

U.S. Patent 7,861,774 – Invalidity in view of Halliburton¹

“Design and Installation of a Cost Effective Completion System For Horizontal Chalk Wells Where Multiple Zones Require Acid Stimulation,” D.W. Thomson and M.F. Nazroo, Offshore Technology Conference, May 5-8, 1997, Pages 323-335, OTC 8472², qualifies as prior art at least under 35 U.S.C. § 102(a) and § 102(b) (“Halliburton”). Thus, Halliburton anticipates and/or renders obvious the asserted claims of the 774 Patent, alone or in combination with other prior art as identified in Defendants’ Invalidation Contentions, including:

- The multi-stage fracture performed at the RET #1 well in Wayne County, West Virginia (which, for example, is a public use) and the related publications that describe that completion such as SPE 19090 “Production and Stimulation Analysis of Multiple Hydraulic Fracturing of a 2,000-ft Horizontal Well,” A.B. Yost II, W.K. Overbey Jr., SPE Gas Technology Symposium, June 7-9, 1989 (collectively, “Yost” or “Yost reference”). Yost is prior art under at least 35 U.S.C. §§ 102(a), 102(b), 102(f), 102(g)(2).
- Lane Wells Documentary and Product Art, showing combinations of packers and sliding sleeves by Lane Wells (“Lane Wells Products”). *See, e.g.*, Composite Catalog from 1956 at DEFINV00007411 (“1956 Composite Catalog”), Lane Wells Tubing Port Valve Brochure at DEFINV00008171 (“Tubing Port Valve Brochure”), Lane Wells Packer Handbook at DEFINV00007955 (“Packers Handbook”), Lane Wells Packers Brochure from 1956 at DEFINV00007890 (“Packers Brochure”), Lane Wells’ pamphlet on “The Use of Packers In Acidizing Operations” at DEFINV00008194 (“Acidizing Pamphlet”), US Pat. No. 2,387,003 (“Barnes”) at DEFINV00008293, US Pat. No. 2,618,340 (“Lynd”) at RC_RAP00003173, and US Pat. No. 2,005,955 (“Renouf”).
- U.S. Patent 2,537,066 (“Lewis”), issued Jan. 9, 1951.
- US Pat. No. 3,062,291 to “Brown,” filed May 11, 1959 and issued Nov. 6, 1962.
- US Pat. No. 5,375,662 to “Echols,” filed Jun. 30, 1993 and issued Dec. 27, 1994.
- RockSeal and RockSeal II Packers, as well as the RockSeal System, by Packers Plus, as sold, publicly used, and shown in printed publications. *See, e.g.*, July 23, 2008 Declaration of Daniel J Themig (“Themig Declaration”); “5.1 RockSeal™ II

¹ This is the first supplemental chart.

² Note, for purposes of determining limits on prior art, the charted reference, and the similar articles: (1) “Design and Installation of a Cost Effective Completion System For Horizontal Chalk Wells Where Multiple Zones Require Acid Stimulation”, D.W. Thomson and M.F. Nazroo, SPE Drilling & Completion September 1998, pages 151-156; SPE 51177 (“Halliburton II”) and (2) “Design and Installation of a Cost Effective Completion System For Horizontal Chalk Wells Where Multiple Zones Require Acid Stimulation”, D.W. Thomson and M.F. Nazroo, 1997 SPE Production Operations Symposium, March 9-11, 1997, pages 97-108, SPE 37482 (“Halliburton III”) count as a single prior art reference under General Order GO-13-20, Footnote 2 because they are the “closely related work of a single prior artist.”

Open Hole Packer Series” advertisement from Packers Plus’ website available at Dkt. 59-2 (“Website”); RC_PAC00021933; RC_PAC00063156; RC_PAC00018079; and RC_PAC00002017.

- Wizard Packer and Sliding Sleeve System by Guiberson / Halliburton (“Wizard System”), as sold, publicly used, and shown in printed publications. *See, e.g.*, Halliburton Completions Products guide from July 1999 (“Wizard Brochure”); *see also* Wizard II Hydraulic Set Retrievable Packer, Tech Manual, April 1998 (“Tech Manual”); “Multilateral and Horizontal Completions, Wizard Packer - A Revolution in Open Hole Packers, The Wizard Packer Provides Outstanding Performance in Open Hole,” Dresser Oil Tools (“Wizard Marketing”).
- Polar Bearfoot Packer, as sold, publicly used, and shown in printed publications. *See, e.g.*, Bearfoot Packer 652-0000 Datasheet; Polar Completions Engineering Inc. Technical Manual, July 5, 2001, Rev. 1; Polar Completions Engineering Inc. Technical Manual, July 5, 2001, Rev. 2; Article entitled “Polar is the Completions Company,” pp. 18-22.
- *Production Control of Horizontal Wells in a Carbonate Reef Structure*, Bill Ellsworth et al., 1999 CIM Horizontal Well Conference (“Ellsworth”), published by 1999.
- U.S. Patent No. 6,315,041 (“Carlisle”), which was filed April 15, 1999 and issued November 13, 2001.
- U.S. Patent No. 6,257,338 (“Kilgore”), which was filed Nov. 2, 1998 and issued July 10, 2001.
- U.S. Patent No. 5,449,039 (“Hartley”), which was filed Feb. 7, 1994 and issued Sept. 12, 1995.

These invalidity contentions are not an admission by Defendants that the accused products, including any current or past versions of these products, are covered by or infringe any claim, particularly when the claim is properly construed. Nor shall these invalidity contentions be construed as an admission that Defendants agree with any claim construction promoted by Rapid Completions to support its infringement contentions. The citations herein are exemplary, and should not be viewed as a limitation on Defendants’ invalidity positions; Defendants reserve the right to further edit these invalidity contentions should the need arise (*e.g.*, when additional evidence becomes available).

