Pretium Resources – digging up dirt
Distorted grades, involvement of SEC sanctioned entities, and high turnover of mineral consultants – Pretium flies many red flags. (PVG:TSX / PVG:NYSE)

SEPTEMBER 6, 2018 -- Pretium Resources owns and operates the purportedly high-grade Brucejack gold mine in Northwest British Columbia in Canada. Viceroy is short Pretium Resources, as our research suggests its mining results have been distorted and the equity likely worthless as the overindebted company bleeds cash over the next 12 months:

- **Strathcona Mineral Services Limited (Strathcona),** the mining consultancy that famously declared Bre-X to be a fraud, resigned from Pretium's 2013 bulk sample program later stating, "...they will not have a mine producing 425,000 oz. a year for the next 20 years, as they have been advertising so far". The entire Pretium investment thesis rests on the validity of the 2013 bulk sample program.

- After Strathcona's resignation, Pretium hired **Strategic Minerals LLC (Strategic Minerals),** an entity owned and managed by disgraced investment manager **Serom “Sima” Muroff** to handle the testing of its bulk sample program. Muroff was charged by the SEC for securities fraud after misappropriating millions of dollars of investor funds and siphoning away millions more. Our research suggests that Muroff has knowingly assisted Pretium in overselling the quality of Brucejack Mine to investors.

- The funds embezzled by Muroff were partially invested in numerous early-stage gold mining assets which to date have produced no gold. We believe Muroff's entity was created to similarly distort gold grades for these gold mining assets. Muroff's investors funds were also used to invest in equities and derivatives of other gold mining assets which we believe included Pretium.

- The overwhelming majority of our research indicates Pretium manipulated the results of its bulk sample program through an overreliance on samples taken from the Cleopatra vein, thereby artificially inflating Pretium's grades and reserve projections for the Brucejack Mine.

- The manipulated bulk sampling test performed by Strategic Minerals was used by the courts in Wong v. Pretium Resources, 2017 as the basis of their decision that the Strathcona analysis was incorrect. This did not exempt the company from withholding Strathcona's preliminary analysis from investors.

- Government documents indicate Pretium is moving approximately double the tonnage from the underground mine than disclosed to investors. This suggests reported grades and reserves are significantly inflated, a much greater amount of waste is being dumped into local lakes, and more explosives are being utilized. Pretium's operational plan has experienced dramatic changes in a short amount of time, leading us to believe that management is scrambling to find consistent, high-grade ore to maintain the charade that its debt and equity are viable.

- Pretium founder and chairman, Robert Quartermain's only mine operating experience at Pirquitas, an Argentinian silver mine owned by Silver Standard, resulted in a ~53% reserve cut and subsequent shutdown. A number of Quartermain's management team left Silver Standard to operate Pretium.

- As of Q2 2018, Pretium has ~$700M of debt (excl. convertible notes) with an effective interest rate of ~15%. If Pretium can't make or re-negotiate the payment, then Pretium may be unable to remain a going concern. We believe this deadline has provided an incentive for Pretium to inflate its results through the near-term depletion of the Cleopatra vein and take more rock out of the ground than disclosed and planned.

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*The implications of our findings on grade, tonnage and life of mine are damning and lead us to believe that Pretium's equity is highly likely to be worthless in its current state, and its credit significantly impaired.*

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Viceroy believe Pretium bears striking resemblance to Rubicon Minerals, now operating as a shadow of its former self after revising mineral reserve estimates down ~90%.

**We believe the most likely scenario is that Pretium's assets are seized by its secured creditors as collateral.**
Attention: Whistleblowers

Viceroy encourage any parties with information pertaining to misconduct within Pretium or any other entity to file a report with the appropriate regulatory body.

We also understand first-hand the retaliation whistleblowers sometimes face for championing these issues. Where possible, Viceroy is happy act as intermediaries in providing information to regulators and reporting information in the public interest in order to protect the identities of whistleblowers.

You can contact the Viceroy team via email on viceroysresearch@gmail.com.

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The authors may continue transacting directly and/or indirectly in the securities of issuers covered on this report for an indefinite period and may be long, short, or neutral at any time hereafter regardless of their initial recommendation.
1. Background

Pretium’s Chairman and founder Robert Quartermain acquired the Brucejack Project (Brucejack) in British Columbia from Silver Standard Resources for $450M on October 28, 2010 and formed Pretium Resources Inc. Quartermain had previously served as President of Silver Standard Resources from 1985 to 2010. This appears to have been a spin-off from Silver Standard as they took 52% of the consideration in equity.

While the Brucejack covers several mineralization zones the two most important are the Valley of Kings zone (VOK) and West zone.

Snowden Mining Industry Consultants (Snowden) was retained by Pretium in November 2012 to provide a mineral resource estimate for the West zone and VOK of the Brucejack Project. The November 2012 Resource Report estimated that the VOK contained indicated gold resources of 16.1 million tonnes at a grade of 16.4 g/t and inferred gold resources of 5.4 million tonnes at a grade of 17.0 g/t.

To substantiate Snowden’s resource model, Pretium retained expert mining consultant Strathcona Mineral Services Ltd. (Strathcona) in late 2012 to oversee a 10,000 tonne bulk sample and sample tower program.

In October 2013, Strathcona determined that Pretium was unlikely to be able to mine more than 2.08 g/t and resigned before completing its work. Pretium subsequently retained Snowden to complete the bulk sample and sample tower program, effectively giving Snowden the opportunity to verify their own resource model.

Snowden’s Feasibility Study and Technical Report dated June 19, 2014 asserted it believed Pretium could recover 7.27m ounces of gold over 18 years with a proven and probable grade of 16.1 g/t.

Snowden’s bulk sample program’s milling results were handled by Strategic Minerals, an entity owned and operated by disgraced, SEC-sanctioned investment manager Sima Muroff.

This is not the first time that much of Pretium’s management would be taking investors for a ride. The Pirquitas mine in Argentina owned by Silver Standard under Quartermain and much of Pretium’s current management experienced a ~53% reserve cut following their departure.

Our research suggests that Strathcona got it right and Snowden got it wrong.

2. A timeline of the Brucejack bulk sample program

"[Pretium] will not have a mine producing 425,000 oz a year for the next 20 years"

2.1. 28th October 2010

Pretium acquires 100% interest in the Brucejack project and other assets from Silver Standard Resources Inc for a total consideration of $450m comprising of $233m in cash and the remainder in equity¹.

2.2. 3rd June 2011


Note that at this time, Brucejack refers to nine mineralization zones: the West Zone, West Zone Footwall Zone, Shore Zone, Gossan Hill Zone, Galena Hill Zone, SG Zone, VOK Zone, Bridge Zone and Bridge Zone Halo.

2.3. 28th November 2011
P&E Mining consultants releases their Technical Report and Resource Estimate on the Brucejack Project.

Combined measured and indicated resource tonnes increase from 3.7m tonnes to 8.6m tonnes and grade increases from 7.66 g/t to 19.35 g/t from the prior report.

2.4. 3rd April 2012
Snowden Mining Industry consultants releases their Mineral Resources Update Technical Report. The VOK and West zone are combined in analysis. According to the report, there was insufficient exploration in the VOK zone to ascertain measured resources.
Combined measured and indicated resource tonnes increase from **8.6m tonnes to 13.7m tonnes** and grade decreases from **19.35 g/t to 13.2 g/t** from the prior report.

This report is also the first mention of the multiple indicator kriging method as opposed to the ordinary kriging method in previous technical reports. This change was remarked upon later by an expert witness in a class action against Pretium which we discuss later in section 3.4.

### 2.5. 18th September 2012
Snowden release their Mineral Resources Update Technical Report. West zone estimates are dated April 2012 and new results for the VOK zone is presented. A total Brucejack mineral resource estimate consists mostly of the VOK and West Zone.

#### Table 1.3 Brucejack (total) Mineral Resource estimate (including VOK and West Zone) based on a cut-off grade of 5 g/t AuEq – September 2012

<table>
<thead>
<tr>
<th>Category</th>
<th>Tonnes (millions)</th>
<th>Gold (g/t)</th>
<th>Silver (g/t)</th>
<th>Gold (Moz)</th>
<th>Silver (Moz)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measured</td>
<td>2.4</td>
<td>5.85</td>
<td>347</td>
<td>0.5</td>
<td>26.8</td>
</tr>
<tr>
<td>Indicated</td>
<td>13.2</td>
<td>13.8</td>
<td>48.7</td>
<td>5.9</td>
<td>20.6</td>
</tr>
<tr>
<td>M+I</td>
<td>15.6</td>
<td>12.6</td>
<td>94.7</td>
<td>6.3</td>
<td>47.4</td>
</tr>
<tr>
<td>Inferred(2)</td>
<td>9.7</td>
<td>20.3</td>
<td>43.2</td>
<td>6.3</td>
<td>13.5</td>
</tr>
</tbody>
</table>

Figure 4 Table 1.3 Brucejack (total) Mineral Resource estimate (including VOK and West Zone) based on a cut-off grade of 5 g/t AuEq – September 2012(5)

Combined measured and indicated resource tonnes increase from **13.7m tonnes to 15.6m tonnes** and grade decreases from **13.2 g/t to 12.6 g/t** from the prior report.

### 2.6. 20th November 2012

#### Table 1.1 VOK Mineral Resource estimate based on a cut-off grade of 5 g/t AuEq – November 2012(6)

<table>
<thead>
<tr>
<th>Category</th>
<th>Tonnes (millions)</th>
<th>Gold (g/t)</th>
<th>Silver (g/t)</th>
<th>Gold (million oz)</th>
<th>Silver (million oz)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indicated</td>
<td>16.1</td>
<td>16.4</td>
<td>14.1</td>
<td>8.5</td>
<td>7.3</td>
</tr>
<tr>
<td>Inferred(2)</td>
<td>5.4</td>
<td>17.0</td>
<td>15.7</td>
<td>2.9</td>
<td>2.7</td>
</tr>
</tbody>
</table>

#### Table 1.2 West Zone Mineral Resource estimate based on a cut-off grade of 5 g/t AuEq – April 2012(6)

<table>
<thead>
<tr>
<th>Category</th>
<th>Tonnes (millions)</th>
<th>Gold (g/t)</th>
<th>Silver (g/t)</th>
<th>Gold (Moz)</th>
<th>Silver (Moz)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measured</td>
<td>2.4</td>
<td>5.85</td>
<td>347</td>
<td>0.5</td>
<td>26.8</td>
</tr>
<tr>
<td>Indicated</td>
<td>2.5</td>
<td>5.96</td>
<td>190</td>
<td>0.5</td>
<td>15.1</td>
</tr>
<tr>
<td>M+I</td>
<td>4.9</td>
<td>5.85</td>
<td>267</td>
<td>0.9</td>
<td>41.9</td>
</tr>
<tr>
<td>Inferred(2)</td>
<td>4.0</td>
<td>6.44</td>
<td>82</td>
<td>0.8</td>
<td>10.6</td>
</tr>
</tbody>
</table>

Figures 5 & 6 Tables 1.1 & 1.2 VOK and West Zone Mineral Resource estimated based on a cut-off grade of 5g/t AuEq – November & April 2012(6)

Combined measured and indicated resource tonnes increase from **15.6m tonnes to 21.0m tonnes** and grade increases from **13.2 g/t to 13.64 g/t** from the prior report.

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2.7. 9th October 2013: Strathcona resigns from the bulk sample program

In late 2012, Pretium hired Strathcona as an independent consultant to oversee a 10,000 tonne bulk sample and sample tower program\(^7\) for the Brucejack Mine. The purpose of this program was to verify Snowden’s mineral resource estimate and model.

Strathcona is the mining consultancy that accurately declared Bre-X to be a fraud in May 1997\(^8\). Strathcona founder, Graham Farquharson, has worked in the mining industry for over 50 years and is a member of the Canadian Mining Hall of Fame.

