



DIVISION OF
CORPORATION FINANCE

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549-7010

February 17, 2009

Mr. Alford B. Neely
Chief Financial Officer
CREDO Petroleum Corporation
1801 Broadway, Suite 900
Denver, Colorado 80202-3837

Re: CREDO Petroleum Corporation
Form 10-K for the Fiscal Year Ended October 31, 2008
Filed January 14, 2009
Schedule 14A
Filed February 5, 2009
File No. 000-08877

Dear Mr. Neely:

We have reviewed your filings and have the following comments. We think you should amend your document in response to these comments. If you disagree, we will consider your explanation as to why our comment is inapplicable or an amendment is unnecessary. Please be as detailed as necessary in your explanation. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure. After reviewing this information, we may raise additional comments.

Please understand that the purpose of our review process is to assist you in your compliance with the applicable disclosure requirements and to enhance the overall disclosure in your filing. We look forward to working with you in these respects. We welcome any questions you may have about our comments or any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Form 10-K for the Fiscal Year Ended October 31, 2008

Properties, page 12

1. We note your statement that, "[t]here are 14 non-experimental Calliope wells. As a group, those wells were producing a total of 88 thousand cubic feet of gas per day at the time Calliope was installed. Since Calliope was installed, those wells have produced 0.0 billion cubic feet of gas and they now have estimated ultimate

(8/8ths) Calliope reserves totaling 00.0 billion cubic feet of gas." *Emphasis*

added. Please revise your disclosure to accurately indicate the production and estimated Calliope reserves.

Management's Discussion and Analysis of Financial Condition and Results of Operations, page 19

Liquidity and Capital Resources, page 20

2. We note on pages 3 and 20 you define the non-GAAP measure, "EBITDA" as earnings before *unrealized gains/losses on derivative contracts*, interest, taxes, depreciation, depletion and amortization. However, based on your reconciliation of EBITDA to net income, it appears this measure represents earnings before interest, taxes, depreciation, depletion and amortization, an appropriate use of the acronym. Please correct your definition of this non-GAAP measure, to correspond to the reconciliation.

Quantitative and Qualitative Disclosures About Market Risk, page 28

3. We note your disclosure stating that your open derivatives of 830 MMBtus covered production months November 2008 through October 2009. Please disclose what percentage this volume is of your expected production for fiscal year 2009. To the extent this percentage represents a significant portion of your expected production for the upcoming year, please provide both the quantitative and qualitative disclosures required by Item 305, as it pertains your commodity price risk.

Controls and Procedures, page 50

4. We note your disclosure indicating that your certifying principal officers have evaluated the effectiveness of your disclosure controls and procedures *and* your internal control over financial reporting. However, you have not adequately differentiated between these terms, nor have you presented the conclusion these officers reached, based on their assessment, of the effectiveness of your internal control over financial reporting. Further, it is unclear whether the evaluations were performed as of October 31, 2008.

Item 307 of Regulation S-K requires you to disclose the conclusions of the executive officers regarding the effectiveness of the disclosure controls and procedures. In addition to that disclosure, management is required to present its annual report on internal control over financial reporting in the Form 10-K. Item 308 of Regulation S-K outlines all the information that must be contained in this report. Please amend your Item 9A disclosure to separate the representations about disclosure controls and procedures required by Item 307, from the

representations required to be included in management's annual report on internal control over financial reporting by Item 308.

Please be sure to clarify whether your officers completed an evaluation of the effectiveness of your disclosure controls and procedures, and an assessment of your internal control over financial reporting, as of your fiscal year-end, October 31, 2008, and to state their conclusions about the effectiveness of both disclosure controls and procedures, and internal control over financial reporting, to comply with Items 307 and 308 of Regulation S-K.

5. We note your disclosure stating "There were *no significant* changes in the Company's internal control over financial reporting that occurred during the fourth quarter that has materially affected, or is reasonably likely to materially effect, the Company's internal control over financial reporting."

The guidance in Item 308(c) of Regulation S-K requires that you disclose any change, rather than only significant change, in internal control over financial reporting that occurred during the fourth quarter that materially affected, or is reasonably likely to materially affect, your internal control over financial reporting.

Certifications, exhibits 31.1 and 31.2

6. We note, in both certifications, you changed the language in paragraph 4(b) from "to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles" to "to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared." Please amend your certifications, in particular paragraphs 1, 2, 4, and 5, to match the exact form set forth in Item 601(b)(31) of Regulation S-K.

Schedule 14A filed February 5, 2009

Components of Executive Compensation, page 9

7. We note your reliance on "salary levels in effect for comparable companies within and without [y]our industry" and "external market data" which you "review periodically to determine the competitiveness of the Company's compensation arrangements for its executive officers and other significant employees." Please provide information regarding the source of salary levels and

the external market data upon which you relied, including the components of the information and the component companies.

Annual Cash Bonuses and Incentives, page 9

8. Provide your targeted “production volume, reserve replacement, finding costs, internal and external prospect generation, promoting acquisitions, dispositions or other transactions that contribute to the Company’s success and the Company’s overall performance” (collectively “targets”) in addition to a description of the specific levels of achievement of each named executive officer relative to the targets as well as any additional information pertaining to each individual’s performance that the compensation committee considered in determining specific payout levels for 2008. See Item 402(b)(1) of Regulation S-K.

If you believe disclosing the targets would result in competitive harm such that the targets could be excluded properly under Instruction 4 to Item 402(b) of Regulation S-K, please provide on a supplemental basis a detailed explanation supporting your conclusion. If disclosure of quantitative or qualitative performance-related factors would cause competitive harm, you are required to discuss how difficult it will be for you to achieve the target levels or other factors. See Instruction 4 to Item 402(b) of Regulation S-K.

Long-Term Incentive Compensation, page 9

9. We note your statement that you use the company’s stock option plan to incentivize your personnel to fulfill the long-term goal of maximizing shareholder value. Please state how your compensation committee makes the determination as to when awards are granted and how many are to be granted.

Chief Executive Officer, page 10

10. We note your statement that “the Compensation Committee believes that Mr. Huffman’s total compensation package ranks at the low end of the compensation scale.” Please revise to clarify the source of the “compensation scale,” and the data and companies used to create a compensation scale on which your compensation committee relied.

Summary Compensation Table, page 10

11. We note your statement that “[n]o other executive officers of the Company had annual compensation and/or long-term compensation, which when aggregated, was in excess of \$100,000 for the fiscal year ended October 31, 2008.” Please revise to confirm that none of your executive officers, other than the named executive officers, had total compensation in excess of \$100,000 for the fiscal year ended October 31, 2008. In the event any you cannot provide this confirmation, please revise your disclosure to include the executive officer(s) with total compensation in excess of \$100,000 as named executive officers in your executive compensation disclosure.

Closing Comments

Please respond to these comments within 10 business days or tell us when you will provide us with a response. Please furnish a letter that keys your responses to our comments and provides any requested information. Detailed letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your responses to our comments.

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 connection with responding to our comments, please provide, in writing, a 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.

In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Corporation Finance in our review of your filing or in response to our comments on your filing.

Mr. Alford B. Neely
CREDO Petroleum Corporation
February 17, 2009
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You may contact Jenifer Gallagher at (202) 551-3706 or Karl Hiller, Branch Chief, at (202) 551-3686 if you have questions regarding comments on the financial statements and related matters. Please contact Doug Brown at (202) 551-3265, Mike Karney at (202) 551-3847 or me at (202) 551-3740 with any other questions.

Sincerely,

H. Roger Schwall
Assistant Director