

**UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
SAN ANTONIO DIVISION**

GRYPHON OILFIELD SOLUTIONS, LLC, §

Plaintiff, §

v. §

STAGE COMPLETIONS INC., §
STAGE COMPLETIONS (USA) CORP., §

Defendants. §
§

CIVIL ACTION NO. 5:17-cv-00942-FB

JURY TRIAL REQUESTED

**PLAINTIFF GRYPHON OILFIELD SOLUTIONS, LLC'S
MOTION FOR PRELIMINARY INJUNCTION***

DATED: September 26, 2017

Respectfully Submitted,

By : /s/ Richard T. McCarty
Eric S. Schlichter
(Application for Admission to Western
District of Texas Submitted)
Attorney-in-Charge
Texas Bar No. 24007994
eschlichter@winston.com
John R. Keville
Texas State Bar No. 00794085
jkeville@winston.com
J. Dean Lechtenberger
Texas Bar No. 12100720
jlechtenberger@winston.com
Richard T. McCarty
Texas Bar No. 24074675
rmccarty@winston.com

WINSTON & STRAWN LLP
1111 Louisiana, 25th Floor
Houston, Texas 77002
Telephone: (713) 651-2600
Facsimile: (713) 651-2700

* Contemporaneous with the filing of this Motion for Preliminary Injunction, Gryphon Oilfield Solutions, LLC is filing a Motion for Leave to Exceed Page Limits for Its Motion for Preliminary Injunction.

Ted D. Lee
Texas State Bar No. 12137700
tlee@gunn-lee.com
GUNN, LEE & CAVE, P.C.
300 Convent St., Suite 1080
San Antonio, Texas 78205
Telephone: (210) 886-9500
Facsimile: (210) 886-9883

ATTORNEYS FOR
PLAINTIFF GRYPHON OILFIELD
SOLUTIONS, LLC

TABLE OF CONTENTS

I. SUMMARY OF THE ARGUMENT	1
II. FACTUAL BACKGROUND	3
A. Background Of The Technology	3
B. The Relationship Between Stage Completions And The Gryphon Patents	6
C. The Market For The Patented Technology And Stage Completions’ Aggressive Introduction Of Its Infringing Bowhead II System.....	7
III. A PRELIMINARY INJUNCTION IS NECESSARY TO PREVENT FURTHER IRREPARABLE HARM TO GRYPHON	9
A. Legal Standards For Granting Preliminary Injunctions In Patent Cases	10
B. Gryphon Has Established It Is Entitled To A Preliminary Injunction	10
1. Gryphon Is Likely to Succeed on the Merits of Its Infringement Claim.....	10
a. The Bowhead II System Infringes Multiple Claims Of The Gryphon Patents	11
(i) Infringement Of Claim 31 Of The ‘117 Patent	11
(ii) Infringement Of Claim 7 Of The ‘727 Patent	14
b. The Gryphon Patents Are Valid.....	20
(i) Assignor Estoppel Precludes Stage Completions From Challenging The Validity Of The Gryphon Patents	20
2. Gryphon Will Be Irreparably Harmed Absent a Preliminary Injunction	23
a. Stage Completions’ Infringement Threatens To Destroy Gryphon’s Market Share And Market Opportunities	24
b. The Harm To Gryphon Cannot Be Compensated Through Money Damages.....	27
3. The Balance Of The Hardships Favors Gryphon	28
4. The Public Interest Unquestionably Favors Protecting Patent Rights	29
IV. CONCLUSION	30

TABLE OF AUTHORITIES

Cases

Abbott Labs. v. Andrx Pharms., Inc., 452 F.3d 1331 (Fed. Cir. 2006) 29

Allen Eng’g Corp. v. Bartell Indus., Inc., 299 F.3d 1336 (Fed. Cir. 2002) 11

Am. Home Prods. Corp. v. Abbott Labs., 522 F. Supp. 1035 (S.D.N.Y. 1981)..... 25

Atlas Powder Co. v. Ireco Chems., 773 F.2d 1230 (Fed. Cir. 1985) 24

Bell & Howell Document Mgmt. Prods. Co. v. Altek Sys., 132 F.3d 701 (Fed. Cir. 1997) 29

Broadcom Corp. v. Qualcomm Inc., 543 F.3d 683 (Fed. Cir. 2008) 29

Celsis In Vitro, Inc. v. CellzDirect, Inc., 664 F.3d 922 (Fed. Cir. 2012)..... 27, 28, 29

Cordelia Lighting, Inc. v. Zhejiang Yankon Grp. Co. Ltd., No. EDCV 14-881 JGB (SPx),
slip. op. (C.D. Cal. Apr. 27, 2015)..... 28

Decade Indus. v. Wood Tech, Inc., 100 F. Supp. 2d 979 (D. Minn. 2000)..... 30

Douglas Dynamics, LLC v. Buyers Prods. Co., 717 F.3d 1336 (Fed. Cir. 2013)..... 23, 27

Dreamlite Holdings Ltd. v. Kraser, 705 F. Supp. 98 (E.D.N.Y. 1988) 21

H.H. Robertson, Co. v. United Steel Deck, Inc., 820 F.2d 384 (Fed. Cir. 1987)..... 11

Hybritech Inc. v. Abbot Labs., 849 F.2d 1446 (Fed. Cir. 1988) 24

Jacobson v. Cox Paving Co., No. 89-1786 PHX PGR, 1991 WL 328445 (D. Ariz. May
16, 1991) 30

Jurgens v. McKasy, 927 F.2d 1552 (Fed. Cir. 1991) 11

Kaepa, Inc. v. Achilles Corp., 76 F.3d 624 (5th Cir. 1996) 30

MAG Aerospace Indus., Inc. v. B/E Aerospace, Inc., 816 F.3d 1374 (Fed. Cir. 2016) 20, 21

Markman v. Westview Instruments, Inc., 52 F.3d 967 (Fed. Cir. 1995) 11

Mentor Graphics Corp. v. Quickturn Design Sys., Inc., 150 F.3d 1374 (Fed. Cir. 1998)..... 21

Metalcraft of Mayville, Inc. v. The Toro Co., 848 F.3d 1358 (Fed. Cir. 2017) 1, 10

Monsanto Co. v. McFarling, 302 F.3d 1291 (Fed. Cir. 2002)..... 10

Ortho Pharm. Corp. v. Smith, Civ. A No. 90-0242, 1990 WL 18681 (E.D. Pa. Feb. 23,
1990) 25

Polymer Techs., Inc. v. Bridwell, 103 F.3d 970 (Fed. Cir. 1996) 26

<i>Power Survey, LLC v. Premier Utility Servs., LLC</i> , 61 F. Supp. 3d 477 (D.N.J. 2014).....	26
<i>Robert Bosch LLC v. Pylon Mfg. Corp.</i> , 659 F.3d 1142 (Fed. Cir. 2011)	10, 29
<i>Roper Corp. v. Litton Sys., Inc.</i> , 757 F.2d 1266 (Fed. Cir. 1985).....	11
<i>Schwabel Corp. v. Conair Corp.</i> , 122 F. Supp. 2d 71 (D. Mass. 2000)	23
<i>Smith Int’l, Inc. v. Hughes Tool Co.</i> , 718 F.2d 1573 (Fed. Cir. 1983)	10
<i>Titan Tire Corp. v. Case New Holland, Inc.</i> , 566 F.3d 1372 (Fed. Cir. 2009)	20, 23
<i>TiVo Inc. v. EchoStar Commc’ns Corp.</i> , 446 F. Supp. 2d 664 (E.D. Tex. 2006).....	27
<i>TiVo Inc. v. EchoStar Commc’ns Corp.</i> , 516 F.3d 1290 (Fed. Cir. 2008).....	27
<i>Tuf-Tite, Inc. v. Federal Package Networks, Inc.</i> , No. 14-cv-2060, 2014 WL 6613116 (N.D. Ill. Nov. 21, 2014).....	28
<i>Windsurfing Int’l, Inc. v. AMF, Inc.</i> , 782 F.2d 995 (Fed. Cir. 1986).....	29
<i>Zen Design Grp., Ltd. v. Clint</i> , No. 08-cv-14309, 2009 WL 4050247 (E.D. Mich. Nov. 23, 2009)	27
Statutes	
35 U.S.C. § 271.....	9
35 U.S.C. § 282.....	20
35 U.S.C. § 283.....	10
Rules	
FED. R. CIV. P. 65.....	1

TABLE OF EXHIBITS

Exhibit No.	Exhibit Description
1	U.S. Patent No. 9,611,727
2	U.S. Patent No. 9,739,117
3	Declaration of Dr. Gary Wooley
4	Declaration of Ganesh Subbaraman
5	Declaration of Benjamin Weber
6	Stage Completions Inc., “Leadership – Stage Completions Inc.,” available at www.stagecompletions.com/leadership-page/ , last accessed on August 17, 2017
7	Excerpts from Blackbird Energy’s Third Quarter 2017 Management’s Discussion and Analysis, dated June 29, 2017
8	Stage Completions (USA) Corporation’s Certificate of Amendment to its Certificate of Incorporation in the State of Delaware, filed with the Secretary of State of the State of Delaware on June 12, 2017
9	Stage Completions (USA) Corporation’s Annual Franchise Tax Report for the State of Delaware for Tax Year 2016
10	Corporation Search of the Government of Alberta, Canada’s Corporate Registration System for Progressive Tool Design Inc.
11	Certified Copy of the Certificate of Incorporation, Registration Statement, and Certificate of Amendment and Registration of Restated Articles for SC Holding Corporation from the Government of Alberta, Canada
12	Certified Copy of the Certificate of Incorporation, Registration Statement, and Certificate of Amendment and Registration of Restated Articles for SC Holding Corporation from the Government of Alberta, Canada
13	Corporation Search of the Government of Alberta, Canada’s Corporate Registration System for Stage Completions Inc.
14	Stage Completions Inc., “Stage Completions Inc. Announces New Record-Setting Completion Time and Frac Intensity in the Eagle Ford Basin of South Texas,” May 18, 2017, available at http://www.stagecompletions.com/blog , last visited on July 8, 2017
15	Stage Completions Inc., PowerPoint Presentation, “Innovating Completion Optimization,” October 2016.
16	Stage Completions Inc., “Stage Completions Inc. Announces Record 76 Stage Pin-Point Completion Without Coil Tubing Assist, Bowhead II System Roll-Out Achievement & Sale of a 10% Minority Interest to Blackbird Energy,” February

