

**IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF TEXAS
GALVESTON DIVISION**

HALLIBURTON ENERGY SERVICES,
INC., AND HALLIBURTON US
TECHNOLOGIES, INC.,

Plaintiffs,

v.

NEWPARK RESOURCES, INC., AND
NEWPARK DRILLING FLUIDS LLC,

Defendants.

Civil Action No. 3:21-cv-00250

JURY TRIAL DEMANDED

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiffs Halliburton Energy Services, Inc. (“Halliburton Energy Services”) and Halliburton US Technologies, Inc. (“Halliburton Technologies”) (together, “Halliburton”), for their Complaint against Defendants Newpark Resources, Inc. (“Newpark Resources”) and Newpark Drilling Fluids LLC (“Newpark Drilling Fluids”) (collectively, “Newpark”), 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. Halliburton Technologies is a Delaware corporation having a regular and established place of business at 3000 N. Sam Houston Parkway E., Houston, TX 77032.

3. On information and belief, Newpark Resources is a Delaware corporation with its principal place of business at 9320 Lakeside Boulevard Suite 100, The Woodlands, TX 77381.

4. On information and belief, Newpark Drilling Fluids is a Texas limited liability company having a principal place of business at 21920 Merchants Way, Katy, TX 77449.

5. On information and belief, Newpark Drilling Fluids is a wholly-owned subsidiary of Newpark Resources.

NATURE OF THE ACTION

6. This is a civil action under 35 U.S.C. § 271 for Newpark's infringement of Halliburton's U.S. Patent No. 8,476,201 (the "'201 patent'") (Ex. A). The '201 patent is generally directed to drilling fluids (also known as "drilling muds") for subterranean drilling and exploration.

JURISDICTION AND VENUE

7. This action arises under the Patent Laws of the United States, 35 U.S.C. § 1 *et seq.* and the Outer Continental Shelf Lands Act, 43 U.S.C. § 1331 *et seq.*

8. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a), 43 U.S.C. § 1333(a)(1), and 43 U.S.C. § 1349(b)(1).

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

10. On information and belief, Newpark Resources maintains a principal place of business in this District at 9320 Lakeside Boulevard Suite 100, The Woodlands, TX 77381.

11. On information and belief, Newpark Drilling Fluids is organized under the laws of Texas and maintains a principal place of business in this District at 21920 Merchants Way, Katy, TX 77449. Newpark Drilling Fluids operates the Newpark Technology Center in this District (Katy, TX), as well as a facility for blending drilling fluids in this District (Conroe, TX). *See, e.g., Ex. B, Newpark, Newpark History, available at <https://www.newpark.com/newpark-history>* (last visited September 14, 2021).

12. Venue is proper in this District pursuant to 28 U.S.C. §§ 1391 and 1400(b). As discussed above, Newpark Drilling Fluids is organized under the laws of Texas and maintains several regular and established places of business in this District. On information and belief, it has also committed acts of infringement in this District, including through the development of the infringing Kronos drilling fluid, blending of the infringing fluid, and use of the infringing fluid on offshore rigs such as the Ensco 8505 rig (actions that are attributed to this District pursuant to 43 U.S.C. § 1349(b)(1)). By directing the activities of its subsidiary, Newpark Resources—which similarly has a regular and established place of business in this District—has also committed acts of infringement in this District.

THE PATENT-IN-SUIT

13. The ‘201 patent, entitled “Drilling Fluids Having Reduced Sag Potential and Related Methods,” was duly and legally issued by the United States Patent & Trademark

Office on July 2, 2013. Halliburton Energy Services is the assignee and owner of the ‘201 patent.

14. On May 1, 2020, Halliburton Energy Services and its affiliate Halliburton Technologies entered into a license agreement in which Halliburton Energy Services granted Halliburton Technologies an exclusive license to the ‘201 patent, including the right to make, have made, use, offer for sale, sell, import, and provide products and services based upon or supported by the ‘201 patent.

15. Halliburton Energy Services retained certain substantial and exclusionary rights in the ‘201 patent, including the right to sue for infringement of the ‘201 patent and the right to veto any assignment or sub-license of Halliburton Technologies’ rights. Halliburton Energy Services also received from Halliburton Technologies a non-exclusive, non-transferable sub-license to make, have made, offer for sale, sell, import, and provide products and services based upon or supported by the ‘201 patent, for the purpose of conducting Halliburton’s business.

16. Collectively, Halliburton Energy Services and Halliburton Technologies own all substantial rights in the ‘201 patent.

17. The ‘201 patent is directed to drilling fluids exhibiting properties superior to prior art fluids. Drilling fluids are utilized in wellbores for resource exploration. The drilling fluids serve a variety of functions, including transporting drill cuttings in the wellbore, cooling and lubricating the drill bit, providing support to maintain the integrity of the wellbore walls, and preventing the blowout of subsurface resources through the wellbore. *E.g.*, ‘201 pat. at 1:10-18.

