

Chapter 1 : Associate Professor John Steen - UQ Researchers

*46th queensland coal industry review - 47TH QUEENSLAND COAL INDUSTRY REVIEW - 48TH QUEENSLAND COAL INDUSTRY REVIEW -*

However RAB drilling gives a less accurate sample and is primarily used in initial exploration in unconsolidated ground limited to depths of approximately m. Diamond drilling consumables are also more expensive as they are custom made to suit the rig. There are also significant cost and time reductions in the overall RC sampling process. RC drilling can also be used as a precollar to diamond drilling and there are two ways of doing this. One option is using a multipurpose rig doing both techniques consecutively on the same hole or, if initial assay results from RC Drilling are promising and deeper samples are required returning to use the initial RC hole and commence diamond coring to greater depths. RC Drilling offers this flexibility which makes it the most cost and time effective drilling method. Levels of Exploration Drilling in Australia Exploration drilling totalled 9. This continued the trend of increased exploration drilling evident since the trough in mineral exploration in Drilling levels remain below the peak in which was associated with large amounts of shallow drilling for gold. Source, Australian Government Geosciences Australia Exploration Expenditure other than for petroleum The seasonally adjusted estimate of mineral exploration expenditure rose The largest rise this quarter was in Western Australia up In original terms, mineral exploration expenditure fell Queensland had the largest fall down In original terms, exploration on areas of new deposits fell In original terms, the largest fall by minerals sought came from expenditure on iron ore exploration down The next largest fall came from expenditure on coal exploration down Metres Drilled other than for petroleum In seasonally adjusted terms, total metres drilled rose 4. In original terms total metres drilled fell A total of 5, soil and rock samples collected across the property; Prospecting and mapping over the newly granted tenements; A 10 hole combined RC and diamond drill program in to test the continuity and extent of gold mineralization intersected during at the Wealth of Nations Prospect; To test a number and variety of quality gold in soil anomalies specific target areas; A number of RC or diamond drill holes are required to test the airborne and subsequent ground EM targets identified in association with surface gold at the target areas. The program will be staged and conducted over a 12 to 24 month period.

*In Queensland, the state fostered the operation of market forces, privatizing state-owned mines and lifting restrictions on the production and marketing of coal. In Nova Scotia, in contrast, public ownership was imposed through the formation of a crown corporation (DEVCO).*

For example, Natural Resources Canada has estimated that less than 0. Each coal mine has a limited life span due to the finite nature of the resource being extracted. Eventually the resource is exhausted, or the point is reached at which it is no longer profitable to extract for any number of reasons, such as increasing mine depth, increasing strip ratios, changing regulations, or market pressures. When extractive activities cease, restoration processes must be completed, although they normally begin far sooner. In fact, reclamation processes typically begin while active mining is still occurring in another area of a mine. Thus, mining and restoration can be completed continuously and progressively throughout the life of a mine. The costs associated with these restoration activities can be substantial: An improved understanding of the potential impacts of industrial activities, societal attitudes toward mining, increasingly stringent regulatory regimes, and dynamic market conditions now typically require companies to state clearly how their operating area will be restored before mining can begin. There are various approaches to reclamation, and collaborative efforts between industry and government can help to improve mine management and reclamation processes. Thus, best practices and select case studies are worth exploring to highlight examples of successful mine closure and remediation. A former opencast coal mine in Montana, U. Technical reclamation activities often aim to proactively manage a mined area for specific natural or recreational value, or other human uses, which can include infrastructure needs such as airports, schools, or shopping centers. Reclamation activities can also target agricultural or silvicultural i. Both underground and opencast mines require reclamation, but the approaches are different. Reclamation activities for underground mines will typically require less aboveground activity, but can necessitate extensive management to avoid drainage and flooding issues after mine closure. This management can involve techniques such as filling of excavated areas with mine spoil or fly ash and diverting or controlling the flow of groundwater to keep it from entering existing mine structures. Doing so avoids the risk of rising water becoming contaminated by dissolved metals and other substances and potentially being discharged into rivers and streams. Notably, higher levels of calcite or carbonates in the rock, however, may neutralize acidic mine water, allowing metals to stay immobile. When excavated areas are built up, re-landscaping or recontouring is completed along with drainage control measures. Recontouring will be guided by mine plan objectives i. Where other human uses are planned for, the land will often be leveled or shaped in a manner that improves access or aids in future infrastructure development. In many cases, reclamation processesâ€”which can include the mine closure and decommissioning stage, as well as the post-closure stageâ€”can require as long as, or even longer than, the combined previous stages of exploration, site construction, and mining. A mine project life cycle<sup>7</sup> Even with mining plans in place, mining can substantially affect local or regional environments. Proper reclamation of mine sites, however, can avoid many risks, including unstable spoil piles, acid drainage and water quality issues, and potential cave-ins. Best practice reclamation activities are designed to limit or avoid these impacts to the greatest degree possible. Although fully listing the legislative, regulatory, or best practices standards governing global mine reclamation is outside the scope of this article, a few prominent examples are worth highlighting. For example, general requirements for the approval of mining permits could resemble the conservation practice standards published by the Natural Resources Conservation Service NRCS , U. NRCS describes a threefold purpose for land reclamation: Companies are also urged to rehabilitate progressively through the full life cycle of the mine and, where possible, to manage and rehabilitate historical disturbances. The varied nature of reporting measures and regulatory regimes governing mine management worldwide are compounded by the fact that many private or unregulated mines have been created, especially in developing nations where regulatory oversight may not yet be as thorough. Thus, it is difficultâ€”if not impossibleâ€”to get a full count of the number of abandoned coal mines worldwide. The legacy of abandoned mines, however, is being addressed in

