IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

PROFRAC SERVICES, LLC; PROFRAC MANUFACTURING, LLC; U.S. WELL SERVICES, LLC; U.S. WELL SERVICES HOLDINGS, LLC, *Plaintiffs,* *v.* LIBERTY ENERGY SERVICES LLC, LIBERTY ENERGY, INC., LIBERTY ADVANCED EQUIPMENT TECHNOLOGIES LLC, *Defendants.*	Case No. 2:25-cv-00522-JRG-RSP

DEFENDANTS' PRELIMINARY DISCLOSURES UNDER P.R. 3-3 AND 3-4 INCLUDING INVALIDITY CONTENTIONS AND DEFENDANTS' ELIGIBILITY CONTENTIONS PURSUANT TO THE COURT'S STANDING ORDER

Liberty Energy Services LLC; Liberty Energy, Inc.; and Liberty Advanced Equipment Technologies LLC (collectively, "Liberty" or "Defendants") provide these Disclosures under P.R. 3-3 and 3-4 including Invalidity Contentions pursuant to the Docket Control Order, D.I. 7, and the Local Patent Rules. Defendants also provide their Eligibility Contentions pursuant to the Court's Standing Order[1] and the Docket Control Order, D.I. 7. Liberty's disclosures and contentions are made with the benefit of limited discovery and are based on Liberty's good-faith understanding of ProFrac Services, LLC; ProFrac Manufacturing, LLC; U.S. Well Services, LLC; and U.S. Well Services Holdings, LLC; (collectively, "ProFrac" or "Plaintiffs") disclosure of asserted claims, Plaintiffs' Infringement Contentions, served May 27, 2025. Liberty continues to pursue discovery

[1] https://www.txed.uscourts.gov/sites/default/files/judgeFiles/EDTX%20Standing%20Order%20Re%20Subject%20Matter%20Eligibility%20Contentions%20.pdf

and to investigate and analyze the prior art and evidence of the state of the art. Liberty reserves the right to modify, amend, and/or supplement these Preliminary Invalidity Contentions and Eligibility Contentions based on additional information obtained through discovery or in light of the Court's claim constructions. Finally, Liberty's submission of contentions is not intended and should not be construed as a waiver of any claim construction argument or non-infringement position.

I. IDENTIFICATION OF PRIOR ART

Pursuant to P.R. 3-3(a), Liberty hereby identifies prior art that anticipates or renders obvious the asserted claims of U.S. Patent Nos. 11,211,801 ("the '801 patent"), 11,009,162 ("the '162 patent"), 11,668,420 ("the '420 patent"), 12,012,952 ("the '952 patent"), 11,067,481 ("the '481 patent"), and 11,674,868 ("the '868 patent"), and (collectively "Asserted Patents") under post-AIA 35 U.S.C. §§ 102 and/or 103, as discussed more fully below.

A. Patents and Published Patent Applications

Pursuant to P.R. 3-3(a), Liberty identifies the following patents and published patent applications (including its number, country of origin, and date of issue) as prior art that anticipates or renders obvious asserted claims of the '801 patent:

Abbreviation	Patent/Pub. No.	Country of Origin	Filing Date	Issue/Pub. Date
Badr '2360	US 2003/0122360 A1	US	9/30/2002	7/3/2003
Reckels WO'1738	WO 2018/071738 A1	US	10/13/2017	4/19/2018
Oehring '8479	US 2016/0348479 A1	US	8/12/2016	12/1/2016
Kaarstad WO'7346	WO 2014/177346 A1	US	4/8/2014	11/6/2014
Oehring '5022	US 2016/015022 A1	US	10/13/2015	4/14/2016
Coli '5734	US 20112/0255734 A1	US	4/6/2012	10/11/2012
Oehring '840	US 9,745,840	US	10/12/2016	8/29/2017

Pursuant to P.R. 3-3(a), Liberty identifies the following patents and published patent

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applications (including its number, country of origin, and date of issue) as prior art that anticipates or renders obvious asserted claims of the ’162 patent:

Abbreviation	Patent/Pub. No.	Country of Origin	Filing Date	Issue/Pub. Date
Cicci ‘348	US 11,549,348	US	11/20/2020 (Priority to 11/27/2019)	1/10/2023
Beisel ‘2855	US 2020/0362855 A1	US	10/7/2019	11/19/2020
Kajaria ‘545	US 9,127,545	US	4/25/2013	9/8/2015
Coli ’5734	US 20112/0255734 A1	US	4/6/2012	10/11/2012

Pursuant to P.R. 3-3(a), Liberty identifies the following patents and published patent applications (including its number, country of origin, and date of issue) as prior art that anticipates or renders obvious asserted claims of the ’420 patent:

Abbreviation	Patent/Pub. No.	Country of Origin	Filing Date	Issue/Pub. Date
Cicci ‘348	US 11,549,348	US	11/20/2020 (Priority to 11/27/2019)	1/10/2023
Beisel ‘2855	US 2020/0362855 A1	US	10/7/2019	11/19/2020
Kajaria ‘545	US 9,127,545	US	4/25/2013	9/8/2015
Coli ’5734	US 20112/0255734 A1	US	4/6/2012	10/11/2012

Pursuant to P.R. 3-3(a), Liberty identifies the following patents and published patent applications (including its number, country of origin, and date of issue) as prior art that anticipates or renders obvious asserted claims of the ’952 patent:

Abbreviation	Patent/Pub. No.	Country of Origin	Filing Date	Issue/Pub. Date
Randle ‘0768	US 2014/0290768 A1	US	3/27/2013	10/2/2014
Lopez ‘2537	US 2016/0102537 A1	US	10/13/2014	4/14/2016
Cook ‘3102	US 2018/0283102 A1	US	4/2/2018	10/4/2018
Beason ‘028	US 11,480,028	US	6/28/2021 (Priority to 4/22/2019)	10/25/2022
Shampine WO’6531	WO 2016/0176531 A1	US	4/29/2016	11/3/2016
Kuhn De Chizelle ‘3551	US 2021/0123551 A1	US	1/27/2017	4/29/2021
Hill ‘341	US 10,436,341	US	10/20/2017	10/8/2019
Martin ‘708	US 11,608,708	US	6/27/2019	3/21/2023
Payne ‘984	US 10,246,984	US	3/3/2016	4/2/2019

Pursuant to P.R. 3-3(a), Liberty identifies the following patents and published patent applications (including its number, country of origin, and date of issue) as prior art that anticipates or renders obvious asserted claims of the ’481 patent:

Abbreviation	Patent/Pub. No.	Country of Origin	Filing Date	Issue/Pub. Date
Borgstadt ‘3072	US 2009/0053072 A1	US	8/21/2007	2/26/2009
Beisel ‘8243	US 2019/0178234 A1	US	9/13/2016	6/13/2019
Haddad ‘698	US 10,584,698	US	4/7/2016	3/10/2020
Omont WO’9219	WO 2016/019219 A1	US	7/31/2015	2/4/2016
Kajita ‘3640	US 2018/0363640 A1	US	12/19/2016	12/20/2018
Broussard ‘278	US 9,970,278	US	10/15/2015	5/15/2018
Liu ‘9779	US 2010/0199779 A1	US	10/29/2007	8/12/2010
Huang ‘8938	US 2011/0098938 A1	US	9/17/2008	4/28/2011
Urdaneta ‘2101	US 2017/0082101 A1	US	9/17/2015	3/23/2017

Pursuant to P.R. 3-3(a), Liberty identifies the following patents and published patent applications (including its number, country of origin, and date of issue) as prior art that anticipates or renders obvious asserted claims of the ’868 patent:

