



DIVISION OF  
CORPORATION FINANCE

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549-4628

November 16, 2010

Mr. B.F. Weatherly  
Chief Financial Officer  
Callon Petroleum Company  
200 North Canal Street  
Natchez, Mississippi 39120

**Re: Callon Petroleum Company  
Form 10-K for the Fiscal Year Ended December 31, 2009  
Filed March 12, 2010  
Response Letter Dated October 22, 2010  
File No. 001-14039**

Dear Mr. Weatherly:

We have reviewed your response 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

Business and Properties, page 3

Acquisitions and Divestitures, page 4

1. Your response to comment four in our September 28, 2010 letter states that you estimated "type curve" parameters for Haynesville recoverable reserves estimation.

- As “recoverable reserves” are not categorized per the definitions in Rule 4-10(a) of Regulation S-X, please explain how you have complied with the Instruction to Item 1202 pertaining to the non-disclosure of estimates of oil or gas resources other than reserves.
- Please furnish to us decline curves that illustrate the values for IP, hyperbolic exponent and initial decline rate as well curves for the Haynesville wells you have drilled to date; and describe the methods you used to establish the 6% terminal decline rate.
- Please reconcile by line item the \$9.9 million and \$8.8 million well costs with the costs you actually incurred.

Please direct these items and those requested below to:

Ronald M. Winfrey, P.E.  
Petroleum Engineer  
Division of Corporation Finance  
U.S. Securities & Exchange Commission  
100 F Street, N.E.  
Washington, DC 20549-4628

Oil and Gas Properties Summary, page 5

2. Your response to prior comment five indicates that you attributed Medusa reserves to your mid-2009 “subsurface technical re-evaluation of the Medusa Field”. Please furnish to us engineering and geological exhibits that support your Medusa prove reserve estimates; and explain the extent to which you utilized seismic analysis including productive area estimation in calculating these quantities.

Financial Statements

Note 18 – Supplemental Oil and Gas Reserve Data (Unaudited), page 79

Standardized Measure, page 81

3. In our prior comment 10 we asked for an illustration of your adjustments to bench mark pricing for use in the standardized measure. The bench mark prices implicit in your presentation appear to differ from West Texas Intermediate and Henry Hub. Please tell us the source of these bench mark prices.

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4. We note the lease fuel designation for the Medusa and Mobile 908 properties' natural gas prices. Please tell us the volumes of proved lease fuel reserves you have claimed and your treatment of these reserves in the standardized measure.

Closing Comments

You may contact Craig Arakawa at (202) 551-3650, or Lily Dang at (202) 551-3867 if you have questions regarding comments on the financial statements and related matters. You may contact Ronald Winfrey, Petroleum Engineer, at (202) 551-3704 with questions about engineering comments. Please contact me at (202) 551-3686 with any other questions.

Sincerely,

Karl Hiller  
Branch Chief