Exhibit No.	Exhibit Description
	15, 2017, available at http://www.stagecompletions.com/press/exquisite-admitting-cordially-september-newspaper-6 , last visited on August 17, 2017
17	“Stage Completions Inc. Announces Record Completion Time and Frac Intensity With Stage’s System in Pipestone, and New Dissolvable Collet Product Launch, February 15, 2017, available at http://www.marketwired.com/press-release/stage-completions-inc-announces-record-completion-time-frac-intensity-with-stages-system-2196038.htm , last visited on June 30, 2017
18	Stage Completions Inc., Case History, “117 Stages: New Single-Point Entry Fracturing Record,” May 16, 2017
19	Stage Completions Inc., Poster, “Technological Advancement in Fully Reclosable Multistage Fracturing Systems,” SPE/ICoTA Workshop: Refracturing and Advancing the Learning Curve, Austin, Texas, 11-12 April 2017
20	Stage Completions Inc., “Stage Completions in the News,” available at http://www.stagecompletions.com/news-events/news-events/ , last visited on August 17, 2017
21	Blackbird Energy, “Blackbird Energy Inc. Provides Operations Update Regarding Its Previous Completion Programs, Its Planned Capital Program At Pipestone And The Roll-Out Of Stage Completions,” May 18, 2017, available at https://www.blackbirdenergyinc.com/news/blackbird-energy-inc-provides-operations-update-regarding-its-previous-completion-programs-its-planned-capital-program-at-pipestone-and-the-roll-out-of-stage-completions , last visited on August 2, 2017
22	Stage Completions Inc., “SC Bowhead II,” available at http://www.stagecompletions.com/sc-bowheada/hzd5560bcija30mb3r3upizsy0qsv5 , last visited on July 10, 2017
23	Screen Captures from Animation found at Stage Completions Inc., “SC Bowhead II,” www.stagecompletions.com/products/sc-bowhead-ii/ , last visited on August 17, 2017
24	Stage Completions Inc., Case History, “76 Stage Pinpoint Sleeve Record,” November 17, 2016
25	Stage Completions Inc., PowerPoint, “Stage Completions: the Future of Downhole Completions, Today,” August 2017, EnerCom’s The Oil and Gas Conference
26	United States Patent & Trademark Office, Assignment Abstract of Title, U.S. Patent Application 14/505,384
27	United States Patent & Trademark Office, Assignment Abstract of Title, U.S. Patent Application 14/178,056

Exhibit No.	Exhibit Description
28	United States Patent & Trademark Office, Assignment Abstract of Title, U.S. Patent Application 14/603,193
29	PRWeb, “Stage Completions Inc. Announces New Record-Setting Completion Time and Frac Intensity in the Eagle Ford Basin of South Texas,” May 25, 2017, available at http://www.prweb.com/releases/2017/05/prweb14359126.htm , last visited on June 30, 2017
30	Stage Completions Inc., PowerPoint, Innovating Completion Optimization, EnerCom Dallas 2017
31	Stage Completions Inc., “SC Bowhead,” available at http://www.stagecompletions.com/products/sc-bowhead/ , last visited on August 17, 2017
32	Blackbird Energy, PowerPoint, “Pure-Play Pipestone: Condensate, Growth, Achievement,” August 2017, EnerCom’s The Oil and Gas Conference
33	Declaration of Richard T. McCarty

Plaintiff Gryphon Oilfield Solutions, LLC (“Gryphon”) filed its complaint against Defendants Stage Completions Inc. and Stage Completions (USA) Corporation (collectively, “Stage Completions”) on September 22, 2017, alleging infringement of United States Patent Nos. 9,611,727 (“the ‘727 Patent”) and 9,739,117 (“the ‘117 Patent”). Stage Completions makes, sells, offers to sell, uses, and/or imports into the United States its Bowhead II system that infringes multiple claims of the ‘727 and ‘117 Patents. Stage Completions and Gryphon compete in a relatively new and emerging market using the patented technology, and Stage Completions is actively seeking to expand its business in that market. Pursuant to FED. R. CIV. P. 65, Gryphon seeks a preliminary injunction preventing Stage Completions’ continuing infringement.

I. SUMMARY OF THE ARGUMENT

The technology covered by the ‘727 and ‘117 Patents relates to sliding sleeve valves used in fracturing downhole formations. Stage Completions’ President, CEO, Director, and part owner, Sean Campbell, is a named inventor on both the ‘727 and ‘117 Patents. Several years ago, Mr. Campbell and his fellow inventors assigned all rights to those patents to another company that Mr. Campbell operated. Through a series of transactions, Gryphon acquired all rights in the ‘727 and ‘117 Patents (collectively, the “Gryphon Patents”). Unfortunately, Mr. Campbell and the other named inventors, through Stage Completions, are now practicing without permission the patents they previously assigned away, requiring Gryphon to seek this preliminary injunction to protect its investment in the Gryphon Patents and in the emerging market for the patented technology.

A preliminary injunction should be granted when the following factors are met: (1) the plaintiff is likely to succeed on the merits; (2) the plaintiff is likely to suffer irreparable harm in the absence of injunctive relief; (3) the balance of the hardships weighs in favor of the injunction; and (4) an injunction is in the public’s interest. *Metalcraft of Mayville, Inc. v. The Toro Co.*, 848 F.3d 1358, 1363 (Fed. Cir. 2017). Gryphon easily establishes each of these factors. Specifically:

- The evidence shows that Stage Completions directly infringes multiple claims of the Gryphon Patents through making, using, selling, offering to sell, and/or importing its Bowhead II system. Additionally, the Gryphon Patents enjoy a statutory presumption of validity, and the equitable doctrine of assignor estoppel prohibits Stage Completions from challenging the validity of the patents. Thus, Gryphon has shown a substantial likelihood that it will prevail on the merits.
- Absent a preliminary injunction, Stage Completions' infringement will irreparably harm Gryphon. As shown, Stage Completions and Gryphon are direct competitors in a nascent marketplace and continued infringement will result in a loss of market share, market opportunities, and business relationships that cannot be adequately accounted for with damages.
- Gryphon is subject to market and price erosion and disruption to its reputation and goodwill from infringing competition. Conversely, any potential loss of business that Stage Completions may suffer from the granting of a preliminary injunction should not be considered, particularly in light of Gryphon's strong showing of infringement and validity, because building a business upon an infringing product is impermissible. Moreover, Stage Completions has a product line other than the infringing Bowhead II system and, thus, a preliminary injunction will not leave Stage Completions unable to conduct business. Accordingly, the balance of the hardships weighs heavily in Gryphon's favor.
- Public policy favors protection of the rights secured by valid patents, and the requested injunction will not deprive the public of the patented invention or non-infringing systems that allow completion and fracturing of wells. This factor favors immediate injunctive relief, as

Stage Completions cannot show that there is any critical public interest that would be injured by the grant of the requested preliminary injunction.

As each of these factors weighs heavily in favor of granting the requested preliminary relief, the Court should enter a preliminary injunction.

II. FACTUAL BACKGROUND

A. Background Of The Technology

The '727 Patent relates to an apparatus and method for fracturing hydrocarbon formations utilizing sliding frac sleeves. '727 Patent, Ex. 1. Earlier technologies included sliding valves with a ball seat that could receive a ball dropped downhole. *Id.*, 1:21-26.¹ After the ball was seated in the ball seat, no further flow could pass through the ball seat, and pressure from fracturing fluid would build up behind the ball and ball seat, causing a piston in the sliding sleeve to move downhole, thereby opening ports in the wall of the frac sleeve to allow pressurized fracturing fluid into the intended production zone. *Id.*, 1:26-31. In order to create numerous fracturing zones, the ball seats and the balls would be of varying sizes, with the smallest ball seat located furthest downhole so that the smaller ball would pass through the gradually smaller ball seats in each frac sleeve until it reaches the smallest one and actuates the sliding piston to open the ports. *Id.*, 1:31-43. Conversely, the frac sleeve furthest uphole would have the largest ball seat. *Id.*, 1:35-38.

This earlier technology presented a number of issues. Prior generation frac sleeves could not be cemented in place with a casing string, as there was no way to clean or wipe the cement out of the valve seat mechanisms, and the volume of fluid and the rate of fluid flow was constricted by the progressively decreasing diameters of the ball seats of the frac sleeves. *Id.*, 1:44-54. The number of frac stages is also limited by the number of ball / ball seat combinations. *Id.*, 1:50-59.

¹ Citations to a patent in the format a:b-c are a citation to a specific column (a) and line numbers ((b)-(c)).

To overcome these shortcomings, the invention of the '727 Patent uses darts with dart profiles extending radially outward that mate with key profiles on the piston of the frac sleeve. *Id.*, 6:61-64, 7:40-8:2. The darts travel through the casing until they reach matching key profiles, whereupon they latch into the respective piston of the frac sleeve, creating a seal in the wellbore so that the hydraulic pressure forces the piston and dart downhole, opening the frac sleeve and allowing the fracturing fluid to enter the formation. *Id.*, 8:5-24. The '727 Patent describes a broad variety of matching key and dart profiles. *Id.*, 5:46-6:47, 7:40-8:2. The key and dart profiles are configured so that a dart may pass through multiple frac sleeves that do not have a matching profile before eventually reaching a frac sleeve with the matching profile. *Id.*, 8:25-48. By using matching key and dart profiles rather than graduated ball seats, the frac sleeves all have the same inside diameter, eliminating flow restrictions in the casing. *Id.*, 6:64-7:22.

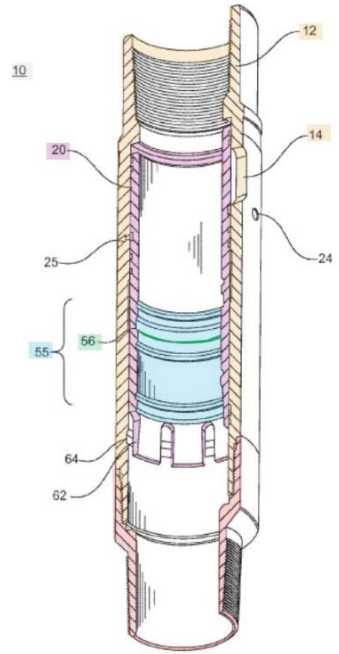


Figure 11 of the '727 Patent (right) demonstrates the basic configuration of the frac valve sleeve. The valve sub (10) has circumferential grooves along the inner wall of the piston (20) to form key profile (55). *Id.*, 7:40-

44. Piston (20) slides downhole after hydraulic pressure behind the matching dart builds to a sufficient level that shear pin (25) shears, allowing the piston to move to a location where the ports (14) are open and fracturing fluid may exit the valve sub and enter the formation. *Id.*, 8:5-24.

