

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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PETROLEUM GEO-SERVICES INC.  
and  
ION GEOPHYSICAL CORPORATION  
AND ION INTERNATIONAL S.A.R.L.  
Petitioners

v.

WESTERNGECO LLC  
Patent Owner

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Case No. IPR2014-00688<sup>1</sup>  
U.S. Patent No. 7,080,607

**PETITIONER'S PETROLEUM GEO-SERVICES INC.'S REPLY**

David I. Berl, Reg. No. 72,751  
Jessamyn S. Berniker, Reg. No. 72,328  
Thomas S. Fletcher, Reg. No. 72,383  
Christopher A. Suarez, Reg. No. 72,553  
WILLIAMS & CONNOLLY LLP  
725 12th St., NW  
Washington, DC 20005  
Telephone: 202-434-5000  
Fax: 202-434-5029

Counsel for Petitioner, Petroleum Geo-Services Inc.

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<sup>1</sup> Case IPR2015-00567 has been joined with this proceeding.

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### CASES

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## **OTHER AUTHORITIES**

37 C.F.R. § 42.100(b) .....	2
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