

**IN THE UNITED STATES DISTRICT COURT  
FOR THE WESTERN DISTRICT OF LOUISIANA  
LAFAYETTE DIVISION**

HALLIBURTON ENERGY SERVICES,  
INC., AND HALLIBURTON  
TECHNOLOGY PARTNERS, LLC,

Plaintiffs,

v.

WEATHERFORD U.S. L.P.,

Defendant.

Civil Action No. \_\_\_\_\_

**JURY TRIAL DEMANDED**

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**COMPLAINT FOR PATENT INFRINGEMENT**

Plaintiffs Halliburton Energy Services, Inc. (“Halliburton Energy Services”) and Halliburton Technology Partners, LLC (“HTP”) (together, “Halliburton”), for their Complaint against Defendant Weatherford U.S. L.P. (“Weatherford”), demand a trial by jury on all issues so triable and allege as follows:

**PARTIES**

1. Halliburton Energy Services is a Delaware corporation having a regular and established place of business at 3000 N. Sam Houston Parkway E., Houston, TX 77032.
2. HTP is a Delaware limited liability company having a regular and established place of business at 3000 N. Sam Houston Parkway E., Houston, TX 77032.
3. On information and belief, Weatherford is a Louisiana limited partnership having a principal place of business at 2000 St. James Place, Houston, TX 77056.

**NATURE OF THE ACTION**

4. This is a civil action under 35 U.S.C. § 271 for Weatherford’s infringement of Halliburton’s U.S. Patent No. 11,333,007 (the “‘007 patent”) (Ex. 1). The ‘007 patent is generally directed to shunt tube systems for delivering sand control materials within subterranean wells.

**JURISDICTION AND VENUE**

5. This action arises under the Patent Laws of the United States, 35 U.S.C. § 1 *et seq.*

6. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a).

7. Weatherford is subject to personal jurisdiction in this District by virtue of, *inter alia*, its residence and conduct of business in this District.

8. On information and belief, Weatherford is organized under the laws of Louisiana and maintains a place of business in this District at 1221 Evangeline Thruway, Broussard, LA 70518.

9. Venue is proper in this District pursuant to 28 U.S.C. §§ 1391 and 1400(b). As discussed above, Weatherford is a resident of this District. In addition, Weatherford maintains a regular and established place of business in this District at 1221 Evangeline Thruway, Broussard, LA 70518. On information and belief, it has also committed acts of infringement in this District, including through the manufacture and/or export of Weatherford’s infringing high pressure–low pressure (HP–LP) shunt system.

### **THE PATENT-IN-SUIT**

10. The '007 patent, entitled "Multiple Shunt Pressure Assembly for Gravel Packing," was duly and legally issued by the United States Patent & Trademark Office on May 17, 2022. Halliburton Energy Services is the assignee and owner of the '007 patent.

11. On May 1, 2020, Halliburton Energy Services and its affiliate Halliburton US Technologies, Inc. ("HUSTI") entered into a license agreement in which Halliburton Energy Services granted HUSTI an exclusive license to the '007 patent (at the time, the '007 patent was in the patent application phase), which included the right to make, have made, use, offer for sale, sell, import, and provide products and services based upon or supported by the '007 patent. Halliburton Energy Services retained certain substantial rights in the '007 patent, including the right to sue for infringement of the '007 patent.

12. On December 24, 2021, the rights previously granted to HUSTI were transferred to Halliburton Group Technologies, Inc. ("HGTI").

13. On December 28, 2021, the rights previously granted to HGTI were transferred to HTP. Collectively, Halliburton Energy Services and HTP own all substantial rights in the '007 patent.

14. The '007 patent is directed to a novel shunt tube system for the transport and delivery of packing material along the length of a wellbore, and to methods for using the shunt tube system. (*E.g.*, '007 pat. at Abstract, 1:15-67, 9:3-41.)

15. During operations for recovery of a production fluid such as oil within a subterranean formation, the production fluid flows into perforated production tubing and is subsequently transported to the surface for collection. However, along with the

production fluid, sand in the subterranean formation may undesirably be swept into the production tubing, where it can cause damage to the tubing and other components within the completion system. ('007 pat. at 1:24-30.)