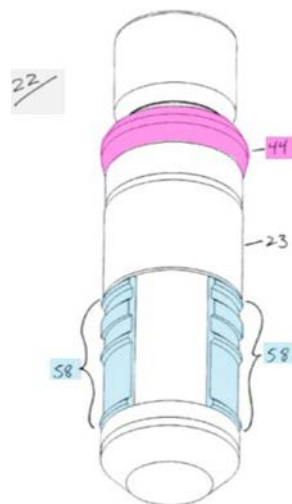
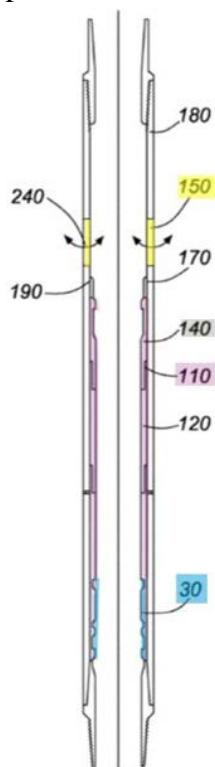
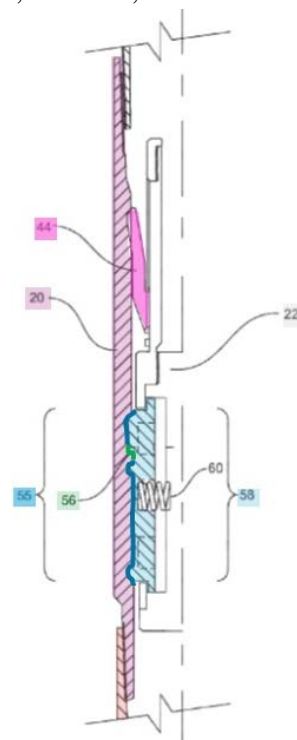


Figure 13 (left) demonstrates a dart configured to mate with the circumferential grooves of the key profile (55) on the piston seen in Figure

11. *Id.*, 7:48-53. The dart (22) has a dart profile (58) disposed around the exterior circumference of the dart. *Id.* The dart cup (44), which may be any shape to create a seal between the dart (22) and the piston (20) and the piston, allows hydraulic pressure from the frac fluid to build behind the dart and piston to shear the piston's shear pins and move the piston into an open position. *Id.*, 6:43-54, 8:8-17.

As can be seen in cut-away Figure 14 of the '727 Patent (right), when dart (22) reaches the piston (20) with a key profile (56) matching the dart profile (58), dart profile (58) mates with the corresponding key profile (56). *Id.*, 7:52-61. As seen in Figure 14, the dart cup (44) creates the seal between the dart (22) and the piston (20). The '727 Patent teaches that "any shape or pattern of key or dart profile that can interlock and perform the same function can be used." *Id.*, 7:64-66.

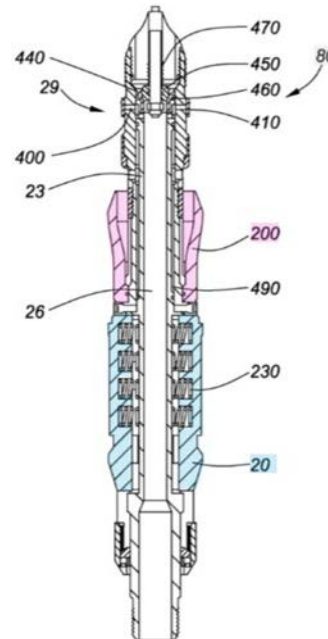


The invention of the '117 also relates to fracturing systems and selectively engaging and activating a downhole frac sleeve. '117 Patent, Ex. 2, 1:19-40, 8:6-11. The profile selective system of the '117 Patent includes profile receivers inside the downhole tools, and profile keys found on actuator tools run downhole, such as darts. *Id.*, 1:44-48.

The frac sleeves, or port tools, include ports (150) that are opened when the valve sleeve (110) moves from a port closed position (in which the sleeve covers the ports) to a port open position (140), as seen in Figure 12 of the '117 Patent (left). *Id.*, 8:30-36. The frac sleeve of the '117 Patent includes a profile receiver (30) that is adapted to match the profile key on a corresponding actuator tool. Each profile receiver has a corresponding profile key, and the profile key on an actuator tool will pass through

the non-matching profile receivers, engaging or locking into only the matching profile receiver. *Id.*, 1:49-53. When the actuator tool engages the matching profile receiver, it activates (*e.g.*, downwardly shifts) the frac sleeve and opens a valve port. *Id.*, 1:61-2:28, 2:34-53.

As seen in Figure 13 (right), the actuator tool (80) has a profile key (20) that matches the same profile found on the profile receiver of at least one frac sleeve to allow engagement with the matching profile receiver. *Id.*, 8:37-43. The cup (200) seals the wellbore when the profile key (20) engages with the profile receiver, allowing fluid pressure to build behind the actuator tool, thereby moving the actuator tool and the engaged valve sleeve downhole to open the ports and allow fracturing fluid to enter the formation. *Id.*, 8:44-9:22.



B. The Relationship Between Stage Completions And The Gryphon Patents

The named inventors on the '727 Patent are Sean Campbell and William Jani. Ex. 1, Cover. Mr. Campbell is the President, CEO, and a Director of, and has an indirect controlling interest in, Stage Completions Inc. Ex. 6; Ex. 7 at 4. Mr. Campbell is also President, CEO, and a director of Stage Completions Inc.'s US subsidiary, Stage Completions (USA) Corporation. Ex. 8; Ex. 9. Stage Completions manufactures its infringing Bowhead II system in Canada using Progressive Tool Design Inc., a corporation owned in part by Mr. Campbell. Ex. 10 at 2; Ex. 4 at ¶ 16.

The other named inventor on the '727 Patent, William Jani, is also affiliated with Stage Completions Inc. Mr. Jani has assigned at least three patent applications (unrelated to the Gryphon Patents) to Stage Completions Inc. and/or its affiliate, SC Asset Corporation,² and he is a director

² Mr. Jani is also a director of SC Asset Corporation. Ex. 11 at 13. SC Asset Corporation holds the rights to certain intellectual property used by Stage Completions in its operations.

of SC Holding Corporation, which holds over ten-percent of the voting shares in Stage Completions Inc. Ex. 12 at 12-13; Ex. 13 at 3.

Mr. Campbell is also a named inventor on the '117 Patent, along with Darryl Firmaniuk and Lennard Sihlis. Ex. 2, Cover Pg. As explained above, Mr. Campbell is closely connected with Stage Completions. Mr. Firmaniuk is also closely connected with Stage Completions, as he is a director of SC Holding Corporation and SC Asset Corporation. Ex. 12 at 12; Ex. 13 at 3. The last named inventor, Lennard Sihlis, is employed by Gryphon. Ex. 5 at ¶ 10.

The named inventors of the '727 Patent and the '117 Patent previously assigned all of their rights to those patents, and Gryphon now holds those rights. *See* Ex. 1, Cover; Ex. 2, Cover; Ex. 4 at ¶¶ 6, 8; Ex. 5 at ¶ 10; *see also* Complaint, DE 1, at ¶¶ 8-16.

C. The Market For The Patented Technology And Stage Completions' Aggressive Introduction Of Its Infringing Bowhead II System

The market for the patented frac sleeve technology is relatively new. Ex. 5 at ¶ 7. Gryphon offers the SUREselect Multistage Fracturing System within this market. *Id.* at ¶¶ 7, 18. The product was originally part of SureTech Completions' product line,³ and was installed and used in a well in early 2014. *Id.* at ¶ 7. SureTech worked to refine and improve the SUREselect system, but with the decline in oil and gas prices in 2015, the market for sliding sleeve valves cratered, with customers reverting to the cheaper plug and perf option. Ex. 4 at ¶ 9; Ex. 5 at ¶¶ 7-9. In June 2016, Gryphon (then named Oiler Tools, LLC) invested a sizable sum of money to purchase many of the assets of SureTech Completions, including all of the intellectual property relating to SureTech's product lines. Ex. 4 at ¶ 8; Ex. 5 at ¶¶ 10, 16. Upon purchasing SureTech's assets, Gryphon began working towards offering the product lines originally offered by SureTech. Ex. 5

³ Named inventor Sean Campbell was a vice president and founder of Suretech Completions Ltd., and president and a founder of SureTech Tool Services Inc. Ex. 6 at 1-2.

at ¶¶ 14, 16-18. Gryphon continues to offer the SUREselect system while also designing and developing its next generation of profile selective sliding sleeve frac valves. *Id.* at ¶ 16.

The market for the patented profile actuated sliding frac sleeves is now growing rapidly. *Id.* at ¶ 24. Earlier frac sleeve systems utilizing ball-actuated sleeves can only support a limited number of fracturing stages. *Id.* at ¶¶ 13-14. Increasingly, customers demand larger, even unlimited, numbers of fracturing stages that can be used in either open hole or cased hole. *Id.* at ¶ 14. Also, cased hole completions with ball-drop sliding sleeves have not been possible (Ex. 1, 1:44-54), and customers now prefer the constant inner diameter found in profile actuated sliding frac sleeve systems and systems that do not require wireline or coiled tubing to actuate the systems. Ex. 5 at ¶ 14.

Given these market forces, Stage Completions has turned its attention to the rapidly growing market for profile actuated sliding frac sleeves. Stage Completions was founded in 2014 (Ex. 13 at 1), and in 2016, it launched its infringing Bowhead II product line. Ex. 14 at 3. In an October 2016 presentation, Stage Completions boasted of its “roll out achievement” of having deployed its Bowhead II system in the key shale plays in North America, including the Permian Basin, the Eagle Ford Basin, the Bakken shale play, and the Uinta Basin, all within the United States. Ex. 15 at 21. As of February 15, 2017, Stage Completions boasted that it expected to deploy in excess of 750 sleeves/collets in Canada, the United States, and internationally. Ex. 16 at 2. Stage Completions referred to the quickening pace of market adoption, referring to the “accelerating absorption and acceptance of the Bowhead Technology.” *Id.* Sean Campbell has described Stage Completions’ market blitz as a “rapid roll out” and noted, “[w]e expect our roll out to continue its aggressive pace over the coming months” *Id.*; Ex. 17 at 2.

