



DIVISION OF  
CORPORATION FINANCE  
MAIL STOP 7010

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
100 F Street, N.E.  
WASHINGTON, D.C. 20549

January 30, 2006

Mr. Lloyd T. Rochford  
President and Chief Executive Officer  
Arena Resources, Inc.  
4920 South Lewis Avenue, Suite 107  
Tulsa, Oklahoma 74105

**Re: Arena Resources, Inc**  
**Form S-3**  
**Filed October 17, 2005**  
**File No. 333-127741**  
**Amendment No. 1 to**  
**Form 10-KSB for the year ended December 31, 2004**  
**Filed October 17, 2005**  
**File No. 1-316757**

Dear Mr. Rochford:

We have reviewed your filings and have the following engineering comments. Where indicated, we think you should revise your document in response to these comments. If you disagree, we will consider your explanation as to why our comment is inapplicable or a revision 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-KSB/A for the Fiscal Year Ended December 31, 2004 and Form S-3/A-1 filed on October 17, 2005

1. Please include a risk factor that states, if true, you estimate that approximately 25% of your proved reserves are from secondary recovery projects that you have not implemented or, if implemented, have not responded to water injection. Explain in detail, if true, that the timing of beginning and completing the unfinished projects is uncertain and there is no way for you to know in advance if these projects will be successful. Please continue to include similar disclosure in future filings until the reserves attributable to secondary recovery projects are fully developed and are responding to water injection as proved producing reserves.

#### Closing Comments

As appropriate, please amend your filing and respond to these comments within 10 business days or tell us when you will provide us with a response. You may wish to provide us with marked copies of the amendment to expedite our review. Please furnish a cover letter with your amendment that keys your responses to our comments and provides any requested information. Detailed cover letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your amendment and responses to our comments.

We will consider a written request for acceleration of the effective date of the registration statement as confirmation of the fact that those requesting acceleration are aware of their respective responsibilities under the Securities Act of 1933 and the Securities Exchange Act of 1934 as they relate to the proposed public offering of the securities specified in the above registration statement. We will act on the request and, pursuant to delegated authority, grant acceleration of the effective date.

We direct your attention to Rules 460 and 461 regarding requesting acceleration of a registration statement. Please allow adequate time after the filing of any amendment for further review before submitting a request for acceleration. Please provide this request at least two business days in advance of the requested effective date.

Mr. Lloyd T. Rochford  
Arena Resources, Inc.  
January 30, 2006  
Page 3

Please contact Jonathon Duersch at (202) 551-3719 or Jill Davis, Branch Chief, at (202) 551-3683 with any questions relating to accounting matters. Please contact James Murphy at (202) 551-3703 with any questions relating to engineering matters. Please contact Melinda Kramer at (202) 551- 3726 or Tangela Richter, Branch Chief, at (202) 551- 3685 with any other questions.

Sincerely,

H. Roger Schwall  
Assistant Director

CC: Ken Dornblaser, Esq  
Melinda Kramer  
Tangela Richter  
Jill Davis