



DIVISION OF  
CORPORATION FINANCE

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

September 25, 2012

Via E-mail

Mr. Jeffrey Finkelstein  
Chief Financial Officer  
Argentex Mining Corporation  
Suite 835  
1100 Melville Street  
Vancouver, British Columbia, V6E 4A6

**Re: Argentex Mining Corporation**  
**Form 20-F for the Year Ended January 31, 2012**  
**Filed May 10, 2012**  
**File No. 000-49995**

Dear Mr. Finkelstein:

We have completed our review of your filing. We remind you that our comments or changes to disclosure in response to our comments do not foreclose the Commission from taking any action with respect to the company or 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. 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 rules require.

Sincerely,

/s/Tia L. Jenkins

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