



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

June 24, 2010

Mr. Brent L. Larson  
Chief Financial Officer  
Neoprobe Corporation  
425 Metro Place North, Suite 300  
Dublin, Ohio 43017-1367

**RE: Neoprobe Corporation  
Form 10-K for the fiscal year ended December 31, 2009  
Filed March 31, 2010  
File No. 0-26520**

Dear Mr. Larson:

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 10-K for the Fiscal Year Ended December 31, 2009

Cautionary Note Regarding Forward-Looking Statements, page 2

1. We note your statement that your report contains forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act. In your future filings, as applicable, please reference this statute only to the extent that you meet the eligibility requirements of these sections. In this regard, we note your disclosure on page 29 that you are a “penny stock” issuer.

Results of Operations, page 37

2. We note your disclosure on page 37 that FY2009 revenue increased from \$7.6 million to \$9.5 million primarily due to increased unit prices. Please provide us with a narrative discussion of the extent to which this revenue increase was attributable to increases in prices or to increases in the volume or amount of goods. If your price increases were due to selling upgraded products such as those that include wireless functionality, please include that in your explanation. Please also confirm that in future filings, as applicable, you will provide the disclosure required by Item 303(a)(3)(iii) of Regulation S-K.

Directors, page 49

3. Please confirm that in future filings, as applicable, you will revise to discuss briefly the specific experience, qualifications, attributes or skills that led to the conclusion that each director should serve on your board given your business and structure. Please refer to Item 401(e) to Regulation S-K.

Notes to the Consolidated Financial Statements, page F-8

Note 8. Convertible Securities, page F-24

4. We note that associated with a change in fiscal 2009 in the terms of the Montaur Notes, the Preferred Stock and the Montaur Warrants the company recorded a \$16.2 million non-cash loss on extinguishment of debt and reclassified \$27.0 million in derivative liabilities to additional paid-in capital. To this regard, please address the following:
  - For each instrument tell us the terms that changed and the amounts and assumptions used to determine the changes qualified as a debt extinguishment.

Please reference the authoritative accounting literature you believe supports your conclusions.

- Provide us with the components of the \$16.2 million in non-cash loss on the extinguishment as it relates to the notes, stock and warrants individually.
- Provide us with the components of the \$27.0 million in derivative liabilities reclassified to additional paid-in capital and reconcile that amount to the \$38.0 million as presented in your Consolidated Statement of Stockholders' Deficit under the caption "Effect of change in terms of notes payable, preferred stock and warrants.

Signatures page

5. In your future filings, please include the introductory sentence before the signatures of the officers and directors. Refer to Form 10-K. Also, please indicate parenthetically who has signed your filing in their capacity as principal accounting officer or controller.

Exhibits, page 63

6. Please file the following agreements as material contracts or tell us why you believe they are not required filings pursuant to Item 601(b) of Regulation S-K:
  - your agreement with Cardinal Health conferring exclusive distribution rights of Lymphoseek in the United States, which you reference on page 13;
  - your Manufacture and Supply Agreement with Reliable for producing the active pharmaceutical ingredient in Lymphoseek, which you reference on page 14; and
  - your Biopharmaceutical Development and Supply Agreement with Laureate Pharma, Inc., which you reference on pages 10, 14 and 35.

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;

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- 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.

You may contact Dennis Hult, Staff Accountant, at (202) 551-3618 or me at (202 551-3603) if you have questions regarding comments on the financial statements and related matters. Please contact Joeseeph McCann at (202) 551-6262 or Tim Buchmiller at (202) 551-3635 if you have questions on any other comments.

Sincerely,

Jay Webb  
Reviewing Accountant