Abbreviation	Patent/Pub. No.	Country of Origin	Filing Date	Issue/Pub. Date
Borgstadt ‘3072	US 2009/0053072 A1	US	8/21/2007	2/26/2009
Beisel ‘8243	US 2019/0178234 A1	US	9/13/2016	6/13/2019
Haddad ‘698	US 10,584,698	US	4/7/2016	3/10/2020
Omont WO’9219	WO 2016/019219 A1	US	7/31/2015	2/4/2016
Kajita ‘3640	US 2018/0363640 A1	US	12/19/2016	12/20/2018
Broussard ‘278	US 9,970,278	US	10/15/2015	5/15/2018
Liu ‘9779	US 2010/0199779 A1	US	10/29/2007	8/12/2010
Huang ‘8938	US 2011/0098938 A1	US	9/17/2008	4/28/2011
Campman ‘625	US 4,513,625	US	6/30/1983	4/30/1985
Urdaneta ‘2101	US 2017/0082101 A1	US	9/17/2015	3/23/2017

B. Printed Publications

Pursuant to P.R. 3-3(a), Liberty identifies the following printed publications (including their title, date of publication, and where feasible, author and publisher) as prior art that anticipates or renders obvious asserted claims the ’801 patent:

Abbreviation	Title	Date of Publication	Author	Publisher
IEEE Std. 141	IEEE Recommended Practice for Electric Power Distribution for Industrial Plants	1994	IEEE Standards Board	The Institute of Electrical and Electronics Engineers, Inc. 345 East 47th Street, New York, NY 10017-2394, USA
Kumar 2005	Harmonics in Offshore Electrical Power System	2005	B. Kumar, V.K. Sethi, and S. Bhattacharjee	Offshore Technology Conference OTC 17095
EWS Websites	*see* Exhibit A1	*see* Exhibit A1	*see* Exhibit A1	*see* Exhibit A1
GE Websites	*see* Exhibit A1	*see* Exhibit A1	*see* Exhibit A1	*see* Exhibit A1
S&S Websites	*see* Exhibit A2	*see* Exhibit A2	*see* Exhibit A2	*see* Exhibit A2
S&S Publications	Stewart & Stevenson Software, Manuals, Release Notes, and Websites	2006-2011	S&S	S&S
GEN284 White Paper	The Basics of Natural Gas Power & Fuel	2013	Haut, LaFleur	Haut, LaFleur
Solar Turbines	Power Generation Product Selection Guide	2016	Caterpillar	Caterpillar

Pursuant to P.R. 3-3(a), Liberty identifies the following printed publications (including their title, date of publication, and where feasible, author and publisher) as prior art that anticipates or renders obvious asserted claims the ’162 patent:

Abbreviation	Title	Date of Publication	Author	Publisher
2018 ADPL 718 Product Catalog	ADPL 718	2018	Dixon	Self

Dixon Frac Pump Brochure	Frac Pump JRZL Series	2018	Dixon	Self
CNC Fittings Brochure	Oilfield Solutions Valves, Fittings, & Flow Lines	2019	CNC Flow Control	Self
Liu 2003	Pipeline Engineering	2003	Henry Liu	Lewis Publishers
Gardner Denver Service Manual	Well Servicing Pump Model GD-2500Q Quituplex Operating and Service Manual	2005	Gardner Denver	Self
Dixon Websites	*see* Exhibit B5	*see* Exhibit B5	*see* Exhibit B5	*see* Exhibit B5
EWS Websites	*see* Exhibit B3	*see* Exhibit B3	*see* Exhibit B3	*see* Exhibit B3
ProFrac Websites	*see* Exhibit B7	*see* Exhibit B7	*see* Exhibit B7	*see* Exhibit B7
Liberty Websites	*see* Exhibit B8	*see* Exhibit B8	*see* Exhibit B8	*see* Exhibit B8
Oehring Paper	Environmental Benefits of Electric Powered Hydraulic Fracturing	October 2015	Oehring, J.M.	SPE Eastern Regional Meeting
GEN284 White Paper	The Basics of Natural Gas Power & Fuel	2013	Haut, LaFleur	Haut, LaFleur
ProFrac Brochure	U.S. Well Services Brochure	2015	USWS	USWS

Pursuant to P.R. 3-3(a), Liberty identifies the following printed publications (including their title, date of publication, and where feasible, author and publisher) as prior art that anticipates or renders obvious asserted claims the ’420 patent:

Abbreviation	Title	Date of Publication	Author	Publisher
2018 ADPL 718 Product Catalog	ADPL 718	2018	Dixon	Self
Dixon Frac Pump Brochure	Frac Pump JRZL Series	2018	Dixon	Self
CNC Fittings Brochure	Oilfield Solutions Valves, Fittings, & Flow Lines	2019	CNC Flow Control	Self
Liu 2003	Pipeline Engineering	2003	Henry Liu	Lewis Publishers
Gardner Denver Service Manual	Well Servicing Pump Model GD-2500Q Quintuplex Operating and Service Manual	2005	Gardner Denver	Self
Dixon Websites	*see* Exhibit C5	*see* Exhibit C5	*see* Exhibit C5	*see* Exhibit C5
EWS Websites	*see* Exhibit C3	*see* Exhibit C3	*see* Exhibit C3	*see* Exhibit C3
ProFrac Websites	*see* Exhibit C7	*see* Exhibit C7	*see* Exhibit C7	*see* Exhibit C7
Liberty Websites	*see* Exhibit C8	*see* Exhibit C8	*see* Exhibit C8	*see* Exhibit C8
Oehring Paper	Environmental Benefits of Electric Powered Hydraulic Fracturing	October 2015	Oehring, J.M.	SPE Eastern Regional Meeting
GEN284 White Paper	The Basics of Natural Gas Power & Fuel	2013	Haut, LaFleur	Haut, LaFleur
ProFrac Brochure	U.S. Well Services Brochure	2015	USWS	USWS

Pursuant to P.R. 3-3(a), Liberty identifies the following printed publications (including

their title, date of publication, and where feasible, author and publisher) as prior art that anticipates or renders obvious asserted claims the ’952 patent:

Abbreviation	Title	Date of Publication	Author	Publisher
S&S Websites	*see* Exhibit D8	*see* Exhibit D8	*see* Exhibit D8	*see* Exhibit D8
S&S Publications	Stewart & Stevenson Software, Manuals, Release Notes, and Websites	2006-2011	S&S	S&S
ProFrac Websites	*see* Exhibit D9	*see* Exhibit D9	*see* Exhibit D9	*see* Exhibit D9
Oehring Paper	Environmental Benefits of Electric Powered Hydraulic Fracturing	October 2015	Oehring, J.M.	SPE Eastern Regional Meeting
ProFrac Brochure	U.S. Well Services Brochure	2015	USWS	USWS

Pursuant to P.R. 3-3(a), Liberty identifies the following printed publications (including their title, date of publication, and where feasible, author and publisher) as prior art that anticipates or renders obvious asserted claims the ’481 patent:

Abbreviation	Title	Date of Publication	Author	Publisher
S&S Websites	*see* Exhibit E2	*see* Exhibit E2	*see* Exhibit E2	*see* Exhibit E2

