

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

PROFRAC HOLDING CORPORATION
and
U.S. WELL SERVICES, LLC,
Petitioners,

v.

HALLIBURTON ENERGY SERVICES, INC.,
Patent Owner

PGR2023-00023
U.S. PATENT NO. 11,373,058 B2

PETITIONERS' UPDATED EXHIBIT LIST

PETITIONERS' EXHIBIT LIST

Exhibit No.	Description
1001	U.S. Patent No. 11,373,058
1002	File History of U.S. Patent No. 11,373,058
1003	Declaration of Dr. Michael Nikolaou
1004	Curriculum Vitae of Dr. Michael Nikolaou
1005	U.S. Patent App. Pub. No. 2018/0230782 to Pankaj <i>et al.</i>
1006	U.S. Patent App. Pub. No. 2016/0258267 to Payne <i>et al.</i>
1007	S. Dalvi, <i>Fundamentals of Oil & Gas Industry for Beginners</i> (Notion Press 2015) (excerpts)
1008	U.S. Patent App. Pub. No. 2013/0306322 to Sanborn <i>et al.</i>
1009	U.S. Patent No. 9,410,410 to Broussard <i>et al.</i>
1010	U.S. Patent App. Pub. No. 2012/0255734 to Coli <i>et al.</i>
1011	U.S. Patent No. 10,020,711 to Oehring <i>et al.</i>
1012	U.S. Patent App. Pub. No. 2008/0236818 to Dykstra <i>et al.</i>
1013	U.S. Patent App. Pub. No. 2006/0015310 to Husen <i>et al.</i>
1014	U.S. Patent App. Pub. No. 2016/0061003 to Gottumukkala <i>et al.</i>
1015	U.S. Patent No. 10,280,722 to Bello <i>et al.</i>

Exhibit No.	Description
1016	Website Printout from the Internet Archive concerning the Mayo Clinic allergy test procedures, accessed at: https://web.archive.org/web/20180728025208/https://www.mayoclinic.org/tests-procedures/allergy-tests/about/pac-20392895
1017	U.S. Patent No. 5,809,428 to Garahi <i>et al.</i>
1018	U.S. Patent App. Pub. No. 2016/0153266 to Rashid <i>et al.</i>
1019	U.S. Patent No. 8,352,227 to Klumpen <i>et al.</i>
1020	U.S. Patent No. 7,953,585 to Gurpinar <i>et al.</i>
1021	U.K. Patent App. GB 2443051 to Varadarajan <i>et al.</i>
1022	Federal Court Management Statistics for the Western District of Texas (Dec. 31, 2022)
1023	PCT International Pub. No. WO 2018/084871 to Madasu <i>et al.</i>
1024	U.S. Patent No. 10,378,333 to Dawson <i>et al.</i>
1025	Website Printout from Amazon.com (Dalvi Book), accessed at: https://www.amazon.com/Fundamentals-Oil-Gas-Industry-Beginners/dp/9352064194/ref=sr_1_1?crid=2OJL05AXX8XSF&keywords=Dalvi+oil+gas+industry&qid=1679761993&srefix=dalvi+oil+gas+industry%2Caps%2C182&sr=8-1

Exhibit No.	Description
1026	Website Printout from the Internet Archive (Dalvi Book), accessed at: https://web.archive.org/web/20161108121245/https://notionpress.com/store/categories/technology-engineering
1027	U.S. Patent No. 10,087,722 to Lecerf <i>et al.</i>
1028	T. Jacobs, These Five Companies are Reinventing the U.S. Frac Fleet, <i>Journal of Petroleum Technology</i> (July 31, 2019)
1029	Website Printout from the Internet Archive (U.S. Well Services) accessed at: https://web.archive.org/web/20151121102607/http://uswellservices.com/
1030	Website Printout from Amazon.com – D. Tiab, <i>Petrophysics: Theory and Practice of Measuring Reservoir Rock and Fluid Transport Properties</i> , 4 th Ed. (Gulf Professional Pub. 2015), accessed at: https://www.amazon.com/dp/0128031883?psc=1&smid=AZOLNCI5GS0EX&ref_=chk_typ_imgToDp
1031	September 18, 2023 Letter from Petitioners’ Counsel to Patent Owner’s Counsel

Exhibit No.	Description
1032	A. Shchipanov <i>et al.</i> , <i>Step Rate Test as a Way to Understand Well Performance in Fractured Carbonates</i> , SPE-185795-MS (June 2017)
1033	United States Environmental Protection Agency, Region VIII, <i>Step Rate Test Procedure</i> (Jan. 12, 1999)
1034	European Patent EP 1 393 136, <i>Method for Monitoring and Detecting Sensor Failure in Oil and Gas Production System</i> , published Feb. 18, 2009
1035	PCT WO 2011/041794 A1, <i>Method and Apparatus for Differential Pressure Measurement</i> , published April 7, 2011
1036	U.S. Patent Application Publication No. US 2015/0377716 A1, <i>Pipeline Constriction Detection</i> , published Dec. 31, 2015
1037	PCT WO 2016/025672 A1, <i>Method of Treating an Underground Formation Featuring Single-Point Stimulation</i> , published Feb. 18, 2016
1038	U.S. Patent Application Publication No. US 2015/0075778A1, <i>Controlling an Injection Treatment of a Subterranean Region Based on Stride Test Data</i> , published March 19, 2015

Exhibit No.	Description
1039	PCT WO 2015/057242 A1, <i>Managing a Wellsite Operation With a Proxy Model</i> , published April 23, 2015
1040	PCT WO 2014/039036 A1, <i>Wellbore Completion and Hydraulic Fracturing Optimization Methods and Associated Systems</i> , published March 13, 2014
1041	U.S. Patent App. Pub. No. US 2014/0262232, <i>Controlling Net Treating Pressure in a Subterranean Region</i> , published Sept. 18, 2014
1042	U.S. Patent No. 7,806,182, <i>Stimulation Method</i> , issued Oct. 5, 2010
1043	U.S. Patent No. 7,788,037, <i>Method and System for Determining Formation Properties Based on Fracture Treatment</i> , issued Aug. 31, 2010
1044	U.S. Patent No. 7,516,793, <i>Methods and Systems for Fracturing Subterranean Wells</i> , issued April 14, 2009
1045	U.S. Patent App. Pub. No. US 2017/0175484, <i>Hydraulic Fracturing with Strong, Lightweight, Low Profile Diverters</i> , published June 22, 2017
1046	M. Van Domelen, <i>A Practical Guide to Modern Diversion Technology</i> , SPE-185120-MS (March 2017)

Exhibit No.	Description
1047	<i>Reservoir Modeling</i> , Wikipedia Webpage from Internet Archive (April 1, 2019)
1048	<i>Nexus® User Guide</i> , Halliburton Landmark Software & Services (December 2009)
1049	May 2, 2024 Deposition Transcript of Dr. Robert A. Durham
1050	Supplemental Declaration of Dr. Michael Nikolaou
1051	May 9, 2024 Affidavit of Internet Archive Records Request Processor Nathaniel E. Frank-White
1052	Petitioners' Demonstrative Slides for Oral Hearing

Date: August 9, 2024

Respectfully submitted,

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CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. § 42.205 and § 42.6(e), the undersigned certifies that on August 9, 2024, Petitioners' Updated Exhibit List and Exhibit 1052 were served on Patent Owner's counsel of record as follows:

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