

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

January 11, 2010

Ms. Karen L. Gallagher Chief Financial Officer Syntroleum Corporation 5416 S. Yale Suite 400 Tulsa, Oklahoma 74135

Re: Syntroleum Corporation

Form 10-K for Fiscal Year Ended December 31, 2008

Filed March 2, 2009 File No. 000-21911

Dear Ms. Gallagher:

We have completed our review of your filing and have no further comments at this time.

Sincerely,

H. Roger Schwall Assistant Director