



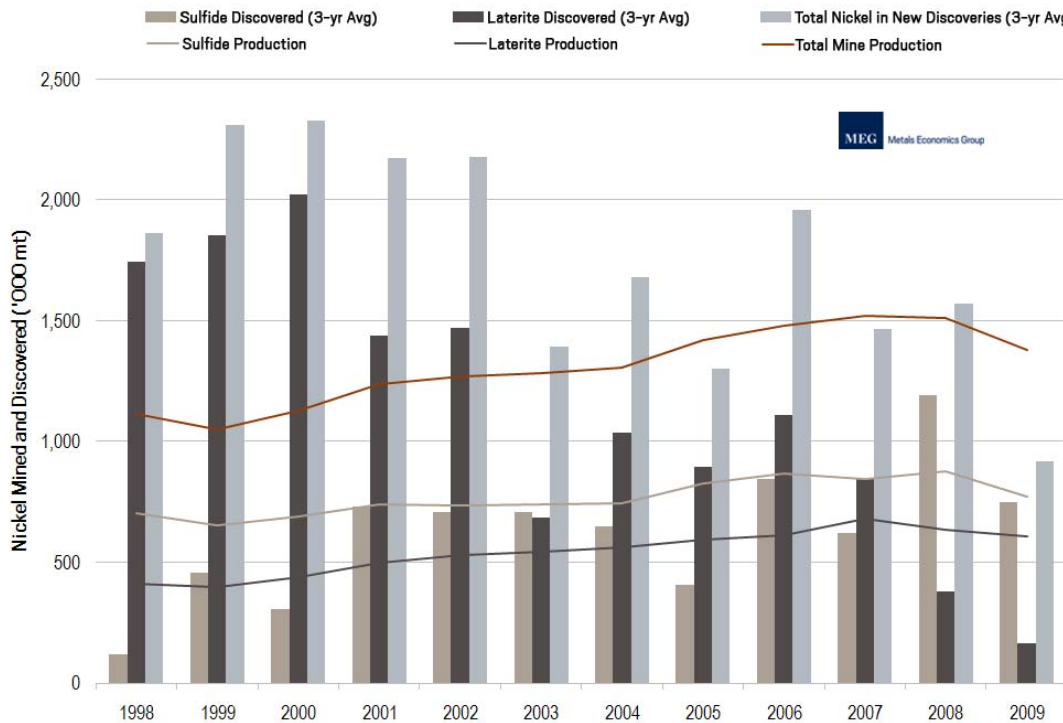
Metals Economics Group Strategies for Nickel Reserves Replacement: The Costs of Finding and Acquiring Nickel

The majors are replacing reserves, but not from new discoveries

Halifax, Nova Scotia, July 7, 2009 – Metals Economics Group’s (MEG) recent Strategies for Nickel Reserves Replacement study concludes that between 2000 and 2009 the world’s largest nickel producers (those with production of at least 15,000 mt of nickel in 2009) overcame rising costs, equipment and labor shortages, electrical outages, permitting hurdles, typhoons, political opposition, and other obstacles to replace almost 270% of their reserves which were depleted through production. This group, representing 82% of 2009 world nickel production, paid an average cost of \$1.18/lb to replace reserves through a combination of acquisitions and exploration.

The major nickel producers increased aggregate production by a total of almost 581,000 mt/y over the past ten years despite a drop of 95,000 mt in 2009. These companies also hold sufficient reserves for 30 years of production at 2009 rates (assuming a 90% recovery rate). However, increasing production has exacerbated their need to add reserves in order to maintain a steady production pipeline, and most of the major producers forecast further production increases in the coming years. Based on 2009 production, each major producer needs to replace an average of 63,000 mt of nickel in reserves each year, ranging from a high of 283,000 mt annually to a little less than 16,000 mt.

Potential Production from New Discoveries Relative to World Nickel Production, 1998-2009



Note: Potential production in new discoveries is calculated using a 75% resources-to-reserves conversion rate and subtracting 10% for sulfide processing losses and 25% for laterite processing losses; a running three-year average of the annual totals is shown.

Data source: MEG’s Strategies for Nickel Reserves Replacement study.

Another pattern seen over the past ten years is the growing importance of laterite resources as a source of future production. Although global reserves changes over time are difficult to calculate precisely due to insufficient data from some regions, changing reporting standards, and varying cutoff grades, MEG estimates

that since 2000 sulfide nickel reserves have declined—mainly due to a lack of new discoveries and diminishing grades at producing mines. On the other hand, laterite discoveries and reserves under active development have increased, although extracting them economically remains challenging. One ramification of this trend is increased capital costs for new mines—laterite projects have average projected capital costs of almost \$50,000/mt of planned annual nickel production capacity—about two and a half times more than that required by sulfide mines.

Industry wide, 36 significant nickel discoveries (defined as a deposit containing at least 100,000 mt of nickel) have been reported so far in the 1998-2008 period¹, containing 32.8 million mt of nickel in reserves, resources, and past production. As implied above, the bulk of nickel in significant discoveries over the period has been found in laterite deposits—about 65% vs 35% in sulfide deposits. However, of the 36 significant discoveries made by the industry, just five were found by the major producers, containing almost 9 million mt in resources—more than three-quarters of which is in laterite deposits.

In addition, exploration programs are encountering increased risks from political and regulatory instability in many developing nations. These countries tend to have inferior infrastructure, less political stability, and uncertain security of tenure—all leading to slower mine development at higher costs. In the current industry-wide nickel pipeline (estimated 113 million mt of nickel in reserves and resources), 34% is in what are considered medium-risk areas and 43% in higher-risk jurisdictions.

As a group, the major producers have increased reserves by about 55% net of production over the past ten years; however, about 70% of their reported reserves increase has come from acquisitions. While resources at acquired projects and mines are an important source of future reserves, acquisitions are often seen simply as a reshuffle of the ownership of existing reserves. The remaining 30% of the group's reserves increases were added through exploration; however, these exploration-derived reserves were added by upgrading resources at newly acquired or longer-held projects and mines, rather than from their five grassroots discoveries, all of whose resources have yet to be upgraded to reserves.

¹ At the time of writing, no qualifying nickel discoveries were reported in 2009; however, due to the time required to assess a large deposit there may be qualifying discoveries attributable to 2009 in the future.

About MEG's Strategies for Nickel Reserves Replacement

Access a detailed and practical examination of how, and at what cost, major companies are replacing their nickel reserves. Our deep analysis includes a rich overview of the industry landscape: reserves and production profiles for major producers, discoveries of large deposits, exploration budgets, acquisitions and divestitures, and project pipelines. Address your key growth issues by comparing competitive reserves replacement strategies, and by understanding the cost of finding and replacing reserves. For more details on this study and for subscription information visit the MEG website at www.metalseconomics.com; phone (902) 429-2880; fax (902) 429-6593; email sales@metalseconomics.com.

About Metals Economics Group (www.metalseconomics.com)

Metals Economics Group (MEG) is the most trusted source of global mining information and analysis. We draw on three decades of comprehensive information and analysis, with an unsurpassed level of experience and historical data. To help our clients reach better decisions more quickly, we supply raw data and sophisticated analysis based on unbiased research and reporting. From worldwide exploration, development, and production to strategic planning and acquisitions activity—our databases and studies help our clients make confident decisions and, ultimately, improve results.

-30-

Media Contact:

Nadine Tanner, Director, Marketing
Metals Economics Group
Suite 300, 1718 Argyle St., Halifax
Nova Scotia, Canada B3J 3N6

T: 902.429.2880
F: 902.429.6593
ntanner@metalseconomics.com