S&S Publications	Stewart & Stevenson Software, Manuals, Release Notes, and Websites	2006-2011	S&S	S&S
Automated Stimulation Delivery Platform brochure	Automated Stimulation Delivery Platform	July 10, 2017	Schlumberger	Schlumberger
FracCAT brochure	FracCAT	May 17, 2015	Schlumberger	Schlumberger
Schlumberger Websites	*see* Exhibit E3	*see* Exhibit E3	*see* Exhibit E3	*see* Exhibit E3
JET Manual 28 FracCAT and Monitoring Equipment	*see* Exhibit E3	Jan. 21, 2007	Schlumberger	Schlumberger
Schlumberger: Well Services Coil: Software and Hardware Requirements and Specifications Document	*see* Exhibit E3	May 10, 2015	Schlumberger	Schlumberger
Omega Current Deployment 2016	*see* Exhibit E3	2016	Schlumberger	Schlumberger
Wellsite Process Control" Powerpoint presentation	*see* Exhibit E3	Oct. 2014	Schlumberger	Schlumberger
WS Omega NAL IT Enablement" Powerpoint presentation	*see* Exhibit E3	2016	Schlumberger	Schlumberger
SPCS User Guide	LimeFrac Single Pump Control System User Guide	April 11, 2012	Lime Instruments	Lime Instruments

Pursuant to P.R. 3-3(a), Liberty identifies the following printed publications (including their title, date of publication, and where feasible, author and publisher) as prior art that anticipates or renders obvious asserted claims the ’868 patent:

Abbreviation	**Title**	**Date of Publication**	**Author**	**Publisher**
S&S Websites	*see* Exhibit F4	*see* Exhibit F4	*see* Exhibit F4	*see* Exhibit F4
S&S Publications	Stewart & Stevenson Software, Manuals, Release Notes, and Websites	2006-2011	S&S	S&S
Automated Stimulation Delivery Platform brochure	Automated Stimulation Delivery Platform	July 10, 2017	Schlumberger	Schlumberger
FracCAT brochure	FracCAT	May 17, 2015	Schlumberger	Schlumberger
Schlumberger Websites	*see* Exhibit F5	*see* Exhibit F5	*see* Exhibit F5	*see* Exhibit F5
JET Manual 28 FracCAT and Monitoring Equipment	*see* Exhibit F5	Jan. 21, 2007	Schlumberger	Schlumberger
Schlumberger: Well Services Coil: Software and Hardware Requirements and Specifications Document	*see* Exhibit F5	May 10, 2015	Schlumberger	Schlumberger
Omega Current Deployment 2016	*see* Exhibit F5	2016	Schlumberger	Schlumberger

Wellsite Process Control" Powerpoint presentation	*see* Exhibit F5	Oct. 2014	Schlumberger	Schlumberger
WS Omega NAL IT Enablement" Powerpoint presentation	*see* Exhibit F5	2016	Schlumberger	Schlumberger
SPCS User Guide	LimeFrac Single Pump Control System User Guide	April 11, 2012	Lime Instruments	Lime Instruments

C. Other Prior Art

Pursuant to P.R. 3-3(a), Liberty identifies the following instances of prior public use, sale or offer for sale, public knowledge, prior invention, and/or derivation, each of which may be prior art under the applicable version of 35 U.S.C. § 102(a)(1), as explained below.

To the extent applicable, in Exhibits A1-F6 Liberty identifies the item offered for sale or publicly used or the information known, the date the offer or use took place or the information became known, and the identity of the person or entity which made the use or which made and received the offer, or the person or entity which made the information known or to whom it was made known. Liberty provides this information on reasonable belief and current information. Liberty reserves the right to further substantiate these activities through third-party discovery.

Stewart & Stevenson LLC

In or around 2012, Stewart & Stevenson LLC, either itself or through subsidiaries or affiliates, designed a hydraulic fracturing system with an intelligent fracturing pump control system ("IPC"). On information and belief, the systems used in the fracturing operations were designed in Dallas, Texas, and were known by others in the United States prior to the earliest possible priority date of the Asserted Claims. These fracturing operations involved the use of a

central control unit that allows fracturing pump operators to monitor and control a maximum of twenty-four fracturing pumps simultaneously as well as process multiple sets of data from multiple pumps in a centralized location. Liberty does not have complete information regarding all characteristics of these fracturing systems, but believes that they were similar to those disclosed in one or more of the S&S publications. At least one such system was implemented as discussed in these publications and evidenced by public documents, which are cited throughout the attached invalidity claim charts. Because the S&S System was in public knowledge (including the knowledge of the inventor of the ’992 and ’435 patents), in public use and/or disclosed in a printed publication by at least 2012, which precedes the earliest possible priority date among the Asserted Claims, this system is prior art under both pre and post-AIA 35 U.S.C. § 102(a), and pre-AIA 35 U.S.C. §§ 102(f) and/or (g)(2).

Evolution Well Services

In or around 2013, Evolution Well Services (“EWS”), either itself or through subsidiaries or affiliates, designed a hydraulic fracturing system with a mobile fracturing operations control unit. On information and belief, the systems used in the fracturing operations were designed in Texas and were known by others in the United States prior to the earliest possible priority date of the Asserted Claims. These fracturing operations involved the use of a fracturing control system with robust monitoring features that was capable of monitoring at multiple rates and pressures and full remote control of pumping equipment and blenders. Liberty does not have complete information regarding all characteristics of these fracturing systems, but believes that they were similar to those disclosed in one or more of Catalog and Websites. At least one such system was implemented as discussed in these publications and evidenced by public documents, which are cited throughout the attached invalidity claim charts. Because the EWS system was in public knowledge (including the knowledge of the inventor of the Asserted Patents), in public use, and/or

disclosed in a printed publication by at least 2013, which precedes the earliest possible priority date among the Asserted Claims, this system is prior art under both pre and post-AIA 35 U.S.C. § 102(a), and pre-AIA 35 U.S.C. §§ 102(f) and/or (g)(2).

ProFrac Clean Fleet

In or around 2014, ProFrac (ProFrac Manufacturing, LLC; and ProFrac Services, LLC), either itself or through subsidiaries or affiliates, designed a mobile fracturing system and offered it for sale, being deployed at least by Antero Resources in the Marcelus Shale. On information and belief, the systems used in the fracturing operations were designed in Houston, Texas, and were known by others in the United States prior to the earliest possible priority date of the Asserted Claims

Liberty Energy Quiet Fleet

In or around at least 2019, Liberty Energy, either itself or through subsidiaries or affiliates, designed a Quiet Fleet hydraulic fracturing system for use in at least the United States. On information and belief, the systems for use in fracturing operations were designed in Houston, Texas, and were known by others in the United States prior to the earliest possible priority date of the Asserted Claims. These system involved the use of fracturing hoses and fittings to connect fluid sources to hydraulic fracturing pumps. Liberty does not have complete information regarding all characteristics of these fracturing systems, but believes that they were similar to those disclosed in one or more of the brochures and websites identified in Exhibits B8 and C8. At least one such system was implemented as discussed in these publications and as evident by public documents, which are cited throughout the attached invalidity claim charts. Because Quiet Fleet was in the public knowledge, in public use, and/or disclosed in a printed publication by at least 2019, which precedes the earliest possible priority date among the Asserted Claims, this system is prior art under both pre and post-AIA 35 U.S.C. § 102(a), and pre-AIA 35 U.S.C. §§ 102(f) and/or (g)(2).

StimCommander

In or around at least 2015, Schlumberger, either itself or through subsidiaries or affiliates, designed a control suite for fracturing operations (e.g., applications, software) for use in at least the United States. On information and belief, the control suites for use in fracturing operations were designed in Houston, Texas, and were known by others in the United States prior to the earliest possible priority date of the Asserted Claims. These control suites involved the use of a fracturing control system with robust control features and capable of multi-pump use. Liberty does not have complete information regarding all characteristics of these fracturing systems, but believes that they were similar to those disclosed in one or more of the brochures and websites identified in Exhibits E3 and F5. At least one such system was implemented as discussed in these publications and as evident by public documents, which are cited throughout the attached invalidity claim charts. Because StimCommander was in the public knowledge, in public use, and/or disclosed in a printed publication by at least 2015, which precedes the earliest possible priority date among the Asserted Claims, this system is prior art under both pre and post-AIA 35 U.S.C. § 102(a), and pre-AIA 35 U.S.C. §§ 102(f) and/or (g)(2).

