
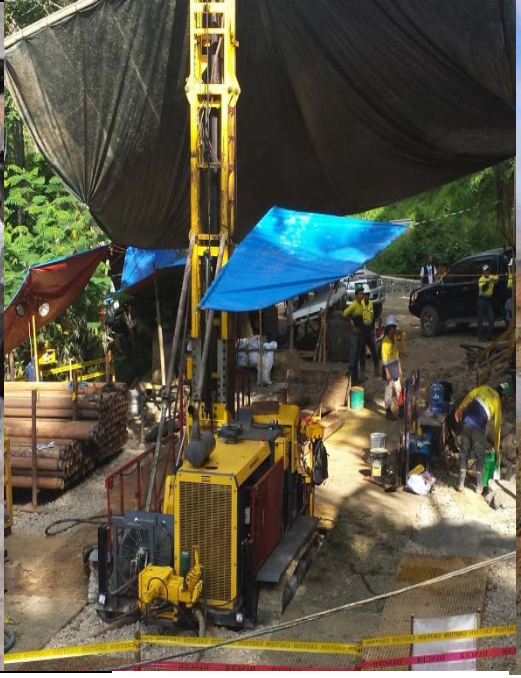

Cost Inputs in a Mining Valuation

Prospectors and Developers Association of Canada
Mining valuation: New perspectives and a global update
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Why This Presentation?

Response to the “Reconciling AISC to Mineral Property Valuations” presentations earlier this year was divided into 2 categories

1. Technical: “Nice summary of the issues with AISC – Can I get a copy?”

2. Financial: “Great but what can you tell us about what is excluded in All-in Costs, especially streaming impacts”?

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Agenda

The goals of this presentation are three-fold:

1) Brief review of AISC related issues

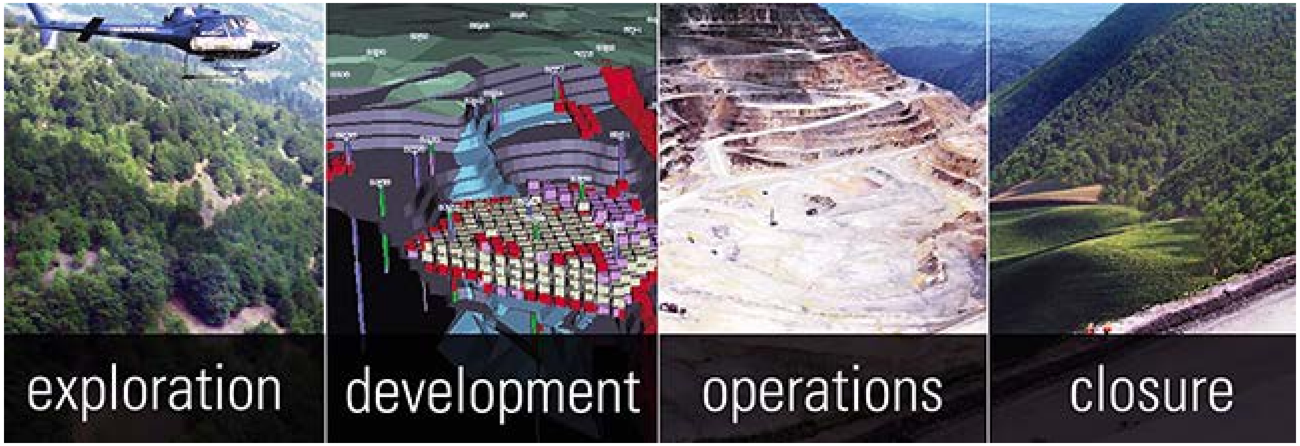
2) Review All-in Costs (AIC) and propose to include costs such as financing costs, income taxes, and working capital adjustments

3) Present Distributable Cash Flow metric concept which incorporates a modified AIC to calculate how much cash is generated per oz of gold produced

