

# Why Are They Cutting My Ounces?

## A Regulator's Perspective

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James Whyte, Senior Geologist  
Ontario Securities Commission

## Disclaimer

**The views expressed in this presentation are the personal views of the presenters and do not necessarily represent the views of the Commission or other Commission staff.**

# 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?***

# Companion Policy Part 6

- **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

## Mining Team

**Craig Waldie**, Senior Geologist

(416) 593-8308

[cwaldie@osc.gov.on.ca](mailto:cwaldie@osc.gov.on.ca)

**Jim Whyte**, Senior Geologist

(416) 593-2168

[jwhyte@osc.gov.on.ca](mailto:jwhyte@osc.gov.on.ca)