IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF TEXAS
HOUSTON DIVISION

U.S. WELL SERVICES, LLC, U.S. WELL SERVICES HOLDINGS, LLC, PROFRAC MANUFACTURING, LLC, PROFRAC SERVICES, LLC, Plaintiffs, v. **LIBERTY ENERGY, INC., LIBERTY OILFIELD SERVICES LLC, LIBERTY ADVANCED EQUIPMENT TECHNOLOGIES LLC, ST9 GAS AND OIL LLC,** Defendants.	Case No. 4:24-cv-00839-KPE **JURY TRIAL DEMANDED**

DEFENDANTS' DISCLOSURES UNDER
P.R. 3-3 AND 3-4 INCLUDING PRELIMINARY INVALIDITY CONTENTIONS

Defendants/Counterclaim-Plaintiffs Liberty Energy, Inc.; Liberty Oilfield Services LLC; Liberty Advanced Equipment Technologies LLC; ST9 Gas and Oil LLC (collectively, "Liberty"); (collectively, "Defendants") provide these Disclosures under P.R. 3-3 and 3-4 including Preliminary Invalidity Contentions pursuant to the Patent Case Scheduling Order, Dkt. 30 and the Local Patent Rules. Liberty's disclosures are made with the benefit of limited discovery and are based on Liberty's good-faith understanding of U.S. Well Services, LLC; U.S. Well Services Holdings, LLC; ProFrac Manufacturing, LLC; and ProFrac Services, LLC (collectively, "USWS" or "Plaintiffs") disclosure of asserted claims and Preliminary Infringement Contentions, served July 18, 2024. Liberty continues to pursue discovery 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 based on additional information obtained through

discovery or in light of the Court's claim constructions. Finally, Liberty's submission of preliminary contentions is not intended and should not be construed as a waiver of any claim construction argument or non-infringement position.

To the extent that these Preliminary Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the asserted claims, Liberty is not proposing any such construction as proper constructions of those terms or phrases. Liberty will disclose its proposed constructions according to the deadlines set by the Court. For purposes of these Preliminary Invalidity Contentions, Liberty may adopt alternative, and even inconsistent, claim construction positions. In particular, certain of these Preliminary Invalidity Contentions, including the attached charts, may be based on claim constructions that appear to underlie USWS's Infringement Contentions. Liberty does not concede that USWS's apparent constructions are proper and may contest any such constructions.

I. IDENTIFICATION OF REFERENCES

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. 11,959,533 ("the '533 patent"), 10,598,258 ("the '258 patent"), 11,091,992 ("the '992 patent"), 10,655,435 ("the '435 patent"), and 11,208,878 ("the '878 patent") (collectively "Asserted Patents") under pre- and 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)(1), Liberty identifies the following patents and published patent applications (including the number of the patent or published application, its country of origin, and dates of filing and issue or publication) as prior art that anticipates or renders obvious asserted claims of the '258 patent:

U.S. Well - Exhibit 2019
Liberty v. U.S. Well - IPR2025-00066
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Abbreviation	Patent/Pub. No.	Country of Origin	Filing Date	Issue/Pub. Date
Yi	CN 103742382	CN	Dec. 30, 2013	Apr. 23, 2014
Rosman	US 4,100,822	U.S.A.	Apr. 19, 1976	Jul. 18, 1978
Bergan	US 2015/0361736	U.S.A.	Jun. 13, 2014	Sep. 25, 2018
Mail	US 8,851,860	U.S.A.	Mar. 12, 2010	Oct. 7, 2014
Payne	US 2016/0258267	U.S.A.	Mar. 3, 2016	Apr. 2, 2019
Buckley ’429	US 2020/0256429	U.S.A.	Sep. 25, 2018	Aug. 13, 2020
Rosman	US 4,100,822	U.S.A.	Apr. 19, 1976	Jul. 18, 1978
Snir	US 10,697,517	U.S.A	Jul. 21, 2016	Jun. 30, 2020
Broussard	US 2016/0032703	U.S.A	Oct. 15, 2015	Feb. 4, 2016
Case	US 7,621,328	U.S.A.	May 7, 2008	Nov. 24, 2009
Salvaire	US 7,901,314	U.S.A	Sept. 4, 2007	Mar. 8, 2011
Hernandez	US 2017/0051732	U.S.A.	Aug. 18, 2015	Feb. 23, 2017
Zhang	US 10,134,257	U.S.A.	Aug. 5, 2016	Nov. 20, 2018
Glass ’854	US 10,227,854	U.S.A.	Jan. 6, 2015	Mar. 12, 2019

Pursuant to P.R. 3-3(a)(1), Liberty identifies the following patents and published patent applications (including the number of the patent or published application, its country of origin, and dates of filing and issue or publication) as prior art that anticipates or renders obvious asserted claims of the ’533 patent:

