Why Are They Cutting My Ounces?

A Regulator’s Perspective

February 7, 2012

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Disclaimer

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Concepts of Reserves and Resources

- There’s a distinction between mineral reserves and mineral resources
- It’s been absorbed into securities regulation from industry standards like the CIM definitions
- The reserve is the *economically constrained* part of a mineral resource
- Grade capping deals fundamentally with what’s there, not what’s economic
- It’s an issue in *resource estimation*
Complying with NI 43-101

- The matter at hand is resource disclosure
- All disclosure, of any kind, has to comply with Part 2 of the Instrument:
  - A QP takes responsibility
  - *State each resource/reserve category separately, and don’t make any up*
  - Don’t add inferred to other categories
  - Grade and tonnage every time
  - *If it’s not CIM categories, it’s not a resource/reserve*
Complying with NI 43-101

- Resource and reserve disclosure has to comply with Part 3 of the Instrument:
  - A QP takes responsibility
  - Statement on data verification
  - Grade and tonnage every time
  - Key assumptions, parameters, and methods used to make the estimate
Complying with NI 43-101

- Disclosure in a technical report has to comply with Form 43-101F1:
  - **Item 1 – Summary** – comply with Parts 2 and 3 of the Rule
  - **Item 14 – Mineral Resource Estimates** – “sufficient discussion” around the factors that constrain the resource estimate
What are some of those assumptions?

- Cutoff grade – why, and how?
- Cutoff grade – breakeven, or economic analysis?
- Metal prices – what are the assumed prices, and how do they factor into the cutoff calculation?
- Call factor or dilution – have you used this to calculate a cutoff grade?
- Minimum resource width – why and how?
- Stripping ratios – do these constrain your resource?
- Maximum depth of resource?
- Did you cap the grades?
The technical report is supposed to be a summary of material information specifically for the investor.

- Treat him like an intelligent layman.
- Use standard notation and terminology, or draw us a picture!
  - Not impossible to draw a mockup of your search ellipse, for example.
  - A very good way to illustrate why grades were capped (or why they weren’t).
- A minor excursus here: the technical report is for the investor; it’s not there as a place for you to store all your files.
Why you shouldn’t cap grades

- Assuming the data (the analytical data, that is) is correct, high-grade values do mean that there is high-grade gold
- To get a “nugget effect” there have to be some nuggets somewhere
Why you *should* cap grades

- Assuming that “drift grade” will exceed “drill grade” can backfire
- For instance, Magnacon in 1989
  - Reporting grades around 8.5g/t
  - Production more like 6g/t
  - Mine failed within a year
Maybe a good solution?

- A statistical sample can be too big
- You may be mixing samples from more than one population
- Capping can prevent overestimation
- Or more rigorous domaining/wireframing could make sure you are examining only one population of samples
Questions or comments

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