Financial Analysis of the Business Case for Mine Rehabilitation

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EXTENDED ABSTRACT

The “business case” for mine rehabilitation is often cited as a key motivator for planning and execution of rehabilitation works. In reality, in the Australian mining sector, there is frequently a much more compelling case to defer closure expenditures or to divest mines rather than to undertake progressive rehabilitation. This trend is well demonstrate by the very low rates of full relinquishment of mining tenure and the great number of “care and maintenance”, abandoned or orphan mines.

The processes for quantifying financial and legal risk to justify rehabilitation activities are the key business drivers. These considerations often resolve down to the estimations of management of exposure to costs or penalties in the near term.

The Western Australian government has recently instituted a revised approach for the management of mining proponent financial obligations with regard to progressive rehabilitation and mine closure. This approach replaced a bonding system whereby mining entities would post cash for bank guarantee bonds with the State based on a disturbance calculation per hectare for different disturbance categories.

This presentation examines, through both a discussion of existing financial and regulatory mechanisms and a number of real world case studies, the factors generally informing decisions by management with respect to mine rehabilitation. Understanding these decision making processes can improve the chances of a rehabilitation program receiving funding approval and can avoid expending time on justifications which are not key drivers.

To better understand the influencing factors in deciding to fund rehabilitation works or not it is useful to imagine oneself in the position of Managing Director a theoretical Mining Company. As Managing Director you have receive an Application for Expenditure for ten million dollars to do rehabilitation works one project which is situated on a mining lease in a remote part of the Western Australian Goldfields.

You are being asked to approve ten million dollars in expenditure to fulfil rehabilitation obligations and commitments, estimated, by the MRF calculating tool, to be $40M.

If you spend ten million on rehabilitation this year we will lead to a maximum reduction of our annual MRF contribution liability from $400 000 pa to $300 000 pa. That is if the regulator completely removes/reduces this liability footprint from the calculation, which they would

(quite reasonably) not do as the rehabilitation has not been demonstrated to have succeeded. Hence in reality for your ten million dollar investment you will probably see a reduction in the MRF contribution in that year of between $40 000 and $60 000. Assuming the larger reduction this first yeas return on investment of .6%. As you continue to benefit from these reductions year on year this builds to 3% in five years.

Clearly this is not a great investment return. However is there any option? The mining approvals under the mine operates stipulate that progressive rehabilitation will occur during operations and all the land will be rehabilitated at closure. Or does it?

The mine has a current Life of Mine projected at a further three years of operations and one year of treating low-grade prior to the complete cessation of operations . The approvals do not specify exactly when or where the progressive rehabilitation is to occur during operations. Further, the approvals do not anticipate periods of suspension in the mine life when it might be in a state of care and maintenance whilst further exploration works occur or an unfavourable commodity price cycle passes.

The key word which hangs over much of the rehabilitation expenditure budgeting process is - Deferral. For a number of reasons it is not a good time to approve this expenditure (cost savings campaign, too many projects current on foot at the operations, moneys weren't forecast for in budgets two years ago etc). There are few if any precents of mining companies getting into any serious regulatory or reputational impacts for deferring rehabilitation. If the money is moved back four years on the balance sheet it reduces as a liability up to 5% a year. Hence by expending that $10M in 4 years instead of this year it improves our balance sheet by $2M.

Sometimes rehabilitation is worth more dead than alive. Yes we might be spending an extra $60 000 per year in MRF payments than we might otherwise be, but not only does the NPV on the deferred expenditure make our balance sheet look better, we have $10M we can spend on growth or Directors fees as the case may be.

Essentially, the motivations for progressive rehabilitation or closure works when the option to defer, place operations in suspension or care and maintenance or indeed simply divest operations at or near the end of their productive lives is such a low risk outcomes, are very weak indeed.

Financial instruments such as rehabilitation funds and performance bonds, as they are currently structured in Australia provide some small degree of incentive but are yet again comparatively week motivators