



UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549

DIVISION OF  
CORPORATION FINANCE

August 28, 2013

Via E-mail

David Blaiklock  
Chief Financial Officer  
Primero Mining Corp.  
Suite 1640, One Bentall Centre  
505 Burrard Street, Box 24  
Vancouver, British Columbia, Canada

**Re: Primero Mining Corp.  
Form 40-F for the Year Ended December 31, 2012  
Filed April 2, 2013  
Form 6-K Furnished August 8, 2013  
File No. 001-35278**

Dear Mr. Blaiklock:

We have reviewed your filing and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter within ten business days by amending your filing, by providing the requested information, or by advising us when you will provide the requested response. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your filing and the information you provide in response to these comments, we may have additional comments.

Form 40-F for the Year Ended December 31, 2012

Exhibit 99.2

Notes to the Consolidated Financial Statements

3. Significant accounting policies, page 8

(g) Inventories, page 11

1. We note your revenues from the sale of silver comprise over 20% of your total revenue for the years ended December 31, 2012 and 2011. For your inventory accounting, please advise us of the following:
  - whether you account for your mine production on a joint product or by-product basis;

- explain to us in reasonable detail the basis for your conclusion to treat your production on a joint product or by-product basis, including how you consider the importance of silver to the viability of the mine and the relative sales value of silver to your total metal sales to arrive at your conclusion;
- clearly describe to us the methodology that you use to allocate the costs of conversion in order to value your inventory on a rational and consistent basis in accordance with IAS 2.14.

(h) Mining interests

(ii) Exploration and evaluation expenditure on exploration properties, page 12

2. Your accounting policy states that the capitalization of exploration and evaluation costs incurred ceases when the related mining property has reached operating levels intended by management and once the property is brought into production, the deferred costs are transferred to mining properties. Please tell us how your accounting policy is in compliance with the paragraphs 5(b) and 17 of IFRS 6. Paragraph 5(b) of IFRS 6 requires the entity to stop applying this IFRS after the technical feasibility and commercial viability of extracting a mineral resource are demonstrable. Paragraph 17 of IFRS 6 requires that an exploration and evaluation asset shall no longer be classified as such when the technical feasibility and commercial viability of extracting a mineral resource are demonstrable.

(vi) Depreciation and depletion, page 14

3. Your accounting policy states that you include a portion of mineralization expected to be classified as reserves in the unit-of-production calculation for determining the depreciation and amortization of your mining properties. To enhance our understanding of your accounting policy, please:
- tell us the percentage and amount of measured, indicated and inferred resources that you include in the portion of mineralization expected to be classified as reserves, and tell us whether there have been any changes to your policy;
  - provide us with your history of converting resources into proven and probable reserves;
  - tell us the number of years of historical data that you have used to estimate your projected rates of converting resources to proven and probable reserves.
  - explain to us whether or not and why historical trends are indicative of future conversion rates.
  - if you have a consistent track record of converting resources to proven and probable reserves, please explain the reasons for your success, given that the information you have about resources is significantly less than the information and supporting technical data that you have about proven and probable reserves.

- Tell us the extent to which resources are currently accessible and the extent to which additional capital improvements are required to convert and gain access to resources.
4. To better understand the effect of resources on your depletion expense, please provide the following:
- the amount of depletion expense for each period presented if only proven and probable reserves is included in the depreciable base (i.e., excluding all measured and indicated and all inferred mineral resources from the depreciable base);
  - the amount of depletion expense if only proven and probable reserves plus the portion of measured and indicated resources expected to be converted to mineral reserves (i.e., excluding all inferred mineral resources from the depreciable base);
  - explain to us why and how you determined that your estimates of resources, such as inferred mineral resources, used to calculate your units of production depreciation are reliable, as contemplated by paragraph 4.41 of the Conceptual Framework for Financial Reporting issued by the International Accounting Standards Board.

Exhibit 99.2

Management's Discussion and Analysis of Financial Condition and Results of Operations  
Non-GAAP measure - Cash costs per gold ounce, page 23

5. We note you present a non-GAAP measure of total by-product cash costs per gold ounce produced, computed by deducting by-product silver sales. In calculating this non-GAAP measure, we believe the reduction for by-product revenues is not appropriate because it materially distorts your actual production costs. In this regard, your presentation suggests you incurred lower mining costs for gold than you actually did. We can appreciate your desire to convey the notion that by-product revenues were sufficient to offset your costs to a degree; however, you should consider describing that in a manner so as to avoid adjusting for these items in the calculation of the non-GAAP measure. We believe the significance of by-product revenues can be described textually in a manner that investors can understand without adjusting for them in the non-GAAP measure. Please amend your Form 40-F as appropriate.

Form 6-K Furnished August 8, 2013

Exhibit 99.1 Management's Discussion and Analysis of Financial Condition and Results of Operations  
Review of Operations  
San Dimas mine, page 8

6. In future filings, please expand your disclosure on page 9 to include a brief description of the World Gold Council ("WGC") to enhance an investor's understanding of this organization, its operations, and its role in defining the all-in sustaining cash costs non-

GAAP measure. In your revised disclosure, please explicitly state that WGC is not a regulatory industry organization, and clarify your relationship with WGC, if any. Please provide us with draft disclosure of your planned revisions.

Non-GAAP measure – All-in sustaining costs per gold ounce, page 22

7. We note your inclusion of the non-GAAP measure all-in sustaining cash costs per gold ounce. In future filings, please clarify:
- why this measure is meant to provide more or better information about the costs of producing gold than an IFRS-derived measure (e.g., operating expenses)
  - the nature and method of calculating each of the adjustments made to total cash costs to arrive at this measure (i.e. sustaining capital expenditures, exploration and evaluation costs and reclamation cost accretion). Explain also whether each adjustment can be determined from one or more income statement line items.

Please provide us with draft disclosure of your planned changes.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes the information the Securities Exchange Act of 1934 and all applicable Exchange Act rules require. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

In responding to our comments, please provide a written statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filing; and
- the company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

David Blaiklock  
Primero Mining Corp.  
August 28, 2013  
Page 5

You may contact Suying Li at (202) 551-3335 or Nasreen Mohammed at (202) 551-3773 if you have questions regarding comments on the financial statements and related matters.

Sincerely,

/s/Tia L. Jenkins

Tia L. Jenkins  
Senior Assistant Chief Accountant  
Office of Beverages, Apparel, and  
Mining