"People have a lot of faith in Strathcona because they’re very blue chip and they’re very conservative. When they get worked up, it’s a big thing"

- Greg Ho Yuen, former partner at Fasken Martineau\(^9\).

On October 9, 2013, Pretium announced Strathcona had resigned from the program, however, the initial press release failed to explain why.

2.8. 22nd October 2013: Strathcona’s resignation letter: no mineral resources

On October 22, 2013, Pretium disclosed the results from the first cross-cuts of the bulk sample and more information on Strathcona’s departure.

Strathcona’s preliminary identified grade of 2.08 g/t was 87% lower than the 16.4 g/t grade indicated in Snowden’s November 2012 Mineral Resources Update Technical Report. In the press release, Pretium disclosed only parts of Strathcona’s resignation letter:

The distinction between mineral reserves and resources is important: reserves represent economical viable ore

\(^7\)https://www.pretivm.com/news/news-details/2013/Pretium-Resources-Inc-First-Bulk-Sample-Cross-Cut-Processing-Results/default.aspx
\(^8\) https://money.cnn.com/1997/05/05/companies/brex/
In the 2017 case Wong v. Pretium Resources\textsuperscript{11} more parts of Strathcona’s resignation letter were disclosed as evidence. These excerpts include comments by Strathcona that allege overestimation of gold grade in the bulk sample area and Pretium’s refusal to disclose material information to their investors.

> [13] Starting in mid-July, 2013 Strathcona, who had considerable experience in the use of the sample tower, began to voice concerns. These concerns were reiterated as the weeks went by. Over the three months of the proposed class period, from July 23 to October 21, 2013 Strathcona repeatedly advised Pretium that the sample tower test results were failing to confirm the validity of the Mineral Resource Estimate and by extension the validity of the Feasibility Study. Also, Strathcona repeatedly urged Pretium’s executive team in emails and letters to publicly disclose these facts to the market. Here is one example:

> [T]he results of sufficient drill-hole and bulk-sample assay data that show that the resource block model developed and reported on in the Snowden [November 2102 Mineral Resource Estimate], and used for the recent Feasibility Study, is not reliable. The resource model greatly overestimates the gold grade of the bulk-sample area …

> … the Feasibility Study, issued just two months ago, is no longer valid, and since this represents a material change for Pretium, we strongly recommend that Pretium make these findings known to the public so that investors are no longer relying on the invalid results of the Brucejack Feasibility Study and the November 2012 mineral resources technical report.

It has become apparent that there is a substantial difference between what information on the VOK program that Pretium believes should be disseminated to public markets, and what emphasis there should be on the interpretation of results as compared with that which Strathcona believes to be appropriate. As a consequence, we at Strathcona find ourselves in an increasingly uncomfortable position given that Pretium has chosen not to follow any of the recommendations for public disclosure that we made in July, August and September …

As we have summarized in earlier sections of this letter, we have expressed our views on the implications of the various phases of the bulk sample program on the Snowden resource model. The underground diamond drilling the assays from the bulk sample derived from the underground mine development, and the new interpretation of the geological constraints on the distribution of gold mineralization have made it clear that the Snowden resource model is no longer valid …

As a consequence, at this time, there are no valid gold mineral resources for the VOK Zone, and without mineral resources there can be no mineral reserves, and without mineral reserves there can be no basis for a Feasibility Study. Therefore, the above statements included in all recent press releases, about probable mineral reserves and future gold production over a 22-year mine life are erroneous and misleading …

In the 40 years that Strathcona has been providing services to the mining industry, we have had some unusual assignments, including the Bre-X saga, etc., but never one such as this assignment with Pretium, whereby we are having to make a plea to Pretium to follow the basic principle to which we have always adhered, which is to tell it like it is and not to hold back on any material facts that should be in the public domain …

We do not think it appropriate and in accordance with good governance standards in the mining industry in the post-Bre-X era that investors should be trading Pretium shares in Toronto and New York without knowledge of the material changes that have occurred as a result of the bulk sample program.

\textsuperscript{11} Wong v. Pretium Resources, 2017 ONSC 3361
Pretium has never released Strathcona’s resignation letter in full to stakeholders. The excerpts above contain further explanations about Strathcona’s conclusions, warnings about Pretium’s inability to mine and produce gold - Pretium’s investors have been deprived of material information.

Ultimately the court ruled that Pretium was right based on the mill results of Snowden’s bulk sample. The circumstances of the mill results are highly suspect: the October 2013 press release identified Strategic Minerals as the operator of the mill, an entity associated with disgraced investment manager Serofim “Sima” Muroff. Strategic Minerals and its background are discussed in more detail below.

We attempted to obtain further information from Strathcona and were only able to learn that it does not wish to become involved again with Pretium. We believe that Strathcona may be bound by a confidentiality agreement.

As a result of Strathcona’s resignation, Snowden took over Strathcona’s remaining responsibilities for the bulk sample program. This essentially left Snowden in a position to confirm the validity of their own mineral resource model.

2.8.1. Dr Dominy’s brief cameo

On the same date the reason for Strathcona’s resignation was announced, Pretium also introduced new consultant, Dr. Simon Dominy, stating he would analyze:

“...the sample theory underlying Strathcona’s sampling protocols for the sample tower and will be providing a formal expert opinion to Pretium”.

Pretium touted Dr. Dominy’s credibility in the press release and its language seemed to imply that Dr. Dominy’s assessment would support Snowden’s sampling methods over Strathcona’s:

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12 https://www.lexology.com/library/detail.aspx?g=2e0a69b5-360b-44d7-a0c7-00d8bddd3588
Snowden’s Response

Given the heterogeneous nature of the Valley of the Kings mineralization, Snowden has consistently advised Pretium that the entire 10,000-tonne bulk sample needs to be processed prior to completing a reconciliation that can be considered robust. Dr. Simon Dominy of Snowden is reviewing the sample theory underlying Strathcona’s sampling protocols for the sample tower and will be providing a formal expert opinion to Pretium. Dr. Dominy has noted that he concurs with the current approach of submitting the entire bulk sample (as batches) for full processing through the Montana plant, and has advised that such an approach is always the best route to fully evaluate bulk samples and/or trial mining parcels.

Dr. Dominy has provided a preliminary report to Pretium that covers several areas of consideration for the evaluation of the design of the sampling Program. This includes the appropriate application of mineralisation characterization study, and the difficulties in achieving representative samples in a high-nugget coarse gold environment.

Dr. Dominy is a dual qualified mining geologist-engineer with 25 years of experience, across mine operations, academic research and consulting. He has an extensive global track-record of auditing, designing and managing gold sampling and assaying programs. He is a leader in the sampling of coarse gold deposits, and consulted, lectured and published widely on the topic. Recent sampling assignments have included: audits and reviews; integrated studies of ore characterisation, gold deportment and metallurgical testing; sample size determination; sample protocol design and optimisation; the application of the Theory of Sampling; metallurgical plant sampling; metallurgical sampling; and grade control systems. He also has extensive practical experience in surface and underground bulk sampling/trial mining programme design, planning, management and interpretation.

Figure 16 PRETIUM RESOURCES INC.: FIRST BULK SAMPLE CROSS-CUT PROCESSING RESULTS

Dr. Dominy was never mentioned again in any Pretium press release, conference call, filing, or presentation nor was his “formal expert opinion” was never disclosed to the street. We believe Dr. Dominy’s conclusion regarding Brucejack’s resource model was not in line with Snowden’s.

In his May 2017 paper “Underground bulk sampling, uniform conditioning and conditional simulation - unrealistic expectations” Dr. Dominy published a case study on Brucejack.

The results were heavily influenced by the ultra-high grade Cleopatra and E-W veins (Figure 3). Bulk samples along a 55 m section of Cleopatra yielded a grade of 80 g/t Au (range 5-218 g/t Au) and along the 30 m E-W vein a grade of 30 g/t Au (range 0-119 g/t Au). Accepting the limitations of individual bulk sample grades from the tower, it is interesting to note that out of 95 individual bulk sample grades, 34 were above 5 g/t Au but contained 94 per cent of the gold. Of the 34, 26 were attributable to either the Cleopatra or E-W veins.

Figure 17 Reconciliation - Underground bulk sampling, uniform conditioning and conditional simulation - unrealistic expectations?

Following Dr. Dominy’s reference, we see 2 images which indicate that the bulk sample relied heavily on the Cleopatra vein.

In the first image, the thin blue line (the Cleopatra vein) progresses south before turning east at 6257975 N. The yellow shaded bulk sample area seems to follow this path: progressing south from 6258000 N and also wrapping east at 6257975 N.

In the second image, red stars denote "visible gold". More gold appears to be visible in the image (higher density of red stars) along the same path where the Cleopatra vein is outlined in the image above.

https://www.researchgate.net/publication/316285936_Underground_bulk_sampling_uniform_conditioning_and_conditional_simulation_-unrealistic_expectations
The Dominy case study further substantiates our assertion that Snowden oversampled the 615L and 615E areas as evidenced by the outsized composite assay masses in the table below compared to the relevant area’s total composite mass.
The fact that Dr. Dominy’s formal expert opinion was not publicly disclosed is strange but predictable given management’s proclivity for marketing Brucejack as a high-grade, high-output, high-yield mine.

**2.9. 22nd November 2013: Snowden claims it found much more gold than Strathcona**

One month after the October 2013 press release, Pretium disclosed the results of Snowden’s bulk sample program. 5,865 oz of gold were said to have been produced from 10,302 tonnes of milled material, resulting in a grade of 17.7 g/t, 8.5x better than Strathcona’s 2.08 g/t sample tower grade and in line with Pretium’s 2012 Resource Report grade of 16.4 g/t. Pretium’s stock appreciated 82% following the announcement.

Octupling your mineral resource grade from the same sample over the space of a month defies reason.

The difference of opinion between Strathcona and Snowden/Pretium now appears to be based on sampling method.

Strathcona used a small sample for analysis (called a sample tower) while Snowden and Pretium used the results from the entire 10,000 tonne bulk sample. Strathcona apparently disagreed with the Snowden approach because it relied very heavily on a thin and rare high-grade vein in the VOK called the Cleopatra vein.

If a producer claims that the amount of gold in the high-grade vein is indicative of the amount of gold in the entire deposit, then investors are misled into believing the company will be producing much more gold in the

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**TABLE 4 FSE for BSP sample composite lots at a range of d, values.**

<table>
<thead>
<tr>
<th>BS lot</th>
<th>BS tower grade (g/t Au)</th>
<th>Total composite mass (t)</th>
<th>Composite assay mass (kg)</th>
<th>d (µm)</th>
<th>FSE (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>645E</td>
<td>1.8</td>
<td>1.935</td>
<td>228</td>
<td>1,000</td>
<td>±9</td>
</tr>
<tr>
<td>585E</td>
<td>2.1</td>
<td>2.250</td>
<td>206</td>
<td>1,000</td>
<td>±12</td>
</tr>
<tr>
<td>656E</td>
<td>5.0</td>
<td>1.440</td>
<td>180</td>
<td>2,500</td>
<td>±24</td>
</tr>
<tr>
<td>615L</td>
<td>3.2</td>
<td>1.469</td>
<td>488</td>
<td>2,500</td>
<td>±18</td>
</tr>
<tr>
<td>615E</td>
<td>35.3</td>
<td>2.918</td>
<td>520</td>
<td>5,000</td>
<td>±5</td>
</tr>
<tr>
<td>All</td>
<td>10.2</td>
<td>10.050</td>
<td>1,672</td>
<td>10,000</td>
<td>±10</td>
</tr>
</tbody>
</table>

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*In addition, Strathcona advised that: The infrequent high-grade intercepts reported in the press releases have been shown in the underground exposures of the bulk sample program to usually be of very narrow width (0.5 meters) and associated with narrow geological structures that occasionally have mineable continuity as in the case of the Cleopatra Vein.*

*When it withdrew, Strathcona advised Pretium that it had previously asserted similar views criticizing the Snowden resource model for the Valley of the Kings accompanied with “recommendations” for public disclosure of the preliminary bulk sample data supporting their conclusions. At one point, these assertions, conclusions and “recommendations” were made on the basis of approximately 20% of the underground drilling results, no assay results from the sample tower and no results from production.*

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*Underground bulk sampling, uniform conditioning and conditional simulation - unrealistic expectations? - I Clark and S C Dominy*

future. Including a significant part of the Cleopatra vein in the sample tested effectively inflated the bulk sample's result.