Key Facts about SRK

Highlights

- Established in 1974
- Over 1,400 staff and 150 associates
- 45 offices worldwide
- Primarily in mining industry
- Provide specialist services from exploration through closure
- Owned by employee shareholders



Valuation Portfolio

Project Valuations Supporting

- Feasibility studies
- Audits/Due Diligences/IE Investigations
- Benchmarking
- Financing and Stock Exchange listings
- M&A transactions
- Litigation and arbitration (i.e. ICSID, ICC, UNCITRAL)

By Geography

- Offices in 26 countries
- Located on 6 continents

By Commodity

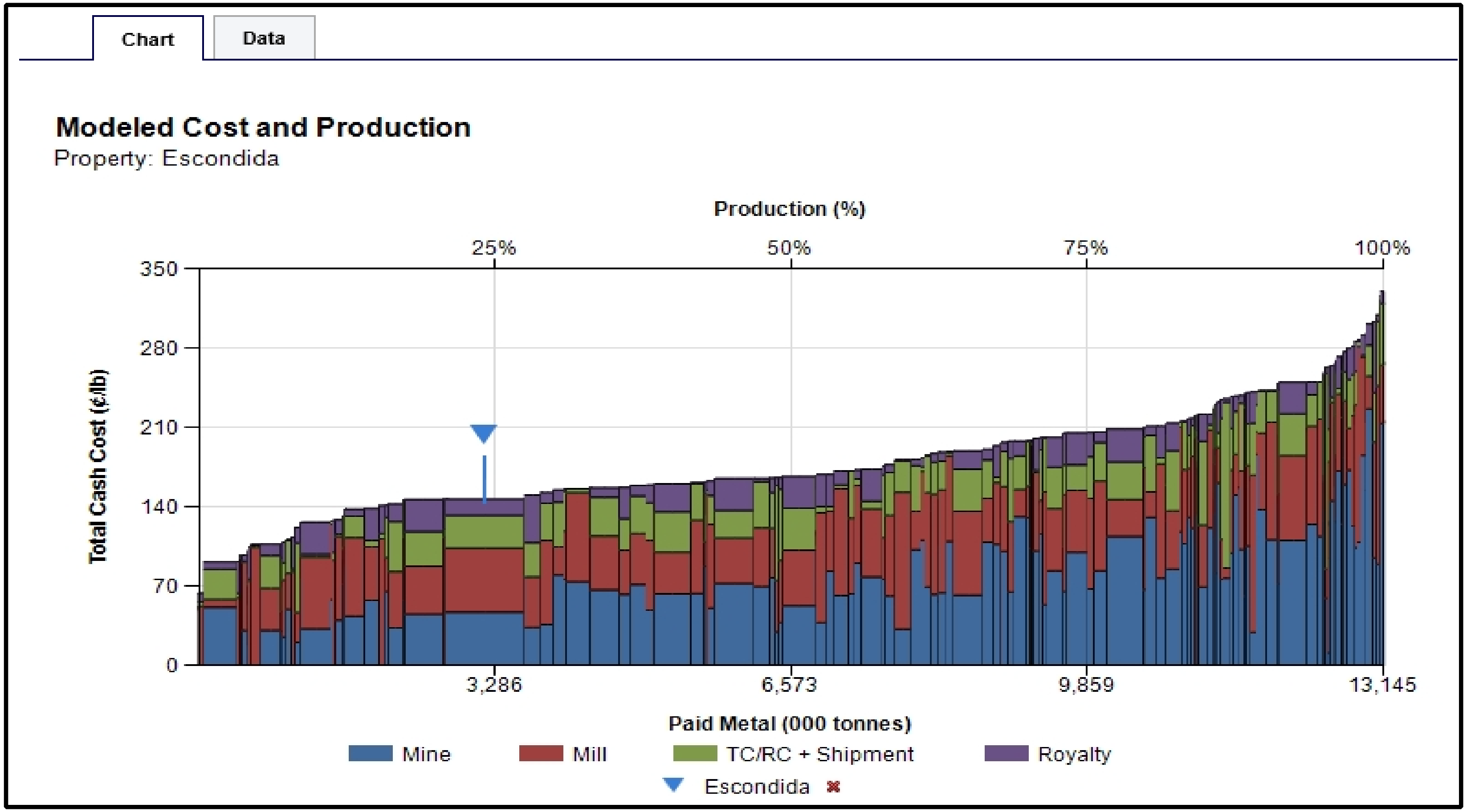
- Base and precious metals
- Ferrous and speciality metals
- REE
- Coal, uranium, oil sands
- Industrial minerals

