## UNITED STATES PATENT AND TRADEMARK OFFICE

## BEFORE THE PATENT TRIAL AND APPEAL BOARD

BAKER HUGHES INCORPORATED and
BAKER HUGHES OILFIELD OPERATIONS, INC.,
Petitioners

v.

PACKERS PLUS ENERGY SERVICES, INC.
Patent Owner

Case IPR2016-00598 Patent 7,861,774

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## PETITIONERS' SUR-SURREPLY

In footnote 2 of its Surreply, Rapid Completions LLC ("RC") cites two sections of the second deposition of Petitioners' expert, Dr. Daneshy (Ex. 2053)—62:4-7 and 60:11-61:10—as supporting its contention that "Even Dr. Daneshy acknowledged that there were no arguments or evidence submitted with the Petition to support this theory [that Ellis encourages a POSITA to remove the casing from a multi-stage fracturing system to avoid problems like screen-out]." But as Dr. Daneshy explained in the balance of his answer on page 62, which RC did not cite, (1) screen-out was not an issue to discuss when addressing Thomson and Ellsworth because Thomson did not use proppant (which is what causes screenout), and (2) he testified about screen-out in his second declaration because Mr. McGowen raised the issue:

- Q. The issue of screening out through perforations was not discussed in your original report, right?
- A. That's right. In the original report, I was trying to respond to the question, having somebody reading Thomson's paper and somebody -- I mean, reading the Ellsworth paper, would he have come up with the idea of combining them into an open-hole completion. And my answer was yes.

Let me also point out something else here. Thomson's paper involved fracture acidizing, and in that paper there was no proppant to screen out. So in that particular paper, the question of screening out or not screening out was not part of the discussion. This came



up, that whole subject came up after Mr. McGowen presented his declaration.

At that point the question was: Could you install Thomson's system together with Ellsworth's packer in an open-hole and fracture it? And my answer was yes then, and it is yes now.

Ex. 2053 at 62:4-23 (emphasis added). In addition, earlier in testimony that RC did not cite, Dr. Daneshy noted that his discussion of the screen-out issue was prompted by Mr. McGowen's discussion of it, and was otherwise obvious and trivial. Ex. 2053 at 61:11-62:3.

Furthermore, on page 4 of its Surreply, RC cites lines 11-22 of page 89 of Dr. Daneshy's deposition as if that testimony concerns perforation-spacing/density or otherwise supports RC's argument that a POSITA would not have attempted open-hole muti-stage fracturing because the lack of casing prevents a POSITA from controlling the fracture initiation points. It does not.

Instead, as the testimony reveals, Dr. Daneshy was merely asked whether, prior to 2001, a person of skill in the art would try and avoid "complex fractures." He responded, "Yes, when we fractured vertical wells, we did not want to create complex fractures." Ex. 2053 at 89:11-22. Dr. Daneshy was not asked whether the pre-2001 desire not to create "complex fractures" "when we fractured vertical wells" required the use of any particular perforation spacing or density in casing.



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Moreover, when Dr. Daneshy used the term "complex" in his testimony,

which RC then re-used in its cited questions, Dr. Daneshy explained that the term

was one that the industry uses today to refer to the result—today—of creating "a

hundred fractures every 50 feet" or "20, 30, 40 of these together." Ex. 2053 at

87:4-23. RC did not ask Dr. Daneshy whether such "complex" fractures resulted

in the "reduced production and screenouts" that RC characterized as "[t]hese

problems" in its Surreply page 4 argument.

Furthermore, Dr. Daneshy testified about fracture spacing—which is the

concept RC is arguing drives perforation spacing (see POR at 17; Ex. 2034 at

24:20-25:10) on Surreply page 4—and explained that, while there may have been a

handful of experts in the entire world who would have appreciated the issue of

close fractures potentially growing into each other, a POSITA likely would not

have. Ex. 2053 at 73:8-75:15.

May 2, 2017

/Mark T. Garrett/

Mark T. Garrett



## **CERTIFICATE OF SERVICE**

Pursuant to 37 C.F.R. § 42.6(e), the undersigned certifies that on May 2, 2017, a complete copy of PETITIONERS' SUR-SURREPLY was served on Patent Owner's Exclusive Licensee via email (by consent), as follows:

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