Strathcona defended its extensive use of the sample tower in estimating mineral resources in its resignation letter, asserting that the sample tower consistently reflected results within a reasonable margin of error to the bulk sample tests.

![Figure 22 Extract from Wong v. Pretium Resources](image)

To test Strathcona's criticism of the Snowden approach, we reviewed Pretium's own map of the area tested. The map of the bulk sample area reprinted below, shows the bulk sample area (yellow with hash lines) intersecting directly with the Cleopatra vein (red – added by us).

It is clear that the Cleopatra vein was drilled and emphasized in the crosscuts. The yellow intersection striking the Cleopatra vein in the purple square (added by us) is much wider:

![Figure 23 VOK 1345L bulk sample with stopes](image)

Page 155 of the 2014 Feasibility Study illustrates the grade of these crosscuts under different names as detailed in figure 24 below. The 615E XC cut is named as 426615E and 615L remains the same. Thus, the overemphasis on the Cleopatra vein accounts for the significant "increase" in gold claimed by Snowden.

None of this was planned, or so Pretium claims. However the "Cleo North" and "Cleo South" raises (denoted by a slim dark blue line), indicate the presence of the high-grade Cleopatra vein, were not included in planned drilling for the bulk sample area layout as laid out in a December 2013 Mineral Resources update. We have highlighted the oversampled 426615E and 615L area in black in the figure below.

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Viceroy Research Group
Once the location of the vein was known it would be fairly simple to oversample that area and report a higher average grade for the Brucejack area. For illustration, removing the 426615-E and 615L samples results in an average gold grade of just 3.19 g/t from the other cross-cuts.

This high variance of gold grades in the Brucejack zone was evidenced in a 2011 preliminary economic assessment performed by Wardrop and P&E Mining consultants. Unlike the Snowden and Strathcona studies, the 2011 Wardrop assessment evaluated the entire Brucejack area, not just the Valley of Kings zone.

---

**Figure 24** Planned (top) versus actual completed (bottom) bulk sample area layout on the 1345 m level, VOK deposit

---

**Figure 25** Brucejack Summary Composite Statistics by Domain

---

The VOK scores extremely highly compared to the other areas in sample variance of gold composites, range between the minimum and maximum figures and mean gold grade.

From the evidence presented so far, the Cleopatra vein’s results should not be extrapolated to the entire area.

Given the evidence above we believe Pretium’s strong Q2 2018 performance and the company’s assertions of this performance as “steady-state production” to be highly questionable. Keep in mind Pretium will need to actively seek investment in order to meet repayments within 6 months, we believe the company is doing its best groom the performance of the Brucejack mine in a way that disagrees completely with several studies of the deposit.

In light of this information, Viceroy believe Strathcona’s resignation appears well justified given Pretium’s non-disclosure of this data to the market.

2.10. 27th November 2013: Graham Farquharson defends Strathcona in Northern Miner interview

Five days after Snowden’s bulk sample results were released, Graham Farquharson of Strathcona gave an interview with mining news website Northern Miner wherein he shared more information about Strathcona’s conclusions

In the interview, Farquharson stated that:

- The bulk sample was skewed by the presence of the Cleopatra vein.
- Pretium repeatedly refused to disclose material information (negative sample tower results) to its investors.
- “…they will not have a mine producing 425,000 oz. a year for the next 20 years, as they have been advertising so far”.

The implication of this is significant: Farquharson believed there may be far less gold at Brucejack than what Pretium is advertising. [Emphasis added]

<table>
<thead>
<tr>
<th>The Northern Miner</th>
<th>To start, do you have any comments about the bulk-sample results?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graham Farquharson</td>
<td>Those results were what we were anticipating: 4,000 oz. gold production from the bulk sample, based on the tower sampling results. It’s not any surprise. All the sample rounds that we took out of the development workings and so on — those were up to the grades that would work out to in excess of 4,000 oz. in the bulk sample.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>The Northern Miner</th>
<th>If you were in agreement on that, why did you leave the project?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graham Farquharson</td>
<td>We gave a lengthy letter to Pretium with our reasons for withdrawing. I think some of the lines from that letter were made public. But the main item was that we found the bulk-sample program, which was composed of [underground drilling, underground geological mapping and the results of the sample tower]. The main objective of that was validation of the resource model that Snowden had prepared in November 2012. That was the basis the feasibility study that Pretium did in June of this year, which suggested it was going to a big mine producing 425,000 oz gold a year for the next 10 years, within a 22-year mine life. All that was based on the Snowden model, which had 16 million tonnes with a grade of 16 grams per tonne in the indicated category and a further quantity in the inferred category — and we didn’t find that. And Pretium didn’t find that — when they did all the underground drilling and geological mapping and the results from the sample tower, and so on — so we told them on several</td>
</tr>
</tbody>
</table>

occasions that they should be alerting the world that the resource model was not panning out. The whole objective of the bulk-sample program was to confirm whether or not the resource model was valid, and we said it wasn’t.

_The Northern Miner_  
If the resource model had been valid, how many ounces should there have been in the bulk sample? Is it correct to say you believed 4,000 oz. was a low number?

Graham Farquharson  
Not quite, because what did happen in the bulk-sample program is that a new vein was discovered called the “Cleopatra” vein. It’s a narrow vein but high grade, and a different geological occurrence than what was anticipated. The Cleopatra vein is not something that would be mined using bulk-mining methods, at 2,700 tonnes a day and so on. It’s high-grade material, but it’s a narrow vein that you could only mine at a slow rate. The good grades in that vein do not substantiate or corroborate the initial resource model, which was based on big dimensions, big stopes and the grade of 16 grams per tonne.

_The Northern Miner_  
So, you don’t think there are enough veins similar to Cleopatra to make what happened in the bulk sample normal in terms of a mine at Brucejack?

Graham Farquharson  
No, because they planned for 16 million tonnes. Which is a lot of tonnes at that high grade of 16 grams per tonne in the indicated category in the resource model. The drilling and the mapping and the bulk sample and so on did not find that.

_The Northern Miner_  
Where did the error come from? We know that this is a very heterolithic deposit with lots of nugget effect — do you have an idea of how Snowden came up with those numbers that you think are so incorrect? Is it the nature of the deposit? Is it the methodology that they’re using?

Graham Farquharson  
It’s the methodology, and we pointed that out. It’s the interpolation method that they use, and of course they disagree with us. The big challenge with that project has always how far do you extract the latent values from the high-grade assays that are scattered throughout the deposit. It’s a difficult assignment, knowing how far to extrapolate those spectacular assay results. We told Pretium that, from all the drilling they’ve done — and it’s a heck of a lot of drilling — and with the sample-tower results and so on, none of those come anywhere close to finding a grade of 16 grams per tonne, which is what allows bulk-mining methods.

_The Northern Miner_  
One would assume that the overall grade of a bulk sample would be a more comprehensive test than a sample tower. but what you’re saying is that the bulk sample happened in this instance to get skewed by the presence of the Cleopatra vein.

Graham Farquharson  
The [sample tower and bulk sample] will agree in the end, and they agree with the underground drilling that they did and that we agreed on, but it is not representative of the rest.

_The Northern Miner_  
If you were suddenly in charge of the project, what would you think is the correct path forward from here? It’s obviously an interesting gold occurrence.

Graham Farquharson  
Yes, and we told them that it has an excellent chance of being a small-tonnage, high-grade mine in the Cleopatra vein, and a couple of other similar occurrences that they found in the last drilling program. If they lined all those up, there’s an excellent chance that they could have a small-tonnage, high-grade gold mine. But they will not have a mine producing 425,000 oz. a year for the next 20 years, as they have been advertising so far. We’re not saying there’s no gold there — this is not Bre-X or anything like that. There is gold there, but the project needs a much different geological model now, based on the work that’s been done and the bulk-sample program being different than what they anticipated before they went underground.
And they've been slow to accept that, because it does make a big change from what they've been telling the markets. But we're absolutely convinced that if this is what the results indicate, then you should tell the world.

As a key takeaway, note that Farquharson does not dispute (and in fact, anticipated) the significant grades obtained in the bulk sample program. The major issue to note that these results cannot be duplicated to the extent advertised, as the Cleopatra vein is non-heterogenous.

2.11. 24th March 2014: Witness in class action lawsuit agrees with Strathcona's conclusion

In March 2014, a putative class action was filed in federal court in the Southern District of New York alleging that Pretium misrepresented the value and amount of gold in its property. In that document, expert witness Dr. Robert Cameron shared Strathcona's conclusions:

The results (gold content) of the bulk sample were positively skewed by Pretium in what appears to be an intentional oversampling of the Cleopatra Vein. By August 1, 2013 Pretium announced they were revising the sampling program to increase tonnage along the high grade Cleopatra vein and reduce the quantity of low grade tonnage to the west. These modifications would result in increasing the amount of gold they would be able to announce after processing in the bulk sample in full at the Montana mill.

Despite the fact that the mined results from the sample exceeded expectations from the November 2012 report, Snowden revised both the grade and quantities downward in the bulk sample area in their December 2013 report, so that the resource model does not match the milled results from the bulk sample. Basically, it can be implied that they made adjustments to the resource model because they recognized that gold content of the Bulk Sample was skewed by Cleopatra Vein and the design/execution of the bulk sampling program by Pretium.

The underground drilling direction was used to explain why investors needed to wait for the final milling for any information, yet they would release “good” drilling results completed along strike as significant intercepts. Drilling either along strike or down-dip of a vein is considered unreliable and as potentially misleading to investors in the industry.

Figures 26, 27 & 28 Yeo et al v. Pretium Resources Inc

Cameron also took issue with Snowden’s use of multiple indicator kriging to model the VOK zone.

42. In the case of the VOK, the data was considered “highly skewed,” meaning that high grade mineralization and the majority of the metal were located in less than 5 percent of the data. To address the variances in the data, Snowden separated the lower grade and higher grade populations and then employed an estimation technique known as Multiple Indicator Kriging in order to calculate resource estimates for the VOK as a whole. This statistical methodology is considered non-standard and challenging to apply, and as a result, has been utilized with less frequency in the industry to perform estimates for operating mines.

Figure 29 Yeo et al v. Pretium Resources Inc
We believe that the overwhelming evidence against Pretium and Snowden’s resource model speaks for itself especially when viewed in the context of Strathcona’s resignation.