18. To ensure that a drilling fluid effectively performs its functions within the wellbore, a “weighting agent” is typically added to the drilling fluid to increase the fluid’s density. ‘201 pat. at 1:19-30. One common weighting agent is barite. *Id.*

19. Because of its relatively large size and weight, the weighting agent has a tendency to settle out of suspension in a drilling fluid. This phenomenon is known as “sag”. ‘201 pat. at 1:31-36. Sag can occur during use of a drilling fluid or even beforehand, during transport of the fluid to the drilling rig. *Id.* at 1:38-47.

20. Sag is a significant concern to drilling operators. It alters the drilling fluid’s physical properties (including density), resulting in poorer performance and potential clogging of a wellbore. *Id.* Sag can be particularly prevalent in difficult drilling environments, such as the deepwater environment.

21. Prior to Halliburton’s invention, there were limited effective solutions to sag. For example, one approach in the industry utilized fluids containing surface-treated clays—called “organophilic clays”—but the performance of these fluids often degraded in the presence of drill cuttings (pieces of earth dislodged by the drill bit during drilling). Fluids without organophilic clays, on the other hand, depended on the addition of drill cuttings, which could increase unpredictability and had limited effectiveness on sag occurring during transport of the fluid to the rig. ‘201 pat. at 1:48-2:23.

22. Halliburton identified a novel approach to solving the problem of sag. It experimented with the use of various “colloidal particles,” despite skepticism in the art that such particles would cause an undesirable increase in the viscosity of the drilling fluid. *E.g.*, ‘201 pat. at 4:12-20. Halliburton scientists undertook extensive testing of variables

such as fluid ingredients, particle sizes, and compositions to assess their effects on fluid properties and their potential to inhibit sag. *E.g.*, ‘201 pat. at Examples.

23. Through their work, Halliburton scientists discovered that certain fluid formulations using, among other components, colloidal particles—including both fibrous and non-fibrous colloidal particles—develop an “associative supporting structure” within the fluid that effectively remedies sag. *E.g.*, ‘201 pat. at 4:12-20, 5:9-61. The fluids exhibit “relatively stable densities and good rheological performance over extended periods of time, which make them more suitable for certain downhole operations.” *Id.* at 5:1-6; *see also id.* at 5:6-8 (“In particular, the low shear rheological performance of the present drilling fluids is particularly distinguishable over that of conventional drilling fluids.”). These drilling fluid formulations are claimed in the ‘201 patent.

24. Halliburton Energy Services has commercialized its invention through the BaraECD® drilling fluid, an industry-leading drilling fluid for challenging deepwater drilling environments. BaraECD drilling fluid has received deserved recognition in the field, including an award from *World Oil* for Best Drilling and Completions Fluid. *E.g.*, Ex. C, World Oil, *World Oil Award 2017 winners honored at Houston gala*, <https://worldoil.com/news/2017/10/12/world-oil-award-2017-winners-honored-at-houston-gala> (last visited September 14, 2021).

ACTS GIVING RISE TO THIS ACTION

Newpark’s infringement

25. On information and belief, in 2015—two years after the ‘201 patent issued—Newpark sought to enter the drilling fluid market for deepwater (e.g., Gulf of Mexico)

environments. *E.g.*, *Newpark History* (“In 2015, . . . Newpark Drilling Fluids launched a strategic Deepwater initiative, extending our offshore reach and capabilities with enhanced, customized fluids technology, expanded facilities infrastructure in Port Fourchon, Louisiana, and a team of professionals dedicated exclusively to deepwater products and services.”). A key part of Newpark’s efforts was introduction of the infringing Kronos drilling fluid, which Newpark began to sell to the Gulf of Mexico market in 2018. *Id.* (“As part of the initiative, we introduced our KronosTM drilling fluid system, a proprietary, synthetic-based invert emulsion system designed to comply with the environmental requirements for fluids used in deep water.”); Ex. E, Newpark, *Newpark Resources Reports First Quarter 2018 Results*, available at <https://www.newpark.com/news/newpark-resources-reports-first-quarter-2018-results> (last visited September 14, 2021).

26. Newpark’s manufacture, use, offer for sale, sale, and/or importation of Kronos infringes at least claim 1 of the ‘201 patent.

27. On information and belief, Kronos is an invert emulsion drilling fluid comprising an oleaginous fluid continuous phase and an aqueous fluid internal phase (*i.e.*, it is an oil-based fluid with water droplets contained therein). *E.g.*, Ex. D, Kronos Brochure (“The Kronos drilling fluid is Newpark’s synthetic-based invert emulsion system.”)

28. On information and belief, Kronos contains a surfactant.

29. On information and belief, Kronos contains barite as a weighting agent, with at least a portion of the barite particles being less than about 45 microns in size.