16. To prevent the ingress of sand into the production tubing, production assemblies can utilize a screen system packed with packing material such as a gravel pack to filter out the sand from the subterranean formation. ('007 pat. at 1:31-42.) A packing screen encircles the production tubing, and the packing material sits on the screen. ('007 pat. at 1:34-42.) The production assembly can employ a shunt tube system to deliver the packing material along the length of the wellbore and screen. ('007 pat. at 1:54-67.) The shunt tube system can carry the packing material through a series of transport tubes and deposit the packing material along the length of the wellbore through nozzles on adjacent packing tubes connected to the transport tubes. ('007 pat. at 7:49-60.)

17. In deep/long wells, high pressures must be applied to ensure delivery of the packing material along the full length of the wellbore, and the shunt system must withstand these high pressures. ('007 pat. at 9:3-25.) The use of a high-pressure shunt tube system entails substantial burden and expense. (*Id.*)

18. As claimed in the '007 patent, Halliburton developed a novel shunt tube system that, *inter alia*, reduces the expense of the shunt tube system while effectively delivering packing material along the length of the wellbore.

19. The inventors of the '007 patent determined that the shunt tube system need not operate at a uniform pressure across the entire length of the wellbore. Instead, the shunt tube system can operate at lower pressures as it progresses further along the length of the

wellbore. ('007 pat. at 9:25-30.) Prior to the invention of the '007 patent, shunt systems were designed to operate at only one uniform pressure, and their use in deeper/longer wells where higher pressures are required presented substantial burden and expense. ('007 pat. at 9:3-25.)

20. In the claimed invention, the shunt tube system comprises an upper portion with a sand screen–shunt tube assembly that operates at a higher pressure and a lower portion with a sand screen–shunt tube assembly that operates at a lower pressure (“HP–LP shunt system”). The upper portion and lower portion may feature different characteristics—such as different cross-sectional flow areas, different tube materials, and/or different burst pressures. The upper portion can be connected (“fluidly coupled”) to a source of working fluid, such as gravel slurry packing material, that will cover the sand screen and is pressurized to travel across the full length of the shunt system.

21. Halliburton has developed an HP–LP shunt tube system embodying the invention of the '007 patent, as part of its PetroGuard® Shunt System product line. As discussed below, Halliburton’s commercialization of the HP–LP PetroGuard® Shunt System has been hindered by Weatherford’s infringement of the '007 patent.

### **ACTS GIVING RISE TO THIS ACTION**

#### **Weatherford’s infringement**

22. On information and belief, Weatherford manufactures, markets, exports, and facilitates the installation and operation of a shunt system with a high-pressure section and a low-pressure section (“the Weatherford HP–LP shunt system”).

23. On information and belief, Weatherford has manufactured, offered for sale, sold, and exported from the United States the Weatherford HP–LP shunt system at least for installation and use in multiple offshore wells located in the Stabroek Block off the coast of Guyana.

24. Weatherford’s manufacture, use, offer for sale, sale, import, and/or export of the Weatherford HP–LP shunt system infringes, literally or under the doctrine of equivalents, at least claims 11-12 of the ‘007 patent.

25. On information and belief, the Weatherford HP–LP shunt system is a completion assembly for deployment in a wellbore. The Weatherford HP–LP shunt system is deployed within a wellbore during the completion phase (well construction phase) to control sand ingress.

26. On information and belief, the Weatherford HP–LP shunt system includes a source of pressurized working fluid, such as gravel pack slurry. For example, the upper joint(s) of the Weatherford HP–LP shunt system delivers gravel pack slurry to downstream joints within the Weatherford HP–LP shunt system.

27. On information and belief, the Weatherford HP–LP shunt system includes a first sand screen assembly attached to a second sand screen assembly. The Weatherford HP–LP shunt system includes a high-pressure section with a sand screen–shunt system assembly attached to a low-pressure section with a sand screen–shunt system assembly.