Dixon Frac Fittings

In or around 2018, Dixon, either itself or through subsidiaries or affiliates, designed hoses, hose assemblies, fittings, pipes, valves, and pumps for industrial applications such as hydraulic fracturing. On information and belief, the systems used in the fracturing operations were designed in the United States and were known by others in the United States prior to the earliest possible priority date of the Asserted Claims. These fittings and hoses includes those designed for applications that included the transfer of slurries and for applications in the petroleum and fracing industries. Liberty does not have complete information regarding all characteristics of these fracturing systems, but believes that they were similar to those disclosed in one or more of Catalog

and Websites. At least some devices were implemented as discussed in these publications and evidenced by public documents, which are cited throughout the attached invalidity claim charts. Because the Dixon devices were in the public knowledge (including the knowledge of the inventor of the Asserted Patents), in public use, and/or disclosed in a printed publication by at least 2018, which precedes the earliest possible priority date among the Asserted Claims, this system is prior art under both pre and post-AIA 35 U.S.C. § 102(a), and pre-AIA 35 U.S.C. §§ 102(f) and/or (g)(2).

GE TM2500+ Mobile Power Plant System

In or around 2018, GE, either itself or through subsidiaries or affiliates, designed a mobile power plant system for use in a hydraulic fracturing system (for instance, the EWS system described above). On information and belief, the systems used in the fracturing operations were designed in the United States and were known by others in the United States prior to the earliest possible priority date of the Asserted Claims. These power plant systems used in fracturing operations involved the use of a power generator, with other common electronic components such as switchgears and transformers, along with fracturing control system that was capable of full remote control of pumping equipment and blenders. Liberty does not have complete information regarding all characteristics of these power generation and fracturing systems, but believes that they were similar to those disclosed in one or more of Catalog and Websites. At least one such system was implemented as discussed in these publications and evidenced by public documents, which are cited throughout the attached invalidity claim charts. Because the GE system was in public knowledge (including the knowledge of the inventor of the Asserted Patents), in public use, and/or disclosed in a printed publication by at least 2018, which precedes the earliest possible priority date among the Asserted Claims, this system is prior art under both pre and post-AIA 35 U.S.C. § 102(a), and pre-AIA 35 U.S.C. §§ 102(f) and/or (g)(2).

D. Evidence of the State of the Art

The prior art references listed above, along with applicant admitted prior art described in the Asserted Patents, may be evidence of the state of the art, including the level of skill and knowledge possessed by a person of ordinary skill in the art, during one or more relevant time periods. Liberty may rely on any, some, or all of the references listed above as evidence of the state of the art on the date of purported invention for each asserted claim of each Asserted Patent, regardless whether a reference is cited as a basis for anticipation and/or obviousness for that claim of that Asserted Patent. In addition, Liberty may rely on the following patents and publications (and any actual systems or uses described therein) as evidence of the state of the art, including the level of skill and knowledge possessed by a person of ordinary skill in the art, during any relevant time period:

Abbreviation	Patent/Pub. No.	Country of Origin	Filing Date	Issue/Pub. Date
Young ‘856	US 11,208,856	US	6/10/2019	12/28/2021
Thigpen ‘2736	US 2008/0262736	US	4/19/2007	10/23/2008
Slater ‘558	US 4,509,558	US	9/24/1982	4/9/1985
Omont ‘6842	US 2017/0226842	US	7/31/2015	8/10/2017
Norris WO’0921	WO 2017/040921	US	9/2/2016	3/9/2017
Mazrooee ‘835	US 10,961,835	US	12/30/2016	3/30/2021
Stansfeld GB’714	GB 2192714	GB	7/16/1986	1/20/1988
Dykstra ‘6818	US 2008/0236818	US	3/27/2007	10/2/2008
Stansfeld EP’504	EP 0 253 504 A1	EU	6/15/1987	1/20/1988
Wang CN’5207	CN 202545207	CN	4/1/2012	11/21/2012
Bo CN’4833	CN 203584833	CN	10/29/2013	5/7/2014
Long CN’1849	CN 204511849	CN	2/2/2015	7/29/2015
Zhen CN’4124	CN 205154124	CN	10/16/2015	4/13/2016

Zhang ‘0483	US 2018/0320483	US	5/2/2017	11/8/2018
Singh WO’0174	WO 2018/160174	US	3/1/2017	9/7/2018
Walker ‘775	US 5,063,775	US	3/16/1990	11/12/1991
Zhang ‘3831	US 2018/0223831	US	2/9/2017	8/9/2018
Stewart ‘0989	US 2019/0100989	US	9/29/2018	4/4/2019
Zhang ‘8979	US 2016/0168979	US	12/16/2014	6/16/2016
Beisel ‘2433	US 2018/0202433	US	9/4/2015	7/19/2018
Pandurangan ‘0457	US 2017/0090457	US	9/30/2015	3/30/2017
Zhang ‘6998	US 2017/0226998	US	2/4/2016	8/10/2017
Iund ‘4322	US 2015/0204322	US	1/17/2014	7/23/2015
Zhang ‘8976	US 2016/0168976	US	12/16/2014	6/16/2016
Glass ‘3443	US 2016/0153443	US	10/30/2014	6/2/2016
Medizade ‘8179	US 2005/0158179	US	1/20/2004	7/21/2005
Baten ‘7704	US 2003/0057704	US	9/26/2001	3/27/2003
Curry ‘541	US 11,976,541	US	5/18/2020	5/7/2024
Weightman ‘6268	US 2014/0166268	US	12/19/2012	6/19/2014
Guidry ‘300	US 10,480,300	US	4/20/2017	11/19/2019
Bayyouk ‘766	US 10,436,766	US	10/10/2016	10/8/2019
Cook ‘483	US 10,422,483	US	4/2/2018	9/24/2019
Paine ‘696	US 10,340,695	US	10/19/2017	7/2/2019
Dhindsa ‘056	US 5,846,056	US	4/7/1995	12/8/1998
Walker ‘044	US 5,006,044	US	11/2/1989	4/9/1991
Codazzi ‘795	US 4,920,795	US	11/19/1987	5/1/1990
And any patents/publications cited in the accompanying charts				

Abbreviation	Title	Date of Publication	Author	Publisher
IEEE 100	The Authoritative Dictionary of IEEE Standards Terms, 7th Ed.	2000	IEEE	IEEE
Siemens instructions	Medium-voltage-switchgear Installation and operating Instructions	June 2, 2014	Siemens	Siemens
Karasik 2008	Pump Handbook, 4th Ed.	2008	Karasik, Messina, Cooper, Heald	McGraw Hill
Arop 2013	Geomechanical Review of Hydraulic Fracturing Technology	2013	Julius Bankong Arop	MIT
API 674	Positive Displacement Pumps – Reciprocating	2016	American Petroleum Institute	American Petroleum Institute
API 616	Gas Turbines for the Petroleum, Chemical, and Gas Industry Services	2011	American Petroleum Institute	American Petroleum Institute
And any non-patent publications cited in the accompanying charts.				

Liberty reserves the right to take additional discovery relating to prior art that may be available from third parties.

II. ANTICIPATION AND OBVIOUSNESS

Pursuant to P.R. 3-3(b), Liberty identifies the following prior art as references that anticipate and/or render obvious the asserted claims of the Asserted Patents under 35 U.S.C. §§ 102 and 103. Liberty's contention that the prior art references may be combined to render the asserted claims of the Asserted Patent obvious under 35 U.S.C. § 103 is not an admission or suggestion that the references do not independently anticipate or render obvious the asserted

claims.

