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 IPR2016-00596 Patent 7,134,505

DECLARATION OF MICHAEL P. DELANEY

Mail Stop PATENT BOARD

Patent Trial and Appeal Board U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450



I, the below-named Declarant, state as follows:

- 1. My name is Michael P. Delaney, and I reside in Dallas, Texas.
- 2. I am a paralegal at the law firm of Caldwell, Cassady and Curry P.C.
- 3. Exhibit 2001 already on file is a true and correct copy of A. Casero, *Open Hole Multi-Stage Completion System in Unconventional Plays: Efficiency, Effectiveness and Economics*, SPE 164009 (2013).
- 4. Exhibit 2002 already on file is a true and correct copy of *Encyclopedia of Hydrocarbons*, Chapter 3.1: Upstream technologies.
- 5. Exhibit 2003 already on file is a true and correct copy of D. Lohoefer, *Comparative Study of Cemented versus Uncemented Multi-Stage Fractured Wells in the Barnett Shale*, SPE 135386, Society of Petroleum Engineers (2010).
- 6. Exhibit 2004 already on file is a true and correct copy of R. Seale *et al.*, *Effective Stimulation of Horizontal Wells—A New Completion Method*, SPE 106357, Society of Petroleum Engineers (2006).
- 7. Exhibit 2005 already on file is a true and correct copy of Exploration and Development, Alberta Oil Magazine.
- 8. Exhibit 2006 already on file is a true and correct copy of *Leading the Way: Multistage fracking pioneer* Packers Plus plays major role in cracking the tight oil code, Canadian OilPatch Technology Guidebook (2012).
- 9. Exhibit 2007 already on file is a true and correct copy of Financial Post, "*Entrepreneur of the Year: National Winner*".
- 10. Exhibit 2008 already on file is a true and correct copy of *Innovation—Groundbreaking Innovation in Calgary*, Calgary Herald (Feb. 12, 1014).



- 11. Exhibit 2009 already on file is a true and correct copy of J. Chury, *Packers Plus Technology Becoming the Industry Standard*, The Oil Patch Report (Dec. 2010/Jan. 2011).
- 12. Exhibit 2010 already on file is a true and correct copy of P. Roche, *Open-Hole or Cased and Cemented*, New Technology Magazine (Nov. 2011).
- 13. Exhibit 2011 already on file is a true and correct copy of P. Roche, *Open-Hole or Cased and Cemented*, New Technology Magazine (Nov. 2011).
- 14. Exhibit 2012 already on file is a true and correct copy of Van Dyke, Kate, "Fundamentals of Petroleum," Fourth Ed. (1997).
- 15. Exhibit 2013 already on file is a true and correct copy of "Proven Performance: Read how Packers Plus systems and solutions have delivered results around the world," Packers Plus Energy Services Inc., accessed May 24, 2016.
- 16. Attached as Exhibit 2017 is a true and correct copy of Packers Plus advertising brochure (2010).
- 17. Attached as Exhibit 2018 is a true and correct copy of Baker Hughes, "FracPoint Completion System Isolated Openhole Horizontal Well in Lower Huron Shale" (2011).
- 18. Attached as Exhibit 2019 is a true and correct copy of Baker Hughes, "Enhancing Well Performance Through Innovative Completion Technologies," presentation, (Sept. 10-12, 2012).
- Attached as Exhibit 2020 is a true and correct copy of Canadian Society for Unconventional Resources, Press Release, "Unconventional Industry Awards Innovative Thinking" (Oct. 3, 2012).
- 20. Attached as Exhibit 2021 is a true and correct bates-stamped copy of BH00364675, CONFIDENTIAL Ball activated sliding sleeves report.



- 21. Attached as Exhibit 2022 is a true and correct copy of Rigzone, Schlumberger Acquires Stake in Packers Plus (Nov. 22, 2005).
- 22. Attached as Exhibit 2023 is a true and correct copy of Britt, L. and Smith, M., *Horizontal Well Completion, Stimulation Optimization, and Risk Mitigation*, SPE 125526 (2009).
- 23. Attached as Exhibit 2024 is a true and correct copy of BH00363808, CONFIDENTIAL Baker Hughes Engineering Materials.
- 24. Attached as Exhibit 2025 is a true and correct copy of RC_PAC00019434, CONFIDENTIAL Packers Plus Engineering Drawing.
- 25. Attached as Exhibit 2026 is a true and correct copy of Baker Hughes 2008 10-K Shareholder Report.
- 26. Attached as Exhibit 2027 is a true and correct copy of Baker Hughes 2010 10-K Shareholder Report.
- 27. Attached as Exhibit 2028 is a true and correct copy of Baker Hughes 2013 10-K Shareholder Report.
- 28. Attached as Exhibit 2029 is a true and correct copy of Packers Plus case study, StackFRAC system provides superior production economics.
- 29. Attached as Exhibit 2030 is a true and correct copy of Packers Plus Case Study, StackFRAC HD system enables high stimulation rates.
- 30. Attached as Exhibit 2031 is a true and correct copy of Packers Plus StackFRAC Video, http://packersplus.com/solution/stackfrac-hd-system/.



- 31. Attached as Exhibit 2032 is a true and correct copy of Baker Hughes FracPoint Video, https://www.youtube.com/watch?v=s5ZQCRRZzXE.
- 32. Attached as Exhibit 2033 is a true and correct copy of a Business News Network Packers Plus Feature video.
- 33. Attached as Exhibit 2038 is a true and correct copy of Ingersoll, C, "BP and the Deepwater Horizon Disaster of 2010" (Apr. 3, 2012).
- 34. Attached as Exhibit 2039 is a true and correct copy of Crosby, D.G., "Methodology to Predict the Initiation of Multiple Transverse Fractures from Horizontal Wellbores" (2001).
- 35. Attached as Exhibit 2040 is a true and correct copy of Kaiser, P., "Hydraulic Fracturing Mine Back Trials Design Rationale and Project Status" (2013).
- 36. Attached as Exhibit 2041 is a true and correct copy of Stoltz, L.R., "Probabilistic Reserves Assessment Using A Filtered Monte Carlo Method In a Fractured Limestone Reservoir" SPE 39714 (1998).
- 37. Attached as Exhibit 2042 is a true and correct copy of 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).
- 38. Attached as Exhibit 2043 is a true and correct copy of Gaynor, Tom M., "Tortuosity Versus Micro-Tortuosity Why Little Things Mean a Lot" SPE/IADC 67818 (2001).
- 39. Attached as Exhibit 2044 is a true and correct copy of Cramer, David, "Stimulating Unconventional Reserviors: Lessons Learned, Successful Practices, Areas for Improvement" SPE 114172 (2008).



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