Relevant Experience:

- SRK Denver valuation work is generally split 50/50 between technical studies and investment transactional support.
- Thus we both calculate our own valuations and audit outside valuations.

Why This Presentation?

Cost curve position remains an important value differentiator, regardless of metal price environment



SNL Mine Economics Copper Cost Curve (2016)

Current Cost Reporting Methodologies

Two current (Non-GAAP) reporting systems in use today

1. World Gold Council guidelines for precious metal cost reporting*
   - Adjusted Operating Costs
   - All-in Sustaining Costs
   - All-in Costs

*Includes minor non-cash adjustments

2. Wood-McKenzie guidelines for base metal cost reporting**
   - C1 Cash Costs
   - C2 Cash Costs
   - C3 Cash Costs

**Includes significant non-cash items like depreciation and amortization

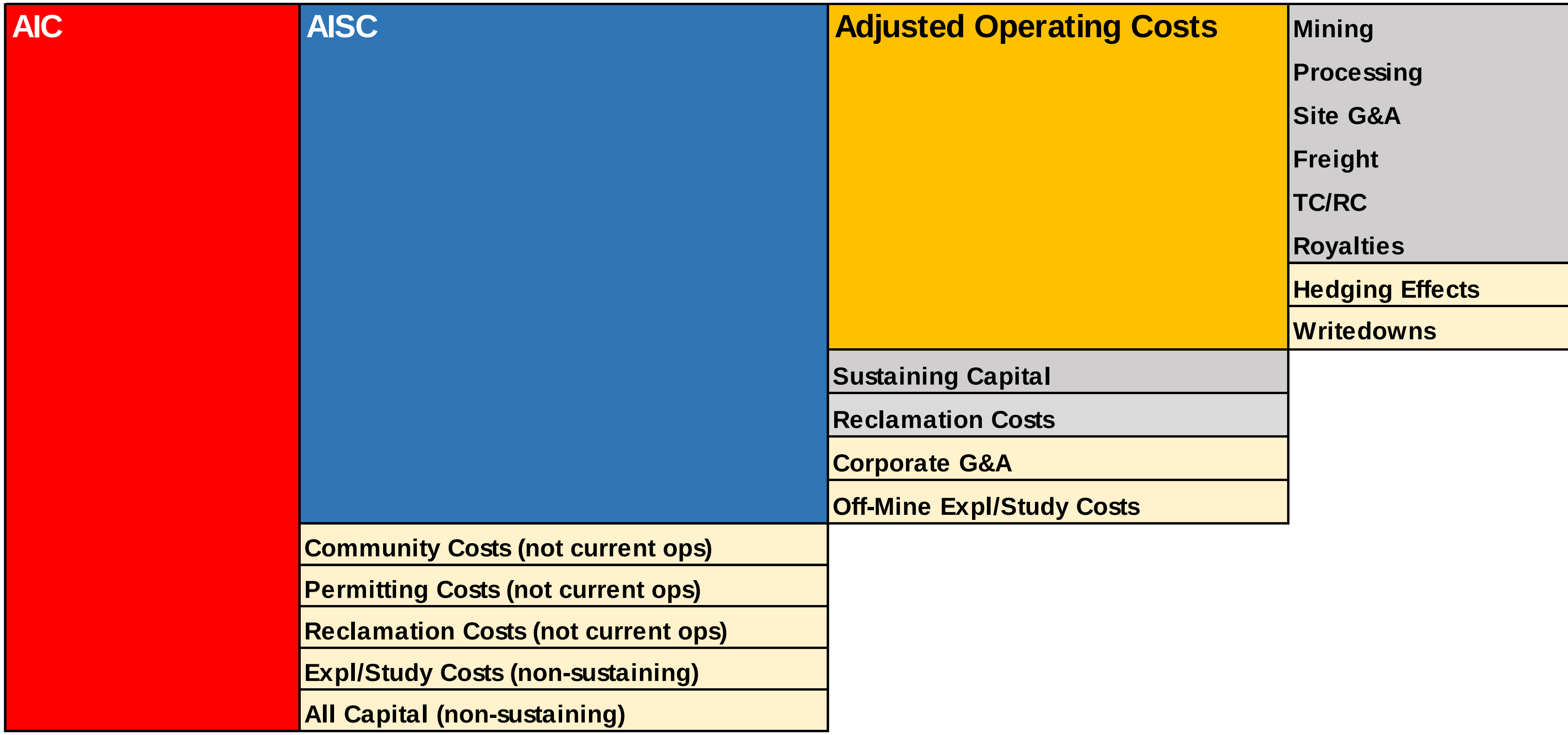
1) Brief review of AISC related issues

a) TC/RC/Freight/Smelter penalties are often omitted

b) More stringent definitions needed for:
- by-product vs. co-product treatment;
- sustaining capital;
- Corporate vs. site G&A; and
- Off-mine exploration/study costs

c) WGC guidelines currently exclude financing costs, income taxes, and working capital – Perhaps should go into AIC

2) All-in Costs (AIC)



Does NOT include: financing costs; income taxes; & working capital.

AISC can be applied to both projects and corporate valuation, but AIC is a corporate metric

Financing Costs - Streaming

Operating Cost or Financial Cost?

- **Is it a royalty?**
  - NO: A traditional royalty as defined by the World Bank (2006) is:
    - ✓ a recurring payment to the owner of the mineral as compensation for transferring to the taxpayer the ownership of that mineral or the right to sell that mineral; or
    - ✓ A recurring charge to the producer of the mineral for the right to mine the minerals produced.

- **Is it a form of financing?**