The combinations provided below reflect Liberty's present understanding of the potential scope of the claims that ProFrac appears to be advancing based on its Preliminary Infringement Contentions and should not be seen as Liberty's acquiescence to ProFrac's interpretation of the patent claims. To the extent ProFrac has failed to provide any disclosures in its infringement contentions, Liberty cannot at this time accurately determine the scope of ProFrac's contentions; therefore, Liberty reserves the right to modify, amend, and/or supplement its initial invalidity contentions as ProFrac makes its contentions known.

To the extent a finder of fact determines that a limitation of a given claim was not disclosed by one of the references identified above, those claims are nevertheless unpatentable as obvious because the asserted claims contain nothing that constitutes patentable innovation. To the extent not anticipated, no asserted claim goes beyond combining familiar elements according to known methods to achieve predictable results. Nor does any asserted claim do more than choose between clear alternatives known to those of ordinary skill in the art.

Liberty identifies the following combinations:

Patent	Claims	Combinations
'801 patent	1-20	GE TM2500+ (as in the EWS System) alone or in combination with IEEE Std. 141, Oehring '5022, Kaarstad WO'7346, the S&S System, Oehring '840, Oehring '8479, and/or Kumar 2005
	1-20	S&S System alone or in combination with IEEE Std. 141, Oehring '5022, Kaarstad WO'7346, the GE TM2500+ (with EWS) System, the S&S System, and/or Kumar 2005
	1-20	Reckles WO' 1738 alone or in combination with IEEE Std. 141, Kaarstad WO'7346, the GE TM2500+ (with EWS) System, Oehring '8479, the S&S System, Solar Turbines, Coli '5734, Oehring '840, and/or Kumar 2005

	1-20	Badr ‘2360 alone or in combination with IEEE Std. 141, Kaarstad WO’7346, the S&S System, the GE TM2500+ (with EWS) System, Reckels WO’1738, Oehring ‘8479, Oehring ’5022, Solar Turbines, Coli ‘5734, Oehring ‘840, and/or Kumar 2005
	1-20	Oehring ‘8479 alone or in combination with IEEE Std. 141, Oehring ‘5022, Kaarstad WO’7346, Badr ‘2360, Reckels WO’1738, the S&S System, the GE TM2500+ (with EWS) System, Solar Turbines, and/or Coli ‘5734
’162 patent	1-14	Cicci ‘348 alone or in combination with Liu 2003, Beisel '2855, the Evolution Wells System, Coli '5734, CNC Fittings, Kemper Fittings, Kajaria ‘545, Gardner Denver, and/or Dixon Frac Fittings
	1-14	Beisel ‘2855 alone or in combination with CNC Fittings, Liu 2003, Kemper Fittings, Beisel ‘2855, Kajaria '545, Gardner Denver, and/or Dixon Frac Fittings
	1-14	EWS System alone or in combination with CNC Fittings, Liu 2003, Kemper Fittings, Beisel ‘2855, Gardner Denver, Kajaria '545, Cicci ‘348, and/or Dixon Frac Fittings
	1-14	Kajaria ‘545 alone or in combination with Liu 2003, Beisel '2855, the Evolution Wells System, Coli '5734, CNC Fittings, Kemper Fittings, Cicci ‘348, and/or Dixon Frac Fittings
	1-14	Dixon Fittings alone or in combination with Liu 2003, Beisel '2855, the Evolution Wells System, Coli '5734, Cicci ‘348, Kajaria ‘545, Gardner Denver, and/or Kemper Fittings
	1-14	Coli ‘5734 alone or in combination with CNC Fittings, Cicci '348, Beisel '2855, the Evolution Wells System, Kajaria '545, Liu 2003, Kemper Fittings, Gardner Denver, and/or Dixon Frac Fittings
	1-14	ProFrac System alone
	1-14	Liberty Energy System alone or in combination with Liu 2003, Beisel '2855, the Evolution Wells System, or Coli '5734
’420 patent	1-20	Cicci ‘348 alone or in combination with Liu 2003, Beisel '2855, the Evolution Wells System, Coli '5734, CNC Fittings, Kemper Fittings, Kajaria ‘545, Gardner Denver, and/or Dixon Frac Fittings
	1-20	Beisel ‘2855 alone or in combination with CNC Fittings, Liu 2003, Kemper Fittings, Beisel ‘2855, Kajaria '545, Gardner Denver, and/or Dixon Frac Fittings

	1-20	EWS System alone or in combination with CNC Fittings, Liu 2003, Kemper Fittings, Beisel ‘2855, Gardner Denver, Kajaria '545, Cicci ‘348, and/or Dixon Frac Fittings
	1-20	Kajaria ‘545 alone or in combination with Liu 2003, Beisel '2855, the Evolution Wells System, Coli '5734, CNC Fittings, Kemper Fittings, Cicci ‘348, and/or Dixon Frac Fittings
	1-20	Dixon Fittings alone or in combination with Liu 2003, Beisel '2855, the Evolution Wells System, Coli '5734, Cicci ‘348, Kajaria ‘545, Gardner Denver, and/or Kemper Fittings
	1-20	Coli ‘5734 alone or in combination with CNC Fittings, Cicci '348, Beisel '2855, the Evolution Wells System, Kajaria '545, Liu 2003, Kemper Fittings, Gardner Denver, and/or Dixon Frac Fittings
	1-20	ProFrac System alone
	1-20	Liberty Energy System alone or in combination with Liu 2003, Beisel '2855, the Evolution Wells System, or Coli '5734
’952 patent	1-19	Randle ‘0768 alone or in combination with Martin '708, Lopez '2537, Cook '3102, Beason '028, Shampine WO'6531, Kuhn De Chizelle '3551, Hill '341, and/or the S&S System
	1-19	Lopez ‘2537 alone or in combination with Martin '708, Randle '0768, Cook '3102, Beason '028, Shampine WO'6531, Kuhn De Chizelle '3551, Hill '341, and the S&S System
	1-19	Cook ‘3102 alone or in combination with Martin '708, Randle '0768, Lopez '2537, Beason '028, Shampine WO'6531, Kuhn De Chizelle '3551, Hill '341, and the S&S System
	1-19	Beason ‘028 alone or in combination with Martin '708, Randle '0768, Lopez '2537, Cook '3102, Shampine WO'6531, Kuhn De Chizelle '3551, Hill '341, and the S&S System
	1-19	Shampine WO’6531 alone or in combination with Martin '708, Randle '0768, Lopez '2537, Cook '3102, Beason '028, Kuhn De Chizelle '3551, Hill '341, and the S&S System
	1-19	Kuhn De Chizelle ‘3551 alone or in combination with Martin '708, Randle '0768, Lopez '2537, Cook '3102, Beason '028, Shampine WO'6531, Hill '341, and the S&S System

	1-19	Hill ‘341 alone or in combination with Martin '708, Randle '0768, Lopez '2537, Cook '3102, Beason '028, Shampine WO'6531, Kuhn De Chizelle '3551, and the S&S System
	1-19	S&S System alone or in combination with Martin '708, Randle '0768, Lopez '2537, Cook '3102, Beason '028, Shampine WO'6531, Kuhn De Chizelle '3551, and/or Hill '341
	1-19	ProFrac System alone
’481 Patent	1-13	Borgstadt ‘3072 alone or in combination with Beisel '234, Haddad '698, Omont WO'9219, Kajita ‘3640, Broussard ‘278, Beisel ‘850, Liu ‘9779, Huang ‘8938, and/or the S&S System
	1-13	S&S System alone or in combination with Borgstadt ‘3072, Omont WO'9219, Kajita '3640, Haddad '698, Broussard '278, Beisel '850, Liu '9779, and/or Huang 8938
	1-13	Schlumberger System alone
’868 Patent	1-13	Borgstadt ‘3072 alone or in combination with Broussard '278, Beisel '850, Liu '9779, Campman '625, and/or Huang 8938
	1-13	Kajita ‘3640 alone or in combination with Borgstadt '3072, Haddad '698, the S&S System, Broussard '278, Beisel '850, Liu '9779, Campman '625, and/or Huang 8938
	1-13	Haddad ‘698 alone or in combination with Borgstadt '3072, the S&S System, Broussard '278, Beisel '850, Liu '9779, Campman '625, and/or Huang 8938
	1-13	S&S System alone or in combination with Broussard '278, Beisel '850, Liu '9779, Campman '625, and/or Huang 8938
	1-13	Schlumberger System alone

