



DIVISION OF
CORPORATION FINANCE

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

August 9, 2010

Stephen McCommon
Chief Financial Officer
CDEX Inc.
4555 South Palo Verde Road, Suite 125
Tucson, AZ 85714

Re: CDEX Inc.
Preliminary Proxy Statement on Schedule 14A
Filed July 29, 2010
File No. 000-49845

Dear Mr. McCommon:

We have limited our review of your filing to the issues we have addressed in our 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.

Corporate Governance and Nomination Committee

1. We note your revisions in response to prior comment 3 and your disclosure that different people serve as your chief executive officer and chairman of the board. Please disclose the reasons for separating those positions and the reasons you believe that this leadership structure is the most appropriate structure at the time of this filing.

Summary Compensation Table

2. Given your revisions regarding modified options added in response to prior comment 4, please revise to provide the disclosures required by Item 402(o)(2) of Regulation S-K.

Approval of amendment to certificate of incorporation

3. Please expand your revisions in response to prior comments 5 and 7 to clarify the impact of the “restructuring.” For example:
- Disclose the material terms of the notes and “accounts payable” outstanding prior to the transactions you mention, such as the dollar amount of principal and interest, conversion rate, interest rate and the identity of the holder of the debt;
 - Disclose the material terms of each of the new securities you issued and the number of shares each new noteholder may acquire upon conversion or exercise. Ensure that such disclosure is clearly reconcilable to the information in the last table of this section. In this regard, given the conversion and warrant rights you say Gemini has, it is unclear how you determined it has the right to acquire only 22,680,651.28 shares. It is similarly unclear how you derived the 25,011,105 share number;
 - You disclose that that warrant held by Gemini increased “because of the restructuring.” Clarify how the restructuring caused that increase; and
 - With a view toward disclosure, tell us whether the other investors who acquired your notes are subject to an ownership limitation similar to the one disclosed here for Gemini.

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 all information required under the Securities Exchange Act of 1934 and that they have provided all information investors require for an informed investment decision. 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.

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Please contact Joseph McCann at (202) 551-6262 or Geoffrey Kruczek, Senior Attorney,
at (202) 551-3641 with any questions.

Sincerely,

Russell Mancuso
Branch Chief