

Natural Resources Reporting: Views from a Major Dr. Patrick Redmond, Teck

Natural Resources Reporting Workshop
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## Presentation Outline

- Background on Teck
- Teck's Resource and Reserve reporting procedures - how we ensure NI 43-101 compliance
- Summary and Conclusions


## A Diversified Mining Company



## 2008 Operating Profit by Business Unit



Revenue : C\$ 6.9 Billion
Market Cap: C\$ ~8 billion
Net Earnings: C $\$ 659$ million

+ Exploration offices in Canada, Mexico, Chile, Peru, Ireland, Turkey and Australia


## Red Dog, Alaska



World's largest zinc mine

- by production \& reserves
- Reserves/ Resources life >30 years


Production

- Zn Production (t)
- Pb Production (t)
- Operating Profit (C\$ million)
$\underline{2007}$
575,000
124,000 885

2008
515,000
112,000
240

## Highland Valley, Canada



One of World's largest tonnage copper mining / milling complexes


- Production
- Cu Production (t)
- Mo Production (mlbs)

136,000

- Operating Profit (C\$million) 776


## Elk Valley Coal, Canada



World's second largest exporter of seaborne hard coking coal


- Production

2007
2008

- Coal Production (t) 22,561,000 23,009,000
- Operating Profit (C\$ Million) 249 1,226

Teck

## Teck's Approach

- Teck's Approach to R\&R Reporting
- How we ensure consistency across multiple mines, commodities, and jurisdictions


## Standard - NI 43101



Proven and Probable Mineral Reserves and Measured, Indicated and Inferred Mineral Resources are estimated in accordance with the definitions of these terms adopted by the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") in November 2005 and incorporated in National Instrument 43-101, "Standards of Disclosure for Mineral Projects" ("NI 43-101"), by Canadian securities regulatory authorities.

## NI 43-101 - History

- NI 43-101 was created after the Bre-X scandal to protect investors from unsubstantiated mineral project disclosures
- It is now the cornerstone of R\&R reporting in Canada
- Teck personnel were involved in the formulation of the original CIM guidelines that underpin NI 43-101


## R\&R Team



- Paul Bankes, Director Reserve Estimation
- 4 people on his team with extensive $R \& R$ modelling/estimation experience
- Reports to Reserve Committee of Management (includes division heads)
- Which in turn reports to the Reserve Committee of the Board of Directors


## Reporting Timetable



EOY Report: End of Year Reserve \& Reserve


Mid-Year Reserve \& Reserve
Sensitivity to Prices \& Cost

## Resources to Reserves



## Standardised Reporting From Each Operation



1. Summary
2. Ownership
3. Location
4. Land Tenure
5. Geology
6. Drilling \& Sampling
7. QA/QC

## Standardised Reporting From Each Operation


8. Production Reconciliation
9. Modelling Method \& Parameters
10. Mine Design Parameters
11. Resource \& Reserve Statement
12. R\&R Change Tracking
13. Economic Test
14. Sensitivity Analysis

## Signed Reports



- R\&R reports must be signed and dated by the site QP(s) and General Manager of Mine
- $\sim 16$ mines with up to 4 section QPs at each



## In-house Audits



- Regular audits of each mine site by Director Reserve Estimation or a member of his team
- Reserve audit template in place



## Summary and Conclusions



1. We have a strict definition of a Resource must have "reasonable prospect for extraction"
2. Qualified Persons (QPs) are key personally liable, must document results, efficient tracking of certification and consent
3. We have a Resource and Reserve committee of the board. Officers of the company take on significant responsibility