Stage Completions continued its aggressive push into the market in April 2017 with its use of 116 infringing Bowhead II systems in the Eagle Ford Basin. Ex. 18 at 1. According to Stage Completions, it began the infringing fracturing operation on April 24, 2017, just twenty days after the '727 Patent issued. *Id.* After the issuance of the '727 Patent, Stage Completions marketed its infringing system in Austin, Texas at an SPE/ICoTA Workshop held April 11–12, 2017. Ex. 19. Stage again presented its Bowhead II system at EnerCom's Oil and Gas Conference held in Denver, Colorado from August 13–17, 2017 (Ex. 4 at ¶¶ 11, 13), and is scheduled to present its Bowhead II system at the SPE Annual Technical Conference and Exhibition held in San Antonio, Texas from October 9–11, 2017 and at the SPE Hydraulic Fracturing Technology Conference and Exhibition scheduled for January 23–25, 2018 in The Woodlands, Texas. Ex. 20 at 4.

In a May 2017 press release, Stage Completions advertised that it had secured commercial orders of 1,881 Bowhead II valves for companies in the Marcellus, Eagle Ford, Bakken, SCOOP / STACK, and Permian shale plays in the United States. Ex. 14 at 3. According to Stage Completions, its infringing Bowhead II technology “is seeing rapid global adoption in a variety of downhole conditions.” *Id.* Stage Completions President and CEO, Sean Campbell, predicted in May 2017 that “an additional 15 industry leading companies [would] adopt Stage's technology over the coming months.” Ex. 21 at 4. Thus, Stage Completions has only recently begun to make significant inroads in the emerging market for the patented technology.

III. A PRELIMINARY INJUNCTION IS NECESSARY TO PREVENT FURTHER IRREPARABLE HARM TO GRYPHON

Gryphon has a right to prevent others in the United States from infringing the '727 and '117 Patents by making, using, selling, offering to sell, or importing the inventions of those patents. 35 U.S.C. § 271. Congress has authorized district courts to grant preliminary injunctive relief in patent cases “in accordance with the principles of equity to prevent the violation of any right

secured by patent, on such terms as the court deems reasonable.” 35 U.S.C. § 283.

A. Legal Standards For Granting Preliminary Injunctions In Patent Cases

Injunctive relief is critical to the preservation of patent rights, as without the right to obtain injunctive relief, such rights would be greatly diminished. *Smith Int’l, Inc. v. Hughes Tool Co.*, 718 F.2d 1573, 1577-78 (Fed. Cir. 1983), *abrogated on other grounds by Robert Bosch LLC v. Pylon Mfg. Corp.*, 659 F.3d 1142 (Fed. Cir. 2011). Although district courts enjoy discretion in determining whether to grant injunctive relief, that discretion is not absolute, and “[w]here a case for a temporary injunction is clearly made out, it is not open to the trial court to deny the remedy.” *Id.* at 1579.

Gryphon is entitled to a preliminary injunction if it shows: (1) that it is likely to succeed on the merits; (2) that it is likely to suffer irreparable harm without a preliminary injunction; (3) that the balance of the equities tips in the favor of Gryphon; and, (4) that an injunction is in the public interest. *Metalcraft*, 848 F.3d at 1363. No particular factor is dispositive, but rather the Court must weigh each factor against the others and against the form and magnitude of the relief requested. *Monsanto Co. v. McFarling*, 302 F.3d 1291, 1297 (Fed. Cir. 2002).

B. Gryphon Has Established It Is Entitled To A Preliminary Injunction

1. Gryphon Is Likely to Succeed on the Merits of Its Infringement Claim

To demonstrate a likelihood of success on the merits, Gryphon must show that it will likely prove infringement of one or more claims of the Gryphon Patents, and that at least one of those claims is likely to withstand invalidity challenges. *Metalcraft*, 848 F.3d at 1364. To defeat a showing as to likelihood of success, a defendant must raise a substantial question regarding either infringement or validity. *Id.* A grant of a preliminary injunction does not require proof of infringement “beyond all question,” nor does it require that there is no evidence supporting the accused infringer. *H.H. Robertson, Co. v. United Steel Deck, Inc.*, 820 F.2d 384, 390 (Fed. Cir.

1987), *overruled on other grounds by Markman v. Westview Instruments, Inc.*, 52 F.3d 967 (Fed. Cir. 1995). Gryphon need only establish a reasonable likelihood of success on the merits. *Id.*

a. The Bowhead II System Infringes Multiple Claims Of The Gryphon Patents

To establish infringement, Gryphon must establish that every limitation set forth in a claim is satisfied by the accused product either literally or via the doctrine of equivalents. *Jurgens v. McKasy*, 927 F.2d 1552, 1560 (Fed. Cir. 1991). At the preliminary injunction stage, that burden may be met by submitting evidence that the claims cover the structure of the accused product. *Roper Corp. v. Litton Sys., Inc.*, 757 F.2d 1266, 1271 (Fed. Cir. 1985). The evidence shows that Stage Completions is directly infringing *at least* claim 31 of the ‘117 Patent and claim 7 of the ‘727 Patent by making, using, selling, offering to sell, and/or importing of the Bowhead II system.

(i) Infringement Of Claim 31 Of The ‘117 Patent

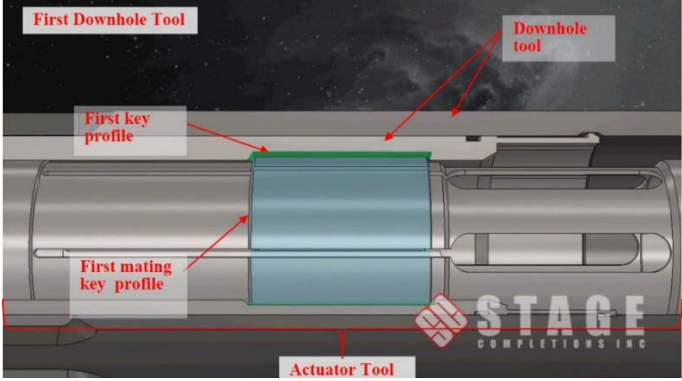
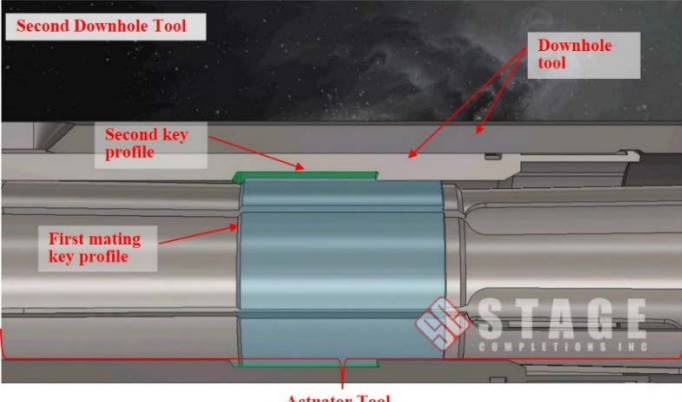
The table below reproduces the language of independent claim 31 of the ‘117 Patent and summarizes the evidence that confirms that the accused Bowhead II system infringes that claim.⁴

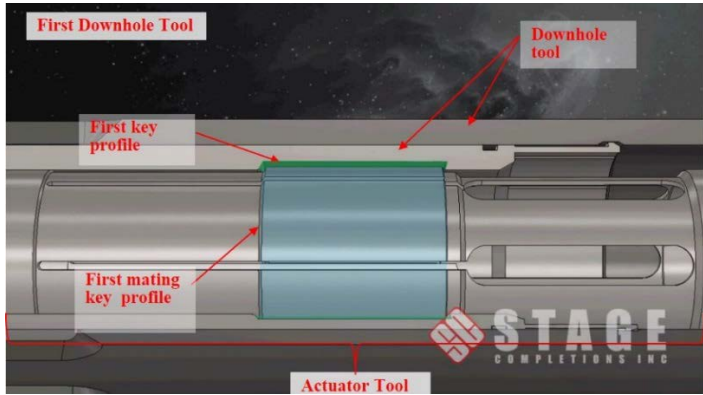

Claim 31 of the ‘117 Patent	Infringement by the Accused Bowhead II System
A profile selective system for actuating a downhole tool in a tubular conduit comprising: ⁵	Stage Completions’ website ⁶ describes the Bowhead II system as “a dissolvable ball and collet activated fracturing sleeve system designed for cased hole and open hole applications” that “offers multiple profile length configurations that facilitate precise valve activation.” <i>See also</i> Ex. 22, at 1. The Bowhead II system is therefore a profile selective system for actuating a downhole tool (<i>i.e.</i> , frac sleeves) in a tubular conduit. Ex. 3 at ¶ 39.
a first downhole tool, comprising a first key profile	Stage Completions’ has documented run histories confirming that numerous Bowhead II sliding sleeves (<i>i.e.</i> , downhole tools)

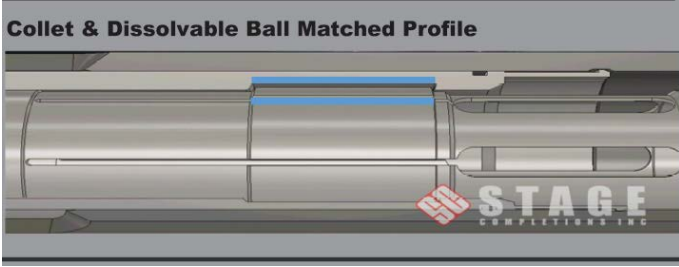
⁴ The evidence presented includes the Declaration of Gryphon’s technical expert witness, Dr. Gary Wooley, attached hereto as Exhibit 3.

⁵ The preamble of a claim generally does not limit the scope of the claim. *Allen Eng’g Corp. v. Bartell Indus., Inc.*, 299 F.3d 1336, 1346 (Fed. Cir. 2002). Gryphon maintains that the preamble of claim 31 does not limit the claim; nevertheless, Gryphon presents evidence establishing the Bowhead II system satisfies the preamble.

⁶ Stage Completions’ website: <http://www.stagecompletions.com/products/sc-bowhead-ii/>.