Liberty does not represent that the foregoing is an exhaustive recitation of all combinations of prior art. Liberty expressly reserves the right to supplement the foregoing and/or rely on additional combinations as it becomes aware of the same. Liberty hereby incorporates by reference any and all combinations listed in Exhibits A1-F6 as though fully set forth in the chart(s) above. The references identified above are each analogous prior art and are, therefore, properly combinable with any other reference. Specifically, each of the above references discloses a hydraulic fracturing system or an element of a hydraulic fracturing system. Therefore, these

references provide interrelated teachings and one of ordinary skill would look to the concepts in any of these references when seeking to solve the problems purportedly solved by the Asserted Patents.

In addition, one of ordinary skill in the art would be motivated to combine these references in the combinations detailed above and in Exhibits A1-F6. One of skill in the art would also have been motivated to combine these reference by his or her education, knowledge, and experience; by the state of the prior art as a whole; by the nature of the problem to be solved (e.g., determining whether an activity goal or movement threshold has been met); by common sense; and by a desire to create or improve hydraulic fracturing systems or elements thereof. Moreover, one of skill in the art would have been well-equipped with sufficient education, knowledge, and training to make the specific combinations with a reasonable expectation of success. Furthermore, each of the references identified above as an invalidating reference also serves as a motivation to combine these references, illustrates the state of the art as a whole, and demonstrates the likelihood of success for such combinations.

III. INVALIDITY CHARTS

Pursuant to P.R. 3-3(c), Liberty provides Exhibits A1-F6 identifying where in each item of prior art each element of each asserted claim is found.

IV. INVALIDITY BASED ON 35 U.S.C. § 112

Pursuant to P.R. 3-3(d), Liberty provides the following grounds of invalidity under 35 U.S.C. § 112.

Neither ProFrac nor Liberty have completed identifying claim construction issues pursuant to the Scheduling Order. The below grounds should therefore not be taken to limit Liberty's contentions as to indefiniteness, lack of enablement, or lack of written description, including as to the terms identified herein. Further, the contentions do not represent Liberty's agreement or views

as to the meaning of any claim term. Nor do they represent Liberty's agreement or views as to the definiteness, written description support for, or enablement of any claim not specifically identified herein.

The below grounds are based on Liberty's investigation to date and currently available information. Liberty reserves the right to supplement and amend these contentions based on further discovery and investigation, including, in particular, the depositions of the named inventors, the parties' claim construction positions, and any claim constructions entered by the Court, and further review and investigation of ProFrac's infringement positions.

A. Lack of Written Description

With respect to written description, 35 U.S.C. § 112(a) requires a patent specification to contain "a written description of the invention." The written description "must do more than merely disclose that which would render the claimed invention obvious." *ICU Med., Inc. v. Alaris Med. Sys., Inc.*, 558 F.3d 1368, 1377 (Fed. Cir. 2009). The written description must "clearly allow persons of ordinary skill in the art to recognize that the inventor invented what is claimed" by the time of the application filing date. *Ariad Pharm., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc). Thus, a written description is inadequate where the claim in question exceeds the scope of what the patent discloses (for example) by omitting an attribute of the described invention from the limitations, thereby over-extending the reach of the claim. *ICU*, 558 F.3d at 1377–78. To satisfy the written description requirement, "the applicant must 'convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the invention,' and demonstrate that by disclosure in the specification of the patent." *Carnegie Mellon Univ. v. Hoffmann-La Roche Inc.*, 541 F.3d 1115, 1122 (Fed. Cir. 2008) (quoting *Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1563-64 (Fed. Cir. 1991)). Below are a few examples

of the written description deficiencies in the Asserted Patents.

1. The ’162 and ’420 Patents

Claims 6 and 12 of the ’162 patent and claims 7 and 16 of the ’420 patent are invalid for lack of written description for failing to convey that the applicant was in possession of the invention via disclosure in the specification, specifically with regard to “the first diameter is **particularly selected** based at least in part on … **a damage accumulation rate**.” All of the aforementioned claims require “the first diameter is **particularly selected** based at least in part on … **a damage accumulation rate**.” The patent specifications describe a damage accumulation rate but do not describe that the diameter is selected based on the damage accumulation rate. Thus, in claiming “the first diameter is **particularly selected** based at least in part on … **a damage accumulation rate**” without demonstrating possession of an invention including this feature, the aforementioned claims have overreached in their scope and are invalid.

2. Priority Date Issues for The Asserted Patents

As discussed below in Section VI, which is incorporated here by reference, Defendants challenge any attempt by Plaintiffs to improperly assert the earliest possible priority date for any and all of the Asserted Patents.

Four of the six Asserted Patents claim priority to provisional patent applications that are lacking written description for subject matter described and claimed in their respective issued patents. Defendants expressly preserve their right to challenge the validity of the asserted claims of the ’801, ’952, ’481, and/or ’868 patents for lack of written description to the extent Plaintiffs continue to claim the benefit of the underlying provisional application.

The ’162 and ’420 patents do not claim priority to a provisional application, but an analogous situation exists due to amendments made to the claims and specification during prosecution to add new matter that was not described or depicted in the non-provisional application

filed on December 27, 2019. Defendants expressly preserve their right to challenge the validity of the asserted claims of the ’162 and ’420 patents for lack of written description to the extent Plaintiffs persist in claiming the benefit of the underlying application filed on December 27, 2019.

B. Indefiniteness

Title 35 U.S.C. § 112(b) requires that a patent claim “particularly point[] out and distinctly claim[] the subject matter which the applicant regards as his invention.” “[A] patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention.” *Nautilus, Inc. v. Biosig Instrs., Inc.*, 134 S. Ct. 2120, 2124 (2014).

Liberty has not completed identifying claim construction issues pursuant to the Scheduling Order. These contentions should therefore not be taken to limit Liberty’s contentions as to indefiniteness, lack of enablement, or lack of written description, including as to the terms identified herein. Further, these contentions do not represent Liberty’s agreement or views as to the meaning of any claim term. Nor do they represent Liberty’s agreement or views as to the definiteness, written description support for, or enablement of any claim not specifically identified herein.

The asserted claims identified below fail to satisfy the requirements of 35 U.S.C. § 112(b) because each of the identified terms fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention. As a result, the asserted claim terms identified in the following table are invalid as indefinite.