many areas. Demonstrating a transparent working relationship with conservation groups and other stakeholders can also help regulatory agencies when reviewing permit applications. If these agencies observe widespread support for mine plans and objectives and are convinced the area will be properly reclaimed and managed in the post-mining stages, permit approvals can likely be obtained much more easily. One example of a collaborative effort is the U. As the mine will not continue producing saleable material, no additional income will be brought in after operations cease. Therefore, most regulatory agencies require some form of a financial safety net, or bonding, to ensure sufficient funds are available for reclamation even if a bankruptcy occurs. In this manner, company insolvency or an abandoned mine will not impose mine closure and reclamation costs on taxpayers. While having adequate funds for reclamation is clearly important, public policy must recognize that environmental protection, reclamation in this case, must be balanced with financial realities to avoid stifling economic activity and to allow mining companies to operate profitably. The International Council on Mining and Metals ICM has reported that expectations from an increasingly risk-averse public and government have been forcing assurance costs higher. In fact, increasingly conservative expectations of certainty relating to environmental protection could place such strict financial and administrative pressures on mining companies that mining projects could be cancelled as uneconomic. When this photo was taken in , the Phoenix 2 mine had been backfilled. Final grading and seeding had yet to be completed on the top lift. Rock side drains were constructed at the perimeter to prevent erosion. The Phoenix 2 mine was the recipient of the U. ARRI is a working group comprised of citizen representatives, industry, academia, and government, and was formed to encourage planting of productive trees on reclaimed coal mine lands and abandoned mine lands. The FRA is made up of five steps: Loosely grade the topsoil or topsoil substitutes established in step one to create a non-compacted growth medium. Use ground covers that are compatible with growing trees. Plant two types of trees: Under these guidelines, final backfill elevations were established to mimic the natural terrain of West Virginia, avoid soil compaction, and enhance post-mine land use. As year six approaches , the Phoenix 2 mine area is returning to a productive, natural state. Key objectives in reclamation activities are to reduce potential damage and prevent negative impacts to the natural environment in and near mined areas, to restore the viability and growing potential of soils to their pre-mining level, and to maintain or improve landscape visual and functional quality. Reviewing effective examples of mine reclamation from around the globe, such as those profiled in this issue, allows the extractive industry to develop a suite of best practices for successfully reclaiming mined areas. These properly reclaimed mines can provide essential lessons on technology, policy, and collaboration and serve as the gold standard for mine reclamation efforts. Minerals and Metals Sector. Background paper on land access, protected areas and sustainable development. Erosion control, soils and ecology. Case studies of successfully reclaimed mining sites. Cornerstone, 1 2 , cornerstonemag. Science reportâ€”Abandoned mines and the water environment SC, www. Conservation practice standardâ€”Land reclamation, currently mined land, www. Promoting environmental and wildlife wellbeing. American Coal, 1, 30â€” Mine Land Stewardship Initiative, www. Financial assurance for mine closure and reclamation, www. A dedication to West Virginia. American Coal, 2, The author can be reached at jhayes@americancoalcouncil.

### Chapter 3 : History | Coal Services

*Queensland Rail's present outlook is that coal tonnages are expected to increase approximately 40% from the million tonnes actually railed in /97 to million tonnes in the year /*

Conference Publication Understanding and measuring revealing: Understanding and measuring revealing: A review and critique of the small worlds hypothesis: The best network structure for innovation. Family business in Southeast Asia and Indonesia. Time narratives in international entrepreneurship Middleton, S. Time narratives in international entrepreneurship. The Future of Asia-Pacific Business: Beyond the Crisis, Brisbane, Australia, Why and when some ventures lose their way on the path to success Saxton, K. Why and when some ventures lose their way on the path to success. Temporal evolutionary trajectories in international new ventures. A network approach to international business. Investment appraisal and real options reasoning in Australian biotechnology firms Caldwell, A. Investment appraisal and real options reasoning in Australian biotechnology firms. An evolutionary economic approach to tracking the evolution of international trade. Dynamics of firms, networks, regions and institutions. The evolution of international trade: A network approach to measuring globalisation Kastle, T. A network approach to measuring globalisation. Von Glinow and T. Globalisation and connectedness in international business: The new science of networks Kastle, T. The new science of networks. International terrorism, uncertainty and the firm Steen, J. International terrorism, uncertainty and the firm. Local Roots, Global Links.

### Chapter 4 : News | White Industries

*Review of the Queensland Coal Mining Act, Incentives for companies to invest in safety Phasing in of new royalty arrangements in Queensland*

### Chapter 5 : CSA Global " Mining Industry Consultants " Worldwide Offices

*plants that Adani's Carmichael coal mine in Queensland.*

### Chapter 6 : coal mining | CORNERSTONE MAG

*minerals and metals, excluding coal and petroleum, in the world, Australia's large trade deficit with the United States mainly to and its mineral industry is a leading catalyst in promoting the structural differences (U.S. Embassy, Canberra, Australia.*

### Chapter 7 : RC Drilling Comparative Costs of Drilling - RC Drilling

*the Australian coal industry, there is a lack of research in the area NOHSC. OSHA (). Preliminary economic analysis for OSHA's proposed ergonomics.*

### Chapter 8 : - Directory of Mining Statistics,

*A review of the JCB's operations was carried out (the Kelman Report), resulting in amendments to the Coal Industry Acts. The amendments refocused the Board away from engineering and industrial issues to a primary concern for the occupational health and welfare of mine workers.*