Abbreviation	Patent/Pub. No.	Country of Origin	Filing Date	Issue/Pub. Date
Yi	CN 103742382	CN	Dec. 30, 2013	Apr. 23, 2014
Buckley ’429	US 2020/0256429	U.S.A.	Sep. 25, 2018	Aug. 13, 2020
Rosman	US 4,100,822	U.S.A.	Apr. 19, 1976	Jul. 18, 1978
Bergan	US 2015/0361736	U.S.A.	Jun. 13, 2014	Sep. 25, 2018
Mail	US 8,851,860	U.S.A.	Mar. 12, 2010	Oct. 7, 2014

Abbreviation	Patent/Pub. No.	Country of Origin	Filing Date	Issue/Pub. Date
Payne	US 2016/0258267	U.S.A.	Mar. 3, 2016	Apr. 2, 2019
Gambier	US 8,506,267	U.S.A	Sep. 3, 2008	Aug. 13, 2013
Barnett	US 10,184,470	U.S.A.	Jan. 12, 2017	Jan. 22, 2019
Williams	US 8,083,504	U.S.A.	Oct. 3, 2008	Dec. 27, 2011
Ray	US 2,505,575	U.S.A.	Mar. 3, 1948	Apr. 25, 1950
Salvaire	US 7,901,314	U.S.A	Sept. 4, 2007	Mar. 8, 2011
Hernandez	US 2017/0051732	U.S.A.	Aug. 18, 2015	Feb. 23, 2017
Zhang	CN 207829871	CN	Feb. 6, 2018	Sep. 7, 2018
Joyner	US 6,907,667	U.S.A.	Oct. 14, 2002	June 21, 2005
Morris	US 2016/0369609	U.S.A.	Aug. 31, 2016	Dec. 22, 2016
Glass ’854	US 10,227,854	U.S.A.	Jan. 6, 2015	Mar. 12, 2019

Pursuant to P.R. 3-3(a)(1), Liberty identifies the following patents and published patent applications (including the number of the patent or published application, its country of origin, and dates of filing and issue or publication) as prior art that anticipates or renders obvious asserted claims of the ’435 patent:

Abbreviation	Patent/Pub. No.	Country of Origin	Filing Date	Issue/Pub. Date
Smith	US 2018/0163528	U.S.A.	Dec. 8, 2017	Jun. 14, 2018
Mazrooee	US 10,961,835	U.S.A	Dec. 30, 2016	Mar. 30, 2021
Borgstadt	US 2009/0053072	U.S.A	Aug. 21, 2007	Feb. 26, 2009
Dykstra	US 2008/0236818	U.S.A.	Mar. 27, 2007	Nov. 23, 2010
Norris	WO 2017/040921	CA(?)	Sep. 2, 2016	Mar. 9, 2017
Omont	WO 2016/019219	CA	Jul. 31, 2015	Feb. 4, 2016
Glass ’854	US 10,227,854	U.S.A.	Jan. 6, 2015	Mar. 12, 2019

Pursuant to P.R. 3-3(a)(1), Liberty identifies the following patents and published patent applications (including the number of the patent or published application, its country of origin, and dates of filing and issue or publication) as prior art that anticipates or renders obvious asserted claims of the ’878 patent:

Abbreviation	Patent/Pub. No.	Country of Origin	Filing Date	Issue/Pub. Date
Orban	WO/ 2018/201118	CA	Apr. 30, 2018	Nov. 1, 2018
Pratt	US 5,042756	U.S.A.	Mar 20, 1990	Aug. 27, 1991
Oehring II	US 2016/0273328	U.S.A.	May 3, 2016	Sep. 22, 2016
Morris	US 2020/0040705	U.S.A.	Jul. 24, 2019	Jun. 14, 2022
Oehring ’409	US 2017/0222409	U.S.A.	April 14, 2017	Aug. 3, 2017
Glass ’854	US 10,227,854	U.S.A.	Jan. 6, 2015	Mar. 12, 2019

Pursuant to P.R. 3-3(a)(1), Liberty identifies the following patents and published patent applications (including the number of the patent or published application, its country of origin, and dates of filing and issue or publication) as prior art that anticipates or renders obvious asserted claims of the ’992 patent:

Abbreviation	Patent/Pub. No.	Country of Origin	Filing Date	Issue/Pub. Date
Birch	US 5,606,853	U.S.A.	Apr. 28, 1995	Mar. 4, 1997
Dykstra	US 2008/0236818	U.S.A.	Mar. 27, 2007	Nov. 23, 2010
Rusnak	US 2008/0288115	U.S.A.	Mar. 14, 2007	Jul. 8, 2014
Hunt	US 2010/0038907	U.S.A.	Apr. 30, 2009	Feb. 18, 2010
Coli ’5734	US 2012/0255734	U.S.A.	Apr. 6, 2012	Jun. 14, 2016
Glass ’854	US 10,227,854	U.S.A.	Jan. 6, 2015	Mar. 12, 2019
Broussard	US 2014/0138079	U.S.A.	Nov. 16, 2012	May 22, 2014