30. On information and belief, Kronos contains a plurality of colloidal particles, comprising fibrous colloidal particles (*e.g.*, sepiolite) and at least one other type of colloidal particle (*e.g.*, calcium carbonate).

31. On information and belief, at least a portion of the plurality of colloidal particles interact with the surfactant in Kronos to form an associative supporting structure that inhibits sag of the weighting agent (barite). *See, e.g.*, Kronos Brochure (“The Kronos Low ECD System minimizes pressure losses and optimizes flow rates by lowering overall rheology characteristics and minimizing sag potential.”).

32. On information and belief, Newpark manufactures Kronos, transports it to one or more drilling rigs (including in the Gulf of Mexico), and places the Kronos drilling fluid in a subterranean formation via a wellbore penetrating the subterranean formation. Newpark actively monitors use of the Kronos drilling fluid, modifying the Kronos fluid composition as circumstances dictate, and provides fluids-related services to the rig operator.

33. Without the technology claimed in the ‘201 patent, Kronos would not be adequate for at least deepwater drilling operations in the Gulf of Mexico, where sag can be more pronounced in light of the higher temperature / pressure environment.

34. Newpark’s infringement of the ‘201 patent has harmed, and continues to harm, Halliburton. Through its use of the technology claimed in the ‘201 patent, Newpark has sold infringing Kronos fluid and related services to several deepwater drilling rigs, and continues to be able to compete for multi-year drilling fluid contracts. Newpark’s

infringement has resulted in lost profits to Halliburton for, among other things, lost sales of BaraECD and related drilling services and fluids provided on deepwater rigs.

Newpark's refusal to cease infringement

35. On July 2, 2019, Halliburton provided written notice to Newpark of its infringement of the '201 patent. Halliburton requested an explanation of Newpark's position on the matter.

36. Subsequently, in response to various requests and assertions from Newpark, Halliburton provided further detail regarding Newpark's infringement of the '201 patent through a series of letters. Among the information provided by Halliburton was a claim chart setting forth Newpark's infringement of the '201 patent, on the basis of information presently available to Halliburton.

37. On several occasions, Halliburton requested that the parties meet to discuss an efficient resolution of their dispute. Eventually, Newpark agreed to meet. The parties met (virtually) in October 2020.

38. Despite Halliburton's detailed explanation of infringement, Newpark denies infringement and has refused to consider a license to the '201 patent. This lawsuit results.

COUNT I: INFRINGEMENT OF THE '201 PATENT

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

40. Newpark has infringed, and continues to infringe, at least claim 1 of the '201 patent through the manufacture, use, sale, offer for sale, and/or importation of Kronos, including through use of Kronos in deepwater Gulf of Mexico drilling rigs. Newpark

directly infringes at least claim 1 of the ‘201 patent under 35 U.S.C. § 271(a). Newpark provides the infringing Kronos fluid and actively manages its use in drilling operations.

41. To the extent any third party is involved in the use of Kronos in a drilling operation, Newpark nonetheless directly infringes at least claim 1 of the ‘201 patent because it directs or controls the third party’s acts. On information and belief, Newpark actively monitors, on-site, drilling operations involving Kronos to assess performance and any needed modifications. Newpark is responsible for use of Kronos during drilling operations.

42. Alternatively, for the reasons set forth above, Newpark infringes at least claim 1 of the ‘201 patent under 35 U.S.C. § 271(b) by directing and controlling the use of Kronos in drilling operations, with knowledge of its infringement of the ‘201 patent. The very purpose of Kronos is to be placed in a subterranean formation via a wellbore during drilling operations.

43. Newpark also infringes the ‘201 patent under 35 U.S.C. § 271(c) by providing the infringing Kronos fluid to drilling rigs for use in drilling operations. Kronos is not a staple article or commodity of commerce—it is a drilling fluid for drilling operations. Kronos has no substantial non-infringing use—it is designed to be used in wellbores, as claimed in the ‘201 patent.

44. Newpark’s infringement has been willful. As noted above, Newpark began its “deepwater initiative” soon after the ‘201 patent issued. In addition, on information and belief, former Halliburton drilling fluid scientists familiar with the technology of the ‘201 patent began working for Newpark during development and commercialization of the

Kronos system. Finally, Halliburton provided written notice of infringement to Newpark in July 2019, yet, Newpark continues to infringe the '201 patent.

PRAYER FOR RELIEF

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

- A. Newpark has been infringing and continues to infringe the '201 patent;
- B. Newpark's infringement has been and continues to be willful;
- C. Newpark's infringement of the '201 patent shall be enjoined until expiration of the '201 patent;
- D. An award of damages, including lost profits, adequate to compensate Halliburton for Newpark's infringement, with pre-judgment interest, including recovery for sales of convoyed and derivative products and services that Halliburton would have sold but for Newpark's sales of infringing Kronos;
- 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.

Dated: September 15, 2021

Respectfully submitted,

/s/ Amir Alavi

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