  - YES: A streaming deal consists of a prepayment by investor to producer in exchange for future **production** at agreed upon product quantity and price that will allow investor to recover their investment and make an acceptable and competitive ROR.
    - ✓ Not debt, not equity, not JV but can exhibit some properties

Streaming Financing

Simplified Example – Investor Viewpoint (in US$000s)

Gold Reserves (koz)	1,000
Mine Life (Years)	10
Prepayment	$50,000
Stream Percent	10%
Stream Price Discount	20%
Spot Gold Price (US$/oz)	$1,250
Average Cash Price to Investor (US$/oz)	$1,000
Average Cash Price to Producer (US$/oz)	$250
	LoM Total
Total Gold Production (koz)	1,000
Total Gold Stream (koz)	100
Stream Prepayment	($50,000)
Stream Revenue to Investor @ $1000	$100,000
Investor Net Cash Flow	**$50,000**
Pre-Tax NPV (5%)	**$27,217**
Pre-Tax IRR	**13.7%**

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Streaming Financing

Simplified Example – Producer Viewpoint (in US$000s)

	LoM Total
Total Gold Production (koz)	1,000
Less Total Stream (koz)	100
Net Gold Production to Producer (koz)	900
Stream Revenue to Producer @ $250 /oz	$25,000
Remaining Revenue to Producer @ $1250 /oz	$1,125,000
Total Revenue to Producer	**$1,150,000**
Avg. Realized Price / oz	**$1,150**
% Discount to Spot Price	**-8.00%**

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Streaming Financing

So What is the Final Cost to the Producer? (in US$000s)

	LoM Total
Revenue to Producer - No Stream	$1,250,000
Revenue to Producer - Net of Stream	$1,150,000
Cost to Producer	$100,000
Prepayment Proceeds	($50,000)
Net Cash Flow to Producer	$50,000
Total Gold Production (koz)	1,000
Net Cost per oz to Producer	$50

Financing Costs - Royalty

Not to be confused with a traditional royalty – this type is a form of financing (in US$000s)

A producer sells a negotiated percentage of its future recurring **revenue** to an investor in exchange for a upfront capital investment.