Claim 31 of the '117 Patent	Infringement by the Accused Bowhead II System
<p>adapted to actuate the first downhole tool;</p>	<p>were used to stimulate dozens of intervals in the Eagle Ford Basin in April 2017, which requires at least a first downhole tool with a first key profile. Ex. 18, at 1. Stage Completions' website includes an animated video that portrays the first downhole tool (<i>i.e.</i>, a first frac sleeve) with a first key profile adapted to actuate the tool (<i>see also</i> Ex. 23):</p>  <p>The Bowhead II system therefore includes a first downhole tool, comprising a first key profile adapted to actuate the first downhole tool. Ex. 3 at ¶ 40.</p>
<p>a second downhole tool spaced apart and uphole relative to the first downhole tool, comprising a second key profile adapted to actuate the second downhole tool;</p>	<p>The Stage Completions' run histories confirm that numerous sliding sleeves were used to stimulate dozens of intervals in April 2017, which requires numerous downhole tools (<i>i.e.</i>, frac sleeves) each having a specific key profile adapted to actuate that tool. Ex. 18, at 1. Stage Completions' website includes an animated video that portrays a second downhole tool (<i>i.e.</i>, frac sleeve) with a second key profile (different from the key profile of the first downhole tool) adapted to actuate the tool (<i>see also</i> Ex. 23):</p>  <p>The second downhole tool is uphole relative to the first downhole tool, thereby allowing the first actuator tool, with its</p>

Claim 31 of the '117 Patent	Infringement by the Accused Bowhead II System
	<p>different mating key profile, to pass through the second downhole tool and progress through the wellbore to the first downhole tool having the matching key profile for the first actuator tool. The Bowhead II system therefore includes a second downhole tool spaced apart and uphole relative to the first downhole tool, comprising a second key profile adapted to actuate the second downhole tool. Ex. 3 at ¶ 40.</p>
<p>a first actuator tool comprising a first mating key profile adapted to selectively engage the first key profile but not the second key profile; and</p>	<p>Stage Completions' website includes an animated video that portrays the first actuator tool with a first mating key profile adapted to engage the first key profile (<i>see also</i> Ex. 23):</p>  <p>The diagram shows a cross-section of a wellbore with two downhole tools. The upper tool is labeled 'First Downhole Tool' and has a 'First key profile' (green). The lower tool is labeled 'Downhole tool' and has a 'Second key profile' (blue). An 'Actuator Tool' is positioned between them, with a 'First mating key profile' (green) that fits into the 'First key profile' but not the 'Second key profile'. The Stage Completions logo is visible in the bottom right.</p> <p>Additionally, a Stage Completions' presentation from an industry workshop (attached as Exhibit 19) demonstrates the two possibilities of the mating key profile either selectively engaging the first key profile, or not engaging the second key profile (mismatched profile). The presentation demonstrates a mismatched profile, where the mating key profile on the first actuator tool is not adapted to selectively engage the second key profile on the second downhole tool:</p>  <p>The diagram is titled 'Collet & Dissolvable Ball Mismatched Profile'. It shows a cross-section of a wellbore with two downhole tools. The upper tool has a 'First key profile' (green) and the lower tool has a 'Second key profile' (blue). A 'Collet & Dissolvable Ball' assembly is shown between them. A red circle with a diagonal slash over it is labeled 'No Engagement', indicating that the mating key profile on the actuator tool does not fit into either key profile. The Stage Completions logo is visible in the bottom right.</p> <p>The presentation demonstrates a matched profile, where the mating key profile on the first actuator tool is adapted to selectively engage the first key profile on the first downhole tool (<i>i.e.</i>, first frac sleeve):</p>

Claim 31 of the '117 Patent	Infringement by the Accused Bowhead II System
	 <p data-bbox="610 554 1414 947">Further, a Stage Completions case history describes Stage Completions' tracking of pressure spikes as the actuator tool passes through non-matching downhole tools in a system having 75 frac sleeves: "Figure 2. demonstrates the locating ability of the dissolvable ball on collet activated sleeves. (A) shows 74 pressure responses as the ball-on-collet passes through every stage before engaging into its designated match stage 75 and shifting the valve open (B)." Ex. 24, at 2. The Bowhead II system therefore includes a first actuator tool comprising a first mating key profile adapted to selectively engage the first key profile but not the second key profile. Ex. 3 at ¶ 41</p>
<p data-bbox="201 989 570 1171">a second actuator tool comprising a second mating key profile adapted to selectively engage the second key profile but not the first key profile.</p>	<p data-bbox="610 989 1414 1171">The evidence presented for the preceding limitations confirms that the Bowhead II system includes a second actuator tool comprising a second mating key profile adapted to selectively engage the second key profile but not the first key profile. Ex. 3 at ¶ 41.</p>

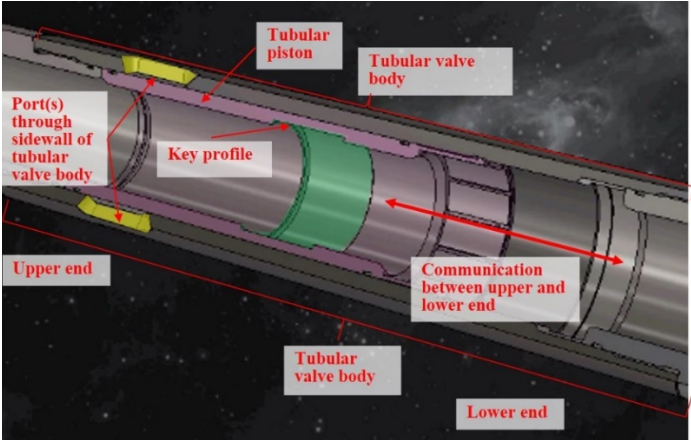
The evidence shows that every limitation in claim 31 is present in the accused Bowhead II system (Ex. 3 at ¶¶ 37-42), and Gryphon is likely to prevail on the merits of its infringement claim.

(ii) Infringement Of Claim 7 Of The '727 Patent

The table below reproduces the language of independent claim 7 of the '727 Patent and summarizes the evidence that confirms that the accused Bowhead II system infringes that claim.⁷

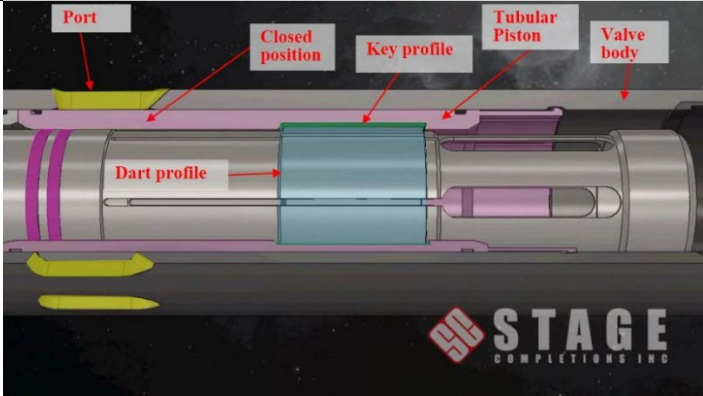
Claim 7 of the '717 Patent	Infringement by the Accused Bowhead II System
<p data-bbox="201 1713 570 1768">A system of valves and at least one dart for use</p>	<p data-bbox="610 1713 1388 1768">Stage Completions describes the Bowhead II system as "a dissolvable ball and collet activated fracturing sleeve system</p>

⁷ The evidence presented includes the Declaration of Gryphon's technical expert witness, Dr. Gary Wooley, attached hereto as Exhibit 3.

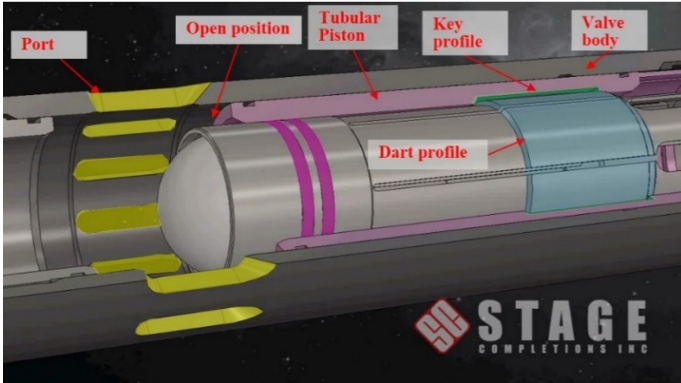
Claim 7 of the '717 Patent	Infringement by the Accused Bowhead II System
downhole in a well, the system comprising:	designed for cased hole and open hole applications” and that “[m]ultiple profile length configurations facilitate precise valve activation.” Ex. 22, at 1. The Bowhead II system has been used to stimulate numerous zones in a well and, thus, utilizes numerous valves (<i>see, e.g.,</i> Ex. 18, at 1) that are activated by at least one dart (the ball-on-collet tool of the Bowhead II system). The Bowhead II system therefore includes a system of valves (<i>i.e.,</i> frac sleeves) and at least one dart for use downhole in a well. Ex. 3 at ¶¶ 45-49.
at least two valves, each valve comprising:	The Bowhead II system has been used to stimulate numerous zones in a well and thus utilizes numerous valves (<i>i.e.,</i> frac sleeves). <i>See, e.g.,</i> Ex. 18, at 1. The Bowhead II system therefore includes at least two valves. Ex. 3 at ¶ 50.
a) a tubular valve body comprising upper and lower ends defining communication therebetween, the valve body further comprising at least one port extending through a sidewall thereof nearer the upper end;	<p>The animation on Stage Completions’ website demonstrates that there is a tubular valve body, which has an upper and a lower end, that there is communication between the two ends (due to the tubular shape), and that there are ports extending through the sidewall near the upper end of the valve body (<i>see also</i> Ex. 23):</p>  <p>The Bowhead II system therefore includes a plurality of frac sleeves, each having a tubular valve body comprising upper and lower ends defining communication therebetween, the valve body further comprising at least one port extending through a sidewall thereof nearer the upper end. Ex. 3 at ¶ 51.</p>
b) a tubular piston slidably disposed in the valve body and configured to provide communication	The animation on Stage Completions’ website shows a slidable tubular piston in each frac sleeve configured to provide communication therethrough that closes the ports when in the closed position (<i>see also</i> Ex. 23):

Claim 7 of the '717 Patent	Infringement by the Accused Bowhead II System
-----------------------------------	--

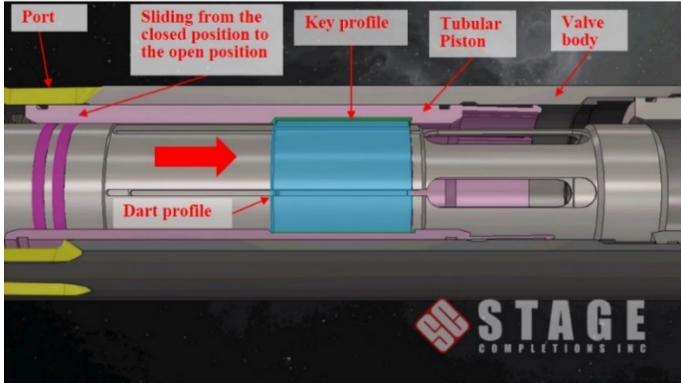
therethrough, the piston closing the at least one port in a closed position, the piston opening the at least one port in an open position;



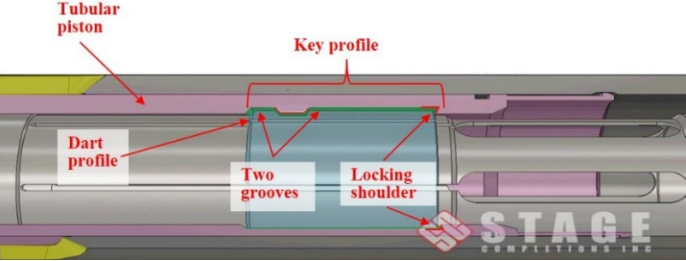
The tubular piston slides downwardly to open the port(s) in the open position.