Indefinite Term	Asserted Patent	Asserted Claims	Brief Explanation
"electrical buses"	'801	1, 12	A POSITA would not be able to determine if the recited "electrical buses" are the same or a different required component as the previously recited "bus bar."
"predetermined"	'801	4, 5	A POSITA would not be able to determine what event the determination must be made in advance of to be considered "predetermined."
"a power output of an isolated single generator occupying all available space in an independent mobile unit physically external to the first mobile unit"	'801	5, 15	A POSITA would not be able to determine the metes and bounds of "occupying all available space." A POSITA would not be able to determine if the "independent mobile unit physically external to the first mobile unit" is a physical unit or a hypothetical calculation.
"the at least one switchgear being physically arranged to replace an electronic equipment room (EER) of at least one of the one or more external mobile units that is designed to comprise the EER"	'801	6, 16	A POSITA would not be able to determine whether the replaced EER must still be physically present in the system.
"the VFD and the MCC being on individual ones of the one or more external mobile units"	'801	7, 17	A POSITA would not be able to determine whether both the VFD and the MCC must be on the same external mobile unit or whether the VFD must be on one mobile unit must and the MCC must be on another mobile unit.
"coupling at least one load sharing FP mobile unit to share the at least one load of a second FP mobile unit"	'801	19	A POSITA would not understand how a load sharing FP mobile unit would be able to share the (power) load of a second FP mobile unit.

"an electric powered, multi-plunger hydraulic fracturing pump having an inlet and an outlet, the outlet coupled to a well associated with the subterranean formation and powered by at least one electric motor"	'162 '420	1, 9 1, 11	A POSITA would be unable to determine whether the electric powered pump is powered by at least one electric motor or whether the outlet is powered by at least one electric motor.
"the fitting having a first end for receiving the hose at the first diameter"	'162	1	A POSITA would be unable to determine whether the first end is "at the first diameter" or whether the hose is "at the first diameter."
"a second end for coupling to the electric powered pump at a second diameter"	'162	1	A POSITA would be unable to determine whether the second end is "at a second diameter" or whether the pump is "at a second diameter."
"the distribution system collecting the slurry from electric powered pump[s]"	'162 '420	1, 9 10, 19	A POSITA would be unable to determine whether the recited "electric powered pumps" are the same or different from the previously recited "electric powered pump."`
"approximately 5 inches" "approximately 6 inches"	'162 '420	2, 10 2, 12	A POSITA would be unable to determine the metes and bounds of "approximately" and no guidance is given in the spec.
"[the fitting]/[each fitting of the pair of fittings] is formed as an integral piece with at least one rigid coupling between at least one of the union, the shank end, and the reducer"	'162 '420	4 5, 14	A POSITA would be unable to determine if the recited rigid coupling is or is not formed as part of the "integral piece." A POSITA would not be able to determine how the "at least one rigid coupling" is "<u>between</u> … **<u>one</u>** of" the union, shank end, and reducer.
"the [first]/[third] diameter is associated with a second threshold"	'162 '420	7, 13 8, 17	A POSITA would be unable to ascertain if a "second" threshold has been met, since there is no recitation of a "first" threshold.
"the shank end including an opening to receive the shank end"	'162	9	A POSITA would be unable to determine how a shank end includes an opening to receive itself.

"a plurality of electric powered, multi-plunger pumps"	'162	8, 14	A POSITA would be unable to determine whether the recited "plurality of electric powered [] pumps" are the same or different from the previously recited "electric powered pumps."
"an external power source"	'952	5, 10, 18	A POSITA would be unable to determine what the power source must be "external" in relation to.
"a first electric powered, multi-plunger hydraulic fracturing pump … is configured, via an Ethernet connection, a control signal and, responsive to the control signal, transmit, via a second connection different from the Ethernet connection, a valve control signal"	'952	12	A POSITA would be unable to determine the metes and bounds of "is configured … a control signal and … transmit."
"determining <u>an adjustment</u> for the one or more operating parameters of the pump; determining the one or more operating parameters, <u>after the adjustment is applied</u>, are within a range; and <u>adjusting</u> the one or more operating parameters of the pump."	'481	1	A POSITA would be unable to determine if the "adjusting" step is the execution of previously recited "adjustment" or if the "adjusting" step must be a separate adjustment from the previous recitations.
"12. The method of claim 8, further comprising: associating the first data with a first damage threshold; associating the second data with a second damage threshold; and determining at least one of the first data or the second data exceeds the respective first or second damage thresholds; and adjusting one or more operating parameters of the pump."	'481	12	A POSITA would be unable to determine if the recited "first damage threshold" and/or "second damage threshold" are the same or different than the "damage threshold" recited in claim 8.

"retrieving, from a data store, the damage threshold and the second damage threshold."	'868	8	A POSITA would be unable to determine if the recited "damage threshold" is referring to the previously recited first damage threshold or the third damage threshold.

V. INELIGIBILITY UNDER 35 U.S.C. § 101

A. The '801 Patent

All asserted claims of the '801 patent are also invalid under 35 U.S.C. § 101, as explained in detail in Exhibit A6. These claims are directed to the abstract idea of electrical load sharing. Even if this was novel, which Liberty disputes, it is nothing more than the application of generic techniques and processes. Thus, all asserted claims of the '801 patent are directed to an abstract idea, which is patent-ineligible subject matter. The asserted claims do not contain any inventive concept that amounts to something more than a patent upon the abstract idea itself. The asserted claims merely implement the abstract idea in fracturing using generic instrumentality and tools that are well-known to those skilled in the art of fracturing technology.

B. The '481 Patent

All asserted claims of the '481 patent are also invalid under 35 U.S.C. § 101, as explained in detail in Exhibit E4. These claims are directed to the abstract idea of monitoring pump conditions. Even if this was novel, which Liberty disputes, it is nothing more than the application of generic techniques and processes. Thus, all asserted claims of the '481 patent are directed to an abstract idea, which is patent-ineligible subject matter. The asserted claims do not contain any inventive concept that amounts to something more than a patent upon the abstract idea itself. The asserted claims merely implement the abstract idea in fracturing using generic instrumentality and tools that are well-known to those skilled in the art of fracturing technology.

C. The ’868 Patent

All asserted claims of the ’868 patent are also invalid under 35 U.S.C. § 101, as explained in detail in Exhibit F6. These claims are directed to the abstract idea of determining adjustments for a pump. Even if this was novel, which Liberty disputes, it is nothing more than the application of generic techniques and processes. Thus, all asserted claims of the ’868 patent are directed to an abstract idea, which is patent-ineligible subject matter. The asserted claims do not contain any inventive concept that amounts to something more than a patent upon the abstract idea itself. The asserted claims merely implement the abstract idea in fracturing using generic instrumentality and tools that are well-known to those skilled in the art of fracturing technology.

VI. PRIORITY DATES

A. The ’801 Patent

Defendants challenge the alleged priority date of the asserted claims of the ’801 patent set forth in Plaintiffs’ Infringement Contentions. Provisional application no. 62/685,797 filed on June 15, 2018 does not disclose all of the subject matter disclosed and claimed in the ’801 patent. For example, the provisional application does not include FIG. 11 of the ’801 patent and the corresponding text describing FIG. 11 at column 2, lines 52-54 and column 15, lines 4-24.

B. The ’420 Patent

Defendants challenge the alleged priority date of the asserted claims of the ’420 patent set forth in Plaintiffs’ Infringement Contentions. Non-provisional application no. 16/728,359 filed on December 27, 2019 does not disclose all of the subject matter disclosed and claimed in the ’420 patent. For example, the December 23, 2021 Preliminary Amendment (new claims) and the

January 9, 2023 Amendment (new text and new FIG. 2B) added new matter that is not disclosed in the above-referenced application filed December 27, 2019.

C. The ’162 Patent

Plaintiffs did not allege an earlier priority date for the asserted claims of the ’162 patent in Plaintiffs’ Infringement Contentions. Defendants reserve their right to challenge Plaintiffs’ position that the asserted claims of the ’162 patent are entitled to a priority date of December 27, 2019 based on the filing date of non-provisional application no. 16/728,359 to the extent it does not disclose all of the subject matter disclosed and claimed in the ’162 patent, including but not limited to claim construction positions taken by Plaintiffs and/or claim amendments made during prosecution of the application that resulted in the ’162 patent.

