



DIVISION OF
CORPORATION FINANCE

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

April 9, 2014

Via E-Mail

Mr. Thomas T. McEntire
Chief Financial Officer
Geospace Technologies Corporation
7007 Pinemont Drive
Houston, Texas 77040

**Re: Geospace Technologies Corporation
Form 10-K for the Fiscal Year Ended September 30, 2013
Filed November 22, 2013
Form 10-Q for the Quarterly Period Ended December 31, 2013
Filed February 6, 2014
File No. 001-13601**

Dear Mr. McEntire:

We have reviewed your response letter submitted March 28, 2014 and filings 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 September 30, 2013

Item 8. Financial Statements

Note 14. Stockholders' Equity, page F-18

1. We refer to your response to prior comment 2. Your response indicates that you granted options under an expired stock option plan. While we see that you determined that there was no modification of the instruments, please help us more fully understand how your

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accounting for the options granted while the plan was expired is appropriate. In that regard, please tell us how you identified the grant date as defined in ASC 718 and explain why you believe your overall accounting for the options, including during the period when the plan was expired, is appropriate in GAAP.

Form 10-Q for the Quarterly Period Ended December 31, 2013

2. Please tell us when you will file the amendment to the Form 10-Q, as referred to in your responses to prior comments 4 and 5.

You may contact Jeanne Bennett, Staff Accountant, at (202) 551-3606 or Gary Todd, Reviewing Accountant, at (202) 551-3605 if you have questions regarding these comments. In this regard, do not hesitate to contact me at (202) 551-3676.

Sincerely,

/s/Gary Todd for

Brian Cascio
Accounting Branch Chief