28. On information and belief, in the Weatherford HP–LP shunt system, the first sand screen assembly comprises a shunt tube assembly with a first burst pressure and the second sand screen assembly comprises a shunt tube assembly with a burst pressure less

than the first burst pressure. The first burst pressure of the high-pressure section is approximately 7000 psi and the second burst pressure of the low-pressure section is approximately 3500 psi.

29. On information and belief, in the Weatherford HP–LP shunt system, the shunt tube assembly with the first burst pressure is fluidly coupled between a source of pressurized working fluid and the shunt tube assembly with the burst pressure less than the first burst pressure. The high-pressure section is fluidly coupled between the source of pressurized working fluid (such as gravel pack slurry) and the low-pressure section.

30. On information and belief, in the Weatherford HP–LP shunt system, the shunt tube assembly of the first sand screen assembly is disposed to operate at pressures between 5000 psi and 10000 psi and the shunt tube assembly of the second sand screen assembly is disposed to operate at pressures of no more than 5000 psi.

31. On information and belief, Weatherford manufactures the Weatherford HP–LP shunt system in the United States (*e.g.*, in Houston, TX). In addition, Weatherford offers for sale and sells the Weatherford HP–LP shunt system in the United States (*e.g.*, in Houston, TX). Furthermore, Weatherford exports, or causes to be exported, components of the Weatherford HP–LP shunt system from the United States for installation and use in other countries.

32. On information and belief, Weatherford knows that its Weatherford HP–LP shunt system will be deployed as a high pressure–low pressure shunt system to deliver a gravel pack slurry within a wellbore, and intends for its system to be used in this manner. On information and belief, Weatherford supplies the system in response to a customer

request for an HP–LP shunt system, and receives formal documentation confirming that the Weatherford HP–LP shunt system will be deployed on site as an HP–LP system to deliver a gravel pack slurry within the wellbore. On information and belief, Weatherford personnel are involved in the installation and operation of the Weatherford HP–LP shunt system at the well site, including the installation of equipment to facilitate the transition from the high-pressure section to the low-pressure section of the Weatherford HP–LP shunt system. In addition, Weatherford provides support and instruction to customers for the operation of the Weatherford HP–LP shunt system.

33. Weatherford’s infringement of the ‘007 patent has harmed, and continues to harm, Halliburton. Benefitting from its use of the technology claimed in the ‘007 patent, Weatherford has sold the Weatherford HP–LP system at least for installation and use in multiple wells in the Guyana Stabroek Block. Weatherford’s infringement has resulted in lost profits to Halliburton attributable to, among other things, lost sales of its PetroGuard® Shunt System.

#### **Weatherford’s knowledge of infringement**

34. On October 14, 2022, Halliburton provided written notice to Weatherford of Weatherford’s infringement of the Guyana patent counterpart to the ‘007 patent. On November 15, 2022, following further investigation, Halliburton explained by letter that Weatherford appears to also be infringing the ‘007 patent through its U.S.-based activity.

35. Since Halliburton’s initial October 2022 letter, the parties have engaged in discussions in an attempt to resolve their dispute, including through a series of written

correspondence and an in-person meeting. However, the parties have been unable to resolve the dispute, and Halliburton is now forced to file this suit to enforce its patent rights.

**COUNT I: INFRINGEMENT OF THE '007 PATENT**

36. Halliburton incorporates the foregoing paragraphs as if set forth herein.

37. Weatherford has infringed, and continues to infringe, the '007 patent, including at least claims 11-12 thereof, literally or under the doctrine of equivalents, through the manufacture, use, sale, offer for sale, import, and/or export of the Weatherford HP–LP shunt system. (*See* ¶¶ 22-33 *supra*.)

38. Weatherford directly infringes the '007 patent, including at least claims 11-12 thereof, under 35 U.S.C. § 271(a) by manufacturing the Weatherford HP–LP shunt system in the United States. (*See* ¶¶ 22-33 *supra*.)

39. Weatherford directly infringes the '007 patent, including at least claims 11-12 thereof, under 35 U.S.C. § 271(a) by offering for sale the Weatherford HP–LP shunt system in the United States. (*See* ¶¶ 22-33 *supra*.)