Abbreviation	Patent/Pub. No.	Country of Origin	Filing Date	Issue/Pub. Date
Craig	US 9,284,829	U.S.A.	Sept. 12, 2012	Mar. 15, 2016
Coli ’393	US 61/710,393	U.S.A.	Oct. 12, 2012	Sept. 22, 2015
Payne ’984	US 10,246,984	U.S.A.	Mar. 3, 2016	April 2, 2019

B. Printed Publications

Pursuant to P.R. 3-3(a)(2), Liberty identifies the following printed publications (by their title, date of publication and, where feasible, author(s) and publisher) as prior art that anticipates or renders obvious asserted claims the ’258 patent:

Abbreviation	Title	Date of Publication	Author	Publisher
GD-2500Q	Gardner Denver GD-2500Q Quintuplex Well Service Pump brochure	2023	Gardner Denver, Inc.	Garner Denver, Inc.
Jelaska	Gears and Gear Drives	2012	Damir Jelaska	John Wiley & Sons Ltd.
Langewis	Practical Hydraulics of Positive Displacement Pumps for High-Pressure Waterflood Installations	Feb. 1971	C. Langewis et. al	Journal of Petroleum Technology
Europump	Variable Speed Pumping A Guide to Successful Applications	2004	Europump and Hydraulic Institute	Europump and Hydraulic Institute

Abbreviation	Title	Date of Publication	Author	Publisher
Handbook of Pumps and Pumping	Handbook of Pumps and Pumping	Dec. 2006	Brian Nesbitt	Elsevier Science & Technology Books
Europump	Variable Speed Pumping A Guide to Successful Applications	2004	Europump and Hydraulic Institute	Europump and Hydraulic Institute
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
ProFrac Websites	*see* Exhibit A1	*see* Exhibit A1	*see* Exhibit A1	*see* Exhibit A1
Lime Instr. Websites	*see* Exhibit A3	*see* Exhibit A3	*see* Exhibit A3	*see* Exhibit A3
SPCS User Guide	LimeFrac Single Pump Control System User Guide	April 11, 2012	Lime Instruments	Lime Instruments
GEN284 White Paper	The Basics of Natural Gas Power & Fuel	2013	Haut, LaFleur	Haut, LaFleur
EWS Websites	*see* Exhibit A2	*see* Exhibit A2	*see* Exhibit A2	*see* Exhibit A2

Pursuant to P.R. 3-3(a)(2), Liberty identifies the following printed publications (by their title, date of publication and, where feasible, author(s) and publisher) as prior art that anticipates or renders obvious asserted claims the ’878 patent:

Abbreviation	Title	Date of Publication	Author	Publisher
ABB1	Introduction to Modular Systems	Nov. 2014	ABB	ABB
Schneider Premset	Scjmeoder Premset Catalog	May 3, 2017	Schneider Electric	Schneider Electric
NEC	"Grounding"	Jul. 16, 2017	NFPA	NFPA
Siemens	Medium-Voltage Switchgear Type NXPLUS C Wind Fixed Circuit Breaker Switchgear up to 36 kV, Extendable Installation and Operating Instructions	June 2, 2014	Siemens	Siemens
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
ProFrac Websites	*see* Exhibit D1	*see* Exhibit D1	*see* Exhibit D1	*see* Exhibit D1
Lime Instr. Websites	*see* Exhibit D2	*see* Exhibit D2	*see* Exhibit D2	*see* Exhibit D2
SPCS User Guide	LimeFrac Single Pump Control System User Guide	April 11, 2012	Lime Instruments	Lime Instruments
GEN284 White Paper	The Basics of Natural Gas Power & Fuel	2013	Haut, LaFleur	Haut, LaFleur
EWS Websites	*see* Exhibit D3	*see* Exhibit D3	*see* Exhibit D3	*see* Exhibit D3

Pursuant to P.R. 3-3(a)(2), Liberty identifies the following printed publications (by their

title, date of publication and, where feasible, author(s) and publisher) as prior art that anticipates or renders obvious asserted claims the'533 patent:

Abbreviation	Title	Date of Publication	Author	Publisher
Europump	Variable Speed Pumping A Guide to Successful Applications	2004	Europump and Hydraulic Institute	Europump and Hydraulic Institute
Handbook of Pumps and Pumping	Handbook of Pumps and Pumping	Dec. 2006	Brian Nesbitt	Elsevier Science & Technology Books
Langewis	Practical Hydraulics of Positive Displacement Pumps for High-Pressure Waterflood Installations	Feb. 1971	C. Langewis et. al	Journal of Petroleum Technology
Jelaska	Gears and Gear Drives	2012	Damir Jelaska	John Wiley & Sons Ltd.
GD-2500Q	Gardner Denver GD-2500 Quintuplex Well Service Pump brochure	2023	Gardner Denver, Inc.	Garner Denver, Inc.
Marks' Standard	Marks' Standard Handbook for Mechanical Engineers, Section 14: Fans, Pumps, and Compressors	1999	T.L. Henshaw, et al	McGraw-Hill

