

PAH NEWS PIX

- COMPENSATION INCLUDED IN SUKHOI LOG GOLD SALE
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C A L E N D A R

- **Mines & Money Vancouver**
May 19–21, 2004
The Fairmont Hotel
Vancouver, BC, Canada
email: minesandmoney@mining-journal.com
- **New York Institutional Gold Conference 2004**
June 2–3, 2004
New York Marriott Marquis
New York, New York
email: iiconf@iiconf.com
- **19th Annual Mining Expo**
June 10–11, 2004
Elko Convention Center
Elko, Nevada
email: brenda@elkocva.com
- **2004 China International Mining**
June 16–18, 2004
Beijing International Convention Center
Beijing, China
email: forum@chinamining.com.cn

The Monthly Report

PAH is often asked to provide assessments of operating properties, at times for financial institutions, and often for the operating company or owners. Such projects normally include site visits, budget reviews, and resource reviews, but the document most used is the monthly report. This document, when properly structured, can provide a compelling picture of an operation's strengths and weaknesses, and is often the best predictor of future performance.

Unfortunately, this mundane document is often considered more of a burden than benefit. Each department must provide a synopsis of the month's progress, significant events, comparisons to budgets and, of course, requires working with accounting reports. The benefit of the report is that all of the diverse parts of the mine ARE brought together, hopefully into a cohesive whole.

Larger corporations generally have templates from other operations to work from, though, in our experience, organization size does not guarantee either content or clarity. Others may want to reconsider their format to improve clarity or content, or to adapt to changes in operations or ownership. For those operations where a template is not available, and where there is a desire for a useful monthly report, PAH offers the following suggestions.

General Structure

The monthly report should be structured in order of increasing detail. Often, only the first page of the monthly report is seen by

corporate staff, hence any crucial issues should be made evident here. Those who desire more detail will proceed to the latter portions of the report.

Summary Page

In most cases, the Monthly Report begins with a short synopsis of key production indicators and costs. This summary should include tonnes and grade mined and milled, mill performance statistics, such as recovery and product, and product sold, with closing inventories. Costs by functional area are normally included, with actual versus budget. Finally, there is a health and safety summary. In most cases, a project can be neatly summarized on one page, but a complex project may require a few more.

Engineers and accountants are most at home in numbers, but graphical representation of key production indicators (KPIs) also serves to provide a historical perspective. Trends in mine, mill and total operating costs are obvious, but commodity prices can be informative. These graphs provide quick insight and should be near the front of the report.

Text within a monthly report can be easily overdone; but some of the better reports reviewed by PAH include a bullet list of key events that have occurred but are not clearly evident from the numbers. Local problems, logistics, major components failures, or weather may have seriously impacted the operation and should be made clear at the outset. The intent of the text should be to

■ **COMPENSATION INCLUDED IN SUKHOI LOG GOLD SALE**

The future owner of the Sukhoi Log gold deposit, which is to be put for tender or auction later this year, will be required to pay compensation for previous development costs already incurred at the site. The volume of compensation is uncertain but it is written down in the project terms. The compensation provision has been included to reimburse regional gold miner Lenzoloto for its work on the project. Lenzoloto, which was acquired by Norilsk Nickel last year, originally borrowed from a partnership of Star Mining (Australia) and JCI (South Africa) almost a ten years ago, but was unable to repay its debts when Star and JCI's rights to the mine license were revoked in 1997. Sukhoi Log, located near Bodaibo in the Irkutsk region, is Russia's largest unmined gold deposits with an estimated reserve of more than 33-mil oz.

■ **NEWMONT TO EXPAND EXPLORATION TO GHANA**

Newmont Mining is looking at Ghana to be its next area of growth. Newmont's \$350 million Ahafo mining project in Ghana is expected to produce 500,000 ounces of gold a year and will start operations in the second half of 2006. Newmont acquired the Ghanaian interests when it merged with Australia's Normandy in 2002.

■ **SEVERAL SUCCESSFUL PROJECTS FOR PLACER DOME**

North American giant Placer Dome Group has measured and indicated resources of almost 42 million ounces of gold from just four of its projects under assessment. Cortez Hill, in which the company has a 60 percent stake, contains a reserve of 37.5 million tonnes grading 4.36 grams/tonne for 5.25 million ounces of gold. Placer Dome's share in Cortez Hill in Nevada is 3.15 million ounces and the deposit is looking to be the most significant discovery in recent years. Pueblo Viejo, in the Dominican Republic, is another successful project, which has a measured and indicated resource of 177.8 mt. grading 3.1g/t for 17.5 million ounces of gold. Cerro Casale in Chile is one of the world's largest undeveloped mines, with its measured and indicated resources measuring at 567.9 million tonnes grading 0.7g/t gold and 0.26 percent copper. Donlin Creek project in Alaska has measured and indicated resources of 82.23 million tonnes containing 7.8 million ounces and an inferred resource of 99.5 mt. containing 10 million ounces.

augment understanding of the numerical and graphical information, but should not simply repeat the numbers.