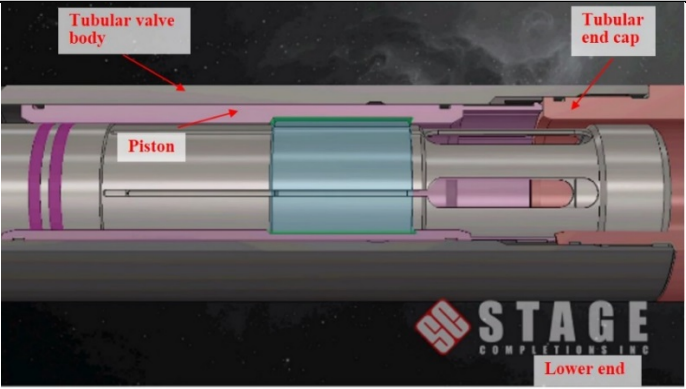
The animation further demonstrates a piston that is slidable between an open position and a closed position.

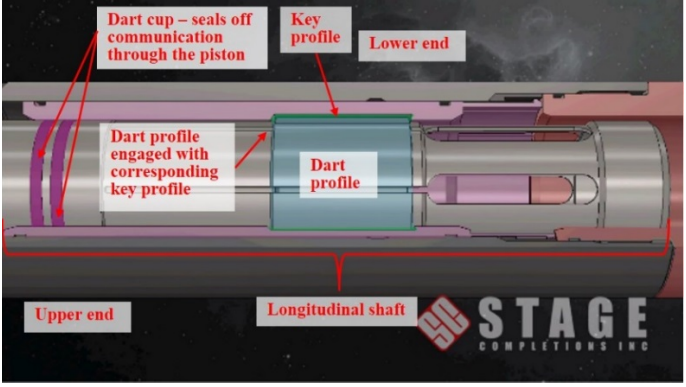
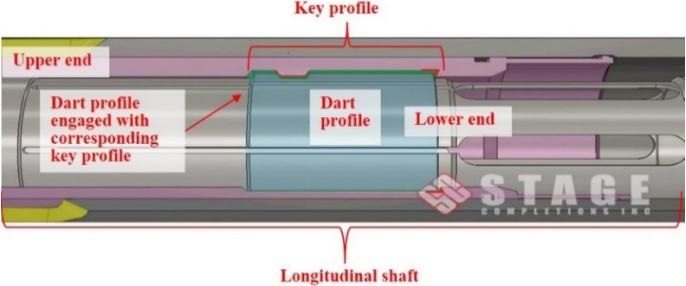


The Bowhead II system therefore has a plurality of frac sleeves each having a tubular piston slidably disposed in the valve body and configured to provide communication therethrough, the piston closing the at least one port in a closed position, the piston opening the at least one port in an open position. Ex. 3 at ¶ 51.

Claim 7 of the '717 Patent	Infringement by the Accused Bowhead II System
<p>c) a key profile disposed on an interior sidewall of the piston and comprising at least two grooves and a locking shoulder, the key profile for moving the piston from the closed position to the open position when a downward force is placed on the piston; and</p>	<p>The figure below from Stage Completions' presentation to The Oil and Gas Conference in August 2017 (Exhibit 25) has been annotated to show the key profile on the interior sidewall of the piston, the key profile having at least two grooves and a locking shoulder:</p>  <p>As previously indicated, the key profile allows the piston to move from the closed position to the open position when a downward force is placed on the piston. Stage Completion acknowledges that its valves are activated by the ball-on-collet tool that engages the key profile in the piston. <i>See, e.g.</i>, Ex. 22 at 1; Ex. 24 at 2.</p> <p>The Bowhead II system therefore has a plurality of frac sleeves, at least one having a key profile disposed on an interior sidewall of the piston, which includes at least two grooves and a locking shoulder, and the key profile is for moving the piston from the closed position to the open position when a downward force is placed on the piston. Ex. 3 at ¶ 52.</p>
<p>d) a tubular end cap disposed on the lower end of the valve body, the end cap configured to stop the piston when the piston moves from the closed position to the open position;</p>	<p>Stage Completions' website demonstrates a tubular end cap on the lower end of the valve body that stops the piston when the piston moves from the closed position to the open position (<i>see also</i> Ex. 23).⁸</p>

⁸ Although this screen capture is for a key profile with only one groove, a comparison to the figure of Exhibit 25, which is shown in the closed position, reveals that the surrounding structure (including the end cap) is the same, with the exception of the differing key profile.

Claim 7 of the '717 Patent	Infringement by the Accused Bowhead II System
	 <p>The Bowhead II system therefore has a tubular end cap disposed on the lower end of the valve body, the end cap configured to stop the piston when the piston moves from the closed position to the open position. Ex. 3 at ¶ 53.</p>
<p>where key profiles of the at least two valves have the locking shoulders in different locations relative to the two grooves within their key profile, and</p>	<p>Based upon information provided at EnerCom’s The Oil and Gas Conference in Denver, Colorado on August 17, 2017, Stage Completions varies the lengths of the grooves within the key profile on its valves. See Ex. 4, ¶ 18; Ex. 25, at 12. Accordingly, if the length of one or more grooves is varied within the key profile, the locking shoulder at the end of the second groove will be in a different location relative to the two grooves within the key profile.</p> <p>The Bowhead II system therefore has key profiles of the at least two valves (<i>i.e.</i>, frac sleeves) with locking shoulders in different locations relative to the two grooves within their key profile. Ex. 3 at ¶ 54.</p>
<p>the at least one dart comprising a longitudinal shaft comprising upper and lower ends, the lower end comprising a dart profile, the dart profile configured to engage grooves and locking shoulder of a matching key profile, the upper end comprising at least one dart cup configured to seal off</p>	<p>As depicted on the Stage Completions website, the dart (the collet-on-ball tool of the Bowhead II system) has a longitudinal shaft with upper and lower ends. The lower end includes a dart profile, and the upper end includes a dart cup that seals off communication through the piston when the dart profile engages the grooves and locking shoulder of a matching key profile (<i>see also</i> Ex. 23):</p>

Claim 7 of the '717 Patent	Infringement by the Accused Bowhead II System
<p>communication through the piston when the dart profile has engaged the corresponding key profile,</p>	 <p>The following annotated excerpt from Exhibit 25 also demonstrates that the Bowhead II dart includes a longitudinal shaft with upper and lower ends and a dart profile that engages with the corresponding key profile. Whereas the animation on the Stage Completions website does not show two grooves, this excerpt of Stage Completions' recent presentation demonstrates two grooves in the key profile. <i>See</i> Ex. 25, at 12.</p>  <p>The Bowhead II system therefore has at least one dart comprising a longitudinal shaft comprising upper and lower ends, the lower end comprising the dart profile, the dart profile configured to engage grooves and locking shoulder of a matching key profile, the upper end comprising at least one dart cup configured to seal off communication through the piston when the dart profile has engaged the corresponding key profile. Ex. 3 at ¶¶ 55-57.</p>
<p>where the location of the two grooves and locking shoulder in the dart profile is configured to specifically bypass unmatching key profiles and</p>	<p>Stage Completions' run histories confirm that the Bowhead II system is designed to have multiple dart profiles and multiple key profiles, where the dart profiles bypass un-matching key profiles. <i>See, e.g.</i>, Ex. 18 at 1. Similarly, with the two grooves and locking shoulder, Stage Completions has advertised that it is going to perform jobs that will utilize 305 frac sleeves, 295 frac sleeves, and 195 frac sleeves—all of which will require the dart profile to bypass un-matching key profiles.</p>

Claim 7 of the ‘717 Patent	Infringement by the Accused Bowhead II System
specifically engage the key profile of a targeted valve.	<p><i>See</i> Ex. 25, at 18; Ex. 4, ¶ 17; <i>see also</i> Ex. 19 (Stage Completions presentation showing that darts will bypass un-matching key profiles).</p> <p>Accordingly, the location of the two grooves and the locking shoulder in the dart profile are configured to specifically bypass un-matching key profiles and specifically engage the key profile of a targeted valve. Ex. 3 at ¶ 58.</p>

The evidence shows that every limitation in claim 7 is present in the accused Bowhead II system (Ex. 3 at ¶¶ 44-59), and Gryphon is likely to prevail on the merits of its infringement claim.

b. The Gryphon Patents Are Valid

The Gryphon Patents enjoy a statutory presumption of validity. 35 U.S.C. § 282. Both patents enjoy the same presumption of validity at the preliminary injunction stage of the proceeding as they do during the remaining stages of litigation. *Titan Tire Corp. v. Case New Holland, Inc.*, 566 F.3d 1372, 1377 (Fed. Cir. 2009). In light of that presumption, and to raise a substantial question as to the validity of the Gryphon Patents at the preliminary injunction stage, Stage Completions must show that “it is more likely than not that [it] will be able to prove at trial, by clear and convincing evidence, that the patent[s are] invalid.” *Id.* at 1379. Stage Completions cannot satisfy that burden, as it is estopped from challenging the validity of the asserted claims. As fully explained below, Stage Completions is prohibited from raising an invalidity challenge to the Gryphon Patents, because it is in privity with the named inventors who assigned away all rights to those patents, with Gryphon now the successor-in-interest to the original assignees.

