

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

**EXCLUSIVE LICENSEE RAPID COMPLETIONS LLC'S
SURREPLY¹**

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¹ On March 31, 2017, Respondent requested authorization to file a motion to strike Petitioners' reply and new supporting evidence or in the alternative submit a surreply and supplemental expert declaration. On April 6, 2017, the Board denied Respondent's request to file a motion and authorized a 5 page surreply responsive to sections II and III of the reply that is not accompanied by an expert declaration.

Exhibit List	
Exhibit	Description
2001	A. Casero, <i>Open Hole Multi-Stage Completion System in Unconventional Plays: Efficiency, Effectiveness and Economics</i> , SPE 164009 (2013)
2002	Encyclopedia of Hydrocarbons, Chapter 3.1: Upstream technologies
2003	D. Lohoefer, Comparative Study of Cemented versus Uncemented Multi-Stage Fractured Wells in the Barnett Shale, SPE 135386, Society of Petroleum Engineers (2010)
2004	R. Seale et al., Effective Stimulation of Horizontal Wells—A New Completion Method, SPE 106357, Society of Petroleum Engineers (2006)
2005	Exploration and Development, Alberta Oil Magazine
2006	Leading the Way: Multistage fracking pioneer Packers Plus plays major role in cracking the tight oil code, Canadian OilPatch Technology Guidebook (2012)
2007	Financial Post, “Entrepreneur of the Year: National Winner”
2008	Innovation—Groundbreaking Innovation in Calgary, Calgary Herald (Feb. 12, 1014)
2009	J. Chury, Packers Plus Technology Becoming the Industry Standard, The Oil Patch Report (Dec. 2010/Jan. 2011)
2010	P. Roche, Open-Hole or Cased and Cemented, New Technology Magazine (Nov. 2011)
2011	R. Ghiselin, Qittitut Consulting, Sleeves vs. Shots—The Debate Rages (Aug. 2011)
2012	Van Dyke, Kate, “Fundamentals of Petroleum,” Fourth Ed. (1997)
2013	“Proven Performance: Read how Packers Plus systems and solutions have delivered results around the world,” Packers Plus Energy Services Inc., accessed May 24, 2016, http://packersplus.com/proven-performance/?type=case-study&system=stackfrac-hd-system&pag=3%20#p3
2014	reserved
2015	reserved
2016	Ali Daneshy Deposition Transcript (11/9/2016)
2017	Packers Plus advertising brochure (2010)

2018	Baker Hughes, “FracPoint Completion System Isolated Openhole Horizontal Well in Lower Huron Shale” (2011)
2019	Baker Hughes, “Enhancing Well Performance Through Innovative Completion Technologies,” presentation, (Sept. 10-12, 2012)
2020	Canadian Society for Unconventional Resources, Press Release, “Unconventional Industry Awards Innovative Thinking” (Oct. 3, 2012)
2021	BH00364675, CONFIDENTIAL Ball activated sliding sleeves report
2022	Rigzone, Schlumberger Acquires Stake in Packers Plus (Nov. 22, 2005)
2023	Britt, L. and Smith, M., Horizontal Well Completion, Stimulation Optimization, and Risk Mitigation, SPE 125526 (2009)
2024	BH00363808, CONFIDENTIAL Baker Hughes Engineering Materials
2025	RC_PAC00019434, CONFIDENTIAL Packers Plus Engineering Drawing
2026	Baker Hughes 2008 10-K Shareholder Report
2027	Baker Hughes 2010 10-K Shareholder Report
2028	Baker Hughes 2013 10-K Shareholder Report
2029	Packers Plus case study, StackFRAC system provides superior production economics
2030	Packers Plus Case Study, StackFRAC HD system enables high stimulation rates
2031	Packers Plus StackFRAC Video, http://packersplus.com/solution/stackfrac-hd-system/
2032	Baker Hughes FracPoint Video, https://www.youtube.com/watch?v=s5ZQCRRZzXE
2033	Business News Network Packers Plus Feature
2034	UN-REDACTED H. McGowen Declaration
2035	UN-REDACTED J. J. Girardi Declaration
2036	REDACTED H. McGowen Declaration
2037	REDACTED J. J. Girardi Declaration
2038	Ingersoll, C, “BP and the Deepwater Horizon Disaster of 2010” (Apr. 3, 2012)

2039	Crosby, D.G., “Methodology to Predict the Initiation of Multiple Transverse Fractures from Horizontal Wellbores” (2001)
2040	Kaiser, P., “Hydraulic Fracturing Mine Back Trials – Design Rationale and Project Status” (2013)
2041	Stoltz, L.R., “Probabilistic Reserves Assessment Using A Filtered Monte Carlo Method In a Fractured Limestone Reservoir” SPE 39714 (1998)
2042	Emanuele, M. A., “A Case History: Completion and Stimulation of Horizontal Wells with Multiple Transverse Hydraulic Fractures in the Lost Hills Diatomite” SPE 39941 (1998)
2043	Gaynor, Tom M., “Tortuosity Versus Micro-Tortuosity – Why Little Things Mean a Lot” SPE/IADC 67818 (2001)
2044	Cramer, David, “Stimulating Unconventional Reservoirs: Lessons Learned, Successful Practices, Areas for Improvement” SPE 114172 (2008)
2045	M. Delaney Declaration
2046	Tess MacLeod Declaration (served but not filed)
2047	Ahmadzamri, A.F., “Development and Testing of Advanced Wireline Conveyance Technology for Rugose Open Hole Conditions” IPTC 17442 (2014) (served but not filed)
2048	Calixto, Eduardo, “Gas and Oil Reliability Engineering, Modeling and Analysis” 2nd Edition (2016) (served but not filed)
2049	Cramer, D.D., “The Application of Limited-Entry Techniques in Massive Hydraulic Fracturing Treatments” SPE 16189 (1987) (served but not filed)
2050	Lloyd, B., “Rotary steerable drilling improves deployment of advanced completion” World Oil, January 2011 (served but not filed)
2051	McGowen Access Database (served but not filed)
2052	Scott Sanchez Deposition Transcript Excerpts (7/29/16) (served but not filed)
2053	Ali Daneshy Deposition Transcript (3/29/2017)
2054	Damgaard, A.P., “A Unique Method for Perforating, Fracturing, and Completing Horizontal Wells” SPE 19282 (1992)

2055	Abass, Hazim, "A Case History of Completing and Fracture Stimulating a Horizontal Well" SPE 29443 (1995)
2056	M. Delaney Declaration

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