40. Weatherford directly infringes the '007 patent, including at least claims 11-12 thereof, under 35 U.S.C. § 271(a) by selling the Weatherford HP–LP shunt system in the United States for use abroad. (*See* ¶¶ 22-33 *supra*.)

41. Weatherford directly infringes the '007 patent, including at least claims 11-12 thereof, under 35 U.S.C. § 271(f)(1) by supplying, or causing to be supplied, from the United States all or a substantial portion of the components of the claimed invention (specifically, the Weatherford HP–LP shunt system components) for combination, installation, and use outside of the United States (*e.g.*, in the Guyana Stabroek Block). On

information and belief, Weatherford supplies at least the high-pressure sand screen assembly and the low-pressure sand screen assembly, including transport tubes and packing tubes, along with the necessary connectors and transition pieces to connect the shunt joints comprising the Weatherford HP–LP system. Weatherford supplies, or causes to be supplied, these components in such manner as to actively induce their combination outside of the United States into a system that would infringe claims 11-12 of the ‘007 patent if such combination occurred within the United States. The Weatherford HP–LP system is deployed in a wellbore as a completion assembly, including at least in wells in the Guyana Stabroek Block, to deliver gravel pack slurry within the wellbore. On information and belief, Weatherford intends, and provides instruction and assistance, for the combination, installation, and use outside of the United States of the Weatherford HP–LP shunt system in this manner. (*See* ¶¶ 22-33 *supra*.)

42. Weatherford directly infringes the ‘007 patent, including at least claims 11-12 thereof, under 35 U.S.C. § 271(f)(2) by exporting from the United States the Weatherford HP–LP shunt system for combination, installation, and use as a completion assembly for the delivery of gravel pack slurry within a wellbore outside of the United States (*e.g.*, in the Guyana Stabroek Block). The HP–LP section pairing that, on information and belief, Weatherford exports is a component of the invention claimed in the ‘007 patent that is especially adapted for use in the invention of the ‘007 patent and is not a staple article or commodity of commerce suitable for substantial non-infringing use. The HP–LP section pairing is especially adapted for use as a completion assembly with high-pressure and low-pressure sections that delivers pressurized working fluid within the

wellbore. On information and belief, Weatherford knows that the HP–LP section pairing that it exports is especially adapted for use in the invention of the ‘007 patent and intends, and provides instruction and assistance, for the combination, installation, and use outside of the United States of the Weatherford HP–LP shunt system in a manner that would infringe at least claims 11-12 of the ‘007 patent if such combination occurred within the United States. (*See* ¶¶ 22-33 *supra*.)

43. Weatherford’s infringement has been, and continues to be, willful. Halliburton provided written notice of infringement to Weatherford no later than November 15, 2022 (including a claim chart detailing Weatherford’s infringement), yet Weatherford continues to infringe the ‘007 patent. (*See* ¶¶ 34-35 *supra*.) While Weatherford disputed certain physical properties of its HP and LP systems, Halliburton explained that those physical properties do not avoid infringement of certain claims of the ‘007 patent, including Claims 11-12.

#### **PRAYER FOR RELIEF**

**WHEREFORE**, Halliburton requests that this Court enter judgment against Weatherford as follows:

- A. Weatherford has been infringing and continues to infringe one or more claims of the ‘007 patent, literally or under the doctrine of equivalents;
- B. Weatherford’s infringement has been and continues to be willful;
- C. Weatherford’s infringement of the ‘007 patent shall be enjoined until expiration of the ‘007 patent;

D. An award of damages, including lost profits and/or a reasonable royalty award, adequate to compensate Halliburton for Weatherford's infringement, with pre-judgment interest;

E. An award of all of other damages permitted by 35 U.S.C. § 284, including increased damages up to three times the amount of compensatory damages found;

F. A declaration that this case is exceptional and an award of attorneys' fees under 35 U.S.C. § 285;

G. An award of costs and expenses in this action; and

H. Such other and further relief as the Court may deem just and proper.

**DEMAND FOR JURY TRIAL**

Halliburton demands trial by jury on all claims and issues so triable.

Date: January 22, 2024

Respectfully submitted,

BREAUD & MEYERS

*s/ Alan K. Breaud*

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