(i) Assignor Estoppel Precludes Stage Completions From Challenging The Validity Of The Gryphon Patents

Assignor estoppel is an equitable remedy that prevents an assignor of a patent from challenging the validity of the patent when accused of infringement. *MAG Aerospace Indus., Inc. v. B/E Aerospace, Inc.*, 816 F.3d 1374, 1379-80 (Fed. Cir. 2016). The doctrine works to prevent

the injustice and unfairness that would otherwise result from allowing a party to sell something, only to later assert that it is worthless. *Mentor Graphics Corp. v. Quickturn Design Sys., Inc.*, 150 F.3d 1374, 1377 (Fed. Cir. 1998). Courts also extend the doctrine of assignor estoppel to those who are in privity with the assignor. *MAG Aerospace*, 816 F.3d at 1379-80. In the preliminary injunction context, assignor estoppel bulwarks the presumption of validity, thereby tipping the scales further in favor of the patentee. *Mentor Graphics*, 150 F.3d at 1378-80; *Dreamlite Holdings Ltd. v. Kraser*, 705 F. Supp. 98, 102 (E.D.N.Y. 1988).

Whether assignor estoppel applies to bar the assignor's employer from challenging the validity of the asserted patents is determined upon a balance of the equities. *MAG Aerospace*, 816 F.3d at 1380. District courts look to a number of factors in determining whether the assignor is in privity with his or her employer such that the estoppel extends to the employer, including:

(1) the assignor's leadership role at the new employer; (2) the assignor's ownership stake in the defendant company; (3) whether the defendant company changed course from manufacturing non-infringing goods to infringing activity after the inventor was hired; (4) the assignor's role in the infringing activities; (5) whether the inventor was hired to start the infringing operations; (6) whether the decision to manufacture the infringing product was made partly by the inventor; (7) whether the defendant company began manufacturing the accused product shortly after hiring the assignor; and (8) whether the inventor was in charge of the infringing operation.

Id.

Undoubtedly, named inventors Sean Campbell ('727 and '117 Patents), William Jani ('727 Patent), and Darryl Firmaniuk ('117 Patent) are estopped from challenging the validity of the Gryphon Patents because they assigned those patents. Similarly, both Stage Completions Inc. and Stage Completions (USA) Corporation are estopped from challenging the validity of the Gryphon Patents because Stage Completions is in privity with the named inventors. Specifically:

- Named inventor Sean Campbell has a prominent leadership role in Stage Completions, serving as the President and CEO of Stage Completions Inc., as well as serving on the board of

directors. *Refer to § II.B, supra.* He also owns an indirect controlling interest in the company and serves on the board of directors of Blackbird Energy Inc., a Canadian entity that owns a ten-percent interest in Stage Completions, Inc. Ex. 7, at 4.

- Mr. Campbell likewise serves as the President and CEO of Stage Completions (USA) Corporation, as well as serving on the board of directors. *Id.*; § II.B, *supra*.
- Mr. Campbell is involved in the infringement of the Gryphon Patents, not only as the CEO of Stage Completions, but also as an owner and a member of the board of directors of Stage Completions' Canadian manufacturer, Progressive Tool Design Inc., for which he holds thirty-percent of the voting shares. Ex. 10 at 2; Ex. 4 at ¶ 17.
- Mr. Campbell has been the face of the roll out of the Bowhead II system, offering statements in numerous press releases regarding the “rapid roll out” of the system. *See, e.g.*, Ex. 17.
- Named inventors William Jani and Darryl Firmaniuk are also closely aligned with Stage Completions Inc. Both are on the board of directors for SC Holding Corporation, which is a shareholder of Stage Completions Inc. *Refer to § II.B, supra.*
- Messrs. Jani and Firmaniuk are still involved in the development of products for Stage Completions, as both are on the board of directors of the Stage Completions Inc. affiliated company, SC Asset Corporation, which holds intellectual property for Stage Completions, and Mr. Jani has even assigned at least three patent applications (unrelated to the Gryphon Patents) to either Stage Completions and/or SC Asset Corporation. *Id.*; Exs. 26-28.

As this evidence shows, the named inventors⁹ of the Gryphon Patents have leadership roles in Stage Completions and its affiliated companies. As President and CEO, Sean Campbell is directly involved with the infringing activity. Stage Completions did not begin manufacturing and

⁹ As previously noted, named inventor Lennard Sihlis is currently employed by Gryphon.

selling the infringing Bowhead II system until May 2016, after Mr. Campbell joined the company. Mr. Campbell also has an ownership interest in Stage Completions, directly benefiting from its infringement. Named inventor Jani continues to contribute to refinements to the patented technology, as evidenced by the patent applications assigned to Stage Completions' intellectual property holding corporation. As such, Stage Completions is in privity with the named inventors of the Gryphon Patents and, as a matter of equity, is subject to the same prohibitions of assignor estoppel applicable to the inventors

In light of the statutory presumption of validity and the inability of Stage Completions to challenge validity, it is axiomatic that Stage Completions will be unable to prove at trial that the Gryphon Patents are invalid. Gryphon is therefore likely to succeed on the merits at the preliminary injunction stage. *See Titan Tire Corp.*, 566 F.3d at 1377 (holding that if the owner of a patent “moves for a preliminary injunction and the alleged infringer does not challenge validity, the very existence of the patent with its concomitant presumption of validity satisfies the [plaintiff’s] burden of showing likelihood of success on the validity issue.”).

2. Gryphon Will Be Irreparably Harmed Absent a Preliminary Injunction

Stage Completions' infringing activities have deprived Gryphon of the exclusivity guaranteed under the Gryphon Patents. Courts have explained the intangible nature of exclusivity:

Exclusivity is closely related to the fundamental nature of patents as property rights. It is an intangible asset that is part of a company's reputation. . . . Where two companies are in competition against one another, the patentee suffers the harm—often irreparable—of being forced to compete against products that incorporate and infringe its own patented inventions.

Douglas Dynamics, LLC v. Buyers Prods. Co., 717 F.3d 1336, 1345 (Fed. Cir. 2013). As an initial matter, courts have consistently held that the loss of market share and business relationships due to infringement by an unauthorized interloper in a market may independently constitute irreparable harm. *Schwabel Corp. v. Conair Corp.*, 122 F. Supp. 2d 71, 83-84 (D. Mass. 2000). This harm is

the result of the loss of the principal right conferred by a patent, which is the right to exclude others from making, using, offering for sale, or selling the patented invention. *Hybritech Inc. v. Abbot Labs.*, 849 F.2d 1446, 1456-57 (Fed. Cir. 1988). Further, these market effects can never be fully compensated financially. Indeed, “[i]f monetary relief were the sole relief afforded by the patent statute then injunctions would be unnecessary and infringers could become compulsory licensees for as long as the litigation lasts.” *Atlas Powder Co. v. Ireco Chems.*, 773 F.2d 1230, 1233 (Fed. Cir. 1985). Consistent with these authorities, Stage Completions’ infringing competition with Gryphon is irreparably harming Gryphon in the nascent market for the patented technology.

a. Stage Completions’ Infringement Threatens To Destroy Gryphon’s Market Share And Market Opportunities

Traditionally, fracking has been done using the older “plug and perf” method, whereby individual zones were fracked using perforating guns and by the placement of frac plugs to isolate individual zones. Ex. 5 at ¶ 8. The “plug and perf” method, however, suffers from a number of limitations that make it very time consuming and expensive. *Id.* at ¶¶ 12, 15; Ex. 3 at ¶ 19. Sliding sleeve systems were introduced to address some of the shortcomings of the “plug and perf” method, as completions using sliding sleeves take less time and also use considerably lower volumes of liquid. Ex. 5 at ¶ 12. Earlier sliding sleeve systems, however, also suffered from critical shortcomings, whether activated using coiled tubing or by ball drop. *Id.* at ¶¶ 13-14 (discussing shortcomings of earlier sliding sleeve systems).

To overcome these shortcomings, Gryphon’s predecessor-in-interest, SureTech Completions, invested time and money in inventing the technology of the profile selective system embodied in the Gryphon Patents, including the SUREselect system. *Id.* at ¶¶ 14, 16. The patented system eliminated a number of the disadvantages of coiled tubing activated sliding sleeves and ball drop sliding sleeves, while also offering the potential for fracturing an unlimited number of

stages, which is important in light of the increasingly long lateral wells drilled today. *Id.* at ¶ 14.

Gryphon recognized the significant market potential for the patented technology within the broader completions market and, therefore, purchased the rights to the SUREselect system and the underlying patents in June 2016. *Id.* at ¶¶ 10, 16. Today, the total frac sleeve market comprises approximately ten-percent of the overall completion market for fracturing wells, with only approximately two-percent comprising new technologies. *Id.* at ¶ 24. However, the total frac sleeve market is predicted to grow dramatically in the next few years, with significant growth predicted in the market for the technology of the Gryphon Patents. *Id.* at ¶ 24.

In purchasing the '727 and '117 Patents, Gryphon's strategy to develop the market for profile selective frac sleeve systems relied upon introducing and developing this technology in the marketplace while excluding competitors through enforcing its patents. *Id.* at ¶ 19. Stage Completions, however, led by Mr. Campbell, is intruding upon the exclusivity bargained for in the sale of SureTech's intellectual property to Gryphon. Stage Completions is aggressively expanding into the market, attempting to corner it. *See* Exs. 14-19, 21, 24-25 29-30. Stage Completions has recently been offering and running its infringing Bowhead II system in virtually every major shale play in the United States. Ex. 4 at ¶ 14; Ex. 15, at 21; Ex. 30, at 26. Ultimately, Stage Completions' continuing use of Gryphon's patented technology results in an immediate loss of business to Gryphon, including a loss of market share and market opportunities. Ex. 5 at ¶¶ 18, 21-22.

Given its aggressive marketing, Stage Completions threatens to permanently deprive Gryphon of market share. Courts emphasize that "loss of market share constitutes irreparable injury 'because market share is so difficult to recover.'" *Ortho Pharm. Corp. v. Smith*, Civ. A No. 90-0242, 1990 WL 18681, at *9 (E.D. Pa. Feb. 23, 1990) (quoting *Am. Home Prods. Corp. v. Abbott Labs.*, 522 F. Supp. 1035, 1038 (S.D.N.Y. 1981)). "Competitors change the marketplace,"

and it “may be impossible to restore a patentee’s . . . exclusive position by an award of damages and a permanent injunction” because customers may already “have established relationships with infringers.” *Polymer Techs., Inc. v. Bridwell*, 103 F.3d 970, 975-76 (Fed. Cir. 1996).