	LoM
Gold Production (koz)	1,000
Gross Revenue @ $1,250 / oz	1,250,000
GR Royalty at 1.5%	18,750
Upfront Payment	(12,000)
Investor Net Cash Flow	6,750
Pre-Tax NPV at 5%	2,478
Pre-tax IRR	9.1%
Net Cost per oz to Producer	$6.75

Near term trends see streaming becoming more common for new financings

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Financing Costs - Debt

Along with streaming and royalty financing, debt financing in various comes with other charges

- Debt Financing
  - ✓ Recurring Coupon/Interest Payments but don’t forget:
    - o Brokerage Fees
    - o Lawyers Fees
    - o Independent Engineer Fees

Financing Costs - Equity

Equity financing has even more issues about its true cost

- Typical Equity Financing Costs
  - ✓ Upfront Payments but also include:
    - o Brokerage Fees
    - o Lawyers Fees
  - ✓ 5 to 15% discounts on secondary issuances
  - ✓ What about the dilution on a corporate NAV basis per share?

Financing Costs - Equity

Additional equity dilutes the entire company – Value Dilution eg.

If there is a 3-for-10 issue, the current price is $0.50, the issue price $0.32, so to calculate the Theoretical Diluted Price (TPD), we have:

- O = original number of shares
- OP = Current share price
- N = number of new shares to be issued
- IP = issue price of new shares

- O = 10, OP = $0.50, N = 3, IP = $0.32, and
- TDP = ((10x0.50)+(3x0.32))/(10+3) = $0.4585 (**8.3% reduction**)

Excluding these kind of costs would have the impact of favoring equity financing over other forms of financing. Important to have apples to apples comparisons.

Taxation Costs

IMF definitions (Sunley and Baunsgaard, 2000)

1. Royalty/Severance tax – <u>already in AISC</u>
   - Unit-based (volume of minerals extracted)
     - ✓ $/t ore mined
   - Value-based (value of minerals extracted aka "ad valorum")
     - ✓ Gross revenue
     - ✓ Net Smelter Return
   - Profit/Income-based (measure of profitability or adj. income)
     - ✓ Net Profits Interest

2. Corporate Income tax – imposed on normal return and rent - <u>not included in cost reporting</u>

3. Confiscatory or Windfall taxes – to capture a larger share of higher return and projects - <u>not included in cost reporting</u>

Income Taxes – Always risk, more so now

Countries are keen to gain a greater share of returns from the sector.