Abbreviation	Title	Date of Publication	Author	Publisher
Minav	Axial Piston Pump Flow Ripple Compensation by Adjusting the Pump Speed with an Electric Drive	May 2011	Tatiana Minay	The Twelfth Scandinavian International Conference on Fluid Power at: Tampere, Finland
Kasuba	Dynamics of Planetary Gear Trains	June 1984	Kasuba, et al.	NASA
Karassik	Pump Handbook, Fourth Edition	2008	Karassik, et al.	McGraw Hill
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
ProFrac Websites	*see* Exhibit B1	*see* Exhibit B1	*see* Exhibit B1	*see* Exhibit B1
Lime Instr. Websites	*see* Exhibit B3	*see* Exhibit B3	*see* Exhibit B3	*see* Exhibit B3
SPCS User Guide	LimeFrac Single Pump Control System User Guide	April 11, 2012	Lime Instruments	Lime Instruments
GEN284 White Paper	The Basics of Natural Gas Power & Fuel	2013	Haut, LaFleur	Haut, LaFleur
EWS Websites	*see* Exhibit B2	*see* Exhibit B2	*see* Exhibit B2	*see* Exhibit B2

Pursuant to P.R. 3-3(a)(2), Liberty identifies the following printed publications (by their title, date of publication and, where feasible, author(s) and publisher) as prior art that anticipates or renders obvious asserted claims the ’992 patent:

Abbreviation	**Title**	**Date of Publication**	**Author**	**Publisher**
Catalog	Mobile Data Technologies Product Catalog	Nov. 1, 2013	MDT	MDT
MDT Websites	*see* Exhibit C3	*see* Exhibit C3	*see* Exhibit C3	*see* Exhibit C3
S&S Publications	Stewart & Stevenson Software, Manuals, Release Notes, and Websites	2006-2011	S&S	S&S
Oehring Paper	Environmental Benefits of Electric Powered Hydraulic Fracturing	October 2015	Oehring, J.M.	SPE Eastern Regional Meeting
ProFrac Websites	*see* Exhibit C1	*see* Exhibit C1	*see* Exhibit C1	*see* Exhibit C1
Lime Instr. Websites	*see* Exhibit C2	*see* Exhibit C2	*see* Exhibit C2	*see* Exhibit C2
SPCS User Guide	LimeFrac Single Pump Control System User Guide	April 11, 2012	Lime Instruments	Lime Instruments

Pursuant to P.R. 3-3(a)(2), Liberty identifies the following printed publications (by their title, date of publication and, where feasible, author(s) and publisher) as prior art that anticipates or renders obvious asserted claims the ’435 patent:

Abbreviation	Title	Date of Publication	Author	Publisher
Catalog	Mobile Data Technologies Product Catalog	Nov. 1, 2013	MDT	MDT
Websites	Mobile Data Technologies Websites	2011-2015	MDT	MDT
S&S Publications	Stewart & Stevenson Software, Manuals, Release Notes, and Websites	2006-2011	S&S	S&S
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
ProFrac Websites	*see* Exhibit E2	*see* Exhibit E2	*see* Exhibit E2	*see* Exhibit E2
Lime Instr. Websites	*see* Exhibit E3	*see* Exhibit E3	*see* Exhibit E3	*see* Exhibit E3
SPCS User Guide	LimeFrac Single Pump Control System User Guide	April 11, 2012	Lime Instruments	Lime Instruments
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 E1	*see* Exhibit E1	*see* Exhibit E1	*see* Exhibit E1

C. Other Prior Art

Pursuant to P.R. 3-3(a)(3)(A) and (B), 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 (pre- or post-AIA) or pre-AIA 35 U.S.C. §§ 102(f), 102(g)(2), as explained below.

To the extent applicable, in Exhibits A1–E7 Liberty identifies the date the offer for sale, sale, or use took place, or when the information became known, and the identity of the 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.

1. Stewart & Stevenson LLC –IPC Intelligent Pump Control System

In or around 2012, Stewart & Stevenson LLC, either itself or through subsidiaries or affiliates, designed 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 IPC 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).

2. Lime Instruments (“Data van” or “Pump Control”)

In or around 2014, Lime Instruments, either itself or through subsidiaries or affiliates, designed a fracturing operations control unit for use in at least the United States. 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. These fracturing operations involved the use of a fracturing control system with robust control features that was 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 the attached charts. At least one such system was implemented as discussed in these publications and evidenced by non-public/public documents, which are cited throughout the attached invalidity claim charts. Because the Conventional Frac Pump Control 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 2014 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).

3. Evolution Well Services (Mobile Data Van)

In or around 2013, Evolution Well Services (“EWS”), either itself or through subsidiaries or affiliates, designed 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 Conventional Frac Pump Control 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).

4. 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

5. Mobile Data Technologies Systems

In or around 2008, Mobile Data Technologies ("MDT"), either itself or through subsidiaries or affiliates, designed a mobile hydraulic fracturing system for use in at least Canada. 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. These fracturing operations involved the use of a fracturing control system

with robust control features that was 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 MDT Catalog or MDT 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 MDT Systems were 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 2017, 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).

