would not be viable. SPCC is not alone in its feelings over the royalty issue. Several North American mining companies are considering looking elsewhere for mining gold, cooper and other minerals. The decision has also hurt mining stocks. After the announcement, Newmont shares were down just over 1 percent on the New York Stock Exchange, while stocks for Phelps Dodge Corp's were down 1.8 percent. On the Toronto Stock Exchange, Barrick stock was trading 47 cents lower and mining shares fell as much as 10 percent on the Lima market. Most large, virtually all foreign-owned, mining firms have "stability agreements" with the Peruvian government until 2010 or later and therefore are not affected by the royalties. All medium-sized mines, which typically have sales under \$100 million and are owned by Peruvian families, are not protected by such stability agreements and are therefore will have to pay these new royalties.

■ CHINESE TO EXPLORE FOR MINERALS IN SOUTH AMERICA

Both Brazil and Chile have expressed an interest for Chinese mining companies to explore for mineral resources in their countries. China is considered a strategic partner for the development Brazil's mineral reserves because of its need to secure raw materials. Chile is hoping that China will want to participate in Chilean mining projects, particularly the Gaby copper project, with the next bidding process. China consumes close to 3 million tonnes per year of copper and produces approximately 600,000 tonnes domestically.

Principal tasks required of production managers are as follows:

- ◆ Ensuring planned throughput and recovery are achieved
- ◆ Keeping operating costs within budget
- ◆ Motivating, encouraging, and demanding requisite employee effort
- ◆ Modifying and restructuring to achieve production and cost goals

As a project moves into the production phase, the pressure rises to make it productive and profitable. When the margins are thin this is likely to be challenging, and navigating through these rough seas becomes a problem. It is often cynically said that "Rich mines make good managers." Certainly, it is much more difficult for an incompetent manager to obviously mismanage a rich mine or even to recognize incompetence in such circumstances.

Serious problems in a new mining project usually become evident by the first half-year of production. It is about this time that Completion Tests become due if the project is externally financed, further signaling trouble. When this occurs, it is time to analyze the situation. Large corporations, with seasoned managers available for this work, can do such an assessment quickly and easily, and if a management replacement is necessary, can usually find an appropriate replacement within their own personnel, at least on a temporary basis. For smaller companies, it is not so easy to determine the source of the problem(s), the necessity for management change, and to locate a replacement; it may require the assistance of managerial and/or technical consultants.

If there are indications that a management change might be worthwhile and knowing that the likelihood of the

replacement resolving the problems is only about 50 percent, is it worth waiting? A dilemma presents itself: the chances of the existing manager resolving the problem and his replacement resolving the problem are about the same. Given this situation, it is no wonder that corporate management changes the manager; to do otherwise would subject the corporate officers to criticism for inaction. The job of the admirals is to 'ad mir al' (to look ahead)!

It is advisable (though somewhat cold-hearted) that the existing manager not know of the impending replacement until the substitute is about to come aboard. This imposes a considerable restriction, given the difficulty in finding and screening candidates. It also requires considerable time, usually at least three months. Where the manager does become aware of the search for a replacement, it is likely that his efficiency will drop and that his focus will be primarily on finding a new position for himself.

And just where does one find a replacement? As far as PAH is aware, there is no pool of unemployed mine managers standing on the London docks or wandering the streets of Denver! So, where do you find them? Possible sources are listed below:

- ◆ Internally, from other operations or within the existing operation
- ◆ Through inquiries of networked colleagues
- ◆ Through management recruiters
- ◆ Through direct advertising, this as a last resort since this makes it public knowledge

What are the qualities one looks for in a mine manager? A listing of primary characteristics and secondary considerations is presented in the table on Page 4. The primary characteristics,

listed on the left-hand side of the table, are given a numeric weighting according to their importance. U.S. law generally precludes probing of the secondary considerations that are listed on the right-hand side of the table, though they may be particularly relevant to overseas assignments in either remote and/or culturally-sensitive areas.

The management requirements for a mining property are not much different from the management of any other entity, and the question sometimes arises about the possibility of recruitment from related business or even unrelated businesses. A listing of possible alternate sources is presented below:

- ◆ Engineering/procurement/ construction
- ◆ Consulting
- ◆ Research
- ◆ Government
- ◆ Military
- ◆ Academia
- ◆ Other industry
- ◆ Other disciplines, e.g.: law, finance

In PAH's experience, very few mine production managers come from any industry other than mining, though they have not necessarily worked in line management positions all their careers; many have spent time in staff positions. Whether limiting the pool of managers in this way is prudent is uncertain, but it probably ensures a higher likelihood of success.

Mining is an international business. While there is a preference for expatriate managers for foreign mines, especially for those that are foreign-owned and are new, the question sometimes arises about the use of a local manager. It is one that should not be precluded, especially with the growing group of experienced mine managers in foreign countries, particularly in Latin America.