Costs

As commercial enterprises, it is not surprising that operating costs and financial results are the primary concern, and are typically presented in the second section of the monthly report. Some projects insist that the costs and revenues be placed at the end, or shipped under separate cover given the sensitive nature of this data.

The presentation of this information is often in two formats, one by consumable category, (i.e. labor, fuel, power, reagents, explosives, etc.), which is the preferred format for accountants. The second format, beloved of mining engineers and metallurgists, is by functional category, (drilling, blasting, crushing, flotation, etc), which allows the managers to quickly focus on where problems may be occurring. The distinction between the two approaches (i.e. cost versus management accounting) is the frequent source of friction between the accountants and the operating staff.

PAH recommends that adjustments made to the operating costs (for accruals, delayed stripping, or other adjustments that can affect the timing of cost recognition) be kept separate and distinct from the costs reported to the operations staff. Operations staff are typically concerned with understanding the costs on a cash basis; 'adjustments' are more often intended to drive tax computations or reporting requirements, and can make it difficult for the operators to accurately understand where costs are occurring.

For each of the accounting categories, costs should be presented for the Month, Budget vs Actual, and for the year to date, also budget vs actual. Many reports make use of color printers to highlight areas in need of attention, using either a percentage error or total dollar difference (or both).

In addition to the dollar (or local currency) totals, the monthly report should include costs per relevant unit of production. For the mining department, these costs are often quoted on a per ton mined basis, while for the mill a cost per ton of feed is more appropriate. Other downstream costs are usually estimated on a per units of sales basis, such as ounces of gold, or pounds of copper.

General and administrative (G&A) costs are frequently one of the largest cost contributors to mining projects. These costs include accounting, security, training, health and safety, transportation, among many others. Costs should be presented clearly by section, and changes within the department should be noted here.

Sales

Revenues can be included within the costs section, or are often presented in a separate marketing section. This section should include units sold or shipped, and sufficient data to provide insight into inventories on hand (particularly for concentrates or bulk products). The average sales price should be clear, also on the month average and year to date.

If treatment penalties or settlement differences are an issue, these should be discussed here in qualitative terms, while the actual costs may be reported either here or in the costs section.

Geology

In many operations, there is a substantial effort extended to the definition of additional reserves, and/or the prevailing geology may require attention throughout the project. This section should include a synopsis of the following areas:

- ◆ Exploration Activity – where and how many holes were drilled, type and meters, preliminary results, potential need for updated resource models, etc.
- ◆ Reconciliation – This topic should be covered quarterly at a minimum,

although present operating trends lean towards monthly reporting. Metals are particularly sensitive to this area. The reconciliation should address all levels, from the model to mining, to milling and ultimately to sales, although the discussion is often separated by department. PAH recommends that at one point, an overall reconciliation be provided.

- ◆ Outlook – many properties are particularly sensitive to the geology expected over the next period of time. Examples might include expected ore types, digging conditions and grades. If so, this information should be presented here.

Mining

Mining production is the obvious focus in this section, and much of the production data will be presented within the summary sheet. However, the details of where the production occurred (open pit, underground, different ore types, special stripping situations) would be provided here. Other components of the mining section should be:

- ◆ The production section should include a comparison of Actual vs. Budget, broken out as needed, including movements to and from stockpiles. Tonnes and grades should be stated clearly. Monthly and Year-to-Date figures are typically provided.
- ◆ PAH recommends that a page-sized map be attached showing specific work areas.
- ◆ While equipment availability and utilization are almost certain to elicit yawns from most readers, mining operations live and die on maintenance. The availability of the equipment should be presented by equipment type, also on a monthly and yearly running total. Problem areas should be highlighted, particularly if a particular component is causing troubles (propel transmissions, bed wear, flat tires, etc).
- ◆ Tire change-outs should be reported for loaders and trucks.
- ◆ Drilling and Blasting should be covered briefly, usually concentrating

on average penetration rates, bit life and powder factor. Some comment on fragmentation should be included.

- ◆ Slope stability, or ground stability should be discussed where these are issues. Normally there should be a broad-brush description, avoiding details such as specific movement unless a clear issue is developing.
- ◆ Stockpile Status, with a summary of movements into and out of the stockpiles, should be a routine entry in the monthly report.
- ◆ Similarly, waste dump status should be provided, indicating average advance rates at the crest, tonnes to each dump and stability issues, if any.
- ◆ As with the geology section, there should be an outlook discussion, stating what is expected over the next reporting period.

Milling

Normally, the gross measures of mill performance will be provided within the summary, and will be repeated in more detail within this section. Production should be presented as both actual and budget, for both the month and the year to date. In addition to the obvious numbers, reported data should include:

- ◆ A breakdown of operation by ore type if appropriate, including recoveries and throughput.
- ◆ Plant operating hours, identifying major maintenance effort, if any,
- ◆ Reagent and supply consumption (including power)
- ◆ Concentrates or product shipped
- ◆ Concentrate inventories
- ◆ Tailings status (tailings placed, remaining capacity)
- ◆ Outlook – major maintenance planned, equipment changes coming, commentary on effects of various ore types.