5. 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 Exhibit E1. 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).

D. Evidence of the State of the Art

The prior art references listed above 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
Oehring	US 9,893,500	U.S.A.	Apr. 14, 2017	Feb. 13, 2018
Li	CN 102602322	CN	Mar. 19, 2012	Apr. 30, 2014
Wang	CN 103089226	CN	Jan. 24, 2013	Apr. 20, 2016
Yu	CN 204402781	CN	Jan. 4, 2015	Jun. 17, 2015
Zhang	CN 207829871	CN	Feb. 6, 2018	Sep. 7, 2018
Lestz	US 2015/0114652	U.S.A.	Oct. 10, 2014	Apr. 30, 2015
Morris	US 2019/0003329	U.S.A.	Jun. 28, 2018	Dec. 31, 2019
Davis	US 2019/0067991	U.S.A.	Aug. 29, 2017	Feb. 28, 2019
Morris	US 2020/0040878	U.S.A.	Jul. 29, 2019	Nov. 14, 2023
Sigmar	US 2020/0088202	U.S.A.	Apr. 29, 2019	Mar. 19, 2020
Beisel	WO 2017/039,692	CA	Sep. 4, 2015	Mar. 9, 2017
Li	CN 102602322	CN	Mar. 19, 2012	Apr. 30, 2014
Yang	CN 105090423	CN	Sep. 8, 2015	Jan. 2, 2018
Yu	CN 105134581	CN	Oct. 8, 2015	Aug. 29, 2017

Abbreviation	Patent/Pub. No.	Country of Origin	Filing Date	Issue/Pub. Date
Yi	CN 203783839	CN	Dec. 30. 2013	Aug. 20, 2014
Liu	CN 205025703	CN	Sep. 29, 2015	Feb. 10, 2016
Vodafone ’208	GB 1487208	GB	Sep. 11, 1974	Sep. 28, 1977
Rostron ’246	GB 2235246	GB	Jun. 29, 1989	Aug. 9, 1989
Bixby ’897	US 3,518,897	U.S.A.	Oct. 28, 1968	Jul. 7, 1970
Allan ’822	US 4,100,822	U.S.A.	Apr. 19, 1976	Jul. 18, 1978
Hagen ’152	US 4,309,152	U.S.A.	Sep. 6, 1979	Jan. 5, 1982
Suttner ’141	US 5,667,141	U.S.A.	May 3, 1995	Sep. 16, 1997
Salvaire ’314	US 7,901,314	U.S.A	Sept. 4, 2007	Mar. 8, 2011
Kovach ’165	US 8,596,165	U.S.A.	Jun. 11, 2007	Dec. 3, 2013
Bottcher ’192	US 9,599,192	U.S.A.	Sep. 25, 2012	Mar. 21, 2017
Kugelev ’040	US 2004/0219040	U.S.A.	Apr. 28, 2004	Nov. 4, 2004
Huang ’484	US 2010/0093484	U.S.A.	Dec. 29, 2008	Apr. 15, 2010
Hernandez ’732	US 2017/0051732	U.S.A.	Aug. 18, 2015	Feb. 23, 2017
Buckley’839	US 2023/0265839	U.S.A.	Apr. 26, 2023	Aug. 24, 2023
Dalton ’005	WO 2015/024005	FRA	Aug. 15, 2014	Feb. 19, 2015
Yao ’394	WO 2015/027394	CN	Aug. 27, 2013	Mar. 5, 2015
Buckley ’943	US 62/562,943	U.S.A	Sept. 25, 2017	—
Zhang ’257	US 10,134, 257	U.S.A.	Aug. 5, 2016	Nov. 20, 2018
Payne ’984	US 10,246,984	U.S.A.	Mar. 3, 2016	Apr. 2, 2019
Snir ’517	US 10,697,517	U.S.A	Jul. 21, 2016	Jun. 30, 2020
Buckley ’769	US 11,339,769	U.S.A	Apr. 29, 2021	May 24, 2022
Broussard ’703	US 2016/0032703	U.S.A	Oct. 15, 2015	Feb. 4, 2016
Case ’328	US 7,621,328	U.S.A.	May 7, 2008	Nov. 24, 2009
And any patents/publications cited in the accompanying charts				

