

May 9, 2006

VIA EDGAR AND FACSIMILE

Mr. John Cash
Branch Chief
Securities and Exchange Commission
Division of Corporation Finance
100 F Street, NE
Washington, D.C. 20549-0405

**Re: Mitcham Industries, Inc.
Form 10-K for the fiscal year ended January 31, 2005
File No. 0-25142**

Dear Mr. Cash:

On April 25, 2006, Mitcham Industries, Inc. (the "Company") received the comments of the staff of the Division of Corporation Finance (the "Staff") of the Securities and Exchange Commission (the "Commission") to Form 10-K for the fiscal year ended January 31, 2005 (the "2005 Form 10-K").

The following responses are for the Staff's review. For your convenience, we have repeated in bold type each comment of the Staff exactly as given in the Staff's comment letter.

Form 10-K for the fiscal year ended January 31, 2005

Statement of Consolidated Cash Flows
Lease pool equipment and new equipment sales

- 1. We have reviewed the comparison of summarized annual consolidated statements of cash flows, original vs. restated as well as the additional information sent to us via facsimile on April 25, 2006. As of the date of this letter, we are awaiting further information regarding your 2004 and 2005 restated amounts. In light of your request that we assist you in meeting your filing timetable for your 2006 Form 10-K we will separately address any additional concerns or comments we may have on your 2004 and 2005 restated amounts once you have provided us with the requested additional information.**

MITCHAM INDUSTRIES INC.
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Response: The Company has supplementally provided to the Staff the additional information regarding its 2004 and 2005 restated amounts.

Note I — Organization and Summary of Significant Accounting Policies — Seismic Equipment Lease Pool. page F-8

2. Based on your response to prior comment three we have the following additional comments:

- We note your policy regarding the removal of assets that are fully depreciated from your books is, “if an asset is fully depreciated and is still expected to generate revenue, then the asset will remain on [your] books. However, if a fully depreciated asset is not expected to have any revenue generating capacity, then [you] will remove the asset from [your] books,” We also note that you are “unable to determine whether a particular asset is generating revenues.” We assume therefore that your policy regarding the removal of assets that are fully depreciated from your books is done at the “major category” of assets level rather than at an individual asset level. Please ensure your stated policy in future filings is clear. Also, please expand your policy to discuss when and how you assess your lease pool assets to determine whether your fully depreciated assets are still generating revenue.

Response: The Company will ensure that its stated policy regarding the removal of assets that are fully depreciated from its books is clear in future filings. The Company will also expand its policy to discuss when and how the Company assesses its lease pool assets to determine whether its fully depreciated assets are still generating revenue.

- We note that at January 31, 2005 you had \$24.3 million of assets on your books which were fully depreciated. We assume that you will revise your January 31, 2005 balance sheet to comply with your stated policy regarding the removal of assets that are fully depreciated but not expected to have any revenue generating capacity.

Response: The \$24.3 million in assets on our books at January 31, 2005 consists of assets that are fully depreciated and are expected to have revenue generating capacity. Any assets that are fully depreciated but not expected to have any revenue generating capacity have previously been removed from and are not reflected on our balance sheet.

- **Expand Management's Discussion and Analysis to quantify the amount of gross assets which were fully depreciated but still generating revenue at January 31, 2005 and January 31, 2006. We believe that this disclosure will enhance an investors understanding of your results of operations as well as your liquidity.**

Response: We will expand Management's Discussion and Analysis to disclose that at January 31, 2005 and January 31, 2006, approximately \$24.3 and \$41.1 million, respectively, of our lease pool assets were fully depreciated but still expected to generate revenue.

- **We note that you have recorded an impairment charge relating to your lease pool in fiscal 2006. In your disclosure regarding this impairment, please ensure that you identify the nature of the asset impaired (the major category of assets impaired) and you include all of the disclosures required by paragraph 26 of SFAS 144.**

Response: Of the \$0.6 million impairment charge relating to our lease pool in fiscal 2006, \$0.4 million was attributable to land systems, cables, geophones and land peripherals, \$0.1 million was impaired in marine and other equipment, and \$0.1 million for slow moving and obsolete lease pool inventory. We will include this disclosure in our 2006 Form 10-K and will also include therein all of the disclosures required by paragraph 26 of SFAS 144.

Should the Staff have any questions or comments, please contact the undersigned at 281.353.4475 or Michael A. Pugh, Chief Financial Officer of Mitcham Industries, Inc. at the same number.

Very truly yours,

MITCHAM INDUSTRIES, INC.

By: /s/ Billy F. Mitcham, Jr.
Billy F. Mitcham, Jr.
President