MINING.com Your source for global mining news

Iron ore plunge to blow $3.6B hole in WA budget

Andrew Topf | April 5, 2015

Markets | Tue Apr 14, 2015 6:16am EDT

Related: STOCKS, REGULATORY NEWS, MARKETS

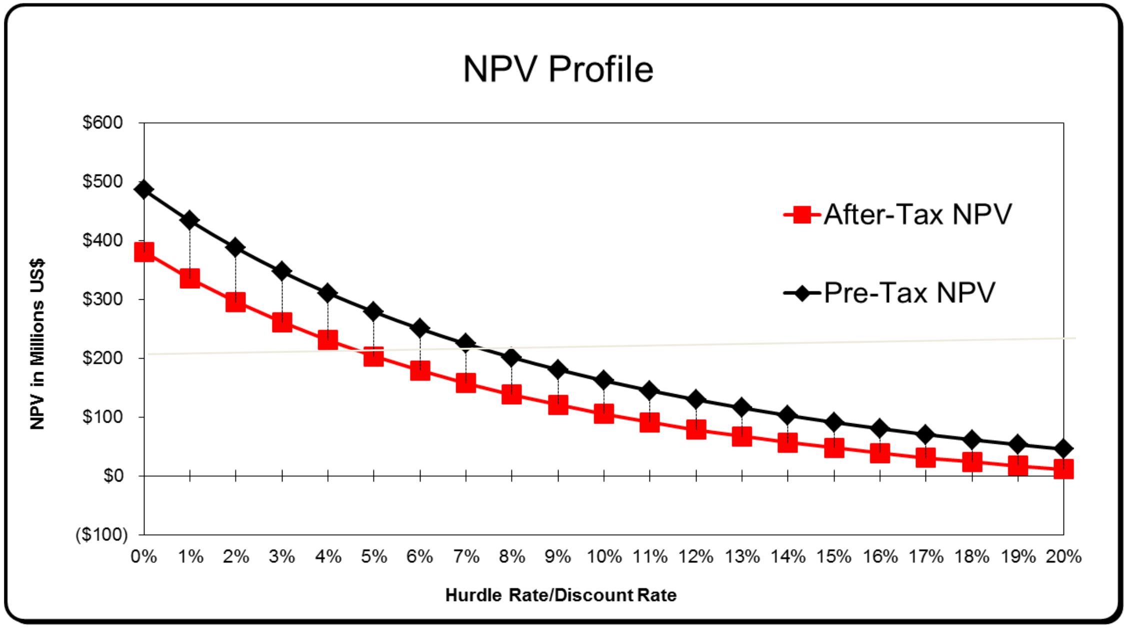
UPDATE 1-Zambia sets mining royalties at 9 pct - presidency source

(The EU plan) rests on the core principle that all companies – big or small, local or global - must pay a fair share of tax where real economic activity is taking place and where their profits are actually made."

EU Vice-President Valdis Dombrovskis - 2015

Income Taxes – Impact on Valuation

Major effect - must be accounted for but not currently included in any cost methodology!



Income taxes can add 300-400 basis points to a discount rate in a mineral project valuation

Working Capital

Not included (except for adjustments to inventory on a sales basis aka Work-in-Process adjustments)

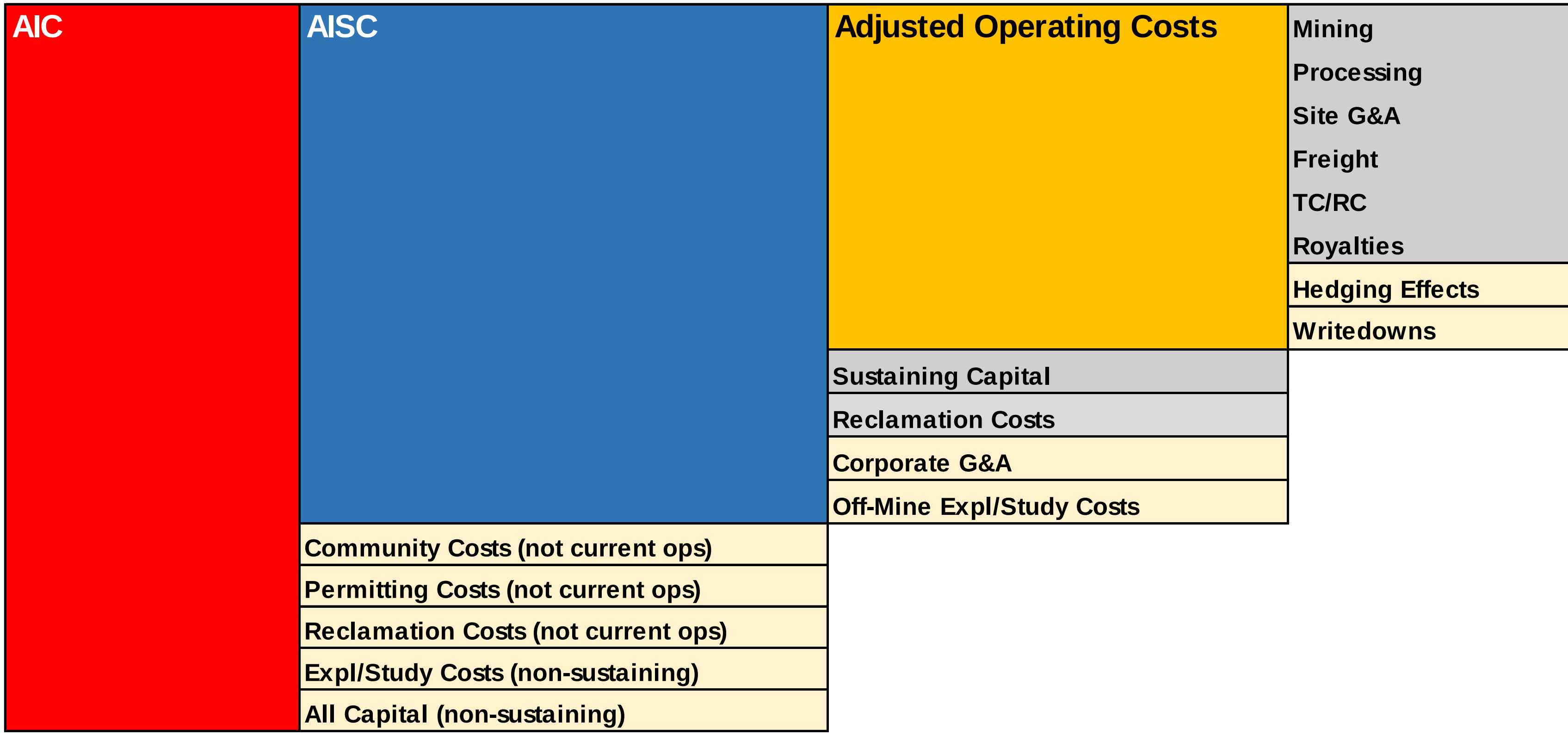
Work in process (WIP) of gold production is a standard calculation but means the following are not included:

- Accounts Receivable (A/R)
- Accounts Payable (A/P)
- Working stocks adjustments (Consumables)
- Cash balances

While usually net to zero over the LoM of an operation – can have large year over year impacts in some cases.

Needs to handled cautiously if included (ie. a week's delay of concentrates at end of a quarter)

All-in Costs (AIC) – Current Status



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Modified All-in Costs (AIC) - Recommended

- **Modified AIC**
  - **AISC**
    - **Adjusted Operating Costs**
      - Mining
      - Processing
      - Site G&A
      - Freight
      - TC/RC
      - Royalties
      - Hedging Effects
      - Writedowns
    - Sustaining Capital
    - Reclamation Costs
    - Corporate G&A
    - Off-Mine Expl/Study Costs
  - Community Costs (not current ops)
  - Permitting Costs (not current ops)
  - Reclamation Costs (not current ops)
  - Expl/Study Costs (non-sustaining)
  - All Capital (non-sustaining)
  - Financing Costs
  - Income Taxes
  - Working Capital/Other Adj.

3) Uses of Modified AIC

Modified AIC can determine how much free cash is available to shareholders on a per oz basis or at the end of a time period as "Distributable Cash Flow".

Realized Gold Price
Less AIC/oz

Margin per Oz sold

Opening Cash
+ Gross Revenue From Sales
+ Streaming/Royalty Proceeds
+ Equity Issue
+ Debt Drawdown
+ Sales/(Purchase) of Assets

Total Cash Available
Less AIC

Closing Cash
Less Opening Cash

Distributable Cash Flow

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Summing Up

Main ideas from presentation:

- AISC reporting can be used both for mineral project and corporate valuations
- However, AIC is strictly a corporate metric consisting of AISC + development/major project costs. Currently lacking some important categories
- Propose that AIC be modified to include:
  - ✓ Financing Costs (Streaming, Royalty, Debt, Equity)
  - ✓ Income Taxes
  - ✓ Working Capital
- A standardized AIC would allow the industry to better assess company market values

Thanks for the opportunity to share my views about these issues.

Photo credit: Matt Santomarco

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