2.12.  19th June 2014 – Revised Feasibility Study

<table>
<thead>
<tr>
<th>Category</th>
<th>Measured</th>
<th>Gold (g/t)</th>
<th>Silver (g/t)</th>
<th>Gold (Moz)</th>
<th>Silver (Moz)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measured</td>
<td>2.0</td>
<td>19.3</td>
<td>14.4</td>
<td>1.2</td>
<td>0.9</td>
</tr>
<tr>
<td>Indicated</td>
<td>13.4</td>
<td>17.4</td>
<td>14.3</td>
<td>7.5</td>
<td>6.1</td>
</tr>
<tr>
<td>M+I</td>
<td>15.3</td>
<td>17.6</td>
<td>14.3</td>
<td>8.7</td>
<td>7.0</td>
</tr>
<tr>
<td>Inferred</td>
<td>5.9</td>
<td>25.6</td>
<td>20.6</td>
<td>4.9</td>
<td>3.9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category</th>
<th>Measured</th>
<th>Gold (g/t)</th>
<th>Silver (g/t)</th>
<th>Gold (Moz)</th>
<th>Silver (Moz)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measured</td>
<td>2.4</td>
<td>5.86</td>
<td>267</td>
<td>0.5</td>
<td>26.8</td>
</tr>
<tr>
<td>Indicated</td>
<td>2.5</td>
<td>5.86</td>
<td>190</td>
<td>0.5</td>
<td>15.1</td>
</tr>
<tr>
<td>M+I</td>
<td>4.0</td>
<td>5.85</td>
<td>267</td>
<td>0.9</td>
<td>41.9</td>
</tr>
<tr>
<td>Inferred</td>
<td>4.0</td>
<td>6.44</td>
<td>82</td>
<td>0.8</td>
<td>10.6</td>
</tr>
</tbody>
</table>

This was the last mineral resource estimate and no mention was made of Strathcona’s objection in the document.

Combined measured and indicated resource tonnes increase from 21.0m tonnes to 23.5m tonnes and grade increases from 13.64g/t to 14.75g/t from the prior report.

Since the June 2011 mineral resources estimate, measured and indicated grades increased 93%, tonnage increased 451%, and gold contained increased 17%. The majority of this increase occurred within the VOK estimate under Snowden’s tenure as mining consultant.

2.13.  Key Takeaways
Pretium clearly wants to communicate Brucejack as a high-grade, high-yield, high-output mine. Strathcona disagreed with management’s characterization of the project and Snowden’s resource model, which relied upon the high-grade Cleopatra vein to be indicative of the entire mine area. Pretium’s current valuation is based entirely upon the accuracy of the Snowden resource model.

Viceroy’s analysis of the mine’s feasibility, supported by that of Strathcona, shows management’s characterization of the Brucejack mine is heavily flawed.

For reasons we will outline below, we believe that Strathcona was correct and that Pretium is now dealing with the fallout of using a flawed resource model and having to deliver the corresponding results. Viceroy further believes that management were aware of the aggressive modelling used in the 2014 feasibility study and are now actively attempting to continue the Brucejack illusion for as long as possible.

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Viceroy Research Group 17 viceroyresearch.org
3. Strategic Minerals and Sima Muroff: SEC-sanctioned individual managed mill to support Snowden’s resource model

After Strathcona’s resignation, Pretium hired an entity owned and managed by Serofim “Sima” Muroff to handle the testing of its bulk sample program; Muroff was sued by the SEC for misappropriating millions of dollars of investor funds. Our research indicates that Sima Muroff scammed investors and Strategic Minerals does not appear to have a reputable background in testing gold.

Strategic Minerals LLC first appeared in Pretium’s October 22, 2013 press release when Strathcona’s sample tower results and parts of its resignation letter were released.

<table>
<thead>
<tr>
<th>Table 1: Cross-cut 426585E Preliminary Mill Results</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tonnes</strong></td>
</tr>
<tr>
<td><strong>(Dry)</strong></td>
</tr>
<tr>
<td>2,167</td>
</tr>
<tr>
<td>Notes: Preliminary mill results are provided by Strategic Minerals LLC, operator of the mill, and are subject to final establishment of weights and assays and settlement.</td>
</tr>
</tbody>
</table>

*Figure 32 Cross-cut 426585E Preliminary Mill Results*™

The company appears again when Pretium released Snowden’s bulk sample results on November 22, 2013:

<table>
<thead>
<tr>
<th>Table 1: Preliminary Mill Results from Processing (at November 20, 2013)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tonnes Milled (Dry)</strong></td>
</tr>
<tr>
<td>8,090</td>
</tr>
<tr>
<td>Notes: Preliminary mill results are provided by Strategic Minerals LLC, operator of the mill, and are subject to final establishment of weights and assays and settlement.</td>
</tr>
</tbody>
</table>

*Figure 33 Preliminary Mill Results from Processing*™

To summarize this series of events:

1. Grade results were a disappointing 2.1 g/t
2. Strathcona resigns from the bulk sample program over Pretium’s lack of disclosure to the market
3. Strategic Minerals LLC is introduced in the press release as the processing mill
4. Milling results from the same sample are an impressive 16.2 g/t, in line with Snowden’s resource model

Strategic Minerals LLC appears to be a company that operated out of Contact Mill and Mining Co’s Phillipsburg facility, which is mentioned in the 2014 Montana Mining magazine as processing ore from Brucejack in late 2013.

*Figure 34 2014 Montana Mining Magazine*™

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A Freedom of Information Act request to the Department of Labour/Mine Safety and Health Administration uncovered that Serofim “Sima” Muroff owned and ran Strategic Minerals LLC in 2014:

<table>
<thead>
<tr>
<th><strong>Effective Date</strong></th>
<th>2/21/2014</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mine Name</strong></td>
<td>Contact Concentrator</td>
</tr>
<tr>
<td><strong>Mine Location Address</strong></td>
<td>77 Red Hill Road, Philpburg, MT 59858</td>
</tr>
<tr>
<td><strong>Location County</strong></td>
<td>Granite</td>
</tr>
<tr>
<td><strong>Directions to Mine</strong></td>
<td>1 1/2 mile South of Philpburg</td>
</tr>
<tr>
<td><strong>Mine Operator Name</strong></td>
<td>Strategic Minerals</td>
</tr>
<tr>
<td><strong>Mine Operator Address</strong></td>
<td>77 Red Hill Rd, Philpburg, MT 59858</td>
</tr>
<tr>
<td><strong>Type of Commodity (product)</strong></td>
<td>Metal - Gold Ore</td>
</tr>
<tr>
<td><strong>Type of Operation</strong></td>
<td>Facility</td>
</tr>
</tbody>
</table>

**Figure 35 Strategic Mineral LLC company information**

### 3.1. Charges relating to Sima Muroff

On April 28, 2017, the SEC charged Sima Muroff with securities fraud for raising $140.5M and misappropriating investor funds from his affiliated entities: Blackhawk Manager LLC (Blackhawk) and ISR Capital LLC (ISR), between 2010 and 2014.

These funds were part of an EB-5 immigrant investor visa program. The funds in these investment vehicles were to be invested in gold mining companies.

Note that Ryan McDermott, Director of Mining Operations in figure 35 above was the senior geologist at ISR and his presence at Strategic Minerals LLC further affirms our view that Muroff used Strategic Minerals for fraudulent purposes.

**Figure 36 Drilling at Gold Hill – Idaho State Register**

This is not the only overlap between Muroff’s ISR Capital entity and Strategic materials: several ISR employees were involved in the operation and incorporation of Strategic Minerals.

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26 From court fillings: the Yellowjacket mine, Belshazzar mine, Thunder Mountain mine and the Monarch Mountain mine to name a few

It is not clear how Muroff and Pretium came into contact but we suspect that the motive for milling at Strategic Minerals was to produce the desired grades from the Brucejack mine bulk sample program.

A person affiliated with the testing facility, Contact Mill & Mining Co., stated in a conversation that it was:

"...strange that Strategic Minerals insisted they handle the testing themselves. That has never happened before. They also had us sign an NDA."

Additionally, they stated it was unusual that the Contact Mill & Mining facility was used to process Pretium’s >10,000 tonne sample, as their facility specialized in small 500-1,000 tonne samples.

The facts surrounding Strategic Minerals LLC are as follows:

- Strategic Minerals LLC was owned by SEC-sanctioned individual Sima Muroff for the relevant period.
- Strategic Minerals was incorporated and run by employees and management of SEC-sanctioned ISR Capital which raised funds from investors to invest in mining-related companies in Idaho and Montana from 2012 to 2014.
- ISR Capital further invested funds in various equity and derivative products of listed mining operators throughout the time period, however we have been unable to confirm if Pretium was one such investment.
- Strategic Minerals LLC operated the Contact Mill Mining and Mill concentrator during late 2013 during which time it processed “...custom ore from Montana and a bulk sample from Pretium’s Brucejack mine...”.
- Grade results for the Brucejack mine from Strategic Minerals LLC were far higher than those reported by Strathcona’s tower sample.

We believe great efforts were to be taken to mask the individual behind Strategic Minerals LLC from Pretium investors. The bulk sample program's results were inferred across the entire project. These results are the basis for Pretium's current market value.

Multi-billion-dollar mining companies do not routinely engage an entity led by an individual who was later charged with fraud, with exceptional consideration to Muroff who further managed a multi-million-dollar investment vehicle – the opportunity for fraud is immense.
### 3.2. Timeline of events – Sima Muroff, ISR Capital & Strategic Minerals

<table>
<thead>
<tr>
<th>Year</th>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>October 28</td>
<td>Pretium acquired the project from Silver Standard. Quartermain served as President of Silver Standard from 1985 to 2010.</td>
</tr>
<tr>
<td></td>
<td>December 21</td>
<td>Sima Muroff is charged with &quot;driving reckless&quot; and &quot;weapon -carry concealed while under the influence.&quot;</td>
</tr>
<tr>
<td>2012</td>
<td>August 27</td>
<td>Strategic Minerals LLC is formed.</td>
</tr>
<tr>
<td></td>
<td>May 31</td>
<td>Sima Muroff is charged with &quot;driving under the influence&quot; and &quot;weapon — carry&quot;</td>
</tr>
<tr>
<td></td>
<td>July 10</td>
<td>Sima Muroff is charged with &quot;drivers license - failed to purchase or invalid.&quot;</td>
</tr>
<tr>
<td></td>
<td>September 30</td>
<td>MHSA Legal ID report for Contact Concentrator is updated to reflect Strategic Minerals as the &quot;Mine Operator&quot;, Ryan McDermott as the &quot;Person at Mine in Charge of Health and Safety&quot; and Sima Muroff (Managing Member) as the &quot;Individuals with ownership interest or corporate officers/directors as well as Individual principal organization officials or members&quot;</td>
</tr>
<tr>
<td></td>
<td>October 9</td>
<td>Pretium issues a press release highlighting Strathcona's resignation from the bulk sample program.</td>
</tr>
<tr>
<td></td>
<td>October 22</td>
<td>Pretium issues a press release containing results from the first cross cuts of the bulk sample and more information on Strathcona's departure. Strathcona's assay results from the sample tower averaged 2.08 g/t. Strathcona's grade is 87% lower than the 16.4 g/t grade indicated in Snowden's 2012 Resource Report. Strategic Minerals is mentioned for the first time as the &quot;operator of the mill&quot;.</td>
</tr>
<tr>
<td></td>
<td>November 22</td>
<td>Pretium issued a press release containing results from Snowden's bulk sample program. The reported grade of 16.2 g/t is nearly 8x better than Strathcona's grade of 2.08 g/t. Strategic Minerals is mentioned again as the &quot;operator of the mill&quot;.</td>
</tr>
<tr>
<td></td>
<td>November 27</td>
<td>Graham Farquharson of Strathcona) gives a negative interview in Northern Miner stating &quot;...the Snowden model, which had 16 million tonnes with a grade of 16 grams per tonne in the indicated category and a further quantity in the inferred category — and we didn't find that. And Pretium didn't find that.&quot;</td>
</tr>
<tr>
<td></td>
<td>December 12</td>
<td>Pretium issued a press release containing updated results from Snowden's bulk sample program. The reported grade is 17.7 g/t and Strategic Minerals is mentioned again as the &quot;operator of the mill&quot;.</td>
</tr>
<tr>
<td>2014</td>
<td>January 29</td>
<td>Inspection of Contact Concentrator by the MHSA leads to 12 &quot;significant&quot; citations.</td>
</tr>
<tr>
<td></td>
<td>February 25</td>
<td>MHSA Legal ID report for Contact Concentrator is updated to replace Ryan McDermott with Sima Muroff as the &quot;Person at Mine in Charge of Health and Safety.&quot;</td>
</tr>
<tr>
<td></td>
<td>March 24</td>
<td>Class action lawsuit document filed against Pretium with negative expert commentary corroborating Strathcona's views.</td>
</tr>
<tr>
<td></td>
<td>July 4</td>
<td>MHSA Legal ID report for Contact Concentrator is updated to remove Strategic Minerals and Sima Muroff.</td>
</tr>
<tr>
<td>2015</td>
<td>April 14</td>
<td>Strategic Minerals files its last annual report with the Montana Secretary of State and is subsequently dissolved.</td>
</tr>
</tbody>
</table>
4. Compensatory measures: how Pretium keeps the illusion going

Recent developments and government filings lead us to believe the 2014 feasibility study – in particular the resources model – is not playing out as expected. While Pretium does have access to the high-quality Cleopatra vein, the surrounding rock appears to have a low gold content. Pretium also appears to have trouble with reliably mining high-grade ore.