Additionally, there have been documented problems with the Bowhead II system. Stage Completions deployed its Bowhead II system on wells for Blackbird Energy Inc. in late 2016 or early 2017. Ex. 7 at 3-4. After one of the wells was shut-in for approximately a month, Blackbird identified that the well was not producing consistent with expectations. *Id.* at 10. An investigation of the well revealed that the Bowhead II system experienced erosion damage to the landing shoulder of the valve profile. *Id.* As a result, the system failed to attain proper collet engagement and full sleeve opening in the majority of the later fracking stages. *Id.* A Blackbird investigation of two additional wells where the system was deployed revealed metal fatigue, erosion, and collet engagement/sleeve opening issues. *Id.* Because the Bowhead II sleeves remained in the closed position, Blackbird was unable to fracture the reservoir along the entire length of the wellbore. *Id.* The cost to recomplete the wells after the failure of Stage Completions’ infringing Bowhead II system has been estimated to be between \$7.6 and \$10.4 million. *Id.* at 11.

These failures by Stage Completions, and the resulting negative impact on the reputation of the patented technology, threaten to brand the entire technology with a reputation for unreliability, further damaging Gryphon’s prospects for competing in and developing that market. Ex. 3 at ¶¶ 22-23; Ex. 4 at ¶¶ 11-12; Ex. 5 at ¶ 20. Courts routinely find that patentees will be irreparably harmed when the accused infringer offers products of inferior quality, as such offerings, particularly in new markets, may irreparably damage the goodwill of the patentee. *See, e.g., Power Survey, LLC v. Premier Utility Servs., LLC*, 61 F. Supp. 3d 477, 487 (D.N.J. 2014); *Zen Design Grp., Ltd. v. Clint*, No. 08-cv-14309, 2009 WL 4050247, at *5 (E.D. Mich. Nov. 23,

2009). This is exactly the danger facing Gryphon in light of Stage Completions' documented failures in the field, as any failures threaten to taint the market against Gryphon's patented technology in favor of other technologies.

Further, courts have also explained that, “[d]uring the growth stage of a product, it is particularly crucial to be able to distinguish oneself from competitors. This includes building the brand, expanding the customer base, and establishing one’s reputation and leadership in the market.” *Celsis In Vitro, Inc. v. CellzDirect, Inc.*, 664 F.3d 922, 931 (Fed. Cir. 2012). Where an infringer intrudes upon the growth stage of product development, courts have found irreparable harm. *Id.*; see also *TiVo Inc. v. EchoStar Commc’ns Corp.*, 446 F. Supp. 2d 664, 669-70 (E.D. Tex. 2006), *rev’d in part on other grounds*, 516 F.3d 1290 (Fed. Cir. 2008) (“Loss of market share in this nascent market is a key consideration in finding that Plaintiff suffers irreparable harm—Plaintiff is losing market share at a critical time in the market’s development, market share that it will not have the same opportunity to capture once the market matures.”). The market for profile selective frac sleeves is indisputably in the growth stage, and Stage Completions’ infringement is depriving Gryphon of the ability to rely upon the exclusionary rights of its patents to establish Gryphon as the market leader in this segment. Stage Completions’ infringement has also deprived Gryphon of the attention and status to which it is otherwise entitled as the sole provider of the profile selective sleeve system. Courts have acknowledged that irreparable harm includes such “erosion in reputation and brand distinction.” *Douglas Dynamics*, 717 F.3d at 1344.

b. The Harm To Gryphon Cannot Be Compensated Through Money Damages¹⁰

Stage Completions’ illicit presence in the emerging market for the patented technology is

¹⁰ It should be noted that Stage Completions Inc. is a foreign corporation, making monetary judgments difficult to collect. Courts have been willing to find irreparable harm in cases where the defendant is a foreign corporation because most assets are likely outside the United States,

allowing it to make inroads with customers that will likely persist. Absent injunctive relief, Stage Completions' infringement creates direct market competition between it and Gryphon that will require Gryphon to compete on the basis of pricing. Ex. 5 at ¶ 23. Indeed, Stage Completions has already offered its infringing Bowhead II system to virtually all of Gryphon's potential customers. *Id.* at ¶ 18. Unfortunately, such pricing competition cannot later be reversed, as any price increases after Stage Completions is removed from the marketplace as an infringer will damage Gryphon's reputation. *Id.* at ¶ 23. As such, price erosion cannot be adequately compensated with money damages and is a valid ground for finding irreparable harm. *Celsis In Vitro*, 664 F.3d at 930.

Additionally, any harm to Gryphon's reputation or the reputation of the patented technology caused by Stage Completions' product failures is of the type not compensable by money. *See Tuf-Tite, Inc. v. Federal Package Networks, Inc.*, No. 14-cv-2060, 2014 WL 6613116, at *8 (N.D. Ill. Nov. 21, 2014). Indeed, it would be impossible to determine the monetary impact such product failures would have on the emerging market for the patented technology, as such failures could set the market back for years to come.

Accordingly, for all of the foregoing reasons, Gryphon will be irreparably harmed in the absence of a preliminary injunction, and that harm cannot be remedied with monetary damages.

3. The Balance Of The Hardships Favors Gryphon

Gryphon invested in the purchase of the '727 and '117 Patents, while Stage Completions' privies assigned away all rights to practice the inventions of those patents. Gryphon stands to suffer price erosion, loss of market share, loss of goodwill and reputation, loss of business relationships in this emerging market, and the possibility of even more infringers in the absence of a preliminary injunction. *See* § III.B.2, *supra*. In contrast, a preliminary injunction would only

making collection of any judgment quite difficult. *See Cordelia Lighting, Inc. v. Zhejiang Yankon Grp. Co. Ltd.*, No. EDCV 14-881 JGB (SPx), slip. op. at 12 (C.D. Cal. Apr. 27, 2015).

require Stage Completions to live with the benefit of the bargain struck by its privies when they assigned away all rights in the Gryphon Patents. In light of the identified harms facing Gryphon, requiring it to compete against its own patented invention is a substantial hardship that is not warranted. *See Robert Bosch LLC v. Pylon Mfg. Corp.*, 659 F.3d 1142, 1156 (Fed. Cir. 2011).

Additionally, an injunction in the United States is unlikely to put Stage Completions Inc. out of business, as it is a Canadian company and its Canadian business will be unaffected. Moreover, Stage Completions also offers the SC Bowhead system, which is not accused in this lawsuit and, thus, will be unaffected. *See Ex. 31*. Regardless, the mere possibility of being put out of business is not enough to avoid the consequences of infringement. *Bell & Howell Document Mgmt. Prods. Co. v. Altek Sys.*, 132 F.3d 701, 708 (Fed. Cir. 1997). Nor may an infringer escape an injunction because the injunction would affect its primary product. *Robert Bosch*, 659 F.3d at 1156. The Federal Circuit has repeatedly explained that “[o]ne who elects to build a business on a product found to infringe cannot be heard to complain if an injunction against continuing infringement destroys the business so elected.” *Broadcom Corp. v. Qualcomm Inc.*, 543 F.3d 683, 704 (Fed. Cir. 2008) (quoting *Windsurfing Int’l, Inc. v. AMF, Inc.*, 782 F.2d 995, 1003 n.12 (Fed. Cir. 1986)). Given Stage Completions’ decision to pursue infringement, even after its privies assigned away all rights to the Gryphon Patents, the balance of the hardships favors Gryphon.

4. The Public Interest Unquestionably Favors Protecting Patent Rights

The public interest favors enforcement of patent rights as part of the policy of encouraging innovation. *Celsis In Vitro*, 664 F.3d at 931; *see also Abbott Labs. v. Andrx Pharms., Inc.*, 452 F.3d 1331, 1348 (Fed. Cir. 2006) (“[A]bsent any other relevant concerns, . . . the public is best served by enforcing patents that are likely valid and infringed.”). Meanwhile, there is no critical public interest that would be injured by the grant of injunctive relief. Indeed, the injunction will

not prevent the completion of oil wells—it will not affect the use of other pre-existing systems such as plug and perf or other sliding sleeve systems that are activated by ball drop or coiled tubing.

Additionally, to the extent Stage Completions argues that there is a public interest in marketplace competition, such an argument would be misplaced.

[P]ublic policy favors protection of the rights secured by valid patents. The American public is not served by favoring the short-run effects of competition in the marketplace over the long-run effects of decreased incentives for innovation under the patent laws. Congress granted exclusive rights on inventions to encourage research and development of new products, even though competition might be sacrificed in the short run.

Jacobson v. Cox Paving Co., No. 89-1786 PHX PGR, 1991 WL 328445, at *24 (D. Ariz. May 16, 1991). As such, the public interest factor weighs in favor of a grant of injunctive relief.

IV. CONCLUSION

Gryphon has made a compelling showing that all the requisite factors favor issuance of a preliminary injunction. Accordingly, Gryphon respectfully requests that the Court issue a preliminary injunction prohibiting Stage Completions from continuing to infringe the ‘727 and the ‘117 Patents while this case is pending.¹¹ A proposed preliminary injunction order is attached hereto for the Court’s consideration and signature.

¹¹ Stage Completions will be served with a copy of this motion and, thus, will have notice of Gryphon’s request for preliminary relief. Upon the granting of a preliminary injunction, Gryphon requests that the Court require no bond. Because Gryphon has made a strong showing of likelihood of success on the merits, a bond is unnecessary. *Kaepa, Inc. v. Achilles Corp.*, 76 F.3d 624, 628 (5th Cir. 1996). Gryphon is willing, however, to post bond if the Court deems it appropriate. If the Court concludes a bond is appropriate, the bond should be in a minimal amount “[g]iven the strong likelihood that [Gryphon] will succeed on the merits of its infringement claim and the minimal chance that [Stage Completions] will suffer cognizable harm from the issuance of [the] injunction.” *Decade Indus. v. Wood Tech, Inc.*, 100 F. Supp. 2d 979, 984 (D. Minn. 2000).

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing document will be served on all parties of record via hand delivery and/or U.S. Regular Mail.

/s/ Nita Moore, Senior Paralegal