Good captains of the Pinafore can be found in foreign ports too!

In recruiting a replacement mine manager, a shrewd candidate may recognize the uncertainty of the position and require a contract for several years with generous compensation in case of premature termination. Because of the high possibility of the sequence of hiring and firing until the project stabilizes, the provision of such a contract is unwise and, even though it will limit the field of candidates, it is best to avoid them.

Since people have a predilection for doing what they like doing, and what they like doing they usually do well, it may be that a manager struggling in operations may be better suited to some other assignment such as a corporate officer or, where the mine is in a foreign country, as a political liaison. Reassigning, rather than firing a manager makes for a smoother transition and the necessity for confidentiality concerning a replacement becomes less convoluted.

Is it possible to minimize the difficulty resulting from sea changes of management? Two options are available:

- ◆ Hire a separate project manager on a temporary basis to manage the EPC work and assist in the start-up period. The project manager usually reports to the production manager, though the former may well be paid at a higher rate than the latter, in part because of the temporary nature of the assignment. To some extent it provides backup and complementary talent. It is usually only applied to large projects, those in excess of \$100 million, but it is worth considering for smaller projects, particularly where profitability is a concern.
- ◆ Hire an assistant production manager to share the work and deputize for the

■ **GOVERNMENTS EXPECTED TO DEMAND ROYALTIES**

The World Bank is warning mining companies that the governments of countries with a strong mining industry are expected to approve royalty plans. Peru, one of the world's most important mining destinations, has already approved a plan to charge royalties. Chile and South Africa are considering imposing royalty taxes on miners as well. These governments insist that mining companies have enjoyed favorable tax treatment for years and should pay for extracting a nation's finite resource. But mining companies say a royalty tax could put them out of business, especially if the price of metal drops. In Chile, the world's biggest copper producer, the mining industry is studying legal action to block a royalty proposal. In South Africa, the world's top gold and platinum producer, industry outrage has been so great that the planned tax is under review and its implementation has been delayed.

Minerals Corner—

**Ilmenite
FeTiO₃, Iron Titanium
Oxide**

Ilmenite forms as a primary mineral in mafic igneous rocks and is concentrated into layers by a process called magmatic segregation. It crystallizes out of a magma relatively early before most of the other minerals and, as a result, the heavier crystals fall to the bottom of the magma chamber and collect in layers. A rich ore body for titanium miners is found in these layers. Ilmenite is black and is named after the location where it was found, Ilmen Lake in the Ilmen Mountains of Miask, Russia. Ilmenite is the most important ore of titanium, which has been used in tech airplanes, missiles, space vehicles and even surgical implants. Ilmenite is mined in Australia, Brazil, Russia, Canada, Sri Lanka, Norway, China, South Africa, Thailand, India, Malaysia, Sierra Leone and the United States.

production manager. For this to work, compatibility between the two is essential. While this strategy is expensive, it may be cheaper in the long run and one that should be adopted for projects that are likely to be problematical. The presence of two managers minimizes the likelihood of difficulties for the following reasons:

- Complementary talents are more likely to keep things from going awry
- The burden of management is shared, so burnout is less of a concern
- Ideas are stimulated by discussion of problems
- A replacement is readily available if the need arises

It's often said that "Mines are made, not found," and given this supposition it is surmised that with astute and dedicated management, a marginal property can be made profitable. In PAH's experience a good orebody must first be found and then investigated through a series of increasingly thorough Feasibility Studies and reviews; with this strategy the necessity of management changes can be largely averted. Still, problems do arise and, as they do, managers come and go.

As the sails billow out on the launching of your next mining project, bon voyage!

MINE MANAGER CHARACTERISTICS

PRIMARY CHARACTERISTICS	VALUE	SECONDARY CONSIDERATIONS
Determination/dedication	10	Age/health
Track record	10	Marital status
Experience	10	Stability
Communication ability		Spouse adaptability
Spoken	8	Children
Written	7	Religious faith
Foreign languages	5	Nationality
Education	5	Personal finances
Energy	5	Personal flaws
Business background	5	Drinker
Coaching/mentoring ability	5	Philanderer
Discipline/focus	5	Gambler
Integrity/ethics	5	
Confidence	3	
Charisma	3	
Theatricality	3	
Loyalty	3	
Polish (dress, manners)	3	
Humility	3	
Severity/humor	2	
TOTAL	100	

This month's article was provided by Dick Addison, P.E., Principal Process Engineer, dick.addison@pincock.com

Note on the author: Dick Addison has been with PAH for over 15 years and has extensive experience in mine development throughout the world. He also suffers from an inexplicable obsession with Gilbert & Sullivan operettas!