As at the date of writing, Pretium has been able to compensate for this through:

▪ Milling development rock
▪ Almost doubling mine development in order to find higher grade ores
▪ Narrowing their drill core sample spacings to better define the area.
▪ Attempting to build a stope inventory by building out mine infrastructure so that more stopes are available.

Our analysis suggests Pretium is a textbook case of selective grading, substantiated by unsustainable results acquired through selective mining and milling. The obvious incentive to undertake this activity is so that Pretium can refinance its extremely expensive debt book.

Due to the complex nature of the following section, below is a summary of its contents.

Pretium’s disclosed tonnage of ore mined and projected ore-to-waste ratios for the relevant period disagree with filings made by the company with the British Columbia mines authority. We have analyzed both sets of figures using three separate methods to calculate the tonnage of excavation implied for the sake of completeness. In all three cases this tonnage far exceeds that claimed by the company to the market.

Given the annual nature of the government filings used, only data for 2017 is available, during which Brucejack operated commercially for roughly half the year. Expert consultants have informed us that excavation from the first half of the year would be stockpiled for the mill. Accordingly, we present two separate tonnages: an annual figure which includes all 2017 excavation, and a pro-rata figure which only includes the excavation from the months Brucejack was in commercial production.

Using the most forgiving (for Pretium) of these calculated tonnages and Pretium’s reported gold production, the actual grade of the excavation can be found. Again, due to the two excavation figures mentioned above, this results in two separate calculated grades.

4.1. Government documents indicate Pretium is moving approximately double the amount of rock from the underground mine than disclosed to investors.

In its financial filings, Pretium disclosed 552,205 tonnes of ore mined in Q3 and Q4 of 2017. However publicly available environmental filings indicate actual ore excavation of 1,168,456 tonnes, 139% higher.

The Brucejack mine’s 2017 ARR details the volume of material displaced at the Brucejack mine in 2017 as 773,000m$^3$ consisting of 595,000m$^3$ (1,654,100 tonnes) for development (tunnels and drifts) and 178,000m$^3$ (494,840 tonnes) for production (stopes).

Excavation within the underground mine during 2017 increased the size of the underground void by approximately 773,000m$^3$. The volume of the underground void was then reduced by approximately 95,500 m$^3$ through cemented paste backfilling, resulting in a total net underground mine void volume of approximately 1,123,500 m$^3$ on December 31st, 2017.

From these figures we can work out the implied total excavation of the Brucejack mine in 2017. Applying the bulk density factor of 2.78 tonnes per m$^3$ calculated by ALS Chemex results in 2,148,940 tonnes of excavation in 2017.

This excavation is detailed in part later in the ARR wherein mining and milling production is broken down by month.

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28 https://www2.gov.bc.ca/gov/content/industry/mineral-exploration-mining/permitting/reclamation-closure/annual-reclamation-reports

29 To view Brucejack’s filings, visit https://mines.empr.gov.bc.ca/ and search for “Brucejack”

Comparing the mass of “Underground – Ore” to the mass implied by the production stope volume shows a 189,624 tonne shortfall.

<table>
<thead>
<tr>
<th>Monthly Mining and Milling Production</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underground - ore (t)</td>
</tr>
<tr>
<td>Less: Excavation - production</td>
</tr>
<tr>
<td>Shortfall from volume calculations</td>
</tr>
</tbody>
</table>

Pretium’s ARR shows a total mill production of 628,394 tonnes, in excess of the calculated stope tonnage for the year. This implies some development tonnage has been milled. Waste ore was specifically not milled. Using this ARR data, we use three distinct methods to illustrate Pretium’s dramatic understatement of tonnage mined.

The implication on grade is dramatic. In Q3 and Q4, Pretium reported a head grade of 9.4 g/t. Factoring in the undisclosed tonnage would have resulted in a grade of 4.04 g/t and 5.37 g/t for the annual and pro-rata grades, respectively. At both these grades, our research indicates the mine is uneconomic and Pretium’s equity value is worthless.

The only way these volume (m³) figures can reconcile to Pretium’s reported tonnage is assuming a much lower and entirely unrealistic bulk density factor (t/m³).

### 4.1.1. Method A: comparing ARR ore & waste tonnage

Pretium disclosed only 1,168,456 tonnes of underground waste and ore excavation in their 2017 ARR. For clarity, page 88 of the ARR claims that this figure includes development tonnage and is classified as “Underground – Waste”.

Comparing this figure to the calculated excavation mass results in undisclosed ore and waste tonnage of 1,150,544 tonnes, almost doubling the tonnage.

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31 Pretium 2017 Brucejack gold mine Annual Reclamation Report – page 46
27 Pretium 2017 Brucejack gold mine Annual Reclamation Report – pages 47 & 88

Viceroy Research Group

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Method B: comparing company ratio of waste to ore mined to ARR tonnage

In its Q4 2017 press release, Pretium disclosed 552,205 tonnes of ore mined in Q3 & Q4 2017.

According to the June 2014 feasibility study update, Pretium expected to mine 839,000 tonnes of ore and 303,000 tonnes of waste in year 1, for a 36.11% ratio of waste-to-ore tonnage.

Applying this 36.11% to the 552,205 tonnes of ore mined results in 199,426 tonnes of waste mined and 751,631 tonnes of total material mined. Total excavation implied by the ARR is 2,148,940 tonnes, 286% higher than what was disclosed to stakeholders.

Investors should note that the June 26, 2013 Feasibility Study has a far more accurate expected waste rock estimate but a far lower ore yield34.

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4.1.3. Method C: comparing company ore and ARR waste tonnage

In the Q4 2017 press release referenced in Method B above Pretium disclosed 552,205 tonnes of ore mined in 2017. In the ARR Pretium disclosed 483,992 tonnes of waste in 2017. The sum of ore and waste gets us to 1,036,196 tonnes of material mined. However, total excavation implied by the ARR is 2,148,940 tonnes, over 2x higher than what was disclosed to the street.

<table>
<thead>
<tr>
<th>Method C: Waste mined from ARR</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Reported ore mined</td>
<td>552,205</td>
</tr>
<tr>
<td>Waste mined from ARR</td>
<td>483,992</td>
</tr>
<tr>
<td>Total mineral mined</td>
<td>1,036,197</td>
</tr>
<tr>
<td>Total 2017 excavation from ARR</td>
<td>2,148,940</td>
</tr>
<tr>
<td>Undisclosed ore + waste tonnage</td>
<td>1,112,743</td>
</tr>
<tr>
<td>Ratio of calculated ARR excavation to</td>
<td></td>
</tr>
<tr>
<td>reported excavation</td>
<td>207%</td>
</tr>
</tbody>
</table>

Figure 49 Viceroy Analysis

4.2. Implication on grade

To be conservative, we use the lowest of our 3 methods (Method A) to determine the implication on grade. The results are incredibly negative for Pretium’s grade. Below we solve for grade in grams per tonne. We have completed two sets of calculations: pro-rata excavation which excludes ore mined and gold production for Q1 and Q2 2017 and a full-year excavation.

We have done this as we believe Pretium was conducting assays and selectively milling for the full-year 2017 but believe had we not included pro-rata figures the company would use this as a basis to discredit this report.

4.2.1. Numerator

<table>
<thead>
<tr>
<th>Pro-rata</th>
<th>Full-year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretium reported production of 152,484 oz of</td>
<td>Pretium reported production of 152,484 oz of gold in</td>
</tr>
<tr>
<td>gold in Q3 and Q4. Applying a 96.2% recovery</td>
<td>Q3 and Q4 and 8,510 oz produced in the pre-commercial</td>
</tr>
<tr>
<td>rate(^{35}) results in 158,507 oz or 4,930,</td>
<td>production period. Applying a 96.2% recovery rate</td>
</tr>
<tr>
<td>131g of gold at the mill for the pro-rata</td>
<td>results in 160,994 oz or 5,007,474g of gold at the mill</td>
</tr>
<tr>
<td>calculation.</td>
<td>for the pro-rata calculation.</td>
</tr>
</tbody>
</table>

4.2.2. Denominator

<table>
<thead>
<tr>
<th>Pro-rata</th>
<th>Full-year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Q3 and Q4 excavation implied by the ARR</td>
<td>Total full-year excavation implied by the ARR is</td>
</tr>
<tr>
<td>is 1,396,811 tonnes. Applying the 36.11% waste-</td>
<td>2,148,940 tonnes. Applying the 36.11% waste-to-ore</td>
</tr>
<tr>
<td>to-ore ratio results in full year ore</td>
<td>ratio results in full year ore excavation of 1,372,863</td>
</tr>
<tr>
<td>excavation of 892,361 tonnes. Adding the</td>
<td>tonnes. Adding the full-year change in Pretium’s 2017</td>
</tr>
<tr>
<td>full-year change in Pretium’s 2017 Q3 and Q4</td>
<td>stockpiles of -36,262 tonnes results in total ore</td>
</tr>
<tr>
<td>stockpiles of 58,868 tonnes results in total</td>
<td>excavation of 1,336,601 tonnes. Applying a 96.47% of</td>
</tr>
<tr>
<td>ore excavation of 951,229 tonnes. Applying</td>
<td>mined ore milled as was the case in 2017 according to</td>
</tr>
<tr>
<td>a 96.47% of mined ore milled as was the case</td>
<td>the financial filings, ore milled would have been</td>
</tr>
<tr>
<td>in 2017 according to the financial filings,</td>
<td>917,697 tonnes.</td>
</tr>
<tr>
<td>ore milled would have been 911,697 tonnes.</td>
<td></td>
</tr>
</tbody>
</table>

4.2.3. Results Summary

This is substantially lower than 9.4 g/t Pretium reported to the street implying a pro-rata grade of 5.37 g/t and a full year grade 4.04 g/t. If Pretium disclosed their tonnage in line with what is coming out of the ground, Pretium would be reconciling at 25% - 33%, significantly below the 2012 proven and probable grade of 16.4 g/t.

4.3. Implication on tonnage

In their financial filings, Pretium disclosed 552,205 tonnes of ore mined in 2017. Our math above calculated 1,168,456 tonnes of ore mined in 2017 as per the ARR, and 759,496 tonnes on a pro-rata basis. This results in 616,251 tonnes of undisclosed ore excavation and 207,291 tonnes on a pro-rata basis. Pretium appears to be pulling far more rock out of the ground than they are disclosing to investors.

Taking substantially more rock out of the ground in search of gold might signal far less gold underground than what was originally planned.

4.4. Counting Stopes: Pretium is developing the mine at a far quicker rate than anticipated.

All the evidence above leads us to believe that Pretium is selectively mining high-grade stopes. We believe it is doing so by developing the mine a far higher rate than the rate projected by the 2014 feasibility study, frantically searching for small, high grade deposits.
In its Q4 2017 announcement Pretium released its lowest head grade yet, and less gold produced than forecast. According to the company this was due to operational issues regarding high-grade stopes and equipment breakdowns. In response Pretium announced increases in stope inventory and development rate, budgeting for a development rate of 700m/mo.