D. The ’952 Patent

Defendants challenge the alleged priority date of the asserted claims of the ’952 patent set forth in Plaintiffs’ Infringement Contentions. Provisional application no. 62/936,782 filed on November 18, 2019 does not disclose all of the subject matter disclosed and claimed in the ’952 patent. For example, the provisional application does not describe a valve control distribution box as claimed in the ’952 patent, and the provisional application does not include FIGS. 1 and 5 of the ’952 patent.

E. The ’481 Patent

Defendants challenge the alleged priority date of the asserted claims of the ’481 patent set forth in Plaintiffs’ Infringement Contentions. Provisional application no. 62/568,716 filed on October 5, 2017 does not disclose all of the subject matter disclosed and claimed in the ’481 patent. For example, the provisional application does not include FIG. 9 of the ’481 patent and

the corresponding text describing FIG. 9 at column 3, lines 7-9 and column 9, line 49 – column 10, line 30.

F. The ’868 Patent

Defendants challenge the alleged priority date of the asserted claims of the ’868 patent set forth in Plaintiffs’ Infringement Contentions. Provisional application no. 62/568,716 filed on October 5, 2017 does not disclose all of the subject matter disclosed and claimed in the ’868 patent. For example, the provisional application does not include FIG. 9 of the ’868 patent and the corresponding text describing FIG. 9 at column 3, lines 10-12 and column 9, line 54 – column 10, line 35.

VII. RESERVATIONS

Discovery in this case is ongoing. *See, e.g.*, Dkt. No. 7. Liberty’s search for, and analysis of, the prior art is ongoing. Liberty continues to investigate ProFrac’s public use, sale, or offer for sale of products and systems that may anticipate or render obvious one or more of the claims of the Asserted Patents. Liberty also continues to investigate and analyze the Asserted Patents and the asserted claims and develop new bases and grounds of invalidity, including, but not limited to the operation and functionality of various prior art systems. Liberty reserves the right to modify, amend, and supplement their Liberty’s Invalidity Contentions and document production in the event that additional grounds or evidence of invalidity are identified or developed in this case. Moreover, Liberty reserves the right to revise their ultimate contentions concerning the invalidity of the asserted claims, which may change depending upon the Court’s construction of the asserted claims, any findings as to the priority date of the asserted claims, and/or positions that ProFrac or expert witness(es) may take concerning claim construction, infringement, and/or invalidity issues.

ProFrac’s Infringement Contentions fail to provide sufficient detail to identify Liberty’s

accused instrumentalities and/or how those instrumentalities allegedly satisfy each element of the asserted claims. Accordingly, if and when ProFrac modifies, amends, or supplements its Infringement Contentions, Liberty reserves the right to modify, amend, and/or supplement Liberty's Invalidity Contentions and document production. Liberty also reserves the right to modify, amend, and/or supplement Liberty's Invalidity Contentions and document production, if and when ProFrac provides further details as to its infringement contentions.

Prior art not included in this disclosure, whether known or not known to Liberty, may become relevant. In particular, Liberty is currently unaware of the extent, if any, to which ProFrac will contend that limitations of the asserted claims are not disclosed in the prior art identified by Liberty. To the extent that ProFrac makes such contentions, Liberty reserves the right to identify additional references or additional combinations of references that disclose, practice, or render obvious the allegedly missing limitation(s).

Liberty's claim charts cite to particular exemplary teachings and disclosures of the prior art as applied to features of the asserted claims. Persons having ordinary skill in the art may, however, view an item of prior art in the context of other publications, literature, products, and understanding. As such, the cited portions are exemplary only, and Liberty reserves the right to rely on un-cited portions of the prior art references and on other publications and expert testimony as aids in understanding and interpreting the cited portions, as providing context thereto, as additional evidence that the prior art discloses or renders obvious a claim limitation or the invention as a whole, or as evidence of the obviousness factor of contemporaneous development by others. Liberty further reserves the right to rely on un-cited portions of the prior art references, other publications, and testimony, including expert testimony, to establish bases for combinations of certain cited references that render the asserted claims obvious.

The references discussed in the claim charts may disclose the elements of the asserted claims explicitly and/or inherently, and/or they may be relied upon to show the state of the art in the relevant time frame. The suggested obviousness combinations are provided in the alternative to Defendants' anticipation contentions and are not to be construed to suggest that any reference included in the combinations is not by itself anticipatory.

Third party discovery is ongoing. Accordingly, Liberty reserves the right to modify, amend, and/or supplement these Disclosures with further information related to these systems, including but not limited to witness testimony, documents and publications regarding the operations and/or functions of these systems, and/or demonstrations of the systems themselves.

Liberty also reserves their right to further challenge any of the claim terms herein under 35 U.S.C. § 112, including by arguing that they are indefinite, not supported by the written description, and/or not enabled. Accordingly, nothing stated herein shall be construed as a waiver of any argument available under 35 U.S.C. § 112.

Liberty also reserves their right to assert additional grounds of invalidity under 35 U.S.C. § 101 based upon the claim construction process or positions taken by Plaintiff in this case.

Liberty further may rely upon persons identified as inventors of the patents and prior art systems and authors of the publications disclosed herein, as well as individuals identified in Defendants' initial disclosures, and others as they become identified in discovery, as prior inventors, as persons of ordinary skill in the art, or as persons having knowledge of or having previously used or offered for sale the alleged inventions claimed in the Asserted Patents. In addition, Liberty may rely upon the facts, as developed in discovery of the prior invention or derivation of the alleged inventions claimed in the Asserted Patents.

Discovery is ongoing and Liberty continues to investigate the prior art, including whether

ProFrac's predecessor(s)-in-interest may have publicly demonstrated and/or offered to sell a system that embodied all of the asserted claims more than one year prior to the priority dates of the Asserted Patents. Liberty reserves their rights to supplement and/or amend these contentions with respect to public demonstrations and/or offers to sell as discovery progresses.

To the extent Liberty's Invalidity Contentions reflect constructions of claim limitations consistent with or implicit in ProFrac's Infringement Contentions, no inference is intended and none should be drawn that Liberty agrees with ProFrac's claim constructions, and Liberty expressly reserves the right to contest such claim constructions. Liberty offers such contentions in response to ProFrac's Infringement Contentions and without prejudice to any position they may ultimately take as to any claim construction issues.

Liberty hereby provides disclosures and related documents pertaining only to the asserted claims identified in ProFrac's Infringement Contentions. Liberty reserves the right to modify, amend, or supplement these Liberty's Invalidity Contentions to show the invalidity of any additional claims that the Court may allow ProFrac to later assert. Liberty further reserves the right to supplement their document production should they later find additional, responsive documents, or information.

VIII. ACCOMPANYING DOCUMENT PRODUCTION

Pursuant to P.R. 3-4(a), Liberty has produced documents and information sufficient to show the operation of the aspects of the Accused Instrumentalities that ProFrac identified in the charts included with its P.R. 3-1 disclosures. *See* LBT(ED-DEF)_1-58468.

Pursuant to P.R. 3-4(b) and the Court's Standing Order regarding Eligibility Contentions, Liberty is producing and serving each item of prior art identified herein. *See* PA_LBT(ED-DEF)_1-8921

Dated: August 21, 2025

Respectfully submitted,

By: /s/ *Robert H. Reckers*

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CERTIFICATE OF SERVICE

Pursuant to the Federal Rules of Civil Procedure and L.R. CV-5(c), I hereby certify that, on August 21, 2025 all counsel of record who have appeared in this case are being served with a copy of the foregoing via the Court's CM/ECF system.

By: /s/ *Robert H. Reckers*
Robert H. Reckers