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<p>[Ipre] A method for fracturing a hydrocarbon-containing formation accessible through a wellbore, the method comprising:</p>	<p>The Halliburton reference, alone or in combination with other analogous art, describes a method for fracturing a hydrocarbon-containing formation accessible through a wellbore.</p> <p>The wells described in the Halliburton reference are intentionally placed into hydrocarbon-containing formations for the production of hydrocarbons. The purpose of the stimulations described in Halliburton is to increase the production of hydrocarbons from the hydrocarbon-containing formations (<i>e.g.</i>, reservoirs) in which the wells are placed.</p>

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	<p>“Design and Installation of a Cost-Effective Completion System for Horizontal Chalk Wells Where Multiple Zones Require Acid <u>Stimulation</u>.”</p> <p>Halliburton at Title. <i>See also</i> Halliburton II at Title; Halliburton III at Title.</p> <p>Summary – “An innovative completion design that <u>allows multiple acid fracs to be performed in horizontal subsea chalk-formation wells with a single trip into the wellbore</u> has recently been codeveloped by a major North Sea operator and an oilfield engineering/manufacturing/service company. The project was initiated to develop a system that would allow multiple acid stimulations to be efficiently performed in the shortest possible time in the North Sea Joanne field. The system ultimately developed allows acid stimulation of up to 10 different zones in a single trip with no through-tubing intervention.”</p> <p>Halliburton at 323. <i>See also</i> Halliburton II at 151; Halliburton III at 97.</p> <p>“By limiting the number of perforations in each group, it was expected that the pressure drop across the perforations would be sufficiently high to ensure that fractures would be initiated from each group of perforations. This would ensure that all the promising areas in the wells would be stimulated.”</p> <p>Halliburton at 325.</p> <p>Summary – “This technique provided a substantial reduction in the operation time normally required to stimulate multiple zones and allowed the stimulations to be precisely targeted within the <u>reservoir</u>. . . . Additionally, this completion method allowed the stimulations to be designed and matched to the requirements of each reservoir zone, which provided the most cost efficient <u>treatments</u> possible.”</p> <p>Halliburton at 323. <i>See also</i> Halliburton II at 151; Halliburton III at 97.</p>

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	<p>“Additionally, it was felt that stimulation programs would be necessary to achieve the necessary production potentials.”</p> <p>Halliburton at 323. <i>See also</i> Halliburton II at 151; Halliburton III at 97.</p> <p>“This ensured that the most cost efficient treatments possible. Were applied and that there would be no compromise to the effectiveness of the procedures to enhance production.”</p> <p>Halliburton at 327. <i>See also</i> Halliburton II at 156; Halliburton III at 101.</p> <p>This preamble is literally present in the Halliburton reference. This preamble is also taught in other, similar references that one skilled in the art could combine with the Halliburton reference to achieve predictable results. For example, U.S. Patent No. 6,315,041 (“Carlisle”), which was filed April 15, 1999 and issued November 13, 2001. Carlisle is prior art to the 774 patent. Like the Halliburton article, Carlisle is directed to the completion of oil and gas wells, including stimulation. (Carlisle at “Field of the Invention”). Carlisle describes a similar method to that described in the Halliburton article performed in an open hole. (<i>See</i> Carlisle at 1:5-22). Carlisle also discloses the use of Wizard Packers for isolation (Carlisle at 1:43-47). Thus, it would have been obvious to a POSITA to combine the Carlisle and Halliburton references to yield the predictable result of sealing off the annulus of the open wellbore to isolate zones of the formation for fracturing a hydrocarbon-containing formation in open hole.</p> <p>“<u>The field of oil and gas well stimulation</u> sometimes involves wells with multiple horizontal laterals in a vertical well that are drilled to facilitate production from a formation. Some of the well laterals are substantially long, up to several thousand feet, and it is <u>desirable to stimulate these horizontal well sections to increase their production</u>. There are a number of <u>stimulation methods, such as acidizing and fracturing</u>.”</p> <p>Carlisle at 1:15-22.</p>

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	<p>“There is another tool, the Wizard Packer from Dresser, that allows <u>isolation of a horizontal well into preset lengths to facilitate stimulation of the formation</u>, but it requires sending darts into the sections to open sliding sleeves which allow the treating fluid to enter into the isolated section.”</p> <p>Carlisle at 1:43-47.</p> <p>While the Halliburton reference alone is sufficient to anticipate or at least render obvious this element, one skilled in the art would understand that additional references may be combined with the Halliburton reference to yield predictable results.</p> <p>For example, US 6,257,338 (“Kilgore”) can be combined with Halliburton to achieve predictable results.</p> <p>“The present invention <u>relates generally to operations performed within subterranean wells</u> and, in an embodiment described herein, more particularly provides apparatus and methods for controlling fluid flow within a subterranean well.”</p> <p>Kilgore at 1:6-10.</p> <p>“Furthermore, the method 10 is described in terms of producing fluid from the well, but <u>the method may also be utilized in injection operations.</u>”</p> <p>Kilgore at 4:4-7.</p> <p>“Of course, may modifications, additions, substitutions, deletions, and other changes may be made to the methods described above and their associated apparatus, which changes would be obvious to one of ordinary skill in the art, and these are contemplated by the principles of the present invention. <u>For example, any of the methods may be utilized to control fluid injection, rather than production, within a well, . . .</u>”</p>

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