During the fourth quarter, gold production was lower than expected as higher-grade stopes scheduled to be mined in December encountered operational issues (equipment down-time and mining execution), that prevented them from being mined and delivering higher grade ore to the mill. Both long-hole drills went down and the stopes could not be drilled off in time. Mining also encountered a hang-up when blasting a long-hole slot. These issues, combined with the limited stope inventory (no other high-grade stopes were accessible in the quarter) contributed to the lower than expected gold production.

Pretivm has taken a number of steps to address these operational issues. To improve access and build stope inventory, the rate of underground development has been increased to 700 meters per month for 2018, up from the 420 meters originally contemplated in the Brucejack Feasibility Study. In addition, a third long-hole drill is now on site to provide back-up and contribute to the build-up of stope inventory.

During the third and fourth quarter of 2017, two sills were established to open up two mining horizons for 2018, the 1230-meter Level to the 1320-meter Level and the 1320-meter Level to the 1440-meter Level. With the continued extension of the mining levels to the east and west within the two mining horizons and the increase in rate of development, stope inventory is expected to increase to 10 to 12 stopes with a range of grades by mid-year 2018. The availability of stopes exposes, with a range of grades, including multiple higher grade stopes, will allow mining operations to optimize stope blending and provide alternative stopes with comparable grades for mining if required. The increased stope inventory is expected to improve the management of production grades as the ramp-up continues.

This was confirmed in the Q1 2018 earnings release showing the development rate had at times exceeded 800m/mo during this period.

This was continued in Q2 2018 with a development rate of 700m/mo.

According to Pretium’s presentation at the 2014 Vancouver Resource Investment Conference, Pretium’s average stope is 15m wide by 28m long and according to page 182 of the feasibility study, the average stope is 30m high. Therefore, the average stope should have a dimension of 10,313 m³. At a density factor of 2.78 tonnes per m³, the average stope mass is 35,028 t.

---

Pretium's mill permit calls for a maximum of 2,700 tonnes per day or 985,500 tonnes per year. At an average stope mass of 35,028 tonnes, it implies Pretium would require 39.6 stopes per year to reach the current maximum mill permit. In the past year, Pretium already exceeded its mill permit by 4.6%.

Despite this, Pretium called for a target stope inventory of 10-12 stopes by mid-2018. Note that stopes in inventory refers to stopes accessible with existing mine infrastructure: otherwise Pretium would be showing a blowout of ore mined relative to ore milled.

Our interpretation of events is as follows. Pretium is following the feasibility study based around the Snowden resources model yielding middling grade results. In Q4 2017 the company loses the high-grade vein resulting in having to mine the surrounding mass resulting in its lowest grades yet.

What follows is a massive rush to develop the Brucejack mine’s underground infrastructure to build up a stope inventory far beyond what can be processed under the company’s current permit. We believe Pretium intends to deliver grade results expected by the street based on Snowden’s wildly optimistic resource model and can only achieve this by mining and milling only the highest-grade deposits.

This is evident when comparing all the above variables.
4.5. Sudden grade control program and narrower drill spacing

On June 4, 2015 Pretium reported the initial results of its underground infill drilling program, the purpose of which was to optimize stope definition by obtaining drill samples from the mine. According to the release, the drill hole centers would be spaced approximately 10m apart for years 1 to 3 of the mine plan.

![Figure 57 Valley of the Kings Underground Infill Drilling Underway](image)

This drill spacing was consistent in Pretium releases about the infill drilling program until March 8, 2016 when the spacing was stated as “7.5 to 10-meter[s]” apart. This implies the spacing was not adequate to provide a definition of the deposit or that the deposit formed no continuous mass.

![Figure 58 Valley of the Kings Infill Drilling Continues](image)

This spacing was reduced again following poor Q4 2017 results to “5 to 7-meter centers”

![Figure 59 Pretium Resources Q4 and year-end 2017 Conference Call Presentation](image)

The tightening of drill core spacings becomes apparent when reviewing the results of the program. See the image below.

---

The sections in purple and red are gold grades above 20 g/t and 5 g/t respectively. Unfortunately for Pretium there is no discernible continuous body of high-grade ore in the majority of its drilling results. This is a reality that reared its head during Q4 2017: not only were previous infill drilling programs insufficient to map the ore body, but there may not be a large continuous ore body in the first place.

Section views of Pretium’s underground drilling results are appended to each of the company’s press releases about the drilling program. We encourage readers to review the data for themselves for a better understanding of how scattered the deposit actually is.

This corroborates our view of the increased pace of development to reach economically viable ore, as well as the company’s newfound focus for amassing more stope inventory than can be currently mined.

4.6. Explosives consumption rates tell a similar story
According to page 218 of the June 2014 feasibility study update:

> **Explosives Vehicles**
>
> At full production, explosives consumption is estimated to be 2.7 t/d of bulk emulsion.
>
> This will be delivered to the mine in six custom-made ISO tanks, each with a capacity of 6,000 L or 7 t. A boom truck will transport the full tanks to the emulsion bays. Two

On page 90 the 2017 ARR states "Explosives use from January through December totaled 1,032,863 kg for development blasting and 346,206 kg for longhole Blasting".

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development and long hole blasting. Explosives use from January through December totaled 1,032,863 kg for development blasting and 346,206 kg for longhole blasting. This quantity of explosive contains 340,630 kg of T-N distributed almost equally as NH₃ and NO₃.

This equates to 40% more than was anticipated by the feasibility study.

This increase in explosive use is consistent with Viceroy’s overproduction thesis.

4.7. Waste rock blowouts not consistent with feasibility study

According to page 313 of the June 2014 feasibility study update:

![Figure 64 Section 18.11 Waste Disposal](image)

Year 1 waste tonnage was expected to be 303,000 tonnes according to pg. 186 of the feasibility study.

![Figure 65 Table 16.5 LOM Backfilling – Waste Rock and Mill Tailings](image)

According to the ARR, 172,854 m³ of underground rock was deposited into the lake in 2017. At a density factor of 2.78 t/m³, this works out to 480,534 tonnes of waste rock. This implies that Pretium has deposited 44.9% more waste rock into Brucejack Lake than total waste generated in year 1. This does not account for any waste used to backfill stopes.

![Figure 66 Viceroy Analysis](image)

42 Pretium 2017 Brucejack gold mine Annual Reclamation Report – page 90
The table in figure 66 shows us that Pretium was expecting a 36% ratio of waste-to-ore in year 1. However, the ARR illustrated something very different in 2017. The ARR showed 483,991 tonnes of waste and 684,465 tonnes of ore, amounting to 71%.

Investors should note that the June 26, 2013 feasibility study has a far more accurate expected waste rock estimate but a far lower ore yield.

<table>
<thead>
<tr>
<th>Year</th>
<th>Ore Tonnes ('000 t)</th>
<th>Total Tailings ('000 t)</th>
<th>Waste Tonnes ('000 t)</th>
<th>Waste Fill Volume (m³)</th>
<th>Paste Fill Volume (m³)</th>
<th>Tailings Underground ('000 t)</th>
<th>Waste to Surface ('000 t)</th>
</tr>
</thead>
<tbody>
<tr>
<td>-2</td>
<td>5</td>
<td>-</td>
<td>575</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>575</td>
</tr>
<tr>
<td>-1</td>
<td>241</td>
<td>-</td>
<td>492</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>492</td>
</tr>
<tr>
<td>1</td>
<td>566</td>
<td>771</td>
<td>442</td>
<td>6,000</td>
<td>192,000</td>
<td>272</td>
<td>430</td>
</tr>
</tbody>
</table>

**Bad ore as waste**
- Year 1 waste tonnes: planned 303,000
- Year 1 ore tonnes: planned 839,000
- Year 1 ratio of waste to ore: planned 36%
- 2017 waste tonnes: ARR 483,991
- 2017 ore tonnes: ARR 684,465
- 2017 ratio of waste to ore: reported to gov’t 71%
- Difference % 96%

Why is Pretium generating far more waste relative to ore than originally planned? Planning for a 36% waste to ore ratio and then executing at a 71% ratio is almost a 2x increase in relative waste production.

Is Pretium having trouble finding viable ore and then classifying the result as waste?

### 4.8. Key Takeaways

There are several discrepancies between the figures Pretium has disclosed to the market and those found in its environmental reports.

Pretium is also far ahead of its development schedule for underground works, attributable to a weak Q4 2017 grade, and is now at roughly double the 2014 feasibility study development rate. We believe the company is trying to deliver the results projected by the Snowden resource model by selectively mining high-grade stopes through unsustainably accelerated mine development.

Obviously, this practice would be entirely unsustainable, however it does play to Pretium’s benefit in the short term given we believe they are actively trying to refinance their high-interest loan book.
5. Robert Quartermain: Same jockey, different horse

Robert Quartermain’s (Pretium’s founder and chairman) only mine operating experience resulted in a ~53% reserve cut and earlier than planned shutdown at Pirquitas, an Argentinian silver mine owned by Silver Standard Resources.

Quartermain served as the President of Silver Standard Resources (now SSR Mining) from 1985 - 2010 and as CEO from 2004 - 2010.

Robert Quartermain is generally regarded as the architect of Silver Standard and now Pretium. His management team at Pretium include the President/CEO Joe Ovsenek, CFO Tom Yip, VP/Chief Exploration Officer Kenneth McNaughton, and Chief Geologist Warwick Board. All worked directly with Quartermain at Silver Standard. This is a concerning overlap of "talent" when considering the issues experienced at Pirquitas.

In June 2009, Silver Standard forecasted that Pirquitas would produce 6m oz of silver in 2009 and 10m oz of silver per year for the next 14 years. In 2010, the year Quartermain left Silver Standard, Pirquitas produced 6.3m oz of silver, almost 40% below his forecast. Furthermore, the open pit operation at Pirquitas was completely shut down in January 2017, approximately six years earlier than Quartermain’s forecast.

5.1. Pirquitas: Don’t get your hopes up

On June 27, 2002 Silver Standard acquired a 43.4% interest in Pirquitas, an Argentinian silver project. The remaining stake was acquired on October 20, 2004. The decision to produce at Pirquitas was made on October 18, 2006 off the back of 2 feasibility study updates in April 2006. What followed was a series of press releases that doubled the mine’s reserve over the space of less than a year.

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>November 26, 2007</td>
<td>Silver Standard announced it had increased Pirquitas’ reserves by 27% from 107.1m ag oz to 136m ag oz.</td>
</tr>
<tr>
<td>May 14, 2014</td>
<td>Silver Standard announced it had increased Pirquitas’ silver reserves by 43% from 136m ag oz to 195.1m ag oz.</td>
</tr>
<tr>
<td>September 29, 2008</td>
<td>2008 Silver Standard announced it had increased Pirquitas’ silver reserves by 13% from 195.1m ag oz to 221.2m ag oz.</td>
</tr>
</tbody>
</table>

In total from November 26, 2007 to September 29, 2008 Pirquitas’ silver reserves had increased 106%.

After many issues, Silver Standard’s Q3 2011 earnings release revised this estimate downward, reporting a new estimate of 172.6m oz of contained silver:

Reserves were reduced by 53% and reserves and resources were reduced by 28%.

A CIBC analyst at the time wrote that these changes dropped the NPV of the Pirquitas mine from $1.7b to $1b, a 41% reduction. According to Reuters:

Late on Wednesday, Silver Standard reduced the proven and probably reserve estimate at the Pirquitas mine by 52 percent to 93.1 million ounces of contained silver. That compared with proven and probable reserves of 195.1 million ounces reported in a 2008 technical report.