Abbreviation	Title	Date of Publication	Author	Publisher
OTC Publication	Implementing New Technology for Improved Mud Pump Performance	2005	H Kverneland;	Offshore Technology Converece
Cavitation	CAVITATION IN RECIPROCATING POSITIVE DISPLACEMENT PUMPS	2011	Karsten Opitz, et. al	Turbomachinaroy Laboratory, Texas A&M University
Piston Pump's	EXPERIMENTAL AND NUMERICAL ASSESSMENT OF AN AXIAL PISTON PUMP'S SPEED LIMIT	2016	Markus Kunkis, Jüregen Weber	ASME
Siemens instructions	Medium-voltage-switchgear Installation and operating Instructions	June 2, 2014	Siemens	Siemens
BorgWarner Product Sheet	HVH410-150 Electric Motor	2016	BorgWarner	BorgWarner
IEEE 100	The Authoritative Dictionary of IEEE Standards Terms, 7th Ed.	2000	IEEE	IEEE
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 USWS appears to be advancing based on its Preliminary Infringement Contentions and should not be seen as Liberty's acquiescence to USWS's interpretation of the patent claims. To the extent USWS has failed to provide any disclosures in its infringement contentions, Liberty cannot at this time accurately determine the scope of USWS's contentions; therefore, Liberty reserves the right to modify, amend, and/or supplement its initial invalidity contentions as USWS 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
'258 patent	1-20	ProFrac System and/or Publications, alone or in combination with, Buckley '429, Yi, Rosman, Bergan, Snir, Jelaska, Handbook of Pumps and Pumping, Zhang, Hernandez, Salvaire, GD-2500Q, Europump, Payne, and/or Broussard

Patent	Claims	Combinations
	1-20	EWS System and/or Publications, alone or in combination with, Buckley '429, Yi, Rosman, Bergan, Snir, Jelaska, Handbook of Pumps and Pumping, Zhang, Hernandez, Salvaire, Europump, Handbook of Pumps and Pumping, Case, Payne, and/or Broussard
	1-20	LI System and/or LI Publications, alone or in combination with, Buckley '429, Yi, Rosman, Bergan, Snir, Jelaska, Handbook of Pumps and Pumping, Zhang, Hernandez, Salvaire , GD-2500Q, Case, Payne, and/or Broussard
	1-20	Buckley '429, alone or in combination with, Hernandez, GD-2500Q, Rosman, Bergan, Snir, Jelaska, Handbook of Pumps and Pumping, Zhang, Salvaire, Europump, Case, Payne, and/or Broussard
	1-20	Yi, alone or in combination with, Bergan, Snir, Jelaska, Handbook of Pumps and Pumping, Rosman, Zhang, Hernandez, Salvaire, GD-2500Q, Europump, Case Payne, and/or Broussard
'533 patent	1, 2, 4, 5, 7-11, 13, 14, 16, 17-24	ProFrac System and/or Publications, alone or in combination with, Buckley '429, Yi, Rosman, Bergan, Snir, Jelaska, Handbook of Pumps and Pumping, Zhang, Hernandez, Salvaire Ray, Kasuba, Morris, Joyner, Sak, Gambier, Karassik, Barnett, Williams, Marks' Standard, or Minav, and/or Payne
	1, 2, 4, 5, 7-11, 13, 14, 16, 17-24	EWS System and/or Publications, alone or in combination with, Buckley '429, Yi, Rosman, Bergan, Snir, Jelaska, Handbook of Pumps and Pumping, Zhang, Hernandez, Salvaire, Ray, Kasuba, Morris, Joyner, Sak, Gambier, Karassik, Barnett, Williams, Marks' Standard, Minav, and/or Payne
	1, 2, 4, 5, 7-11, 13, 14, 16, 17-24	LI System and/or LI Publications, alone or in combination with, Buckley '429, Yi, Rosman, Bergan, Snir, Jelaska, Handbook of Pumps and Pumping, Zhang, Hernandez, Salvaire, Ray, Kasuba, Morris, Joyner, Sak, Gambier, Karassik, Barnett, Williams, Marks' Standard, Minav, and/or Payne.
	1, 2, 4, 5, 7-11, 13, 14, 16, 17-24	Buckley '429, alone or in combination with, Hernandez, Karassik, GD-2500Q, Bergan, Snir, Jelaska, Handbook of Pumps and Pumping, Rosman, Zhang, Salvaire, Ray, Kasuba, Morris, Joyner, Sak, Karassik, Barnett, Williams, Marks' Standard, Minav, Gambier, and/or Payne

