

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

BAKER HUGHES, A GE COMPANY, LLC
and
BAKER HUGHES OILFIELD OPERATIONS LLC
Petitioners

v.

PACKERS PLUS ENERGY SERVICES, INC.
Patent Owner

Case IPR2016-01506
Patent 7,861,774

PETITIONERS' CORRECTED REPLY¹

¹ As authorized by the Board (by email) on July 9, 2018, this Paper replaces Paper 62 in IPR2016-00598 (Petitioners' Reply for joined proceeding IPR2016-01506) and corrects citation errors therein.

Petitioners' Exhibit List

Exhibit	Description
1001	U.S. Patent No. 7,861,774 (“the ’774 Patent”)
1002	Affidavit of Margaret Kieckhefer, of the Library of Congress, regarding excerpts from COMPOSITE CATALOG OF OIL FIELD AND PIPE LINE EQUIPMENT, Vol. 2 (21st ed. World Oil 1955) (“Lane-Wells”)
1003	B. Ellsworth, <i>et al.</i> , <i>Production Control of Horizontal Wells in a Carbonate Reef Structure</i> , 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. (“Daneshy1”)
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 (“Echols”)
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)
1015	M.J. Eberhard, <i>et al.</i> , <i>Current Use of Limited-Entry Hydraulic Fracturing in the Codell/Niobrara Formations—DJ Basin</i> , SPE (Society for Petroleum Engineering) 29553 (1995)
1016	Affidavit of Nancy Chaffin Hunter, regarding the proceedings of the 10th Middle East Oil Show & Conference (Bahrain March 15-18, 1997) (including D.W. Thomson, <i>et al.</i> , <i>Design and Installation of a Cost-Effective Completion System for Horizontal Chalk Wells Where Multiple Zones Require Acid Stimulation</i> , SPE (Society for Petroleum Engineering) 37482 (1997)) (“Thomson”)

Exhibit	Description
1017	Affidavit of Nancy Chaffin Hunter, regarding the proceedings of the Production Operation Symposium (Oklahoma City, OK April 2-4, 1995) (including R. Coon and D. Murray, <i>Single-Trip Completion Concept Replaces Multiple Packers and Sliding Sleeves in Selective Multi-Zone Production and Stimulation Operations</i> , SPE 29539 (1995)) (“Coon”)
1018	Howard, G. C. & Fast, C. R., HYDRAULIC FRACTURING (AIMMPE 1970)
1019	Hyne, Norman J., DICTIONARY OF PETROLEUM EXPLORATION, DRILLING, & PRODUCTION (1991)
1020	U.S. Patent 4,018,272 (“Brown”)
1021	U.S. Patent No. 4,279,306
1022	K.W. Lagrone, <i>et al.</i> , <i>A New Development in Completion Methods</i> , SOCIETY OF PETROLEUM ENGINEERING, Paper 530-PA (1963)
1123 ²	Affidavit of Velma J’Nette Davis-Nichols, regarding Lane-Wells (see Ex. 1002) (including Lane-Wells at Appendix A)
1124	Affidavit of Debbie Caples, regarding Ex. 1006 and Ex. 1007 (including Ex. 1006 at Appendix B and Ex. 1007 at Appendix D) – NOT FILED
1125	Affidavit of Rodolfo Diaz, regarding Ex. 1022 (including Ex. 1022 at Appendix A and related materials at Appendix B) – NOT FILED
1126	Declaration of Rebekah Stacha, regarding Ex. 1015 (including Ex. 1015 at Exhibit A) – NOT FILED
1127	Affidavit of Troy Price, regarding Ex. 1018 (including Ex. 1018 at Appendix A) – NOT FILED
1128	Affidavit of Troy Price, regarding Ex. 1019 (including Ex. 1019 at Appendix A) – NOT FILED
1129	Table Associated with qrySumNetValuebyFamily from Ex. 2051 (contains PROTECTIVE ORDER MATERIAL)
1130	March 1, 2017 email from Justin Nemunaitis, confirming RE Packer revenue in Ex. 1129 was included in revenue figure reported at Ex. 2050 at 42:9
1131	Transcript of February 28, 2017 Deposition Testimony of Harold R. McGowen III (“McGowen1”)

² Exs. 1023 *et seq.* have been renumbered 1123 *et seq.* for clarity, given joinder.

Exhibit	Description
1132	Second Declaration of Ali Daneshy, Ph.D. (“Daneshy2”)
1133	UNREDACTED Transcript of July 27, 2017 Deposition Testimony of Harold R. McGowen III (“McGowen2”) (contains PROTECTIVE ORDER MATERIAL)
1134	U.S. Patent No. 5,360,066 (“Venditto”)
1135	U.S. Patent No. 5,499,678 (“Surjaatmadja”)
1136	U.S. Patent No. 6,508,307 (“Almaguer”)
1137	U.S. Patent No. 2,689,009 (“Brainerd”)
1138	REDACTED Transcript of July 27, 2017 Deposition Testimony of Harold R. McGowen III (“McGowen2”)

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