Silver Standard blamed the reduction on a geological reinterpretation that lowered the amount of recoverable silver, along with higher operating costs.

The parallels between Silver Standard and Pretium are very interesting: a controversial geological interpretation during the bulk sample program and higher operating costs being experienced today.

We believe Quartermain was effectively "fired" from Silver Standard. In a 2010 interview, he:

▪ Admits to having a difference of opinion with the board,
▪ Admits the board and he "agreed" it was time for him to step down,
▪ Spoke (surprisingly) negatively of his replacement, John Smith.

An excerpt from the interview including Quartermain’s Parthian shot at his successor.
When asked about Quartermain a senior management team member at Silver Standard said the following:

"It took us a few years to fix what he did."

"Robert did not leave us with any cash. The balance sheet was in rough shape and we needed capital."

"The modelling and mathematics they used was very aggressive."

"When the issues at Pirquitas became apparent and he left, he said 'I have no idea how anyone is going to let me run another mine again'."

Pirquitas may have been just one of a portfolio of assets at Silver Standard however it was the only asset that Silver Standard chose to actively operate during Quartermain’s tenure.

Therefore, by investing in Pretium, one is backing a management team whose only operating experience resulted in a ~53% reserve reduction.

<table>
<thead>
<tr>
<th>Name</th>
<th>Pretium position</th>
<th>Silver Standard position</th>
<th>Date left Silver Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Robert A. Quartermain</td>
<td>Executive Chairman</td>
<td>President</td>
<td>January 19, 2010</td>
</tr>
<tr>
<td>George Paspalas</td>
<td>Lead Director</td>
<td>Chief Operating Officer</td>
<td>January 7, 2011</td>
</tr>
<tr>
<td>Joseph J. Ovsenek</td>
<td>President, Chief Executive Officer and Director</td>
<td>Senior Vice President Corporate Development</td>
<td>February 15, 2011</td>
</tr>
<tr>
<td>Tom S.Q. Yip</td>
<td>Executive Vice President and Chief Financial Officer</td>
<td>Chief Financial Officer</td>
<td>August 31, 2011</td>
</tr>
<tr>
<td>Michelle Romero</td>
<td>Executive Vice President, Corporate Affairs and Sustainability</td>
<td>Communications Director</td>
<td>February, 2011</td>
</tr>
<tr>
<td>Kenneth C. McNaughton</td>
<td>Vice President and Chief Exploration Officer</td>
<td>Senior Vice President, Exploration</td>
<td>February 15, 2011</td>
</tr>
<tr>
<td>Warwick Board</td>
<td>Vice President, Geology and Chief Geologist</td>
<td>Senior Resource Geologist</td>
<td>July, 2012</td>
</tr>
<tr>
<td>Kevin Torpy</td>
<td>General Manager, Brucejack Mine</td>
<td>Project Mine Engineer</td>
<td>October, 2011</td>
</tr>
</tbody>
</table>

Of note are the twin presences of:

- **Kenneth “Ken” McNaughton**
  
  Currently Vice President and Chief Exploration Officer at Pretium, McNaughton held a similar role at Silver Standard, Senior Vice President of Exploration. McNaughton was listed as the Qualified Person for exploration in the announcement of Pirquitas’ reserve increases.

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48 https://www.caseyresearch.com/whats-next-bob-quartermain/
James McCrea
Geologist and Qualified Person responsible for mineral resources at the Pirquitas Mine, McCrea also contributed significantly to the work done on the Brucejack area while it was still owned by Silver Standard under the name Snowfield. His work is heavily cited in the Brucejack mine technical reports.

Two individuals involved in the ill-fated reserve estimate increases at the Pirquitas mine were heavily involved in the Brucejack project. Quartermain and much of management were involved with the Pirquitas mine and are now at Brucejack where events seem to be following a similar pattern.

We further believe that the sale of the Brucejack Mine to Quartermain was a forced sale given that Quartermain had left Silver Standard on the verge of bankruptcy.

5.2. Quartermain resigns as Pretium CEO
On May 7, 2015, Pretium announced that Robert Quartermain would be appointed as Chairman and CEO. Additionally, Joe Ovsenek would be appointed to President. Quartermain’s tenure as CEO would be short lived.

On December 15, 2016, Pretium announced that Quartermain would step down as CEO and become Executive Chair while Ovsenek would become President and CEO effective January 1, 2017.

It is curious that Robert Quartermain would relinquish the CEO title of his crown jewel asset months before commissioning.

Perhaps it is because Quartermain knew that the mine would experience significant issues and would grade poorly once commissioned. The first 2 months of Pretium's commissioning resulted in a grade of 3.7 g/t in June and 6.3 g/t in July, both significantly below the 16.4 g/t proven and probable grade.

Or perhaps Quartermain knew that the mine was experiencing significant issues and the original mine plan would need to change dramatically?

It is our view that such significant deviations from plan should not be occurring if the mine was performing as expected. Higher all-in sustaining costs (AISC), tighter drill spacing, faster underground development, more stopes, change in stope method, and unexpected need for a grade control system collectively suggest to us that management is scrambling to find gold. Finally, the asset output change (more dore than planned) is peculiar to us.

“Some of the red flags are more significant or more obvious than others. Some of them, on their own, might not create any doubt or questions to the casual observer but collectively, they all point in the same direction.”

- October 20, 1997 letter from Strathcona Mineral Services Ltd. to Bre-X Minerals Ltd
6. Financial irregularities supports aggressive mining thesis

6.1. COGS mismatch

A comparison of Pretium’s expected and actual cost of sales corroborates our already extensive evidence that the company is taking more ore out of the ground than disclosed to investors.

The following extract from Pretium’s 2014 feasibility study forecasts operating costs of CAD 163/tonne of ore mined and processed. For ore not processed a cost of CAD 93/tonne is forecast. In consultation with industry experts, we believe this figure is conservative.

Figure 75 Section 15.2 Cut-off grade

We have used this data to derive an estimate of cost of sales based on Brucejack’s first 12 months of commercial, ramped production:

<table>
<thead>
<tr>
<th>COGS Analysis (Quarterly)</th>
<th>Q3 2017</th>
<th>Q4 2017</th>
<th>Q1 2018</th>
<th>Q2 2018</th>
<th>First 12 months</th>
<th>Implied tonnage calc</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expected ore COS/tonne CAD/tonne</td>
<td>163.05</td>
<td>163.05</td>
<td>163.05</td>
<td>163.05</td>
<td>163.05</td>
<td>163.05</td>
</tr>
<tr>
<td>Implied expected waste COS/tonne CAD/tonne</td>
<td>93.00</td>
<td>93.00</td>
<td>93.00</td>
<td>93.00</td>
<td>93.00</td>
<td>93.00</td>
</tr>
<tr>
<td>USD/CAD period start USD/CAD</td>
<td>1.2491</td>
<td>1.2466</td>
<td>1.2627</td>
<td>1.2893</td>
<td>1.2491</td>
<td>1.2491</td>
</tr>
<tr>
<td>USD/CAD period end USD/CAD</td>
<td>1.2468</td>
<td>1.2573</td>
<td>1.2898</td>
<td>1.3141</td>
<td>1.3141</td>
<td>1.3141</td>
</tr>
<tr>
<td>USD/CAD period average USD/CAD</td>
<td>1.2480</td>
<td>1.2520</td>
<td>1.2762</td>
<td>1.3017</td>
<td>1.2816</td>
<td>1.2816</td>
</tr>
<tr>
<td>Expected ore COS/tonne USD/tonne</td>
<td>130.85</td>
<td>130.24</td>
<td>127.76</td>
<td>125.26</td>
<td>127.22</td>
<td>127.22</td>
</tr>
<tr>
<td>Implied expected waste COS/tonne USD/tonne</td>
<td>74.52</td>
<td>74.28</td>
<td>72.87</td>
<td>71.45</td>
<td>72.57</td>
<td>72.57</td>
</tr>
<tr>
<td>Ore mined tonnes</td>
<td>271,534</td>
<td>280,671</td>
<td>268,339</td>
<td>248,506</td>
<td>1,069,050</td>
<td>1,851,547</td>
</tr>
<tr>
<td>Year 1 waste-to-ore ratio %</td>
<td>36.11%</td>
<td>36.11%</td>
<td>36.11%</td>
<td>36.11%</td>
<td>36.11%</td>
<td>36.11%</td>
</tr>
<tr>
<td>Waste mined tonnes</td>
<td>98,051</td>
<td>101,350</td>
<td>96,897</td>
<td>89,736</td>
<td>386,034</td>
<td>668,594</td>
</tr>
<tr>
<td>Ore cost USD 000’s</td>
<td>35,477</td>
<td>36,553</td>
<td>34,284</td>
<td>31,128</td>
<td>137,442</td>
<td>235,559</td>
</tr>
<tr>
<td>Waste cost USD 000’s</td>
<td>7,307</td>
<td>7,529</td>
<td>7,061</td>
<td>6,411</td>
<td>28,308</td>
<td>48,517</td>
</tr>
<tr>
<td>Calculated cost of sales USD 000’s</td>
<td>42,784</td>
<td>44,082</td>
<td>41,345</td>
<td>37,539</td>
<td>165,750</td>
<td>284,076</td>
</tr>
<tr>
<td>Reported cost of sales USD 000’s</td>
<td>44,912</td>
<td>80,168</td>
<td>72,588</td>
<td>86,408</td>
<td>284,076</td>
<td>284,076</td>
</tr>
<tr>
<td>Difference USD 000’s</td>
<td>2,128</td>
<td>36,086</td>
<td>31,243</td>
<td>46,869</td>
<td>118,326</td>
<td>-</td>
</tr>
<tr>
<td>Difference %</td>
<td>4.97%</td>
<td>81.86%</td>
<td>75.57%</td>
<td>130.18%</td>
<td>71.39%</td>
<td>0.00%</td>
</tr>
</tbody>
</table>

Note that, outside of Q3 2017, costs have blown out significantly on a relative basis, up to 130% over expectation in Q2 2018 and averaged 71% over expectation for the first year of commercial production. If we were to take actual costs and reverse the equation, we would have expected Pretium to have mined ~73% more ore relative to waste – a figure closer to what we have seen through Pretium’s environmental reports.

This analysis further supports our belief that Pretium has overmined and is selectively milling high-grade ore in order to keep up appearances while a new financing deal is taking place.

6.2. Overcapitalization of mine development

Pretium’s 2014 feasibility study indicates that an initial capital outlay of ~US$746m would be required to bring the mine up to commercialization, ~US$289m of which would be required to develop the Brucejack mineral property (i.e. not including PPE or indirect costs).

Per discussions with our mineral consultants, we have highlighted these relevant costs below:

<table>
<thead>
<tr>
<th>Major Area</th>
<th>Description</th>
<th>Capit (US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Costs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11 Mine Site</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24 Mine Underground</td>
<td></td>
<td></td>
</tr>
<tr>
<td>31 Mine Site Process</td>
<td></td>
<td></td>
</tr>
<tr>
<td>33 Mine Site Facilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>34 Mine Site Tailings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>35 Mine Site Temporary Facilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>36 Mine Site (Surface) Mobile Equipment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>84 Off Site infrastructure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subtotal Direct Costs</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| 91 Indirect Costs     |                           |             |
| 98 Owner’s Costs      |                           |             |

In 2017 alone, over US$420m of construction capex was attributed to Pretium’s mineral property account:

<table>
<thead>
<tr>
<th>Year ended December 31, 2016</th>
<th>Mineral properties</th>
<th>Construction in progress</th>
<th>Plant and equipment</th>
<th>Exploration and evaluation assets</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost</td>
<td>$382,294</td>
<td>$653,181</td>
<td>$15,964</td>
<td>$248,677</td>
<td>$1,797,327</td>
</tr>
<tr>
<td>Additions</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Foreign exchange differences</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Transfer from construction in progress to plant and equipment</td>
<td>-</td>
<td>(2,905)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Subtotal, December 31, 2016</td>
<td>$382,294</td>
<td>$650,276</td>
<td>$13,059</td>
<td>$245,770</td>
<td>$1,794,427</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year ended December 31, 2017</th>
<th>Mineral properties</th>
<th>Construction in progress</th>
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<th>Total</th>
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<td>-</td>
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<td>-</td>
<td>-</td>
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<tr>
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<td>$245,770</td>
<td>$1,794,427</td>
</tr>
</tbody>
</table>

Figure 77 Table 1.4 Summary of Initial Capital Cost

Figure 78 Pretium 2017 Annual Financial Report – Note 8 Mineral Properties, Plant and Equipment

This follows a CAD 513m transfer to mineral properties from “Exploration and evaluation assets” in 2015, bringing the Mineral Properties asset balance to >US$800m, or ~US$670m when excluding the purchase price for the mine of ~$138m.