Patent	Claims	Combinations
	1, 2, 4, 5, 7-11, 13, 14, 16, 17-24	Yi, alone or in combination with, Bergan, Snir, Jelaska, Handbook of Pumps and Pumping, Rosman, Zhang, Hernandez, Salvaire, Ray, Kasuba, Morris, Joyner, Sak, Gambier, Karassik, Barnett, Williams, Marks' Standard, Minav, and/or Payne
'878 patent	1-10	ProFrac System and/or Publications, alone or in combination with, Scheider Premset , Morris, Schneider Premset ABB1, Tawy, National Electric Code, Pratt, and/or Oehring II
	1-10	LI System and/or LI Publications, alone or in combination with, Morris, Oehring '409, ProFrac System and/or Publications, Scheider Premset, Schneider Premset ABB1, Tawy, National Electric Code, Pratt, and/or Oehring II
	1-10	EWS System and/or Publications, alone or in combination with, Morris, Oehring '409, ProFrac System and/or Publications, Scheider Premset, Schneider Premset ABB1, Tawy, National Electric Code, Pratt, and/or Oehring II
	1-10	Oehring '409, alone or in combination with, Scheider Premset, Siemens ABB1, Morris, Orban, Pratt, and/or Oehring II
	1-10	Morris, alone or in combination with, Scheider Premset, ABB1, Orban, Pratt, and/or Oehring II
'992 patent	1-20	ProFrac System and/or Publications, alone or in combination with, Coli '5734, Coli '114, ProFrac System and/or Publications, Rusnak, Kidd, Birch, and/or Hunt,
	1-20	LI System and/or LI Publications, alone or in combination with, Coli '5734, Broussard, ProFrac System and/or Publications, Coli '5734, Coli '114, Rusnak, Kidd, Birch, and/or Hunt
	1-20	MDT System and/or Publications, alone or in combination with, Coli '5734, Broussard, ProFrac System and/or Publications, Coli '5734, Coli '114, Rusnak, Kidd, Birch, and/or Hunt
	1-20	S&S System and/or Publications, alone or in combination with, Coli '5734, Broussard, or the ProFrac System and/or Publications, Coli '114, Rusnak, Kidd, Birch, and/or Hunt
	1-20	Coli '5734 alone or in combination with, Dykstra, Rusnak, Birch, and/or Hunt
	1-20	Broussard, alone or in combination with, Dykstra, Coli '114, Craig, Rusnak, Birch, and/or Hunt
	1-20	Coli '393, alone or in combination with, Dykstra, Coli '114, Craig, Rusnak, Kidd, Birch, and/or Hunt

Patent	Claims	Combinations
’435 patent	1-19	ProFrac System and/or Publications, alone or in combination with, Mazrooee, Norris, Omont, and/or Borgstadt
	1-19	LI System and/or LI Publications, alone or in combination with, Mazrooee, Norris, Omont, and/or Borgstadt
	1-19	MDT System and/or Publications, alone or in combination with, Mazrooee, Norris, Omont, and/or Borgstadt
	1-19	S&S Systems and/or Publications, alone or in combination with, Mazrooee, Norris, Omont, and/or Borgstadt
	1-19	Norris, alone or in combination with, Omont, Borgstadt, and/or Dykstra
	1-19	Mazrooee, alone or in combination with, Smith, Omont, Borgstadt, and/or Dykstra

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–E7 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–E7. 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–E7 identifying 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 USWS 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 USWS's infringement positions.

A. Lack of Written Description

With respect to written description, title 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 '533 Patent

Claims 1, 10, and 22 of the '533 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 "a plurality of arms extending from a final drive gear." All three of the aforementioned claims require "a plurality of arms." Such a structure is not described in the specification of the patent. At best, Figure 1 contains a structure that could arguably resemble "arms." But the structure in the Figure 1 is more akin to a bracket. Thus, in claiming all structures that include arms, without demonstrating possession of an invention including these structures, the

Claims 1, 10, and 22 have overreached in their scope and are invalid.

2. The ’435 Patent

Claims 1-12 of the ’435 patent are invalid for lack of written description for failing to adequately describe critical components of the claimed invention. All of the listed claims either contain or refer to a method that makes use of a “control device.” The specification does not provide adequate detail to communicate what the inventor is claiming to a skilled artisan. Further, this limitation is new matter because the specification does not describe how the instructions are generated: the specification lacks description of both where these instructions are generated and how it is done. Thus, claims 1-12 of the ’435 patent are invalid for lack of written description.

B. Indefiniteness

Title 35 U.S.C. § 112 ¶ 2 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 ¶ 2 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
"high pressure"	'258	1, 15	An ordinary artisan would have lacked reasonable certainty about the scope and meaning of this term in the context of the claims, specification, and industry. Terms of degree generally necessitate a base line comparison to differentiate from other variants of the degree, ("high pressure" vs "non-high pressure"). This baseline is lacking in either the claims or specification. Further, "high pressures" necessitates more specificity in fracturing applications because what an artisan may consider "high" pressure varies well to well and even at different points within the same wellbore. *See U.S. Well Services, Inc. v. Haliburton Company*, No. 6:21-cv-367-ADA, ECF No. 23 (Jan. 17, 2022).
"natural gas," "variable frequency drive," "electric powered"	'992	5, 9, 10, 11, 17	An ordinary artisan would have lacked reasonable certainty about the scope and meaning of this term in the context of the claims, specification, and industry.
"one or more parameters," "configured to measure flow through the suction line and the discharge line," "flow and/or pressure conditions," "underperforming," "a measurement," "configured to control one or more blenders"	'435	1, 4, 5, 8, 18	An ordinary artisan would have lacked reasonable certainty about the scope and meaning of this term in the context of the claims, specification, and industry.