General and Administration

Manpower

In developed countries, labor is often the largest single expense, and is monitored closely. There is a tendency to be less

■ LAS BAMBAS PRICE SET

The Peruvian Government has confirmed that the Las Bambas Copper project will be put on the market at US\$40 million and a two percent royalty. Las Bambas, in southern Apurimac department, holds 40.5Mt of proven reserves grading more than 2% copper and exploration potential of more than 500 Mt. Fourteen companies have pre-qualified to take part in the Las Bambas auction which is scheduled to take place July 23. The government has committed any buyer to invest US\$1 billion in the project, or construct a processing plant with a capacity of a minimum of 50,000t per day.

Minerals Corner—

Rhabdophane

(Ce, La, Nd) PO₄ – H₂O,

Hydrated Cerium Lanthanum

Neodymium Phosphate

Rhabdophane is a rare earth phosphate mineral that forms from the alteration of rare earth igneous minerals. It is the primary mineral in carbonatites and a few rare hydrothermal veins. Its most notable feature is its greasy luster and botryoidal habit. Rhabdophane is a collection of three officially recognized minerals that are distinguished by their percentages of rare earth elements. The three minerals are: Rhabdophane – (Ce), Rhabdophane – (La), and Rhabdophane – (Nd). Each is named for the rare earth element that composes the highest percentage of rare earth element in that particular mineral. Rhabdophane – (Ce) is the most common of the three. This mineral is whitish, yellow and has a hexagonal or pseudo-hexagonal form. It is named for its spectral signature, which reveals the tell-tail spectral lines of its rare earth elements. Rhabdophane is Greek for “rod appearing.” It can be found in Majuba Hill, Pershing County, Nevada and Salisbury, Litchfield County, Connecticut, USA; Gakaia, Burundi; Fowey Consols, Cornwall, England; Grube Clara, Oberwolfach, Germany; Mt. Weld, Western Australia; Kola Peninsula, Russia; and Mont Saint-Hilaire, Quebec, Canada.

attentive in less developed countries, which PAH notes creates a whole set of unique problems including supervision, training, security and safety issues. Keeping a close tab is important for all operations, and the manpower count, broken out by department, should be provided. Staff, hourly, contractors and temporary employees should be clearly identified as well. Statistics on absenteeism and turnover are also helpful. Usually a simple table suffices for this section, along with minimal text describing any issues that may warrant general attention.

Health and Safety

The overall trend in mining has been an increasing focus to reduce injuries and accidents, such that the safety record is often the first criteria for evaluation of management quality. Accident rates by lost time, first aid, near miss etc., should be tabulated and included within the report.

Community Relations

Community relations in many areas of the world are stable and are relatively minor in importance. In these projects, community relations discussion are often lumped together with G&A. Newer projects seem to be more prone to difficulties in this area, and some discussion should be included within the monthly report.

Market Synopsis

In many cases, this section may be as little as a single line, providing metal prices. It is good practice to provide a short narrative on market changes (LME

stocks, or industry shifts). Events that may impact the market can be noted here. In the case of industrial minerals operators, this section could be several paragraphs. In some industries, price competition may be such that this information may be considered sensitive.

Environmental

That there is an increasing focus on environmental issues within the industry is no surprise to mining professionals. Many projects now have to report dewatering results, quantities pumped and quality, water pumped for process use, water treatment and discharge, dust, noise, and ground vibrations to name few. Many PAH clients now report meteorological conditions during the month as well. A brief narrative is recommended discussing major points.

Capital and Expense Projects

Projects under construction typically have a separate EPCM construction report, which often accompanies the monthly report. For most projects, there is always some construction underway, which are either expensed or capitalized depending on the accounting requirements. The progress of these projects, such as tailings expansions, shop extensions, or drainage control systems, should be noted and tracked.

Conclusions

The monthly report, properly developed, can provide an invaluable tool for the coordination of operations, troubleshooting problems, and fostering an understanding of the issues confronted by the

various entities within a mining project. A well constructed report can be a money saver as well, both in terms of helping the operators, and, admittedly, making the job of consultants easier as well.

A few general pointers should be kept in mind when constructing a monthly report format:

- ◆ Keep it brief. In spite of the rather intimidating list presented here, many operators produce a document of 20 pages or less. Some complicated operations, of course, require far more.
- ◆ Use charts and graphs to show changes and trends over the operating history.
- ◆ In most cases, extensive details, such as those generated by the mill or geotechnical departments, should be confined to departmental reports that feed to the monthly report.
- ◆ Clearly identify production-impacting events that transpired during the month and highlight needed reactions to events, upcoming decisions and deadlines.
- ◆ Ensure that the document is internally consistent. If the accountants are using different numbers, they should be corrected or explained.
- ◆ Use the document to alert other departments of pending issues.
- ◆ The monthly report is a useful historical document, but avoid frequent changes to either format or definitions, as these make it difficult to track changes and trends.

This month's article was provided by Dave Crawford, P.E., Principal Mining Engineer dave.crawford@pincock.com



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