Simply put, the real capital outlay for the development of Pretium’s mineral properties is over 2x the expected capital outlay in the 2014 feasibility study, likely a major factor in Pretium’s over-indebtedness.

The remaining ~$458m feasibility budgeted outlay attributed to PPE or other indirect, capitalized fixed asset outlays also appears to have been overblown, with pre-depreciation PPE balances at $544m at Q4 2017.

In Q2 2018, Pretium reported free cash flows of $72m, partially driven by lower than expected AISC per ounce of gold sold of $648 relative to previous quarters ($1,009/oz in Q1 2018) and limited sustaining capex, which management advised will be significantly higher in the second half of 201852.

Given the quantum of evidence suggesting Pretium has overmined in 2017, Viceroy believe Pretium have been capitalizing operational costs in the 2017 financial year to bump 2018 results. In other words, Pretium have taken a capitalized earnings bath to push favorable results during a debt refinance period.

7. Valuation

7.1. Pretium has a significant debt payment coming due; if it can't make the payment, then Pretium may be unable to remain a going concern

As of Q2 2018, Pretium has ~$700M of debt (excl. convertible notes) and $142M of cash on their balance sheet. The company’s net debt represents ~35% of its current market cap. This is one of the highest net debt-to-market cap ratios we have seen in the gold mining industry. In fact, the top 10 North American gold mining companies by market cap are leveraged approximately 12% on average. Pretium's leverage represents almost 3x this amount. We believe Pretium is a high-risk credit.

According to page 8 of Pretium’s Q2 2018 financial statements, Pretium’s creditors would seem to agree with us: "the effective interest rate on the credit facility is 15.0%". The effect of this rate has not previously been seen as interest expenses have been capitalized.

[Figure 79 Pretium Q1 2018 Financial Statements – Note 7 (a) Senior secured term credit facility]

On December 31, 2018, Pretium is due to pay a $423M credit facility. Pretium has the option to extend this for 1 year for a 2.5% extension fee plus 7.5% payment-in-kind interest. This would result in a $455M liability by December 31, 2019.

[Figure 80 Pretium Q1 2018 Financial Statements – Note 2 (a) Statement of compliance]

In addition to the credit facility, Pretium has the option to repurchase its stream obligation for $237M on December 31, 2018. If they do not exercise this option, the stream obligation rises to $272M on December 31, 2019. It is worth noting that this stream contract changed hands before commencement of mineral production.

This means that Pretium will have a $660M liability by December 31, 2018 or a $727M liability, excluding converted notes, by December 31, 2019.

It is our belief that Pretium have distorted its operations in order to influence a refinancing these expensive commitments.

Pretium has expressed that they intend to repurchase their stream obligation in their Q4 2017 conference call slides.

The terms of the stream agreement are laid out in Pretium’s annual reports.

Viceroy believe the evidence supported research contained in this report will be taken into serious consideration by possible future creditors. We cannot imagine a rational party would provide Pretium with preferable terms in light of what we believe to be clear evidence of distorting mineral studies, mining results, and financial statements.

As an aside, make note that a provision within Pretium’s credit and stream agreements requires Pretium to report monthly grades to its creditors. If indeed Pretium has distorted these grades, we believe this would be deemed a significant breach of contract.

7.2. Rolling over debt – contractual obligations and restrictions

Our research suggests it is unlikely that Pretium will be able to refinance its existing loan structure, leaving it with little option but to roll over its expensive commitments for another year. The question then becomes whether or not Pretium can do so without breaching its contract restrictions.

Unfortunately, Pretium has only made available heavily redacted credit, stream and offtake agreements from which we cannot draw a strong analysis.
Commonly, these agreements have certain performance covenants based on earnings, mineral grade and leverage – we cannot imagine Pretium’s agreements being substantially different. If Pretium have similarly marketed the Brucejack Project to its creditors as a high-grade, high-output, high-yield mine, then management will have some explaining to do.

This argument is the basis of conclusion that Pretium’s equity is effectively worthless. As our NAV projections below show, the likely scenario in Pretium’s situation is that the mine is turned over to creditors as collateral for their loans, which are unlikely to be repaid in full.

7.3. Revised NAV

Viceroy have recreated an extremely conservative baseline NAV with which to value Pretium. We back-tested the results of our NAV and consider its assumption optimistic when using operating variables provided by Pretium (output in line with “higher price” post-tax NAV in the 2014 feasibility study).

Note that our model assumes extremely conservative corporate expenses, capex and lower operating costs given movements in the USD/CAD exchange rate.

Recall in Section 4.2.3 above the distinction between full year grade and pro-rata: using these two implied grades and substituting them as year 1 to 10 grades allows us to revise Brucejack’s NAV for these adjusted grades.

The 2014 feasibility study breaks out a relationship between ore grades for years 1 to 10 of mine operation and for the entire 18-year life of the mine. As discount rates will substantially nullify the effect of a pro-rata adjustment on grades of this nature, we have assumed what we believe to be an optimistic 5.37 au g/t on our NAV model for the remaining life of the mine. This figure is derived from our calculations in Section 6.3 of this report.
Once grade assumptions of Pretium’s NAV have are adjusted to our estimate of 5.37g/t, Pretium’s NAV falls to USD -1,917m.

Pretium would need to achieve 8.52g/t to simply break even, assuming an optimistic gold price of $1300/oz.

For background, when applying assumptions used in Pretium’s feasibility study, our NAV results at ~US$1.6b, similar to feasibility study model.
The research presented in the sections above leads us to believe the following:

1. Unless Brucejack can sustain a gold grade of significantly more than 8.98 g/t, the Brucejack mine will not be economically feasible and therefore worthless.

2. Pretium and Snowden disagreed with Strathcona, who believed Brucejack did not exhibit such grades that could be mined in the manner Pretium has inaccurately marketed to shareholders. Our evidence has corroborated Strathcona’s findings.

3. Pretium has managed to report such grades through development acceleration, selective stoping and mining above its mandate.

Another major issue we present to investors is the use of a 5% WACC, which is entirely unrealistic given Pretium’s high leverage at an incredibly high 15% effective interest rate. In reality, we believe Pretium’s WACC would exceed 10%.

7.4. Impairment of debt

Our revised Brucejack’s NAV, supported by the information contained within this report, suggests Pretium’s debt is substantially impaired.

It would be uneconomic to change Brucejack’s mine plan without significant investment, as the mining and milling equipment currently used by Pretium is unsuitable for a low-tonnage high yield mine that would better fit the Cleopatra vein. Significant changes to mine plan would require further investment, as well as disposal of equipment currently in use at Brucejack.

Our mine valuation – coupled with Pretium’s overleveraged balance sheet – lead us to believe Pretium equity is effectively worthless at its current state with a NAV of US-$1.7b.

In this scenario, we believe the most likely outcome is that debtholders will exercise their security and take control of the mine as the company becomes progressively, but quickly, unprofitable.
8. Conclusion

Viceroy believe that Pretium will soon, or may have already, exhausted the accessible high-grade stopes of the Cleopatra vein in the Brucejack mine. The company’s accelerated development schedule and sudden focus on stope inventory and grade control leads us to believe this is the case. The mismatch between the amount of ore mined in environmental filings and company releases further leads us to believe that the overall grade of the mine is far below that projected by the 2014 feasibility study.

The upcoming debt repayments and stream repurchase are the clear motivator for such activities. Viceroy believe it is plausible that Pretium can continue this overmining program in the short term, and would not be put off by Q3 results that, similar to Q2 2018, look great at face value. Evidence suggests these results are entirely unsustainable.

We believe Brucejack will experience the same fate as Pirquitas with all its consequences for Pretium’s shareholders. Management’s track record does not inspire hope, and accordingly we expect more misleading statements to the market.

We value Pretium’s shares at $0 per share based on a revised estimate of the Brucejack mine’s grade, the expectation of further operational issues and managerial incompetence.

While this valuation may be viewed as inflammatory, we believe the collective research within this report and concerns raised by industry experts regarding the Brucejack mine objectively validates a negative NAV value for the project – we would be doing a disservice to report it otherwise.
9. Case Study – Rubicon Minerals

Rubicon Minerals (TSE: RMX) is a Canadian gold-mining company that lives on as a shadow of its former self. The company commenced production in 2015 and did produce some bullion at its flagship Phoenix Gold project located in Red Lake, Ontario.

Phoenix Gold had its first gold pour in July 2015 after a streak of positive news regarding the company. This was not to last.

On October 5, 2015 only 5 months after being reappointed at a company AGM, Rubicon CEO Michael A. Lalonde apparently stepped down without explanation55. On November 3, 2015 underground activities at the Phoenix Gold project were announced as “temporarily suspended” to revise resource estimates56. On January 11, 2016 Rubicon significantly downgraded its mineral resource estimates both indicated and inferred.

The change resulted in a 91% decrease in indicated gold and 86% decrease in inferred resources. Rubicon claims that this error was discovered in the midst of developments in the company’s understanding of the Phoenix Gold F2 deposit’s composition, specifically the spatial distribution of gold within the deposit.

The following figure from its June 2018 corporate presentation illustrates the difference between the two geological interpretations.

---

The company had completely overestimated the continuity of the F2 gold deposit by applying incorrect methodologies to their drill samples.

The 2018 structural interpretation is clearly more complex than both previous iterations and demonstrates an in-depth understanding. What toppled Rubicon was the willingness to market the 2013 interpretation as fact and plan their mine operations as such.

We present this case study as we believe this is exactly what is happening at Pretium with the Cleopatra vein at Brucejack. While Rubicon now appear to be taking a measured and methodical approach to their deposit, this change came far too late for its stakeholders.

10. Independent mineral consultants have expressed discomfort with Pretium's strategy, estimation methodology, project risk, and potential for gold

In order to back test our thesis Viceroy engaged multiple mining firms consisting of experienced and well-regarded mineral consultants to opine on Pretium's bulk sample program and recent operating performance (under NDA). Their quotes are below:

"We are fairly convinced it will be lower grade. I am not so hopeful about the quality of this mine. This is a bit scary because the continuity is only there on a few sections."

"They will make less gold."

"There is random scattering of really high-grade hits and this is influencing the entire sample which is overestimating their entire mine."

"It is strange that they have not revealed the grade of the stockpile."

"Whenever you read a technical report with a bunch of statistical mumbo like in this one, it raises red flags and tells you that they really have no idea what is going on underground."

"There is a high degree of risk with this project."

"I don’t think the estimate is done in a conservative manner. To not put a top cut at all on any of these high grades is an aggressive estimation decision. Additionally, the extreme high grades are likely false because of the assay technique. Combination of no top cut, extending estimate distances and no metallic assay takes conservative elements out of the estimation."

"8% of the tonnage holds 96% of the resource of the project. This is highly suspicious to us."

"I think they’re going to go through stuff quicker and I think they’re eventually going to be forced to mine low grade."