### UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

**BAKER HUGHES INCORPORATED** and

BAKER HUGHES OILFIELD OPERATIONS, INC.,

**Petitioners** 

 $\mathbf{v}_{\bullet}$ 

PACKERS PLUS ENERGY SERVICES, INC.,

**Patent Owner** 

*Inter Partes* Review No. IPR2016-00598 Patent 7,861,774

PETITION FOR INTER PARTES REVIEW UNDER 35 U.S.C. § 312



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## **Petitioner's Exhibit List**

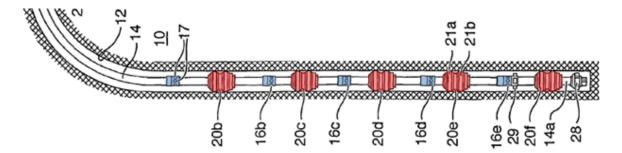
Exhibit	Description
1001	U.S. Patent No. 7,861,774 ("the '774 Patent")
1002	D.W. Thomson, et al., Design and Installation of a Cost-Effective Completion System for Horizontal Chalk Wells Where Multiple Zones Require Acid Stimulation, SPE (Society for Petroleum Engineering) 37482 (1997) ("Thomson")
1003	B. Ellsworth, et al., Production Control of Horizontal Wells in a Carbonate Reef Structure, 1999 Canadian Institute of Mining, Metallurgy, and Petroleum Horizontal Well Conference ("Ellsworth")
1004	U.S. Patent No. 5,449,039 ("Hartley")
1005	Declaration of Ali Daneshy, Ph.D.
1006	KATE VAN DYKE, FUNDAMENTALS OF PETROLEUM ENGINEERING (4th ed. 1997)
1007	RON BAKER, A PRIMER OF OIL WELL DRILLING (5th ed. (revised) 1996)
1008	U.S. Patent No. 4,099,563 ("Hutchison")
1009	U.S. Patent No. 5,375,662
1010	U.S. Patent No. 6,257,338
1011	Excerpts of Prosecution History of the '774 Patent
1012	U.S. Provisional Application No. 60/404,783
1013	Excerpts of Prosecution History of U.S. Patent No. 7,134,505 ("the '505 Patent")
1014	Declaration of Christopher D. Hawkes, Ph.D., P.Geo., regarding the proceedings of the 7th One-Day Conference On Horizontal Well Technology Operational Excellence (Canada November 3, 1999) (including Ex. 1003 at 102-110)



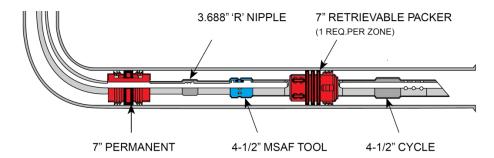
Pursuant to 35 U.S.C. § 312 and 37 C.F.R. § 42.100 *et seq.*, Baker Hughes Incorporated and Baker Hughes Oil Field Operations, Inc. ("Petitioners") request *inter partes* review of U.S. Patent No. 7,861,774 ("the '774 Patent," Ex. 1001), which issued January 4, 2011. The Board is authorized to deduct any required fees from Norton Rose Fulbright US LLP Deposit Account 50-1212/11508227.

## I. INTRODUCTION

The '774 Patent's purported invention was a combination of ball-actuated sliding sleeves [blue] and multi-element packers [red] for selectively treating or "stimulat[ing]" zones in an oil well, such as by "frac'ing" or "acidizing."



But these systems were known before 2001, the earliest claimed priority date. Petitioners' primary reference, Thomson, described such a system in 1997:



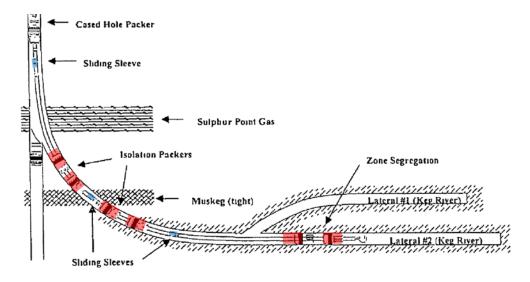
While Thomson's figure shows one ball-actuated sliding sleeve [blue] (which it called a "MSAF tool"), its text is clear that "[u]p to 9 MSAF tools [blue] can be



run in the completion with isolation of each zone being achieved by hydraulic-set retrievable packers [red] that are positioned on each side of a MSAF tool [blue]."

Patent Owner may attempt to rely on several purported distinctions over the prior art during this proceeding—such as the use of its system in an open (*i.e.*, uncased) hole, the "solid body" nature of its packers, or setting packers without also setting slips—but all three fail.

First, it would have been obvious to use Thomson's system in open holes. Ellsworth, for example, was already using a similar system in an open hole:



Ellsworth explained that, by 1999, "[o]pen hole completions ha[d] been the accepted practice for horizontal wells [in some regions]."

Second, Thomson's packers are solid body packers.

Third, setting packers without also setting slips was obvious. In the same open holes in which it was obvious to use Thomson's system, Ellsworth was already using solid body packers that did not include slips.



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