V. INVALIDITY UNDER 35 U.S.C. § 101

A. The ’435 Patent

Claims 7-19 of the ’435 patent are also invalid under 35 U.S.C. § 101. These claims are essentially directed to the idea of measuring a condition and adjusting a flow of fluid into a container. Even if this was novel, which Liberty disputes, it is nothing more than the application of generic techniques and processes. Thus, the claims 7-19 are directed to an abstract idea, which is patent-ineligible subject matter. The asserted claims do not contain any inventive concept that amounts to significantly 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 ’992 Patent

Claims 8-14 of the ’992 patent are also invalid under 35 U.S.C. § 101. These claims are essentially directed to the idea of monitoring a fracturing process. Even if this was novel, which Liberty disputes, it is nothing more than the application of generic techniques and processes. Thus, the claims 8-14 are directed to an abstract idea, which is patent-ineligible subject matter. The asserted claims do not contain any inventive concept that amounts to significantly more than a patent upon the abstract idea itself. The asserted claims merely implement the abstract idea in fracturing using generic computing devices and tools that are well-known to those skilled in the art of fracturing technology.

VI. APPLICABILITY OF PRE- OR POST-AIA LAW

USWS bears the burden of showing, on a claim-by-claim basis, entitlement to a priority date earlier than the filing date of the application leading to the relevant Asserted Patent. *See In re Magnum Oil Tools Intl, Ltd.*, 829 F.3d 1364, 1376 (Fed. Cir. 2016) (A “patentee bears the burden

of establishing that its claimed invention is entitled to an earlier priority date."). "To obtain the benefit of the filing date of a parent application, the claims of the later-filed application must be supported by the written description in the parent 'in sufficient detail that one skilled in the art can clearly conclude that the inventor invented the claimed invention as of the filing date sought.'" *Anascape Ltd. v. Nintendo of Am. Inc.*, 601 F.3d 1333, 1335 (Fed. Cir. 2010) (citations omitted). Further, the chain of priority must be unbroken to obtain the benefit of the earlier filing date. *Zenon Envmnt'l, Inc. v. U.S. Filter Corp.*, 506 F.3d 1370, 1378 (Fed. Cir. 2007) (citations omitted). For example, omitting matter from the written description or claims in a continuation application can break the chain of priority where the omission results in an invention nowhere described in the priority application(s). *See Anascape*, 601 F.3d at 1335–40 (patentee injected new matter by claiming single input member operable in more than six degrees of freedom in continuation application when parent application described only single input member operable in six degrees of freedom).

USWS's Preliminary Infringement Contentions identify what USWS considers the priority date for each asserted claim. Liberty does not necessarily agree with the priority dates identified by USWS. Liberty also reserves the right to identify additional prior art references that anticipate or render obvious those claims in the event USWS later identifies priority dates earlier than those expressly identified in USWS's Preliminary Infringement Contentions

Liberty agrees that the '258 patent, the '533 patent, the '435 patent, and the '878 patent are subject to the AIA.

As for the '992 patent, Plaintiffs contend that the '992 patent is entitled to a priority date no later than November 16, 2012, which is the filing date of U.S. Patent No. 9,410,410 ("the '410 patent"). Liberty contends that the '992 patent is not entitled to the November 16, 2012 priority

date because certain subject matter claimed by the ’992 patent (e.g., “a centralized control unit” and associated centralized monitoring of generators) is not present in patent application no. 13/679,689, which issued as the ’410 patent. Thus, if it is determined that the ’992 patent cannot benefit from the November 16, 2012 filing date, Liberty contends that the ’992 is subject to the AIA.

VII. RESERVATIONS

Discovery in this case is ongoing. *See, e.g.*, Dkt. No. 30. Liberty’s search for, and analysis of, the prior art is ongoing. Liberty continues to investigate USWS’s the 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 USWS’s 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 USWS or expert witness(es) may take concerning claim construction, infringement, and/or invalidity issues.

USWS’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 USWS modifies, amends, or supplements its Infringement Contentions, Liberty reserves the right to modify, amend, and/or supplement their Liberty’s Invalidity Contentions and document production. Liberty also reserves the right to

modify, amend, and/or supplement their Liberty's Invalidity Contentions and document production, if and when USWS 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 USWS will contend that limitations of the asserted claims are not disclosed in the prior art identified by Liberty. To the extent that USWS 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 USWS's the prior art, including whether USWS'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 USWS's Infringement Contentions, no inference is intended and none should be drawn that Liberty agrees with USWS's claim constructions, and Liberty expressly reserves the right to contest such claim constructions. Liberty offer such contentions in response to USWS'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 USWS'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 USWS 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 is producing and serving documents and information sufficient to show the operation of the aspects of the Accused Instrumentalities—Liberty's DigiFrac system—that USWS identified in the charts included with its P.R. 3-1 disclosures.

Pursuant to P.R. 3-4(b), Liberty has produced each item of prior art identified herein. In addition, additional references, as noted, were previously produced by USWS and listed in the accompanying charts.

Pursuant to P.R. 3-4(c), Liberty will produce documents and information, to the extent in its possession and summaries when reasonably available, sufficient to show the amount sold, revenues, costs, and profits of each Accused Instrumentality identified under P.R. 3-1(b), after a Protective Order is entered for this case.

Dated: September 19, 2024

Respectfully submitted,

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CERTIFICATE OF SERVICE

Pursuant to the Federal Rules of Civil Procedure and LR5.3, I hereby certify that, on April 8, 2024 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